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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 5–7
FOR

UPPER COOK INLET FINFISH

ALASKA BOARD OF FISHERIES MEETING
ANCHORAGE, ALASKA

February 7–20, 2020

Regional Information Report No. 2A20-02

The following staff comments were prepared by the Alaska Department of Fish and Game (department) for use at the Alaska Board of Fisheries (board) meeting, February 7–20, 2020 in Anchorage, Alaska. The comments are forwarded to assist the public and board. The comments contained herein should be considered preliminary and subject to change, as new information becomes available. Final department positions will be formulated after review of written and oral public testimony presented to the board.

Acronyms and Abbreviations

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

Weights and measures (metric)

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

Weights and measures (English)

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

Time and temperature

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

Physics and chemistry

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

General

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

Acronyms

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

REGIONAL INFORMATION REPORT 2A20-02

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UPPER COOK INLET FINFISH

ALASKA BOARD OF FISHERIES MEETING ANCHORAGE, ALASKA

FEBRUARY 7–20, 2020

by
Alaska Department of Fish and Game

Alaska Department of Fish and Game
Division of Sport Fish, Research and Technical Services
333 Raspberry Road, Anchorage, AK 99518–1565

January 2020

ABSTRACT

This document contains Alaska Department of Fish and Game (department) staff comments on commercial, personal use, sport, and subsistence regulatory proposals for the Upper Cook Inlet finfish. These comments were prepared by the department for use at the Alaska Board of Fisheries meeting, February 7–20, 2020, in Anchorage, Alaska. The comments are forwarded to assist the public and board. The comments contained herein should be considered preliminary and subject to change, as new information becomes available. Final department positions will be formulated after review of written and oral public testimony presented to the board.

Key words: Alaska Board of Fisheries (board), Alaska Department of Fish and Game (department), staff comments, regulatory proposals, fisheries, commercial, personal use, sport, guided sport, subsistence, Upper Cook Inlet, finfish, regulations, management plans, escapement goals, stock of concern, methods, means, bag limits, allocation, herring, salmon, eulachon.

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TABLE OF CONTENTS

Page

TABLE OF CONTENTS (Continued)

Page

TABLE OF CONTENTS (Continued)

Page

Summary of department positions on regulatory proposals for Upper Cook Inlet finfish; Anchorage, February 7-19, 2020.

Proposal No.	Department Position	Issue
216	N	Create a Deshka River large king salmon optimum escapement goal.
217	N	Create a Deshka River King Salmon Fishery Management Plan
215	N	Create a Susitna and Yentna Rivers King Salmon Management Plan.
219	N	Create a Little Susitna River King Salmon Fishery Management Plan
199	N	Amend the Northern District King Salmon Management Plan.
200	N	Close the Northern District commercial king salmon fishery when the sport fishery in the Susitna or Knik Arm drainages are restricted.
203	N	Provide additional fishing periods in the Northern District king salmon commercial fishery when the Deshka River king salmon sport fishery is liberalized
201	N	Amend paired restrictions in the Deshka River king salmon sport and commercial fisheries.
225	O	Limit retention of king salmon in the Eklutna Tailrace to hatchery fish.
121	N	Amend the *Kasilof River Salmon Management Plan* to prioritize achieving the lower end of the Kenai River late-run king salmon escapement goal.
119	N	Eliminate the Kasilof River sockeye salmon optimal escapement goal.
118	N	Amend the *Kasilof River Salmon Management Plan* to include the Kasilof River biological escapement goal.
185	N	Open the Kasilof Section set gillnet fishery June 20 instead of June 25 provided an estimated 20,000 sockeye salmon are in the Kasilof River
182	N	Open the Kasilof Section commercial set gillnet fishery June 20 instead of June 25.
117	N	Increase open waters from within 600 feet of mean high tide to within 1,200 feet of mean high tide as a restrictive option in the Kasilof Section set gillnet fishery after July 8.
176	N	Allow commercial fishing with set gillnets in the North Kalifonsky Beach area starting July 8.
175	N	Allow commercial fishing with set gillnets in the North Kalifonsky Beach area starting July 1.
177	N	Open the North Kalifornsky Beach set gillnet fishery with the Kasilof section and limit the fishery to within 600 feet of the mean high tide.

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

Summary of department positions on regulatory proposals (page 2 of 5)

120	N	Remove the Kasilof River Special Harvest Area from (c)(4) of the *Kasilof River Salmon Management Plan*.
184	N/O	Open extra commercial fishing periods at a set time of 7 a.m. in the Upper Subdistrict set net fishery.
122	N	Create a commercial dip net fishery in the Kasilof River.
204	N	Amend the *Northern District Salmon Management Plan* to specify priority of sockeye, pink, and chum salmon includes inriver users.
206	N	Amend the *Northern District Salmon Management Plan* to allow for regular set gillnet gear in the Northern District commercial sockeye salmon fishery during times of reduced effort in the Central District.
205	N	Clarify the definition of "minimize" in the *Northern District Salmon Management Plan*.
207	N	Remove the Eastern Subdistrict gear restrictions in the *Northern District Salmon Management Plan*.
202	N/S	Amend the *Northern District King Salmon Management Plan* to allow operation of one set gillnet per permit
211	N	Eliminate the four set gillnet per person limit.
208	O	Modify description of waters open to fishing.
210	N/O	Close waters to drift gillnetting on the west side of Cook Inlet within one mile of shore from the West Forelands to Sea Otter Point.
139	O	Close the drift gillnet salmon fishery in Chinitna Bay.
130	N	Allow commercial fishing with drift gillnets in the Chinitna Bay subdistrict starting August 15.
138	O	Establish drift gillnet weekly fishing periods in the Chinitna Bay Subdistrict.
198	S	Amend waypoint descriptions and provide coordinates for landmarks.
197	S	Provide waypoint locations for landmark names and modify waypoint locations in Chinitna Bay.
209	S	Amend the waypoint location for Light Point on Kalgin Island.
212	N	Eliminate the requirement to obtain a commissioner's permit for the Cook Inlet Smelt fishery.
141	O	Allow a vessel to carry more than a legal complement of gillnet gear in the Cook Inlet Area.

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

Summary of department positions on regulatory proposals (page 3 of 5)

140	N	Allow a dual-permit vessel to have 200 fathoms of gear on board while in Chinitna Bay subdistrict, but fish with no more than 150 fathoms of gear in the subdistrict at any time.
85	NA	Limit the prosecution of fishing derbies.
86	N	Establish resident and non-resident annual limits for sockeye salmon in the Cook Inlet Area.
9	N	Establish a seasonal limit of five king salmon in Cook Inlet from October 1—April 30.
150	O/N	Require retention of sockeye salmon caught in the Kenai River.
147	O/N	Prohibit fishing for salmon on the upper Kenai River after taking the bag limit for that day.
146	N	Increase the sockeye salmon limit to six fish per day in the Kenai River when the commercial fishery is open.
151	O/N	Allow retention of sockeye salmon snagged on the Kenai River.
152	O/N	Prohibit barbed hooks when fishing in the Kenai River drainage.
148	O	Allow two unbaited, single-hook artificial flies and limit hook size throughout the Kenai River drainage.
162	N	Remove restrictions to guided sport vessels on the Kenai River when the King salmon sport fishery is closed.
14	O	Modify the definition of bag limit to include fish landed but not originally hooked by an angler.
161	N	Allow sport fishing from a guide vessel on the Kenai River on Mondays
160	N	Allow transport of more than five persons per vessel used for guided sport fishing on the Kenai River in July.
159	N	Allow five anglers per vessel used for guided sport fishing on the Kenai River in July.
155		Allow sport fishing guides to sport fish while a client is present from the banks of the Kasilof River.
156	N	Allow sport fish guides to sport fish on the Kasilof River from shore while a client is present.
158	N	Prohibit sport fishing guides from sport fishing from shore while a client is present.

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

Summary of department positions on regulatory proposals (page 4 of 5)

157	N	Limit the number of client groups per guide or guide vessel on the Kasilof River in July.
168	N	Prohibit motorized vessels on the Kenai River.
166	N	Prohibit sport fishing from a motorized vessel on the lower Kenai River on Thursdays in July.
165	N	Prohibit sport fishing from a motorized vessel on the lower Kenai River on Thursdays in July.
167	N	Allow sport fishing from a vessel with a motor on board but not in use on the Kenai River on Mondays in July.
164	N	Prohibit motorized vessels on the Kenai River from Skilak Lake to the Soldotna Bridge May 1– August 31.
169	N	Prohibit motorized vessels on a section of the Kasilof River January 1— September 15.
221	O	Extend the use of bait to September 11 in Unit 2 of the Susitna River Drainage Area sport fishery.
144	S	Align spring sport fishing dates for Bishop and Bench creeks.
143	S	Clarify the fishing season for king salmon less than 20 inches in length on the Kasilof River.
232	S	Close a section of the south fork of Big River to sport fishing.
231	N	Establish limits in the Big River Drainage of two salmon 16" or greater in length.
230	O	Allow retention of snagged sockeye salmon in the Big River Lakes and Wolverine Creek.
229	S/N	Extend the hours of the Ship Creek youth fishery.
227	N/O	Open additional days in the sport fishery in the Fish Creek drainage.
228	O	Prohibit fishing while wading in Fish Creek.
213	S	Allow anglers to use 5 lines fishing for northern pike through the ice.
222	S	Allow fishing for resident species on days closed to king salmon fishing in Unit 2.
233	S	Allow fishing for fish, other than salmon, in upper Threemile Creek and the Threemile Lake outlet
214	S	Prohibit live release of northern pike in the Anchorage Bowl and Knik River drainages.

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

Summary of department positions on regulatory proposals (page 5 of 5)

223	O	Allow more than one unbaited, single-hook, artificial lure in the Susitna River.
224	O	Allow more than one unbaited, single-hook, artificial lure in the rainbow trout fishery throughout the Susitna River Drainage.
220	O	Prohibit retention of rainbow trout and the use of bait in the Lake Creek drainage.
81	O	Manage fisheries in Upper Cook Inlet by designating types of salmon habitat.
83	N/O	Close all commercial fishing in Upper Cook Inlet.
15	O	Prohibit reselling of guide services by anyone other than licensed guides.
38	N/O	Create a king salmon management plan with paired restrictions in Upper and Lower Cook Inlet commercial fisheries.
37	N/O	Create a king salmon management plan with paired restrictions in Kodiak and Cook Inlet commercial fisheries.

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

COMMITTEE OF THE WHOLE–GROUP 5: NORTHERN COOK INLET KING SALMON ESCAPEMENT GOAL DISCUSSION, NORTHERN COOK INLET SPORTFISH MANAGEMENT PLANS, NORTHERN DISTRICT KING SALMON MANAGEMENT PLAN AND NORTHERN DISTRICT KING SALMON SPORT FISHERIES (9 PROPOSALS – CHAIR: PAYTON)

Northern Cook Inlet King Salmon Escapement Goal Discussion

Northern Cook Inlet king salmon escapement goal discussion.

Northern Cook Inlet Sportfish Management Plans (4 proposals)

PROPOSAL 216 – Create a Deshka River large king salmon OEG.

5 AAC 61.XXX. New Title.

PROPOSED BY: Matanuska-Valley Fish and Game Advisory Committee.

WHAT WOULD THE PROPOSAL DO? This would create a Deshka River king salmon optimum escapement goal (OEG) specific to large fish.

WHAT ARE THE CURRENT REGULATIONS? The *Policy for the management of sustainable salmon fisheries* (5 AAC 39.222) contains principles and criteria for the management of salmon fisheries by the state. The policy also defines escapement goal terms as follows:

Sustainable escapement goal (SEG): "means a level of escapement, indicated by an index or an escapement estimate, that is known to provide for sustained yield over a 5 to 10 year period…; the SEG will be developed from the best available biological information; and should be scientifically defensible on the basis of that information; the SEG will be determined by the department and will take into account data uncertainty and be stated as either a "SEG range" or "lower bound SEG:…"

Optimal escapement goal (OEG): "means a specific management objective for salmon escapement that considers biological and allocative factors and may differ from the SEG or BEG; an OEG will be sustainable and may be expressed as a range with the lower bound above the level of SET, and will be adopted as a regulation by the board..."

Biological escapement goal (BEG) "means the escapement that provides the greatest potential for maximum sustained yield; BEG will be developed from the best available biological information, and should be scientifically defensible on the basis of available biological information; BEG will be determined by the department and will be expressed as a range based on factors such as salmon stock productivity an data uncertainty…"

The *Policy for statewide salmon escapement goals* (5 AAC 39.223) recognizes the establishment of salmon escapement goals as a joint responsibility of the Alaska Department of Fish and Game

(department) and the Alaska Board of Fisheries (board) and describes the concepts, criteria, and procedures for establishing and modifying salmon escapement goals. Under the policy, the board recognizes and describes the department's responsibility for establishing and modifying biological escapement goals (BEG), sustainable escapement goals (SEG), and sustained escapement thresholds (SET)

The policy also states that the board will: "…in recognition of its joint responsibilities, and in consultation with the department, during the regulatory process, review a biological escapement goal (BEG), sustainable escapement goal (SEG), or sustainable escapement threshold (SET) determined by the department and, with the assistance of the department, determine the appropriateness of establishing an OEG; the board will provide an explanation of the reasons for establishing an OEG and provide, to the extent practicable, and with the assistance of the department, an estimate of expected differences in yield of any salmon stock, relative to maximum sustained yield, resulting from implementation of an OEG."

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? It is difficult to determine the effect of the proposal on future production because the proposal does not define "large king salmon" or provide a recommended range for the proposed OEG. It would result in less timely inseason management due to time needed to estimate daily counts of large fish. While a sonar project can measure each fish daily, estimating daily counts of large fish on a weir project like Deshka would require collecting a sub sample and applying those samples over several days of daily counts to determine the estimate. This would likely involve technician time not currently funded in order to sample king salmon daily. Postseason estimates of large fish would likely differ from inseason counts due to the estimation process. Inseason run projections may be less accurate due to unknown differences in run timing of large fish vs run timing of all fish. Sport harvest of king salmon is not currently assessed by size, so estimates of the total run of Deshka River king salmon by size would be problematic.

BACKGROUND: A stock assessment project was implemented on the Deshka River in 1995; the weir program has continued to present day and has allowed for timely inseason management of the sport fishery and collection of biological data that has been used to set escapement goals based on production models and forecasting. This data is fundamental to the recent state-space modeling that has led to total run reconstruction and assessment of production of Susitna River drainage king salmon back to 1977. The recommended BEG range of 9,000–18,000 fish is based on this model that estimates Smsy at 12,800 fish of all ages with a high degree of precision. Other recommended goals for the Eastside, Talkeetna, and Yentna stocks are also based on fish of all ages. Large fish goals have been developed as a next-best approach for other stocks of king salmon in Alaska (Kenai River early- and late-run, Crooked Creek, stocks in SEAK) primarily due to the departments inability to assess all sizes of king salmon for those stocks. Although it is understood that some of the fish from the youngest age class (1.1's) may pass thru the weir undetected, the current SEG and the recommended BEG are based on and assessed via counts of fish of all sizes ages.

The Deshka River, like other areas of the state, has experienced diminished returns of king salmon since 2007 (Figure 216-1) and a shift in age proportions to smaller younger fish. A SEG of 13,000-28,000 king salmon was established in 2002. In the past 10 years of diminished returns, the goal

was not achieved in 2008–2009 and 2017–2019 and achieved 2010–2016. The sport fishery was closed midseason 2008–2009 and 2017–2018 and closed preseason in 2019. A restrictive harvest fishery occurred other years, most often in the form of bait being restricted and the annual limit restricted to two king salmon over 20 inches in length.

DEPARTMENT COMMENTS: The department **is NEUTRAL** on this proposal. An escapement goal that includes all sizes and ages remains an appropriate goal for the Deshka River and one that can be assessed with the tools now in place. While the department has developed large fish escapement goals for king salmon to improve stock assessment, they may not be appropriate for all systems and the cost-benefit should be considered. Managing for a goal based on large fish is somewhat contrary to language in the SSFP that states the importance of all size ranges of fish and has the effect of de-valuing younger fish.

On the Kenai River, the decision to move to a large fish goal was based on the sonar's inability to differentiate between sockeye salmon and small king salmon and inriver netting program to obtain a representative sample of the run. Making inseason estimates of run size of large fish introduces a level of complexity and potential error that is unnecessary given the current weir assessment on the Deshka River. Additionally, the number of king salmon of all sizes harvested below the weir is estimated via the Statewide Harvest Survey. Combined with estimates of commercial harvest, this information is necessary to estimate the total return to the Deshka River. The total return estimate is used in conjunction with the weir count and associated age data to estimate the returns per spawner, which is critical to both setting of appropriate escapement goals and to forecasting future runs.

COST ANALYSIS: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery. Approval of this proposal may result in an additional direct cost for the department to assess the run for large king salmon.

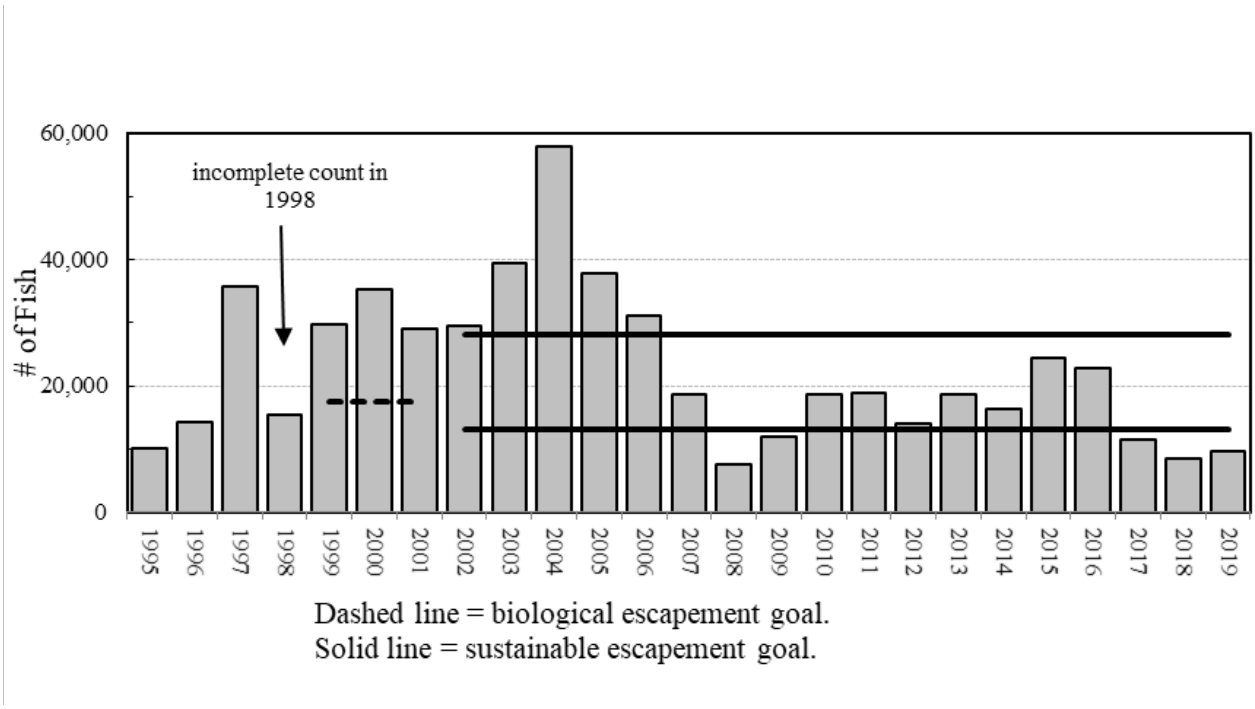

Figure 216-1.–Deshka River king salmon escapement, 1995–2019.

PROPOSAL 217 – Create a Deshka River King Salmon Fishery Management Plan.

5 AAC 61.XXX. New Title.

PROPOSED BY: Mat-Su Borough Fish and Wildlife Commission.

WHAT WOULD THE PROPOSAL DO? This would create a Deshka River King Salmon Fishery Management Plan that would provide the department direction and guidelines for management of the sport fishery.

WHAT ARE THE CURRENT REGULATIONS? The Deshka River king salmon sport fishery is open January 1 through July 13, from 6:00 a.m. until 11:00 p.m. each day. Only 1 king salmon over 20 inches in length is allowed per day with an annual limit of 5 king salmon over 20 inches in length. Bait is allowed beginning June 1. The department relies on established regulations and EO authority to manage king salmon fisheries during times of high or low abundance in order to achieve escapement goals.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This may increase predictability in actions the department is likely to take when restrictions or liberalizations to sport fisheries are warranted but management would likely not change appreciably because nearly all the prescribed actions are already being utilized by the department. It would provide one new management tool of being able to limit harvest to a maximum size limit of 28 inches in total length.

BACKGROUND: The Susitna River drainage, like other areas of the state, has experienced diminished returns of king salmon since 2007. Of 17 king salmon goals in NCI, performance had declined from achieving over 90% prior to 2007 (2002–2006) to about 40% (2007–2010). In 2011, the board made stock of concern (SOC) designations on 6 systems located in the WCI and Susitna River areas: Chuitna, Theodore, and Lewis rivers of WCI and Alexander Creek, Willow and Goose creeks of the Susitna River drainage. The board closed the Chuitna, Theodore, and Lewis rivers and Goose Creek and reduced fishing time within Unit 2 of the Eastside Susitna River Management Unit to reduce harvest by 50% in that unit. Only 24% of the NCIMA escapement goals were achieved in 2011 even with these changes in place, and further restrictions to sport and commercial fisheries were necessary to adequately address the areawide downturn (Table 217-1). Beginning in 2012, managers began to utilize a strategy that considered harvest reductions necessary to achieve escapement goals by management area and public input from stakeholder meetings. Public meetings early in the downturn of production revealed that a full season of fishing opportunity, even though highly restrictive, was preferred over a less restrictive season that would likely be interrupted by midseason closures. Midseason closures had created a situation of less predictable fisheries 2008–2011 and harvesting out of proportion to the run. The goal became to maximize fishing opportunity while conserving stocks and decreasing the potential for midseason closures. Beginning 2012, harvest reductions were implemented by EO prior to the start of the season and have varied by area, from 100% reduction in the Eastside Susitna area to a 60% reduction on the Yentna River drainage to less than 25% on the Deshka River (Table 217-2, Table 217-3). Harvest reductions have been based upon the level needed to achieve escapement goals in the various areas based off the immediate past 2 to 3 years of harvest and escapement data. In addition, consideration

has been given to potential shifts in effort due to some areas being more restrictive than other areas. Managing by EO has allowed for intricate, finer detailed management and the greatest potential for maximizing opportunities. The department has attempted to keep actions similar from year to year within each unit of the Susitna River Drainage to provide consistency for those planning fishing trips.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the implementation of this management plan. Although the department currently has the necessary tools, except for the authority to implement a size limit harvest restriction, to manage king salmon sport fisheries in the Susitna River drainage, the plan may provide consistency and predictability in actions taken by the department while managing king salmon fisheries may be beneficial to users for trip planning. A plan of management actions under various abundance scenarios negates the need for regulatory change, leaving current regulations to reflect times of average production. The department does not oppose the addition of a new management tool of being able to limit harvest to a maximum size limit of 28 inches in total length, which could increase the harvest of king salmon less than 28 inches in total length.

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

Table 217-1.–History of achieving king salmon escapement goals in NCI, 2006–2019.

System	Goal Range		Escapement													
	Lower	Upper	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
					Beginning of downturn				Beginning conservative management							
Knik Arm																
Little Susitna River (weir)	2,300	3,900												2,531	NC	3,666
Little Susitna River	900	1,800	1,855	1,731	1,297	1,028	589	887	1,154	1,651	1,759	1,507	1,622	1,192	530	NC
Eastside Susitna																
Willow Creek	1,600	2,800	2,193	1,373	1,255	1,133	1,173	1,061	756	1,752	1,335	2,046	1,814	1,329	411	897
Little Willow Creek	450	1,800	816	1,103	NC	776	468	713	494	858	684	788	675	840	280	631
Sheep Creek	600	1,200	580	400	NC	500	NC	350	363	NC	262	NC	NC	NC	334	NC
Goose Creek	250	650	306	105	117	65	76	80	57	62	232	NC	NC	148	90	NC
Montana Creek	1,100	3,100	1,850	1,936	1,357	1,460	755	494	416	1,304	953	1,416	692	603	473	789
Clear (Chunilna) Creek	950	3,400	1,520	3,310	1,795	1,205	903	512	1,177	1,471	1,390	1,205	NC	780	940	1,511
Prairie Creek	3,100	9,200	3,570	5,036	3,039	3,500	3,022	2,038	1,185	3,304	2,812	3,209	1,853	1,930	1,194	2,371
Chulitna River	1,800	5,100	2,862	5,166	2,514	2,093	1,052	1,875	667	1,262	1,011	3,137	1,151	NC	1,125	2,765
Westside Susitna																
Alexander Creek	2,100	6,000	885	480	150	275	177	343	181	588	911	1,117	754	170	296	1,297
Deshka River (weir)	13,000	28,000	31,150	18,714	7,533	11,967	18,594	19,026	14,010	18,531	16,335	24,316	22,774	11,383	8,549	9,711
Peters Creek	1,000	2,600	1,114	1,225	NC	1,283	NC	1,103	459	1,643	1,443	1,514	1,122	307	NC	1,209
Lake Creek	2,500	7,100	5,300	4,081	2,004	1,394	1,617	2,563	2,366	3,655	3,506	4,686	3,588	1,601	1,767	2,692
Talachulitna River	2,200	5,000	6,152	3,871	2,964	2,608	1,499	1,368	847	2,285	2,256	2,582	4,295	1,087	1,483	3,225
West Cook Inlet																
Lewis River	250	800	341	0[a]	120	111	56	92	107	61	61	5[a]	0[a]	0[a]	0[a]	0[a]
Theodore River	500	1,700	958	486	345	352	202	327	179	476	312	426	68	21	18	201
Chuitna River	1,200	2,900	1,911	1,180	586	1,040	735	719	502	1,690	1,398	1,965	1,372	235	939	2,115

means missed goal.

[a] Lewis River diverged into muskeg 1/2 mi. below bridge; intermittant connection with Cook Inlet.

Table 217-2.–Preseason and inseason emergency orders issued to manage king salmon fisheries in NCI, 2012–2019.

Little Susitna		
	Preseason EOs	Inseason EOs
2012	annual 2; single hook only; harvest Fri - Mon (4 days)	closed June 15
2013	annual 2; single hook only; harvest Sat - Mon (3 days)	none
2014	same as 2013	reinstated 7 days/wk July 4
2015	same as 2013	reinstated 7 days/wk June 19; restored to regulation June 27; liberalized adding bait July 3
2016	annual 2; single hook only; harvest Fri - Mon (4 days)	restored to regulation June 27; liberalized adding bait July 6
2017	annual 2 only	closed July 1
2018	annual 2; single hook only; harvest Fri - Mon (4 days)	restricted to C & R June 15; closed June 22
2019	closed	restored to regulation June 26
Deshka River		
	Preseason EOs	Inseason EOs
2012	annual 2	closed June 25
2013	annual 2; single hook artificial only	reinstated bait June 29
2014	same as 2013	reinstated bait June 14
2015	same as 2013	reinstated bait June 13; restored to regulation June 27
2016	annual 2	restored to regulation June 11
2017	none	closed to bait June 23; closed July 4
2018	C & R only; single hook artificial only	closed June 22
2019	closed	
Eastside Susitna area (units 2, 3, 5, 6)		
	Preseason EOs	Inseason EOs
2012	annual 2; single hook only; harvest through second Monday, then C&R only on weekends	closed June 25
2013	C & R only; single hook only	none
2014	same as 2013	none
2015	same as 2013	none
2016	same as 2013	none
2017	same as 2013	closed July 4
2018	closed	none
2019	closed	none

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Table 217-2.–Page 2 of 2.

Yentna River

	Preseason EOs	Inseason EOs
2012	annual 2	closed June 25
2013	annual 2; single hook only; harvest Fri - Mon (4 days)	none
2014	same as 2013	none
2015	same as 2013	none
2016	same as 2013	none
2017	same as 2013	closed July 4
2018	C & R only; single hook only	closed June 22
2019	closed	

Talachulitna River

	Preseason EOs	Inseason EOs
2012	annual 2	closed June 25
2013	C & R only; single hook only	none
2014	same as 2013	none
2015	same as 2013	none
2016	same as 2013	none
2017	annual 2; single hook only; harvest Fri - Mon (4 days)	closed July 4
2018	C & R only; single hook only	closed June 22
2019	closed	

Table 217-3.–King salmon sport harvest reduction by area as a result of emergency restrictions in the Northern Cook Inlet area, 2012–2019.

		Susitna River Drainage					
Harvest reductions	Little Susitna	Deshka River	Unit 2 streams	Talkeenta River	Yentna drainage	Talachulitna River	Total [a]
Average low year harvest (2009-2011)	1,123	2,414	1,238	1,361	3,210	325	9,653
2012 Target reduction	50%	22%	90%	25%	45%		50%
2012 harvest	216	1,650	35	113	875	17	2,944
2012 Actual % reduction	81%	32%	97%	92%	73%	95%	70% [b]
2013 Target reduction	75%	50%	100%	100%	60%	100%	70-75%
2013 harvest	336	1,087	0	0	1,340	0	2,781
2013 Actual % reduction	70%	55% [c]	100%	100%	58%	100%	71%
2014 Target reduction	75%	50%	100%	100%	60%	100%	70-75%
2014 harvest	437	1,329	0	0	689	0	2,486
2014 Actual % reduction	61%	45%	100%	100%	79%	100%	74%
2015 Target reduction	75%	50%	100%	100%	60%	100%	70-75%
2015 harvest	672	1,927	0	0	1,544	0	4,549
2015 Actual % reduction	40%	20%	100%	100%	52%	100%	53% [d]
2016 Target reduction	50%	20%	100%	100%	60%	100%	60%
2016 harvest	1,005	2,899	0	0	1,467	0	5,762
2016 Actual % reduction	11%	0%	100%	100%	54%	100%	40% [d]
2017 Target reduction	15%	0%	100%	100%	60%	60%	40-50%
2017 harvest	351	1,392	0	0	913	140	2,901
2017 Actual % reduction	69%	42%	100%	100%	72%	57%	70% [b]
2018 Target reduction	50%	100%	100%	100%	100%	100%	99%
2018 harvest	37	0	0	0	0	0	37
2018 Actual % reduction	97%	100%	100%	100%	100%	100%	99.6%
2019 Target reduction	100%	100%	100%	100%	100%	100%	100%
2019 harvest	113 [e]	0	0	0	0	0	113
2019 Actual % reduction	90%	100%	100%	100%	100%	100%	98.8%

[a] does not include harvest from the stocked Eklutna Tailrace.

[b] midseason closures resulted in further harvest reduction than targeted.

[c] unusually warm water temperatures and low water levels likely influenced low fishing success.

[d] relaxation of restrictions during the season on Deshka and Little Susinta rivers may have resulted in less harvest reduction than targeted.

[e] estimated harvest.

PROPOSAL 215 – Create a Susitna and Yentna King Salmon Fishery Management Plan.

5 AAC 61.XXX. New Title.

PROPOSED BY: Mat-Su Borough Fish and Wildlife Commission.

WHAT WOULD THE PROPOSAL DO? This would create a Susitna and Yentna rivers King Salmon Fishery Management Plan to document actions currently used to manage sport fisheries and provide an additional management tool: size restriction.

WHAT ARE THE CURRENT REGULATIONS? Across the Susitna River drainage king salmon fishing is open January 1 through July 13, 6:00 a.m. – 11:00 p.m. each day. Only 1 king salmon over 20 inches in length is allowed per day and an annual limit of 5 king salmon over 20 inches in length applies. There are some exceptions. General regulations for Unit 2 (Parks Highway streams) allow fishing through the third Monday in June and then on Saturdays–Mondays only through July 13. On the Deshka River, bait is allowed beginning June 1. The department relies on established regulations and EO authority to manage king salmon fisheries during times of high or low abundance in order to achieve escapement goals.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? May increase predictability in actions the department is likely to take when restrictions or liberalizations to sport fisheries are warranted but management would likely not change appreciably because nearly all the prescribed actions are already being utilized by the department. It would provide one new management tool of being able to limit harvest to a maximum size limit of 28 inches in total length, which could increase the harvest of king salmon less than 28 inches in total length.

BACKGROUND: The Susitna River drainage, like other areas of the state, has experienced diminished returns of king salmon since 2007. Of 17 king salmon goals in NCI, performance had declined from achieving over 90% prior to 2007 (2002–2006) to about 40% (2007–2010). In 2011, the board made stock of concern (SOC) designations on 6 systems located in the WCI and Susitna River areas: Chuitna, Theodore, and Lewis rivers of WCI and Alexander Creek, Willow and Goose creeks of the Susitna River drainage. The board closed the Chuitna, Theodore, and Lewis rivers and Goose Creek to sport fishing for king salmon and reduced sport fishing time within Unit 2 of the Eastside Susitna River Management Unit in an effort to reduce harvest by 50% in that unit. Only 24% of the NCIMA escapement goals were achieved in 2011 even with these changes in place, and further restrictions to sport and commercial fisheries were necessary to adequately address the areawide downturn (Table 215-1). Beginning in 2012, managers began to utilize a strategy that considered harvest reductions necessary to achieve escapement goals by management area and public input from stakeholder meetings. Public meetings early in the downturn of production revealed that a full season of fishing opportunity, even though highly restrictive, was preferred over a less restrictive season that would likely be interrupted by midseason closures. Midseason closures had created a situation of less predictable fisheries 2008–2011 and harvesting out of proportion to the run. The goal became to maximize fishing opportunity while conserving stocks and decreasing the potential for midseason closures. Beginning in 2012, harvest reductions were implemented by EO prior to the start of the season and have varied by area, from 100% reduction in the Eastside Susitna area to a 60% reduction on the Yentna River drainage to less than

25% on the Deshka River (Table 215-2; Table 215-3). Harvest reductions have been based upon the level needed to achieve escapement goals in the various areas based off the immediate past 2 to 3 years of harvest and escapement data. In addition, consideration has been given to potential shifts in effort due to some areas being more restrictive than other areas. Managing by EO has allowed for more precise management and the greatest potential for maximizing opportunities. The department has attempted to keep actions similar from year to year within each unit of the Susitna River Drainage management area to provide consistency for anglers planning fishing trips.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the implementation of this management plan. Although the department currently has the necessary tools, except for the authority to implement a size limit harvest restriction, to manage king salmon sport fisheries in the Susitna River drainage, the plan may provide consistency and predictability in actions taken by the department while managing king salmon fisheries may be beneficial to users for trip planning. A plan of management actions under various abundance scenarios negates the need for regulatory change, leaving current regulations to reflect times of average production. The department does not oppose the addition of a new management tool of being able to limit harvest to a maximum size limit of 28 inches in total length, which could increase the harvest of king salmon less than 28 inches in total length.

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

Table 215-1.–History of achieving king salmon escapement goals in NCI, 2006–2019.

System	Goal Range		Escapement													
	Lower	Upper	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
					Beginning of downturn				Beginning conservative management							
Knik Arm																
Little Susitna River (weir)	2,300	3,900												2,531	NC	3,666
Little Susitna River	900	1,800	1,855	1,731	1,297	1,028	589	887	1,154	1,651	1,759	1,507	1,622	1,192	530	NC
Eastside Susitna																
Willow Creek	1,600	2,800	2,193	1,373	1,255	1,133	1,173	1,061	756	1,752	1,335	2,046	1,814	1,329	411	897
Little Willow Creek	450	1,800	816	1,103	NC	776	468	713	494	858	684	788	675	840	280	631
Sheep Creek	600	1,200	580	400	NC	500	NC	350	363	NC	262	NC	NC	NC	334	NC
Goose Creek	250	650	306	105	117	65	76	80	57	62	232	NC	NC	148	90	NC
Montana Creek	1,100	3,100	1,850	1,936	1,357	1,460	755	494	416	1,304	953	1,416	692	603	473	789
Clear (Chunilna) Creek	950	3,400	1,520	3,310	1,795	1,205	903	512	1,177	1,471	1,390	1,205	NC	780	940	1,511
Prairie Creek	3,100	9,200	3,570	5,036	3,039	3,500	3,022	2,038	1,185	3,304	2,812	3,209	1,853	1,930	1,194	2,371
Chulitna River	1,800	5,100	2,862	5,166	2,514	2,093	1,052	1,875	667	1,262	1,011	3,137	1,151	NC	1,125	2,765
Westside Susitna																
Alexander Creek	2,100	6,000	885	480	150	275	177	343	181	588	911	1,117	754	170	296	1,297
Deshka River (weir)	13,000	28,000	31,150	18,714	7,533	11,967	18,594	19,026	14,010	18,531	16,335	24,316	22,774	11,383	8,549	9,711
Peters Creek	1,000	2,600	1,114	1,225	NC	1,283	NC	1,103	459	1,643	1,443	1,514	1,122	307	NC	1,209
Lake Creek	2,500	7,100	5,300	4,081	2,004	1,394	1,617	2,563	2,366	3,655	3,506	4,686	3,588	1,601	1,767	2,692
Talachulitna River	2,200	5,000	6,152	3,871	2,964	2,608	1,499	1,368	847	2,285	2,256	2,582	4,295	1,087	1,483	3,225
West Cook Inlet																
Lewis River	250	800	341	0[a]	120	111	56	92	107	61	61	5[a]	0[a]	0[a]	0[a]	0[a]
Theodore River	500	1,700	958	486	345	352	202	327	179	476	312	426	68	21	18	201
Chuitna River	1,200	2,900	1,911	1,180	586	1,040	735	719	502	1,690	1,398	1,965	1,372	235	939	2,115

means missed goal.

[a] Lewis River diverged into muskeg 1/2 mi. below bridge; intermittant connection with Cook Inlet.

Table 215-2.–Preseason and inseason emergency orders issued to manage king salmon fisheries in NCI, 2012–2019.

Little Susitna		
	Preseason EOs	Inseason EOs
2012	annual 2; single hook only; harvest Fri - Mon (4 days)	closed June 15
2013	annual 2; single hook only; harvest Sat - Mon (3 days)	none
2014	same as 2013	reinstated 7 days/wk July 4
2015	same as 2013	reinstated 7 days/wk June 19; restored to regulation June 27; liberalized adding bait July 3
2016	annual 2; single hook only; harvest Fri - Mon (4 days)	restored to regulation June 27; liberalized adding bait July 6
2017	annual 2 only	closed July 1
2018	annual 2; single hook only; harvest Fri - Mon (4 days)	restricted to C & R June 15; closed June 22
2019	closed	restored to regulation June 26

Deshka River		
	Preseason EOs	Inseason EOs
2012	annual 2	closed June 25
2013	annual 2; single hook artificial only	reinstated bait June 29
2014	same as 2013	reinstated bait June 14
2015	same as 2013	reinstated bait June 13; restored to regulation June 27
2016	annual 2	restored to regulation June 11
2017	none	closed to bait June 23; closed July 4
2018	C & R only; single hook artificial only	closed June 22
2019	closed	

Eastside Susitna area (units 2, 3, 5, 6)		
	Preseason EOs	Inseason EOs
2012	annual 2; single hook only; harvest through second Monday, then C&R only on weekends	closed June 25
2013	C & R only; single hook only	none
2014	same as 2013	none
2015	same as 2013	none
2016	same as 2013	none
2017	same as 2013	closed July 4
2018	closed	none
2019	closed	none

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Table 215-2.–Page 2 of 2.

Yentna River

	Preseason EOs	Inseason EOs
2012	annual 2	closed June 25
2013	annual 2; single hook only; harvest Fri - Mon (4 days)	none
2014	same as 2013	none
2015	same as 2013	none
2016	same as 2013	none
2017	same as 2013	closed July 4
2018	C & R only; single hook only	closed June 22
2019	closed	

Talachulitna River

	Preseason EOs	Inseason EOs
2012	annual 2	closed June 25
2013	C & R only; single hook only	none
2014	same as 2013	none
2015	same as 2013	none
2016	same as 2013	none
2017	annual 2; single hook only; harvest Fri - Mon (4 days)	closed July 4
2018	C & R only; single hook only	closed June 22
2019	closed	

Table 215-3.–King salmon sport harvest reduction by area as a result of emergency restrictions in the Northern Cook Inlet area, 2012–2019.

		Susitna River Drainage					
Harvest reductions	Little Susitna	Deshka River	Unit 2 streams	Talkeenta River	Yentna drainage	Talachulitna River	Total [a]
Average low year harvest (2009-2011)	1,123	2,414	1,238	1,361	3,210	325	9,653
2012 Target reduction	50%	22%	90%	25%	45%		50%
2012 harvest	216	1,650	35	113	875	17	2,944
2012 Actual % reduction	81%	32%	97%	92%	73%	95%	70% [b]
2013 Target reduction	75%	50%	100%	100%	60%	100%	70-75%
2013 harvest	336	1,087	0	0	1,340	0	2,781
2013 Actual % reduction	70%	55% [c]	100%	100%	58%	100%	71%
2014 Target reduction	75%	50%	100%	100%	60%	100%	70-75%
2014 harvest	437	1,329	0	0	689	0	2,486
2014 Actual % reduction	61%	45%	100%	100%	79%	100%	74%
2015 Target reduction	75%	50%	100%	100%	60%	100%	70-75%
2015 harvest	672	1,927	0	0	1,544	0	4,549
2015 Actual % reduction	40%	20%	100%	100%	52%	100%	53% [d]
2016 Target reduction	50%	20%	100%	100%	60%	100%	60%
2016 harvest	1,005	2,899	0	0	1,467	0	5,762
2016 Actual % reduction	11%	0%	100%	100%	54%	100%	40% [d]
2017 Target reduction	15%	0%	100%	100%	60%	60%	40-50%
2017 harvest	351	1,392	0	0	913	140	2,901
2017 Actual % reduction	69%	42%	100%	100%	72%	57%	70% [b]
2018 Target reduction	50%	100%	100%	100%	100%	100%	99%
2018 harvest	37	0	0	0	0	0	37
2018 Actual % reduction	97%	100%	100%	100%	100%	100%	99.6%
2019 Target reduction	100%	100%	100%	100%	100%	100%	100%
2019 harvest	113 [e]	0	0	0	0	0	113
2019 Actual % reduction	90%	100%	100%	100%	100%	100%	98.8%

[a] does not include harvest from the stocked Eklutna Tailrace.

[b] midseason closures resulted in further harvest reduction than targeted.

[c] unusually warm water temperatures and low water levels likely influenced low fishing success.

[d] relaxation of restrictions during the season on Deshka and Little Susinta rivers may have resulted in less harvest reduction than targeted.

[e] estimated harvest.

PROPOSAL 219 – Create a Little Susitna River King Salmon Fishery Management Plan.

5 AAC 60.XXX. New Title.

PROPOSED BY: Mat-Su Borough Fish and Wildlife Commission.

WHAT WOULD THE PROPOSAL DO? This would create a Little Susitna River King Salmon Fishery Management Plan.

WHAT ARE THE CURRENT REGULATIONS? The Little Susitna River king salmon sport fishery is open from January 1 through July 13, from 6:00 a.m. until 11:00 p.m. each day. Only 1 king salmon over 20 inches is allowed per day with an annual limit of 5 king salmon over 20 inches in length. Only unbaited artificial lures are allowed October 1–August 5. The department relies on established regulations and emergency order authority to manage king salmon fisheries during times of high or low abundance in order to achieve escapement goals.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This may increase predictability in actions the department is likely to take when restrictions or liberalizations to sport fisheries are warranted, but management would likely not change appreciably because nearly all the prescribed actions are already being utilized by the department.

BACKGROUND: Beginning in 2012, a management strategy was developed and preseason action taken to reduce harvest up to 50% across the Susitna and Little Susitna drainages (Table 219-1) in an effort to address the king salmon downturn with a variety of restrictions that would spread harvest evenly across the season and provide consistent fishing opportunity throughout the season. A reduction of 50% on the Little Susitna River was based on the 2012 run being similar in size to the 2010 and 2011 runs. There is no formal forecast for Little Susitna king salmon. The preseason strategy in 2012 restricted harvest to 4 days per week (Friday–Mondays) and allowed catch-and-release fishing on the other 3 days of the week (Tuesdays–Thursdays); the annual limit was reduced from 5 to 2 king salmon over 20 inches and gear restricted to single hook only (Table 219-2). The 2012 run was smaller than anticipated and closure of the fishery by June 15 was necessary to achieve the SEG (Table 219-3). The result was an 80% reduction in harvest (Table 219-1). The strategy for 2013 was based on the outcome of the 2012 season and targeted a 75% harvest reduction. The restrictions imposed were similar to 2012 except Fridays were removed as a harvest day (harvest was allowed Saturdays–Mondays; catch-and-release Tuesdays–Fridays). The SEG was achieved in 2013. The same preseason emergency restrictions were used to manage the fishery for the next three years (2014–2016) with the SEG achieved in each year. Given successes in attaining the goal in these years and even reversing preseason actions and liberalizing the fishery 2015–2016 by the end of the season, the expectation for 2017 was to continue the upward trend. However, and unforeseen, was that brood years 2013 and 2014 would produce weaker returns that would reverse this trend. Various restrictions have been implemented since 2016 both preseason and inseason in order to attain the goal. The goal was achieved in 2017 after eventual closure of the fishery, missed in 2018, and again achieved in 2019. The 3-4 day per week harvest scenario has been the most common action taken to manage the fishery from the outset of the season since 2012. The weir has been an important inseason management tool to adjust or relax restrictions inseason and also postseason, as an indication of future run strength. With more

years of weir count and biological data, forecasting may become an option. The department has found no usable relationship between the Deshka River and Little Susitna River run size from which to manage Little Susitna king salmon based on the Deshka River forecast. For the immediate future, using immediate past years' escapements and successes in achieving the goal for directing the next years management strategy is the best approach in managing this fishery.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the implementation of this management plan. Although the department currently has the necessary tools, except for the authority to implement a size limit harvest restriction, to manage king salmon sport fisheries in the Susitna River drainage, the plan may provide consistency and predictability in actions taken by the department while managing king salmon fisheries may be beneficial to users for trip planning. A plan of management actions under various abundance scenarios negates the need for regulatory change, leaving current regulations to reflect times of average production. The department does not oppose the addition of a new management tool of being able to limit harvest to a maximum size limit of 28 inches in total length, which could increase the harvest of king salmon less than 28 inches in total length.

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

Table 219-1.–King salmon sport harvest reduction by area as a result of emergency restrictions in the Northern Cook Inlet area, 2012–2019.

		Susitna River Drainage					
Harvest reductions	Little Susitna	Deshka River	Unit 2 streams	Talkeenta River	Yentna drainage	Talachulitna River	Total [a]
Average low year harvest (2009-2011)	1,123	2,414	1,238	1,361	3,210	325	9,653
2012 Target reduction	50%	22%	90%	25%	45%		50%
2012 harvest	216	1,650	35	113	875	17	2,944
2012 Actual % reduction	81%	32%	97%	92%	73%	95%	70% [b]
2013 Target reduction	75%	50%	100%	100%	60%	100%	70-75%
2013 harvest	336	1,087	0	0	1,340	0	2,781
2013 Actual % reduction	70%	55% [c]	100%	100%	58%	100%	71%
2014 Target reduction	75%	50%	100%	100%	60%	100%	70-75%
2014 harvest	437	1,329	0	0	689	0	2,486
2014 Actual % reduction	61%	45%	100%	100%	79%	100%	74%
2015 Target reduction	75%	50%	100%	100%	60%	100%	70-75%
2015 harvest	672	1,927	0	0	1,544	0	4,549
2015 Actual % reduction	40%	20%	100%	100%	52%	100%	53% [d]
2016 Target reduction	50%	20%	100%	100%	60%	100%	60%
2016 harvest	1,005	2,899	0	0	1,467	0	5,762
2016 Actual % reduction	11%	0%	100%	100%	54%	100%	40% [d]
2017 Target reduction	15%	0%	100%	100%	60%	60%	40-50%
2017 harvest	351	1,392	0	0	913	140	2,901
2017 Actual % reduction	69%	42%	100%	100%	72%	57%	70% [b]
2018 Target reduction	50%	100%	100%	100%	100%	100%	99%
2018 harvest	37	0	0	0	0	0	37
2018 Actual % reduction	97%	100%	100%	100%	100%	100%	99.6%
2019 Target reduction	100%	100%	100%	100%	100%	100%	100%
2019 harvest	113 [e]	0	0	0	0	0	113
2019 Actual % reduction	90%	100%	100%	100%	100%	100%	98.8%

[a] does not include harvest from the stocked Eklutna Tailrace.

[b] midseason closures resulted in further harvest reduction than targeted.

[c] unusually warm water temperatures and low water levels likely influenced low fishing success.

[d] relaxation of restrictions during the season on Deshka and Little Susinta rivers may have resulted in less harvest reduction than targeted.

[e] estimated harvest.

Table 219-2.–Preseason and inseason emergency orders issued to manage king salmon fisheries in Little Susitna River, 2012-2019.

Little Susitna		
	Preseason EOs	Inseason EOs
2012	annual 2; single hook only; harvest Fri - Mon (4 days)	closed June 15
2013	annual 2; single hook only; harvest Sat - Mon (3 days)	none
2014	same as 2013	reinstated 7 days/wk July 4
2015	same as 2013	reinstated 7 days/wk June 19; restored to regulation June 27; liberalized adding bait July 3
2016	annual 2; single hook only; harvest Fri - Mon (4 days)	restored to regulation June 27; liberalized adding bait July 6
2017	annual 2 only	closed July 1
2018	annual 2; single hook only; harvest Fri - Mon (4 days)	restricted to C & R June 15; closed June 22
2019	closed	restored to regulation June 26

Table 219-3.–History of achieving king salmon escapement goals in NCI, 2006–2019.

System	Goal Range		Escapement													
	Lower	Upper	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
					Beginning of downturn				Beginning conservative management							
Knik Arm																
Little Susitna River (weir)	2,300	3,900												2,531	NC	3,666
Little Susitna River	900	1,800	1,855	1,731	1,297	1,028	589	887	1,154	1,651	1,759	1,507	1,622	1,192	530	NC
Eastside Susitna																
Willow Creek	1,600	2,800	2,193	1,373	1,255	1,133	1,173	1,061	756	1,752	1,335	2,046	1,814	1,329	411	897
Little Willow Creek	450	1,800	816	1,103	NC	776	468	713	494	858	684	788	675	840	280	631
Sheep Creek	600	1,200	580	400	NC	500	NC	350	363	NC	262	NC	NC	NC	334	NC
Goose Creek	250	650	306	105	117	65	76	80	57	62	232	NC	NC	148	90	NC
Montana Creek	1,100	3,100	1,850	1,936	1,357	1,460	755	494	416	1,304	953	1,416	692	603	473	789
Clear (Chunilna) Creek	950	3,400	1,520	3,310	1,795	1,205	903	512	1,177	1,471	1,390	1,205	NC	780	940	1,511
Prairie Creek	3,100	9,200	3,570	5,036	3,039	3,500	3,022	2,038	1,185	3,304	2,812	3,209	1,853	1,930	1,194	2,371
Chulitna River	1,800	5,100	2,862	5,166	2,514	2,093	1,052	1,875	667	1,262	1,011	3,137	1,151	NC	1,125	2,765
Westside Susitna																
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Deshka River (weir)	13,000	28,000	31,150	18,714	7,533	11,967	18,594	19,026	14,010	18,531	16,335	24,316	22,774	11,383	8,549	9,711
Peters Creek	1,000	2,600	1,114	1,225	NC	1,283	NC	1,103	459	1,643	1,443	1,514	1,122	307	NC	1,209
Lake Creek	2,500	7,100	5,300	4,081	2,004	1,394	1,617	2,563	2,366	3,655	3,506	4,686	3,588	1,601	1,767	2,692
Talachulitna River	2,200	5,000	6,152	3,871	2,964	2,608	1,499	1,368	847	2,285	2,256	2,582	4,295	1,087	1,483	3,225
West Cook Inlet																
Lewis River	250	800	341	0[a]	120	111	56	92	107	61	61	5[a]	0[a]	0[a]	0[a]	0[a]
Theodore River	500	1,700	958	486	345	352	202	327	179	476	312	426	68	21	18	201
Chuitna River	1,200	2,900	1,911	1,180	586	1,040	735	719	502	1,690	1,398	1,965	1,372	235	939	2,115

means missed goal.

[a] Lewis River diverged into muskeg 1/2 mi. below bridge; intermittant connection with Cook Inlet.

Northern District King Salmon Management Plan (4 proposals)

PROPOSAL 199 – Modify the Northern District King Salmon Management Plan.

5AAC 21.366. Northern District king salmon management plan.

PROPOSED BY: Mat-Su Borough Fish and Wildlife Commission/Mike Wood.

WHAT WOULD THE PROPOSAL DO? This would modify the *Northern District King Salmon Management Plan (NDKSMP)* by adding three new provisions (a)(12)–(a)(14) and amending provision (a)(10). Specifically, this proposal seeks to modify the NDKSMP as follows:

1. Close the entire Northern District (ND) commercial king salmon fishery if the Deshka River sport fishery is restricted to nonretention.
2. Restrict the entire ND king salmon commercial fishery to a maximum of 6 hours per period if the Deshka River sport fishery is limited to harvest of king salmon less than 28 inches total length.
3. Close the commercial king salmon fishery in Statistical Areas 247-41 to 247-43 in the General Subdistrict of the ND (Figure 199-1) if the Little Susitna River king salmon sport fishery is closed or restricted to nonretention.
4. Restrict the commercial king salmon fishery to no more than 6 hours per period in Statistical Areas 247-41 to 247-43 in the General Subdistrict of the ND if the sport fishery in the Little Susitna River is restricted to harvest of king salmon less than 28 inches total length.
5. Provide an option to close the entire ND commercial king salmon fishery if the inseason escapement projections in the Deshka River is below the sustainable escapement goal (SEG). This action is not specific to a closure in the sport fishery.
6. Provide an option to restrict the ND commercial king salmon fishery in Statistical Areas 247-41to 247-43 of the General Subdistrict to no more than 6 hours per period if the inseason escapement projection in the Little Susitna River is below the SEG. This action is not specific to a closure in the sport fishery.

WHAT ARE THE CURRENT REGULATIONS? The *NDKSMP* regulates the directed king salmon commercial fishery in the ND of UCI. The purpose of the plan is to ensure an adequate escapement of king salmon into ND drainages and to provide management guidelines to the department. The department shall manage ND king salmon stocks primarily for sport and guided sport uses in order to provide sport and guided sport fishermen with a reasonable opportunity to harvest these salmon over the entire run as measured by the frequency of inriver restrictions.

The directed commercial king salmon season opens the first Monday on or after May 25 and continues through June 24, unless closed earlier by emergency order (EO). Fishing periods are Mondays only from 7:00 a.m. to 7:00 p.m. Harvest may not exceed 12,500 king salmon, which was estimated to be 10% of the annual Susitna River king salmon run when the management plan was adopted in 1986. Permit holders are allowed only one 35-fathom set gillnet with a mesh size not to exceed six inches and may not operate nets within 1,200 feet seaward of another set gillnet.

Other provisions in the plan include:

(8) from May 25 through June 24, the area from an ADF&G regulatory marker located one mile south of the Theodore River to the Susitna River is open to fishing the second regular Monday period only;
(9) if the Theodore, Lewis, or Ivan River is closed to sport fishing, the commissioner shall close, by emergency order, the area from an ADF&G regulatory marker located one mile south of the Theodore River to the Susitna River to commercial king salmon fishing for the remainder of the fishing periods provided for under this section;
(10) if the Deshka River is closed to sport fishing, the commissioner shall close, by emergency order, the commercial king salmon fishery throughout the Northern District for the remainder of the fishing periods provided for under this section; and
(11) if the Chuitna River is closed to sport fishing, the commissioner shall close, by emergency order, the area from a point at the wood chip dock to the Susitna River (~20 miles) to commercial king salmon fishing for the remainder of the directed king salmon fishery.
(b) The commissioner may depart from the provisions of the management plan under this section as provided in 5 AAC 21.363(e).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This may reduce the number of open hours in the ND commercial fishery, or close the fishery, which may result in a reduction of ND commercial king salmon harvest to an unknown extent. This provides additional options to restrict or close the ND commercial fishery when inseason escapement projections are below the king salmon SEGs for the Deshka and Little Susitna rivers, which may also reduce harvest in the ND commercial king salmon fishery. Effects of this proposal to Northern Cook Inlet (NCI) sport fisheries are difficult to determine because it is unlikely the department would use this option since king salmon between 20 inches and 28 inches in length contribute to the escapement goals that have been developed to include these age classes. The department would continue to use its emergency order authority to manage the sport fisheries to achieve escapement goals.

BACKGROUND: The department is recommending new king salmon escapement goals for the Susitna River by dividing the drainage into four distinct management units, each with its own escapement goal.

The *NDKSMP* was first adopted in 1986 and has been modified at various board meetings since. In 2002, the season opening date was changed from the first Monday on or after June 1 to the first Monday on or after May 25. The number of fishing periods remained at three with only one period open in that area from an ADF&G regulatory marker located one mile south of Theodore River to the Susitna River. In 2005, the number of commercial fishing periods remained the same, but the length of those periods was increased from six to 12 hours in duration. In 2008, the number of fishing periods was increased from three periods per year, to four or five, dependent on the calendar year. The season opening date remained the same, but the closing date was changed to through June 24, unless closed by EO. The area from one mile south of the Theodore River to the Susitna River remained open to fishing for the second regular Monday period only.

Chronic inability to meet king salmon escapement goals on certain Susitna River drainage streams from 2008–2010 (Table 199-1) prompted the board to designate six king salmon stocks as Stocks

of Concern (SOC) in 2011. In response to the SOC designation, the board closed sport fishing in the Beluga, Theodore, Lewis, and Chuitna rivers beginning with the 2011 season. The board also modified the *NDKSMP* to close the ND set gillnet fishery from the wood chip dock to the Susitna River (Figure 199-2) if the sport fishery was closed in the Chuitna River. This area has remained closed to commercial fishing during ND directed king salmon fishery since 2011. The board also took action to reduce the sport harvest within Unit 2 of the Susitna River drainage by removing a weekend of fishing, limiting fishing time to 6 a.m. to 11 p.m., closing Goose Creek to king salmon fishing, and closing the confluence of Alexander Creek to sport fishing for all species during the king salmon run. Board action in addition to EOs to restrict and close various sport fisheries in NCI (Table 199-2) were insufficient to achieve the majority of escapement goals, prompting further actions.

Since 2012, the department has implemented numerous additional restrictive actions in both sport and commercial fisheries in response to below-average king salmon runs throughout NCI. In the commercial fishery, restrictions have included reducing 12-hour fishing periods to six hours; closing one or more fishing periods during the directed king salmon fishery; and complete season closures, as was done in both 2018 and 2019 (Table 199-3). In sport fisheries, managers began to utilize a strategy that took into account harvest reductions necessary to achieve escapement goals by management area and public input from stakeholder meetings. As WCI streams with escapement goals had already been closed in regulation, the focus was on the Susitna and Little Susitna drainages, which remained open to harvest. Public meetings early on in the downturn of production revealed that a full season of fishing opportunity, even though highly restrictive, was preferred over a less restrictive season that would likely be interrupted by midseason closures. Midseason closures had created a situation of less predictable fisheries 2008-2011 and harvesting out of proportion to the run. The goal became to maximize fishing opportunity while conserving stocks and decreasing the potential for midseason closures. Beginning 2012, harvest reductions were implemented by EO (Table 199-4) prior to the start of the season and have varied by area on the Susitna and Little Susitna drainages, from 100% reduction in the Eastside Susitna area to a 60% reduction on the Yentna River drainage to less than 25% on the Deshka River (Table 199-5). Harvest reductions have been based upon the level needed to achieve escapement goals in the various areas based off the immediate past two to three years of harvest and escapement data. In addition, consideration has been given to potential shifts in effort due to some areas being more restrictive than other areas. Harvest reductions off low run years preceding intensive management shows the effect of these EOs (Table 199-6) which collectively has averaged about 72% in sport fisheries and 33% in commercial fisheries. Reductions have been greatest since 2016 due to midseason closures in 2017 and 2018 and closure from the outset of the 2019 season in both sport and commercial fisheries.

From 1993–2008, an average of 55 commercial permit holders have participated in the ND king salmon fishery each year, with an average annual harvest of 2,465 fish (Tables 199-7 and 199-8). However, in the past 10 years (2009–2018), the average harvest declined to 1,429 fish per year (42% reduction) from an average of 46 permit holders. 1993 was the first year set gillnet fishermen were required to register (prior to fishing) to fish in one of three areas (ND, Upper Subdistrict, or Greater Cook Inlet) for the entire year (5 AAC 21.345). The registration requirement served to eliminate a common practice of fishing in multiple areas in UCI during the same year. Prior to the

requirement to register prior to fishing, the commercial king salmon harvest cap of 12,500 king salmon was reached one time, in 1986.

From 1993–2007, the average annual sport fish harvest of king salmon in the NCI area was approximately 28,000 fish (Table 199-8). Harvest diminished to 11,800 at the outset of the current period of low returns (2008-2011) and was further reduced since 2012 by preseason and inseason EOs to an average of 3,700 fish (87% reduction). Based on the most recent 10 year's harvest data, the directed commercial fishery averaged 21% of the harvest, while the sport fishery averaged 79% of the ND king salmon harvest. Harvest reductions in both sport and commercial fisheries are consistent with the recent decline in king salmon production, a pattern common to many Alaskan king salmon stocks.

The ND commercial king salmon fishery was sampled for genetic mixed stock analysis from 2014–2016 (Tables 199-9, 199-10, and 199-11). The ND commercial harvest of the Susitna/Matanuska reporting group (Figure 199-3) average averaged 530 fish per year from the 2014–2016 seasons (this assumes that unsampled harvest was the same stock composition as sampled harvest). King salmon originating from the NCI Northwest and Susitna/Matanuska reporting groups averaged 1,116 fish per season. Because the NCI Northwest reporting group includes king salmon from outside the Susitna River, it is not possible to genetically isolate Susitna River king salmon in the commercial setnet harvest. However, even if all of the king salmon from the NCI Northwest group was considered Susitna River king salmon, the estimated annual commercial harvest rate is approximately 1% of this stock based on king salmon population estimates in the Susitna River during 2014–2016 (Table 199-12). Subsistence harvest of Susitna River king salmon also averaged less than 1% per year. Sport fish harvest rates of Susitna River king salmon averaged 3% per year, for a total harvest rate from all three fisheries of 5%.

The department has conducted mark-recapture experiments to estimate abundance of adult king salmon in the Mainstem Susitna (Susitna River above the Yentna River confluence) and Yentna rivers (Table 199-13). Drainage-wide king salmon abundance estimates are only available for four years, 2014–2017, ranging from 63,000 to 137,000 fish. Yentna River estimates were not completed in 2013 or 2018, but abundance estimates in the Yentna River drainage ranged from 18,000–48,000 from 2014–2017. Mainstem Susitna River abundance estimates were completed from 2013–2018 and ranged from 31,000 to 89,000 king salmon. Spawning distribution in 2014 and 2015 indicated the major destinations were the combined Eastside Susitna River streams (17% and 20%), Deshka River (15% and 19%), Talkeetna River (15% and 10%), and Chulitna River (18% and 8%) (Table 199-14).

From 2002–2019 (18 years) king salmon escapement at the Deshka River weir was below the escapement goal five times (28%) and within or above the goal 13 years (72%) (Table 199-15). During the most recent 10 years (2010–2019), king salmon escapement in the Deshka River was below the goal range three years and within the goal range seven years.

Escapement on the Little Susitna River has traditionally been monitored by post season aerial survey to provide an index of spawning escapement (Figure 199-4). The goal was missed in 2010 after the sport fishery was closed late in the season (Table 199-1). A weir based SEG of 2,300 – 3,900 fish was introduced in 2017 as the primary goal unless the case of an incomplete count, in

which case the aerial goal is used to assess escapement. The weir-based goal was achieved in 2017 and 2019 and missed in 2018 after action was taken both preseason and inseason to restrict and eventually close the sport fishery (Figure 199-4; Table 199-5). Sport harvest (Figure 199-6) has likewise dropped precipitously from an average of 2,700 from 1993-2007 to 1,400 fish (average 2008-2011) at the outset of the downturn, to 440 fish (average 2012-2018) during the most recent period of more intense harvest reductions made by emergency order.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal. The department urges the board to provide additional guidance on how to manage commercial fisheries in light of actions it may take regarding management of inriver fisheries in the ND. For example, if the board opts to allow catch-and-release fishing at lower abundance levels, how should the department manage the commercial setnet fishery.

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

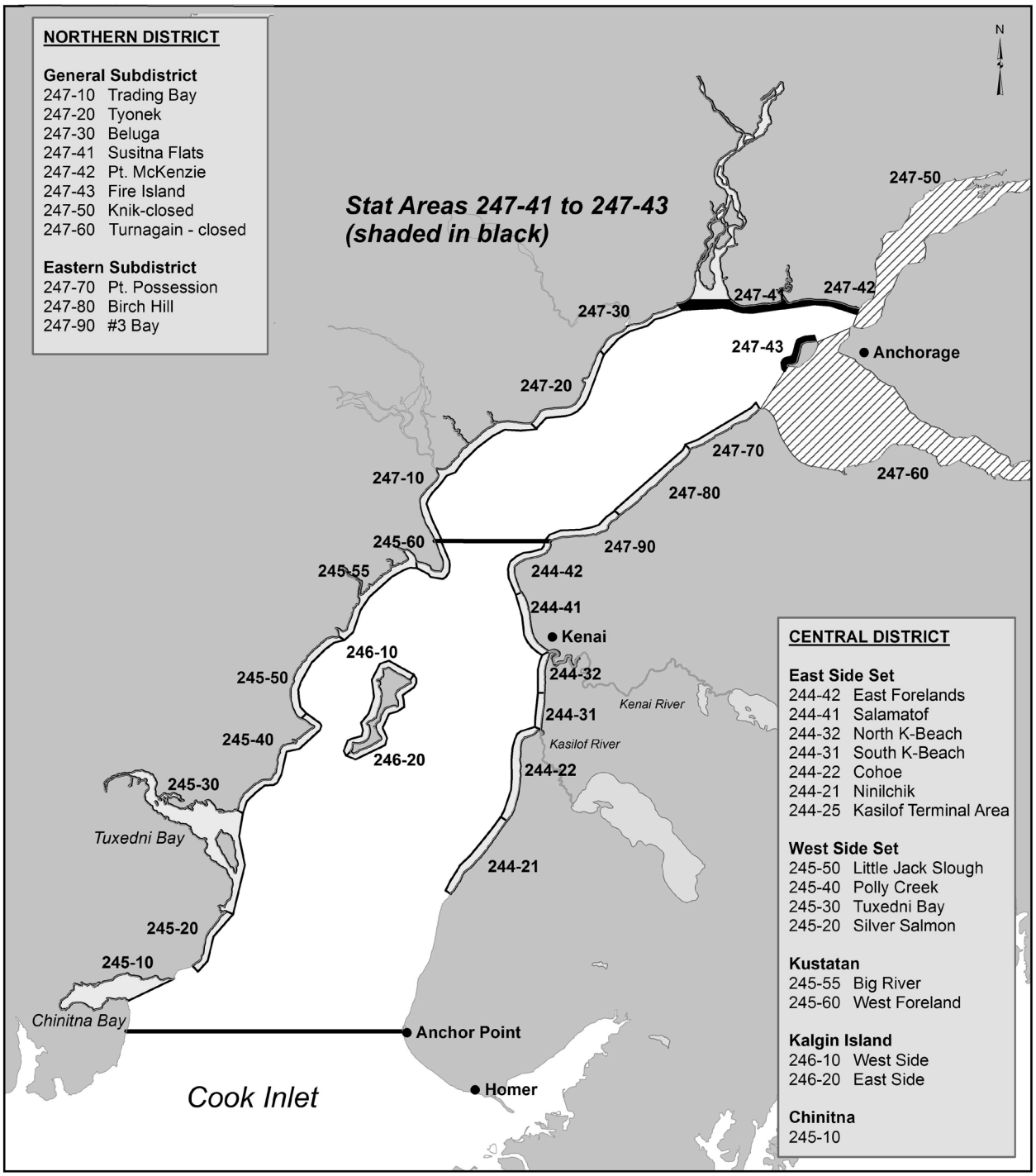

Figure 199-1.–Map of Upper Cook Inlet set gillnet commercial fishing statistical areas.

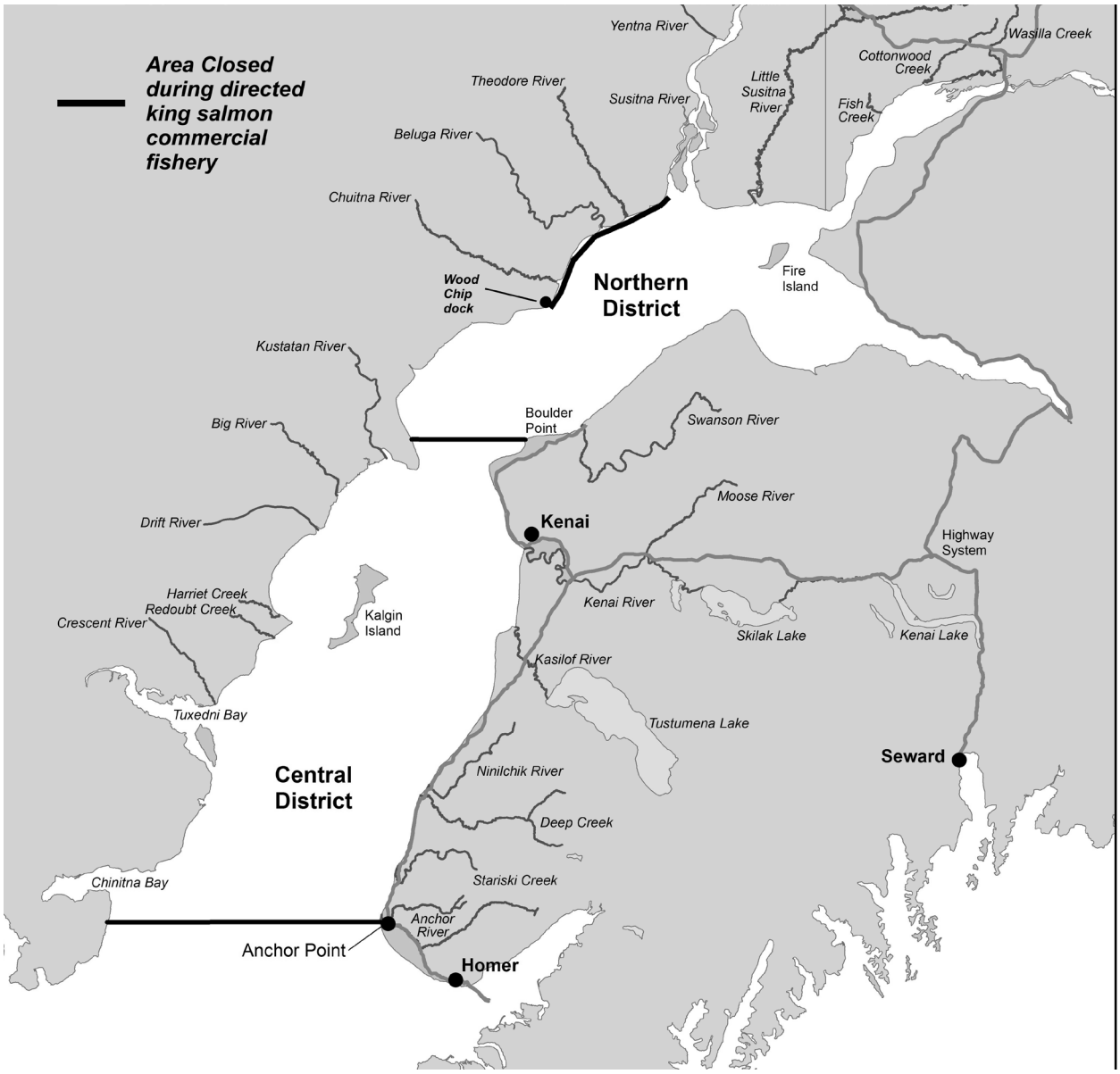

Figure 199-2.–Area closed during the directed king salmon fishery in the Northern District, 2011–2017. The entire district was closed in 2018 and 2019.

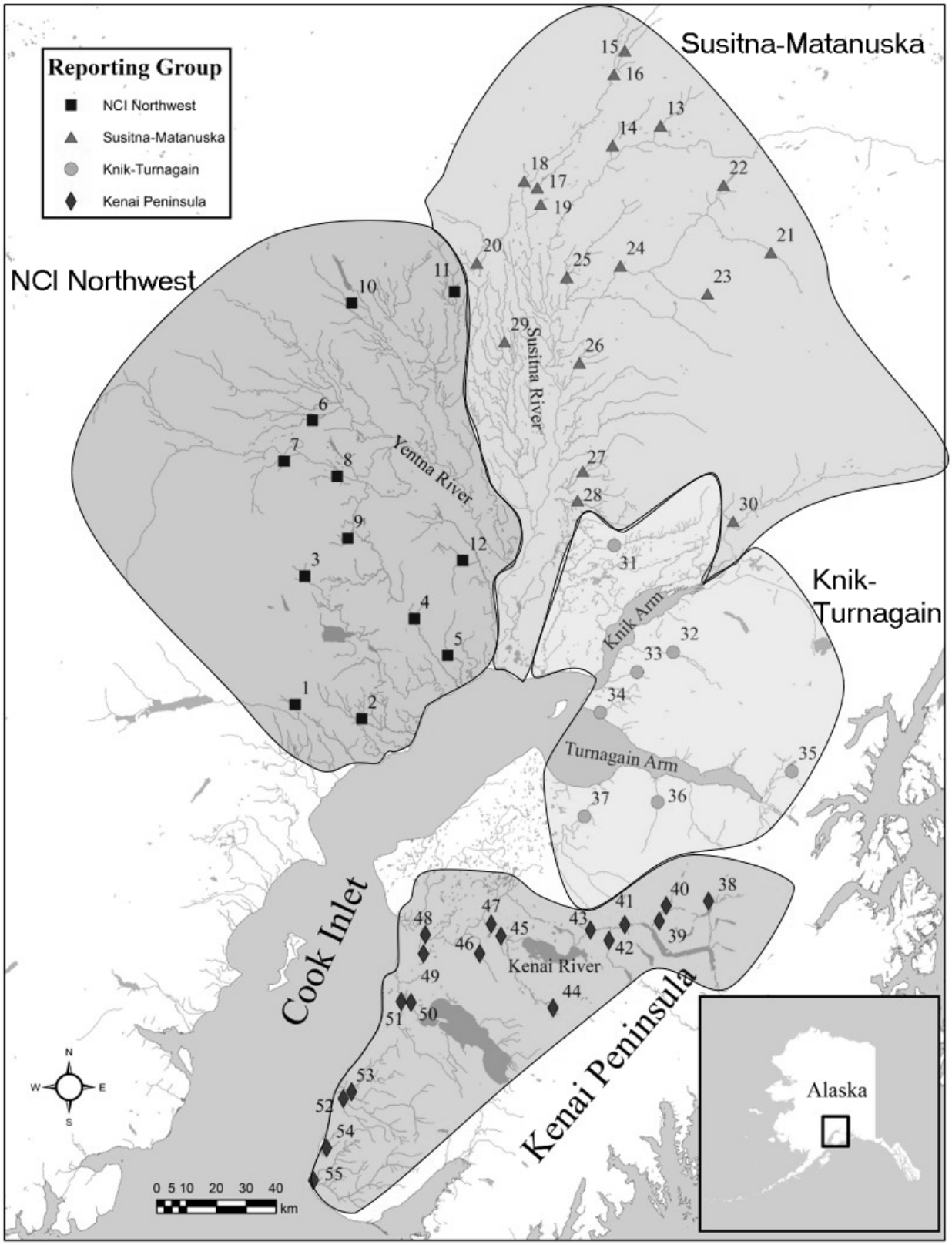

Figure 199-3.–Sampling locations for King salmon populations from Cook Inlet included in the Cook Inlet genetic baseline.

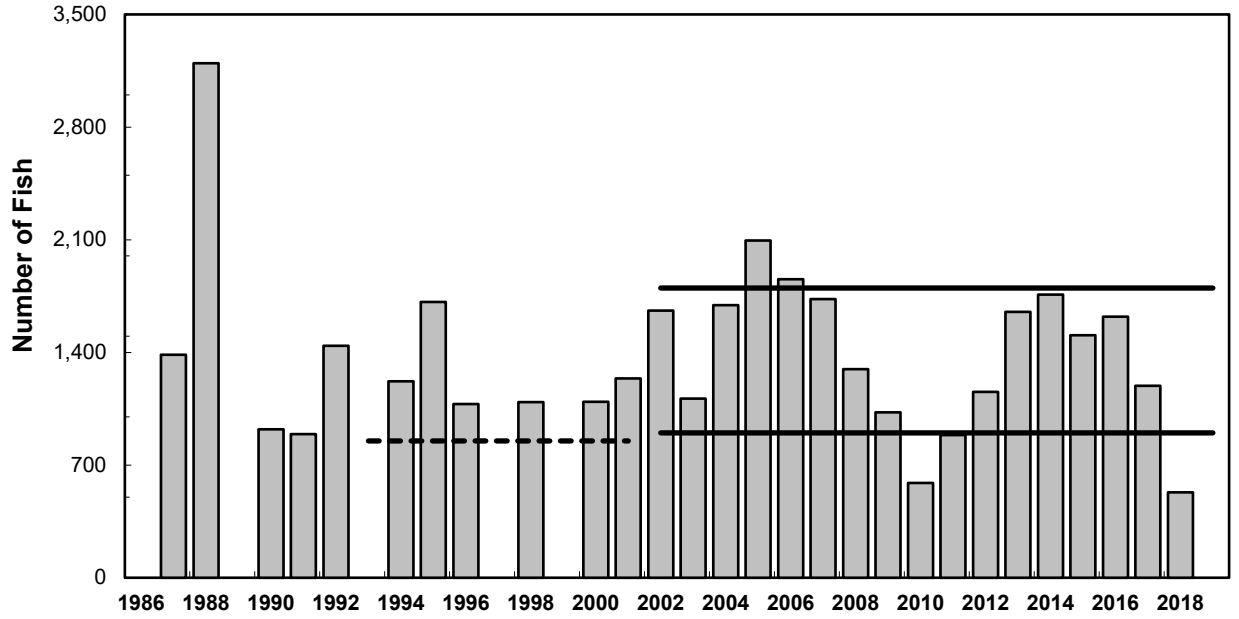

Figure 199-4.–Aerial index counts of king salmon on the Little Susitna River, 1986–2019. Dashed line = biological escapement goal of 850 fish. Solid lines = sustainable escapement goal range of 900–1,800 fish. Blank years denote years no count was made due to poor water visibility.

