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ALASKA DEPARTMENT OF FISH AND GAME

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

PRINCE WILLIAM SOUND/UPPER COPPER AND UPPER SUSITNA RIVERS FINFISH AND SHELLFISH

ALASKA BOARD OF FISHERIES MEETING CORDOVA, ALASKA

NOVEMBER 30–DECEMBER 6, 2021

Regional Information Report No. 3A21-04

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, November 30–December 6, 2021 in Cordova, 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

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PRINCE WILLIAM SOUND/UPPER COPPER AND UPPER SUSITNA RIVERS FINFISH AND SHELLFISH

ALASKA BOARD OF FISHERIES MEETING
CORDOVA, ALASKA

NOVEMBER 30–DECEMBER 6, 2021

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

November 2021

ABSTRACT

This document contains Alaska Department of Fish and Game staff comments on commercial regulatory proposals for the Prince William Sound/Upper Copper and Upper Susitna Rivers and Finfish and Shellfish meeting. These comments were prepared by the department for use at the Alaska Board of Fisheries meeting, November 30–December 6, 2021, in Cordova, Alaska. The comments are forwarded to assist the public and board. The comments contained herein should be considered preliminary and subject to change, as new information becomes available. Final department positions will be formulated after review of written and oral public testimony presented to the board.

Keywords: Alaska Board of Fisheries (board), Alaska Department of Fish and Game (department), staff comments, regulatory proposals, fisheries, commercial, personal use, sport, subsistence, shellfish, finfish

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SUMMARY OF DEPARTMENT POSITIONS ON REGULATORY PROPOSALS FOR PRINCE WILLIAM SOUND FINFISH – CORDOVA, NOVEMBER 30– DECEMBER 6, 2021.

Proposal Number	Department Position	Issue
1	O	Establish a longline skate fishery in Prince William Sound.
2	S	Add a 6-hour prior notice of landing requirement for the Prince William Sound Area directed lingcod fishery.
3	S	Clarify possession and landing requirements for the parallel Pacific cod fishery in the Prince William Sound Area
4	S	Clarify possession and landing requirements for the state-managed sablefish fishery in the Prince William Sound Area
5	N	Establish an optimal escapement goal for Copper River king salmon.
6	O	Require inseason reporting of subsistence, sport fish, and personal use harvest and effort.
7	N	Prohibit guiding in subsistence finfish fisheries.
8	O	Prohibit dipnetting near tributary mouths of the Upper Copper River District.
9	N	Prohibit dipnetting from a boat in the Glennallen Subdistrict.
10	N	Prohibit dipnetting from a boat in the Upper Copper River District.
11	O	Prohibit dipnetting from a moving boat in a portion of the Chitina Subdistrict.
12	O	Prohibit dipnetting from a boat when within 50 feet of a person dipnetting from shore in the Chitina Subdistrict
13	N	Prohibit dipnetting from a boat within 75 feet of an operating fish wheel in the Glennallen Subdistrict.
14	O	Prohibit the use of gillnet mesh in dip nets.
15	O	Prohibit the use of gillnet mesh in dip nets.
16	O	Prohibit the use of depth or fish finders on boats in the Upper Copper River District.
17	N	Establish specific permit and bag limits when dipnetting from a boat in the Glennallen Subdistrict.
18	N	Extend the lower boundary of the Chitina Subdistrict downstream ½ mile.
19	N	Reduce the maximum harvest level in the Chitina Subdistrict Personal Use Fishery when the Copper River commercial fishery harvest is 50% below the 10-year average on June 1.
20	N	Amend the annual limit for salmon in the Chitina Subdistrict.

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

Proposal Number	Department Position	Issue
21	N	Amend the opening date of the Chitina Subdistrict personal use fishery from June 7 to June 1.
22	N	Reverse the positive customary and traditional subsistence use determination for freshwater finfish within the Chitina Subdistrict.
23	N	Reverse the positive customary and traditional subsistence use determination for rainbow and steelhead trout in the Prince William Sound Area, or establish amounts reasonably necessary for subsistence and bag and possession limits for rainbow and steelhead trout in the Prince William Sound Area.
24	S	Add bag and possession limits for Dolly Varden in the Prince William Sound freshwater finfish subsistence fishery.
25	S	Establish allowable gear in the Prince William Sound freshwater finfish subsistence fishery.
26	N	Create a community subsistence salmon permit for Prince William Sound.
27	N	Amend subsistence fishing season to remove linkage between subsistence salmon fishing opportunity and commercial salmon fishing periods.
28	N	Amend household harvest limits for subsistence-caught salmon.
29	N	Allow use of drift gillnets to harvest salmon for subsistence uses throughout Prince William Sound.
30	S	Extend single-hook, artificial fly regulations in the Gulkana River to include the area under the Richardson Highway Bridge.
31	N	Increase the possession limit for sockeye salmon in the Upper Copper River.
32	O	Allow harvest of rainbow trout 20 inches or less in a portion of the Gulkana River.
33	O	Allow harvest of rainbow trout 18 inches or less in the Gulkana River.
34	S	Remove the 14-inch size limit for Gulkana River Arctic grayling.
35	O	Amend bag and possession limits for Arctic grayling and methods and means in Moose Creek.
36	O	Increase the bag and possession limit of lake trout in Crosswind Lake.
37	S	Establish sport bag and possession limit for lake trout in the Prince William Sound area.
38	N	Establish restrictions in the Copper River Delta coho salmon sport fishery based on the number of days the commercial fishery is closed.
39	N	Extend the area closed to sport fishing in Ibeck Creek.
40	N	Close 18 Mile or Silver Creek to coho salmon fishing August 1 to November 1.
41	N	Repeal mandatory closed waters from the Copper River King Salmon Management Plan.
42	N	Amend the set gillnet group exvessel value percentage trigger point in the *Prince William Sound Management and Salmon Enhancement Allocation Plan*.
43	N	Repeal the definition of enhanced salmon stocks.

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Proposal Number	Department Position	Issue
44	N	Amend allocation corrective action criteria for set gillnet gear under the *Prince William Sound Management and Salmon Enhancement Allocation Plan.*
45	N	Increase minimum operation distance between set and drift gillnet gear in the Main Bay Subdistrict.
46	N	Repeal limitations on use of deep gillnet gear.
47	N	Amend Prince William Sound Management and Salmon Enhancement Allocation Plan to provide management guidance for reducing Coghill District harvest of salmon stocks bound for other districts.
48	N	Amend Prince William Sound Management and Salmon Enhancement Allocation Plan to provide management guidance for reducing Eshamy District harvest of salmon stocks bound for other districts.
49	O	Amend the Prince William Sound Management and Salmon Enhancement Allocation Plan.
50	O	Amend the Armin F. Koernig Salmon Hatchery Management Plan to reduce straying of hatchery-produced salmon.
51	O	Amend the Cannery Creek Salmon Hatchery Management Plan to reduce straying of hatchery-produced salmon.
52	O	Amend the Solomon Gulch Salmon Hatchery Management Plan to reduce straying of hatchery-produced salmon.
53	O	Amend the Wally Noerenberg (Esther Island) Hatchery Management Plan to reduce straying of hatchery-produced salmon.
54	N	Amend the Prince William Sound Management and Salmon Enhancement Allocation Plan to specify hatchery chum salmon production
55	N	Amend private-non-profit hatchery permits to decrease allowable hatchery production.
56	N	Create requirements and specifications for use of 250 fathoms of seine gear in Prince William Sound.
57	N	Create requirements and specifications for use of 250 fathoms of seine gear in Prince William Sound.
58	N	Amend the Armin F. Koernig Salmon Hatchery Management Plan to provide daily fishing periods.
59	O	Reduce waters closed to commercial salmon fishing.
60	S	Update closed waters defined in regulation by incorporating GPS locations to replace closed waters areas historically defined by physical markers.
61	N	Establish a commercial fishery for sea cucumbers in Registration Area E.
62	N	Establish a commercial fishery for sea cucumbers in Registration Area E.
63	O	Amend Registration Area E king crab fishing seasons, guideline harvest level, and lawful gear regulations.
64	O	Establish a fishing season for golden king crab in Registration Area E.
65	O	Establish a department-issued permit for the commercial golden king crab fishery in Registration Area E.

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

Proposal Number	Department Position	Issue
66	S	Amend guideline harvest range for golden king crab in Registration Area E.
67	N	Establish a golden king pot limit in Registration Area E.
68	N	Adopt amounts reasonably necessary for subsistence for Tanner crab in the Prince William Sound Area, outside the Valdez Nonsubsistence Area.
69	O	Modify criteria for opening commercial Tanner crab fishery in Prince William Sound.
70	O	Modify criteria for opening commercial Tanner crab fishery in Prince William Sound.
71	O	Adopt a new Tanner crab harvest strategy for Prince William Sound.
72	O	Allow the department to issue a permit for Tanner crab fisheries closed more than one year.
73	S	Establish closed waters for commercial Tanner crab fishing in the Prince William Sound Area, Registration Area E.
74	S	Redefine and rename commercial Tanner crab districts in the Prince William Sound Area, and add one additional district
75	S	Adopt a new a Prince William Sound Area E Tanner crab harvest strategy to align with new proposed districts.
76	S	Repeal commissioner's permits for Tanner crab in the Eastern and Western Districts of Prince William Sound Area.
77	S	Amend the Tanner crab registration deadline.
78	S	Remove district references and include all districts in the Prince William Sound Area E and include a weather-delay provision for the opening date of the fishery.
79	N	Designate Registration Area E an exclusive registration area for Tanner crab.

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COMMITTEE OF THE WHOLE – GROUP 1: COMMERCIAL GROUNDFISH (4 PROPOSALS)

Commercial Groundfish (4 proposals)

PROPOSAL 1 – 5 AAC 28.2XX. New section.

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

WHAT WOULD THE PROPOSAL DO? Establish a directed skate fishery in Prince William Sound (PWS) using longline gear with guideline harvest levels (GHLs) calculated as 25% of the federal Eastern Gulf of Alaska longnose and big skate Total Allowable Catches (TACs).

WHAT ARE THE CURRENT REGULATIONS? Skates may be retained and sold as bycatch in other directed groundfish harvest. Allowable bycatch levels are set annually by emergency order (EO) and have been set at 5% of the directed groundfish harvest since 2016.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? A person could register to fish in a directed skate fishery. Having the capability to directly target skates could increase the harvest of skates in PWS by an unknown amount depending on the number of permits fishing and abundance of skates. This could increase the harvest of bycatch species, such as rockfish, and discarded bycatch, particularly Pacific halibut, by unknown amounts.

BACKGROUND: Skates are not specified in PWS groundfish fishery regulations and are therefore classified as a miscellaneous groundfish. A directed fishery for big (*Raja binoculata*) and longnose (*R. rhina*) skates occurred under a commissioner's permit in PWS during 2009 and 2010 following the department's receipt of a capital budget increment, which allowed for management of this fishery. Big and longnose skates are the two most frequently landed skate species in PWS. In years following these two directed fisheries, most of the skate harvest occurs as bycatch in the state-waters Pacific cod fishery. Skates are also harvested in all directed longline groundfish fisheries. Both species are long lived, have slow growth rates, and mature late in life, making them vulnerable to overfishing.

In the 2009 directed skate fishery, 9 vessels harvested 258,389 lb in 17 landings (Table 1-1). Landings of big skate ranged from 1,067 lb to 26,718 lb in the Inside District, and from 604 lb to 20,903 lb in the Outside District and exceeded the 50,000 lb GHL by 130,000, harvest was 250% of the GHL. In the 2010 directed skate fishery, 6 vessels harvested 104,509 lb in 16 landings. Landings of big skate were restricted by a 2,500 lb trip limit, to avoid exceeding the skate GHL as occurred in 2009. GHLs for the directed fishery were set independently for longnose and big skate for the PWS Inside and Outside districts using estimates of skate abundance derived from PWS Inside District trawl survey data; these survey results were not reflected in the catch. There were higher catches of big than longnose skate, which resulted in a high level of discards, injury, and

most likely skate mortality; the GHL was exceeded for big skates in both districts. The trawl survey is primarily designed to assess Tanner crab abundance and may not accurately assess the abundance of these skate species. Furthermore, there may be a seasonal component for skate abundance in PWS. The department has not issued directed skate fishery commissioner's permits since 2010 for several reasons: lack of comprehensive stock assessment data, relative catch and composition of skate species, bycatch in the directed skate fishery, particularly Pacific halibut (Table 1-2), and other existing skate harvest opportunities as bycatch in other directed groundfish fisheries.

Between 2012 and 2016, bycatch skate harvest ranged from 92,488 lb in 2016 to 268,440 lb in 2015 (Table 1-3). The last 3 years, from 2017 to 2019, skate harvest has been at lower levels, averaging just over 30,000 lb. This is related to the lower abundance and corresponding GHLs of Pacific cod. Bycatch levels are a percentage of the directed harvest, and because this has been reduced, so has the skate harvest.

There is no directed fishery for skates in federal waters; skates may only be retained as bycatch. Concern over skate abundance levels derived from National Marine Fisheries Services (NMFS) stock assessment surveys in recent years resulted in a reduction in maximum retainable amounts (MRA) from 20% to 5% for skate bycatch in federal waters fisheries in 2016. NMFS was reacting to concerns about the skate population stock assessment information and of vessels "topping off" their harvest with maximum allowed bycatch. Additionally, the Central Gulf of Alaska (CGOA) TAC was achieved for big skate in 2013 through 2016, and big skate was closed to retention in federal waters adjacent to PWS. The department closed big skate in state waters of PWS in those years to mirror the NMFS action as there was no statewide GHL set for skate species. The PWS allowable bycatch level of skate species in aggregate had been reduced by EO from 20% to 15% in 2014 due to a conservation concern. Following suit after the recent federal action, ADF&G reduced allowable skate bycatch levels in 2016 by EO from 15% to 5%, where it has remained through the present.

In state waters retention of big skates was closed on May 9 in 2013, February 6 in 2014, February 11 in 2015, and September 27 in 2016; all these actions were coordinated with federal big skate closures. Following the reduction in the federal MRA to 5%, there have been no early closures through 2019.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal because of conservation concerns for big and longnose skates. We have no comprehensive skate stock assessment in PWS and have concerns about bycatch in a directed skate fishery, particularly Pacific halibut. There are existing opportunities to harvest skate as bycatch in other directed groundfish fisheries.

COST ANALYSIS: Approval of this proposal would result in an additional direct cost for a private person to participate in a new skate fishery in PWS, including those costs associated with acquiring a CFEC permit, gear, and operating a vessel in the fishery. Approval of this proposal would result in additional costs to the department if a directed fishery occurs, including those costs associated with management of the fishery, sampling the harvest, and sending department observers aboard participating vessels.

Table 1-1.–Effort, harvest, guideline harvest levels (GHLs) by species and district, and percentage of GHLs harvested, in Prince William Sound Area directed skate fishery, 2009–2010.

Year	Vessels	Landings	Total Directed Skate Harvest	Skate Species	Inside District GHL (lb)	Inside District Harvest (lb)	% of GHL	Outside District GHL (lb)	Outside District Harvest (lb)	% of GHL
2009	9	6	258,379	Big	20,000	47,220	236%	30,000	82,793	276%
				Longnose	100,000	68,828	69%	150,000	59,538	40%
2010	17	16	104,510	Big	20,000	20,382	102%	30,000	6,190	21%
				Longnose	110,000	68,681	62%	155,000	9,257	6%

Table 1-2.–Prince William Sound Area skate harvest (includes bycatch and directed), 1988–2019.

Year	lb	Year	lb	Year	lb
1988	11,770	1999	842	2010	212,347
1989	614	2000	323	2011	201,012
1990		2001	243	2012	146,572
1991	132	2002	691	2013	237,656
1992	18	2003	882	2014	120,304
1993	815	2004	283	2015	268,440
1994		2005	84,013	2016	92,488
1995	1,713	2006	89	2017	39,831
1996	26,667	2007	37	2018	31,726
1997	37,256	2008	9,449	2019	19,752
1998	44,790	2009	328,636	10 yr Avg	137,013

Table 1-3.–Catch abundance and results of selected species and species groups from observed longline sets during the PWS pilot program directed skate fishery.

Year	District	Big Skate		Longnose Skate		Other skate		Pacific Halibut		Rockfish		Other species	
		Ret	Disc	Ret	Disc	Ret	Disc	Ret	Disc	Ret	Disc	Ret	Disc
2009	Inside	0	567	777	7	0	182	0	598	49	0	1,012	319
	Outside	138	3	34	0	0	135	0	361	0	0	86	60
	2009 Total	**138**	**570**	**811**	**7**	**0**	**317**	**0**	**959**	**49**	**0**	**1,098**	**379**
2010	Inside	295	623	1,340	27	0	785	203	1,653	241	1	1,770	1,345
	Outside	194	391	382	6	0	93	0	572	0	0	500	398
	2010 Total	**489**	**1,014**	**1,722**	**33**	**0**	**878**	**203**	**2,225**	**241**	**1**	**2,270**	**1,743**
	Fishery Totals	**627**	**1,584**	**2,533**	**40**	**0**	**1,195**	**203**	**3,184**	**290**	**1**	**3,368**	**2,122**

Note: Ret=Retained; Disc=Discarded

PROPOSAL 2 – 5 AAC 28.271. Landing Requirements for Prince William Sound Area.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would add a 6-hour prior notice of landing (PNOL) requirement for the Prince William Sound Area (PWS) commercial lingcod fishery. Fishermen would be required to call a telephone number, specified by the department on registration forms, at least six hours prior to landing and report the following information: 1) vessel name and ADF&G number; 2) date and location of landing and estimated time of arrival; 3) name of fish buyer or processor; and 4) estimated number of pounds of lingcod on board the vessel.

WHAT ARE THE CURRENT REGULATIONS? The PWS directed lingcod fishery opens on July 1 (5 AAC 28.210 (c)) with a registration requirement for a vessel to participate (5 AAC 28.206 (d)). The PWS directed lingcod season ends December 31 by regulation or by emergency order (EO) if guideline harvest levels (GHLs) are achieved; separate GHLs are established for the Inside and Outside districts. Lingcod may be retained as bycatch, up to 20% by weight of directed species on board the vessel (set by EO) after July 1. To be retained, lingcod must measure at least 35 inches from the tip of the snout to the tip of the tail (5 AAC 28.270 (a)).

A 6-hour PNOL exists for the Cook Inlet Area (CI) directed lingcod fishery (5 AAC 28.371 (b)), PWS sablefish (5 AAC 28.272 (e)), CI sablefish (5 AAC 28.360 (d)), and CI pelagic shelf rockfish fisheries (5 AAC 28.365 (h)).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Participants in the directed lingcod fishery would be required to contact the department at least 6 hours prior to landing their fish. This would result in increased sampling opportunities for the department and allow better fishery management and enforcement.

BACKGROUND: Department staff has difficulty achieving biological sampling objectives for lingcod in recent years due to very short notice given to processors before vessels delivered and a lack of a PNOL requirement for the directed fishery. Although lingcod GHLs have not been achieved since 2013 for the Outside District and 2011 for the Inside District, overall harvest and effort, from the directed and bycatch fisheries combined, increased in 2018 and 2019 (Table 2-1).

Biological sampling of lingcod harvested during the PWS fishery is coordinated out of the Homer ADF&G office from deliveries occurring in Whittier, Seward, and Cordova. For Whittier and Seward landings, staff must travel from Homer to meet vessels, which takes approximately 4-5 hours one-way. Offloading happens quickly and the opportunity to sample landings in all ports can easily be missed if there is no notification beforehand. Having a PNOL in the regulations for the lingcod fishery would assist in achieving sampling goals and would allow Alaska Wildlife Troopers (AWT) to be notified about upcoming deliveries, providing a coordinated enforcement opportunity.

Regulations requiring a 6-hour PNOL for the CI lingcod fishery were adopted by the board in 2019. A 6-hour PNOL requirement was also adopted by the board in 2016 for both the CI directed rockfish and sablefish fisheries and has greatly improved coordination of sampling operations in the port of Seward where these landings frequently occur. There has been a 6-hour PNOL for the PWS sablefish fishery since 2005. Landings during the PWS sablefish fishery often occur in Seward or Whittier and are covered by the same Homer staff as CI rockfish and sablefish landings. When possible, department Homer staff sample landings in Seward and Whittier during the same trip. Adoption of this proposal will improve the ability of department staff to coordinate travel to other ports and increase opportunities to collect biological samples from Central Region (PWS and CI) commercial groundfish fisheries.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. Having a PNOL requirement for the PWS lingcod fishery in addition to other state-managed groundfish fisheries could result in higher productivity and efficiency for the Central Region sampling program. If adopted, sampling staff will be notified of all groundfish landings and may be able to collect biological information from more deliveries during a single sampling trip.

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 2-1.–Prince William Sound Area commercial lingcod effort and harvest, directed and bycatch fisheries combined, harvest from Inside and Outside Districts, by state and federal waters, 1988–2019.

			Harvest (lb)			
Year	Vessels	Landings	Inside District State Waters	Outside District State Waters	Outside District Federal Waters	Total
1988	20	27	1,338	7,106	18,508	26,952
1989	20	24	1,279	5,335	15,096	21,710
1990	25	31	8,117	3,155	31,628	42,899
1991	30	51	20,244	4,928	7,679	32,851
1992	45	57	2,349	3,981	19,611	25,941
1993	29	49	246	7,462	59,073	66,781
1994	29	56	9,542	851	33,615	44,007
1995	36	49	138	2,751	107,319	110,208
1996	27	46	5,799	790	22,164	28,753
1997	42	73	22,890	2,933	12,375	38,198
1998	18	27	3,399	1,468	6,229	11,096
1999	16	18	1,483	5,352	2,509	9,344
2000	18	41	5,113	12,174	6,568	23,855
2001	32	49	4,359	18,796	3,657	26,812
2002	20	27	1,007	777	18,386	20,170
2003	32	51	5,593	7,023	11,619	24,235
2004	30	47	6,024	6,791	17,477	30,292
2005	30	46	6,193	8,986	9,065	24,244
2006	22	46	5,911	6,303	15,869	28,084
2007	34	41	6,866	2,615	21,215	30,695
2008	30	49	8,051	1,822	30,728	40,601
2009	42	89	8,492	8,782	55,198	72,472
2010	21	39	6,670	4,115	44,141	54,925
2011	29	49	7,952	5,648	32,210	45,810
2012	45	69	4,114	5,665	30,706	40,485
2013	26	35	1,527	4,986	23,818	30,331
2014	20	25	4,199	1,000	10,671	15,871
2015	18	35	2,968	1,778	15,618	20,364
2016	27	40	404	2,563	11,127	14,093
2017	22	28	460	4,043	8,119	12,622
2018	36	60	6,688	4,316	18,551	29,554
2019	38	64	7,388	8,231	10,789	26,408
Average 2010–2019	28	44	4,237	4,234	20,575	29,046

PROPOSAL 3 – 5 AAC 28.267. Prince William Sound Pacific Cod Management Plan.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would clarify possession and landing requirements for vessels participating in a parallel Pacific cod fishery in the Prince William Sound Area (PWS) by stating that vessels may only fish in one registration area at a time.

WHAT ARE THE CURRENT REGULATIONS? Vessels are required to register for the PWS parallel Pacific cod fishery and may only be registered for one registration area at a time as provided in 5 AAC 28.206 (d) and 5 AAC 28.020 (a) and (b)(1).

Under 5 AAC 28.267 *Prince William Sound Pacific Cod Management Plan*, parallel Pacific cod seasons in state waters of the PWS open and close by emergency order for each gear type to coincide with corresponding federal seasons in the adjacent Central Gulf of Alaska Regulatory Area (CGOA). Additional statewide provisions governing Pacific cod management plans and parallel groundfish fisheries are defined in 5 AAC 28.081 and 5 AAC 28.087, respectively.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Clarifying allowable fishing activity in area regulation, specifically the requirement to remain within a single groundfish registration area during the same trip, would reduce confusion for the public and aid enforcement regarding PWS requirements for parallel Pacific cod commercial fisheries.

BACKGROUND: Vessels participating in the parallel Pacific cod fishery in PWS may fish in both state and federal waters on the same trip if they meet federal requirements. However, vessels must be registered for the fishery and may only be registered for one registration area at a time (5 AAC 28.020). Therefore, if a vessel participates inside state waters during the parallel Pacific cod fishery, the vessel must remain in the registration area for that trip. If the vessel were to fish in the adjacent Cook Inlet Area during that trip, for example, the vessel registration for the PWS parallel Pacific cod fishery would be invalidated and the vessel would no longer be complying with registration requirements.

The decreasing Pacific cod abundance, and corresponding federal total allowable catch (TAC), has resulted in a reduction in PWS parallel season harvest for all gear types from 3.05 million lb in 2015 to 75,279 lb in 2019, the lowest since 2008 (Table 3-1). Vessel participation from all gear types ranged from 36 in 2017 to 50 vessels in 2018, with 65 landings in 2019, the lowest since 2006.

The recent decline in Pacific cod abundance and corresponding quotas could result in fishery participants fishing in multiple registration areas in one season as they seek additional fishing opportunities. This regulation clarification will help participants understand the requirements when changing registration areas during the season, improve management with more accurate location reporting, and aid enforcement.

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.

Table 3-1.–Prince William Sound Area parallel Pacific cod season annual effort and harvest by gear type, 1988–2020.

			Harvest (lb)[a]				
Year	Vessels	Landings	Other[b]	Longline	Pot	Jig[c]	Total[d]
1988	39	87	0	330,718	0	0	330,718
1989	23	45	[e]	71,845	[e]	[e]	71,845
1990	84	307	[e]	1,203,118	[e]	[e]	1,203,118
1991	88	234	17,074	1,248,218	961,912	[e]	2,227,204
1992	140	524	[e]	1,359,176	594,741	[e]	1,953,917
1993	57	205	[e]	810,831	466,202	[e]	1,277,033
1994	46	197	0	316,550	1,584,722	[e]	1,901,272
1995	75	205	24,539	359,765	1,204,450	6,982	1,595,736
1996	50	135	218,170	214,021	420,183	1,663	854,037
1997	60	172	1,506	334,086	582,324	4,333	922,249
1998	50	150	5,879	534,553	138,243	0	678,675
1999	54	196	1,909	687,169	641,523	[e]	1,330,601
2000	58	175	[e]	403,230	332,310	0	735,540
2001	23	63	[e]	143,641	[e]	[e]	143,641
2002	22	51	[e]	17,700	0	0	17,700
2003	26	45	234	14,051	[e]	[e]	14,285
2004	17	45	[e]	13,247	0	0	13,247
2005	24	38	221	11,073	0	0	11,294
2006	30	59	587	18,407	0	0	18,988
2007	31	82	[e]	64,807	[e]	[e]	64,807
2008	35	78	0	66,563	0	0	66,563
2009	41	90	[e]	166,190	0	0	166,190
2010	40	93	326	88,700	0	0	89,026
2011	39	93	345	359,402	[e]	[e]	359,747
2012	32	82	1,963	420,544	[e]	[e]	422,507
2013	32	92	182	806,281	[e]	[e]	806,463
2014	33	82	415	791,448	[e]	[e]	791,863
2015	44	188	782	3,045,972	0	0	3,046,754
2016	50	145	5,766	1,136,224	[e]	82,109	1,224,099
2017	36	123	197	845,947	0	[e]	846,144
2018	50	99	1,323	238,296	480	[e]	240,099
2019	42	65	1,530	73,749	[e]	0	75,279
2020			CLOSED[f]				0
Average 2010–2019	40	106	1,283	780,656			790,198

[a] Harvest is reported in round lb; includes bycatch to other groundfish fisheries.

[b] "Other" includes trawl and gillnet gear.

[c] Includes mechanical jig and hand troll.

[d] Total harvest does not include confidential data.

[e] Confidential data due to limited number of participants.

[f] Federal Gulf of Alaska Pacific cod fishery was closed, thereby closing the parallel fishery.

PROPOSAL 4 – 5 AAC 28.272. Sablefish harvest, possession, and landing requirements for Prince William Sound Area.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would clarify possession and landing requirements for vessels fishing in state waters of the Prince William Sound Area (PWS) while retaining sablefish during that trip.

WHAT ARE THE CURRENT REGULATIONS? In state waters of PWS, sablefish may only be retained in the Inside District during the open directed sablefish season from April 15 through August 31 by a limited-entry permit holder who registered to participate by the registration deadline of 5:00 p.m. April 1 (5 AAC 28.206 (c) and 5 AAC 28.210 (b)). The PWS sablefish permit holder may not take more than the annual amount (quota specific to permit type) specified by the department; log sheets and 6- hour prior notice of landing are required in the fishery (5 AAC 28.272 (c), (e), and (f)).

The operator of a fishing vessel may not take sablefish in PWS while sablefish taken in another registration area are on board the vessel (5 AAC 28.272 (b)).

As provided in 5 AAC 28.070 (c)(2), a CFEC permit holder, while taking fish in an area or having taken fish in an area during the same trip, may not have on board an aggregate amount of a groundfish species that exceeds the amount allowed by regulation for that area, regardless of where the groundfish were taken.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would provide clarity and reduce confusion for the public and department staff by more clearly defining allowable fishing activity under 5 AAC 28.272, which governs retention of sablefish in state waters of PWS. It would also aid enforcement, specifically for vessels that fish Individual Fishing Quota (IFQ) sablefish and halibut during the same trip.

BACKGROUND: The state and federally-managed IFQ sablefish fisheries are managed separately, and harvest occurs in either state or federal waters, respectively (Table 4-1). Therefore, a vessel may not fish in both federal and state waters on the same trip when retaining sablefish at any point during that trip, regardless of where they fished first (5 AAC 28.070 (c)(2)). Harvest and fishing location are reported at the time of landing for the whole trip, and it would be difficult for enforcement to evaluate in what order fishing occurred, if fishing occurred in multiple statistical areas.

It is problematic for accurate accounting and enforcement when vessels participating concurrently in federally managed IFQ halibut and IFQ sablefish fisheries in federal waters also fish inside state waters during that trip with the following potential scenarios: sablefish are harvested in state waters either out of season or without a limited-entry PWS permit, or harvest location of sablefish is misreported. During an IFQ halibut trip, vessels may cross the state waters boundary line, and harvest fish in both state waters and federal waters; however, vessels retaining sablefish in federal waters may not also fish inside state waters on that trip. Even when sablefish harvest does not occur inside state

waters, this has been both an enforcement and management issue, as vessel operators often report fishing location by splitting all harvest between the same state and federal waters statistical areas without specifying the location where sablefish was taken, when different (e.g. sablefish taken in federal waters only, while halibut split between those state and federal areas). In addition to violating 5 AAC 28.070 (c)(2), inaccurate reporting on fish tickets violates 5 AAC 39.130 (c)(8) and indicates that sablefish harvested in federal waters were retained illegally in state waters. Adding the proposed regulatory language would provide clarity and reduce confusion for the public and department staff and aid enforcement.

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.

Table 4-1.–Prince William Sound Area annual sablefish effort, guideline harvest level (GHL), and harvest, including test fish, from the Inside and Outside Districts, 1988–2019.

					Annual harvest (lb)			
Year	Permits fished	Vessels	Landings	GHL	Inside	Outside	Test fishery[a]	Total[b]
1988		54	145	192,063	219,416	27,958		247,374
1989		25	95	192,063	188,042	746		188,788
1990		71	251	192,063	211,485	4,929		216,414
1991		78	157	192,063	326,235	24,398		350,633
1992		63	126	192,063	432,172	33,684		465,856
1993		60	92	242,000	316,603	74,943		391,546
1994		66	102	242,000	280,700	60,359		341,059
1995		126	134	242,000	565,548	11,767		577,315
				Limited entry program implemented				
1996	67	69	77	242,000	247,545	33,475	10,376	291,396
1997	51	51	81	242,000	196,370	2,689	9,311	208,370
1998	59	59	60	242,000	233,005	14	11,676	244,695
1999	39	42	45	242,000	206,142	0	7,765	213,907
2000	31	32	32	242,000	342,854	77	13,582	356,513
2001	46	47	49	242,000	310,216	0	13,692	323,908
2002	48	49	51	242,000	320,694	0	7,924	328,618
				Shared quota fishery implemented				
2003	50	39	67	242,000	213,932	0	9,914	223,846
2004	50	38	67	242,000	225,002	0	9,994	234,996
2005	49	34	70	242,000	220,392	0	6,687	227,079
2006	46	27	73	242,000	185,494	0	10,068	195,562
2007	49	28	61	242,000	199,213	0		199,213
2008	50	31	70	242,000	206,888	[c]		206,888
2009	52	32	104	242,000	219,438	0		219,438
2010	52	30	112	242,000	212,229	0		212,229
2011	52	29	94	242,000	222,099	0		222,099
2012	50	26	87	242,000	203,824	0		203,824
2013	43	30	93	242,000	155,488	0		155,488
2014	39	27	72	242,000	96,726	[c]		96,726
2015	24	21	40	122,000	16,910	0		16,910
2016	29	22	43	110,823	40,457	0		40,457
2017	38	20	52	117,000	73,113	0		73,113
2018	43	20	58	133,000	88,117	0		88,117
2019	41	17	47	134,000	85,796	[c]		85,796
Average 2010–2019	41	24	70	182,682	119,476			119,476

[a.] Fish harvested under ADF&G's program receipts authority are listed as "test fishery" and not included in vessels or landings.

[b.] Confidential data excluded from total harvest.

[c.] Confidential data due to fewer than 3 participants; Outside District was closed to sablefish harvest in 1997.

COMMITTEE OF THE WHOLE – GROUP 2: COPPER RIVER KING SALMON, UPPER COPPER RIVER SUBSISTENCE AND PERSONAL USE (19 PROPOSALS)

Copper River King Salmon Management Plan (2 proposals)

PROPOSAL 5 – 5 AAC 24.361. Copper River King Salmon Management Plan.

PROPOSED BY: Kenai River Sportfishing Association.

WHAT WOULD THE PROPOSAL DO? Replace the department recommended sustainable escapement goal (SEG) of 21,000 – 31,000 king salmon for the Copper River with an OEG of 24,000 – 40,000 king salmon.

WHAT ARE THE CURRENT REGULATIONS? The current SEG is 24,000 or more king salmon.

WHAT WOULD BE THE EFFECTS IF THE PROPOSAL IS ADOPTED? This would create an escapement goal that could reduce long-term production of Copper River king salmon. This may also result in more liberal mid- to late-season commercial fishery management during years of high king salmon abundance to avoid exceeding the upper end of the OEG range. Inriver king salmon fisheries would not be liberalized until 40,000 fish were estimated to be inriver. Under the department recommended goal, inriver king salmon fisheries could be liberalized when 31,000 fish were estimated to be inriver.

BACKGROUND: At its 1996 meeting, the board adopted 5 AAC 24.361. *Copper River King Salmon Management Plan* and directed the department to reduce harvest potential of king salmon for commercial, sport, and personal use fisheries by five percent each. In 1999, the board added a spawning escapement goal of 28,000–55,000 king salmon to the plan. At the 2003 board meeting, the escapement goal was changed to an SEG of 24,000 or more king salmon. The department recommended keeping the lower bound escapement goal slightly below the historic average of 26,000 king salmon and to remove the upper bound in an effort to keep escapements near the historic average and allow for large runs to better inform the spawner-recruit relationship. By 2017, a more robust Bayesian analysis was developed that included information on larger returns and escapements, additional escapement estimates from a mark/recapture study, genetic mixed stock analysis, and age studies. Based on this analysis the department recommends an SEG range of 21,000–31,000 king salmon in 2020 that better defines the range that would maximize long-term returns.

Escapement goals for king salmon have been met in 6 of the last 10 years and there are no stocks of concern for king salmon in the Copper River drainage. King salmon management and their assessment is detailed in the board written report *Management of Salmon Stocks in the Copper River*.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal but is concerned with establishing escapement goals that increase the probability of reduced yields on average in the future. Under the *Policy for Management of Sustainable Salmon Fisheries* and the *Policy for Statewide Salmon Escapement Goals*, the board can establish an OEG or inriver goal with the assistance of the department. The department's SEG recommendation of 21,000–31,000 is based on long-term data sets, rigorous analyses, accounts for variable environmental conditions, can be managed inseason with existing abundance indicators, best maximizes long-term production, and ensures long-term sustainability of Copper River king salmon stocks.

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 5-1.–Summary of king salmon harvests and upriver escapement in the Copper River, 2000–2019.

Year	Commercial harvest[a]	CRD Subsistence harvest[b]	Sport harvest[c]	Glennallen Subdistrict harvest[d]	Chitina Subdistrict harvest[d]	Total harvest	Upriver return estimate[e]	Estimated total return	Spawning escapement[f]
2000	32,018	689	5,531	4,856	3,168	46,262	38,047	70,754	24,492
2001	40,551	826	4,904	3,553	3,113	52,947	39,778	81,155	28,208
2002	39,552	549	5,098	4,217	2,056	51,472	32,873	72,974	21,502
2003	49,031	710	5,717	3,092	1,921	60,471	44,764	94,505	34,034
2004	38,889	1,106	3,435	3,982	2,502	49,914	40,564	80,559	30,645
2005	35,764	260	4,093	2,618	2,094	44,829	30,333	66,357	21,528
2006	31,309	779	3,425	3,229	2,681	41,423	67,789	99,877	58,454
2007	40,274	1,145	5,113	3,939	2,722	53,193	46,349	87,768	34,575
2008	12,067	470	3,616	3,218	2,022	21,393	41,343	53,880	32,487
2009	10,398	212	1,355	3,036	223	15,224	32,400	43,010	27,786
2010	10,582	276	2,416	2,425	718	16,417	22,323	33,181	16,764
2011	19,788	212	1,753	3,062	1,080	25,895	33,889	53,889	27,994
2012	12,623	237	535	2,510	572	16,477	31,452	44,312	27,835
2013	9,445	854	285	2,522	762	13,868	32,581	42,880	29,012
2014	11,011	153	931	1,785	733	14,613	24,158	35,322	20,709
2015	23,701	167	1,343	2,614	1,585	29,410	32,306	56,174	26,764
2016	13,161	73	327	2,471	726	16,758	16,009	29,243	12,485
2017	14,628	778	1,731	3,366	1,973	22,476	40,725	56,131	33,655
2018	7,303	1,356	1,280	7,668	1,374	18,981	52,524	61,183	42,202
2019	18,605	808	1,561	4,315	2,689	27,978	43,714	63,127	35,149
Average 2014–2018	13,961	505	1,122	3,581	1,278	20,448	33,144	47,611	27,163
Average 2009–2018	13,264	432	1,196	3,146	975	19,012	31,837	45,533	26,521

[a] Includes commercial harvest plus homepack, donated and educational harvests.

[b] Includes State and Federal subsistence harvests in the Copper River District.

[c] Includes sport harvest in the Copper River Delta and the upper Copper River upstream of Haley Creek.

[d] These data are expanded to reflect unreported state harvest and include reported federal harvest (2002–2004) and expanded federal harvest beginning in 2005.

[e] Prior to 1999 upriver returns were calculated by applying the percentage of king salmon in the Glennallen and Chitina subdistrict fisheries to the sonar count. Starting in 1999, upriver king salmon returns are estimated through a mark-recapture method.

[f] From 2000–2002 the Copper River drainagewide escapement goal for king salmon was 28,000–55,000 and from 2003–present the escapement goal has been a SEG of 24,000 or greater king salmon.

PROPOSAL 41 – 5 AAC 24.361. Copper River King Salmon Management Plan.

PROPOSED BY: Cordova District Fishermen United.

WHAT WOULD THE PROPOSAL DO? This would repeal the restriction limiting the number of hours that may be fished within the inside closure area (Figure 41-1) of the Copper River District during statistical week 20 and 21.

WHAT ARE THE CURRENT REGULATIONS? During statistical weeks 20 and 21 (the first two weeks of the season), the department may not open more than one 12-hour fishing period within the inside closure area of the Copper River District described in AAC 24.350(1)(B) (Figure 41-1).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would provide the department the ability to harvest surplus king and sockeye salmon in the Copper River District inside closure area early in the season. Closure of inside-waters could still be used inseason to conserve Copper River king salmon stocks.

BACKGROUND: Since 1997, the department has implemented regular inside-waters closures as a tool to reduce king salmon harvest in Copper River District. This strategy was developed by the department based on catch data showing most of the king salmon are harvested in the shallow inside areas. To conserve Copper River king salmon the department has implemented more inside closures than required by regulation during each of the last 12 seasons (Table 41-1).

Over the past 18 years, Copper River king salmon runs have declined, and the department has responded by implementing commercial fishing restrictions to reduce harvest proportionally. The use of inside closures has ranged from minimal in years with high king salmon abundance to expanded use through the first month of the fishery in years of low king salmon abundance. From 2002–2007, during the most recent period of increased productivity, average Copper River District commercial king salmon harvest was approximately 39,000 fish, and average combined subsistence, sport, and personal use harvests were 10,300 fish. From 2008–2019, during the current period of reduced run size, average Copper River District commercial king salmon harvest averaged 13,700 fish, and average combined subsistence, sport, and personal use harvests were 6,300 fish. During the period of increased productivity (2002–2007) king salmon spawning escapement ranged from 21,500–58,500, with an average escapement of 33,500. During the period of reduced productivity (2008–2019), king salmon spawning escapement ranged from 12,400–42,700, with an average escapement of 27,800 (Figure 41-2). The average subsistence harvests have declined during the period of reduced run size as well. Despite low run sizes, department management restrictions in subsistence, commercial, personal use, and sport fisheries resulted in spawning escapement achieving the lower bound SEG of 24,000 king salmon in seven of 10 years (Figure 41-2).

At the December 2011 board meeting, the *Copper River King Salmon Management Plan* was amended to limit the number of commercial openings inside of the barrier islands (inside closures) to no more than one 12-hour fishing period during statistical weeks 20 and 21 to increase the probability of achieving the king salmon SEG. The standard commercial fishing schedule for the Copper River is two evenly spaced fishing periods per week, beginning in mid-May, with the first period each week starting at 7:00 a.m. on Monday. Fishing effort, harvest, and Miles Lake sonar salmon escapement trends guide a decision on the time and area of a possible second weekly fishing period, typically scheduled for 7:00 a.m. on Thursdays. The Copper River fishery primarily targets sockeye salmon, thus the number of fishing periods per week and duration are primarily driven by sockeye salmon management (achieving the sockeye salmon SEG of 360,000–750,000 fish) with inside closures meant to protect king salmon. The sockeye salmon SEG range has been exceeded in four out of eight years since the 2011 board meeting. A complete history of the *Copper River King Salmon Management Plan* can be found in the board written report *Management of salmon stocks in the Copper River*.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. Inside-waters closures have been a longstanding tool to conserve Copper River king salmon and would continue to be used as needed to conserve Copper River king salmon if this proposal is adopted.

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.

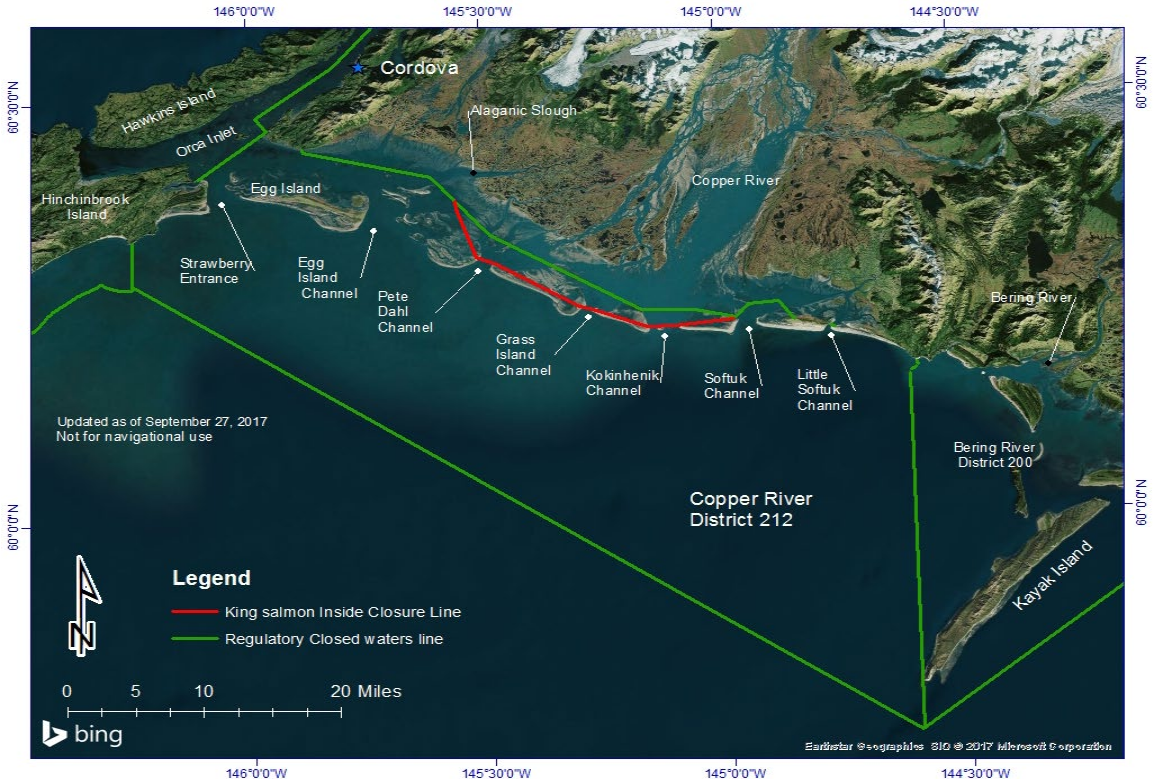


Figure 41-1.–Map of Copper River and Bering River districts showing inside closure area.

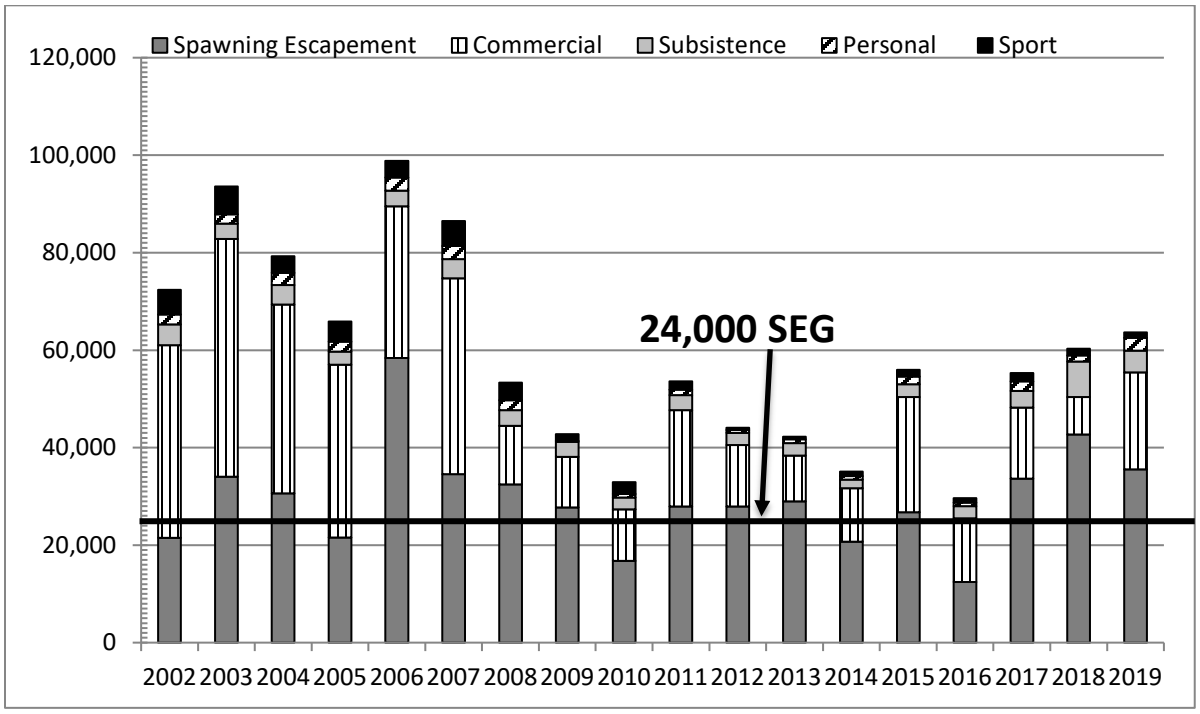


Figure 41-2.–Copper River king salmon escapement and harvest by user group, 2002–2019.

Table 41-1.–King salmon regulatory history for the Copper River District commercial and Upper Copper River king salmon fisheries, 2009–2020.

Year	Escapement[a,b]	Date	Copper River district[c]	Chitina Subdistrict	Upper Copper River sport fishery
2009	27,787	21-May	Inside area closed 6 out of 13 periods		
		8-Jun		Prohibited retention	
		16-Jun			Reduced annual limit from 4 to 2, with only 1 of the 2 allowed from any tributary or the Copper River mainstem.
		29-Jun			Closed the Gulkana River drainage.
		27-Jul			Prohibited retention in the Klutina River and the use of bait and treble hooks.
2010	**16,764**	20-May	Inside area closed 5 out of 12 periods		
		21-Jun		Prohibited retention	Reduced annual limit from 4 to 2, with only 1 of the 2 allowed from any tributary or the Copper River mainstem.
2011	27,994	16-May	Inside area closed 5 out of 14 periods		
		25-Jun			Reduced annual limit from 4 to 2, with only 1 of the 2 allowed from any tributary or the Copper River mainstem and prohibited retention in the Copper River drainage upstream of the Klutina River (including the Gulkana River).
		27-Jun		Prohibited retention	
2012	27,835	17-May	Inside area closed 10 out of 13 periods		
		18-Jun		Prohibited retention	
		30-Jun			Reduced annual limit from 4 to 1 and prohibited retention and the use of bait and treble hooks in the Gulkana River .
		28-Jul			Prohibited retention and the use of bait and treble hooks in the Klutina River and the Upper Copper River drainage downstream of the Klutina River
2013	29,012	16-May	Inside area closed 4 out of 9 periods		
		15-Jun			Reduced annual limit from 4 to 1 and prohibited retention and the use of bait and treble hooks in the
		24-Jun		Prohibited retention	

-continued-

Table 41-1.–Page 2 of 2.

Year	Escapement[a,b]	Date	Copper River district[c]	Chitina Subdistrict	Upper Copper River sport fishery
2014	**20,709**	15-May	Inside area closed 11 out of 13 periods		
		14-Jun			Reduced annual limit from 4 to 1
		16-Jun		Prohibited retention	
2015	26,764	15-May	Expanded inside area and closed 10 out of 15 periods	No action	No management actions taken
2016	**12,485**	15-May	Expanded inside area and closed for 12 out of 14 periods		
		18-Jun			Prohibited retention and the use of bait and treble hooks in the Copper River drainage upstream of the Klutina River (including the Gulkana River).
		20-Jun		Prohibited retention	
		25-Jun			Closed the Upper Copper River drainage to sport fishing for king salmon
2017	33,655	15-May	Expanded inside area and closed for 9 out of 13 periods		
		1-May		.	Closed the Upper Copper River drainage to sport fishing for king salmon River.
		1-Jun		Prohibited retention	
		5-Jun			Opened Upper Copper River drainage to sport fishing for king salmon with 2-fish annual bag limit
		19-Jun		Re-open retention	
2018	42,202	15-May	Inside area closed for 3 out of 3 periods	No action	No action
2019	45,149	15-May	Inside area closed for 7 out of 13 periods	No action	No action
2020	**21,586**	15-May	Expanded Inside area and closed for 5 out of 5 periods		
		20-Jun			Upper Copper River drainage king salmon annual limit reduced from 4 to 1 fish.
		22-Jun		Prohibited retention	

[a] Numbers in **bold** are below the escapement goal.

[b] 2020 escapement data are preliminary.

[c] Reflects number of periods excluding the portion of the Copper River District in and around the barrier islands through the end of the king salmon run (approximately June 30).

Upper Copper River Personal Use and Subsistence (17 proposals)

PROPOSAL 6 – 5 AAC 01.630. Subsistence fishing permits; 5 AAC 77.591. Copper River Personal Use Dip Net Salmon Fishery Management Plan; and 5 AAC 52.XXX. New section.

PROPOSED BY: Karen Linnell.

WHAT WOULD THE PROPOSAL DO? Require daily effort and harvest reporting by participants in the Upper Copper River drainage subsistence, personal use, and sport fisheries within three days of their fishing activity. The proposer does not specify if the reporting requirement is specific to all salmon species or is limited to sockeye salmon only.

WHAT ARE THE CURRENT REGULATIONS? Subsistence and personal use permit holders in the Glennallen and Chitina subdistricts must record their harvest daily on their permits and return those permits within 15 (personal use) or 30 days (subsistence) after the season closes on September 30. Sport anglers must immediately record any king salmon harvested on their license or harvest record form. There is no reporting requirement for this information for any other sport harvest.

WHAT WOULD BE THE EFFECTS IF THE PROPOSAL IS ADOPTED? This would require the department to develop a reporting system and increase staffing to compile effort and harvest data that would be collected daily. Additional enforcement effort would be needed to ensure compliance. For sport anglers, there would be a requirement to report sport effort and harvest in the Copper River drainage, but not elsewhere in the state.

BACKGROUND: In the Glennallen Subdistrict subsistence fishery permit holders may report online, by phone, or mail by October 31. Chitina Subdistrict personal use fisheries harvest reports have been required to be reported online by October 15 beginning in 2020. The department uses the past harvest reports and effort to evaluate run strength and timing and to predict inseason sockeye salmon harvest based on fish passage at the Miles Lake sonar. Harvest per permit holder in these fisheries is generally correlated to sonar passage (Table 6–1).

The department issues upwards of 1,700 Glennallen Subdistrict subsistence permits and 12,000 Chitina Subdistrict personal use fishery permits annually. Over the last 10 years, 14,000–22,000 anglers have reported sport fishing in the Upper Copper Upper Susitna Management Area and in past years participation has exceeded 40,000 sport anglers annually.

Sport harvest in the state has been monitored through the statewide harvest survey since 1977. These data are used to ensure sustainability of area fisheries and to identify needed research on abundance and effort. Several creel surveys conducted on the Klutina and Gulkana rivers have verified the accuracy of the SWHS as an indicator of harvest and catch on these rivers. Additionally, a counting tower on the Gulkana River provides additional inseason escapement data

on sockeye and king salmon. Sport harvest of sockeye salmon is relatively low compared to other sockeye salmon fisheries in the Copper River drainage (Table 6–1) and is primarily focused on the Klutina River which accounts for an average of 82% of the overall sockeye salmon harvest while the Gulkana River accounts for an average of 14%.

The lower bound of the Copper River drainage sockeye salmon escapement goal has been met or exceeded in all of the past 20 years (2000–2019: Table 6–1). The king salmon lower bound escapement goal has been met in 14 of the last 20 years. Inseason management actions have been taken in the Copper River king salmon fisheries since 2009 and sockeye salmon fisheries in 2018 and 2020 in response to weak returns (Table 6–2).

Gulkana Hatchery sockeye salmon brood/excess fish reaching the facility and their remote release locations has ranged from 6,618–157,980 fish from 2000–2019 (Table 6–1). Annual variation in these numbers reflects variation in hatchery production processes and is not correlated to overall sonar passage or harvest in any of the eight fisheries along the river.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. The requirement of mandatory daily reporting in the sport, personal use, and subsistence fisheries of the Upper Copper River are unnecessary because inseason harvest reports are not currently used to manage these fisheries, places an additional burden on users, would be challenging to enforce, and places additional budgetary and administrative burdens on the department. Specific to the sport fisheries, requiring daily online reporting in only one area of the state may add confusion for sport anglers who fish multiple areas of the state.

COST ANALYSIS: Approval of this proposal may result in an additional direct cost for a private person to participate in these fisheries, if travel is required to report daily harvests. Approval of this proposal is expected to result in an additional direct cost for the department through implementation and administration of an inseason harvest reporting system.

SUBSISTENCE REGULATION REVIEW:

1. Is this stock in a nonsubsistence area? No.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes, the board made a positive customary and traditional use finding for the salmon stocks in the Glennallen Subdistrict of the Upper Copper District (5 AAC 01.616 (a)(1)).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? The board has found the following amounts of salmon are reasonably necessary for subsistence uses in the following locations:
    a. Glennallen Subdistrict of the Upper Copper River District:
        i. in that portion from the southern boundary of the subdistrict at the downstream edge of the Chitina-McCarthy Road Bridge to the mouth of the Tonsina River: 25,500–39,000 salmon;

ii. in that portion from the mouth of the Tonsina River upstream to the mouth of the Gakona River: 23,500–31,000 salmon;

iii. in that portion from the mouth of the Gakona River upstream to the mouth of the Slana River, and the waters of the Copper River as described in 5 AAC 01.647(i)(3): 12,000–12,500 salmon.

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

Table 6-1.—Upper Copper River sockeye and king salmon harvest and escapement 2000–2019.

		Sockeye salmon harvest[a]					King salmon harvest[a]				
Year	Sonar count	Glennallen Subdistrict subsistence	Chitina Subdistrict personal use	Sport	Sockeye salmon escapement[b]	King salmon inriver estimate	Glennallen Subdistrict subsistence	Chitina Subdistrict personal use	Sport	King salmon escapement[b]	Gulkana Hatchery brood/excess
2000	636,837	59,497	107,856	14,550	343,691	38,047	4,856	3,168	5,531	**24,492**	75,385
2001	878,205	83,787	132,108	8,509	538,681	39,778	3,553	3,113	4,904	28,208	75,620
2002	830,263	58,800	86,543	8,492	581,717	32,873	4,217	2,056	5,098	**21,502**	62,361
2003	747,091	60,623	81,513	7,549	507,895	44,764	3,092	1,921	5,717	34,034	45,024
2004	669,514	73,214	108,527	7,383	433,945	40,564	3,982	2,502	3,435	30,645	6,618
2005	855,125	86,140	122,463	8,803	515,599	30,333	2,618	2,094	4,093	**21,528**	92,455
2006	959,706	76,056	124,810	14,455	579,552	67,789	3,229	2,681	3,425	58,454	97,202
2007	919,601	83,338	126,154	24,757	612,103	46,349	3,939	2,722	5,113	34,575	28,648
2008	718,344	57,632	82,318	12,682	480,597	41,343	3,218	2,022	3,616	32,487	45,022
2009	709,748	60,517	90,917	14,408	469,090	32,400	3,036	223	1,355	27,786	43,409
2010	923,811	84,856	140,811	16,085	502,992	22,323	2,425	718	2,416	**16,764**	157,980
2011	914,231	75,375	129,985	8,565	607,657	33,889	3,062	1,080	1,753	27,994	59,589
2012	1,294,400	92,792	128,058	24,168	953,245	31,452	2,510	572	535	27,835	65,348
2013	1,267,060	90,788	182,915	26,997	860,929	32,581	2,522	762	285	29,012	72,369
2014	1,218,418	98,535	158,879	18,179	864,988	24,158	1,785	733	931	**20,709**	53,737
2015	1,346,100	108,696	225,425	9,619	930,061	32,306	2,614	1,585	1,343	26,764	40,123
2016	801,593	81,839	150,303	7,801	513,546	16,009	2,471	726	327	**12,485**	32,341
2017	723,426	56,110	134,294	9,789	465,518	40,725	3,366	1,973	1,731	33,655	16,934
2018	701,577	56,093	80,542	2,965	478,701	52,524	7,668	1,374	1,280	42,202	30,306
2019	1,039,654	76,387	175,413	7,382	720,997	43,714	4,315	2,689	1,561	35,149	15,552
Average 2014–2018	958,223	80,255	149,889	9,671	650,563	33,144	3,581	1,278	1,122	27,163	34,688
Average 2009–2018	990,036	80,560	142,213	13,858	664,673	31,837	3,146	975	1,196	26,521	57,214

[a] Subsistence and personal use harvest data include expanded (accounts for unreported harvest) state harvest and reported (2002–2004) and expanded (2005–2019) federal subsistence harvest. Sport harvest is from the Statewide Harvest Survey.

[b] Data in **bold** indicate escapement below the lower bound threshold (28,000–55,000 king salmon from 2000–2002 and 24,000 king salmon after 2001; Prior to 2003 the Copper River sockeye salmon escapement goal was 300,000, from 2003–2010 the escapement goal was 300,000–500,000, 2011–present the escapement goal has been 360,000–750,000).

Table 6-2.– King salmon regulatory history for the Copper River District commercial and Upper Copper River king salmon fisheries, 2009–2020.

Year	Escapement[a,b]	Date	Copper River district[c]	Chitina Subdistrict	Upper Copper River sport fishery
2009	27,787	21-May	Inside area closed 6 out of 13 periods		
		8-Jun		Prohibited retention	
		16-Jun			Reduced annual limit from 4 to 2, with only 1 of the 2 allowed from any tributary or the Copper River mainstem.
		29-Jun			Closed the Gulkana River drainage.
		27-Jul			Prohibited retention in the Klutina River and the use of bait and treble hooks.
2010	**16,764**	20-May	Inside area closed 5 out of 12 periods		
		21-Jun		Prohibited retention	Reduced annual limit from 4 to 2, with only 1 of the 2 allowed from any tributary or the Copper River mainstem.
2011	27,994	16-May	Inside area closed 5 out of 14 periods		
		25-Jun			Reduced annual limit from 4 to 2, with only 1 of the 2 allowed from any tributary or the Copper River mainstem and prohibited retention in the Copper River drainage upstream of the Klutina River (including the Gulkana River).
		27-Jun		Prohibited retention	
2012	27,835	17-May	Inside area closed 10 out of 13 periods		
		18-Jun		Prohibited retention	
		30-Jun			Reduced annual limit from 4 to 1 and prohibited retention and the use of bait and treble hooks in the Gulkana River .
		28-Jul			Prohibited retention and the use of bait and treble hooks in the Klutina River and the Upper Copper River drainage downstream of the Klutina River
2013	29,012	16-May	Inside area closed 4 out of 9 periods		
		15-Jun			Reduced annual limit from 4 to 1 and prohibited retention and the use of bait and treble hooks in the Gulkana River
		24-Jun		Prohibited retention	

-continued-

Table 6-2.–Page 2 of 2.

