RC 2

ALASKA DEPARTMENT OF FISH AND GAME

STAFF COMMENTS ON
COMMERCIAL, PERSONAL USE, SPORT, AND SUBSISTENCE
REGULATORY PROPOSALS
COMMITTEE OF THE WHOLE–GROUPS A–C

FOR THE PRINCE WILLIAM SOUND AND UPPER COPPER/UPPER SUSITNA MANAGEMENT AREAS

ALASKA BOARD OF FISHERIES MEETING
VALDEZ, ALASKA

December 1–December 5, 2017

Regional Information Report 2A17-04

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, December 1–December 5, 2017. The comments are forwarded to assist the public and board. The comments contained herein should be considered preliminary and subject to change, as new information becomes available. Final department positions will be formulated after review of written and oral public testimony presented to the board.

Acronyms and Abbreviations

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

Weights and measures (metric)

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

Weights and measures (English)

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

Time and temperature

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

Physics and chemistry

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

General

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

Acronyms

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

REGIONAL INFORMATION REPORT 2A17-04

ALASKA DEPARTMENT OF FISH AND GAME

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

PRINCE WILLIAM SOUND FINFISH

ALASKA BOARD OF FISHERIES MEETING VALDEZ, ALASKA

DECEMBER 1–DECEMBER 5, 2017

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 2017

ABSTRACT

This document contains Alaska Department of Fish and Game (department) staff comments on commercial, sport, subsistence, and personal use finfish regulatory proposals for the Prince William Sound and Upper Copper/Upper Susitna Management Areas. These comments were prepared by the department for use at the Alaska Board of Fisheries (board) meeting, December 1–5 in Valdez, Alaska. The comments are forwarded to assist the public and board. The comments contained herein should be considered preliminary and subject to change as new information becomes available. Final department positions will be formulated after review of written and oral public testimony presented to the board.

Key words: Alaska Board of Fisheries (board), Alaska Department of Fish and Game (department), staff comments, Prince William Sound, Upper Copper/Upper Susitna, finfish, management, management plan, regulatory proposals, inriver, commercial fisheries, personal use, sport, guided sport, subsistence, bag limits, possession limits, king, sockeye, coho, chum, pink, salmon, herring, groundfish, lingcod, rockfish, sablefish.

This document should be cited as follows:

ADF&G (Alaska Department of Fish and Game). 2017. Alaska Department of Fish and Game staff comments on commercial, sport, subsistence, and personal use finfish regulatory proposals, Committee of the Whole–Groups A–C, for the Prince William Sound and Upper Copper/Upper Susitna Management Areas Alaska Board of Fisheries meeting, Valdez, Alaska December 1–5, 2017. Alaska Department of Fish and Game, Regional Information Report 2A17–04, Anchorage.

TABLE OF CONTENTS

Page

TABLE OF CONTENTS (Continued)

Page

Summary of department positions on regulatory proposals for Prince William Sound Finfish – Valdez, December 1–December 5, 2017.