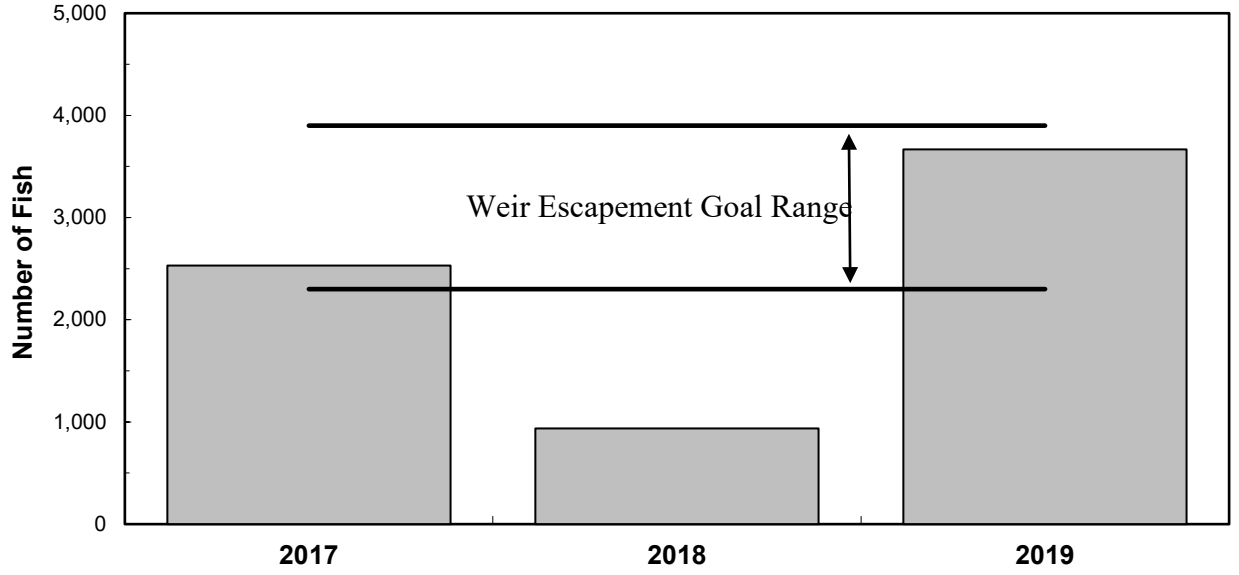

Figure 199-5.–Weir counts of king salmon on the Little Susitna River, 2017–2019. Note: the weir flooded in 2018; the count was estimated at 936 fish (95% CI 697–1,253).

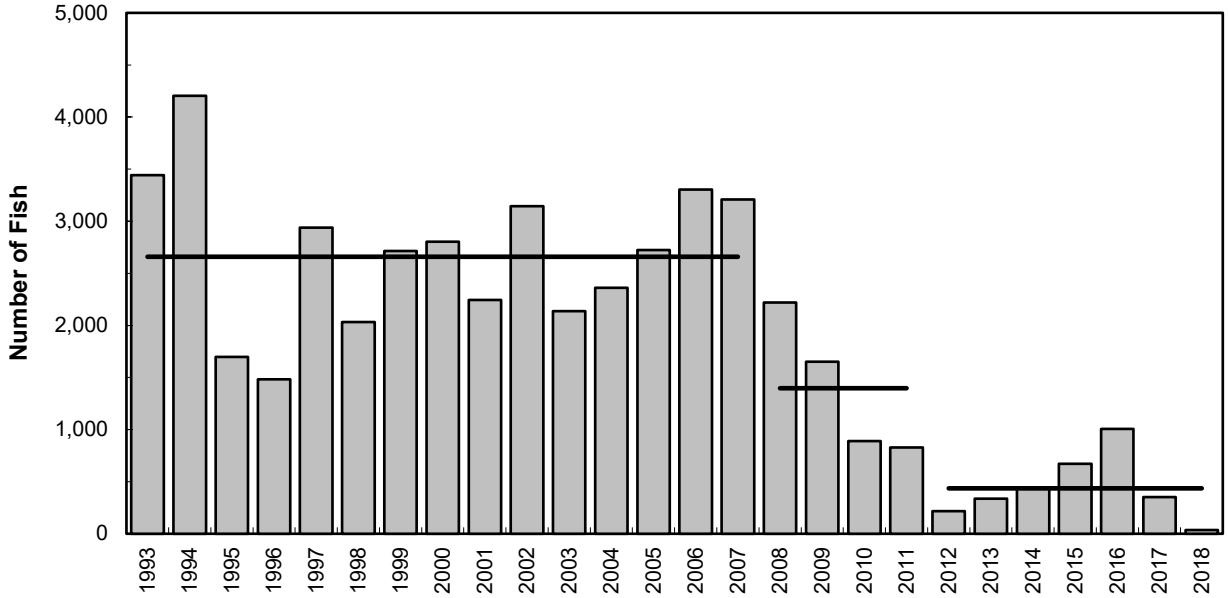

Figure 199-6.–Sport harvest of king salmon on the Little Susitna River, 1993–2018 (solid lines represent average annual harvest from 1993–2007; 2008–2011; and 2012–2018).

Table 199-1. History of achieving king salmon escapement goals in NCI, 2006–2019.

System	Goal Range		Escapement													
	Lower	Upper	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Knik Arm					Beginning of downturn				Beginning conservative management							
Little Susitna River (weir)	2,300	3,900												2,531	NC	3,666
Little Susitna River	900	1,800	1,855	1,731	1,297	1,028	589	887	1,154	1,651	1,759	1,507	1,622	1,192	530	NC
Eastside Susitna																
Willow Creek	1,600	2,800	2,193	1,373	1,255	1,133	1,173	1,061	756	1,752	1,335	2,046	1,814	1,329	411	897
Little Willow Creek	450	1,800	816	1,103	NC	776	468	713	494	858	684	788	675	840	280	631
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Deshka River (weir)	13,000	28,000	31,150	18,714	7,533	11,967	18,594	19,026	14,010	18,531	16,335	24,316	22,774	11,383	8,549	9,711
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West Cook Inlet																
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Theodore River	500	1,700	958	486	345	352	202	327	179	476	312	426	68	21	18	201
Chuitna River	1,200	2,900	1,911	1,180	586	1,040	735	719	502	1,690	1,398	1,965	1,372	235	939	2,115

means missed goal

[a] Lewis River diverged into muskeg 1/2 mi. below bridge; intermittent connection with Cook Inlet.
Peters Creek count of 1,674 questionable in 2018 because Marten Creek counted multiple days after mainstem counted. Therefore calling it a NC.

Table 199-2.–Sport fishing emergency orders related to management of NCI king salmon, 2008–2011.

Year	Restriction by Emergency Order
2008	Prohibited bait use on the Deshka River effective June 14.
	Closed Deshka River to King salmon fishing effective June 20.
2009	Prohibited bait on the Deshka River and limited harvest to Saturdays-Mondays (catch-and-release only Tuesdays-Fridays) effective May 15.
	Closed the Deshka River to King salmon fishing effective June 13.
	Closed the Little Susitna River to King salmon fishing effective July 3.
	Closed the last 3-day weekend of fishing within Unit 2 of the Susitna River effective July 3.
2010	Closed the Chuit, Theodore, and Lewis rives to King salmon fishing effective May 15.
	Prohibited bait on the Deshka River effective June 12.
	Rescinded bait closure on the Deshka River effective June 19.
	Reduced the annual limit to 1 King salmon over 20 inches in Unit 4 (Yentna drainage) effective June 26.
	Reduced the annual limit to 1 King salmon over 20 inches in Units 5 and 6 (Talkeetna and Chulitna drainages) effective July 2.
	Closed the Little Susitna River to King salmon fishing effective July 2.
	Closed the last 2 weekends of fishing within Unit 2 of the Susitna River effective July 2.
2011	Closed the Little Susitna River to King salmon fishing effective June 17.

Table 199-3.–List of emergency order restrictive actions taken in the Northern District directed king salmon commercial fishery, 2008–2019.

Year	Restriction by Emergency Order
2008	Closed Last Monday period on 6/23
	Closed 1st Regular period during regular season
2009	Reduced the May 25 and June 1 periods from 12 to 6 hrs.
	Closed the last two periods (June 15 and June 22).
2010	Closed the area 1 mile south of the Chuitna River to the Susitna River for all periods (May 31, June 7, 14, 21).
	Reduced fishing time to 6 hours for the June 14 period.
2011	Closed the area from the wood chip dock to the Susitna River for all periods (May 30, June 6, 13, and 20).
2012	Closed the area from the wood chip dock to the Susitna River for all periods (May 28, June 4, 11, and 18).
	Reduced fishing time from 12 to 6 hours
	Closed the June 25 period.
2013	Closed the May 27 fishing period
	Closed the area from the wood chip dock to the Susitna River for all 4 open periods
	Reduced fishing time to 6 hours for all four open periods
2014	Closed the May 26 period
	Closed the area from the wood chip dock to the Susitna River for all 4 open periods
	Reduced fishing time 6 hours for 1st two periods
2015	Closed the May 25 period,
	closed the area from the wood chip dock to the Susitna River for the remaining periods (June 1, 8)
	reduced fishing time to 6 hours for 1st two periods
2016	Reduced hours from 12 to 6 for the first fishing period on May 30
	Closed the area from the wood chip dock to the Susitna River for all 4 open periods
2017	Reduced hours from 12 to 6 for the last fishing period on June 19
	Closed the area from the wood chip dock to the Susitna River for all 4 open periods
2018	Closed for entire season
2019	Closed for entire season

Table 199-4.–Preseason and inseason emergency orders issued to manage king salmon fisheries in NCI, 2012-2019.

Little Susitna

Year	Preseason EOs	Inseason EOs
2012	annual 2; single hook only; harvest Fri - Mon (4 days)	closed June 15
2013	annual 2; single hook only; harvest Sat - Mon (3 days)	none
2014	same as 2013	reinstated 7 days/wk July 4
2015	same as 2013	reinstated 7 days/wk June 19; restored to regulation June 27; liberalized adding bait July 3
2016	annual 2; single hook only; harvest Fri - Mon (4 days)	restored to regulation June 27; liberalized adding bait July 6
2017	annual 2 only	closed July 1
2018	annual 2; single hook only; harvest Fri - Mon (4 days)	restricted to C & R June 15; closed June 22
2019	closed	restored to regulation June 26

Deshka River

Year	Preseason EOs	Inseason EOs
2012	annual 2	closed June 25
2013	annual 2; single hook artificial only	reinstated bait June 29
2014	same as 2013	reinstated bait June 14
2015	same as 2013	reinstated bait June 13; restored to regulation June 27
2016	annual 2	restored to regulation June 11
2017	none	closed to bait June 23; closed July 4
2018	C & R only; single hook artificial only	closed June 22
2019	closed	

Eastside Susitna area (units 2, 3, 5, 6)

Year	Preseason EOs	Inseason EOs
2012	annual 2; single hook only; harvest through second Monday, then C&R only on weekends	closed June 25
2013	C & R only; single hook only	none
2014	same as 2013	none
2015	same as 2013	none
2016	same as 2013	none
2017	same as 2013	closed July 4
2018	closed	none
2019	closed	none

-continued-

Table 199-4.–Page 2 of 2.

Yentna River

Year	Preseason EOs	Inseason EOs
2012	annual 2	closed June 25
2013	annual 2; single hook only; harvest Fri - Mon (4 days)	none
2014	same as 2013	none
2015	same as 2013	none
2016	same as 2013	none
2017	same as 2013	closed July 4
2018	C & R only; single hook only	closed June 22
2019	closed	

Talachulitna River

Year	Preseason EOs	Inseason EOs
2012	annual 2	closed June 25
2013	C & R only; single hook only	none
2014	same as 2013	none
2015	same as 2013	none
2016	same as 2013	none
2017	annual 2; single hook only; harvest Fri - Mon (4 days)	closed July 4
2018	C & R only; single hook only	closed June 22
2019	closed	

Table 199-5.–King salmon sport harvest reduction by area as a result of emergency restrictions in NCI, 2012–2019.

		Susitna River Drainage					
Harvest reductions	Little	Deshka	Unit 2	Talkeenta	Yentna	Talachulitna	Total [a]
Average low year (2009-2011)	1,123	2,414	1,238	1,361	3,210	325	9,653
2012 Target reduction	50%	22%	90%	25%	45%		50%
2012 harvest	216	1,650	35	113	875	17	2,944
2012 Actual % reduction	81%	32%	97%	92%	73%	95%	70% [b]
2013 Target reduction	75%	50%	100%	100%	60%	100%	70-75%
2013 harvest	336	1,087	0	0	1,340	0	2,781
2013 Actual % reduction	70%	55% [c]	100%	100%	58%	100%	71%
2014 Target reduction	75%	50%	100%	100%	60%	100%	70-75%
2014 harvest	437	1,329	0	0	689	0	2,486
2014 Actual % reduction	61%	45%	100%	100%	79%	100%	74%
2015 Target reduction	75%	50%	100%	100%	60%	100%	70-75%
2015 harvest	672	1,927	0	0	1,544	0	4,549
2015 Actual % reduction	40%	20%	100%	100%	52%	100%	53% [d]
2016 Target reduction	50%	20%	100%	100%	60%	100%	60%
2016 harvest	1,005	2,899	0	0	1,467	0	5,762
2016 Actual % reduction	11%	0%	100%	100%	54%	100%	40% [d]
2017 Target reduction	15%	0%	100%	100%	60%	60%	40-50%
2017 harvest	351	1,392	0	0	913	140	2,901
2017 Actual % reduction	69%	42%	100%	100%	72%	57%	70% [b]
2018 Target reduction	50%	100%	100%	100%	100%	100%	99%
2018 harvest	37	0	0	0	0	0	37
2018 Actual % reduction	97%	100%	100%	100%	100%	100%	99.6%
2019 Target reduction	100%	100%	100%	100%	100%	100%	100%
2019 harvest	113 [e]	0	0	0	0	0	113
2019 Actual % reduction	90%	100%	100%	100%	100%	100%	98.8%

[a] does not include harvest from the stocked Eklutna Tailrace.

[b] midseason closures resulted in further harvest reduction than targeted.

[c] unusually warm water temperatures and low water levels likely influenced low fishing success.

[d] relaxation of restrictions during the season on Deshka and Little Susinta rivers may have resulted in less harvest reduction than targeted.

[e] estimated harvest.

Table 199-6.–Reduction to harvest of king salmon in sport (Susitna and Little Susitna drainages) and commercial fisheries (norther district set) as a result of emergency orders issued preseason and inseason, 2012–2019.

Year	Sport	Commercial
Average low year harvest (2009-2011)	9,653	1,709
2012 harvest	2,944	1,030
% reduction	70%	40%
2013 harvest	2,781	1,134
% reduction	71%	34%
2014 harvest	2,486	1,377
reduction	74%	19%
2015 harvest	4,549	1,560
% reduction	53%	9%
2016 harvest	5,762	2,030
% reduction	40%	plus 19
2017 harvest	2,901	2,031
% reduction	70%	plus 19
2018 harvest	37	0
% reduction	99.6%	100%
2019 harvest	113[a]	0
% reduction	98.8%	100%
Mean harvest	2,697	1,145
Mean reduction	72%	33%

[a] estimated harvest on Little Susitna River which was opened to harvest by emergency order late in the season.

Table 199-7.–Permits, periods fished, and king salmon harvest in the Northern District directed king salmon commercial fishery from May 25–June 24 and harvest of king salmon in Northern District sport fisheries, 1990–2019.

	ND Commercial Fishery				NCI Sport Fishery		Total
Year	Permits	Periods	Harvest	Percent	Harvest	Percent	Harvest
1993	80	4	3,072	6%	49,387	94%	52,459
1994	73	2	3,014	9%	31,104	91%	34,118
1995	65	1	3,837	19%	16,537	81%	20,374
1996	58	1	1,690	8%	19,839	92%	21,529
1997	45	2	894	4%	22,620	96%	23,514
1998	51	2	2,240	9%	22,912	91%	25,152
1999	56	2	2,259	6%	32,803	94%	35,062
2000	47	3	2,046	6%	33,102	94%	35,148
2001	43	3	1,616	5%	30,395	95%	32,011
2002	36	3	1,747	6%	26,474	94%	28,221
2003	30	3	1,185	4%	28,220	96%	29,405
2004	44	3	1,819	6%	27,543	94%	29,362
2005	52	3	3,150	10%	28,682	90%	31,832
2006	59	3	3,887	12%	28,644	88%	32,531
2007	62	3	3,132	11%	25,413	89%	28,545
2008	74	4	3,855	19%	15,919	81%	19,774
2009	55	3	1,266	10%	11,156	90%	12,422
2010	51	4	1,674	14%	10,510	86%	12,184
2011	61	4	2,187	18%	9,712	82%	11,899
2012	38	4	1,030	25%	3,020	75%	4,050
2013	38	4	1,134	28%	2,940	72%	4,074
2014	44	4	1,377	30%	3,205	70%	4,582
2015	40	4	1,560	22%	5,627	78%	7,187
2016	41	4	2,030	22%	7,176	78%	9,206
2017	44	4	2,031	37%	3,493	63%	5,524
2018	0	0	0	0%	636	100%	636
2019	0	0	0	0%	ND	ND	ND
Annual Averages							
1993–2007	53	3	2,373	8%	28,245	92%	30,618
2008–2011	60	4	2,246	16%	11,824	85%	14,070
2012–2018	41	4	1,309	26%	3,728	73%	5,037
All Years	50	3	2,067	10%	19,118	90%	21,185

ND = data not available

Table 199-8.–King salmon commercial harvest from Northern District directed fishery by statistical area, May 25– June 24, 2010–2019.

Year	Date	247-10	247-20	247-30	247-41	247-42	247-43	247-70	247-80	247-90	Total
2010	5/31	141	102	ND	43	48	42	32	5	20	
	6/7	180	302	ND	71	63	71	74	22	19	
	6/14	ND	61	ND	8	54	25	19	8	5	
	6/21	17	147	ND	2	23	39	20	7	4	
	Total	338	612	ND	124	188	177	145	42	48	1,674
2011	5/30	118	85	ND	57	73	129	55	29	6	
	6/6	305	192	ND	51	53	112	64	19	25	
	6/13	132	208	ND	31	60	72	66	18	13	
	6/20	27	83	ND	18	20	32	22	3	9	
	Total	582	568	ND	157	206	345	207	69	53	2,187
2012	5/28	129	20	ND	7	5	2	32	9	8	
	6/4	35	27	ND	36	26	44	40	ND	6	
	6/11	252	101	ND	16	29	11	58	19	5	
	6/18	10	34	ND	12	14	16	20	ND	7	
	Total	426	182	ND	71	74	73	150	28	26	1,030
2013	6/3	117	ND	ND	91	75	51	24	9		
	6/10	179	ND	ND	52	74	51	87	14	12	
	6/17	121	ND	ND	16	13	15	55	8	4	
	6/24	44	ND	ND	3	13	ND	ND	ND	6	
	Total	461	ND	ND	162	175	117	166	31	22	1,134
2014	6/2	125	38	ND	39	40	43	92	74	30	
	6/9	263	ND	ND	37	45	71	22	10	3	
	6/16	103	ND	ND	15	39	32	48	14	6	
	6/23	41	95	ND	8	23	5	10	3	3	
	Total	532	133	ND	99	147	151	172	101	42	1,377
2015	6/1	83	38	ND	52	38	93	39	25	9	
	6/8	92	76	ND	48	27	85	72	41	22	
	6/15	93	80	ND	58	80	75	38	5	7	
	6/22	86	29	ND	34	33	51	37	10	4	
	Total	354	223	ND	192	178	304	186	81	42	1,560
2016	5/30	315	170	ND	39	5	45	131	23	23	
	6/6	43	177	ND	1	46	19	76	ND	6	
	6/13	152	74	ND	32	52	101	173	ND	16	
	6/20	42	93	ND	11	37	55	71	1	1	
	Total	552	514	ND	83	140	220	451	24	46	2,030
2017	5/29	36	81	ND	4	23	62	35	13	3	
	6/5	291	97	ND	7	80	111	151	25	4	
	6/12	160	287	ND	28	33	99	88	24	17	
	6/19	37	107	ND	14	37	43	27	3	4	
	Total	524	572	ND	53	173	315	301	65	28	2,031
2018					NO Fishery						0
2019					NO Fishery						0

ND = no data.

Table 199-9.–Stock composition (%) and stock-specific harvest estimates based on genetic data for King salmon harvested in the General Subdistrict (south), General Subdistrict (north), and Eastern Subdistrict of the Northern District commercial set gillnet fishery of Cook Inlet, Alaska, 2014. (Table 20; St. Saviour et al 2019).

		Stock-specific harvest			
			90% CI		
Area	Reporting group	Mean	5%	95%	P≥1
General Subdistrict (south) [a]					
	NCI Northwest	364	213	499	1
	Susitna-Matanuska	309	168	471	1
	Knik-Turnagain	77	14	151	1
	Kenai Peninsula	13	0	44	0.83
	Harvest represented	763			
	Harvest not represented	51 [b]			
	Total harvest	814			
General Subdistrict (north) [c]	NCI Northwest	36	0	92	0.84
	Susitna-Matanuska	74	24	138	1
	Knik-Turnagain	283	234	330	1
	Kenai Peninsula	4	0	17	0.56
	Harvest represented	398			
	Harvest not represented	0			
	Total harvest	398			
Eastern Subdistrict [d]	NCI Northwest	118	54	188	1
	Susitna-Matanuska	112	50	179	1
	Knik-Turnagain	90	41	147	1
	Kenai Peninsula	6	0	22	0.63
	Harvest represented	326			
	Harvest not represented	0			
	Total harvest	326			

Note: Standard deviation (SD) is of the percentage, and P is the probability that the stock-specific harvest estimate is greater than or equal to 1 fish. Stock-specific harvest estimates may not sum to the total harvest due to rounding error, and 90% credibility intervals (CI) may not include the point estimate for very low stock-specific harvest numbers because fewer than 5% of the iterations had values above zero.

[a] Estimates for General Subdistrict (south) were calculated using a stratified estimator for combined area strata. Sample size is 196.

[b] Trading Bay is not represented by harvest samples after June 16.

[c] Sample size is 196.

[d] Sample size is 130.

Table 199-10.–Stock composition (%) and stock-specific harvest estimates based on genetic data for King salmon harvested in the General Subdistrict (south), General Subdistrict (north), and Eastern Subdistrict of the Northern District commercial set gillnet fishery of Cook Inlet, Alaska, 2015. (Table 21; St. Saviour et al 2019).

		Stock-specific harvest			
			90% CI		
Area	Reporting group	Mean	5%	95%	P≥1
General Subdistrict (south) [a]					
	NCI Northwest	235	180	284	1
	Susitna-Matanuska	134	84	189	1
	Knik-Turnagain	14	0	40	0.88
	Kenai Peninsula	0	0	1	0.04
	Harvest represented	382			
	Harvest not represented	368 [b]			
	Total harvest	750			
General Subdistrict (north) [c]	NCI Northwest	17	0	68	0.6
	Susitna-Matanuska	55	6	112	0.98
	Knik-Turnagain	603	554	658	1
	Kenai Peninsula	0	0	0	0.04
	Harvest represented	674			
	Harvest not represented	0			
	Total harvest	674			
Eastern Subdistrict [d]	NCI Northwest	96	41	150	1
	Susitna-Matanuska	62	10	121	0.99
	Knik-Turnagain	202	159	243	1
	Kenai Peninsula	1	0	4	0.1
	Harvest represented	360			
	Harvest not represented	0			
	Total harvest	360			

Note: Estimates were calculated using a stratified estimator for combined temporal and area strata. Standard deviation (SD) is of the percentage, and P is the probability that the stock-specific harvest estimate is greater than or equal to 1 fish. Stock-specific harvest estimates may not sum to the total harvest due to rounding error, and 90% credibility intervals (CI) may not include the point estimate for very low stock-specific harvest numbers because fewer than 5% of the iterations had values above zero.

[a] Sample size is 291

[b] Insufficient samples to analyze Trading Bay

[c] Sample size is 267

[d] Sample size is 288

Table 199-11.–Stock composition (%) and stock-specific harvest estimates based on genetic data for King salmon harvested in the General Subdistrict (south), General Subdistrict (north), and Eastern Subdistrict of the Northern District set gillnet fishery of Cook Inlet Alaska, in 2016. Estimates were calculated using a stratified estimator for combined temporal and area strata. The probability that the stock-specific harvest estimate is greater than or equal to 1 fish (P>1) are provided.

		Stock-specific harvest			
			90% CI		
Area	Reporting group	Mean	5%	95%	P≥1
General Subdistrict (south)					
	NCI Northwest	548	385	720	1.00
	Susitna-Matanuska	570	387	740	1.00
	Knik-Turnagain	41	0	104	0.86
	Kenai Peninsula	1	0	10	0.12
	Harvest represented	1,160			
	Harvest not represented	0			
	Total harvest	1,160			
General Subdistrict (north)	NCI Northwest	4	0	26	0.27
	Susitna-Matanuska	56	24	94	1.00
	Knik-Turnagain	404	366	435	1.00
	Kenai Peninsula	0	0	0	0.03
	Harvest represented	464			
	Harvest not represented	0			
	Total harvest	464			
Eastern Subdistrict	NCI Northwest	90	35	148	1.00
	Susitna-Matanuska	68	17	128	0.99
	Knik-Turnagain	365	315	415	1.00
	Kenai Peninsula	0	0	0	0.03
	Harvest represented	523			
	Harvest not represented	0			
	Total harvest	523			

Note: Stock-specific harvest estimates may not sum to the total harvest represented due to rounding error and their 90% credibility intervals may not include the point estimate for the very low stock-specific harvest numbers because fewer than 5% of iterations had values above zero.

Table 199-12.–King salmon population estimates based on mark/recapture studies and estimates of harvest rates (HR) by commercial, sport, and subsistence fisheries of Susitna River king salmon, 2013–2017. Commercial fishery harvest data based on genetic stock composition estimates.

		COMMERCIAL			SPORT					SUBSISTENCE		
Year	Total Drainage Population	Total Harvest	Susitna	Susitna HR	Susitna Catch	Susitna Release	C/R mortality[a]	Susitna Harvest	Sport HR	Susitna Harvest	HR	Total HR
2013	127,757[b]	1,134			16,679	14,190	1,135	2,489				
2014	90,492	1,377	1,058	1.1%	12,507	10,458	837	2,049	2.2%	682	0.7%	4.5%
2015	136,996	1,560	954	0.7%	28,671	24,761	1,981	3,910	2.8%	837	0.6%	4.5%
2016	97,426	2,030	1,336	1.3%	19,205	14,460	1,157	4,745	4.8%	738	0.7%	7.6%
2017	63,275	2,031			10,246	7,696	616	2,550				
2014–15 Avg	113,745	1,469	1,006	0.9%	20,589	17,565	1,405	2,980	2.5%	760	0.7%	4.5%
2014–16 Avg	108,305	1,656	1,116	1.1%	20,128	1,656	1,325	3,568	3.3%	752	0.7%	5.5%

[a] *Used 8% for catch and release mortality*

[b] Used the average proportion of mainstem Susitna population estimate to the total drainage estimate of 70% from 2014-2015 to estimate total drainage population for 2013

Table 199-13.–Susitna River drainage mark-recapture abundance estimates for sockeye salmon in 2006–2008, coho salmon 2010–2015, chum salmon 2010–2012, and king salmon 2013–2018.

		Abundance Estimate						
Species	Return	Mainstem Susitna R.	95% CI	Yentna	95% CI	Total	95% CI	Source
Sockeye	2006	107,000	(49,180 - 164,820)	311,197	(252,000 - 391,000)	418,197	(335,448 - 500,946)	FDS 07-83
Salmon	2007	87,883	(79,712 - 96,054)	239,849	(205,955 - 273,743)	327,732	(292,867 - 362,597)	FDS 11-19
	2008	70,552	(60,882 - 80,221)	288,988	(251,436 - 326,540)	359,540	(320,763 - 398,317)	FDS 11-12
Coho	2010	73,640	(42,590 - 139,753)	122,777	(89,067 - 178,817)	196,417	(153,498 - 281,020)	FDS 13-05
Salmon	2011	131,878	(100,712 - 193,164)	84,677	(67,473 - 106,704)	216,555	(182,995 - 281,825)	FDS 16-35
	2012	90,397	(46,672 - 173,872)	93,919	(75,101 - 116,974)	184,316	(139,469 - 267,485)	FDS 16-52
	2013	130,026	(100,411 - 193,403)	Not Done				AEA 2014
	2014	84,879	(68,799 - 106,083)	73,819	(61,120 - 87,004)	158,698	(137,817 - 183,294)	AEA 2015
	2015	152,500	(120,552 - 184,448)	110,321	(97,157 - 123,869)	262,821	(228,128 - 297,514)	*FDS In prep.*
Chum	2010	151,127	(103,911 - 251,314)	205,869	(150,499 - 268,455)	356,996	(284,573 - 476,270)	FDS 13-05
Salmon	2011	1,468,231	(1,271,724 - 1,758,917)	283,801	(216,660 - 386,754)	1,752,032	(1,556,974 - 2,073,042)	FDS 16-35
	2012	229,903	(143,362 - 528,890)	99,442	(62,712 - 228,990)	329,345	(237,012 - 735,368)	FDS 16-52
King	2013	89,463	(77,720 - 114,954)	Not Done				AEA 2014
Salmon	2014	68,225	(53,473 - 94,240)	22,267	(17,466 - 28,701)	90,492	(74,498 - 116,748)	AEA 2015
	2015	88,600	(77,500 - 101,100)	48,400	(39,500 - 60,400)	137,000	(122,207 - 153,764)	*FDS In prep.*
	2016	66,116	(58,694 - 74,734)	31,310	(23,336 - 42,682)	97,426	(86,142 - 111,334)	*FDS In prep.*
	2017	45,471	(38,808 - 54,285)	17,804	(12,764 - 25,407)	63,275	(54,399 - 74,572)	*FDS In prep.*
	2018	30,605	(23,128 - 38,816)	Not Done				*FDS In prep.*

Cleary, P.M., R. A. Merizon, R. J. Yanusz, and D. J. Reed. 2013. Abundance and Spawning Distribution ' of Susitna River chum Oncorhynchus keta and coho O. kisutch salmon, 2010. Alaska Department of Fish and Game, Fishery Data Series No. 13-05, Anchorage.

Cleary, P. M., R. J. Yanusz, J. W. Erickson, D. J. Reed R. A. Neustel, and N. J. Szarzi. 2016 Abundance and spawning distribution of Susitna River chum Oncorhynchus keta and coho O. kisutch salmon, 2011. Alaska Department of Fish and Game, 'Fishery Data Series No. 16-35, Anchorage.

Cleary, P. M., R. J. Yanusz, J. W. Erickson, D. J. Reed R. A. Neustel, J. P. Bullock and N. J. Szarzi. 2016. Abundance and spawning distribution of Susitna River chum Oncorhynchus keta and coho O. kisutch salmon, 2012. Alaska Department of Fish and Game, 'Fishery Data Series No. 16-52, Anchorage.

Cleary, P. M., R. J. Yanusz, J. W. Erickson, D. J. Reed R. A. Neustel, J. P. Bullock and N. J. Szarzi. 2016. Distribution of Spawning Susitna River King Oncorhynchus tshawytscyha and Pink Salmon O. gorbuscha, 2012. Alaska Energy Authority. Susitna-Watana Hydroelectric 'Project. Anchorage.

AEA 2014- LGL Research Associates, Inc., and Alaska Department of Fish and Game, 'Divison of Sport Fish. 2014. Initial Study Report 'Part A: Sections 1-6, 8-10. Susitna-Watana Hydroelectric Project, Anchorage.

AEA 2015- LGL Research Associates, Inc., and Alaska Department of Fish and Game, Divison of Sport Fish. 2015. Salmon Escapement Study, Study Plan Susitna-Watana Hydroelectric Project, Anchorage.Section 9.7. Study Completion Report

Table 199-14.–King salmon abundance and spawning distributions in the entire Susitna drainage, 2014 and 2015 obtained by mark-recapture.

	2014			2015		
Location	Total Abundance	Tributary Abundance	Percent of Total	Total Abundance	Tributary Abundance	Percent of Total
Susitna River above the mainstem tagging site	68,225			88,580		
PRM 34–102.4 mainstem Susitna River [a]		2,098	2%		5,600	4%
Deshka River		14,024	15%		25,454	19%
Eastside Susitna River		15,073	17%		27,490	20%
Talkeetna River		14,024	15%		13,236	10%
PRM 102.4–153.4 mainstem Susitna River [b]		6,609	7%		6,109	4%
Chulitna River		16,397	18%		10,691	8%
Yentna River above tagging site	22,267			48,416		
Lake Creek drainage		5,163	6%		10,805	8%
Kahiltna River drainage		4,195	5%		7,481	5%
Talachulitna River drainage		1,721	2%		9,351	7%
Skwentna River drainage, other than the Talachulitna River		4,303	5%		11,221	8%
Remaining Yentna River drainage, other than the areas above		6,885	8%		9,558	7%
Total Susitna Drainage	90,492		100%	136,996		100%

[a] PRM 34 upstream to the Chulitna River Confluence.

[b] Chulitna River Confluence to Devils Canyon.

Table 199-15.–King salmon escapement and escapement goals in the Deshka River, 2002–2019.

Year	Escapement	Escapement Goal Range	Below, Within, Above Esc Goal Range
2002	28,535	13,000–28,000	Above
2003	39,257	13,000–28,000	Above
2004	56,659	13,000–28,000	Above
2005	36,433	13,000–28,000	Above
2006	29,922	13,000–28,000	Above
2007	17,594	13,000–28,000	Within
2008	6,416	13,000–28,000	Below
2009	11,960	13,000–28,000	Below
2010	18,594	13,000–28,000	Within
2011	19,026	13,000–28,000	Within
2012	14,088	13,000–28,000	Within
2013	18,532	13,000–28,000	Within
2014	16,335	13,000–28,000	Within
2015	24,395	13,000–28,000	Within
2016	22,874	13,000–28,000	Within
2017	11,356	13,000–28,000	Below
2018	8,549	13,000–28,000	Below
2019	9,711	13,000–28,000	Below
Average	21,680		Below = 5 (28%) Within = 8 (44%) Above = 5 (38%)

PROPOSAL 200 - Close the Northern District commercial king salmon fishery when sport fishery is restricted.

5AAC 21.366. Northern District king salmon management plan.

PROPOSED BY: Ben Allen.

WHAT WOULD THE PROPOSAL DO? This would close the Northern District (ND) commercial king salmon fishery when any river or stream in the Susitna River or Knik Arm drainages has a harvest restriction implemented in the king salmon sport fishery.

WHAT ARE THE CURRENT REGULATIONS? The *NDKSMP* regulates the directed king salmon commercial fishery in the ND of UCI. The purpose of the plan is to ensure an adequate escapement of king salmon into ND drainages and to provide management guidelines to the department. The department shall manage ND king salmon stocks primarily for sport and guided sport uses in order to provide sport and guided sport fishermen with a reasonable opportunity to harvest these salmon over the entire run as measured by the frequency of inriver restrictions.

The directed commercial king salmon season opens the first Monday on or after May 25 and continues through June 24, unless closed earlier by emergency order (EO). Fishing periods are Mondays only from 7:00 a.m. to 7:00 p.m. Harvest may not exceed 12,500 king salmon, which was estimated to be 10% of the annual Susitna River king salmon run when the management plan was adopted in 1986. Permit holders are allowed only one 35-fathom set gillnet with a mesh size not to exceed six inches and may not operate nets within 1,200 feet seaward of another set gillnet.

Other provisions in the plan include:

(8) from May 25 through June 24, the area from an ADF&G regulatory marker located one mile south of the Theodore River to the Susitna River is open to fishing the second regular Monday period only;
(9) if the Theodore, Lewis, or Ivan River is closed to sport fishing, the commissioner shall close, by emergency order, the area from an ADF&G regulatory marker located one mile south of the Theodore River to the Susitna River to commercial king salmon fishing for the remainder of the fishing periods provided for under this section;
(10) if the Deshka River is closed to sport fishing, the commissioner shall close, by emergency order, the commercial king salmon fishery throughout the Northern District for the remainder of the fishing periods provided for under this section; and
(11) if the Chuitna River is closed to sport fishing, the commissioner shall close, by emergency order, the area from a point at the wood chip dock to the Susitna River (~20 miles) to commercial king salmon fishing for the remainder of the directed king salmon fishery.
(b) The commissioner may depart from the provisions of the management plan under this section as provided in 5 AAC 21.363(e).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Based upon current Northern Cook Inlet (NCI) king salmon production, this would likely close the ND directed king salmon commercial fishery every year until production increases to average or above average levels. Based upon genetic estimates of the commercial set gillnet harvest, a complete closure of

the commercial fishery would increase king salmon entry into the Susitna River drainage by 1,000 fish or less each year, which is less than 1% of the annual run.

BACKGROUND: See background on Proposal 199. Currently the only paired restriction in regulation is based upon closure to the Deshka River king salmon sport fishery. Spawning distribution in 2014 and 2015 indicated the major destinations were the combined Eastside Susitna River streams (17% and 20%), Deshka River (15% and 19%), Talkeetna River (15% and 10%), and Chulitna River (18% and 8%) (Table 199-5). There are no paired restrictions between sport fisheries in the Yentna River drainage, Eastside Susitna River streams, or Little Susitna River (Knik Arm) and the ND commercial fishery. While limited to a harvest cap of 12,500 fish, or 10% of total king salmon return, the commercial fishery currently harvests approximately 1% of the annual Susitna River king salmon run.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal. There would be limited biological benefit associated with this because the commercial fishery does not target specific tributary stocks within the Susitna River or Knik Arm drainages. The commercial fishery takes approximately 1% of the annual Susitna River king salmon run based on genetic stock composition estimates of the commercial fishery harvest. The department urges the board to provide additional guidance on how to manage commercial fisheries in light of actions it may take regarding management of inriver fisheries in the northern district. For example, if the board opts to allow catch-and-release fishing at lower abundance levels, how should the department manage the commercial set net fishery.

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

PROPOSAL 203 – Pair liberalization of the Deshka River king salmon sport fishery with extra hours in the Northern District commercial king salmon fishery.

5 AAC 21.366. Northern District King Salmon Management Plan.

PROPOSED BY: Betty Gilcrist.

WHAT WOULD THE PROPOSAL DO? This would create a paired management provision that links a liberalization of the Deshka River king salmon sport fishery daily bag limit to two or more king salmon with an option to open one additional 6-hour fishing period per week in the Northern District (ND) directed commercial king salmon fishery.

WHAT ARE THE CURRENT REGULATIONS? 5 AAC 21.366. Northern District King Salmon Management Plan. (a) The purpose of this management plan is to ensure an adequate escapement of king salmon into the Northern District drainages and to provide management guidelines to the department. The department shall manage the Northern District king salmon stocks primarily for sport and guided sport uses in order to provide sport and guided sport fishermen with a reasonable opportunity to harvest these salmon over the entire run as measured by the frequency of inriver restrictions.

While the department has the emergency order (EO) authority to liberalize the king salmon sport fishery in the Deshka River, and may depart from the provisions of the management plan under as provided in 5 AAC 21.363(e)., there are no provisions in the management plan that provide for additional fishing time in the ND king salmon commercial fishery.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This could increase the king salmon harvest in the ND commercial fishery in years when the Deshka River sport fishing bag limit was liberalized. This could decrease the amount of king salmon returning to less productive systems of the Susitna River drainage such as the Eastside Susitna River drainages which include three stocks of management concern.

BACKGROUND: See background on Proposal 199. The bag limit for Deshka River king salmon has not been increased since 2007.

Chronic inability to meet king salmon escapement goals on certain Susitna River drainage streams from 2008–2010 (Table 199-1) prompted the board to designate six king salmon stocks as Stocks or Concern (SOC) in 2011. In response to the SOC designation, the board closed sport fishing in the Beluga, Theodore, Lewis, and Chuitna rivers beginning with the 2011 season. The board also modified the *NDKSMP* to close the ND set gillnet fishery from the wood chip dock to the Susitna River (Figure 199-2) if the sport fishery was closed in the Chuitna River. This area has remained closed to commercial fishing during ND directed king salmon fishery since 2011. The board also took action to reduce the sport harvest within Unit 2 of the Susitna River drainage by removing a weekend of fishing and limiting fishing time to 6 a.m. to 11 p.m., closing Goose Creek to king salmon fishing, and closing the confluence of Alexander Creek to sport fishing for all species during the king salmon run.

King salmon runs to the Susitna River drainage have recently been reconstructed back to 1979 for four stocks that have historically been managed separately under sport regulations specific to each. These stocks are similar relative to abundance, but differ in terms of productivity; therefore, in general, they do not correlate to each other. For example, productivity in 2013 and 2014 was below average for the Deshka River stock, and average for the Eastside Susitna River stock (Figure 203-1).

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal. The department urges the board to provide additional guidance on how to manage commercial fisheries in light of actions it may take regarding management of inriver fisheries in the northern district. For example, if the board opts to allow catch-and-release fishing at lower abundance levels, how should the department manage the commercial set net fishery.

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

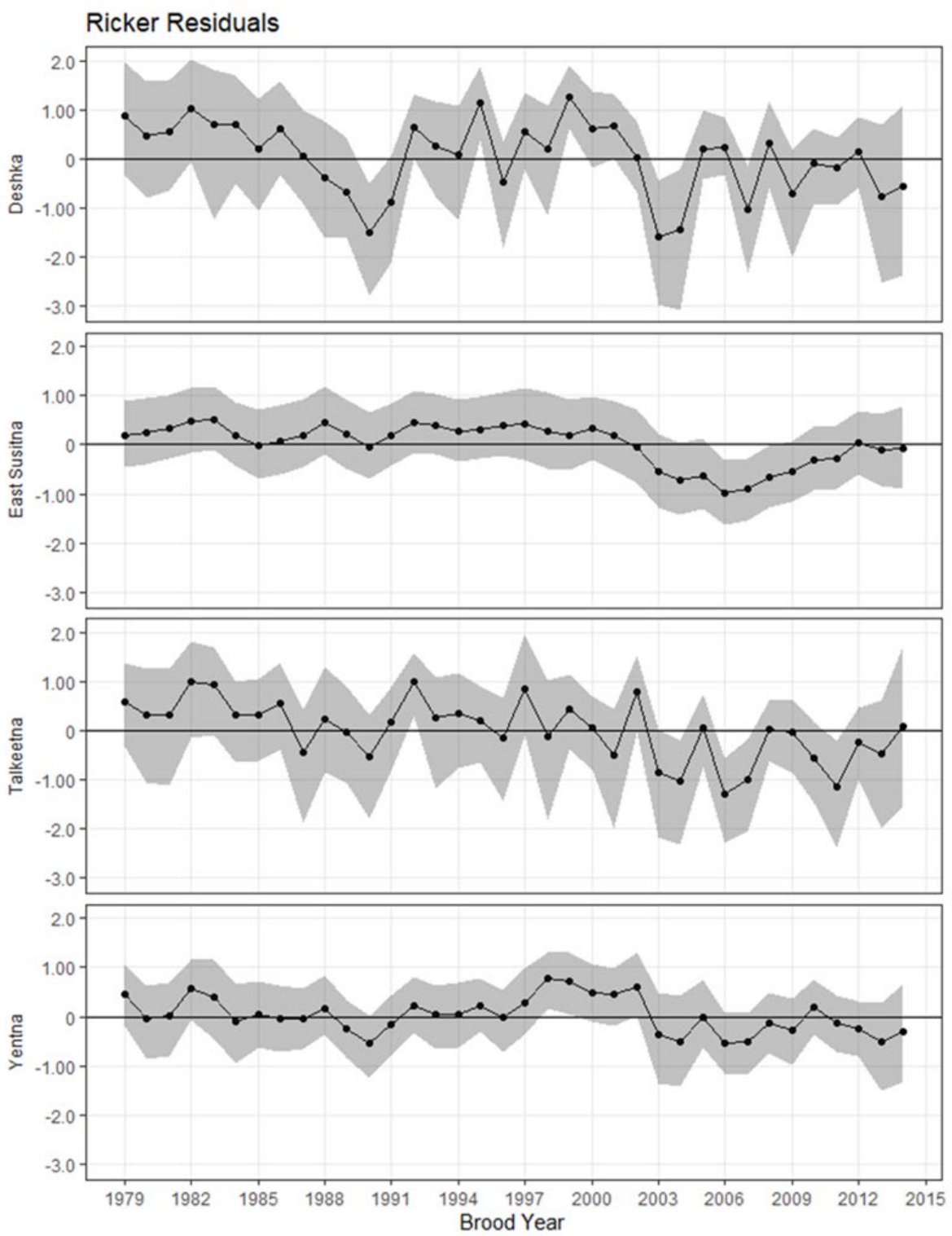

Figure 203-1.–Point estimates (posterior medians; solid lines) and 95% credibility intervals (shaded areas) of Ricker productivity residuals from a state-space model by stock, 1979–2014 brood years. The solid line at zero on the Y axis represents average productivity, while points above and below the line represent above and below average productivity, respectively.

PROPOSAL 201 - Amend the Northern District King Salmon management plan to include paired restrictions.

5 AAC 21.366. Northern District King Salmon Management Plan.

PROPOSED BY: Northern District Set Netters Association of Cook Inlet/Stephen Braund.

WHAT WOULD THE PROPOSAL DO? This would amend (a)(10) of the *Northern District king salmon management plan (NDKSMP)* to pair restrictive actions in the Deshka River sport fishery and the Northern District (ND) directed commercial king salmon fishery as follows:

1. If the Deshka River king salmon sport fishery is open to retention or restricted to catch-and-release (C/R) fishing, then the ND commercial fishery shall be open, unless otherwise regulated in this management plan.
2. If the Deshka River king salmon sport fishery harvest is reduced by gear or time restrictions, then the ND commercial fishery will be restricted to 6-hour fishing periods.
3. If the Deshka River king salmon sport fishery is closed, then the ND commercial fishery shall be closed.

WHAT ARE THE CURRENT REGULATIONS? The *NDKSMP* regulates the directed king salmon commercial fishery in the ND of Upper Cook Inlet. The purpose of the plan is to ensure an adequate escapement of king salmon into ND drainages and to provide management guidelines to the department. The department shall manage ND king salmon stocks primarily for sport and guided sport uses in order to provide sport and guided sport fishermen with a reasonable opportunity to harvest these salmon over the entire run as measured by the frequency of inriver restrictions.

The directed commercial king salmon season opens the first Monday on or after May 25 and continues through June 24, unless closed earlier by EO. Fishing periods are Mondays only from 7:00 a.m. to 7:00 p.m. Harvest may not exceed 12,500 king salmon, which was estimated to be 10% of the annual Susitna River king salmon run when the management plan was adopted in 1986. Permit holders are allowed only one 35-fathom set gillnet with a mesh size not to exceed six inches, and may not operate nets within 1,200 feet seaward of another set gillnet.

Other provisions in the plan include:

(8) from May 25 through June 24, the area from an ADF&G regulatory marker located one mile south of the Theodore River to the Susitna River is open to fishing the second regular Monday period only;
(9) if the Theodore, Lewis, or Ivan River is closed to sport fishing, the commissioner shall close, by EO, the area from an ADF&G regulatory marker located one mile south of the Theodore River to the Susitna River to commercial king salmon fishing for the remainder of the fishing periods provided for under this section;
(10) if the Deshka River is closed to sport fishing, the commissioner shall close, by EO, the commercial king salmon fishery throughout the Northern District for the remainder of the fishing periods provided for under this section; and

(11) if the Chuitna River is closed to sport fishing, the commissioner shall close, by EO, the area from a point at the wood chip dock to the Susitna River (~20 miles) to commercial king salmon fishing for the remainder of the directed king salmon fishery.

(b) The commissioner may depart from the provisions of the management plan under this section as provided in 5 AAC 21.363(e).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would tie a paired restrictive action in the Deshka River king salmon sport fishery with a restrictive action in the ND commercial king salmon fishery. Currently, paired restrictive provisions are limited to a closure in the sport fishery requiring a closure in the commercial fishery. Because the department typically prohibits the use of bait when restricting fisheries to catch-and-release fishing, this would effectively always trigger 6-hour fishing periods in the commercial fishery. If the commercial fishery were open to 6-hour fishing periods instead of complete closure, this could increase the harvest of king salmon in the ND commercial fishery.

BACKGROUND: See background on Proposal 199. While the entire ND commercial set gillnet fishery closes if the Deshka River sport fishery is closed, the department has taken restrictive actions when the sport fishery is restricted to no-bait or nonretention. These actions include closing fishing periods or restricting fishing periods to 6-hours in duration (Table 199-3).

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal. The department urges the board to provide additional guidance on how to manage commercial fisheries in light of actions it may take regarding management of inriver fisheries in the northern district. For example, if the board opts to allow catch-and-release fishing at lower abundance levels, how should the department manage the commercial set net fishery.

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

Northern District King Salmon Sport Fishing (1 proposal)

PROPOSAL 225 – Extend area and limit retention of king salmon in the Eklutna Tailrace to hatchery fish.

5 AAC 60.122. Special provisions for the seasons, bag, possession, annual, and size limits, and methods and means for the Knik Arm Drainages Area.

PROPOSED BY: Andrew Couch.

WHAT WOULD THE PROPOSAL DO? This would limit retention of king salmon to hatchery fish, as indicated by a missing adipose fin, downstream of the marker currently marking the lower terminus of the Eklutna Tailrace fishery to the Knik River's confluence with Knik Arm.

WHAT ARE THE CURRENT REGULATIONS? The Eklutna Tailrace and waters within a half mile radius and downstream a distance of two miles from its confluence with the Knik River is open to king salmon fishing year-round.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would increase the area open to fishing for hatchery king salmon by approximately 1.5 miles. This would likely increase the harvest of hatchery fish as well as mortality of wild king salmon stocks migrating upstream of the Tailrace in the Knik River and in the Matanuska River. This would also increase complexity of regulations and potentially increase cost to the department to fin clip Eklutna stocked king salmon.

BACKGROUND: The Knik and Matanuska rivers are glacial and intersect at Knik Arm forming a web of interconnected channels. The two rivers do not fully separate from one another for the first 4 miles above Knik Arm (Figure 225-1). The Eklutna Tailrace flows into the Knik River and is a result of the Eklutna Power Plant. The Tailrace is approximately 1/4-mile-long and empties into a side channel of the Knik River at river mile (rm) 4. The department began a king salmon sport fishery at this site, stocking the first smolt in 2002 (Table 225-1). One of the main objectives of this program was to take pressure off wild king salmon stocks through supplemental hatchery fish returning to a terminal harvest area.

Therefore, the harvest area was chosen to maximize the potential for harvest of hatchery fish only. Three annual objectives of the stocking program are to 1) produce a return of 4,000 adult king salmon to Eklutna Tailrace, 2) generate 10,000 angler-days annually of king salmon sport fishing effort at Eklutna Tailrace where none previously existed, and 3) stock 424,000 thermally marked king salmon smolt in Eklutna Tailrace. The department does not externally mark hatchery king salmon in this terminal fishery. Therefore, it is not possible to distinguish between hatchery and wild king salmon.

In 2008, with the support of the department the fishing area was expanded 1.5 miles downstream to the lower end of a side channel of the Knik River that led directly upstream to the Tailrace (Figure 225-1) as it was likely king salmon entering the side channel would be destined for the Tailrace.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. Extending the fishery any further downstream of the current boundary could result in interception of small stocks of king salmon ascending the Matanuska River, subjecting them to over harvest. Hatchery fish destined for the Tailrace cannot be distinguished from wild fish destined for Matanuska tributaries because they are not externally marked.

COST ANALYSIS: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery. Approval of this proposal would result in an additional direct cost for the department if it was required to externally mark Eklutna hatchery fish.

Figure 225-1.–Map of Eklutna Tailrace king salmon fishery in relation to the Knik and Matanuska rivers.

Table 225-1.–Number of king salmon smolt stocked and adult sport fish harvest at Eklutna Tailrace from 2002–2019.

Year	Smolt released		Mark type	Sport harvest
2002	106,991	[a]	TM	0
2003	218,492	[a]	TM	399
2004	215,165	[a]	TM	23
2005	164,586	[a]	TM	941
2006	213,250	[a]	TM	484
2007	110,978	[a]	TM	1,084
2008	114,136	[a]	TM	594
2009	77,785	[a]	TM	499
2010	152,014	[a]	TM	168
2011	122,962	[a]	TM	184
2012	160,347	[a]	TM	76
2013	94,609	[a]	TM	159
2014	424,000	[b]	TM	589
2015	424,000	[b]	TM	956
2016	425,247	[b]	TM	1,369
2017	422,835	[b]	TM	551
2018	432,369	[b]	TM	560
2019	229,704	[b]	TM	ND

TM=thermal mark

ND= Data not available from Statewide Harvest Survey.

[a] objective to stock 200,000 smolt.

[b] objective to stock 425,000 smolt to offset poor marine survival.

COMMITTEE OF THE WHOLE–GROUP 6: KASILOF SALMON MANAGEMENT PLAN, NORTHERN DISTRICT SALMON MANAGEMENT PLAN, LANDMARKS AND WAYPOINTS, AND MISCELLANEOUS COMMERCIAL FISHERIES (29 PROPOSALS – CHAIR: JENSEN)

Kasilof Salmon Management Plan (12 proposals)

PROPOSAL 121 – Make Kenai River late-run king salmon escapement goal priority over upper end of the Kasilof River optimal escapement goal.

5 AAC 21.365. Kasilof River Salmon Management Plan.

PROPOSED BY: Kenai River Sportfishing Association.

WHAT WOULD THE PROPOSAL DO? This would amend the *Kasilof River Salmon Management Plan* (*KRSMP*) to state that achieving the lower end of the Kenai River late-run king salmon escapement goal shall take priority over not exceeding the upper end of the Kasilof River optimal escapement goal (OEG) of 160,000–390,000 sockeye salmon.

WHAT ARE THE CURRENT REGULATIONS? The *KRSMP* states that achieving the lower end of the Kenai River sockeye salmon escapement goal takes priority over not exceeding the upper end of the of the Kasilof River sockeye salmon OEG. The *Kenai River Late-Run King Salmon Management Plan* contains provisions for restricting or closing the ESSN fishery in order to achieve the large king salmon sustainable escapement goal (SEG) in the Kenai River, as follows:

From July 1–31, in order to achieve the SEG, if the sport fishery is restricted to fishing with no bait, then the ESSN fishery will be managed with the following provisions:

1. No Monday/Thursday regular fishing periods.
2. No more than 48 hours of fishing time per week with a 36-hour Friday no-fishing window.
3. The following gear modifications were options for the department to consider:
    - gear restrictions where fishermen would be allowed to fish up to four set gillnets that are each not more than 35 fathoms in length and 29 meshes in depth and 105 fathoms in the aggregate, or two set gillnets that are each not more than 35 fathoms in length and 45 meshes in depth;
    - gear restrictions where fishermen would be allowed to fish two set gillnets that are each not more than 35 fathoms in length and 29 meshes in depth or one set gillnet that is not more than 35 fathoms in length and 45 meshes in depth;

If the sport fishery is restricted to no bait and no retention of king salmon, then the Upper Subdistrict set gillnet fishery is open for no more than 24 hours per week in July, with a 36-hour "Friday" window. No additional restrictions on gear would occur during this time period. If the sport fishery is closed, the entire ESSN fishery closes.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? By making this change to the *KRSMP*, this would prioritize achieving the lower end of two stock's escapement goals, Kenai River late-run king and sockeye salmon, over exceeding the upper end of the Kasilof River sockeye salmon OEG. This could result in higher sockeye and king salmon escapements into the Kasilof and Kenai rivers and reduce commercial harvest of Kasilof River sockeye and king salmon, and Kenai River sockeye and king salmon, especially during years of weak Kenai River king or sockeye salmon runs.

BACKGROUND: The *KRSMP* governs commercial harvest of Kasilof River salmon excess to spawning escapement needs. In 2002, the board made numerous changes to the KRSMP. One major change to the plan was the creation of an OEG range of 150,000–300,000 fish. The OEG was adopted primarily in response to poor sockeye salmon runs to the Kenai River in 2000 and 2001, when the department struggled to achieve the minimum Kenai River inriver goal, while the Kasilof River experienced strong sockeye salmon runs both years. In this case, the department was challenged with how to reduce Kasilof River sockeye salmon escapement through additional set gillnet harvest, while minimizing harvest of Kenai River sockeye salmon. At this time, the Kasilof River Special Harvest Area had never been used, although it had been in existence since 1986, and the 600-foot fishery in the Kasilof Section was not part of the management plan. The board responded by making the upper end of the Kasilof River OEG 50,000 fish above the upper end of the biological escapement goal (BEG) range of 150,000–250,000 fish. The rationale for the 50,000 additional fish above the Kasilof River BEG was to allow for a reduction of harvest of Kasilof River sockeye salmon during years when the Kenai River sockeye salmon run was weak. In 2008, the board clarified the *Upper Cook Inlet Salmon Management Plan* that achieving established escapement goals was the primary management objective.

In 2011, the department transitioned the Kasilof River sockeye sonar program from Bendix sonar to DIDSON and also recommended an increase in the Kasilof River BEG range from 150,000–250,000 fish to 160,000–340,000 fish. Based on this change, the board also modified the Kasilof River OEG range to 160,000–390,000 fish. This represented a 90,000 fish increase in both the BEG and OEG. Because there was very little difference in enumeration estimates between the two sonar technologies in the Kasilof River, the change in escapement goals represented an increase in actual number of spawners in the system. A reassessment of the Kasilof River sockeye salmon escapement goal in 2013 and 2016 did not result in any recommended changes to the BEG for this stock. However, based on an escapement goal review in 2019, the department recommended a slightly lower Kasilof River BEG of 140,000–320,000 sockeye salmon.

In 2014, the board modified the *Kenai River Late-Run King Salmon Management Plan* (5 AAC 21.359) to include "paired restrictions" between the Kenai River king salmon sport and personal use fisheries and the Upper Subdistrict set gillnet (ESSN) fishery. The paired restrictions were created to share the burden of king salmon conservation in years of low returns between all user groups. Beginning with the 2017 season, Kenai River late-run king salmon were managed to meet a sustainable escapement goal (SEG) of 13,500–27,000 large (>75cm mid-eye to tail fork) fish. At the 2017 board meeting, the board included the use of restricting the set gillnet fishery in the Kasilof Section to within 600 feet of the mean high tide mark to aid in achieving the Kenai River late run king salmon escapement goal. Furthermore, because the ESSN fishery harvests fewer large kings than all-sized kings, the paired restrictive provisions in the *Kenai River Late-Run*

King Salmon Management Plan were modified at the 2017 board meeting by increasing the weekly maximum number of hours from 36 to 48 hours per week the ESSN fishery could be open.

Since 2002, the Kasilof River sockeye salmon escapement has been above the escapement goal 18 years (72%), and within the escapement goal 5 years (28%)) (Table 117-4). More recently in the last decade (2010–2019), the Kasilof River sockeye salmon escapement has been within the escapement goal 3 years (30%) and above the escapement goal 7 years (70%).

From 1986–2016 Kenai River late-run king salmon were managed to achieve a SEG/BEG for king salmon of all sizes (Table 121-1). During that time the goal was not met three years, was met nine years, and was exceeded 19 years. Since 2017, Kenai River late-run king salmon have been managed to meet a sustainable escapement goal (SEG) of 13,500–27,000 large (>75cm mid-eye to tail fork) fish. From 2017–2019, the SEG was met twice and missed once.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal. Without specific direction from the board, the department places a higher priority on achieving the lower end of an escapement goal for one stock over exceeding the upper end of another stock. There already are provisions within the KRSMP and *Kenai River Late-Run King Salmon Management Plan* that restrict fishing to aid in achieving the Kenai River late run king salmon escapement goal.

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

Table 121-1.–Kenai River late-run large king salmon estimates of passage and spawner escapement.

Year		Escapement	SEG/BEG	Inriver goal
1986		52,552	15,500–22,300	-
1987		50,327	15,500–22,300	-
1988		41,889	15,500–22,300	-
1989		26,591	15,500–22,300	-
1990		27,234	15,500–22,300	-
1991		31,021	15,500–22,300	-
1992		34,500	15,500–22,300	-
1993		31,957	15,500–22,300	-
1994		29,031	15,500–22,300	-
1995		31,689	15,500–22,300	-
1996		34,341	15,500–22,300	-
1997		27,795	15,500–22,300	-
1998		39,000	15,500–22,300	-
1999		30,563	17,800–35,700	-
2000		32,550	17,800–35,700	-
2001		37,641	17,800–35,700	-
2002		45,457	17,800–35,700	-
2003		67,187	17,800–35,700	-
2004		63,683	17,800–35,700	-
2005		60,246	17,800–35,700	-
2006	**All Sizes of Fish**	48,950	17,800–35,700	-
2007		37,010	17,800–35,700	-
2008		32,342	17,800–35,700	-
2009		21,410	17,800–35,700	-
2010		11,375	17,800–35,700	-
2011		16,340	17,800–35,700	-
2012		21,417	17,800–35,700	-
2013		19,342	17,800–35,700	-
2014		17,451	17,800–35,700	-
2015		22,642	15,000–30,000	≥ 22,500
2016		22,535	15,000–30,000	≥ 22,500
2017[a]		20,501	13,500–27,000	-
2018[a]	**Large Fish**	17,279	13,500–27,000	-
2019[a]		11,671	13,500–27,000	-
Averages				
1986–2016		34,389		
2017–2019		16,484		

Note* Large fish are king salmon that are 75 cm from mideye to tail fork in length or longer
Shaded areas indicate that the goal was achieved for that year
[a]These estimates are preliminary until biometrically reviewed and published.

PROPOSAL 119 – Remove optimal escapement goal from Kasilof River Salmon Management Plan.

5 AAC 21.365. Kasilof River Salmon Management Plan.

PROPOSED BY: Mark Ducker.

WHAT WOULD THE PROPOSAL DO? This would remove the Kasilof River sockeye salmon optimal escapement goal (OEG) from the *Kasilof River Salmon Management Plan* (KRSMP).

WHAT ARE THE CURRENT REGULATIONS? The KRSMP states, in part, that achieving the lower end of the Kenai River sockeye salmon escapement goal range takes priority over not exceeding the upper end of the Kasilof River OEG range of 160,000–390,000 sockeye salmon. In years when the lower end of the Kenai River sockeye salmon goal is achieved, Kasilof River sockeye salmon are to be managed to the biological escapement goal (BEG).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Low run entry of sockeye salmon into the Kenai River, and achievement of the Kenai River escapement goal, would not have higher priority than exceeding the Kasilof River BEG. This may result in greater use of regulations that focus the harvest of Kasilof sockeye salmon, such as Kasilof Section ½ mile or 600-foot fishery, or the Kasilof River Special Harvest Area.

BACKGROUND: In 2002, the board made numerous changes to the KRSMP. One major change to the plan was the creation of an OEG range of 150,000–300,000 fish. The OEG was adopted primarily in response to poor sockeye salmon runs to the Kenai River in 2000 and 2001, when the department struggled to achieve the minimum Kenai River inriver goal, while the Kasilof River experienced strong sockeye salmon runs both years. In this case, the department was challenged with how to reduce Kasilof River sockeye salmon escapement through additional set gillnet harvest, while minimizing harvest of Kenai River sockeye salmon. At this time, the Kasilof River Special Harvest Area had never been used, although it had been in existence since 1986, and the 600-foot fishery in the Kasilof Section was not part of the management plan. The board responded by making the upper end of the Kasilof River OEG 50,000 fish above the upper end of the BEG range of 150,000–250,000 fish. The rationale for the 50,000 additional fish above the Kasilof River BEG was to allow for a reduction of harvest of Kasilof River sockeye salmon during years when the Kenai River sockeye salmon run was weak. Exact wording of the plan (5 AAC 21.365(b)) from 2002–2005 regulations stated: "Achieving the lower end of the Kenai River sockeye salmon escapement goal shall take priority over not exceeding the upper end of the Kasilof River OEG of 150,000–300,000 sockeye salmon." In 2008, the board also clarified that achieving established escapement goals was the primary management objective.

In 2011, the department transitioned the Kasilof River sockeye sonar program from Bendix sonar to DIDSON. Although the difference in the number of fish detected by the two sonars was small in the Kasilof River, the department's escapement goal analysis supported an increase of the Kasilof River BEG range from 150,000–250,000 fish to 160,000–340,000 fish. Based on this change, the board also modified the Kasilof River OEG range to 160,000–390,000 fish. This represented a 90,000 fish increase in both the BEG and OEG. Because there was very little

difference in enumeration estimates between the two sonar technologies in the Kasilof River, the change in escapement goals represented an increase in actual number of spawners in the system. A reassessment of the Kasilof River sockeye salmon escapement goal in 2013 and 2016 did not result in any recommended changes to the BEG for this stock, but as noted earlier, based on an escapement goal review in 2019, the department recommended a slightly lower Kasilof River BEG of 140,000–320,000 sockeye salmon.

Since 2002, the Kasilof River sockeye salmon escapement has been above the BEG/OEG 13 years (72%), and within the escapement goal five years (28%) (Table 117-4). More recently in the last decade (2010–2019), the Kasilof River sockeye salmon escapement has been within the BEG/OEG range three years (30%) and above the escapement goal range seven years (70%).

Since 1999, the sonar count (or inriver fish passage) for Kenai River late-run sockeye salmon was above the inriver goal range 14 years (67%), within the inriver goal range six years (29%), and below the inriver goal range one year (5%). During this same time period, escapements have been above the SEG range nine years (43%), within the goal range nine years (43%), and below the goal range three years (14%) (Table 88-1; Figure 88-1). From 1999–2016 (18 years), there also was an OEG for Kenai River sockeye salmon. During this time the OEG was not achieved three times (17%), was achieved 11 times (61%), and was exceeded four times (22%).

DEPARTMENT COMMENTS: The Department is **NEUTRAL** on this allocative proposal. Without specific direction from the board, the department places a higher priority on achieving the lower end of an escapement goal for one stock over exceeding the upper end of another stock. If adopted, this proposal could increase the harvest of Kenai River origin sockeye and king salmon during years these stocks have low returns.

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

PROPOSAL 118 – Add biological escapement goal to Kasilof River Salmon Management Plan.

5 AAC 21.365. Kasilof River Salmon Management Plan.

PROPOSED BY: Jeff Beaudoin.

WHAT WOULD THE PROPOSAL DO? This would amend the *Kasilof River Salmon Management Plan* (KRSMP) to include the Kasilof River sockeye salmon biological escapement goal (BEG).

WHAT ARE THE CURRENT REGULATIONS? The KRSMP governs commercial harvest of Kasilof River salmon excess to spawning escapement needs. It is the intent of the board that Kasilof River salmon be harvested in the fisheries that have historically harvested them, including methods, means, times, and locations of those fisheries. Openings in areas historically fished must be consistent with escapement objectives for UCI salmon and with *Upper Cook Inlet Salmon Management Plan*. Achieving the lower end of the Kenai River sockeye salmon escapement goal range takes priority over not exceeding the upper end of the Kasilof River OEG of 160,000–390,000 sockeye salmon. The Kasilof River BEG of 160,000–340,000 fish is currently not mentioned in the KRSMP.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would result in no change to management of Kasilof River sockeye salmon. The department currently manages this stock to achieve the BEG or OEG, whichever is applicable. Listing the BEG in the management plan, however, might reduce confusion with regard to the *Upper Cook Inlet Salmon Management Plan,* where it states the department is to manage to escapement goals identified in management plans. If the numeric goal range was identified in the KRSMP, the plan would need to be updated any time there was a change to the goal.

BACKGROUND: In 2002, the board made numerous changes to the KRSMP. A major change included the creation of an OEG range of 150,000–300,000 fish. The OEG was adopted primarily in response to poor sockeye salmon runs to the Kenai River in 2000 and 2001, when the department struggled to achieve the minimum Kenai River inriver goal, while the Kasilof River experienced strong runs both years. In this case, the department was challenged with how to reduce Kasilof River sockeye salmon escapement through additional set gillnet harvest, while minimizing harvest of Kenai River sockeye and king salmon. The board responded by establishing an OEG of 50,000 fish above the upper end of the BEG range of 150,000–250,000 fish, with the rationale for setting an OEG being to provide 50,000 additional fish in escapement in the Kasilof River in years when the Kenai River sockeye salmon run was weak. Exact wording of the plan (5 AAC 21.365(b) from 2002–2005 regulations) stated: "Achieving the lower end of the Kenai River sockeye salmon escapement goal shall take priority over not exceeding the upper end of the Kasilof River OEG of 150,000–300,000 sockeye salmon." In 2011, the department transitioned the Kasilof River sockeye sonar program from Bendix sonar to DIDSON and also recommended a change in the Kasilof River BEG range from 150,000–250,000 fish to 160,000–340,000 fish; based on this change, the board also modified the Kasilof River OEG range to 160,000–390,000 fish.

The 2019 UCI escapement goal review team has recommended a change in the Kasilof River sockeye salmon BEG from 160,000–340,000 fish to 140,000–320,000 fish.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. The department currently manages this stock to achieve the BEG or the OEG if achieving the lower end of the Kenai River sockeye salmon escapement goal is in jeopardy. The department is recommending a decrease in the Kasilof River sockeye salmon BEG beginning in 2020, therefore the board may want to consider if any change to the OEG is warranted.

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

PROPOSAL 185 – Open the Kasilof Section set gillnet fishery fishing season on June 20 instead of June 25.

5 AAC 21.310. Fishing seasons.

PROPOSED BY: Joseph Person.

WHAT WOULD THE PROPOSAL DO? This would open the Kasilof Section set gillnet fishery fishing season on June 20 instead of June 25. However, the fishery could not open on any day before June 25 if the department estimated that less than 20,000 sockeye salmon were in the Kasilof River from June 20 through June 24.

WHAT ARE THE CURRENT REGULATIONS? The Kasilof Section set gillnet fishery is open from June 25 through August 15. However, there is an option for opening this area prior to June 25, but no earlier than June 20, if the department estimates that 50,000 sockeye salmon are in the Kasilof River prior to June 25.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would increase the likelihood of opening the Kasilof Section set gillnet fishery prior to June 25, which would increase the harvest of sockeye and king salmon bound to the Kenai and Kasilof rivers. This may decrease the likelihood of exceeding the Kasilof River sockeye salmon biological escapement goal (BEG) of 160,000–340,000 fish or the optimal escapement goal (OEG) of 160,000–390,000 fish. Based on years when the fishery has been opened prior to June 25 (Table 182-1), this would increase the harvest of king salmon (all sizes and origins) by 18–85 fish per additional fishing period (Table 182-3) and increase sockeye salmon harvest by 13,000–32,000 fish per additional fishing period depending on abundance.

BACKGROUND: From 2005–2019 (past 15 years), the average date in which 20,000 sockeye salmon were estimated to have passed the Kasilof River sockeye salmon sonar is June 20 (Table 185-1). In all 15 years, the estimated sockeye salmon passage was 20,000 fish or more prior to June 25.

From 2010–2018, the average harvest of large (≥75 cm METF) Kenai River tributary (~early-run) king salmon harvested in the Kasilof Section set gillnet fishery for dates including June 23–July 9 was four fish (ranging from 0 to 16) (Table 182-3).

Please also see Background section on Proposals 175, 179, and 182.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal.

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

Table 185-1.–Date that 20,000 sockeye salmon were enumerated at the Kasilof River sonar site, 2005–2019, and years and harvest when the fishery opened prior to June 25.

Year	Date	Opened Prior to June 25	Total Harvest	Harvest Per Period
2005	6/17	Yes	128,147	32,037
2006	6/21	No		
2007	6/21	No		
2008	6/23	No		
2009	6/21	No		
2010	6/23	No		
2011	6/20	No		
2012	6/24	No		
2013	6/19	No		
2014	6/17	Yes	22,559	22,559
2015	6/17	Yes	31,084	15,542
2016	6/20	Yes	15,534	15,534
2017	6/18	Yes	13,049	13,049
2018	6/24	No		
2019	6/24	No		
Average	6/20		42,075	19,744

PROPOSAL 182 – Open the Kasilof Section set gillnet fishery on June 20 instead of June 25.

5 AAC 21.310. Fishing seasons.

PROPOSED BY: Jeff Beaudoin.

WHAT WOULD THE PROPOSAL DO? This would open the Kasilof Section commercial set gillnet fishery on June 20 instead of June 25. From June 20 through June 24, the fishery would be open for regular fishing periods only. The fishery could open on a non-regular fishing period between June 20–24 if the department determines that 50,000 sockeye salmon are in the Kasilof River during this time.

WHAT ARE THE CURRENT REGULATIONS? The Kasilof Section is open from June 25 through August 15, unless closed earlier by emergency order. If the department estimates that 50,000 sockeye salmon are in the Kasilof River before June 25, but on or after June 20, the Kasilof Section may be opened by emergency order.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would result in one or two additional regular fishing periods prior to June 25, based on the calendar each year. Based on years when the fishery has been opened prior to June 25 (Table 182-1), this would increase the harvest of king salmon (all sizes and origins) by 18–85 fish per additional fishing period and increase sockeye salmon harvest by 13,000–32,000 fish per additional fishing period depending on abundance. This could increase the likelihood of keeping Kasilof River sockeye salmon escapements within the biological or optimal escapement goal range.

BACKGROUND: From 1981–1983, the set gillnet fisheries in all of the Upper Subdistrict opened on June 25, with no provision for an earlier opening; in 1984, the season opened in the Kasilof Section on July 5, with a 75,000 escapement trigger for an early (June 25) opening; from 1985–2001, the season opened on the first regular period on or after July 1, with an escapement trigger of 50,000 fish for a June 25 opening; from 2002–2004, the Kasilof Section opened on the first regular period on or after June 25, with no early season trigger; and from 2005 to present, the season opens on the first regular period on or after June 25 with a 50,000 fish trigger for an opening as early as June 20.

Since 2005, the Kasilof Section set gillnet fishery opened prior to the June 25 (or later) scheduled season opening date in seven of 15 years, based on the 50,000-sockeye salmon trigger (Table 182-2). However, in 2013, 2014, and 2015, the section was not opened immediately upon reaching the 50,000 fish trigger due to concerns over weak Kenai River early-run king salmon abundance, but the 2014 and 2015 seasons were still opened prior to the first scheduled regular period. More recent genetic stock composition estimates of the Kasilof Section set gillnet harvest shows very little to no harvest of Kenai River early-run king salmon during this time.

From 2010–2018, the average harvest of large (≥75 cm METF) Kenai River tributary (~early-run) king salmon harvested in the Kasilof Section set gillnet fishery for dates including June 23–July 9 was four fish (ranging from 0 to 16) (Table 182-3).

Since 2002, the Kasilof River sockeye salmon escapement has been above the BEG/OEG 13 years (72%), and within the escapement goal five years (28%) (Table 117-4). During the last decade (2010–2019), the Kasilof River sockeye salmon escapement has been within the BEG/OEG range three years (30%) and above the escapement goal range seven years (70%).

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal.

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

Table 182-1.–Kasilof Section set gillnet commercial harvest of king and sockeye salmon for dates prior to June 25 (June 20–24), 2005–2019. Years without harvest meant the fishery was not open prior to June 25 for that year.

	Harvest		No. of Fishing	Harvest/Period	
Year	King[a]	Sockeye	Periods	King[a]	Sockeye
2005	341	128,147	4	85	32,037
2014	18	22,559	1	18	22,559
2015	74	31,084	2	37	15,542
2016	74	15,534	1	74	15,534
2017	54	13,049	1	54	13,049
Avg	112	42,075	2	54	19,744

[a] All-sized king salmon

Table 182-2.– Date 50,0000 sockeye salmon were enumerated in the Kasilof River, date the Kasilof Section set gillnet fishery opened for the season, and the date the Kasilof Section was scheduled to open, 2005–2019.

Year	Date 50,000 sockeye were enumerated	Date Kasilof Section Opened	Date Kasilof Section scheduled to open	Early Opening
2005	19-Jun	20-Jun	27-Jun	Yes
2006	27-Jun	26-Jun	26-Jun	No
2007	1-Jul	25-Jun	25-Jun	No
2008	26-Jun	26-Jun	26-Jun	No
2009	29-Jun	25-Jun	25-Jun	No
2010	27-Jun	27-Jun	28-Jun	Yes
2011	24-Jun	25-Jun	27-Jun	Yes
2012	30-Jun	3-Jul	25-Jun	No
2013	22-Jun	27-Jun	27-Jun	No
2014	19-Jun	23-Jun	26-Jun	Yes
2015	20-Jun	22-Jun	25-Jun	Yes
2016	24-Jun	23-Jun	27-Jun	Yes
2017	24-Jun	24-Jun	26-Jun	Yes
2018	3-Jul	25-Jun	25-Jun	No
2019	1-Jul	27-Jun	27-Jun	No
Average	25-Jun	25-Jun	26-Jun	

Table 182-3.–Large (≥75 cm METF) fish stock compositions and stock-specific harvest estimates by year for king salmon harvested in the Kasilof Section of Eastside set gillnet fishery by spatiotemporal stratum, Upper Cook Inlet, Alaska, 2010, 2011, and 2013–2018. (Table 10 from Eskelin and Barclay, 2019).