Year	Escapement[a,b]	Date	Copper River district[c]	Chitina Subdistrict	Upper Copper River sport fishery
2014	**20,709**	15-May	Inside area closed 11 out of 13 periods		
		14-Jun			Reduced annual limit from 4 to 1
		16-Jun		Prohibited retention	
2015	26,764	15-May	Expanded inside area and closed 10 out of 15 periods	No action	No management actions taken
2016	**12,485**	15-May	Expanded inside area and closed for 12 out of 14 periods		
		18-Jun			Prohibited retention and the use of bait and treble hooks in the Copper River drainage upstream of the Klutina River (including the Gulkana River).
		20-Jun		Prohibited retention	
		25-Jun			Closed the Upper Copper River drainage to sport fishing for king salmon
2017	33,655	15-May	Expanded inside area and closed for 9 out of 13 periods		
		1-May		.	Closed the Upper Copper River drainage to sport fishing for king salmon River.
		1-Jun		Prohibited retention	
		5-Jun			Opened Upper Copper River drainage to sport fishing for king salmon with 2-fish annual bag limit
		19-Jun		Re-open retention	
2018	42,202	15-May	Inside area closed for 3 out of 3 periods	No action	No action
2019	45,149	15-May	Inside area closed for 7 out of 13 periods	No action	No action
2020	**21,586**	15-May	Expanded Inside area and closed for 5 out of 5 periods		
		20-Jun			Upper Copper River drainage king salmon annual limit reduced from 4 to 1 fish.
		22-Jun		Prohibited retention	

[a] Numbers in **bold** are below the escapement goal.

[b] 2020 escapement data are preliminary.

[c] Reflects number of periods excluding the portion of the Copper River District in and around the barrier islands through the end of the king salmon run (approximately June 30).

PROPOSAL 7 – 5 AAC 01.620. Lawful gear and gear specifications.

PROPOSED BY: Shawn Gillman.

WHAT WOULD THE PROPOSAL DO? Prohibit a guide or transport service from charging a fee or a permit holder paying any fee to participate in the Glennallen Subdistrict subsistence fishery.

WHAT ARE THE CURRENT REGULATIONS? There are no statutes or regulations requiring a fee or license purchase to participate in a subsistence fishery. Secondly, there are no regulations defining guides, guide services, or transporters in a subsistence fishery.

WHAT WOULD BE THE EFFECTS IF THE PROPOSAL IS ADOPTED? This would decrease subsistence opportunity for households that do not own a boat, know someone with a personal boat or fish wheel, or cannot physically fish from shore. Competition among participants would increase for the limited number of shore-based fishing sites.

BACKGROUND: Subsistence fishing guides and subsistence charter vessel operators (i.e., transporters) provide options for households to participate in the Glennallen Subdistrict subsistence fishery. Many households rely on guides and transporters because the number of productive shore-based fishing sites is very limited; they do not own a boat or are not comfortable driving a boat on the Copper River; they do not own, or are unable to build or operate a fishwheel; they do not know someone with a fishwheel to use; or they do not have access to shoreline to place a fishwheel. Based on harvest reports, more than 95% of dipnetting (by shore and boat) occurs in a short ~1.5-mile long reach of the Copper River just upstream of the Chitina-McCarthy Bridge. This same reach is shared by upwards of 20 fish wheels. Access for fish wheels along the river is also limited by a lack of accessible public land to place a household's fish wheel, or by land ownership. The most reasonable access to this fishery for many subsistence users is by boat, but without an available transport or guide service many subsistence users may find it very challenging to participate and meet their subsistence needs.

From 2014–2018, dip nets were used to catch an average of 41% of the Glennallen Subdistrict subsistence sockeye salmon harvest and 47% of the king salmon harvest (Table 7-1). Apportioning the Glennallen Subdistrict dip net harvest by boat versus shore began in 2019. In 2019, for all gear types combined in the Glennallen Subdistrict, 30% of sockeye salmon harvest and 36% of king salmon harvests were taken from boats (Table 7-2). For dip net users, approximately 80% of all reported harvest of king salmon and 62% of all sockeye salmon were dipnetted from a boat. By method, harvest per permit fished was 27 sockeye and two king salmon for dipnetters fishing from a boat; 45 sockeye and one king salmon for dipnetters fishing from shore; and 70 sockeye, and five king salmon for fish wheel operators (Table 7-2).

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. There are no conservation issues related to 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.

SUBSISTENCE REGULATION REVIEW:

1. Is this stock in a nonsubsistence area? No.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes, the board made a positive customary and traditional use finding for the salmon stocks in the Glennallen Subdistrict of the Upper Copper District (5 AAC 01.616 (a)(1)).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? The board has found the following amounts of salmon are reasonably necessary for subsistence uses in the following locations:
    a. Glennallen Subdistrict of the Upper Copper River District:
        i. in that portion from the southern boundary of the subdistrict at the downstream edge of the Chitina-McCarthy Road Bridge to the mouth of the Tonsina River: 25,500–39,000 salmon;
        ii. in that portion from the mouth of the Tonsina River upstream to the mouth of the Gakona River: 23,500–31,000 salmon;
        iii. in that portion from the mouth of the Gakona River upstream to the mouth of the Slana River, and the waters of the Copper River as described in 5 AAC 01.647(i)(3): 12,000–12,500 salmon.
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

Table 7-1.–Reported harvest by gear type in the Glennallen Subdistrict subsistence salmon fishery, 2000–2019.

	Subsistence dip net permit						Subsistence fish wheel permit					
Year	Permits issued	Permits fished	King salmon	Sockeye salmon	King salmon per permit fished	Sockeye salmon per permit fished	Permits issued	Permits fished	King salmon	Sockeye salmon	King salmon per permit fished	Sockeye salmon per permit fished
2000	464		537	8,368			787		4,245	49,873		
2001	407	365	299	8,532	1	23	832	783	3,074	70,585	4	90
2002	469	265	409	6,855	2	26	652	554	3,015	41,037	5	74
2003	399	267	318	6,132	1	23	613	513	2,077	38,077	4	74
2004	330	188	273	4,851	1	26	626	544	2,893	47,279	5	87
2005	363	220	264	6,305	1	29	598	510	1,816	54,661	4	107
2006	338	213	266	6,243	1	29	646	541	2,178	46,516	4	86
2007	467	291	432	8,155	1	28	707	589	2,674	53,322	5	91
2008	536	325	445	6,517	1	20	650	533	1,793	33,687	3	63
2009	469	277	342	6,030	1	22	621	503	1,988	37,708	4	75
2010	620	384	598	11,253	2	29	701	569	1,360	54,490	2	96
2011	617	401	681	13,034	2	33	689	564	1,518	41,009	3	73
2012	867	507	516	17,860	1	35	660	540	1,407	50,269	3	93
2013	808	543	794	22,924	1	42	531	431	1,169	44,201	3	103
2014	1,148	690	551	24,736	1	36	508	409	652	42,027	2	103
2015	1,128	738	1,109	29,873	2	40	503	405	870	43,378	2	107
2016	1,300	789	833	22,525	1	29	469	348	930	31,703	3	91
2017	1,264	770	1,695	16,499	2	21	368	274	751	18,495	3	68
2018	1,312	748	1,243	14,637	2	20	347	270	2,747	19,353	10	72
2019	1,354	871	1,603	29,838	2	34	359	287	1,474	20,163	5	70
Average 2014–2018	1,230	747	1,086	21,654	1	29	439	341	1,190	30,991	3	91
Average 2009–2018	953	585	836	17,937	1	31	540	431	1,339	38,263	3	89

Table 7-2.–Reported harvest statistics for the Glennallen Subdistrict subsistence salmon fishery, 2019.

Gear	Permits fished	Harvest		Harvest/permit fished	
		King salmon	Sockeye salmon	King salmon	Sockeye salmon
Dip net (boat)	548	1,121	14,770	2	27
Dip net (shore)	173	161	7,807	1	45
Dip net (unknown)	150	321	7,261	2	48
Fish wheel	287	1,474	20,163	5	70
Total	1,158	3,077	50,001	NA	NA

PROPOSAL 8 – 5 AAC 01.647. Copper River Subsistence Salmon Fisheries Management Plans; and 5 AAC 77.591. Copper River Personal Use Dip Net Salmon Fishery Management Plan.

PROPOSED BY: Kirk Wilson.

WHAT WOULD THE PROPOSAL DO? Prohibit subsistence and personal use dipnetting within 500 yards below and 100 yards above the confluence of any tributary to the Copper River above Haley Creek.

WHAT ARE THE CURRENT REGULATIONS? Personal use dipnetting is allowed in the mainstem Copper River from a line approximately 200 yards upstream of Haley Creek to the downstream edge of the Chitina-McCarthy Bridge. Subsistence dipnetting is allowed above the Chitina-McCarthy Bridge to the confluence of the Slana River.

WHAT WOULD BE THE EFFECTS IF THE PROPOSAL IS ADOPTED? This would reduce the area open to subsistence and personal use dipnetting and potentially reduce the harvest and subsistence opportunity by an unknown amount.

BACKGROUND: Within the Chitina Subdistrict of the Upper Copper River District dip nets are the only legal gear under state regulations. From 2014 – 2018, average of 10,044 household dipnet permits have been issued and 6,074 permits fished in the personal use salmon fishery (Table 8–1). The only anadromous tributary to the Copper River within the Chitina Subdistrict is the Chitina River (Figure 8-1). However, Tenas, Eskalida, O'Brien, Taral, and Fox creeks, and two other unnamed creeks also flow into this subdistrict.

Both dip nets and fish wheels are legal gear under state regulations in the Glennallen Subdistrict of the Upper Copper River District. From 2014 to 2018 an average of 21,654 sockeye salmon and 1,085 king salmon were harvested by subsistence dip netters. Of those, an average of 120 sockeye salmon and 8 king salmon were harvested by an average of 6 dipnetters fishing between the Gulkana River and just below the Tonsina River. During this same period an average of 925,078 sockeye and 33,144 king salmon entered the Copper River.

Between the Chitina-McCarthy Bridge and the Tonsina River, the Tonsina River is the only anadromous system, but 15 additional tributaries exist, including the Kotsina River just above the bridge and Fivemile creek at the Chitina Airport (Figure 8–2). The Kotsina bar is the most used access location for subsistence dipnetters and a majority of the dipnetting done in the Glennallen Subdistrict occurs within the confluence of the Kotsina River. Above the Tonsina River there are five major tributaries cataloged as spawning rivers for sockeye and king salmon (Klutina, Tazlina, Gulkana, Gakona, and Chistochina rivers) and 12 other smaller rivers and streams cataloged as rearing habitat for king and coho salmon as well as several other uncatalogued streams.

Although both sockeye and king salmon may hold in the Copper River near the confluences of tributary streams, these holding areas vary from year to year and may extend beyond the proposed

500-yard closure areas. Data from radiotelemetry, tagging, and genetic studies indicate king salmon in these holding areas are comprised of mixed stocks rather than only the tributary-specific stock.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. This would establish an expansive mosaic of closed areas within the Upper Copper River District and the result in loss of personal use and subsistence opportunity with no conservation benefits.

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.

SUBSISTENCE REGULATION REVIEW:

1. Is this stock in a nonsubsistence area? No.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes, the board made a positive customary and traditional use finding for the salmon stocks in the Glennallen Subdistrict of the Upper Copper District (5 AAC 01.616 (a)(1)).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? The board has found the following amounts of salmon are reasonably necessary for subsistence uses in the following locations:
    a. Glennallen Subdistrict of the Upper Copper River District:
        i. in that portion from the southern boundary of the subdistrict at the downstream edge of the Chitina-McCarthy Road Bridge to the mouth of the Tonsina River: 25,500–39,000 salmon;
        ii. in that portion from the mouth of the Tonsina River upstream to the mouth of the Gakona River: 23,500–31,000 salmon;
        iii. in that portion from the mouth of the Gakona River upstream to the mouth of the Slana River, and the waters of the Copper River as described in 5 AAC 01.647(i)(3): 12,000–12,500 salmon.
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

Table 8-1.–Number of state permits issued and expanded salmon harvests for the Chitina Subdistrict personal use dip net fishery in the Copper River, 2000–2019.

	Permits		Estimated Salmon Harvest			
Year	Issued	Fished	King	Sockeye	Coho	Total[a]
2000	8,146	7,216	3,168	107,856	3,657	114,884
2001	9,458	6,644	3,113	132,108	2,720	138,425
2002	6,804	4,480	2,023	85,968	1,934	90,242
2003	6,441	4,257	1,903	80,796	2,533	85,496
2004	8,156	4,955	2,495	107,312	2,860	113,176
2005	8,230	5,330	2,043	120,013	1,869	124,403
2006	8,497	5,291	2,663	123,261	2,715	129,103
2007	8,377	5,549	2,694	125,126	1,742	130,222
2008	8,041	4,803	1,999	81,359	2,711	86,476
2009	7,958	4,830	214	90,035	1,712	92,228
2010	9,970	6,075	700	138,487	2,013	141,565
2011	9,217	5,710	1,067	128,052	1,702	131,265
2012	10,016	5,781	567	127,143	1,385	129,362
2013	10,592	6,768	744	180,663	797	182,904
2014	11,717	7,116	719	157,215	1,129	159,392
2015	12,635	7,829	1,570	223,080	841	226,832
2016	11,394	6,219	711	148,982	1,182	151,480
2017	9,490	6,161	1,961	132,694	715	136,043
2018	4,982	3,044	1,273	77,051	1,436	80,135
2019	8,071	5,467	2,611	171,203	1,064	175,487
Average 2014–2018	10,044	6,074	1,247	147,804	1,061	150,776
Average 2009–2018	9,797	5,953	953	140,340	1,291	143,121

[a] Total harvest includes steelhead and other species.

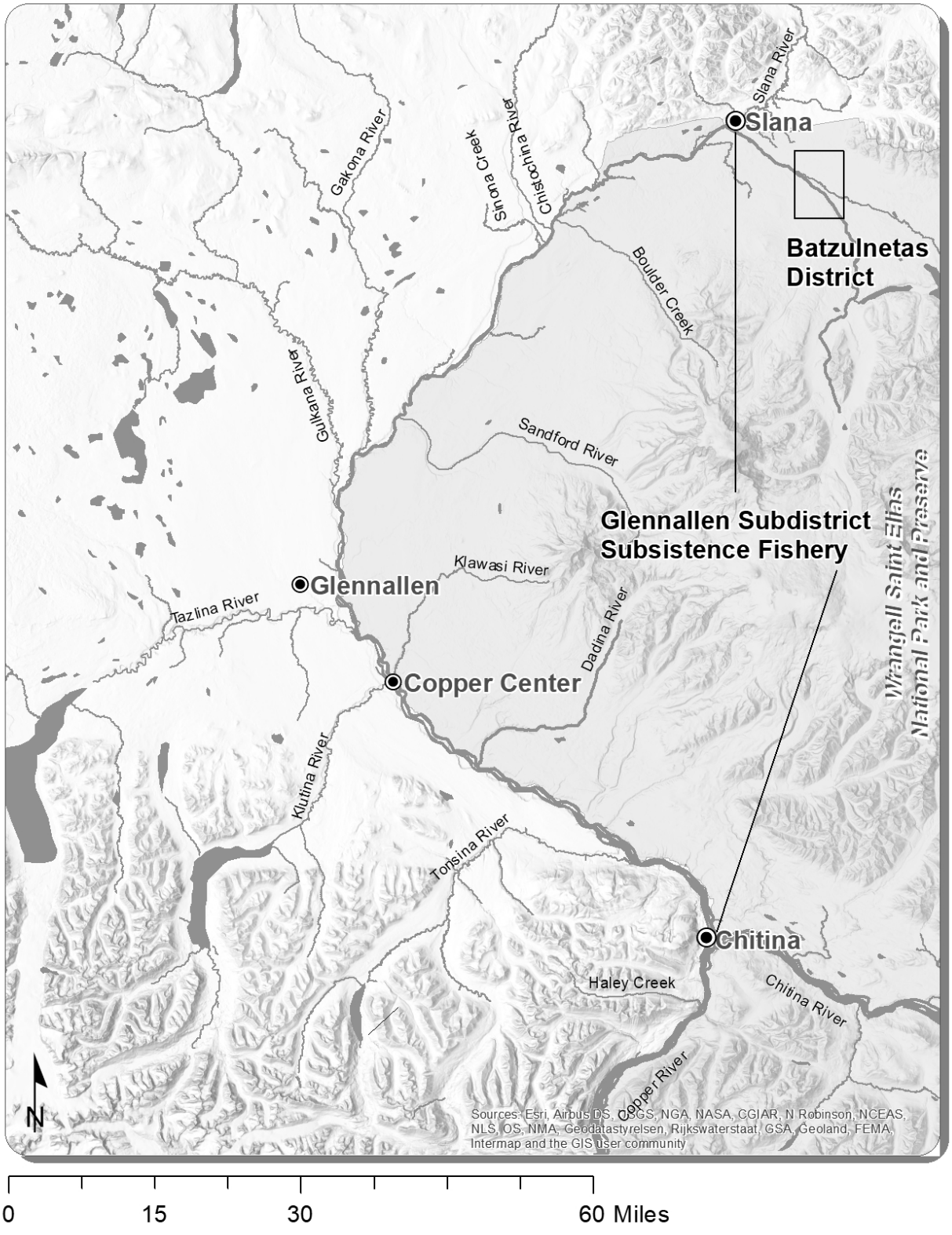


Figure 8-1.–Upper Copper River and tributaries.

Table 8-2.–Reported effort and harvest of sockeye and king salmon by dip net in the Glennallen Subdistrict subsistence fishery and total inriver return of sockeye and king salmon, 2001–2019.

Year	Permits fished	Permit-days[a]	Sockeye salmon	King salmon	Coho salmon	Total harvest	Total inriver return[b] Sockeye salmon	Total inriver return[b] King salmon
2001	365	649	8,454	296	25	8,856	838,427	39,778
2002	265	627	6,855	408	142	7,406	797,390	32,873
2003	267	579	6,132	318	58	6,509	702,327	44,764
2004	188	389	4,851	273	76	5,202	628,950	40,564
2005	220	439	6,305	264	0	6,569	824,792	30,333
2006	213	451	6,243	266	10	6,520	891,917	67,789
2007	291	569	8,110	430	28	8,616	873,252	46,349
2008	325	629	6,517	445	35	6,997	677,001	41,343
2009	277	509	5,340	303	8	6,380	677,348	32,400
2010	384	795	11,249	598	65	11,917	901,488	22,323
2011	401	836	13,034	681	63	13,778	880,342	33,889
2012	507	982	17,727	510	50	18,430	1,262,948	31,452
2013	543	999	22,882	794	55	23,777	1,234,479	32,581
2014	690	1,389	24,736	551	169	25,460	1,194,260	24,158
2015	738	1,366	29,873	1,109	26	31,008	1,313,794	32,306
2016	789	1,432	22,518	833	20	23,378	785,584	16,009
2017	770	1,390	16,492	1,693	51	18,249	682,701	40,725
2018	748	1,164	14,651	1,240	92	15,979	649,053	52,524
2019	871	1,456	29,643	1,552	111	31,556	995,940	43,714
Average 2014–2018	747	1,348	21,654	1,085	72	22,815	925,078	33,144
Average 2009–2018	585	1,086	17,850	831	60	18,836	958,200	31,837

[a] Many permits are fished for multiple days. Permit-days provides a true measure of effort in any given year.

[b] Escapement goal was 28,000–55,000 king salmon from 2000–2002 and 24,000 king salmon after 2001; Prior to 2003 the Copper River sockeye salmon escapement goal was 300,000, from 2003–2010 the escapement goal was 300,000–500,000, 2011–present the escapement goal has been 360,000–750,000).

PROPOSAL 9 – 5 AAC 01.620. Lawful gear and gear specifications.

PROPOSED BY: Copper Basin Fish and Game Advisory Committee.

WHAT WOULD THE PROPOSAL DO? Prohibit using a dip net from a boat to harvest salmon in the Glennallen Subdistrict.

WHAT ARE THE CURRENT REGULATIONS? Salmon may be taken in the Glennallen Subdistrict by fish wheels and dip nets.

WHAT WOULD BE THE EFFECTS IF THE PROPOSAL IS ADOPTED? This would reduce subsistence opportunity, potentially reduce harvest, and increase crowding by restricting use of dip nets from shore only.

BACKGROUND: Dip nets have been a subsistence gear type in the Upper Copper River District since before statehood. Dip nets have been legal gear for salmon in the Glennallen Subdistrict since the subdistrict was established in 1977, except for 1979–1983. The fishery opens by regulation on June 1 and remains open through September 30. Permit holders may only use one gear type (either fish wheel or dip net) and must declare the gear type when obtaining their permit. Annual limits are 30 salmon for an individual and 60 salmon for a household of two plus 10 salmon for each additional household member. Additionally, an individual permit holder may request up to a total of 200 salmon and a household of two or more may request up to 500 salmon. If using a dip net, only 5 fish of the total annual limit may be king salmon.

In the GSD the number of dip net permits issued and fished has steadily risen since 2004 while the number of fish wheel permits has decreased (Table 9-1). Harvest per dip net permit fished averages about 29 sockeye salmon and 1 king salmon, and 91 sockeye salmon and three king salmon per fish wheel permit fished. From 2014 – 2018, an average of 41% of the sockeye salmon and 47% the king salmon harvest in the GSD was taken with a dip net. During 2019, 30% of the reported sockeye and 36% of the reported king salmon harvest was taken by dip nets fished from boats compared to 16% and 5% respectively by dip nets fished from shore, and 40% and 48% by fish wheels.

The Glennallen Subdistrict encompasses approximately 125 miles of the mainstem Copper River (outside the Wrangell-St. Elias National Park boundary). Public shoreline access to the Glennallen Subdistrict is limited to about 1.5 miles of state land along the east riverbank above the Chitina-McCarthy Bridge (Figure 9-1). This shoreline access provides limited dipnetting sites and is one of the most concentrated areas used by fish wheels in the Glennallen Subdistrict, which generally occupy the ½ mile upstream of the Chitina-McCarthy Bridge (Figure 9-2). There is also extremely limited access directly under the Chitina-McCarthy Bridge, near the Chitina airport (also shared by fish wheels), and walk-in access (2 miles) at the mouth of the Klutina River.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal concerning prohibiting dipnetting from a boat. There are no management or biological concerns with using dip net gear from a boat. If adopted, this regulation would result in further divergence in methods and means between state and federal subsistence fisheries in the Glennallen Subdistrict. The board should discuss whether prohibiting dipnetting from a boat still provides a normally diligent participant with a reasonable expectation of success in taking salmon for subsistence uses.

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

SUBSISTENCE REGULATION REVIEW:

1. Is this stock in a nonsubsistence area? No.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes, the board made a positive customary and traditional use finding for the salmon stocks in the Glennallen Subdistrict of the Upper Copper District (5 AAC 01.616 (a)(1)).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? The board has found the following amounts of salmon are reasonably necessary for subsistence uses in the following locations:
    a. Glennallen Subdistrict of the Upper Copper River District:
        i. in that portion from the southern boundary of the subdistrict at the downstream edge of the Chitina-McCarthy Road Bridge to the mouth of the Tonsina River: 25,500–39,000 salmon;
        ii. in that portion from the mouth of the Tonsina River upstream to the mouth of the Gakona River: 23,500–31,000 salmon;
        iii. in that portion from the mouth of the Gakona River upstream to the mouth of the Slana River, and the waters of the Copper River as described in 5 AAC 01.647(i)(3): 12,000–12,500 salmon.
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

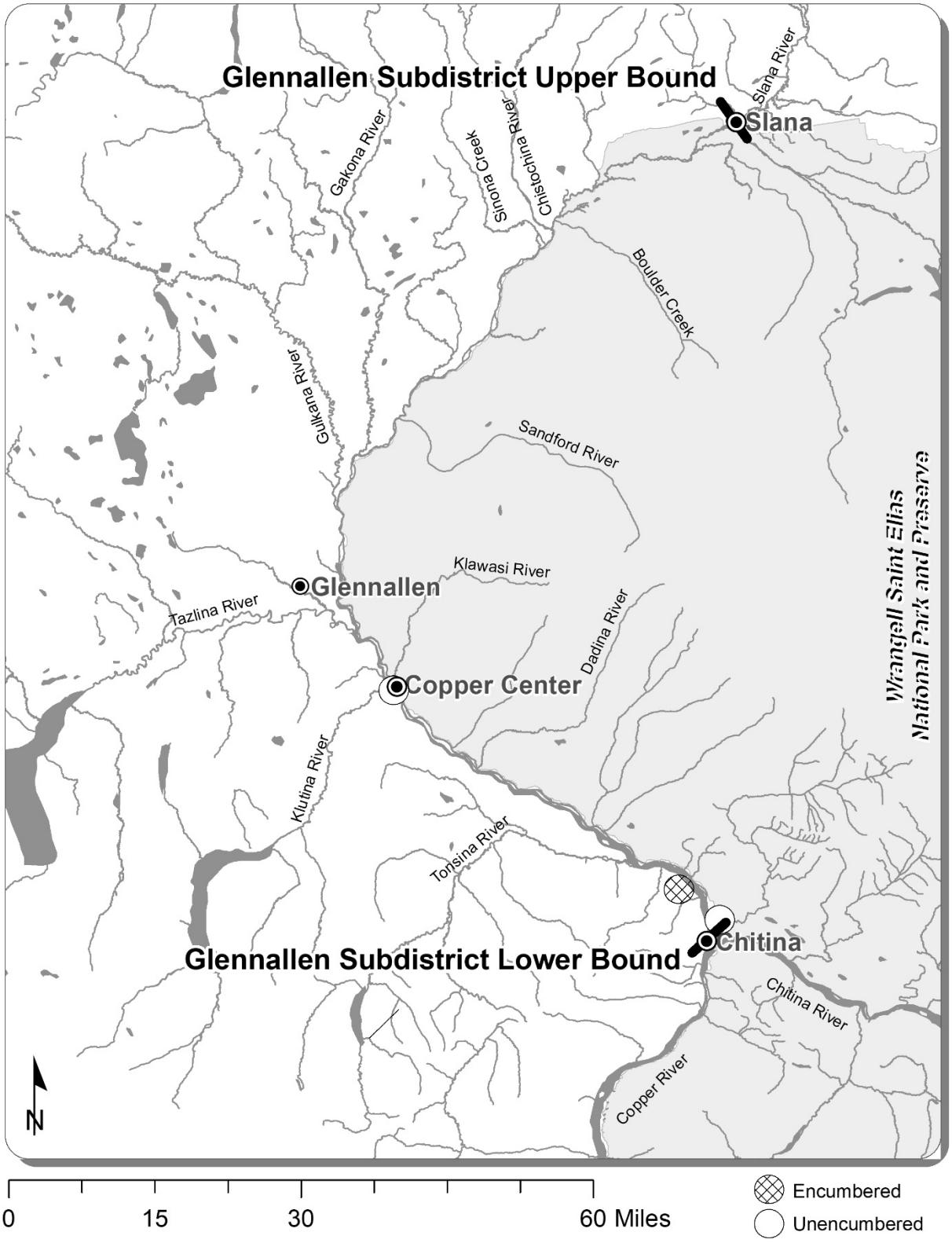


Figure 9-1.–Glennallen Subdistrict public access points to shoreline.

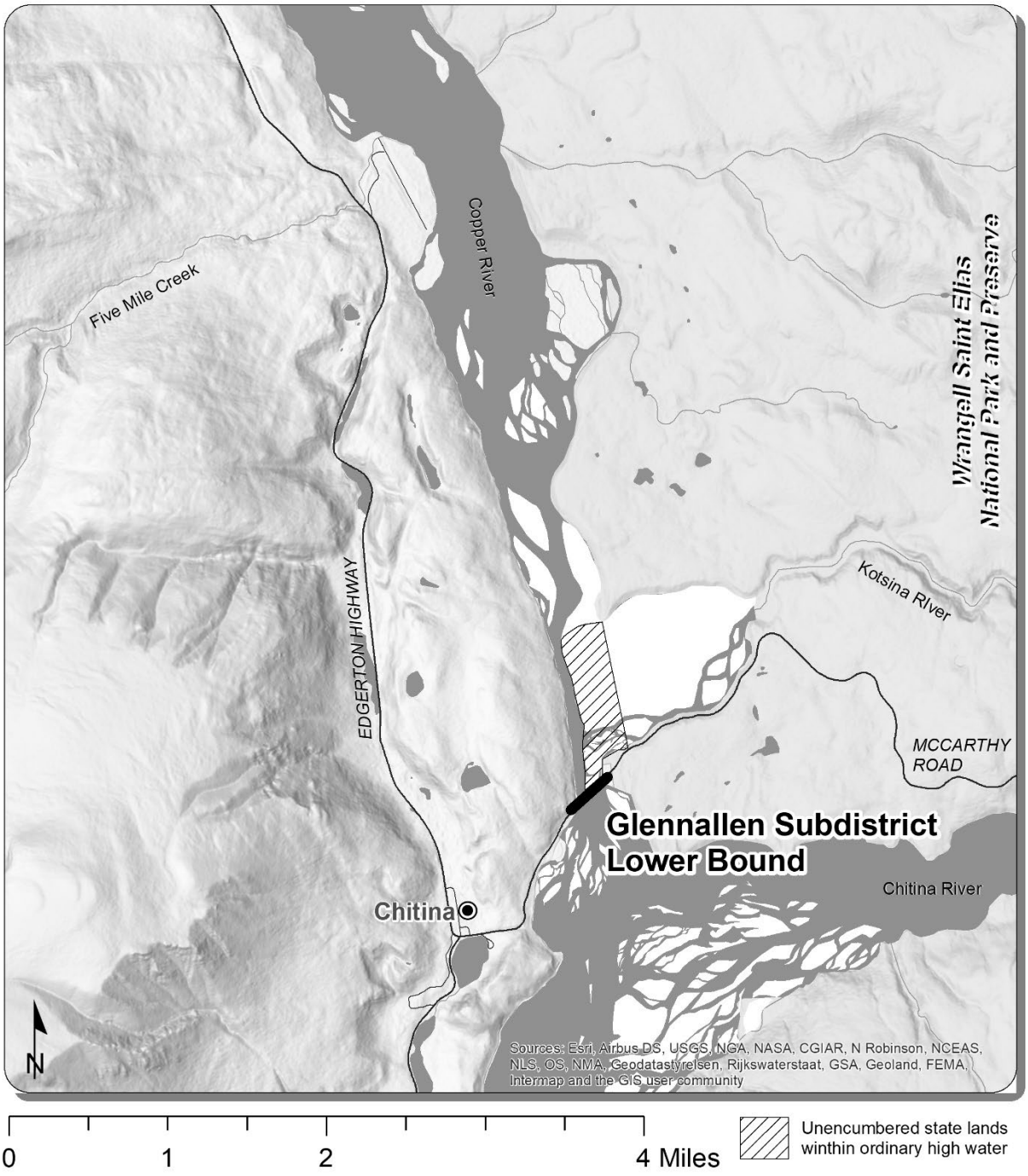


Figure 9-2.–Section of Glennallen Subdistrict open to public to fish from shore or use a fish wheel.

Table 9-1.–Reported harvest by gear type in the Glennallen Subdistrict subsistence salmon fishery, 2000–2019.

	Subsistence dip net permit						Subsistence fish wheel permit					
Year	Permits issued	Permits fished	King salmon	Sockeye salmon	King salmon per permit fished	Sockeye salmon per permit fished	Permits issued	Permits fished	King salmon	Sockeye salmon	King salmon per permit fished	Sockeye salmon per permit fished
2000	464		537	8,368			787		4,245	49,873		
2001	407	365	299	8,532	1	23	832	783	3,074	70,585	4	90
2002	469	265	409	6,855	2	26	652	554	3,015	41,037	5	74
2003	399	267	318	6,132	1	23	613	513	2,077	38,077	4	74
2004	330	188	273	4,851	1	26	626	544	2,893	47,279	5	87
2005	363	220	264	6,305	1	29	598	510	1,816	54,661	4	107
2006	338	213	266	6,243	1	29	646	541	2,178	46,516	4	86
2007	467	291	432	8,155	1	28	707	589	2,674	53,322	5	91
2008	536	325	445	6,517	1	20	650	533	1,793	33,687	3	63
2009	469	277	342	6,030	1	22	621	503	1,988	37,708	4	75
2010	620	384	598	11,253	2	29	701	569	1,360	54,490	2	96
2011	617	401	681	13,034	2	33	689	564	1,518	41,009	3	73
2012	867	507	516	17,860	1	35	660	540	1,407	50,269	3	93
2013	808	543	794	22,924	1	42	531	431	1,169	44,201	3	103
2014	1,148	690	551	24,736	1	36	508	409	652	42,027	2	103
2015	1,128	738	1,109	29,873	2	40	503	405	870	43,378	2	107
2016	1,300	789	833	22,525	1	29	469	348	930	31,703	3	91
2017	1,264	770	1,695	16,499	2	21	368	274	751	18,495	3	68
2018	1,312	748	1,243	14,637	2	20	347	270	2,747	19,353	10	72
2019	1,354	871	1,603	29,838	2	34	359	287	1,474	20,163	5	70
Average 2014–2018	1,230	747	1,086	21,654	1	29	439	341	1,190	30,991	3	91
Average 2009–2018	953	585	836	17,937	1	31	540	431	1,339	38,263	3	89

PROPOSAL 10 – 5 AAC 01.620. Lawful gear and gear specifications.

PROPOSED BY: Ahtna Tene Nene'.

WHAT WOULD THE PROPOSAL DO? Prohibit using a dip net from a boat to harvest salmon in the Glennallen Subdistrict.

WHAT ARE THE CURRENT REGULATIONS? Fish may be taken in the Glennallen Subdistrict by fish wheels and dip nets.

WHAT WOULD BE THE EFFECTS IF THE PROPOSAL IS ADOPTED? For subsistence dip net permit holders, this would decrease access to the fishery, potentially reduce subsistence opportunity and harvest, and increase crowding by restricting dipnetters to fish only from shore.

BACKGROUND: Dip nets have been a subsistence gear type in the Upper Copper River District since before statehood. Permit holders in the GSD may only use one gear type (either fish wheel or dip net) and must declare the gear type when attaining their permit. Annual limits are the same for either gear type except that dip net permit holders are limited to a maximum of five king salmon.

In the GSD the number of dip net permits issued and fished has steadily risen since 2004 while the number of fish wheel permits has decreased (Table 10-1). Harvest per dip net permit fished averages about 29 sockeye salmon and 1 king salmon (Table 10-2), and 91 sockeye salmon and three king salmon per fish wheel permit fished. From 2014 to 2018 an average of 41% of the sockeye salmon and 47% the king salmon harvest in the GSD was taken with a dip net. During 2019, 30% of the reported sockeye and 36% of the reported king salmon harvest was taken by dip nets fished from boats compared to 16% and 5% respectively by dip nets fished from shore, and 40% and 48% by fish wheels.

Public shoreline access to the 125 miles of GSD is limited to about 1.5 miles of unencumbered state land along the east riverbank above the Chitina-McCarthy Bridge (Figure 10-1). This shoreline access provides limited dipnetting sites and is one of the most concentrated areas used by fish wheels in the GSD, which generally occupy the ½ mile upstream of the Chitina-McCarthy Bridge (Figure 10-2).

Harvest in the GSD is not correlated with the number of sockeye salmon reaching the Gulkana Hatchery (Table 10-1). The number of hatchery brood and excess sockeye salmon also appears unrelated to annual sonar counts and overall sockeye salmon escapement in the Copper River drainage. King salmon harvest levels in the GSD corresponds with escapement but is subject to other factors such as water levels (Table 10-2).

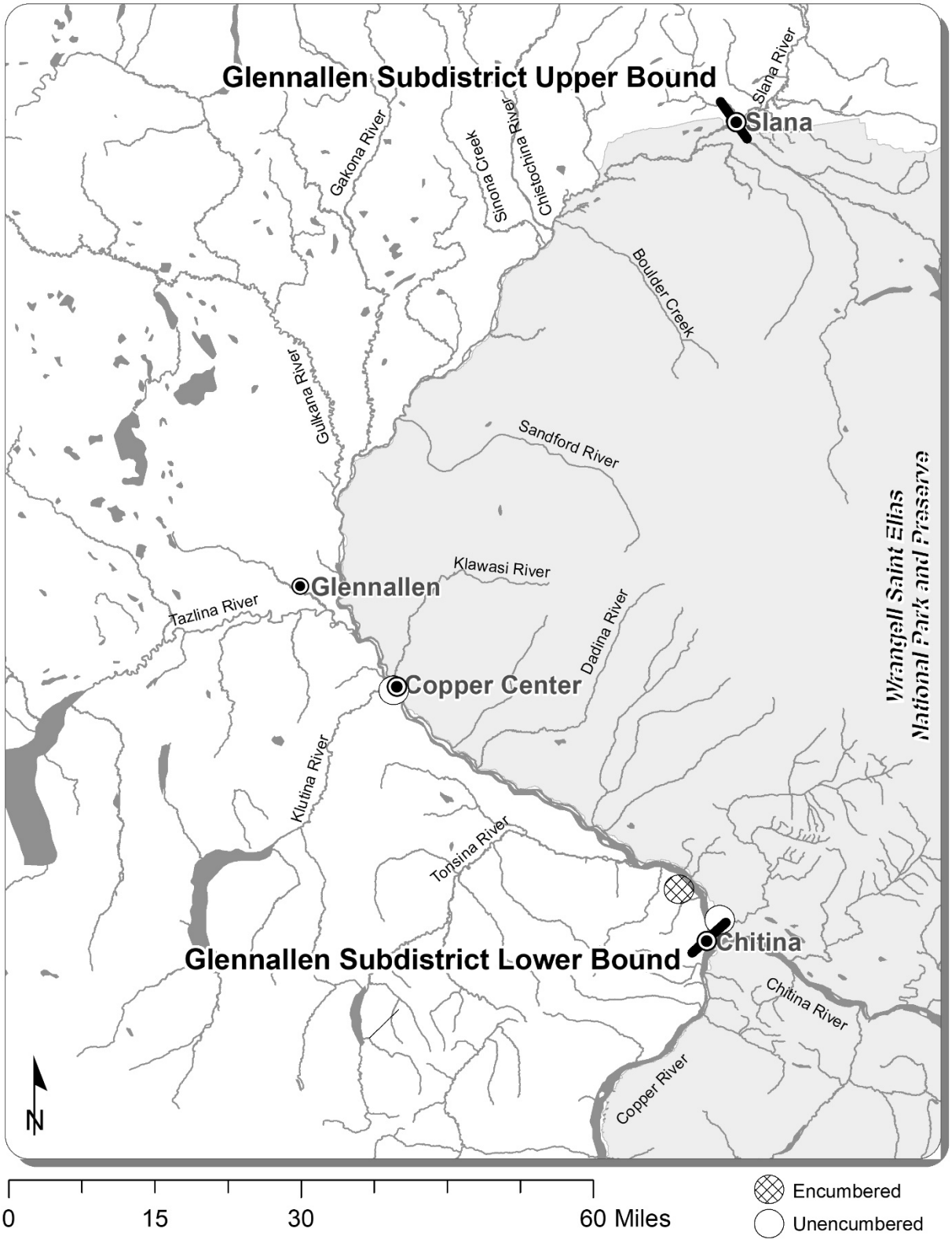
DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal concerning prohibiting dipnetting from a boat. There are no management or biological concerns with using

dip net gear from a boat. If adopted, this regulation would result in further divergence in methods and means between state and federal subsistence fisheries in the Glennallen Subdistrict. The board should discuss whether prohibiting dipnetting from a boat still provides a normally diligent participant with a reasonable expectation of success in taking salmon for subsistence uses. This proposal originally specified the subsistence fishery only and this request was not directed at the personal use fishery. The appropriate regulatory reference is listed above.

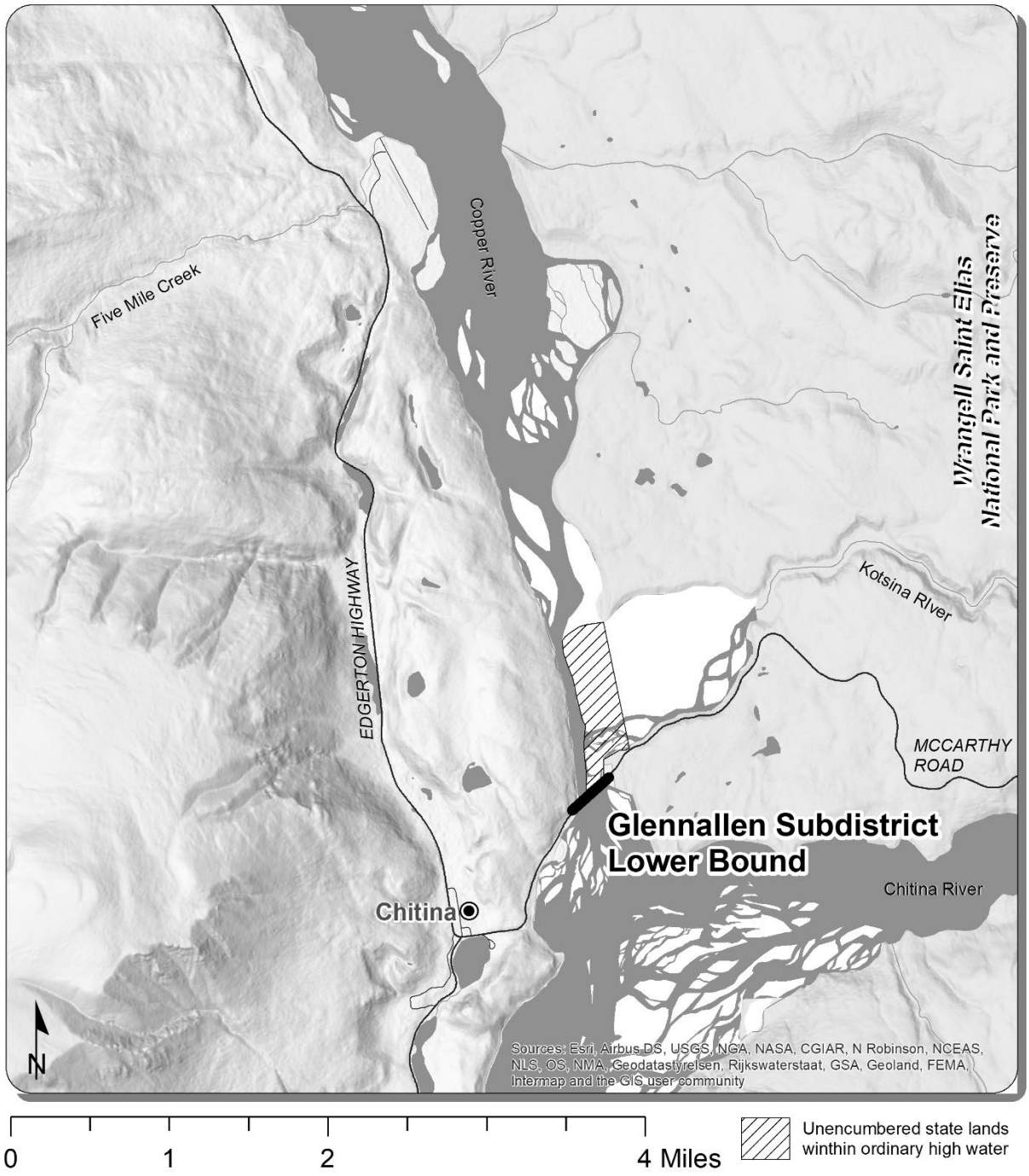
COST ANALYSIS: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery. Approval of this proposal is not expected to result in an additional direct cost for the department.

SUBSISTENCE REGULATION REVIEW:

1. Is this stock in a nonsubsistence area? No.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes, the board made a positive customary and traditional use finding for the salmon stocks in the Glennallen Subdistrict of the Upper Copper District (5 AAC 01.616 (a)(1)).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? The board has found the following amounts of salmon are reasonably necessary for subsistence uses in the following locations:
    a. Glennallen Subdistrict of the Upper Copper River District:
        i. in that portion from the southern boundary of the subdistrict at the downstream edge of the Chitina-McCarthy Road Bridge to the mouth of the Tonsina River: 25,500–39,000 salmon;
        ii. in that portion from the mouth of the Tonsina River upstream to the mouth of the Gakona River: 23,500–31,000 salmon;
        iii. in that portion from the mouth of the Gakona River upstream to the mouth of the Slana River, and the waters of the Copper River as described in 5 AAC 01.647(i)(3): 12,000–12,500 salmon.
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.



Map 10-1.–Glennallen Subdistrict public access points to shoreline.



Map 10-2.–Section of Glennallen Subdistrict open to public access to fish from shore or use a fish wheel.

Table 10-1.–Sockeye salmon reported harvest by gear type in the Glennallen Subdistrict subsistence salmon fishery, 2001–2019.

		Glennallen Subdistrict subsistence fishery					
		Permits fished		Harvest		Hatchery brood excess	Spawning escapement[a]
Year	Sonar passage	Dip net	Fish wheel	Dip net	Fish wheel		
2001	878,205	365	783	8,454	69,936	75,620	538,681
2002	830,263	265	554	6,855	41,037	62,361	581,717
2003	747,091	267	513	6,132	38,077	45,024	507,895
2004	669,514	188	544	4,851	47,279	6,618	433,945
2005	855,125	220	510	6,305	54,661	92,455	515,599
2006	959,706	213	541	6,243	46,516	97,202	579,552
2007	919,601	291	589	8,155	53,322	28,648	612,103
2008	718,344	325	533	6,517	33,697	45,022	480,597
2009	709,748	277	503	5,340	36,065	43,409	469,090
2010	923,811	384	569	11,253	55,414	157,980	502,992
2011	914,231	401	564	13,034	41,009	59,589	607,657
2012	1,294,400	507	540	17,860	50,269	65,348	953,245
2013	1,267,060	543	431	22,924	44,201	72,369	860,929
2014	1,218,418	690	409	24,736	42,027	53,737	864,988
2015	1,346,100	738	405	29,873	43,378	40,123	930,061
2016	801,593	789	348	22,525	31,703	32,341	513,563
2017	723,426	770	274	16,499	18,495	16,934	465,518
2018	701,577	748	270	14,657	19,353	30,306	478,701
2019	1,039,654	871	287	29,643	20,358	15,552	720,997
Average 2014–2018	958,223	747	341	21,654	30,991	34,688	650,566
Average 2009–2018	990,036	585	431	17,870	38,191	57,214	664,674

[a] Prior to 2003 the Copper River sockeye salmon escapement goal was 300,000, from 2003 2010 the escapement goal was 300,000–500,000, 2011–present the escapement goal has been 360,000–750,000).

Table 10-2.–Reported harvest of king salmon by gear type in the Glennallen Subdistrict subsistence salmon fishery, 2001–2019.

Year	Inriver estimate	King salmon harvest		Spawning escapement[a]
		Dip net	Fish wheel	
2001	39,778	296	3,045	28,208
2002	32,873	409	3,015	21,502
2003	44,764	318	2,052	34,034
2004	40,564	273	2,893	30,645
2005	30,333	264	1,816	21,528
2006	67,789	266	2,178	58,454
2007	46,349	432	2,674	34,575
2008	41,343	445	1,793	32,487
2009	32,400	303	1,905	27,786
2010	22,323	598	1,372	16,764
2011	33,889	681	1,518	27,994
2012	31,452	516	1,407	27,835
2013	32,581	794	1,169	29,012
2014	24,158	551	652	20,709
2015	32,306	1,109	870	26,764
2016	16,009	833	930	12,485
2017	40,725	1,695	751	33,655
2018	52,524	1,245	2,747	42,202
2019	43,714	1,552	1,525	35,149
Average 2014–2018	33,144	1,087	1,190	27,163
Average 2009–2018	31,837	833	1,332	26,521

[a] Escapement goal was 28,000 – 55,000 king salmon from 2000 – 2002 and 24,000 king salmon after 2001.

PROPOSAL 11 – 5 AAC 77.591. Copper River Personal Use Dip Net Salmon Fishery Management Plan.

PROPOSED BY: Nicole Farnham.

WHAT WOULD THE PROPOSAL DO? Prohibit dipnetting from a drifting boat or boat under power.

WHAT ARE THE CURRENT REGULATIONS? There are no restrictions specific to dipnetting from a moving boat in any personal use fishery statewide.

WHAT WOULD BE THE EFFECTS IF THE PROPOSAL IS ADOPTED? This would require households dipnetting from a boat to tie off to shore or anchor in river, which would increase competition and conflict with shore-based dipnetters, as well as affect boating safety by having to tie off to rocks and cliff faces in a fast and surging current.

BACKGROUND: Boats have been used by personal use dipnetters since at least 1984. An average of 1,139 households (range 656–1,642) fished from boats from 2014–2018 in the CSD compared to 4,855 (range 2,288–6,522) that fished from shore. During this same period, permit holders in the CSD harvested an average of 24% of the reported sockeye salmon (Table 11–1) and 27% of the reported king salmon harvest from boats (Table 11–2). Harvest per permit fished from 2014–2018 was 26 salmon for households fishing from a boat and 19 salmon for households fishing from shore. In the CSD the river is swift and surging, lined with rocks and cliffs, and the number of suitable locations to tie off to are limited.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal because it would increase conflict between users, provides no conservation measure, and would decrease boater safety.

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 11-1.–Total Miles Lake sonar passage, reported harvest of sockeye salmon in the Chitina Subdistrict personal use salmon dip net fishery, and spawning escapement of sockeye salmon in the Copper River, 2001–2019.

	Permits fished				Sonar	Harvest				Spawning
Year	Boat	Shore	Unknown	Total[a]	passage	Boat	Shore	Unknown	Total	escapement[b]
2001	1,165	4,292	1,451	6,644	878,205	23,722	69,784	25,569	119,075	538,681
2002	786	2,703	1,169	4,480	830,263	13,488	40,844	18,658	72,990	581,717
2003	836	2,861	707	4,257	747,091	15,338	45,173	10,948	71,459	507,895
2004	876	3,394	841	4,955	669,514	18,387	59,969	14,826	93,182	433,945
2005	771	3,823	888	5,330	855,125	17,187	73,011	16,670	106,868	515,599
2006	900	3,845	711	5,291	959,706	18,801	71,219	12,423	102,443	579,552
2007	1,149	4,234	320	5,549	919,601	25,686	82,239	4,936	112,861	612,103
2008	955	3,665	366	4,803	718,344	17,187	49,178	4,520	70,885	480,597
2009	749	3,823	455	4,830	709,748	13,988	61,989	5,455	81,432	469,090
2010	957	4,943	468	6,075	923,811	21,025	89,180	6,585	116,790	502,992
2011	958	4,683	228	5,710	914,231	22,197	88,774	3,193	114,164	607,657
2012	989	4,733	214	5,781	1,294,400	22,253	84,593	2,961	109,807	953,245
2013	889	5,529	293	6,768	1,267,060	24,538	122,253	4,867	151,658	860,929
2014	1,041	5,918	312	7,116	1,218,418	25,280	107,921	3,978	137,179	864,988
2015	1,250	6,522	206	7,829	1,346,100	40,306	150,798	3,866	194,970	930,061
2016	1,338	4,873	143	6,219	801,593	34,166	90,190	2,189	126,545	513,563
2017	1,412	4,675	128	6,161	723,426	33,033	78,137	2,032	113,202	465,518
2018	656	2,288	118	3,044	701,577	17,398	45,068	2,578	65,044	478,701
2019	1,642	3,832	78	5,467	1,039,654	49,091	96,555	1,610	147,256	720,997
Average 2014–2018	1,139	4,855	181	6,074	958,223	30,037	94,423	2,929	127,388	650,566
Average 2009–2018	1,024	4,799	257	5,953	990,036	25,418	91,890	3,770	121,079	664,674

[a] Total is less than sum of permits because some households fish from both shore and a boat

[b] Prior to 2003 the Copper River sockeye salmon escapement goal was 300,000, from 2003–2010 the escapement goal was 300,000–500,000, 2011–present the escapement goal has been 360,000–750,000).

Table 11-2.–Inriver estimated abundance, reported harvest in the Chitina Subdistrict personal use salmon dip net fishery, and spawning escapement of king salmon in the Copper River, 2001–2019.

Year	Permits fished				Inriver estimate[b]	Harvest				Spawning escapement[c]
	Boat	Shore	Unknown	Total[a]		Boat	Shore	Unknown	Total	
2001	1,165	4,292	1,451	6,644	39,778	712	1,471	620	2,803	28,208
2002	786	2,703	1,169	4,480	32,873	411	907	428	1,746	21,502
2003	836	2,861	707	4,257	44,764	481	907	254	1,642	34,034
2004	876	3,394	841	4,955	40,564	528	1,223	357	2,108	30,645
2005	771	3,823	888	5,330	30,333	382	1,120	273	1,775	21,528
2006	900	3,845	711	5,291	67,789	496	1,326	249	2,071	58,454
2007	1,149	4,234	320	5,549	46,349	687	1,593	109	2,389	34,575
2008	955	3,665	366	4,803	41,343	480	1,096	124	1,700	32,487
2009	749	3,823	455	4,830	32,400	64	118	17	199	27,786
2010	957	4,943	468	6,075	22,323	141	370	76	587	16,764
2011	958	4,683	228	5,710	33,889	189	700	35	924	27,994
2012	989	4,733	214	5,781	31,452	181	299	16	496	27,835
2013	889	5,529	293	6,768	32,581	127	462	31	620	29,012
2014	1,041	5,918	312	7,116	24,158	162	462	28	652	20,709
2015	1,250	6,522	206	7,829	32,306	350	983	30	1,363	26,764
2016	1,338	4,873	143	6,219	16,009	164	383	16	563	12,485
2017	1,412	4,675	128	6,161	40,725	484	1,184	41	1,709	33,655
2018	656	2,288	118	3,044	52,524	273	746	50	1,069	42,202
2019	1,642	3,832	78	5,467	43,714	885	1,339	27	2,251	35,149
Average 2014–2018	1,139	4,855	181	6,074	33,144	287	752	33	1,071	27,163
Average 2009–2018	1,024	4,799	257	5,953	31,837	214	571	34	818	26,521

[a] Total is less than sum of permits as some households fish from both shore and a boat.

[b] Inriver estimate developed by proportion of king and sockeye salmon in the upper Copper River District fisheries in 2001 and 2002 and by mark recapture conducted by Native Village of Eyak 2003–2019).

[c] Escapement goal was 28,000–55,000 king salmon from 2000–2002 and 24,000 king salmon after 2001.

PROPOSAL 12 – 5 AAC 77.591. Copper River Personal Use Dip Net Salmon Fishery Management Plan.

PROPOSED BY: Nicole Farnham.

WHAT WOULD THE PROPOSAL DO? This would prohibit dipnetting from a boat within 50 feet of shore-based dipnetters in the Chitina Subdistrict personal use salmon dip net fishery.

WHAT ARE THE CURRENT REGULATIONS? There are no minimum distances for dip netting between shore-based dipnetters or boat and shore-based dipnetters.

WHAT WOULD BE THE EFFECTS IF THE PROPOSAL IS ADOPTED? It would require operators of boats used by dipnetters to estimate a 50-ft distance from any shore-based dipnetter while navigating the fast current of the Copper River. The presence of shore dipnetters may exclude boats from these areas thereby reducing harvest opportunity for dipnetters fishing from boats and increase potential for conflict.

BACKGROUND: Boats have been used by personal use dipnetters since at least 1984. An average of 1,139 households (range 656–1,642) fished from boats during 2014–2018 in the Chitina Subdistrict personal use salmon dip net fishery compared to 4,855 (range 2,288–6,522) that fished from shore. During this same period, permit holders fishing from boats reported harvesting on average 24% of sockeye salmon (Table 12–1) and 27% of the reported king salmon (Table 12–2). Average harvest per permit fished from 2014–2018 was 26 salmon for households fishing from a boat and 19 salmon for households fishing from shore.

Conflicts between dipnetters fishing from boats and from shore are rare as most boats fish moving waters while shore dippers generally work eddies in the canyon. In areas where shore based dipnetters sweep the moving currents, few boats fish those same sites. Boats that fish eddies often find eddies unavailable to shore dipnetters.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. The proposal is a social issue that would be difficult to enforce, addresses a problem that does not exist, and provides no conservation benefits.

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 12-1–Total annual Miles Lake sonar passage, reported harvest of sockeye salmon in the Chitina Subdistrict personal use salmon dip net fishery, and spawning escapement of sockeye salmon in the Copper River, 2001–2019.

Year	Permits fished				Sonar passage	Harvest				Spawning escapement[b]
	Boat	Shore	Unknown	Total[a]		Boat	Shore	Unknown	Total	
2001	1,165	4,292	1,451	6,644	878,205	23,722	69,784	25,569	119,075	538,681
2002	786	2,703	1,169	4,480	830,263	13,488	40,844	18,658	72,990	581,717
2003	836	2,861	707	4,257	747,091	15,338	45,173	10,948	71,459	507,895
2004	876	3,394	841	4,955	669,514	18,387	59,969	14,826	93,182	433,945
2005	771	3,823	888	5,330	855,125	17,187	73,011	16,670	106,868	515,599
2006	900	3,845	711	5,291	959,706	18,801	71,219	12,423	102,443	579,552
2007	1,149	4,234	320	5,549	919,601	25,686	82,239	4,936	112,861	612,103
2008	955	3,665	366	4,803	718,344	17,187	49,178	4,520	70,885	480,597
2009	749	3,823	455	4,830	709,748	13,988	61,989	5,455	81,432	469,090
2010	957	4,943	468	6,075	923,811	21,025	89,180	6,585	116,790	502,992
2011	958	4,683	228	5,710	914,231	22,197	88,774	3,193	114,164	607,657
2012	989	4,733	214	5,781	1,294,400	22,253	84,593	2,961	109,807	953,245
2013	889	5,529	293	6,768	1,267,060	24,538	122,253	4,867	151,658	860,929
2014	1,041	5,918	312	7,116	1,218,418	25,280	107,921	3,978	137,179	864,988
2015	1,250	6,522	206	7,829	1,346,100	40,306	150,798	3,866	194,970	930,061
2016	1,338	4,873	143	6,219	801,593	34,166	90,190	2,189	126,545	513,563
2017	1,412	4,675	128	6,161	723,426	33,033	78,137	2,032	113,202	465,518
2018	656	2,288	118	3,044	701,577	17,398	45,068	2,578	65,044	478,701
2019	1,642	3,832	78	5,467	1,039,654	49,091	96,555	1,610	147,256	720,997
Average 2014–2018	1,139	4,855	181	6,074	958,223	30,037	94,423	2,929	127,388	650,566
Average 2009–2018	1,024	4,799	257	5,953	990,036	25,418	91,890	3,770	121,079	664,674

[a] Total is less than sum of permits as some household fish from both shore and a boat.

[b] Prior to 2003 the Copper River sockeye salmon escapement goal was 300,000, from 2003–2010 the escapement goal was 300,000–500,000, 2011–present the escapement goal has been 360,000–750,000).

Table 12-2.–Inriver estimated abundance, reported harvest in the Chitina Subdistrict personal use salmon dip net fishery, and spawning escapement of king salmon in the Copper River, 2001–2019.

	Permits fished				Inriver	Harvest				Spawning
Year	Boat	Shore	Unknown	Total[a]	estimate[b]	Boat	Shore	Unknown	Total	escapement[c]
2001	1,165	4,292	1,451	6,644	39,778	712	1,471	620	2,803	28,208
2002	786	2,703	1,169	4,480	32,873	411	907	428	1,746	21,502
2003	836	2,861	707	4,257	44,764	481	907	254	1,642	34,034
2004	876	3,394	841	4,955	40,564	528	1,223	357	2,108	30,645
2005	771	3,823	888	5,330	30,333	382	1,120	273	1,775	21,528
2006	900	3,845	711	5,291	67,789	496	1,326	249	2,071	58,454
2007	1,149	4,234	320	5,549	46,349	687	1,593	109	2,389	34,575
2008	955	3,665	366	4,803	41,343	480	1,096	124	1,700	32,487
2009	749	3,823	455	4,830	32,400	64	118	17	199	27,786
2010	957	4,943	468	6,075	22,323	141	370	76	587	16,764
2011	958	4,683	228	5,710	33,889	189	700	35	924	27,994
2012	989	4,733	214	5,781	31,452	181	299	16	496	27,835
2013	889	5,529	293	6,768	32,581	127	462	31	620	29,012
2014	1,041	5,918	312	7,116	24,158	162	462	28	652	20,709
2015	1,250	6,522	206	7,829	32,306	350	983	30	1,363	26,764
2016	1,338	4,873	143	6,219	16,009	164	383	16	563	12,485
2017	1,412	4,675	128	6,161	40,725	484	1,184	41	1,709	33,655
2018	656	2,288	118	3,044	52,524	273	746	50	1,069	42,202
2019	1,642	3,832	78	5,467	43,714	885	1,339	27	2,251	35,149
Average 2014–2018	1,139	4,855	181	6,074	33,144	287	752	33	1,071	27,163
Average 2009–2018	1,024	4,799	257	5,953	31,837	214	571	34	818	26,521

[a] Total is less than sum of permits as some household fish from both shore and a boat.

[b] Inriver estimate developed by proportion of king and sockeye salmon in the upper Copper River District fisheries in 2001 and 2002 and by mark recapture conducted by Native Village of Eyak 2003–2019).

[c] Escapement goal was 28,000–55,000 king salmon from 2000–2002 and 24,000 king salmon after 2001.

PROPOSAL 13 – 5 AAC 01.620. Lawful gear and gear specifications.

PROPOSED BY: Faye Ewan.

WHAT WOULD THE PROPOSAL DO? Require households dipnetting from a boat to stay at least 75 feet from a fish wheel.

WHAT ARE THE CURRENT REGULATIONS? A person may not set or operate a fish wheel within 75 feet of another fish wheel.

AS 16.05.790 prohibits obstruction of someone attempting to take fish or game but does not apply to "lawful competitive practices among persons engaged in lawful hunting, fishing or trapping".