Proposal No.	Department Position	Issue
1	S	Reduce the bag and possession limits for lingcod in the Prince William Sound Area.
2	S/NA	Reduce the bag and possession limits for lingcod in a portion of the Prince William Sound Area.
3	S	Modify and align bag and possession limits for rockfish in the Prince William Sound Area.
4	O	Establish a pelagic rockfish jig fishery with a separate guideline harvest level in the Outside District of the Prince William Sound Area.
5	S	Specify that bycatch allowance of lingcod in the Prince William Sound Area is measured as round weight.
6	O	Allow vessels fishing for halibut in the Prince William Sound Area to retain all Pacific cod bycatch when directed Pacific cod fisheries are closed due to reaching the federal halibut bycatch allowance.
7	S	Clarify lawful gear requirements for Prince William Sound Area groundfish fisheries.
8	S	Add specific registration requirements for Prince William Sound Area groundfish fisheries.
9	S	Clarify procedures for obtaining, completing, and submitting log sheets for the Prince William Sound Area sablefish fishery.
10	O	Set an optimal escapement goal for Copper River sockeye salmon.
11	S	Remove the requirement to open the Batzulnetas subsistence fishery by emergency order.
12	N	Require operators of fish wheels without live boxes to be present when fishing in the Glennallen Subdistrict subsistence fishery.
13	N	Prohibit using a dip net from a boat to harvest salmon in the Glennallen Subdistrict.
14	N/O	Modify the season dates for the Glennallen Subdistrict subsistence salmon fishery based on the preseason king salmon harvest projection.
15	O	Prohibit the use of monofilament or gillnet mesh in dip nets.
16	O	Require log books for all charters operating in personal use and subsistence fisheries.
17	N	Extend the lower boundary of the Chitina Subdistrict downstream to the Uranatina River.
18	N	Repeal the reduction in maximum harvest level in the Chitina Subdistrict Personal Use fishery when the Copper River commercial fishery is closed 13 or more consecutive days.
19	N	Allow salmon to be taken for subsistence purposes at any time between May 1 and November 30 in the Copper River District.
20	N	Open all waters of the Copper River District to subsistence fishing for salmon from April 20 through October 15.
21	O/S	Close the Prince William Sound Area subsistence herring fishery, limit gear to 60 feet in length, and monitor the number of permits and area fished.
22	O	Allow Pacific herring to be taken for personal use in the Prince William Sound Area.
23	O	Prohibit catch-and-release sport fishing in the Upper Copper River and Upper Susitna River drainages.

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

Summary of department positions on regulatory proposals for Prince William Sound Finfish – Valdez, December 1–December 5, 2017.

Proposal No.	Department Position	Issue
24	S	Amend sockeye salmon regulations in the Gulkana River drainage.
25	S	Remove the unbaited, single-hook artificial lure restriction in flowing waters of the Upper Susitna River drainage.
26	O	Allow bow fishing for pink and coho salmon in the Valdez terminal harvest area.
27	S	Remove a closed water provision for Clear Creek.
228	O	Decrease the size of the area closed to subsistence fishing through the ice for northern pike on the Chatanika River.
28	N	Repeal mandatory inside waters commercial salmon fishery closures in the *Copper River King Salmon Management Plan.*
29	N	Extend inside closure area to 1/4 mile off the southern shores of all barrier islands in the Copper River commercial drift gillnet salmon fishery.
30	N	Repeal certain closed waters provisions in the Copper River District commercial drift gillnet salmon fishery.
31	O/N	Reduce the maximum depth of drift gill nets in the Copper River District commercial drift gillnet salmon fishery to 29 meshes through the start of Statistical Week 24.
32	O/N	Prohibit commercial salmon fishing in the Copper River District, during the month of May, if the preseason forecast for Copper River king salmon is below the 20-year average, or 35,000 king salmon.
33	O	Prohibit sale of commercially caught king salmon in the Copper River District if restrictions on Copper River drainage subsistence fisheries have been implemented.
34	O/N	Prohibit commercial salmon fishing in the Copper River District until a salmon is recorded at the Copper River sonar.
35	O/N	Open commercial salmon fishing with drift gillnet gear in the Copper River District on the Monday or Thursday closest to May 1.
36	O/N	Open the Copper River District commercial salmon fishery for a minimum of two twelve-hour periods per week.
37	N	Repeal commercial salmon fishery closed waters near Kayak Island and allow commercial salmon fishing with drift gillnet gear near Kayak Island with the same boundaries in effect in 1980.
38	N	Modify purse seine gear length in the Prince William Sound Area.
39	N	Allow permit stacking and increase the amount of purse seine gear that may be operated from a vessel with two limited entry purse seine permit holders onboard in the Prince William Sound Area commercial salmon fishery.
40	N	Establish minimum operation depth for drift gillnet gear fished within 90 fathoms of a set gillnet in the Crafton Island Subdistrict.
41	N	Prohibit operation of commercial salmon drift gillnet gear within 60 fathoms of the shoreward of a set gillnet in the Crafton Island Subdistrict.
42	N	Repeal maximum length for set gillnet gear in the *Main Bay Salmon Hatchery Harvest Management Plan* and prohibit operation of a drift gillnet within 20 fathoms of a set gillnet.
43	N/S	Clarify provisions for operation of drift gillnet and set gillnet gear in the Main Bay Subdistrict.
44	O	Specify that operation of each set gillnet or drift gillnet must be performed or assisted by a Commercial Fisheries Entry Commission permit holder in the Prince William Sound Area commercial salmon fishery.