			Kenai River tributaries		Kenai River mainstem		Kasilof River mainstem		Cook Inlet other	
Stratum	Dates	Year	Stock Comp [a]	Stock-specific Harvest	Stock Comp [a]	Stock-specific Harvest	Stock Comp [a]	Stock-specific Harvest	Stock Comp [a]	Stock-specific Harvest
Kasilof Section	27 Jun–7 Jul	2010	0.00	2	0.11	98	0.04	40	0.01	9
"Early" b	25 Jun–9 Jul	2011	0.00	0	0.30	463	0.11	176	0.00	0
	27 Jun–6 Jul	2013	0.00	0	0.16	65	0.03	10	0.02	8
	23 Jun–7 Jul	2014	0.00	0	0.08	38	0.03	13	0.00	1
	22 Jun–6 Jul	2015	0.00	1	0.11	90	0.06	49	0.05	44
	23 Jun–9 Jul	2016	0.00	4	0.23	267	0.11	130	0.02	28
	24 Jun–8 Jul	2017	0.01	10	0.47	338	0.13	95	0.04	30
	25 Jun–7 Jul	2018	0.02	16	0.16	107	0.01	7	0.01	10
		Average	0.01	4	0.20	183	0.07	65	0.02	16
Kasilof Section	8–31 Jul	2010	0.01	14	0.22	574	0.39	1,048	0.02	46
"Late" c	11–31 Jul	2011	0.00	1	0.27	835	0.30	917	0.00	2
	8–23 Jul	2013	0.00	0	0.20	170	0.07	63	0.00	0
	9–23 Jul	2014	0.00	0	0.21	117	0.18	99	0.00	0
	9–30 Jul	2015	0.00	1	0.25	401	0.20	316	0.00	2
	11–28 Jul	2016	0.00	3	0.28	467	0.34	574	0.00	2
	10–31 Jul	2017	0.01	15	0.49	672	0.27	373	0.01	13
	9–28 Jul	2018	0.00	0	0.26	220	0.16	133	0.00	0
		Average	0.00	4	0.27	432	0.24	440	0.00	8

-continued-

Table 182-3.–Page 2 of 2.

Stratum	Dates	Year	Kenai River tributaries Stock Comp [a]	Kenai River tributaries Stock-specific Harvest	Kenai River mainstem Stock Comp [a]	Kenai River mainstem Stock-specific Harvest	Kasilof River mainstem Stock Comp [a]	Kasilof River mainstem Stock-specific Harvest	Cook Inlet other Stock Comp [a]	Cook Inlet other Stock-specific Harvest
Kasilof Section	1–10 Aug	2015	0.00	1	0.34	115	0.46	155	0.00	0
"August"	3–15 Aug	2017	0.00	1	0.33	76	0.57	130	0.00	0
		Average	0.00	1	0.34	96	0.52	142	0.00	0
KRSHA	17 Jul–2 Aug	2013	0.00	0	0.16	59	0.49	174	0.00	0
	16 Jul–2 Aug	2014	0.00	1	0.12	77	0.49	305	0.00	0
	7 Jul–2 Aug	2015	0.01	3	0.14	60	0.31	132	0.00	1
		Average	0.00	2	0.14	65	0.43	204	0.00	0
Kasilof 600 ft [d]	15–31 Jul	2015	0.00	1	0.16	32	0.26	55	0.00	1

Note: The 90% credibility intervals of stock compositions and stock specific-harvest estimates can be found in Appendices A1–A4 of this report for 2010–2014, Eskelin and Barclay (2016–2018) for 2015–2017, and Table 3 of this report for 2018.

[a] "Stock comp" means stock composition of large fish relative to the total harvest of all fish (large and small combined).
[b] "Early" describes the portion of the fishery prior to the Kenai and East Foreland sections opening for the season.
[c] "Late" describes the portion of the fishery in July after the Kenai and East Foreland sections open for the season.
[d] Kasilof Section openings restricted to within 600 feet of the mean high tide mark.

PROPOSAL 117 – Allow set gillnetting in the Kasilof Section within 1,200 feet of mean high tide.

5 AAC 21.365. Kasilof River Salmon Management Plan.

PROPOSED BY: Jeff Beaudoin.

WHAT WOULD THE PROPOSAL DO? This would allow commercial set gillnet fishing periods in the Kasilof Section of the Upper Subdistrict to be restricted to within 1,200 feet of mean high tide as a restrictive management option after July 8.

WHAT ARE THE CURRENT REGULATIONS? The area open to commercial set gillnet fishing in the Kasilof section is within 1.5 miles from mean high tide. Beginning July 8, if the commissioner determines that further restrictions are necessary to aid in achieving the lower end of the Kenai River late-run sockeye and king salmon escapement goals, the commissioner may by emergency order (EO), limit fishing in the Kasilof Section set gillnet fishery to those waters within one-half mile of shore if the set gillnet fishery in the Kenai and East Forelands Sections are not open for the fishing period. The commissioner may further restrict fishing to within 600 feet of the mean high tide mark in the Kasilof Section. Use of the 600 feet fishery in this area is not subject to the time limitations that apply to EO hours described in the *Kenai River Late-Run Salmon Management Plan.*

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would replace the 600 feet option in the Kasilof Section set gillnet fishery with a 1,200 feet option. Fishing within 1,200 feet of the mean high tide mark would increase the harvest of Kenai and Kasilof river sockeye and king salmon compared to fishing within 600 feet of mean high tide. It is possible that some fishermen that are unable to fish gear within 600 feet of mean high tide due to not having "sets" or shore fishery leases in this area might be able to fish within 1,200 feet, although how many, if any, this applies to is unknown.

BACKGROUND: The *Kasilof River Salmon Management Plan* was first modified in 2011 to include an option of opening the Kasilof Section set gillnet fishery within 600 feet of the mean high tide mark beginning July 8 (5 AAC 21.365(c)(3)). Use of the 600-foot fishery could occur if the commissioner determined that further restrictions were necessary to aid in achieving the lower end of the Kenai River late-run sockeye and king salmon escapement goals; it also was to be used in place of fishing in the Kasilof River Special Harvest Area, if possible. At the 2017 UCI meeting, the board again modified the management plan to state that fishing within 600 feet of the mean high tide mark was not subject to weekly emergency order (EO) hourly restrictions found in either the Kenai River Late-Run king or sockeye salmon management plans. This modification reinforced board intent that use of the Kasilof Section 600-foot fishery was to occur before using the KRSHA. Fishing in this area also more closely aligned with the preamble to the management plan than fishing in the KRSHA as the preamble states that it is the intent of the board that Kasilof River salmon be harvested in the fisheries that have historically harvest them, including the methods, means, times, and locations of those fisheries.

At the 2017 UCI board meeting a proposal was passed that allowed fishing to be restricted within 600 feet of shore in the North K Beach (NKB) statistical area. In 2019, at the statewide board

meeting, Proposal 181 was passed, exempting EO hours used in the NKB 600-foot fishery from weekly EO hourly restrictions, making use of the NKB area consistent with the Kasilof Section 600-foot fishery and the KRSHA.

Since 2011, the Kasilof Section 600-foot set gillnet fishery has been open 11 times; 6 days in 2015, 4 days in 2018, and 1 day in 2019 (Table 117-1). In 2015, approximately 106,000 sockeye and 223 king salmon were harvested in this area. Genetic mixed stock analysis (MSA) of the king salmon harvest showed that 79 (38%) of the king salmon were Kenai River mainstem stock (late-run), while 126 (60%) were Kasilof River mainstem stock (Table 117-2).

MSA analyses have been completed from sockeye salmon harvested in the Kasilof Section 600-foot fishery from one day of fishing in 2015 and from two sample dates in 2018 (Table 117-3). In 2015, approximately 57% of the harvest from July 15 was Kasilof River stock, while 42% originated from the Kenai River. In 2018, approximately 31,000 sockeye and 104 king salmon were taken. MSA from two samples showed that 50–67% of the sockeye salmon harvest was Kasilof River stock, while 26% to 27% was Kenai River stock. In 2019, the harvest was 3,800 sockeye and 4 king salmon. Genetic samples were obtained from the fishery in 2019 but have not been analyzed.

Since 2002, the Kasilof River sockeye salmon escapement has been above the BEG/OEG range 13 years (72%), and within the escapement goal five years (28%) (Table 117-4). In the last decade (2010–2019), the Kasilof River sockeye salmon escapement has been within the BEG/OEG range three years (30%) and above the escapement goal range seven years (70%). The 600-foot set gillnet fishery has been implemented during part of three different years, 2015, 2018, and 2019, to aid in achieving the lower end of the Kenai River late-run sockeye and king salmon escapement goals. In these three years, the Kenai River sockeye salmon inriver goal was exceeded in 2015 and 2019 and achieved in 2018 (Table 88-1). The Kenai River sockeye salmon SEG was achieved in 2018 and exceeded in 2015 and likely exceeded in 2019, but the 2019 final escapement will not be known until late in 2020. In these three years, the Kenai River king salmon late-run escapement goal was achieved in 2015 and 2018, but not made in 2019.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal. While 5 AAC 21.363(e) provides the department with authority to deviate from management plans by EO to achieve established escapement goals, the department prefers management tools be provided in species- and area-specific management plans because doing so provides greater clarity and direction on how a specific fishery should be managed than does the general language contained in 5 AAC 21.363(e).

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

Table 117-1.–Commercial harvest of king and sockeye salmon in the Kasilof Section set gillnet fishery within 600 feet of mean high tide.

Year	Date	King	Sockeye
2015	07/15	35	19,596
2015	07/16	23	3,661
2015	07/19	50	27,771
2015	07/21	49	21,559
2015	07/22	43	20,712
2015	07/28	23	12,799
	Total =	223	106,098

Year	Date	King	Sockeye
2018	07/18	32	12,428
2018	07/22	27	7,714
2018	07/26	20	6,644
2018	07/28	25	4,614
	Total =	104	31,400

Year	Date	King	Sockeye
2019	08/02	4	3,806

Table 117-2.–Proportion and estimated number of king salmon harvested by reporting group and stratum in the ESSN fishery, Upper Cook Inlet, Alaska, 2015 (from Eskelin and Barclay 2016).

Stratum				Credibility interval			Credibility interval	
Area	Date	Reporting group	Proportion	5%	95%	Harvest	5%	95%
Kasilof	22 Jun–6 Jul	Kenai River tributaries	0.003	0.000	0.016	3	0	13
		Kenai River mainstem	0.551	0.395	0.712	448	321	579
		Kasilof River mainstem	0.200	0.094	0.313	162	77	255
		Cook Inlet other	0.246	0.132	0.371	200	107	302
Kasilof	9–30 Jul	Kenai River tributaries	0.001	0.000	0.001	2	0	1
		Kenai River mainstem	0.575	0.437	0.708	925	703	1,139
		Kasilof River mainstem	0.420	0.288	0.556	675	463	893
		Cook Inlet other	0.004	0.000	0.030	7	0	48
KRSHA[a]	7 Jul–2 Aug	Kenai River tributaries	0.017	0.000	0.128	7	0	54
		Kenai River mainstem	0.320	0.180	0.465	136	77	198
		Kasilof River mainstem	0.661	0.516	0.798	282	220	340
		Cook Inlet other	0.001	0.000	0.001	0	0	0
Kasilof 600 ft[b]	15–31 Jul	Kenai River tributaries	0.007	0.000	0.055	1	0	12
		Kenai River mainstem	0.379	0.230	0.533	79	48	111
		Kasilof River mainstem	0.605	0.456	0.748	126	95	156
		Cook Inlet other	0.009	0.000	0.076	2	0	16
Kasilof	1–10 Aug	Kenai River tributaries	0.004	0.000	0.029	1	0	10
		Kenai River mainstem	0.437	0.302	0.572	146	101	192
		Kasilof River mainstem	0.558	0.425	0.691	187	142	232
		Cook Inlet other	0.001	0.000	0.001	0	0	0

Note: Harvest values given by reporting group within each stratum may not sum to overall total for each reporting group due to rounding.

[a] Kasilof River Special Harvest Area.

[b] Kasilof Section openings restricted to within 600 ft of the mean high tide line.

Table 117-3.–Sockeye salmon stock composition summary from the Kasilof Section 600-foot fishery on July 15, 2015; July 18, 2018 and July 26 & 28, 2018; and also from the North K.Beach 600-foot fishery on July 19 & 21, 2018.

Date: 7/15/2015	Kasilof Section 600 ft[a] Stock Composition (n = 393)			
		90% CI		
Reporting Group	Mean	5%	95%	SD
Crescent	0.0	0.0	0.0	0.2
West	0.0	0.0	0.0	0.2
JCL	0.0	0.0	0.1	0.2
SusYen	0.7	0.0	4.6	1.6
Fish	0.3	0.0	1.4	0.5
KTNE	0.4	0.0	1.4	0.5
Kenai	42.0	36.6	47.5	3.3
Kasilof	56.5	51.2	61.6	3.2

Kasilof Section 600 ft[a]

Dates: 7/18	Stock Composition (n = 186)				Harvest = 12,428			
		90% CI				90% CI		
Reporting Group	Mean	5%	95%	SD	Mean	5%	95%	SD
Other Cook Inlet [b]	6.5	2.4	11.5	2.7	813	302	1,426	339
Kenai	26.7	20.0	33.8	4.3	3,314	2,482	4,195	531
Kasilof	66.8	59.8	73.4	4.1	8,301	7,430	9,116	511

Dates: 7/26 & 7/28	Stock Composition (n = 186)				Harvest = 11,258			
		90% CI				90% CI		
Reporting Group	Mean	5%	95%	SD	Mean	5%	95%	SD
Other Cook Inlet [b]	24.2	16.6	31.9	4.6	2,722	1,872	3,592	522
Kenai	26.4	19.4	34.0	4.5	2,978	2,186	3,827	505
Kasilof	49.4	42.3	56.8	4.3	5,559	4,760	6,394	486

Kenai Section, North K Beach 600 ft[a]

Dates: 7/19 & 7/21	Stock Composition (n = 187)				Harvest = 9,057			
		90% CI				90% CI		
Reporting Group	Mean	5%	95%	SD	Mean	5%	95%	SD
Other Cook Inlet [b]	1.8	0.1	5.1	1.7	161	6	464	150
Kenai	46.9	38.3	56.5	5.5	4,244	3,471	5,118	500
Kasilof	51.4	41.9	59.9	5.5	4,652	3,793	5,425	498

Note: The 90% credibility intervals of harvest estimates may not include the point estimate for the very low harvest estimates

Note: Stock composition and harvest estimates may not sum to 100% due to rounding errors.

[a] These mixtures represent fishing periods restricted to within 600 feet of the mean high tide mark. The stock composition estimates may differ from what was reported in season due to postseason reanalysis using a different mixed stock analysis program.

[b] This reporting group includes populations from the Crescent, West, JCL, SusYen, Fish, and KTNE reporting groups

Table 117-4.–Estimated escapement, and escapement goals (BEG, OEG) for sockeye salmon in the Kasilof River, 2002–2019. Included is a comparison of the estimated escapement and escapement goals (Above, Within or Below).

Year	Estimated Escapement	BEG/OEG	Goal Range	Result
2002	226,682	BEG	150,000–250,000	Within
2003	359,633	BEG	150,000–250,000	Above
2004	577,581	BEG	150,000–250,000	Above
2005	348,012	BEG	150,000–250,000	Above
2006	368,092	OEG	150,000–300,000	Above
2007	336,866	BEG	150,000–250,000	Above
2008	301,469	OEG	150,000–300,000	Above
2009	297,125	OEG	150,000–300,000	Within
2010	267,013	BEG	150,000–250,000	Above
2011[a]	245,721	BEG	160,000–340,000	Within
2012	374,523	BEG	160,000–340,000	Above
2013	489,654	BEG	160,000–340,000	Above
2014	439,997	BEG	160,000–340,000	Above
2015	470,677	BEG	160,000–340,000	Above
2016	239,981	BEG	160,000–340,000	Within
2017	358,724	OEG	160,000-390,000	Within
2018	394,309	OEG	160,000-390,000	Above
2019	378,416	BEG	160,000-340,000	Above
Averages				
2002–2010	342,497			
2011–2019	376,889			

Comparison of Escapement to Escapement Goals

	Years	%
Below Goal	0	0%
Within Goal	5	28%
Above Goal	13	72%
Totals	18	

[a] 2002-2010 are Bendix sonar estimates; 2011-2019 are DIDSON estimates

PROPOSAL 176 – Allow commercial fishing with set gillnets in the NKB statistical area within 600 feet of mean high tide beginning July 8.

5 AAC 21.310. Fishing seasons.

PROPOSED BY: Gary Hollier.

WHAT WOULD THE PROPOSAL DO? This would allow commercial fishing with set gillnets to be open in the North Kalifonsky Beach (NKB) statistical area (244-32) within 600 feet of mean high tide beginning July 8, regardless if July 8 is a regular scheduled period or not.

WHAT ARE THE CURRENT REGULATIONS? Opening dates for commercial fisheries in Upper Cook Inlet (UCI) are identified in 5 AAC 21.310. *Fishing Seasons*. The Kenai and East Foreland sections set gillnet fishery (Figure 175-1) opens on the first Monday or Thursday on or after July 8. This regulation also states that on or after July 8, when the Kasilof Section is open to commercial fishing with set gillnets and the Kenai and East Foreland sections are closed to commercial fishing with set gillnets, commercial fishing with set gillnets may be allowed within 600 feet of the mean high tide mark in the NKB area.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This may increase the harvest of Kenai and Kasilof river king and sockeye salmon by an unknown amount. This would be dependent upon whether or not the department opened the 600-foot fishery before the regular season opened in the Kenai and E. Foreland sections (see background below).

BACKGROUND: An emergency petition regarding when the NKB 600-foot fishery may be opened was submitted to the board at the Statewide Dungeness Crab, Shrimp, & Miscellaneous Shellfish meeting, held on March 6–9, 2018. During the 2017 commercial salmon fishery, the department did not open the NKB 600-foot fishery on July 8 when the Kasilof Section set gillnet fishery was open, but the Kenai and East Foreland sections season had not opened yet. Specifically, this petition sought, in part, to have the board clarify that the NKB 600-foot fishery could open on July 8, regardless if it was a regular fishing period or not. In response to the petition, RC 4 included the following language.

The provision allowing fishing within 600 feet of shore in NKB when the remainder of the Kenai Section is closed was adopted at the 2017 UCI board meeting after deliberation on Proposal 136 amended with substitute regulatory language in RC96. During the 2017 fishing season, the department in consultation with Department of Law (DOL) interpreted the new provision to apply only when the fishing season is open in the Kenai Section. In 2017, July 8 and July 9 fell on a Saturday and Sunday, respectively, which are closed weekly fishing periods. Based on this, the fishing season in the Kenai and East Foreland sections did not open until Monday, July 10, which was the first regular fishing period in the Kenai and East Foreland sections on or after July 8. Since the fishing season was closed on July 8 or July 9, the department determined that it could not open NKB within 600 feet of shore until after July 10, 2017, per 5 AAC 21.310(a), which states,

(a) If an opening date specified in this section for a fishing season in any district, subdistrict, or section falls on a date during a closed weekly fishing period under 5 AAC 21.320, the fishing season will open the first day of the next open weekly period.

Prior to the 2017 UCI commercial fishing season, the Alaska Department of Law and Department of Fish and Game reviewed records from the 2017 UCI finfish board meeting related to Proposal 136. Based on this review, the department determined commercial fishing with set gillnet gear within 600 feet of the mean high tide mark in NKB outside the commercial salmon fishing season in the Kenai Section, would be inconsistent with board intent. The board's record does not specifically direct the department to open waters of NKB within 600 feet of the mean high tide mark outside the commercial salmon fishing season, therefore, based on the information available, the department does not believe that an emergency under 5 AAC 96.625(f) exists

The board found that the petition did not meet the emergency petition criteria.

For more information on the NKB 600-foot fishery, please see the Background section on Proposal 175.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal, but supports the board clarifying their intent with regard to when NKB 600-foot fishery should be opened.

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

PROPOSAL 175 – Open the North Kalifonsky Beach (NKB) within 600 feet of the mean high tide mark with set gillnets.

5 AAC 21.310. Fishing seasons.

PROPOSED BY: Gary Hollier.

WHAT WOULD THE PROPOSAL DO? This would open the North Kalifonsky Beach (NKB) statistical area within 600 feet of the mean high tide mark to set gillnets that are no more than 29 meshes deep with a mesh size no larger than 4¾ inch. Fishing would be open in this area for regular Monday and Thursday 12-hour fishing periods and up to 24 additional hours per week, but only from July 1 until the Kenai Section opens by regulation (which is on or after July 8).

WHAT ARE THE CURRENT REGULATIONS? Opening dates for commercial fisheries in Upper Cook Inlet (UCI) are identified in 5 AAC 21.310. *Fishing seasons*. The Kenai and East Foreland sections set gillnet fishery (Figure 175-1) opens on the first Monday or Thursday on or after July 8. Upper Subdistrict set gillnet (ESSN) fishermen may fish no more than four nets per permit, and no more 105 fathoms of gillnet per permit, where a single gillnet may not be longer than 35 fathoms, nor deeper than 45 meshes, with mesh size not to exceed six inches.

In Cook Inlet, one person may own two set gillnet permits (S04H) and operate two full complements of gear. However, in the ESSN fishery only, if one person owns and operates two permits, 105 fathoms of the 210 fathoms of total gear must be fished with nets that are not more than 29 meshes in depth and marked with a blue buoy on either end of the net. The buoy must be at least 9.5 inches in diameter. There also is an option for gear reduction (number of nets and depth of nets) in the ESSN fishery found in 5 AAC 21.359. *Kenai River King Salmon Management Plan*.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would increase the harvest of king and sockeye salmon by an unknown amount in the NKB statistical area (Figure 175-1), which is that area of beach from the Kenai River south to the Blanchard Line (approximately 3.9 miles). Harvest would be dependent on run timing and abundance of Kenai and Kasilof river king and sockeye salmon. By reducing mesh size to no more than 4¾ inch and limiting the area to within 600 feet of the mean high tide mark, this would favor the harvest of smaller fish (i.e., sockeye salmon and small king salmon) while reducing the harvest of larger king salmon, when comparing harvests to the mesh size that is commonly used in the ESSN fishery.

BACKGROUND: In 2017, the board passed Proposal 136 which allowed set gillnetting within 600 feet of the mean high tide mark in the NKB area, beginning on or after July 8, when the Kasilof Section is open to set gillnetting, but the Kenai and East Foreland sections are not open. Since adoption of this proposal, the NKB 600-foot fishing area has been open five times; two days in 2018 and three days in 2019 (Table 175-1). The average king salmon harvest per fishing period in the 600-foot fishery was the same in both years; i.e., six king salmon per period. The average king salmon harvest from the full area (out to 1.5 miles from shore) was 96 fish/period in 2018 and 27 fish/period in 2019. Sockeye salmon catches averaged 4,529 per period in the 600-foot fishery in 2018 and 4,211 fish/period in 2019. The average sockeye salmon harvest in the full area averaged 3,352 fish/period in 2018 and 8,235 fish/period in 2019.

Kenai River sockeye salmon passage is measured at the river mile 19 sonar site. Since 1980, the number of sockeye salmon enumerated in the Kenai River in August has steadily increased (Table 135-1). For example, the average sockeye salmon passage estimate in August was 114,000 fish per year in the 1980s but has increased to nearly 472,000 fish per year for each of the past 10 years. The average percentage of each year's total passage estimate that occurs in August has risen from 8% in the 1980s to 33% during the past 10 years. The average day that sonar operations ceased each year has also increased from August 12 in the 1980s to August 19 during the past 10 years. Sonar operations typically cease when less than 1% of the season's total sockeye salmon passage has occurred for three consecutive days.

Genetic stock composition estimates were conducted on the 2018 sockeye salmon harvest in the NKB 600-foot fishery (Table 175-2). Samples were pooled (n=187) from two days of fishing representing a harvest of 9,057 fish. From this, it was estimated that 4,652 fish (51.4%) were of Kasilof River origin; 4,244 fish (46.9%) were of Kenai River origin; and 161 fish (1.8%) were from Other Cook Inlet areas.

Since 1999, the sonar count (or inriver fish passage) for Kenai River late-run sockeye salmon was above the inriver goal range 14 years (67%), within the inriver goal range six years (29%), and below the inriver goal range one year (5%). During this same time period, escapements have been above the SEG range nine years (43%), within the goal range nine years (43%), and below the goal range three years (14%) (Table 88-1; Figure 88-1). From 1999–2016 (18 years), there also was an OEG for Kenai River sockeye salmon. During this time the OEG was not achieved three times (17%), was achieved 11 times (61%), and was exceeded four times (22%).

Since 2002, the Kasilof River sockeye salmon escapement has been above the BEG/OEG 13 years (72%), and within the escapement goal five years (28%) (Table 117-4). More recently in the last decade (2010–2019), the Kasilof River sockeye salmon escapement has been within the BEG/OEG range three years (30%) and above the escapement goal range seven years (70%).

From 1986–2016 Kenai River late-run king salmon were managed to meet an SEG/BEG based upon all sizes of fish (Table 121-1). During that time the goal was not met three years, was met nine years, and was exceeded 19 years. Since 2017, Kenai River late-run king salmon have been managed to meet a sustainable escapement goal (SEG) of 13,500–27,000 large (>75cm mid-eye to tail fork) fish. From 2017–2019, the SEG was met twice and missed once.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal.

COST ANALYSIS: Approval of this proposal could result in an additional direct cost to NKB setnetters who would either have to purchase 4 ¾ inch mesh nets no deeper than 29 meshes deep or modify existing gear to these specifications. Approval of this proposal is not expected to result in an additional cost to the department.

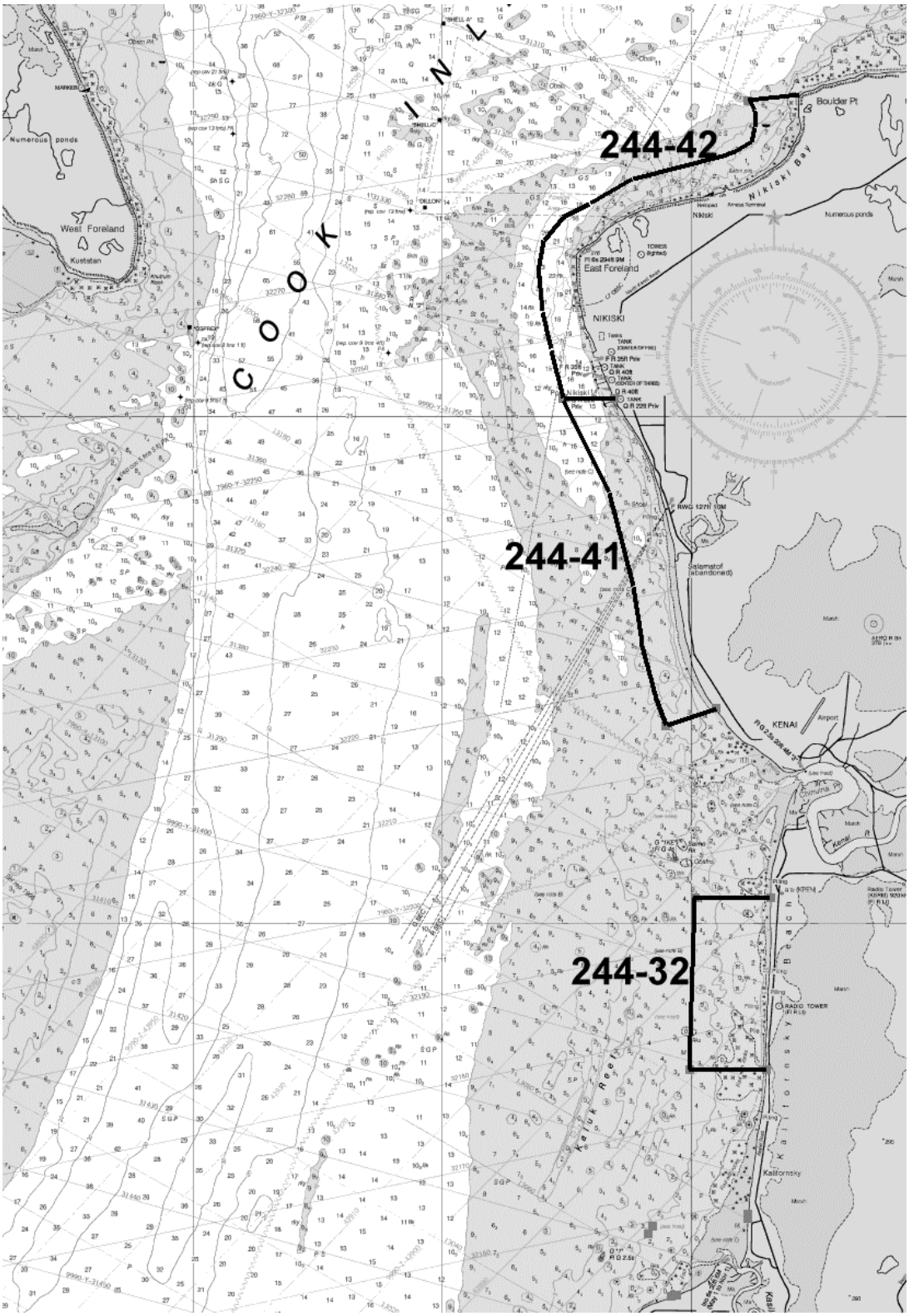

Figure 175-1.–Map of the Kenai and East Foreland sections set gillnet statistical areas. The north Kalifornsky Beach statistical area is defined as 244-32.

Table 175-1.–King (all sizes) and sockeye salmon harvest in the North Kalifonsky Beach statistical area (244-32), 2018–2019.

Date	King	Sockeye	Area Fished
7/9/2018	51	1,184	Full Area
7/12/2018	177	6,277	Full Area
7/19/2018	5	6,885	600 ft
7/21/2018	6	2,172	600 ft
7/23/2018	59	2,595	Full Area
Averages			
Full Area	96	3,352	
600 ft	6	4,529	

Date	King	Sockeye	Area Fished
7/8/2019	26	4,128	Full Area
7/11/2019	39	6,539	Full Area
7/13/2019	4	3,227	600 ft
7/15/2019	39	7,329	Full Area
7/18/2019	77	8,938	Full Area
7/21/2019	13	8,076	600 ft
7/22/2019	37	7,266	Full Area
7/25/2019	26	13,125	Full Area
7/28/2019	12	14,133	Full Area
7/29/2019	16	12,666	Full Area
7/31/2019	15	8,746	Full Area
8/1/2019	11	5,551	Full Area
8/2/2019	0	1,331	600 ft
8/3/2019	2	2,163	Full Area
Averages			
Full Area	27	8,235	Full Area
600 ft	6	4,211	600 ft

Table 175-2.–Genetic stock composition estimates of sockeye salmon harvested in the North Kalifonsky Beach statistical area (244-32), 2018.

Kenai Section, North K Beach 600 ft[a]								
Dates: 7/19 & 7/21, 2018	Stock Composition (*n* = 187)				Harvest = 9,057			
		90% CI				90% CI		
Reporting Group	Mean	5%	95%	SD	Mean	5%	95%	SD
Other Cook Inlet [b]	1.8	0.1	5.1	1.7	161	6	464	150
Kenai	46.9	38.3	56.5	5.5	4,244	3,471	5,118	500
Kasilof	51.4	41.9	59.9	5.5	4,652	3,793	5,425	498

Note: data from Appendix F4; Barclay 2019.
Note: The 90% credibility intervals of harvest estimates may not include the point estimate for the very low harvest estimates.
Note: Stock composition and harvest estimates may not sum to 100% due to rounding errors.

[a] These mixtures represent fishing periods restricted to within 600 feet of the mean high tide mark. The stock composition estimates may differ from what was reported in season due to postseason reanalysis using a different mixed stock analysis program.

[b] This reporting group includes populations from the *Crescent*, *West*, *JCL*, *SusYen*, *Fish*, and *KTNE* reporting groups.

PROPOSAL 177 – Make NKB 600-foot set gillnet fishery part of the Kasilof Section.

5 AAC 21.310. Fishing seasons.

PROPOSED BY: Chris Every.

WHAT WOULD THE PROPOSAL DO? This would include the North Kalifornsky Beach (NKB) set gillnet fishery, statistical area 244-32 (Figure 177-1) within 600 feet of the mean high tide mark as part of the Kasilof Section. The NKB fishery beyond 600 feet from mean high tide would remain part of the Kenai Section.

WHAT ARE THE CURRENT REGULATIONS? Opening dates for commercial fisheries are identified in 5 AAC 21.310. *Fishing seasons*. The Upper Subdistrict set gillnet (ESSN) commercial fishery is primarily managed under the guidance of two management plans: 5 AAC 21.365. *Kasilof River Salmon Management Plan* and 5 AAC 21.360. *Kenai River Late-Run Sockeye Salmon Management Plan*. The Kasilof Section fishery opens on or after June 25, with provisions for an opening as early as June 20 based on a 50,000-sockeye salmon inriver trigger. The Kenai and East Foreland sections do not open until on or after July 8. Both fisheries close on or before August 15. The fishing seasons regulation also states that on or after July 8, when the Kasilof Section is open to commercial fishing with set gillnets and the Kenai and East Foreland sections are closed to commercial fishing with set gillnets, commercial fishing with set gillnets may be allowed within 600 feet of the mean high tide mark in the NKB area.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This regulatory change would increase the frequency of openings in the NKB 600-foot fishery, which would increase the commercial harvest of salmon bound for the Kenai and Kasilof rivers by an unknown amount. Expanding the size of the Kasilof Section and moving it closer to the mouth of the Kenai River may result in reduced fishing time in the Kasilof Section in years of low Kenai River late-run sockeye and king salmon abundance or when Kenai River late-run sockeye and king salmon escapement is below inseason objectives.

BACKGROUND: The Kasilof Section (Figure 177-1) extends from one mile north of the Ninilchik River to the Blanchard Line, which is 4.5 miles north of the Kasilof River, a total distance of approximately 30 miles. This area is managed prior to July 8 primarily for the harvest of Kasilof River sockeye salmon stocks. After July 8 it is managed for sockeye salmon stocks of both the Kenai and Kasilof Rivers. The NKB statistical area (244-32) is currently the southern portion of the Kenai Section and is open to commercial fishing on or after July 8.

Per this proposal, the NKB 600-foot fishery would become part of the Kasilof Section, but the NKB one-and-one-half mile fishery (full area) would remain part of the Kenai Section.

Please see Background for Proposal 175.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal.

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

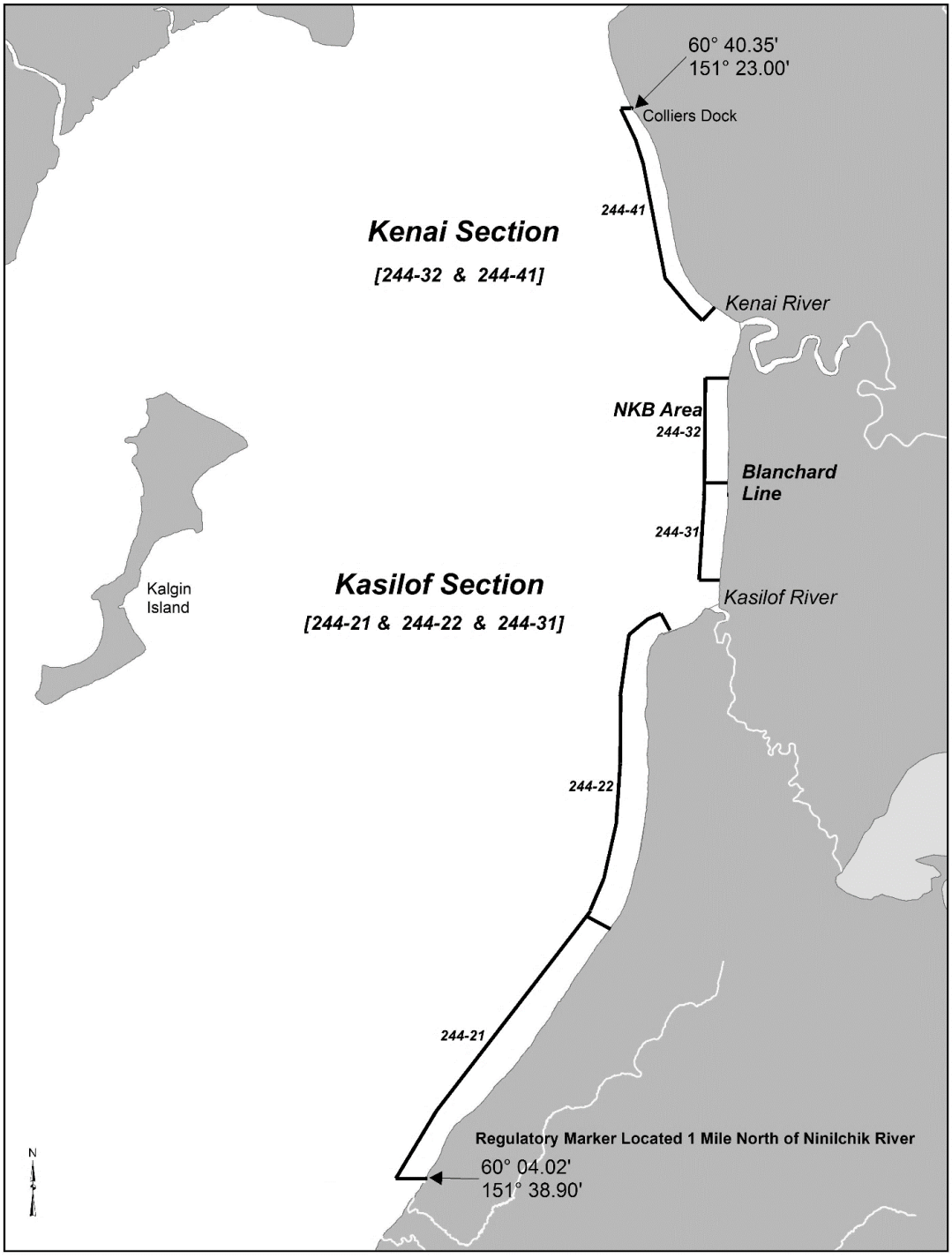

Figure 177-2.–Map of Kenai and Kasilof sections set gillnet fishing boundaries and statistical areas.

PROPOSAL 120 – Delete provisions Kasilof River Salmon Management Plan after July 8.

5 AAC 21.365. Kasilof River Salmon Management Plan.

PROPOSED BY: Jeff Beaudoin.

WHAT WOULD THE PROPOSAL DO? This would delete provision (c)(4) from the *Kasilof River Salmon Management Plan* (KRSMP), which refers to use of the Kasilof River Special Harvest Area (KRSHA) after July 8.

WHAT ARE THE CURRENT REGULATIONS? The *KRSMP* allows the commissioner to open the KRSHA after July 8 if the Kasilof section set gillnet fishery had previously been restricted to fishing within one-half mile from shore. Use of the KRSHA is not to exceed 48 hours without a 24 consecutive hour closure, unless the department projects that Kasilof River sockeye salmon escapement will exceed 365,000 fish. If escapement is projected to exceed 365,000 fish, the KRSHA may be open with no mandatory time limits. However, the management plan states the board's intent that the KRSHA should rarely, if ever, be opened under this subsection and only for conservation reasons. Before the commissioner opens the KRSHA, it is also the board's intent that additional fishing time be allowed in the remainder of the Kasilof Section first, and secondly that the mandatory closures specified in regulation be reduced in duration, if necessary, to meet the escapement goals contained within this and other management plans.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would prohibit use of the KRSHA until sockeye salmon escapement projections in the Kasilof River had exceeded 365,000 fish. Thus, after July 8, opening the Kasilof Section and North Kalifonsky Beach (NKB) statistical area set gillnet fishery within 600 feet of mean high tide would be more likely. Providing more fishing time under the 600-foot provision, as opposed to fishing the KRSHA, will likely increase harvest of Kenai River late-run sockeye and king salmon.

BACKGROUND: The KRSHA was developed by the board in 1986 to be used for the purpose of concentrating commercial harvest on Kasilof River sockeye salmon run, while significantly decreasing the harvest of Kenai River sockeye salmon. The board has expressed their intent in the management plan that the KRSHA should rarely, if ever, be opened, and before doing so, the department should add additional fishing time in the remainder of the Kasilof Section and then reduce the mandatory closures specified in regulation. The KRSHA was first opened in 2004 and since then has been used over nine different years, from as few as 5 days per year in 2018 to as many as 21 days in 2006 (Table 120-1). During that time, more than 1.3 million sockeye salmon were harvested, along with 7,100 king salmon.

In 2011, the board modified the *KRSMP* to include provisions beginning after July 8. Beginning July 8, the set gillnet fishery in the Kasilof Section will be managed as specified in 5 AAC 21.360(c) *Kenai River Late-Run Sockeye Salmon Management Plan*. In addition to provisions of 5 AAC 21.360(c), the department may limit fishing in the Kasilof Section during the regular weekly periods and any extra fishing periods to those waters within one-half mile of shore, if the set gillnet fishery in the Kenai and East Foreland sections is not open for the fishing period. If the department determines that further restrictions are necessary to aid in achieving the lower end of the Kenai River escapement goal range, the department may further restrict fishing to within 600

ft of the high-tide mark in the Kasilof Section. After July 8, if the Kasilof Section set gillnet fishery is restricted to fishing within the first one-half mile of shore, the department may open the KRSHA described in (f) of this section to both set and drift gillnet fishing using only one gillnet, for fishing periods not to exceed 48 hours in duration without one period of 24 consecutive hours of closure. The provisions in (f)(1–8) of this section apply during these openings.

At the 2017 UCI board meeting, Proposal 136 was passed (with substitute language in RC96), which allowed commercial fishing with set gillnets in the NKB statistical area (244-32) to occur within 600 feet mean high tide. At the same meeting, Proposal 101 was also adopted, allowing for the use of 600-foot fishing periods in the Kasilof Section to be exempt from time limitations in the Kenai River late-run king or sockeye salmon management plans. Moreover, the board expressed their intent in the management plan that the 600-foot fishery in the Kasilof Section was to be used prior to the KRSHA, if possible. In 2019, at the statewide board meeting, Proposal 181 was passed, exempting EO hours used in the NKB 600-foot fishery from weekly EO hourly restrictions, making use of the NKB area consistent with the Kasilof Section 600-foot fishery and the KRSHA.

Please see Background Section on Proposals 117-119.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal.

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

Table 120-1.–Commercial salmon harvest in the Kasilof River Special Harvest Area, 2004–2018.

	King Salmon		Sockeye Salmon		
Year	Drift	Set	Drift	Set	Days Open
2004	9	68	572	4,904	8
2005	119	629	19,292	77,907	11
2006	1,731	1,265	349,417	338,155	21
2007	16	164	4,659	15,631	8
2008	358	1,164	17,370	60,499	12
2013	11	358	2,701	64,150	14
2014	36	625	11,676	198,131	17
2015	89	426	28,387	101,660	20
2018	4	28	743	11,410	5
Total	2,373	4,727	434,817	872,447	116

PROPOSAL 184 – Make all additional fishing time in the Upper Subdistrict set gillnet fishery begin at 7:00 a.m.

5 AAC 21.320. Weekly fishing periods.

PROPOSED BY: Chris Every.

WHAT WOULD THE PROPOSAL DO? This would require that any additional fishing periods provided in the Upper Subdistrict set gillnet (ESSN) fishery beyond regularly scheduled periods start at 7:00 a.m.

WHAT ARE THE CURRENT REGULATIONS? Salmon may be taken in the ESSN fishery from 7:00 a.m. Monday until 7:00 p.m. Monday and from 7:00 a.m. Thursday until 7:00 p.m. Thursday. Additional fishing time may be provided by emergency order (EO) and is subject to time and area provisions in the *Kasilof River Salmon Management Plan*, and the *Kenai River Late-Run King and Sockeye Salmon Management Plans*.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Establishing a mandatory 7:00 a.m. set time for all additional fishing periods in the ESSN fishery may result in a loss in fishing opportunity and a reduction in the harvest of all salmon by an unknown amount. Fishing time is frequently scheduled around the tides to maximize harvest potential and to allow fishermen to safely set and remove their fishing gear during slack portions of the tide.

BACKGROUND: The Upper Subdistrict set gillnet fishery comprises approximately 60 miles of beach. Slack tides in the southern part of the Subdistrict may occur two to three hours earlier than further north in this area. Because tidal influence increases in strength as you travel north in the Subdistrict, due in part to Cook Inlet becoming narrower, it can be very dangerous to nearly impossible to remove fishing gear while the tide is "running." Because there are limits on the number of EO hours the ESSN fishery may be open each week, start and stop times for EO fishery extensions and openings are critical decisions the department makes on nearly a daily basis. Therefore, when a regular fishing period is extended by EO, or an additional fishing period is opened by EO, the department attempts to set the closing time for fishing periods to accommodate the safe removal of gear, which also results in increasing harvest potential because most of the gear is able to fish the entire fishing period.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocative aspects of this proposal but **OPPOSES** provisions that impair flexibility in the use of EO authority for conducting safe and orderly fisheries and making efficient use of the EO hours available under the management plans. While there may be unavoidable unintended allocative consequences based on additional fishing period start and stop times, the department sets these times to maximize sockeye salmon harvest potential and to provide safe and orderly fisheries.

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

PROPOSAL 122 – Create a commercial dip net fishery at the mouth of the Kasilof River.

5 AAC 21.365. Kasilof River Salmon Management Plan, 5 AAC 21.330. Gear, and 5 AAC 21.350 (b) (4) Closed waters.

PROPOSED BY: Nathan Hoff.

WHAT WOULD THE PROPOSAL DO? This would create a commercial dip net fishery at the mouth of the Kasilof River by adding dip nets as a new commercial salmon fishing gear type in Upper Cook Inlet (UCI).

WHAT ARE THE CURRENT REGULATIONS? Per 5 AAC 21.330. *Gear*, legal commercial fishing gear in UCI is either set or drift gillnets; purse seines may also be used, but only in Chinitna Bay and only by emergency order (EO).

5 AAC 21.350(b)(4). *Closed Waters* describes the area at the mouth of the Kasilof River that is normally closed to commercial fishing as approximately 1-mile north and 1-mile south of the river mouth and approximately one and one-half miles offshore (Figure 122-1). The boundaries of the Kasilof River Special Harvest Area (KRSHA) are approximately 600 feet inside the closed waters boundary. The KRSHA may be opened to both set and drift gillnetting under limited circumstances described in 5 AAC 21.365. *Kasilof River Salmon Management Plan* (KRSMP).

Dip nets are legal gear in UCI for the commercial harvest of smelt in the Susitna River under an interim permit issued by the commissioner. Dip nets are legal gear in the Kenai, Kasilof, and Beluga rivers and Fish Creek personal use fisheries.

The Kasilof Section set gillnet fishery is open by regulation from June 25 through August 15. The Kasilof River personal use dip net fishery is open from June 25 through August 7. The dip net fishery is open 24 hours per day, 7 days per week. The dip net fishery is open from a line between ADF&G regulatory markers outside the terminus of the river upstream for a distance of one mile (Figure 122-1). Dipnetting from a boat is allowed during the same open season and times as dipnetting from shore.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? It is difficult to determine what the effects of this proposal might be because some important details are lacking. Opening a commercial dip net fishery at the mouth of the Kasilof River in the same waters, and at the same time, that the personal use dip net fishery was being prosecuted would result in conflict between these two user groups. The proposal states that anytime the Kasilof Section set gillnet fishery was open, a set gillnet permit holder could fish at the mouth of the Kasilof River from a boat with up to three dip nets. Because current regulations require a setnet permit holder to be on site when their gear is being fished, in order to participate in the commercial dip net fishery, the permit holder would not be allowed to fish their set gillnets. Harvest from three dip nets would very likely be less than the harvest from a legal complement of set gillnet gear, which is 105 fathoms (630 feet). It is also possible that a commercial dip net fishery at the mouth of the Kasilof River could result in a reduced harvest of all other salmon, particularly king salmon, if retention of these fish in the dip net fishery was not allowed.

Currently, there are approximately 450 set gillnet permit holders who register to fish in the Upper Subdistrict, all of whom could fish in the proposed commercial dip net fishery. How many would choose to participate in a commercial dip net fishery at the mouth of the Kasilof River is unknown. If this proposal was adopted, the board would need to clarify whether the set gillnet permit holder needs to be in the vessel while it is engaged in commercial dipnetting. Current regulations do not require the permit holder to be in the vessel while commercial set gillnet fishing, but the permit holder must be on site.

BACKGROUND: At the 1984 UCI board meeting, a proposal to allow dip nets as commercial salmon harvest gear was proposed, but not passed. Dip nets are used as legal gear for commercial salmon fisheries in the Yukon River, as well as several other personal use salmon and smelt fisheries across the state.

Since statehood, legal gear in UCI for commercial salmon fisheries has included only drift and set gillnets, and seines. The area currently open to commercial salmon fishing, which excludes closed waters at the mouth of the Kasilof River and the all freshwaters of the Kasilof River, have also been in regulation since statehood. The KRSHA was developed as a conservation tool by the board in 1986 to be used for the purpose of concentrating commercial harvest on Kasilof River sockeye salmon run, while significantly decreasing the harvest of Kenai River sockeye salmon. The board has expressed their intent that the KRSHA should rarely, if ever, be opened, and before doing so, the department should add additional fishing time in the remainder of the Kasilof Section and then reduce the mandatory closures specified in regulation.

The proposed area to be opened for commercial salmon dipnetting is the same area currently open to personal use dip netting (Figure 122-1). This area is tidally influenced with both salt and fresh water and does not overlap with the KRSHA waters.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocative aspects of this proposal but has concerns about the potential conflict between commercial and personal use dipnetters in this 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. Approval of this proposal is not expected to result in an additional cost for the department.

Figure 122-1.–Boundary of closed waters to commercial fishing at the mouth of the Kasilof River and boundary of the KRSHA. Personal use dip netting is open between the two dip net boundary lines, which is approximately one river mile. This is the same area where this proposal would open a commercial dip net fishery.

Northern District Salmon Management Plan (11 proposals)

PROPOSAL 204 – Modify the preamble to the Northern District Salmon Management Plan.

5 AAC 21.358. Northern District Salmon Management Plan.

PROPOSED BY: Kristine Ogonowski.

WHAT WOULD THE PROPOSAL DO? This would modify the preamble to the *Northern District Salmon Management Plan* (*NDSMP*) to remove the commercial fishery priority in the Northern District (ND) for pink, chum, and sockeye salmon harvest. No user group would have a stated priority for harvest of these stocks. Preamble language that speaks to minimizing the harvest of ND coho salmon to provide sport and guided sport fishermen a reasonable opportunity to harvest these salmon resources over the entire run would not change, but "other inriver users" would be added as a group that would be provided reasonable opportunity to harvest salmon resources.

WHAT ARE THE CURRENT REGULATIONS? The preamble of NDSMP states, "The purposes of this management plan are to minimize the harvest of coho salmon bound for the Northern District of upper Cook Inlet and to provide the department direction for management of salmon stocks. The department shall manage the chum, pink, and sockeye salmon stocks primarily for commercial uses to provide commercial fisherman with an economic yield from the harvest of these salmon resources based on abundance. The department shall also manage the chum, pink, and sockeye salmon stocks to minimize the harvest of Northern District coho salmon, to provide sport and guided sport fisherman a reasonable opportunity to harvest these salmon resources over the entire run, as measured by the frequency of inriver restrictions, or as specified in this section and other regulations.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This likely would not alter current management in the ND set gillnet fishery unless specific management provisions were adopted by the board to meet this guiding principle.

BACKGROUND: Purpose statements found in the preamble of most UCI salmon management plans provide direction to future boards, stake holders, and the department on the long-term management objectives of the board at the time that plan was adopted. Purpose statements first appeared in the *Upper Cook Inlet Salmon Management Plan* in 1981. These statements have changed slightly over the years as the board has deliberated extensively to balance the allocation needs and desires of various user groups. In 1999, the *Northern District Salmon Management Plan* was adopted and current language directing the department to minimize the harvest of ND coho salmon has remained unchanged since.

Prior to 1978, all salmon stocks in UCI were basically managed for commercial uses, since sport use of these stocks was small at that time. In 1978, the board adopted the first rendition of the UCI salmon management plan as an uncodified policy. From 1981–1996, it remained relatively unchanged and directed the department to manage most stocks returning to UCI prior to July 1 "primarily" for sport uses. From July 1–August 15, most stocks were managed "primarily" for commercial uses with certain exceptions. After August 15, salmon stocks moving to Kenai Peninsula drainages were managed for sport purposes, while all other stocks were managed for commercial purposes. In

addition, in managing the commercial fishery, the department was instructed to "minimize" harvest of certain stocks important to sport uses, such as Kenai River king and coho salmon stocks. In 1996, the plan was changed to management priority by stocks; sockeye, pink, and chum salmon stocks were to be managed for commercial purposes with the caveat that a reasonable opportunity be provided to other users, and coho and king salmon stocks were managed for sport purposes.

There are several restrictions to reduce ND commercial set gillnet fishery harvest of coho salmon. Beginning in 1993, after August 15, the ND was restricted to two weekly regular fishing periods only, and beginning in 1997, additional fishing periods (outside regular periods) were not allowed if coho salmon were expected to be the most abundant species. These restrictions can be found in the *Upper Cook Inlet Salmon Management Plan* (1993–1998), the *Northern District Coho Salmon Management Plan* (1997–1998), and the *Northern District Salmon Management Plan* (1999–present). In 2008, when Susitna River sockeye salmon were designated a stock of yield concern, set gillnet gear reductions were implemented to reduce harvest of those stocks. These gear reduction to one or two nets per permit have likely resulted in reduced harvest of ND coho salmon stocks.

Poor returns of coho salmon to UCI in 1997 and 1999, coupled with failing to meet escapement goals, prompted the board to restrict coho salmon sport fisheries on select NCI streams. In 2000, the board conducted a special out-of-cycle session to address Cook Inlet coho salmon. Because of the broad decline in coho salmon abundance, restrictive action was taken in a wide geographic range (i.e., Anchorage, Kenai, Susitna River, Knik Arm, and parts of Western Cook Inlet (WCI)). Coho salmon restrictions were placed on both sport and commercial fisheries throughout most of the UCI area. The "minimize" language in the ND plan was changed from "minimize Susitna River coho" to "minimize ND coho." In 2000, as a result of a petition to the board, additional restrictions were put in place in many areas of Cook Inlet. In the ND, set gillnets were restricted to two nets instead of three from August 1–10.

The department has conducted mark-recapture experiments to estimate abundance of adult salmon in the Mainstem Susitna (Susitna River above the Yentna River confluence) and Yentna rivers (Table 199-5). Sockeye salmon estimates are available for 2006 –2008, coho salmon for 2010–2015, chum salmon 2010–2012, and king salmon for 2013–2018. Susitna River drainage sockeye salmon abundance point estimates ranged from 418,197 in 2006 to 327,732 in 2007. Coho salmon ranged from a high of 262,821 in 2015 to a low of 158,698 in 2014. Chum salmon ranged from 1,752,032 in 2011 to 329,345 in 2012. Drainagewide king salmon abundance estimates are only available for four years, 2014–2017, ranging from 63,000 to 137,000 fish. Yentna River estimates were not completed in 2013 or 2018, while mainstem Susitna River estimates were done from 2013-2018 and ranged from 31,000 to 89,000 king salmon.

Very little is known about pink salmon abundance in UCI; there are no pink salmon escapement goals and no projects designed specifically to enumerate escapement. At the Deshka River, pink salmon escapement is monitored as part of a coho salmon enumeration project, and is considered a minimum count. Weir counts ranged from 9,000 to 1,279,148 and averaged 322,189 on even numbered years from 1998–2018 (Table 204-1). Weir counts have been less than 100,000 fish since 2006.

NCI supports relatively large coho salmon sport fisheries, while harvest of sockeye and pink salmon are much smaller. On the Little Susitna River, sport fishing effort averages 26,000 angler-days each season, about half of which is estimated to be directed at coho salmon. The average annual sport harvest from 1988–2018 was approximately 12,000 coho salmon (Table 204-2). A more recent average annual harvest (2014–2018) is approximately 6,000 fish. Sport harvest in 2011 of 2,450 fish and in 2012 of 1,680 coho salmon reflect poor run years when the sport fishery was closed midseason. The average annual coho salmon sport fish harvest from 2002–2018 is 736 fish in Fish Creek; 7,700 fish in Jim Creek; and 3,300 fish in the Deshka River. In all of UCI the average annual sport harvest of coho salmon from 2009–2018 was 132,000 fish, while the harvest of coho salmon in all commercial fisheries averaged 186,000 fish (Table 204-3).

Genetic stock composition estimates from the Northern District set gillnet harvests of coho salmon were conducted from 2013–2016 (Table 204-4). Samples from the harvest were analyzed and were assigned to one of 11 different stock reporting groups (Figure 204-1). From the fish that were sampled, stock assignment over these four years averaged 10 fish (0.03%) in Southwest CI; 6,111 fish (16%) in Northwest; 4,792 fish (13%) in Susitna River; 1,025 fish (3%) in Deshka River; 7,525 fish (20%) in Yentna River; 8,678 fish (23%) in Knik Arm; 389 fish (1%) in Jim Creek; 8,267 fish (22%) in Turnagain/Northeast; 326 fish (.9%) in Kenai River; 31 fish (.08%) in Kasilof River; and 16 fish (.04%) in Southeast. Improvements in genetic identification of coho salmon has allowed estimates of commercial and sport harvest rates specific to the Susitna River drainage (Tables 204-5 and 204-6). The total harvest rate of the Northern District set gillnet fishery and Susitna River sport fishery averaged 15% from 2013-2015 in the mainstem Susitna River, while averaging 15% in the Yentna River from 2014–2015. The total harvest rate between the two fisheries averaged 15% of Deshka River coho salmon and 34% of Jim Creek coho salmon. Harvest rates reported here do not include drift gillnet harvests of these stocks.

Since the late 1990s NCI coho salmon production and associated harvests have trended down, but escapement goals have generally been met. From 1990–1998 (11 years), the Little Susitna River coho salmon escapement goal was a point-goal of 7,500 fish (Table 204-2). It was achieved all 11 years. Since 1999, the goal has been a sustainable escapement goal (SEG) range, and during this time, there were 16 years where there was a total count of the escapement at the weir. Since 1999, the goal was not achieved five times (31%), was achieved five times (31%), and was exceeded six times (38%). For the five years where the weir was flooded and produced incomplete counts, in two of those years the goal was achieved prior to the flood, and in one year (2006), while the pre-flood count was under the goal, it is believed the goal was very likely achieved, or perhaps exceeded. See background for Proposal 199 for management actions associated with these escapement goal performance metrics. The sport fishery was closed midseason on poor run years 2011-2012 and the goal missed. Bait was restricted early in the season on the below average run year of 2016 and the goal narrowly missed.

Since 2002 (18 years), there has been a coho salmon SEG of 1,200–4,400 fish at Fish Creek. The goal has been met or exceeded in all 18 years during which the sport fishery was liberalized 11 years.

A new coho salmon escapement goal was established at the Deshka River in 2017. Since then, the SEG of 10,200–24,100 was met or exceeded in all three years, during which the sport fishery was liberalized two years and closed one year, 2019, in order to achieve the goal. Genetic stock

composition estimates of total harvest rate averaged 35% from 2013–2015 on the Deshka River (Table 204-6). Sport harvest rate in 2013, an average run year, was 7% and commercial harvest rate, 32%. On below average run years 2014–2015, sport harvest rate rose to about 35% while commercial harvest was about 21%.

Coho salmon escapement is monitored in Jim Creek via a foot index survey of a section of McRoberts Creek, a tributary of the Jim Creek drainage. Since 2002 (18 years) the foot survey escapement goal has been met or exceeded 12 times (67%) and not achieved six times (33%). Poor runs in 2011–2012 and in 2016 resulted in midseason closure of the sport fishery. Harvest rates derived from genetic stock identification is available for 2015 and 2016, the first two years a weir was operated on Jim Creek in recent years. Commercial harvest rate was estimated at about 33% and the sport harvest rate 30% in both years (average total harvest rate 62%; Table 204-6).

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. When adopting or modifying specific management plans that apply in Cook Inlet, future board action could be guided by the proposed principle contained in the preamble. Preamble language in management plans provides direction to future boards, stake holders, and the department on the long-term management objectives of the board at the time the language was adopted but does not override management for established escapement objectives. The specific management provisions as to how to meet these directives are often codified in the rest of the management plan.

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

Table 204-1.–Pink salmon weir counts during even years on the Deshka River, 1998–2019.

Year	Count
1998	541,946
2000	1,279,148
2002	946,256
2004	390,087
2006	83,454
2008	12,947
2010	9,078
2012	78,857
2014	78,111
2016	65,567
2018	58,630
Average	322,189

Table 204-2.–Coho salmon escapement goals and estimated sport harvest in Northern Cook Inlet where escapement goals are established.

	Little Susitna			Fish Creek			Jim Creek			Deshka River		
Year	Harvest	Passage	SEG	Harvest	Passage	SEG	Harvest[a]	Escapement[b]	SEG	Harvest	Passage	SEG
1990	7,497	15,511	7,500									
1991	16,450	39,241	7,500									
1992	20,033	21,182	7,500									
1993	27,610	34,822	7,500									
1994	17,665	28,948	7,500									
1995	14,451	12,266	7,500									
1996	16,753	15,803	7,500									
1997	7,756	9,894[c]	7,500									
1998	14,469	15,159	7,500									
1999	8,864	3,017	9,600-19,200									
2000	20,357	15,436	9,600-19,200									
2001	17,071	30,587	9,600-19,200									
2002	19,278	47,938	10,100-17,700	1,233	14,651	1,200-4,400	14,707	2,473	400-700	3,616	24,612	
2003	13,672	10,877	10,100-17,700	112	1,231	1,200-4,400	6,415	1,421	400-700	4,946	17,305	
2004	15,307	40,199	10,100-17,700	774	1,415	1,200-4,400	11,766	4,652	400-700	4,440	62,940	
2005	10,203	16,839[c]	10,100-17,700	535	3,011	1,200-4,400	10,114	1,464	400-700	3,616	47,887	
2006	12,399	8,786[c,d]	10,100-17,700	281	4,967	1,200-4,400	19,259	2,389	400-700	6,042	59,419	
2007	11,089	17,573	10,100-17,700	120	6,868	1,200-4,400	11,848	725	400-700	2,550	10,575	
2008	13,498	18,485	10,100-17,700	993	4,868	1,200-4,400	17,545	1,890	400-700	3,426	12,724	
2009	8,346	9,523	10,100-17,700	1,178	8,214	1,200-4,400	11,573	1,331	400-700	4,060	27,348	
2010	10,662	9,214	10,100-17,700	805	6,977	1,200-4,400	8,442	242	400-700	5,690	10,393	
2011	2,452	4,826	10,100-17,700	414	1,428	1,200-4,400	3,132	261	400-700	2,282	7,326	
2012	1,681	6,779[c]	10,100-17,700	274	1,237	1,200-4,400	1,858	213	400-700	1,358	6,825	
2013	5,229	13,583[c]	10,100-17,700	356	7,593	1,200-4,400	3,258	663	400-700	2,658	22,141	
2014	6,922	24,211	10,100-17,700	622	10,283	1,200-4,400	3,045	122	400-700	2,598	11,578	
2015	8,880	12,756	10,100-17,700	2,041	7,912	1,200-4,400	2,910	571	450-1400	745	10,775	
2016	4,361	10,049	10,100-17,700	496	2,484	1,200-4,400	1343	106	450-1400	1,528	6,820	
2017	3,068	17,781	10,100-17,700	358	8,966	1,200-4,400	750	607	450-1400	2,825	36,869	10,200-24,100
2018	6,663	7,583[c]	10,100-17,700	1,915	5,022	1,200-4,400	2,924	758	450-1400	3,169	12,962	10,200-24,100
2019	NA	4,229	10,100-17,700	NA	3,025	1,200-4,400	NA	162	450-1400	NA	10,445	10,200-24,100

[a]Includes other Knik River tributaries

[b]Escapement is a foot index survey of a section of McRoberts Creek, a tributary of the Jim Creek drainage.

[c]Weir washed out, incomplete count

[d]Esc goal undoubtedly achieved, perhaps exceeded

Table 204-3.–Upper Cook Inlet coho salmon harvest in commercial and sport fisheries, 2009–2018.

Year	Drift	ESSN	Kalg/West	ND	Total Commercial	UCI Sport Harvest	Total All	UCI Sport Catch
2009	82,096	11,435	22,050	37,629	153,210	168,726	321,936	263,177
2010	110,275	32,683	26,281	38,111	207,350	145,929	353,279	214,310
2011	40,858	15,560	16,760	22,113	95,291	109,725	205,016	168,443
2012	74,678	6,537	12,354	13,206	106,775	89,847	196,622	133,886
2013	184,771	2,266	31,513	42,413	260,963	123,920	384,883	179,402
2014	76,932	5,908	19,379	35,200	137,419	152,439	289,858	212,741
2015	130,720	17,948	20,748	46,616	216,032	169,231	385,263	247,847
2016	90,242	11,606	15,171	30,476	147,495	85,613	233,108	112,637
2017	191,490	29,916	29,535	52,701	303,642	128,416	432,058	177,164
2018	108,906	4,705	50,681	67,098	232,290	143,815	375,205	196,228
Average	109,097	13,856	24,447	38,556	186,047	131,766	317,723	190,584

Table 204-4.–Stock-specific harvest, standard deviation (SD), and 90% credibility intervals calculated using a stratified estimator for combined strata in the Northern District set gillnet (3 spatial strata each year) fishery based on genetic analysis of mixtures of coho salmon harvested in the Upper Cook Inlet in 2013–2016.

Northern District, Eastern and General subdistricts set gillnet; 2013

Area strata	Reporting Group	Harvest	90% CI 5%	90% CI 95%	SD
	Southwest	30	0	152	59
	Northwest	6,783	5,042	8,694	1,100
	Susitna	5,712	3,875	7,634	1,141
	Deshka	1,449	471	2,539	626
	Yentna	11,667	9,791	13,658	1,149
	Knik	7,685	6,527	8,934	726
	Jim	475	175	855	207
	Turnagain/Northeast	7,932	6,670	9,225	777
	Kenai	513	224	829	187
	Kasilof	0	0	64	34
	Southeast	0	0	77	39
	Harvest represented	42,246			
	Harvest unanalyzed	147			
	Total Harvest	42,393			

Note: Stock-specific harvest numbers may not sum to the total harvest due to rounding error.

Northern District, Eastern and General subdistricts set gillnet; 2014

Area strata	Reporting Group	Harvest	90% CI 5%	90% CI 95%	SD
	Southwest	0	0	60	28
	Northwest	6,095	4,799	7,456	820
	Susitna	4,847	3,462	6,290	863
	Deshka	0	0	807	386
	Yentna	4,877	3,687	6,085	747
	Knik	9,000	7,980	10,041	629
	Jim	523	262	827	175
	Turnagain/Northeast	8,169	7,135	9,380	704
	Kenai	189	36	393	115
	Kasilof	3	0	78	36
	Southeast	46	1	191	66
	Harvest represented	33,750			
	Harvest unanalyzed	1,375			
	Total Harvest	35,125			

Note: Stock-specific harvest numbers may not sum to the total harvest due to rounding error.

-continued-

Northern District, Eastern and General subdistricts set gillnet; 2015

Area strata	Reporting Group	Harvest	90% CI 0	90% CI 1	SD
	Southwest	6	0	74	40
	Northwest	7,390	5,434	9,456	1,201
	Susitna	4,271	2,492	6,163	1,123
	Deshka	1,074	0	2,230	687
	Yentna	8,542	6,875	10,234	1,021
	Knik	12,438	10,712	14,215	1,081
	Jim	372	117	705	182
	Turnagain/Northeast	8,519	7,371	9,873	768
	Kenai	303	120	550	132
	Kasilof	100	0	288	99
	Southeast	0	0	131	68
	Harvest represented	43,015			
	Harvest unanalyzed	3,488			
	Total Harvest	46,503			

Note: Stock-specific harvest numbers may not sum to the total harvest due to rounding error.

Northern District, Eastern and General subdistricts set gillnet; 2016

Area strata	Reporting Group	Harvest	90% CI 5%	90% CI 95%	SD
	Southwest	4	0	82	39
	Northwest	4,175	2,985	5,622	784
	Susitna	4,338	2,755	5,801	932
	Deshka	1,578	859	2,361	452
	Yentna	5,014	3,701	6,281	785
	Knik	5,587	4,816	6,405	497
	Jim	188	58	367	100
	Turnagain/Northeast	8,448	7,619	9,280	511
	Kenai	298	140	507	112
	Kasilof	22	0	111	41
	Southeast	17	0	159	71
	Harvest represented	29,669			
	Harvest unanalyzed	780			
	Total Harvest	30,449			

Note: Stock-specific harvest numbers may not sum to the total harvest due to rounding error.

-continued-

Table 204-4.–Page 3 of 3.

Northern District, Eastern and General subdistricts set gillnet; Average: 2013–2016						
			90% CI			
Area strata	Reporting Group	Harvest	5%	95%	SD	% of Total
	Southwest	10	0	92	42	0.03%
	Northwest	6,111	4,565	7,807	976	16%
	Susitna	4,792	3,146	6,472	1,015	13%
	Deshka	1,025	332	1,984	538	3%
	Yentna	7,525	6,014	9,065	926	20%
	Knik	8,678	7,509	9,899	733	23%
	Jim	389	153	688	166	1%
	Turnagain/Northeast	8,267	7,199	9,439	690	22%
	Kenai	326	130	570	137	0.88%
	Kasilof	31	0	135	53	0.08%
	Southeast	16	0	140	61	0.04%
	Harvest represented	37,170				
	Harvest unanalyzed	1,448				
	Total Harvest	38,617				

Note: Stock-specific harvest numbers may not sum to the total harvest due to rounding error.

Note: Stock-specific harvest numbers may not sum to the total harvest due to rounding error.

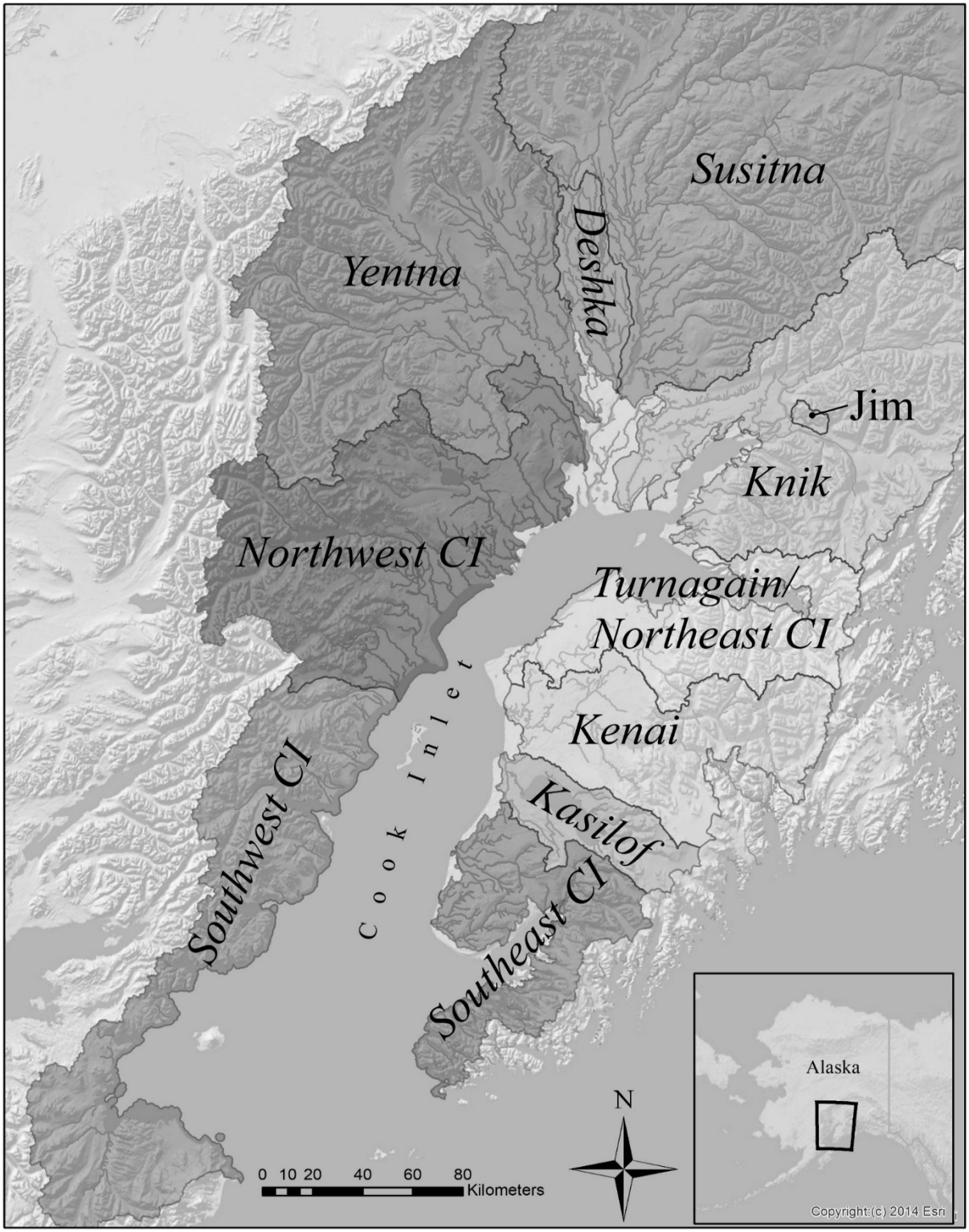

Figure 204-1.–Map of Cook Inlet showing reporting group areas for genetic mixed stock analysis of coho salmon harvest samples.

Table 204-5.–Abundance and Northern District set gillnet commercial harvest and sport harvest of Susitna River drainage coho salmon, 2013–2015.

	Commercial harvest[a]	Mainstem abundance	Mainstem inriver	Sport harvest[b]	Commercial harvest rate	Sport harvest rate	Total harvest rate
Mainstem Susitna							
2013	7,186	130,026	184,488	15,647	4%	8%	12%
2014	5,045	84,879	109,483	15,120	5%	14%	18%
2015	5,779	152,500	182,759	17,900	3%	10%	13%
Yentna River							
2013	11,707						
2014	5,075	73,819	93,448	9,899	5%	11%	16%
2015	9,235	110,321	148,545	10,928	6%	7%	14%

[a] Commercial harvest includes applying analyzed stock composition to unanalyzed harvest

Table 204-6.–Northern District set gillnet commercial harvest and sport harvest and rates of harvest of Deshka River coho salmon, 2013–2015, and Jim Creek coho salmon, 2015–2016.

	Escapement	Commercial harvest[a]	Sport harvest	Total run	Commercial harvest rate	Sport harvest rate	Total harvest rate
Deshka River							
2013	22,341	1,454	2,658	36,542	4%	7%	11%
2014	11,578	0	2,598	17,339	0%	15%	15%
2015	10,775	1,162	2,221	17,045	7%	13%	20%
Jim Creek							
2015	3,572	402	2,910	9,800	4%	30%	34%
2016	1,764	193	1,343	4,553	4%	29%	34%

[a] Commercial harvest includes applying analyzed stock compositin to unanalyzed harvest

Data source: Barclay, A. W. and C. Habicht. 2018. Updated Genetic Baseline and Genetic Stock Identification of Upper Cook Inlet Coho Salmon Harvest, 2013–2016. Alaska Department of Fish and Game, Fishery Data Series No. YY-XX, Anchorage.

[a]Marine harvest estimated by updated mixed stock analyis using current gentic baseline. Harvest numbers for the Mainstem Susitna River differ from those presented at the 2017 Upper Cook Inlet
BOF meeting (*Barclay, A. W., C. Habicht, W. Gist, and T. M. Willette. 2017. Genetic stock identification of Upper Cook Inlet coho salmon harvest, 2013-2015. Alaska Department of Fish and Game,*
Regional Information Report 5J17-03, Anchorage.) Updated estimates are from the tab "Upper CI commercial" in this workbook and are in the publication process.

[b]*From statewide harvest survey*

PROPOSAL 206 – Allow gear restrictions in the Northern District set gillnet fishery.

5 AAC 21.358. Northern District Salmon Management Plan.

PROPOSED BY: Northern District Set Netters Association of Cook Inlet/Stephen Braund.

WHAT WOULD THE PROPOSAL DO? This would allow gear restrictions in the Northern District (ND) set gillnet fishery to be rescinded from July 20 to August 6 when the Central District drift gillnet fishery is restricted or closed for conservation of sockeye salmon stocks of the Central District.

WHAT ARE THE CURRENT REGULATIONS? The department is instructed to manage the ND commercial salmon fisheries, in part, based on the abundance of sockeye salmon counted through weirs on Judd, Chelatna, and Larson lakes, or other salmon abundance indices as the department deems appropriate. The board has provided the department with emergency order (EO) authority to reduce the number of nets fished in the ND set gillnet fishery in order to reduce the harvest of Susitna River sockeye salmon, as outlined in *5 AAC 21.358(c). Northern District Salmon Management Plan (NDSMP).*

5 AAC 21.358(c) states that from July 20 through August 6, if the department's assessment of abundance indicates that restrictions are necessary to achieve the sockeye escapement goal, the commissioner may, by EO, reduce the number of set gillnets that may be used to one or two nets per permit. From July 31 through August 6, the reduction in gear is limited to two set gillnets per permit in that portion of the General District south of the Susitna River.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? If the gear restriction were removed, this would likely increase the ND set gillnet harvest of sockeye, coho, pink, and chum salmon by an unknown amount.

BACKGROUND: In 2008, Susitna River sockeye salmon were classified as a stock of yield concern. An action plan describing the existing management plans and EO authority that the department was to follow to conserve Susitna River sockeye salmon was developed and adopted by the board. Further restrictions were adopted in the action plan and codified in the *NDSMP* for the ND commercial set gillnet fishery. Specifically, from July 20–August 6, if the department's assessment of abundance indicates that restrictions are necessary to achieve sockeye salmon escapement goals, the ND set gillnet fishery may be limited to no more than one 35-fathom set gillnet per permit. At the 2011 meeting, the board modified the plan by adding the option of limiting the General Subdistrict of the ND to the use of two set gillnets per permit from July 31 through August 6.