WHAT WOULD BE THE EFFECTS IF THE PROPOSAL IS ADOPTED? This would require boat operators to estimate distance from a fish wheel while navigating the swift current of the Copper River and may exclude boat operators from fishing more productive near-shore areas due to concerns of being too close to a fish wheel.

BACKGROUND: In the Glennallen Subdistrict fish wheels and dip nets are the only two legal gear types. Fish wheels must have a minimum of 75 feet from each other to prevent one fish wheel from interfering with the operation of another fish wheel. There is no minimum separation distance between dip net users and between dip net and fish wheel users in regulation.

Although conflicts between dipnetters and fish wheel operators can occur because they are fishing near each other, they are generally very limited and stem from a misunderstanding of the regulations. The chances for conflict are highest in the vicinity just above the Chitina-McCarthy Bridge where from 2011 – 2019, an average of 658 dip net permits were fished along with 21 fish wheels in the same river stretch (Table 13–1). In the remaining portion of the Glennallen Subdistrict, the average number of dip net permits fished during 2011 – 2019 was 14, and number of fish wheels was 40.

Over the last five years (2014–2018), 74% of all permits issued in the Glennallen Subdistrict (Table 13-2) were for dip nets. Over the last 10 years the number of dip net permits issued has increased 110% from 620 permits issued in 2010 to 1,354 permits issued in 2019. During those same 10 years the number of fish wheel permits issued has decreased 49% from 701 permits to 359 permits.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. The board should consider if adoption of this proposal would increase complexity of subsistence regulations, result in further divergence of state from federal subsistence regulations, and the enforceability of

this regulation. The adoption of this proposal would likely provide no added conservation and safety benefits, nor would it reduce conflict between users.

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.

SUBSISTENCE REGULATION REVIEW:

1. Is this stock in a nonsubsistence area? No.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes, the board made a positive customary and traditional use finding for the salmon stocks in the Glennallen Subdistrict of the Upper Copper District (5 AAC 01.616 (a)(1)).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? The board has found the following amounts of salmon are reasonably necessary for subsistence uses in the following locations:
    a. Glennallen Subdistrict of the Upper Copper River District:
        i. in that portion from the southern boundary of the subdistrict at the downstream edge of the Chitina-McCarthy Road Bridge to the mouth of the Tonsina River: 25,500–39,000 salmon;
        ii. in that portion from the mouth of the Tonsina River upstream to the mouth of the Gakona River: 23,500–31,000 salmon;
        iii. in that portion from the mouth of the Gakona River upstream to the mouth of the Slana River, and the waters of the Copper River as described in 5 AAC 01.647(i)(3): 12,000–12,500 salmon.
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

Table 13-1.–Number of fish wheels fished by year in each subarea of the Glennallen Subdistrict compared to the number of dip net permits fished in those same areas, 2011–2019.

	Downstream of Tonsina River		Upstream of Tonsina River	
Year	Number of fish wheels	Dip net permits fished	Number of fish wheels	Dip net permits fished
2011	36	384	78	17
2012	32	489	61	18
2013	31	522	32	21
2014	27	684	25	6
2015	20	735	19	3
2016	20	779	36	10
2017	14	761	28	9
2018	15	730	39	18
2019	12	842	46	29
Average (2011–2019)	21	658	40	14

Table 13-2.–Reported harvest by gear type in the Glennallen Subdistrict subsistence salmon fishery, 2000–2019.

	Subsistence dip net permit						Subsistence fish wheel permit					
Year	Permits issued	Permits fished	King salmon	Sockeye salmon	King salmon per permit fished	Sockeye salmon per permit fished	Permits issued	Permits fished	King salmon	Sockeye salmon	King salmon per permit fished	Sockeye salmon per permit fished
2000	464		537	8,368			787		4,245	49,873		
2001	407	365	299	8,532	1	23	832	783	3,074	70,585	4	90
2002	469	265	409	6,855	2	26	652	554	3,015	41,037	5	74
2003	399	267	318	6,132	1	23	613	513	2,077	38,077	4	74
2004	330	188	273	4,851	1	26	626	544	2,893	47,279	5	87
2005	363	220	264	6,305	1	29	598	510	1,816	54,661	4	107
2006	338	213	266	6,243	1	29	646	541	2,178	46,516	4	86
2007	467	291	432	8,155	1	28	707	589	2,674	53,322	5	91
2008	536	325	445	6,517	1	20	650	533	1,793	33,687	3	63
2009	469	277	342	6,030	1	22	621	503	1,988	37,708	4	75
2010	620	384	598	11,253	2	29	701	569	1,360	54,490	2	96
2011	617	401	681	13,034	2	33	689	564	1,518	41,009	3	73
2012	867	507	516	17,860	1	35	660	540	1,407	50,269	3	93
2013	808	543	794	22,924	1	42	531	431	1,169	44,201	3	103
2014	1,148	690	551	24,736	1	36	508	409	652	42,027	2	103
2015	1,128	738	1,109	29,873	2	40	503	405	870	43,378	2	107
2016	1,300	789	833	22,525	1	29	469	348	930	31,703	3	91
2017	1,264	770	1,695	16,499	2	21	368	274	751	18,495	3	68
2018	1,312	748	1,243	14,637	2	20	347	270	2,747	19,353	10	72
2019	1,354	871	1,603	29,838	2	34	359	287	1,474	20,163	5	70
Average 2014–2018	1,230	747	1,086	21,654	1	29	439	341	1,190	30,991	3	91
Average 2009–2018	953	585	836	17,937	1	31	540	431	1,339	38,263	3	89

PROPOSAL 14 – 5 AAC 01.620. Lawful gear and gear specifications.

PROPOSED BY: Kirk Wilson.

WHAT WOULD THE PROPOSAL DO? Prohibit the use of monofilament or multifilament gillnet mesh for net bag material in the Glennallen Subdistrict prior to August 15.

WHAT ARE THE CURRENT REGULATIONS? Under 5 AAC 39.105(d)(24) a dip net is defined as a bag-shaped net supported on all sides by a rigid frame; the maximum straight-line distance between any two points on the net frame, as measured through the net opening, may not exceed five feet; the depth of the bag must be at least one-half the greatest straight-line distance, as measured through the net opening; no portion of the bag may be constructed of webbing that exceeds a stretch measurement of 4.5 inches; the frame must be attached to a single rigid handle and be operated by hand.

Dip nets are legal gear in the Glennallen Subdistrict subsistence fishery and Chitina Subdistrict personal use fishery. There are no limitations under 5 AAC 01.620, 5 AAC 39.105, or 5 AAC 77.591 as to the type of web material used in a dip net.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would create an exception for the Glennallen Subdistrict within the Prince William Sound Area, since gillnet mesh bag material could still be used in the Chitina Subdistrict. It would also deviate from statewide regulation as well as federal subsistence regulations. It is unlikely to increase survival of released king salmon because tangling in dip nets is more a function of net depth and mesh size rather than net material. This could require participants to have two types of nets because mono/multifilament would still be allowed August 15 through September 30.

BACKGROUND: In 1988, the board adopted the current statewide regulation limiting mesh size to a maximum of 4.5 inches. This regulation was adopted in response to staff and public observation indicating more fish were "gilled" than "dipped" when larger mesh was used. At that time, the board agreed that smaller mesh should be used to ensure fish were dipped. The current definition of dip net does not address net material.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. Prohibiting monofilament- or multifilament-based mesh material for dip nets in the Glennallen Subdistrict subsistence salmon fishery will not facilitate the release of king salmon, nor does it serve as a conservation measure. A uniform statewide standard provides regulatory consistency that is easier to enforce.

COST ANALYSIS: Approval of this proposal would likely result in an additional direct cost for a private person to participate in these fisheries because many dipnetters may have to replace their

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

SUBSISTENCE REGULATION REVIEW:

1. Is this stock in a nonsubsistence area? No.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes, the board made a positive customary and traditional use finding for the salmon stocks in the Glennallen Subdistrict of the Upper Copper District (5 AAC 01.616 (a)(1)).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? The board has found the following amounts of salmon are reasonably necessary for subsistence uses in the following locations:
    a. Glennallen Subdistrict of the Upper Copper River District:
        i. in that portion from the southern boundary of the subdistrict at the downstream edge of the Chitina-McCarthy Road Bridge to the mouth of the Tonsina River: 25,500–39,000 salmon;
        ii. in that portion from the mouth of the Tonsina River upstream to the mouth of the Gakona River: 23,500–31,000 salmon;
        iii. in that portion from the mouth of the Gakona River upstream to the mouth of the Slana River, and the waters of the Copper River as described in 5 AAC 01.647(i)(3): 12,000–12,500 salmon.
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

PROPOSAL 15 – 5 AAC 01.620. Lawful gear and gear specifications and 5 AAC 77.591. Copper River Personal Use Dip Net Salmon Fishery Management Plan.

PROPOSED BY: Copper Basin Advisory Committee.

WHAT WOULD THE PROPOSAL DO? Prohibit the use of monofilament or multifilament gillnet mesh for net bags in subsistence and personal use fisheries in the Copper River.

WHAT ARE THE CURRENT REGULATIONS? Under 5 AAC 39.105(d)(24) a dip net is defined as a bag-shaped net supported on all sides by a rigid frame; the maximum straight-line distance between any two points on the net frame, as measured through the net opening, may not exceed five feet; the depth of the bag must be at least one-half the greatest straight-line distance, as measured through the net opening; no portion of the bag may be constructed of webbing that exceeds a stretch measurement of 4.5 inches; the frame must be attached to a single rigid handle and be operated by hand.

Dip nets are legal gear in the Glennallen Subdistrict subsistence fishery and Chitina Subdistrict personal use fishery. There are no limitations under 5 AAC 01.620, 5 AAC 39.105, or 5 AAC 77.591 as to the type of web material used in a dip net.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would create an exception for the Prince William Sound Area deviating from statewide regulations as well as federal subsistence fishing regulations. This is unlikely to increase survival of released king salmon because tangling in dip nets is more a function of net depth and mesh size rather than net material.

BACKGROUND: In 1988, the board adopted the current statewide regulation limiting mesh size to a maximum of 4.5 inches. This regulation was adopted in response to staff and public observation indicating more fish were "gilled" than "dipped" when larger mesh was used. At that time, the board agreed that smaller mesh should be used to ensure fish were dipped. The current definition of dip net does not address net material.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. Prohibiting monofilament- or multifilament-based mesh material for dip nets in the Chitina Subdistrict personal use and Glennallen Subdistrict subsistence salmon fisheries will not facilitate the release of king salmon, nor does it serve as a conservation measure. A uniform statewide standard provides regulatory consistency that is easier to enforce.

COST ANALYSIS: Approval of this proposal would likely result in an additional direct cost for a private person to participate in these fisheries as many dipnetters may have to replace their dip

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

SUBSISTENCE REGULATION REVIEW:

1. Is this stock in a nonsubsistence area? No.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes, the board made a positive customary and traditional use finding for the salmon stocks in the Glennallen Subdistrict of the Upper Copper District (5 AAC 01.616 (a)(1)).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? The board has found the following amounts of salmon are reasonably necessary for subsistence uses in the following locations:
    a. Glennallen Subdistrict of the Upper Copper River District:
        i. in that portion from the southern boundary of the subdistrict at the downstream edge of the Chitina-McCarthy Road Bridge to the mouth of the Tonsina River: 25,500–39,000 salmon;
        ii. in that portion from the mouth of the Tonsina River upstream to the mouth of the Gakona River: 23,500–31,000 salmon;
        iii. in that portion from the mouth of the Gakona River upstream to the mouth of the Slana River, and the waters of the Copper River as described in 5 AAC 01.647(i)(3): 12,000–12,500 salmon.
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

PROPOSAL 16 – 5 AAC 01.620. Lawful gear and gear specifications.

PROPOSED BY: Kirk Wilson, Karen Linnell, and Copper Basin Fish and Game Advisory Committee.

WHAT WOULD THE PROPOSAL DO? Prohibit the use of any electronic fish finders in the Glennallen Subdistrict from June through September.

WHAT ARE THE CURRENT REGULATIONS? There are no regulations regarding the use of electronic fish finders.

WHAT WOULD BE THE EFFECTS IF THE PROPOSAL IS ADOPTED? It would prevent boat operators from determining depth in the Copper River, increase the chance of boat groundings, and reduce boating safety.

BACKGROUND: Based on interviews with boaters during the 2020 fishing season, electronic fish finders (i.e., boat mounted sonars typically with GPS capabilities) in boats accessing either GSD or CSD are used for navigation and avoiding shifting silt bars in the Copper River. These devices were not used to locate fish because boat-mounted sonars are hampered by heavy silt and the fast current of the river. They are not an effective tool for locating and targeting salmon in the Copper River.

From 2014–2018 an average of 41% of the subsistence sockeye salmon harvest was taken by dip nets (Table 16-1) and 48% of the king salmon harvest (Table 16-2). Boats have been used by subsistence and personal use dip netters since at least 1984. Tracking of GSD dip net harvest by boat versus shore started in 2019 when 30% of the overall reported sockeye salmon harvest and 37% of the overall reported king salmon harvest were taken from boats. Harvest per permit fished was 27 sockeye and 2 king salmon for dipnetters fishing from a boat, 44 sockeye and 1 king salmon for dipnetters fishing from shore, and 72 sockeye and 5 king salmon for fish wheel operators.

From 2014–2018, permit holders in the CSD harvested an average of 24% of the reported sockeye salmon (Table 16-1) and 27% of the reported king salmon harvest from boats (Table 16–2). Reported harvest per permit fished from 2014–2018 was 26 salmon for households fishing from a boat and 19 salmon for households fishing from shore.

Harvest in the CSD and GSD is not correlated with the number of sockeye salmon reaching the Gulkana Hatchery (Table 16-1). The number of hatchery brood and excess sockeye salmon also appears unrelated to annual sonar counts and overall sockeye salmon escapement in the Copper River drainage.

DEPARTMENT COMMENTS: The department **OPPOSES** the prohibition of navigational devices on the Copper River. There is no evidence to support higher harvest rates for permit

holders using this technology, because the heavily silted waters affect signal strength and prohibiting these devices could affect boating safety.

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.

SUBSISTENCE REGULATION REVIEW:

1. Is this stock in a nonsubsistence area? No.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes, the board made a positive customary and traditional use finding for the salmon stocks in the Glennallen Subdistrict of the Upper Copper District (5 AAC 01.616 (a)(1)).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? The board has found the following amounts of salmon are reasonably necessary for subsistence uses in the following locations:
    a. Glennallen Subdistrict of the Upper Copper River District:
        i. in that portion from the southern boundary of the subdistrict at the downstream edge of the Chitina-McCarthy Road Bridge to the mouth of the Tonsina River: 25,500–39,000 salmon;
        ii. in that portion from the mouth of the Tonsina River upstream to the mouth of the Gakona River: 23,500–31,000 salmon;
        iii. in that portion from the mouth of the Gakona River upstream to the mouth of the Slana River, and the waters of the Copper River as described in 5 AAC 01.647(i)(3): 12,000–12,500 salmon.
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

Table 16-1.–Salmon passage at Miles Lake sonar, reported sockeye salmon harvest in the Chitina Subdistrict personal use salmon dip net and Glennallen Subdistrict subsistence fisheries, hatchery brood and excess fish, and sockeye salmon spawning escapement, 2001–2019.

		Personal use harvest			Subsistence harvest			
Year	Sonar passage	Boat	Shore	Unknown	Dip net	Fish wheel	Hatchery brood excess	Spawning escapement[a]
2001	878,205	23,722	69,784	25,569	8,454	69,936	75,620	538,681
2002	830,263	13,488	40,844	18,658	6,855	41,037	62,361	581,717
2003	747,091	15,338	45,173	10,948	6,132	38,077	45,024	507,895
2004	669,514	18,387	59,969	14,826	4,851	47,279	6,618	433,945
2005	855,125	17,187	73,011	16,670	6,305	54,661	92,455	515,599
2006	959,706	18,801	71,219	12,423	6,243	46,516	97,202	579,552
2007	919,601	25,686	82,239	4,936	8,155	53,322	28,648	612,103
2008	718,344	17,187	49,178	4,520	6,517	33,697	45,022	480,597
2009	709,748	13,988	61,989	5,455	5,340	36,065	43,409	469,090
2010	923,811	21,025	89,180	6,585	11,253	55,414	157,980	502,992
2011	914,231	22,197	88,774	3,193	13,034	41,009	59,589	607,657
2012	1,294,400	22,253	84,593	2,961	17,860	50,269	65,348	953,245
2013	1,267,060	24,538	122,253	4,867	22,924	44,201	72,369	860,929
2014	1,218,418	25,280	107,921	3,978	24,736	42,027	53,737	864,988
2015	1,346,100	40,306	150,798	3,866	29,873	43,378	40,123	930,061
2016	801,593	34,166	90,190	2,189	22,525	31,703	32,341	513,563
2017	723,426	33,033	78,137	2,032	16,499	18,495	16,934	465,518
2018	701,577	17,398	45,068	2,578	14,657	19,353	30,306	478,701
2019	1,039,654	49,091	96,555	1,610	29,643	20,358	15,552	720,997
Average 2014–2018	958,223	30,037	94,423	2,929	21,658	30,991	34,688	650,566
Average 2009–2018	990,036	25,418	91,890	3,770	17,870	38,191	57,214	664,674

[a] Prior to 2003 the Copper River sockeye salmon escapement goal was 300,000, from 2003–2010 the escapement goal was 300,000–500,000, 2011–present the escapement goal has been 360,000–750,000).

Table 16-2.–Estimated king salmon inriver passage, reported harvest in the Chitina Subdistrict personal use salmon dip net and Glennallen Subdistrict subsistence fisheries, and spawning escapement, 2001–2019.

		Personal use harvest			Subsistence harvest		
Year	Inriver estimate	Boat	Shore	Unknown	Dip net	Fish wheel	Spawning escapement[a]
2001	39,778	712	1,471	620	296	3,045	28,208
2002	32,873	411	907	428	409	3,015	21,502
2003	44,764	481	907	254	318	2,052	34,034
2004	40,564	528	1,223	357	273	2,893	30,645
2005	30,333	382	1,120	273	264	1,816	21,528
2006	67,789	496	1,326	249	266	2,178	58,454
2007	46,349	687	1,593	109	432	2,674	34,575
2008	41,343	480	1,096	124	445	1,793	32,487
2009	32,400	64	118	17	303	1,905	27,786
2010	22,323	141	370	76	598	1,372	16,764
2011	33,889	189	700	35	681	1,518	27,994
2012	31,452	181	299	16	516	1,407	27,835
2013	32,581	127	462	31	794	1,169	29,012
2014	24,158	162	462	28	551	652	20,709
2015	32,306	350	983	30	1,109	870	26,764
2016	16,009	164	383	16	833	930	12,485
2017	40,725	484	1,184	41	1,695	751	33,655
2018	52,524	273	746	50	1,245	2,747	42,202
2019	43,714	885	1,339	27	1,552	1,525	35,149
Average 2014–2018	33,144	287	752	33	1,087	1,190	27,163
Average 2009–2018	31,837	214	571	34	833	1,332	26,521

[a] Escapement goal was 28,000–55,000 king salmon from 2000–2002 and 24,000 king salmon after 2001.

PROPOSAL 17 – 5 AAC 01.645. Subsistence bag, possession, and size limits; annual limits.

PROPOSED BY: Faye Ewan.

WHAT WOULD THE PROPOSAL DO? This would require a special supplemental permit when dipnetting from a boat with an annual limit of 30 fish for a household of one, 60 fish for a household of 2 or more, and no more than 5 king salmon as part of their annual limit for all households.

WHAT ARE THE CURRENT REGULATIONS? The annual limit for households in the Glennallen Subdistrict subsistence salmon fishery is 30 salmon for a household of one person, 60 salmon for a household of two people, and 10 additional salmon for each additional person in a household of two or more people. Upon request permits allow for no more than 200 salmon for a household of one, and 500 for a household of two or more. Households choosing to harvest with dip nets may take no more than five king salmon as part of their annual limit.

WHAT WOULD BE THE EFFECTS IF THE PROPOSAL IS ADOPTED? This would decrease the annual limit for households that choose to use a dip net from a boat and it would require the department to issue a third type of permit for this fishery. Overall subsistence harvest opportunity would decrease for households dipnetting from a boat under state regulations compared to federal regulations.

BACKGROUND: Dip nets have been a subsistence gear type in the Upper Copper River District since before statehood. Dip nets have been a legal gear in GSD since the subdistrict was established in 1977, with the exception of 1979–1983. Permit holders may only use one gear type (either fish wheel or dip net) and must declare the gear type when attaining their permit.

The number of GSD dip net permits fished has steadily risen since 2004 while the number of fish wheel permits has decreased (Table 17-1). Harvest per dip net permit averaged one king salmon and 29 sockeye salmon from 2014–2018. For fish wheels, harvest per permit fished has averaged three king salmon and 91 sockeye salmon over the same period. During 2019, 30% of the reported sockeye salmon and 37% of the reported king salmon harvest was taken by dipnets fished from boats compared with 16% and 5% respectively by dip nets fished from shore, and 41% and 50% by fish wheels (Table 17–2).

The GSD encompasses approximately 125 miles of the mainstem Copper River. Public shoreline access is limited to about 1.5 miles of unencumbered state land along the east riverbank above the Chitina-McCarthy Bridge (Figure 17-1). This shoreline access provides limited dipnetting sites and is one of the most concentrated areas used by fish wheels in the Glennallen Subdistrict, which generally occupy the 0.5-mile reach upstream of the Chitina-McCarthy Bridge (Figure 17-2). There is also limited access directly under the Chitina-McCarthy Bridge, near the Chitina Airport (also shared by fish wheels), and walk-in access (2 miles) at the mouth of the Klutina River. The

ability to harvest fish from a boat provides access to the entire length of the GSD, though most effort by boat in the GSD occurs just upstream of the Chitina-McCarthy Bridge.

Harvest in the GSD is not correlated with the number of sockeye salmon reaching the Gulkana Hatchery (Table 17–1). The number of hatchery brood and excess sockeye salmon also appears unrelated to annual sonar counts and sockeye salmon escapement in the Copper River drainage.

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

COST ANALYSIS: Approval of this proposal may result in an additional direct cost for a private person to participate in this fishery if travel is required to pick up the permit. Approval of this proposal is not expected to result in an additional direct cost for the department.

SUBSISTENCE REGULATION REVIEW:

1. Is this stock in a nonsubsistence area? No.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes, the board made a positive customary and traditional use finding for the salmon stocks in the Glennallen Subdistrict of the Upper Copper District (5 AAC 01.616 (a)(1)).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? The board has found the following amounts of salmon are reasonably necessary for subsistence uses in the following locations:
    a. Glennallen Subdistrict of the Upper Copper River District:
        i. in that portion from the southern boundary of the subdistrict at the downstream edge of the Chitina-McCarthy Road Bridge to the mouth of the Tonsina River: 25,500–39,000 salmon;
        ii. in that portion from the mouth of the Tonsina River upstream to the mouth of the Gakona River: 23,500–31,000 salmon;
        iii. in that portion from the mouth of the Gakona River upstream to the mouth of the Slana River, and the waters of the Copper River as described in 5 AAC 01.647(i)(3): 12,000–12,500 salmon.
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

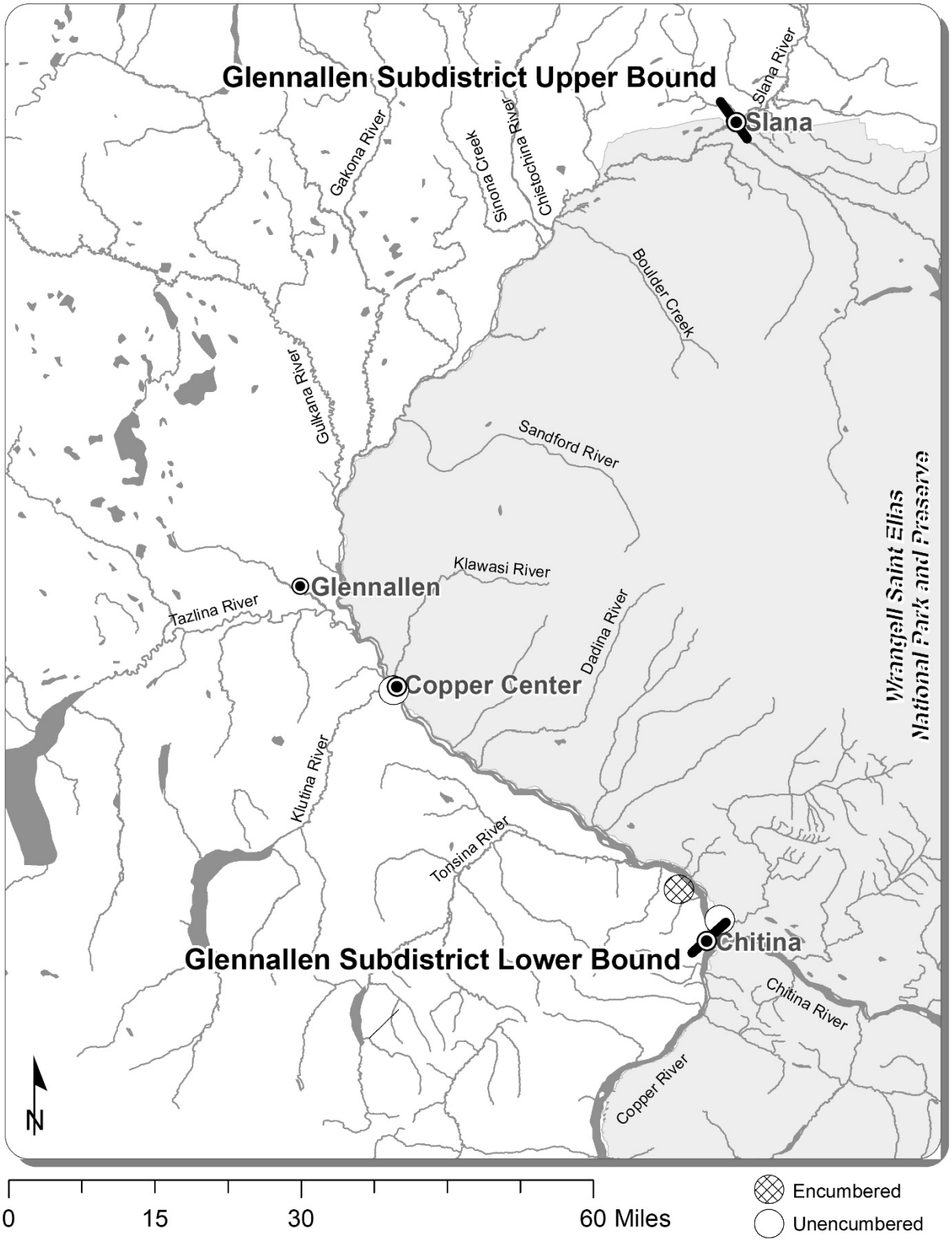


Figure 17-1.–Glennallen Subdistrict public access.

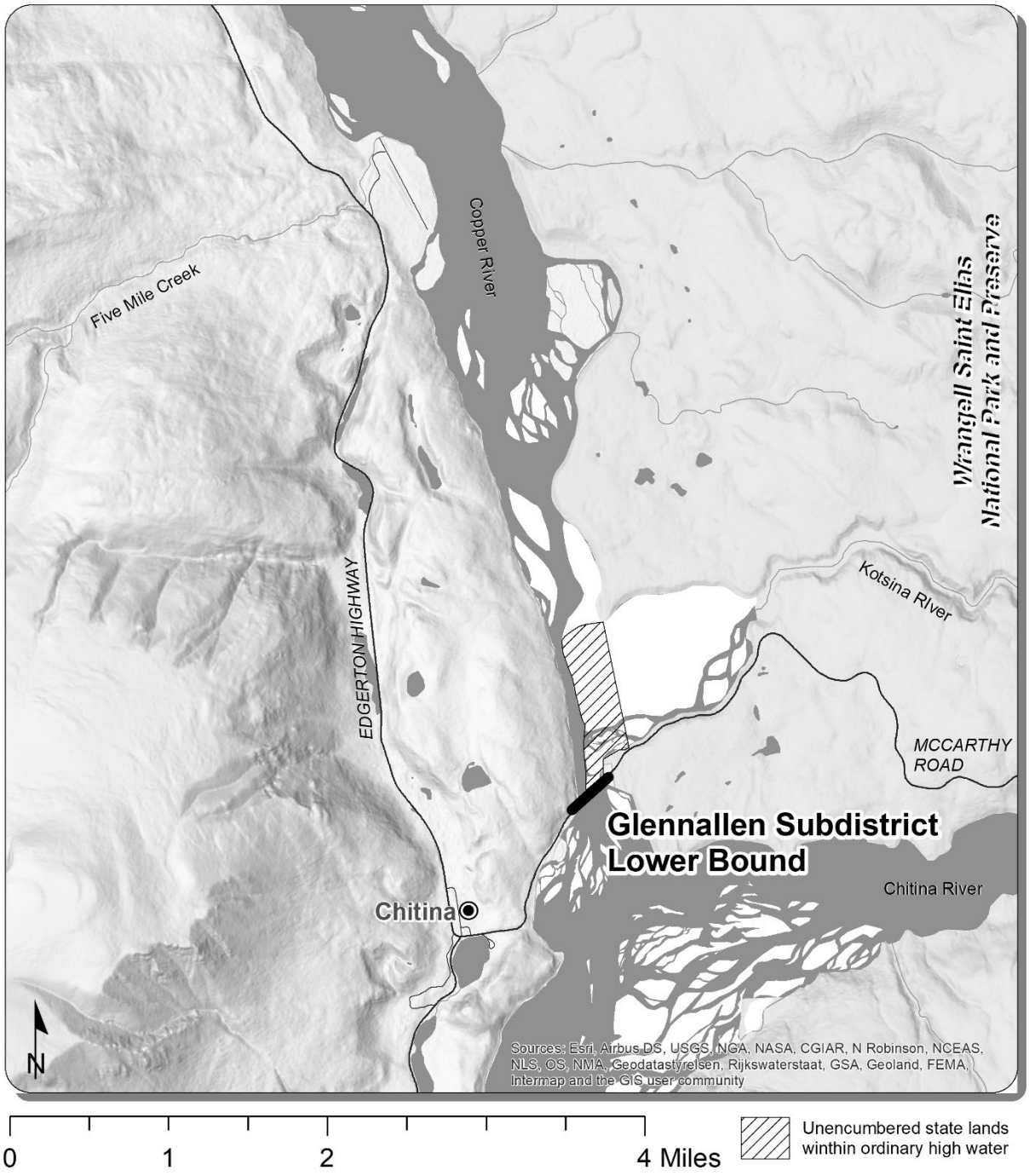


Figure 17-2.–Detail of unencumbered public access in the Glennallen Subdistrict.

Table 17-1.–Copper River salmon passage and escapement and reported harvest by gear type in the Glennallen Subdistrict subsistence salmon fishery, 2000–2019.

	Salmon passage and escapement					Subsistence dip net			Subsistence fish wheel		
	Sockeye salmon			King salmon							
Year	Sonar passage	Hatchery brood excess	Spawning escapement [a]	Inriver estimate	Spawning escapement[a]	Permits fished	King salmon harvest	Sockeye salmon harvest	Permits fished	King salmon harvest	Sockeye salmon harvest
2001	878,205	75,620	538,681	39,778	28,208	365	299	8,532	783	3,074	70,585
2002	830,263	62,361	581,717	32,873	21,502	265	409	6,855	554	3,015	41,037
2003	747,091	45,024	507,895	44,764	34,034	267	318	6,132	513	2,077	38,077
2004	669,514	6,618	433,945	40,564	30,645	188	273	4,851	544	2,893	47,279
2005	855,125	92,455	515,599	30,333	21,528	220	264	6,305	510	1,816	54,661
2006	959,706	97,202	579,552	67,789	58,454	213	266	6,243	541	2,178	46,516
2007	919,601	28,648	612,103	46,349	34,575	291	432	8,155	589	2,674	53,322
2008	718,344	45,022	480,597	41,343	32,487	325	445	6,517	533	1,793	33,687
2009	709,748	43,409	469,090	32,400	27,786	277	342	6,030	503	1,988	37,708
2010	923,811	157,980	502,992	22,323	16,764	384	598	11,253	569	1,360	54,490
2011	914,231	59,589	607,657	33,889	27,994	401	681	13,034	564	1,518	41,009
2012	1,294,400	65,348	953,245	31,452	27,835	507	516	17,860	540	1,407	50,269
2013	1,267,060	72,369	860,929	32,581	29,012	543	794	22,924	431	1,169	44,201
2014	1,218,418	53,737	864,988	24,158	20,709	690	551	24,736	409	652	42,027
2015	1,346,100	40,123	930,061	32,306	26,764	738	1,109	29,873	405	870	43,378
2016	801,593	32,341	513,563	16,009	12,485	789	833	22,525	348	930	31,703
2017	723,426	16,934	465,518	40,725	33,655	770	1,695	16,499	274	751	18,495
2018	701,577	30,306	478,701	52,524	42,202	748	1,243	14,637	270	2,747	19,353
2019	1,039,654	15,552	720,997	43,714	35,149	871	1,603	29,838	287	1,474	20,163
Average 2014–2018	958,223	34,688	650,566	33,144	27,163	747	1,086	21,654	341	1,190	30,991
Average 2009–2018	990,036	57,214	664,674	31,837	26,521	585	836	17,937	431	1,339	38,263

[a] Escapement goal was 28,000–55,000 king salmon from 2000–2002 and 24,000 king salmon after 2001; Prior to 2003 the Copper River sockeye salmon escapement goal was 300,000, from 2003–2010 the escapement goal was 300,000–500,000, 2011 present the escapement goal has been 360,000–750,000).

Table 17-2.–Harvest by gear type in the Glennallen Subdistrict subsistence salmon fishery, 2019.

Gear	Permits fished	Harvest		Harvest/permit fished	
		King salmon	Sockeye salmon	King salmon	Sockeye salmon
Dip net (boat)	548	1,121	14,770	2	27
Dip net (shore)	173	161	7,807	1	45
Dip net (unknown)	150	321	7,261	2	48
Fish wheel	287	1,474	20,163	5	70
Total	1,158	3,077	50,001		

PROPOSAL 18 – 5 AAC 77.591. Copper River Personal Use Dip Net Salmon Fishery Management Plan.

PROPOSED BY: Chitina Dipnetters Association and Fairbanks Fish and Game Advisory Committee.

WHAT WOULD THE PROPOSAL DO? Increase the size of the Chitina Subdistrict by extending the lower boundary approximately 0.5 miles downstream.

WHAT ARE THE CURRENT REGULATIONS? Under 5 AAC 77.591(h), the Chitina Subdistrict consists of all waters of the mainstem Copper River from the downstream edge of the Chitina-McCarthy Road Bridge downstream to an east-west line crossing the Copper River as designated by department regulatory markers located approximately 200 yards upstream of Haley Creek.

WHAT WOULD BE THE EFFECTS IF THE PROPOSAL IS ADOPTED? This would provide additional fishing area for Chitina personal use permit holders accessing the fishery by boat but accessing the proposed additional area from shore would be difficult due to rockslides and river crossing barriers. This change in the Chitina Subdistrict boundary would diverge from federal subsistence regulatory boundaries.

BACKGROUND: From 1968–1975, the lower boundary of the Upper Copper River District was located 1.25 miles downstream of O'Brien Creek. This was extended to the current location, 200 yards upstream of Haley Creek, in 1975 (Figure 18-1). There has been no documented subsistence or personal use fishing in the mainstem Copper River from Haley Creek to the Uranatina River.

Participation in the Chitina Subdistrict averaged 6,074 permits fished from 2014–2018 (Table 18–1). The number of households reporting fishing from shore consistently remains higher than those reporting fishing from boats, however the number of permits being fished from boats has been increasing over the past 5 years. The number of households reporting harvest from boats has risen, but total harvest from boats and shore combined is still within historical levels.

The current lower boundary location allows for enforcement of the fishery by ATV access via the Copper River Highway (CRH). The current lower boundary marker on the western shoreline can be reached by the CRH and provides a clear view across the river to the regulatory boundary marker on the eastern shore. This accessible line of sight offers a logistically simple way to enforce the lower boundary of the subdistrict. Moving the lower boundary downstream of Haley Creek will limit shoreline access to the lower boundary marker because crossing Haley Creek by ATV is challenging and at times unfordable, making it subsequently more difficult for enforcement personnel to reach.

The issue of multiple boats fishing the same area will likely not be alleviated by extending the lower boundary downstream ½ mile. Competition for popular drift locations and back-eddies is common throughout the subdistrict. Extending the subdistrict downstream of a popular drift site

may provide additional opportunity for permit holders fishing from boats but the problem of congestion in that area will likely remain based on the increasing trend of boat dipnetters.

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.

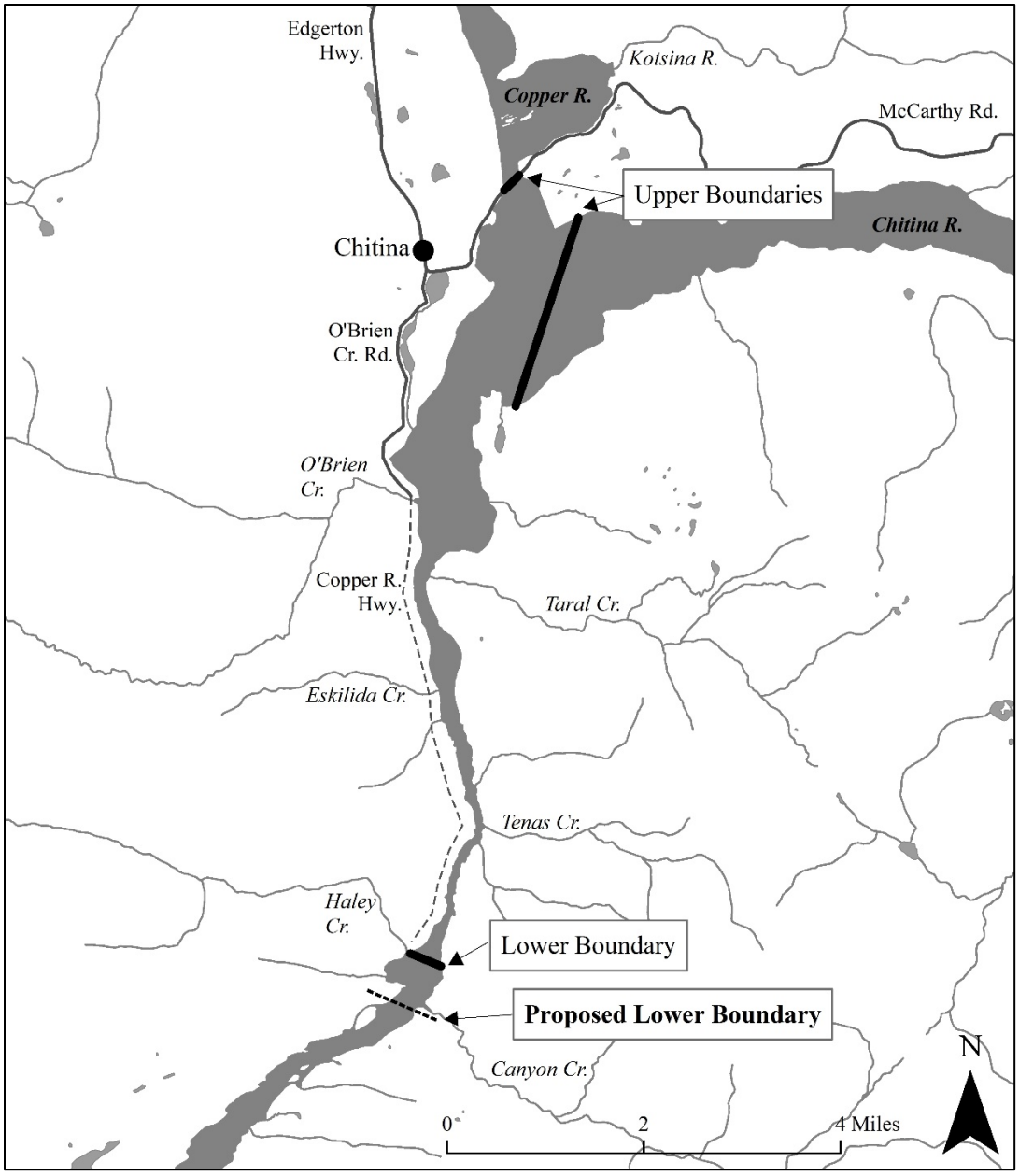


Figure 18-1.–Map of the Chitina Subdistrict with the current boundaries and proposed lower boundary.

Table 18-1.–Miles Lake sonar passage, the number of permits fished and the reported harvest of sockeye salmon from boat and from shore in the Chitina Subdistrict, 2001–2019.

Year	Sonar Passage	Permits Fished				Harvest			
		Boat	Shore	Unknown	Total[a]	Boat	Shore	Unknown	Total
2001	878,205	1,165	4,292	1,451	6,644	23,722	69,784	25,569	119,075
2002	830,263	786	2,703	1,169	4,480	13,488	40,844	18,658	72,990
2003	747,091	836	2,861	707	4,257	15,338	45,173	10,948	71,459
2004	669,514	876	3,394	841	4,955	18,387	59,969	14,826	93,182
2005	855,125	771	3,823	888	5,330	17,187	73,011	16,670	106,868
2006	959,706	900	3,845	711	5,291	18,801	71,219	12,423	102,443
2007	919,601	1,149	4,234	320	5,549	25,686	82,239	4,936	112,861
2008	718,344	955	3,665	366	4,803	17,187	49,178	4,520	70,885
2009	709,748	749	3,823	455	4,830	13,988	61,989	5,455	81,432
2010	923,811	957	4,943	468	6,075	21,025	89,180	6,585	116,790
2011	914,231	958	4,683	228	5,710	22,197	88,774	3,193	114,164
2012	1,294,400	989	4,733	214	5,781	22,253	84,593	2,961	109,807
2013	1,267,060	889	5,529	293	6,768	24,538	122,253	4,867	151,658
2014	1,218,418	1,041	5,918	312	7,116	25,280	107,921	3,978	137,179
2015	1,346,100	1,250	6,522	206	7,829	40,306	150,798	3,866	194,970
2016	801,593	1,338	4,873	143	6,219	34,166	90,190	2,189	126,545
2017	723,426	1,412	4,675	128	6,161	33,033	78,137	2,032	113,202
2018	701,577	656	2,288	118	3,044	17,398	45,068	2,578	65,044
2019	1,039,654	1,642	3,832	78	5,467	49,091	96,555	1,610	147,256
Average 2014–2018	127,388	1,139	4,855	181	6,074	30,037	94,423	2,929	127,388
Average 2009–2018	121,079	1,024	4,799	257	5,953	25,418	91,890	3,770	121,079

[a] Total does not equal sum of permits fished from boat, shore and unknown because some permits are fished from both boats and shore.

PROPOSAL 19 – 5 AAC 77.591. Copper River Personal Use Dip Net Salmon Fishery Management Plan.

PROPOSED BY: Cordova District Fishermen United.

WHAT WOULD THE PROPOSAL DO? Reduce the maximum harvest limit in the Chitina Subdistrict personal use salmon dip net fishery by 50–66% when the Copper River District commercial fishery harvests are 50% below average by June 1.

WHAT ARE THE CURRENT REGULATIONS? The *Copper River District Salmon Management Plan* (5 AAC 24.360) directs the department to manage the Copper River District commercial salmon fishery to achieve the sockeye salmon SEG of 360,000-750,000 fish and an inriver goal (set annually) as measured at the Miles Lake sonar. The *Copper River Subsistence Salmon Fisheries Management Plan* (5 AAC 01.647) further directs the department to manage the Copper River commercial salmon fishery to ensure that an adequate escapement reaches the spawning grounds and to provide for hatchery broodstock and for subsistence, personal use, and sport fisheries.

The *Copper River Personal Use Dip Net Salmon Fishery Management Plan* (5 AAC 77.591) sets the maximum harvest level for the Chitina Subdistrict personal use salmon fishery at 100,000–150,000 salmon, not including any salmon in excess of the inriver goal or salmon taken after August 31.

The department has general EO authority to modify openings or close entirely the personal use fishery to attain spawning escapement.

WHAT WOULD BE THE EFFECTS IF THE PROPOSAL IS ADOPTED? Fishing time and harvest opportunity in in the personal use fishery would be reduced significantly during the season (June 7–August 31) to achieve a commensurate 50–66% reduction in harvest. During years when the commercial fishery is significantly reduced because of poor king salmon returns, but sockeye salmon returns are strong, the proposal would limit the department's ability to manage the personal use fishery inseason to harvest surplus fish above the escapement goal range. This would restrict the personal use fishery for the entire season based on the first two weeks performance of the commercial fishery.

BACKGROUND: The salmon stocks of the Copper River are fully allocated. The board has established an inriver goal for Coper River sockeye salmon that is comprised of 360,000-750,000 sockeye salmon and 17,500 other salmon for spawning escapement, 61,000–82,500 salmon for subsistence, 100,000–150,000 salmon for personal use, 15,000 sockeye salmon for the sport fishery, and an annually determined number of sockeye salmon for hatchery brood and surplus fish. The lower bound of the inriver goal has ranged from 592,000–759,000 salmon (average = 685,000) over the last 10 years (2009–2018) and has been met or exceeded every year except for

2000 (Table 19–1). The inriver goal was also missed in 2020 when 530,313 salmon were counted past the Miles Lake sonar compared to a goal of 661,000.

The Copper River District commercial drift gillnet fishery is managed to provide commercial harvest opportunity and to ensure the inriver goal is achieved. Sockeye salmon harvest in the commercial fishery is influenced by run strength of both sockeye and king salmon. In years with weak king salmon runs the time and area of the commercial fishery are restricted to achieve escapement.

Management of the personal use fishery is guided by the *Copper River Personal Use Dip Net Salmon Fishery Management Plan*, with the weekly number of hours of fishing time determined by the weekly passage of fish at Miles Lake sonar. To achieve sockeye and king salmon escapement goals and provide subsistence opportunity, the department can exercise its emergency order authority under AS 16.05.055 to further restrict fishing time in the personal use fishery, close the fishery to retention of king salmon as directed under 5 AAC 24.361, or close the fishery entirely. All inriver fisheries are managed to achieve the sockeye and king salmon escapement goals. The lower bound of the sockeye salmon escapement goal has been achieved every year, and the king salmon escapement goal has been met or exceeded 15 of the 20 years since first established.

During 2009–2018 an average of 1,288,645 sockeye salmon have been harvested in the Copper River District commercial fishery while and average 142,213 sockeye salmon have been harvested in the Chitina Subdistrict personal use fishery (Table 19-1). In 2018, the total sockeye salmon return was one of the lowest on record during which 45,917 sockeye salmon were harvested in the commercial fishery and 80,542 harvested in the personal use fishery.

DEPARTMENT COMMENTS: The department is **NEUTRAL** 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 19-1.–Summary of sockeye salmon returns, harvests and upriver escapement in the Copper River, 2000–2019.

Year	Estimated Total Return	Commercial Harvest[a]	Inriver goal (Lower bound)	Sonar count	Chitina Subdistrict harvest[b]	Spawning Escapement[c]
2000	1,633,508	881,419	768,000	598,790	107,856	343,691
2001	2,237,918	1,325,690	723,006	838,427	132,108	538,681
2002	2,192,176	1,249,920	651,500	797,390	86,543	581,717
2003	2,043,029	1,192,164	617,000	702,327	81,513	507,895
2004	1,819,097	1,048,603	552,000	628,950	108,527	433,945
2005	2,276,773	1,333,574	579,000	824,792	122,463	515,599
2006	2,592,750	1,498,423	637,000	891,917	124,810	579,552
2007	2,961,748	1,904,038	577,000	873,252	126,154	612,103
2008	1,141,223	323,096	615,000	677,001	82,318	480,597
2009	1,721,642	902,941	592,000	677,348	90,917	469,090
2010	1,715,742	643,086	668,000	901,488	140,811	502,992
2011	3,097,537	2,061,525	622,380	880,342	129,985	607,657
2012	3,276,472	1,874,726	684,000	1,262,948	128,058	953,245
2013	3,009,733	1,617,717	728,000	1,234,479	182,915	860,929
2014	3,386,773	2,062,265	748,000	1,194,260	158,879	864,988
2015	3,209,594	1,761,443	759,000	1,313,794	225,425	930,061
2016	2,074,971	1,184,901	712,000	785,584	150,303	513,563
2017	1,531,135	731,932	690,000	682,701	134,294	465,518
2018	817,099	45,917	644,000	649,053	80,542	478,701
2019	2,391,059	1,265,956	618,000	995,940	175,413	720,997

[a] Includes commercial harvest plus homepack, donated and educational harvests.

[b] These data are expanded to reflect unreported state harvest, include reported federal harvest (2002-2004) and include expanded federal harvest beginning in 2005.

[c] Upriver return minus upriver sockeye harvests. Prior to 2003 the Copper River sockeye salmon escapement goal was 300,000, from 2003–2010 the escapement goal was 300,000–500,000, 2011–present the escapement goal has been 360,000–750,000).

PROPOSAL 20 – 5 AAC 77.591. Copper River Personal Use Dip Net Salmon Fishery Management Plan.

PROPOSED BY: Kirk Wilson.

WHAT WOULD THE PROPOSAL DO? Reduce the annual limit per household in the Chitina Subdistrict personal use salmon dip net fishery and reestablish supplemental periods for harvest of additional sockeye salmon.

WHAT ARE THE CURRENT REGULATIONS? The total annual limit for each personal use salmon fishing permit is 25 salmon for the head of household and an additional 10 salmon for each dependent of the permit holder. Only one king salmon may be retained per household.

WHAT WOULD BE THE EFFECTS IF THE PROPOSAL IS ADOPTED? It would decrease the annual limit of salmon for each household, require multiple trips to Chitina to harvest additional fish during supplemental periods and complicate management of the fishery. As written, this proposal would remove the one fish annual limit for king salmon.

BACKGROUND: In 1984, the board created a personal use salmon fishery in the Copper River drainage and in 1987 established the *Copper River Personal Use Dip Net Salmon Fishery Management Plan* (5 AAC 77.590). Prior to 1997, maximum allowable harvest for the Chitina personal use fishery was 60,000 salmon (all species combined) with 25% of fish in excess of this inriver goal allocated to the personal use fishery. During 1997–1999, maximum allowable harvest was increased to 100,000 salmon, excluding fish in excess of the inriver goal as well as any salmon harvested after August 31. In 2000, the Chitina personal use fishery was reclassified as a subsistence fishery, and the amount reasonably necessary to meet subsistence needs was 100,000–150,000 salmon excluding fish in excess of the inriver goal as well as any salmon harvested after August 31. In 2003, the board reversed its 1999 decision and reclassified the Chitina Subdistrict as a personal use fishery but maintained the harvest level and bag limits. Provisions for supplemental periods for 10 additional sockeye salmon were adopted prior to the 1998 fishing season. In 2014, the board removed the supplemental periods and established annual limits of 25 salmon for the head of household and 10 salmon for each dependent of the permit holder, except that only one king salmon may be retained per household.

Average harvest for the 5 years (2010–2014) prior to the current regulations was 146,312 sockeye salmon and 759 king salmon annually with an average of 24 salmon harvested per permit fished (Table 20–1). Average harvest for the 5 years (2015-2019) under the new annual limits increased to 150,602 sockeye salmon and 1,625 king salmon annually with an average of 27 salmon harvested per permit fished. Average participation in the fishery under the new limits has declined since 2014.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal. The personal use fishery is managed inseason and harvests in this fishery are controlled by reductions in fishing time determined weekly based on number of fish passing the Miles Lake sonar.

COST ANALYSIS: Approval of this proposal would require households to expend an undetermined amount in travel and lodging to participate in supplemental periods to harvest additional fish. Approval of this proposal is not expected to result in an additional direct cost for the department.

Table 20-1.–Number of state permits issued and fished, and expanded salmon harvests for the Chitina Subdistrict personal use dip net fishery in the Copper River, 2000–2019 (Shaded data are for years with current annual limits and unshaded data are years with the lower annual limits plus supplemental periods).

		Permits		Estimated Salmon Harvest				
Year	Supplemental periods	Issued	Fished	King	Sockeye	Coho	Total[a]	Total harvest per permit fished
2000	1	8,146	7,216	3,168	107,856	3,657	114,884	16
2001	2	9,458	6,644	3,113	132,108	2,720	138,425	21
2002	1	6,804	4,480	2,023	85,968	1,934	90,242	20
2003	0	6,441	4,257	1,903	80,796	2,533	85,496	20
2004	1	8,156	4,955	2,495	107,312	2,860	113,176	23
2005	2	8,230	5,330	2,043	120,013	1,869	124,403	23
2006	1	8,497	5,291	2,663	123,261	2,715	129,103	24
2007	4	8,377	5,549	2,694	125,126	1,742	130,222	23
2008	2	8,041	4,803	1,999	81,359	2,711	86,476	18
2009	0	7,958	4,830	214	90,035	1,712	92,228	19
2010	2	9,970	6,075	700	138,487	2,013	141,565	23
2011	4	9,217	5,710	1,067	128,052	1,702	131,265	23
2012	7	10,016	5,781	567	127,143	1,385	129,362	22
2013	6	10,592	6,768	744	180,663	797	182,904	27
2014	6	11,717	7,116	719	157,215	1,129	159,392	22
2015	NA	12,635	7,829	1,570	223,080	841	226,832	29
2016	NA	11,394	6,219	711	148,982	1,182	151,480	24
2017	NA	9,490	6,161	1,961	132,694	715	136,043	22
2018	NA	4,982	3,044	1,273	77,051	1,436	80,135	26
2019	NA	8,071	5,467	2,611	171,203	1,064	175,487	32
Average (2010–2014)		10,302	6,290	759	146,312	1,405	148,898	24
Average (2015–2019)		9,314	5,744	1,625	150,602	1,048	153,995	27

[a] Total harvest includes steelhead and other species.

PROPOSAL 21 – 5 AAC 77.591. Copper River Personal Use Dip Net Salmon Fishery Management Plan.

PROPOSED BY: Fairbanks Fish and Game Advisory Committee.

WHAT WOULD THE PROPOSAL DO? Allow the Chitina Subdistrict personal use salmon dip net fishery to open up to six days earlier than currently allowed.

WHAT ARE THE CURRENT REGULATIONS? The Chitina Subdistrict personal use salmon dip net fishery must open between June 7 and June 15 depending on salmon abundance as measured at the Miles Lake sonar.

WHAT WOULD BE THE EFFECTS IF THE PROPOSAL IS ADOPTED? This would potentially provide personal use dip netters six additional days of fishing at the start of the season depending on run strength. Salmon harvest by the personal use fishery prior to June 7 will increase by an unknown amount, but likely less than 10,000 salmon based on harvests in the Chitina Subdistrict during June 1–6 from 2001–2011.

BACKGROUND: From 1984 through 2011, the Chitina Subdistrict personal use salmon dip net fishery opened between June 1 and 11 depending on salmon passage at the Miles Lake sonar. In 2011, the board amended and adopted a proposal changing the start date for the Chitina Subdistrict to between June 7 and 15 and limited the Copper River District commercial drift gillnet fishery to a single 12-hour inside area opening in statistical weeks 20 and 21 versus a single inside opener each week. The board took these actions to increase the number of early run salmon bound for spawning tributaries in the upper drainages of the Glennallen Subdistrict subsistence fishery.

Changing the opening date to June 7 had little effect in overall harvest of sockeye salmon (Table 21–1) or king salmon (Table 21-2) the first week of June. From 2001–2011 sockeye salmon harvests downstream of the Tonsina River averaged 5,190 fish compared to 4,522 during 2012–2019. The most apparent effect of the change in opening dates was to shift effort and harvest from one fishery to another. Between the periods 2001–2011 and 2012–2019, harvest by dip net increased by an average of 2,355 sockeye and 120 king salmon when comparing the June 1–6 and June 7–15 periods (Tables 21-1 and 21-2). It is likely that any further changes to opening and closing dates in either the Chitina Subdistrict or Glennallen Subdistrict will have limited success in changing overall harvest as users will likely shift their effort or otherwise adapt their approach in order to harvest their fish.

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 direct cost for the department.

Table 21-1.–Reported sockeye salmon harvest in fisheries of the Upper Copper River District below the Tonsina River during June 1–6, 2001–2019 (the shaded area represents the years with the June 7–15 opening dates).

	Harvest below Tonsina River				Percent of total reported harvest			
		Subsistence				Subsistence		
Year	Personal use dip net	Dip net	Fish wheel	Total	Personal use dip net	Dip net	Fish wheel	Total
2001	5,188	929	3,120	9,237	4.4%	1.2%	4.1%	4.8%
2002	322	290	1,829	2,441	0.4%	0.6%	3.8%	2.0%
2003	1,996	644	1,430	4,070	2.8%	1.5%	3.2%	3.5%
2004	5,471	1,203	2,896	9,570	5.9%	2.3%	5.5%	6.6%
2005	6,534	1,192	1,373	9,099	6.2%	1.9%	2.2%	5.4%
2006	374	123	901	1,398	0.4%	0.2%	1.7%	0.9%
2007	354	508	1,299	2,161	0.3%	0.8%	2.1%	1.2%
2008	871	576	543	1,990	1.2%	1.4%	1.3%	1.8%
2009	3,919	430	961	5,310	4.8%	1.0%	2.3%	4.3%
2010	1,498	238	1,265	3,001	1.3%	0.4%	1.9%	1.7%
2011	6,219	704	1,891	8,814	5.5%	1.3%	3.5%	5.3%
2012	0	1,767	5,711	7,478	0.0%	2.6%	8.4%	4.2%
2013	0	241	0	241	0.0%	0.4%	0.0%	0.1%
2014	0	2,903	1,753	4,656	0.0%	4.3%	2.6%	2.3%
2015	0	5,301	1,059	6,360	0.0%	7.2%	1.4%	2.4%
2016	0	5,555	2,614	8,169	0.0%	10.2%	4.8%	4.5%
2017	0	2,538	395	2,933	0.0%	7.2%	1.1%	2.0%
2018	0	327	154	481	0.0%	0.9%	0.4%	0.5%
2019	0	5,184	677	5,861	0.0%	10.4%	1.4%	3.0%
Average 2001–2011	2,977	622	1,592	5,190	3.0%	1.2%	2.9%	3.4%
Average 2012–2019	0	2,977	1,545	4,522	0.0%	5.4%	2.5%	2.4%

Table 21-2.–Reported king salmon harvest in fisheries of the Upper Copper River District below the Tonsina River from June 1–6, 2001–2019 (the shaded area represents the years with the June 7–15 opening dates).

	Harvest below Tonsina River				Percent of total reported harvest			
		Subsistence				Subsistence		
Year	Personal use dip net	Dip net	Fish wheel	Total	Personal use dip net	Dip net	Fish wheel	Total
2001	143	29	393	565	5.2%	0.9%	12.2%	9.4%
2002	3	20	447	470	0.2%	0.6%	13.1%	9.2%
2003	62	43	264	369	3.9%	1.8%	11.2%	9.3%
2004	164	69	437	670	7.9%	2.2%	13.8%	12.8%
2005	154	69	133	356	9.0%	3.3%	6.4%	9.4%
2006	8	6	61	75	0.4%	0.2%	2.5%	1.7%
2007	6	35	130	171	0.3%	1.1%	4.2%	3.1%
2008	41	28	47	116	2.4%	1.3%	2.1%	3.0%
2009	122	36	111	269	N/A	1.6%	5.0%	N/A
2010	27	16	17	60	N/A	0.8%	0.9%	N/A
2011	124	26	22	172	N/A	1.2%	1.0%	N/A
2012	0	34	77	111	0.0%	1.8%	4.0%	4.6%
2013	0	5	0	5	0.0%	0.3%	0.0%	0.2%
2014	0	113	71	184	0.0%	9.4%	5.9%	10.0%
2015	0	315	24	339	0.0%	15.9%	1.2%	10.2%
2016	0	203	99	302	0.0%	11.8%	5.7%	13.2%
2017	0	174	21	195	0.0%	7.1%	0.9%	4.7%
2018	0	67	95	162	0.0%	1.7%	2.4%	3.2%
2019	0	318	110	428	0.0%	10.4%	3.6%	8.0%
Average[a] 2001–2011	78	34	187	299	4.8%	1.4%	6.6%	6.6%
Average 2012–2019	0	154	62	216	0.0%	7.3%	3.0%	6.8%

[a] Personal use dip net average percentage excludes 2009–2011 due to emergency actions prohibiting retention of king salmon in the fishery effective June 8, June 21, and June 27, respectively.

PROPOSAL 22 – 5 AAC 01.616. Customary and traditional subsistence uses of fish stocks and amounts necessary for subsistence uses.

PROPOSED BY: Fairbanks Fish and Game Advisory Committee.

WHAT WOULD THE PROPOSAL DO? This would reverse the positive customary and traditional (C&T) use determination for freshwater finfish within the Chitina Subdistrict.

WHAT ARE THE CURRENT REGULATIONS? There is a positive C&T finding for all nonsalmon freshwater fish in the Prince William Sound Area, including the Chitina Subdistrict (5 AAC 01.616(e)). Regarding subsistence harvest opportunities, fish other than rainbow trout and steelhead trout, may be taken at any time in the Prince William Sound Area following stipulations in 5 AAC 01.610. Rainbow trout and steelhead trout taken incidentally by fish wheel or subsistence finfish net gear, except dip net gear, are lawfully taken and may be retained for subsistence purposes. Rainbow trout and steelhead trout taken by dip net gear must be released immediately and returned to the water unharmed.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Subsistence harvests of nonsalmon freshwater fish would be prohibited in the Chitina Subdistrict. Harvests of nonsalmon freshwater fish for subsistence uses would likely decline. in the Chitna Subdistrict.

BACKGROUND: AS 16.05.258(a) directs the board to identify fish stocks or portions of stocks that are customarily and traditionally taken or used for subsistence. The statute also directs the commissioner of ADF&G to provide recommendations to the board concerning stock identifications. To make these C&T findings, the board considers the eight criteria listed in 5 AAC 99.010.