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

Summary of department positions on regulatory proposals for Prince William Sound Finfish – Valdez, December 1–December 5, 2017.

Proposal No.	Department Position	Issue
45	N	Limit each Commercial Fisheries Entry Commission permit holder to no more than four set gillnet sites deployed with lines and buoys in the Prince William Sound Area commercial set gillnet fishery.
46	N	Change boundary description of the Main Bay Subdistrict.
47	N	Include the value of all enhanced salmon produced in the Prince William Sound Area in the *Prince William Sound Management and Salmon Enhancement Allocation Plan*.
48	N	Allow commercial fishing for salmon in the Armin F. Koernig Hatchery Terminal and Special Harvest Areas prior to July 18.
49	N	Reduce harvest of sockeye salmon in the directed chum salmon fishery prior to July 18 in the Armin F. Koernig Hatchery Terminal and Special Harvest Areas.
50	S	Define Copper and Bering River District seaward boundaries with geographic coordinates.
51	S	Amend district and subdistrict boundaries to match Alaska Department of Fish and Game statistical area boundaries within the Prince William Sound Management Area.
52	S	Amend Prince William Sound Area description to specify lines of longitude for the eastern and western boundaries.

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

COMMITTEE OF THE WHOLE–GROUP A: GROUNDFISH (9 PROPOSALS)

Sport Groundfish (3 Proposals)

PROPOSAL 1 – 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: Denise M. Hawks.

WHAT WOULD THE PROPOSAL DO? Reduces the bag limit for lingcod in PWSMA to one per day and two in possession.

WHAT ARE THE CURRENT REGULATIONS? Lingcod may be taken July 1–December 31, with a bag limit of two fish and a possession limit of four fish; lingcod must be 35 inches or greater in length including the head, or 28 inches or greater with the head removed.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Using a bag limit analysis of logbook data from 2016, it is estimated that a reduction in the bag limit from two to one fish would reduce the guided angler harvest of lingcod by 17% or about 812 fish if effort stayed consistent. The majority (83%) of guided anglers do not harvest more than one lingcod on a trip. Estimated unguided angler harvest reduction is unknown since the SWHS is a household survey and therefore cannot be used to estimate the possible reduction of harvest for individual unguided anglers. The proposed lingcod bag limit of one per day in the PWSMA would align with the North Gulf Coast Management Area bag limit of one per day except for Resurrection Bay, which is closed to all retention of lingcod.

BACKGROUND: Lingcod are found throughout the PWSMA but are more abundant in the outside waters and around Montague Strait and Hinchinbrook Entrance. While adult lingcod can be found to depths of 1,200 feet, they typically inhabit nearshore rocky reefs from 30–300 feet in depth. Although lingcod can live to be 29 years old, the average age of lingcod harvested in the sport fishery is 15 years, based on creel sampling. Little is known of lingcod movement in PWS, but tagging studies in other areas indicate that while most lingcod make localized movements, some move up to hundreds of miles. Females generally make greater movements than males. In some areas of the Pacific Northwest (including Puget Sound and the Strait of Georgia) localized depletion has occurred since lingcod have a preference for rocky reefs, which are easily located using charts, sonar, and GPS.

Most lingcod are caught in state waters and are often targeted by jigging near pinnacles or reefs. Few anglers target lingcod exclusively; most lingcod are taken by anglers targeting other species or targeting lingcod in conjunction with other species (combination trip). The sport fishery accounts for the majority of lingcod harvest in PWS. A target sustainable level of harvest for lingcod in the PWSMA has not been defined.

Currently, the department assesses lingcod catch and harvest through saltwater guide logbook and SWHS data. It is estimated that in 2016, 10,607 lingcod were caught and 6,038 harvested (Figure 1-1), which is below the previous 10-year (2006–2015) average of 17,560 caught and 9,298 lingcod harvested.