Since 2005, the department has sampled the commercial sockeye salmon harvest in the ND to collect genetic information for stock identification. Fish bound for the Susitna River drainage are categorized under the reporting groups Susitna/Yentna (Sus/Yent) and Judd/Chelatna/Larson (JCL) (Figure 206-1). From 2006–2013, the proportion of the Eastern Subdistrict total sockeye salmon harvest that could be attributed to the Sus/Yent and JCL reporting groups averaged 1,534 fish, or 12% of the total harvest (ranged from 6%–22%) (Table 206-1). Given the total run estimates to the Susitna River during that time period, the

exploitation rate of this stock in the Eastern Subdistrict set gillnet fishery averaged 0.4% and ranged from 0.1%–0.8%. Genetic information from the years following 2013 is not available at this time. From 2010–2019, total sockeye salmon harvest in the Eastern Subdistrict between July 20 and August 6 averaged 7,467 fish per year (Table 206-2).

In the drift gillnet fishery, from 2011–2018, the average annual Sus/Yent sockeye salmon harvest was estimated to be 113,000 fish out of an average annual total drift harvest of more than 1.5 million fish, which is approximately 7.1% of the drift harvest (Table 206-3). The average annual drift harvest of Kenai River sockeye salmon is more than 1.2 million fish, or approximately 78% of the annual drift gillnet harvest.

Beginning in 2009, the department began assessing sockeye salmon escapement via weirs in the Susitna River drainage at three individual lakes, Judd and Chelatna lakes in the Yentna River drainage, and Larson Lake in the mainstem Susitna River drainage. Since then, escapements were achieved or exceeded seven times (70%) at Judd Lake and not achieved three times (30%); were achieved or exceeded eight times (91%) at Chelatna Lake and not achieved one time (9%); and were achieved or exceeded seven times (64%) at Larson Lake and not achieved four times at Larson Lake (36%) (Table 206-4). Overall, since 2009, the escapement goal at these three lakes was achieved or exceeded 24 times (75%) and not achieved eight times (25%).

The department believes recent sockeye salmon total returns in the Susitna River represent current capacity of this system in the presence of northern pike. As a result of this stock being designated as a stock of yield concern (SOC), restrictions were implemented in the commercial drift and ND set gillnet fisheries to reduce the harvest of this stock. Since then, average annual yields have increased moderately (Table 206-5) and escapements in the three indicator systems (Judd, Chelanta, and Larson lakes) have been met in most years (Table 206-4).

DEPARTMENT COMMENTS: department is **NEUTRAL** on the allocative aspects of this proposal.

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

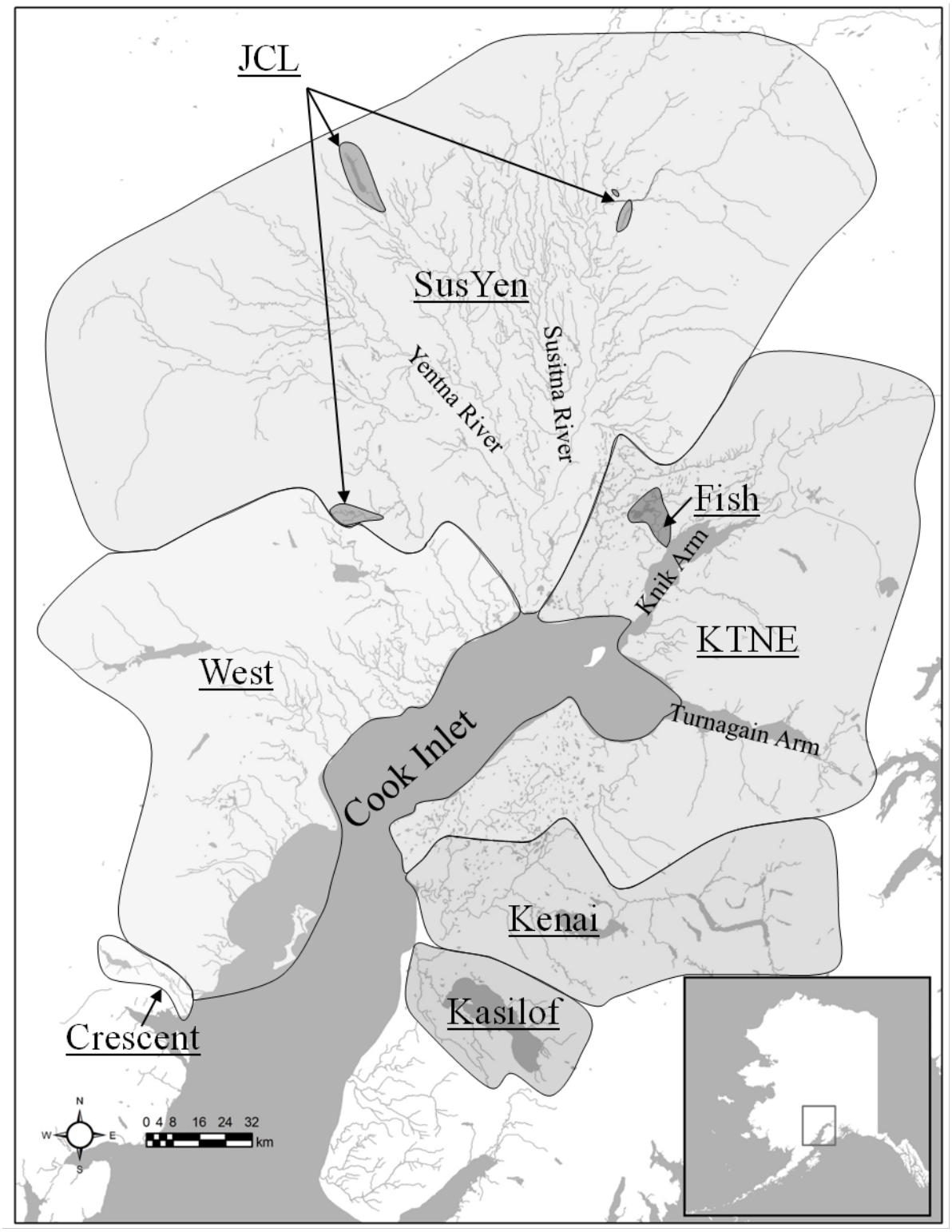

Figure 206-1.–Map of Upper Cook Inlet showing reporting group areas for mixed stock analysis using genetic markers for sockeye salmon.

Table 206-1.–Harvest of Susitna River drainage sockeye salmon in the Eastern and General Subdistricts of the Northern District, 2006–2013.

	Eastern Subdistrict					General Subdistrict				
Year	Total Harvest	Proportion Sus/Yent and JCL	Sus/Yent and JCL Harvest	Sus/Yent and JCL exploitation rate	Total Harvest	Total Harvest	Proportion Sus/Yent and JCL	Sus/Yent and JCL Harvest	Sus/Yent and JCL exploitation rate	Susitna River total run
2006	9,467	18%	1,742	0.37%	3,163	3,163	30%	955	0.20%	474,415
2007	9,222	14%	1,263	0.21%	8,245	8,245	30%	2,490	0.42%	590,365
2008	16,652	22%	3,613	0.79%	9,578	9,578	32%	3,046	0.67%	457,490
2009	18,057	6%	1,138	0.35%	22,595	22,595	26%	5,875	1.82%	322,496
2010	15,051	8%	1,219	0.40%	25,126	25,126	20%	4,975	1.62%	307,393
2011	9,909	7%	694	0.13%	25,573	25,573	42%	10,638	1.96%	542,405
2012	10,765	13%	1,399	0.43%	11,815	11,815	17%	2,032	0.63%	321,947
2013	11,037	11%	1,203	0.34%	12,386	12,386	45%	5,524	1.56%	354,440
Avg	12,520	12%	1,534	0.38%	14,810	14,810	30%	4,442	1.11%	421,369

Note: Sus/Yent and JCL is the Susitna River (Sus), Yentna River (Yent) and Judd, Chelatna and Larson Lakes (JCL).

Table 206.2–Commercial salmon harvest in the Eastern and General Subdistricts of the Northern District from July 20 through August 6, 2011–2019.

	Eastern Subdistrict						General Subdistrict				
Year	Number of periods	King	Sockeye	Coho	Pink	Chum	King	Sockeye	Coho	Pink	Chum
2011	5	1	2,982	1,000	430	427		9,898	8,213	194	3,594
2012	5	1	4,925	2,986	3,126	97	1	3,626	6,380	178	982
2013	5	5	1,888	2,986	551	143	6	1,963	17,174	210	681
2014	5	2	5,251	2,772	3,086	228	2	7,455	14,707	601	937
2015	6	4	9,648	3,858	992	253	3	16,636	20,448	240	3,745
2016	5	5	7,891	2,582	1,450	102	4	9,763	10,634	390	1,286
2017	5	4	9,503	4,929	4,217	282	2	9,702	13,484	1,023	2022
2018	5	3	12,427	11,392	6,730	240	3	10,968	26,051	1,835	2,022
2019	5	2	16,403	3,797	1,082	248	4	18,216	13,372	268	2,883
Average	5	3	7,467	3,974	2,290	239	3	9,862	14,310	624	2,038

Table 206-3.–Stock-specific harvest calculated using a stratified estimator for combined strata in the Central District drift gillnet fishery based on genetic analysis of mixtures of sockeye salmon harvested in Upper Cook Inlet, 2015-2018.

Excluding Corridor-Only Periods	Harvest									
Reporting Group	2011	2012	2013	2014	2015	2016	2017	2018	Avg	% of harvest
Crescent	7,293	7,254	7,037	95	433	108	23,281	1,270	5,846	0.5%
SusYen/JCL	129,603	143,984	94,731	52,048	20,569	73,481	63,570	71,699	81,211	7.1%
Fish	42,652	13,406	36	10,976	377	13,083	8,983	19,715	13,654	1.2%
KTNE/West	218,117	128,017	111,866	151,786	6,207	13,761	110,746	59,607	100,013	8.8%
Kenai	1,757,966	1,948,532	1,038,649	731,459	364,433	627,947	295,704	187,205	868,987	76.1%
Kasilof	112,137	107,806	79,576	98,996	45,568	2,289	72,146	57,885	72,050	6.3%
Harvest represented	2,267,768	2,349,000	1,331,895	1,045,360	437,587	730,669	574,430	397,381	1,141,761	100.0%
Harvest unanalyzed					2,230	353	2,173	2,159	1,729	
Total Harvest	2,269,779	2,351,012	1,333,908	1,047,374	525,525	731,021	576,603	399,542	1,154,345	

Corridor-Only Periods	Harvest									
Reporting Group	2,011	2,012	2,013	2,014	2,015	2,016	2,017	2,018	Avg	% of harvest
Crescent	1,907	22	14	42	1,980	35	1,530	11	693	0.2%
SusYen/JCL	63,817	29,044	34,295	53,730	784	25,053	44,181	270	31,397	7.2%
Fish	19,063	3,456	2,232	180	530	1,110	11,043	167	4,723	1.1%
KTNE/West	73,025	12,949	23,079	11,975	10,690	10,322	41,281	2,065	23,173	5.3%
Kenai	729,033	516,923	256,932	320,730	352,418	492,396	170,426	2,493	355,169	81.0%
Kasilof	52,082	24,585	16,460	60,345	7,717	622	18,350	7,147	23,413	5.3%
Harvest represented	938,927	586,979	333,012	447,002	374,119	529,538	286,811	12,153	438,568	100.0%
Harvest unanalyzed					2,230	353	2,173	2,159	1,729	
Total Harvest	940,938	588,991	335,025	449,016	376,349	529,891	288,984	14,312	440,438	

All Periods	Harvest									
Reporting Group	2,011	2,012	2,013	2,014	2,015	2,016	2,017	2,018	Avg	% of harvest
Crescent	9,200	7,275	7,051	136	2,413	143	24,811	1,281	6,539	0.4%
SusYen/JCL	193,421	173,028	129,025	105,778	21,353	98,534	107,751	71,969	112,607	7.1%
Fish	61,715	16,862	2,269	11,156	907	14,193	20,026	19,882	18,376	1.2%
KTNE/West	291,142	140,967	134,945	163,761	16,897	24,083	152,027	61,672	123,187	7.8%
Kenai	2,486,999	2,465,456	1,295,581	1,052,189	716,851	1,120,343	466,130	189,698	1,224,156	77.5%
Kasilof	164,218	132,391	96,036	159,341	53,285	2,911	90,496	65,032	95,464	6.0%
Harvest represented	3,208,706	2,937,991	1,666,920	1,494,376	811,706	1,260,207	861,241	409,534	1,580,329	100.0%
Harvest unanalyzed					4,460	706	4,346	4,318	3,458	
Total Harvest	3,208,706	2,937,991	1,666,920	1,494,376	816,166	1,260,913	865,587	413,852	1,583,786	

Table 206-4.–Sockeye salmon escapement at Judd, Chelatna, and Larson lake weirs, 2009–2019.

JUDD LAKE

Year	ESC	Goal Range		Below, Within, Above Esc Goal
2009	44,602	25,000	55,000	Within
2010	18,466	25,000	55,000	Below
2011	39,909	25,000	55,000	Within
2012	18,715	25,000	55,000	Below
2013	14,088	25,000	55,000	Below
2014	22,229	25,000	55,000	Within
2015	47,934	25,000	55,000	Within
2016	no count	25,000	55,000	-
2017	35,731	15,000	40,000	Within
2018	30,844	15,000	40,000	Within
2019	44,145	15,000	40,000	Above

CHELATNA LAKE

Year	ESC	Goal Range		Below, Within, Above Esc Goal
2009	17,721	20,000	65,000	Below
2010	37,734	20,000	65,000	Within
2011	70,353	20,000	65,000	Above
2012	36,736	20,000	65,000	Within
2013	70,555	20,000	65,000	Above
2014	26,374	20,000	65,000	Within
2015	69,897	20,000	65,000	Above
2016	60,792	20,000	65,000	Within
2017	26,986	20,000	45,000	Within
2018	20,434	20,000	45,000	Within
2019	26,303	20,000	45,000	Within

LARSON LAKE

Year	ESC	Goal Range		Below, Within, Above Esc Goal
2009	40,930	15,000	50,000	Within
2010	20,324	15,000	50,000	Within
2011	12,225	15,000	50,000	Below
2012	16,557	15,000	50,000	Within
2013	21,821	15,000	50,000	Within
2014	12,430	15,000	50,000	Below
2015	23,185	15,000	50,000	Within
2016	14,333	15,000	50,000	Below
2017	31,866	15,000	35,000	Within
2018	23,632	15,000	35,000	Within
2019	9,699[a]	15,000	35,000	Below

[a]3,104 pre-spawn mortality found below weir at confluence with Talkeetna River; likely a result of warm water temps

Table 206-5.–Susitna River drainage sockeye salmon harvest estimates based on genetic analysis of sockeye salmon harvested in the Upper Cook Inlet commercial fishery, 2005–2018.

Year	Judd-Chelatna-Larson	Susitna-Yentna	Susitna River drainage
2005	27,178	27,748	54,926
2006	16,230	28,231	44,461
2007	134,100	104,842	238,942
2008	66,315	47,092	113,407
2009	45,224	57,296	102,520
2010	55,659	58,425	114,084
2011	92,480	125,039	217,519
2012	90,128	88,826	178,954
2013	110,754	76,336	187,090
2014	56,109	67,659	123,768
2015	40,993	159,452	200,445
2016	47,868	76,548	124,416
2017	37,489	148,646	186,135
2018	52,596	50,558	103,154
Average			
2005-2008	60,956	51,978	112,934
2009-2018	62,930	90,879	153,809

Data source: Barclay 2019 (Table 8).
NOTES; this table does not include sport fish harvest, subsistence harvest, personal use harvest, or commercial harvest that could not be represented from the samples collected.

PROPOSAL 205 – Define the term "minimize" in the Northern District Salmon Management Plan.

5 AAC 21.358. Northern District Salmon Management Plan.

PROPOSED BY: Howard Delo.

WHAT WOULD THE PROPOSAL DO? This proposal would define the term "minimize" in regulation as used in the *Northern District Salmon Management Plan (NDSMP).*

WHAT ARE THE CURRENT REGULATIONS? The NDSMP states, "*The purposes of this management plan are to minimize the harvest of coho salmon bound for the Northern District (ND) of Upper Cook Inlet (UCI) and to provide the department direction for management of salmon stocks. The department shall manage the chum, pink, and sockeye salmon stocks primarily for commercial uses to provide commercial fisherman with an economic yield from the harvest of these salmon resources based on abundance. The department shall also manage the chum, pink, and sockeye salmon stocks to minimize the harvest of ND coho salmon, to provide sport and guided sport fisherman a reasonable opportunity to harvest these salmon resources over the entire run, as measured by the frequency of inriver restrictions, or as specified in this section and other regulations*.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This likely would not alter current management in the ND set gillnet fishery unless specific management provisions were adopted by the board to meet a definition of minimize.

BACKGROUND: The term "minimize" is used many times in management plans of the state's salmon fisheries. The *NDKSMP* currently defines minimize in terms of the frequency of inriver restrictions. In UCI, it occurs as far back as the 1970s, and attempts to specifically define this term have occurred with proposals to board meetings in 1984, 1996, and 1999. The definition of the term minimize was reported in Regional Information Report No. 2A98-32 at the 1999 board meeting. The report defined "minimize," at it applied to the statement, the department shall manage the commercial fishery to "minimize" the incidental take of Susitna River coho, and late-run Kenai River king and coho salmon as follows. Minimize meant that no additional fishing periods were to be provided in the Northern District or the Upper Subdistrict if coho salmon were expected to be the most abundant species in the harvest. In the Kenai, Kasilof and East Forelands sections, fishing was to be curtailed when sockeye salmon were below the upper end of the sonar goal and sockeye salmon catches were declining sharply and coho salmon catches were increasing. Extra fishing time was not to be given based on the abundance of Susitna River coho salmon or Kenai River late-run king salmon. Regarding Kenai River coho salmon, regular Monday and Friday fishing periods were not to be restricted even if coho salmon were expected to be the most abundant species in the commercial harvest; commercial fisheries management was to follow management plans.

Since 1996, the term "minimize" in UCI management plans has normally been associated with the application of "windows," which are days that the commercial fishery cannot fish in order to "minimize" harvests and let fish pass into the river for other fisheries. Additionally, optional EO hours are defined in management plans and are applied to commercial fishery openings to

minimize harvest potential based on the abundance of sockeye salmon. These EO hours are the maximum to be added as a liberalization to the normally scheduled opening hours during high salmon abundance. Time and area restrictions to the drift gillnet fleet are implemented in order to minimize the harvest of NCI salmon stocks. Emergency order hours are also used as a limitation, as the only hours open to harvest during low salmon abundance. Lastly, season opening and ending dates have also been defined in various UCI management plans to minimize take of non-target salmon species in mixed stock commercial fisheries. All the above uses are for specific allocative instances as prescribed in management plans by the board.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal.

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

PROPOSAL 207 – Exempt the Eastern Subdistrict set gillnet fishery from gear restrictions.

5 AAC 21.358. Northern District Salmon Management Plan.

PROPOSED BY: Russel Clark.

WHAT WOULD THE PROPOSAL DO? This would exempt the Eastern Subdistrict set gillnet fishery from the gear restrictions found in the 5 AAC 21.358(c) *Northern District Salmon Management Plan*.

WHAT ARE THE CURRENT REGULATIONS? *5 AAC 21.358. Northern District Salmon Management Plan*. (a) The purposes of this management plan are to minimize the harvest of coho salmon bound for the Northern District of upper Cook Inlet and to provide the department direction for management of salmon stocks. The department shall manage the chum, pink, and sockeye salmon stocks primarily for commercial uses to provide commercial fisherman with an economic yield from the harvest of these salmon resources based on abundance. The department shall also manage the chum, pink, and sockeye salmon stocks to minimize the harvest of Northern District coho salmon, to provide sport and guided sport fisherman a reasonable opportunity to harvest these salmon resources over the entire run, as measured by the frequency of inriver restrictions, or as specified in this section and other regulations.

The management plan directs the department to manage the Northern District commercial salmon fisheries based on the abundance of sockeye salmon counted through the weirs on Larson, Chelatna, and Judd Lakes or other salmon abundance indices as the department deems appropriate. From July 20 through August 6, if the department's assessment of abundance indicates that restrictions are necessary to achieve the sockeye escapement goal, the commissioner may, by EO, reduce the number of set gillnets that may be used to one or two nets per permit. From July 31 through August 6, the reduction in gear is limited to two set gillnets per permit in that portion of the General District south of the Susitna River.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would increase the harvest of Northern Cook Inlet sockeye and coho salmon in the Eastern Subdistrict of the ND by an unknown, but likely small amount.

BACKGROUND: In 2008, Susitna River sockeye salmon were designated a stock of yield concern. An action plan describing the existing management plans and EO authority that the department was to follow to conserve Susitna River sockeye salmon was developed and adopted by the board. Further restrictions were adopted in the action plan for the ND commercial set gillnet fishery. Specifically, from July 20–August 6, if the department's assessment of abundance indicates that restrictions are necessary to achieve sockeye salmon escapement goals, the ND set gillnet fishery may be limited to no more than one 35-fathom set gillnet per permit. At the 2011 meeting, the board modified the plan by adding the option of limiting the General Subdistrict of the ND to the use of two set gillnets per permit from July 31 through August 6.

Since 2005, the department has sampled the commercial sockeye salmon harvest in the ND to collect genetic information for stock identification. Fish bound for the Susitna River drainage are categorized under the reporting groups Susitna/Yentna and Judd/Chelatna/Larson (Sus/Yent and

JCL; Figure 206-1). From 2006–2013, the proportion of the Eastern Subdistrict total sockeye salmon harvest that could be attributed to the Sus/Yent and JCL reporting groups averaged 12% and has ranged from 6%–22% (Table 206-1). During this time, the average annual total harvest of Sus/Yent and JCL sockeye salmon taken in the Easter Subdistrict was approximately 1,500 fish, for an average annual exploitation rate of 0.4% of Susitna River stocks. From 2010–2019, the total sockeye salmon harvest in the Eastern Subdistrict between July 20 and August 6 averaged 7,467 fish per year (Table 206-2).

Genetic stock composition estimates were made from the entire set gillnet fishery in the ND for years 2015–2017. The average annual harvest of Susistna/Yentna and JCL reporting groups in all of the ND during these three years was 15,000 fish (Table 207-1).

The department believes recent sockeye salmon total returns in the Susitna River represent current capacity of this system in the presence of northern pike. As a result of this stock being designated as a stock of yield concern, restrictions were implemented in the commercial drift and ND set gillnet fisheries to reduce the harvest of this stock. Since then, average annual yields have improved moderately (Table 206-5) and escapements in the three indicator systems (Judd, Chelanta, and Larson lakes) have been met in most years (Table 206-4).

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal.

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

Table 207-1.–Stock-specific harvest, 90% credibility intervals, and standard deviation (SD) calculated using a stratified estimator for combined strata in the Northern District set gillnet (1 temporal stratum) fisheries based on genetic analysis of mixtures of sockeye salmon harvested in the Upper Cook Inlet from 2015–2017 (from Barclay 2019).

2015

Area strata	Reporting Group	Harvest	5%	95%	SD
Northern District, Eastern and General subdistricts set gillnet					
	Crescent	5	0	2	43
	West	13,858	10,260	17,968	2,383
	JCL	4,963	3,208	6,773	1,080
	Sus/Yen	15,111	11,405	18,822	2,263
	Fish	5,146	2,659	7,338	1,390
	KTNE	7,644	4,935	11,619	2,067
	Kenai	4,686	2,722	6,918	1,277
	Kasilof	13	0	15	90
	Harvest represented	51,426			
	Harvest unanalyzed	4,203			
	Total Harvest	55,629			

2016

Area strata	Reporting Group	Harvest	5%	95%	SD
Northern District, Eastern and General subdistricts set gillnet					
	Crescent	26	0	117	130
	West	6,890	4,300	10,291	1,860
	JCL	6,647	5,118	8,288	962
	Sus/Yen	8,591	5,741	11,511	1,754
	Fish	6,891	5,396	8,482	940
	KTNE	5,783	4,007	8,005	1,226
	Kenai	8,817	6,484	11,235	1,447
	Kasilof	46	0	319	196
	Harvest represented	43,691			
	Harvest unanalyzed	3,301			
	Total Harvest	46,992			

2017

Area strata	Reporting Group	Harvest	5%	95%	SD
Northern District, Eastern and General subdistricts set gillnet					
	Crescent	131	0	856	315
	West	10,650	8,540	12,994	1,355
	JCL	3,517	2,237	5,016	855
	Sus/Yen	5,984	3,736	8,414	1,403
	Fish	10,881	9,041	12,877	1,188
	KTNE	11,492	9,141	13,940	1,433
	Kenai	6,853	4,917	8,920	1,186
	Kasilof	373	0	1,368	506
	Harvest represented	49,881			
	Harvest unanalyzed	6,682			
	Total Harvest	56,563			

PROPOSAL 202 – Allow a dual set gillnet permit holder to fish with one net per permit, or two nets total.

5 AAC 21.366. Northern District King Salmon Management Plan.

PROPOSED BY: Northern District Set Netters Association of Cook Inlet/Stephen Braund.

WHAT WOULD THE PROPOSAL DO? This would allow a dual set gillnet permit holder to fish with one net per permit, or two nets total, during the Northern District (ND) directed commercial king salmon fishery.

WHAT ARE THE CURRENT REGULATIONS? Currently, 5 AAC 21.366. *Northern District King Salmon Management Plan* (5) states that no CFEC permit holder may operate more than one set gillnet at a time. This provision has been interpreted by the Department of Public Safety to mean that a dual set gillnet permit holder is limited to fishing with one net total, not one net per permit.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This could increase the harvest of king salmon in the ND directed king salmon fishery by an unknown, but likely small, amount. This would align 5AAC 21.366 (5) with the provisions of 5AAC 21.331(d and i) that allow dual permit holders to fish two complements of allowable gear.

BACKGROUND: When the *Northern District King Salmon Management Plan* was first adopted in 1986, a Cook Inlet set gillnet permit holder could only own one limited entry permit. When the regulations changed in 2011 to allow one person to own and operate two S04H permits, there was confusion over the interpretation of the management plan regarding how much gear one person owning two permits could fish.

House Bill 286 was passed into law in 2002, allowing an individual to own two commercial salmon permits in the same fishery. In 2006, House Bill 251 was passed allowing the board to authorize additional gear with ownership of a second permit. In 2011, the board allowed a single person to operate two legal complements of set gillnet fishing gear in UCI if he or she owned two S04H permits. Prior to 2011, a person could own two set gillnet fishing permits, but could only fish one of them.

At the 2017 UCI meeting, the board adopted Proposal 109, to allow a dual set gillnet permit holder in the Kasilof River Special Harvest Area to operate two complements of gear, which meant two nets. At that time, regulatory language in 5 AAC 21.365.(f)(5) *Kasilof River Salmon Management Plan* was the same as that found in the *NDKSMP*, "a permit holder may not use more than one gillnet to take salmon at any one time."

Since 2011, the number of ND set gillnet permit holders that have reported harvest on dual permits during the regular salmon season has ranged from only one dual permit operation in 2013 to a high of seven dual permit operators in 2014 (Table 202-1).

From 1993–2008, an average of 55 commercial permit holders have participated in the ND king salmon fishery each year, with an average annual harvest of 2,465 fish (Tables 199-7 and 199-8). However, in the past 10 years (2009–2018), the average harvest declined to 1,429 fish per year

(42% reduction) from an average of 46 permit holders. 1993 was the first year set gillnet fishermen were required to register (prior to fishing) to fish in one of three areas (ND, Upper Subdistrict, or Greater Cook Inlet) for the entire year (5 AAC 21.345). The registration requirement served to eliminate a common practice of fishing in multiple areas in UCI during the same year. Prior to the requirement to register prior to fishing, the commercial king salmon harvest cap of 12,500 king salmon was reached one time, in 1986.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocative aspects of this proposal but **SUPPORTS** alignment and clarity in regulatory language.

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

Table 202-1.–Number of dual set gillnet permit holders reporting harvest in the Northern District directed commercial king salmon fishery, 2011–2019.

Year	No. Dual Permits
2011	3
2012	6
2013	1
2014	7
2015	5
2016	5
2017	4
2018	4
2019	4
Avg	4

PROPOSAL 211 – Eliminate the limit of fishing with no more than four set gillnets per person in all areas of Cook Inlet.

5 AAC 21.331. Gillnet specifications and operations.

PROPOSED BY: Tyonek Fish and Game Advisory Committee.

WHAT WOULD THE PROPOSAL DO? This would eliminate the limit of fishing with no more than four set gillnets per person in all areas of Cook Inlet, except for Fire Island, where there is no limit on the number of nets that may be fished per permit. The maximum amount of gear, which is not more than 105 fathoms per permit, would not change.

WHAT ARE THE CURRENT REGULATIONS? 5 AAC 21.331 states that a set gillnet in Cook Inlet may not be longer than 35 fathoms in length and 45 meshes in depth. A person may not operate more than four set gillnets with more than 105 fathoms of set gillnet in the aggregate, except on Fire Island, where a person may operate more than four set gillnets, but the aggregate length may not exceed 105 fathoms. The maximum mesh size for set gillnets in Cook Inlet is six inches.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The overall effect of this proposal is uncertain, as it would depend on how many permit holders took advantage of the change in regulation that allowed them to fish more than four nets per permit. Because this proposal does not alter the total allowable fishing gear that may be fished per permit (105 fathoms), it theoretically would result in no change to harvest potential, but this may vary from site to site based on differences in how fish migrate at each site. It is unclear how the change in net length would affect shore fishery leases in Cook Inlet.

BACKGROUND: With the exception of Fire Island, the legal limit for set gillnet fishing gear has been no more than four nets per permit with an aggregate length not to exceed 105 fathoms in all areas of Cook Inlet since statehood.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal.

COST ANALYSIS: Approval of this proposal could result in an additional direct cost for a private person to participate in this fishery if they chose to purchase new gear or modify existing gear in order to fish more than four nets per person; however, this would be a voluntary change. Similarly, modification of shore fisheries leases in order to accommodate more net sites on a lease could result in additional costs to the fishermen, again, a voluntary cost. Approval of this proposal is not expected to result in an additional cost to the department.

PROPOSAL 208 – Maintain current language in the Big River Sockeye Salmon Management Plan.

5 AAC 21.368. Big River Sockeye Salmon Management Plan.

PROPOSED BY: David Chessik.

WHAT WOULD THE PROPOSAL DO? This would maintain the current language in the *Big River Sockeye Salmon Management Plan* defining the boundaries of the fishery on Kalgin Island.

WHAT ARE THE CURRENT REGULATIONS? 5 AAC 21.368(b). *Big River Sockeye Salmon Management Plan* currently states: salmon may be taken in waters of the Kustatan Subdistrict along the mainland shore from the terminus of the Kustatan River, southwest to the southern boundary of the subdistrict, and in the Kalgin Island Subdistrict along the western shore from Light Point 60° 29.00′ N. lat., 151° 50.50′ W. long. to the Kalgin Island Light on the southern end of Kalgin Island at 60° 20.80' N. lat., 152° 05.09' W. long (Figure 208-1).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This proposal was submitted in response to department Proposal 209 that seeks to amend the waypoint location of Light Point on Kalgin Island for boundary clarification and to remove confusion associated with old regulatory waypoints. If Proposal 209 is not adopted, enforcement of the location of Light Point will continue to cause confusion, as the present regulatory coordinates are inshore hundreds of feet from any beach.

BACKGROUND: The *Big River Sockeye Salmon Management Plan* (5 AAC 21.368) was first adopted in 1989. This plan allows for a small set gillnet fishery in a portion of the Kustatan Subdistrict that targets sockeye salmon bound for the Big River Lakes watershed. In 2005, the area open to fishing was expanded to include those waters on the west side of Kalgin Island. At that time the longitude and latitude of Light Point (60° 29.00′ N. lat., 151° 50.50′ W. long.) were adopted in error as that location is not on the shoreline of Kalgan Island.

DEPARTMENT COMMENTS: The department is **OPPOSED** to this proposal and has submitted Proposal 209 establishing preferred GPS coordinates for Light Point.

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

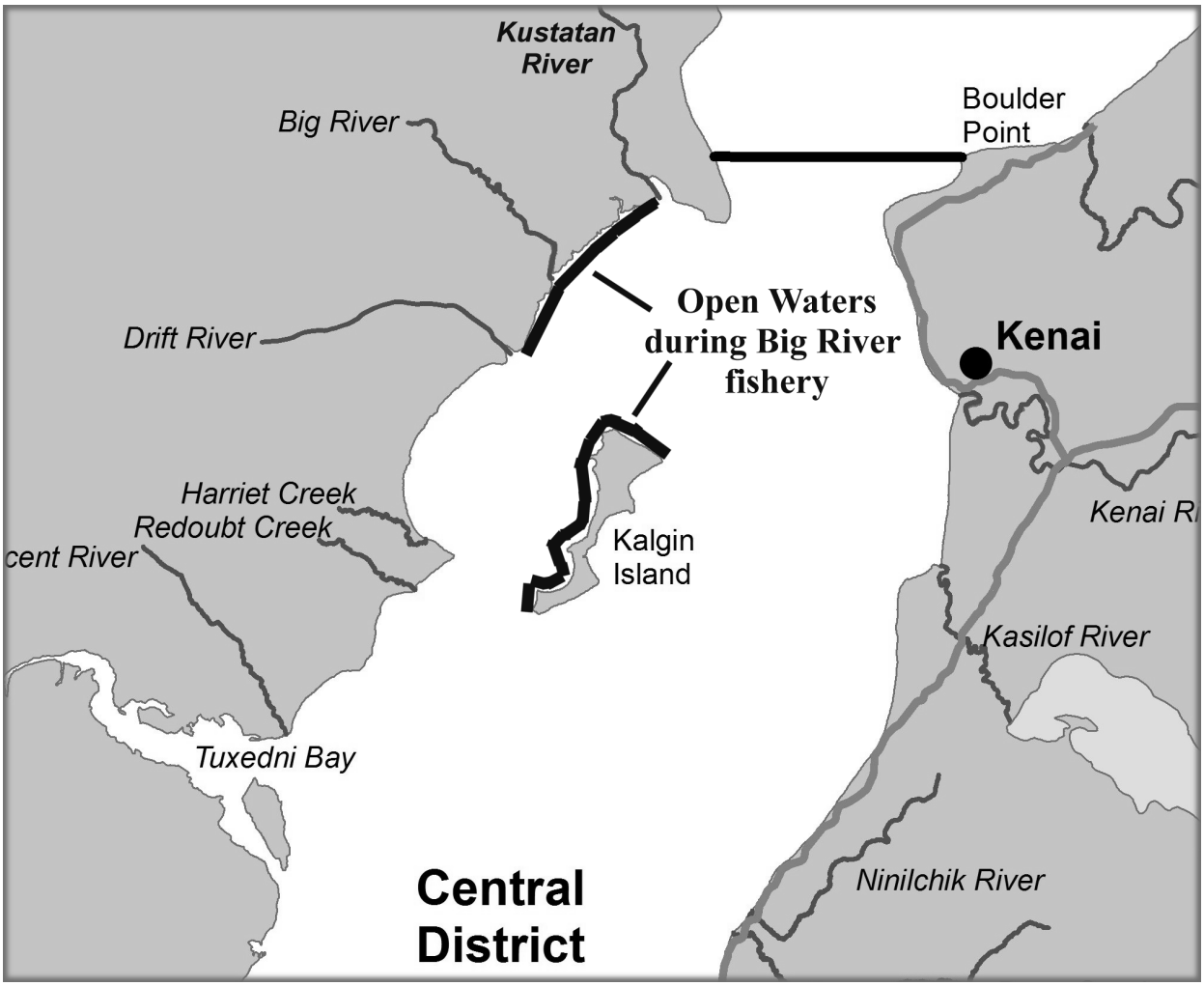

Figure 208-3.–Map of waters open to commercial fishing during the Big River sockeye salmon fishery.

PROPOSAL 210 – Close waters to drift gillnetting on the west side of Cook Inlet.

5 AAC 21.350. Closed waters.

PROPOSED BY: Mel Erickson.

WHAT WOULD THE PROPOSAL DO? This would close waters to drift gillnetting on the west side of Cook Inlet within one mile of the mean high tide line from the West Forelands to Sea Otter Point (Figure 210-1).

WHAT ARE THE CURRENT REGULATIONS? 5 AAC 21.350(b)(6) lists specific waters closed to commercial salmon fishing along the west side of Cook Inlet, including waters within one statute mile of the terminus, at mean high tide, of the Kustatan, Drift, and Big rivers, and waters within one statute mile of the terminus, at mean lower low water, of Cannery Creek. In addition, commercial fishing is closed within 500 yards of the terminus, at mean high tide, of any anadromous fish stream, and within 900 feet of the stream bed or channel of any anadromous fish stream throughout the intertidal portion of that stream out to the lower low water mark. Commercial salmon fishing is also prohibited within the fresh waters of streams and rivers of the state, and over the beds of channels of fresh waters of streams and rivers of the state during all stages of the tide.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would reduce areas currently open to drift gillnetting on the west side of Cook Inlet and reduce the commercial harvest of salmon by an unknown amount. This would add confusion regarding those waters that are open to drift gillnetting on the west side of Cook Inlet, especially in Drift Gillnet Area 3. Drift Area 3 is defined as those waters of the Central District south of the West Forelands within one mile of mean lower low water (zero tide), while this proposal seeks to close waters in the same area within one mile of mean high tide.

BACKGROUND: The board adopted a new definition of closed waters (5 AAC 39.290) and salmon stream (5 AAC 39.975) at the 2013 Statewide Finfish and Supplemental Issues meeting. The board changed the definition because there was confusion on how closed waters were defined and enforced by the Department of Public Safety. The new definition prohibits commercial fishing in waters within 500 yards of a salmon stream. In addition, commercial salmon fishing is prohibited within the fresh waters of streams and rivers of the state, and over the beds or channels of fresh waters of streams and rivers of the state during all stages of the tide. The department and board have also regularly updated 5 AAC 21.350, which lists waters closed to commercial fishing in UCI.

5 AAC 21.353. *Central District Drift Gillnet Fishery Management Plan.*(f) state that from August 16 until closed by emergency order, Drift Gillnet Areas 3 and 4 are open for fishing during regular fishing periods. Drift Gillnet Area 3 means those waters of the Central District within one mile of mean lower low water (zero tide) south of a point on the West Foreland at 60° 42.70' N. lat., 151° 42.30' W. long. (Figure 210-2).

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocative aspects of this proposal but **OPPOSES** closing additional waters without a biological or fishery management justification. Existing regulations provide adequate protections around the terminus of salmon streams.

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

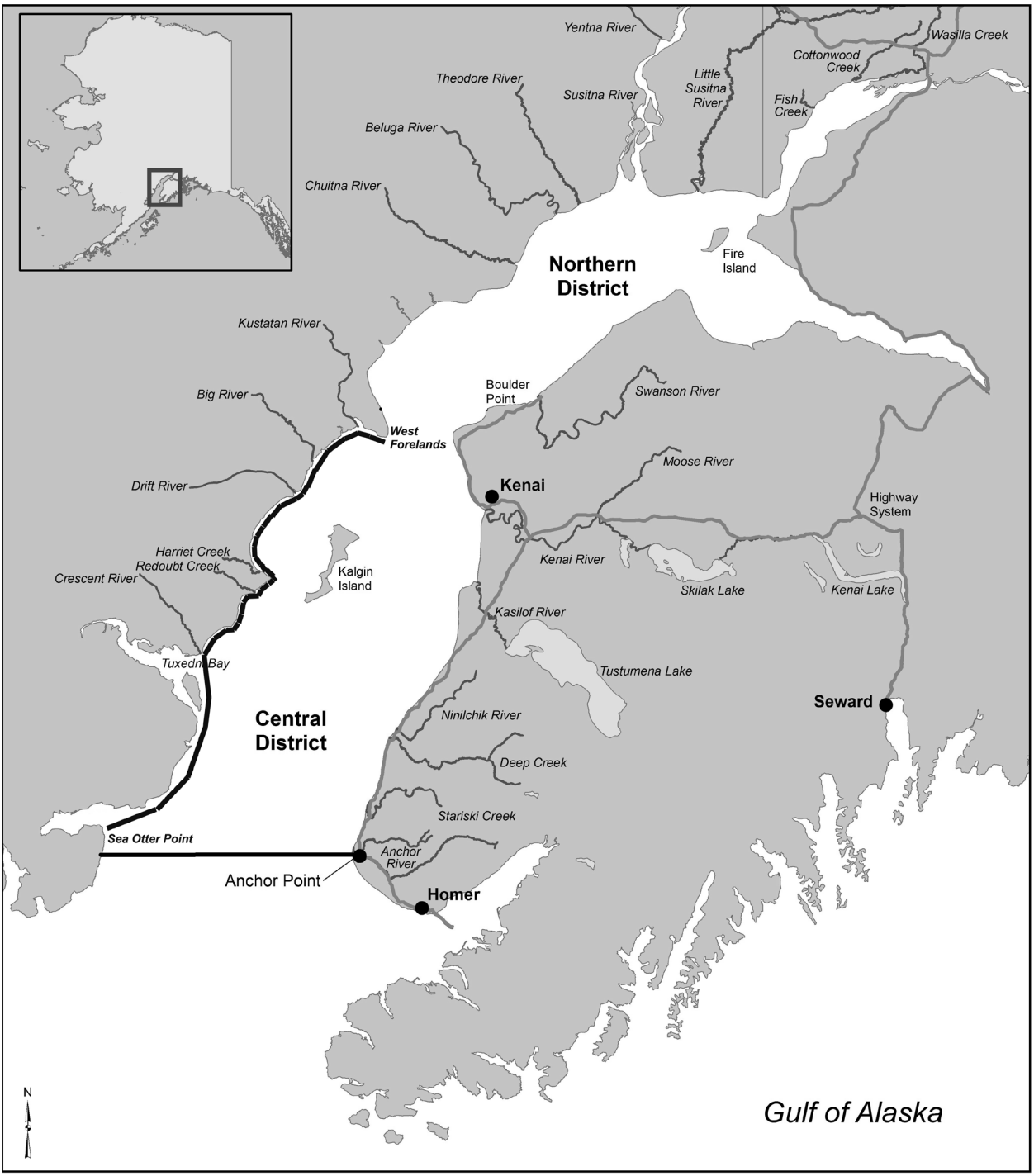

Figure 210-1.–Map of proposed drift closure from West Forelands to Sea Otter Point.

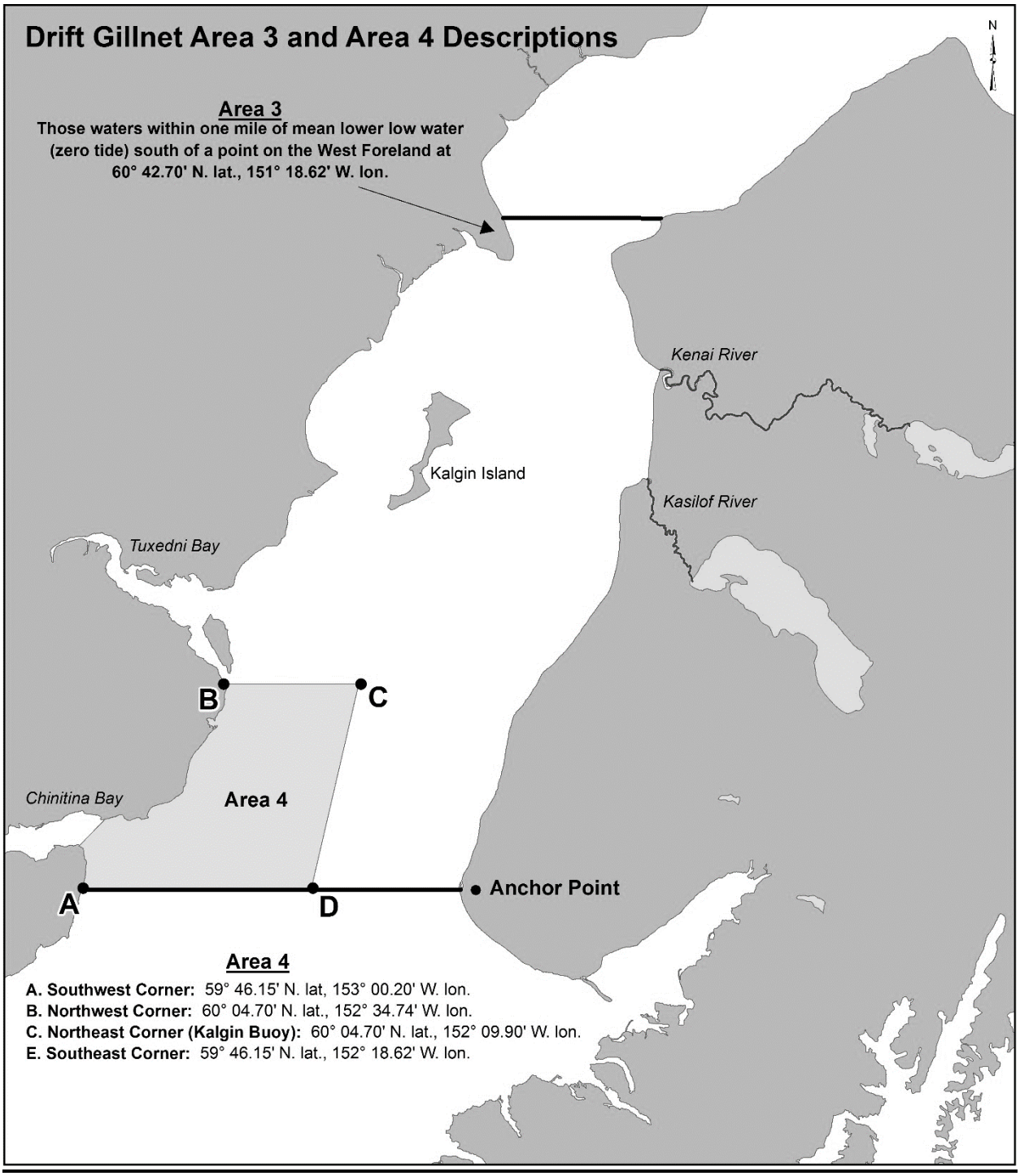

Figure 210-2.–Map of drift gillnet Areas 3 and 4.

PROPOSAL 139 – Close the drift gillnet salmon fishery in Chinitna Bay Subdistrict for up to three years.

5 AAC 21.350. Closed waters.

PROPOSED BY: Mel Erickson.

WHAT WOULD THE PROPOSAL DO? This would close the drift gillnet salmon fishery in Chinitna Bay Subdistrict (CBS) for up to three years. The proposal does not suggest closing set gill net fisheries in the CBS.

WHAT ARE THE CURRENT REGULATIONS? The CBS is open to drift gillnetting by emergency order (EO) only. This typically occurs after the lower end of the chum salmon aerial census sustainable escapement goal (SEG) is achieved or when the chum salmon run is complete.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would eliminate all harvest of salmon by drift gillnets in the CBS. This could result in an increase of salmon escaping into tributaries in the CBS or it could make more salmon available to harvest to setnetters in the CBS or sport fisheries on the west side of Cook Inlet.

BACKGROUND: See Background section on Proposal 138.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal because it would reduce the ability to manage for the CBS chum salmon SEG range. This is the only salmon escapement goal in western Cook Inlet and it has been exceeded 50% of the time during the 2010-2019 time period. The fishery only opens by EO, which means the department assesses chum salmon abundance prior to opening the fishery.

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

PROPOSAL 130 – Allow commercial fishing with drift gillnets in the Chinitna Bay Subdistrict starting August 15.

5 AAC 21.353. Central District Drift Gillnet Fishery Management Plan.

PROPOSED BY: Teague Vanek.

WHAT WOULD THE PROPOSAL DO? This would allow commercial fishing with drift gillnets in the Chinitna Bay Subdistrict (CBS) of Upper Cook Inlet (UCI) starting August 15.

WHAT ARE THE CURRENT REGULATIONS? Since 1983, regulations have allowed the CBS to open to both drift gillnets and purse seines only by emergency order (EO). Set gillnetting is open only on the north side of the CBS for Monday and Thursday 12-hour regular fishing periods from June 25 until closed by EO.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would allow the CBS to open to drift gillnetting about 9 days earlier than the average season opening date since 1983. This would increase the commercial harvest of sockeye, coho, and chum salmon by an unknown amount. It could reduce the escapement of coho and chum salmon in the CBS and the number of coho and chum salmon that enter West Cook Inlet streams available for inriver fisheries.

BACKGROUND: Typically, the department opens the CBS to drift gillnetting either after aerial census counts show the chum salmon sustainable escapement goal (SEG) of 3,500–8,000 fish has been achieved or the chum salmon run is complete, which occurs in the latter part of August. Opening the CBS to drift and seine fishing after the chum salmon run is complete meets with board intent as reported in the 1983 Upper Cook Inlet Annual Management Report. This report highlighted regulatory changes adopted by the board affecting commercial fishing in the CBS, stating, "Adopted in the fall meeting in 1982, the board clarified its intent for this regulatory change in the spring of 1983. Drift and seine gear was to be permitted (by EO) during the portions of the season when chum salmon were not a concern (i.e., both prior to and after the chum salmon return) as well as immediately after chum salmon escapements were observed.

Commercial harvests in the CBS are relatively small compared to other areas of Cook Inlet. There are no biological concerns for the local stocks that are targeted in this fishery. It is assumed that the coho salmon harvested in this area are Westside Cook Inlet stocks and not Northern Cook Inlet or Kenai River stocks. Since 1983 (37 years), the CBS has been open to drift gillnetting 27 years, producing an average harvest of 228 sockeye, 5,189 coho, and 1,384 chum salmon (Table 130-1). In the last 10 years, the average harvest has been 254 sockeye, 4,605 coho, and 1,078 chum salmon, with an average season opening date of August 25. In the past 10 years, an average of 14 vessels have fished in the CBS drift fishery.

In 2002, the peak aerial survey chum salmon SEG was changed from a point goal to a range of 3,500–8,000 fish. Since then (18 years) the goal has been achieved or exceeded 17 times and not met one time (Figure 130-1).

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal. Other than in the CBS, the department does not assess escapement levels of coho or chum salmon in any western Cook Inlet watersheds.

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

Table 130-1.–Drift gillnet harvest of sockeye, coho, and chum salmon in Chinitna Bay, 1983–2019.

Yr	Sockeye	Coho	Chum	Date Opened
1983	224	8,754	4,474	15-Aug
1984	949	16,809	4,788	13-Aug
1985	962	20,322	2,023	23-Aug
1986	364	5,346	2,437	22-Aug
1987	55	6,369	3,559	17-Aug
1988	192	14,226	5,324	15-Aug
1989	3	743	72	28-Aug
1990	35	1,622	219	24-Aug
1991	4	453	0	30-Aug
1992	20	1,880	250	21-Aug
1993	98	43	73	27-Aug
1994	25	2,282	313	26-Aug
1995	592	7,347	1,161	18-Aug
1996				
1997				
1998				
1999				
2000				
2001				
2002				
2003				
2004				
2005				
2006	57	1,509	34	31-Aug
2007	4	414		3-Sep
2008	4	2,857	113	25-Aug
2009	18	3,085	372	26-Aug
2010	52	868	180	27-Aug
2011	0	479	2	1-Sep
2012	4	792	124	29-Aug
2013	12	2,895	169	19-Aug
2014	4	2,292	65	29-Aug
2015	628	3,467	1,203	18-Aug
2016	103	4,219	1,326	26-Aug
2017	1,027	24,177	5,067	18-Aug
2018	60	2,277	257	31-Aug
2019	654	4,585	2,382	16-Aug
Average	228	5,189	1,384	24-Aug
Low	0	43	0	
High	1,027	24,177	5,324	

Note: for years with no values, the fishery was not open.

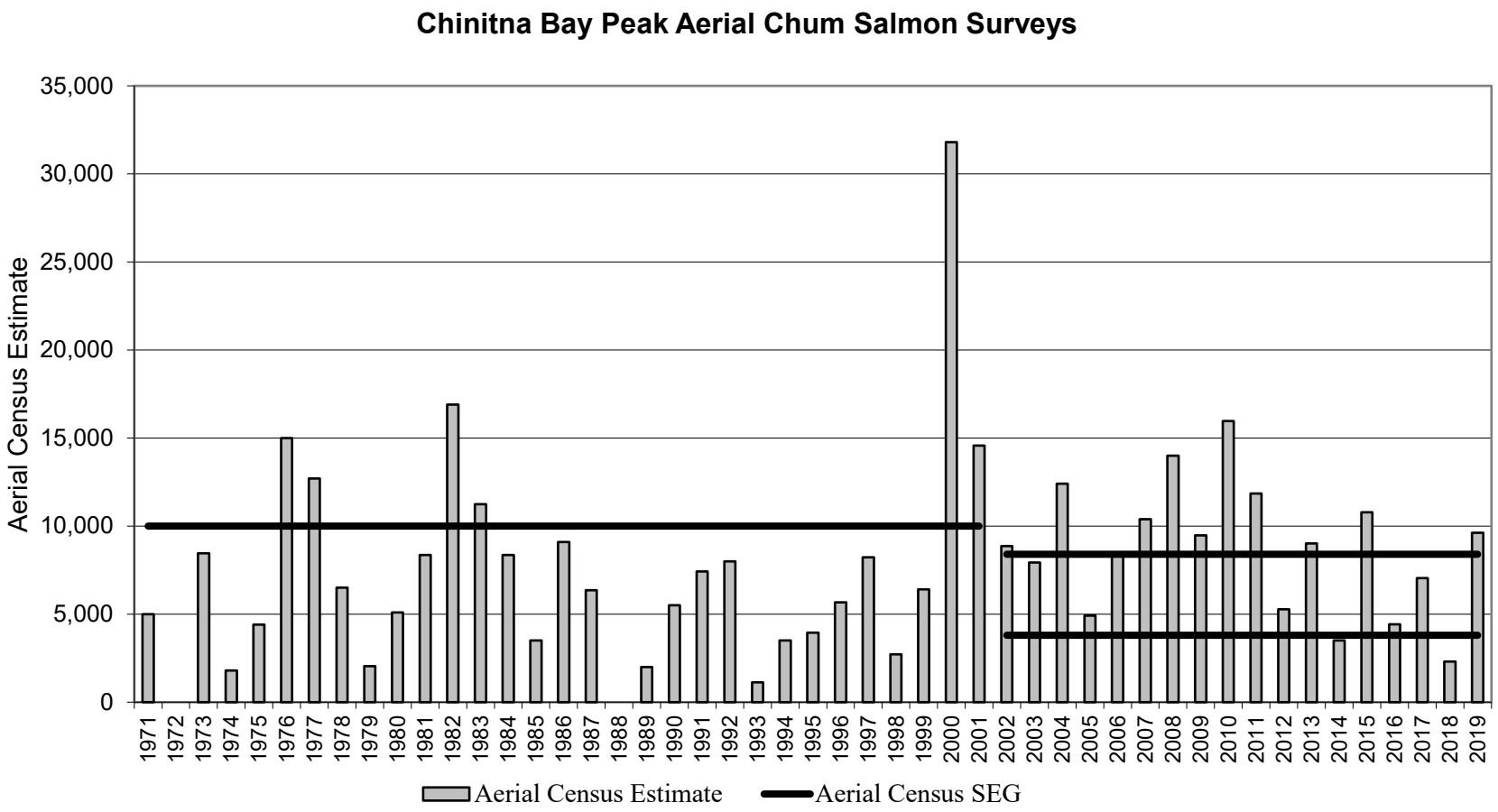

Figure 130-1.–Peak Aerial Census count in Chinitna Bay, 1971–2019

PROPOSAL 138 – Establish 12-hour weekly fishing periods in the Chinitna Bay Subdistrict.

5 AAC 21.320. Weekly fishing periods.

PROPOSED BY: Central Peninsula Fish and Game Advisory Committee.

WHAT WOULD THE PROPOSAL DO? This would establish 12-hour weekly fishing periods on Tuesdays and Fridays for the drift gillnet fishery in the Chinitna Bay Subdistrict (CBS) beginning on August 15 each year.

WHAT ARE THE CURRENT REGULATIONS? The CBS (Fig 126-1) is open to drift gillnetting by emergency order (EO) only. This typically occurs after the lower end of the chum salmon aerial census sustainable escapement goal (SEG) is achieved or when the chum salmon run is complete.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would open the CBS to drift gillnetting by regulation on August 15, which would increase the harvest of coho and chum salmon by an unknown amount. Since achievement of the chum salmon SEG would still be a management priority, this would require the department to conduct aerial census flight prior to August 15, and if the chum salmon SEG had not been achieved, it would require an EO to close the CBS.

The department does not have any new data regarding coho salmon runs or harvest rates but believes current management is sustainable. The CBS coho salmon stocks are not monitored for escapement and with the discontinuation of the guide logbook program in the spring of 2019, the department no longer has one of the few metrics by which to gauge relative coho salmon run strength inseason. In the absence of inseason run strength information, conservative regulation is recommended.

BACKGROUND: Aerial surveys of the drainages in the CBS for chum salmon are flown yearly, in conjunction with other nearby aerial flights flown by staff of the Lower Cook Inlet Management Area. No other assessment flights are flown for UCI for any species. In the past 10 years, the mean date for opening the CBS to drift gillnetting has been August 25 (from 1983–2019 the mean date was August 24) (Table 130-1).

Because the CBS is not opened to drift gillnetting until the chum salmon SEG has been achieved, or the chum salmon run is deemed to be nearly complete, the harvest of salmon in this area is dominated by late-run west Cook Inlet coho salmon. The average annual harvest by drift gillnets in the CBS since 1983 has been approximately 5,200 coho, 1,400 chum, and 230 sockeye salmon (Table 130-1). In the past 10 years, the average annual harvest has been 4,600 coho, 1,100 chum, and 254 sockeye salmon.

There is also a set gillnet fishery in the CBS that sporadically occurs with only one or two permit holders and limited harvest and effort. The set gillnet fishery is open for regular Monday/Thursday fishing periods on June 25 in conjunction with other set gillnet fisheries on the west side of UCI and closes by emergency order at the end of the season.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. Fishing time in CBS should be based on inseason assessment of chum salmon run strength and achievement of the CBS chum salmon escapement goal.

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. This proposal could result in additional costs to the department for additional aerial census flights of the CBS.

Landmarks and Waypoints (3 proposals)

PROPOSAL 198 – Amend waypoint descriptions for North Point and West Point/West Point Light on Fire Island.

5 AAC 21.330. Gear; and 5 AAC 21.350. Closed waters.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would amend waypoint descriptions, provide a GPS coordinate for North Point and West Point/West Point Light on Fire Island, and add a GPS coordinate to the closed waters description for the Turnagain Arm and Knik Arm area.

WHAT ARE THE CURRENT REGULATIONS? Numerous regulations describe waters where set gillnetting may or may not occur in the Northern District including the following:

- Set gillnetting is open along the north and west coast from Point MacKenzie to the southern boundary of the district on the west shore.
- Set gillnetting is open in those waters along the west coast of Fire Island from North Point to West Point.
- Set gillnetting may not occur east of a line from Point Possession to the site of the old West Point light on the southern end of Fire Island then along the eastern shore of Fire Island to North Point

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would reduce regulatory confusion by including waypoint locations for landmark names and correct erroneous waypoint locations in the Northern District. This will allow the board to align current set gillnet Shore Fisheries Leases with 5 AAC 21.330 and 5 AAC 21.350 as well as provide GPS waypoint descriptions for landmark names that can be confusing for both fishermen and the Department of Public Safety.

BACKGROUND: In 1996, multiple waypoint descriptions used for regulatory boundaries in the Northern District were converted from North American Datum 1927 (NAD27) to NAD83 and have remained in regulation since. It is theorized that during this conversion process some waypoint locations throughout UCI ended up being offshore of beach locations, or sometimes hundreds of feet inland. This can make enforcement of open or closed waters boundaries less than clear. In 1999, the waypoints were changed from degrees minutes seconds to decimal minutes. The actual location of the coordinate following this conversion did not change and has remained in regulation since. Furthermore, the department has been striving to assign waypoint locations to landmark names and to ADF&G regulatory markers to reduce regulatory confusion. There are five issues that would be resolved through adoption of this proposal, as follows.

The first issue to be resolved in this proposal is to address the differing waypoint coordinates listed for Point MacKenzie in 5 AAC 21.330. Gear and 5 AAC 21.350. Closed waters. Shore fishery lease locations are often based on current ADF&G regulatory language. Depending upon which coordinates are used, either two or seven current Shore Fisheries Lease set gillnet sites are out of

compliance with 5 AAC 21.330 and 5 AAC 21.350. Even if the coordinates in 5 AAC 21.330 are used as the location for Point MacKenzie, there are two Shore Fishery Lease set gillnet sites out of compliance. The two Shore Fisheries Leases affected by these differing waypoints were first obtained in 1965 and in 1986. This would establish one waypoint location for Point MacKenzie in both 5 AAC 21.330 and 5 AAC 21.350. The new waypoint for Point MacKenzie was chosen from the United States Geological Survey Geographic Names Information System (GNIS) database.

Second, in order to bring all existing Shore Fisheries Leases into compliance with the 5 AAC 21.350, description for both Turnagain and Knik Arm, a new offshore waypoint has been proposed linking Point MacKenzie to North Point on Fire Island. While this new waypoint slightly expands waters open to commercial fishing, it is very likely no additional set gillnets will be fished here due to the very strong tides in this area and due to existing Shore Fishery Leases.

Third, "North Point" on Fire Island is referenced in both 5 AAC 21.330 and 5 AAC 21.350, but no coordinates are provided in either. This would assign a waypoint location for "North Point" on Fire Island.

The fourth issue addressed by this proposal is the differing landmark names listed for the same locations on the south end of Fire Island referenced in 5 AAC 21.330 and 5 AAC 21.350. Descriptions in 5 AAC 21.330, use the name "West Point," while descriptions in 5 AAC 21.350, use the name "Old West Point Light." In order to bring existing Shore Fisheries Leases into compliance with these regulations, this would assign a waypoint location for "West Point Light," as listed in the GNIS database for all references to "West Point," or "West Point Light."

Finally, in 5 AAC 21.350, the waypoint listed for Point Possession is currently offshore by more than 300 feet. This would assign an updated waypoint location that is onshore, eliminating confusion for where this boundary intersects with the beach.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal.

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

PROPOSAL 197 – Assign waypoint locations for landmark names in Chinitna Bay.

5 AAC 21.200. Fishing districts, subdistricts, and sections; and 5 AAC 21.330. Gear.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would assign GPS waypoint locations for landmark names and correct erroneous waypoint locations in the Chinitna Bay Subdistrict (CBS).

WHAT ARE THE CURRENT REGULATIONS? The CBS is defined as all waters in Chinitna Bay west of a line from Spring Point to Sea Otter Point (5 AAC 21.200(b)(6)). Set gillnetting is open only on the north side of Chinitna Bay between two waypoints listed in 5 AAC 21.330(b)(3)(vii). Drift gillnets may be used in the CBS only east of a line from the crane on the south shore (defined by a waypoint that is more than 150 feet offshore) to the ADF&G regulatory marker on Glacier Spit.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would reduce regulatory confusion by including GPS waypoint locations for landmark names and corrects erroneous waypoint locations in Chinitna Bay.

BACKGROUND: Chinitna Bay is defined as all waters west of a line from Spring Point to Sea Otter Point; however, there are no waypoints listed for either of these landmarks, which has led to regulatory confusion. Set gillnetting is open only on the north side of Chinitna Bay between two waypoints. However, one of these waypoints is approximately 900 feet offshore. Finally, drift gillnets may be used only east of a line from the crane on the south shore defined by a waypoint that is more than 150 feet offshore and more than 1,600 feet from where remnants of the crane are currently located to an ADF&G regulatory marker (that is not there).

The north side of the CBS is open to set gillnetting for Monday and Thursday regular fishing periods beginning June 25 until closed by emergency order (EO). The department may open Chinitna Bay to drift gillnetting and seining by EO either after aerial census counts show the chum salmon sustainable escapement goal (SEG) of 3,500–8,000 fish has been achieved or the chum salmon run is complete, which occurs in the latter part of August. In 1996, multiple waypoint descriptions used for regulatory boundaries in Chinitna Bay were converted from North American Datum 1927 (NAD27) to NAD83. It is theorized that during this conversion process some waypoint locations throughout UCI ended up being offshore of beach locations, or sometimes hundreds of feet inland. This can make enforcement of open or closed waters boundaries less than clear. In 1999, the waypoints were changed from degrees minutes seconds to decimal minutes. The actual location of the coordinate following this conversion did not change and has remained in regulation since. Furthermore, the department has been striving to assign waypoint locations to landmark names and to ADF&G regulatory markers to reduce regulatory confusion.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal.

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

PROPOSAL 209 – Amend GPS latitude and longitude coordinates that describe the location of Light Point on Kalgin Island.

5 AAC 21.368. Big River Sockeye Salmon Management Plan.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would amend GPS latitude and longitude coordinates that describe the location of Light Point on Kalgin Island.

WHAT ARE THE CURRENT REGULATIONS? According to 5 AAC 21.368 (b), salmon may be taken in waters of the Kustatan Subdistrict along the mainland shore from the terminus of the Kustatan River, southwest to the southern boundary of the subdistrict, and in the Kalgin Island Subdistrict along the western shore from Light Point at 60° 29.00′ N. lat., 151° 50.50′ W. long. to the Kalgin Island Light on the southern end of Kalgin Island at 60° 20.80' N. lat., 152° 05.09' W. long.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would modify the waypoint description for Light Point by moving it approximately 1,200 feet to the east from the current regulatory description (Figure 209-1). The reason for this suggested move is because the current description for Light Point has it located hundreds of feet offshore of the nearest shoreline. This makes it difficult to determine where on the shoreline Light Point is located. Moving the location to a very prominent landmark feature, i.e., the easternmost point on Kalgin Island, will remove uncertainty for fishermen and the Department of Public safety in determining exactly where on the beach Light Point is located.

BACKGROUND: The *Big River Sockeye Salmon Management Plan* (5 AAC 21.368) was first adopted in 1989. This plan allows for a small set gillnet fishery in a portion of the Kustatan Subdistrict that targets sockeye salmon bound for the Big River Lakes watershed. In 2005, the area open to fishing was expanded to include those waters on the west side of Kalgin Island.

From 1989–2004, the average annual king salmon harvest during the Big River sockeye salmon fishery was 462 fish, while the average annual sockeye salmon harvest was 5,290 fish from an average of 18 permit holders per year (Table 209-1). From 2005–2019, after the waters of the west side of Kalgin Island were added to the fishery, the average annual harvest has been 440 king and 14,110 sockeye salmon from 28 permit holders.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal.

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

Figure 209-1.–Map of current and newly suggested location of Light Point on Kalgin Island.

Table 209-1.–Harvest of king and sockeye salmon by permit in the Big River Fishery from 1989–2019.

	King			Sockeye			Number of
Year	Big River	Kalgin Island	Total	Big River	Kalgin Island	Total	Permits
1989	523		523	3,429		3,429	33
1990	871		871	6,483		6,483	26
1991	716		716	11,167		11,167	39
1992	365		365	3,382		3,382	39
1993	399		399	15,193		15,193	20
1994	435		435	3,124		3,124	19
1995	186		186	3,951		3,951	14
1996	136		136	5,070		5,070	15
1997	86		86	2,408		2,408	13
1998	78		78	2,555		2,555	7
1999	777		777	4,074		4,074	10
2000	774		774	2,510		2,510	13
2001	612		612	6,955		6,955	8
2002	536		536	5,600		5,600	8
2003	469		469	5,241		5,241	8
2004	429		429	3,494		3,494	8
2005	87	444	531	2,405	13,454	15,859	21
2006	244	430	674	3,392	16,282	19,674	19
2007	43	269	312	2,074	12,894	14,968	24
2008	198	649	847	1,803	15,774	17,577	28
2009	107	333	440	3,791	21,543	25,334	27
2010	52	316	368	2,120	14,326	16,446	29
2011	77	447	524	2,997	14,783	17,780	34
2012	65	355	420	3,560	9,479	13,039	28
2013	124	346	470	3,073	12,445	15,518	30
2014	118	259	377	1,842	8,563	10,405	29
2015	79	249	328	1,686	5,573	7,259	30
2016	97	161	258	3,490	6,280	9,770	32
2017	96	204	300	3,499	11,168	14,667	30
2018	60	275	335	1,310	3,554	4,864	32
2019	201	221	422	1,740	6,751	8,491	31
Averages						-	
1989-2004	462	-	462	5,290	-	5,290	18
2005-2019	110	331	440	2,585	11,525	14,110	28

Miscellaneous Commercial Fisheries (3 proposals)

PROPOSAL 212 – Eliminate the requirement to obtain a commissioner's permit in the commercial smelt fishery.

5 AAC 21.505. Cook Inlet Smelt Fishery Management Plan.

PROPOSED BY: Teague Vanek.

WHAT WOULD THE PROPOSAL DO? This would eliminate the requirement to obtain a commissioner's permit in order to participate in the Cook Inlet commercial smelt fishery.

WHAT ARE THE CURRENT REGULATIONS? The commercial smelt fishery is prosecuted under 5 AAC 21.505. *Cook Inlet Smelt Fishery Management Plan* and only under the conditions of a commissioner's permit. This fishery is allowed in saltwater only, from May 1 to June 30, specifically in that area of Cook Inlet from the Chuitna River to the Little Susitna River and in the Susitna River south of 61° 21.50'N. lat. (Figure 212-1). Legal gear for the fishery is limited to a hand-operated dip net, as defined in 5 AAC 39.105, with the total harvest not to exceed 100 tons of smelt. Any salmon caught during the fishery are to be immediately returned to the water unharmed. To participate in this fishery, every fisherman must purchase a miscellaneous finfish permit (M99B) from the Commercial Fishery Entry Commission (CFEC), as well as obtaining a commissioner's permit, which can be obtained from the department's office in Soldotna. The commissioner's permit is free; the M99B permit is $75; nonresidents are required to pay an annual nonresident differential of $220 with issuance of their first permit.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would allow fishermen to participate in the Cook Inlet smelt fishery without obtaining a Commissioner's Permit. A miscellaneous finfish permit from CFEC would still be required. Elimination of the Commissioner's Permit requirement would make it more difficult to manage this fishery and constrain harvest within the 200-ton harvest limit.

BACKGROUND: Smelt return to many of the larger river systems in UCI, with particularly large runs to the Susitna and Kenai rivers. Both longfin smelt and eulachon (referred to as smelt and often identified as hooligan) are documented in Cook Inlet. Smelt begin returning to spawning areas in Cook Inlet generally from mid-May to mid-June and return in quantities large enough to support a limited commercial fishery. Longfin smelt return to Cook Inlet in the fall of the year and are not targeted because of the relatively small run size.

At the 1998 board meeting, the commercial smelt fishery was closed, but the regulation did not take effect until after the 1999 season. In 2000, as part of its draft *Forage Fish Management Plan,* the department recommended smelt fishing be restricted to the General Subdistrict of the Northern District. Legal gear would be dip nets only, which had the benefit of eliminating the harvest of non-target species. The area opened to fishing was designed to target Susitna River smelt stocks. In this draft policy, the department recommended that active forage fish fisheries be allowed to take place in a tightly controlled and closely monitored manner through the use of a commissioner's permit, while not allowing any "new" fisheries to develop. The intent was to allow

an active, low-level fishery to continue. However, when the board adopted the current Forage Fish Management Plan, they chose to close the entire commercial smelt fishery. At the 2005 board meeting, proposals were submitted to reopen the fishery, which the board accepted, authorizing a commercial smelt fishery beginning with the 2005 season. While the intent of the commissioner's permit was to control and closely monitor the fishery, the harvest, market, and logistics to reach the fishing area inherently limits participation in the fishery.

Prior to adoption of 5 AAC 39.212. *Forage Fish Management Plan*, the entire UCI area was open to smelt fishing from October 1 to June 1. The only documented commercial harvests of smelt occurred in 1978 (300 pounds), 1980 (4,000 pounds), 1998 (18,900 pounds), and 1999 (100,000 pounds) (Table 212-1). Prior to 1998, fishermen were mistakenly advised that gillnets were the only legal gear for the harvest of smelt. Because primary markets at the time required undamaged fish for bait or marine mammal food, this harvest method was unacceptable. When the interpretation of the regulation was reviewed in 1998, and subsequently changed to allow dip nets to be used, the 1999 harvest increased to 100,000 pounds (100 tons), which was the harvest cap at the time. All smelt harvest has occurred in the brackish waters of the Susitna River. At the 2017 board meeting, the harvest cap was increased from 100 tons to 200 tons annually. From 1978–2019, commercial smelt harvests in UCI ranged from 300 lb to 195 tons. The amount of smelt harvested in this fishery is limited by market demand and the logistics of getting the harvest to a location where the smelt can be processed (boxed and frozen) prior to shipment, rather than abundance of fish.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. The harvest quota for the fishery has been achieved, or nearly achieved, in 9 of the past 18 years (Table 212-1), requiring an emergency order closure of the fishery. The provisions of the fishery that are currently outlined in the commissioner's permit (Figure 212-2) and a registration requirement should be incorporated into the *Cook Inlet Smelt Fishery Management Plan* if the commissioner's permit requirement is eliminated.

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

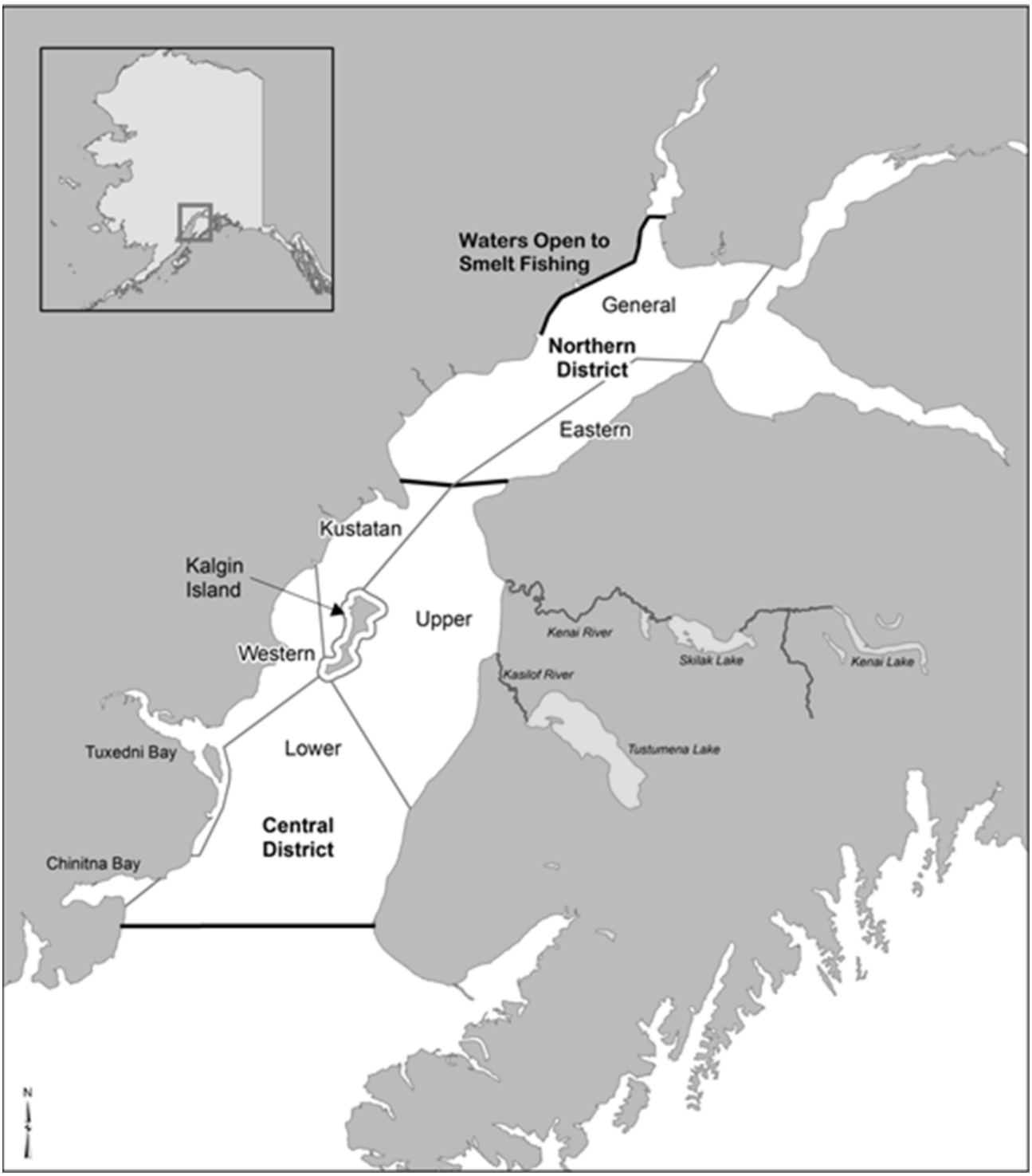

Figure 212-1.–Map of area open to commercial smelt fishing in UCI.

THE STATE of ALASKA
GOVERNOR MIKE DUNLEAVY

Department of Fish and Game

43961 Kalifornsky Beach Rd., Suite B
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COMMISSIONER'S PERMIT
2019 UCI COMMERCIAL SMELT FISHERY 5AAC 21.505

1. In 2019, commercial fishing for eulachon (smelt) will be allowed under the following provisions;
   a. Smelt may be taken with dip nets only as defined in 5 AAC 39.105.
   b. Open area is in the marine waters from the Chuit River to the Little Susitna River.
   c. Closed waters listed in 5 AAC 21.350 are in effect, with the exception of the Susitna River, where fishing is allowed south of the powerline crossing at approximately 61° 21.50' N. lat..
   d. Fishing is open from May 1 through June 30, unless closed earlier by emergency order.
   e. Total harvest is limited to 200 tons or less.
   f. No salmon may be retained.

2. All participants in this fishery must have in their possession a 2019 miscellaneous finfish permit (M99B) obtained from the Commercial Fisheries Entry Commission.