The only justification for making a negative C&T finding offered in the proposal is that the board has made a negative C&T finding for salmon in the Chitina Subdistrict, due to the specific use pattern in that specific area for that specific stock. However, C&T findings are stock-specific and a positive or negative finding for a stock or game population within a particular geographic area does not bind the board to the same finding for other stocks and populations in the same area. Findings are based on the information provided about the eight criteria for a specific stock.

The proposal incorrectly states that the board has not addressed the C&T status of nonsalmon fish in the subdistrict. At its meeting in December 2008, in response to Proposal 2, submitted by the Ahtna Tene Nené Customary and Traditional Committee, the board made a positive C&T finding for freshwater fish other than salmon in the entire Prince William Sound Area. The finding was based primarily on a C&T worksheet prepared by the Division of Subsistence (http://www.adfg.alaska.gov/specialpubs/SP2_SP2008-011.pdf), which drew primarily on research on use patterns summarized in Division of Subsistence Technical Paper No. 292, *The Harvest and Use of Non-salmon Fish Species in the Copper River Basin, Alaska* (http://www.adfg.alaska.gov/techpap/tp292.pdf) and systematic household harvest surveys

pertaining to study years 1983, 1987, and 2001. As recommended by the department, the stock addressed by the C&T finding was "freshwater finfish, other than salmon."

The proposal does not provide any new information addressing any of the eight criteria for this stock, or any portion of this stock. Updated information available from the department are harvests from permit returns (Table 22-1), as well as the results of systematic household surveys conducted in Copper River Basin communities from 2009–2013. About 70% of the local communities' households used nonsalmon freshwater finfish in these most recent study years, higher than the 52% estimated for 2001 and similar to the 67% of households using this stock in 1982 and 73% in 1987 (Figure 22-1). Participation in fishing for this stock was also similar in the most recent study years compared to previous study years. Between 2009-2013, as estimated in pounds usable weight, harvests of nonsalmon freshwater fish by local area residents averaged 14.2 lb per person, similar to 14.5 lb per person in 1982 and 15.4 lb per person in 1987, but is notably higher than the 6.0 lb per person estimate for 2001 (Figure 22-2). These findings suggest that no significant change has occurred in the use patterns for this stock since the board's positive C&T finding in 2008.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal. In a memorandum to the board in 2003 addressing proposals to reverse a positive C&T finding for a salmon stock, the Alaska Department of Law advised that, due to the positive affirmation of a C&T finding, the board should make such a change "only if it can point to an error in the . . . finding or can identify significant new information that was not available for the Board's consideration . . . A decision to review the earlier information and simply disagree with the conclusions reached in the earlier positive finding would be very difficult to defend in a legal challenge." As noted above, no new information has been provided to suggest that the board's 2008 positive C&T finding was in error. Also, it would be highly unusual for a C&T finding to exclude a specific waterbody or specific portion of a waterbody, as well as a specific fish species, absent any evidence of a distinctive use pattern within that waterbody. The C&T pattern identified by the board for the nonsalmon freshwater fish stock applies generally to the entire management 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 direct cost for the department.

SUBSISTENCE REGULATION REVIEW:

1. Is this stock in a nonsubsistence area? No.
2. Is this stock customarily and traditionally taken or used for subsistence? The board has determined under 5 AAC 01.616(e) that all nonsalmon freshwater fish in the Prince William Sound Area, including the Chitina Subdistrict, are customarily and traditionally taken or used for subsistence.
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.

4. What amount is reasonably necessary for subsistence uses? There is a single ANS in the entire management area for all nonsalmon freshwater fish combined of 25,000–42,000 usable pounds.
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

Table 22-1.–Freshwater finfish subsistence permits and reported harvest in the Prince William Sound Area, 1962–2019.

	Permits					Harvest[b]						
Permit year[a]	Total issued	Total returned	Total fished	PWS Area resident	Non-PWS Area resident	Whitefish	Suckers	Dolly Varden	Lake trout	Arctic grayling	Burbot	Total
1962	1	0	0	1	0	0	0	0	0	0	0	0
1963	3	1	1	3	0	2	0	0	0	0	0	2
1964	9	0	0	3	6	0	0	0	0	0	0	0
1965	6	2	2	1	5	18	0	0	0	0	0	18
1966	10	5	4	1	9	317	0	0	0	0	4	321
1967	21	6	4	8	13	872	0	733	0	0	0	1,605
1968	11	6	4	4	7	273	0	0	0	0	0	273
1969	9	5	3	4	5	260	0	0	2	0	0	262
1970	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1971	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1972	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1973	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1974	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1975	1	0	0	0	1	0	0	0	0	0	0	0
1976	8	7	7	0	8	505	0	0	0	0	0	505
1977	9	5	4	1	8	322	0	0	0	0	0	322
1978	11	8	6	3	8	709	0	0	6	0	0	715
1979	12	8	6	1	11	412	1,504	0	0	0	0	1,916
1980	15	5	3	3	12	624	0	0	0	0	0	624
1981	11	3	3	2	9	301	0	0	0	0	0	301
1982	12	5	5	2	10	590	5	0	0	0	0	595
1983	12	8	6	4	8	418	50	0	0	0	0	468
1984	9	6	5	3	6	789	5	0	4	0	2	800
1985	12	5	3	2	10	624	0	0	0	0	0	624

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Table 22-1.–Page 2 of 3.

Permit year[a]	Permits					Harvest[b]						
	Total issued	Total returned	Total fished	PWS Area resident	Non-PWS Area resident	Whitefish	Suckers	Dolly Varden	Lake trout	Arctic grayling	Burbot	Total
1987	9	9	8	5	4	841	3	0	2	0	0	846
1988	13	10	7	12	1	750	0	0	0	0	0	750
1989	12	3	9	8	4	618	0	0	8	6	2	634
1990	8	6	6	8	0	849	0	0	5	4	4	862
1991	9	7	6	7	2	1,115	0	0	4	1	1	1,121
1992	10	9	6	5	5	998	0	0	2	1	0	1,001
1993	7	5	4	5	2	876	0	0	3	2	2	883
1994	5	5	5		5	1,565	0	0	0	0	0	1,565
1986	14	9	8	1	13	936	1	0	0	0	0	937
1995	7	6	6	5	2	2,964	0	0	2	2	5	2,973
1996	8	7	7	8	0	2,104	39	0	0	0	3	2,146
1997	10	8	5	7	3	1,380	58	0	0	0	0	1,438
1998	6	6	6	5	1	2,032	7	0	1	0	0	2,040
1999	9	9	7	6	3	1,382	2	0	1	0	0	1,385
2000	9	7	3	6	3	1,974	3	0	4	0	0	1,981
2001	8	8	7	6	2	1,670	36	0	2	0	2	1,710
2002	12	12	7	8	4	1,321	0	0	4	0	1	1,326
2003	13	12	6	7	6	1,143	9	0	2	0	8	1,162
2004	11	10	4	7	4	2,125	8	0	15	0	0	2,148
2005	17	17	14	7	10	1,643	18	0	13	0	1	1,675
2006	13	13	10	6	7	1,070	2	0	6	0	3	1,081
2007	18	17	12	7	11	3,094	4	0	6	0	3	3,107
2008	16	14	10	4	12	585	0	0	9	1	2	597
2009	28	26	17	8	20	2,708	11	0	28	0	21	2,768

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Table 22-1.–Page 3 of 3.

	Permits					Harvest[b]						
Permit year[a]	Total issued	Total returned	Total fished	PWS Area resident	Non-PWS Area resident	Whitefish	Suckers	Dolly Varden	Lake trout	Arctic grayling	Burbot	Total
2010	27	22	19	5	22	2,088	12	0	33	1	13	2,147
2011	25	24	20	9	16	981	0	0	17	0	1	999
2012	15	15	10	5	10	648	0	0	8	0	0	656
2013	25	25	19	7	18	1,259	16	0	10	2	0	1,287
2014	19	17	12	6	13	697	1	0	19	19	0	736
2015	15	14	10	5	10	664	0	0	6	2	1	673
2016	25	18	14	5	20	959	0	0	14	6	0	979
2017	26	23	11	8	18	1,208	12	0	2	2	1	1,225
2018	42	31	25	5	37	6,981	156	0	12	0	0	7,149
2019	44	44	33	3	41	6,250	6	0	7	0	1	6,264
Average 2014–2019	25	21	14	6	20	2,102	34	0	11	6	0	2,152
Average 2009–2018	25	22	16	6	18	1,819	21	0	15	3	4	1,862

[a] Permit year runs from October 1 through the following September 30 because most subsistence permits are issued for gillnetting whitefish which is allowed from October 1 through the following March 30.

[b] Starting in 2011, all gillnet incidental harvest reported as harvested was released, either alive or dead.

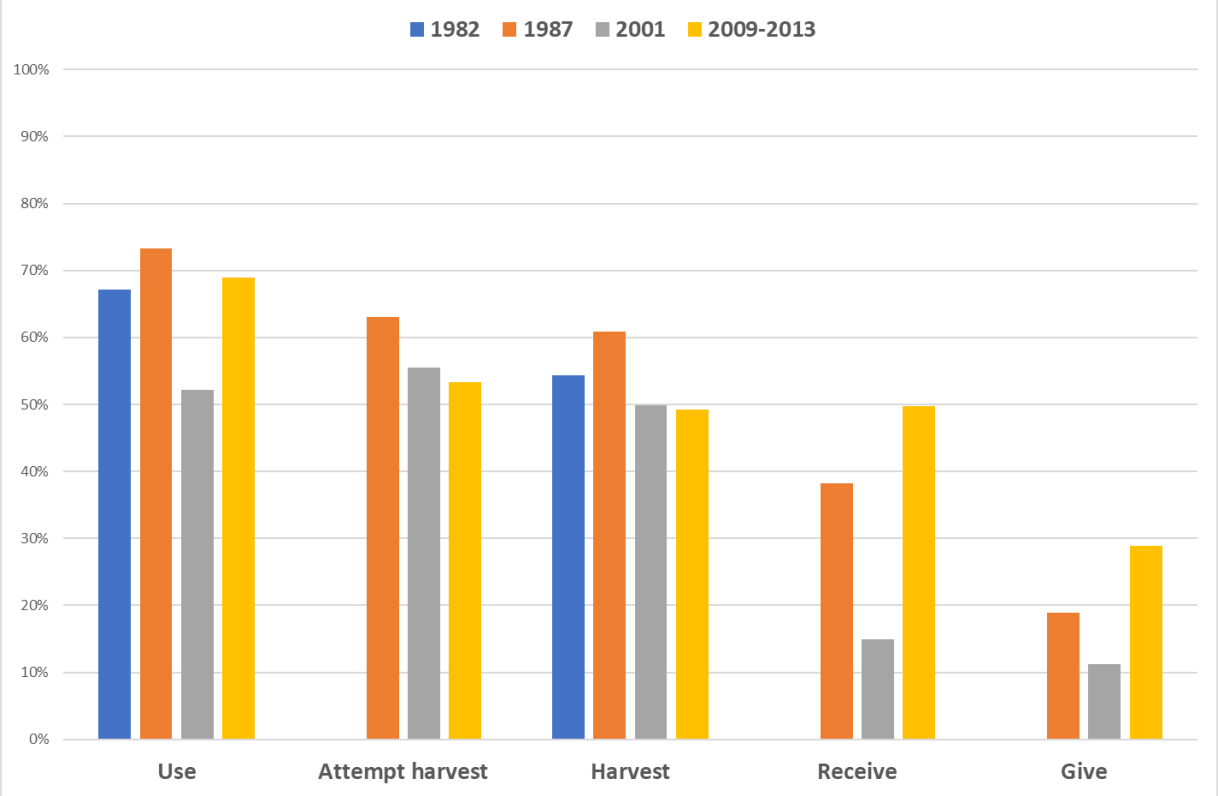


Figure 22-1.–Percentage of Copper River Basin households that used, attempted a harvest, harvested, gave away, or received nonsalmon freshwater fish, 1982, 1987, 2001, 2009–2013.

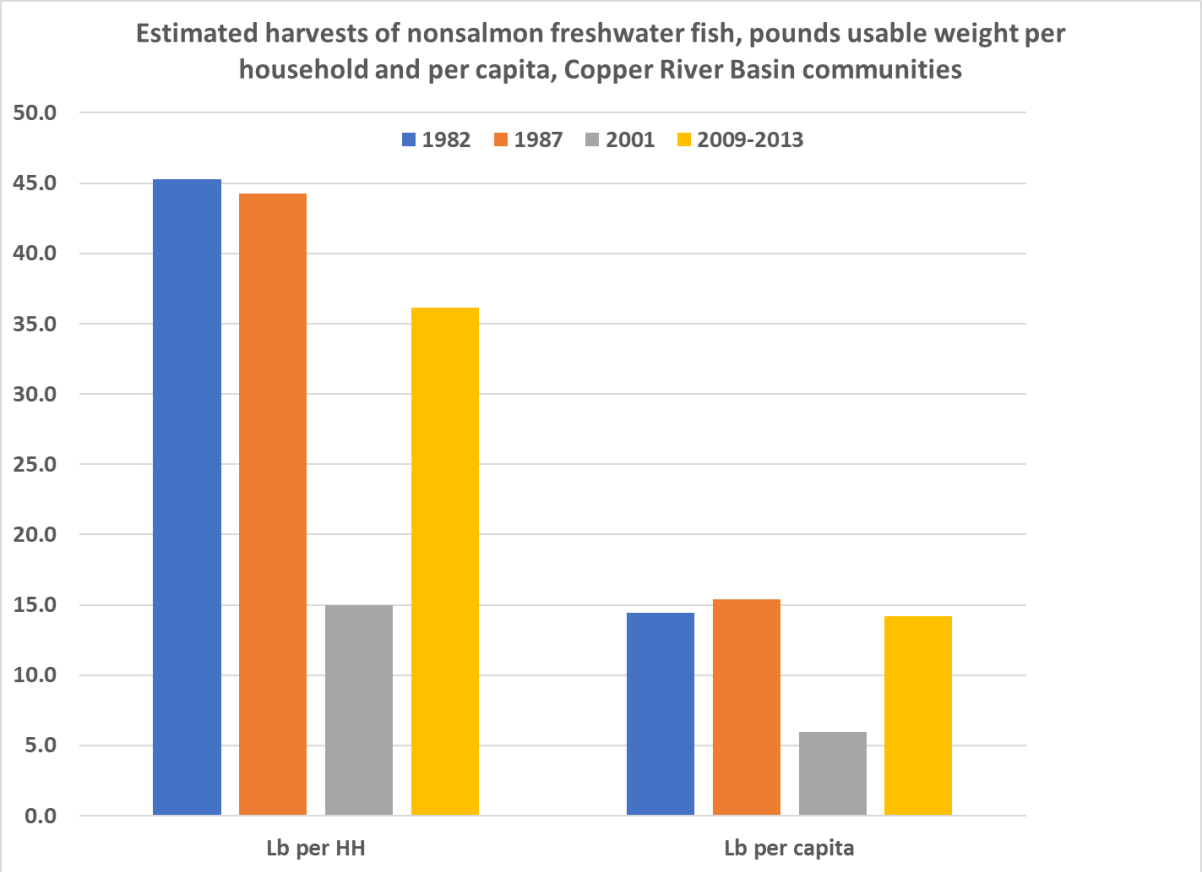


Figure 22-2.–Estimated harvests of nonsalmon freshwater fish, pounds usable weight per household and per capita, Copper River Basin communities, 1982, 1987, 2001, 2009–2013.

COMMITTEE OF THE WHOLE – GROUP 3: PRINCE WILLIAM SOUND SUBSISTENCE AND PRINCE WILLIAM SOUND AND UPPER COPPER AND SUSITNA RIVERS SPORT (13 PROPOSALS)

Prince William Sound Subsistence (7 proposals)

PROPOSAL 23 – 5 AAC 01.610. Fishing seasons; 5 AAC 01.616. Customary and traditional subsistence uses of fish stocks and amounts necessary for subsistence uses; and 5 AAC 01.645. Subsistence bag, possession, and size limits; annual limits.

PROPOSED BY: Fairbanks Fish and Game Advisory Committee.

WHAT WOULD THE PROPOSAL DO? This would reverse the positive C&T finding for rainbow and steelhead trout in the Prince William Sound Management Area. The proposal also suggests an option that if the board does not make a negative C&T finding, it revise the ANS finding for the nonsalmon freshwater finfish stock to include a specific finding for rainbow and steelhead trout and provide a bag and possession limit specifically for the rainbow/steelhead trout subsistence fishery.

WHAT ARE THE CURRENT REGULATIONS? There is a positive C&T finding for all nonsalmon freshwater fish in the Prince William Sound Management Area, this includes rainbow and steelhead trout. There is a single ANS for all nonsalmon freshwater fish combined of 25,000–42,000 usable pounds. Currently, subsistence harvest of rainbow and steelhead trout is permitted as a retention of incidental harvests in subsistence fishwheels or nets, except dipnets. As stated in 5 AAC 01.610(e), rainbow and steelhead trout taken incidentally by fish wheel or subsistence finfish net gear, except dip net gear, are lawfully taken and may be retained for subsistence purposes. Rainbow and steelhead trout taken by dip net gear must be immediately returned to the water unharmed.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The proposal has two options. The first would modify regulations to make a negative C&T finding for rainbow and steelhead trout, and thereby prohibit any subsistence harvests of these fish. This would likely reduce the harvest of rainbow and steelhead trout for subsistence uses and create confusion regarding subsistence fishing opportunities.

The second option would establish a separate ANS for rainbow/steelhead trout and "create harvest opportunity to meet the lowest amount determined reasonably necessary to meet the positive C&T." It is unknown what effect this may have because no specific change to current rainbow and steelhead trout subsistence fishing regulations, including bag and possession limits, were suggested, and ANS is not intended to be used as a quota, but rather

as one way to determine if reasonable opportunity for success in harvesting a resource for subsistence uses is being provided through regulations. A directed subsistence fishery on rainbow or steelhead trout may increase subsistence harvests, by an unknown amount, depending on harvestable surplus.

BACKGROUND: AS 16.05.258(a), directs the board to identify fisheries stocks or portions of stocks that are customarily and traditionally taken or used for subsistence. The statute also directs the commissioner of ADF&G to provide recommendations to the board concerning stock identifications. To make these C&T findings, the board considers the eight criteria listed in 5 AAC 99.010.

At its meeting in December 2008, in response to Proposal 2, submitted by the Ahtna Tene Nené Customary and Traditional Committee, the board made a positive C&T finding for freshwater fish other than salmon in the entire Prince William Sound Area. The finding was based primarily on a C&T worksheet prepared by the Division of Subsistence (http://www.adfg.alaska.gov/specialpubs/SP2_SP2008-011.pdf), which drew primarily on research on use patterns summarized in Division of Subsistence Technical Paper No. 292, *The Harvest and Use of Non-salmon Fish Species in the Copper River Basin, Alaska* (http://www.adfg.alaska.gov/techpap/tp292.pdf) and systematic household harvest surveys pertaining to study years 1983, 1987, and 2001. As recommended by the department, the stock addressed by the C&T finding was "freshwater finfish, other than salmon" which included rainbow and steelhead trout, as well as other species.

In a memorandum to the board in 2003 addressing proposals to reverse a positive C&T finding for a salmon stock, the Alaska Department of Law advised that the board should make such a change "only if it can point to an error in the . . . finding or can identify significant new information that was not available for the Board's consideration . . . A decision to review the earlier information and simply disagree with the conclusions reached in the earlier positive finding would be very difficult to defend in a legal challenge." The proposal does not provide any new information addressing any of the eight criteria for rainbow/steelhead trout for this management area. Updated information available from the department are the results of systematic household surveys conducted in Copper River Basin communities from 2009–2013.

As shown in Figure 23-1, the percentage of Copper River Basin households using rainbow trout ranged from about 15% in 1982 to about 24% in 2001; for the most recent study years, 2009-2013, about 21% used rainbow trout. An equal or slightly higher percentage in each study year fished for rainbow trout. Lower percentages of households used steelhead trout in the study years: about 2% in 2001, and 2–3% in some communities in the most recent study years. Estimated harvests of rainbow trout, in numbers of fish, were 1,561 in 1982, 3,643 in 1987, 2,828 in 2001, and 2,816 in the most recent study years. Estimated total annual harvests of steelhead trout by community residents have been around 100 or fewer fish. Historically, rainbow trout and other freshwater fish were harvested by a variety of methods. Technical Paper 292 cites traps in combination with weirs, dipnets, gillnets, and spears for rainbow trout. Most now are taken with rod and reel or hook and line under sport fishing regulations. Some are harvested incidentally in fish wheels. This information suggests that there has been no significant change in the harvest and use patterns for

rainbow and steelhead trout in the Prince William Sound Management Area since the positive C&T finding in 2008.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. The updated harvest information from 2009–2013 study years suggests that there has been no significant change in the harvest and use patterns for rainbow or steelhead trout in the Prince William Sound Management Area since the positive C&T finding in 2008. Therefore, the department has not updated the C&T worksheet at this time. Creating "harvest opportunity to meet the lowest amount determined reasonably necessary" as the proposal suggests would likely entail expanding the current subsistence regulations which allow retention of rainbow and steelhead trout taken incidentally in fish wheels or nets other than dipnets. Rainbow and steelhead trout are part of a set of nonsalmon fish taken for subsistence uses in the PWS area. Within the nonsalmon freshwater fish category, substitutions of species 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.

SUBSISTENCE REGULATION REVIEW:

1. Is this stock in a nonsubsistence area? No.
2. Is this stock customarily and traditionally taken or used for subsistence? The board has determined under 5 AAC 01.616(e) that all nonsalmon freshwater fish in the Prince William Sound Area, including the Chitina Subdistrict, are customarily and traditionally taken or used for subsistence.
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence uses? There is a single ANS for all nonsalmon freshwater fish combined of 25,000–42,000 usable pounds.
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

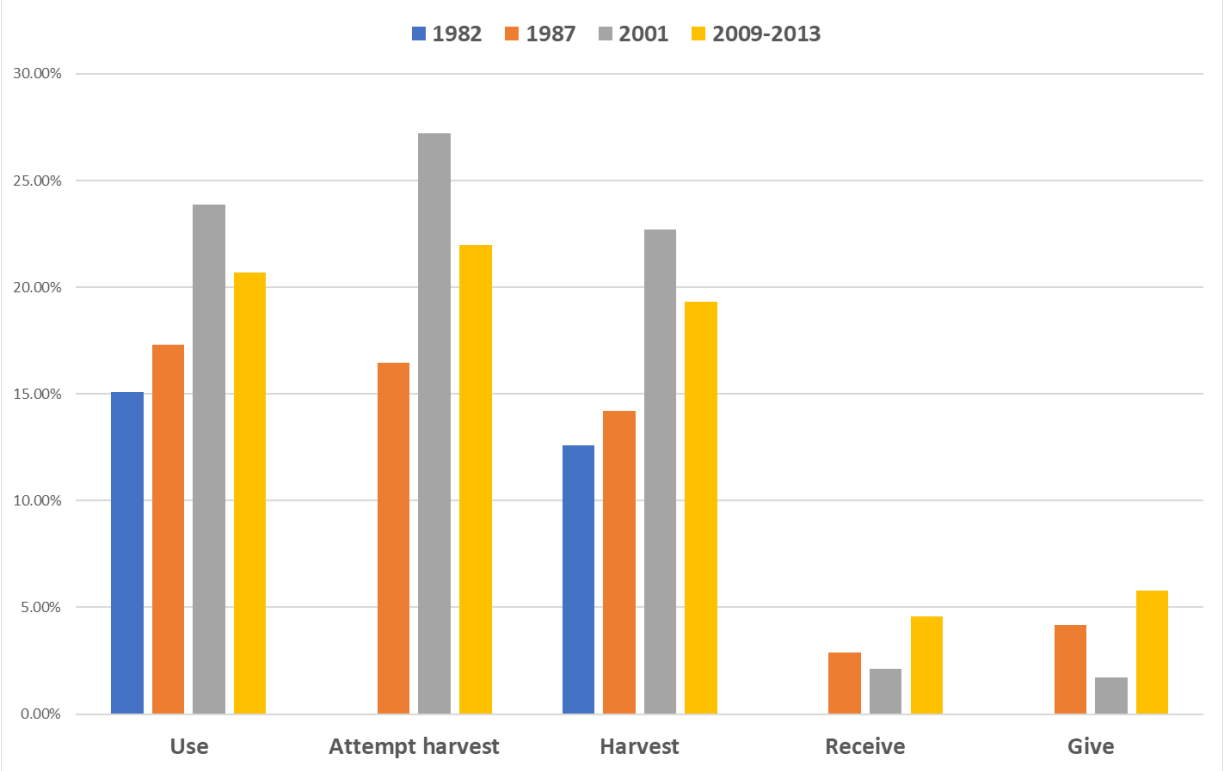


Figure 23-1.–Percentage of Copper River households that used, attempted a harvest, harvested, received, or gave away rainbow trout, 1982, 1987, 2001, 2009–2013.

PROPOSAL 24 – 5 AAC 01.645. Subsistence bag, possession, and size limits; annual limits.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? Establish subsistence bag and possession and annual limits for Dolly Varden of 10 fish, with an annual limit of 40 fish, in the Prince William Sound Area.

WHAT ARE THE CURRENT REGULATIONS? Subsistence bag and possession and annual limits are currently established for Arctic grayling, lake trout, and burbot in the Prince William Sound Area, which includes the Upper Copper-Upper Susitna Management Area.

WHAT WOULD BE THE EFFECTS IF THE PROPOSAL IS ADOPTED? This would allow for the continued subsistence harvest of Dolly Varden by correcting an error in regulation when subsistence bag, possession, and annual limits for freshwater fishes in the Prince William Sound Area were moved from permit stipulations into regulation. Subsistence harvest of Dolly Varden is not anticipated to change substantially.

BACKGROUND: In 2008, the board made a positive C&T finding for freshwater finfish of the Prince William Sound Area, including the Upper Copper-Upper Susitna Management Area. They established an ANS of 25,000 – 42,000 useable pounds of freshwater finfish.

Traditionally, bag, possession, and annual limits for each species were included in the permit stipulations and could vary from water body to water body. In 2016, bag, possession, and annual limits for subsistence caught freshwater finfish were established as set limits in regulation through the errors and omissions process. Limits for Dolly Varden were inadvertently left out of this transition.

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.

SUBSISTENCE REGULATION REVIEW:

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

2. Is the stock customarily and traditionally taken or used for subsistence? Yes, the board made a positive customary and traditional use finding for freshwater finfish, other than salmon, in the Prince William Sound Area (5 AAC 01.616 (e)).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? The board has found that 25,000–42,000 usable pounds of freshwater finfish, other than salmon, are reasonably necessary for subsistence uses in the Prince William Sound Area (5 AAC 01.616(f)).
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

PROPOSAL 25 – 5 AAC 01.620. Lawful gear and gear specifications.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? Establish regulatory freshwater finfish subsistence gear specifications for gillnets and fyke nets in Prince William Sound Area, rather than under permit stipulations.

WHAT ARE THE CURRENT REGULATIONS? Gear specifications for freshwater finfish subsistence fisheries in the Prince William Sound Area are currently specified on permits but are not established in regulation. Under 5 AAC 01.620 gillnets used for herring are limited to a maximum length of 10 fathoms.

WHAT WOULD BE THE EFFECTS IF THE PROPOSAL IS ADOPTED? This would allow for enforcement of traditional gear requirements in the freshwater finfish subsistence fishery. There would be no change to the gear types themselves (figures 25-1 and 25-2), so subsistence opportunity and harvests are not expected to decrease.

BACKGROUND: The department has issued permits (figures 25-1 and 25-2) for participation in a subsistence fishery for freshwater finfish in the Upper Copper-Upper Susitna Management Area since statehood. Permits outline what gear may be used, any restrictions to that gear, and when certain gear may be used and for what species.

Specific gear restrictions and limits on its use within permit stipulations are difficult to enforce because they are not supported by regulation and may be altered at any time by the fishery manager. Current restrictions on the length, depth and mesh size of gillnets; limiting them to freshwater lakes only; establishing set times of years for their use; and, limiting their use to specific species are essential to maintaining an orderly fishery and limiting the impact of this nonselective gear on nontarget species. The same is true of restrictions on the opening size of fyke nets.

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.

SUBSISTENCE REGULATION REVIEW:

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

2. Is the stock customarily and traditionally taken or used for subsistence? Yes, the board made a positive customary and traditional use finding for freshwater finfish, other than salmon, in the Prince William Sound Area (5 AAC 01.616 (e)).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? The board has found that 25,000–42,000 usable pounds of freshwater finfish, other than salmon, are reasonably necessary for subsistence uses in the Prince William Sound Area (5 AAC 01.616(f)).
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

Figure 25-1.–First page of UCUSMA subsistence freshwater subsistence permit.

20___ UPPER COPPER/UPPER SUSITNA - FRESHWATER FINFISH SUBSISTENCE PERMIT

Return permit to : Department of Fish and Game
P.O. Box 47
Glennallen, AK 99588

Phone: 822-3309 **Fax: 822-3811**

LAST NAME	FIRST NAME	MAILING ADDRESS	
List household members authorized to fish this permit here			
		PHONE#	
		ADL OR ID#	

I plan to fish in the following waters:_____

TO BE COMPLETED BY ISSUING OFFICER

Gear Limitations: Gillnet: 2 in. max bar mesh, 100 ft. max. length, 8 ft. max depth; **Fyke Net**: 4 in. diameter throat max
Hand line: single hook only

	Target Species	Bag/Poss. Limit	Annual	Type of Gear	Water bodies
Harvest Limits	Whitefish	1,000	1,000		
	Suckers	No limit	No limit		
	Arctic Grayling	5	20/water body		
	Lake Trout	2	10/water body		
	Burbot	2/5	10/water body		
	Dolly Varden	10	40/water body		

Gear Types : Fyke net, Spear, Handline, Dip net, Set gillnet (whitefish/suckers only), (use of other legal gear types must be reviewed by Area Biologist)

Permit Stipulations:

1. **Gillnets must be set stationary and not manned on one or both ends like a beach seine.**
2. **A permittee may fish only a single gear type at a time (i.e. gillnet). No gillnet may be set within 100 feet of another gillnet.**
3. **Permittee may not combine the daily sport and subsistence bag limits for a single species in the same day and may not sport fish while fishing subsistence gear.**
4. **Subsistence gear must be visibly identified with the permit holder's first initial, last name and address in characters at least 1 inch high. Gillnets and fyke nets must be marked with a high visibility buoy.**
5. **Hand lines must be closely attended, within 15 feet. The number of hand lines may not exceed the daily bag limit for the target species.**
6. **Non-target species must be released alive or dead. You are PROHIBITED from retaining lake trout, burbot, or grayling caught in gillnets**
7. **The waters of the Lake Louise-Susitna Lake and Susitna Lake – Tyone Lake channels and approaches, as designated in the attached aerial photo, are closed to gillnets 5 AAC 01.625(c)(1)–(3).**
8. **Permittee shall show their permit, catch, and fishing gear to any Alaska Wildlife Trooper or ADF&G Peace Officer upon request.**
9. **Your household will be denied a permit the following year for failure to report harvest as specified.**
10. **Permit holders finding 5 or more lake trout in their net, shall move their fishing location at least ¼ mile to avoid further catch of non-target species.**
11. **Permittee shall notify the ADF&G Glennallen field office (822-3309) or Alaska Wildlife Troopers Glennallen Post (822-3264) 24 hours prior to setting any subsistence fishing gear authorized by this permit.**

The above named person(s) is authorized to fish for subsistence purposes in the waters of the Upper Copper Upper Susitna Management Area in accordance with regulations in 5 AAC 01.005 through 01.040 and 01.600 through 5 AAC 01.647.

I hereby claim the information contained herein is a true statement as witnessed by my signature below; and I further state that I am a resident of the State of Alaska as defined in AS 16.05.415. (Note: Providing false information is subject to a maximum penalty of either a $25,000 fine or 1 year imprisonment, or both, per AS 11.56.210).

PERMIT DATES - FROM_____ **TO**_____ **RETURN PERMIT BY:**_____

Figure 25-2.–Issuing guidelines for UCUSMA subsistence freshwater finfish permits.

UCUSMA resident freshwater finfish subsistence permit issuing guidelines

All lakes and flowing waters in the UCUSMA are open for subsistence fishing for resident freshwater species (does not include salmon). An ANS of 25,000 to 42,000 usable pounds has been established for the Prince William Sound Area. Permits are available to Alaska residents only.

Permit Issuing Guidelines

1. Only state residents may participate in this fishery. Non-residents may not assist at all, just like Glennallen permits
2. A permit can list more than one gear type for a species or multiple gear types for multiple species, but only one gear type may be fished at a time.
3. One permit per household. No limit difference for households of one person or households of 2 or more people.
4. Whitefish and suckers are the only species we will issue gillnet permits for. Other fishes **may not be retained** as an incidental harvest and must be **released alive or dead**.
5. Gillnet permits may be issued beginning September 1 (there have been occasions where we issued one in August by request), BUT may only be fished from October 1 through March 31. This is to minimize by-catch of non-target species.
6. Number Permits consecutively with the following format: YR-FW-XXX (i.e. 08-FW-005)
7. For "Other Species" list the species and write in the gear type as per the species guideline below.

Species Guidelines

Species	Season	Bag/Possession limit			Allowed locations	Generally allowed gea
		Daily	Annual	Size Limit		
Whitefish	October 1 – March 31	1,000	1,000	None	Lakes only	Set Gillnet
	All Year	1,000	1,000	None	All waters	Fyke net, Dip net, Spear
Suckers	October 1 – March 31	No Limit	No Limit	None	All waters	Set Gillnet
	All Year	No Limit	No Limit	None	All waters	Fyke net, Dip net, Spear
Arctic grayling	All Year	5	20 per water body	None	All waters EXCEPT STOCKED LAKES	Fyke net, Spe Hand line, Di net
Lake trout	All Year	2	10 per water body	None	All waters	Fyke net, Har line, Spear
Burbot	All Year	2	10 per water body	None	Hudson, Tolsona, Moose, Sucker, and Summit lakes and all Tyone River Drainage lakes and streams	Fyke net, Har line, Spear
Burbot	All Year	5	10 per water body	None	All other waters	Fyke net, Har line, Spear
Dolly Varden	All Year	10	40 per water body	None	All waters	Fyke net, Har line, Spear, D net
Rainbow trout	No open season					

[a] For permits allowing other legal gear types, please consult Area Biologist prior to issuing permit.

PROPOSAL 26 – 5 AAC 01.630. Subsistence fishing permits.

PROPOSED BY: Native Village of Chenega.

WHAT WOULD THE PROPOSAL DO? This would establish a Native Village of Chenega subsistence salmon permit authorizing tribal members to annually harvest up to 1,000 sockeye and 50 king salmon by drift or set gillnet for subsistence throughout the Southwestern District, Eshamy, Coghill, and Northwestern districts in Prince William Sound. More specifically, the permit would allow a limited number of sockeye salmon to be harvested by set gillnet or dipnet in regulatory closed waters within Eshamy Lagoon.

WHAT ARE THE CURRENT REGULATIONS? There are currently no regulatory provisions for the issuance of a subsistence fishing permit to a village council or similar organization for PWS saltwater subsistence salmon fishing. In the Prince William Sound/Copper River Area, a subsistence fishing permit may be issued to a village council or similarly qualified organization in the Glennallen Subdistrict in the upper Copper River. Subsistence salmon fishing permits are available to fish in all commercial fishing districts within the PWS management area. There are also subsistence salmon fishing permits for areas traditionally fished around the villages of Tatitlek and Chenega. Salmon may be taken for subsistence in the districts described in 5 AAC 01.605(b) only from May 15 through October 31 during fishing periods as follows: 1) from May 15 until two days before the commercial opening of that salmon district, seven days per week; or 2) during the commercial salmon season, only during open commercial salmon fishing periods in that district; and Saturdays from 6:00 a.m. to 10:00 p.m.; 3) from two days following the closure of the commercial salmon fishing season in that district through October 31, seven days a week (5 AAC 01.610(g)).

The ANS for the Chenega subsistence fishing permit area is 2,100–3,500 salmon and the ANS covering the Eshamy, Northwestern, and Coghill district subsistence fisheries is 115–200 salmon.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Subsistence salmon effort and harvest may increase in the Southwestern, Eshamy, Northwestern, and Coghill districts. The Eshamy Lake sockeye salmon run is historically highly variable, and a fixed harvest allowance may result in overharvest in some years. Participants in this subsistence salmon fishery would be limited to members of the Native Village of Chenega. Subsistence salmon fishing opportunity would increase for members of the Native Village of Chenega who do not participate in current subsistence fisheries.

BACKGROUND: The ANS findings for Chenega are based on household harvest surveys conducted during the late 1980s and 1990s, and the ANS for salmon was calculated using estimated community harvest data for subsistence, rod and reel, and homepack. ANS findings for the Eshamy, Northwestern, and Coghill district were based on permit returns.

The recent 10-year average (2009–2018) salmon subsistence harvest in Prince William Sound outside of Copper River District and Tatitlek and Chenega subsistence fishing permit areas is 48 salmon, 58.2% below the lower bound of the ANS (Table 26-1). The recent 10-year average (2009–2018) salmon subsistence harvest in the Chenega subsistence fishing permit areas is 174 salmon, 91.7% below the lower bound of the ANS (Table 26-2).

The board's 2017 amendment to 5 AAC 01.610(g) opened subsistence fishing Saturdays from 6:00 a.m. to 10:00 p.m. during the commercial salmon season. Department practice is to open the commercial season on or about May 15.

Prior to 2012, the department operated a counting weir on the Eshamy River for more than 40 years. Starting in 2012, a remote video weir pilot project was attempted on the Eshamy River, but weir integrity issues and absence of observers led the department to conclude that the low sockeye salmon counts during these years underrepresented actual escapement and the project was discontinued after 2016. There has been no sockeye salmon escapement assessment for Eshamy Lake sockeye salmon in the last four years.

PWS salmon fisheries are fully allocated.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. In deliberating this proposal, the board should consider if a reasonable opportunity to harvest salmon for subsistence uses exists.

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.

SUBSISTENCE REGULATION REVIEW:

1. Is this stock in a nonsubsistence area? No.
2. Is this stock customarily and traditionally taken or used for subsistence? The board has determined under 5 AAC 01.616(a)(2 and 6) that salmon in the Chenega subsistence area and Eshamy, Northwestern, and Coghill districts are customarily and traditionally taken or used for subsistence.
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence uses? The board has established a range of 2,100–3,500 salmon for the Chenega subsistence fishing permit area and a range of 115–200 salmon is the ANS that for the Eshamy, Northwestern, and Coghill district subsistence fisheries combined.
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

Table 26-1.–Salmon harvest and effort in the Prince William Sound general area subsistence fishery, 2009–2019.

	Permits				Reported harvest[a]						
Year	Issued	Returned	Fished	Not fished[b]	King	Sockeye	Coho	Pink	Chum	Unknown	Total
2009	1	1	0	1	0	0	0	0	0	0	0
2010	2	2	1	1	0	0	0	0	0	0	0
2011	4	4	3	1	29	40	1	5	10	0	85
2012	14	12	6	6	0	40	0	0	22	0	62
2013	8	8	7	1	0	12	0	0	24	5	41
2014	23	21	2	19	0	3	0	0	0	0	3
2015	25	23	10	13	4	115	0	0	3	0	122
2016	5	5	1	4	0	1	0	0	0	0	1
2017	6	5	3	2	0	16	0	0	0	0	16
2018	26	24	8	16	1	103	22	9	19	0	154
2019	44	43	16	27	8	406	0	3	14	0	431
Average, 2009–2018	11	11	4	6	3	33	2	1	8	1	48

[a] Reported harvest only and includes harvest from Prince William Sound, exclusive of the Copper River District and customary and traditional subsistence locations within PWS. The ANS for this area is 115-200 salmon.

[b] As reported on returned permits.

Table 26-2.–Salmon harvest and effort in the Tatitlek and Chenega subsistence fisheries, 2009–2019.

	Permits				Reported Harvest[a]						
Year	Issued	Returned	Fished	Not fished[b]	Chinook	Sockeye	Coho	Pink	Chum	Unk	Total
Tatitlek (1,800–3,000 salmon ANS)											
2009	12	4	3	1	0	170	131	0	0	0	301
2010	8	5	5	0	0	165	142	50	10	0	367
2011	10	4	4	0	0	922	536	0	22	0	1,480
2012	32	7	6	1	15	728	75	0	0	0	818
2013	22	11	8	3	0	613	277	0	129	0	1,019
2014	7	5	2	3	0	46	103	0	0	0	149
2015	16	4	4	0	12	110	143	0	8	0	273
2016	5	5	0	5	0	0	0	0	0	0	0
2017	7	5	4	1	0	45	55	0	0	0	100
2018	24	6	2	4	0	143	0	0	4	10	157
2019	5	4	3	1	0	100	37	0	2	0	139
Average, 2009–2018	15	6	4	2	3	308	148	6	19	1	485
Chenega (2,100–3,500 salmon ANS)											
2009	4	4	3	1	2	168	26	5	84	0	285
2010	9	5	5	0	0	55	0	6	87	0	148
2011	17	11	8	3	2	134	26	50	60	0	272
2012	23	14	6	8	0	603	20	0	77	1	701
2013	13	4	3	1	0	19	0	0	63	0	82
2014	10	5	2	3	0	0	0	10	0	0	10
2015	21	4	1	3	56	0	35	0	12	0	103
2016	7	6	1	5	0	32	1	0	0	0	33
2017	6	3	2	1	0	105	0	0	61	0	166
2018	22	1	1	0	0	13	2	0	40	0	55
2019	2	2	1	1	0	0	0	0	0	0	0
Average, 2009–2018	14	6	3	3	6	107	9	7	44	0	174

[a] Reported harvest only.

[b] As reported on returned subsistence permits.

PROPOSAL 27 – 5 AAC 01.610. Fishing seasons.

PROPOSED BY: Native Village of Chenega.

WHAT WOULD THE PROPOSAL DO? This would allow subsistence salmon fishing in all waters of Area E commercial salmon fishing districts in Prince William Sound 24 hours per day, 7 days per week by removing the connection between subsistence and commercial fishing opportunity as specified in 5 AAC 01.610(g)(1-4).

WHAT ARE THE CURRENT REGULATIONS? A household subsistence salmon permit is required. Chenega and Tatitlek subsistence fishing permit areas encompass portions of multiple commercial fishing districts and subsistence fishing is tied to individual commercial fishing periods as described below.

Salmon may be taken for subsistence in the districts described in 5 AAC 01.605(b) only from May 15 through October 31 during fishing periods as follows: 1) from May 15 until two days before the commercial opening of that salmon district, seven days per week; or 2) during the commercial salmon season, only during open commercial salmon fishing periods in that district; and Saturdays from 6:00 a.m. to 10:00 p.m.; 3) from two days following the closure of the commercial salmon fishing season in that district through October 31, seven days a week (5 AAC 01.610(g)(4)).

The ANS for the Chenega subsistence fishing permit area is 2,100–3,500 salmon, the ANS for the Tatitlek subsistence fishing permit is 1,800–3,000, and the ANS covering the Eshamy, Northwestern, and Coghill district subsistence fisheries is 115–200 salmon.

The ANS) in the Copper River District is defined in 5 AAC 01.616(b)(2) as follows: 1) 3,000-5,000 salmon in years when there is a harvestable surplus allowing for a commercial fishery, and 2) 19,000-32,000 salmon during years when there is no commercial fishery.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The intent of the proposal is to provide additional subsistence fishing opportunity in Eshamy and Southwestern districts of Prince William Sound; however, as written, it would apply to all districts, including the Copper River District. Subsistence salmon harvest and effort may increase by an unknown amount. Participants in the subsistence salmon fishery in all districts would have additional opportunity to harvest salmon outside of open commercial fishing periods and Saturdays. This could reduce the amount of commercially caught salmon retained for personal use (homepack) and sport fishery harvests by providing increased subsistence fishing opportunity. Subsistence salmon fishing opportunity would increase for individuals who do not have a commercial salmon fishing permit. Overall salmon harvested in the Copper River District would likely increase.

This proposal would increase the need for enforcement monitoring to ensure compliance of the prohibition on commercial use of subsistence caught salmon. Subsistence fishing outside of commercial fishing periods increases the likelihood of subsistence harvest

moving into the commercial market, especially considering the high commercial value of Copper River salmon.

BACKGROUND: The ANS findings are based on household harvest surveys conducted during the late 1980s and 1990s. The ANS for salmon was calculated using estimated community harvest data for subsistence, sport fishery harvests, and homepack. The board's 2017 amendment to 5 AAC 01.610(g) opened subsistence fishing Saturdays from 6:00 a.m. to 10:00 p.m. during the commercial salmon season.

The recent 10-year average (2009–2018) for subsistence salmon harvest in the Copper River district is 3,310 salmon, within the lower ANS range for when commercial fishing allowed (Table 27-1). The recent 10-year average (2009–2018) salmon subsistence harvest in Prince William Sound outside of Copper River District and Tatitlek and Chenega subsistence fishing permit areas is 48 salmon, 58.2% below the lower bound of the ANS (Table 27-2). The recent 10-year average (2009–2018) salmon subsistence harvest in the Chenega subsistence fishing permit area is 174 salmon, 91.7% below the lower bound of the ANS. The recent 10-year average (2009–2018) salmon subsistence harvest in the Tatitlek subsistence fishing permit area is 485 salmon, 73.1% below the lower bound of the ANS (Table 27-3).

Historically, the commercial salmon fishing season starts on or about May 15. Regulations limit fishing opportunities for subsistence users primarily to Saturdays, and commercial fishing periods traditionally use on a Monday-and-Thursday schedule. Subsistence fishing is generally only allowed in an area currently open to commercial fishing. Commercial fishermen who want fish for personal use may choose to retain salmon from their commercial harvest (homepack, Table 27-4) or forgo commercial harvesting to participate in the subsistence fishery. The ANS for salmon during years when there is no commercial fishery in the Copper River District was calculated using estimated community harvest data for subsistence, sport fishery harvests, and homepack.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. In deliberating this proposal, the board should consider if a reasonable opportunity to harvest salmon for subsistence uses exists.

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.

SUBSISTENCE REGULATION REVIEW:

1. Is this stock in a nonsubsistence area? No.
2. Is this stock customarily and traditionally taken or used for subsistence? Yes. The board has determined under 5 AAC 01.616(a)(2) that salmon in the Southwestern District are customarily and traditionally taken or used for subsistence.

3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence uses? The board has established a range of 2,100–3,500 salmon for the ANS of the Southwestern District.
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

Table 27-1.–Salmon harvest and effort in the Copper River District subsistence drift fishery, 2009–2019.

	Permits				Reported harvest			
Year	Issued	Returned	Fished	Not fished[a]	Chinook	Sockeye	Coho	Total
2009	323	293	128	165	212	1,764	22	1,998
2010	325	314	139	175	276	1,980	27	2,283
2011	273	263	113	150	212	1,783	34	2,029
2012	378	357	204	153	237	4,270	0	4,507
2013	531	492	321	171	854	5,639	1	6,494
2014	288	269	101	168	153	1,675	0	1,828
2015	241	231	97	134	167	1,403	10	1,580
2016	195	189	77	112	73	1,075	2	1,150
2017	450	416	265	151	778	2,448	43	3,269
2018	684	630	437	193	1,356	5,189	195	6,740
2019	573	555	347	208	808	6,163	330	7,301
Average, 2009–2018	374	352	187	165	401	2,875	34	3,310

[a] As reported on returned permits.

Table 27-2.–Salmon harvest and effort in the Prince William Sound general area subsistence fishery, 2009–2019.

	Permits				Reported harvest[a]						
Year	Issued	Returned	Fished	Not fished[b]	King	Sockeye	Coho	Pink	Chum	Unknown	Total
2009	1	1	0	1	0	0	0	0	0	0	0
2010	2	2	1	1	0	0	0	0	0	0	0
2011	4	4	3	1	29	40	1	5	10	0	85
2012	14	12	6	6	0	40	0	0	22	0	62
2013	8	8	7	1	0	12	0	0	24	5	41
2014	23	21	2	19	0	3	0	0	0	0	3
2015	25	23	10	13	4	115	0	0	3	0	122
2016	5	5	1	4	0	1	0	0	0	0	1
2017	6	5	3	2	0	16	0	0	0	0	16
2018	26	24	8	16	1	103	22	9	19	0	154
2019	44	43	16	27	8	406	0	3	14	0	431
Average, 2009–2018	11	11	4	6	3	33	2	1	8	1	48

[a] Reported harvest only and includes harvest from Prince William Sound, exclusive of the Copper River District and customary and traditional subsistence locations within PWS.

[b] As reported on returned permits.

Table 27-3.–Salmon harvest and effort in the Tatitlek and Chenega subsistence fisheries, 2009–2019.

	Permits				Reported Harvest[a]						
Year	Issued	Returned	Fished	Not fished[b]	Chinook	Sockeye	Coho	Pink	Chum	Unk.	Total
Tatitlek (1,800–3,000 salmon ANS)											
2009	12	4	3	1	0	170	131	0	0	0	301
2010	8	5	5	0	0	165	142	50	10	0	367
2011	10	4	4	0	0	922	536	0	22	0	1,480
2012	32	7	6	1	15	728	75	0	0	0	818
2013	22	11	8	3	0	613	277	0	129	0	1,019
2014	7	5	2	3	0	46	103	0	0	0	149
2015	16	4	4	0	12	110	143	0	8	0	273
2016	5	5	0	5	0	0	0	0	0	0	0
2017	7	5	4	1	0	45	55	0	0	0	100
2018	24	6	2	4	0	143	0	0	4	10	157
2019	5	4	3	1	0	100	37	0	2	0	139
Average 2009–2018	15	6	4	2	3	308	148	6	19	1	485
Chenega (2,100–3,500 salmon ANS)											
2009	4	4	3	1	2	168	26	5	84	0	285
2010	9	5	5	0	0	55	0	6	87	0	148
2011	17	11	8	3	2	134	26	50	60	0	272
2012	23	14	6	8	0	603	20	0	77	1	701
2013	13	4	3	1	0	19	0	0	63	0	82
2014	10	5	2	3	0	0	0	10	0	0	10
2015	21	4	1	3	56	0	35	0	12	0	103
2016	7	6	1	5	0	32	1	0	0	0	33
2017	6	3	2	1	0	105	0	0	61	0	166
2018	22	1	1	0	0	13	2	0	40	0	55
2019	2	2	1	1	0	0	0	0	0	0	0
Average, 2009–2018	14	6	3	3	6	107	9	7	44	0	174

[a] Reported harvest only.

[b] As reported on returned subsistence permits.

Table 27-4.–Area E salmon retained from the commercial harvest for personal use (homepack) by species and gear type, 2004–2019.

	Number of Permits			Number of King			Number of Sockeye			Number of Coho			Number of Pink			Number of Chum		
Year	Purse Seine	Drift gillnet	Set gillnet	Purse Seine	Drift gillnet	Set gillnet	Purse Seine	Drift gillnet	Set gillnet	Purse Seine	Drift gillnet	Set gillnet	Purse Seine	Drift gillnet	Set gillnet	Purse Seine	Drift gillnet	Set gillnet
2004	0	169	0	0	540	0	0	654	0	0	2	0	0	0	0	0	1	0
2005	0	226	0	0	767	0	0	1,897	0	0	226	0	0	21	0	0	27	0
2006	1	264	0	2	779	0	0	1,598	0	0	166	0	0	10	0	0	5	0
2007	1	279	0	1	1,028	0	0	2,086	1	0	353	0	0	43	0	0	102	0
2008	2	236	1	3	611	1	0	2,349	72	0	449	0	0	53	0	0	14	0
2009	0	325	3	0	876	0	0	6,474	7	0	767	0	0	61	0	0	67	0
2010	4	351	1	0	957	0	2	8,126	55	51	1,117	0	0	21	0	0	152	0
2011	8	350	2	0	1,344	2	73	9,740	268	350	802	0	0	82	0	0	184	0
2012	20	403	7	11	929	0	143	10,344	318	78	1,220	0	83	3,546	0	55	1,240	0
2013	1	379	7	0	633	24	50	10,532	228	25	288	0	0	248	0	0	81	0
2014	11	405	8	7	806	10	168	13,218	301	17	1,463	0	0	191	0	11	120	0
2015	8	385	9	5	1,179	9	401	11,607	965	23	1,500	0	0	169	0	4	123	20
2016	9	364	8	9	758	10	316	10,507	696	60	1,639	0	13	708	0	7	57	0
2017	29	408	8	37	788	6	218	10,197	1,306	177	2,448	0	287	615	19	28	209	2
2018	32	366	13	24	156	3	556	5,433	304	123	3,829	65	91	1,320	0	10	134	191
2019	33	379	11	45	789	11	867	9,914	763	755	1,260	0	8	1,424	5	42	382	0
Average 2009–2018	12	374	7	9	843	6	193	9,618	445	90	1,507	7	47	696	2	12	237	21

PROPOSAL 28 – 5 AAC 01.645. Subsistence bag, possession, and size limits; annual limits.

PROPOSED BY: Native Village of Eyak.

WHAT WOULD THE PROPOSAL DO? This would increase subsistence salmon harvest limits in PWS fishing districts, where drift gillnets are allowed, to 30 salmon for a household of one, 60 salmon for a household of two, and ten additional salmon for each additional member of the household. The proposal also seeks to allow the harvest of up to 500 salmon by request but requests that this harvest be limited to pink salmon and chum salmon.

WHAT ARE THE CURRENT REGULATIONS? In PWS, outside of the Chenega and Tatitlek subsistence fishing areas, the annual subsistence limit is 15 salmon for a household of one person, 30 salmon for a household of two persons, and 10 salmon for each additional household member. There is a limit of five king salmon per permit. Commercial fishermen can remove an unlimited number of salmon from their commercial catch for personal use (i.e. homepack) and are required to record homepack salmon on their commercial fish tickets. The ANS in the Copper River District is defined in 5 AAC 01.616(b)(2) as follows: 1) 3,000-5,000 salmon in years when there is a harvestable surplus allowing for a commercial fishery, and 2) 19,000-32,000 salmon during years when there is no commercial fishery.

The ANS covering the Eshamy, Northwestern, and Coghill district subsistence fisheries is 115–200 salmon.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would likely increase the number of salmon harvested in Area E subsistence salmon fisheries fishery by mirroring the harvest limits with the Glennallen Subdistrict subsistence fishery, which is in the freshwaters of the Copper River. In the case of the Copper River District subsistence fishery, these harvest limits would apply to a fishery harvesting the much the same salmon stocks as those of the Glennallen Subdistrict subsistence salmon fishery and the Chitina Subdistrict personal use fishery.

BACKGROUND: The ANS findings are based on household harvest surveys conducted during the late 1980s and 1990s. The ANS for salmon was calculated using estimated community harvest data for subsistence, sport fish harvests, and homepack.

The recent 10-year average (2009–2018) for subsistence salmon harvest in the Copper River District is 3,310 salmon, within the lower ANS range for when commercial fishing is allowed (Table 27-1). The recent 10-year average (2009–2018) salmon subsistence harvest in Prince William Sound outside of Copper River District and Tatitlek and Chenega subsistence fishing permit areas is 48 salmon, 58.2% below the lower bound of the ANS (Table 27-2).

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. In deliberating this proposal, the board should consider if a reasonable opportunity to harvest salmon for subsistence uses exists.

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.

SUBSISTENCE REGULATION REVIEW:

1. Is this stock in a nonsubsistence area? No.
2. Is this stock customarily and traditionally taken or used for subsistence? Yes. The board has determined under 5 AAC 01.616(a)(1 and 6) that salmon in the Glennallen Subdistrict and Coghill, Northwestern, and Eshamy Districts are customarily taken or used for subsistence.
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence uses? The Amount Necessary for Subsistence (ANS) in the Copper River District is defined in 5 AAC 01.616(b)(2) as follows: 1) 3,000-5,000 salmon in years when there is a harvestable surplus allowing for a commercial fishery, and 2) 19,000–32,000 salmon during years when there is no commercial fishery. The ANS covering the Eshamy, Northwestern, and Coghill district subsistence fisheries is 115–200 salmon.
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

Table 28-1.–Salmon harvest and effort in the Copper River District subsistence drift gillnet fishery, 2009–2019.

	Permits				Reported harvest			
Year	Issued	Returned	Fished	Not fished[a]	Chinook	Sockeye	Coho	Total
2009	323	293	128	165	212	1,764	22	1,998
2010	325	314	139	175	276	1,980	27	2,283
2011	273	263	113	150	212	1,783	34	2,029
2012	378	357	204	153	237	4,270	0	4,507
2013	531	492	321	171	854	5,639	1	6,494
2014	288	269	101	168	153	1,675	0	1,828
2015	241	231	97	134	167	1,403	10	1,580
2016	195	189	77	112	73	1,075	2	1,150
2017	450	416	265	151	778	2,448	43	3,269
2018	684	630	437	193	1,356	5,189	195	6,740
2019	573	555	347	208	808	6,163	330	7,301
Average, 2009–2018	374	352	187	165	401	2,875	34	3,310

[a] As reported on returned permits.

Table 28-2.–Salmon harvest and effort in the Prince William Sound general area subsistence fishery, 2009–2019.

	Permits				Reported harvest[a]						
Year	Issued	Returned	Fished	Not fished[b]	Chinook	Sockeye	Coho	Pink	Chum	Unknown	Total
2009	1	1	0	1	0	0	0	0	0	0	0
2010	2	2	1	1	0	0	0	0	0	0	0
2011	4	4	3	1	29	40	1	5	10	0	85
2012	14	12	6	6	0	40	0	0	22	0	62
2013	8	8	7	1	0	12	0	0	24	5	41
2014	23	21	2	19	0	3	0	0	0	0	3
2015	25	23	10	13	4	115	0	0	3	0	122
2016	5	5	1	4	0	1	0	0	0	0	1
2017	6	5	3	2	0	16	0	0	0	0	16
2018	26	24	8	16	1	103	22	9	19	0	154
2019	44	43	16	27	8	406	0	3	14	0	431
Average, 2009–2018	11	11	4	6	3	33	2	1	8	1	48

[a] ·Reported harvest only and includes harvest from Prince William Sound, exclusive of the Copper River District and customary and traditional subsistence locations within PWS.

[b] .As reported on returned permits.

PROPOSAL 29 – 5 AAC 01.620. Lawful gear and gear specifications.

PROPOSED BY: Native Village of Eyak.

WHAT WOULD THE PROPOSAL DO? This would allow drift gillnet gear to be used for subsistence fishing in all districts in Prince William Sound concurrent with commercial fishing openings and on Saturdays from 6 a.m. until 10 p.m.

WHAT ARE THE CURRENT REGULATIONS? Drift gillnets are only allowed for subsistence fishing in the Coghill, Unakwik, Eshamy, Copper River, and Bering River districts.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would likely increase subsistence opportunity and the number of salmon harvested in Prince William Sound subsistence fisheries. Most subsistence salmon harvest in PWS saltwater occurs with a gillnet, therefore little to no subsistence fishing has taken place in districts where purse seine is the only legal gear type. This would allow the use of drift gillnet in the Southwestern, Montague, Northwestern, Eastern and Southeastern districts where currently only purse seine gear is allowed.

BACKGROUND: Legal subsistence gear types in the Tatitlek and Chenega Subsistence areas are either gillnet or seine, and dip nets in freshwater for pink salmon and has been this way since the creation of these subsistence fisheries in 1988. Subsistence fisheries in PWS commercial salmon fishing districts, outside of Chenega and Tatitlek subsistence areas, are restricted to purse seine and gillnet gear type in districts specified in 5 AAC 24.330.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. This proposal references 5 AAC 01.648. however, the intent of this proposal is addressed in 5 AAC 01.620. In deliberating this proposal, the board should consider if a reasonable opportunity to harvest salmon for subsistence uses exists.

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.

SUBSISTENCE REGULATION REVIEW:

1. Is this stock in a nonsubsistence area? No.
2. Is this stock customarily and traditionally taken or used for subsistence? Yes. The board has determined under 5 AAC 01.616(a)(2—6) that salmon in Coghill, Northwestern, Eshamy, Unakwik, Southeastern, Bering River, Copper River, Southwestern, Montague, Northern, and Eastern districts are customarily taken or used for subsistence.

3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence uses? The Amount Necessary for Subsistence (ANS) covering subsistence fisheries in Prince William Sound outside of the Tatitlek and Chenega subsistence areas is 115–200 salmon.
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

Prince William Sound and Upper Copper and Susitna Rivers Sport (11 proposals)

PROPOSAL 30 – 5 AAC 52.023. Special provisions for seasons, bag, possession, and size limits, and methods and means for the Upper Copper River and Upper Susitna River Area.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? Change the area directly under the Richardson Highway bridge to single-hook, artificial fly regulations in the Gulkana River.

WHAT ARE THE CURRENT REGULATIONS? Only unbaited, single-hook artificial lures can be used in the Gulkana River year-round with the exception of: the portion of the Gulkana River from the Richardson Highway Bridge downstream to a department marker approximately 500 yards downstream of its confluence with the Copper River that is limited to unbaited, single-hook artificial flies with a gap that does not exceed ¾" inch between point and shank from June 1 – July 31; and the portion of the Gulkana River mainstem upstream from the Richardson Highway Bridge to a department marker 7 ½ miles upstream of the West Fork confluence which is open to bait and artificial lures, including treble hooks, from June 1–July 19.

WHAT WOULD BE THE EFFECTS IF THE PROPOSAL IS ADOPTED? Clarify regulatory boundaries for anglers and enforcement as it relates to the Richardson Highway Bridge.