3. All fishermen must report to the Soldotna ADF&G office no later than 12:00 noon of the day following each fishing day. The report may be emailed, faxed or verbally reported and is to include: (a) the name of the permit holder, (b) date fished, (c) area fished and (d) total pounds of smelt harvested, whether kept for personal use or sold.

4. Fish tickets must be submitted to ADF&G Soldotna office within 7 days of harvest, again accounting for all smelt harvested, whether kept for personal use or sold.

5. Failure to comply with the commercial smelt permit terms may result in permit revocation. Permit violations will be forwarded to the Alaska Department of Public Safety for enforcement action.

_____ _____
Fisherman's Signature (Permittee) Department Representative

_____ _____
Date Date

_____
Permittee's phone number(s)

Figure 212-2.–ADF&G commissioner's permit for the 2019 Cook Inlet commercial smelt fishery.

Table 212-1.–Cook Inlet commercial harvest of smelt, 1978, 1980, 1998–1999, and 2006–2019.

Year	Lb	Tons	Permits
1978	300	0.2	NA
1980	4,000	2.0	NA
1998	18,610	9.3	<3
1999	100,000	50.0	NA
2006	90,783	45.4	8
2007	125,044	62.5	11
2008	127,365	63.7	6
2009	78,258	39.1	6
2010	126,135	63.1	3
2011	201,570	100.8	5
2012	195,910	98.0	4
2013	190,830	95.4	4
2014	198,814	99.4	4
2015	213,934	107.0	4
2016	191,536	95.8	4
2017	18,685	9.3	<3
2018	382,967	191.5	4
2019	389,121	194.6	4

PROPOSAL 141 – Allow a vessel to carry more than a legal complement of fishing gear.

5 AAC 21.331. Gillnet specifications and operations; and 5 AAC 21.333. Requirements and specifications for use of 200 fathoms of drift gillnet in the Cook Inlet Area.

PROPOSED BY: Central Peninsula Fish and Game Advisory Committee.

WHAT WOULD THE PROPOSAL DO? This would allow a vessel to carry more than a legal complement of fishing gear, while not increasing the legal amount of gear that may be fished.

WHAT ARE THE CURRENT REGULATIONS? 5 AAC 39.240. *General gear specifications and operations*, a statewide provision, says a fishing vessel shall operate, assist in operating, or have aboard it or any boat towed by it, only one legal limit of salmon fishing gear in the aggregate. A vessel may also have unhung gear aboard an amount sufficient for mending purposes.

In Cook Inlet, 5 AAC 21.331. *Gillnet specifications and operations* states that a drift gillnet may not be more than 150 fathoms in length, 45 meshes in depth, with a maximum mesh size of six inches, except as allowed under 5 AAC 21.333. *Requirements and specifications for use of 200 fathoms of drift gillnet in the Cook Inlet Area.* This regulation states that two Cook Inlet drift gillnet CFEC permit holders may concurrently fish from the same vessel and jointly operate up to 200 fathoms of drift gillnet gear, and a person holding two Cook Inlet drift gillnet CFEC permits may also operate up to 200 fathoms of drift gillnet gear under this section.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would allow commercial fishing vessels in UCI to have more than the legal complement of fishing gear onboard their vessel, which could result in a vessel fishing with more than a legal complement of fishing gear. Commercial permit holders that retrieve derelict nets or those acting as a good Samaritan vessels would be able to pick up another vessel's gear and transport it to shore without fear of regulatory penalty.

BACKGROUND: 5 AAC 39.240 has been in regulation since the mid-1980s and is intended to limit the amount of fishable hung gear allowed on a vessel while engaged in commercial fishing activities. This regulation occurs largely for enforcement reasons so that gillnetters cannot easily deploy and then quickly retrieve illegal gear in violation of regulations that limit the amount and type of gear.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal because it presents enforcement concerns.

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

PROPOSAL 140 – Allow a dual-permit drift gillnet vessel to have 200 fathoms of gear on board in the Chinitna Bay Subdistrict.

5 AAC 21.333. Requirements and specifications for use of 200 fathoms of drift gillnet in the Cook Inlet Area.

PROPOSED BY: Dan Anderson.

WHAT WOULD THE PROPOSAL DO? This would allow a dual-permit drift gillnet vessel to have 200 fathoms of gear on board when in the Chinitna Bay Subdistrict (CBS) while fishing, but would not change the requirement that only 150 fathoms of gear can be used in the CBS at any time.

WHAT ARE THE CURRENT REGULATIONS? In Upper Cook Inlet (UCI), legal drift gillnet gear is limited to no more than150 fathoms per permit (5AAC 21.331). Dual permit holders, or two permit holders on one boat, collectively referred to as D-boats, can fish up to 200 fathoms of gear in UCI, other than in the CBS (5AAC 21.331(i)) or the Kasilof River Special Harvest Area (KRSHA). Drift gillnet vessels are not allowed to use or have aboard more than the legal amount of hung drift gillnet gear for the area they are fishing (5 AAC 39.240). Because D-boat fishing is not allowed in the CBS, only 150 fathoms of gear may be aboard the vessel (5AAC 21.333) at any time.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would allow dual-permitted drift gillnet vessels to have 200 fathoms of gear aboard their boats but would still limit them to fishing no more than 150 fathoms in the CBS. This would not change the harvest potential of vessels fishing in the CBS because the gear limitation of 150 fathoms per vessel would not change. It is possible that this might result in a small increase in the number of vessels fishing in the CBS. This assessment is based on the fact that Drift Gillnet Areas 3 and 4 are open by regulation for regular Mon/Thurs fishing periods after August 15. D-boat fishing is allowed in these areas. The CBS often opens for 12-hour fishing periods on Tuesdays and Fridays late in August (Table 130-1). If this proposal were adopted, D-boat vessels fishing in Drift Gillnet Areas 3 and 4 could now fish in the CBS, when it is open, with no more than 150 fathoms of gear while having 200 fathoms of gear on board the vessel.

BACKGROUND: Because the CBS is approximately 75 miles (one-way) from the mouth of the Kenai River and approximately 67 miles (one-way) from the mouth of the Kasilof River, the department will often open the CBS to drift gillnet fishing on a staggered schedule with Drift Gillnet Areas 3 and 4. This allows a vessel to fish on a Monday or Thursday in Drift Areas 3 and 4, overnight on the west side of Cook Inlet, and then fish in the CBS on a Tuesday or Friday before making the long trip back to port. However, because Drift Gillnet Areas 3 and 4 are open to D-boat fishing, but the CBS is not, this has limited D-boat fishing opportunity late in the season. The reason for this is that no vessel, single permit or dual permit, may have more than 150 fathoms of gear aboard while fishing in the CBS. The extra 50-fathoms that D-boats fish with would technically have to be removed completely from the vessel while fishing in the CBS. A vessel may have a small amount of additional unhung gear aboard the vessel for mending purposes only. When the regulation was passed to allow dual-permit drift gillnet fishing, the limitation on the amount

of gear that could be aboard a vessel in the CBS was not reviewed. At the 2017 UCI meeting, the board reviewed this same issue for the KRSHA and adopted a regulation to allow a drift vessel in this area to have 200 fathoms of gear aboard, but limited fishing to no more than 50 fathoms per vessel, regardless if it is a single permit or dual permit operation.

5 AAC 39.240 has been in regulation since the mid-1980s and is intended to limit the amount of fishable hung gear allowed on a vessel while engaged in commercial fishing activities. This regulation occurs largely for enforcement reasons so that gillnetters cannot easily deploy and then quickly retrieve illegal gear in violation of regulations that limit the amount and type of gear.

Please see the Background section for Proposal 138 for harvest information in the CBS.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal, but **SUPPORTS** clarifying board intent with regard to D-boat operations in CBS.

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

COMMITTEE OF THE WHOLE–GROUP 7: UPPER COOK INLET AREAWIDE SPORT FISHERIES, KENAI/KASILOF RIVERS SPORTFISH GUIDING, KENAI/KASILOF RIVERS MOTORS, MISCELLANEOUS SPORTFISH, KENAI RIVER HABITAT, AND MULTIPLE AREA AND MULTIPLE REGION PLANS (45 PROPOSALS – CHAIR: GODFREY)

Upper Cook Inlet Areawide Sport Fisheries (9 proposals)

PROPOSAL 85 – limit fishing derbies to abundant stocks where fish do not spawn.

5 AAC 56.120. General provisions for seasons, bag, possession, annual, and size limits, and methods and means for the Kenai Peninsula Area.

PROPOSED BY: John McCombs.

WHAT WOULD THE PROPOSAL DO? This would limit fishing derbies to quantified abundant stocks where fish do not spawn.

WHAT ARE THE CURRENT REGULATIONS? Fishing derbies are defined in AS 16.05.940 (13) as a contest in which prizes are awarded for catching fish. There are two types of sport fishing derbies in Alaska: authorized and unauthorized. Authorized derbies are those permitted by the department (AS 16.05.662) to sell fish entered in the derby. Authorized derbies must be permitted and file a report with the department. Unauthorized derbies go unmonitored and a report to the department is not required.

All sport-fishing derbies require a permit from the Department of Commerce and Economic Development, Division of Occupational Licensing and Games of Chance.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? There would be no effect on derbies if this proposal were adopted because the board does not have the authority to permit or prohibit fishing derbies.

BACKGROUND: The Department of Revenue, not the board or the Commissioner, has the authority to permit or prohibit fishing derbies under AS 05.15.100. The Commissioner's authority is limited to permitting the sale of fish from a derby and the board retains all its authority to regulate time, area, methods, and means regardless of whether a derby exists.

DEPARTMENT COMMENTS: The department recommends **NO ACTION** on this proposal. The board has deliberated on many proposals similar to these in past meetings. The board may indirectly regulate derbies through time, area, methods and means, and bag and possession limit adjustments that apply to all participants in the fishery. Department defers to DOL for comments on board's authority to restrict fishing derbies beyond time, area, methods and means, and bag and possession limits.

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

PROPOSAL 86 – Combine personal use and sport limits, and annual limits for sockeye salmon

5 AAC 56.120. General provisions for seasons, bag, possession, annual, and size limits, and methods and means for the Kenai River Drainage Area.

PROPOSED BY: Steve Pratt.

WHAT WOULD THE PROPOSAL DO? This seeks to address two separate issues. The first would combine personal use and sport limits for sockeye salmon in Cook Inlet, and the second would establish resident and nonresident annual limits for sockeye salmon.

WHAT ARE THE CURRENT REGULATIONS? There are no annual limits for sockeye salmon sport harvest in Cook Inlet. The Upper Cook Inlet (UCI) personal use salmon permit covers four fisheries: gillnetting on the Kasilof River, and dipnetting on the Kenai River, Kasilof River, and Fish Creek. In the personal use taking of salmon, the total annual limit for each personal use salmon fishing permit is 25 salmon for the head of a household and 10 salmon for each dependent of the permit holder.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would increase regulatory complexity by combining regulations and limits of sport and personal use fisheries. Alaskans would lose harvest opportunity on sockeye salmon even in years with a harvestable surplus. Nonresidents would have highly restricted limits without a conservation justification. The relative inriver effort and harvest in Cook Inlet for sockeye salmon would likely decrease.

BACKGROUND: The *Kenai River Late-Run Sockeye Salmon Management Plan* (5 AAC 21.360) provides the department direction to liberalize and restrict the personal use salmon fishery based upon meeting escapement goals. Until 2016, the department managed the Kenai River Late-run sockeye salmon run for an Optimal Escapement Goal (OEG). When the department converted to DIDSON based goals in 2011, the OEG was a range of 700,000 to 1,400,000 sockeye salmon. The OEG was repealed in 2017, and since then the department has managed for the SEG of 700,000 to 1,200,000 sockeye salmon. Since 2011, the lower bound of the Kenai Late-run sockeye salmon escapement goals was achieved every year (Table 86-1). The inriver goal, the tiered goals based on preseason forecasts, and inseason evaluations of the total Kenai River late-run sockeye salmon return, have been exceeded every year but one since 2011.

Data collected by the statewide harvest survey indicates that on average more nonresident than resident anglers fish the Kenai River each year, however resident anglers account for the majority of total fishing effort.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal.

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

Table 86-1.–History of Kenai River sockeye salmon personal use/subsistence, educational, and sport harvest and escapement goals, 1987–2019

Year	Personal Use Dip Net, and Educational Harvest [a]	Sport Harvest Below Sonar [b]	Kenai River Sonar Count [c]	Sport Harvest Above Sonar	Spawning Escapement	Inriver Goal	BEG/SEG	OEG	Preseason Forecast (Millions)	Actual Run Size (Millions)
1987	24,090	50,274	1,596,871	233,958	1,362,913	400,000-700,000	330,000-600,000	330,000-600,000	3.5	8.6
1988	16,880	29,345	1,021,469	144,093	877,376	400,000-700,000	330,000-600,000	330,000-600,000	5.0	5.8
1989	51,192	66,162	1,599,959	268,958	1,331,001	400,000-700,000	330,000-600,000	330,000-600,000	-	5.9
1990	3,477	19,640	659,520	155,742	503,778	400,000-700,000	330,000-600,000	330,000-600,000	4.7	2.7
1991	13,433	31,536	647,597	227,697	419,900	400,000-700,000	330,000-600,000	330,000-600,000	-	1.7
1992	30,454	47,622	994,798	222,482	772,316	400,000-700,000	330,000-600,000	330,000-600,000	4.2	7.7
1993	35,592	27,717	813,617	137,229	676,388	400,000-700,000	330,000-600,000	330,000-600,000	1.9	3.9
1994	15,804	17,954	1,003,446	102,378	901,068	400,000-700,000	330,000-600,000	330,000-600,000	1.5	3.4
1995	15,720	29,451	630,447	108,076	522,371	450,000-700,000	330,000-600,000	330,000-600,000	2.3	2.3
1996	104,110	39,810	797,847	166,166	631,681	550,000-800,000	330,000-600,000	330,000-600,000	2.5	3.2
1997	116,107	43,642	1,064,818	147,057	917,761	550,000-825,000	330,000-600,000	330,000-600,000	4.0	3.9
1998	105,497	33,980	767,558	155,905	611,653	550,000-850,000	330,000-600,000	330,000-600,000	1.7	1.5
1999	150,993	46,043	803,379	187,725	615,654	750,000-950,000	500,000-800,000	500,000-1,000,000	1.6	2.5
2000	99,571	57,978	624,578	203,801	420,777	600,000-850,000	500,000-800,000	500,000-1,000,000	2.5	1.4
2001	152,580	51,374	650,036	168,104	481,932	600,000-850,000	500,000-800,000	500,000-1,000,000	2.4	1.8
2002	182,229	46,693	957,924	213,066	744,858	750,000-950,000	500,000-800,000	500,000-1,000,000	1.7	3.0
2003	227,207	60,722	1,181,309	253,734	927,575	750,000-950,000	500,000-800,000	500,000-1,000,000	2.0	3.8
2004	266,937	62,397	1,385,981	254,836	1,131,145	850,000-1,100,000	500,000-800,000	500,000-1,000,000	3.2	5.0
2005	300,105	58,017	1,376,452	254,818	1,121,634	850,000-1,100,000	500,000-800,000	500,000-1,000,000	3.3	5.6
2006	130,486	30,964	1,499,692	172,638	1,327,054	750,000-950,000	500,000-800,000	500,000-1,000,000	1.8	2.5
2007	293,941	60,623	867,572	265,702	601,870	750,000-950,000	500,000-800,000	500,000-1,000,000	2.4	3.4
2008	236,355	46,053	614,946	208,334	406,612	650,000-850,000	500,000-800,000	500,000-1,000,000	3.1	2.3
2009	343,302	45,868	745,170	241,938	503,232	650,000-850,000	500,000-800,000	500,000-1,000,000	2.4	2.4
2010	393,317	59,651	970,662	256,582	714,080	750,000-950,000	500,000-800,000	500,000-1,000,000	1.7	3.3
2011	543,043	92,225	1,599,217	318,484	1,280,733	1,100,000-1,350,000	700,000-1,200,000	**700,000-1,400,000**	3.9	6.2
2012	530,128	102,376	1,581,555	368,634	1,212,921	1,100,000-1,350,000	700,000-1,200,000	**700,000-1,400,000**	4.0	4.7
2013	350,302	78,837	1,359,893	379,685	980,208	1,000,000-1,200,000	700,000-1,200,000	**700,000-1,400,000**	4.4	3.5
2014	384,018	78,057	1,520,340	301,998	1,218,341	1,000,000-1,200,000	700,000-1,200,000	**700,000-1,400,000**	3.8	3.3
2015	384,095	83,112	1,709,051	309,004	1,400,047	1,000,000-1,200,000	700,000-1,200,000	700,000-1,400,000	3.6	3.9
2016	264,900	79,465	1,383,692	262,981	1,120,717	1,100,000-1,350,000	700,000-1,200,000	**700,000-1,400,000**	4.7	3.5
2017	304,632	67,233	1,308,498	235,208	1,056,773	1,000,000-1,300,000	**700,000-1,200,000**	Repealed	2.2	2.9
2018	169,553	41,122	1,035,761	147,493	831,096	**900,000-1,100,000**	**700,000-1,200,000**	Repealed	2.5	1.7
2019	ND	ND	1,849,054	ND	ND	1,000,000-1,300,000	700,000-1,200,000	Repealed	3.8	3.6

Note: ND = no data available

Bold font is years since 2011 (first year of DIDSON-based goals) the goal was achieved

[a] Personal use (1987-1995), Subsistence dip net harvest (1991-1995), and Kenaitze educational harvest (1989-1995) from Brannian and Fox,1996. From 1994 to present, the educational harvest is the total late-run harvest.

[b] In 1994 and 1995 a creel survey was conducted to estimate harvest below the sonar. In 1994, 49.7% of the below Soldotna Bridge harvest was taken below the sonar. In 1995, 68.6 % was taken below the sonar. The average of these two percentages is applied to all other year's below-bridge harvest to estimate the harvest below the sonar.

[c] Bendix sonar counts for 1987-2010; DIDSON counts beginning in 2011.

PROPOSAL 9 – Establish a season limit of five king salmon from October 1 through April 30

5 AAC 58.022. Waters; seasons; bag, possession, annual, and size limits; and special provisions for Cook Inlet–Resurrection Bay Saltwater Area.

PROPOSED BY: Andy Housh.

WHAT WOULD THE PROPOSAL DO? This would establish a season limit of five king salmon in Cook Inlet from October 1 through April 30.

WHAT ARE THE CURRENT REGULATIONS? In Cook Inlet salt waters, king salmon 20 inches or longer harvested from April 1 through August 31 apply towards the Cook Inlet annual limit of five king salmon.

The *Cook Inlet Winter Salt Water King Salmon Sport Fishery Management Plan* is effective for all Cook Inlet salt waters from September 1 through March 31, and has a guideline harvest level of 4,500 king salmon. King salmon harvested in the winter fishery are not included in the Cook Inlet annual limit of five.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would reduce king salmon harvest opportunity by an unknown amount in the winter fishery by implementing a season limit. Since the winter fishery season is September 1 through March 31, this would add regulation complexity by adding a season limit with differing dates. This would create a more restrictive annual limit for the winter fishery than the summer fishery because it does not specify a size. It would no longer align the use of king salmon annual limits with the time when mature Cook Inlet stocks are present in Cook Inlet salt waters. This may shift some effort from Cook Inlet salt water fisheries to other fisheries where there is no annual limit, such as North Gulf Coast. Effort and harvest may increase for other species such as rockfish within Cook Inlet. This would increase likelihood of not exceeding the winter fishery GHL.

BACKGROUND: Boat-based anglers troll year-round for feeder (immature) king salmon in Cook Inlet and Kachemak Bay. Participation in the winter is dependent on weather conditions and size of boat. Most fishing effort occurs in nearshore waters along Bluff Point and the south side of Kachemak Bay, from Point Pogibshi east to Chugachik Island.

The purpose of the *Cook Inlet Winter Salt Water King Salmon Sport Fishery Management Plan* (5 AAC 58.060) is to meet the board's goal of slowing the growth in the sport harvest of king salmon. In 2016, the board extended the area of the winter fishery to include all Cook Inlet salt waters, also included the month of September when mature Cook Inlet stocks were no longer present and expanded the GHL from 3,000 to 4,500 to include harvest that occurs with those changes. The winter fishery average annual harvest was approximately 2,000 fish from 2002 through 2013 and increased to an average annual harvest of over 5,000 since 2014 (Table 9-1). From 2002 through 2013, the harvest remained within the GHL but has exceeded it annually since 2014. This harvest increase has been attributed to an increased abundance of outside–Cook Inlet stocks and favorable marine weather throughout the winter.

In the winter fishery, king salmon harvest is mostly composed of outside–Cook Inlet stocks. From 2014 through 2018, the department conducted a Cook Inlet marine sport harvest assessment program to identify the harvest contribution by genetic groups for the Upper and Lower Cook Inlet summer fisheries and the winter fishery. In the winter fishery, Cook Inlet stocks were either absent or harvested at an undetectable low level. The stock composition of the outside–Cook Inlet genetic reporting group was not assessed with this program. Origins of king salmon from stocks outside of Cook Inlet are likely a mix of Southeast hatchery fish, non-Southeast Alaska wild stocks (e.g., Copper River), and fish from southeast Alaska, British Columbia, and west coast.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. It adds regulatory complexity by having differing season dates for the winter fishery and seasonal limit and creates differing size requirements for the seasonal limits. The winter fishery has exceeded the GHL annually for the last five years; however, Cook Inlet stocks were either absent or harvested at an undetectable low level in the winter fishery. Harvest will fluctuate with changes in the abundances of nonlocal stocks and how favorable the marine weather remains throughout the winter.

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

Table 9-1.–King salmon sport harvest by fishery and user group in Upper and Lower Cook Inlet salt waters, 2002–2018.

	Lower Cook Inlet Management Area											
	UCI Summer			LCI Summer			Winter			Entire MA		
Year	Guided	Unguided	Total	Guided	Unguided	Total	Guided	Unguided	Total	Guided	Unguided	Total
2002	1,825	1,970	3,795	2,357	1,520	3,877	204	1,219	1,423	8,144	3,694	11,838
2003	1,916	2,326	4,242	2,858	1,732	4,590	289	1,515	1,804	10,481	4,347	14,828
2004	2,395	3,024	5,419	2,519	3,515	6,034	419	1,650	2,069	10,779	6,958	17,737
2005	2,415	2,371	4,786	4,309	3,861	8,170	412	2,546	2,958	12,206	6,644	18,850
2006	2,610	3,323	5,933	3,717	3,055	6,772	169	1,346	1,515	9,821	6,547	16,368
2007	2,026	2,786	4,812	2,223	1,736	3,959	404	1,607	2,011	7,630	4,926	12,556
2008	912	1,742	2,654	2,072	1,285	3,357	336	1,356	1,692	5,199	3,363	8,562
2009	1,026	645	1,671	1,636	808	2,444	310	1,386	1,696	4,783	1,763	6,546
2010	1,580	731	2,311	1,789	2,580	4,369	789	1,770	2,559	6,034	4,100	10,134
2011	1,746	1,308	3,054	1,993	1,718	3,711	441	1,559	2,000	5,817	3,467	9,284
2012	827	581	1,408	1,556	1,817	3,373	330	1,749	2,079	4,162	2,728	6,890
2013	1,099	1,438	2,537	2,630	3,180	5,810	638	1,773	2,411	5,766	5,256	11,022
2014	1,379	1,160	2,539	2,095	2,964	5,059	438	2,735	3,173	7,427	4,562	11,989
2015	1,904	2,282	4,186	4,472	3,594	8,066	902	4,277	5,179	12,737	6,778	19,515
2016	1,801	1,962	3,763	4,533	5,335	9,868	344	4,762	5,106	12,364	7,641	20,005
2017	1,294	1,862	3,156	3,628	5,059	8,687	903	3,615	4,538	9,614	7,824	17,438
2018	1,436	1,541	2,977	3,318	3,500	6,818	1,341	6,503	7,844	6,095	12,062	18,157
Averages												
1986–2013	3,303	2,262	5,566	2,472	2,234	4,706	395	1,623	2,018	8,748	4,334	13,082
2014–2018	1,563	1,761	3,324	3,609	4,090	7,700	786	4,378	5,168	9,647	7,773	17,421

[a] Preliminary.

PROPOSAL 150 – Require retention of sockeye salmon in the Kenai River.

5 AAC 57.120. General provisions for seasons, bag, possession, annual, and size limits, and methods and means for the Kenai River Drainage Area.

PROPOSED BY: Central Peninsula Fish and Game Advisory Committee.

WHAT WOULD THE PROPOSAL DO? This would require retention of sockeye salmon caught in the Kenai River regardless of hook placement.

WHAT ARE THE CURRENT REGULATIONS? Statewide regulations state that it is unlawful to intentionally snag or attempt to snag any fish in fresh water. Fish unintentionally hooked elsewhere than in the mouth must be released immediately. The term "snag" means to hook a fish elsewhere than in the mouth.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would increase the harvest of sockeye salmon by increasing angler efficiency and may attract additional participants to the fishery.

BACKGROUND: In 1964, the board prohibited the use of treble hooks on the Russian River in an effort to reduce snagging sockeye salmon, as snagging accounted for roughly 50% of the effort. Catch-per-unit-effort data revealed both fly/snag methods had similar rates of success. In 1965, 61% of harvested sockeye salmon were snagged, and in 1966, 41% harvested were snagged. In 1965, the board adopted a fly-only regulation for the Russian River. In 1966, the board adopted an anti-snagging regulation. The goal was to create a more acceptable method of harvest, as the public expressed dismay to the unethical aspects of snagging. Information collected about the same time through marking and release of snagged sockeye salmon indicated nearly all fish hooked, landed, marked, and released that were hooked elsewhere than the mouth survived to pass through the Russian River weir. Snagging has been prohibited in the fresh waters of Alaska since 1975.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal as it may encourage anglers to snag sockeye salmon in the Kenai River. The prohibition of snagging in fresh waters is a longstanding practice in Alaska sport fisheries. The department has a historical position of opposing snagging in fresh waters statewide and continues to maintain that position. Anglers release fish for a number of reasons. Catch-and-release fishing also allows fishing opportunity for all users and provides managers with the ability to allow fisheries to continue through the season to achieve escapement goals. The department is **NEUTRAL** on the allocative aspects of this proposal.

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

PROPOSAL 147 – Prohibit salmon fishing on the Kenai River after taking the bag limit.

5 AAC 57.120. General provisions for seasons, bag, possession, annual, and size limits, and methods and means for the Kenai River Drainage Area; and 57.122. Special provisions for the seasons, bag, possession, and size limits, and methods and means for the Middle Section of the Kenai River Drainage Area.

PROPOSED BY: Cooper Landing Fish and Game Advisory Committee.

WHAT WOULD THE PROPOSAL DO? This would prohibit fishing for salmon on the Kenai River from the outlet of Kenai Lake downstream to the inlet of Skilak Lake including the Russian River drainage after taking the bag limit for that day.

WHAT ARE THE CURRENT REGULATIONS? Subject to the requirement of achieving the sustainable escapement goal (SEG) of 700,000–1,200,000 late-run sockeye salmon, the department shall provide for an inriver sockeye salmon sport fishery in the Kenai River. The bag and possession limit may be increased if the department determines that the abundance of the Kenai River late-run sockeye salmon is greater than 2.3 million. With few exceptions the Middle Kenai River Mainstem, from the outlet of Kenai Lake downstream to the inlet of Skilak Lake, is open for fishing for salmon other than king salmon from June 11 to April 30 and July 1 to October 31 for coho salmon. The combined bag and possession limit for coho, sockeye, and chum salmon of 3 per a day,6 in possession of which only 2 can be coho salmon from July 1 to August 31. From September 1 to October 31 all 3 may be coho salmon. The bag and possession limit for pink salmon is 6 fish.

The Russian River and the Kenai River mainstem from its confluence with the Russian River downstream approximately 1,800 yards to the power lines are managed to achieve the escapement goals for early- and late-run Russian River sockeye salmon. If the department projects that the sockeye salmon escapement goal will be exceeded, then the bag possession limit may be increased. Fishing for sockeye salmon is open from June 11 to August 20. Fishing for coho salmon is open July 1 to September 30 except for the confluence section of the Kenai River mainstem which remains open until October 31. The combined bag and possession limit of sockeye, chum, and coho salmon is 3 per a day and 6 in possession of which only 1 may be a coho salmon. The bag and possession limit for pink salmon is 6 fish. King salmon fishing is prohibited in the Middle and Upper Sections of the Kenai River Drainage including all tributaries.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This could reduce overall sport fishing effort by an unknown amount and increase regulatory complexity in the Middle Section of the Kenai River. It is unknown if this would reduce crowding in the fisheries affected because an angler may choose to delay retaining a limit of salmon in order to fish for a longer period of time.

BACKGROUND: The middle Kenai River is defined as the area from the outlet of Kenai Lake to the inlet of Skilak Lake. This section of river provides a popular drift boat sport fishery and in some areas such as the Russian River/Kenai River confluence area and Russian River Ferry area, a popular shore-based sport fishery. There are four public boat launches which includes one on

Skilak Lake itself (Figure 147-1 and 147-2). The middle Kenai River and Russian River provide a robust and popular guided and unguided sport fishery for sockeye and coho salmon and resident species such as rainbow trout and Dolly Varden.

The estimated effort for the middle Kenai River, as reported by the Statewide Harvest Survey for all species from 1998 to 2018 has averaged 48,014 angler-days. Angler effort has ranged from 28,712 to 67,164 angler-days during this time. Combined guided and unguided catch of sockeye salmon has averaged 47,804 fish with 25,814 fish being harvested during this period. The retention rate of sockeye salmon on the upper Kenai River averages approximately 55%, although rates may be as low as 41% or as high as 65% (Table 147-1). Reported catch of coho salmon has averaged 6,481 fish with 2,972 fish being reported harvested. Retention rates during this time period have averaged approximately 46% and ranged from 30% to 67% (Table 147-1).

The Russian River, Russian River confluence, and Russian River Ferry area has the highest concentration of shore-based angling on the middle Kenai River (Figure 147-2). The Russian River itself provides a popular sport fishery for early- and late-run sockeye salmon, a smaller coho salmon fishery, and resident species fishery. Estimates of effort as reported by the Statewide Harvest Survey for all species from 1998 to 2018 on the Russian River has averaged 55,222 angler-days. Angler effort during this period has ranged from 39,873 to 70,804 angler-days (Table 147-2). Sockeye salmon catch has averaged 92,376 fish and ranged between 41,686 and 148,660 fish. The retention rate of these fish has averaged approximately 60% and ranged from 47% to 72%. Coho salmon catch has averaged 9,120 fish and ranged between 4,661 and 7,278 fish. The retention rate of these fish has averaged approximately 49% and ranged from 48% to 68% (Table 147-2).

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal; harvest has been sustainable and escapement goals have been met or exceeded over most years under current regulation. This proposal would increase regulatory complexity and reduce sport fishing effort for salmon and resident species. The department is **NEUTRAL** on allocative aspects of this proposal.

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

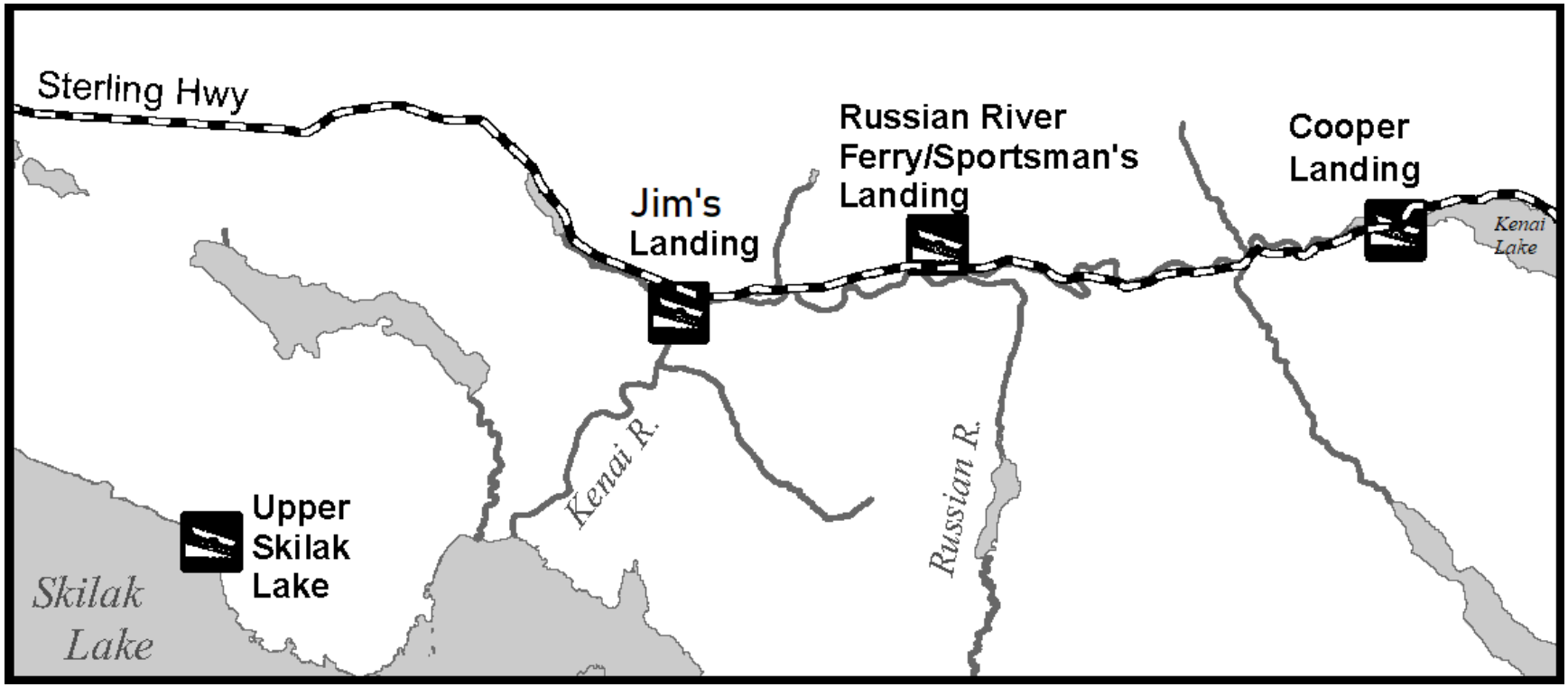

Figure 147-1.–Map of the middle Kenai River and boat launches.

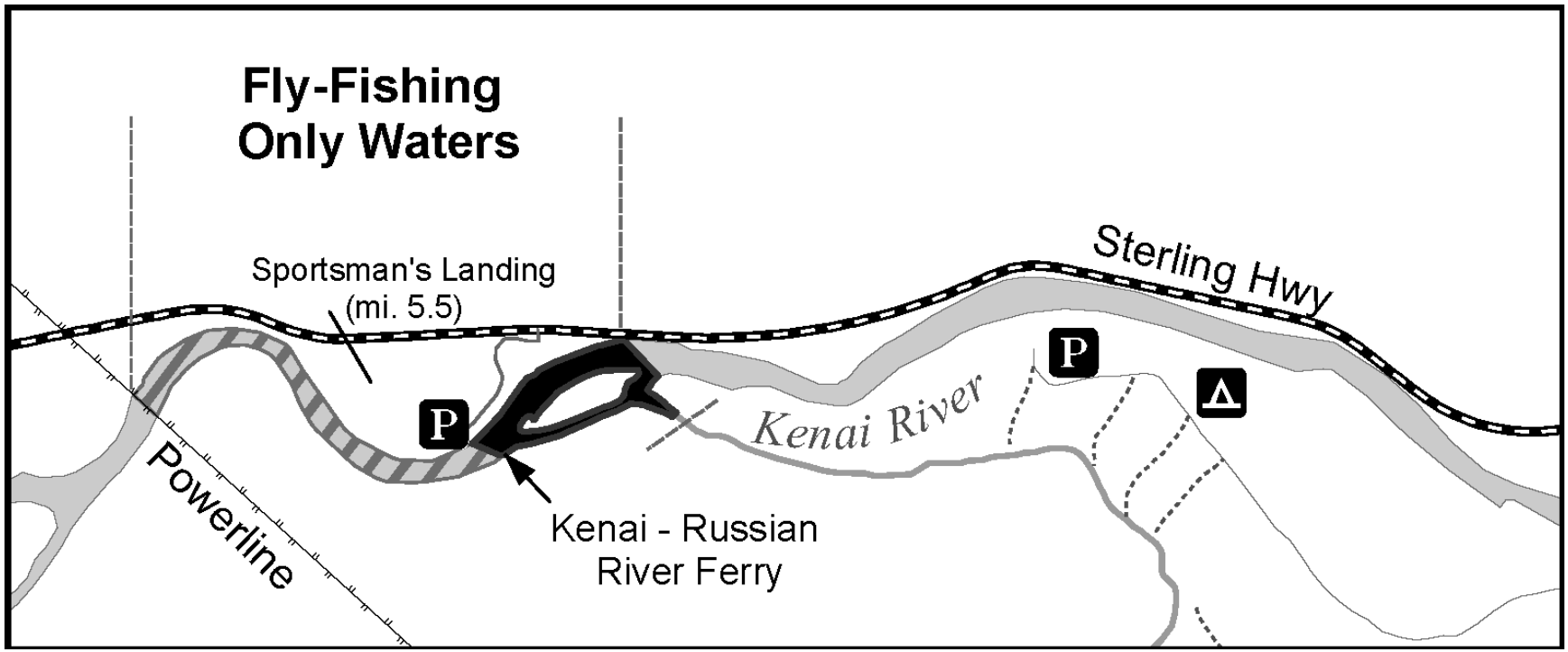

Figure 147-2.–Map of the Kenai River and Russian River confluence area.

Table 147-1.–Estimated effort, catch (C), harvest (H) and retention rate (% R) for sockeye salmon, coho salmon, and resident species from Skilak lake Inlet to Kenai Lake outlet, 1998–2018.

		Sockeye			Coho			Rainbow Trout			Dolly Varden		
Year	Effort[a]	C	H	% R	C	H	% R	C	H	% R	C	H	% R
1998	28,712	39,823	20,994	0.53	4,466	2,203	0.49	42,224	0	0.00	35,659	468	0.01
1999	39,049	67,658	33,796	0.50	4,164	2,729	0.66	50,189	0	0.00	31,826	683	0.02
2000	46,142	55,567	27,978	0.50	7,421	2,565	0.35	78,836	0	0.00	56,375	349	0.01
2001	35,294	40,348	20,425	0.51	5,496	2,425	0.44	51,130	0	0.00	54,802	363	0.01
2002	52,937	91,672	40,115	0.44	13,368	4,851	0.36	71,753	0	0.00	38,481	766	0.02
2003	40,815	60,519	25,771	0.43	5,666	3,180	0.56	54,552	0	0.00	50,969	487	0.01
2004	49,814	68,377	29,185	0.43	7,739	3,601	0.47	91,443	0	0.00	89,318	452	0.01
2005	51,892	71,601	34,779	0.49	9,314	4,413	0.47	57,936	267	0.00	62,798	565	0.01
2006	40,624	44,350	19,941	0.45	7,343	3,528	0.48	67,741	289	0.00	52,048	414	0.01
2007	67,164	71,162	35,248	0.50	8,755	3,790	0.43	90,757	661	0.01	90,757	584	0.01
2008	50,655	52,562	28,803	0.55	9,863	4,536	0.46	103,095	941	0.01	78,489	1,003	0.01
2009	60,319	72,760	42,247	0.58	10,687	4,357	0.41	102,745	399	0.00	91,815	412	0.00
2010	43,344	46,820	23,359	0.50	5,535	2,733	0.49	79,663	237	0.00	63,254	402	0.01
2011	43,750	56,273	23,322	0.41	7,493	2,213	0.30	71,088	374	0.01	50,768	150	0.00
2012	43,222	44,952	20,856	0.46	3,949	1,262	0.32	81,349	386	0.00	66,323	304	0.00
2013	62,213	72,378	36,065	0.50	7,092	2,978	0.42	90,301	446	0.00	70,350	492	0.01
2014	49,038	42,893	27,082	0.63	10,761	7,216	0.67	69,629	135	0.00	66,551	287	0.00
2015	50,607	46,215	24,205	0.52	6,308	2,760	0.44	123,441	286	0.00	86,330	621	0.01
2016	41,627	28,070	17,256	0.61	2,546	1,613	0.63	78,149	169	0.00	69,309	398	0.01
2017	47,182	36,774	23,684	0.64	5,328	1,985	0.37	103,437	830	0.01	60,211	136	0.00
2018	38,840	30,900	20,060	0.65	5,108	2,607	0.51	48,373	351	0.01	33,281	374	0.01
Average													
1998-2018	48,014	47,804	25,814	0.55	6,481	2,972	0.46	84,818	361	0.00	65,819	358	0.01
2009-2018	45,459	36,970	22,457	0.61	6,010	3,236	0.52	84,606	354	0.00	63,136	363	0.01

Source: Alaska Sport Fishing Survey database [Internet]. 1998– . Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited October 2019). Available from: http://www.adfg.alaska.gov/sf/sportfishingsurvey/.

[a] Effort (angler-days) directed toward all species.

Table 147-2.–Russian River effort, catch (C) and harvest (H), and retention rate (%R) for sockeye salmon, coho salmon, and resident species effort, 1998–2018.

		Sockeye Salmon			Coho Salmon			Rainbow trout			Dolly Varden		
Year	Effort [a]	C	H	%R	C	H	%R	C	H	%R	C	H	% R
1998	47,942	102,660	67,821	0.66	6,819	4,612	0.68	20,088	351	0.02	5,957	73	0.01
1999	64,536	114,886	66,618	0.58	14,028	3,910	0.28	37,764	83	0.00	11,791	196	0.02
2000	69,864	124,284	70,961	0.57	8,747	3,938	0.45	34,948	44	0.00	11,596	168	0.01
2001	55,972	88,863	53,950	0.61	9,524	5,222	0.55	16,007	215	0.01	11,087	253	0.02
2002	68,263	141,955	84,138	0.59	12,628	6,093	0.48	29,484	16	0.00	8,566	175	0.02
2003	50,448	103,771	51,071	0.49	12,022	5,197	0.43	21,204	182	0.01	10,504	263	0.03
2004	60,784	102,414	55,144	0.54	16,327	6,574	0.40	42,875	49	0.00	25,713	324	0.01
2005	55,801	117,453	55,642	0.47	10,220	3,868	0.38	20,026	232	0.01	9,218	232	0.03
2006	70,804	148,660	80,861	0.54	13,033	5,431	0.42	28,059	256	0.01	11,390	261	0.02
2007	57,755	88,514	53,668	0.61	7,593	3,169	0.42	25,718	261	0.01	7,857	196	0.02
2008	55,444	103,228	66,172	0.64	7,800	3,739	0.48	20,333	219	0.01	9,481	354	0.04
2009	64,518	140,072	93,032	0.66	10,067	5,313	0.53	21,047	214	0.01	10,741	146	0.01
2010	39,873	51,231	32,745	0.64	4,661	2,581	0.55	14,710	97	0.01	7,645	45	0.01
2011	47,264	73,937	37,109	0.50	7,916	4,353	0.55	17,817	108	0.01	7,375	165	0.02
2012	41,152	55,119	30,305	0.55	7,459	4,800	0.64	21,275	216	0.01	7,659	47	0.01
2013	59,682	80,398	47,308	0.59	7,808	4,262	0.55	27,869	275	0.01	14,505	198	0.01
2014	57,544	75,014	53,734	0.72	7,350	2,848	0.39	32,711	514	0.02	13,647	332	0.02
2015	55,420	66,862	43,741	0.65	8,040	3,682	0.46	31,208	277	0.01	11,897	189	0.02
2016	39,957	41,686	24,629	0.59	5,101	3,159	0.62	24,258	101	0.00	12,259	281	0.02
2017	49,455	59,135	37,701	0.64	6,031	3,315	0.55	24,675	516	0.02	12,306	213	0.02
2018	47,186	59,759	42,343	0.71	8,350	4,042	0.48	13,015	161	0.01	8,264	147	0.02
Average													
1998–2018	55,222	92,376	54,700	0.60	9,120	4,291	0.49	25,004	209	0.01	10,927	203	0.02
2009–2018	50,205	70,321	44,265	0.63	7,278	3,836	0.53	22,859	248	0.01	10,630	176	0.02

Source: Alaska Sport Fishing Survey database [Internet]. 1998– . Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited October 2019). Available from: http://www.adfg.alaska.gov/sf/sportfishingsurvey/.

[a] Effort (angler-days) directed toward all species.

PROPOSAL 146 – Increase the bag limit for sockeye salmon in the Kenai River.

5 AAC 57.120. General provisions for seasons, bag, possession, annual, and size limits, and methods and means for the Kenai River Drainage Area; and 57.122. Special provisions for the seasons, bag, possession, and size limits, and methods and means for the Middle Section of the Kenai River Drainage Area.

PROPOSED BY: Frank Casey.

WHAT WOULD THE PROPOSAL DO? This would increase the bag limit for the sockeye salmon sport fishery from 3 fish to 6 fish per day in the Kenai River Drainage Area when the Cook Inlet commercial sockeye salmon fishery is open.

WHAT ARE THE CURRENT REGULATIONS? Subject to the requirement of achieving the sustainable escapement goal (SEG) of 700,000–1,200,000 late-run sockeye salmon, the department shall provide for an inriver sockeye salmon sport fishery in the Kenai River. With few exceptions the lower Kenai River mainstem is open to sport fishing for sockeye salmon all year with a limit of 3 fish a day, 6 in possession. The bag and possession limit may be increased if the department determines that the abundance of the Kenai River late-run sockeye salmon is greater than 2.3 million. The Russian River and the Kenai River mainstem from its confluence with the Russian River downstream approximately 1,800 yards to the power lines are managed to achieve the escapement goals for early- and late-run Russian River sockeye salmon. The bag limit of sockeye salmon is 3 fish and 6 in possession.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Increasing bag and possession limits for sockeye salmon would likely increase harvest and effort in the sport fishery by an unknown amount and could lead to more frequent restrictive actions to all users to meet the late-run sockeye salmon SEG under existing inriver goals, especially in runs of less than 2.3 million Kenai River late-run sockeye salmon. Additionally, this may increase the likelihood of restrictive actions in the sport fishery upstream of Skilak Lake to achieve the Russian River sockeye salmon escapement goals.

BACKGROUND: The *Kenai River Late-run Sockeye Salmon Management Plan* (5 AAC 21.360) provides direction to the department for managing the inriver sockeye salmon sport fishery based on inseason evaluation of sockeye salmon abundance and achievement of the SEG. Until 2016 the department managed the Kenai River late-run sockeye salmon run for an Optimal Escapement Goal (OEG). When the department converted to DIDSON based goals in 2011, the OEG was a range of 700,000 to 1,400,000 sockeye salmon. The OEG was repealed and since 2017 the department has managed for the SEG of 700,000 to 1,200,000 sockeye salmon. To provide an allocation to the inriver sport fishery, facilitate achievement of the SEG, and spread escapements throughout the escapement goal range, the commercial fishery is managed to achieve an inriver goal which varies depending on total Kenai River late-run sockeye salmon run size.

Kenai River late-run sockeye salmon escapement goals have been achieved every year but one (2015) since 2011 (Table 146-1). The inriver goal, the tiered goals based on preseason forecasts and inseason evaluations of the total Kenai River late-run sockeye salmon return, have been

exceeded every year but one since 2011. The sport fishery is managed based upon inseason escapement estimates at the RM19 sonar and managed by modifying time, and bag and possession limits in order to achieve the SEG.

In order to liberalize the sport fish bag and possession limit for Kenai River late-run sockeye salmon, the department must determine the total the abundance of Kenai River late-run sockeye salmon is greater than 2.3 million. This is accomplished inseason by estimating the current commercial harvest and inriver passage of late-run sockeye salmon and estimating how much of the run is still to arrive. In addition, the department must determine that the total harvest under the increased bag and possession limit will not reduce the escapement below the SEG. Since 2002 when the bag limit for sockeye salmon was lowered from 6 to 3, the limit has been liberalized by EO 12 out of 18 years. Harvest levels of sockeye salmon in the Kenai River drainage have been increasing with the highest 7 inriver sport harvests of sockeye salmon occurring from 2002–present, when the bag limit started at 3 fish.

The Russian River sockeye fishery is managed to meet SEGs for the early-run (22,000–42,000 fish) and late-run (30,000–110,000 fish). Since 1998, the early- and late-run SEGs have been achieved or exceeded every year (Table 146-2). Liberalizations are implemented based upon when the department projects to exceed the upper bound of the respective escapement goal and consists of opening the confluence sanctuary area (early-run only) and increasing bag and possession limits.

The Russian River sockeye salmon sport fishery has no closures or restrictions that are paired to commercial fishing opportunity. The sport fishery is managed based upon inseason escapement counts at the weir located at the outlet of Lower Russian Lake.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal.

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

Table 146-1.–History of Kenai River sockeye salmon personal use/subsistence, educational, and sport harvest and escapement goals, 1987–2019.

Year	Personal Use Dip Net, and Educational Harvest [a]	Sport Harvest Below Sonar [b]	Kenai River Sonar Count [c]	Sport Harvest Above Sonar	Spawning Escapement	Inriver Goal	BEG/SEG	OEG	Preseason Forecast (Millions)	Actual Run Size (Millions)
1987	24,090	50,274	1,596,871	233,958	1,362,913	400,000-700,000	330,000-600,000	330,000-600,000	3.5	8.6
1988	16,880	29,345	1,021,469	144,093	877,376	400,000-700,000	330,000-600,000	330,000-600,000	5.0	5.8
1989	51,192	66,162	1,599,959	268,958	1,331,001	400,000-700,000	330,000-600,000	330,000-600,000	-	5.9
1990	3,477	19,640	659,520	155,742	503,778	400,000-700,000	330,000-600,000	330,000-600,000	4.7	2.7
1991	13,433	31,536	647,597	227,697	419,900	400,000-700,000	330,000-600,000	330,000-600,000	-	1.7
1992	30,454	47,622	994,798	222,482	772,316	400,000-700,000	330,000-600,000	330,000-600,000	4.2	7.7
1993	35,592	27,717	813,617	137,229	676,388	400,000-700,000	330,000-600,000	330,000-600,000	1.9	3.9
1994	15,804	17,954	1,003,446	102,378	901,068	400,000-700,000	330,000-600,000	330,000-600,000	1.5	3.4
1995	15,720	29,451	630,447	108,076	522,371	450,000-700,000	330,000-600,000	330,000-600,000	2.3	2.3
1996	104,110	39,810	797,847	166,166	631,681	550,000-800,000	330,000-600,000	330,000-600,000	2.5	3.2
1997	116,107	43,642	1,064,818	147,057	917,761	550,000-825,000	330,000-600,000	330,000-600,000	4.0	3.9
1998	105,497	33,980	767,558	155,905	611,653	550,000-850,000	330,000-600,000	330,000-600,000	1.7	1.5
1999	150,993	46,043	803,379	187,725	615,654	750,000-950,000	500,000-800,000	500,000-1,000,000	1.6	2.5
2000	99,571	57,978	624,578	203,801	420,777	600,000-850,000	500,000-800,000	500,000-1,000,000	2.5	1.4
2001	152,580	51,374	650,036	168,104	481,932	600,000-850,000	500,000-800,000	500,000-1,000,000	2.4	1.8
2002	182,229	46,693	957,924	213,066	744,858	750,000-950,000	500,000-800,000	500,000-1,000,000	1.7	3.0
2003	227,207	60,722	1,181,309	253,734	927,575	750,000-950,000	500,000-800,000	500,000-1,000,000	2.0	3.8
2004	266,937	62,397	1,385,981	254,836	1,131,145	850,000-1,100,000	500,000-800,000	500,000-1,000,000	3.2	5.0
2005	300,105	58,017	1,376,452	254,818	1,121,634	850,000-1,100,000	500,000-800,000	500,000-1,000,000	3.3	5.6
2006	130,486	30,964	1,499,692	172,638	1,327,054	750,000-950,000	500,000-800,000	500,000-1,000,000	1.8	2.5
2007	293,941	60,623	867,572	265,702	601,870	750,000-950,000	500,000-800,000	500,000-1,000,000	2.4	3.4
2008	236,355	46,053	614,946	208,334	406,612	650,000-850,000	500,000-800,000	500,000-1,000,000	3.1	2.3
2009	343,302	45,868	745,170	241,938	503,232	650,000-850,000	500,000-800,000	500,000-1,000,000	2.4	2.4
2010	393,317	59,651	970,662	256,582	714,080	750,000-950,000	500,000-800,000	500,000-1,000,000	1.7	3.3
2011	543,043	92,225	1,599,217	318,484	1,280,733	1,100,000-1,350,000	700,000-1,200,000	**700,000-1,400,000**	3.9	6.2
2012	530,128	102,376	1,581,555	368,634	1,212,921	1,100,000-1,350,000	700,000-1,200,000	**700,000-1,400,000**	4.0	4.7
2013	350,302	78,837	1,359,893	379,685	980,208	1,000,000-1,200,000	700,000-1,200,000	**700,000-1,400,000**	4.4	3.5
2014	384,018	78,057	1,520,340	301,998	1,218,341	1,000,000-1,200,000	700,000-1,200,000	**700,000-1,400,000**	3.8	3.3
2015	384,095	83,112	1,709,051	309,004	1,400,047	1,000,000-1,200,000	700,000-1,200,000	700,000-1,400,000	3.6	3.9
2016	264,900	79,465	1,383,692	262,981	1,120,717	1,100,000-1,350,000	700,000-1,200,000	**700,000-1,400,000**	4.7	3.5
2017	304,632	67,233	1,308,498	235,208	1,056,773	1,000,000-1,300,000	**700,000-1,200,000**	Repealed	2.2	2.9
2018	169,553	41,122	1,035,761	147,493	831,096	**900,000-1,100,000**	**700,000-1,200,000**	Repealed	2.5	1.7
2019	ND	ND	1,849,054	ND	ND	1,000,000-1,300,000	700,000-1,200,000	Repealed	3.8	3.6

Note: ND = no data available

Bold font is years since 2011 (first year of DIDSON-based goals) the goal was achieved

[a] Personal use (1987-1995), Subsistence dip net harvest (1991-1995), and Kenaitze educational harvest (1989-1995) from Brannian and Fox,1996. From 1994 to present, the educational harvest is the total late-run harvest.

[b] In 1994 and 1995 a creel survey was conducted to estimate harvest below the sonar. In 1994, 49.7% of the below Soldotna Bridge harvest was taken below the sonar. In 1995, 68.6 % was taken below the sonar. The average of these two percentages is applied to all other year's below-bridge harvest to estimate the harvest below the sonar.

[c] Bendix sonar counts for 1987-2010; DIDSON counts beginning in 2011.

Table 146-2.─Angler effort, harvest, and escapement, Russian River early-run (ER) and late-run (LR) sockeye salmon, 1998─2019.

		Sport harvest [b]		Subsistence harvest[c]		Spawning escapement [d]		Total run [e]	
Year	Effort [a]	ER	LR	ER	LR	ER	LR	ER	LR
1998	47,942	42,711	25,110	ND	ND	34,143	113,480	76,854	138,590
1999	64,536	34,283	32,335	ND	ND	36,607	139,863	70,890	172,198
2000	69,864	40,732	30,229	ND	ND	32,736	56,580	73,468	86,809
2001	55,972	35,400	18,550	ND	ND	78,255	74,964	113,655	93,514
2002	68,263	52,139	31,999	ND	ND	85,943	62,115	138,082	94,114
2003	50,448	22,986	28,085	ND	ND	23,650	157,469	46,636	185,554
2004	60,784	32,727	22,417	ND	ND	56,582	110,244	89,309	132,661
2005	55,801	37,139	18,503	ND	ND	52,903	59,473	90,042	77,976
2006	70,804	51,167	29,694	ND	ND	80,524	89,160	131,691	118,854
2007	57,755	36,805	16,863	380	316	27,298	53,068	64,483	70,247
2008	55,444	42,492	23,680	928	478	30,989	46,638	74,409	70,796
2009	64,518	59,097	33,935	605	369	52,178	80,088	111,880	114,392
2010	39,873	23,412	9,333	615	246	27,074	38,848	51,101	48,427
2011	47,264	22,697	14,412	684	315	29,129	41,529	52,510	56,256
2012	41,152	15,231	15,074	867	461	24,115	54,911	40,213	70,446
2013	59,682	27,162	20,146	768	567	35,776	31,573	63,706	52,286
2014	57,544	35,870	17,864	1,276	496	44,920	52,277	82,066	70,637
2015	55,420	29,997	13,744	989	704	50,226	46,223	81,212	60,671
2016	39,957	13,086	11,543	1,090	586	38,739	37,837	52,915	49,966
2017	49,455	27,109	10,592	1,597	236	37,123	45,012	65,829	55,840
2018	47,186	26,999	15,344	1,691	363	44,110	71,052	72,800	86,759
2019	NA	NA	NA	NA	NA	125,942	64,585 [f]	NA	NA
Average									
1998–2018	55,222	33,773	20,926			43,953	69,638	78,274	90,809
2009–2018	50,205	28,066	16,199	1,018	434	38,339	49,935	67,423	66,568

Note: ND means no data collected. NA means data too preliminary to be reported yet.

[a] Estimates for 1998–2018 are from the SWHS and include effort for the whole year and for other species.

[b] Harvest from 1998─present was estimated from the annual SWHS.

[c] The subsistence fishery started in 2007 and includes Russian River Falls and Upper Kenai dipnet and rod-n-reel; it does not include Moose Range Meadows data.

[d] Escapements for the early-run are the number of fish past the weir from its installation in June thru July 14.

[e] Total run is determined from escapement above the weir plus harvest.

[f] Incomplete count, weir evacuated 8/18/19 due to nearby wildfire danger.

PROPOSAL 151 – Allow retention of snagged sockeye salmon on the Kenai River.

5 AAC 57.120. General provisions for seasons, bag, possession, annual, and size limits, and methods and means for the Kenai River Drainage Area.

PROPOSED BY: Steve Pratt.

WHAT WOULD THE PROPOSAL DO? This would allow retention of sockeye salmon snagged on the Kenai River.

WHAT ARE THE CURRENT REGULATIONS? Statewide regulations state that it is unlawful to intentionally snag or attempt to snag any fish in fresh water. Fish unintentionally hooked elsewhere than in the mouth must be released immediately. The term "snag" means to hook a fish elsewhere than in the mouth.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would increase the harvest of sockeye salmon by increasing angler efficiency and may attract additional participants to the fishery.

BACKGROUND: In 1964, the board prohibited the use of treble hooks on the Russian River in an effort to reduce snagging sockeye salmon, as snagging accounted for roughly 50% of the effort. Catch-per-unit-effort data revealed both fly/snag methods had similar rates of success. In 1965, 61% of harvested sockeye salmon were snagged, and in 1966, 41% harvested were snagged. In 1965, the board adopted a flies-only regulation for the Russian River. In 1966, the board adopted an anti-snagging regulation. The goal was to create a more acceptable method of harvest, as the public expressed dismay to the unethical aspects of snagging. Data collected about the same time through marking and release of snagged sockeye salmon indicated nearly all fish hooked, landed, marked, and released that were hooked elsewhere than the mouth survived to pass through the Russian River weir. Snagging has been prohibited in the fresh waters of Alaska since 1975.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal as it may encourage anglers to snag sockeye salmon in the Kenai River. The prohibition of snagging in fresh waters is a longstanding practice in Alaska sport fisheries. The department has a historical position of opposing snagging in fresh waters statewide and continues to maintain that position. The department is **NEUTRAL** on the allocative aspects of this proposal.

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

PROPOSAL 152 – Prohibit barbed hooks when fishing in the Kenai River drainage.

5 AAC 57.120. General provisions for seasons, bag, possession, annual, and size limits, and methods and means for the Kenai River Drainage Area.

PROPOSED BY: Jordan Perrego.

WHAT WOULD THE PROPOSAL DO? This would prohibit barbed hooks in the angler's possession when fishing in the Kenai River drainage.

WHAT ARE THE CURRENT REGULATIONS? 5 AAC 75.020(a) *Sport fishing gear,* states unless otherwise provided, sport fishing may only be conducted by use of a closely attended, single line having no more than one plug, spinner, or series of spinners or two flies or two hooks.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Prohibiting the use of barbed hooks would reduce angler efficiency by an unknown amount. A 2010 study by California Department of Fish and Game examined capture efficiency of artificial flies fished with barbed and barbless hooks in trout fisheries in California. The study found angler efficiency decreased by 11–24%, with young and inexperienced anglers disproportionately affected. Reduced angler efficiency would result in either anglers fishing longer in order to achieve their bag limits, or a reduced harvest. Prohibiting barbed hooks would not reduce mortality of released fish by a measurable amount. Requiring all anglers to use barbless hooks only for resident species of the Kenai River would add complexity to the regulations and thereby increase the likelihood of violations. The requirement of not possessing barbed hooks while fishing would lead to extended and more invasive enforcement checks on the river to ensure compliance.

BACKGROUND: Mortality of released fish is dependent mostly on hook placement. Hooking mortality is often higher for fish that have been hooked in vital areas, such as the esophagus or gills. Other factors, such as fish size, gear type, bleeding, and elapsed time to unhook the fish, can influence survival to a lesser degree than hook location. Studies of mortality rates on fish released using barbed and barbless hooks are inconclusive. Results largely suggest there is no significant difference in mortality rates of fish caught on barbed versus barbless hooks, although due to the vast body of research on the topic, some studies do support the use of barbless hooks for specific species in some fisheries. It is important to consider the species and fishery when reviewing the results of release mortality studies.

Some western states have implemented barbless hook regulations. Washington and Oregon have barbless regulations for salmon, steelhead (Endangered Species Act listed) and cutthroat trout on sections of the Columbia and Willamette rivers as part of a broad-based policy to restructure Columbia River sport fisheries and address allocation issues by reducing angler efficiency. Montana, Colorado, Wyoming, Utah, and Nevada have either rejected barbless hook proposals or repealed barbless regulations for reasons including regulatory complexity and lack of measurable biological benefit.

In the Kenai River Drainage Area, both rainbow trout and Dolly Varden are managed more conservatively than the statewide standard through seasonal closures, conservative size limits, a one-fish bag limit, and methods and means restrictions. Flowing waters are closed to rainbow trout

fishing and/or all fishing from May 1 through June 10. The bag and possession limit is one fish under 16 inches in length for both species throughout the drainage. In flowing waters of the drainage, bait is prohibited the entire year upstream of Skilak Lake and allowed only seasonally downstream of Skilak Lake.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. Anglers may currently use barbless hooks, and many do. The department encourages anglers to use best practices through outreach efforts. However, we do not support a regulation requiring the practice because of the negative effects it would cause to sport fishing opportunity in the absence of a measurable biological benefit. Requiring anglers to change their gear to barbless hooks may also reduce opportunity as some anglers may decide not to do so and fish elsewhere or not fish the Kenai River at all. The department is **NEUTRAL** on allocative aspects of this proposal.

COST ANALYSIS: Approval of this proposal is would result in a significant additional direct cost for a private person to replace their flies and lures with barbless hooks in order to participate in this fishery. Approval of this proposal is not expected to result in an additional direct cost for the department.

PROPOSAL 148 – Allow two unbaited, single-hook artificial flies and limit hook size.

5 AAC 57.121. Special provisions for the seasons, bag, possession, and size limits, and methods and means for the Lower Section of the Kenai River Drainage Area; 5 AAC 57.122. Special provisions for the seasons, bag, possession, and size limits, and methods and means for the Middle Section of the Kenai River Drainage Area; and 5 AAC 57.123. Special provisions for the seasons, bag, possession, and size limits, and methods and means for the Upper Section of the Kenai River Drainage Area.

PROPOSED BY: Phil Brna and Mike Brown.

WHAT WOULD THE PROPOSAL DO? This would allow the use of two unbaited, single-hook artificial flies and limit hook size throughout the Kenai River drainage.

WHAT ARE THE CURRENT REGULATIONS? In waters designated as fly-fishing-only waters, sport fishing is permitted with not more than one single-hook artificial fly that weighs less than one-fourth ounce, including the hook, and with a gap between the point and shank of the hook that is three-eighths inch or less. Weights may be used and any weights used must be 18 inches or more ahead of the artificial fly.

In the Middle Section of the Kenai River, from the inlet of Skilak Lake upstream to the outlet of Kenai Lake, only one unbaited, single-hook, artificial lure or fly, with a gap between hook and shank must be 3/8 inch or less may be used year-round.

The Lower Section of the Kenai River requires use of one unbaited single-hook, artificial lures or flies in specific subsections throughout the year. Additionally, only artificial flies may be used in specific waters. There are also times and specific areas from August 1 – November 30 when bait and multiple hooks may be used during the coho salmon fishing season.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would liberalize the allowable gear in fly-fishing-only and single hook areas. Additionally, it may increase harvest and catch of target fish species. Fly-fishing only regulations are a statewide regulation (5 AAC 75.024) so this proposal would not affect them, but the area regulations would be modified to no longer align with the fly-fishing-only regulations.

BACKGROUND: Fly-fishing-only regulations for specific waters of the state have been in effect since at least 1966 in the Kenai River. Fly-fishing-only regulations have been adopted in most areas to reduce the incidence of both intentional and unintentional snagging. There are other waters in the state that require one unbaited, single-hook, artificial lure to be used during specific times of the year, but these have not been designated fly-fishing-only waters.

The Kenai River supports some of the state's largest king and sockeye salmon fisheries as well as high effort resident rainbow trout fisheries in the lower and middle river. The single hook regulations in place are designed to be conservative and reduce angler efficiency in high use or predominate staging areas near tributary stream confluences with the Kenai River. Additionally, single hook regulation is utilized to allow angling opportunity for target species while reducing

incidental catch of non-target species. For instance, in the lower Kenai River tributary sanctuary areas for king salmon have been established but in order to provide opportunity for sockeye salmon the allowable gear is restricted to single-hook, artificial flies. Single hook regulations are stipulated within management plans and in general regulation dependent upon the fishery and intent of the regulation.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. This would result in the loss of the fly-fishing-only designation as a management tool and implement liberalizations to several fisheries across the drainage on multiple species that may have differing management objectives and levels of assessment. This would increase regulatory complexity unless all fly-fishing-only waters were repealed, and regulations replaced with the proposed language.

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

Kenai/Kasilof Rivers Sportfish Guiding (9 proposals)

PROPOSAL 162 – Remove restrictions to guided sport vessels on the Kenai River.

5 AAC 57.140. Kenai River guiding and guided fishing requirements in the Kenai River Drainage Area.

PROPOSED BY: Mel Erickson.

WHAT WOULD THE PROPOSAL DO? This would remove restrictions to guided sport vessels on the Kenai River when the king salmon sport fishery is closed.

WHAT ARE THE CURRENT REGULATIONS? During May, June, and July, sport fishing from a registered guide vessel downstream of Skilak Lake is permitted only from 6:00 a.m. to 6:00 p.m. In addition, downstream of the outlet of Skilak Lake, a person may not sport fish from a registered guide vessel on any Sunday from May 1 through July 31. Guided anglers may fish from shore for any species when fishing from guided vessels is prohibited between 6 p.m. to 6 a.m. On any Monday in May through July, except for Memorial Day, a person may not fish from a boat in the portion of the Kenai River from the outlet of Skilak Lake to the mouth of the river, except that unguided sport fishing from a nonmotorized vessel is allowed on Mondays in May through July. In July, registered guide vessels may carry no more than five persons, including the guide, clients, and other passengers.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would increase the number of days anglers may fish from guided vessels in years when king salmon fisheries are closed. Fishing from a guided vessel would be allowed 24 hours a day seven days a week, and five anglers would be allowed to fish from a guided vessel in July. This may increase catch and harvest of rainbow trout, sockeye, pink, and silver salmon, and would increase user conflict between unguided and guided anglers on days typically allocated for fishing by unguided vessels. This proposal would also add to regulatory complexity.

BACKGROUND: The board has adopted management plans structured to constrain the harvest of both early-run and late-run king salmon stocks to sustainable levels while still providing for fishing opportunity. The management guidelines that the board has adopted through the years have closed specific areas of the river to all fishing, restricted certain areas of the river to shore fishing only, and imposed time and date closures for all guided and unguided boat anglers. In addition, the board has addressed the allocation between guided and unguided anglers within the Kenai River king salmon sport fishery by reducing the number of hours and days guided anglers may fish, limiting the number of clients allowed to fish from a guided vessel, and prohibiting guides from fishing while clients are present/fishing.

Since 1985, during June and July, sport fishing from registered guide vessels has been permitted only from 6:00 a.m. to 6:00 p.m. (except for the years 1986–1988 when, during July, the time was 7:00 a.m. to 7:00 p.m.). In 2000, the daily time restrictions were extended to include the month of May. Guided anglers are also restricted from fishing on the Kenai River downstream of Skilak Lake from a registered guide vessel on Sundays or Mondays in May through July (except

Memorial Day). These regulations are intended to restrict harvest of king salmon by reducing guided angling effort, provide unguided anglers with hours free of competition with guided anglers, and reduce angler congestion on the Kenai River.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal. If the board were to adopt aspects of this proposal it should consider how it may impact sustainable fishing levels.

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

PROPOSAL 14 – Modify the definition of bag limit to mean fish landed but not originally hooked by an angler

5 AAC 75.995. Definitions.

PROPOSED BY: Mel Erickson.

WHAT WOULD THE PROPOSAL DO? This would modify the definition of bag limit to include fish landed but not originally hooked by an angler.

WHAT ARE THE CURRENT REGULATIONS? Bag limit is defined as the maximum legal take of fish per person per day. A fish when landed and not immediately released becomes a part of the bag limit of the person originally hooking it.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would encourage the practice of party fishing and would create an areawide exception to the statewide definition of individual-based bag limits. This would likely increase the harvest in many of the Cook Inlet and North Gulf Coast fisheries by an unknown amount, but potentially to unsustainable levels. This would also create inconsistent regulations for halibut, because currently, individual-based harvest limits are set by federal regulation. It would also add regulation complexity to the definition of bag limit, which may result in a lack of enforceability.

BACKGROUND: The definition of bag limit has consistently been maintained by the board and party fishing has not been implemented at any time in Alaska. The current definition is enforceable and still allows guides or experienced anglers to assist less experienced anglers land their catch.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal since it may increase harvest in some fisheries to unsustainable levels and result in a lack of enforceability. As written, this proposal would be better addressed at a statewide meeting, but if the board chooses to take action with this proposal, it should be applicable to regulations for Cook Inlet and North Gulf Coast area fresh and salt waters.

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

PROPOSAL 161 – Allow sport fishing from a guide vessel on Mondays in August.

5 AAC 57.140. Kenai River guiding and guided fishing requirements in the Kenai River Drainage Area.

PROPOSED BY: Mel Erickson.

WHAT WOULD THE PROPOSAL DO? This would allow sport fishing from a guide vessel on the Kenai River on Mondays in August.

WHAT ARE THE CURRENT REGULATIONS? From July 31 or the end of the king salmon season, whichever is later, through November 30, sport fishing from a registered guide vessel for any species of fish on Mondays is prohibited downstream from the confluence of the Moose and Kenai rivers, and sport fishing from a registered guide vessel for coho salmon on Mondays upstream from the confluence of the Moose River and Kenai River is prohibited; any coho salmon caught must be released immediately without further harm.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would increase the amount of available guided fishing time for coho salmon by an additional 4 to 5 days (depending on calendar year) that were previously closed to fishing for coho salmon from guide boats below Moose River. This would increase the amount of guided fishing effort, catch, and harvest of Kenai River coho salmon and other fish species by an unknown amount. This would remove all the available days during the August coho salmon season that unguided anglers could fish without anglers fishing from guided vessels being present.

BACKGROUND: The *Kenai River Coho Salmon Management Plan* (5 AAC 57.170) was first adopted in 1996 in response to a decline in coho salmon smolt abundance and increased harvest of returning adults in the Kenai River. A special board meeting was convened in 1997 through a petition submitted by the department based on high Kenai River coho salmon harvests beginning in 1993 and 1994, which were thought to be unsustainable, and declining Moose River (Kenai River tributary) coho salmon smolt counts. As a result of that meeting, restrictions affecting all users were adopted into regulation to conserve Kenai River coho salmon. Additional restrictive regulations were added to the plan from 1997–1999. These regulations were an attempt to reduce the total harvest of Kenai River coho salmon by 20% from combined sport and commercial users, and originally had a sunset clause of December 2002.

In 1999, the board again addressed this fishery by reducing the coho salmon bag limit in the Russian River and in that area of the Kenai River downstream from the confluence of the Russian and Kenai rivers to the ferry crossing from three to one per day. This conservation measure was in response to an increasingly popular clearwater fishery at the Russian River, where stocks are subject to higher exploitation rates.

In 2000, a special board meeting was convened through a petition submitted by the governor based on low abundance of coho salmon throughout Cook Inlet. As an outcome of this meeting, more restrictions were put in place to conserve both Kenai River and Northern District coho salmon.

The net result of the management plan on the Kenai River sport fishery was an overall reduction of coho salmon harvest. Currently, the department does not manage the Kenai River coho salmon sport fishery inseason based upon abundance because no escapement goal for coho salmon has been established for the Kenai River. There are no coho salmon escapement goals for the other streams in the Northern Kenai Peninsula Management Area where the bag and possession limit for coho salmon was reduced from three to two fish.

Coho salmon fishing regulations were liberalized for the Kenai River by the board in 2005 and 2008. Changes resulted in a net gain in fishing time and area, and a seasonal increase in the bag limit, as well as less restrictive fishing methods. Coho salmon fishing regulations for other Northern Kenai Peninsula Management Area streams were not changed.

In 2008, liberalizations allowed for the Kenai River coho salmon sport fishery included:

1. The bag and possession limit was increased from two to three fish beginning September 1.
2. The season for coho salmon fishing within the lower Kenai River drainage downstream of Skilak Lake was extended by 30 days, from October 31 to November 30.
3. Bait was allowed from July 1–November 30 downstream of the Upper Killey River, and bait with multiple hooks from August 1–November 30 was allowed.

Total Kenai River drainage coho salmon sport fishery harvests from 1984 to 2000 (three coho salmon per day) averaged 53,185 fish annually; from 2000 – 2018 (two coho salmon per day), the average increased to 53,850 fish, with guided anglers averaging 26.7% of the total harvest since 2000 (Table 161-1).

Since the most recent inception of the sport fish guide freshwater logbook program in 2006 through 2016, the number of guided trips in August, September, and October has averaged 2,251, 728, and 51, respectively (Tables 161-2, 161-3, and 161-4). Using the freshwater logbook data, the average proportion of guided nonresident anglers from 2006–2016 in August, September, and October was 89%, 78%, and 42%, respectively.

Information gathered from research programs on Kenai River indicate the coho salmon runs averaged about 140,000 fish from 1999–2004, with harvests averaging just over 62,000 fish (Table 161-5). Overall harvest rates for Kenai River coho salmon runs prior to 2000 were high, in some cases (84% in 1999) under the previous Kenai River coho salmon management plan, which allowed a three-fish bag limit and more liberal commercial fishing in August; under a plan that allowed a two-fish bag limit and more restrictive commercial fishing, the harvest rate ranged from 35% to 47% from 2000–2004. New regulations in 2005 and 2008, which liberalized sport and commercial fisheries, very likely increased harvest rates of Kenai River coho salmon relative to the rates observed from 1999 – 2004. Research findings from studies conducted in Southeast Alaska with transboundary coho salmon stocks have indicated that a harvest rate of about 61% is sustainable.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal. The department does not have any new data regarding coho salmon runs or harvest rates but believes current management is sustainable. The Kenai River coho salmon stock is not monitored for escapement and with the discontinuation of the guide logbook program in the spring of 2019, the department no longer has one of the few metrics by which to gauge relative coho salmon run strength inseason. Inriver harvest data indicate harvest of Kenai River coho salmon is relatively stable under existing regulations and the department does not recommend any increase in exploitation. In the absence of inseason run strength information, conservative regulation is recommended.

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

Table 161-1.–Guided and nonguided sport harvest of Kenai River coho salmon, 1984–2018.

Year	Bag Limit	Season Start	Season End	Guided Harvest	%	Nonguided Harvest	%	Kenai River Harvest [a]	Total Drainage Harvest [b]
1984	3	entire year		5,490	9.2	54,154	90.8	59,644	62,076
1985	3	entire year		4,006	9.0	40,529	90.8	44,635	46,090
1986	3	entire year		13,883	23.1	46,227	76.9	60,110	62,938
1987	3	entire year		4,976	15.0	28,234	85.0	33,210	37,484
1988	3	entire year		4,456	9.1	44,238	90.7	48,785	51,950
1989	3	entire year		15,835	28.6	39,424	71.3	55,275	59,575
1990	3	entire year		15,274	25.3	45,051	74.7	60,325	63,497
1991	3	entire year		30,789	40.4	45,367	59.6	76,163	80,674
1992 [c]	3	entire year		20,794	39.8	31,516	60.2	52,310	56,877
1993	3	entire year		23,743	47.0	26,795	53.0	50,538	52,855
1994	3	entire year		41,170	47.5	45,541	52.5	86,711	91,490
1995	3	entire year		23,587	51.1	22,596	48.9	46,183	50,346
1996 [d]	3	entire year		13,728	32.5	28,565	67.5	42,293	47,860
1997 [e]	3/1 [f]	7/1	9/30	3,101	19.2	13,063	80.8	16,164	20,770
1998	3	7/1	9/30	5,217	19.3	21,750	80.7	26,967	31,579
1999 [g]	3	7/1	9/30	8,087	25.6	23,550	74.4	31,637	35,591
2000 [h]	2	7/1	9/30	9,349	19.3	39,170	80.7	48,519	52,489
2001	2	7/1	9/30	13,518	27.2	36,264	72.8	49,782	55,027
2002	2	7/1	9/30	14,444	24.2	45,206	75.8	59,650	66,160
2003	2	7/1	9/30	11,964	25.6	34,658	74.3	46,657	52,370
2004 [i]	2	7/1	10/31	14,845	22.5	51,070	77.4	65,952	72,658
2005 [J]	2	7/1	10/31	12,285	24.4	38,071	75.5	50,411	54,297
2006	2	7/1	10/31	9,233	24.5	28,281	75.1	37,639	43,118
2007	2	7/1	10/31	10,312	27.1	27,705	72.9	38,017	41,263
2008 [k]	2/3	7/1	11/30	13,618	26.4	38,006	73.6	51,624	55,520
2009	2/3	7/1	11/30	11,759	23.5	38,201	76.5	49,960	55,495
2010	2/3	7/1	11/30	15,424	29.2	37,488	70.8	52,912	55,555
2011	2/3	7/1	11/30	11,277	25.6	32,855	74.4	44,132	48,642
2012	2/3	7/1	11/30	12,277	33.7	24,130	66.3	36,407	41,237
2013	2/3	7/1	11/30	14,994	30.6	33,960	69.4	48,954	53,526
2014	2/3	7/1	11/30	14,896	24.6	45,670	75.4	60,566	63,465
2015	2	7/1	11/30	16,808	29.5	40,259	70.5	57,067	60,845
2016	2	7/1	11/30	10,650	26.7	29,281	73.3	39,931	43,213
2017	2	7/1	11/30	14,503	29.9	33,924	70.1	48,427	52,061
2018	2	7/1	11/30	16,570	32.8	33,939	67.1	50,575	54,839
Average (1984–2003)				14,171	26.9	35,595	73.1	49,778	53,885
Average (2004–2018)				13,297	27.4	35,523	72.6	48,838	53,049

Source: Statewide Harvest Surveys from Mills (1984–1994), Howe et al. (1995, 1996), and Alaska Sport Fishing Survey database [Internet]. 1996–. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited October 2019). Available from:

[a] Includes Kenai R guided/non-guided not specified, reach not specified.

[b] Includes entire Kenai R drainage (Russian R, Beaver Cr, Funny R, Grant Cr, Hidden Cr/Lk, Jean Lk, Kenai Lk, Moose R, Quartz Cr, Sevena Lk, Skilak Lk, Soldotna Cr, Swan Lake System, and Trail Lk).

[c] No fishing after 3 coho harvested, to prevent "boat limits."

[d] Closed sections of 5 rm below lakes to all fishing to protect spawning cohos, from Jan 1 to June 14

[e] Guides retricted on Mondays

[f] Emergency order reduced bag limit to 1 per day on 8/11/98

[g] Repealed d

[h] Coho salmon sport fishing closed from 8/1-8/3

[i] Extended season to Oct. 31

[j] Repealed h, allowed to fish after limit of coho upstream of Soldotna Bridge, guides allowed to fish upstream of Moose for other species

[k] 2 per day in August/3 per day in Sept. thru Nov.

Table 161-2.–Guided freshwater logbook data from 2006–2016 for the Lower Kenai River during the month of August.

		Resident		Non-Resident			Coho Salmon		Sockeye Salmon		Rainbow Trout		Dolly Varden	
Year	Number of Trips	Clients	Percent	Clients	Percent	Total	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest
2006	1,940	461	7%	6,121	93%	6,582	6,237	5,583	5,226	3,271	7,912	104	5,920	93
2007	2,002	729	11%	5,779	89%	6,508	6,865	6,338	4,318	2,948	11,399	86	6,010	71
2008	2,226	748	10%	6,660	90%	7,408	8,516	8,134	1,073	663	9,307	28	7,035	43
2009	1,642	714	14%	4,542	86%	5,256	7,319	6,811	1,497	1,028	7,944	19	6,448	21
2010	2,164	848	12%	6,368	88%	7,216	7,156	6,770	2,884	1,974	7,116	25	4,850	41
2011	2,236	937	13%	6,540	87%	7,477	7,506	7,283	5,010	3,334	11,394	30	7,319	54
2012	2,376	838	11%	7,049	89%	7,887	5,373	5,222	6,301	4,681	11,485	37	8,054	93
2013	2,401	1,017	12%	7,168	88%	8,185	10,096	9,619	3,018	2,271	7,168	25	5,119	56
2014	2,507	1,021	12%	7,547	88%	8,568	7,166	6,866	4,795	3,822	5,758	32	5,948	81
2015	2,685	1,176	13%	7,965	87%	9,141	8,019	7,837	14,450	12,213	19,350	79	6,893	97
2016	2,581	1,029	12%	7,604	88%	8,633	5,091	5,034	7,489	6,481	7,094	12	5,369	26
Average 2006–2016	2,251	865	11%	6,668	89%	7,533	7,213	6,863	5,096	3,881	9,630	43	6,270	61

Table 161-3.–Guided freshwater logbook data from 2006–2016 for the Lower Kenai River during the month of September.

	Number	Resident		Non-Resident			Coho Salmon		Sockeye Salmon		Rainbow Trout		Dolly Varden	
Year	of Trips	Clients	Percent	Clients	Percent	Total	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest
2006	620	261	14%	1,609	86%	1,870	2,049	1,690	382	6	3,644	14	4,192	27
2007	566	285	17%	1,436	83%	1,721	1,942	1,652	118	6	7,415	51	4,605	19
2008	617	357	19%	1,548	81%	1,905	2,568	2,360	19	0	3,659	0	3,150	1
2009	709	539	26%	1,557	74%	2,096	2,675	2,540	85	7	7,364	5	4,097	0
2010	734	578	27%	1,597	73%	2,175	2,594	2,469	103	11	10,293	7	8,069	20
2011	771	603	26%	1,735	74%	2,338	2,995	2,844	81	11	7,165	18	5,588	1
2012	690	441	22%	1,603	78%	2,044	1,723	1,657	297	11	4,385	4	3,760	39
2013	806	645	26%	1,866	74%	2,511	3,159	3,040	180	18	7,615	11	5,383	2
2014	801	644	26%	1,794	74%	2,438	3,926	3,585	106	33	6,810	0	5,537	3
2015	883	608	22%	2,133	78%	2,741	4,166	4,013	219	103	8,426	29	6,160	11
2016	813	598	24%	1,868	76%	2,466	2,378	2,329	145	7	10,841	11	8,518	16
Average 2006–2016	728	505	22%	1,704	78%	2,210	2,743	2,562	158	19	7,056	14	5,369	13

Table 161-4.–Guided freshwater logbook data from 2006–2016 for the Lower Kenai River during the month of October.

	Number	Resident		Non-Resident			Coho Salmon		Sockeye Salmon		Rainbow Trout		Dolly Varden	
Year	of Trips	Clients	Percent	Clients	Percent	Total	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest
2006	54	90	62%	56	38%	146	182	126	0	0	1,669	4	943	2
2007	54	90	55%	74	45%	164	199	123	0	0	836	6	365	0
2008	62	110	59%	76	41%	186	130	103	0	0	1,332	0	764	0
2009	27	54	64%	30	36%	84	122	98	1	0	140	0	36	0
2010	51	84	55%	68	45%	152	250	153	0	0	826	1	282	0
2011	36	50	47%	56	53%	106	294	200	0	0	227	0	38	0
2012	51	101	62%	63	38%	164	317	242	0	0	618	0	252	0
2013	22	25	40%	38	60%	63	128	104	0	0	22	0	27	0
2014	49	111	69%	49	31%	160	396	264	0	0	706	0	431	0
2015	52	113	68%	54	32%	167	662	420	1	0	274	6	208	6
2016	98	179	61%	113	39%	292	584	360	0	0	1,714	6	500	6
Average 2006–2016	51	92	58%	62	42%	153	297	199	0	0	760	2	350	1

Table 161-5.–Estimated harvest, total run, and harvest rate of Kenai River coho salmon from 1999–2004.

Year	Escapement[a,b]	Harvest			Research Mortality	Total Run	Total Harvest[e]	Harvest Rate[f]
		Sport[c]	Personal Use	Commercial[d]				
1999	7,889	35,361	1,009	3,894	193	48,346	40,457	0.837
2000	72,742	52,489	1,449	2,965	555	130,200	56,903	0.437
2001	75,122	55,004	1,555	1,934	540	134,155	58,493	0.436
2002	133,612	66,104	1,721	6,115	968	208,520	73,940	0.355
2003	79,915	51,944	1,332	2,578	209	135,978	55,854	0.411
2004	95,394	72,565	2,661	11,149	2,106	183,875	86,375	0.470
Average								
1999–2004	77,446	55,578	1,621	4,773	762	140,179	62,004	0.491
2000–2004	91,357	59,621	1,744	4,948	876	158,546	66,313	0.422

Note: 1991–1993 and 1998 Kenai River coho salmon creel data was used to calculate the effect of increasing the bag limit from 2 to 3 fish, only boat angler interviews/data were selected for use for 1991–1993 due to the lack of data from shore anglers.

[a] Kenai River coho salmon total runs were estimated only during 1999–2004.

[b] Sources: Carlon and Evans 2007, Massengill and Evans 2007.

[c] Source: Statewide Harvest Survey.

[d] Sources: Massengill and Carlon 2004 a,b; Massengill and Carlon 2007 a,b; Massengill 2007.

[e] Aggregate of all harvest estimates (sport, commercial, and personal use).

[f] Total Harvest divided by Total Run.

ND = No Data

PROPOSAL 160 – Allow a Kenai River guide vessel to transport up to five anglers in July.

5 AAC 57.140. Kenai River guiding and guided fishing requirements in the Kenai River Drainage Area.

PROPOSED BY: Mel Erickson.

WHAT WOULD THE PROPOSAL DO? This would allow a Kenai River guide vessel to transport up to five anglers to and from a shore-based sockeye salmon fishery in July.

WHAT ARE THE CURRENT REGULATIONS? During July, a vessel used for guided sport fishing on the Kenai River may not carry more than five persons, including the fishing guide, clients, and other passengers.

Department of Natural Resources regulations prohibit a person from operating a motor powered boat on waters of the Kenai River Special Management Area, except for Kenai and Skilak Lakes, with more than six persons on board, including the operator, unless authorized by the director under a permit issued under 11 AAC 18. This regulation is not specific to sport fishing guides (*11 AAC 20.862 (a)*).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The total guided fishing effort for sockeye salmon would increase by an unknown amount. Harvest of sockeye salmon by guided anglers would also increase by an unknown amount. Conflict related to issues such as congestion on the river, bank erosion, and poor quality of the angling experience may increase.

BACKGROUND: Since 1985, during June and July, sport fishing from registered guide vessels has been permitted only from 6:00 a.m. to 6:00 p.m. (except for the years 1986 – 1988 when during July the time was 7:00 a.m. to 7:00 p.m.). In 2000, the daily time restrictions were extended to include the month of May. Guided anglers are also restricted from fishing on the Kenai River, downstream of Skilak Lake, from a registered guide vessel on Sundays or Mondays in May through July (except Memorial Day). Regulations were adopted by the Alaska Board of Fisheries in 2000 limiting the total number occupants in guide vessel registered with DNR Parks to no more than 5 persons, including the guide, clients and other passengers during the month of July. These regulations created more parity between guided and unguided anglers.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal. If this proposal were adopted it would result in an increase in the exploitation of Kenai River sockeye salmon.

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

PROPOSAL 159 – Allow five anglers per vessel used for guided sport fishing on the Kenai River in July.

5 AAC 57.140. Kenai River guiding and guided fishing requirements in the Kenai River Drainage Area.

PROPOSED BY: Mel Erickson.

WHAT WOULD THE PROPOSAL DO? This would allow five anglers per vessel used for guided sport fishing on the Kenai River in July.

WHAT ARE THE CURRENT REGULATIONS? During July, a vessel used for guided sport fishing on the Kenai River may not carry more than five persons, including the fishing guide, clients, and other passengers.

Alaska Department of Natural Resources (DNR) regulations prohibit a person from operating a motor-powered boat on waters of the Kenai River Special Management Area, except for Kenai and Skilak lakes, with more than six persons on board, including the operator, unless authorized by the director under a permit issued under 11 AAC 18. This regulation is not specific to sport fishing guides (*11 ACC 20.862 (a)*).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? An additional client fishing for king salmon could increase the total guided fishing effort for king salmon in July by an unknown amount, up to 25% depending on how many guides booked a fifth client. Increasing effort would also increase the total guided harvest of Kenai River king and sockeye salmon during July by an unknown amount.

BACKGROUND: Since 1985, during June and July, sport fishing from registered guide vessels has been permitted only from 6:00 a.m. to 6:00 p.m. (except for the years 1986–1988 when during July the time was 7:00 a.m. to 7:00 p.m.). In 2000, the daily time restrictions were extended to include the month of May. Guided anglers are also restricted from fishing on the Kenai River, downstream of Skilak Lake, from a registered guide vessel on Sundays or Mondays in May through July (except Memorial Day). Regulations were adopted by the Alaska Board of Fisheries (board) in 2000 limiting the total number of occupants in guide vessels registered with DNR to no more than five persons, including the guide, clients, and other passengers during the month of July. These regulations created more parity between guided and unguided anglers. They restricted guided effort and guided harvest of king salmon, provided unguided anglers with hours free of competition with guided anglers, and reduced angler congestion on the Kenai River (Table 159-6).

Guided effort, catch, and harvest by anglers fishing in guided vessels in the early-run Kenai River king salmon fishery has exceeded that of unguided anglers from 1996–2018 (Table 159-1), whereas unguided effort, catch, and harvest by anglers fishing in the late-run Kenai River king salmon fishery has exceeded that of guided anglers every year since 1981, except six years (1998, 2008, 2012, 2013, 2014 and 2018; Table 159-2). The king salmon catch rate (number of fish caught/hours fished) is greater for guided than for unguided anglers (Table 159-3). Historically,

exploitation rates for both early- and late-runs have been relatively stable and have averaged less than 0.30 since 1998 (tables 159-4 and 159-5). Since 2009, the numbers of fish in the early- and late-runs have been well below average (tables 159-4 and 159-5).

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal. If this proposal were adopted it would result in an increase in the exploitation of Kenai River king and sockeye salmon. If the board were to adopt aspects of this proposal it should consider how it may impact sustainable fishing levels.

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

Table 159-1.–Effort, catch, and harvest of early-run king salmon as estimated from a creel survey of anglers on the Kenai River from the mouth upstream to the Soldotna Bridge from May 16 through June 30, 1981–2018.

	Nonguided			Guided		
Year	Effort	Catch	Harvest	Effort	Catch	Harvest
1981	47,913	ND	1,618	19,857	ND	1,846
1982	76,329	ND	2,144	22,799	ND	1,797
1983	64,651	ND	1,729	43,823	ND	3,526
1984	89,549	ND	1,695	40,610	ND	2,211
1985	87,199	ND	2,591	50,339	ND	4,181
1986	100,371	ND	2,958	41,724	ND	3,379
1987	122,876	ND	5,806	48,078	ND	5,418
1988	134,807	ND	5,601	66,636	ND	6,348
1989	104,702	ND	1,833	93,927	ND	4,878
1990	33,807	ND	153	38,992	ND	570
1991	24,320	ND	298	23,279	ND	593
1992	28,217	ND	653	26,113	ND	712
1993	76,500	ND	2,784	46,773	ND	4,062
1994	72,433	2,259	1,524	61,766	4,140	3,198
1995	90,073	4,679	3,009	75,917	6,681	4,724
1996	58,551	1,461	981	71,629	4,091	3,185
1997	37,792	1,991	1,282	64,451	4,791	3,660
1998	17,506	736	157	38,631	1,133	491
1999	40,816	1,634	993	69,972	5,562	4,541
2000	27,371	562	289	54,248	1,747	860
2001	24,215	257	148	45,988	1,580	1,280
2002	5,232	125	91	9,780	294	285
2003	23,840	973	628	35,218	1,840	1,320
2004	30,523	1,168	773	34,768	2,633	1,512
2005	32,492	1,176	651	47,000	3,254	2,226
2006	27,985	1,419	833	44,786	3,104	2,564
2007	25,460	917	710	44,796	3,027	1,934
2008	28,838	1,408	900	43,736	2,145	1,702
2009	23,703	388	334	29,336	670	564
2010	16,345	286	193	23,394	918	645
2011	16,255	309	155	28,108	782	661
2012	7,205	124	86	13,476	348	227
2013	1,196	15	0	1,948	25	0
2014[a]	0	0	0	0	0	0
2015[a]	0	0	0	0	0	0
2016[b]	4,055	137	9	4,628	248	103
2017[c]	12,416	328	172	17,358	682	382
2018[d]	3,785	179	82	6,570	274	102
Average 2009–2018	8,496	177	103	12,482	395	268
Percentage	40%	31%	28%	100%	100%	100%
Average 1981–2008	54,799	1,384	1,530	46,630	3,068	2,607
Percentage	54%	31%	37%	46%	69%	63%

ND = No Data

Source: Hammarstrom and Larson 1986; Conrad and Hammarstrom 1987; Hammarstrom 1988-1994; King 1995-1997; Marsh 1999, 2000; Reimer et al. 2002; Reimer 2003, 2004a-b, 2007; Eskelin 2007, 2009, 2010; Perschbacher 2012a-d, 2014, 2015, Perschbacher and Eskelin 2018, A. A. Eskelin, Sport Fish Biologist, ADF&G, Soldotna, personal communication.

[a] Kenai River closed to Chinook fishing 2014 and 2015 during the early-run.

[b] Kenai River closed to Chinook fishing 5/1-6/3/16 and then restricted during the remainder of the early-run.

[c] First year of large fish (Chinook greater than or equal to 750mm) catch and harvest estimates.

[d] Kenai River closed to Chinook fishing 6/13-6/30 and restricted to lower river 7/1-7/15.

Table 159-2.–Effort, catch, and harvest of late-run king salmon as estimated from a creel survey of anglers on the Kenai River from the mouth upstream to the Soldotna Bridge from July 1 through July 31, 1981–2018.

	Nonguided			Guided		
Year	Effort	Catch	Harvest	Effort	Catch	Harvest
1981	66,309	ND	1,988	30,351	ND	2,162
1982	92,931	ND	2,083	34,897	ND	2,257
1983	110,172	ND	3,405	54,756	ND	4,919
1984	208,309	ND	3,888	42,062	ND	2,614
1985	171,109	ND	4,395	40,398	ND	2,705
1986	159,943	ND	4,855	47,379	ND	3,198
1987	193,630	ND	5,573	69,622	ND	5,194
1988	235,043	ND	8,042	88,331	ND	8,393
1989	186,382	ND	3,281	86,507	ND	4,727
1990	161,071	ND	2,269	85,477	ND	3,544
1991	147,293	ND	2,985	82,706	ND	3,864
1992	112,091	ND	2,504	75,324	ND	4,176
1993	201,695	ND	7,413	92,213	ND	7,866
1994	244,729	10,502	7,760	110,049	8,037	6,628
1995	200,397	7,126	4,914	123,585	6,773	5,211
1996	128,438	2,631	2,131	110,057	4,352	3,853
1997	137,226	5,740	4,480	126,416	6,796	5,856
1998	89,854	10,502	2,406	98,872	8,037	3,575
1999	134,264	6,613	4,422	118,196	10,584	7,605
2000	134,020	6,907	5,480	114,362	8,228	6,585
2001	127,395	8,458	5,496	109,238	11,294	8,240
2002	100,808	7,282	4,917	90,868	9,584	6,436
2003	115,688	12,652	6,200	91,768	16,117	7,637
2004	127,725	8,185	5,003	110,690	14,329	9,491
2005	125,235	12,248	6,893	105,550	13,416	8,420
2006	140,490	9,516	5,895	117,210	10,272	7,295
2007	112,575	5,273	2,853	106,644	8,135	6,405
2008	98,903	4,437	3,525	99,597	6,491	5,748
2009	99,938	4,786	3,124	77,238	5,566	4,254
2010	88,995	3,141	2,748	69,194	2,898	2,627
2011	81,005	5,000	3,080	67,208	4,581	3,378
2012	11,520	553	44	20,834	697	59
2013	21,730	698	334	38,180	1,855	1,243
2014	9,805	528	116	22,258	937	424
2015	39,057	3,012	1,449	38,219	3,509	2,447
2016	75,995	4,075	3,028	37,986	3,738	3,153
2017 [a]	74,062	3,741	3,456	47,062	2,799	2,548
2018 [b]	23,573	1,876	214	41,112	2,225	394
Average						
2009–2018	52,568	2,741	1,759	45,929	2,881	2,053
Percentage	53%	49%	46%	47%	51%	54%
Average						
1981–2008	145,133	7,871	4,466	87,969	9,496	5,522
Percentage	62%	45%	45%	38%	55%	55%

ND = No Data

Source: Hammarstrom and Larson 1986; Conrad and Hammarstrom 1987; Hammarstrom 1988-1994; King 1995-1997; Marsh 1999, 2000; Reimer et al. 2002; Reimer 2003, 2004a-b, 2007; Eskelin 2007, 2009, 2010; Perschbacher 2012a-d, 2014, 2015, Perschbacher and Eskelin 2018, A. A. Eskelin, Sport Fish

[a] First year of large fish (Chinook greater than or equal to 750mm) catch and harvest estimates.

[b] By emergency order, retention of Chinook prohibited 7/1-7/15 and restricted to above Slikok marker 7/16

Table 159-3.–Average number of hours for an angler to catch a king salmon on the Kenai River based on a creel survey from the mouth upstream to the Soldotna Bridge, 1994–2018.

Average hours to catch a king salmon				
	Early-Run		Late-Run	
Year	Unguided	Guided	Unguided	Guided
1994	32.1	14.9	23.3	13.7
1995	19.3	11.4	28.1	18.2
1996	40.1	17.5	48.8	25.3
1997	19.0	13.5	23.9	18.6
1998	23.8	34.1	8.6	12.3
1999	25.0	12.6	20.3	11.2
2000	48.7	31.1	19.4	13.9
2001	94.2	29.1	15.1	9.7
2002	41.9	33.3	13.8	9.5
2003	24.5	19.1	9.1	5.7
2004	26.1	13.2	15.6	7.7
2005	27.6	14.4	10.2	7.9
2006	19.7	14.4	14.8	11.4
2007	27.8	14.8	21.3	13.1
2008	20.5	20.4	22.3	15.3
2009	61.1	43.8	20.9	13.9
2010	57.2	25.5	28.3	23.9
2011	52.6	36.0	16.1	14.7
2012	58.3	38.8	20.8	29.9
2013	71.6	83.0	31.1	20.6
2014	CLOSED TO FISHING		18.6	23.8
2015	CLOSED TO FISHING		13.0	10.9
2016	29.5	18.5	18.6	9.2
2017	26.8	18.6	15.7	12.7
2018	21.2	26.3	15.4	18.4
Mean	37.8	25.4	19.7	14.9

Source: R. Begich, Sport Fish Biologist, ADF&G Soldotna, personal communication

Table 159-4.–Early-run Kenai River king salmon population data, 1986–2019.

Year	Cook Inlet marine harvest [a]	Misc. marine [b]	Kenaitze educational harvest	Inriver run [c]	Sport harvest above sonar [d]	Catch-and-release mortality above sonar	Spawning escapement	Total run	Harvest rate
1998	278	0	126				5,918	7,719	0.23
1999	216	0	100				2,808	10,471	0.73
2000	229	0	119				6,580	8,812	0.25
2001	154	0	166				6,455	8,937	0.28
2002	139	0	40				8,489	9,442	0.10
2003	151	0	94				11,735	14,481	0.19
2004	152	0	56				15,319	18,335	0.16
2005	156	194	63				11,529	15,414	0.25
2006	218	0	56				6,072	10,605	0.43
2007	167	23	13				5,151	8,485	0.39
2008	97	63	36				4,138	7,604	0.46
2009	59	9	41				4,034	5,435	0.26
2010	70	26	26				3,012	4,255	0.29
2011	93	0	35				5,196	6,543	0.21
2012	47	0	19				2,977	3,376	0.12
2013	86	0	9				1,601	1,688	0.05
2014	65	10	1				2,621	2,690	0.03
2015	66	41	8				4,198	4,303	0.02
2016	27	14	3	6,393	6	39	6,346	6,436	0.01
2017	33	29	8	7,342	462	73	6,702	7,413	0.10
2018	25	16	1	3,031	79	12	2,909	3,073	0.05
2019	NA	NA	NA	NA	NA	NA	4,173	4,188	0.00
Average									
1998–2013	145	20	62				6,313	8,850	0.28
2014–2018	43	22	4	5,589	182	41	4,555	4,783	0.04

Note: ND means no data collected. NA means data too preliminary to be reported yet.

[a] Cook Inlet marine sport harvest; calculated as 5% of total Cook Inlet marine sport harvest.

[b] 60% of commercial cost-recovery harvest and eastside setnet harvest before 25 June.

[c] Estimates for 1998–2015 are based on a run reconstruction model, Fleischman and Reimer 2017, FMS 17-02. Estimates for 2016–2018 are unpublished preliminary estimates.

[d] Includes creel survey estimates for the area from Cook Inlet to the Soldotna Bridge and estimates from the SWHS from the Soldotna Bridge to the outlet of Kenai Lake.

[e] Estimate of inriver run for 2013 based on RM 13.7 ARIS sonar estimates of fish greater than or equal to 750 mm plus estimate of number of fish less than 750 mm based on weir data and radio telemetry.

[f] Preliminary ARIS sonar estimates at RM 13.7 for 2014–2015. Values subject to change until sonar report is published.

Table 159-5.–Late-run Kenai River king salmon population data, 1986–2019.

Year	Deep Creek marine harvest [a]	Eastside setnet harvest [b]	Drift gillnet harvest [c]	Kenaitze educational	Federal Subsistence	Personal use dipnet [d]	Sport harvest below sonar [e]	Inriver run estimated by sonar [f]	Sport harvest above sonar [g]	release mortality above sonar	Spawning escapement	Total run	Harvest rate
1998	917	2,165	123	1		156					33,385	43,130	0.23
1999	502	4,402	231	3		327					29,100	45,657	0.36
2000	568	1,795	114	4		288					25,502	41,719	0.39
2001	465	1,905	170	4		291					29,531	45,754	0.35
2002	226	3,483	132	3		321					40,514	55,910	0.28
2003	95	4,375	317	5		432					48,461	67,984	0.29
2004	832	9,990	439	7		525					65,112	91,312	0.29
2005	583	9,501 [i]	744	7		632					55,688	84,189	0.34
2006	477	3,074 [i]	742	5		460					39,305	57,122	0.31
2007	387	4,055 [i]	260	3		717					29,664	44,421	0.33
2008	287	3,425 [i]	255	10		887					28,094	42,680	0.34
2009	128	1,410	187	1		432					18,251	28,044	0.35
2010	262	2,384	170	11		456					13,037	22,180	0.41
2011	425	2,499	208	3		726					15,731	26,381	0.40
2012	211	333	89	0		27					22,453	23,206	0.03
2013	229	679	89	2		3					12,305	14,382	0.14
2014	322	706	93	0		0					11,980	13,403	0.11
2015	354	2,808	143	4		28					16,825	22,796	0.26
2016[j]	16	2,906	215	4	1	376	3,374	20,821	2,522	170	14,754	24,338	0.39
2017[j]	119	2,998	100	6	0	752	3,806	25,939	2,016	159	19,948	29,914	0.33
2018[j]	30	555	169	1	0	0	64	17,021	101	108	16,813	17,571	0.04
2019[j]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	11,671	14,020	0.17
Average													
1998–2013	412	3,467	267	4	ND	418					31,633	45,879	0.30
2014–2018	168	1,995	144	3	0	231	2,415	21,260	1,546	146	16,064	21,604	0.23

Note: NA means data too preliminary to be reported yet.

[a] 60% of SWHS estimates of Cook Inlet marine sport harvest after 24 June.

[b] Estimates for 1986–2009 are from Fleischman and McKinley (2013). Estimates for 2010–2015 from Eskelin et al. (2013), Eskelin and Barclay (2015, 2016).

[c] Estimates for 1986–2009 are from Fleischman and McKinley (2013). Estimates for 2010–2015 are from ESSN GSI allocation.

[d] Estimates for 1986–1994 from SWHS, estimates for 1995 are from Ruesch and Fox (1996), estimates for 1996–2018 are from returned permits.

[e] Creel survey estimates are from below RM 8.6 prior to 2013 and below RM 13.7 since 2013.

estimates published in Miller et al. (2013–2015) and expanded by inverse of proportion midriver. Estimates for 2013–2015 inriver run are preliminary Adaptive Resolution

[g] Creel survey and SWHS estimates are from above RM 8.6 sonar prior to 2013 and above RM 13.7 sonar since 2013.

[h] Some catch-and-release mortality (usually less than 100 fish) occurs below the sonar and is not counted towards escapement.

[i] Harvest estimate does not include Kasilof River terminal fishery which occurred 2005–2008.

[j] These estimates are preliminary until biometrically reviewed and published.

Table 159-6.–Number of resident and nonresident clients fishing from guided vessels on the Kenai River, 2006–2016.

	May				June				July			
Year	Number of Resident Clients	% of Total	Number of Non-Resident Clients	% of Total	Number of Resident Clients	% of Total	Number of Non-Resident Clients	% of Total	Number of Resident Clients	% of Total	Number of Non-Resident Clients	% of Total
2006	132	24%	419	76%	1,337	14%	8,090	86%	2,624	11%	21,045	89%
2007	123	22%	435	78%	1,220	14%	7,643	86%	2,914	13%	19,769	87%
2008	70	15%	382	85%	1,256	15%	7,010	85%	2,725	13%	18,613	87%
2009	154	37%	264	63%	1,172	20%	4,784	80%	2,570	16%	13,591	84%
2010	125	31%	278	69%	675	14%	4,114	86%	2,388	15%	13,205	85%
2011	94	26%	271	74%	843	16%	4,443	84%	1,984	13%	13,261	87%
2012	84	22%	299	78%	576	15%	3,250	85%	1,030	9%	10,216	91%
2013	11	19%	48	81%	370	13%	2,389	87%	1,039	9%	11,063	91%
2014	2	6%	32	94%	332	13%	2,145	87%	951	8%	11,036	92%
2015	4	50%	4	50%	234	9%	2,429	91%	1,040	9%	11,024	91%
2016	19	31%	43	69%	303	10%	2,851	90%	1,247	9%	12,718	91%
Mean	74	26%	225	74%	756	14%	4,468	86%	1,865	11%	14,140	89%

Source: ADF&G Freshwater Sport Fish Guide Logbook.

PROPOSAL 155 – Allow sport fishing guides to sport fish while a client is present from the banks of the Kasilof River.

5 AAC 56.140. Kasilof River guiding and guided fishing requirements.

PROPOSED BY: Raymond Davis.

WHAT WOULD THE PROPOSAL DO? This would allow sport fishing guides to sport fish while a client is present from the banks of the Kasilof River

WHAT ARE THE CURRENT REGULATIONS? From January 1 through July 31 sport fishing guide may not sport fish while a client is present or is within the sport fishing guide's control or responsibility; however a sport fishing guide may provide assistance to a client with a disability in order to enable the client to engage in sport fishing.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would increase guided sport fishing effort, catch, and harvest of king, sockeye, pink, and coho salmon and resident species by an unknown amount in the Kasilof River guided sport fishery. Additionally, this would align guided sport fishing regulations on the Kasilof River with regulations on the Kenai River. Conflict related to issues such as congestion and access (private property), bank erosion, and poor quality of the angling experience may increase.

BACKGROUND: The regulation prohibiting guides from fishing from a vessel is a long-standing guide regulation on the Kasilof River. Guided fishing trips reported by freshwater logbooks on the Kasilof River has ranged from 1,618 to 2,341 trips with an average of 1,944 tips during 2006 to 2016 (Table 155-1). Guided sockeye salmon harvest on the Kasilof River has ranged from 139 to 5,615 fish with an average 1,362 fish during this period (Table 155-2). Guided king salmon harvest reported by freshwater logbooks on the Kasilof River ranged from 272 to 2,701 fish with an average of 1,657 fish from 2006 to 2016 (Table 155-2).

Regulation regarding sport fishing guides fishing while clients are present varies across Cook Inlet and the state. For instance, on the Kenai River from January 1 through December 31, a sport fishing guide may not sport fish from a vessel while a client is present or is within the sport fishing guide's control or responsibility. A sport fishing guide may provide assistance to a client with a disability in order to enable the client to engage in sport fishing (*5 AAC 57.140 (h) (1)*).

In Knik Arm, Susitna River Drainage, and waters of West Cook Inlet, a person who is a sport fishing guide, may not sport fish in waters open to sport fishing for king salmon 20 inches or greater in length while a client is present or within the guide's control or responsibility, except when guiding a client with a disability (*5 AAC 60.140, 5 AAC 61.140* and *5 AAC 62.140*).

In the Bristol Bay area, a sport fishing guide may not retain fish while the guide is accompanying or personally directing the angler in fishing activities during any portion of a guided fishing trip (*5 AAC 67.036*). In the Copper River drainage, a sport fishing guide while providing sport fishing guide services in fresh water may sport fish, but may not retain a king salmon, while a client is present or is within the guide's control or responsibility (*5 AAC 52.037*).

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal. If this proposal were adopted it would likely result in increased exploitation and harvest. If the board were to adopt aspects of this proposal it should consider how it may impact sustainable fishing levels.

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

Table 155-1.–Guided freshwater logbook effort data for the Kasilof River from 2006–2016.

Year	Days fished	Trips	Businesses	Guides
2006	6,910	2,042	148	190
2007	7,070	2,121	139	191
2008	7,071	2,107	119	173
2009	6,160	1,875	122	160
2010	5,952	1,857	106	159
2011	7,845	2,341	101	147
2012	5,950	1,847	101	153
2013	6,896	2,099	100	166
2014	5,275	1,618	107	180
2015	5,619	1,705	100	183
2016	5,772	1,769	99	168
Average 2006–2016	6,411	1,944	113	170

Table 155-2.–Guided freshwater logbook catch and harvest data for the Kasilof River from 2006–2016.

		Chinook salmon		Sockeye salmon		Coho salmon		Rainbow trout		Dolly Varden		Arctic grayling		Lake trout		Other [a]	
River	Year	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest
Kasilof																	
	2006	3,569	1,982	291	252	1,785	1,709	226	3	1,221	135	30	3	0	0	276	54
	2007	4,203	2,635	338	304	963	932	633	6	1,489	146	0	0	1	0	23	4
	2008	3,325	2,272	197	168	1,443	1,413	153	1	1,036	94	0	0	7	0	211	41
	2009	3,132	2,350	173	165	939	896	39	3	682	62	5	1	4	0	175	2
	2010	3,138	1,977	147	139	878	833	94	36	861	69	0	0	1	0	374	34
	2011	3,670	2,701	308	282	1,024	1,003	168	5	490	32	0	0	0	0	118	10
	2012	1,321	700	1,190	1,084	909	891	82	6	457	28	0	0	4	0	994	65
	2013	2,143	1,128	2,314	2,205	1,123	1,101	272	0	695	86	2	0	0	0	142	16
	2014	607	272	3,934	3,750	724	722	39	0	223	11	0	0	0	0	305	71
	2015	848	528	5,817	5,615	968	948	79	17	345	11	0	0	2	0	52	20
	2016	2,170	1,682	1,065	1,016	515	504	38	1	191	20	0	0	5	2	293	69
	Average	2,557	1,657	1,434	1,362	1,025	996	166	7	699	63	3	0	2	0	269	35

Source: Freshwater Logbook Program from Sigurdsson and Powers (2009-2014, 2016); R.H. Powers, Program Coordinator, ADF&G Anchorage, personal communication.

Note: 2017 and 2018 data not available at time of publication

[a] Other species include primarily pink salmon.

PROPOSAL 156 – Allow sport fishing guides to sport fish from shore while a client is present in the early-run and late-run Kasilof River king salmon fisheries.

5 AAC 56.140. Kasilof River guiding and guided fishing requirements.

PROPOSED BY: Kenai River Professional Guide Association.

WHAT WOULD THE PROPOSAL DO? This would allow sport fishing guides to sport fish from shore while a client is present in the early-run and late-run Kasilof River king salmon fisheries.

WHAT ARE THE CURRENT REGULATIONS? From January 1 through July 31, sport fishing guide may not sport fish while a client is present or is within the sport fishing guide's control or responsibility however a sport fishing guide may provide assistance to a client with a disability in order to enable the client to engage in sport fishing.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would increase sport fishing guide effort, catch, and harvest of king, sockeye, pink, and coho salmon and resident species by an unknown amount in the Kasilof River sport fishery. Additionally, this would align guided sport fishing regulations on the Kasilof River with regulations on the Kenai River. Conflict related to issues such as congestion at public access areas such Crooked Creek State Recreation Site (also known as People Hole), bank erosion, and poor quality of the angling experience may increase.

BACKGROUND: The regulation prohibiting guides from fishing while clients are present is a long-standing guide regulation on the Kasilof River. Guided fishing effort reported by freshwater logbooks on the Kasilof River has ranged from 1,618 to 2,341 trips with an average of 1,944 trips during 2006 to 2016 (Table 155-1). Guided sockeye salmon harvest on the Kasilof River has ranged from 139 to 5,615 fish with an average 1,362 fish during this period (Table 155-2). Guided king salmon harvest reported by freshwater logbooks on the Kasilof River ranged from 272 to 2,701 fish with an average of 1,657 fish from 2006 to 2016 (Table 155-2).

Crooked Creek State Recreation Site, also known as People Hole, is the only shore based early-run king salmon fishery in the Northern Kenai Peninsula Management Area. Unguided shore angler effort determined by Kasilof River early-run king salmon creel survey estimated an average of 17,696 angler hours during the fishery (May 16 through June 30) for years 2004 through 2010. Early-run king salmon catch averaged 889 fish with a harvest of 320 during this time period (Table 156-1).

Regulation regarding sport fishing guides fishing while clients are present varies across Cook Inlet and the state. For instance, on the Kenai River from January 1 through December 31, a sport fishing guide may not sport fish from a vessel while a client is present or is within the sport fishing guide's control or responsibility. A sport fishing guide may provide assistance to a client with a disability in order to enable the client to engage in sport fishing (*5 AAC 57.140 (h) (1)*).

In Knik Arm, Susitna River Drainage, and waters of West Cook Inlet, a person who is a sport fishing guide, may not sport fish in waters open to sport fishing for king salmon 20 inches or greater in length while a client is present or within the guide's control or responsibility, except when guiding a client with a disability (*5 AAC 60.140, 5 AAC 61.140* and *5 AAC 62.140*).

In the Bristol Bay area, a sport fishing guide may not retain fish while the guide is accompanying or personally directing the angler in fishing activities during any portion of a guided fishing trip (*5 AAC 67.036*). In the Copper River drainage, a sport fishing guide while providing sport fishing guide services in fresh water may sport fish, but may not retain a king salmon, while a client is present or is within the guide's control or responsibility (*5 AAC 52.037*).

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal. If this proposal were adopted it would likely result in increased exploitation on Kasilof River early- and late-run king salmon. If the board were to adopt aspects of this proposal it should consider how it may impact sustainable fishing levels.

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

Table 156-1.–Fishing effort, catch and harvest of early-run king salmon by angler type, Kasilof River creel survey, May 16 through June 30, 2004–2010.

	Shore Guided				Shore Unguided				Shore Total			
Year	Number Anglers	Angler Hours	Catch	Harvest	Number Anglers	Angler Hours	Catch	Harvest	Number Anglers	Angler Hours	Catch	Harvest
2004	0	0	0	0	5,138	15,096	1,643	503	5,138	15,096	1,643	503
2005	0	0	0	0	5,142	16,452	1,366	497	5,142	16,452	1,366	497
2006	0	0	0	0	7,910	23,199	887	296	7,910	23,199	887	296
2007	0	0	0	0	6,181	17,953	747	329	6,181	17,953	747	329
2008	57	248	14	14	6,511	19,712	564	274	6,568	19,960	578	288
2009	50	204	0	0	6,242	17,091	354	169	6,292	17,295	354	169
2010	4	10	0	0	4,743	14,371	660	170	4,747	14,381	660	170
Average	16	66	2	2	5,981	17,696	889	320	5,997	17,762	891	322

	Boat Guided				Boat Unguided				Boat Total			
Year	Number Anglers	Angler Hours	Catch	Harvest	Number Anglers	Angler Hours	Catch	Harvest	Number Anglers	Angler Hours	Catch	Harvest
2004	4,328	24,670	3,463	1,479	2,550	12,089	983	426	6,878	36,759	4,446	1,905
2005	4,615	32,840	3,446	1,768	2,297	11,300	743	401	6,912	44,140	4,189	2,169
2006	5,410	38,065	3,330	1,818	2,928	13,994	553	375	8,338	52,059	3,883	2,193
2007	4,625	32,363	3,162	1,940	2,109	10,926	516	384	6,734	43,289	3,678	2,324
2008	4,420	31,113	2,303	1,490	2,325	10,740	304	207	6,745	41,853	2,607	1,697
2009	3,526	24,255	1,711	1,196	1,575	7,361	211	166	5,101	31,616	1,922	1,362
2010	4,790	33,792	2,334	1,089	963	4,800	135	74	5,753	38,592	2,469	1,163
Average	4,531	31,014	2,821	1,540	2,107	10,173	492	290	6,637	41,187	3,313	1,830

	Guided Total				Unguided Total				Total			
Year	Number Anglers	Angler Hours	Catch	Harvest	Number Anglers	Angler Hours	Catch	Harvest	Number Anglers	Angler Hours	Catch	Harvest
2004	4,328	24,670	3,463	1,479	7,688	27,185	2,626	929	12,016	51,855	6,089	2,408
2005	4,615	32,840	3,446	1,768	7,439	27,752	2,109	898	12,054	60,592	5,555	2,666
2006	5,410	38,065	3,330	1,818	10,838	37,193	1,440	671	16,248	75,258	4,770	2,489
2007	4,625	32,363	3,162	1,940	8,290	28,879	1,263	713	12,915	61,242	4,425	2,653
2008	4,477	31,361	2,317	1,504	8,836	30,452	868	481	13,313	61,813	3,185	1,985
2009	3,576	24,459	1,711	1,196	7,817	24,452	565	335	11,393	48,911	2,276	1,531
2010	4,794	33,802	2,334	1,089	5,706	19,171	795	244	10,500	52,973	3,129	1,333
Average	4,546	31,080	2,823	1,542	8,088	27,869	1,381	610	12,634	58,949	4,204	2,152
% of Total	36%	53%	67%	72%	64%	47%	33%	28%				

Source: Preliminary estimates from the Kasilof River early-run king salmon angler creel survey 2004-2010.

PROPOSAL 158 – Prohibit sport fishing guides fishing from shore on the Kenai River while a client is present.

5 AAC 57.140. Kenai River guiding and guided fishing requirements in the Kenai River Drainage Area.

PROPOSED BY: Paul Boyden.

WHAT WOULD THE PROPOSAL DO? This would prohibit Kenai River sport fishing guides from sport fishing from shore while a client is present or in the guide's control.

WHAT ARE THE CURRENT REGULATIONS? On the Kenai River, a sport fishing guide may not sport fish from a vessel while clients are present or in the guide's control. Sport fishing guides are allowed to provide assistance to clients with a disability and engage in sport fishing with clients from shore.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would decrease guided sport fishing effort, catch and harvest of king, sockeye, pink, and coho salmon and resident species by an unknown amount in the Kenai River sport fishery. Additionally, this would align guided sport fishing regulations on the Kenai River with regulations on the Kasilof River. This would eliminate the possibility of a guide hooking a fish while on shore and then allowing a client to land the fish.

BACKGROUND: The regulation prohibiting guides from fishing from a vessel is a long-standing guide regulation on the Kenai River. Guided fishing trips reported by freshwater logbooks on the Kenai River has ranged from 9,015 to 13,125 with an average of 10,619 trips from 2006–2016 (Table 158-1). Guided sockeye salmon harvest on the Kenai River has ranged from 5,372 to 28,976 fish with an average 14,310 fish from 2006–2016 (Table 158-2).

Regulation regarding sport fishing guides fishing while clients are present varies across Cook Inlet and the state. For instance, on the Kasilof River, from January 1 through July 31, a sport fishing guide may not sport fish while a client is present or is within the sport fishing guide's control or responsibility. A sport fishing guide may provide assistance to a client with a disability in order to enable the client to engage in sport fishing (*5 AAC 56.140*).

In Knik Arm, Susitna River Drainage, and waters of West Cook Inlet, a person who is a sport fishing guide, may not sport fish in waters open to sport fishing for king salmon 20 inches or greater in length while a client is present or within the guide's control or responsibility, except when guiding a client with a disability (*5 AAC 60.140, 5 AAC 61.140* and *5 AAC 62.140*).

In the Bristol Bay area, a sport fishing guide may not retain fish while the guide is accompanying or personally directing the angler in fishing activities during any portion of a guided fishing trip (*5 AAC 67.036*). In the Copper River drainage, a sport fishing guide while providing sport fishing guide services in fresh water may sport fish, but may not retain a king salmon, while a client is present or is within the guide's control or responsibility (*5 AAC 52.037*).

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal. If this proposal were adopted it would likely result in decreased exploitation and harvest. If the board were to adopt this proposal it should consider an allowance for sport fishing guides to provide assistance to clients with a disability.

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

Table 158-1.–Guided freshwater logbook effort data for the Kenai River May through October, 2006–2016.

	May – October			
	Number	Number of anglers		
Year	of trips	Resident	Nonresident	Total
2006	13,001	5,240	40,094	45,334
2007	13,125	5,883	38,448	44,331
2008	13,024	5,861	37,896	43,757
2009	10,374	5,871	27,648	33,519
2010	10,355	5,303	28,631	33,934
2011	10,575	5,237	29,660	34,897
2012	9,090	3,605	25,449	29,054
2013	9,127	3,699	25,892	29,591
2014	9,015	3,583	25,675	29,258
2015	9,234	3,645	26,413	30,058
2016	9,893	3,787	28,186	31,973
Average	10,619	4,701	30,363	35,064

Table 158-2.–Guided freshwater logbook catch and harvest data for the Kenai River from 2006–2016.

		Chinook salmon		Sockeye salmon		Coho salmon		Rainbow trout		Dolly Varden		Arctic grayling		Lake trout		Other [a]	
River	Year	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest
Kenai																	
	2006	15,117	8,757	12,884	6,719	9,122	7,839	46,610	622	34,031	356	1,140	18	0	0	16,548	2,687
	2007	12,634	7,410	11,818	7,442	9,545	8,573	60,774	643	44,346	293	52	5	35	2	65	11
	2008	9,770	7,183	8,620	5,372	12,069	11,249	50,799	238	42,303	178	39	0	51	6	8,474	1,577
	2009	6,451	4,039	11,722	8,001	10,722	9,878	47,533	165	44,291	149	72	0	0	0	149	13
	2010	4,951	3,557	11,886	7,921	10,620	9,839	46,541	136	36,234	187	41	0	59	1	5,042	1,021
	2011	5,567	3,642	18,021	12,331	11,342	10,777	48,004	144	38,325	215	88	0	22	1	152	0
	2012	1,242	309	37,884	28,976	7,696	7,312	42,596	139	35,882	131	25	3	73	0	13,033	1,664
	2013	1,408	766	19,867	15,498	13,874	13,153	42,716	198	34,966	200	154	0	12	0	145	17
	2014	765	299	25,606	21,524	11,865	11,041	40,172	123	36,951	239	176	1	21	0	15,881	3,563
	2015	2,401	1,760	32,140	26,777	13,216	12,570	48,859	418	39,231	394	76	0	57	5	146	22
	2016	4,604	3,153	20,079	16,845	8,306	7,918	49,532	146	42,639	145	39	1	32	3	6,452	2,106
	Average	5,901	3,716	19,139	14,310	10,762	10,014	47,649	270	39,018	226	173	3	33	2	6,008	1,153

Source: Freshwater Logbook Program from Sigurdsson and Powers (2009-2014, 2016); R.H. Powers, Program Coordinator, ADF&G Anchorage, personal communication.

Note: 2017 and 2018 data not available at time of publication

[a] Other species include primarily pink salmon.

PROPOSAL 157 – Limit the number of client groups per guide or guide vessel on the Kasilof River during the month of July.

5 AAC 56.140. Kasilof River guiding and guided fishing requirements.

PROPOSED BY: Mike Adams.

WHAT WOULD THE PROPOSAL DO? This would limit the number of client groups per guide or guide vessel on the Kasilof River during the month of July.

WHAT ARE THE CURRENT REGULATIONS? On the Kasilof River downstream of the Sterling Highway Bridge, a person may not sport fish from a registered guide vessel on any Sunday in July.

Sport fishing guides are required to register with the Department of Natural Resources and must be registered with the Department of Fish and Game before guiding anglers. All guided sport fishing trips on both salt and fresh waters were required to be reported in a logbook and submitted to the department through May of 2019.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The catch, effort and harvest of king, sockeye, coho salmon and resident species by guided anglers may decline by an undetermined amount, initially. Thereafter it could result in an increase in guide numbers as some operators may hire more guides to meet the demand.

BACKGROUND: Beginning in 2002, guides operating on the Kasilof River were restricted to one group of clients per day. Sport fish guide logbook regulations became effective in 2006; therefore, the number of guides servicing two separate clients or groups of clients in one day prior to implementation of the logbook program is not known. The number of guided sport fishing trips taken on the Kasilof River has averaged 2,000 annually from 2006 through 2010 (Table 157-1).

Beginning in 2011, guides operating on the Kasilof were allowed to conduct multiple trips per day. The number of guided sport fishing trips taken on the Kasilof River has averaged 1,897 trips annually from 2011 through 2016 (Table 157-2). The number of guided trips taken in July on the Kasilof River between 2006 and 2010 averaged 555 trips, while trips taken in July between 2011 and 2016 averaged 577 (Table 157-3).

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal. If this proposal were adopted, initially it would likely result in reduced exploitation and harvest. Future analysis of guided trips will not be possible due to the discontinuation of the freshwater logbook program in the spring of 2019.

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

Table 157-1.–Guide logbook fishing effort, number of trips, business and guides, Kasilof River, 2006–2010.

	Days fished	Trips	Businesses	Guides
2006				
Below Highway	6,563	1,936	113	151
Above Highway	158	47	14	15
Unspecified	189	59	21	24
Total	6,910	2,042	148	190
2007				
Below Highway	6,761	2,022	106	152
Above Highway	89	30	13	14
Unspecified	220	69	20	25
Total	7,070	2,121	139	191
2008				
Below Highway	6,660	1,980	88	139
Above Highway	89	28	10	11
Unspecified	322	99	21	23
Total	7,071	2,107	119	173
2009				
Below Highway	5,757	1,746	84	117
Above Highway	102	32	8	8
Unspecified	301	97	30	35
Total	6,160	1,875	122	160
2010				
Below Highway	5,735	1,784	85	134
Above Highway	154	54	11	14
Unspecified	63	19	10	11
Total	5,952	1,857	106	159
Average				
Below Highway	6,295	1,894	95	139
Above Highway	118	38	11	12
Unspecified	219	69	20	24
Total	6,633	2,000	127	175

Source: Participation, effort and Harvest in the Sport Fish Business/Guide Licensing and Logbook

Table 157-2.–Guide logbook fishing effort, number of trips, business and guides, Kasilof River, 2011–2016.

	Days fished	Trips	Businesses	Guides
2011				
Below Highway	7,734	2,307	89	133
Above Highway	104	32	10	12
Unspecified	7	2	2	2
Total	7,845	2,341	101	147
2012				
Below Highway	5,668	1,747	84	126
Above Highway	282	100	17	27
Unspecified	0	0	0	0
Total	5,950	1,847	101	153
2013				
Below Highway	6,367	1,937	74	126
Above Highway	510	155	22	35
Unspecified	19	7	4	5
Total	6,896	2,099	100	166
2014				
Below Highway	4,222	1,310	67	119
Above Highway	1,017	296	35	56
Unspecified	36	12	5	5
Total	5,275	1,618	107	180
2015				
Below Highway	4,283	1,317	63	117
Above Highway	1,332	387	36	65
Unspecified	4	1	1	1
Total	5,619	1,705	100	183
2016				
Below Highway	5,066	1,548	68	121
Above Highway	664	207	29	45
Unspecified	42	14	2	2
Total	5,772	1,769	99	168
Average				
Below Highway	5,557	1,694	74	124
Above Highway	652	196	25	40
Unspecified	18	6	2	3
Total	6,226	1,897	101	166

Source: Participation, effort and Harvest in the Sport Fish Business/Guide Licensing and Logbook Programs, 2011-2016.

Table 157-3.–Guided freshwater logbook effort during the month of July for the Kasilof River, 2006–2016.

Year	# of Trips in July	All Trips
2006	502	2,042
2007	582	2,121
2008	578	2,107
2009	588	1,875
2010	524	1,857
2011	799	2,341
2012	316	1,847
2013	761	2,099
2014	499	1,618
2015	538	1,705
2016	549	1,769
Average	567	1,944

Source: Participation, effort and Harvest in the Sport Fish Business/Guide Licensing and Logbook Programs, 2006-2016.

Kenai/Kasilof Rivers Motors (6 proposals)

PROPOSAL 168 – Prohibit motorized vessels on the Kenai River.

5 AAC 57.120. General provisions for seasons, bag, possession, annual, and size limits, and methods and means for the Kenai River Drainage Area. and 5 AAC 77.540. Upper Cook Inlet Personal Use Salmon Fishery Management Plan.

PROPOSED BY: John McCombs.

WHAT WOULD THE PROPOSAL DO? This would permanently prohibit motorized vessels on the Kenai River.

WHAT ARE THE CURRENT REGULATIONS? In the Kenai River, downstream from the outlet of Skilak Lake to the Sterling Highway Bridge, no one may fish from any motorized vessel on Mondays (except Memorial Day) during May, June, and July. For purposes of this regulation, a motorized vessel is one that has a motor on board. From the Sterling Highway Bridge downstream to the mouth of the Kenai River, no one may fish on Mondays (except Memorial Day) during May, June, and July from a vessel that has on board no more than one motor that does not exceed 10 horsepower (HP), and it may only be used between the mouth of the Kenai River and ADF&G regulatory markers located at Cunningham Park, and only after fishing from the vessel has ceased for that day; a person may not deploy sport fishing gear from a vessel after a motor has been used to propel that vessel on the same day.

Under DNR regulations, no one may operate a boat on the Kenai River (except Skilak and Kenai lakes) upstream of mile 4.2 with a motor or combination of motors with a propeller shaft rating greater than 50 HP. No one may operate a boat on the Kenai River upstream of river mile 4.2 unless the motor is a four-stroke motor or a direct fuel injection motor. This includes boats operated on both Kenai and Skilak lakes. The maximum length of vessels for the Kenai River (except Skilak and Kenai lakes) is 21 feet.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would change the vessels used on the Kenai River to be primarily drift boats, would eliminate fishing opportunity from power boats completely, and increase the opportunity to fish without power boat anglers.. This would most likely reduce the level of participation in most Kenai River sport fisheries, especially the king and coho salmon fisheries, and the resident species fisheries by a significant amount. Conflict related to issues such as congestion on the river, bank erosion, and poor quality of the angling experience could be reduced.

BACKGROUND: There are several Kenai River seasonal and reach-specific boat fishing restrictions that have been implemented over the past 20 years. Prior to the 2002 season, fishing on Mondays in May and June was prohibited from any vessel. In February 2002, the board allowed fishing on Mondays from unguided nonmotorized vessels.

Power boats, often in high numbers, are transiting on the river each Monday even though fishing from a motorized vessel is restricted each Monday downstream of Skilak Lake. In July, for

example, shore-based anglers (particularly those targeting sockeye salmon) travel to various shore locations and fish from shallow waters or riverbanks throughout the lower river. From July 10–31, personal use dip net anglers transit the lower river both to and from the lower river area downstream of the Warren Ames Bridge open to dipnetting. Point of origin for river users transiting the river on Mondays in July include state-, city-, and privately-owned boat launches and campgrounds, commercial businesses (e.g., lodges), as well as privately-owned residences throughout the lower river.

In 2008, the board adopted a regulation prohibiting the taking of fish in the Kenai River personal use dip net fishery from a boat powered by a two-stroke motor, other than direct fuel injection. In 2008–2010, these new outboard motor type restrictions reduced hydrocarbon concentrations in the Kenai River that had been in excess of the Department of Environmental Conservation standard of 10 parts per billion during peak use in July.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal. The board has viewed drift boat-only days as an allocative issue. If the board decides to take action on this proposal they should seek the advice of the Department of Law as they may need to tie the effects directly to fishing activity.

COST ANALYSIS: Approval of this proposal is expected to result in an additional direct cost for a private person to participate in this fishery. New boats would need to be purchased to participate in fishing the Kenai River from a nonmotorized vessel. If the prohibition applied to department vessels, approval of this proposal would result in a significant additional cost for the department.

PROPOSAL 166 – Prohibit sport fishing from a motorized vessel on the Lower Kenai River on Thursdays during the month of July.

5 AAC 57.121. Special provisions for the seasons, bag, possession, and size limits, and methods and means for the Lower Section of the Kenai River Drainage Area.

PROPOSED BY: Chris Every.

WHAT WOULD THE PROPOSAL DO? This would prohibit sport fishing from a motorized vessel on the Lower Kenai River on Thursdays during the month of July. In addition, this also seeks to prohibit motorized vessel traffic on the Kenai River Mondays and Thursdays.

WHAT ARE THE CURRENT REGULATIONS? In the Kenai River, downstream from the outlet of Skilak Lake to the Sterling Highway Bridge (Figure 166), no one may fish from any motorized vessel on Mondays (except Memorial Day) during May, June, and July. For purposes of this regulation, a motorized vessel is one that has a motor on board.

From the Sterling Highway Bridge downstream to the mouth of the Kenai River, no one may fish on Mondays (except Memorial Day) during May, June, and July from a vessel that has on board no more than one motor that does not exceed 10 horsepower (HP), and it may only be used between the mouth of the Kenai River and ADF&G regulatory markers located at Cunningham Park, and only after fishing from the vessel has ceased for that day; a person may not deploy sport fishing gear from a vessel after a motor has been used to propel that vessel on the same day.

Presently, under DNR regulations, no one may operate a boat on the Kenai River (except Skilak and Kenai lakes) upstream of mile 4.2 with a motor or combination of motors with a propeller shaft rating greater than 50 HP. No one may operate a boat on the Kenai River upstream of river mile 4.2 unless the motor is a four-stroke motor or a direct fuel injection motor. This includes boats operated on both Kenai and Skilak lakes. The maximum length of vessels for the Kenai River (except Skilak and Kenai lakes) is 21 feet.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would decrease fishing opportunity for power boat anglers by an additional day per week and increase the opportunity to fish without power boat anglers. This may reduce the level of participation in Kenai River sport fisheries, especially the late-run king salmon fisheries, by an unknown amount. Conflict related to issues such as congestion on the river, bank erosion, and poor quality of the angling experience may be reduced. King salmon fishing effort and harvest would be lower initially. Effort and harvest may increase in the future if more anglers adapt to the new drift boat regulations.

BACKGROUND: There are several Kenai River seasonal and reach-specific boat fishing restrictions that have been implemented over the past 20 years. Prior to the 2002 season, fishing on Mondays in May and June was prohibited from any vessel. In February 2002, the board allowed fishing on Mondays from unguided nonmotorized vessels. This may provide additional relief from erosion and turbidity caused by boat wakes and hydrocarbon pollution caused by outboard motor

emissions, and for increased fishing opportunity from nonmotorized vessels without the presence of power boats in the fishery.

Power boats, often in high numbers, are transiting on the river each Monday even though fishing from a motorized vessel is restricted each Monday downstream of Skilak Lake. In July, for example, shore-based anglers (particularly those targeting sockeye salmon) travel to various shore locations and fish from shallow waters or riverbanks throughout the lower river. From July 10–31, personal use dip net anglers transit the lower river both to and from the lower river area downstream of the Warren Ames Bridge open to dip netting. Point of origin for river users transiting the river on Mondays in July include state-, city-, and privately-owned boat launches and campgrounds, commercial businesses (e.g., lodges), as well as privately-owned residences throughout the lower river.

In 2008, the board adopted a regulation prohibiting the taking of fish in the Kenai River personal use dip net fishery from a boat powered by a two-stroke motor, other than direct fuel injection. In 2008–2010, these new outboard motor type restrictions reduced hydrocarbon concentrations in the Kenai River that had been in excess of the Department of Environmental Conservation standard of 10 parts per billion during peak use in July.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal. The board has viewed drift boat-only days as an allocative issue. If the board decides to take action on this proposal, they should seek the advice of the Department of Law as they may need to tie the effects directly to fishing activity.

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

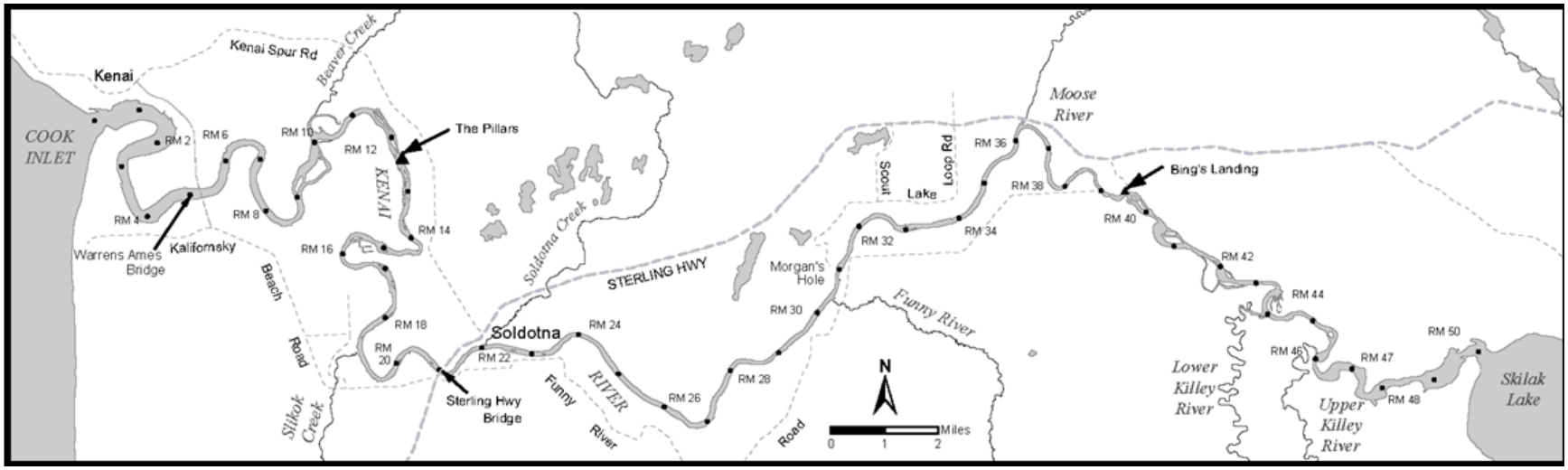

Figure 166.–Map of the Lower Kenai River.

PROPOSAL 165 – Add Thursdays in July to periods when only non-motorized vessels may fish on the Kenai River.

5 AAC 57.121. Special provisions for the seasons, bag, possession, and size limits, and methods and means for the Lower Section of the Kenai River Drainage Area.

PROPOSED BY: Chris Every.

WHAT WOULD THE PROPOSAL DO? This would add Thursdays in July to periods when only nonmotorized vessels may fish on the Kenai River downstream of the Soldotna Bridge and no motor may be on board.

WHAT ARE THE CURRENT REGULATIONS? In the Kenai River, downstream from the outlet of Skilak Lake to the Sterling Highway Bridge, no one may fish from any motorized vessel on Mondays (except Memorial Day) during May, June, and July. For purposes of this regulation, a motorized vessel is one that has a motor on board.

From the Sterling Highway Bridge downstream to the mouth of the Kenai River, no one may fish on Mondays (except Memorial Day) during May, June, and July from a vessel that has on board no more than one motor that does not exceed 10 horsepower (HP), and it may only be used between the mouth of the Kenai River and ADF&G regulatory markers located at Cunningham Park, and only after fishing from the vessel has ceased for that day; a person may not deploy sport fishing gear from a vessel after a motor has been used to propel that vessel on the same day (Figure 165).

Presently, under DNR regulations, no one may operate a boat on the Kenai River (except Skilak and Kenai lakes) upstream of mile 4.2 with a motor or combination of motors with a propeller shaft rating greater than 50 HP. No one may operate a boat on the Kenai River upstream of river mile 4.2 unless the motor is a four-stroke motor or a direct fuel injection motor. This includes boats operated on both Kenai and Skilak lakes. The maximum length of vessels for the Kenai River (except Skilak and Kenai lakes) is 21 feet.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would decrease fishing opportunity for power boat anglers by an additional day per week and increase the opportunity to fish without power boat anglers. This may reduce the level of participation in Kenai River sport fisheries, especially the early- and late-run king salmon fisheries, by an unknown amount. Conflict related to issues such as congestion on the river, bank erosion, and poor quality of the angling experience may be reduced. King salmon fishing effort and harvest would be lower initially. Effort and harvest may increase in the future if more anglers adapt to the new drift boat regulations.

BACKGROUND: There are several Kenai River seasonal and reach-specific boat fishing restrictions that have been implemented over the past 20 years. Prior to the 2002 season, fishing on Mondays in May and June was prohibited from any vessel. In February 2002, the board allowed fishing on Mondays from unguided nonmotorized vessels. This may provide additional relief from erosion and turbidity caused by boat wakes and hydrocarbon pollution caused by outboard motor

emissions, and for increased fishing opportunity from nonmotorized vessels without the presence of power boats in the fishery.

Power boats, often in high numbers, are transiting on the river each Monday even though fishing from a motorized vessel is restricted each Monday downstream of Skilak Lake. In July, for example, shore-based anglers (particularly those targeting sockeye salmon) travel to various shore locations and fish from shallow waters or riverbanks throughout the lower river. From July 10–31, personal use dip net anglers transit the lower river both to and from the lower river area downstream of the Warren Ames Bridge open to dipnetting. Point of origin for river users transiting the river on Mondays in July include state-, city-, and privately-owned boat launches and campgrounds, commercial businesses (e.g., lodges), as well as privately-owned residences throughout the lower river.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal. The board has viewed drift boat-only days as an allocative issue.

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

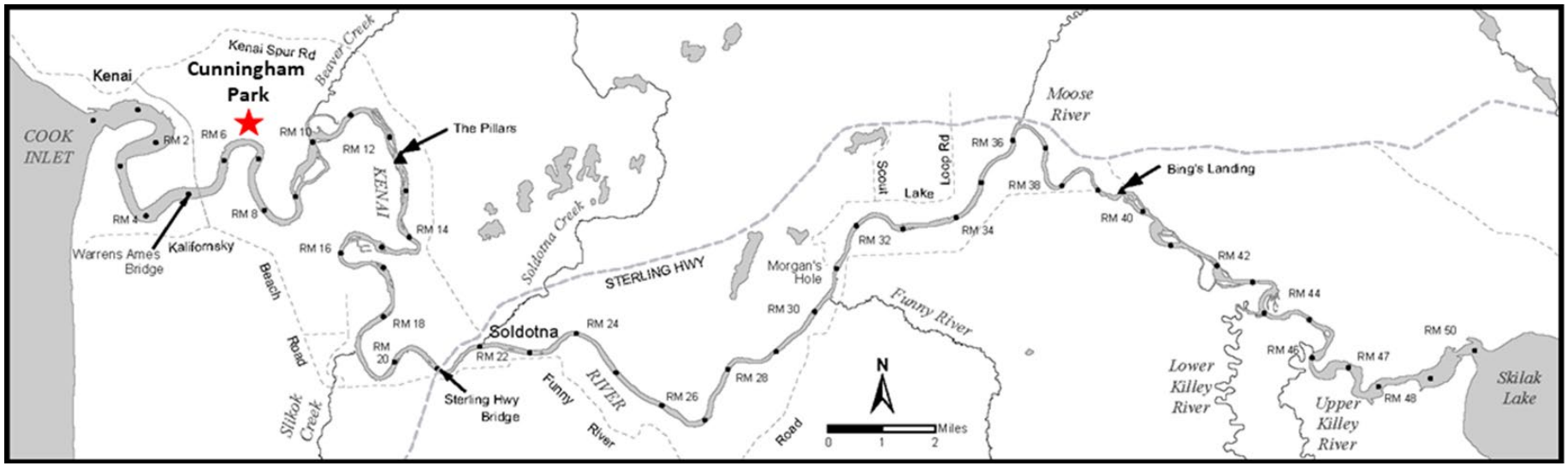

Figure 165.–Map of the Lower Kenai River showing Cunningham Park, RM 6.5.

PROPOSAL 167 – Allow sport fishing from a vessel with a motor on board, but not in use, on the Kenai River on Mondays in July.

5 AAC 21.359. Kenai River Late-Run King Salmon Management Plan and 5 AAC 57.121. Special provisions for the seasons, bag, possession, and size limits, and methods and means for the Lower Section of the Kenai River Drainage Area.

PROPOSED BY: Eric Christian.

WHAT WOULD THE PROPOSAL DO? This would allow sport fishing from a vessel with a motor on board, but not in use, on the Kenai River on Mondays in July.

WHAT ARE THE CURRENT REGULATIONS? In the Kenai River, downstream from the outlet of Skilak Lake to the Sterling Highway Bridge, no one may fish from any motorized vessel on Mondays (except Memorial Day) during May, June, and July. For purposes of this regulation, a motorized vessel is one that has a motor on board. Motors may be used to transport anglers to shore fishing locations, but anglers may not fish from any vessel that has a motor on board.

From the Sterling Highway Bridge downstream to the mouth of the Kenai River, no one may fish on Mondays (except Memorial Day) during May, June, and July from a vessel that has on board no more than one motor that does not exceed 10 horsepower (HP), and it may only be used between the mouth of the Kenai River and ADF&G regulatory markers located at Cunningham Park, and only after fishing from the vessel has ceased for that day; a person may not deploy sport fishing gear from a vessel after a motor has been used to propel that vessel on the same day.

Presently, under DNR regulations, no one may operate a boat on the Kenai River (except Skilak and Kenai lakes) upstream of mile 4.2 with a motor or combination of motors with a propeller shaft rating greater than 50 HP. No one may operate a boat on the Kenai River upstream of river mile 4.2 unless the motor is a four-stroke motor or a direct fuel injection motor. This includes boats operated on both Kenai and Skilak lakes (Figure 167). The maximum length of vessels for the Kenai River (except Skilak and Kenai lakes) is 21 feet.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would likely increase sport fishing effort by an unknown amount in July. Conflict related to issues such as congestion on the river and between specific user groups may arise. This would complicate enforcement of regulations because enforcement personnel would not be able to determine if a motor has been started for the day and whether anglers have commenced fishing for the day.

BACKGROUND: There are several Kenai River seasonal and reach-specific boat fishing restrictions that have been implemented over the past 20 years. Prior to the 2002 season, fishing on Mondays in May and June was prohibited from any vessel. In February 2002, the board allowed fishing on Mondays from unguided nonmotorized vessels.

Power boats, often in high numbers, are transiting on the river each Monday even though fishing from a motorized vessel is restricted each Monday downstream of Skilak Lake. In July, for example, shore-based anglers (particularly those targeting sockeye salmon) travel to various shore

locations and fish from shallow waters or riverbanks throughout the lower river. From July 10–31, personal use dip net anglers transit the lower river both to and from the lower river area downstream of the Warren Ames Bridge open to dip netting. Point of origin for river users transiting the river on Mondays in July include state-, city-, and privately-owned boat launches and campgrounds, commercial businesses (e.g., lodges), as well as privately-owned residences throughout the lower river.

In 2008, the board adopted a regulation prohibiting the taking of fish in the Kenai River personal use dip net fishery from a boat powered by a two-stroke motor, other than direct fuel injection. In 2008–2010, these new outboard motor type restrictions reduced hydrocarbon concentrations in the Kenai River that had been in excess of the Department of Environmental Conservation standard of 10 parts per billion during peak use in July.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal.

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

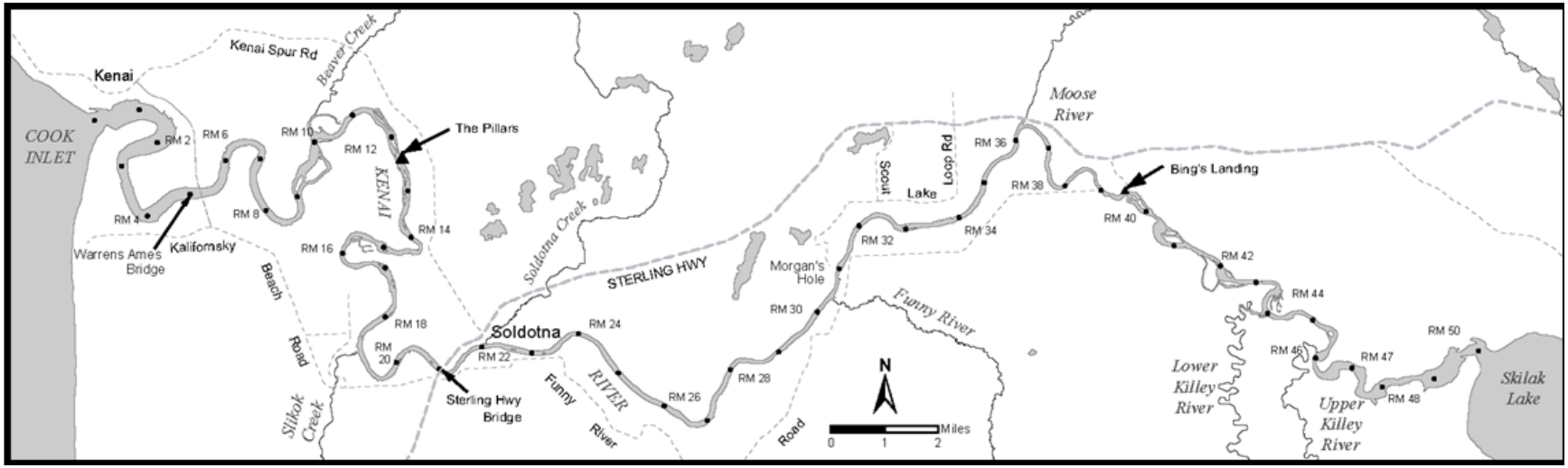

Figure 167.–Map of the Kenai River.

PROPOSAL 164 – Prohibit the use of motorized vessels on the Kenai River from Skilak Lake to the Soldotna Bridge from May 1 to August 31.

5 AAC 21.359. Kenai River Late-Run King Salmon Management Plan.

PROPOSED BY: Mark and Elbridge Walker.

WHAT WOULD THE PROPOSAL DO? This would prohibit the use of motorized vessels on the Kenai River from Skilak Lake to the Soldotna Bridge from May 1 to August 31.

WHAT ARE THE CURRENT REGULATIONS? In the Kenai River, downstream from the outlet of Skilak Lake to the Sterling Highway Bridge, no one may fish from any motorized vessel on Mondays (except Memorial Day) during May, June, and July. For purposes of this regulation, a motorized vessel is one that has a motor on board. From the Sterling Highway Bridge downstream to the mouth of the Kenai River, no one may fish on Mondays (except Memorial Day) during May, June, and July from a vessel that has on board no more than one motor that does not exceed 10 horsepower (HP), and it may only be used between the mouth of the Kenai River and ADF&G regulatory markers located at Cunningham Park, and only after fishing from the vessel has ceased for that day; a person may not deploy sport fishing gear from a vessel after a motor has been used to propel that vessel on the same day.

Under DNR regulations, no one may operate a boat on the Kenai River (except Skilak and Kenai lakes) upstream of mile 4.2 with a motor or combination of motors with a propeller shaft rating greater than 50 HP. No one may operate a boat on the Kenai River upstream of river mile 4.2 unless the motor is a four-stroke motor or a direct fuel injection motor. This includes boats operated on both Kenai and Skilak lakes. The maximum length of vessels for the Kenai River (except Skilak and Kenai lakes) is 21 feet.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would change the vessels used on the Middle Kenai River (Figure 164) to primarily drift boats and would eliminate fishing opportunity from power boats from May 1 to August 31 from Skilak Lake to the Soldotna Bridge. This would most likely reduce the level of participation in Kenai River sport fisheries that take place in this stretch of the Kenai River, especially in the king, sockeye, and coho salmon, and resident species fisheries by a significant amount and increase the opportunity to fish without power boat anglers. Conflict related to issues such as congestion on the river, bank erosion, and poor quality of the angling experience could be reduced.

BACKGROUND: There are several Kenai River seasonal and reach-specific boat fishing restrictions that have been implemented over the past 20 years. Prior to the 2002 season, fishing on Mondays in May and June was prohibited from any vessel. In February 2002, the board allowed fishing on Mondays from unguided nonmotorized vessels.

Power boats, often in high numbers, are transiting on the river each Monday even though fishing from a motorized vessel is restricted each Monday downstream of Skilak Lake. In July, for example, shore-based anglers (particularly those targeting sockeye salmon) travel to various shore locations and fish from shallow waters or riverbanks throughout the lower river. From July 10–31,

personal use dip net anglers transit the lower river both to and from the lower river area downstream of the Warren Ames Bridge open to dipnetting. Point of origin for river users transiting the river on Mondays in July include state-, city-, and privately-owned boat launches and campgrounds, commercial businesses (e.g., lodges), as well as privately-owned residences throughout the lower river.

In 2008, the board adopted a regulation prohibiting the taking of fish in the Kenai River personal use dip net fishery from a boat powered by a two-stroke motor, other than direct fuel injection. In 2008–2010, these new outboard motor type restrictions reduced hydrocarbon concentrations in the Kenai River that had been in excess of the Department of Environmental Conservation standard of 10 parts per billion during peak use in July.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal. The board has viewed drift boat-only days as an allocative issue. If the board decides to take action on this proposal they should seek the advice of the Department of Law as they may need to tie the effects directly to fishing activity.