BACKGROUND: Since 2000, all flowing waters of the Gulkana River drainage have been limited to the use of unbaited, single-hook artificial lures year-round to protect rainbow trout/steelhead, with two exceptions: (1) a portion of the Gulkana River downstream of the Richardson Highway bridge that is restricted to unbaited, single-hook, artificial flies only from June 1 through July 31; and (2) a portion of the Gulkana River upstream of the Richardson Highway bridge which allows for the use of bait and treble hooks from June 1 through July 19. The regulations downstream of the bridge were established to provide protection to king salmon that were holding downstream of the bridge and regulations upstream of the bridge are in place only during the king salmon season to provide harvest opportunity as previous studies indicate a 50% reduction in king salmon harvest when bait is not allowed. As currently written, the section of river directly under the Richardson Highway bridge falls under the general regulation of unbaited, single-hook artificial lures.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal to clarify existing regulations.

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

PROPOSAL 31 – 5 AAC 52.022. General provisions for seasons, bag, possession, annual, and size limits, and methods and means for the Upper Copper River and Upper Susitna River Area.

PROPOSED BY: Fairbanks Fish and Game Advisory Committee.

WHAT WOULD THE PROPOSAL DO? Increase the possession limit of sockeye salmon greater than 16 inches in length in the Upper Copper River drainage to six fish.

WHAT ARE THE CURRENT REGULATIONS? The possession limit for salmon, other than king salmon, 16 inches or longer is three fish, which is the same as the bag limit.

WHAT WOULD BE THE EFFECTS IF THE PROPOSAL IS ADOPTED? Sport harvest of sockeye salmon may increase by an unknown amount.

BACKGROUND: Estimates of sport harvest for Copper River sockeye salmon has been tracked using the Statewide Harvest Survey (SWHS) since 1977. Harvests have ranged from a low of 1,523 fish in 1981 to a high of 26,611 fish in 2013, and over the past 5 years (2014–2018) has averaged 9,513 fish (Table 31-1). Sport harvest generally reflects run strength of the Copper River sockeye salmon and is highly influenced by run strength on the Klutina River. The primary sport fisheries for sockeye salmon occur in the Klutina and Gulkana rivers that, account on average for 94% of the area's sockeye salmon harvest from 2009–2018. Neither the Klutina nor Gulkana rivers have sockeye salmon escapement goals but instead a drainagewide sustainable escapement goal (SEG) for Copper River sockeye salmon is in place. The SEG has been achieved annually since 2000.

Sockeye salmon fisheries in the Copper River are managed to provide for sustained yield, diversity of public fishing opportunities, and to achieve public benefits from the fishery that outweigh the costs of associated management and research. Current levels of sport harvest are considered sustainable as total sport harvest of sockeye salmon has accounted for only 1.0% of the total harvest from the Copper River over the last 10 years (2009–2018).

Sockeye salmon possession limits for freshwater locations along the road system in Southcentral and Northern Alaska are typically the same as the bag limit but there are exceptions that allow for twice the bag limit (Table 31–2). Exceptions for West Cook Inlet and portions of the Susitna River were put in place due to the remoteness of the fisheries, which often involve anglers camping out, and on the Kenai River due to its popularity with many anglers who travel to the area to fish for the weekend.

Many nonlocal anglers travel to the Copper River Basin to participate in area sport fisheries where facilities and services for fish processing and freezing are limited. Allowing a higher possession limit of sockeye salmon would benefit nonlocal anglers or those participating in multi-day fishing trips because they would be able to keep in their possession up to double the bag limit. Harvest is not expected to increase by any significant amount due to this change in possession limits.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal. If adopted, regulatory language should be clear this applies to sockeye salmon only and that bag and possession limits for coho salmon remain at three fish.

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

Table 31-1.–Estimated sockeye salmon sport harvest, inriver abundance (i.e. sonar passage), and spawning escapement, 2000–2019.

Year	Sport harvest				Sonar passage	Spawning escapement
	Gulkana R.	Klutina R.	Other waters	Total		
2000	4,307	7,219	835	12,361	636,837	343,691
2001	1,808	5,834	527	8,169	878,205	538,681
2002	2,545	4,704	512	7,761	830,263	581,717
2003	1,465	5,321	322	7,108	747,091	507,895
2004	976	5,069	419	6,464	669,514	433,945
2005	1,169	6,646	320	8,135	855,125	515,599
2006	923	13,222	152	14,297	959,706	579,552
2007	1,452	21,242	315	23,009	919,601	612,103
2008	575	10,107	749	11,431	718,344	480,597
2009	1,335	11,759	321	13,415	709,748	469,090
2010	1,476	12,238	1,029	14,743	923,811	502,992
2011	785	6,025	917	7,727	914,231	607,657
2012	1,539	21,564	301	23,404	1,294,400	953,245
2013	1,978	23,721	912	26,611	1,267,060	860,929
2014	709	17,004	292	18,005	1,218,418	864,988
2015	533	8,903	53	9,489	1,346,100	930,061
2016	853	6,406	279	7,538	801,593	513,563
2017	1,330	7,695	564	9,589	723,426	465,518
2018	676	1,597	670	2,943	701,577	478,701
2019	1,011	6,148	223	7,382	1,039,654	720,997
Average 2014–2018	820	8,321	372	9,513	958,223	650,566
Average 2009–2018	1,121	11,691	534	13,346	990,036	664,674

Table 31-2.–Bag and possession limits for other salmon in Northern and Southcentral Alaska freshwaters.

Area/Drainage	Other salmon (Excludes king salmon)	Size limit	Bag and possession limits
Yukon R.	Other salmon	No size limit	10 per day, 10 in possession
Tanana R.	Chum & coho	No size limit	3 per day, 3 in possession[a]
West Cook Inlet	Other salmon	16 inches or longer	3 per day, 6 in possession
Susitna R. - Unit 1	Other salmon	16 inches or longer	3 per day, 6 in possession
Susitna R. - Unit 2	Other salmon	16 inches or longer	3 per day, 3 in possession[b]
Susitna R. - Unit 3	Other salmon	16 inches or longer	3 per day, 3 in possession
Susitna R. - Unit 4	Other salmon	16 inches or longer	3 per day, 6 in possession
Susitna R. - Unit 5	Other salmon	16 inches or longer	3 per day, 3 in possession
Susitna R. - Unit 6	Other salmon	16 inches or longer	3 per day, 3 in possession
Knik Arm	Other salmon	16 inches or longer	3 per day, 3 in possession[b]
Kenai R. - Lower Mainstem	Sockeye & Chum	16 inches or longer	3 per day, 6 in possession[a]
Kenai R. - Upper Kenai	Other salmon	16 inches or longer	3 per day, 6 in possession[b]
Kenai Peninsula Freshwaters	Other salmon	16 inches or longer	3 per day, 3 in possession[b]
North Gulf Coast	Other salmon	No size limit	3 per day, 3 in possession[b]
Prince William Sound	Other salmon	No size limit	6 per day, 12 in possession[c]

Note: Rows in grey indicate areas where the possession limit is twice the bag limit.

[a] In combination

[b] Of which only 2 per day, 2 in possession may be coho

[c] Of which only 3 per day, 3 in possession may be coho

PROPOSAL 32 – 5 AAC 52.023. Special provisions for seasons, bag, possession, and size limits, and methods and means for the Upper Copper River and Upper Susitna River Area.

PROPOSED BY: Kirk Wilson and Copper Basin Advisory Committee.

WHAT WOULD THE PROPOSAL DO? Allow harvest of rainbow/steelhead trout, 20 inches or less in length, with a bag and possession limit of one fish, in all flowing waters of the Gulkana River drainage, excluding the Middle Fork Gulkana River.

WHAT ARE THE CURRENT REGULATIONS? Rainbow/steelhead trout may not be retained or possessed; all rainbow/steelhead trout caught must be released immediately and returned to the water unharmed.

WHAT WOULD BE THE EFFECTS IF THE PROPOSAL IS ADOPTED? Bag and possession limits for rainbow/steelhead trout would be liberalized but anglers would be required to measure fish because fish retained may not be larger than 20 inches. Sport harvest will increase by an unknown amount.

BACKGROUND: Fishing effort in the Gulkana River was the highest across drainages within the Upper Copper-Upper Susitna Management Area (UCUSMA) during 1977–2010 and has since been second to the Klutina River. The Gulkana River supports the largest wild rainbow and steelhead trout fishery in the management area. From 1977 through 1987, 49% of all rainbow/steelhead trout harvested in the UCUSMA were taken from the Gulkana River drainage. During this time, the combined average annual harvest of rainbow trout and steelhead from the drainage was 1,424 fish (range of 752–2,633 fish; Table 32-1), with, on average, steelhead trout comprising less than 2% of the harvest. In 1988, rainbow trout bag and possession limits were reduced across the UCUSMA from 10 fish to two fish, with only one over 20 inches. Due to this regulatory change, harvest of rainbow/steelhead trout in the Gulkana River declined during 1988–1990, with the average annual harvest of rainbow/steelhead trout reduced to 830 fish (range 459–1,327 fish; Table 32-1).

Research conducted by the department on the Gulkana River between 1986–1988 indicated very low numbers of rainbow trout in the system and prompted concerns regarding the stock's productivity and susceptibility to overharvest. In 1991, the Gulkana River drainage was restricted to a catch-and-release fishery for rainbow/steelhead trout. Since then, additional measures have been implemented to provide further protection for rainbow/steelhead trout in the Gulkana River including limiting all flowing waters to unbaited, single-hook, artificial lures or flies (with exception during the king salmon fishery to seasonally permit the use of bait and multiple-hooks in a section of the mainstem from June 1 through July 19), as well as implementing spawning closures in areas of the Middle Fork Gulkana River, Hungry Hollow Creek, and Twelvemile Creek.

Even though it has been restricted to catch-and-release for nearly 30 years, the Gulkana River has remained the most popular rainbow/steelhead trout fishery in the UCUSMA. Over the past 10

years (2009–2018), 71% of the total UCUSMA catch of rainbow/steelhead trout has been from the Gulkana River, where approximately 3,000 rainbow/steelhead trout are caught each year (Table 32-2).

The rainbow/steelhead trout population in the Gulkana River is one of the northernmost in North America and is considered a true fringe population. Abundance is considered low and remains incapable of supporting any level of long-term sustainable harvest. In 2005, a mark-recapture project was conducted to estimate the abundance of rainbow trout in the mainstem Gulkana River. The abundance of rainbow trout 6–11 inches in length was estimated to be 6,850 fish and those 11 inches or larger to be 5,238 fish, producing a combined estimate of 12,088 rainbow trout 6 inches or larger (95% CI = 9,671–14,505).

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. No abundance information is available that shows an increase in population size since the 2005 assessment, and because the Gulkana River remains one of the most fished systems in the UCUSMA, there are concerns over sustainability for rainbow/steelhead trout that are living at the northernmost edge of their natural distribution. Current conservative regulations ensure sustainability of rainbow/steelhead trout in the Gulkana River.

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

Table 32-1.–Sport fishing effort (angler-days) and rainbow/steelhead trout harvest in the Gulkana River, 1977–1990, under different regulatory approaches.

Year	Effort[a]	Harvest	Regulation
1977	4,165	752	
1978	6,570	1,256	
1979	17,323	1,455	
1980	13,752	1,249	
1981	14,430	1,469	
1982	14,979	1,309	10 fish bag and possession, only 2 over 20"
1983	17,484	1,476	
1984	13,031	1,256	
1985	15,607	2,633	
1986	14,351	1,154	
1987	17,755	1,651	
1988	11,330	1,327	
1989	15,769	703	2 fish bag and possession, only 1 over 20"
1990	19,112	459	
Average (1977–1987)	13,586	1,424	10 fish bag and possession, only 2 over 20"
Average (1988–1990)	15,404	830	2 fish bag and possession, only 1 over 20"

[a] Sport fishing effort is not apportioned by species.

Table 32-2.–Sport fishing effort (angler-days) and rainbow/steelhead trout catch under catch-and-release regulations in the Gulkana River, 1991–2019.

Year	Effort[a]	Catch
1991	21,285	1,296
1992	26,039	1,701
1993	27,543	2,875
1994	25,581	3,380
1995	33,415	4,009
1996	25,727	6,864
1997	23,713	8,195
1998	27,349	5,533
1999	29,934	7,971
2000	20,896	6,986
2001	18,664	4,367
2002	18,060	7,851
2003	19,164	6,616
2004	17,351	4,815
2005	15,277	4,687
2006	11,910	2,021
2007	19,323	4,134
2008	16,794	5,461
2009	13,340	4,041
2010	13,834	4,155
2011	6,134	2,921
2012	5,593	2,637
2013	6,322	3,886
2014	5,503	1,697
2015	6,840	1,568
2016	6,129	4,140
2017	8,001	3,140
2018	6,552	2,030
2019	9,005	899
Average (2009–2018)	7,825	3,022
Average (1991–2018)	17,010	4,249

[a] Sport fishing effort is not apportioned by species.

PROPOSAL 33 – 5 AAC 52.023. Special provisions for seasons, bag, possession, and size limits, and methods and means for the Upper Copper River and Upper Susitna River Area.

PROPOSED BY: Fairbanks Fish and Game Advisory Committee.

WHAT WOULD THE PROPOSAL DO? Allow harvest of rainbow/steelhead trout, 18 inches or less in length, with a bag and possession limit of one fish, in all flowing waters of the Gulkana River drainage.

WHAT ARE THE CURRENT REGULATIONS? Rainbow/steelhead trout may not be retained or possessed; all rainbow/steelhead trout caught must be released immediately and returned to the water unharmed.

WHAT WOULD BE THE EFFECTS IF THE PROPOSAL IS ADOPTED? Bag and possession limits for rainbow/steelhead trout would be liberalized but anglers would be required to measure fish because fish retained may not be larger than 18 inches. Sport harvest will increase by an unknown amount.

BACKGROUND: The Gulkana River was the system with the highest fishing effort in the Upper Copper Upper Susitna Management Area (UCUSMA) from 1977–2010 and has since only been second to the Klutina River. The Gulkana River supports the largest wild rainbow and steelhead trout fishery in the management area. From 1977 through 1987, 49% of all rainbow/steelhead trout harvested in the UCUSMA were taken from the Gulkana River drainage. During this time, the combined average annual harvest of rainbow trout and steelhead from the drainage was 1,424 fish (range of 752–2,633 fish; Table 32-1), and steelhead trout comprised less than 2% of the harvest on average. In 1988, rainbow trout bag and possession limits were reduced across the UCUSMA from 10 fish to 2 fish, with only 1 allowed to be over 20 inches. Due to this regulatory change, harvest of rainbow/steelhead trout in the Gulkana River declined from 1988–1990, with the average annual harvest of rainbow/steelhead trout reduced to 830 fish (range 459–1,327 fish; Table 32-1).

Research conducted by the department on the Gulkana River during 1986–1988 indicated very low numbers of rainbow trout in the system and prompted concerns regarding the stock's productivity and susceptibility to overharvest. In 1991, the Gulkana River drainage was restricted to a catch-and-release fishery for rainbow/steelhead trout. Since then, additional measures have been implemented to provide further protection for rainbow/steelhead trout in the Gulkana River including limiting all flowing waters to unbaited, single-hook, artificial lures or flies (with exception during the king salmon fishery to seasonally permit the use bait and multiple-hooks in a section of the mainstem from June 1 through July 19), as well as implementing spawning closures in areas of the Middle Fork Gulkana River, Hungry Hollow Creek, and Twelvemile Creek.

Even though it has been restricted to catch-and-release for nearly 30 years, the Gulkana River has remained the most popular rainbow/steelhead trout fishery in the UCUSMA. Over the past 10

years (2009–2018), 71% of the total UCUSMA catch of rainbow/steelhead trout has been from the Gulkana River, where approximately 3,000 rainbow/steelhead trout are caught each year (Table 32-2).

The rainbow/steelhead trout population in the Gulkana River is one of the northernmost in North America and is considered a true fringe population. Abundance is considered low and remains incapable of supporting any level of long-term sustainable harvest. In 2005, a mark-recapture project was conducted to estimate the abundance of rainbow trout in the mainstem Gulkana River. The abundance of rainbow trout 6–11 inches in length was estimated to be 6,850 fish and those 11 inches or larger to be 5,238 fish, producing a combined estimate of 12,088 rainbow trout 6 inches or larger (95% CI = 9,671 -14,505).

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. No abundance information is available that shows an increase in population size and because the Gulkana River remains one of the most fished systems in the UCUSMA, there are concerns over sustainability for rainbow/steelhead trout that are living at the northernmost edge of their natural distribution. Current conservative regulations ensure sustainability of rainbow/steelhead trout in the Gulkana River.

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

Table 33-1.–Sport fishing effort (angler-days) and rainbow/steelhead trout harvest in the Gulkana River, 1977–1990, under different regulatory approaches.

Year	Effort[a]	Harvest	Regulation
1977	4,165	752	
1978	6,570	1,256	
1979	17,323	1,455	
1980	13,752	1,249	
1981	14,430	1,469	
1982	14,979	1,309	10 fish bag and possession, only 2 over 20"
1983	17,484	1,476	
1984	13,031	1,256	
1985	15,607	2,633	
1986	14,351	1,154	
1987	17,755	1,651	
1988	11,330	1,327	
1989	15,769	703	2 fish bag and possession, only 1 over 20"
1990	19,112	459	
Average (1977–1987)	13,586	1,424	10 fish bag and possession, only 2 over 20"
Average (1988–1990)	15,404	830	2 fish bag and possession, only 1 over 20"

[a] Sport fishing effort is not apportioned by species.

Table 33-2.–Sport fishing effort (angler-days) and rainbow/steelhead trout catch in the Gulkana River, 1991–2019, under catch-and-release regulations.

Year	Effort[a]	Catch
1991	21,285	1,296
1992	26,039	1,701
1993	27,543	2,875
1994	25,581	3,380
1995	33,415	4,009
1996	25,727	6,864
1997	23,713	8,195
1998	27,349	5,533
1999	29,934	7,971
2000	20,896	6,986
2001	18,664	4,367
2002	18,060	7,851
2003	19,164	6,616
2004	17,351	4,815
2005	15,277	4,687
2006	11,910	2,021
2007	19,323	4,134
2008	16,794	5,461
2009	13,340	4,041
2010	13,834	4,155
2011	6,134	2,921
2012	5,593	2,637
2013	6,322	3,886
2014	5,503	1,697
2015	6,840	1,568
2016	6,129	4,140
2017	8,001	3,140
2018	6,552	2,030
2019	9,005	899
Average (2009-2018)	7,825	3,022
Average (1991-2018)	17,010	4,249

[a] Sport fishing effort is not apportioned by species.

PROPOSAL 34 – 5 AAC 52.023. Special provisions for seasons, bag, possession, and size limits, and methods and means for the Upper Copper River and Upper Susitna River Area.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? Remove the size limit for Arctic grayling in the Gulkana River drainage.

WHAT ARE THE CURRENT REGULATIONS? In the Gulkana River drainage, anglers may retain a total of two (upstream of Paxson lake) or five (downstream of Paxson Lake) Arctic grayling, with only one that is 14 inches or greater in length.

WHAT WOULD BE THE EFFECTS IF THE PROPOSAL IS ADOPTED? Regulations for the Gulkana River drainage except above Paxson Lake will be consistent with the *Wild Arctic Grayling Management Plan* regional management approach and anglers will no longer need to measure fish they wish to retain to remain in compliance with regulation. Harvest of Arctic grayling is not expected to increase substantially.

BACKGROUND: The Gulkana River drainage supports the largest Arctic grayling fishery within the Upper Copper-Upper Susitna Management Area (UCUSMA). Over the past 10 years, approximately 62% of the annual catch and 36% of the annual harvest of Arctic grayling from the UCUSMA has occurred in the Gulkana River drainage. From 2009–2018, the average Arctic grayling catch and harvest has been 22,800 fish and 1,200 fish, respectively (Table 34-1). The majority of this catch and harvest occurs in the mainstem between the outlet of Paxson Lake and Sourdough Creek. Currently, all waters in the Gulkana River drainage have a size restriction in place limiting the take of Arctic grayling, 14 inches or larger, to one fish.

A 2017 assessment of the Arctic grayling population in the Gulkana River between Paxson Lake and Sourdough indicated that the population abundance was large enough to support greater exploitation across all size classes. The size composition sampled indicated that Arctic grayling 14 inches or greater in length made up only a small proportion of the population present in the mainstem Gulkana River during summer. However, a 2016 radio telemetry project demonstrated that larger Arctic grayling migrated into cooler waters of the upper Middle and East Fork drainages during summer, and these aggregations of fish seeking refuge from warmer waters can be very large. For example, in 2019 an estimated 40,995 fish (95% CI = 29,171–52,732) were concentrated into a 5.6-mile (9 km) reach within the upper Middle Fork drainage. Of these 2,813 fish (95% CI = 2,189–3,436) were 14 inches or larger, or approximately 7% of the population. The upper Middle Fork waters are relatively inaccessible and provide a refuge from most sport anglers.

Management of Gulkana River Arctic grayling is guided by the *Wild Arctic Grayling Management Plan* (5 AAC 52.055) which attempts to achieve sustained yield while providing diverse fishing opportunities. The department manages wild Arctic grayling fisheries under one of three management approaches: (1) regional management approach; (2) conservative management

approach; or (3) special management approach. Most wild Arctic grayling fisheries in the Upper Copper-Upper Susitna Management Area fall under the regional management approach and are open to fishing all year, with or without bait, and have a bag and possession limit of five fish with no size limit. The Gulkana River drainage below Paxson Lake is managed under the regional management approach and length limits are typically not employed under that management strategy.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal because it simplifies regulations and aligns the Gulkana River downstream of Paxson Lake with the *Wild Arctic Grayling Management Plan*'s regional management approach. Current regulations are unnecessarily restrictive based on recent studies and should remain sustainable without the current 14-inch size restriction. It would prevent anglers from having to measure retained fish, reduce handling stress, and uncomplicate enforcement.

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 34-1.–Sport fishing effort (angler-days) and catch and harvest of Arctic grayling in the Gulkana River, 2000–2019.

Year	Effort[a]	Catch	Harvest
2000	20,896	28,819	2,482
2001	18,664	31,496	2,062
2002	18,060	65,826	1,753
2003	19,164	66,014	2,646
2004	17,351	34,543	2,132
2005	15,277	40,344	1,331
2006	11,910	15,638	1,553
2007	19,323	20,103	1,179
2008	16,794	35,613	729
2009	13,340	41,749	1,665
2010	13,834	38,766	1,522
2011	6,134	13,363	2,081
2012	5,593	17,358	532
2013	6,322	17,129	1,393
2014	5,503	13,163	436
2015	6,840	12,731	501
2016	6,129	35,208	1,299
2017	8,001	24,222	1,028
2018	6,552	14,442	1,485
2019	9,005	24,392	850
Average (2009–2018)	7,825	22,813	1,194

[a.] Sport fishing effort is not apportioned by species.

PROPOSAL 35 – 5 AAC 52.023. Special provisions for seasons, bag, possession, and size limits, and methods and means for the Upper Copper River and Upper Susitna River Area.

PROPOSED BY: Bonnie McLeod.

WHAT WOULD THE PROPOSAL DO? Reduce the bag and possession limit to two fish and allow only catch-and-release fishing from April 1 through May 31. This would put management of the Arctic grayling fishery in Moose Creek under the conservative management approach of the *Wild Arctic Grayling Management Plan.*

WHAT ARE THE CURRENT REGULATIONS? The Moose Creek Arctic grayling fishery is open year-round with a bag and possession limit of five fish.

WHAT WOULD BE THE EFFECTS IF THE PROPOSAL IS ADOPTED? Harvest of Arctic grayling would likely decrease, and effort may also decrease due to anglers being restricted to catch-and-release fishing during the period when most fishing effort occurs.

BACKGROUND: Management of Arctic grayling populations in the Upper Copper-Upper Susitna Management Area (UCUSMA) is guided by the *Wild Arctic Grayling Management Plan* (5 AAC 52.055). To achieve sustained yield and provide diverse fishing opportunities, the department manages wild Arctic grayling fisheries under one of three management approaches: (1) regional management approach; (2) conservative management approach; or (3) special management approach. Most wild Arctic grayling fisheries in the UCUSMA fall under the regional management approach and are open to fishing all year, with or without bait, and have a bag and possession limit of five fish with no size limit. The Moose Creek Arctic grayling fishery is managed under the regional management approach.

Moose Creek flows through Glennallen and is primarily accessed within ½ mile of the Glenn Highway near milepost 186 (Figure 35-1). It drains into the Tazlina River and supports a population of Arctic grayling and a smaller number of rainbow trout. The fishery mainly occurs in spring and targets fish as they move through the system to and from their spawning areas that are largely inaccessible to anglers. While the Statewide Harvest Survey (SWHS) has received reports of anglers fishing the system as early as 1983, fishing effort in Moose Creek has only been reported in 18 out of past 36 years. Due to the infrequent SWHS response rate and consistent low number of respondents, it is assumed that Arctic grayling harvest and catch in Moose Creek is minimal. Additionally, the low number of annual respondents has always been too low to produce an accurate estimate of harvest or catch.

The Division of Sport Fish stocks waters throughout the state to improve sport fisheries by increasing opportunity and diversity. Resident species, such as Arctic grayling, are usually stocked in landlocked lakes. It is department policy that open systems, like Moose Creek, are not stocked with resident fish species due to potential genetic impacts to wild populations. The practice of

stocking fish where wild populations already exist is not done to avoid stocked fish competing with native fish.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal because there is no indication that current harvest levels are unsustainable. This change would unnecessarily restrict anglers and further complicate existing regulations.

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

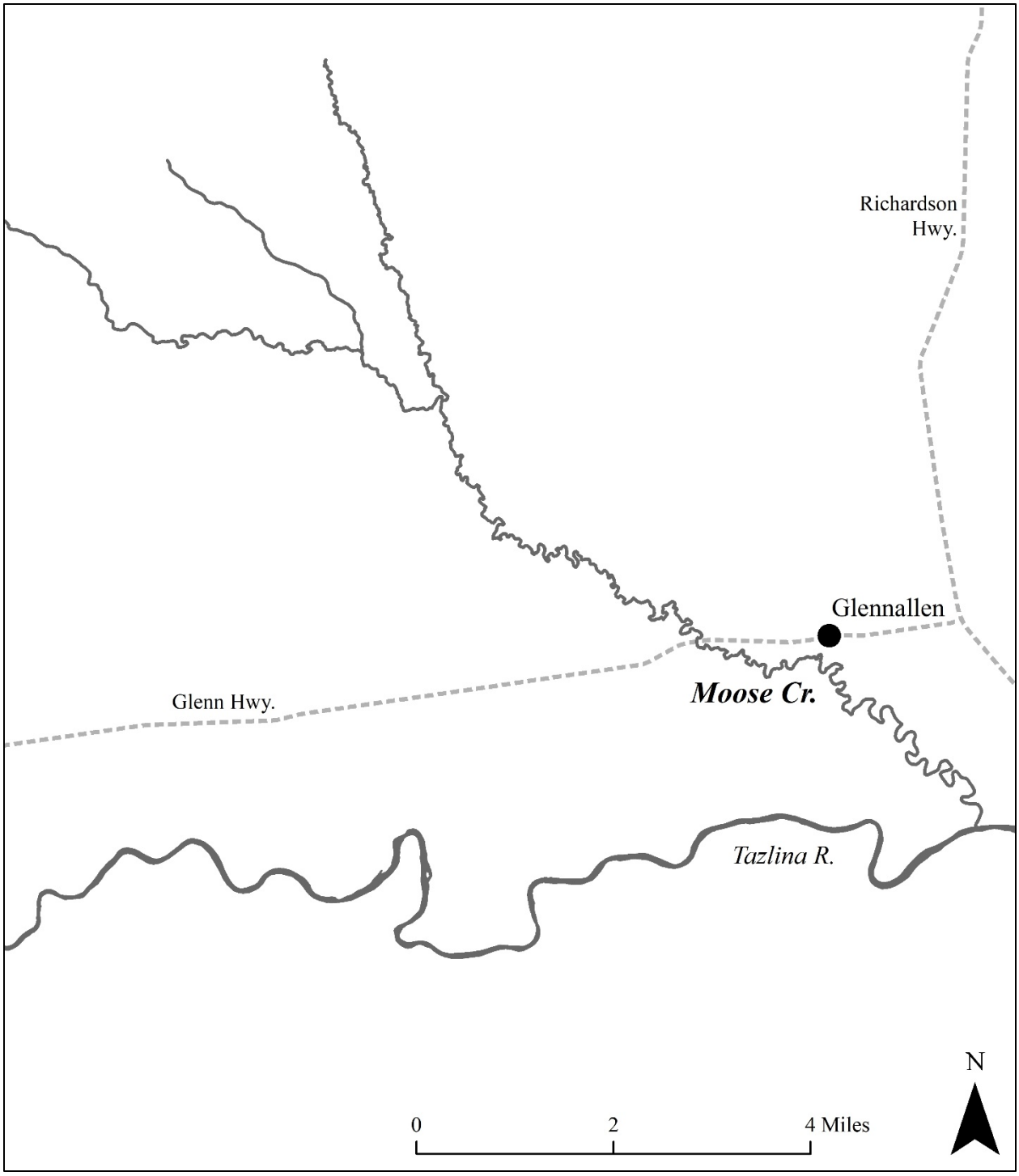


Figure 35-1.–Moose Creek located in Glennallen.

PROPOSAL 36 – 5 AAC 52.023. Special provisions for seasons, bag, possession, and size limits, and methods and means for the Upper Copper River and Upper Susitna River Area.

PROPOSED BY: Kirk Wilson.

WHAT WOULD THE PROPOSAL DO? Increase the bag and possession limit of lake trout to three fish in Crosswinds Lake and establish an annual limit of one lake trout over 30 inches in Crosswinds Lake.

WHAT ARE THE CURRENT REGULATIONS? In Crosswinds Lake, the bag and possession limit for lake trout is one fish, no size limit, and no annual limit.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Bag and possession limits for lake trout would be liberalized but anglers would be required to measure fish because an annual limit of only one fish over 30 inches would be in place. Sport harvest may increase by an unknown amount.

BACKGROUND: Management of lake trout populations in the Upper Copper-Upper Susitna Management Area (UCUSMA) is guided by the *Wild Lake Trout Management Plan* (5 AAC 52.060) (WLTMP). The department uses the Lake Area Model (LAM) as a conservative guideline to identify sustainable harvests for lake trout.

The LAM uses surface area to predict the biomass that can be sustainably removed from a lake annually, which is then converted to numbers of fish that can be harvested annually based on an assumed average weight of harvested fish and the existing length limit. For example, a decrease in the length limit decreases the average size of fish harvested, thereby increasing the allowable annual harvest. Prior to 2012, the regulation at Crosswind Lake allowed for one fish over 24 inches total length which, because of the length limit, assumed that no more than 361 fish could be harvested annually. Under the current 1 fish any size regulation, the allowable harvest is estimated at 565 lake trout annually. Removing the minimum length limit in 2012 was intended to reduce overall fishing mortality by reducing the number of fish caught and released while allowing more fish to be actually harvested.

The department manages resident species populations for long-term sustainability and uses various restrictions such as bag limits, gear restrictions, and spawning closures to limit harvest to within sustainable levels and, in the case of lake trout, those levels are determined through use of the LAM. From 1986 through 2011 the Crosswind Lake lake trout fishery was restricted to a bag limit of 2 fish over 20 inches and 10 fish under 20 inches (1986–1987), 2 fish any size (1988–1995), 1 fish over 24 inches (1996–2011), and 1 fish any size (since 2012). Under the 1 fish over 24 inches restrictions the combined harvest and estimated catch mortality (10% of Statewide Harvest Survey catch estimate minus harvest) exceeded the sustainable yield in 8 out of 16 years from 1996–2011 (Table 36–1). At its 2011 meeting the board aligned the lake trout regulations in Lake Louise, Susitna, Tyone and Crosswind lakes to 1 fish any size.

Since 2012 the number of SWHS respondents for Crosswind Lake has been too low to produce accurate estimates of annual harvest or catch. However, the low response rate indicates that fishing effort has been low, and presumably harvests have been below the yield potential. Examining two consecutive 10-year periods indicates a decline in fishing effort because the average number of respondents during 2000 – 2009 was 13.7, and during 2010 – 2019 the average was 5.1.

Prince William Sound Aquaculture Corporation has stocked 1.2–10.5 million sockeye salmon fry annually in Crosswind lake since 1986. Other than annual monitoring of zooplankton abundance no studies have been conducted to determine the interaction or impact of large scale stocking of sockeye salmon fry on resident predator populations that, previous to stocking, relied on resident fish prey only. However, lake trout and sockeye salmon coexist in multiple lakes within the UCUSMA and in Paxson and Summit Lakes they coexist with large releases of hatchery produced sockeye salmon fry. The department has identified lake trout spawning locations in Crosswind Lake but has conducted no population estimates for this species in this lake.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. A three-fold increase in the bag limit could result in a level of fishing mortality that may exceed the predicted sustainable yield. Additionally, this proposed management strategy is inconsistent with other UCUSMA lake trout fisheries and is not in alignment with the WLTMP and would complicate the regulations.

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

Table 36-1.–Sport fishing effort (angler days), catch, and total fishing mortality of lake trout from Crosswind Lake and the sustainable yield potential, 1996–2019. Annual estimates of harvest with less than 12 respondents is not reported.

Year	Number of respondents	Effort[a]	Catch	Fishing mortality (harvest plus 10% hooking mortality)	Yield potential
1996	23	1,323	1,230	482	361
1997	18	865	451	132	361
1998	25	964	1,539	368	361
1999	20	2,309	2,598	732	361
2000	24	1,111	910	358	361
2001	11	-	-	-	361
2002	12	986	975	367	361
2003	13	2,328	1,438	507	361
2004	14	1,401	861	181	361
2005	16	2,392	2,256	693	361
2006	13	765	483	220	361
2007	9	-	-	-	361
2008	10	-	-	-	361
2009	15	2,056	2,657	531	361
2010	10	-	-	-	361
2011	7	-	-	-	361
2012	4	-	-	-	565
2013	6	-	-	-	565
2014	4	-	-	-	565
2015	3	-	-	-	565
2016	3	-	-	-	565
2017	8	-	-	-	565
2018	4	-	-	-	565
2019	2	-	-	-	565

[a] Sport fishing effort is not apportioned by species.

PROPOSAL 37 – 5 AAC 55.022. General provisions for seasons, bag, possession, and size limits, and methods and means for the Prince William Sound Area.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? Establish sport bag and possession limit of two fish with no size restriction for lake trout in the Prince William Sound (PWS) area.

WHAT ARE THE CURRENT REGULATIONS? Currently in PWS, lake trout fall under "Other finfish" with no bag, possession, or size limits.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would create a bag limit for lake trout in PWS where none currently exists, minimizing the likelihood of overharvest. This would also align lake trout bag limits with adjacent management areas and provide regulatory consistency.

BACKGROUND: Lake trout are a relatively long-lived species and in the PWS management area there are only two lakes that are known to support populations of lake trout (Figure 37-1). Blueberry Lake, near Valdez, was stocked by the department with lake trout fingerling in 2020. Lake Tokun, located in the Copper River Delta, has a native population of lake trout. Lake Tokun is very remote and difficult to access. No assessment has been conducted on the population of lake trout in Lake Tokun. It is likely that little, if any, harvest of lake trout occurs in Lake Tokun due to its remote location.

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.

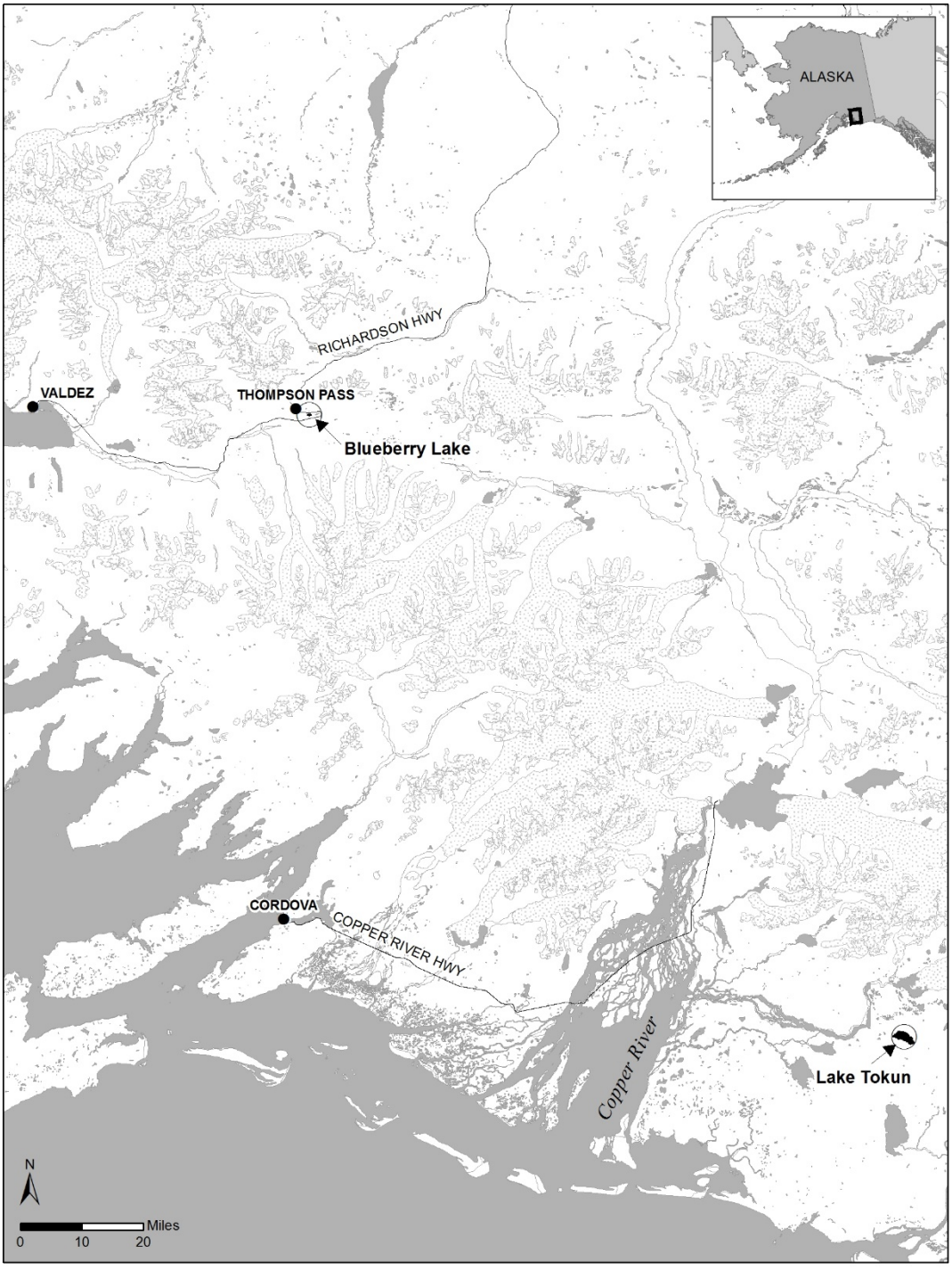


Figure 37-1.–Blueberry Lake and Lake Tokun in the Prince William Sound Management Area.

PROPOSAL 38 – 5 AAC 55.023. Special provisions for the seasons, bag, possession, and size limits, and methods and means for the Prince William Sound Area.

PROPOSED BY: Cordova District Fishermen United.

WHAT WOULD THE PROPOSAL DO? Establish restrictions in the Copper River Delta coho salmon sport fishery based on the number of days the commercial fishery is closed.

WHAT ARE THE CURRENT REGULATIONS? Coho salmon sport fishing is open year-round, with a bag and possession limit of three coho salmon in freshwater drainages crossed by the Copper River Highway. A coho salmon that is removed from the water must be retained and becomes part of the bag limit of the person who originally hooked the fish. From August 15 – September 15, anglers that harvest a bag limit of coho salmon in this area may not sport fish with bait for the rest of the day in those waters. Commercial fisheries on the Copper River Delta for coho salmon are closed unless opened by emergency order.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This may reduce sport harvest and increase escapement of coho salmon by an unknown amount. This may also reduce sport fishing opportunity by an unknown amount. This would also increase the likelihood of inseason emergency order regulations and would increase regulatory complexity. It may also reduce sport fishing effort due to the uncertainty of what regulations may be in effect.

BACKGROUND: Copper River Delta coho salmon have been managed to achieve a sustainable escapement goal (SEG) of 32,000 to 67,000 fish. This goal is evaluated through inseason aerial surveys and in the last 10-years (2010–2019) the SEG has been achieved each year (Table 38-1).

Commercial fisheries in the Copper River District are opened by emergency order and are typically announced 36 – 60 hours prior to an opening. The standard management strategy for coho salmon is one or two 24-hour periods per week depending on escapement and harvest levels. Time and area of openings are adjusted depending on run-strength indicators. Emergency orders modify the sport fishery regulations and are issued when the escapement is anticipated to be below or exceed the goal. In the last 10 years only two emergency orders have been issued modifying the sport fishery. Both of those emergency orders were issued in 2019. The first emergency order prohibited the use of bait and the second reduced the coho salmon bag limit. During the last 10 years, if this proposed regulation had been in place, it would also only have taken effect in a single year, 2019.

In the Copper River District, average annual commercial coho salmon harvests from 2010-2019 is approximately 223,446 fish (Table 38-1). The Statewide Harvest Survey estimates an average sport harvest of 15,732 coho salmon annually (2010–2019 average) in the Copper River Delta sport fisheries (Table 38-1).

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 38-1.–Harvest and escapement of coho salmon on the Copper River Delta.

	Copper River Delta Sport				Copper River District Commercial		Cordova Area Subsistence			
Year	EO's issued	Action	Estimated Harvest (SWHS)	Percent	Harvest	Percent	Harvest	Percent	Estimated Total Harvest	Copper River Delta Estimated Escapement (SEG 32,000-67,000)
2010	0	None	16,663	7%	211,647	93%	95	0.04%	228,405	41,077
2011	0	None	15,087	10%	128,054	89%	615	0.43%	143,756	38,145
2012	0	None	15,654	11%	131,298	89%	392	0.26%	147,344	37,010
2013	0	None	18,462	7%	245,234	93%	311	0.12%	264,007	34,680
2014	0	None	16,925	5%	316,922	95%	630	0.19%	334,477	43,010
2015	0	None	25,667	15%	138,404	84%	888	0.53%	164,959	41,665
2016	0	None	13,682	4%	368,983	96%	557	0.14%	383,222	76,200
2017	0	None	10,447	3%	308,232	97%	557	0.17%	319,236	43,760
2018	0	None	11,089	3%	306,538	96%	450	0.14%	318,077	53,800
2019	2	Restrict	13,641	15%	79,147	85%	810	0.87%	93,598	36,620

PROPOSAL 39 – 5 AAC 55.023. Special provisions for the seasons, bag, possession, and size limits, and methods and means for the Prince William Sound Area.

PROPOSED BY: Cordova District Fishermen United.

WHAT WOULD THE PROPOSAL DO? Extend the area closed to sport fishing in Ibeck Creek.

WHAT ARE THE CURRENT REGULATIONS? Ibeck Creek is closed to all sport fishing upstream from department markers located approximately three miles upstream of the Copper River Highway bridge (Figure 39-1). Waters open to sport fishing on Ibeck Creek are part of the Copper River Highway streams and are open year around to sport fishing for coho salmon and trout. In all freshwater drainages crossed by the Copper River Highway from and including Eyak River to the Million Dollar Bridge, the bag and possession limit for salmon (other than king salmon) is three fish. A coho salmon that is removed from the water must be retained and becomes part of the bag limit of the person who originally hooked the fish. From August 15 – September 15, anglers that harvest a bag limit of coho salmon from the Copper River Highway freshwater drainages may not sport fish with bait for the remainder of the day in those waters.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would reduce fishing opportunity for anglers. It would primarily affect the coho salmon sport fishery since few anglers target other species in Ibeck Creek. It is unlikely the sport harvest of coho salmon would be reduced because anglers would likely fish in open waters further downstream or move to another stream along the Copper River Highway.

BACKGROUND: The bag and possession limit of three salmon (other than king salmon) has been in effect since 1989 in the Prince William Sound (PWS) Management Area. In 2011, the Alaska Board of Fisheries closed Ibeck Creek beginning three miles upstream of the Copper River Highway. Currently, very little angler effort is observed more than 1.5 miles upstream of the Copper River Highway. While spawning coho salmon may be present throughout Ibeck Creek, the majority of coho salmon observed during aerial surveys are upstream of the waters currently open to fishing.

Ibeck Creek has become one of the most popular sport fishing locations along the Copper River Highway. This is the most road accessible coho salmon fishery in the Copper River Delta. In the last five years, harvest in Ibeck Creek has accounted for 25 – 53% of the coho salmon harvested from Copper River Highway streams (Table 39-1). Many anglers walk upstream of the highway on Ibeck Creek to get away from crowds and to fish above the confluence with the Scott Glacier. Currently the glacial waters of the Scott Glacier mix with the clear water of Ibeck Creek just upstream of the Copper River Highway. The Statewide Harvest Survey (SWHS) estimates that 18,112 angler-days (average 2010–2019) occur on the Cordova road system. It is estimated by the SWHS that anglers annually catch and harvest, 28,107 and 15,732 coho salmon, respectively (average 2010–2019) (Table 39-1). Ibeck Creek is managed as part of the Copper River Delta escapement goal. The Copper River Delta is managed for a coho salmon sustainable escapement

goal (SEG) range of 32,000 to 67,000 fish. This goal is monitored inseason through aerial surveys and in the last 10 years (2010–2019) the SEG has been achieved (Table 38-1). The department has the authority to restrict or liberalize the fisheries inseason to achieve escapement.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal. If adopted, federally-qualified subsistence users would still be able to fish with rod and reel in this portion of Ibeck Creek under federal subsistence regulations. The department does not have a biological concern for Copper River Delta coho salmon stocks. In years with poor returns, the department has the authority to restrict fisheries inseason in order to ensure Copper River Delta escapement goals are met.

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

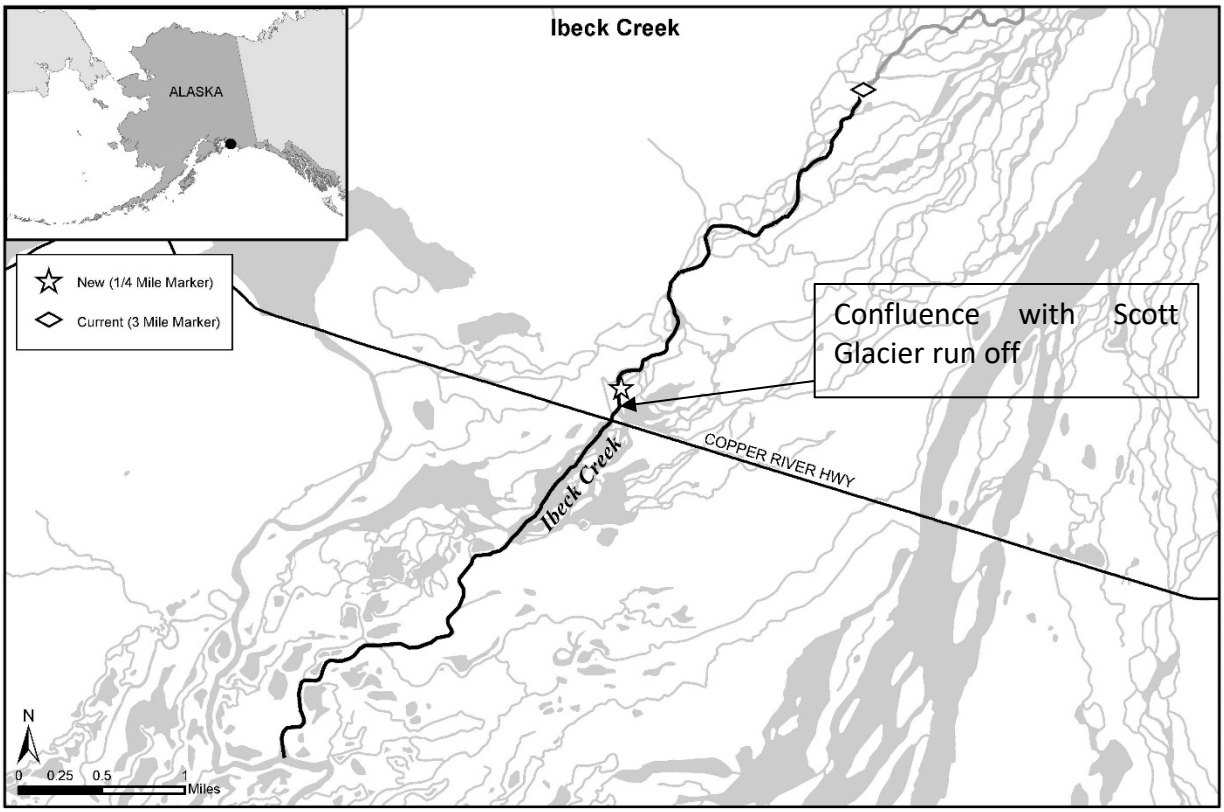


Figure 39-1.–Ibeck Creek drainage.

Table 39-1.– Harvest and catch of coho salmon at selected sites on the Copper River Highway, PWSMA, 2001–2019 (SWHS).

	Cordova Area Sites									
	Eyak River		Alaganik Slough		Ibeck Creek		Other Cordova sites		Total	
Year	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest
2001	17,477	10,025	3,188	1,565	726	462	14,113	2,465	35,504	14,517
2002	9,345	5,547	1,681	663	662	297	4,747	1,389	16,435	7,896
2003	15,604	8,473	4,655	1,708	11,857	3,318	15,041	3,329	47,157	16,828
2004	25,746	10,235	13,032	3,843	377	135	15,447	2,839	54,602	17,052
2005	10,639	5,228	4,049	1,777	4,120	2,437	11,304	2,601	30,112	12,043
2006	6,579	3,328	2,237	1,236	1,803	913	6,055	2,537	16,674	8,014
2007	8,141	4,677	1,641	1,052	2,260	927	7,352	2,874	19,394	9,530
2008	8,103	4,714	3,994	1,738	1,811	620	7,393	2,279	21,301	9,351
2009	13,065	8,464	2,425	1,379	7,925	3,780	4,728	909	28,143	14,532
2010	15,052	8,379	3,554	2,208	7,321	4,818	4,608	1,258	30,535	16,663
2011	8,633	5,206	2,303	1,332	12,223	7,351	6,909	1,198	30,068	15,087
2012	11,775	7,010	949	623	10,345	7,430	5,054	591	28,123	15,654
2013	10,260	7,229	4,698	2,752	13,204	6,986	3,247	1,495	31,409	18,462
2014	13,093	7,857	2,815	1,728	10,890	6,274	4,607	1,066	31,405	16,925
2015	10,655	8,338	12,483	5,862	22,875	10,315	3,283	1,152	49,296	25,667
2016	6,794	5,217	4,817	2,413	8,868	5,464	2,829	588	23,308	13,682
2017	4,429	3,088	1,980	887	8,081	5,584	3,323	888	17,813	10,447
2018	6,634	4,958	3,773	2,291	3,980	2,747	2,156	1,093	16,543	11,089
2019	8,950	5,900	5,831	3,102	4,578	3,899	3,212	740	22,571	13,641
Average 2009–2018	9,628	6,318	4,320	2,320	10,237	6,087	3,923	1,007	28,107	15,732

PROPOSAL 40 – 5 AAC 55.023. Special provisions for the seasons, bag, possession, and size limits, and methods and means for the Prince William Sound Area.

PROPOSED BY: Copper River/Prince William Sound Fish and Game Advisory Committee.

WHAT WOULD THE PROPOSAL DO? Close 18-Mile Creek to coho salmon fishing August 1 to November 1.

WHAT ARE THE CURRENT REGULATIONS? Coho salmon sport fishing is open year-round, with a bag and possession limit of three coho salmon in freshwater drainages crossed by the Copper River Highway. A coho salmon that is removed from the water must be retained and becomes part of the bag limit of the person who originally hooked the fish. From August 15 – September 15 anglers that harvest a bag limit of coho salmon in this area may not sport fish with bait for the rest of the day in those waters. Eighteen Mile Creek is open year-round to cutthroat trout and Dolly Varden fishing with a bag and possession limit of 10 of each.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would create an exception to the road system provision as 18-Mile Creek would be the only Copper River Highway tributary closed to coho salmon fishing, likely moving angling effort to waters not affected by this proposal. Anglers could still fish for trout and other salmon, except coho salmon. Escapement of coho salmon may increase in 18-Mile Creek by an unknown, but likely small amount. Sport harvest of coho salmon on the Copper River Highway tributaries may decrease by an unknown, but likely small amount, but would most likely not change. This would likely increase effort and potentially harvest at other coho salmon fishing locations by an unknown amount, but likely small amount.

BACKGROUND: Eighteen Mile Creek is a tributary of Alaganik Slough (Figure 40-1; Table 40-1) which crosses the Copper River Highway. Anglers target trout, char, and salmon, including coho salmon, in Alaganik Slough and 18-Mile Creek. Eighteen Mile Creek can be accessed from the Copper River Highway or from Alaganik Slough Road. In 2018, the US Forest Service made improvements to a trail that can be accessed from the Copper River Highway and the upper portion of 18-Mile Creek and this increased angler effort as they are able to access one of the better sections for anglers to target coho salmon in this tributary. Effort levels in Eighteen Mile Creek are too low to be captured in the Statewide Harvest Survey, so the department has no estimates of catch or harvest of coho salmon from this tributary. The bag and possession limit of three salmon (other than king salmon) has been in effect since 1989 in the Prince William Sound (PWS) Management Area.

Escapement goals for the Copper River Delta, which includes 18-Mile Creek, are evaluated by department aerial surveys and have been achieved for coho salmon in each of the previous ten years (Table 38-1). In 2019, the last year of complete data, the aerial survey escapement estimate was 36,420 coho salmon in drainages crossed by the Copper River Highway. The sustainable escapement goal (SEG) for the Copper River Delta is 32,000 to 67,000 coho salmon.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal. If adopted, this proposal would result in regulatory complexity. The department does not have a biological concern for Copper River Delta coho salmon stocks. In years with poor returns, the department has the authority to restrict fisheries inseason in order to ensure Copper River Delta escapement goals are met.

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

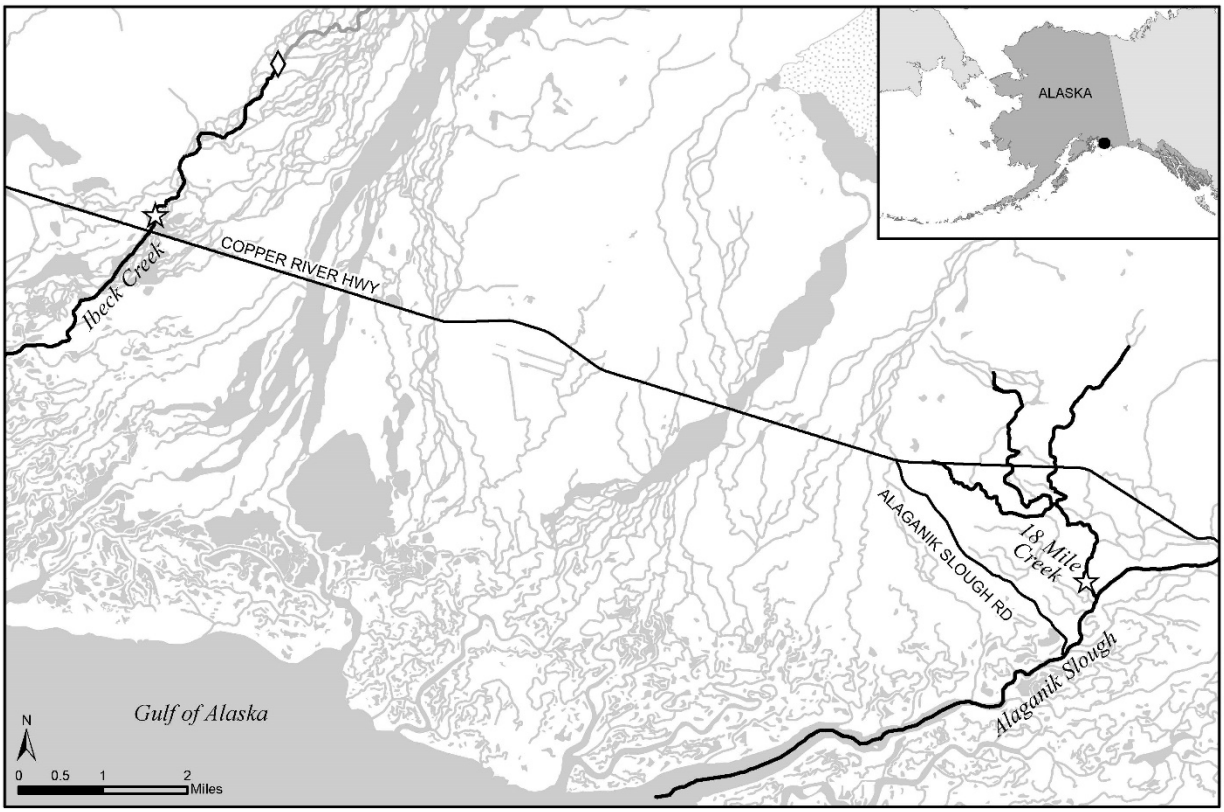


Figure 40-1.–Ibeck and 18-mile creeks on the Copper River Delta.

Table 40-1.–Harvest and catch of coho salmon at selected sites of the Cordova road system and Copper River Delta, PWSMA, 2001–2019.

	Cordova Area Sites									
	Eyak River		Alaganik Slough		Ibeck Creek		Other Cordova sites		Total	
Year	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest
2001	17,477	10,025	3,188	1,565	726	462	14,113	2,465	35,504	14,517
2002	9,345	5,547	1,681	663	662	297	4,747	1,389	16,435	7,896
2003	15,604	8,473	4,655	1,708	11,857	3,318	15,041	3,329	47,157	16,828
2004	25,746	10,235	13,032	3,843	377	135	15,447	2,839	54,602	17,052
2005	10,639	5,228	4,049	1,777	4,120	2,437	11,304	2,601	30,112	12,043
2006	6,579	3,328	2,237	1,236	1,803	913	6,055	2,537	16,674	8,014
2007	8,141	4,677	1,641	1,052	2,260	927	7,352	2,874	19,394	9,530
2008	8,103	4,714	3,994	1,738	1,811	620	7,393	2,279	21,301	9,351
2009	13,065	8,464	2,425	1,379	7,925	3,780	4,728	909	28,143	14,532
2010	15,052	8,379	3,554	2,208	7,321	4,818	4,608	1,258	30,535	16,663
2011	8,633	5,206	2,303	1,332	12,223	7,351	6,909	1,198	30,068	15,087
2012	11,775	7,010	949	623	10,345	7,430	5,054	591	28,123	15,654
2013	10,260	7,229	4,698	2,752	13,204	6,986	3,247	1,495	31,409	18,462
2014	13,093	7,857	2,815	1,728	10,890	6,274	4,607	1,066	31,405	16,925
2015	10,655	8,338	12,483	5,862	22,875	10,315	3,283	1,152	49,296	25,667
2016	6,794	5,217	4,817	2,413	8,868	5,464	2,829	588	23,308	13,682
2017	4,429	3,088	1,980	887	8,081	5,584	3,323	888	17,813	10,447
2018	6,634	4,958	3,773	2,291	3,980	2,747	2,156	1,093	16,543	11,089
2019	8,950	5,900	5,831	3,102	4,578	3,899	3,212	740	22,571	13,641
Average 2009–2018	9,628	6,318	4,320	2,320	10,237	6,087	3,923	1,007	28,107	15,732

COMMITTEE OF THE WHOLE – GROUP 4: PRINCE WILLIAM SOUND ENHANCEMENT AND GEAR, SEASONS, AND CLOSED WATERS (19 PROPOSALS)

Enhancement (14 proposals)

PROPOSAL 42 – 5 AAC 24.370. Prince William Sound Management and Enhancement Allocation Plan.

PROPOSED BY: Darin Gilman.

WHAT WOULD THE PROPOSAL DO? This would decrease the exvessel value trigger for the set gillnet fleet from 5% to 4.25%.

WHAT ARE THE CURRENT REGULATIONS? Under the current allocation plan (5 AAC 24.370(f)): If the set gillnet gear group catches 5 percent or more of the previous five-year average ex-vessel value of the total common property fishery for enhanced salmon as calculated by the department under (c) of this section, the year following this calculation beginning July 10, the department shall by emergency order, open set gillnet fishing periods totaling no more than 36 hours per week.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The set gillnet gear group would be restricted to no more than 36 hours per week more frequently than under current regulations, resulting in decreased set gillnet harvest. Conversely, this would increase drift gillnet harvest by restricting set gillnet in more years than the current trigger dictates.

BACKGROUND: The 5-year average exvessel values of enhanced salmon harvested by the set gillnet group have been above the 5% trigger point in 3 of 5 years since 2016 (Table 42-1). With a 4.25% trigger, set gillnet gear users would have been restricted to 36 hours of commercial fishing per week during each of the last 5 years (Table 42-1).

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 42-1.–Five year rolling average allocation percentages by gear type, 2016–2020.

Management Year	Drift gillnet	Purse Seine	Set Gillnet
2020	52.3%	47.7%	5.4%
2019	43.1%	56.9%	4.7%
2018	46.7%	53.3%	5.2%
2017	47%	53%	5.1%
2016	44.7%	55.3%	4.5%

PROPOSAL 43 – 5 AAC 24.370. Prince William Sound Management and Salmon Enhancement Allocation Plan.

PROPOSED BY: Michael Bowen.

WHAT WOULD THE PROPOSAL DO? This would include Valdez Fisheries Development Association (VFDA) enhanced salmon harvest value in the *Prince William Sound Management and Salmon Enhancement Allocation Plan*.

WHAT ARE THE CURRENT REGULATIONS? Under the *Prince William Sound Management and Salmon Enhancement Allocation Plan*, "enhanced salmon stocks" are defined as those salmon produced by Prince William Sound Aquaculture Corporation (PWSAC).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Enhanced pink salmon produced by VFDA would add an average value (2014–2018) of $18.13 million ($17.84 million for pink salmon, $290,600 for coho salmon) to the purse seine portion of the *Prince William Sound Management and Salmon Enhancement Allocation Plan*. Adding this value to the purse seine allocation would increase the likelihood of allocation imbalance and increase the frequency that the drift gillnet fleet would have access to Port Chalmers chum salmon.