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

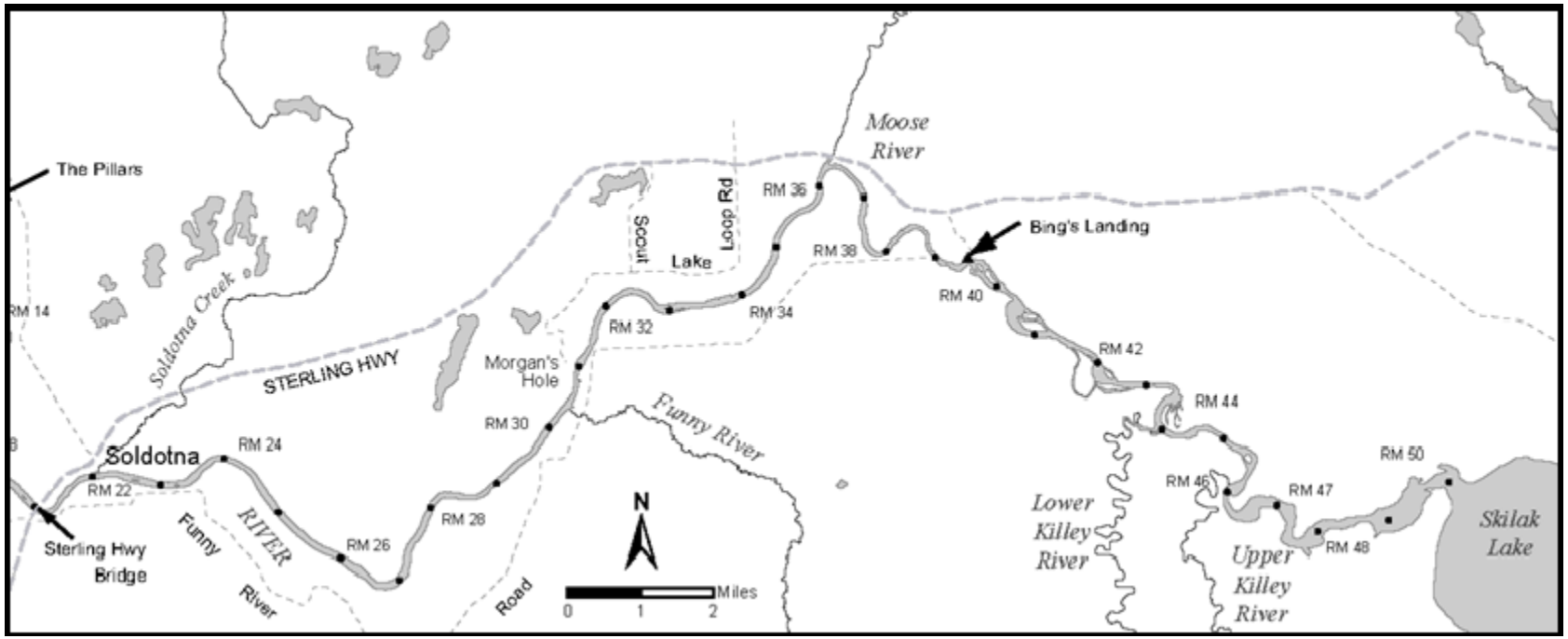

Figure 164.–Map of the Middle Kenai River.

PROPOSAL 169 – Prohibit the use of motorized vessels on the Kasilof River from the Sterling Highway Bridge upstream to the head of Silver Salmon Rapids from January 1 to September 15.

5 AAC 56.122. Special provisions for the seasons, bag, possession, annual, and size limits, and methods and means for the Kenai Peninsula Area.

PROPOSED BY: Charles McCrone.

WHAT WOULD THE PROPOSAL DO? This would prohibit the use of motorized vessels on the Kasilof River from the Sterling Highway Bridge upstream to the head of Silver Salmon Rapids from January 1 to September 15.

WHAT ARE THE CURRENT REGULATIONS? In the Kasilof River drainage, from the Sterling Highway Bridge upstream to ADF&G markers located at the outlet of Tustumena Lake (Figure 169), sport fishing from a boat in not allowed August 1 to August 15. Sport fishing from shore is allowed year-round.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would close the area above the Sterling Highway Bridge open to fishing for anglers fishing from a power boat from January 1 to September 15, which could reduce the harvest of sockeye and coho salmon, as well as resident species by an unknown amount, and increase the opportunity to fish without power boat anglers.. Portions of the Kasilof River corridor riverbank between the Sterling Highway Bridge and Tustumena Lake outlet is private property. Therefore, it is possible that conflicts could arise between landowners and the anglers who may stop to fish from shore. Incidental catch of and illegal fishing for king salmon would presumably decrease, assuming king salmon cannot be targeted from shore, thereby giving some protection to spawning king salmon. Enforcement of the current closure to king salmon fishing in this area would be simplified.

BACKGROUND: The Kasilof River supports both early- and late-run king salmon. King salmon returning to the Kasilof River prior to July 1 originate primarily from Crooked Creek, a Kasilof River tributary and are managed as early-run fish. Late-run king salmon return during July through early September and originate primarily from the mainstem and to a lesser extent Crooked Creek. Late-run king salmon are thought to spawn from mid-August through September. There is no escapement goal for Kasilof River late-run king salmon. From 1996–2006 harvest estimated by the Statewide Harvest Survey has averaged 931 late-run king salmon. In 2005 the department began a late-run king salmon assessment program to estimate run-timing and spawning distribution. Information gained from 2005 allowed the department to add a mark-recapture phase to the program to estimate abundance of late-run Kasilof River king salmon in 2006–2007.

Recently angler effort above the bridge during August has resulted in some enforcement problems associated with anglers actively attempting to take king salmon in an area closed to king salmon fishing under the guise of fishing for coho salmon. Current regulations allow anglers to fish throughout an area where prespawning aggregations of king salmon are easily identified and are vulnerable to fishing. Typically on this section of the Kasilof River during July and August anglers are fishing for sockeye and coho salmon and to a lesser extent resident species such as steelhead

trout. When fishing for coho salmon anglers use a terminal gear configuration (line weight, hook and bait size) similar to that used to fish for king salmon in the Kasilof River. Consequently, anglers may target king salmon in waters closed to king salmon fishing under the false pretext of fishing for coho salmon. Since these anglers use similar terminal gear for coho salmon and generally do not harvest king salmon, law enforcement has difficulty enforcing the king salmon fishing closure. Fishing effort in the upper Kasilof River is relatively low in July and early August, closing sections of the river would result in a loss of fishing opportunity for coho salmon and resident species.

A Federal subsistence fishery also takes place in Kasilof River waters within the Kenai National Wildlife Refuge from the outlet of Tustumena Lake downstream to the first set of rapids (Silver Salmon Rapids). In this fishery salmon may be taken by dip net or rod and reel. Seasons and harvest limits depend on the species. Specifically, king and sockeye salmon may be taken from June 16 – August 15. The harvest limit for king salmon is 10 per permit holder and 2 for each additional household member, while for sockeye the harvest limit is 25 per permit holder and 5 for each additional household member. For coho and pink salmon, the season is June 16 – October 31 and harvest limits are the same as those for king salmon (10 per permit holder and 2 for each additional household member).

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal. The board has viewed drift boat-only days as an allocative issue. If the board decides to take action on this proposal they should seek the advice of the Department of Law as they may need to tie the effects directly to fishing activity.

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. New boats would need to be purchased to participate in fishing the Kasilof River from a nonmotorized vessel. Approval of this proposal is not expected to result in an additional cost for the department.

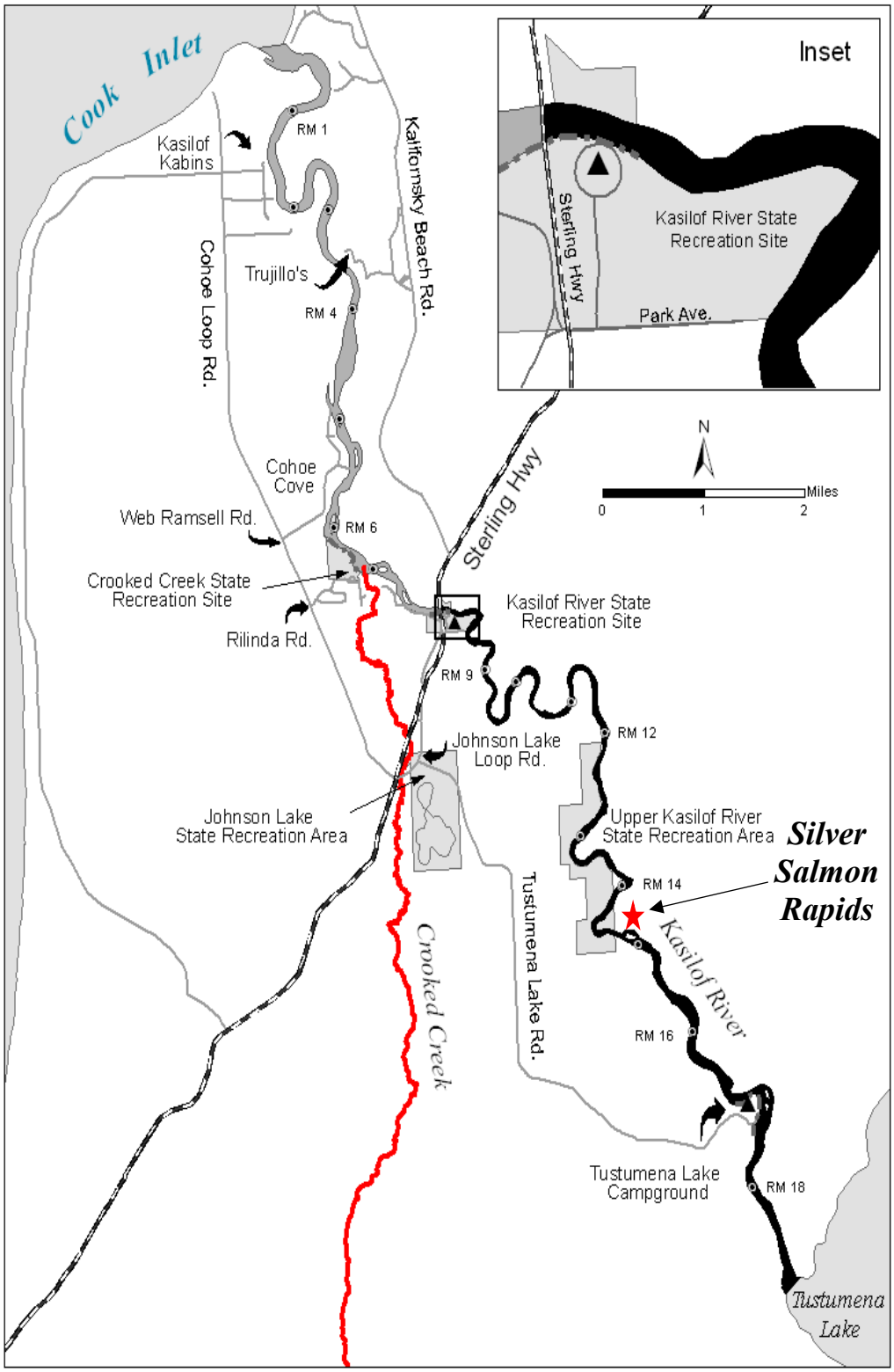

Figure 169.–Map of the Kasilof River.

Miscellaneous Sportfish (17 proposals)

PROPOSAL 221 – Extend the use of bait to September 11 in Unit 2.

5 AAC 61.114. Special provisions for the seasons, bag, possession, and size limits, and methods and means for Unit 2 of the Susitna River Drainage Area.

PROPOSED BY: Matanuska-Valley Fish and Game Advisory Committee.

WHAT WOULD THE PROPOSAL DO? This would extend the use of bait an additional 10 days in Unit 2 of the Susitna River Drainage Area sport fishery

WHAT ARE THE CURRENT REGULATIONS? From September 1 – July 13, in all flowing waters, only unbaited, artificial lures may be used.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would likely increase sport fishing effort and harvest of coho salmon by an unknown, but likely small, amount. Harvest and incidental catch-and-release mortality would increase on rainbow trout, Dolly Varden, and Arctic grayling. A bait fishery through the first 10 days in September could have negative consequences on pre-wintering aggregates of rainbow trout. This would increase regulatory complexity by making Unit 2 different from the rest of the Susitna Drainage.

BACKGROUND: The Susitna River drainage, which includes streams crossing the Parks Highway in Unit 2, contains the majority of wild rainbow trout waters in the Northern and Western Cook Inlet management areas. For several years prior to 1986, the board attempted to accommodate a wide array of individual requests for regulatory reform for conservative rainbow trout management in the Northern Cook Inlet Management Area (NCIMA). In 1984, a 13-member citizen planning team, working with department staff and the angling community, drafted a *Cook Inlet Rainbow Trout/Steelhead Management Policy* (CIRTMP) to provide guidelines for the management of rainbow trout in the NCIMA. The board officially adopted the CIRTMP as the management policy in 1986. The policy provided a systematic approach for selecting fishery regulations, as well as a process for identification of waters for special management. Part of the policy called for management under a conservative yield strategy aimed at maintaining historical size and age compositions and stock levels for wild rainbow trout. Bag and possession limits under this concept are 2 trout, of which only 1 may be 20 inches or more in length; with an annual limit of 2 trout. Harvest is not allowed during the spawning period (April 15–June 14). This management strategy calls for the use of unbaited artificial lures in all flowing waters from September 1 through May 15 to enhance survival of released fish at the time when trout are often targeted. This regulation was implemented in 1987 and set the bait closure from September 1–December 31. Rainbow trout exit the upper reaches of tributaries in the fall (September–October) and ultimately congregate on the lower reaches or completely exit tributaries for the winter months. The bait closure was extended in 1993 to September 1–May 15 to provide further protection to trout reentering Susitna River tributaries following the winter period. This regulation exists for the entire Susitna River drainage. The May 15 date was later extended through July 13, but that action was intended for king salmon conservation.

Statewide management standards for wild trout (5 AAC 75.220), adopted by the board in 2003, currently guides wild rainbow trout regulatory changes. This policy is similar to CIRTMP with respect to protection and conservative management of wild rainbow trout to the effect that no modification of regulations was necessary on the Susitna River drainage when the plan was implemented. Presently, most major rainbow trout fisheries on the Susitna River drainage are catch-and-release, although some allow minimal harvest. Special management waters allowing only catch-and-release fishing have been designated since the late 1980s and now include most of Lake Creek, Deshka River, Willow Creek, and Clear Creek, and; the entire drainages of the North Fork of the Kashwitna and Prairie, Alexander, Fish (Talkeetna River drainage), and Montana creeks. Waters of the Susitna River upstream of Talkeetna River have been designated trophy rainbow trout waters, allowing only one trout over 20 inches per day.

The combination of conservation measures over the years has greatly benefited Susitna River rainbow trout stocks during a time of rapid growth in major trout fisheries in the late 1990s, early 2000s, as indicated by an upward trend in catch during a downward trend in effort (Figure 221-1). Catch stabilized at about 32,000 fish from 2002 – 2013. The reduction to catch in recent years was likely caused by lost days of fishing opportunity due to king salmon restrictions and closures. Most catch can be attributed to Willow and Montana creeks (Table 221-1).

The coho salmon fishery in Unit 2 of the Susitna River overlaps the area and time period in which rainbow trout are migrating to the lower reaches of the river in preparation for winter. Coho salmon are caught throughout August, with the peak of effort around mid-August and then gradually reducing through early September. The 2014–2018 average coho salmon harvest Unit 2 is 7,400 fish (Table 221-2).

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. Regulatory strategies have been carefully crafted and enacted by the board and the department over the past two decades to manage trout conservatively in order to maintain historical conditions as defined under the *Statewide management standards for wild trout (5 AAC 75.220)*. Allowing a bait fishery to occur in area where pre-wintering aggregates of rainbow trout are present would be inconsistent with wild rainbow trout management.

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

Figure 221-1.–Rainbow trout catch in Unit 2 of the Susitna River and sport effort, 1990–2018.

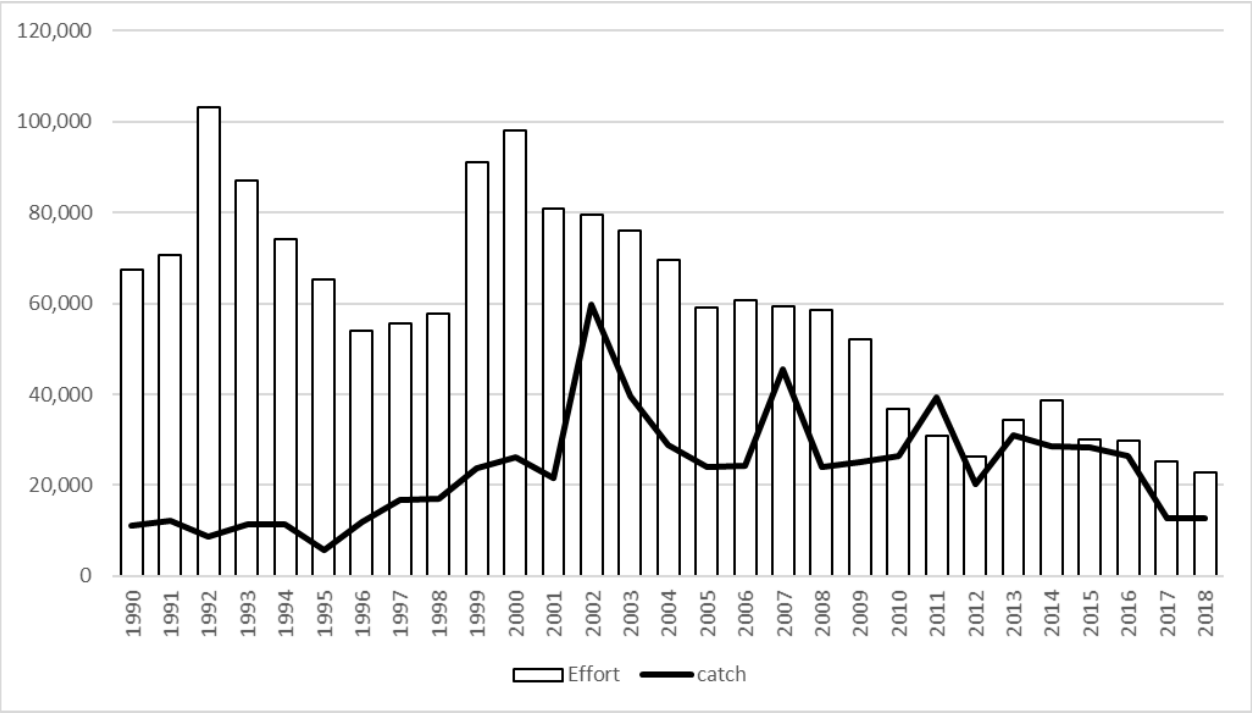

Table 221-1.–Rainbow trout catch in major fisheries within Unit 2 (Parks Hwy streams) of the Susitna River drainage, 1990–2018.

Year	Willow Creek	Little Willow	Kashwitna River	Sheep Creek	Goose Creek	Montana Creek	minor streams	Total
1990	3,914	689	1,630	840	1,378	1,277	1,311	11,039
1991	3,965	1,230	692	1,076	2,183	2,136	907	12,189
1992	3,206	1,124	293	633	617	2,501	285	8,659
1993	3,934	829	995	967	2,054	2,034	673	11,486
1994	4,673	2,024	319	757	1,566	1,807	284	11,430
1995	2,340	730	178	506	280	1,245	324	5,603
1996	4,766	1,077	654	2,077	384	2,828	200	11,986
1997	5,198	1,415	2,177	2,008	2,139	3,473	299	16,709
1998	4,487	1,259	1,593	4,885	333	4,138	414	17,109
1999	11,965	2,484	1,016	1,415	960	5,337	677	23,854
2000	8,836	1,920	2,107	2,173	3,175	7,236	846	26,293
2001	11,510	1,414	882	763	1,103	5,678	324	21,674
2002	22,650	2,821	1,402	9,308	4,063	19,170	216	59,630
2003	13,750	3,576	2,315	5,289	1,691	12,393	495	39,509
2004	10,920	2,293	698	1,869	1,835	10,171	949	28,735
2005	10,863	2,878	961	2,218	685	6,151	327	24,083
2006	10,032	1,744	993	2,716	1,121	7,610	130	24,346
2007	20,905	2,800	163	4,244	506	16,740	203	45,561
2008	8,235	2,597	1,068	1,769	746	8,014	1,619	24,048
2009	14,700	1,707	558	1,137	237	6,474	325	25,138
2010	10,689	2,260	24	5,495	1,567	6,409	34	26,478
2011	19,557	1,109	729	5,709	976	9,836	1,386	39,302
2012	8,207	602	326	870	1,061	8,590	701	20,357
2013	8,973	1,109	103	459	2,618	17,636	194	31,092
2014	13,566	1,090	1,307	1,830	1,924	8,348	410	28,475
2015	14,168	2,326	313	2,597	193	8,482	122	28,201
2016	13,238	4,443	728	934	2,020	4,514	525	26,402
2017	7,116	1,022	137	128	229	4,200	0	12,832
2018	2,643	1,122	467	2,165	664	5,487	149	12,697
2012-2016 Mean	10,146	2,001	590	1,531	1,006	6,206	241	21,721

Table 221-2.–Unit 2 of the Susitna River drainage coho salmon harvest by fishery, 2009–2018.

Year	Willow Creek	Lt. Willow Creek	Kashwitna River	Caswell Creek	Sheep Creek	Goose Creek	Montana Creek	Birch Creek	Sunshine Creek	Total
2009	3,232	1,027	525	607	1,594	635	3,087	320	816	11,843
2010	1,986	1,506	660	670	1,641	132	2,498	345	1,123	10,561
2011	2,055	189	755	129	762	64	780	196	1,046	5,976
2012	918	295	285	160	395	608	1,085	129	957	4,832
2013	1,760	210	541	284	1,699	52	2,428	652	685	8,311
2014	1,408	807	564	99	995	1,593	1,602	172	1,775	9,015
2015	3,127	437	376	203	2,215	519	1,530	0	873	9,280
2016	660	398	217	329	1,037	164	328	34	532	3,699
2017	2,787	582	99	241	1,217	23	1,767	0	1,585	8,301
2018	1,375	1,201	554	102	552	12	991	140	1,821	6,748
2014-2018 mean	1,871	685	362	195	1,203	462	1,244	69	1,317	7,409

PROPOSAL 144 – Align spring sport fishing closure dates for Bishop and Bench creeks.

5 AAC 56.122. Special provisions for the seasons, bag, possession, annual, and size limits, methods and means for the Kenai Peninsula Area.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would align spring sport fishing closure dates for Bishop and Bench creeks to other Kenai area waters.

WHAT ARE THE CURRENT REGULATIONS? In the Bishop Creek drainage, including Daniels Creek from June 15–April 14, flowing waters are open to sport fishing with a spawning closure April 15–June 14.

Bench Creek drainage, including Bench Lake, from June 11–May 1, waters are open to sport fishing with a spawning closure May 2–June 10.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Adjusting the spring closure dates to May 1–June 10 will align spawning closure dates in regulation for the majority of the Northern Kenai Management Area and decrease regulatory complexity. This would close sport fishing one day earlier in the Bench Creek drainages and extend the spawning closure into May in the Bishop Creek drainage (figures 144-1 and 144-2).

BACKGROUND: The department submitted this proposal to provide the board an opportunity to review Northern Kenai Peninsula Area sport fishing regulations and consider changes to simplify and align regulations. At its 2017 meeting the board adopted a suite of proposals submitted by the department to align regulations in the Kenai River drainage. Aligning the spring closure dates in Bishop and Bench creeks should have been part of that package. Nearly all existing regulations for dates to trigger general or special provisions to sport fish regulations are at the first, last or middle day of a month. The purpose is to create regulations: 1) with consistent dates that encompass biological concerns and 2) that are easily understood by the public. Regulations have been adopted in the Kenai River drainage over the years for various fisheries based on biological as well as social issues. In many cases, dates to implement or discontinue regulations for one fishery do not align with regulations for another fishery in the same area. Over time this creates regulations that are disjointed, overly complex, and not implicit to the public. This proposal identifies regulations that would align dates and waters to simplify regulations without impacting fishery management objectives.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal.

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

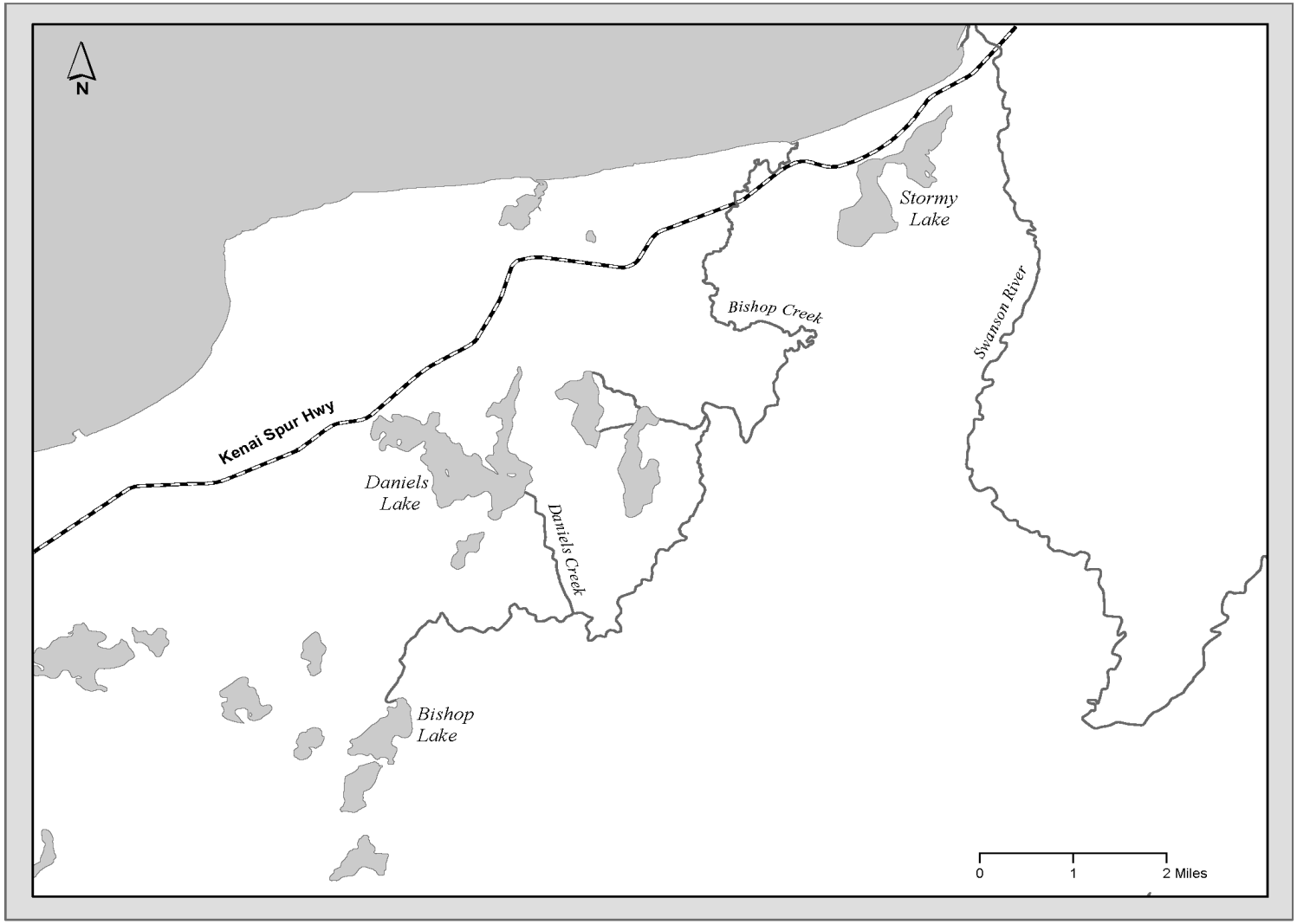

Figure 144-1.–Map of Bishop Creek Drainage.

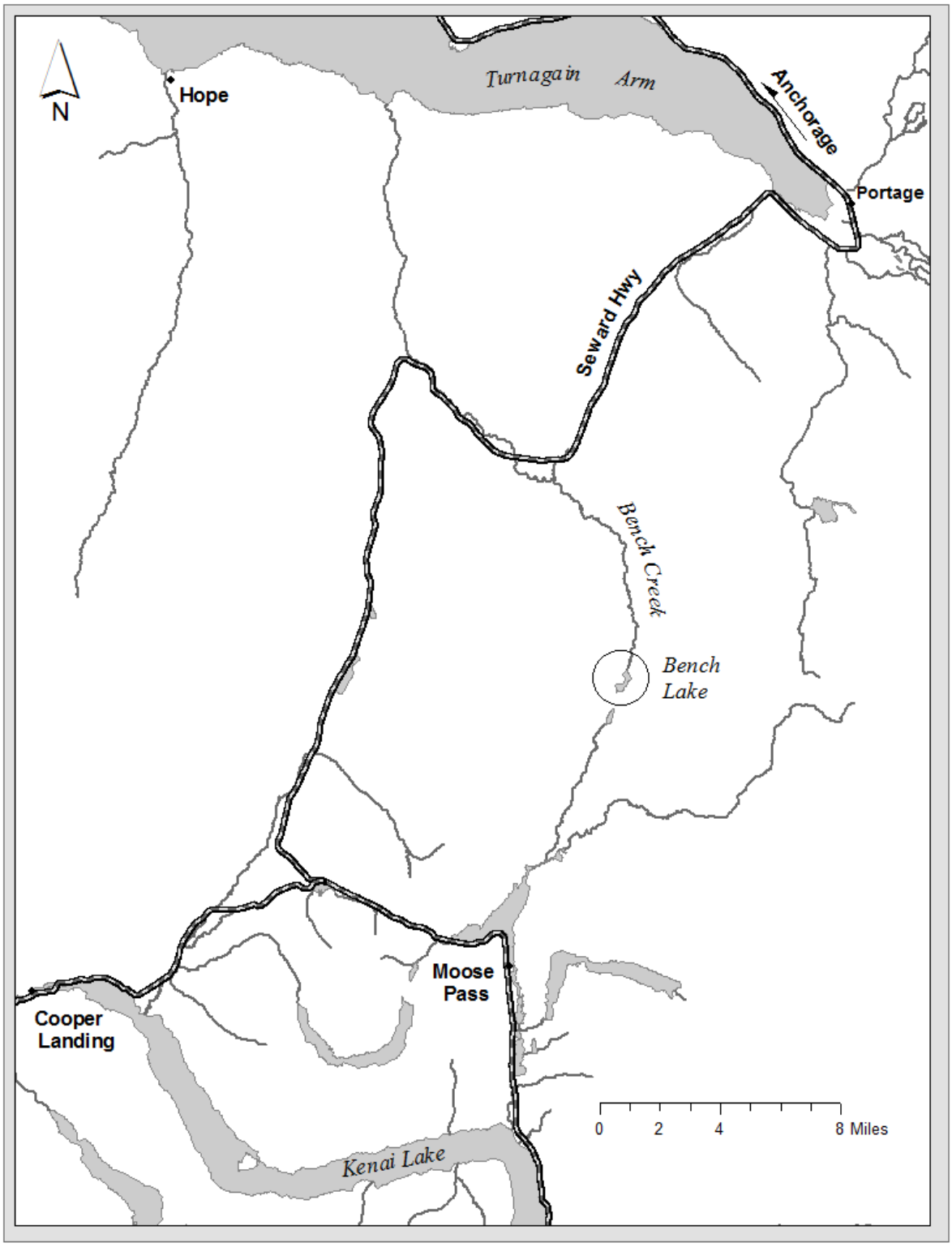

Figure 144-2.–Map of Bench Lake drainage.

PROPOSAL 143 – Clarify the fishing season for jack king salmon on the Kasilof River.

5 AAC 56.122. Special provisions for the seasons, bag, possession, annual, and size limits, methods and means for the Kenai Peninsula Area.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would clarify the fishing season for king salmon less than 20 inches in length (jack) on the Kasilof River.

WHAT ARE THE CURRENT REGULATIONS? In the Kasilof River drainage, excluding Crooked Creek and Tustumena Lake and its tributaries, king salmon 20 inches or greater in length may be taken from January 1 – June 30, upstream of Sterling Highway Bridge, and from January 1 – July 31, downstream of the Sterling Highway Bridge. Bag and possession limit of 1 fish; annual limit of 5 king salmon 20 inches or greater in length.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would clarify the language for the Kasilof River king salmon fishery (5 AAC 56.122) to reflect that fishing for king salmon less than 20 inches (jack salmon) is allowed and the statewide jack king salmon bag and possession limit of 10 fish (5 AAC 75.018) applies.

BACKGROUND: The department submitted this proposal to provide the board an opportunity to review Northern Kenai Peninsula Area sport fishing regulations and consider changes to address regulatory language that is inconsistent with the intended prosecution of the king salmon fishery on the Kasilof River. Current regulation opens the Kasilof River king salmon season for king salmon over 20 inches in length but does not open the fishery to retention of jack king salmon. The board has established statewide regulation governing jack king salmon (5 AAC 75.018) that the department utilizes as default regulation when fishing for king salmon is open unless special provisions are in place for a specific body of water.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. This would reduce regulatory complexity and provide consistency with statewide king salmon fisheries.

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

PROPOSAL 232 – Close the South Fork of Big River to sport fishing.

5 AAC 62.122. Special provisions for the seasons, bag, possession, and size limits, and methods and means for the West Cook Inlet Area.

PROPOSED BY: Danny Brewer.

WHAT WOULD THE PROPOSAL DO? This would close the South Fork of Big River to sport fishing upstream of an island located about 1 ¼ miles upstream of the South Fork confluence with Big River (Otter) Lake to protect spawning sockeye salmon.

WHAT ARE THE CURRENT REGULATIONS? The limit for salmon, other than king salmon, is 3 per day, 6 in possession. From September 1–July 13, only unbaited, artificial lures may be used. In Wolverine Creek, including Big River Lake within a 500-yard radius of the mouth of Wolverine Creek, from June 1–July 31, is fly-fishing-only waters.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Salmon, primarily sockeye salmon, that utilize this area for spawning, would be protected.

BACKGROUND: The Big River drainage supports popular sport fishing opportunities for sockeye and coho salmon fishing. Much of the drainage is semi glacial, infiltrated by many clearwater tributaries. One such tributary enters the South Fork Big River. Sport fishing occurs at the mouth where sockeye salmon congregate and eventually spawn on an alluvial gravel bar (Figure 232-1).

DEPARTMENT COMMENTS: The department **SUPPORTS** this proposal. Closing the South Fork of Big River would protect spawning salmon where they stack up in a small area and are vulnerable to harvest while staging and maturing in the same area they will eventually 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. Approval of this proposal is not expected to result in an additional direct cost for the department.

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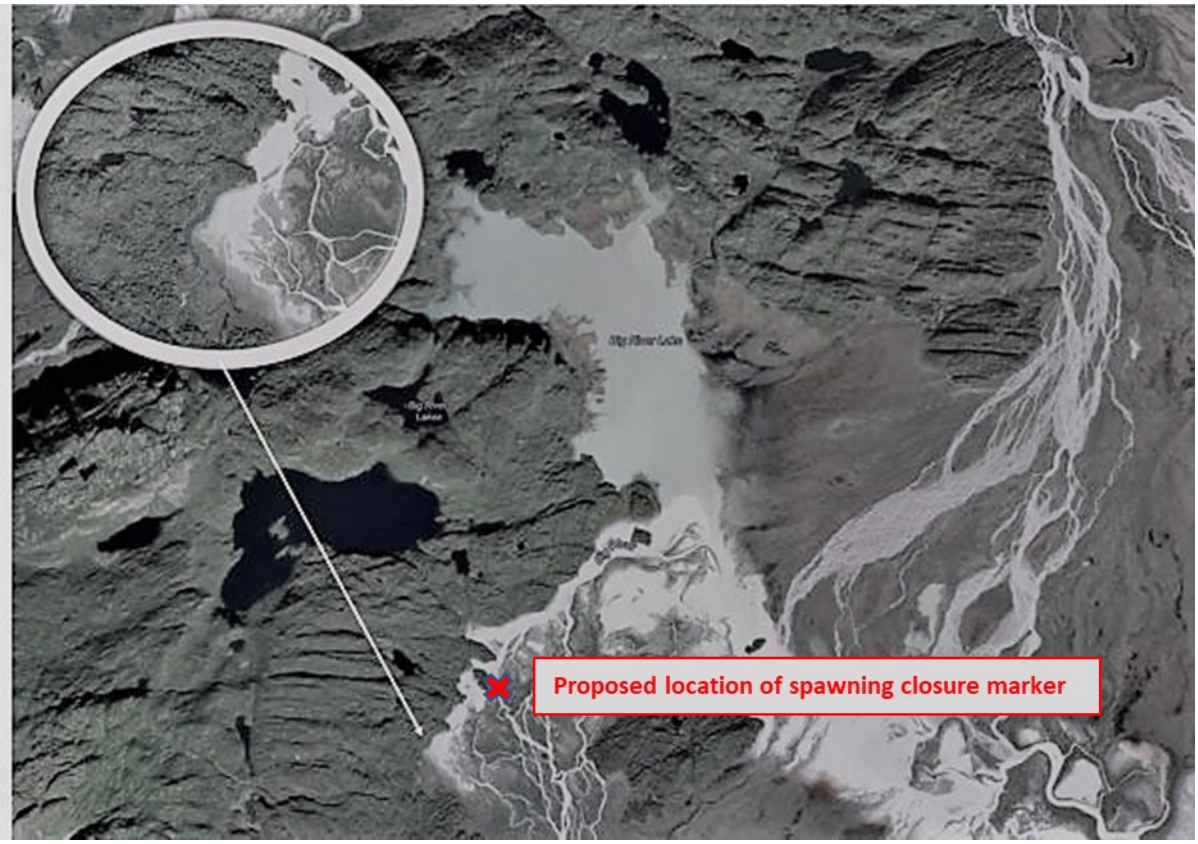

Figure 232-1.–Map of salmon spawning area proposed to be closed to sport fishing

PROPOSAL 231 – Establish limits in the Big River Drainage of two salmon.

5 AAC 62.122. Special provisions for the seasons, bag, possession, and size limits, and methods and means for the West Cook Inlet Area.

PROPOSED BY: Danny Brewer.

WHAT WOULD THE PROPOSAL DO? This would establish limits in the Big River Drainage of 2 salmon 16" or greater in length.

WHAT ARE THE CURRENT REGULATIONS? The limit for salmon, other than king salmon, is 3 per day, 6 in possession. From September 1–July 13, only unbaited, artificial lures may be used. In Wolverine Creek, including Big River Lake within a 500-yard radius of the mouth of Wolverine Creek, from June 1–July 31, is fly-fishing-only waters.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would result in a small decrease in sockeye and coho salmon sport harvest. It may result in a more orderly fishery at the mouth of Wolverine Creek as boats could cycle more quickly through the small clear water area where fishing and bear viewing occurs.

BACKGROUND: The department does not monitor coho or sockeye salmon escapement on WCI area streams and there are no sockeye or coho salmon escapement goals established for Big River. The department relies on the Statewide Harvest Survey to monitor changes in sport fishery effort and harvest over time. The sport fishery is managed under conservative regulations to ensure sustainable harvest. Sport effort and harvest on the Big River system increased beginning in 2003 due to large runs and a corresponding increase in guided effort. Effort increased from about 1,000 angler days prior to 2003, to 4,400 angler days since that year (Table 231-1). Much of this effort is directed at sockeye salmon. Harvest of sockeye salmon prior to 2003 averaged about 1,600 fish. Harvest since 2003 has averaged 4,100 fish. The current harvest level appears to be sustainable under current regulation, although anglers and guides in recent years have expressed concerns over overharvest at the mouth of Wolverine Creek, especially on low water years when sockeye salmon stage at the mouth of Wolverine Creek for prolonged periods of time. Harvest of coho salmon prior to 2003 averaged about 400 fish. Harvest since 2003 has averaged 2,800 coho salmon and has been stable, except for years coho salmon returns were poor throughout NCI, such as 2011–2012 and 2016.

Approximately 40 guides provide sport fishing guide services on this system (Table 231-2), about 850 trips per year. Guided clients fish about 1,100 days to harvest nearly 3,000 coho salmon on the Kustatan River, while 3,300 client days have been expended to harvest an average of 4,800 coho salmon on Big River Lakes since 2006.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. Although the department does not monitor coho or sockeye salmon escapement on WCI area streams and there are no sockeye or coho salmon goals established for Big River, the existing bag and possession limits and methods and means appear to provide for a sustainable fishery. A reduced bag limit at the mouth of Wolverine Creek may result in a more orderly fishery in this high use often congested area where both fishing and bear viewing occurs.

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

Table 231-1.–Coho and sockeye salmon harvest and effort at Wolverine Creek mouth and Big River Lakes, 1996–2018.

	Coho Harvest			Sockeye Harvest			
	Wolverine Creek	Big River Lakes	Total	Wolverine Creek	Big River Lakes	Total	Angler-days
1996	0	600	600	811	1,217	2,028	1,251
1997	0	305	305	700	471	1,171	976
1998	0	264	264	925	357	1,282	815
1999	0	463	463	1,277	506	1,783	1,341
2000	0	325	325	2,607	440	3,047	2,504
2001	0	508	508	549	443	992	960
2002	0	490	490	575	89	664	746
2003	1,035	1,795	2,830	2,700	791	3,491	3,684
2004	1,213	1,357	2,570	2,277	516	2,793	3,322
2005	1,123	2,705	3,828	2,217	1,184	3,401	5,365
2006	1,675	2,278	3,953	3,052	928	3,980	4,975
2007	1,241	1,644	2,885	5,551	1,477	7,028	6,052
2008	3,564	3,560	7,124	3,579	857	4,436	6,430
2009	1,275	1,757	3,032	2,627	1,119	3,746	3,829
2010	960	2,667	3,627	2,809	837	3,646	5,020
2011	801	1,270	2,071	2,252	1,680	3,932	5,014
2012	818	816	1,634	2,915	1,559	4,474	4,076
2013	754	1,539	2,293	3,006	1,019	4,025	5,055
2014	1,118	1,619	2,737	3,210	1,576	4,786	4,348
2015	1,007	1,376	2,383	2,510	1,383	3,893	3,557
2016	425	659	1,084	2,254	1,291	3,545	3,017
2017	651	683	1,334	2,043	2,455	4,498	3,669
2018	490	1,613	2,103	1,724	1,834	3,558	3,261
96-'02 mean	0	422	422	1,063	503	1,567	1,228
03-'18 mean	1,134	1,709	2,843	2,795	1,282	4,077	4,417

Table 231-2.–Guided harvest of coho and sockeye salmon and effort at Wolverine Creek mouth and Big River Lakes, 2006–2016.

	Coho Harvest			Sockeye Harvest					
	Wolverine Creek	Big River Lakes	Total	Wolverine Creek	Big River Lakes	Total	Guides	Trips	Client-days
2006	1,819	6,329	8,148	5,241	2,444	7,685	43	912	3,490
2007	1,360	4,613	5,973	7,346	4,673	12,019	44	956	3,624
2008	988	9,401	10,389	4,475	4,006	8,481	51	1,351	5,327
2009	1,012	3,081	4,093	2,625	4,389	7,014	40	822	3,094
2010	887	4,726	5,613	3,481	2,112	5,593	35	674	2,620
2011	608	2,937	3,545	3,094	3,481	6,575	32	749	2,838
2012	400	2,610	3,010	4,461	3,984	8,445	42	705	2,707
2013	514	3,719	4,233	2,963	3,873	6,836	37	821	3,179
2014	498	2,272	2,770	5,114	5,768	10,882	38	754	2,935
2015	408	2,638	3,046	2,730	4,956	7,686	40	778	3,018
2016	150	1,126	1,276	2,200	4,700	6,900	28	749	2,781
average	786	3,950	4,736	3,975	4,035	8,011	39	843	3,238

PROPOSAL 230 – Allow retention of snagged sockeye salmon.

5 AAC 62.122. Special provisions for the seasons, bag, possession, and size limits, and methods and means for the West Cook Inlet Area.

PROPOSED BY: Adam Housh.

WHAT WOULD THE PROPOSAL DO? This would allow retention of snagged sockeye salmon in the Big River Lakes and Wolverine Creek.

WHAT ARE THE CURRENT REGULATIONS? The limit for salmon, other than king salmon, is 3 per day, 6 in possession. From September 1–July 13, only unbaited, artificial lures may be used. In Wolverine Creek, including Big River Lake within a 500-yard radius of the mouth of Wolverine Creek, from June 1–July 31, is fly-fishing-only waters.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would create an exception to the statewide prohibition on snagging in the fresh waters of Alaska. It would likely increase harvest of sockeye salmon by increasing angler efficiency and may attract additional participants to the fishery. It would likely increase the conflicts between anglers and bear viewers. The waters are designated as fly-fishing-only waters. The area is unique in that it has developed into a destination for bear viewing, relaxing, and fishing amongst bears in a safe environment. These designated waters provide a quality and unique fishing experience that would change dramatically if snagging were permitted. It would create an unenforceable situation where enforcement would have to attempt to prove the snagging is unintentional.

BACKGROUND: Big River Lakes are located on the west side of Cook Inlet, south of the West Foreland, due west of Kenai (Figure 230-1). The Big River drainage supports popular sport fishing opportunities for sockeye and coho salmon fishing. Much of the drainage is semi glacial, infiltrated by many clearwater tributaries. While there are numerous spots to fish for both species around Big River (Otter) Lake and Big River and its forks, the most popular fishing occurs near the inlet of Wolverine Creek where salmon congregate and mill prior to ascending Wolverine Creek to their final spawning destination in Wolverine Lake (Figure 230-2). Most anglers are guided to this spot for a bear viewing, fly fishing experience. At its peak during July, boats line up and cycle through a small clear water area close to the creek inlet for a chance to fish and view bears fishing for salmon. These waters have been designated fly-fishing-only waters to perpetuate a quality fishing experience where more value has been placed on salmon/bear viewing than meat fishing. This is less a meat fishery and more a quality of experience fishery where the impetus is viewing bears that are fishing for salmon while sport fishing.

The department does not monitor coho or sockeye salmon escapement on WCI area streams and there are no sockeye or coho salmon goals established for Big River. The department relies on the Statewide Harvest Survey and guide logbooks to monitor changes in sport fishery effort and harvest over time. The sport fishery is managed under conservative regulations to ensure sustainable harvest. Sport effort and harvest on the Big River system increased beginning in 2003 due to large runs and a corresponding increase in guided effort. Effort increased from about 1,000 angler days prior to 2003, to 4,400 angler days since that year (Table 230-1). Much of this effort

is directed at sockeye salmon. Harvest of sockeye salmon prior to 2003 averaged about 1,600 fish. Harvest since 2003 has averaged 4,100 fish. The current harvest level appears to be sustainable under current regulation, although anglers and guides in recent years have expressed concerns over overharvest at the mouth of Wolverine Creek, especially on low water years when sockeye salmon stage at the mouth of Wolverine Creek for prolonged periods of time. Harvest of coho salmon prior to 2003 averaged about 400 fish. Harvest since 2003 has averaged 2,800 coho salmon and has been stable, with the exception of years coho returns were poor throughout NCI, such as 2011–2012 and 2016.

Approximately 40 guides provide sport fishing guide services on this system (Table 231-2), about 850 trips per year. Guided clients fish about 1,100 days to harvest nearly 3,000 coho salmon on the Kustatan River, while 3,300 client days have been expended to harvest an average of 4,800 coho salmon on Big River Lakes since 2006.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal as it may encourage anglers to snag sockeye salmon in the Big River Lakes and Wolverine Creek. Current harvest levels are considered sustainable, allowing a more effective means to harvest fish may require more conservative regulations. The prohibition of snagging in fresh waters is a longstanding practice in Alaska sport fisheries. The department has had a longstanding position of opposing snagging in fresh waters statewide and continues to maintain that position. In addition, there is some concern for safety in this area. Snagging would be a dangerous method of fishing in this particular fishery where boats are intermingled and congested.

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

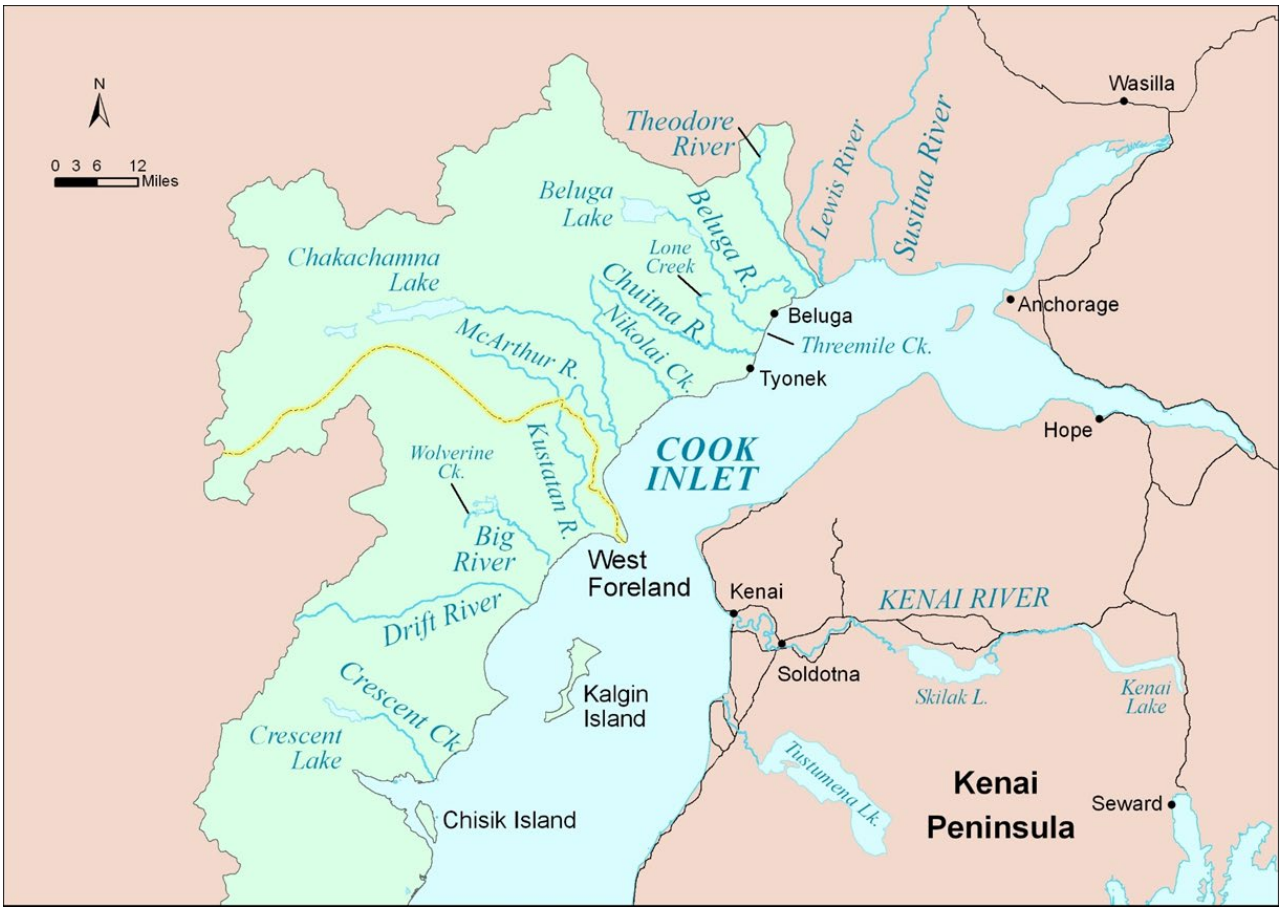

Figure 230-1.–Location of the Big River drainage of West Cook Inlet.

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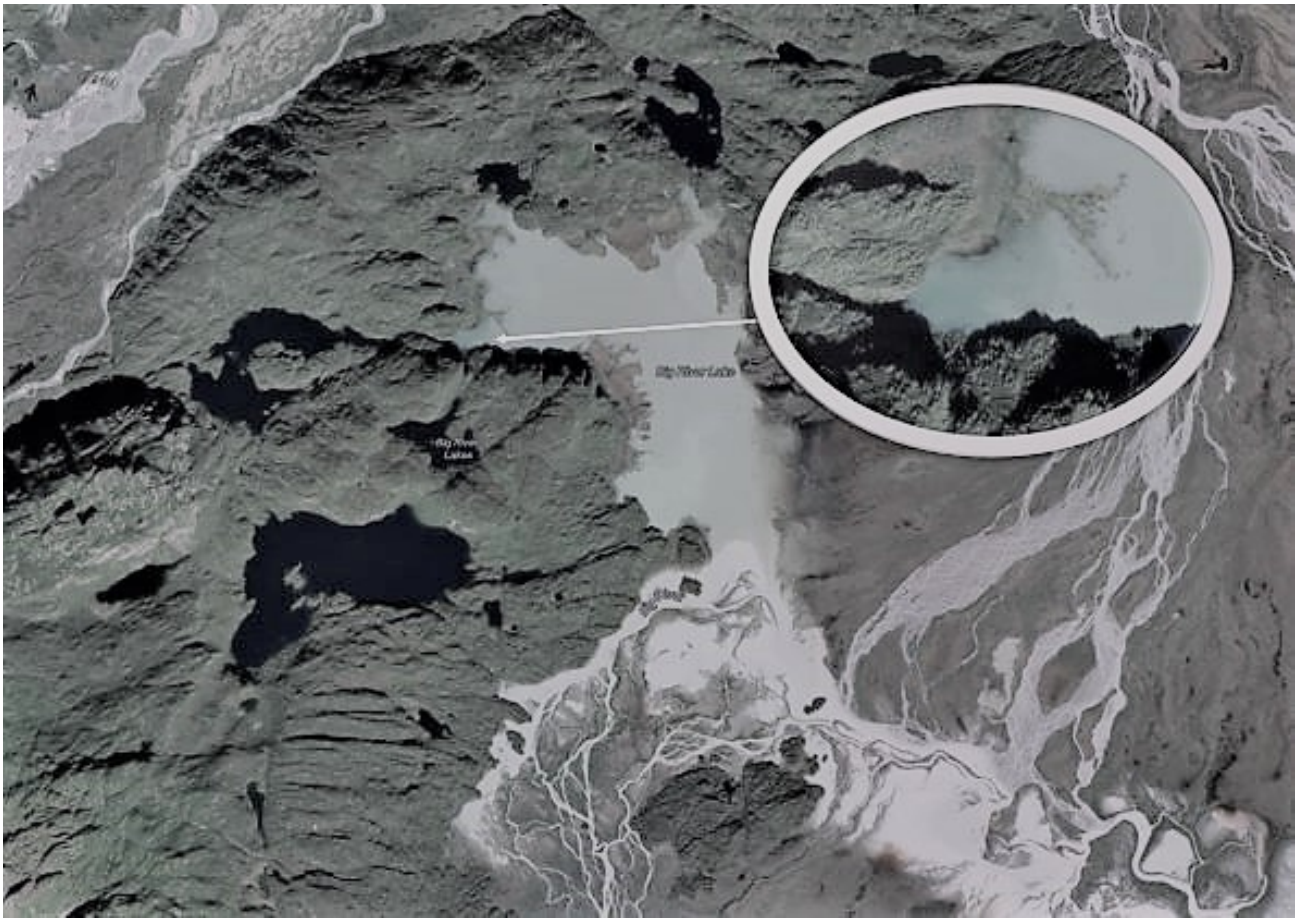

Figure 230-2.–Map of Wolverine Creek salmon fishery area.

Table 230-1.–Coho and sockeye salmon harvest and effort at Wolverine Creek mouth and Big River Lakes, 1996–2018.

	Coho Harvest			Sockeye Harvest			
	Wolverine Creek	Big River Lakes	Total	Wolverine Creek	Big River Lakes	Total	Angler-days
1996	0	600	600	811	1,217	2,028	1,251
1997	0	305	305	700	471	1,171	976
1998	0	264	264	925	357	1,282	815
1999	0	463	463	1,277	506	1,783	1,341
2000	0	325	325	2,607	440	3,047	2,504
2001	0	508	508	549	443	992	960
2002	0	490	490	575	89	664	746
2003	1,035	1,795	2,830	2,700	791	3,491	3,684
2004	1,213	1,357	2,570	2,277	516	2,793	3,322
2005	1,123	2,705	3,828	2,217	1,184	3,401	5,365
2006	1,675	2,278	3,953	3,052	928	3,980	4,975
2007	1,241	1,644	2,885	5,551	1,477	7,028	6,052
2008	3,564	3,560	7,124	3,579	857	4,436	6,430
2009	1,275	1,757	3,032	2,627	1,119	3,746	3,829
2010	960	2,667	3,627	2,809	837	3,646	5,020
2011	801	1,270	2,071	2,252	1,680	3,932	5,014
2012	818	816	1,634	2,915	1,559	4,474	4,076
2013	754	1,539	2,293	3,006	1,019	4,025	5,055
2014	1,118	1,619	2,737	3,210	1,576	4,786	4,348
2015	1,007	1,376	2,383	2,510	1,383	3,893	3,557
2016	425	659	1,084	2,254	1,291	3,545	3,017
2017	651	683	1,334	2,043	2,455	4,498	3,669
2018	490	1,613	2,103	1,724	1,834	3,558	3,261
96-'02 mean	0	422	422	1,063	503	1,567	1,228
03-'18 mean	1,134	1,709	2,843	2,795	1,282	4,077	4,417

PROPOSAL 229 – Extend the Ship Creek youth-only fishery.

5 AAC 59.122. Special provisions for the seasons, bag, possession, annual, and size limits, and methods and means for the Anchorage Bowl Drainages Area.

PROPOSED BY: Dustin Douglas Slinker.

WHAT WOULD THE PROPOSAL DO? This would extend the Ship Creek youth-only fishery on the third Saturday in June by 4 hours by changing the closure from 6 p.m. to 10 p.m.

WHAT ARE THE CURRENT REGULATIONS? Each year, on the third Saturday in June, the section of Ship Creek from the C Street bridge upstream to the Bridge Restaurant (approximately 400 ft.) is open to youth anglers only (15-years of age or younger) from 6 a.m. to 6 p.m. Anglers 16 years or older are not allowed to fish in this section during the youth fishery. Youth anglers are allowed to retain 1 king salmon 20 inches or longer and up to 10 king salmon less than 20 inches in length (Figure 229).

All individuals with a valid sport fishing license can legally fish from the mouth of the creek upstream to a point 100 feet below the Chugach Power Plant dam (marked by a cable stretched across the creek). The entire section of Ship Creek open to sport fishing is approximately 3,500 ft. long. Anglers may fish for king salmon from January 1–July 13 except for in the designated youth fishing zone from 6 a.m. to 6 p.m. on the third Saturday in June. From May 15–July 13 the fishery is closed daily between 11 p.m. and 6 a.m. The current bag and possession limits for king salmon in those waters of Ship Creek open to salmon fishing are 1 king salmon 20 inches or longer; and 10 for king salmon less than 20 inches in length.

The following regulations apply to both youth and all anglers. King salmon 20 inches or longer must be immediately recorded on a sport fishing harvest record card and count towards the annual limit of 5 king salmon from the salt or fresh waters of Cook Inlet north of Bluff Point. A king salmon 20 inches or longer that is removed from the water must be retained and becomes part of the bag limit of the angler that originally hooked the fish. A person may not remove a king salmon from the water before releasing it. After taking a king salmon 20 inches or longer, a person may not sport fish for any species of fish that same day in waters open to sport fishing for king salmon. Harvested king salmon less than 20 inches in length do not need to be recorded and do not count towards the Cook Inlet seasonal limit.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? By extending the youth-only fishery by an additional 4 hours it is likely the number of king salmon caught and harvested by youth anglers will increase by an unknown amount. The Ship Creek fishery is very tidally influenced and by extending the fishery by an additional 4 hours youth anglers may have more time to fish during the preferred stage of the tide. Sport fishing opportunity for anglers 16 years old and older in this section of Ship Creek would be eliminated from 6 p.m. to 10 p.m. on the third Saturday in June.

BACKGROUND: The Ship Creek youth fishery was created in 2017 as the result of a proposal submitted at the Upper Cook Inlet board meeting. This annual youth fishing event is advertised

through social media and has been generally well received. Since the fishery's inception in 2017 the department has attended annually to provide fishing equipment and assistance to youth anglers. Based on annual observations, the department estimates that at least 400 youth participate in this fishery annually and the department loans out between 75 and 124 fishing rods to youth during this fishery. The number of fish harvested during the Ship Creek youth-only fishery is unknown. Anecdotally, it appears that this fishery is growing in popularity and in recent years there has been an increase in the number of families participating with their own fishing gear. The Bait Shack, a local business, also offers free loaner rods to youth during this fishery. Each year the department places signs informing all anglers about the boundary of the youth fishery and youth zone regulations.

DEPARTMENT COMMENTS: The department **SUPPORTS** providing increased opportunity for youth to fish Ship Creek as described in this proposal and is **NEUTRAL** on the allocative aspects of this proposal. If the hours of the youth fishing zone were extended to 11:00 p.m. it would reduce regulatory complexity by encompassing the entire timeframe the creek is open to fishing on a daily basis.

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.

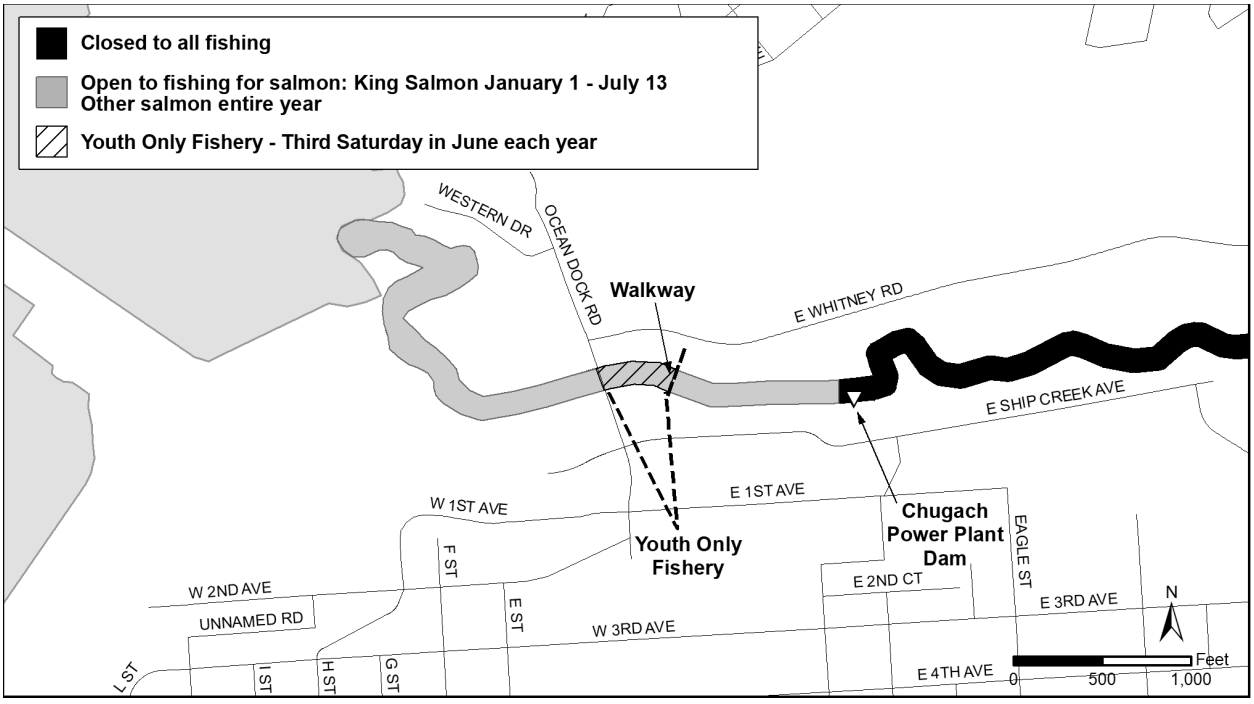

Figure 229.–Map of lower Ship Creek.

PROPOSAL 227 – Open additional days in the sport fishery in the Fish Creek drainage.

5 AAC 60.122. Special provisions for the seasons, bag, possession, annual, and size limits, and methods and means for the Knik Arm Drainages Area.

PROPOSED BY: Matanuska Valley Fish and Game Advisory Committee.

WHAT WOULD THE PROPOSAL DO? This would open additional days in the sport fishery in the Fish Creek drainage to allow fishing on the first two Saturdays and Sundays in July and daily after August 1, except that the youth only fishery would still be designated for the first Saturday-Sunday in August.

WHAT ARE THE CURRENT REGULATIONS? Fish Creek is open from its mouth upstream to a regulatory marker located one quarter mile upstream of Knik Goose Bay Rd to fishing from the second Saturday in August through December 31 on Saturdays and Sundays from 5:00 a.m.–10:00 p.m., except that sport fishing for king salmon is closed. A youth-only fishery is open the first Saturday and Sunday in August from 5:00 a.m.–10:00 p.m.

The PU dip net fishery opens by emergency order between July 15 and July 31 if the department projects that the escapement of sockeye salmon into Fish Creek will be more than 35,000 fish.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The first part of the proposal seeking to add up to two weekends of sport fishing during July, prior to the time period the PU dipnet fishery is typically open, would increase sport harvest by an unknown but likely small amount as few sockeye salmon are present in the fishery prior to July 10.

The second part of the proposal seeking to increase days from 2 to 7 days per week in the sport fishery after August 1 may triple the harvest of coho salmon.

BACKGROUND: Fish Creek has the potential to produce large runs of sockeye salmon (18,800–126,800; escapement range past 10 years) relative to small or moderate runs of coho salmon (1,200–10,300; escapement range past 10 years) (Table 227-1). A PU dipnet fishery has evolved through the years as the primary harvester of sockeye salmon as they enter Fish Creek during July. This fishery has high fishing power and when opened, can harvest as many as 23,000 sockeye salmon (Table 227-2) over a weeklong period while reducing daily weir counts by 95%. The sport fishery is structured to target smaller runs of coho salmon during August where about 1,600 angler-days of fishing effort is expended to harvest an average of 775 coho salmon. Sockeye salmon typically begin entering Fish Creek around July 10. The average quarter point occurs on July 21 and the run is 90% complete by about August 6 (Figure 227-1). Coho salmon begin entering Fish Creek in late July with the quarter point occurring August 11 and midpoint, August 21. As some overlap between the two runs exists, efforts have been made to ensure separation between the two fisheries, by time, to prevent user conflicts as both fisheries occur within the same relatively small area (Figure 227-2). On years sockeye abundance can support a PU fishery, the fishery is typically opened by emergency order about July 24 and runs through July 31. The sport fishery opens in August by regulation with a two-day youth only fishery occurring the first Saturday and Sunday

in August. The sport fishery for all anglers begins the following Saturday and Sunday and continues each weekend through the end of the coho salmon season.

The Fish Creek sport fishery shares the same regulations as other adjacent small streams of Knik Arm. These small streams are restricted primarily to intertidal fisheries and have been open to salmon fishing on weekends only (Saturdays and Sundays) since 1971 because harvestable surpluses could not accommodate continuous daily exploitation and to provide consistency in regulation. Fish, Cottonwood, and Wasilla creeks are managed together as they share similarities in fishery structure and salmon production and because a past study found coho salmon weir counts on these streams to be significantly correlated. Therefore, Fish Creek weir counts are often used to affect inseason management on all 3 streams.

The Fish Creek SEG range of 1,200–4,400 coho salmon has been achieved over the past 10-year period, although narrowly achieved on poor run years of 2011–2012 that were observed areawide (Table 227-1). Fish Creek has been liberalized inseason in 7 of the past 10 years by EO and Fish Creek weir counts used to liberalize Cottonwood and Wasilla creeks on these years (no inseason actions were taken in 2011–2012 or in 2019).

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocative aspects of opening additional days of sport fishing during July. For regulatory simplicity, the department recommends the board consider Saturdays and Sundays June 15–July 14. This small increase in sport harvest of sockeye salmon would be sustainable on most years. The department **OPPOSES** expanding the sport fishery to daily harvest beginning in August. The current regulations for Fish Creek are consistent with other adjacent small Knik Arm streams that tend to be managed together and provides regulatory consistency. For purposes of management and consistency in regulation, the department recommends Fish, Wasilla, and Cottonwood creeks continue to share the same regulations. The department has used EO authority to liberalize the sport fishery in the past and will continue to do so as needed to provide additional harvest opportunity on years of strong abundance.

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

Table 227-1.–Fish Creek sockeye and coho salmon sport fishing effort, harvest, and escapement, 2000–2019.

		Sockeye salmon		Coho salmon			
	Effort (Angler-days)	Escapement (weir count) [a]	Harvest	Escapement (weir count) [b]		Harvest	Inriver harvest rate
2000	1,408	19,533	21	5,218		470	8.3%
2001	1,670	43,498	10	9,247	[d]	361	3.8%
2002	2,776	90,482	147	14,651	[d]	1,233	7.8%
2003	758	91,952	57	1,231	[d]	112	8.3%
2004	2,029	22,157	400	1,415	[cd]	774	
2005	1,461	14,215	79	3,011	[cd]	535	
2006	948	32,562	0	4,967	[cd]	281	
2007	907	27,948	289	6,868	[cd]	120	
2008	1,343	19,339	26	4,868	[cd]	993	
2009	2,050	83,480	647	8,214	[d]	1,178	12.5%
2010	2,161	126,836	632	6,977	[d]	805	10.3%
2011	970	66,678	87	1,428	[cd]	414	
2012	1,220	18,823	548	1,237		274	18.1%
2013	1,000	18,912	193	7,593	[e]	356	4.5%
2014	2,068	43,915	242	10,283		622	5.7%
2015	2,587	102,367	180	7,912		2,041	20.5%
2016	1,629	46,202	308	2,484	[c]	496	
2017	1,250	63,882	0	8,966		358	3.8%
2018	2,896	72,157	968	7,244		1,916	20.9%
2019		76,264		3,025			
Average	1,638	54,060	254	7,215	[d]	776	10.6%

[a] SEG 50,000 from 2000-2001; 20,000-70,000 from 2002-2016; 15,000-45,000 since 2017.

[b] SEG 2,700 from 2000-2001; 1,200-4,400 since 2002.

[c] 2004-2008, 2011, and 2016 weir was removed on August 15 at the historical 35th percertile of the coho run.

[d] Coho salmon counted below weir after it was pulled:
2000-2011: 761 (2000), 800 (2001), 536 (2002), 911 (2003), 1,840 (2004), 825 (2005), 756 (2006), 2,750 (2007), 4,735 (2008), 452 (2009), 57 (2010), 872 (2011).

[e] Incomplete or partial count due to weir submersion.

[f] average includes complete count years only of fish counted through the weir.

Table 227-2.–Fish Creek personal use salmon harvest and escapement, 2009–2018.

	Harvest (dip net)						Escapement	
Year	Sockeye	Coho	Chum	Pink	Chinook	Total	Sockeye	SEG
2009	9,898 [a]	53	33	66	10	10,060	83,480	20,000-70,000
2010	23,705 [b]	3,576	290	1,721	12	29,303	126,836	20,000-70,000
2011	5,236 [c]	905	72	155	2	6,370	66,678	20,000-70,000
2012	No fishery						18,823	20,000-70,000
2013	No fishery						18,912	20,000-70,000
2014	5,829 [d]	1,895	227	4,218	0	12,169	43,915	20,000-70,000
2015	19,260 [e]	3,321	329	1,329	0	24,239	102,367	20,000-70,000
2016	No fishery						46,202	20,000-70,000
2017	4,894 [f]	281	54	273	1	5,503	63,882	15,000-45,000
2018	18,659 [g]	1,779	208	880	5	21,531	72,157	15,000-45,000
Average	12,497	1,687	173	1,235	4	15,596	64,325	

[a] opened by EO at 6:00am August 1 through 11:00pm August 11 based upon projecting in excess of 70,000 fish.

[b] opened by EO at 6:00am July 24 through 11:00pm July 31 based upon projecting in excess of 70,000 fish.

[c] Opened by EO at 6:00am July 29 through 11:00pm July 31 based upon projecting is excess of 50,000 fish.

[d] Opened by EO at 6:00am July 25 through 11:00pm July 31 based upon projecting in excess of 50,000 fish.

[e] Opened by EO at 6:00am July 24 through 11:00pm July 31 based upon projecting in excess of 50,000 fish.

[f] Opened by EO at 6:00am July 26 through 11:00pm July 31 based upon projecting in excess of 35,000 fish.

[g] Opened by EO at 6:00am July 24 through 11:00pm July 31 based upon projecting in excess of 35,000 fish.

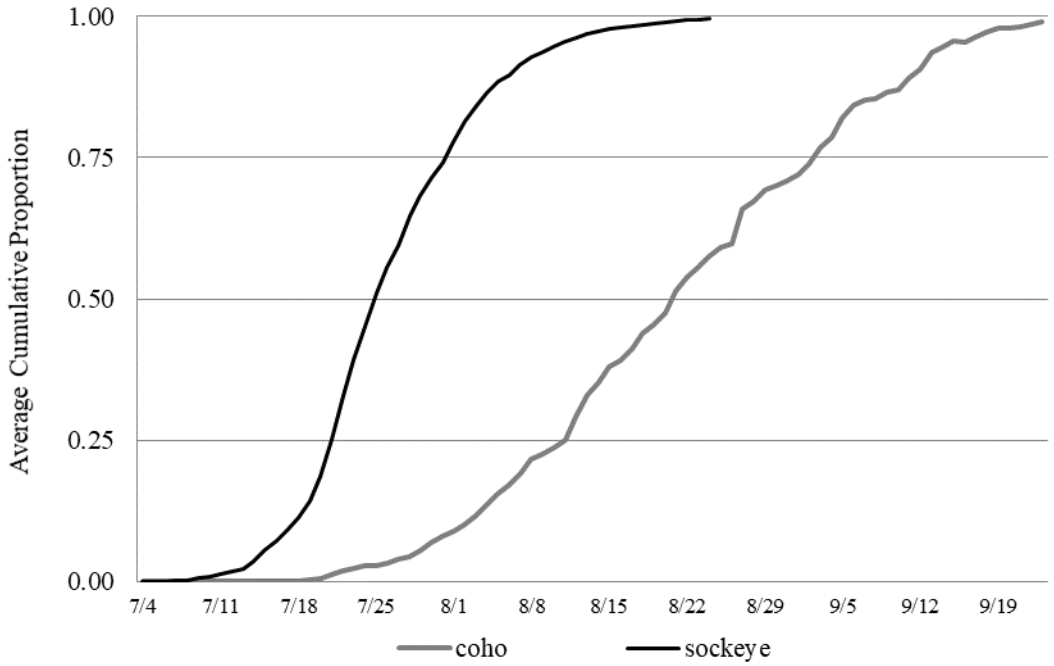

Figure 227-1.–Average cumulative proportion of coho and sockeye salmon counted through the weir at Fish Creek.

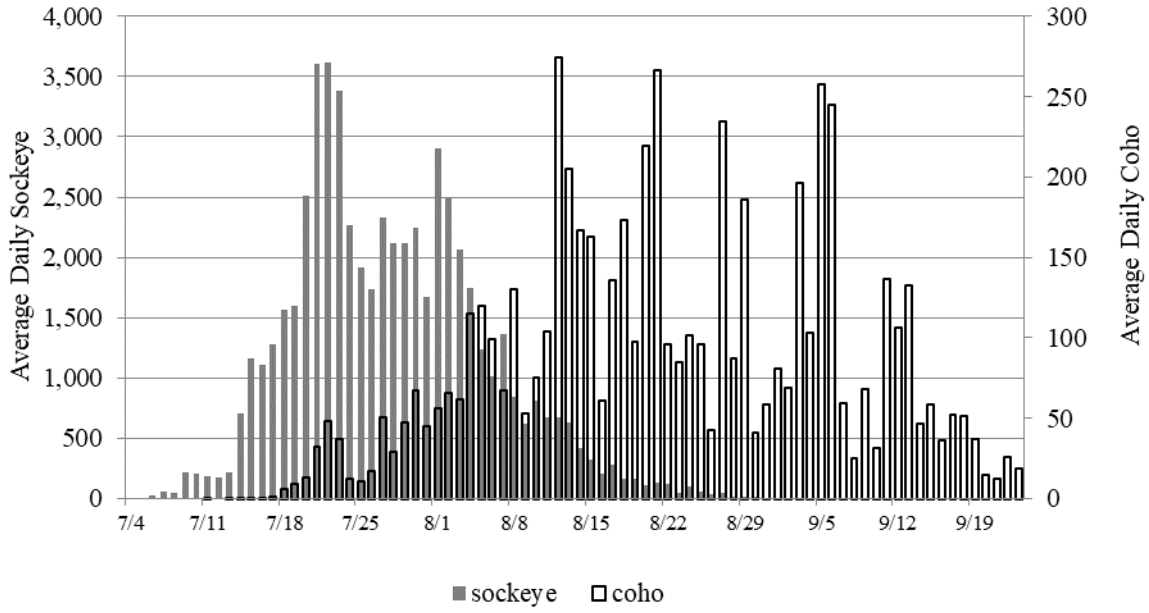

Figure 227-2.–Average daily weir count of coho and sockeye salmon counted through the weir at Fish Creek.

PROPOSAL 228 – Prohibit fishing while wading in Fish Creek.

5 AAC 60.122. Special provisions for the seasons, bag, possession, annual, and size limits, and methods and means for the Knik Arm Drainages Area.

PROPOSED BY: Gene Sandone.

WHAT WOULD THE PROPOSAL DO? This would prohibit fishing while wading in Fish Creek downstream from a marker located 0.1 miles downstream of Knik Goose Bay Road (KGB) from 2.5 hours before high tide through the time of high tide.

WHAT ARE THE CURRENT REGULATIONS? Fish Creek is open from its mouth upstream to a regulatory marker located one quarter mile upstream of KGB to fishing from the second Saturday in August through December 31 on Saturdays and Sundays from 5:00 a.m.–10:00 p.m., except that sport fishing for king salmon is closed. A youth-only fishery is open the first Saturday and Sunday in August from 5:00 a.m.–10:00 p.m.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Prohibiting fishing while wading in Fish Creek for 2.5 hours before high tide through the time of high tide would increase regulatory complexity and enforceability without a measurable biological benefit. It is unknown if this would resolve a social issue between anglers who prefer different fishing techniques or decrease the harvest of salmon by some amount.

BACKGROUND: The Fish Creek sport fishery is structured to target coho salmon during August where about 1,600 angler-days of fishing effort is expended to harvest an average of 775 coho salmon. The sport fishery opens in August by regulation with a 2-day youth only fishery occurring the first Saturday and Sunday in August. The sport fishery for all anglers begins the following Saturday and Sunday and continues each week through the end of the coho season.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. If adopted, this would increase regulatory complexity and enforceability without a measurable biological benefit.

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

PROPOSAL 213 – Allow anglers to use five lines while fishing for northern pike.

5 AAC 60.120. General provisions for the seasons, bag, possession, annual, and size limits, and methods and means for the Knik Arm Drainages Area., 5 AAC 60.122. Special provisions for the seasons, bag, possession, and size limits, and methods and means for the Knik Arm Drainage Area., 5 AAC 61.110. General provisions for the seasons, bag, possession, annual, and size limits, and methods and means for the Susitna River Drainage Area., 5 AAC 61.112. Special provisions for the seasons, bag, possession, and size limits, and methods and means for Unit 1 of the Susitna River Drainage Area., 5 AAC 61.114. Special provisions for the seasons, bag, possession, and size limits, and methods and means for Unit 2 of the Susitna River Drainage Area., 5 AAC 61.118. Special provisions for the seasons, bag, possession, and size limits, and methods and means for Unit 4 of the Susitna River Drainage Area., 5 AAC 62.122. General provisions for the seasons, bag, possession, annual, and size limits, and methods and means for the West Cook Inlet Area., and 5 AAC 62.122. Special provisions for the seasons, bag, possession, and size limits, and methods and means for the West Cook Inlet Area.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would allow anglers to use 5 lines while fishing for northern pike through the ice in designated Northern Cook Inlet (NCI) waters, including Stephan Lake (Knik Arm lake), Parker, Whitsol, Ladyslipper, and Amber lakes (lower Susitna River), Shirley Lake (Willow Creek drainage lake), and Threemile Creek drainage (West Cook Inlet). This further simplifies the codified regulations, listing all 5-line lakes under general regulations vs special regulation sections, where they are currently listed.

WHAT ARE THE CURRENT REGULATIONS? Sport fishing through the ice is permitted with the use of 2 closely attended lines, provided only 1 hook or artificial lure is used on each line. Two lines per angler are allowed when fishing through the ice; 2 hooks are allowed per line, provided that both hooks are attached to 1 single piece of bait.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Increased harvest of northern pike with minimal to no impact to nontarget species. Potential increase in salmon productivity.

BACKGROUND: Northern pike were illegally introduced to the Susitna River drainage of Southcentral Alaska sometime in the early 1950's. This system encompasses tens of thousands of square miles and in terms of political boundaries, is roughly the size of the state of West Virginia. The Susitna River drainage is comprised of glacial rivers, numerous fast and slow clearwater tributaries and side channel sloughs, along with numerous interconnecting shallow lakes and ponds, large deep-water lakes and thousands of acres of adjacent wetland areas. The spread of northern pike in this system was fairly slow through the mid 1980's. However, since then, northern pike have rapidly expanded throughout most of their nonnative range and can now be found throughout much of the Susitna River Drainage, Knik Arm and Anchorage Bowl lakes, and some waters of West Cook Inlet. The bulk of salmonid productivity in Northern Cook Inlet takes place in the numerous fast, clearwater streams and large deep clearwater lakes that support little or no

northern pike habitat. In these areas, predation impacts by invasive northern pike are fairly negligible. However, there are tributaries and lake systems that support vast expanses of northern pike habitat where overlap with salmonid habitat is moderate to severe, and northern pike predation on juvenile salmonids has had catastrophic impacts on salmonid communities. Most of the habitat suitable to northern pike is found within the lower-lying Westside Susitna area. The area from the headwaters of the Deshka River (Petersville Road) across the Kahiltna River to Hewitt Lake, then down to the mouth of the Susitna River, encompasses areas where most of the northern pike populations and habitat exist (Figure 213-1). In the Knik Arm area, most northern pike habitat exists in a triangle created by the Susitna River and Parks Highway south of Willow. This area includes the Nancy Lake, Big Lake, and Little Susitna River drainages, and lakes of the Susitna Flats such as Flathorn and Figure Eight lakes. The amount of available northern pike habitat in the Eastside Susitna area is sparse when compared to that of the Westside or Knik Arm.

Northern pike have been reported by anglers in several Anchorage area lakes since the early 2000's. The department has been able to confirm northern pike in Cheney, Sand, Otter, Lower Fire, and Campbell lakes. Three of these lakes (Cheney, Sand, and Otter) were treated with rotenone to eradicate northern pike. Lower Fire Lake is currently the only lake in the Anchorage area where northern pike are still present (Figure 213-2). Response rates on the SWHS are very low for Lower Fire Lake but it indicates the majority of sport-caught northern pike are harvested. Northern pike have also been detected in Lower Fire Creek although they have not been found in Upper Fire Lake or the creek between the two lakes. Anchorage area lakes will continue to be monitored for the presence of northern pike and removal methods will be determined on a case-by-case basis.

In 1977, the first-year sport harvest estimates were available, harvest of northern pike in the NCIMA was only 132 fish (Figure 213-3). Northern pike harvests slowly increased through 1983 when the harvest totaled 944 fish. Since 1984, harvest of northern pike has greatly increased, likely due to continued range expansion and increased angler interest. Interest in northern pike as a sport fish grew through the 1990s as concerns about their spread increased and regulations were subsequently liberalized. In 1996, the board liberalized northern pike regulations throughout NCI by increasing the bag and possession limit from 10 fish to no bag limit. Additional action taken provided for the use of 5 lines through the ice in select NCI lakes where northern pike were prolific. In 1998, action resulted in allowing the use of bow and arrow and spear for taking northern pike.

During the 2002, 2008, and 2011 board meetings, additional lakes were added to the list of lakes where 5 lines were allowed through the ice to take northern pike (Figure 213-4). Currently, all lakes and streams designated for use of 5 lines contain predominantly northern pike. Harvest stabilized between 1999–2010 at about 10,200 fish (Figure 213-3). Harvest has increased since, with peaks of 18,800 fish in 2013 and 17,500 fish in 2015.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal to encourage anglers to harvest northern pike. Other systems that primarily contain northern pike have regulations allowing anglers to use 5 lines through the ice. Expanding that list to include the proposed waters may encourage anglers to fish these areas and harvest northern pike.

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

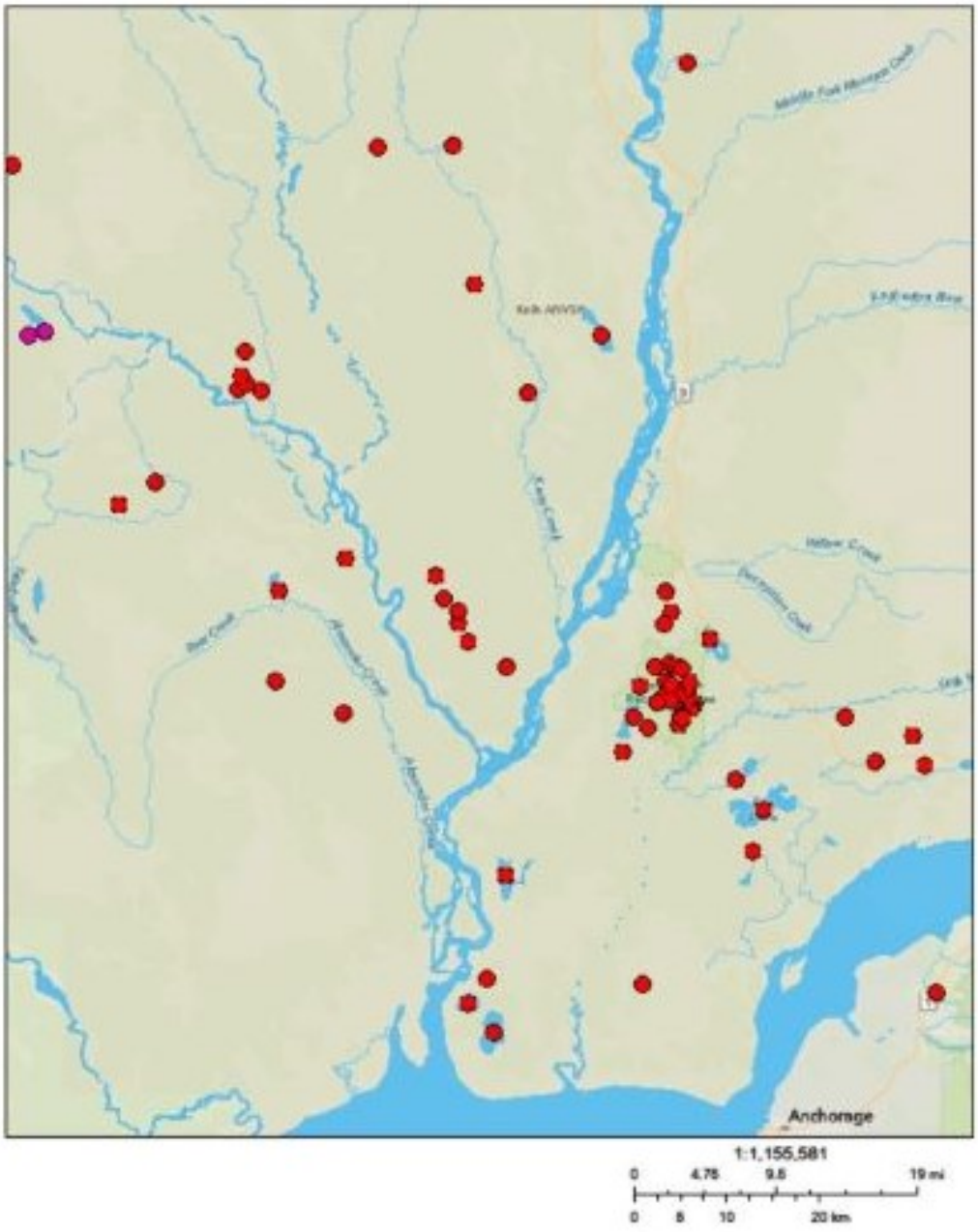

Figure 213-1.–Map of confirmed northern pike waters in the Susitna and Knik areas of Northern Cook Inlet.

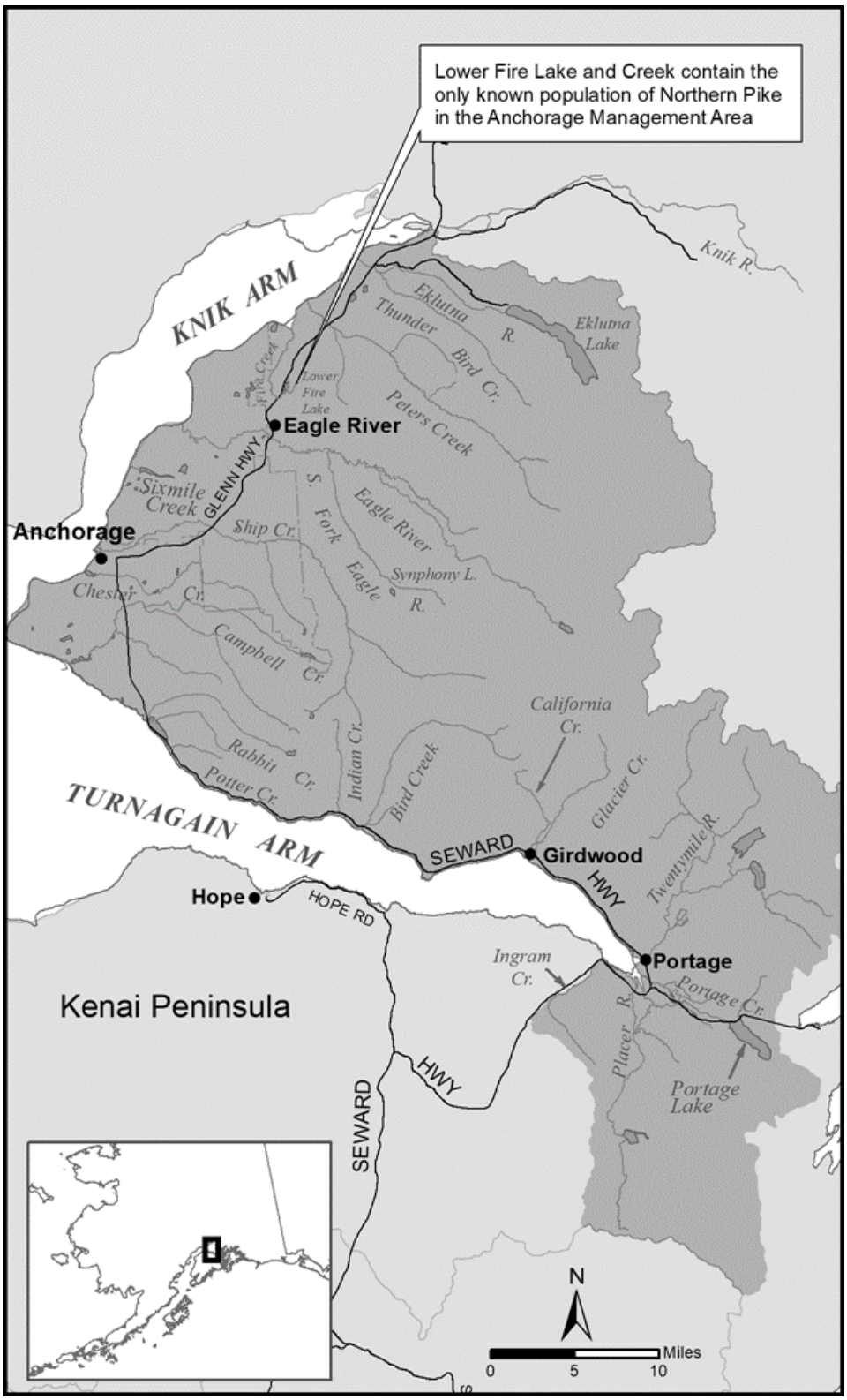

Figure 213-2.–Map of the Anchorage Management area.

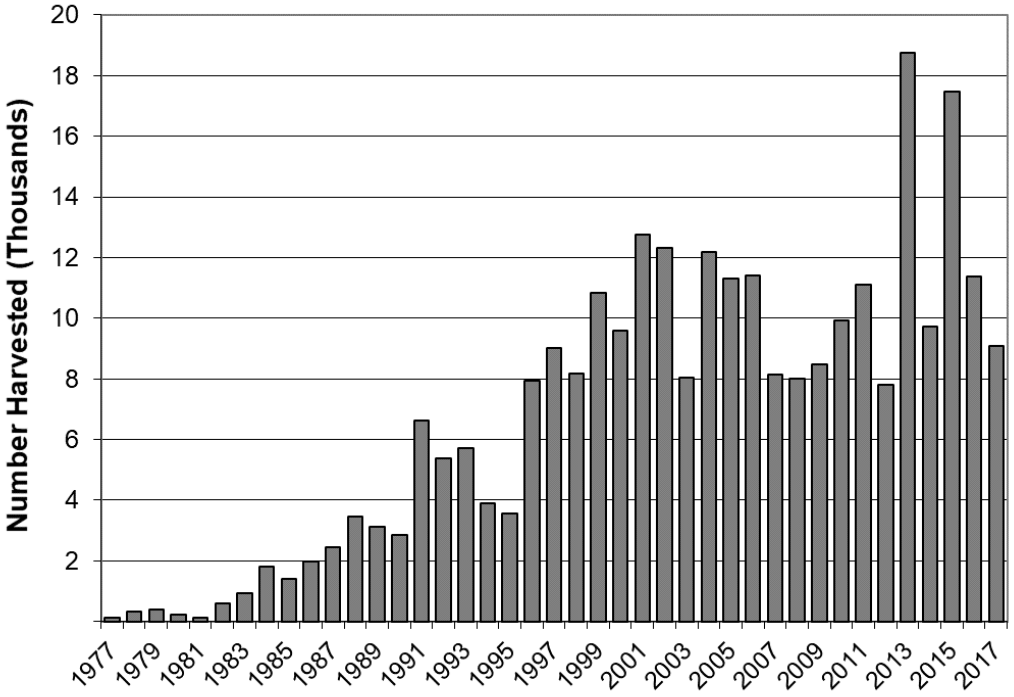

Figure 213-3.–Northern Cook Inlet sport harvest of northern pike.

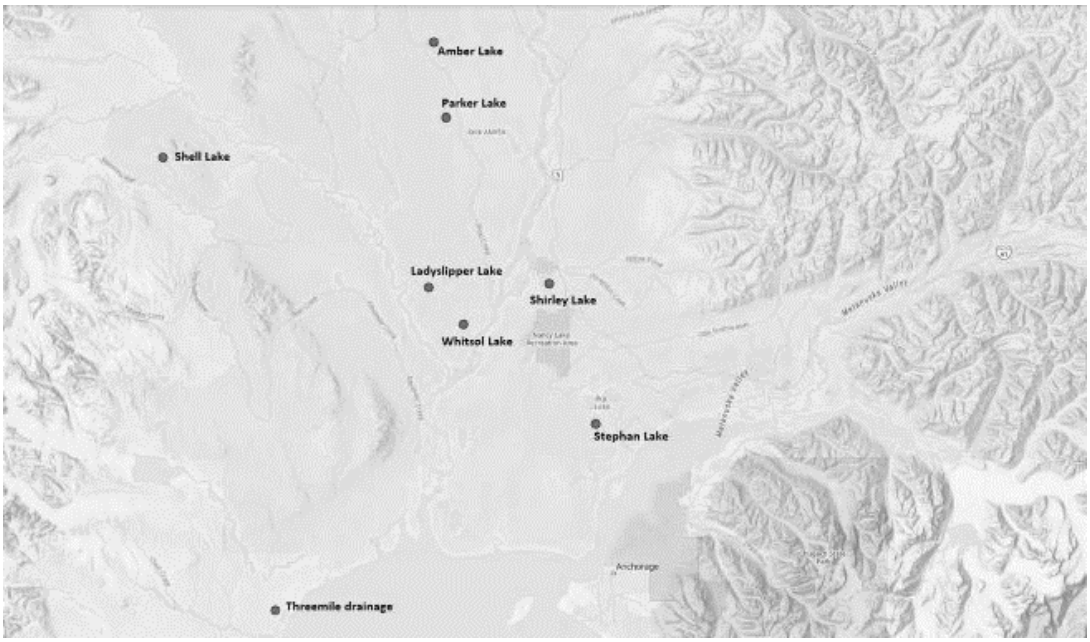

Figure 213-4.–Map of proposed 5-line lake waters.

PROPOSAL 222 – Allow fishing for rainbow trout on days closed to king salmon fishing.

5 AAC 61.114. Special provisions for the seasons, bag, possession, and size limits, and methods and means for Unit 2 of the Susitna River Drainage Area.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would allow anglers to fish for rainbow trout and other resident species on days closed to king salmon fishing within Unit 2 of the Susitna River drainage. Recommended language in the proposal states "sport fishing for king salmon is open only from the third Monday in June…" but should say "sport fishing for king salmon is open through the third Monday in June…"

WHAT ARE THE CURRENT REGULATIONS? Currently fishing for rainbow trout and other resident species is closed in the lower sections of streams within Unit 2 of the Susitna River drainage (Parks Highway streams) on days closed to king salmon fishing. From June 15 to April 14, the bag limit for rainbow trout is two per day and in possession of which only one may be 20 inches or longer. From April 15 to June 14, no retention of rainbow trout is allowed. Montana Creek and Willow Creek downstream of the Parks Highway are designated special management waters for rainbow trout where retention is prohibited year-round.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Increased fishing opportunity for rainbow trout anglers and an increase in rainbow trout catch. An unknown but likely small increase in the incidental catch of king salmon.

BACKGROUND: King salmon within Unit 2 tend to stage and become increasingly concentrated in the mouth and lower reaches of tributaries, such as Willow and Montana creeks, as they mature for spawning. The department issued preseason EOs closing streams within this area to fishing for king salmon in 2018 and 2019 to address king salmon shortages. These EOs allowed fishing for finfish species other than king salmon on days normally closed in regulation to mitigate lost opportunity to fish for king salmon. The result was 20 additional days of fishing opportunity for trout anglers.

Rainbow trout fisheries experienced a period of rapid growth in the late 1990s, early 2000s, as indicated by an upward trend in catch during a downward trend in effort (Figure 222-1). Catch stabilized at about 32,000 fish from 2002 through 2013. The reduction in catch in recent years was likely caused by lost days of fishing opportunity due to king salmon restrictions and closures.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. This change would simplify regulations by providing regulatory consistency with other areas where popular fisheries for both resident fish and king salmon overlap.

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

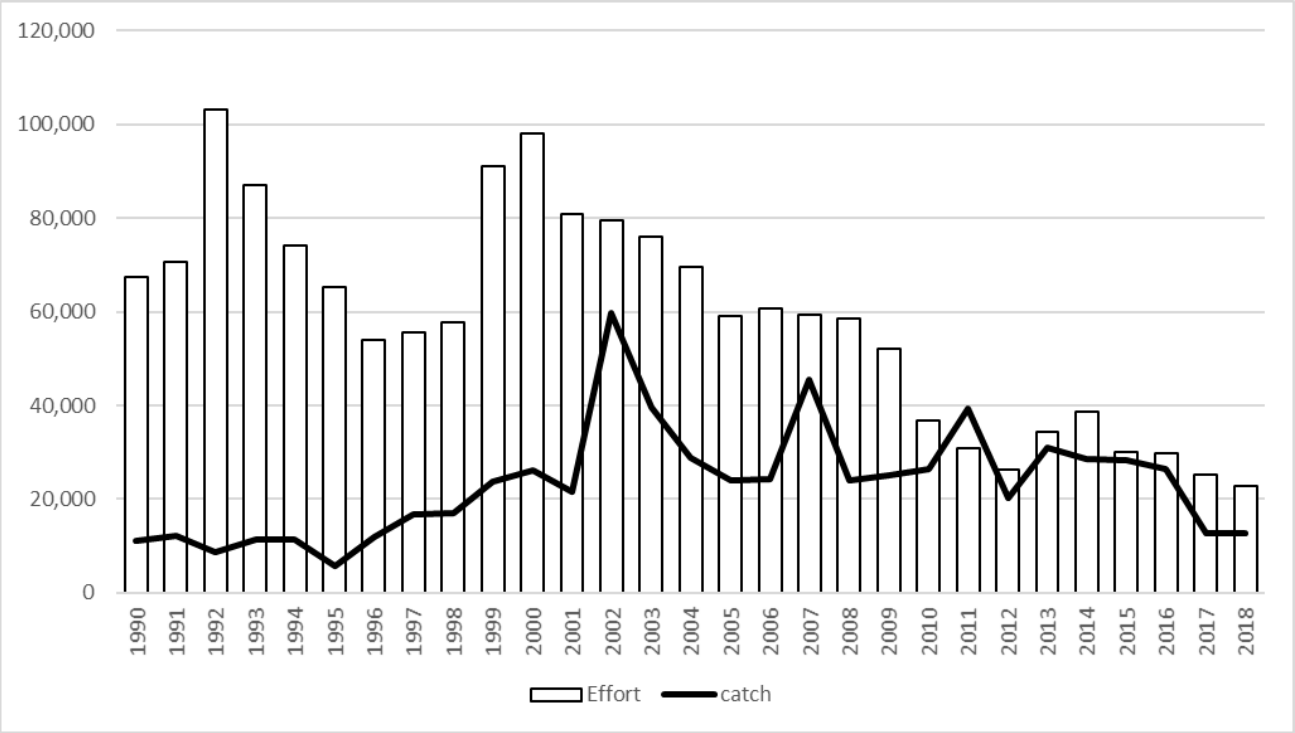

Figure 222-1.–Rainbow trout catch in Unit 2 of the Susitna River and sport effort, 1990–2018.

PROPOSAL 233 – Allow fishing in the vicinity of the Threemile Lake outlet.

5 AAC 62.122. Special provisions for the seasons, bag, possession, and size limits, and methods and means for the West Cook Inlet Area.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would allow sport fishing for fish, other than salmon, in the vicinity of the Threemile Lake outlet.

WHAT ARE THE CURRENT REGULATIONS? Threemile (Tukhallah) Lake is closed to sport fishing within a 300-foot radius of the lake outlet (Figure 233-1). The remainder of the lake is closed year-round to all salmon fishing but sport fishing for other species is allowed. Sport fishing through the ice for northern pike is allowed using 5 lines. Standard ice fishing gear must be used, the fishing gear must be closely attended, and all other fish caught must be released immediately. Anglers may use two hooks on a single line, provided that both hooks are attached to the one single piece of bait.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would increase harvest of northern pike because their densities have been found to be highest near the lake outlet.

BACKGROUND: In spring of 2018, the department and Tyonek Tribal Conservation District conducted an extensive study and suppression of northern pike in the Threemile Creek drainage, located in West Cook inlet near Tyonek. The drainage used to support all five Pacific salmon species along with rainbow trout but is now completely dominated by northern pike. In the nearly 5,000 hours of gill netting effort, northern pike were the only species captured (over 1,200) besides 4 small Dolly Varden. The highest density of northern pike occurs in the Threemile Lake outlet and the upper part of Threemile Creek (Figure 233-1) where they predate on the few remaining coho salmon fry and smolts naturally funneled into that narrow area. The area in the vicinity of the lake outlet was closed to all sport fishing in 1992 primarily to protect spawning sockeye salmon.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. If open to sport fishing for northern pike, anglers could harvest northern pike in this area of the drainage where densities are highest and potentially assist salmon recovery in this system. The lake would remain closed to salmon fishing.

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

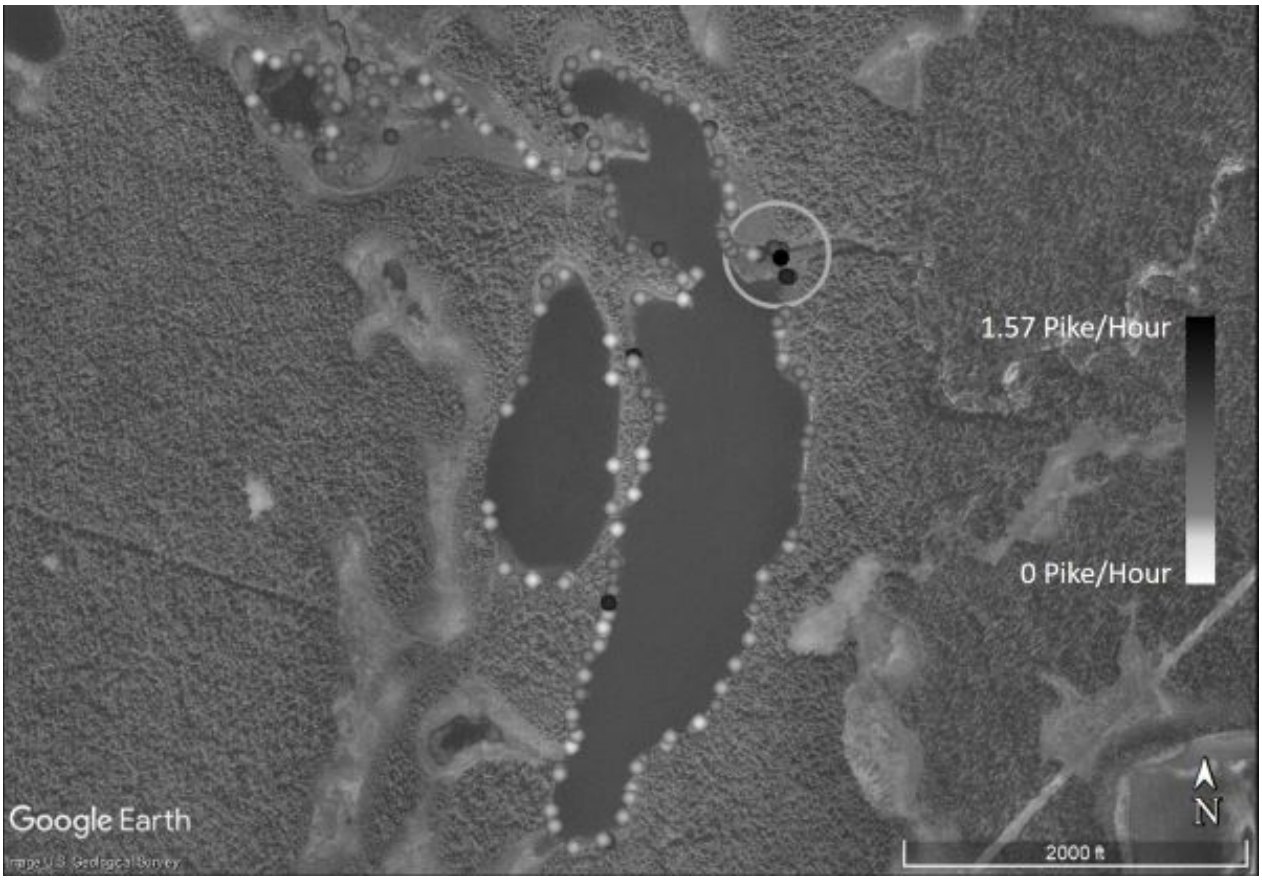

Figure 233-1.–Catch per unit effort of northern pike gillnetted in Threemile Lake, 2018.

PROPOSAL 214 – Prohibit live release of northern pike.

5 AAC 59.120. General provisions for the seasons, bag, possession, and size limits, and methods and means for the Anchorage Bowl Drainages Area., and 5 AAC 60.120. General provisions for the seasons, bag, possession, annual, and size limits, and methods and means for the Knik Arm Drainage Area.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would prohibit live release of northern pike in the Anchorage Bowl and Knik Arm management areas.

WHAT ARE THE CURRENT REGULATIONS? Intentional waste or destruction of any sport caught fish is prohibited, including northern pike, in the Knik Arm and Anchorage Bowl. In the Knik Arm and Anchorage Bowl, there is no bag, possession, or size limit on northern pike. Northern pike may be taken using sport fishing gear, spear, or bow and arrow (the arrow must be attached to the bow with a line and the arrow must have a barbed tip). When fishing through the ice for northern pike, anglers may use two hooks on a single line, provided that both hooks are attached to a single piece of bait.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Increased removal of northern pike because any sport caught northern pike would have to be killed and could not be released live back into the water. Regulations would align with adjacent management areas where catch-and-kill regulations have been implemented, thereby creating consistency in regulation and enforcement.

BACKGROUND: During the 2011 board cycle, a proposal was passed prohibiting the live release of northern pike in the West Cook Inlet and all units of the Susitna River Drainage, areas where king salmon stocks of concern had been identified. However, the remaining waters in southcentral containing northern pike were not included in that proposal.

Northern pike were illegally introduced to Derks Lake on the Kenai Peninsula in the 1970's. Over the course of several decades, they spread throughout the Soldotna Creek drainage and were introduced to other northern Kenai Peninsula lakes with the help of further illegal introductions. In 2008, the department completed the first northern pike eradication project on the Kenai Peninsula in Arc Lake. Over the following decade, northern pike eradication projects occurred on 20 water bodies on the Kenai Peninsula, with the last lakes treated in October 2018 in the vicinity of Tote Road in Soldotna. At the time, these were the last known water bodies to contain northern pike on the Kenai Peninsula. The board proposals generated by the department were drafted in early spring of 2019, when it was believed the Kenai Peninsula was free of northern pike. Unfortunately, in May 2019, northern pike were discovered in Vogel Lake, which is on the northern tip of the Kenai Peninsula. Follow up surveys of the area determined northern pike presence is limited to Vogel Lake, North Vogel Lake, and the outlet stream Miller Creek. Barriers have been put in place to prevent movement of northern pike further up the drainage. Though eradication from these waters is anticipated, it is unknown when northern pike eradication efforts will occur.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal to expand mandatory retention of northern pike to the Anchorage Bowl and Knik Arm areas to promote consistency in regulation between adjacent management areas and reduce predation through northern pike suppression.

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

PROPOSALS 223 and 224 – Allow multiple hooks in Susitna drainage for rainbow trout.

5 AAC 61.114. Special provisions for the seasons, bag, possession, and size limits, and methods and means for Unit 2 of the Susitna River Drainage Area; 5 AAC 61.116. Special provisions for the seasons, bag, possession, and size limits, and methods and means for Unit 3 of the Susitna River Drainage Area; 5 AAC 61.118. Special provisions for the seasons, bag, possession, and size limits, and methods and means for Unit 4 of the Susitna River Drainage Area; 5 AAC 61.120. Special provisions for the seasons, bag, possession, and size limits, and methods and means for Unit 5 of the Susitna River Drainage Area; 5 AAC 61.122. Special provisions for the seasons, bag, possession, and size limits, and methods and means for Unit 6 of the Susitna River Drainage Area; and 5 AAC 61.185. Special management areas for rainbow trout in the Susitna River Drainage Area.

PROPOSED BY: Gene Sandone.

WHAT WOULD THE PROPOSAL DO? This would allow more than one unbaited, single-hook, artificial lure in Units 2-6 and in areas designated special management areas for rainbow trout.

WHAT ARE THE CURRENT REGULATIONS? In flowing waters, only one, single-hook lure is allowed September 1–May 31. Multiple hook lures are allowed June 1-August 31. Bait is allowed July 14–August 31. Waters designated as special management waters for rainbow trout within the Susitna River drainage allow only one unbaited, single-hook, artificial lure year-round.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would increase the catch and harvest of rainbow trout and other resident species concentrated while transitioning to overwintering habitat in the Susitna and Yentna mainstems during fall and spawning habitat in upland tributaries during the spring. This may increase the amount of time it takes to unhook and release a rainbow trout. May increase catch and harvest of rainbow trout and other resident species and salmon by an unknown amount. Regulations allowing multiple hooks in special management waters of units 2-6 would differ from single hook only regulations in other management areas designated special management waters.

BACKGROUND: The Susitna River drainage, which includes streams crossing the Parks Highway in Unit 2, contains the majority of wild rainbow trout waters in the Northern and Western Cook Inlet management areas. For several years prior to 1986, the board attempted to accommodate a wide array of individual requests for regulatory reform for conservative rainbow trout management in the Northern Cook Inlet Management Area (NCIMA). In 1984, a 13-member citizen planning team, working with department staff and the angling community, drafted a *Cook Inlet Rainbow Trout/Steelhead Management Policy* (CIRTMP) to provide guidelines for the management of rainbow trout in the NCIMA. The board officially adopted the CIRTMP as the management policy in 1986. The policy provided a systematic approach for selecting fishery regulations, as well as a process for identification of waters for special management. Part of the policy called for management under a conservative yield strategy aimed at maintaining historical size and age compositions and stock levels for wild rainbow trout. Bag and possession limits under this concept are 2 trout, of which only 1 may be 20 inches or more in length; with an annual limit

of 2 trout. Harvest is not allowed during the spawning period (April 15–June 14). This management strategy calls for the use of unbaited artificial lures in all flowing waters from September 1 through May 15 to enhance survival of released fish at the time when trout are often targeted. This regulation was implemented in 1987 and set the bait closure from September 1–December 31. Rainbow trout exit the upper reaches of tributaries in the fall (September–October) and ultimately congregate on the lower reaches or completely exit tributaries for the winter months. The bait closure was extended in 1993 to September 1–May 15 to provide further protection to trout reentering Susitna River tributaries following the winter period. This regulation exists for the entire Susitna River drainage. The May 15 date was later extended through July 13, but that action was intended for king salmon conservation.

Statewide management standards for wild trout (5 AAC 75.220), adopted by the board in 2003, currently guides wild rainbow trout regulatory changes. This policy is similar to CIRTMP with respect to protection and conservative management of wild rainbow trout to the effect that no modification of regulations was necessary on the Susitna River drainage when the plan was implemented. Presently, most major rainbow trout fisheries on the Susitna River are catch-and-release, although some allow minimal harvest. The Talachulitna River was the first waters designated as special management waters for rainbow trout in 1977 where only catch-and-release fishing is allowed year-round and only one unbaited, single-hook, artificial lure allowed as terminal gear (Figure 223-1). Other special management waters allowing single hook only catch-and-release fishing have been designated since the late 1980s and now include most of Lake Creek, Deshka River, Willow Creek, and Clear Creek, and; the entire drainages of the North Fork of the Kashwitna and Prairie, Alexander, Fish (Talkeetna River drainage), and Montana creeks. Waters of the Susitna River upstream of Talkeetna River have been designated trophy rainbow trout waters, allowing only one trout over 20 inches per day.

Average rainbow trout catch in the Susitna River drainage 2009–2013 was 53,768 fish. A more recent average of 42,947 fish occurred 2014–2018 (Table 223-1). Average rainbow trout harvest from 2009–2013 was 6,156 fish. A more recent average of 5,632 occurred 2014–2018.

DEPARTMENT COMMENTS: The department **OPPOSES** these proposals. Regulatory strategies have been carefully crafted and enacted by the board and the department over the past four decades to manage trout conservatively in order to maintain historical conditions as defined under the *Statewide management standards for wild trout (5 AAC 75.220)*. Allowing multiple hooks would be inconsistent with wild rainbow trout management and alter a management strategy that has been maintaining healthy trout populations since the late 1970s.

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

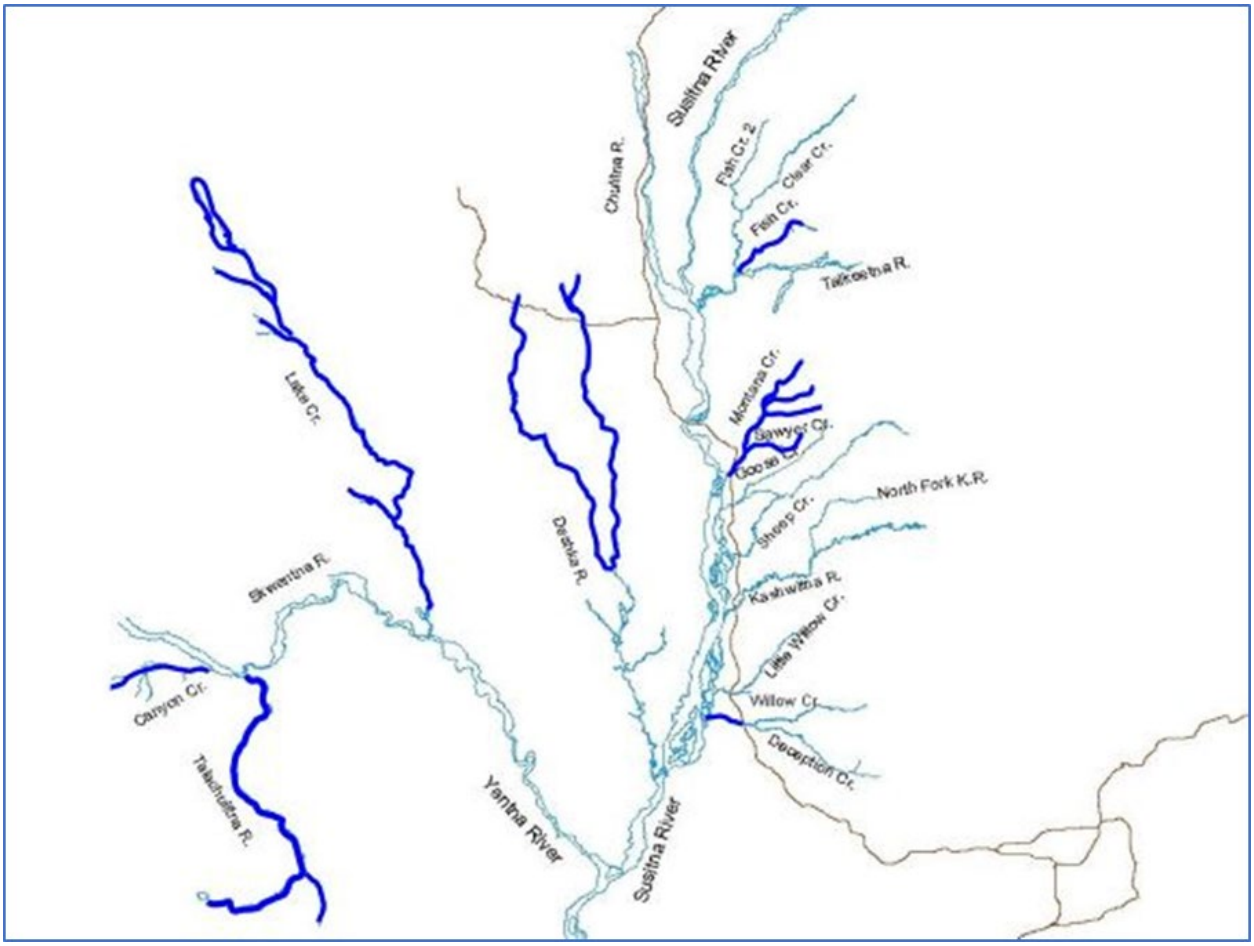

Figure 223-1.–Map of special management waters of the Susitna River drainage where catch-and-release, single hook only regulations apply (highlighted).

Table 223-1.–Wild rainbow trout catch and harvest in select major fisheries designated in whole or in part special management waters for rainbow trout, 1999–2018.

	Westside Susitna										Eastside Susitna										Susitna River	
	Talachulitna		Lake Creek		Deshka		Other				Willow Creek		Montana Creek		Talkeetna River [a]		Other					
	catch	harvest	catch	harvest	catch	harvest	catch	harvest	Total Catch	Total Harvest	catch	harvest	catch	harvest	catch	harvest	catch	harvest	Total Catch	Total Harvest	catch	harvest
1999	11,072	0	15,310	640	5,323	561	6,159	665	21,298	7,360	11,965	0	5,337	0	7,402	207	11,600	894	36,304	1,101	57,602	8,461
2000	5,209	0	12,156	567	6,146	205	5,887	454	18,756	6,659	8,836	91	7,236	0	6,669	197	13,392	618	36,133	906	54,889	7,565
2001	7,027	0	7,739	183	8,300	270	5,726	306	16,345	6,179	11,510	119	5,678	0	5,937	92	7,207	637	30,332	848	46,677	7,027
2002	6,283	0	11,622	445	4,464	417	7,376	347	16,433	8,238	22,650	209	19,170	0	11,312	90	22,929	547	76,061	846	92,494	9,084
2003	9,721	0	22,460	561	5,868	368	2,278	496	28,824	3,207	13,750	61	12,393	0	7,875	299	18,503	812	52,521	1,172	81,345	4,379
2004	9,000	0	22,130	587	5,868	938	5,971	104	28,102	7,496	10,920	144	10,171	0	6,384	157	14,065	410	41,540	711	69,642	8,207
2005	17,060	0	21,197	209	3,161	60	5,157	70	24,428	5,426	10,863	32	6,151	0	6,772	61	8,695	249	32,481	342	56,909	5,768
2006	2,883	0	28,013	159	9,635	523	3,487	345	37,993	4,169	10,032	103	7,610	0	7,653	125	11,641	318	36,936	546	74,929	4,715
2007	11,846	0	11,405	236	3,905	185	4,822	169	15,479	5,243	20,905	10	16,740	0	8,766	186	16,921	444	63,332	640	78,811	5,883
2008	2,249	0	10,267	153	2,070	419	3,477	172	12,509	4,049	8,235	60	8,014	0	7,889	511	10,539	697	34,677	1,268	47,186	5,317
2009	6,331	0	10,217	27	3,093	562	7,814	276	13,586	8,403	14,700	62	6,474	0	6,482	34	8,094	294	35,750	390	49,336	8,793
2010	5,242	0	10,011	154	1,334	122	4,198	158	11,503	4,474	10,689	84	6,409	0	5,266	85	14,126	788	36,490	957	47,993	5,431
2011	8,647	0	23,420	143	2,156	0	4,844	325	25,901	4,987	19,557	0	9,836	0	6,769	154	17,943	493	54,105	647	80,006	5,634
2012	7,109	0	12,321	76	556	61	4,708	31	12,908	4,845	8,207	0	8,590	0	3,730	78	6,099	162	26,626	240	39,534	5,085
2013	5,433	0	9,015	174	731	103	4,999	191	9,937	5,276	8,973	0	17,636	0	7,379	208	8,046	355	42,034	563	51,971	5,839
2014	11,032	0	23,717	568	1,951	29	4,077	275	25,943	4,674	13,566	0	8,348	0	1,990	0	9,459	1,000	33,363	1,000	59,306	5,674
2015	12,798	0	13,955	200	624	166	10,917	128	14,707	11,283	14,168	0	8,482	0	17,987	115	7,794	230	48,431	345	63,138	11,628
2016	3,914	0	10,052	175	924	32	4,516	211	11,187	4,723	13,238	0	4,514	0	4,437	21	14,185	516	36,374	537	47,561	5,260
2017	737	0	2,525	40	710	0	3,568	322	3,557	3,608	7,116	0	4,200	0	3,398	18	6,271	217	20,985	235	24,542	3,843
2018	1,646	0	4,102	35	1,814	26	1,629	293	6,209	1,690	2,643	0	5,497	0	781	0	5,060	66	13,981	66	20,190	1,756
2009-2013 mean	6,552	0	12,997	115	1,574	170	5,313	196	14,767	5,597	12,425	29	9,789	0	5,925	112	10,862	418	39,001	559	53,768	6,156
2014-2018 mean	6,025	0	10,870	204	1,205	51	4,941	246	12,321	5,196	10,146	0	6,208	0	5,719	31	8,554	406	30,627	437	42,947	5,632

[a] includes tributaries, such as Clear Creek.

PROPOSAL 220 – Prohibit retention of rainbow trout in all of Lake Creek drainage.

5 AAC 61.118. Special provisions for the seasons, bag, possession, and size limits, and methods and means for Unit 4 of the Susitna River Drainage Area.

PROPOSED BY: Jim Wagner.

WHAT WOULD THE PROPOSAL DO? This would prohibit retention of rainbow trout in all of Lake Creek drainage and the use of bait upstream of a marker located one-half mile upstream of the confluence of Lake Creek and the Yentna River.

WHAT ARE THE CURRENT REGULATIONS? From August 16–May 14, from an ADF&G regulatory marker located approximately 100 yards upstream of its mouth to an ADF&G regulatory marker located approximately one-quarter mile upstream of Bulchitna Lake, only one unbaited, single-hook, artificial lure may be used; in that same area from May 15–July 13, only unbaited, artificial lures may be used. In that same area, from August 16–June 14, rainbow trout may not be retained. Upstream from an ADF&G regulatory marker located approximately one-quarter mile upstream of Bulchitna Lake, only 1 unbaited, single-hook artificial lure may be used year-round. The lower approximately 2.5 miles of Lake Creek is open to the harvest of rainbow trout from June 15–August 15. During this period, rainbow trout bag and possession is two 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 increase regulatory complexity, as bait is not allowed in other waters designated as special management waters for rainbow trout. It would reduce the harvest of rainbow trout and eliminate opportunity for those wishing to retain a rainbow trout to eat while camping. It would also increase waste of rainbow trout incidentally caught while fishing for salmon that are mortally hooked that under current regulations could be harvested. Given that the harvest is likely comprised of anglers keeping mortally hooked fish while salmon fishing, combined with some intentional harvest, it is likely that this would do little to increase the overall rainbow trout population in this system.

BACKGROUND: Lake Creek is a tributary to the Yentna River, flowing approximately 60 miles from its headwaters at Chelatna Lake, a remote lake accessible only by aircraft. Approximately 95% of the creek is navigable only by raft. In 1989, this upper section, upstream of a marker ¼ mile upstream of Bulchitna Lake became special management waters for rainbow trout. Regulations allowed only catch-and-release and unbaited, single-hook, artificial lures. In 1991, efforts were made to conserve rainbow trout in the lower approximate 2.5 miles of Lake Creek where the river is navigable by boat and fishing effort is highest. This section is from a marker 100 yards upstream of the mouth to the marker ¼ mile upstream of Bulchitna Lake (Figure 220-1). Beginning that year, bait was prohibited August 16 through December 31 to protect those rainbow trout exiting Lake Creek to overwinter in the Yentna River. This regulation was expanded in 1993, specifying single hook, artificial lure only and no retention of rainbow trout from August 16 through June 14, this action was taken to provide further protection for rainbow trout returning the following spring to spawn. Additionally, in 1995 a regulation prohibiting bait in the entire Susitna River drainage September 1 through July 13 was adopted (the September 1 date is a long standing regulation protecting fall rainbow trout as they become concentrated in the lower reaches

of tributaries while exiting into the Susitna River for overwintering and the July 13 date is related to king salmon conservation). The effect on the lower section of Lake Creek meant bait is allowed only July 14 – August 15.

Though the rainbow trout fishery is highly restrictive, it is one of few places on the Yentna River where someone can harvest a rainbow trout if a local cabin owner or someone out camping wants to cook a fish over a fire. From 1999–2008, an average of 16,230 rainbow trout were caught and 374 harvested in the Lake Creek drainage (Table 220-1). A more recent average of 11,933 caught and 159 harvested occurred from 2009–2018. Approximately 2% of those caught from 1999–2008 were harvested, dropping to about 1% from 2009–2018. The reduction in catch and harvest likely follows a reduction in effort attributable to restrictions and closures to the king salmon fishery in recent years. About 56 guides operate in the Lake Creek area. From 2006–2016, an average of 30 rainbow trout were harvested per year by clients (Table 220-2). Most harvest occurs during the king salmon fishery, when multiple hooks are allowed, and during the coho salmon fishery, when bait is allowed, both of which increase hooking mortality and result in retention of the rainbow trout caught.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal as there is no conservation concern for rainbow trout under existing regulations. Harvest is minimal, and the regulations have been crafted through the years to align with the statewide policy for the management of sustainable wild trout fisheries and provide protection during their seasonal migrations and spawning, while allowing some harvest to occur.

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

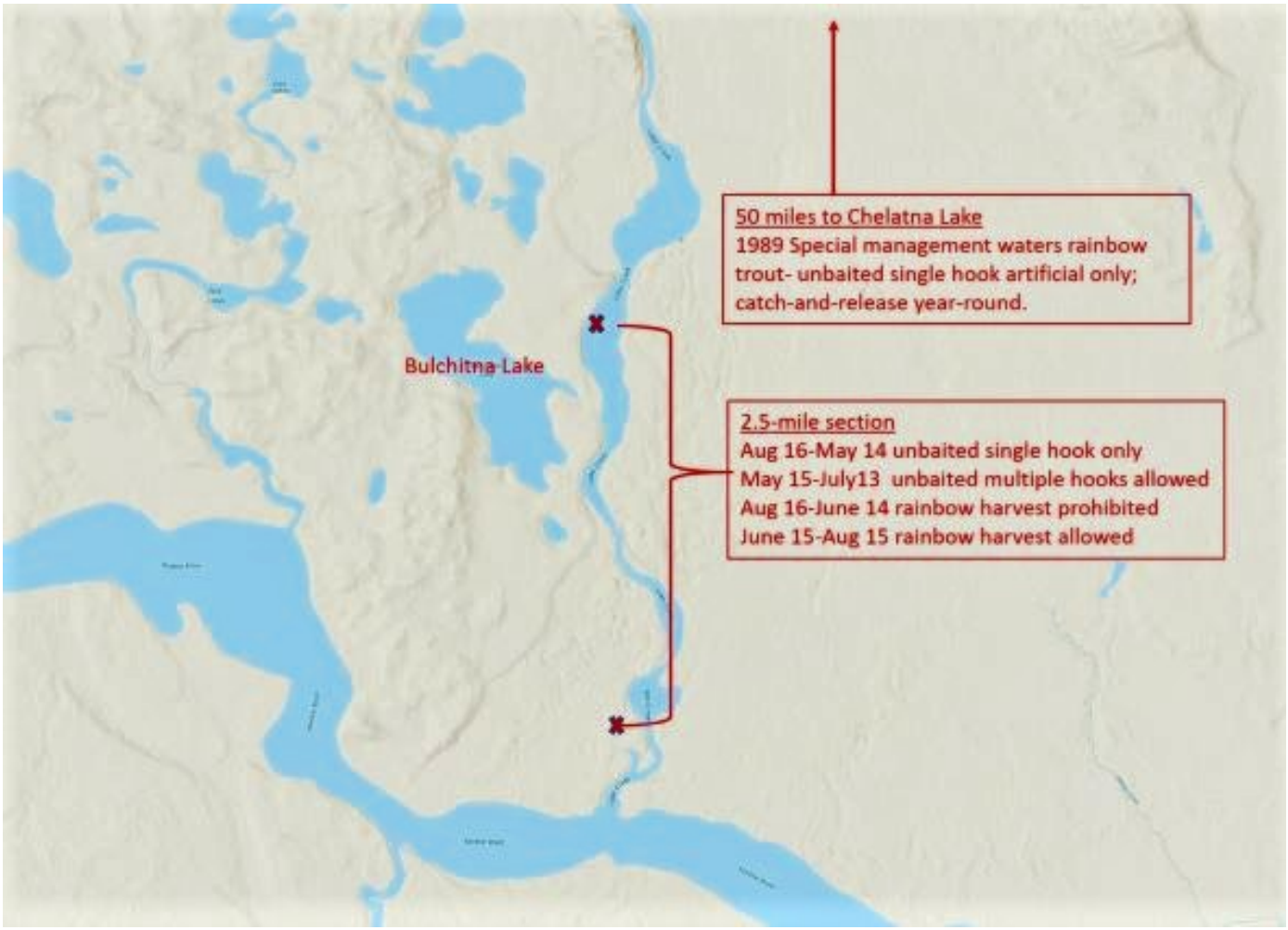

Figure 220-1.–Map of Lake Creek rainbow trout regulations.

Table 220-1.–Lake Creek rainbow trout harvest and angler-days of fishing effort, 1999–2018.

Year	Harvest	Catch	Effort
1999	640	15,310	17,991
2000	567	12,156	21,671
2001	183	7,739	20,559
2002	445	11,622	14,933
2003	561	22,460	19,857
2004	587	22,130	20,898
2005	209	21,197	21,844
2006	159	28,013	19,801
2007	236	11,405	13,486
2008	153	10,267	11,891
2009	27	10,217	12,693
2010	154	10,011	10,674
2011	143	23,420	11,520
2012	76	12,321	9,129
2013	174	9,015	13,101
2014	568	23,717	10,294
2015	200	13,955	11,657
2016	175	10,052	10,171
2017	40	2,525	6,183
2018	35	4,097	8,180
1999-2008 mean	374	16,230	18,293
2009-2018 mean	159	11,933	10,360

Table 220-2.–Guided effort and rainbow trout harvest at Lake Creek, 2006–2016.

Year	Guides	Trips	Client Days	Harvest	Released
2006	61	1,072	3,229	41	2,512
2007	58	1,344	3,835	47	4,025
2008	63	1,195	3,374	80	2,594
2009	63	1,444	4,132	12	4,764
2010	52	1,374	3,882	27	4,321
2011	65	1,427	3,719	47	5,812
2012	49	1,031	2,778	14	3,021
2013	50	993	2,786	6	3,518
2014	50	995	2,709	24	4,625
2015	57	1,087	2,963	8	4,427
2016	52	1,168	3,244	28	3,753
Average	56	1,194	3,332	30	3,943

PROPOSAL 81 – Adopt a policy to manage by designating types of salmon spawning habitat.

5 AAC 39.222. Policy for the management of sustainable salmon fisheries.

PROPOSED BY: David Chessik.

WHAT WOULD THE PROPOSAL DO? This would adopt a policy in Upper Cook Inlet (UCI) wherein fisheries are managed by designating types of salmon spawning habitat.

WHAT ARE THE CURRENT REGULATIONS? There are many area and date closures in place intended to protect easily accessible stocks in tributary streams and vulnerable stocks that lack inseason assessment. Many streams in the Kenai Peninsula, Anchorage, and the MatSu Valley areas are closed each spring to all fishing during rainbow trout spawning. Sections of streams at the head of Turnagain Arm are closed each year to all fishing after July 14 to provide additional protection to coho and king salmon stocks vulnerable in tributaries with no inseason assessment. In the majority of clear water streams on the road system, that are utilized most heavily by sport fishermen, the upstream portion of the streams are closed to fishing for salmon. Spawning areas are restricted or closed to sport fishing under 5AAC 42 – 77 either seasonally (during the spawning period) or for the entire year. Freshwater habitat management policies are outlined throughout the *Policy for the Management of Sustainable Salmon Fisheries* (5 AAC 39.222) and the *Riparian Habitat Fishery Management Plan for the Kenai Peninsula* (5 AAC 56.180).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? It is unknown what the specific effects of this proposal would be, or whether it would improve upon habitat quality protections that currently exist for salmonid habitat resources. The department would need to define spawning sites for all species of salmon throughout Cook Inlet, which would result in a substantial cost to the department. Regulations would likely become more complex, and sport fishing opportunity would likely be reduced or eliminated in some UCI freshwaters.

BACKGROUND: Habitat issues in salmon streams are managed primarily by the ADF&G Habitat Section. A variety of habitat regulations under this division specifically protect anadromous streams and the habitat of salmonid resources, including spawning beds or areas.

Many watersheds throughout Southcentral Alaska have both critical habitat protections and closed areas to sport fishing that work in conjunction. For example, the Kenai River has critical habitat bank closures throughout the lower and middle river areas in addition to sport fishing restricted areas around the confluences of the major spawning tributaries. Additionally, these tributaries are closed to sport fishing for salmon year-round.

Throughout much of the open-water season in Southcentral Alaska, freshwater systems host spawning salmon of one species or another. Spawning can take place throughout a system: from the intertidal reaches, where pink salmon spawn, throughout a river system, and into lakes where sockeye salmon spawn. The department integrates conservative principles when identifying sensitive habitat areas and evolving fisheries to maintain the high quality of freshwater habitat and sustainable fisheries throughout the state.

Salmon sport fisheries across the state are managed to meet sustainable escapement levels following sustainable fisheries principles and as directed by management plans developed through the board process. The department will identify, monitor, and provide recommendation to the board as area specific habitat protection needs arise. Current salmon management policy integrates the need to protect critical habitat and spawning areas that have been identified within management plans and general regulation, usually specific to a location on the system or drainage.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. Current management measures in many Cook Inlet streams are in place to protect king, coho, and sockeye salmon, and rainbow trout in easily accessible tributary streams. The department has the mechanisms needed to identify and manage spawning habitat areas consistent with 5 AAC 39.222.

COST ANALYSIS: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery. Approval of this proposal would result in significant additional costs to the department in order to conduct habitat assessment projects on every anadromous stream in UCI.

Multiple Area and Multiple Region Plans (4 proposals)

PROPOSAL 83 – Close all commercial fishing in UCI.

5 AAC 21.310. Fishing seasons.

PROPOSED BY: Neil DeWitt.

WHAT WOULD THE PROPOSAL DO? This would close all commercial fishing in Upper Cook Inlet (UCI).

WHAT ARE THE CURRENT REGULATIONS? 5 AAC 21.363. *Upper Cook Inlet Salmon Management Plan* states that the department should receive long-term direction in management of UCI salmon stocks and salmon species. It states further that:

(1) consistent with the statutory priority for subsistence, the harvest of upper Cook Inlet salmon for customary and traditional subsistence uses will be provided for specific species in appropriate areas, seasons, and periods to satisfy subsistence needs; other beneficial uses, to the extent they are consistent with the public interest and overall benefit of the people of Alaska, will be allowed in order to maximize the benefits of these resources;

(2) to provide for the management and allocation of the upper Cook Inlet salmon resources, the harvest of the upper Cook Inlet salmon will be governed by specific and comprehensive management plans adopted by the board for salmon stocks and species, on a Cook Inlet basin wide basis, for different areas, and drainages and for different types of fisheries;

Chapter 21 of the Alaska Administrative Code contains regulations and management plans adopted by the board providing direction to the department for the commercial harvest of salmon in the Cook Inlet Area.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would close all commercial salmon fishing in UCI, resulting in a reduction in harvest of approximately 3.2 million fish per year (Table 83-1), based on the most recent 10 years average harvest. This would result in this amount of salmon entering freshwater streams throughout UCI, which would increase the likelihood of achieving escapement objectives for all salmon during low abundance years, but would also increase the likelihood of exceeding escapement objectives for all salmon during years of average or above average abundance. Closing all commercial salmon fisheries in UCI would also result in significant economic losses to local communities and to the State of Alaska.

BACKGROUND: Commercial fisheries in UCI have existed since the late 1800s (Table 83-1). The average annual commercial salmon harvest in UCI peaked in the decade of 1980-1989 at approximately 6.2 million fish, of which approximately 4.4 million were sockeye salmon.

Since 1999, the sonar count (or inriver fish passage) for Kenai River late-run sockeye salmon was above the inriver goal range 14 years (67%), within the inriver goal range six years (29%), and below the inriver goal range one year (5%). During this same time period, escapements have been above the SEG range nine years (43%), within the goal range nine years (43%), and below the goal range three years (14%) (Table 88-2; Figure 88-1).

Since 1990, the Kasilof River sockeye salmon escapement has been above the BEG range 20 years (67%), within the BEG range 8 years (27%), and below the BEG 2 years (7%) (Table 117-5). More recently in the last decade (2010–2019), the Kasilof River sockeye salmon escapement has been within or above the BEG range in every year, and escapement has exceeded the upper bound of the BEG in 8 of those 10 years.

Beginning in 2009, the department began assessing sockeye salmon escapement via weirs in the Susitna River drainage at three individual lakes, Judd and Chelatna lakes in the Yentna River drainage, and Larson Lake in the mainstem Susitna River drainage. Since then, escapements were achieved or exceeded seven times (70%) at Judd Lake and not achieved three times (30%); were achieved or exceeded eight times (91%) at Chelatna Lake and not achieved one time (9%); and were achieved or exceeded seven times (64%) at Larson Lake and not achieved four times at Larson Lake (36%) (Table 129-1). Overall, since 2009, the escapement goal at these three lakes was achieved or exceeded 24 times (75%) and not achieved eight times (25%).

At Fish Creek, in the last 20 years (2000–2019), sockeye salmon escapement has been below the goal five times (25%), within the goal range seven times (35%), and above the goal eight times (40%) (Table 129-2).

Coho salmon goals in UCI have generally been met over the last 20 years. From 1988–1998 (11 years), the Little Susitna River coho salmon escapement goal was a point-goal of 7,500 fish (Table 101-1). It was achieved all 11 years. Since 1999, the goal has been a sustainable escapement goal (SEG) range. Since 1999, there have been 16 years where there was a total count of the escapement at the weir. During that time, the goal was not achieved five times (31%), was achieved five times (31%), and was exceeded six times (38%). For the five years where the weir was flooded and produced incomplete counts, in two of those years the goal was achieved prior to the flood, and in one year (2006), while the pre-flood count was under the goal, it is believed the goal was very likely achieved, or perhaps exceeded.

Since 2002 (18 years), there has been a coho salmon SEG of 1,200–4,400 fish at Fish Creek. The goal has been met or exceeded in all 18 years.

A new coho salmon escapement goal was established at the Deshka River in 2017. Since then, the SEG of 10,200–24,100 was met or exceeded in all three years.

Coho salmon escapement is monitored in Jim Creek via a foot index survey of a section of McRoberts Creek, a tributary of the Jim Creek drainage. Since 2002 (18 years) the foot survey escapement goal has been met or exceeded 12 times (67%) and not achieved six times (33%).

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocative aspects of this proposal but is **OPPOSED** to wholesale closure of fisheries without a biological justification. The board has spent considerable time crafting management plans to provide fishing opportunity for all user groups in UCI, while meeting established escapement objectives. This proposal has the potential to forgo yield in years of high abundance, unnecessarily impacting economic return. A complete closure of all UCI commercial fisheries would result in increased likelihood of reduced future yield and variable production for some stocks in UCI, because in many cases inriver harvest is not adequate to constrain escapements within established goal ranges.

COST ANALYSIS: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery. Approval of this proposal would result in considerable loss of revenue to the State of Alaska.

Table 83-1.–Upper Cook Inlet commercial salmon harvest, 1890-2019.

Average Annual Harvest Per Decade (in thousands of fish)[a]							
Decade		King	Sockeye	Coho	Pink	Chum	All
1890	1899	19	382	35	5	0	442
1900	1909	40	487	62	53	0	642
1910	1919	53	1,396	132	574	57	2,213
1920	1929	49	1,251	250	367	70	1,988
1930	1939	68	1,609	273	592	137	2,680
1940	1949	92	1,658	406	1,304	316	3,776
1950	1959	79	1,334	226	995	506	3,139
1960	1969	13	1,159	262	1,179	598	3,212
1970	1979	12	1,136	187	620	668	2,623
1980	1989	24	4,361	529	543	754	6,210
1990	1999	15	3,813	350	295	239	4,713
2000	2009	16	2,950	191	206	106	3,469
2010	2019	7	2,570	187	228	177	3,170

[a] prior to 1954 catches contain both Lower & Upper Cook Inlet; 1954-2019 are UCI only.

PROPOSAL 15 – Prohibit reselling of guide services by anyone other than licensed guides

5 AAC 75.075. Sport fishing services and sport fishing guide services; salt water license and fresh water registration requirements; regulation of activities; 75.076. Sport fishing guide and operator reporting requirements; and 75.077. Sport fishing guide vessel registration requirements. (This proposal will be hear at the LCI and UCI meetings, and deliberated at the UCI meeting)

PROPOSED BY: Mel Erickson.

WHAT WOULD THE PROPOSAL DO? This would prohibit reselling of guide services by anyone other than licensed guides.

WHAT ARE THE CURRENT REGULATIONS? Current regulations do not address how guide services may be sold.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This proposal would eliminate third party booking agents or tour brokers and increase the difficulty for a private person to book an available guided fishing trip. This proposal may also create economic hardship for guide businesses that currently utilize guide booking offices to book trips.

BACKGROUND: Under AS 16.050251(a)(12) the board has the authority to regulate guided sport fishing as needed for conservation, development, and the utilization of fisheries. Sport fishing guides are defined as a person who is licensed to provide sport fishing guide services to persons who are engaged in sport fishing. Sport fishing guide services are defined as assistance, for compensation, to a sport fisherman to take or attempt to take fish by accompanying or physically directing the sport fisherman in sport fishing activities during any part of a sport fishing services. It does not include services provided by an assistant, deckhand, or similar person who works directly under the supervision of and on the same vessel as a sport fishing guide.

Sport fishing services are defined as the indirect provision of assistance, for the intent to receive compensation, to a person engaged in sport fishing in taking or attempting to take fish by a business that employs a sport fishing guide to provide sport fishing guide services to the person during any portion of a sport fishing trip. This does not include an activity for which a sport fishing guide is required or booking and other ancillary services provided by a tour broker or agent to sport fishing service operator.

There are many ways in which sport anglers are able to book a guided fishing trip, including using third party booking agents or tour brokers. A business that offers booking services for many charters is a common business model in communities with many charters; this business may or may not be a registered guide. In small communities, non-fishing businesses such as lodges may assist their customers by contacting sport fishing guides to reserve a fishing trip for them.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. This issue would be best addressed at a statewide meeting. If the board chooses to take action at this meeting it would apply to regulations for Cook Inlet and North Gulf Coast area fresh and salt waters. This proposal would be difficult to enforce due to the variety of ways a private person can book a guided fishing

trip. Department defers to DOL for comments on board's authority to address this issue, and comments from DPS on enforceability of this proposal.

COST ANALYSIS: Approval of this proposal may result in an additional direct cost for a private person to participate in this fishery. It would result in an additional direct cost for an individual or business that currently assist anglers with booking a guided trip since they would have to become a registered guide to provide those services. Approval of this proposal is not expected to result in an additional cost to the department.

PROPOSAL 38 – Create a king salmon management plan with paired restrictions in Upper and Lower Cook Inlet commercial fisheries.

5 AAC 21.xxx. New Section. (This proposal will be heard at the LCI and UCI meetings, and deliberated at the UCI meeting.)

PROPOSED BY: Donald Johnson.

WHAT WOULD THE PROPOSAL DO? This would create a king salmon conservation management plan that pairs restrictions in Upper Cook Inlet (UCI) and Lower Cook Inlet (LCI) commercial fisheries.

WHAT ARE THE CURRENT REGULATIONS? In LCI, outside of Resurrection Bay where the department manages king salmon for recreational use, current commercial fishing regulations do not specifically address king salmon harvest retention. In UCI, while there are management plan provisions that pair restrictive actions (time, gear, non-retention and closure) in the Kenai River sport fishery and Upper Subdistrict commercial set gillnet fishery, there are no provisions that restrict the retention of king salmon in the gillnet fishery. In addition, there are no commercial king salmon retention provisions in any other UCI commercial drift or set gillnet fishery.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would prohibit retention of king salmon in LCI commercial salmon fisheries when retention of this species is prohibited in UCI salmon fisheries. Because the proposal does not specify which gear types and fisheries would be "paired," and specifically how and where the paired restrictions would take place, it is not possible to determine what effects the proposal would have on the commercial harvest of king salmon in LCI.

BACKGROUND: The LCI Seine Fishery Management Plan (5 AAC 21.369) directs seine fishery managers to target only LCI stocks. Historically, the commercial harvest of king salmon by both the purse seine and set gillnet fleet in LCI has remained low (Table 38-1), with efforts targeting stocks returning to LCI districts. There are no commercially significant stocks of king salmon in the LCI Area. The *Kenai River Late-Run King Salmon Management Plan* (5 AAC 21.359) pairs restrictive actions in the Kenai River sport fishery to hourly restrictions in the Upper Subdistrict set gillnet fishery. Ultimately, if the sport fishery is closed to meet the king salmon sustainable escapement goal, the entire Upper Subdistrict set gillnet fishery closes. The *Northern District King Salmon Management Plan* (5 AAC 21.266) provides provisions for an early-season directed king salmon fishery in the Northern District of UCI. Harvest of king salmon in all UCI commercial fisheries has declined in the most recent 10 years compared to historical averages (Table 38-2).

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocative aspects of this proposal but **OPPOSED** to this proposal as written since it does not specify which of the commercial gears operating in either LCI or UCI would be restricted. There currently are no commercial salmon gillnet fisheries where release of king salmon is required and the department is concerned about potential mortality and waste of king salmon released from commercial gillnets. King salmon originating from UCI likely represent a small fraction of king salmon caught in LCI commercial salmon fisheries and the conservation benefits of this proposal are negligible.

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

Table 38-1.–Commercial harvest of king salmon in Lower Cook Inlet, 1990–2019.

Year	Purse seine	Set gillnet	Year	Purse seine	Set gillnet	Year	Purse seine	Set gillnet
1990	199	1,361	2000	169	1,019	2010	10	31
1991	576	842	2001	123	865	2011	39	102
1992	603	1,288	2002	40	1,513	2012	47	90
1993	1,079	1,089	2003	302	881	2013	141	250
1994	128	1,103	2004	258	1,402	2014	38	330
1995	225	2,078	2005	85	532	2015	59	812
1996	127	1,060	2006	50	589	2016	153	766
1997	126	1,136	2007	28	440	2017	194	471
1998	119	952	2008	42	148	2018	185	196
1999	273	1,491	2009	1	84	2019	367	362

Table 38.2–Upper Cook Inlet commercial king salmon harvest by gear type and area, 1980–2018.

	Central District						Northern District		
	Drift Gillnet		Upper S.district Set		Kalgin/W. Side Set		Set Gillnet		
Year	Number	%	Number	%	Number	%	Number	%	Total
1980	889	6.4	9,643	69.9	2,273	16.5	993	7.2	13,798
1981	2,320	19.0	8,358	68.3	837	6.8	725	5.9	12,240
1982	1,293	6.2	13,658	65.4	3,203	15.3	2,716	13.0	20,870
1983	1,125	5.5	15,042	72.9	3,534	17.1	933	4.5	20,634
1984	1,377	13.7	6,165	61.3	1,516	15.1	1,004	10.0	10,062
1985	2,048	8.5	17,723	73.6	2,427	10.1	1,890	7.8	24,088
1986	1,834	4.7	19,826	50.5	2,108	5.4	15,488	39.5	39,256
1987	4,552	11.5	21,159	53.6	1,029	2.6	12,700	32.2	39,440
1988	2,237	7.7	12,859	44.2	1,148	3.9	12,836	44.1	29,080
1989[a]	0	0.0	10,914	40.8	3,092	11.6	12,731	47.6	26,737
1990	621	3.9	4,139	25.7	1,763	10.9	9,582	59.5	16,105
1991	246	1.8	4,893	36.1	1,544	11.4	6,859	50.6	13,542
1992	615	3.6	10,718	62.4	1,284	7.5	4,554	26.5	17,171
1993	765	4.1	14,079	74.6	720	3.8	3,307	17.5	18,871
1994	464	2.3	15,575	78.0	730	3.7	3,193	16.0	19,962
1995	594	3.3	12,068	67.4	1,101	6.2	4,130	23.1	17,893
1996	389	2.7	11,564	80.8	395	2.8	1,958	13.7	14,306
1997	627	4.7	11,325	85.2	207	1.6	1,133	8.5	13,292
1998	335	4.1	5,087	62.6	155	1.9	2,547	31.4	8,124
1999	575	4.0	9,463	65.8	1,533	10.7	2,812	19.6	14,383
2000	270	3.7	3,684	50.1	1,089	14.8	2,307	31.4	7,350
2001	619	6.7	6,009	64.6	856	9.2	1,811	19.5	9,295
2002	415	3.3	9,478	74.5	926	7.3	1,895	14.9	12,714
2003	1,240	6.7	14,810	80.0	770	4.2	1,683	9.1	18,503
2004	1,104	4.1	21,684	80.5	2,208	8.2	1,926	7.2	26,922
2005	1,958	7.1	21,597	78.1	739	2.7	3,373	12.2	27,667
2006	2,782	15.4	9,956	55.2	1,030	5.7	4,261	23.6	18,029
2007	912	5.2	12,292	69.7	603	3.4	3,818	21.7	17,625
2008	653	4.9	7,573	56.8	1,124	8.4	3,983	29.9	13,333
2009	859	9.8	5,588	63.9	672	7.7	1,631	18.6	8,750
2010	538	5.4	7,059	71.3	553	5.6	1,750	17.7	9,900
2011	593	5.3	7,697	68.4	659	5.9	2,299	20.4	11,248
2012	218	8.6	705	27.9	555	22.0	1,049	41.5	2,527
2013	493	9.1	2,988	55.4	590	10.9	1,327	24.6	5,398
2014	382	8.2	2,301	49.4	507	10.9	1,470	31.5	4,660
2015	556	5.1	7,781	72.1	538	5.0	1,923	17.8	10,798
2016	606	6.0	6,759	67.4	460	4.6	2,202	22.0	10,027
2017	264	3.4	4,779	62.4	387	5.1	2,230	29.1	7,660
2018	503	14.8	2,312	67.9	447	13.1	143	4.2	3,405
2019[b]	168	5.4	2,232	71.6	522	16.7	197	6.3	3,119
1980-19 Avg [a]	975	6.6	9,760	63.7	1,096	8.3	3,350	21.4	15,181
2010-19 Avg	432	7.1	4,461	61.4	522	10.0	1,459	21.5	6,874

[a] 1989 was not used in averages, as the drift fleet did not fish due to the Exxon Valdez oil spill and this had an effect on all other fisheries.

[b] Preliminary harvest data based on call-in reports, not from fish tickets.

PROPOSAL 37 – Create a king salmon conservation management plan that paired restrictions in Upper Cook Inlet and Lower Cook Inlet commercial fisheries.

5 AAC 18.XXX. New section This proposal will be heard at the LCI, Kodiak, and UCI meetings, and deliberated at the UCI meeting.

PROPOSED BY: Donald Johnson.

WHAT WOULD THE PROPOSAL DO? This would create a new comprehensive, overarching king salmon management plan that would pair commercial restrictions in the Kodiak Management Area (KMA) with those in the Upper Cook Inlet (UCI) and Lower Cook Inlet (LCI) salmon management areas.

WHAT ARE THE CURRENT REGULATIONS? Management is based on inseason assessments of king salmon run strength in fishing districts where harvests will occur. King salmon are incidentally harvested in LCI and KMA commercial salmon fisheries targeting sockeye, pink, chum and coho salmon. In UCI, the commercial harvest of king salmon is tightly regulated through management plans that have been systematically modified by the board to meet the challenge of mixed-stock fishery harvest in the UCI area.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Pairing unspecified management actions between Cook Inlet and Kodiak fisheries to conserve king salmon would add regulatory complexity and may provide an unknown savings in king salmon in some years. The proposal offers no specifics as to how this would be done, including which stocks of king salmon the comprehensive plan would affect. Presumably, restrictions would be imposed in the KMA area during years of anticipated low king salmon abundance in the Cook Inlet area. This could lead to lost commercial fishing opportunity and exceeding KMA salmon escapement goals.

BACKGROUND: A king salmon genetics study was implemented for the KMA from 2014 through 2016. In those years, Cook Inlet king salmon comprised less than 4.5% of the king salmon harvested in the KMA.

In Kodiak and LCI, there are no direct commercial fisheries harvests of king salmon. In LCI, the highest levels of king salmon deliveries occur when effort is closest to hatchery king salmon release sites (Halibut Cove and Seldovia).

In UCI, the largest commercial harvest of king salmon occurs in the directed set gillnet fishery in the Northern District and in the Upper Subdistrict set gillnet fishery. Both of these fisheries are prosecuted under the provisions of either the *Northern District King Salmon Management Plan* (5 AAC 21.366) or the *Kenai River Late-Run King Salmon Management Plan* (5 AAC 21.359). These management plans provide the department with step-down provisions to reduce the harvest of king salmon, including closures to commercial fisheries, that are enacted if escapement is less than desired or if escapement goals are not projected to be achieved.

Beginning in 2014, the board established nonretention of king salmon 28 inches or greater in length in the commercial seine fishery in the Kodiak Area prior to July 6. Beginning in 2005, if the department determines that the Karluk River or Ayakulik River king salmon biological escapement

goals will not be met, nonretention of king salmon 28 inches or greater is established in the commercial salmon fishery.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocative aspects of this proposal. The department is **OPPOSED** to aspects of this proposal that add regulatory complexity and would make it difficult to meet LCI and KMA salmon management objectives without a measurable benefit to conservation of UCI king salmon. In the KMA, Cook Inlet king salmon are incidentally harvested in local stock fisheries targeting sockeye, pink, and chum salmon and make up a small fraction of the king salmon harvest. In LCI, there are no directed commercial fisheries that target king salmon. Districts that do not have hatchery releases of king salmon within its boundaries (Kamishak Bay, Eastern, and Outer districts) often go years with no reported commercial king salmon landings.

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