BACKGROUND: The 5-year average purse seine harvest (2015–2019) of VFDA pink salmon is 13.54 million fish and PWSAC pink salmon is 13.74 million fish. VFDA pink salmon are harvested almost exclusively by the purse seine gear group. The harvest timing for VFDA pink salmon is from June 18–August 2 and provides the primary early-season purse seine salmon fishing opportunity in PWS. The 5-year average purse seine harvest (2015–2019) of VFDA coho salmon is 25,700 fish. VFDA coho salmon are harvested exclusively by the purse seine gear group.

Proposals pertaining to the *Prince William Sound Management and Salmon Enhancement Allocation Plan* have been before the board since the plan became effective in 1991. A history and analysis of the allocation plan through the 1996 board meeting is available in board finding 97-02-FB. After 1997, the plan continued to fail to achieve some of its allocation objectives, resulting in modifications to the plan at the 2003 board meeting and the formation of a PWS Management and Allocation Plan Workgroup. The workgroup formally met at least six times between 2004 and the 2005 board meeting. Board action at the 2005 meeting modified the plan to apply only to PWSAC enhanced stocks, excluding VFDA stocks and wild stocks from both PWS and Copper River. This history and analysis of the *Prince William Sound Management and Salmon Enhancement Allocation Plan* is available in board finding 06-248-FB.

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 43-1.–Five-year annual harvest value of SGH Hatchery by gear type and species, 2014–2018.

Pink Salmon

Year	Drift Gillnet	Purse Seine	Set Gillnet	Total Value
2014	$35,327	$22,251,059	$1,242	$22,287,628
2015	$14,596	$22,950,630	$1,058	$22,966,284
2016	$15,103	$9,916,671	$435	$9,932,209
2017	$163,919	$20,841,121	$2,490	$21,007,529
2018	$37,996	$14,605,637	$2,315	$14,645,948
Average	$47,406	$17,842,521	$1,464	$17,891,390

Coho Salmon

Year	Drift Gillnet	Purse Seine	Set Gillnet	Total Value
2014	$0	$1,423	$0	$1,423
2015	$0	$57,646	$0	$57,646
2016	$0	$41,635	$0	$41,635
2017	$20,751	$314,275	$119	$335,145
2018	$9,160	$1,038,239	$103	$1,047,502
Average	$5,982	$290,644	$111	$296,670

Table 43-2.–Five-year percentage of harvest value of SGH Hatchery by gear type, 2014–2018.

Year	DGN	PS	SGN	Annual Total
2014	0.16%	99.8%	0.01%	100.0%
2015	0.06%	99.9%	0.00%	100.0%
2016	0.15%	99.9%	0.00%	100.0%
2017	0.78%	99.2%	0.01%	100.0%
2018	0.26%	99.7%	0.02%	100.0%
Average	0.29%	99.7%	0.01%	100.0%

PROPOSAL 44 – 5 AAC 24.370. Prince William Sound Management and Enhancement Allocation Plan.

PROPOSED BY: Darin Gilman.

WHAT WOULD THE PROPOSAL DO? If the set gillnet gear group is limited to no more than 36 hours per week beginning July 10, this proposal stipulates that it must be the first 36 hours per week.

WHAT ARE THE CURRENT REGULATIONS? If the set gillnet gear group catches 5% or more of the previous five-year average ex-vessel value of the total common property fishery for enhanced salmon as calculated by the department, then beginning July 10 in the year following this calculation, the department shall by emergency order, open set gillnet fishing periods totaling no more than 36 hours of fishing time per week.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Specifying that the set gillnet fleet is limited to the first 36 hours of the week would largely result in decreased harvest for the set gillnet fleet. This would require that fishing time for set gillnet gear group is at the beginning of the week rather than split throughout the week which would result in fishing fewer total periods.

BACKGROUND: In 2005, the *Prince William Sound Management and Salmon Enhancement Allocation Plan* was changed to include only PWSAC enhanced salmon. During that process, wild salmon (including Copper River drift gillnet fishery) and Solomon Gulch pink salmon (purse seine fishery) were both excluded from the allocation calculation. These were balanced concessions negotiated by each gear group. The set gillnet gear group has been above the 5% trigger for allocative corrective action in 3 out of the last 5 years (Table 44-1). Fishing the first 36 hours of available fishing time each week during these recent years with the allocative corrective action triggered would have resulted in the set gillnet gear group fishing three fewer second weekly fishing periods.

Proposals pertaining to the *Prince William Sound Management and Salmon Enhancement Allocation Plan* have been before the board since the plan became effective in 1991. A history and analysis of the allocation plan through the 1996 board meeting is available in board finding 97-02-FB. After 1997, the plan continued to fail to achieve some of its allocation objectives, resulting in modifications to the plan at the 2003 board meeting and the formation of a PWS Management and Allocation Plan Workgroup. The workgroup formally met at least six times between 2004 and the time of the 2005 board meeting. Board action at the 2005 board meeting modified the plan to apply only to enhanced stocks, excluding VFDA stocks and PWS and Copper River wild stocks. A history and analysis of the most recent Alaska Board of Fisheries Findings on the *Prince William Sound Management and Salmon Enhancement Allocation Plan* is available in board finding 06-248-FB.

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 44-1.–Five year rolling average allocation percentages by gear type, 2006–2020.

Management Year	Drift gillnet	Purse Seine	Set Gillnet
2020	52.30%	47.70%	5.40%
2019	43.10%	56.90%	4.70%
2018	46.70%	53.30%	5.20%
2017	47.00%	53.00%	5.10%
2016	44.70%	55.30%	4.50%
2015	44.60%	55.40%	4.30%
2014	46.30%	53.70%	4.30%
2013	42.40%	57.60%	4.10%
2012	39.00%	60.90%	3.70%
2011	41.00%	59.00%	4.00%
2010	37.90%	62.10%	3.70%
2009	42.90%	57.10%	5.30%
2008	52.40%	47.60%	6.00%
2007	54.60%	45.40%	6.30%
2006	56.89%	43.11%	5.84%

PROPOSAL 45 – 5 AAC 24.367. Main Bay Salmon Hatchery Harvest Management Plan.

PROPOSED BY: Prince William Sound Setnetters Association.

WHAT WOULD THE PROPOSAL DO? This would limit commercial drift gillnet operations to within 30 fathoms of a commercial set gillnet in the Main Bay Hatchery Subdistrict, excluding in the zone outside the offshore end of the set gillnet.

WHAT ARE THE CURRENT REGULATIONS? There is a minimum distance of 25 fathoms between set gillnet and drift gillnet operations in the Main Bay Subdistrict, except in the zone outside the setnet offshore end, and no part of a set gillnet may be operated within 50 fathoms of any other part of another set gillnet. This gear spacing also applies to the Main Bay Hatchery Terminal Harvest Area (THA). Set gillnets are currently limited to 50 fathoms in length in the Main Bay Hatchery THA.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would prevent drift gillnets from being deployed between set gillnets in the Main Bay Subdistrict unless the set gillnets are more than 60 fathoms apart. It is difficult to determine how adoption of this proposal would affect harvest or harvest opportunity for each gear group. The proposed increase in gear spacing would decrease crowding and gear conflicts and be easier to enforce.

BACKGROUND: At the 1996 PWS board meeting, the board adopted a similar proposal that affected minimum distance requirements in waters of the Crafton Island Subdistrict. At that time, set gillnets needed to be separated by at least 100 fathoms and drift gillnet gear needed to be 50 fathoms away from a set net. This created a theoretical line equidistant between two adjacent set nets where a drift gillnet could conceivably be deployed. While it would be difficult to remain perfectly centered between two set gillnets, drift gillnet fishermen attempted to exploit this ambiguity in regulation. The board increased the minimum distance between drift and set gear to 60 fathoms in the Crafton Island Subdistrict thereby eliminating this interpretation in regulation.

For conservation purposes, the Main Bay Subdistrict (Figure 45-1) is sometimes opened by itself for the harvest of enhanced stocks and to minimize the harvest of wild stocks migrating in the general Crafton Island Subdistrict. Gear and spacing requirements are different inside Main Bay than in the Crafton Island Subdistrict to accommodate additional gear in this terminal fishery adjacent to the hatchery. Minimum distance requirements between two set gillnets sites is reduced to 50 fathoms, set gillnets may only be 50 fathoms in length, and drift gillnet gear must remain at least 25 fathoms from set gillnet gear. The same regulatory ambiguity that previously existed in the Crafton Island Subdistrict in 1996 currently exists for the Main Bay Subdistrict. At the 1999 PWS board meeting, a similar proposal that sought to increase the minimum distance between set and drift gillnet gear in

the Main Bay Subdistrict failed. In making their decision, board members at this meeting expressed concern about allocation, enforcement, and lack of clarity.

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.

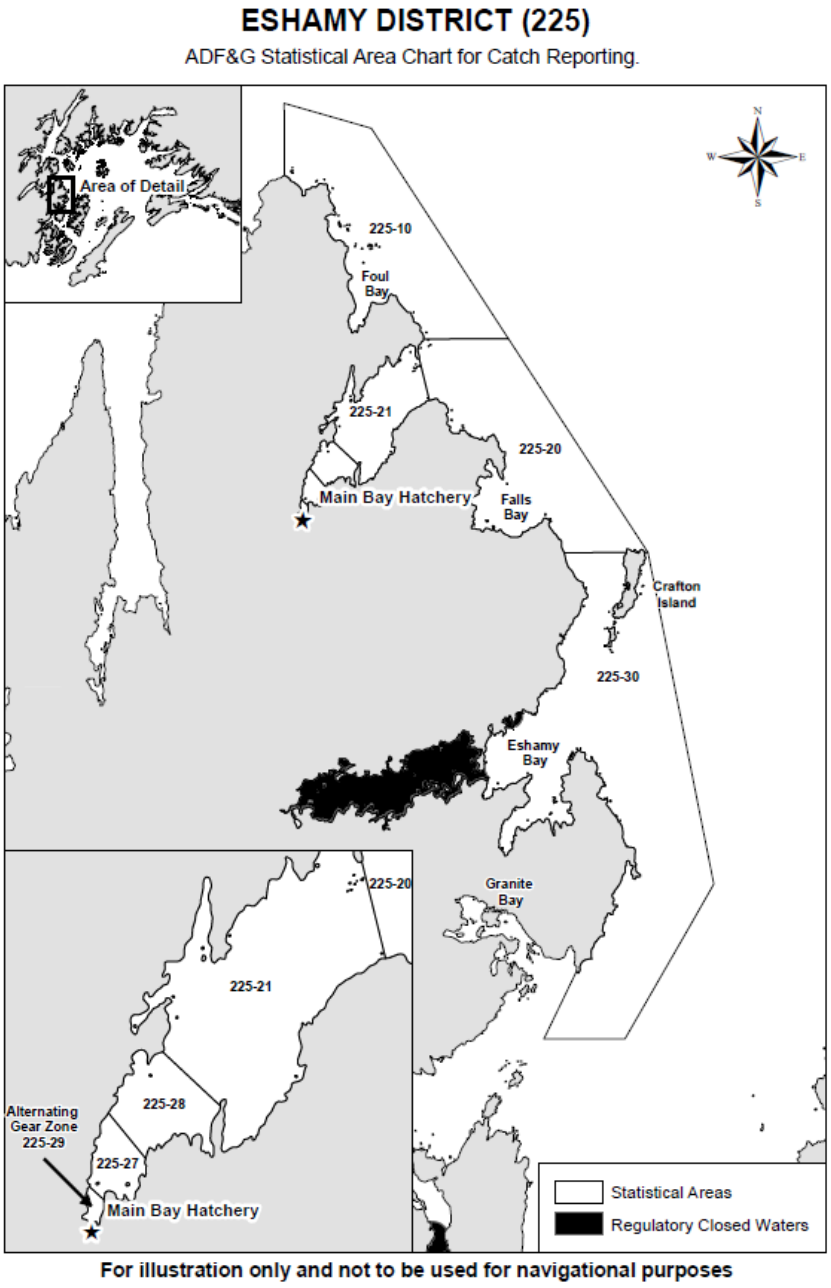


Figure 45-1.–Eshamy District map.

PROPOSAL 46 – 5 AAC 24.331. Gillnet specifications and operations.

PROPOSED BY: Ezekiel Brown.

WHAT WOULD THE PROPOSAL DO? This would allow the use of drift gillnets deeper than 60 meshes prior to the first Monday of July in Coghill, Unakwik, and Eshamy districts and the Port Chalmers Subdistrict (Figure 46-1).

WHAT ARE THE CURRENT REGULATIONS? Before the first Monday in July, unless modified by emergency order, in the Coghill, Unakwik, and Eshamy Districts and the Port Chalmers Subdistrict, drift gillnets with a mesh size of less than eight inches may not be more than 60 meshes in depth and drift gillnets with a mesh size of eight inches or greater may not be more than 40 meshes in depth;

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would likely increase harvest efficiency of the drift gillnet fleet. Allowing deeper gear in these districts can lead to enforcement concerns of deep gear illegally being fished in other districts, notably Copper River and Bering River where net depth is limited to 60 meshes. The differences between a 60-mesh net and a deeper net are difficult to discern when a net is on a reel and when a net is deployed. Determining if someone was fishing a deep net illegally in the Copper River and Bering River districts would likely require physically counting meshes and would not be enforceable from the air or passing by in a boat.

BACKGROUND: The current regulation, 5 AAC 24.331(b)(6), was adopted in 1979 in response to concerns over sockeye salmon harvest levels. The Coghill Lake and Miners Lake wild sockeye salmon run timing overlaps with the Esther hatchery chum salmon run timing. This regulation is in place to conserve wild sockeye salmon in migratory corridors and in terminal areas. The department currently has EO authority to allow deeper gear prior to the first Monday of July.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. If this proposal is adopted the department would use time and area adjustments to achieve management goals rather than gear restrictions.

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.

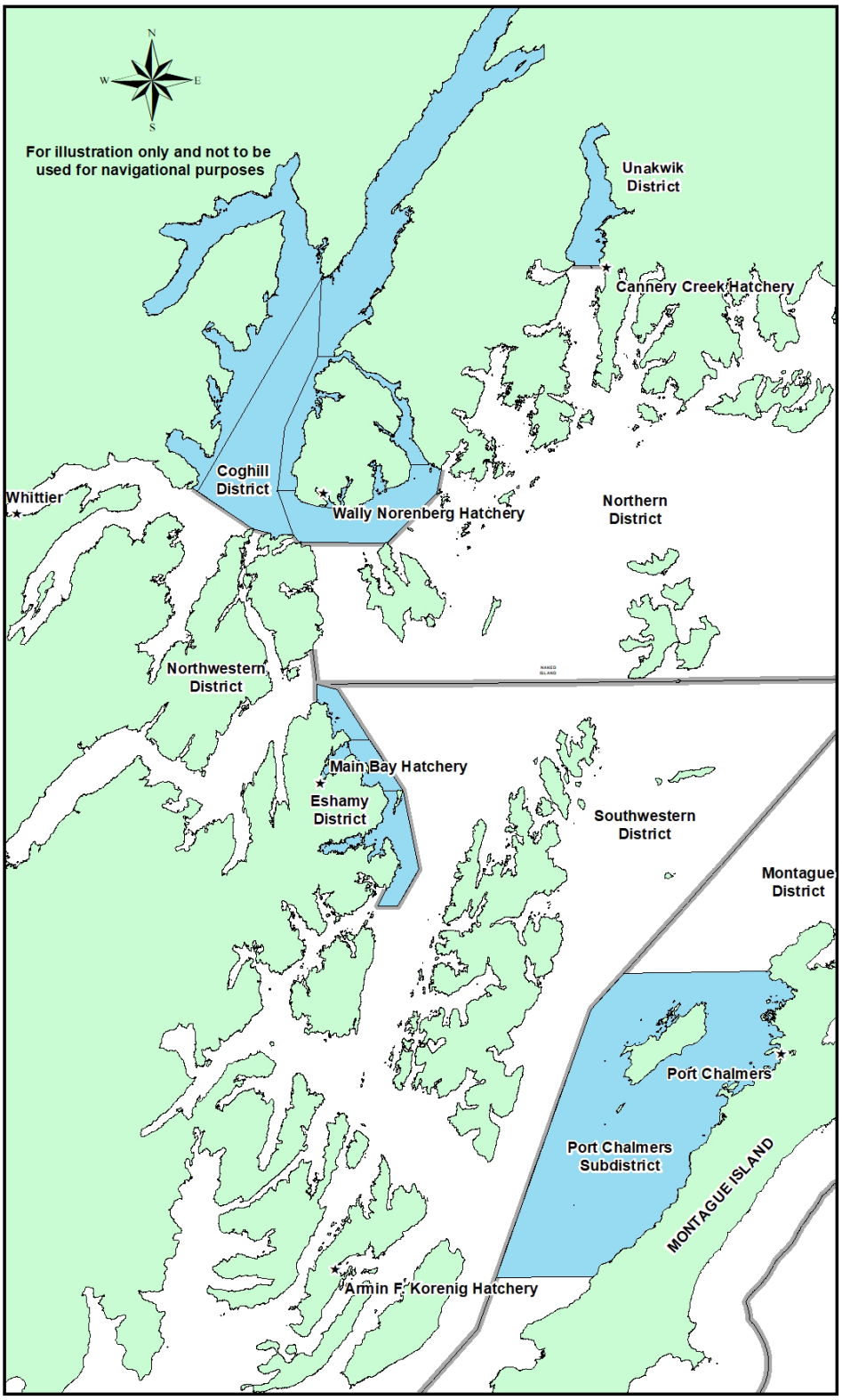


Figure 46-1.-Drift Gillnet Districts and subdistricts referenced in Proposal 46.

PROPOSAL 47 and 48 – 5 AAC 24.370. Prince William Sound Management and Enhancement Allocation Plan.

PROPOSED BY: Northwest and Alaska Seine Association.

WHAT WOULD THE PROPOSAL DO? These proposals would amend the *Prince William Sound Management and Salmon Enhancement Allocation Plan* to provide the department further guidance on management of the Coghill and Eshamy districts to reduce the harvest of stocks bound for other districts.

WHAT ARE THE CURRENT REGULATIONS? The Coghill and Eshamy districts are described in *5 AAC 24.200. Fishing districts, subdistricts, and sections.*

Under the *Prince William Sound Management and Salmon Enhancement Allocation Plan,* the Coghill District is open to drift gillnet gear during periods established by emergency order until July 21 after which time, if the harvestable surplus is predominately pink salmon, purse seine gear may be operated. After July 21, both purse seine and drift gillnet gear may be operated in the district. In late August/early September, when the harvest is no longer predominantly pink salmon (dominated by coho salmon) the district is open to drift gillnet gear only. The Eshamy District is managed based on surplus wild and enhanced salmon stocks returning to the district.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would not change current management practices. The department already manages to focus fishing effort within districts on salmon stocks returning to these districts, thereby reducing the potential harvest of stocks bound for other areas.

BACKGROUND: Current management practices within Coghill and Eshamy districts incorporate time and area adjustments in commercial fisheries that limit wild salmon harvest based on species specific escapement goals in affected districts. Additionally, the department has management tools and guidance from Prince William Sound Management and Salmon Enhancement Allocation Plan that provide a framework for managing enhanced salmon harvest in these districts.

Since 2015, the gillnet gear group has harvested an average of 40,000 Solomon Gulch Hatchery (SGH) pink salmon and 50,000 Armin F. Koernig Hatchery (AFK) chum salmon in the Coghill and Eshamy districts (Table 47-1). These fisheries harvested an annual average of 14% of the AFK chum salmon and <1% SGH pink salmon runs. The annual combined SGH pink and AFK chum salmon harvest in the Coghill and Eshamy districts over the previous five years represents an average of 2% of the annual total gillnet harvest from these two districts. These hatchery released salmon are intended to be harvested by the purse seine fleet. The value of the enhanced salmon is accounted for and added to the gillnet gear portion of the allocation plan. Similar language was added to the *Prince*

William Sound Management and Salmon Enhancement Allocation Plan for the AFK chum salmon fishery at the 2017 PWS BOF meeting. In addition to gillnet fisheries harvesting salmon bound for purse seine fisheries, purse seine fisheries throughout PWS harvest salmon intended to be harvested by the gillnet fleet.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. If the board adopts regulatory guidance for reducing harvest of salmon stocks bound for other districts, the language should apply to all commercial fishing districts to be consistent with current department management practices.

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 47-1.–Contribution of AFK chum and SGH pink salmon to Coghill and Eshamy districts gillnet fisheries, 2015–2019.

	2015	2016	2017	2018	2019	Total	5-year Average
AFKH Chum Salmon (No. of Fish)							
Coghill District	5,575	15,205	33,255	13,959	9,215	77,209	15,442
Eshamy District	44,644	43,842	22,721	18,795	40,200	170,203	34,041
Total	50,219	59,047	55,976	32,754	49,415	247,411	49,482
SGH Pink Salmon (No. of Fish)							
Coghill District	7,030	146	110,790	1,511	9,869	129,346	25,869
Eshamy District	10,151	3,352	19,874	20,118	14,785	68,280	13,656
Total	17,180	3,498	130,665	21,629	24,654	197,627	39,525

PROPOSAL 49 – 5 AAC 24.370. Prince William Sound Management and Salmon Enhancement Allocation Plan.

PROPOSED BY: Pioneer Alaska Fisheries Inc.

WHAT WOULD THE PROPOSAL DO? This would define "enhanced salmon stocks" in the *Prince William Sound Management and Salmon Enhancement Allocation Plan* such that it would require the department and the board to set hard triggers on an acceptable percentage of straying for each species of salmon and, if exceeded, require hatchery production to be reduced the following spring from each remote release site, hatchery or terminal harvest area (THA) until straying is found below the trigger level. It would also emphasize wild stock management and minimizing impact on wild stocks as primary objectives of the plan, essentially codifying components of the Prince William Sound/Copper River Comprehensive Salmon Plan.

WHAT ARE THE CURRENT REGULATIONS? The *Prince William Sound Management and Salmon Enhancement Allocation Plan* defines area and time management for a fair and reasonable allocation of the harvest of enhanced salmon among the drift gillnet, seine, and set gillnet commercial fisheries and to reduce conflict between the user groups.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The effect of a reduction in hatchery-produced sockeye, coho, pink, and chum salmon would not be apparent in the commercial fishery until returns from impacted brood years are realized.

This proposal may also affect fishery management considerations related to issues of effort on wild and hatchery stock. Focusing purse seine, drift gillnet, and set gillnet fishing effort on hatchery-produced salmon fisheries serves to reduce effort on other hatchery and wild stocks and to spread the fleets. A reduction in hatchery production could increase effort on wild salmon stocks and possibly result in more conservative management of those fisheries. An additional effect would be a potential increase in the proportion of the total return required for hatchery cost recovery.

BACKGROUND: Alaska Statute places authority for permitting salmon hatcheries and associated activities with the Alaska Department of Fish and Game (AS 16.10.375- AS 16.10.560). The department has promulgated regulations to implement this permitting authority that includes opportunity for public comment allows concerns to be considered by the commissioner when reviewing salmon hatchery permit applications. The commissioner may modify an existing permit, if necessary (5 AAC 40.110 – 5 AAC 40.990). Hatchery salmon production was originally started in Prince William Sound (PWS) in the 1970s to mitigate the natural high and low return rates of wild salmon stocks. Production levels were selected to allow for an economically viable fishery during years of poor natural runs. Hatchery production levels are specified in the operating permit written for each hatchery. The current production levels are based on criteria in the *Prince William Sound/Copper River Phase 3 Comprehensive Salmon Plan* that was approved in 1994. The purpose of the Phase 3 plan is to achieve optimum production of wild and enhanced salmon stocks on a sustained yield basis. The plan establishes three fishery goals: 1) increase fishing opportunities for salmon resource users, 2) achieve equitable allocation of the harvestable surplus of wild and enhanced salmon while minimizing impacts to historic wild stock fisheries, and 3) achieve an

economically self-sustaining fishery. Additionally, the Phase 3 plan recommends that five biological and economic criteria be employed to achieve an optimum production level including: 1) wild stock escapement goals must be achieved over the long term, 2) the proportion of hatchery salmon straying into wild-stock streams must remain below 2% of the wild-stock escapement over the long term, 3) the growth rates of juvenile salmon during the early marine period must be density independent over the long term, 4) the abundance of juvenile salmon predators must be independent of juvenile salmon abundance over the long term, and 5) the long-term average cost of hatchery operation, management, and evaluation must remain below 50% of the value of hatchery production.

Please reference hatchery background information in proposals 50, 51, 52, and 53 for more detail on green egg capacity, annual returns/runs, and exvessel values.

The *Prince William Sound/Copper River Comprehensive Salmon Plan* notes that if it is determined that the rate of straying is significantly greater than 2%, the Prince William Sound/Copper River Regional Planning Team will determine whether and to what extent the hatchery program should be modified to reduce the rate of straying. Any recommendation made by the regional planning team goes to the commissioner for consideration. The plan further notes that the present estimate of acceptable threshold of hatchery-salmon straying is not well supported and further research is needed to determine the effect interbreeding may have on the productivity of wild salmon. The *Alaska Department of Fish and Game Genetic Policy* (Genetic Policy) does not define an acceptable rate of straying and provides rationale for why a single rate is not appropriate. It is difficult to develop stray rate thresholds that are scientifically defensible. The Genetic Policy outlines considerations in assessing stray rates: species (each species has different propensities to stray, and genetic diversity), the significance or uniqueness of the wild stock (e.g. escapement size, geographic distribution, life histories, genetic stock structure); and the hatchery broodstock origin and distance from, and life history similarity to, native stream.

Measuring stray rates is also not straight-forward and needs to consider: sampling methods within and across years (e.g. how many times a year and for how many years), single stream or streams representing a geographic area, and which streams (e.g. level of escapement and distance from release site to qualify a stream for sampling). Stray rates may vary greatly within years due to the relative return timing of hatchery and wild fish and may vary greatly between years due to variable freshwater survival of wild stocks relative to hatchery stocks. Finally, harvest management can impact the levels of straying.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. In permitting hatchery operations the department considers many of the concerns raised in this proposal, including the need to minimize negative interactions between hatchery-produced and wild salmon, minimize straying, and the need to ensure harvest practices targeting hatchery-produced salmon do not negatively impact wild fish. As new information becomes available through sources such as Alaska Hatchery Research Project, the department will consider this information during review of hatchery permits on a case-by-case basis and consider permit alterations, if appropriate.

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 will result in additional research costs for the department.

PROPOSAL 50 – 5 AAC 24.365. Armin F. Koernig Salmon Hatchery Management Plan.

PROPOSED BY: Pioneer Alaska Fisheries Inc.

WHAT WOULD THE PROPOSAL DO? This would require the department and the board to set hard triggers on an acceptable percentage of straying for each species of salmon released from the Armin F. Koernig Hatchery and if exceeded, require hatchery production to be reduced the following spring from each remote release site, hatchery or terminal harvest area (THA) until straying is found below the trigger level.

WHAT ARE THE CURRENT REGULATIONS? The *Armin F. Koernig Salmon Hatchery Management Plan* defines area and time management to achieve escapement goals to the hatchery.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The effect of reducing hatchery chum and pink salmon production would not be apparent in the commercial fishery until returns from impacted brood years are realized.

This proposal may also affect fishery management considerations related to issues of effort on wild and hatchery stock. Currently, hatchery chum and pink salmon attract a large proportion of purse seine fishing effort. This serves to reduce effort on other hatchery and wild stocks and to distribute the fleet throughout Prince William Sound (PWS). A reduction of hatchery chum or pink salmon could increase effort on other wild and enhanced salmon stocks and possibly result in more conservative management of those fisheries. An additional effect would be a potential increase in the proportion of the total return required for cost recovery.

BACKGROUND: Alaska Statute places authority for permitting salmon hatcheries and associated activities with the Alaska Department of Fish and Game (AS 16.10.375- AS 16.10.560). The department has promulgated regulations to implement this permitting authority that includes opportunity for public comment allows concerns to be considered by the commissioner when reviewing salmon hatchery permit applications. The commissioner may modify an existing permit, if necessary (5 AAC 40.110 – 5 AAC 40.990). Hatchery salmon production was originally started in PWS in the 1970s to mitigate the natural high and low return rates of wild salmon stocks. Production levels were selected to allow for an economically viable fishery during years of poor natural runs. Hatchery production levels are specified in the operating permit written for each hatchery. The current production levels are based on criteria in the *Prince William Sound /Copper River Phase 3 Comprehensive Salmon Plan* that was approved in 1994. The purpose of the Phase 3 plan is to achieve optimum production of wild and enhanced salmon stocks on a sustained yield basis. The plan establishes three fishery goals: 1) increase fishing opportunities for salmon resource users, 2) achieve equitable allocation of the harvestable surplus of wild and enhanced salmon while minimizing impacts to historic wild stock fisheries, and 3) achieve an economically self-sustaining fishery. Additionally, the Phase 3 Plan recommends that five biological and economic criteria be employed to achieve an optimum production level including: 1) wild stock escapement goals must be achieved over the long term, 2) the proportion of hatchery salmon

straying into wild-stock streams must remain below 2% of the wild-stock escapement over the long term, 3) the growth rates of juvenile salmon during the early marine period must be density independent over the long term, 4) the abundance of juvenile salmon predators must be independent of juvenile salmon abundance over the long term, and 5) the long-term average cost of hatchery operation, management, and evaluation must remain below 50% of the value of hatchery production.

The five-year even-year total return (2012-2020) of Armin F. Koernig Salmon Hatchery (AFK) pink salmon is 2.86 million fish and the five-year odd-year total return (2011-2019) of AFK pink salmon is 9.06 million fish (Table 50-1). Pink salmon total run exvessel value for AFK exhibits a general declining trend over the last 10 years (2010-2019) with a greater than 400% swing between high and low years and an annual average of $9.45 million. Over the last six years (2014-2019) the AFK pink salmon run has been in a lower survival pattern and annual exvessel value has averaged $6.6 million (Figure 50-2). AFK pink salmon are harvested predominately by the purse seine gear group. The harvest timing for AFK pink salmon is from July 20–August 20 and is one of three PWSAC hatcheries that provide purse seine pink salmon fishing opportunity in PWS. Beginning in 2017 the permitted capacity at AFK was increased by 17% from 162 million to 190 million pink salmon green eggs (Figure 50-1). There have only been two years of adult pink salmon returns since this production increase: the 2019 adult pink salmon return was 39% below the average odd-year (2009-2017) return of 10.0 million fish, and the 2020 adult pink salmon return was 75% below the average even-year (2000-2018) return of 5.4 million fish (Table 50-1).

The five-year average total run of PWSAC chum salmon at Wally Noerenberg Hatchery (WNH) is 2.64 million; Port Chalmers (PC) Remote Release is 630,000; and AFK is 350,000 (Figure 50-3). Chum salmon total run exvessel value for WNH has varied more widely than pink salmon, peaking in value in 2017 at $26.46 million and the recent 10-year average (2010-2019) is $16.21 million (Figure 50-2). WNH chum salmon are harvested primarily by the gillnet gear group. The harvest timing for WNH chum salmon is from June 1 - July 15 and are primarily harvested by the gillnet gear group. WNH is currently permitted for a total of 153 million chum salmon green eggs, 131 million for WNH and 22 million permitted for AFK (Figure 50-3). PWSAC is currently permitted to annually release 41 million chum salmon fry at Port Chalmers, these fry are part of the 131 million green eggs permitted at WNH.

The *Prince William Sound/Copper River Comprehensive Salmon Plan* notes that if it is determined that the rate of straying is significantly greater than 2%, the Prince William Sound/Copper River Regional Planning Team will determine whether and to what extent the hatchery program should be modified to reduce the rate of straying. Any recommendation made by the regional planning team goes to the commissioner for consideration. The plan further notes that the present estimate of acceptable threshold of hatchery-salmon straying is not well supported and further research is needed to determine the effect interbreeding may have on the productivity of wild salmon. The *Alaska Department of Fish and Game Genetic Policy* (Genetic Policy) does not define an acceptable rate of straying and provides rationale for why a single rate is not appropriate. It is difficult to develop stray rate thresholds that are scientifically defensible. The Genetic Policy outlines considerations in assessing stray rates: species (each species has different propensities to stray, and genetic diversity), the significance or uniqueness of the wild stock (e.g. escapement size, geographic distribution, life histories, genetic stock structure); and the hatchery broodstock origin and distance from, and life history similarity to, native stream.

Measuring stray rates is also not straight-forward and needs to consider: sampling methods within and across years (e.g. how many times a year and for how many years), single stream or streams representing a geographic area, and which streams (e.g. level of escapement and distance from release site to qualify a stream for sampling). Stray rates may vary greatly within years due to the relative return timing of hatchery and wild fish and may vary greatly between years due to variable freshwater survival of wild stocks relative to hatchery stocks. Finally, harvest management can impact the levels of straying.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. In permitting hatchery operations the department considers many of the concerns raised in this proposal, including the need to minimize negative interactions between hatchery-produced and wild salmon, minimize straying, and the need to ensure harvest practices targeting hatchery-produced salmon do not negatively impact wild fish. As new information becomes available through sources such as Alaska Hatchery Research Project, the department will consider this information during review of hatchery permits on a case-by-case basis and consider permit alterations, if appropriate.

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 will result in an additional research cost for the department.

Table 50-1.–Armin F. Koering Hatchery Pink Salmon Returns, 2000–2020

Year	Total Return
2000	6,904,559
2001	4,865,879
2002	7,929,788
2003	7,065,581
2004	5,230,138
2005	10,121,228
2006	5,216,231
2007	15,760,177
2008	6,112,588
2009	10,703,437
2010	13,768,753
2011	3,199,541
2012	3,763,888
2013	20,222,117
2014	4,476,859
2015	10,854,375
2016	1,471,867
2017	4,968,436
2018	3,307,954
2019	6,071,637
2020	1,293,916
Five-year, odd year average prior to production increase (2009–2017)	9,989,581
Five-year, even year average prior to production increase (2010–2018)	5,357,864
Odd year average since production increase (2019)	6,071,637
Even year average since production increase (2020)	1,293,916
Five-year, odd year average (2011–2019)	9,063,221
Five-year, even year average (2012–2020)	2,862,897

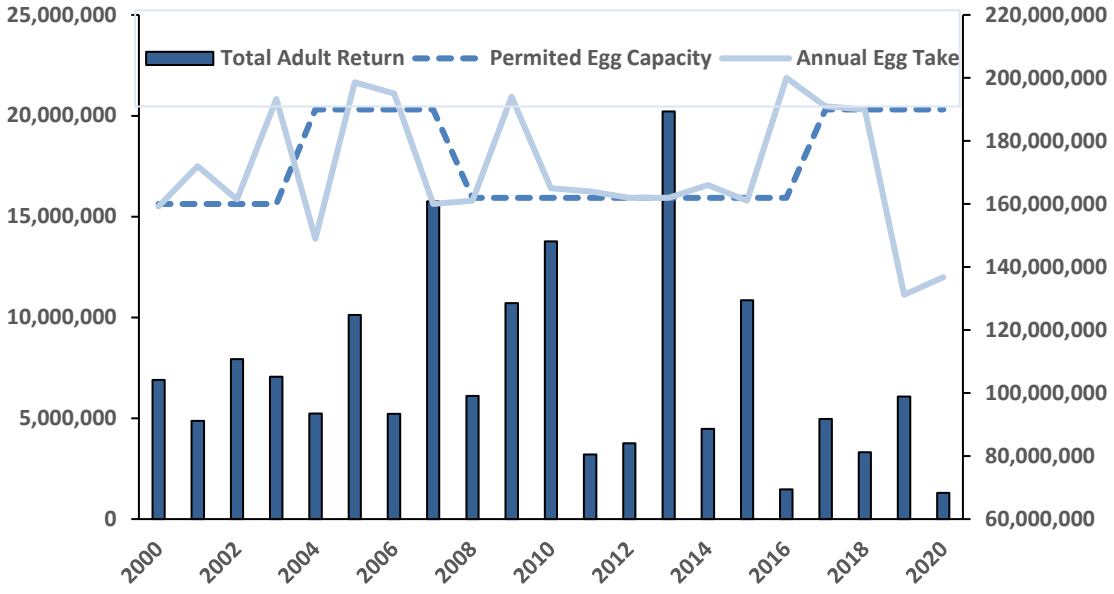


Figure 50-1.–Armin F. Koernig Hatchery Pink Salmon Adult Returns, Permitted Egg Capacity, and Annual Egg Take, 2000–2020. Egg Take trendline obscures Egg Capacity trendline in years they were similar.

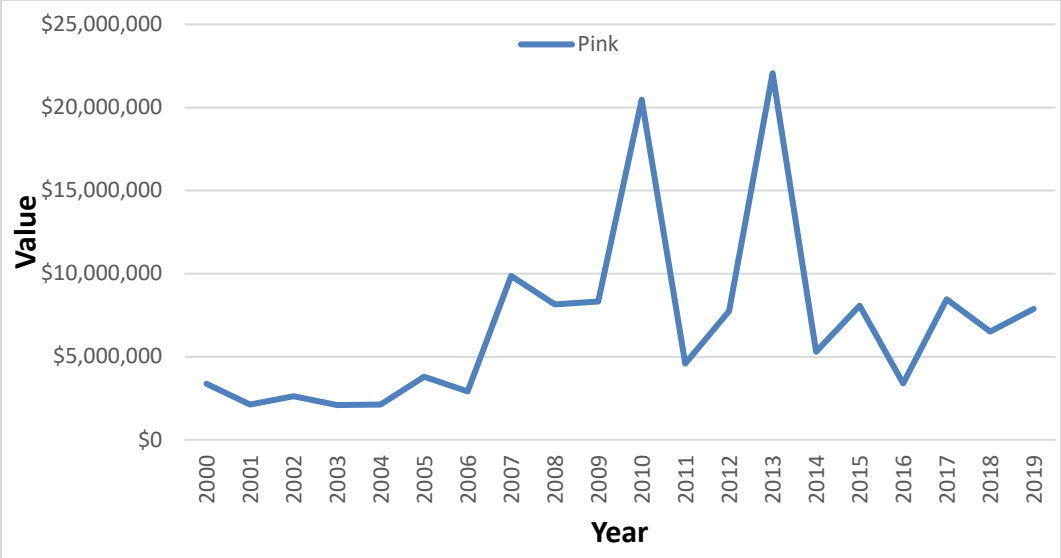


Figure 50-2.–AFK pink salmon total run exvessel value, 2010–2019.

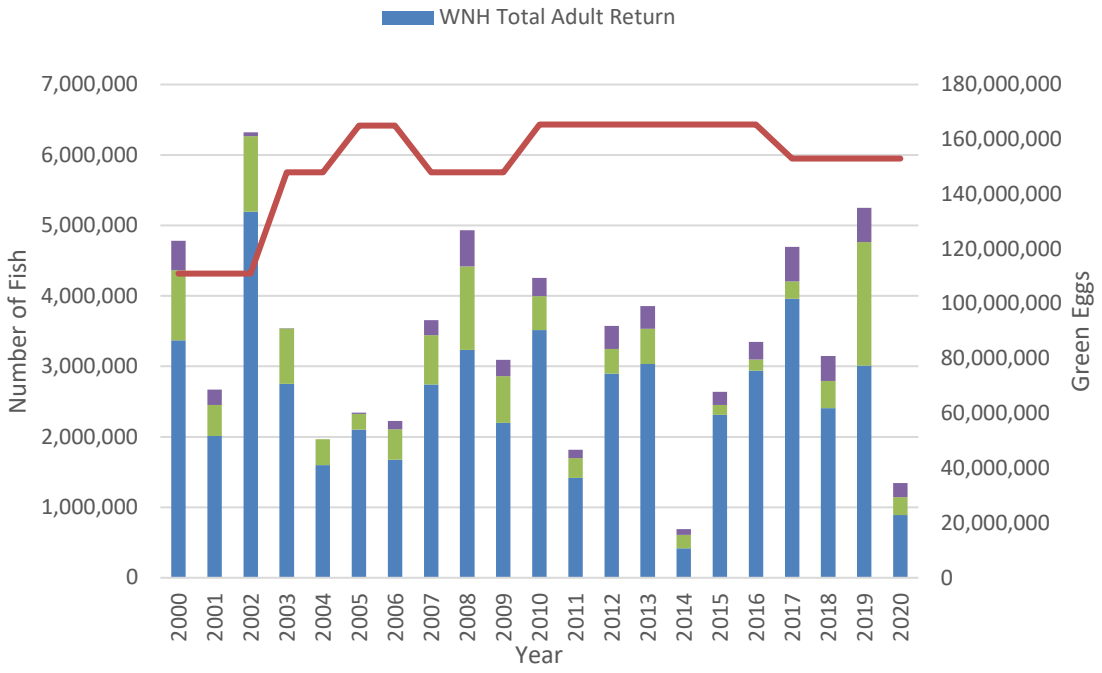


Figure 50-3.–PWSAC chum salmon adult returns and WNH permitted egg capacity, 2000–2020.

PROPOSAL 51 – 5 AAC 24.363. Cannery Creek Hatchery Management Plan.

PROPOSED BY: Pioneer Alaska Fisheries Inc.

WHAT WOULD THE PROPOSAL DO? This would require the department and the board to set hard triggers on an acceptable percentage of straying for each species of salmon released from the Cannery Creek Hatchery and if exceeded, require hatchery production to be reduced the following spring from each remote release site, hatchery or terminal harvest area (THA) until straying is found below the trigger level.

WHAT ARE THE CURRENT REGULATIONS? The *Cannery Creek Salmon Hatchery Management Plan* defines area and time management to achieve escapement goals to the hatchery.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The effect of reducing hatchery pink salmon production would not be apparent in the commercial fishery until returns from impacted brood years are realized.

This proposal may also affect fishery management considerations related to issues of effort on wild and hatchery stock. Currently, hatchery pink salmon attract a large proportion of purse seine fishing effort. This serves to reduce effort on other hatchery and wild stocks and to distribute the fleet throughout Prince William Sound (PWS). A reduction of hatchery chum or pink salmon could increase effort on other wild and enhanced salmon stocks and possibly result in more conservative management of those fisheries. An additional effect would be a potential increase in the proportion of the total return required for cost recovery.

BACKGROUND: Alaska Statute places authority for permitting salmon hatcheries and associated activities with the Alaska Department of Fish and Game (AS 16.10.375- AS 16.10.560). The department has promulgated regulations to implement this permitting authority that includes opportunity for public comment allows concerns to be considered by the commissioner when reviewing salmon hatchery permit applications. The commissioner may modify an existing permit, if necessary (5 AAC 40.110 – 5 AAC 40.990). Hatchery salmon production was originally started in PWS in the 1970s to mitigate the natural high and low return rates of wild salmon stocks. Production levels were selected to allow for an economically viable fishery during years of poor natural runs. Hatchery production levels are specified in the operating permit written for each hatchery. The current production levels are based on criteria in the *Prince William Sound /Copper River Phase 3 Comprehensive Salmon Plan* that was approved in 1994. The purpose of the Phase 3 plan is to achieve optimum production of wild and enhanced salmon stocks on a sustained yield basis. The plan establishes three fishery goals: 1) increase fishing opportunities for salmon resource users, 2) achieve equitable allocation of the harvestable surplus of wild and enhanced salmon while minimizing impacts to historic wild stock fisheries, and 3) achieve an economically self-sustaining fishery. Additionally, the Phase 3 plan recommends that five biological and economic criteria be employed to achieve an optimum production level including: 1) wild stock escapement goals must be achieved over the long term, 2) the proportion of hatchery salmon

straying into wild-stock streams must remain below 2% of the wild-stock escapement over the long term, 3) the growth rates of juvenile salmon during the early marine period must be density independent over the long term, 4) the abundance of juvenile salmon predators must be independent of juvenile salmon abundance over the long term, and 5) the long-term average cost of hatchery operation, management, and evaluation must remain below 50% of the value of hatchery production.

The five-year even-year total return (2012-2020) of Cannery Creek Salmon Hatchery (CCH) pink salmon is 3.08 million fish and the five-year odd-year total return (2011-2019) of CCH pink salmon is 9.57 million fish (Table 51-1). Pink salmon total run exvessel value for CCH exhibits a general declining trend over the last 10 years (2010-2019) with a more than 400% swing between high and low annual values from 2010 to 2013. The overall annual average exvessel value over this recent 10-year period was $10.05 million, but small runs over the last six years (2014-2019) have resulted in a substantially smaller average exvessel value of $6.6 million (Figure 51-2). This is driven by both the number of fish returning as well as annual price fluctuations. CCH pink salmon are harvested predominately by the purse seine gear group. The harvest timing for CCH pink salmon is from July 25–August 25 and is one of three PWSAC hatcheries that provide purse seine pink salmon fishing opportunity in PWS. Beginning in 2010 the permitted capacity at CCH was increased by 23% from 152 million to 187 million pink salmon green eggs (Figure 51-1). There have been eight years of pink salmon returns since this production increase: the average odd-year (2013-2019) pink salmon return was 44% above the average odd-year (2003-2011), return of 7.5 million fish, and the average even-year (2014-2020) total pink salmon return was 66% below the average (2004-2012) of 9.1 million fish (Table 51-1).

The *Prince William Sound/Copper River Comprehensive Salmon Plan* notes that if it is determined that the rate of straying is significantly greater than 2%, the Prince William Sound/Copper River Regional Planning Team will determine whether and to what extent the hatchery program should be modified to reduce the rate of straying. Any recommendation made by the regional planning team goes to the commissioner for consideration. The plan further notes that the present estimate of acceptable threshold of hatchery-salmon straying is not well supported and further research is needed to determine the effect interbreeding may have on the productivity of wild salmon. The *Alaska Department of Fish and Game Genetic Policy* (Genetic Policy) does not define an acceptable rate of straying and provides rationale for why a single rate is not appropriate. It is difficult to develop stray rate thresholds that are scientifically defensible. The Genetic Policy outlines considerations in assessing stray rates: species (each species has different propensities to stray, and genetic diversity), the significance or uniqueness of the wild stock (e.g. escapement size, geographic distribution, life histories, genetic stock structure); and the hatchery broodstock origin and distance from, and life history similarity to, native stream.

Measuring stray rates is also not straight-forward and needs to consider: sampling methods within and across years (e.g. how many times a year and for how many years), single stream or streams representing a geographic area, and which streams (e.g. level of escapement and distance from release site to qualify a stream for sampling). Stray rates may vary greatly within years due to the relative return timing of hatchery and wild fish and may vary greatly between years due to variable freshwater survival of wild stocks relative to hatchery stocks. Finally, harvest management can impact the levels of straying.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. In permitting hatchery operations the department considers many of the concerns raised in this proposal, including the need to minimize negative interactions between hatchery-produced and wild salmon, minimize straying, and the need to ensure harvest practices targeting hatchery-produced salmon do not negatively impact wild fish. As new information becomes available through sources such as Alaska Hatchery Research Project, the department will consider this information during review of hatchery permits on a case-by-case basis and consider permit alterations, if appropriate.

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 will result in an additional research cost for the department.

Table 51-1.–Cannery Creek Hatchery Pink Salmon Returns, 2000–2020

Year	Total Return
2000	6,573,795
2001	2,108,028
2002	1,588,501
2003	8,349,320
2004	2,761,140
2005	13,595,157
2006	2,969,543
2007	7,430,043
2008	11,013,594
2009	3,258,244
2010	19,768,346
2011	4,743,895
2012	3,478,658
2013	15,959,517
2014	4,537,866
2015	10,183,238
2016	707,850
2017	6,736,574
2018	3,656,259
2019	10,274,004
2020	3,057,366
Five-year, odd year average prior to production increase (2003–2011)	7,475,332
Five-year, even year average prior to production increase (2002–2010)	9,128,156
Odd year average since production increase (2013–2019)	10,788,333
Even year average since production increase (2012–2020)	3,087,600
Five-year, odd year average (2011–2019)	9,579,446
Five-year, even year average (2012–2020)	3,087,600

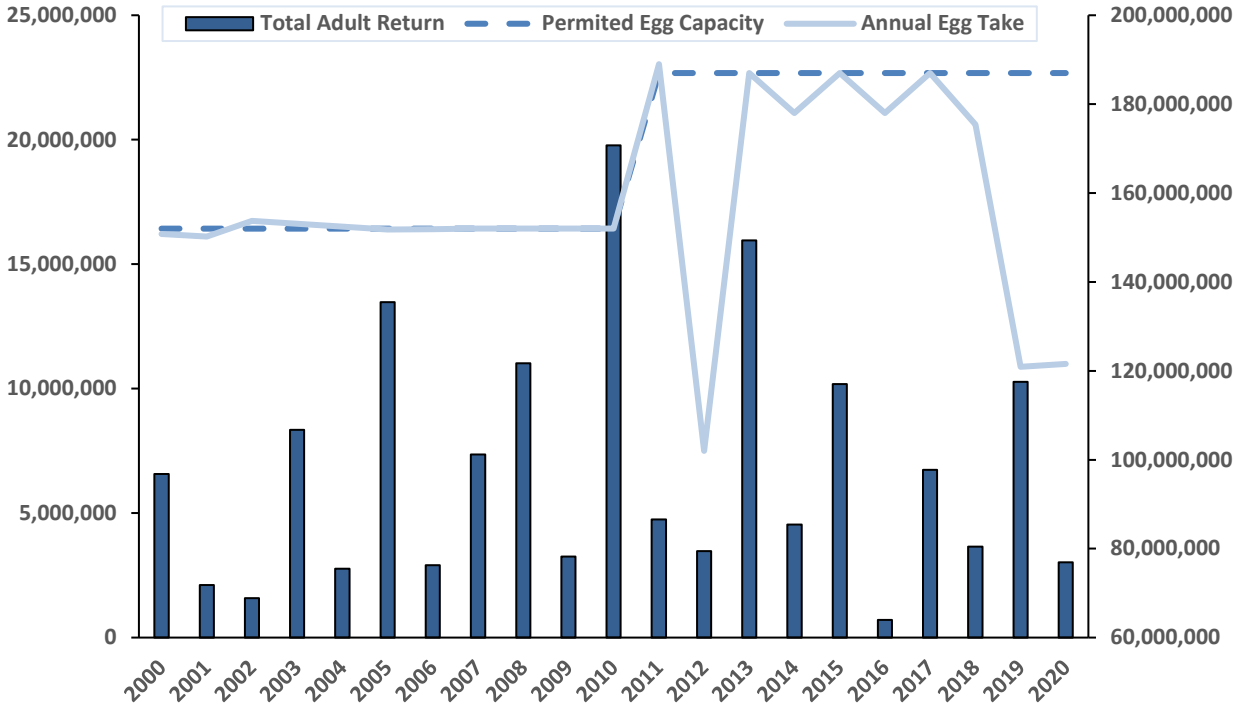


Figure 51-1.–Cannery Creek Hatchery Pink Salmon Adult Returns, Permitted Egg Capacity, and Annual Egg Take, 2000–2020. Egg Take trendline obscures Egg Capacity trendline in years they were similar.

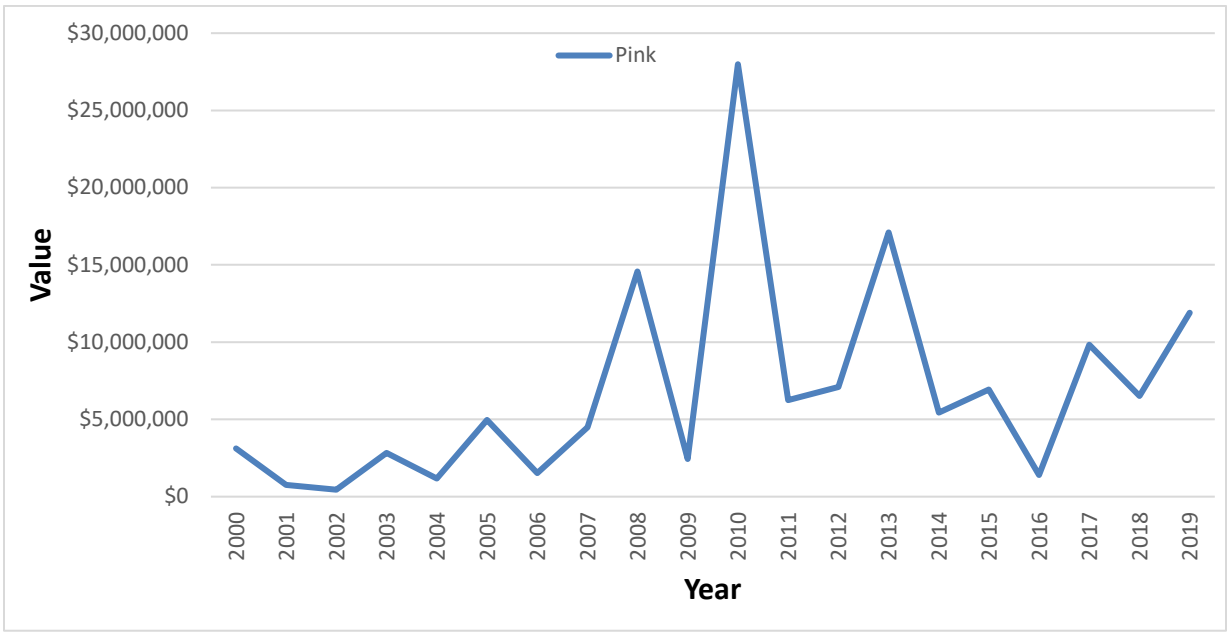


Figure 51–2.–CCH pink salmon total run exvessel value, 2010–2019.

PROPOSAL 52 – 5 AAC 24.366. Solomon Gulch Hatchery Management Plan.

PROPOSED BY: Pioneer Alaska Fisheries Inc.

WHAT WOULD THE PROPOSAL DO? This would require the department and the board to set hard triggers on an acceptable percentage of straying for each species of salmon released from the Solomon Gulch Hatchery and if exceeded, require hatchery production to be reduced the following spring from each remote release site, hatchery or terminal harvest area (THA) until straying is found below the trigger level.

WHAT ARE THE CURRENT REGULATIONS? The *Solomon Gulch Hatchery Management Plan* defines area and management times to achieve the corporation's pink salmon escapement goal.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The effect of reducing hatchery pink salmon production would not be apparent in the commercial fishery until returns from impacted brood years are realized.

This proposal may also affect fishery management considerations related to issues of effort on wild and hatchery stock. Currently, hatchery pink salmon attract a large proportion of purse seine fishing effort. This serves to reduce effort on other hatchery and wild stocks and to distribute the fleet throughout Prince William Sound (PWS). A reduction of hatchery pink salmon could increase effort on other wild and enhanced salmon stocks and possibly result in more conservative management of those fisheries. An additional effect would be a potential increase in the proportion of the total return required for cost recovery.

BACKGROUND: Alaska Statute places authority for permitting salmon hatcheries and associated activities with the Alaska Department of Fish and Game (AS 16.10.375- AS 16.10.560). The department has promulgated regulations to implement this permitting authority that includes opportunity for public comment allows concerns to be considered by the commissioner when reviewing salmon hatchery permit applications. The commissioner may modify an existing permit, if necessary (5 AAC 40.110 – 5 AAC 40.990). Hatchery salmon production was originally started in PWS in the 1970s to mitigate the natural high and low return rates of wild salmon stocks. Production levels were selected to allow for an economically viable fishery during years of poor natural runs. Hatchery production levels are specified in the operating permit written for each hatchery. The current production levels are based on criteria in the *Prince William Sound /Copper River Phase 3 Comprehensive Salmon Plan* that was approved in 1994. The purpose of the Phase 3 plan is to achieve optimum production of wild and enhanced salmon stocks on a sustained yield basis. The plan establishes three fishery goals: 1) increase fishing opportunities for salmon resource users, 2) achieve equitable allocation of the harvestable surplus of wild and enhanced salmon while minimizing impacts to historic wild stock fisheries, and 3) achieve an economically self-sustaining fishery. Additionally, the Phase 3 plan recommends that five biological and economic criteria be employed to achieve an optimum production level including: 1) wild stock

escapement goals must be achieved over the long term, 2) the proportion of hatchery salmon straying into wild-stock streams must remain below 2% of the wild-stock escapement over the long term, 3) the growth rates of juvenile salmon during the early marine period must be density independent over the long term, 4) the abundance of juvenile salmon predators must be independent of juvenile salmon abundance over the long term, and 5) the long-term average cost of hatchery operation, management, and evaluation must remain below 50% of the value of hatchery production.

The five-year even-year total return (2012-2020) of Valdez Fisheries Development Association (VFDA) pink salmon is 12.69 million fish and the five-year odd-year total return (2011-2019) of VFDA pink salmon is 19.38 million fish (Table 52-1). Total annual VFDA pink salmon exvessel value has shown a general decreasing trend, has averaged $23.28 million, and has fluctuated by nearly $15 million between high and low values in the last 10 years (2010-2019) (Figure 52-2). VFDA pink salmon are harvested predominately by the purse seine gear group. The harvest timing for VFDA pink salmon is from June 18–August 2 and provides the primary early-season purse seine salmon fishing opportunity in PWS. Beginning in 2016 the permitted capacity at VFDA's Solomon Gulch Hatchery (SGH) was increased 9% from 230 million to 250 million pink salmon green eggs. An additional 8% permitted capacity of 20 million green eggs was added in 2018, increasing the permitted capacity at SGH from 250 million to 270 million pink salmon green eggs (Figure 52-1). There have been three years of pink salmon returns since these production increases: the 2019 odd-year total pink salmon return was 35% below the average return (2009-2017) of 17.3 million fish, and the average even-year (2018-2020) total pink salmon return was 41% below the average (2008-2016 of 15.77 million fish (Table 52-1).

The *Prince William Sound/Copper River Comprehensive Salmon Plan* notes that if it is determined that the rate of straying is significantly greater than 2%, the Prince William Sound/Copper River Regional Planning Team will determine whether and to what extent the hatchery program should be modified to reduce the rate of straying. Any recommendation made by the regional planning team goes to the commissioner for consideration. The plan further notes that the present estimate of acceptable threshold of hatchery-salmon straying is not well supported and further research is needed to determine the effect interbreeding may have on the productivity of wild salmon. The *Alaska Department of Fish and Game Genetic Policy* (Genetic Policy) does not define an acceptable rate of straying and provides rationale for why a single rate is not appropriate. It is difficult to develop stray rate thresholds that are scientifically defensible. The Genetic Policy outlines considerations in assessing stray rates: species (each species has different propensities to stray, and genetic diversity), the significance or uniqueness of the wild stock (e.g. escapement size, geographic distribution, life histories, genetic stock structure); and the hatchery broodstock origin and distance from, and life history similarity to, native stream.

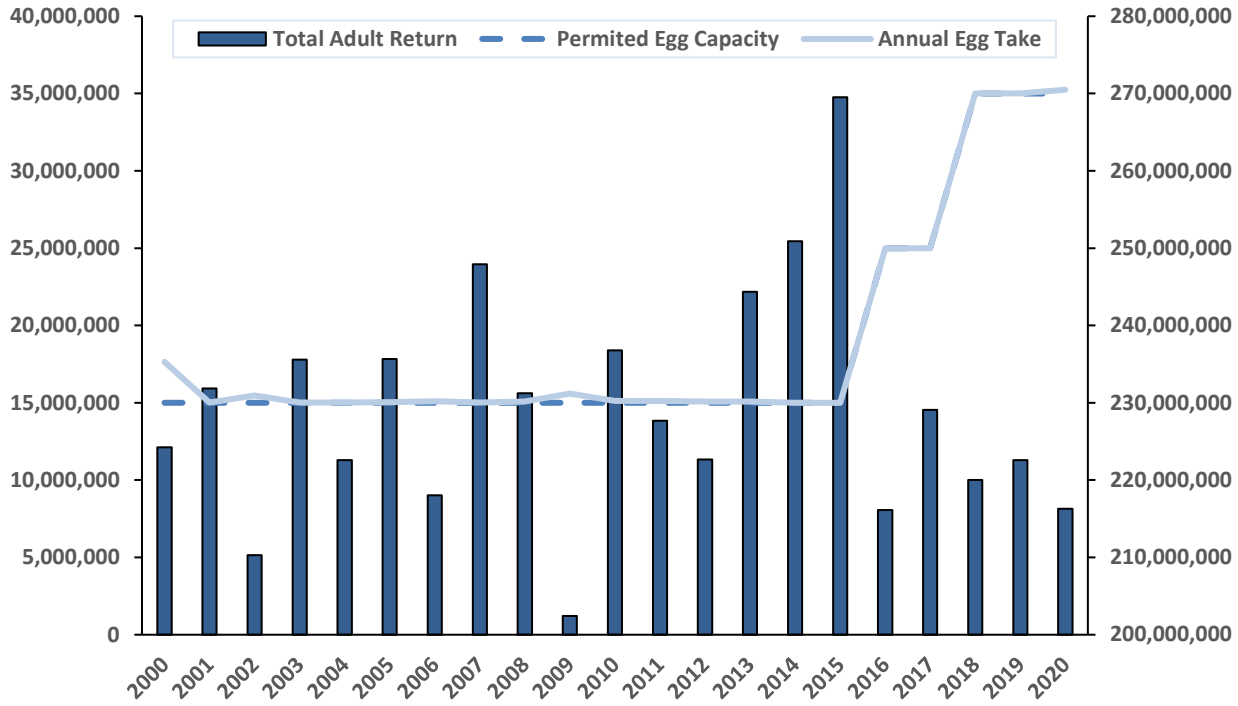
Measuring stray rates is also not straight-forward and needs to consider: sampling methods within and across years (e.g. how many times a year and for how many years), single stream or streams representing a geographic area, and which streams (e.g. level of escapement and distance from release site to qualify a stream for sampling). Stray rates may vary greatly within years due to the relative return timing of hatchery and wild fish and may vary greatly between years due to variable freshwater survival of wild stocks relative to hatchery stocks. Finally, harvest management can impact the levels of straying.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. In permitting hatchery operations the department considers many of the concerns raised in this proposal, including the need to minimize negative interactions between hatchery-produced and wild salmon, minimize straying, and the need to ensure harvest practices targeting hatchery-produced salmon do not negatively impact wild fish. As new information becomes available through sources such as Alaska Hatchery Research Project, the department will consider this information during review of hatchery permits on a case-by-case basis and consider permit alterations, if appropriate.

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 will result in an additional research cost for the department.

Table 52-1.–Solomon Gulch Hatchery Pink Salmon Returns, 2000–2020

Year	Total Return
2000	12,113,551
2001	15,932,656
2002	5,149,430
2003	17,784,817
2004	11,296,792
2005	17,833,484
2006	9,021,053
2007	23,967,744
2008	15,617,999
2009	1,222,473
2010	18,399,595
2011	13,830,644
2012	11,330,663
2013	22,183,858
2014	25,445,746
2015	34,751,413
2016	8,057,516
2017	14,543,144
2018	10,002,010
2019	11,282,485
2020	8,624,211
Five-year, odd year average return prior to production increase (2009–2017)	17,306,306
Five-year, even year average return prior to production increase (2008–2016)	15,770,304
Odd year average return since production increase (2019)	11,282,485
Even year average return since production increase (2018–2020)	9,313,111
Five-year, odd year average (2011–2019)	19,318,309
Five-year, even year average (2012–2020)	12,692,029



*Permitted egg capacity and annual egg take have little difference over this time series.

Figure 52-3.–Solomon Gulch Hatchery Pink Salmon Adult Returns, Permitted Egg Capacity, and Annual Egg Take, 2000–2020. Egg Take trendline obscures Egg Capacity trendline in years they were similar.

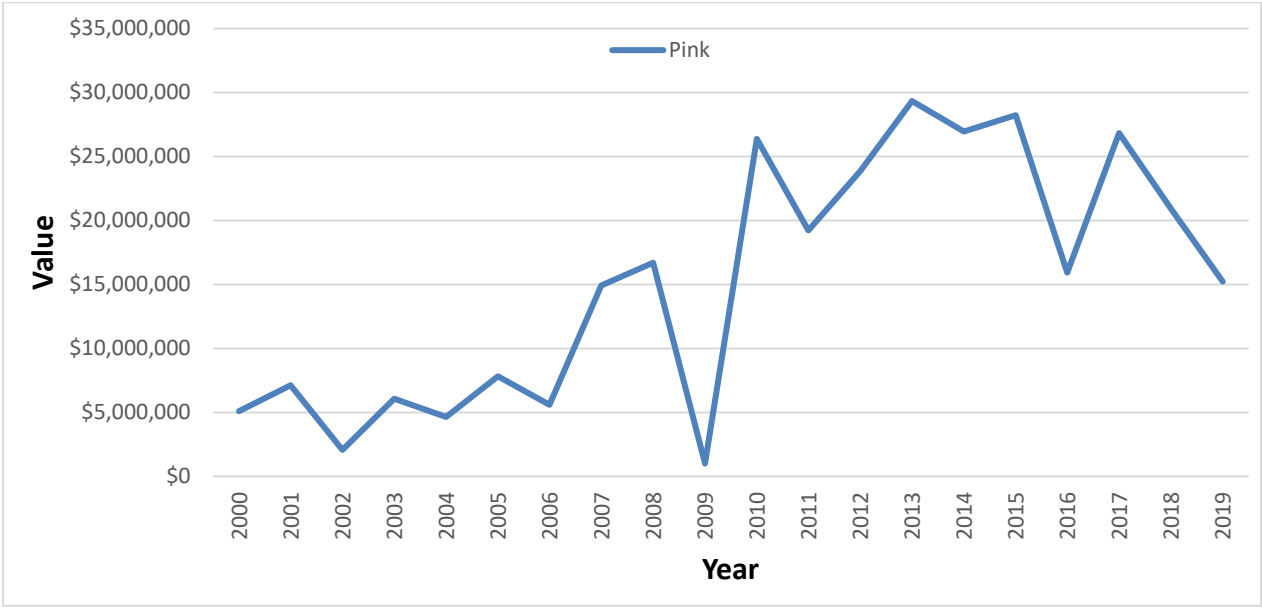


Figure 52-2.–SGH pink salmon total run exvessel value, 2010–2019.

PROPOSAL 53 – 5 AAC 24.368. Wally Noerenberg (Esther Island) Hatchery Management Plan.

PROPOSED BY: Pioneer Alaska Fisheries Inc.

WHAT WOULD THE PROPOSAL DO? This would require the department and the board to set hard triggers on an acceptable percentage of straying for each species of salmon released from the Wally Noerenberg Hatchery and if exceeded, require hatchery production to be reduced the following spring from each remote release site, hatchery or terminal harvest area (THA) until straying is found below the trigger level.

WHAT ARE THE CURRENT REGULATIONS? The *Wally Noerenberg Hatchery Management Plan* defines area and time management to achieve escapement goals to the hatchery.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The effect of reducing hatchery chum, pink and coho salmon production would not be apparent in the commercial fishery until returns from impacted brood years are realized.

As this proposal relates to chum salmon production, a decrease would not affect the commercial chum salmon fishery until the return year of the reduced brood release. It is not possible to determine which gear group will have access to Port Chalmers or Esther subdistricts at this time. Assuming that neither purse seine or drift gillnet gear groups are experiencing an allocation shortfall at that time, and assuming an even distribution of the proposed reduction among all enhanced chum salmon fisheries, both gear groups would bear the loss proportionately. If either gear group is entitled to a "piggy bank" area because of an allocation shortfall, then that gear group would bear a disproportionate share of the loss. The proposed reduction may result in the elimination of one or both remote release chum salmon fisheries.

Fishery management considerations would include wild and hatchery stock issues related to effort. Currently, hatchery chum and pink salmon attract a large proportion of purse seine and drift gillnet fishing effort. This serves to reduce effort on other hatchery and wild stocks and to spread the fleets. A reduction of hatchery chum or pink salmon could increase effort on other wild and enhanced salmon stocks and possibly result in more conservative management of those fisheries. An additional effect would be a potential increase in the proportion of the total return required for cost recovery.

BACKGROUND: Alaska Statute places authority for permitting salmon hatcheries and associated activities with the Alaska Department of Fish and Game (AS 16.10.375- AS 16.10.560). The department has promulgated regulations to implement this permitting authority that includes opportunity for public comment allows concerns to be considered by the commissioner when reviewing salmon hatchery permit applications. The commissioner may modify an existing permit, if necessary (5 AAC 40.110 – 5 AAC 40.990). Hatchery salmon production was originally started in Prince William Sound (PWS) in the 1970s to mitigate the natural high and low return rates of

wild salmon stocks. Production levels were selected to allow for an economically viable fishery during years of poor natural runs. Hatchery production levels are specified in the operating permit written for each hatchery. The current production levels are based on criteria in the *Prince William Sound/Copper River Phase 3 Comprehensive Salmon Plan* that was approved in 1994. The purpose of the Phase 3 plan is to achieve optimum production of wild and enhanced salmon stocks on a sustained yield basis. The plan establishes three fishery goals: 1) increase fishing opportunities for salmon resource users, 2) achieve equitable allocation of the harvestable surplus of wild and enhanced salmon while minimizing impacts to historic wild stock fisheries, and 3) achieve an economically self-sustaining fishery. Additionally, the Phase 3 plan recommends that five biological and economic criteria be employed to achieve an optimum production level including: 1) wild stock escapement goals must be achieved over the long term, 2) the proportion of hatchery salmon straying into wild-stock streams must remain below 2% of the wild-stock escapement over the long term, 3) the growth rates of juvenile salmon during the early marine period must be density independent over the long term, 4) the abundance of juvenile salmon predators must be independent of juvenile salmon abundance over the long term, and 5) the long-term average cost of hatchery operation, management, and evaluation must remain below 50% of the value of hatchery production.

The five-year even-year total return (2012–2020) of Wally Noerenberg Hatchery (WNH) pink salmon is 4.10 million fish and the five-year odd-year total return (2011-2019) of WNH pink salmon is 9.64 million fish (Table 53-1). Pink salmon total run exvessel value for WNH exhibits a general declining trend over the last 10 years (2010-2019) with the lowest annual value representing 5% of the peak value (Figure 53-2). WNH pink salmon are harvested by both the purse seine and gillnet gear group. The harvest timing for WNH pink salmon is from July 19–September 5 and is one of three PWSAC hatcheries that provide purse seine pink salmon fishing opportunity in PWS. WNH is currently permitted for 148 million pink salmon green eggs (Figure 53-1).

The five-year average total run of PWSAC chum salmon at WNH is 2.64 million; Port Chalmers Remote Release is 630,000; and AFK is 350,000 (Figure 53-3). Chum salmon total run exvessel value for WNH has varied more widely than pink salmon, peaking in value in 2017 at $26.46 million and the recent 10-year average (2010-2019) is $16.21 million (Figure 53-2). WNH chum salmon are harvested primarily by the gillnet gear group. The harvest timing for WNH chum salmon is from June 1 - July 15 and are primarily harvested by the gillnet gear group. WNH is currently permitted for 153 million chum salmon green eggs, 131 million for WNH and 22 million permitted for AFK (Figure 53-3). PWSAC is currently permitted to annually release 41 million chum salmon fry at Port Chalmers, these fry are part of the 131 million green eggs permitted at WNH.

The *Prince William Sound/Copper River Comprehensive Salmon Plan* notes that if it is determined that the rate of straying is significantly greater than 2%, the Prince William Sound/Copper River Regional Planning Team will determine whether and to what extent the hatchery program should be modified to reduce the rate of straying. Any recommendation made by the regional planning team goes to the commissioner for consideration. The plan further notes that the present estimate of acceptable threshold of hatchery-salmon straying is not well supported and further research is needed to determine the effect interbreeding may have on the productivity of wild salmon. The *Alaska Department of Fish and Game Genetic Policy* (Genetic Policy) does not define an acceptable rate of straying and provides rationale for why a single rate is not appropriate. It is

difficult to develop stray rate thresholds that are scientifically defensible. The Genetic Policy outlines considerations in assessing stray rates: species (each species has different propensities to stray, and genetic diversity), the significance or uniqueness of the wild stock (e.g. escapement size, geographic distribution, life histories, genetic stock structure); and the hatchery broodstock origin and distance from, and life history similarity to, native stream.

Measuring stray rates is also not straight-forward and needs to consider: sampling methods within and across years (e.g. how many times a year and for how many years), single stream or streams representing a geographic area, and which streams (e.g. level of escapement and distance from release site to qualify a stream for sampling). Stray rates may vary greatly within years due to the relative return timing of hatchery and wild fish and may vary greatly between years due to variable freshwater survival of wild stocks relative to hatchery stocks. Finally, harvest management can impact the levels of straying.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. In permitting hatchery operations the department considers many of the concerns raised in this proposal, including the need to minimize negative interactions between hatchery-produced and wild salmon, minimize straying, and the need to ensure harvest practices targeting hatchery-produced salmon do not negatively impact wild fish. As new information becomes available through sources such as Alaska Hatchery Research Project, the department will consider this information during review of hatchery permits on a case-by-case basis and consider permit alterations, if appropriate.

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 will result in an additional research cost for the department.

Table 53-1.–Wally Noerenberg Hatchery Total Pink Salmon Returns, 2000–2020

Year	Total Return
2000	8,856,119
2001	7,126,101
2002	5,616,803
2003	17,843,002
2004	2,704,549
2005	9,221,716
2006	3,977,073
2007	7,519,098
2008	8,701,656
2009	3,223,164
2010	17,309,257
2011	6,647,472
2012	5,687,710
2013	17,479,441
2014	7,609,619
2015	17,537,606
2016	744,035
2017	2,508,749
2018	2,296,808
2019	4,025,313
2020	4,185,154
Five-year, odd year average (2011–2019)	9,639,716
Five-year, even year average (2012–2020)	4,104,665

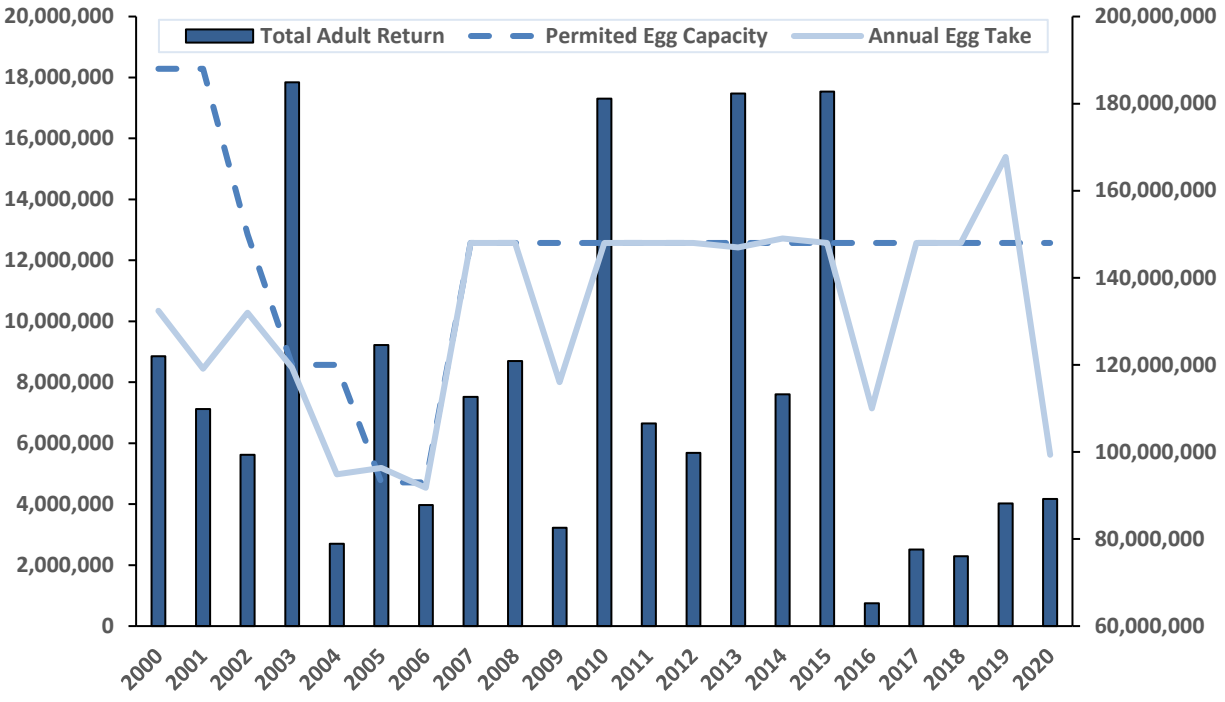


Figure 53-1.–Wally Noerenberg Hatchery Pink Salmon Adult Returns, Permitted Egg Capacity, and Annual Egg Take, 2000–2020. Egg Take trendline obscures Egg Capacity trendline in years they were similar.

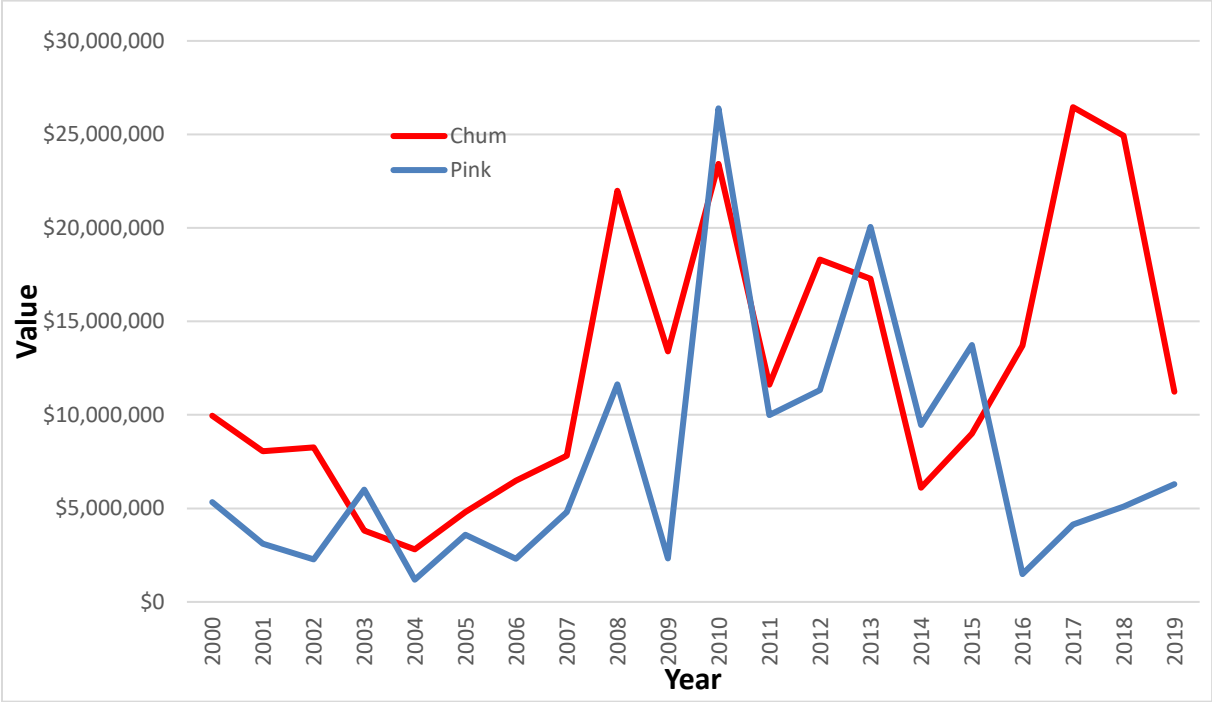


Figure 53-2.–WNH chum and pink salmon total run exvessel value, 2010–2019.

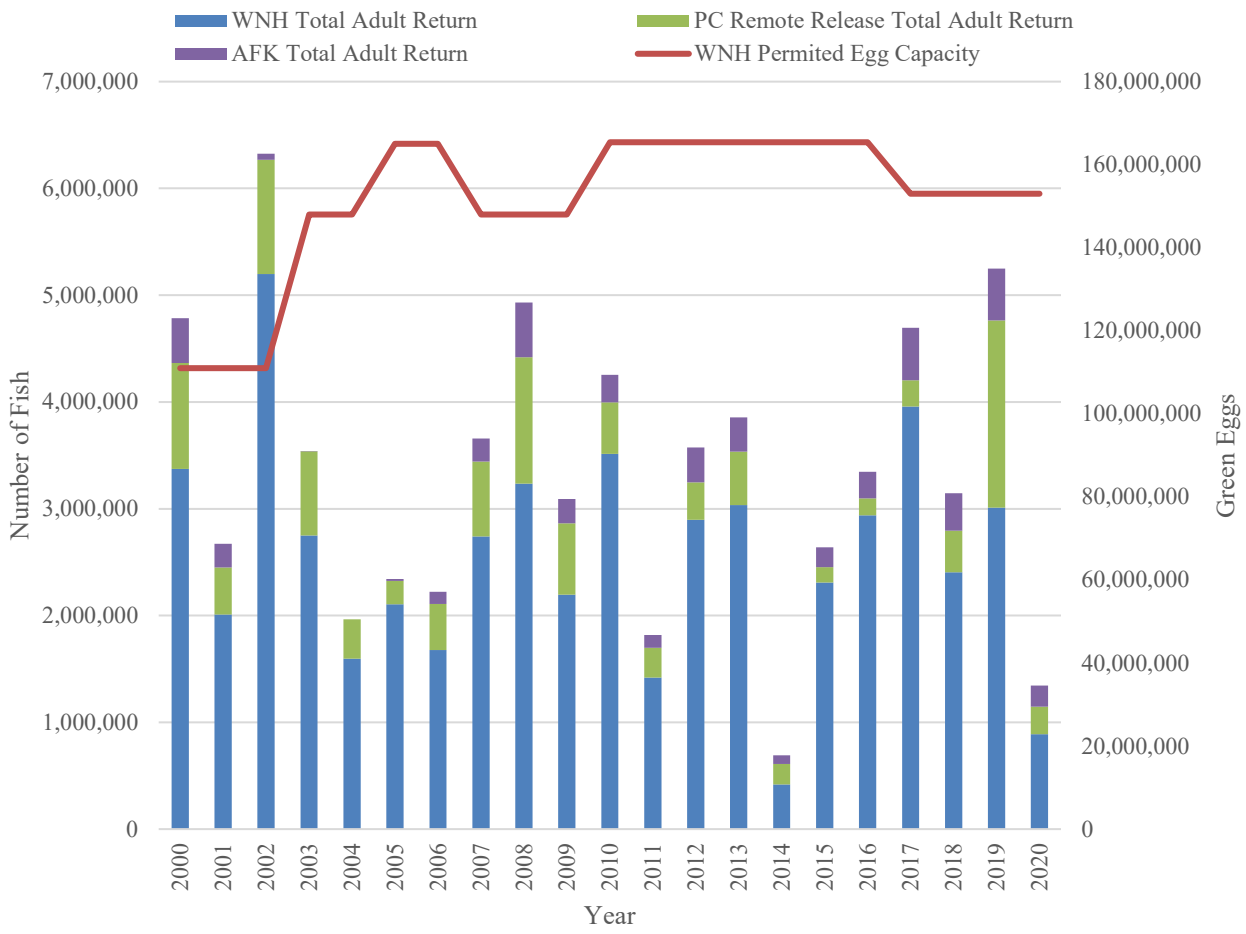


Figure 53-3.–PWSAC chum salmon adult returns and WNH permitted egg capacity, 2000–2020.

PROPOSAL 54 – 5 AAC 24.370. Prince William Sound Management and Salmon Enhancement Allocation Plan.

PROPOSED BY: Virgil Umphenour.

WHAT WOULD THE PROPOSAL DO? This reduces hatchery salmon production to 24% of the level permitted in 2000.

WHAT ARE THE CURRENT REGULATIONS? The *Prince William Sound Management and Salmon Enhancement Allocation Plan* defines area and time management for a fair and reasonable allocation of the harvest of enhanced salmon among the drift gillnet, seine and set gillnet commercial fisheries and to reduce conflict between the user groups.

Current regulations have no provision specifying what the production levels are for given hatcheries. Production levels are currently proposed by hatchery operators, reviewed, and recommended for approval by Regional Planning Teams and approved by the commissioner of the Alaska Department of Fish and Game. Additionally, each area has a Comprehensive Salmon Enhancement Plan that outlines production goals for species and areas. There are several interrelated statutory authorities relating to hatchery production levels. Primary authority over issuance of hatchery permits and regulation of hatchery operations is vested in the commissioner and department. The board's authority over hatchery production has previously been outlined by the Alaska Department of Law in an informal Attorney General Opinion (Nov. 6, 1997; 661-98-0127). The informal attorney general opinion notes that the board "may exercise indirect authority over hatchery production by regulating the harvest of hatchery released fish in the common use fishery," by regulating "hatchery brood stock and cost recovery harvests," and by regulatory action "amending those portions of hatchery permits relating to the source and number of salmon eggs, hatchery harvests, and designation of special harvest areas." The opinion also noted that "Board action that effectively revokes or prevents the issuance of a hatchery permit is probably not authorized."

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The effect reducing hatchery chum salmon production would not be apparent in the commercial fishery until 2025 because of the lag time from egg-take to adult return. The proposed reduction from 3.3 million fish to 800,000 fish would impact allocation among gear groups. This scale of reduction would financially impact permit holders that target enhanced chum salmon and associated local economies.

Because the proposed production decrease would not affect the commercial fishery until 2025 it is not possible to determine which gear group will have access to Port Chalmers or Esther subdistricts at that time. Assuming that neither purse seine or drift gillnet gear groups are experiencing an allocation shortfall at that time, and assuming an even distribution of the proposed reduction among all enhanced chum salmon fisheries, both gear groups would bear the loss proportionately. If either gear group is entitled to a "piggy bank" area because of an allocation shortfall, then that gear group would bear a disproportionate share of the loss. The proposed reduction may result in

the elimination of one or both remote release chum salmon fisheries. Additionally, a reduction of this scale may render the allocation plan obsolete as the drift gillnet gear group derives a higher proportion of their allocation from enhanced chum salmon than the purse seine gear group.

Fisheries management considerations would include wild and hatchery stock issues related to effort. Currently, hatchery chum salmon attract a large proportion of purse seine and drift gillnet fishing effort. This serves to reduce effort on other hatchery and wild stocks and to spread the fleets. A reduction of hatchery chum salmon could increase effort on other wild and enhanced salmon stocks and possibly result in more conservative management of those fisheries. An additional effect would be a potential increase in the proportion of the total return required for cost recovery.

BACKGROUND: Hatchery salmon production was originally started in PWS in the 1970s to mitigate the natural high and low return rates of wild salmon stocks. Production levels were selected to allow for an economically viable fishery during years of poor natural runs. Hatchery production levels are specified in the operating permit written for each hatchery. The current production levels are based on criteria in the *Prince William Sound /Copper River Phase 3 Comprehensive Salmon Plan*. The purpose of the Phase 3 Plan is to achieve optimum production of wild and enhanced salmon stocks on a sustained yield basis. The plan establishes three fishery goals: 1) increase fishing opportunities for salmon resource users, 2) achieve equitable allocation of the harvestable surplus of wild and enhanced salmon while minimizing impacts to historic wild stock fisheries, and 3) achieve an economically self-sustaining fishery. Additionally, the Phase 3 Plan recommends that five biological and economic criteria be employed to achieve an optimum production level including: 1) wild stock escapement goals must be achieved over the long term, 2) the proportion of hatchery salmon straying into wild-stock streams must remain below 2% of the wild-stock escapement over the long term, 3) the growth rates of juvenile salmon during the early marine period must be density independent over the long term, 4) the abundance of juvenile salmon predators must be independent of juvenile salmon abundance over the long term, and 5) the long-term average cost of hatchery operation, management, and evaluation must remain below 50% of the value of hatchery production.

Chum salmon permitted green egg numbers in PWS averaged around 130 million eggs from the early 1980s to the early 2000s and varied between 148 million to 165 million eggs from the mid-2000s to the present. Chum salmon smolt originating from these eggs are released onsite at WNH and through remote releases at AFK and Port Chalmers (NW Montague Island).

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 will not result in an additional cost for the department.

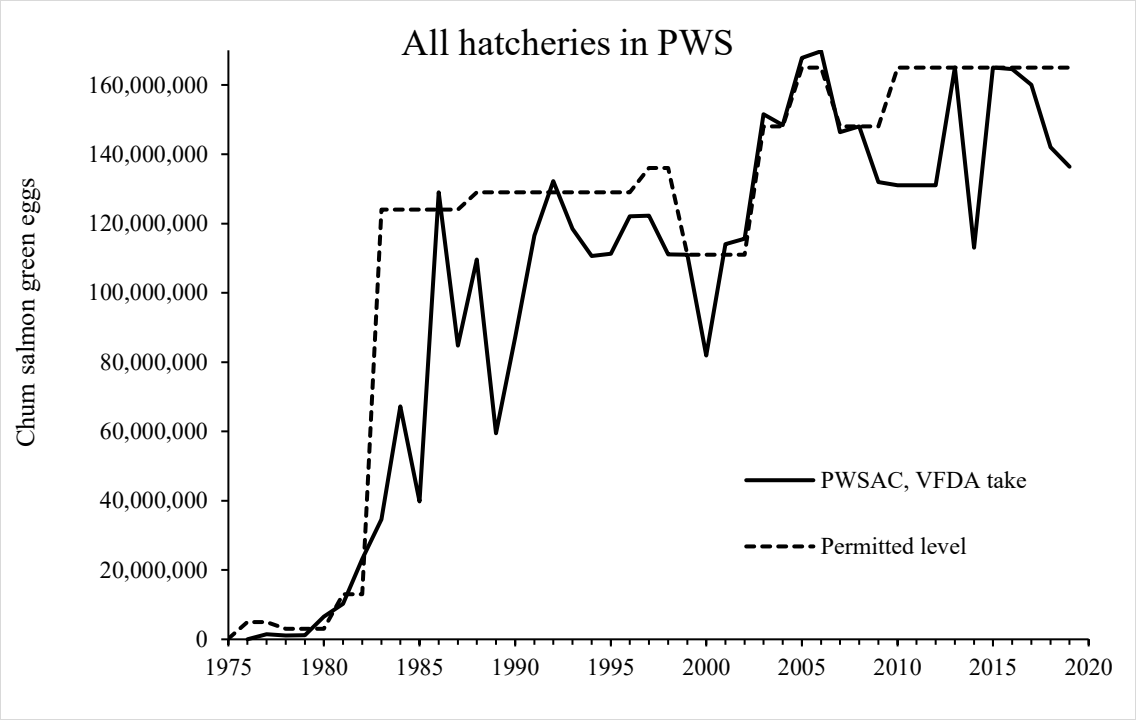


Figure 54-1.–All hatcheries chum salmon permitted capacity and reported egg take by year.

PROPOSAL 55 – 5 AAC 40.XXX. New Section.

PROPOSED BY: Virgil Umphenour.

WHAT WOULD THE PROPOSAL DO? This reduces hatchery salmon production to 25% of the level permitted in 2000.

WHAT ARE THE CURRENT REGULATIONS? Current regulations have no provision specifying what the production levels are for given hatcheries. Production levels are currently proposed by hatchery operators, reviewed, and recommended for approval by Regional Planning Teams and approved by the commissioner of the Alaska Department of Fish and Game. Additionally, each area has a Comprehensive Salmon Enhancement Plan that outlines production goals for species and areas. There are several interrelated statutory authorities relating to hatchery production levels. Primary authority over issuance of hatchery permits and regulation of hatchery operations is vested in the commissioner and department. The board's authority over hatchery production has previously been outlined by the Alaska Department of Law in an informal Attorney General Opinion (Nov. 6, 1997; 661-98-0127). The informal attorney general opinion notes that the board "may exercise indirect authority over hatchery production by regulating the harvest of hatchery released fish in the common use fishery," by regulating "hatchery brood stock and cost recovery harvests," and by regulatory action "amending those portions of hatchery permits relating to the source and number of salmon eggs, hatchery harvests, and designation of special harvest areas." The opinion also noted that "Board action that effectively revokes or prevents the issuance of a hatchery permit is probably not authorized."

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would reduce hatchery salmon production to 25% of the level permitted in 2000. The effect of reducing hatchery chum salmon production would not be apparent in the commercial fishery until 2025 because of the lag time from egg-take to adult return. The proposed reduction from 3.3 million fish to 800,000 fish would impact allocation among gear groups. This scale of reduction would financially impact permit holders that target enhanced chum salmon and associated local economies.

Because the proposed production decrease would not affect the commercial fishery until 2025 it is not possible to determine which gear group will have access to Port Chalmers or Esther subdistricts at that time. Assuming that neither purse seine or drift gillnet gear groups are experiencing an allocation shortfall at that time, and assuming an even distribution of the proposed reduction among all enhanced chum salmon fisheries, both gear groups would bear the loss proportionately. If either gear group is entitled to a "piggy bank" area because of an allocation shortfall, then that gear group would bear a disproportionate share of the loss. The proposed reduction may result in the elimination of one or both remote release chum salmon fisheries. Additionally, a reduction of this scale may render the allocation plan obsolete as the drift gillnet gear group derives a higher proportion of their allocation from enhanced chum salmon than the purse seine gear group.

Fisheries management considerations would include wild and hatchery stock issues related to effort. Currently, hatchery chum salmon attract a large proportion of purse seine and drift gillnet fishing effort. This serves to reduce effort on other hatchery and wild stocks and to spread the fleets. A reduction of hatchery chum salmon could increase effort on other wild and enhanced salmon stocks and possibly result in more conservative management of those fisheries. An additional effect would be a potential increase in the proportion of the total return required for cost recovery.

BACKGROUND: Hatchery salmon production was originally started in Prince William Sound (PWS) in the 1970s to mitigate the natural high and low return rates of wild salmon stocks. Production levels were selected to allow for an economically viable fishery during years of poor natural runs. Hatchery production levels are specified in the operating permit written for each hatchery. The current production levels are based on criteria in the *Prince William Sound/Copper River Phase 3 Comprehensive Salmon Plan*. The purpose of the Phase 3 plan is to achieve optimum production of wild and enhanced salmon stocks on a sustained yield basis. The plan establishes three fishery goals: 1) increase fishing opportunities for salmon resource users, 2) achieve equitable allocation of the harvestable surplus of wild and enhanced salmon while minimizing impacts to historic wild stock fisheries, and 3) achieve an economically self-sustaining fishery. Additionally, the Phase 3 plan recommends that five biological and economic criteria be employed to achieve an optimum production level including: 1) wild stock escapement goals must be achieved over the long term, 2) the proportion of hatchery salmon straying into wild-stock streams must remain below 2% of the wild-stock escapement over the long term, 3) the growth rates of juvenile salmon during the early marine period must be density independent over the long term, 4) the abundance of juvenile salmon predators must be independent of juvenile salmon abundance over the long term, and 5) the long-term average cost of hatchery operation, management, and evaluation must remain below 50% of the value of hatchery production.

Chum salmon permitted green egg numbers in PWS averaged around 130 million eggs from the early 1980s to the early 2000s and varied between 148 million to 165 million eggs from the mid-2000s to the present. Chum salmon smolt originating from these eggs are released onsite at WNH and through remote releases at AFK and Port Chalmers (NW Montague Island).

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 will not result in an additional cost for the department.

Gear, Seasons, Closed Waters (5 proposals)

PROPOSAL 56 and 57 – 5 AAC 24.332. Seine specifications and operations; and 5 AAC 24.XXX. New section.

PROPOSED BY: Ezekiel Brown and Rob Nelson.

WHAT WOULD THE PROPOSAL DO? These proposals would allow two Prince William Sound (PWS) purse seine permit holders to operate a lead and purse seine, with an aggregate length of up to 250 fathoms, and up to 450 meshes deep, from a single vessel (dual-permit operation).

WHAT ARE THE CURRENT REGULATIONS? Current regulations allow one permit holder to fish one legal complement of purse seine gear per vessel, with a purse seine that is not less than 200 meshes or more than 335 meshes in depth, or less than 125 fathoms or more than 225 fathoms in length. Any number of Commercial Fisheries Entry Commission (CFEC) permit holders may fish from a single vessel however, there is no allowance for additional gear associated with multiple permit holders on one vessel.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This may increase the number of active PWS salmon seine permits and decrease the number of purse seine vessels fishing in PWS. Purse seine vessels with two permit holders on board would have an advantage of a purse seine that is up to 250 fathoms long rather than only 225 fathoms and up to 450 meshes deep rather than only 335 meshes, potentially increasing harvest efficiency of that vessel. The increased harvest efficiency associated with these larger seines may provide a competitive advantage to purse seine vessel operations choosing to have two CFEC permit holders onboard.

BACKGROUND: The number of active commercial salmon purse seine fishing permits in Area E has steadily increased over the last 15 years, from a low of 101 permits in 2004 to 238 in 2019 (Table 56-1). Since the 2017 board meeting, PWS hatchery pink salmon harvests have been consistently below forecast despite recent hatchery production increases. These below average hatchery returns in combination with increased participation have led to fisheries frequently being confined to hatchery subdistricts and terminal areas to manage for wild salmon escapement. Congestion associated with an increasing number of boats and confined harvest areas, continues to be problematic in PWS.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal. If the board adopts this proposal, the department recommends the board also adopt new vessel marking requirements to aid in enforcement, similar to steps the board has taken to facilitate enforcement in other areas of the state where dual permit operations are allowed.

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 56-1.–Active purse seine permits by year, 1997–2020.

Year	Number of Permits
1997	113
1998	148
1999	139
2000	130
2001	146
2002	115
2003	106
2004	101
2005	101
2006	111
2007	119
2008	139
2009	153
2010	174
2011	183
2012	224
2013	211
2014	221
2015	216
2016	210
2017	230
2018	234
2019	238
10-Year Average, 2010–2019	214
5-Year Average, 2015–2019	226
2020	219

PROPOSAL 58 – 5 AAC 24.365. Armin F. Koernig Salmon Hatchery Management Plan.

PROPOSED BY: Northwest and Alaska Seine Association.

WHAT WOULD THE PROPOSAL DO? This would amend the *Armin F. Koernig Salmon Hatchery Management Plan* to allow for the harvest of stocks bound for other districts.

WHAT ARE THE CURRENT REGULATIONS? The Southwestern District is closed to salmon fishing prior to July 18, except within the Armin F. Koernig (AFK) Hatchery Special Harvest Area (SHA) and Terminal Harvest Area (THA) which may be opened for the harvest of enhanced salmon stocks returning to the Armin F. Koernig hatchery and where, to the extent practical, the department shall manage to reduce the harvest of stocks bound for other districts;

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would lead to an increase of harvest of wild and hatchery stocks bound for other areas within PWS in an existing fishery targeting hatchery-produced chum salmon. Allowing for the harvest of stocks bound for other districts in PWS would reduce harvest for permit holders fishing in these districts and would reduce escapement in these districts.

BACKGROUND: In 2003, PWSAC reintroduced chum salmon production at AFK Hatchery with the intent of harvesting returning chum salmon for cost recovery purposes. After attempting cost recovery in 2007, PWSAC determined that it was not a viable fishery for cost recovery purposes. Since 2008, the department has managed a common property fishery within the AFK SHA and THA. In 2010, at the request of PWSAC, chum salmon production was doubled at AFK to provide additional opportunity for the purse seine fleet. At the 2017 PWS board meeting these regulations were updated to allow for the harvest of these fish in a common property fishery in the AFK SHA and THA, with specific guidance that to the extent practical the department reduce the harvest of stocks bound for other districts.

The AFK hatchery is situated in one of the primary salmon migration corridors in PWS. Returning enhanced chum salmon share run timing with Coghill Lake wild sockeye salmon, with wild chum and pink salmon returning to the Northern, Eastern, Coghill, and Northwestern districts, and with enhanced sockeye salmon returning to Main Bay Hatchery (MBH). Closure of the Southwestern District prior to July 18 is intended to limit harvest of wild and enhanced salmon destined for other areas of PWS.

The AFK hatchery enhanced chum salmon fishery is limited to the THA and SHA because of concern for excessive harvest on non-AFK hatchery-produced salmon; and since 2016 due to a recent pattern of missed Coghill Lake sockeye salmon escapement goals the department has regularly reduced fishing time to limit harvest of wild sockeye salmon and enhanced sockeye salmon returning to MBH. Despite using these management tools to limit harvest, there is still incidental take of non-AFK-produced salmon in this fishery. Since 2011, approximately 41,300 MBH and 4,600 wild sockeye salmon have been harvested on average in this fishery (Table 58-1).

MBH sockeye are intended to be harvested by the drift and set gillnet fleets, subsequently harvest of these fish by the purse seine fleet has resulted in a commensurate decline in drift and set gillnet harvest. The value of the MBH sockeye is added to the purse seine portion of the allocation plan.

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 58-1.–Sockeye salmon contribution estimates to AFK SHA and THA during the directed enhanced chum salmon fishery at Armin F. Koernig Hatchery, June 1–July 18.

Year	Wild	MBH	Total	Percentage Wild
2006	0	15,376	15,376	0.00%
2007	141	361	502	28.09%
2008	3,959	33,044	37,003	10.70%
2009	4,034	54,389	58,423	6.90%
2010	3,106	56,108	59,214	5.25%
2011	2,751	18,679	21,430	12.84%
2012	11,952	57,097	69,049	17.31%
2013	4,396	37,134	41,530	10.59%
2014	2,027	26,151	28,178	7.19%
2015	5,185	99,175	104,360	4.97%
2016	2,323	49,208	51,531	4.51%
2017 [a]	3,157	24,818	27,975	11.29%
2018	3,567	29,182	32,749	10.89%
2019	6,035	30,355	36,390	16.58%
2020 [b]	NA	NA	14,527	NA
Average, 2012–2016	5,177	53,753	58,930	8.78%
Average, 2017–2020	4,253	28,118	32,371	15.24%
5-year Average, 2016–2020	3,771	33,391	32,626	11.56%
10-year Average, 2011–2020	4,599	41,311	42,768	10.75%

[a] Adoption of language to reduce the harvest of salmon destined for other areas of PWS.

[b]No otolith sampling due to Covid-19 pandemic.

PROPOSAL 59 – 5 AAC 24.350. Closed Waters.

PROPOSED BY: Cordova District Fishermen United.

WHAT WOULD THE PROPOSAL DO? This would remove closed waters within Hawkins Cutoff and Orca Inlet, in the Southeastern District.

WHAT ARE THE CURRENT REGULATIONS? The current Hawkins Cutoff-Orca Inlet regulatory closed waters is described as, south of a line from 60° 27.86' N. lat., 146° 19.72' W. long. to 60° 27.65' N. lat., 146° 21.39' W. long., and Orca Inlet and Nelson Bay south and east of a line from Salmo Point to Shepard Point, and all of Orca Inlet southeast of Hawkins Island (Figure 59-1).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The waters of Hawkins Cutoff-Orca Inlet that are normally closed to protect anadromous streams and staging fish, would open when the Southeastern District is opened. Removal of the Hawkins Cutoff-Orca Inlet regulatory closed waters would likely result in inconsistent opportunity within the Southeastern District as it would remove protections for staging fish and create enforcement concerns, which would make it difficult for the department to ensure escapement of wild stocks within that area (Figure 59-2).

BACKGROUND: These regulatory closed water areas were created in 1969 and updated in 2008 by the board. The waters of the Hawkins Cutoff-Orca Inlet area are extremely shallow and were protected because of concerns about "creek robbing", its close proximity to Cordova, and weak escapements. A relatively large area was needed to adequately protect all vulnerable streams, as the terminus of some streams within this area can move up to 1.5 miles during a single tide cycle (Figure 59-2). The following excerpt from the 1970 Area Management Report illustrates these concerns:

> The Department is aware that a certain amount of illegal fishing is pursued each year, but this probably has been fairly constant in the past. In 1970, probably due to a poor seine season, increased amounts of gear in the fishery and non-existant enforcement, illegal fishing was apparently at a new high. Fishermen complained continuously about the Department's lack of regulation enforcement. During this season one temporary Protection Assistant was on duty for approximately two weeks. This man was stationed at Bering River which left the entire Copper River flats open to illegal fishing. The Senior Protection Officer informed Management Biologists that he did not have funds available for regulation enforcement of this fishery, and after the termination of his one assistant, all protection effort by his Division ceased. When escapement surveys of early indicator streams could be flown it was apparent that escapements were below normal levels, and the season was closed.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. Due to the shallow nature of the Hawkins Cutoff and Orca Inlet the removal of the Hawkins Cutoff-Orca Inlet regulatory closed waters would likely result in inconsistent opportunity within the Southeastern District as it would remove protections for staging fish and would make it difficult for the department to ensure escapement of wild stocks within that 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 direct cost for the department.

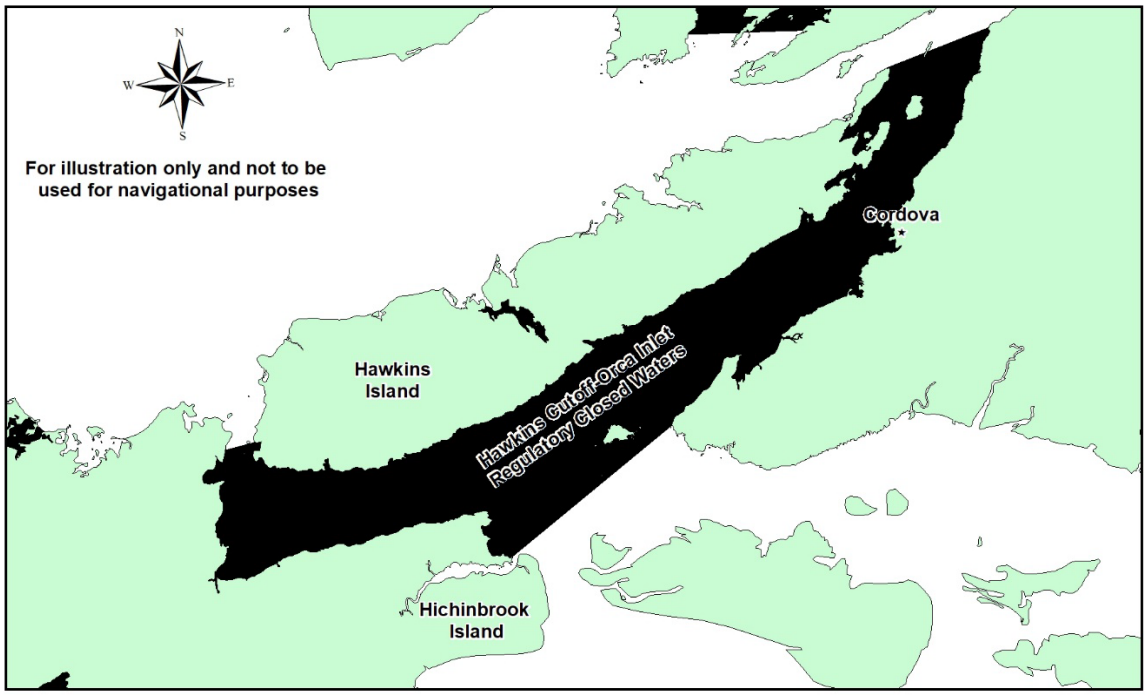


Figure 59-1.-Current Hawkins Cutoff-Orca Inlet Regulatory Closed Waters.

Figure 59-2.- Hawkins Cutoff-Orca Inlet at low tide.

PROPOSAL 60 – 5 AAC 24.350. Closed Waters.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would define and update closed waters in Prince William Sound with GPS coordinates.

WHAT ARE THE CURRENT REGULATIONS? Current Prince William Sound regulatory closed water areas are defined only with physical markers.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This will update the closed waters regulations and maintain the historical intent of the closed water areas defined by physical markers. Alaska Wildlife Troopers will have better defined closed water areas to enforce and area fishermen will have clearer lines for staying in compliance with closed water regulations.

BACKGROUND: The department has been relying on physical markers throughout Prince William Sound to help designate closed waters. In 2015, the Prince William Sound marker maintenance program was discontinued due to budget reductions and markers have started to fall into disrepair across Prince William Sound. The depertment's proposed new regulatory GPS coordinates conform to current geospatial coastline standards, and match existing coordinates and traditional marker locations. A select number of regulatory closed waters were also updated to address enforcement concerns.

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

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

COMMITTEE OF THE WHOLE – GROUP 5: SHELLFISH (19 PROPOSALS)
Sea Cucumbers (2 proposals)

PROPOSAL 61 and 62 – 5 AAC 38.2XX. New section.

PROPOSED BY: Robert Linville and Cordova District Fisherman United.

WHAT WOULD THE PROPOSAL DO? Establish a commercial fishery for sea cucumbers in Prince William Sound Area (PWS; Registration Area E) with a season of October 1 - March 1.

WHAT ARE THE CURRENT REGULATIONS? There are no area regulations allowing the commercial harvest of sea cucumbers in PWS. The statewide miscellaneous shellfish fishery regulation 5 AAC 38.062 (a) would allow the department to issue permits to commercially harvest sea cucumbers in PWS.

There are sea cucumber management plans in Southeast Alaska (38.140) and Kodiak (5 AAC 38.416) establishing regulations for the commercial harvest of sea cucumbers.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would allow commercial harvest of sea cucumbers with a commissioner's permit and increase the harvest of sea cucumbers in PWS by an unknown amount if permits are issued.

BACKGROUND: Commercial fisheries for sea cucumbers have not been developed in PWS but have been developed in other registration areas beginning in the 1990s. The Southeast Alaska sea cucumber fishery and management plan were developed in the 1990s and the development of the guideline harvest levels (GHLs) in different areas is based on department stock assessment done with SCUBA diving equipment. Much of the more recent development and expansion of the fishery has been with the help of the Southeast Alaska Regional Dive Fisheries Association (SARDFA), a stakeholder organization. Reconnaissance of new areas by SARDFA have guided the department on new locations to conduct stock assessment surveys and ultimately expanded the commercial fishery area. Statute 16.40.240 has allowed the dive fisheries industry to tax themselves on their harvested product transferring some funds to the department to fund stock assessment surveys in SE Alaska.

In Kodiak, the sea cucumber commercial fishery was first developed from 1991 to 1993. As the fishery developed, the department implemented several management measures intended to prevent overharvest. A seasonal closure to protect spawning sea cucumbers, GHLs, and fishing periods to allow harvest tracking and assessment of inseason fishery performance. Additionally, management sections were established in the Kodiak District to distribute effort and prevent localized depletion. Kodiak does not have a fishery independent assessment of the population.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. Statewide regulations already allow the department to issue permits for commercial sea cucumber harvest.

COST ANALYSIS: Approval of this proposal would result in an additional direct cost for a private person to participate in a new sea cucumber fishery in PWS, including those costs associated with acquiring a CFEC permit, gear, and operating a vessel in the fishery. Approval of this proposal would result in additional costs to the department if a directed fishery occurs, including those costs associated with management of the fishery.

King Crab (5 proposals)

PROPOSAL 63 – 5 AAC 34.210. Fishing seasons for Registration Area E, 5 AAC 34.217. Guideline harvest range for Registration Area E, and 5 AAC 34.225. Lawful gear for Registration Area E.

PROPOSED BY: Robert Linville.

WHAT WOULD THE PROPOSAL DO? Establish a commissioner's permit fishery for golden king crab in Prince William Sound Area (PWS), Registration Area E. It would also expand the lower bound of the guideline harvest range (GHR) for golden king crab to 0-60,000 lb, establish season dates of January 15 through March 15, define pot specifications for the taking of king crab, establish a golden king crab fishery pot limit, and define the method to determine vessel pot limits.

WHAT ARE THE CURRENT REGULATIONS? The commercial harvest of king crab in PWS is closed until the board adopts a harvest strategy (5 AAC 34.210). Currently, there are no provisions for issuance of commissioner's permits in this fishery. The GHR for golden king crab is 40,000 to 60,000 lb (5 AAC 34.217). Legal king crab gear is defined under 5 AAC 34.050.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The department would be able to issue permits for a PWS golden king crab fishery, set guideline harvest levels (GHLs) for golden king crab between 0 and 60,000 lb, and, if the department opened a golden king crab fishery, the total pot limit for the fishery would be 200 pots; vessel pot limits would be set by dividing the fishery pot limit by the number of registered vessels with a maximum vessel pot limit of 15 pots. If a fishery were opened and permits issued this would increase the harvest of golden king crab in PWS by an unknown amount depending on the number of permits issued and abundance of golden king crab.

BACKGROUND: The department does not have a king crab assessment program in PWS and no data are available to identify or quantify a harvestable surplus. Both red and golden king crab have been caught in the PWS large-mesh trawl survey. Numbers of red king crab have ranged from 0 to 2 and none have been caught in the survey since 2005, while only 2 golden king crab have ever been captured (in 1995 and 1997) in the history of the survey. The department conducted a 3-year pot survey for golden king crab in western PWS from 2004 through 2006. Data obtained over the course of that 3-year survey provided an indication that the golden king crab numbers in the Knight Island Passage area of PWS are at low and stable levels, and not high enough to sustain commercial harvest.

The first commercial harvest of king crab in PWS was landed in 1957 and the fishery quickly developed; the second highest harvest of 246,965 lb was landed in 1960 (Table 63-1). In 1972, the highest harvest of 296,200 lb of primarily blue king crab were landed. Species separation of the king crab species in harvest reporting began in the 1979/80 season. Between 1979 and 1984 both

blue and red king crab harvest declined and commercial fisheries for both these species were closed by emergency order (EO) from the 1984/85 season through the 1990/91 season, and also from 1992/93 through 1994/95 before being closed by regulation in 1996. These closures coincided with the development of the golden king crab fishery from 1982 to 1989.

Harvest of golden king crab was negligible during the first three seasons of species separation and then peaked during the 1982/83 season at 147,016 lb before declining to relatively low levels from the 1983/84 season through the 1988/89 season (Table 63–1). During the fishery, the average weight of golden king crab decreased from 9.7 lb in the 1982/83 season to 6.6 lb in the 1988/89 season. Due to conservation concerns, the fishery was closed for the 1989/90 season by EO. Because of low harvest levels and the decrease in average size of harvested crab, the board established a guideline harvest range (GHR) of 40,000 to 60,000 lb. For the following years, the lower end of the GHR was not achieved, leading to a closure of the commercial fishery for 1992/93 and 1993/94 seasons. For years when pot effort data were available (beginning in 1984/85 season), catch per unit effort (CPUE) for golden king crab also declined to the lowest level of 0.6 crab/pot during the 1991/92 season. Although the fishery did reopen for a month during the 1994/95 season, participation and harvest were low, and the fishery was closed by EO each season until the board closed it by regulation in 1996.

In March 2008, the board made a positive customary and traditional use finding for king crab in PWS and subsequently opened a golden king crab subsistence fishery. The board has not adopted an ANS for king crab. Harvest in this fishery is monitored with a required permit and administered in conjunction with the subsistence Tanner crab fishery. Harvest and participation have remained low since the fishery opened in 2008. The reported number of trips with golden king crab harvest has ranged from 0 in 2012/13 to a high of 42 trips in the 2018/19 season (Table 63–2). The 2018/19 season produced the highest harvest of golden king crab since the subsistence fishery was implemented in 2008. During the 2018/19 season, there were 181 legal male golden king crab reported caught with 47 crab retained, 230 sublegal male crab released, and 605 female crab released on 42 trips. During the 2019/20 season, there were 38 legal male crab retained and 17 released with 97 females released; golden king crab were caught on 16 trips.

The department prosecuted a Commissioner's Permit Tanner crab fishery in the Eastern and Western Districts of PWS in 2018, 2019, and 2020 following adoption of a new regulation by the board in 2017. Logbooks were required in this fishery and in 2020 participants were asked to record any other crab species that were caught (and released) in their pots. Logbook data from 2020 indicated king crab were caught in 18 pots out of 6,068 pots total; in these pots 275 golden king crab were caught and 83 were legal males. Five records indicated "king crab" without noting the species, gender, or size of these king crab. Golden king crab are generally caught at deeper depths than Tanner crab and historically are caught in different areas.

There was a PWS Tanner crab test fishery prosecuted in the Northern and Hinchinbrook Districts of PWS between February 22 and April 7, 2020. The department sent observers aboard 3 of the trips. In 2 out of the 3 trips, 11 sublegal golden king crab were caught. The harvest rates in these fishery and assessment programs suggest that there likely is not a commercially harvestable surplus of golden king crab.

Currently, the department does not have a king crab assessment program, which would be needed to determine if a harvestable surplus is available. Although subsistence harvest of golden king crab peaked in 2018/19, and golden king crab were caught in the commissioner's permit Tanner crab

fishery, overall catch and CPUE remains low and does not indicate that abundance levels are high enough to support a commercial fishery. A golden king crab test fishery is scheduled to be prosecuted during October and November 2020 and results will be available at the PWS board meeting. The results of this test fishery will provide information needed to determine if a commissioner's permit fishery would be appropriate.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. The department has conservation concerns associated with issuing commissioner's permits allowing for a golden king crab commercial fishery without having a stock assessment in place and estimates of harvestable surplus golden king crab. The department conducted a test fishery in October and November 2020 to assess golden king crab stock status in PWS. Results of that test fishery have not been analyzed at this time but will be available for review during the 2021 PWS Alaska Board of Fisheries meeting.

COST ANALYSIS: Approval of this proposal would result in an additional direct cost for a private person to participate in a new commissioner's permit fishery for golden king crab in PWS, including those costs associated with acquiring a CFEC permit, gear, and operating a vessel in the fishery. Approval of this proposal would result in additional costs to the department if a commissioner's permit fishery occurs, including those costs associated with management of the fishery, sampling the harvest, and sending department observers aboard participating vessels.

Table 63-1.–Prince William Sound Area (Registration Area E) commercial king crab harvests, 1960–2019, including golden king crab catch per unit effort (CPUE; crab/pot) and average weight when available.

			King Crab Harvest (lb)				Golden King	
Season[a,b,c]	Vessels	Landings	Red	Blue	Golden	Total	CPUE[d]	Avg Wt (lb)
1960						246,965		
1961						236,081		
1962						31,478		
1963						43,569		
1964						14,028		
1965						5,500		
1966						11,000		
1967						41,800		
1968						200,000		
1969						48,100		
1970						94,300		
1971						144,200		
1972						296,200		
1973						207,916		
1974						85,379		
1975						53,423		
1976/77						17,087		
1977/78						86,595		
1978/79						114,000		
1979/80	18	109	52,026	13,662	0	65,688		
1980/81	14	65	32,433	7,282	20	39,735		
1981/82	11	43	25,358	5,634	0	30,992		
1982/83	31	187	30,809	10,433	147,016	188,258		9.7
1983/84	18	69	16,467	5,324	50,535	73,226		8.8
1984/85	4	14	235	closed	40,232	40,467	0.9	6.0[d]
1985/86	4	11	closed	closed	51,800	51,800	1.4	5.8
1986/87	4	11	closed	closed	65,674	65,837	3.4	6.1
1987/88	4	15	closed	closed	68,270	68,270	2.4	6.6
1988/89	5	14	closed	closed	48,442	48,442	2.6	6.6
1989/90	0	0	closed	closed	closed	0		
1990/91	[e]	[e]	closed	closed	[e]	[e]	0.8	6.4[d]
1991/92	[e]	[e]	[e]	[e]	[e]	[e]	0.6	6.5[d]
1992/93	0	0	closed	closed	closed	0		
1993/94	0	0	closed	closed	closed	0		
1994/95	[e]	[e]	closed	closed	[e]	[e]	1.4	7.9[d]
1996–2019	closed by regulation							

[a] 1995/1996 to 1999 seasons closed by emergency order.

[b] Seasons closed by regulation effective August 1999.

[c] Catch not reported by species prior to 1979/1980 season.

[d] Derived from available fish ticket data.

[e] Data are confidential.

Table 63-2.–Annual reported effort, harvest, and catch for trips targeting golden king crab (GKC) in the Prince William Sound Area subsistence fishery, 2008/2009–2019/2020.

Season	Number of permits issued	Number of legal crab retained	Number of legal crab released	Total crab	Number of sublegal released	Number of females released	Number of Trips[a]
2008/09	115	5	8	13	9	12	13
2009/10	93	3	7	10	21	22	9
2010/11	73	12	0	12	5	8	12
2011/12	79	10	8	18	23	39	9
2012/13	151	0	0	0	0	0	0
2013/14	173	27	2	29	6	97	20
2014/15	211	35	22	57	15	179	24
2015/16	206	16	7	23	9	39	16
2016/17	183	5	0	5	4	7	15
2017/18	179	6	4	10	12	27	6
2018/19	192	47	134	181	230	605	42
2019/20	252	38	17	55	92	97	16

Note: permits are combined for Tanner and GKC which have different habitats (GKC, very deep) with most trips targeting Tanner crab.

[a] Number of trips with GKC harvest.

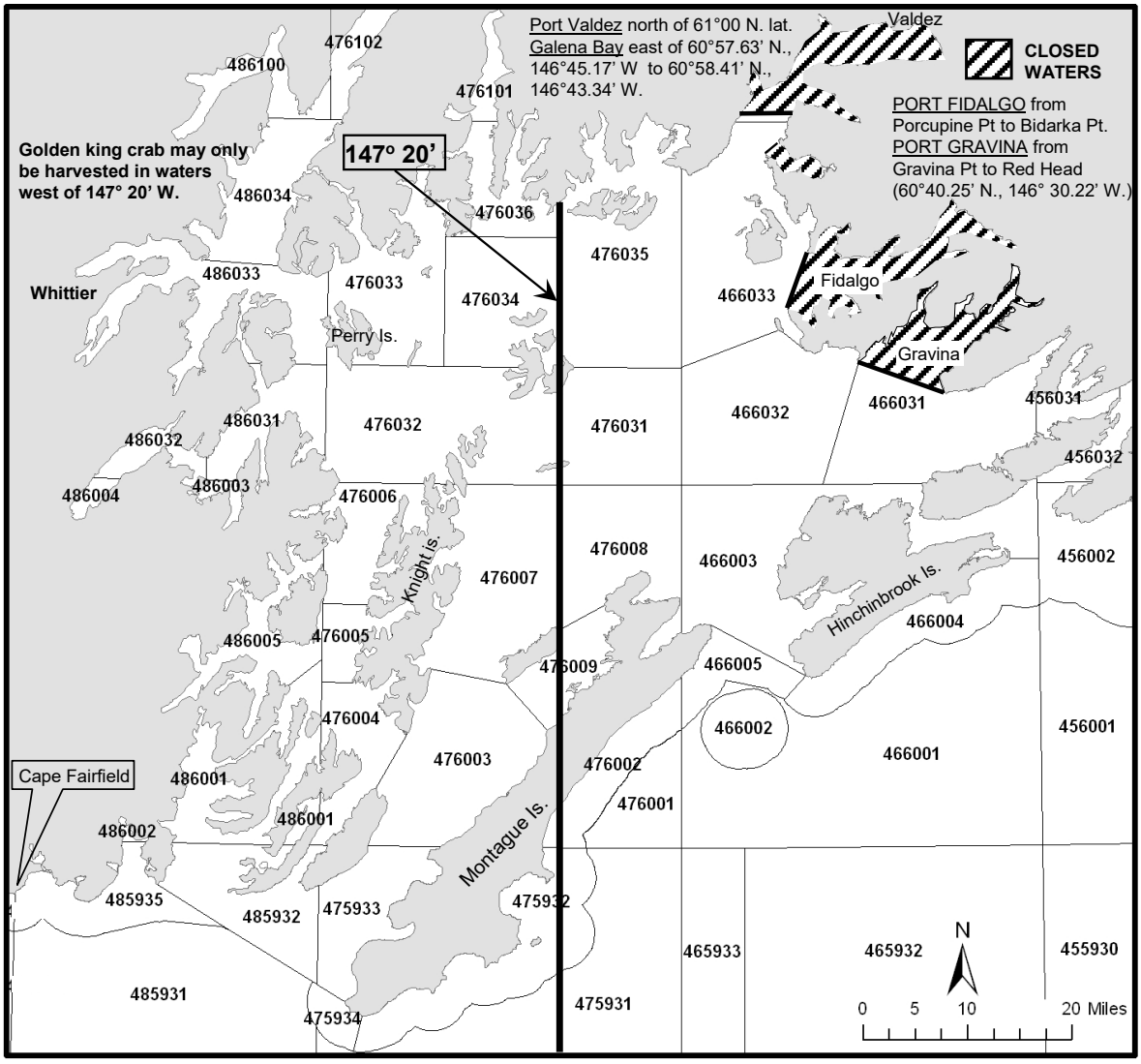


Figure 63-1.–Prince William Sound Area Tanner and golden king crab subsistence fishery statistical areas, closed waters, and boundaries; golden king crab may only be retained in waters west of 147° 20′ W. long.

PROPOSAL 64 – 5 AAC 34.210. Fishing seasons for Registration Area E.

PROPOSED BY: Cordova District Fishermen United, Shellfish Division.

WHAT WOULD THE PROPOSAL DO? Establish a commissioner's permit fishery for golden king crab in Prince William Sound Area (PWS; Registration Area E) and establish season dates.

WHAT ARE THE CURRENT REGULATIONS? The commercial harvest of king crab in PWS is closed until the board adopts a harvest strategy (5 AAC 34.210). Currently, there are no provisions for the issuance of commissioner's permits in this fishery. There is a guideline harvest range (GHR) for golden king crab of 40,000 to 60,000 lb (5 AAC 34.217).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? A person could apply for a commissioner's permit to participate in a commercial king crab fishery in PWS and the season would be defined as January 15 through March 15. If a fishery were opened and permits were issued, this could increase the harvest of golden king crab in PWS by an unknown amount depending on the number of permits issued and abundance of golden king crab.

BACKGROUND: Refer to the comments on Proposal 63.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. The department has conservation concerns associated with issuing commissioner's permits allowing for a golden king crab commercial fishery without having a stock assessment in place and estimates of harvestable surplus golden king crab. The department conducted a test fishery in October and November 2020 to assess golden king crab stock status in PWS. Results of that test fishery have not been analyzed at this time but will be available for review during the 2021 PWS Alaska Board of Fisheries meeting.

COST ANALYSIS: Approval of this proposal would result in an additional direct cost for a private person to participate in a new commissioner's permit fishery for golden king crab in PWS, including those costs associated with acquiring a CFEC permit, gear, and operating a vessel in the fishery. Approval of this proposal would result in additional costs to the department if a commissioner's permit fishery occurs, including those costs associated with management of the fishery, sampling the harvest, and sending department observers aboard participating vessels.

PROPOSAL 65 – 5 AAC 34.2XX. New section.

PROPOSED BY: Cordova District Fisherman United.

WHAT WOULD THE PROPOSAL DO? This would allow the department to issue commissioner's permits for a commercial golden king crab fishery in the Prince William Sound Area (PWS; Registration Area E) and allow the department to establish season dates, fishing area, deploy department observers, and other conditions as needed; the proposal also sets pot limits, legal size, and log sheet requirements.

WHAT ARE THE CURRENT REGULATIONS? The commercial harvest of king crab in PWS is closed until the board adopts a harvest strategy (5 AAC 34.210). Currently, there are no provisions for the issuance of commissioner's permits in this fishery. There is a guideline harvest range (GHR) for golden king crab of 40,000 to 60,000 lb (5 AAC 34.217).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? A person could apply for a commissioner's permit to participate in a commercial king crab fishery in PWS with conditions set by the department. A 15-pot limit would be established for the fishery. If a fishery were opened and permits were issued, this could increase the harvest of golden king crab in PWS by an unknown amount depending on the number of permits issued and abundance of golden king crab.

BACKGROUND: Refer to the comments on Proposal 63.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. The department is concerned with issuing commissioner's permits allowing for a golden king crab commercial fishery without having a stock assessment in place and estimates of harvestable surplus golden king crab. The department does not have a king crab assessment program, which would be needed to supply evidence of a harvestable surplus beyond that taken for subsistence purposes. Although subsistence harvest of golden king crab peaked in the 2018/19 season, and golden king crab were caught in the commissioner's permit Tanner crab fishery, overall catch is still relatively low and does not indicate that abundance levels are high enough to support a commercial fishery. The department conducted a test fishery in October and November 2020 to assess golden king crab stock status in PWS. Results of that test fishery have not been analyzed at this time but will be available for review during the 2021 PWS Alaska Board of Fisheries meeting.

COST ANALYSIS: Approval of this proposal would result in an additional direct cost for a private person to participate in a new commissioner's permit fishery for golden king crab in PWS including those costs associated with acquiring a CFEC permit, gear, and operating a vessel in the fishery. Approval of this proposal would result in additional costs to the department if a commissioner's permit fishery occurs, including those costs associated with management of the fishery, sampling the harvest, and sending department observers aboard participating vessels.

PROPOSAL 66 – 5 AAC 34.217. Guideline harvest range for Registration Area E.

PROPOSED BY: Cordova District Fisherman United.

WHAT WOULD THE PROPOSAL DO? This would amend the guideline harvest range (GHR) for a commercial golden king crab fishery in the Prince William Sound Area (PWS; Registration Area E) by expanding the lower bound to between 0 and 60,000 lb.

WHAT ARE THE CURRENT REGULATIONS? There is a GHR for golden king crab of 40,000 to 60,000 lb (5 AAC 34.217). The commercial harvest of king crab in PWS is closed until the board adopts a harvest strategy (5 AAC 34.210).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The proposed guideline harvest range would allow the department to open a commercial golden king crab fishery with a smaller harvest limit than allowed under current regulation. Fishing opportunity would be dependent on determination that a harvestable surplus exists.

BACKGROUND: Refer to the comments on Proposal 63.

DEPARTMENT COMMENTS: The department **SUPPORTS** this proposal. If a stock assessment and fishery were to be developed, this wider GHR provides the ability to open a small fishery that does not pose a conservation risk or negatively impact the subsistence fishery. The department conducted a test fishery in October and November 2020 to assess golden king crab stock status in PWS. Results of that test fishery have not been analyzed at this time but will be available for review during the 2021 PWS Alaska Board of Fisheries meeting.

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 67 – 5 AAC 34.225. Lawful gear for Registration Area E.

PROPOSED BY: Cordova District Fisherman United.

WHAT WOULD THE PROPOSAL DO? This would specify legal gear and pot limits for the taking of golden king crab in a commercial fishery in the Prince William Sound Area (PWS; Registration Area E), with a mechanism to determine vessel pot limits.

WHAT ARE THE CURRENT REGULATIONS? Legal king crab gear is defined under 5 AAC 34.050.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? King crab pots used in a PWS commercial golden king crab fishery would have to adhere to specifications in 5 AAC 34.050, and a maximum of 200 pots would be allowed during the fishery. In addition, a method to determine vessel pot limits would be defined as dividing the fishery pot limit by the number of registered vessels, and a maximum vessel limit of 15 pots would be established. Currently, in Area E regulations, there are no defined fishery or vessel pot limits and there is no reference to pot specifications.

BACKGROUND: Refer to the comments on Proposal 63.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. If this proposal is adopted the department recommends the board also adopt a buoy tag marking requirement to facilitate enforcement of the new pot limit.

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.

Tanner Crab Subsistence (1 proposal)

PROPOSAL 68 – 5 AAC 02.208. Customary and traditional subsistence uses of shellfish stocks and amounts necessary for subsistence.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would provide an opportunity for the board and public to consider adopting an ANS for the Tanner crab stock in the Prince William Sound Area (outside of the Valdez Nonsubsistence Area described at 5 AAC 99.015(a)(5)). There are ANS amounts for the other shellfish stocks for which the board has found there are customary and traditional (C&T) subsistence uses, but not for Tanner crab.

WHAT ARE THE CURRENT REGULATIONS? The board has made a positive C&T use finding for Prince William Sound Tanner crab (5 AAC 02.208(a)) but has not established an ANS for this stock. A subsistence Tanner crab fishery is open to Alaska residents with a bag and possession limit of 12 legal crab per person. The subsistence Tanner crab fishery is monitored through a mandatory permit system (5 AAC 02.206). Tanner crab may be taken for subsistence purposes only from October 1 through March 31 (5 AAC 02.220(1)), with pots, ring nets, dip nets, diving gear, hooked or hookless hand lines, and by hand (5 AAC 02.207(1)). There are multiple specifications for a pot used to take Tanner crab: it must have a minimum of two escape rings that are at least four and three-eighths inches inside diameter (5 AAC 02.207((2a)), and it may not have any portion of the line attaching the pot to a buoy floating on the surface of the water at any time, except for that portion of the line connecting the main buoy to any auxiliary buoy or buoys (5 AAC 02.207((2b)). No more than two pots per person with a maximum of two pots per vessel may be used to take Tanner crab (5 AAC 02.207(3)).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? An ANS finding will provide the board with a metric to determine if current regulations are providing a reasonable opportunity for subsistence uses of Tanner crab in this area.

BACKGROUND: Under AS 16.05.258(a), the board is charged with identifying fish stocks, or portions of stocks, that "are customarily taken or used for subsistence" (a C&T use finding). In March 2008, the board found that shrimp, Dungeness crab, Tanner crab, king crab, and miscellaneous shellfish of the Prince William Sound Area are customarily and traditionally used for subsistence (5 AAC 02.208(a)). AS 16.05.258(b) directs the board to determine the amount of the harvestable portion of fish stocks that support C&T uses that is reasonably necessary for subsistence uses (ANS). "Reasonable opportunity" is defined in statute as "an opportunity, as determined by the appropriate board, that allows a subsistence user to participate in a subsistence hunt or fishery that provides a normally diligent participant with a reasonable expectation of success of taking of fish or game" (AS 16.05.258 (f)).

In March 1999, board action on Proposal 350 closed subsistence, personal use, and sport fisheries for Tanner crab in the Prince William Sound Management Area due to lack of harvestable surplus. At the March 2008 meeting, the board made a positive C&T use finding for shrimp, Dungeness crab, Tanner crab, king crab, and miscellaneous shellfish in PWS in response to proposals 361–365 (5 AAC 02.208(a)) (http://www.adfg.alaska.gov/specialpubs/SP2_SP2008-003.pdf). Although the board opened a subsistence fishery for Tanner crab at this meeting, it did not make an ANS determination because the fishery had been closed for ten years. The board preferred to postpone the finding until a harvest record through the permit system had been established.

Subsistence permits for harvesting crab within the Prince William Sound Area have been required since 2008 (5 AAC 02.015), when the fishery reopened. Permits require harvest information including date of harvest, area of harvest, number of pots fished, number of legal male Tanner crab harvested, number of legal male Tanner crab discarded, number of sublegal male Tanner crab caught, and the number of females captured. This harvest information must be recorded each time the crab pots are pulled and before concealing the crab from plain view or removing the crab from the fishing site. Permits must be returned by April 15 each season.

Aside from 2008 when 115 permits were issued, fewer than 100 permits had been issued, until 2012. Participation in the permit program then increased, with the number of permits issued averaging approximately 200 from the 2014/15 season through the 2018/19 season. While participation has remained steady since 2012, 50% or fewer of permit holders actually participated in the fishery in all seasons except the 2012/13 season, when a high of 58% of permit holders participated. In the 2017/18 season, the legal male Tanner crab harvest increased from 548 crab in the 2016/17 season to 1,073 crab. This was associated with the 2017 board decision to increase the bag and possession limit from 5 legal crab per person to 12 legal crab per person due to an increase in abundance. However, the harvest in the 2018/19 season dropped back to 624 crab (Table 68-1).

The department is providing options for the board to consider should it choose to adopt an ANS range for Tanner crab in the Prince William Sound Area (outside the Valdez nonsubsistence area). Options presented in Special Publication No. BOF 2020-08 are based on subsistence permit returns. Participation increased from an average of 90 permits issued and 34 permits fished from 2008 through 2011, to 185 permits issued and 87 permits fished from 2012 through 2018. Therefore, options based on two time periods are offered: all years (2008–2018) and 2012–2018. Table 68-2 provides ANS options based on: 1) the low and high annual harvests rounded to the nearest 50 crab between 2008 and 2018; 2) the low and high annual harvests rounded to the nearest 50 crab between 2012 and 2018; 3) the mean harvest for the period 2008–2018 bounded by the standard deviation and rounded to the nearest 50 crab; 4) the mean harvest for the period 2012–2018 bounded by the standard deviation and rounded to the nearest 50 crab.

DEPARTMENT COMMENTS: The department submitted this proposal and supports the Board discussing ANS determinations but is **NEUTRAL** on the outcome.

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.

SUBSISTENCE REGULATION REVIEW:

1. Is this stock in a nonsubsistence area? No.
2. Is this stock customarily and traditionally taken or used for subsistence? The board has determined under 5 AAC 02.208(a) that Tanner crab are customarily and traditionally taken or used for subsistence in Prince William Sound.
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence uses? This is a board determination.
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

Table 68-1.–Prince William Sound Area subsistence Tanner crab permits, permits fished, and harvest, 2008–2018 seasons.

Year	Permits	Permits fished	Harvest
2008	115	40	44
2009	93	33	85
2010	73	29	78
2011	79	34	213
2012	151	87	2067
2013	173	80	629
2014	211	91	793
2015	206	93	816
2016	183	91	548
2017	179	70	1073
2018	192	96	624
Average 2008–2011	90	34	105
Average 2012–2018	185	87	936
Historical average 2008–2018	150	68	634

Source Rumble et al. 2020:36
Note 2019/2020 not available in latest AMR, as of August 11, 2020

Table 68-2.–Tanner crab ANS Options, Prince William Sound Area.

Using high and low harvests			
Year	Low	High	ANS range option (rounded)
2008–2018	44	2067	50 to 2,050 crab
2012–2018	548	2067	550 to 2,050 crab

Using SD to establish range round mean			
Year	Low	High	ANS range option (rounded)
2008–2018	92	1,175	50 to 1,200 crab
2012–2018	427	1,444	450 to 1,450 crab

Tanner Crab Commercial (11 proposals)

PROPOSAL 69 – 5 AAC 35.308. Registration Area E Tanner crab harvest strategy.

PROPOSED BY: Cordova District Fisherman United.

WHAT WOULD THE PROPOSAL DO? Would allow the Prince William Sound Area (PWS; Registration Area E) Tanner crab fishery to open under the conditions of a commissioner's permit if the commercial fishery has been closed for 5 or more years.

WHAT ARE THE CURRENT REGULATIONS? The Tanner crab harvest strategy in Registration Area E (5 AAC 35.308) establishes guideline harvest levels (GHLs) based on abundance thresholds of historical legal-size male Tanner crab and utilizes abundance estimates derived from department trawl surveys. The commercial fishery may open if the estimated abundance of legal male Tanner crab is greater than or equal to 200,000 crab. Male Tanner crab may be taken in the Northern and Hinchinbrook districts (Figure 69-1) from January 15 through March 31, during periods established by emergency order (5 AAC 35.310). Commissioner's permits may be issued for Tanner crab in PWS Eastern and Western districts (Figure 69-1) with conditions set by the department (5 AAC 35.311).

Only male Tanner crab five inches or greater in width of shell may be taken or possessed (5 AAC 35.320). Lawful gear and pot marking requirements are also defined (5 AAC 35.325 and 5 AAC 35.326). Pot storage (5 AAC 35.327), operation of other gear restrictions (5 AAC 35.328), and inspection requirements (5 AAC 35.345) are also included in the Registration Area E regulations.

Log sheet (5 AAC 35.350) and daily reporting requirements (5 AAC 35.358) are defined in order for the department to monitor the fishery.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? A person could apply to obtain a commissioner's permit to participate in a commercial Tanner crab fishery in all districts of PWS, including the Northern and Hinchinbrook districts, which are currently closed to fishing under a commissioner's permit. If commissioner's permits were issued by the department in all districts, this would increase the harvest of Tanner crab in PWS by an unknown amount depending on the number of permits issued and abundance of Tanner crab.

BACKGROUND: Commercial harvest of Tanner crab in PWS began in 1968 when 1.2 million pounds of crab were landed. The fishery peaked during the 1972/73 season when more than 13.9 million pounds were landed. In 1976, a minimum size limit of 5.3 inches in carapace width was implemented. After this, harvest decreased during the late 1970s and early 1980s, followed by large area closures during the 1984 and 1985 seasons. Stable harvests of around 500,000 pounds occurred during the 1986, 1987, and 1988 seasons before the fishery was closed due to lack of recruitment documented by the annual stock assessment pot survey. The commercial Tanner crab

fishery in PWS was closed from 1989 through 2017 (Table 69-1). The decline of Tanner crab abundance in the early years of the commercial fishery was likely due to overharvest of reproductive males and females prior to implementation of the legal male size limit and prohibition of harvesting females.

The department has assessed Tanner crab abundance in PWS since 1977, using a pot survey until 1991 and a trawl survey from 1991 to the present. The pot survey provided relative abundance indices of legal Tanner crab and was used to set GHLs for the commercial fishery. The trawl survey has occurred annually from 1991–1995 and 2013–2015, 2017-2020 and biennially from 1997–2011, with no survey in 2016; data from this survey are used to estimate abundance of all male recruit classes and females (Table 69-2; Figure 69-1). Legal male estimates declined from 101,746 crab in 1993 to the lowest level of 3,677 crab in 1999. Since then, estimates of Tanner crab gradually increased and peaked in 2011 and 2013. The 2011 and 2013 trawl surveys produced legal male estimates at historical high levels of 182,448 and 184,993 crab, respectively. Abundance estimates from the trawl survey decreased by 65% from these levels down to ~75,000 legal male crab in 2018 and ~63,000 legal male crab in 2019, well below the threshold to trigger a commercial fishery. This 65% decline in abundance estimate is the primary indicator of lack of harvestable surplus that has guided the department to keep the fishery closed.

The PWS Tanner and golden king crab subsistence fishery participation was low from 2008/09 through 2011/12 seasons, with fewer than 50 permits fishing with an average of 10 or fewer legal male crab reported harvested (Table 69-3). Total legal males caught (the sum of harvested and released male Tanner crab) peaked in 2012/13 with 3,624 crab but in the last 4 seasons it decreased from 1,817 legal male crab in 2016/17 to a low of 275 in 2019/20, the lowest level since 2011/12.

This Commissioner's Permit Tanner crab fishery has been prosecuted for the past 3 seasons in the Eastern and Western Districts, 2018-2020. The highest harvest and catch per pot occurred in 2019, 124,707 lb with an average of 15.2 legal Tanner crab per pot (Table 69-4). In 2020, there was the highest amount of effort, for both pot lifts and vessels, at 5,948 pot lifts from 22 vessels. The first year of the fishery had the lowest number of pot lifts (3,788) and harvest (83,338 lb) with 14 participating vessels.

In 2020, a test fishery was conducted in order for the department to gather information on the current health of the PWS Tanner crab stock in areas outside and within the ADF&G trawl survey areas, and outside the commissioner's permit fishery areas, the Eastern and Western districts (Figure 69-2). The objectives of the test fishery were to collect information on legal male catch rate, male size composition, and distribution of Tanner crab in areas of the Northern and Hinchinbrook districts. The department solicited bids to contract vessels to conduct the test fishery using pot gear to harvest up to 30,000 lb of Tanner crab in PWS. Six lots of up to 5,000 lb each were available in defined areas of the Northern and Hinchinbrook districts. The minimum bid price was $0.35 per pound for Tanner crab harvested. Contracts were awarded to the highest bidder for each lot and vessel owners were allowed to bid on more than one lot. The vessel operators were required to have prior commercial Tanner crab fishing experience. Fishing was limited to the Northern and Hinchinbrook districts, with a maximum gear limit of 25 Tanner crab pots per vessel. Within each lot, 25 mandatory pot locations were defined, and pots were required to be set within 0.5 nautical miles of these specific locations. Additional pot locations fished within each lot were up to the vessel operator. Log sheets and daily call-ins were required, and vessels were required to accommodate observers upon request.

There were bids submitted for all six test fishery lots (A-F). Four vessels were awarded one lot each and one vessel was awarded two of the lots. The test fishery was conducted between February 22 and April 7, 2020. In four of the six lots, vessels caught near or over the 5,000 lb limit (Table 69-5; Figure 69-3). In addition to bid price per pound, all proceeds from overages above 5,000 lb went to the State of Alaska.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. The department has submitted proposals that will address the issues raised in this proposal and comprehensively revise management of Tanner crab in PWS. The department proposal will result in a harvest strategy that uses all available survey and fishery information to determine if there is a harvestable surplus and will not open an area based solely on a time period that an area has been closed. The department proposals are based on methods that have been used to manage Tanner crab fisheries throughout Alaska. The department proposals will adjust the PWS Tanner crab district boundaries and amend the existing PWS Tanner crab harvest strategy to incorporate information from the test fishery, the commissioner's permit fishery, and department trawl survey. Districts will open depending on stock status using all available department data.

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 as costs would be similar to the commissioner's permit fishery that has been prosecuted for the past 3 years. Approval of this proposal is not expected to result in an additional direct cost for the department.

Table 69-1.–Commercial Tanner crab harvest in Prince William Sound Area (Registration Area E), 1968/1969 season through 2017.

Season[a]	Vessels	Landings	Harvest by Area (lb)				Total	Mean weight (lb/crab)	Number of crab
				Inside	Outside				
1968/69							1,235,613		
1969/70							1,284,597		
1970/71							4,159		
1971/72							7,788,498		
1972/73							13,927,868		
1973/74				1,658,000	8,500,000		10,158,000		
1974/75				1,187,000	2,667,000		3,854,000		
1975/76				3,322,482	3,810,262		7,132,744		
			Northern	Hinchinbrook	Western	Eastern	Total		
1976/77[b]	23	316	782,048	766,650	701,725	70,925	2,321,348		
1977/78	38	591	994,721	1,161,831	2,079,549	570,573	4,806,674	2.2	2,184,852
1978/79	51	783	649,977	708,562	2,248,545	3,443,471	7,050,555	2.1	3,357,408
1979/80	49	561	140,228	332,583	1,462,059	4,057,847	5,992,717	2.0	2,996,359
1980/81	30	304	152,196	812,352	1,561,207	250,076	2,775,831	2.1	1,321,824
1981/82	29	216	351,139	722,834	1,503,253	288,425	2,865,651	No Data	
1982/83	40	304	471,422	31,447	921,663	45,308	1,469,840	2.1	699,924
1984[c]	0	0	Closed	Closed	Closed	No Effort	0		
1985	0	0	Closed	Closed	No Effort	No Effort	0		
1986	14	35	137,720	236,241	160,829	587	535,377	2.1	254,941
1987	23	65	152,834	222,052	196,246	0	571,132	2.1	271,968
1988	21	46	55,929	226,509	191,654	0	474,092	2.1	225,758
1989–2017					FISHERY CLOSED				
2016[d]							3,946		

[a] Closed from 1989 to 2017.

[b] New districts and minimum legal size established.

[c] Calendar year season established.

[d] Test fishery conducted.

Table 69-2.–Prince William Sound large mesh trawl survey Tanner crab male abundance estimates.

		Pre-Recruits				Historical Legal Males		Total Males	
		Pre-4	Pre-3	Pre-2	Pre-1	Abund.	±95% CI	Abund.	±95% CI
Year	Tows	(<73)	(73-92)	(93-112)	(113-134)	(>135)			
1991	29	834,939	695,205	326,658	275,497	134,820	106,043	2,267,119	1,420,647
1992	37	598,511	319,585	487,258	318,010	68,119	39,590	1,791,483	606,616
1993	38	470,946	118,931	224,734	287,448	101,746	32,069	1,203,805	433,640
1994	38	669,317	79,685	123,373	182,595	55,544	23,511	1,110,513	484,107
1995	32	296,371	40,200	70,587	108,529	17,077	13,643	532,765	171,825
1996	No Survey								
1997	39	213,804	51,866	51,114	34,283	11,336	11,048	362,403	158,018
1998	No Survey								
1999	40	117,966	6,719	27,531	16,792	3,677	3,574	172,686	64,516
2000	No Survey								
2001	40	1,380,910	390,383	223,047	59,143	6,626	6,655	2,060,109	784,610
2002	No Survey								
2003	40	497,200	115,487	196,717	90,967	14,962	17,553	915,333	360,036
2004	No Survey								
2005	40	279,702	80,563	142,569	117,450	28,940	25,743	649,224	291,641
2006	No Survey								
2007	32	747,359	201,944	220,162	207,069	36,694	32,823	1,413,230	422,800
2008	No Survey								
2009	43	1,005,227	509,029	255,598	301,614	79,095	42,681	2,150,563	884,060
2010	No Survey								
2011	43	984,555	415,403	559,976	579,851	182,448	85,397	2,722,235	1,794,176
2012	No Survey								
2013	43	5,987,002	1,024,721	429,215	322,264	184,993	74,780	7,948,194	2,332,076
2014	41	817,813	634,475	421,009	329,437	134,929	80,188	2,337,664	647,323
2015	43	611,303	466,460	609,544	302,250	102,789	46,797	2,092,345	882,266
2016	No Survey								
2017	43	219,496	75,278	253,599	444,370	149,481	70,117	1,142,224	290,506
2018	43	347,925	114,176	209,609	227,648	75,103	28,106	974,462	322,243
2019	43	141,230	51,621	154,868	212,511	63,454	25,431	623,684	182,780

Table 69-3.–Annual reported effort, harvest, and catch for Tanner crab in the Prince William Sound Area subsistence fishery, 2008/09–2019/20.

	Permits				Legal males					
	Issued	Fished	Returned	Number of trips	Harvested	Released	Total	Sublegal crab released	Female crab released	Avg harvest per permit fished
2008/09	130	40	115	98	49	13	62	139	30	1
2009/10	95	33	93	84	88	23	111	286	77	3
2010/11	74	29	73	72	90	11	101	228	26	3
2011/12	82	34	79	100	278	49	327	491	116	8
2012/13	152	87	151	381	2,177	1,447	3,624	5,989	750	25
2013/14	183	80	173	202	668	276	944	1,647	284	8
2014/15	217	90	211	233	898	1,386	2,284	1,809	383	10
2015/16	215	93	206	239	861	2,377	3,238	1,603	258	9
2016/17	185	91	183	202	558	1,259	1,817	1,067	198	6
2017/18	182	70	179	203	1,112	361	1,473	761	127	16
2018/19	195	96	192	225	675	386	1,061	950	824	7
2019/20	252	53	221	114	270	5	275	200	63	5

Table 69-4.–PWS Commissioner's Permit Tanner crab fishery harvest in number and pounds of crab, including pot lifts, average CPUE (crab/pot), and number of vessels for 2018, 2019, and 2020 seasons.

Year	Pot Lifts	Harvest (number of crab)	Harvest (lb)	CPUE (crab/pot)	Vessels
2018	3,788	47,397	83,338	12.5	14
2019	4,853	74,405	124,707	15.2	14
2020	5,948	64,652	109,020	10.9	22
Average	4,863	62,151	105,688	13	17

Table 69-5.–2020 Test fishery pot lifts, harvest in number of Tanner crab, harvest in lb of crab, and catch per unit effort (CPUE) for Lots A through F.

Lot	Pot	Harvest (crab)	Harvest (lb)	CPUE (crab/pot)
A	114	2,616	5,120	22.9
B	58	593	1,029	10.2
C	135	2,711	4,762	20.1
D	188	3,103	5,827	16.5
E	144	848	1,590	5.9
F	157	3,046	5,443	19.4
Total	796	12,917	23,771	16.2

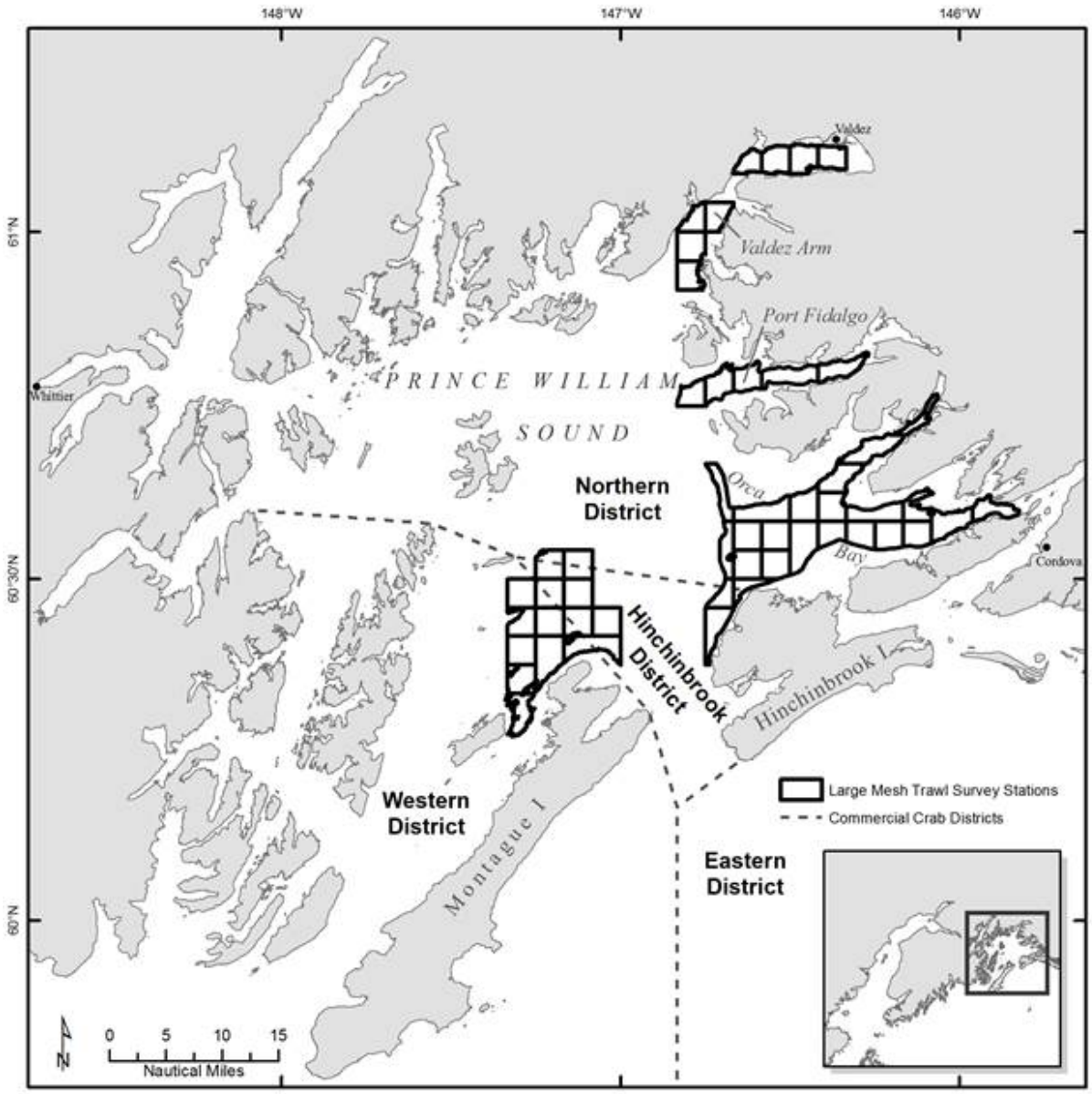


Figure 69-1.–Prince William Sound large mesh trawl survey locations, targeting Tanner crab.

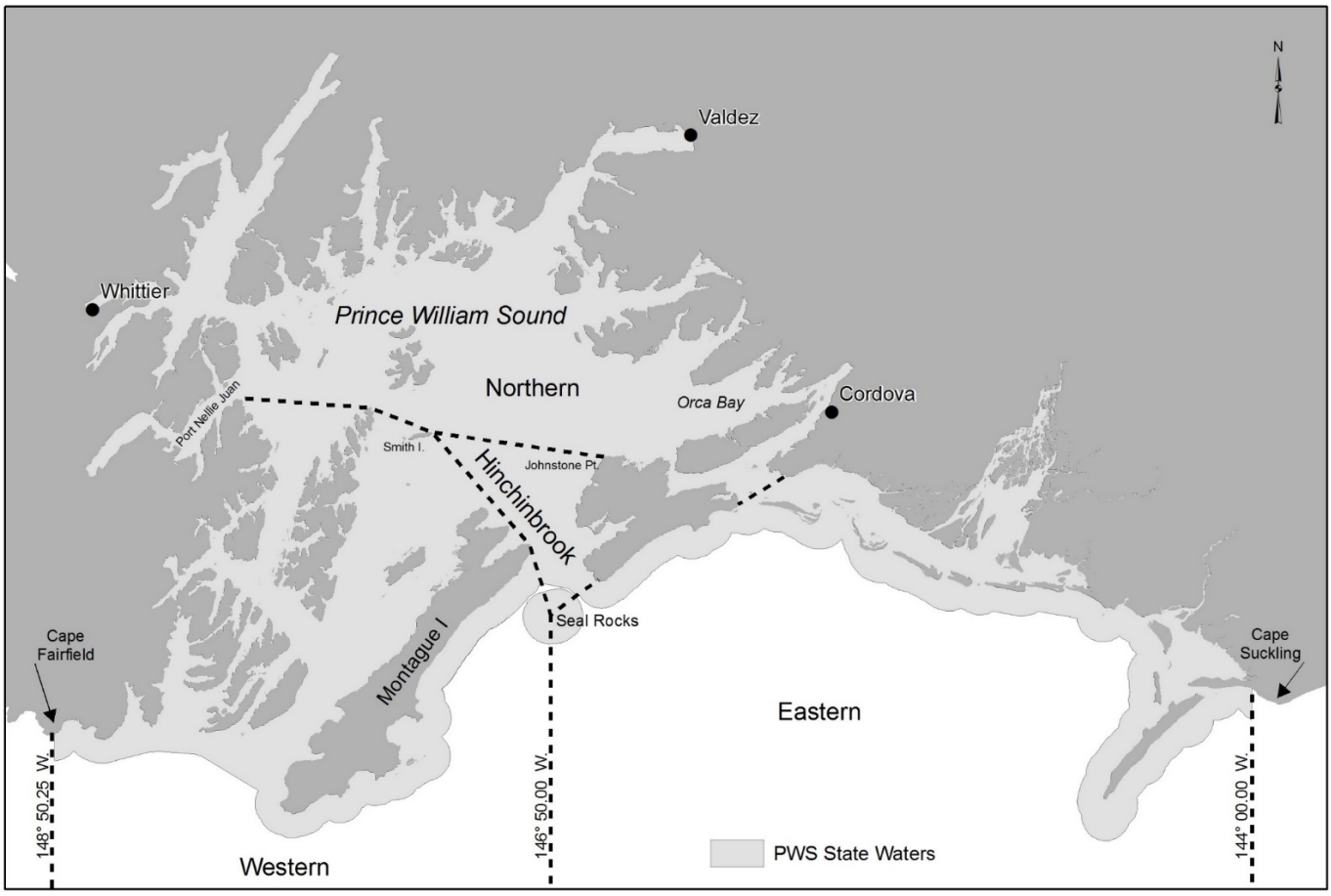


Figure 69-2.–Prince William Sound Area (Registration Area E) commercial crab districts.

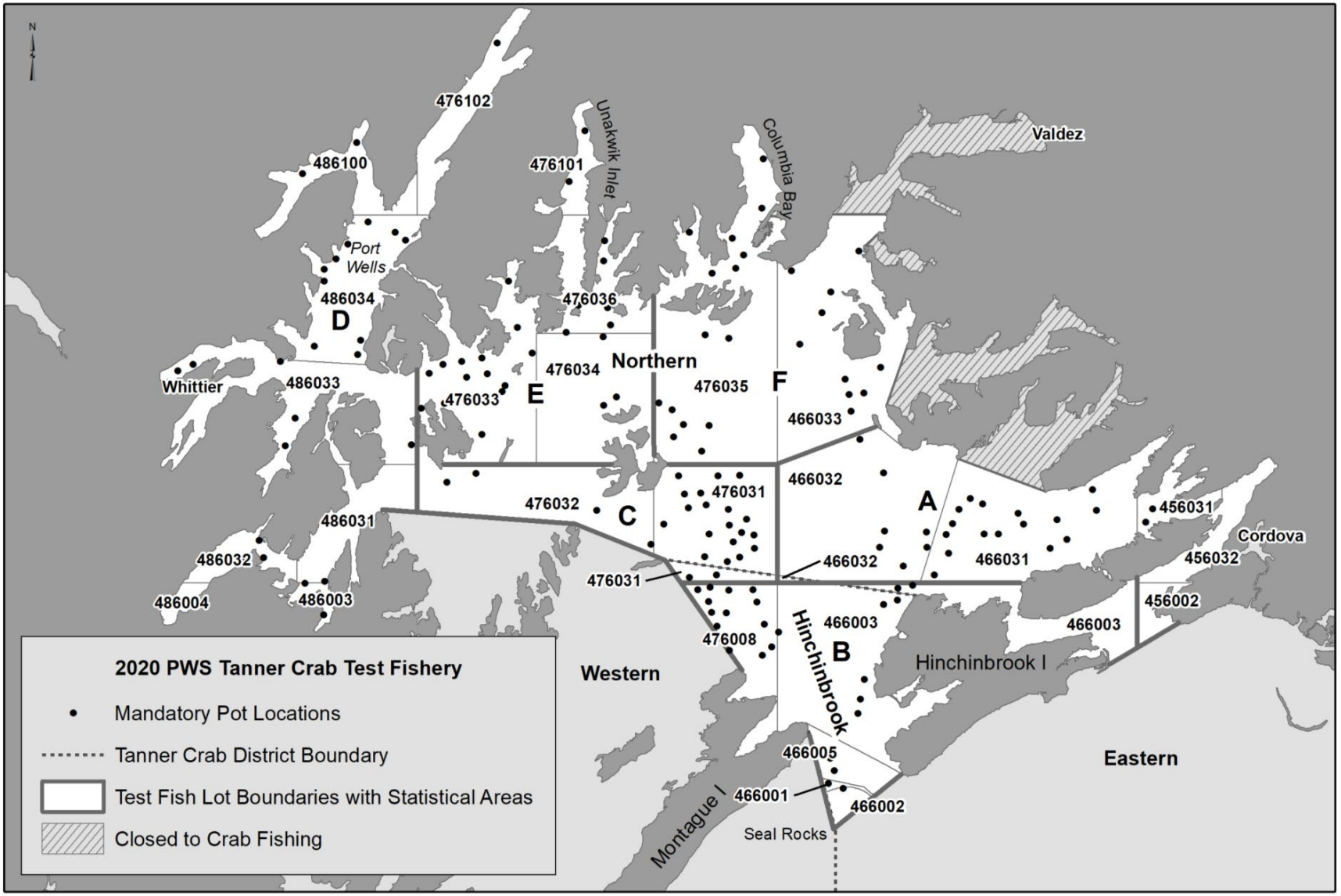


Figure 69-3.–Prince William Sound Area Tanner crab Test Fishery Lots (A-F) with statistical areas and mandatory pot locations.

PROPOSAL 70 – 5 AAC 35.308. Registration Area E Tanner crab harvest strategy.

PROPOSED BY: Warren Chappell and Robert Smith

WHAT WOULD THE PROPOSAL DO? This would require unanimous approval of all Prince William Sound Area (PWS; Registration Area E) advisory committees to close a commercial Tanner crab fishery for more than one year.

WHAT ARE THE CURRENT REGULATIONS? The Tanner crab harvest strategy in Registration Area E (5 AAC 35.308) establishes guideline harvest levels (GHLs) based on abundance thresholds of historical legal-size male Tanner crab and utilizes abundance estimates derived from department trawl surveys. The commercial fishery may open if the estimated abundance of legal male Tanner crab is greater than or equal to 200,000 crab. Male Tanner crab may be taken in the Northern and Hinchinbrook districts from January 15 through March 31, during periods established by emergency order (5 AAC 35.310). Commissioner's permits may be issued for Tanner crab in PWS Eastern and Western districts with conditions set by the department (5 AAC 35.311).

Only male Tanner crab five inches or greater in width of shell may be taken or possessed (5 AAC 35.320). Lawful gear and pot marking requirements are also defined (5 AAC 35.325 and 5 AAC 35.326). Pot storage (5 AAC 35.327), operation of other gear restrictions (5 AAC 35.328), and inspection requirements (5 AAC 35.345) are also included in the Registration Area E regulations.

Log sheet (5 AAC 35.350) and daily reporting requirements (5 AAC 35.358) are specified in regulation.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? If Tanner crab fisheries were opened in PWS with a unanimous vote of PWS advisory committees, harvest of Tanner crab in PWS would increase by an unknown amount depending on the number of participants and crab abundance. This could result in overfishing and harvest that is not sustainable.

BACKGROUND: Refer to the comments in proposal 69.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. The department has submitted proposals that will address the issues raised in this proposal and comprehensively revise management of Tanner crab in PWS. The department proposal will result in a harvest strategy that uses all available survey and fishery information to determine if there is a harvestable surplus and will not open an area based solely on a time period that an area has been closed. The department proposals are based on methods that have been used to manage Tanner crab fisheries throughout

Alaska. The department proposals will adjust the PWS Tanner crab district boundaries and amend the existing PWS Tanner crab harvest strategy to incorporate information from the test fishery, the commissioner's permit fishery, and department trawl survey. Districts will open depending on stock status using all available department data. Opening fisheries on stocks that have low abundance, based solely on a closed time period could result in overfishing and harvest that is not sustainable.

COST ANALYSIS: Approval of this proposal would result in no 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 71 – 5 AAC 35.308. Registration Area E Tanner crab harvest strategy.

PROPOSED BY: Warren Chappell and Robert Smith.

WHAT WOULD THE PROPOSAL DO? This would require a commercial Tanner crab fishery to be prosecuted every year in the Prince William Sound Area (PWS; Registration Area E) and for development of this fishery to occur with consultation of local advisory committees.

WHAT ARE THE CURRENT REGULATIONS? The Tanner crab harvest strategy in Registration Area E (5 AAC 35.308) establishes guideline harvest levels (GHLs) based on abundance thresholds of historical legal-size male Tanner crab and utilizes abundance estimates derived from department trawl surveys. The commercial fishery may open if the estimated abundance of legal male Tanner crab is greater than or equal to 200,000 crab. Male Tanner crab may be taken in the Northern and Hinchinbrook districts from January 15 through March 31, during periods established by emergency order (5 AAC 35.310). Commissioner's permits may be issued to fish for Tanner crab in the PWS Eastern and Western districts with conditions set by the department (5 AAC 35.311).

Only male Tanner crab five inches or greater in width of shell may be taken or possessed (5 AAC 35.320). Lawful gear and pot marking requirements are also defined (5 AAC 35.325 and 5 AAC 35.326). Pot storage (5 AAC 35.327), operation of other gear restrictions (5 AAC 35.328), and inspection requirements (5 AAC 35.345) are also included in the Registration Area E regulations.

Log sheet (5 AAC 35.350) and daily reporting requirements (5 AAC 35.358) are defined in order for the department to monitor the fishery.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? If Tanner crab fisheries were open each year in PWS, harvest of Tanner crab in PWS would increase by an unknown amount depending on the number of participants and crab abundance. This could result in overfishing and harvest that is not sustainable.

BACKGROUND: Refer to the comments on Proposal 69.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. The department has submitted proposals that will address the issues raised in this proposal and comprehensively revise management of Tanner crab in PWS. The department proposal will result in a harvest strategy that uses all available survey and fishery information to determine if there is a harvestable surplus and will not open an area based solely on a time period that an area has been closed. The department proposals are based on methods that have been used to manage Tanner crab fisheries throughout Alaska. The department proposals will adjust the PWS Tanner crab district boundaries and amend the existing PWS Tanner crab harvest strategy to incorporate information from the test fishery, the commissioner's permit fishery, and department trawl survey. Districts will open depending on

stock status using all available department data. Opening fisheries annually, regardless of stock status, could result in overfishing and harvest that is not sustainable.

COST ANALYSIS: Approval of this proposal would result in no 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 72 – 5 AAC 35.311. Commissioner's permits for Tanner crab in Registration Area E.

PROPOSED BY: Warren Chappell and Robert Smith.

WHAT WOULD THE PROPOSAL DO? This would require the department to issue a commissioner's permit for commercial Tanner and king crab fisheries in the Prince William Sound Area (PWS; Registration Area E) if fisheries have been closed for more than one year.

WHAT ARE THE CURRENT REGULATIONS? The Tanner crab harvest strategy in Registration Area E (5 AAC 35.308) establishes guideline harvest levels (GHLs) based on abundance thresholds of historical legal-size male Tanner crab and utilizes abundance estimates derived from department trawl surveys. The commercial fishery may open if the estimated abundance of legal male Tanner crab is greater than or equal to 200,000 crab. Male Tanner crab may be taken in the Northern and Hinchinbrook districts from January 15 through March 31, during periods established by emergency order (5 AAC 35.310). Commissioner's permits may be issued for Tanner crab in PWS Eastern and Western districts of PWS with conditions set by the department (5 AAC 35.311).

Only male Tanner crab five inches or greater in width of shell may be taken or possessed (5 AAC 35.320). Lawful gear and pot marking requirements are also defined (5 AAC 35.325 and 5 AAC 35.326). Pot storage (5 AAC 35.327), operation of other gear restrictions (5 AAC 35.328), and inspection requirements (5 AAC 35.345) are also included in the Registration Area E regulations.

Log sheet (5 AAC 35.350) and reporting requirements (5 AAC 35.358) are defined for the department to monitor the fishery.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? A person could apply for a permit to participate in a commercial Tanner or king crab fishery in PWS. If permits were issued by the department, harvest of Tanner and king crab in PWS would increase by an unknown amount depending on the number of permits issued and crab abudnance. This could result in overfishing and harvest that is not sustainable.

BACKGROUND: Refer to the comments on Proposal 69.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. The department has submitted proposals that will address the issues raised in this proposal and comprehensively revise management of Tanner crab in PWS. The department proposal will result in a harvest strategy that uses all available survey and fishery information to determine if there is a harvestable surplus and will not open an area based solely on a time period that an area has been closed. The department proposals are based on methods that have been used to manage Tanner crab fisheries throughout Alaska. The department proposals will adjust the PWS Tanner crab district boundaries and amend

the existing PWS Tanner crab harvest strategy to incorporate information from the test fishery, the commissioner's permit fishery, and department trawl survey. Districts will open depending on stock status using all available department data. The department conducted a test fishery in October and November 2020 to assess golden king crab stock status in PWS. Results of that test fishery have not been analyzed at this time but will be available for review during the 2021 PWS Alaska Board of Fisheries meeting. Opening fisheries on stocks that have low abundance, based solely on a closed time period could result in overfishing and harvest that is not sustainable.

COST ANALYSIS: Approval of this proposal would result in no additional direct cost for a private person to participate in this fishery. Approval of this proposal is not expected to result in an additional direct cost for the department.

PROPOSAL 73 – 5 AAC 35.3XX. New Section.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would establish closed waters for commercial Tanner crab fishing in the Prince William Sound Area (PWS; Registration Area E).

WHAT ARE THE CURRENT REGULATIONS? The Tanner crab harvest strategy in Registration Area E (5 AAC 35.308) establishes guideline harvest levels (GHLs) based on abundance thresholds of historical legal-size male Tanner crab and utilizes abundance estimates derived from department trawl surveys. The commercial fishery may open if the estimated abundance of legal male Tanner crab is greater than or equal to 200,000 crab. Male Tanner crab may be taken in the Northern and Hinchinbrook districts from January 15 through March 31, during periods established by emergency order (5 AAC 35.310). Commissioner's permits may be issued for Tanner crab in PWS Eastern and Western districts conditions set by the department (5 AAC 35.311).

Only male Tanner crab five inches or greater in width of shell may be taken or possessed (5 AAC 35.320). Lawful gear and pot marking requirements are also defined (5 AAC 35.325 and 5 AAC 35.326). Pot storage (5 AAC 35.327), operation of other gear restrictions (5 AAC 35.328), and inspection requirements (5 AAC 35.345) are also included in the Registration Area E regulations.

Log sheet (5 AAC 35.350) and reporting requirements (5 AAC 35.358) are defined in regulation.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Closed areas for Tanner crab commercial fisheries in PWS will be established and aligned with the closed areas that currently exist in the Tanner and golden king crab subsistence fishery (Figure 63-1).

BACKGROUND: Commercial Tanner crab regulations allowing a commissioner's permit fishery in the Eastern and Western districts of the Prince William Sound Area and also providing for a harvest strategy for the entire PWS (5 AAC 35.308) were adopted by the board in March 2017. The commissioner's permit Tanner crab fishery has been prosecuted for the past four seasons (2017-2020); however, the districts where the fishery is allowed do not include these proposed closed areas.

As defined by the harvest strategy, conditions have not been met to allow a PWS-wide fishery, which would include the Northern District that encompasses the proposed closed areas. In 2020, a Tanner crab test fishery was prosecuted in the Northern and Hinchinbrook districts, and these closed areas were defined for the test fishery. These same areas are already defined in regulation as closed waters for the subsistence Tanner crab fishery and were adopted as a conservation measure to provide a refuge for Tanner crab and protect potential nursery grounds. Adopting this proposal would provide consistency between commercial and subsistence Tanner crab regulations in the same area and ensure these closed waters are in effect if a commercial fishery was allowed in the Northern District, thereby providing protection for this important and vulnerable resource.

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

COST ANALYSIS: Approval of this proposal would result in no additional direct cost for a private person to participate in this fishery. Approval of this proposal is not expected to result in an additional direct cost for the department.

PROPOSAL 74 – 5 AAC 35.305. Description of Registration Area E districts.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would redefine and rename commercial Tanner crab districts in the Prince William Sound Area (PWS; Registration Area E). Five districts would be established, and boundaries defined for the Prince William Sound Tanner crab commercial fishery: Northeastern, Northwestern, Central, Southeastern, and Southwestern districts (Figure 74-1).

WHAT ARE THE CURRENT REGULATIONS? PWS is divided into four districts: Northern, Western, Eastern, and Hinchinbrook districts with boundaries defined (5 AAC 35.305; Figure 69-2).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The proposed districts generally align with statistical areas, which would aid management when harvest and catch per unit effort (CPUE) data are utilized to implement inseason management actions by discrete location.

BACKGROUND: The current commercial PWS Tanner crab districts do not reflect management and stock assessment objectives. By regulation, all commercial Tanner crab harvest data are required to be reported on fish tickets by statistical area. The proposed districts divide PWS using information on Tanner crab habitat, historical harvest data, available survey data, and suitable stock assessment methods

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. Implementing these proposed districts would allow specific survey methods with distinct management goals to be applied for each district, providing for a more robust harvest strategy.

COST ANALYSIS: Approval of this proposal would result in no 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.

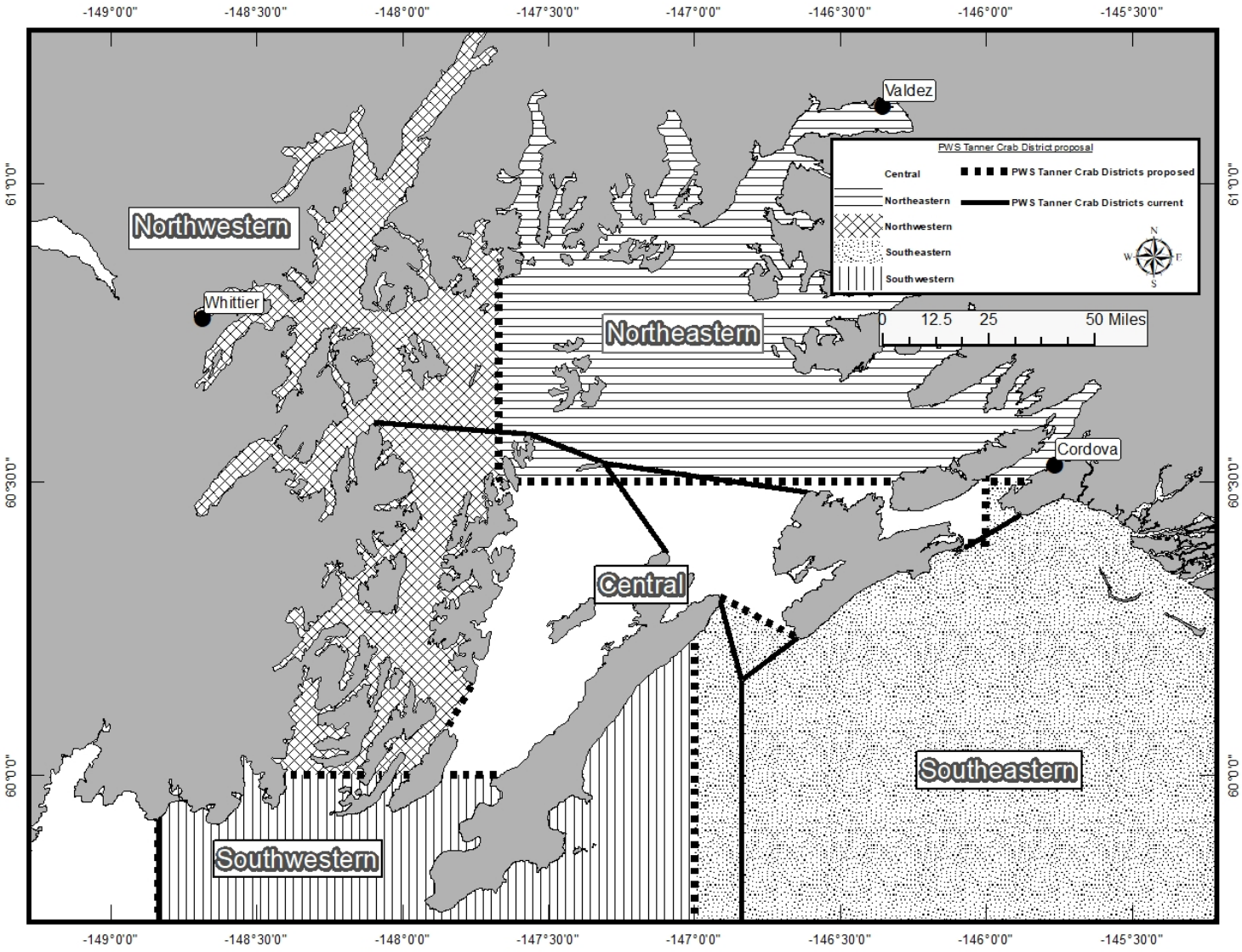


Figure 74-1.–Prince William Sound (Registration Area E) current and proposed commercial crab districts.

PROPOSAL 75 – 5 AAC 35.308. Registration Area E Tanner crab harvest strategy.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would replace the existing Tanner crab harvest strategy in the Prince William Sound Area (PWS; Registration Area E) with a new harvest strategy that would align with new proposed districts and base abundance thresholds on the current legal size. No changes are proposed for the subsistence crab fisheries in PWS.

WHAT ARE THE CURRENT REGULATIONS? The Tanner crab harvest strategy in Registration Area E (5 AAC 35.308) establishes guideline harvest levels (GHLs) based on abundance thresholds of historical legal-size male Tanner crab and utilizes abundance estimates derived from department trawl surveys. The commercial fishery may open if the estimated abundance of legal male Tanner crab is greater than or equal to 200,000 crab. Male Tanner crab may be taken in the Northern and Hinchinbrook districts from January 15 through March 31, during periods established by emergency order (5 AAC 35.310). Commissioner's permits may be issued to fish for Tanner crab in the Eastern and Western districts of PWS with conditions set by the department (5 AAC 35.311).

Only male Tanner crab five inches or greater in width of shell may be taken or possessed (5 AAC 35.320). Lawful gear and pot marking requirements are also defined (5 AAC 35.325 and 5 AAC 35.326). Pot storage (5 AAC 35.327), operation of other gear restrictions (5 AAC 35.328), and inspection requirements (5 AAC 35.345) are also included in the Registration Area E regulations.

Log sheet (5 AAC 35.350) and reporting requirements (5 AAC 35.358) are defined in regulation.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Establish a PWS Tanner crab harvest strategy aligned with new districts and define circumstances in which commercial and sport fisheries would open by district. This will provide greater transparency and consistency for the public in understanding how and when these Tanner crab fisheries in PWS would occur. The proposal would also base abundance thresholds on current legal-size male Tanner crab and provide the department with the ability to make management decisions using available data in areas where a trawl survey is not conducted.

BACKGROUND: The current harvest strategy, adopted by the board in 2014, does not function as intended due to a mismatch between the area used to develop abundance thresholds and the area where the trawl survey stock assessment is conducted. New Tanner crab districts have also been proposed to operate in tandem with this proposal; this harvest strategy uses these new districts. This harvest strategy includes district-specific abundance thresholds that can be assessed with the current department trawl survey. The result is 3 districts in PWS that will each have abundance thresholds assessed with a trawl survey and 2 districts assessed and managed using other tools, because these areas are untrawlable. The department will identify when a harvestable surplus is present in the areas

that are currently closed to commercial fishing. Abundance thresholds will be developed in the next months and submitted during the PWS Finfish and Tanner crab meeting.

Also, refer to the comments on Proposal 69.

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

COST ANALYSIS: Approval of this proposal would result in no 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 76 – 5 AAC 35.311. Commissioner's permits for Tanner crab in Registration Area E.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would repeal the existing regulation that allows commissioner's permits to be issued for Tanner crab in the Eastern and Western districts of the Prince William Sound Area (PWS; Registration Area E).

WHAT ARE THE CURRENT REGULATIONS? The Tanner crab harvest strategy in Registration Area E (5 AAC 35.308) establishes guideline harvest levels (GHLs) based on abundance thresholds of historical legal-size male Tanner crab and utilizes abundance estimates derived from department trawl surveys. The commercial fishery may open if the estimated abundance of legal male Tanner crab is greater than or equal to 200,000 crab. Male Tanner crab may be taken in the Northern and Hinchinbrook districts from January 15 through March 31, during periods established by emergency order (5 AAC 35.310). Commissioner's permits may be issued for Tanner crab in the PWS Eastern and Western districts of PWS with conditions set by the department (5 AAC 35.311).

Only male Tanner crab five inches or greater in width of shell may be taken or possessed (5 AAC 35.320). Lawful gear and pot marking requirements are also defined (5 AAC 35.325 and 5 AAC 35.326). Pot storage (5 AAC 35.327), operation of other gear restrictions (5 AAC 35.328), and inspection requirements (5 AAC 35.345) are also included in the Registration Area E regulations.

Log sheet (5 AAC 35.350) and reporting requirements (5 AAC 35.358) are defined in order for the department to monitor the fishery.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Commissioner's permits would not be issued for a commercial Tanner crab fishery in the Eastern and Western Districts of PWS and management of Tanner crab in PWS would be based on annual estimates of abundance and provisions of the *Registration Area E Tanner crab harvest strategy*.

BACKGROUND: The department is proposing new district definitions and a new PWS Tanner crab harvest strategy at this meeting. This will allow a fishery by regulation and a commissioner's permit will no longer be needed. This proposed harvest strategy includes the areas that cover the current Eastern and Western districts in PWS; however, districts will be renamed and redefined as proposed with different boundaries. If the proposal redefining of the districts is adopted, the Eastern and Western districts will not exist in regulation and therefore will make this regulation invalid. The department is using the information from this fishery to develop the updated harvest strategy.

Also, refer to the comments on Proposal 69.

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

COST ANALYSIS: Approval of this proposal would result in no 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 77 – 5 AAC 35.306. Area E registration.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would amend the Tanner crab registration deadline in the Prince William Sound Area (PWS; Registration Area E).

WHAT ARE THE CURRENT REGULATIONS? The Tanner crab fishery is superexclusive in Registration Area E (5 AAC 35.306 (a)) and a Tanner crab vessel must be registered no later than 30 days before the scheduled opening date of the commercial Tanner crab season (5 AAC 35.306 (b)).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would provide fishery participants additional time to decide if they are going to register for the PWS Tanner crab fishery and would not affect management of the fishery.

BACKGROUND: The department uses registration deadlines in order to make decisions for the commercial Tanner crab fisheries in PWS. Fifteen days prior to the opening of the fishery is adequate to make initial fishery decisions. Similarly, the PWS shrimp pot fishery has a deadline 15 days prior to the season start and this is adequate for the department to make fishery management decisions.

Also, refer to the comments on Proposal 69.

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

COST ANALYSIS: Approval of this proposal would result in no 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 78 – 5 AAC 35.310. Fishing seasons for Registration Area E.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would remove district references for PWS Tanner crab commercial season dates in the Prince William Sound Area (PWS; Registration Area E), extend the season, and provide for a weather delay for the opening of the season.

WHAT ARE THE CURRENT REGULATIONS? In the Northern and Hinchinbrook districts, male Tanner crab may be taken from January 15 until March 31, during periods established by emergency order (5 AAC 35.310).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The PWS commercial Tanner crab allowable season dates will be January 15 through April 15 for all districts, and provisions to allow for a weather delay to open the season shall be implemented.

BACKGROUND: The department is proposing new Tanner crab district definitions for PWS along with a new harvest strategy. This proposal removes district references; the department has time and area authority to open and close districts in PWS. In addition, adding a weather delay provision provides for a safe and fair start to this Tanner crab fishery that has had diverse participation in terms of vessel size and port of entry.

Also, refer to the comments on Proposal 69.

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

COST ANALYSIS: Approval of this proposal would result in no 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 79 – 5 AAC 35.306. Area E registration.

PROPOSED BY: Robert Linville.

WHAT WOULD THE PROPOSAL DO? This would change the Registration Area E Tanner crab fishery designation from superexclusive to exclusive.

WHAT ARE THE CURRENT REGULATIONS? Registration Area E, Prince William Sound Area, is superexclusive (5 AAC 35.306) which means if a vessel fishes for Tanner crab in Registration Area E, it cannot register and participate in a Tanner crab fishery in another registration area in the same year.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would allow vessels that participate in the Registration Area E Tanner crab fishery to also participate in Tanner crab fisheries occurring in nonexclusive registration areas during the same fishing season. This would allow effort to increase in the PWS Tanner crab fishery and nonexclusive Tanner crab fisheries.

BACKGROUND: Refer to the comments for Proposal 69.

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

COST ANALYSIS: Approval of this proposal would result in no 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.