The age structure of the lingcod harvest was highly variable, ranging from 7 to 24 years old (Figure 1-2). The population of lingcod less than 35 inches or greater in length is unknown. It is also not know what proportion of lingcod population this represents.

DEPARTMENT COMMENTS: The department **SUPPORTS** this proposal. Overall, sport fishing effort has increased in PWS. Decreasing the bag and possession limit will establish a conservative fishery on a relatively long-lived species where there is limited information and will make regulations between adjacent management areas consistent.

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

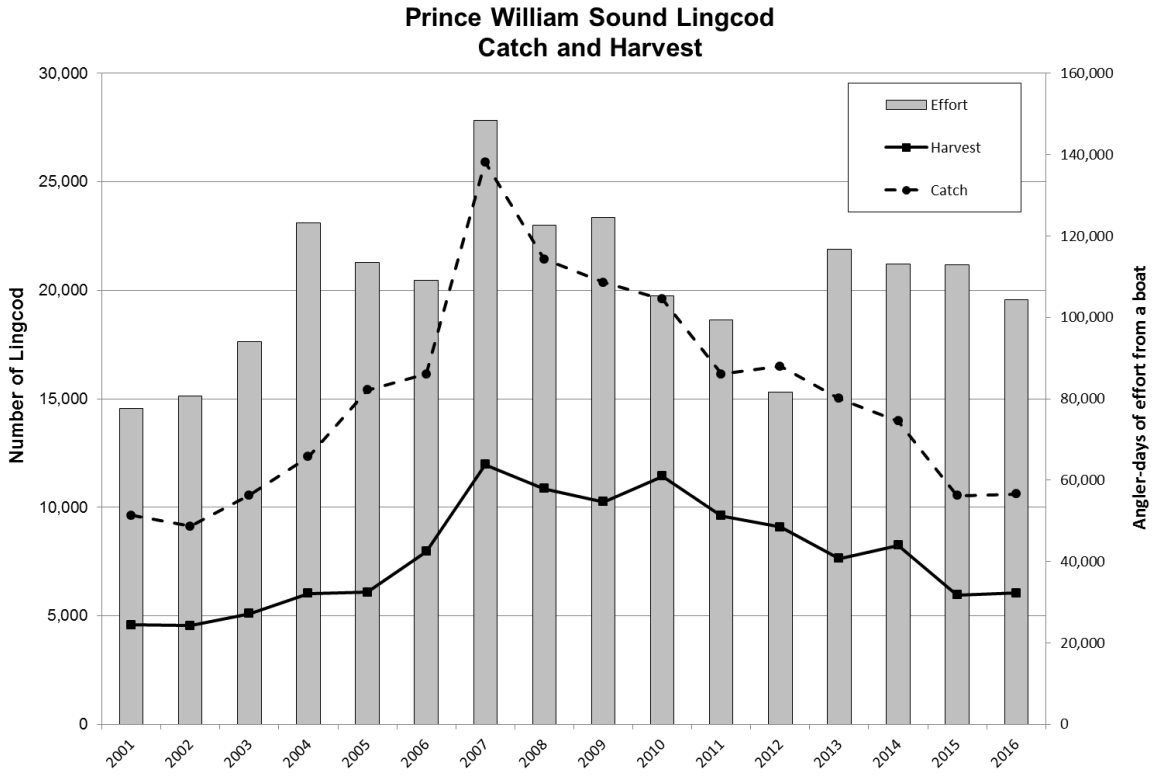

Figure 1-1.–PWS lingcod harvest, catch and effort (angler-days fished). Effort is for all species combined. All data from SWHS.

Note: Angler-days of effort does not include effort from Seward originated trips and effort is for all species.

Figure 1-2.–The age composition of sport harvested lingcod in PWS, 1992–2016.

Note: Bubble size gives an indication of relative sample size for that year.

PROPOSAL 2 – 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: Whittier Fish and Game Advisory Committee.

WHAT WOULD THE PROPOSAL DO? Reduces the bag limit for lingcod in PWSMA to one per day and two in possession, except in a specified area, where the bag limit would remain two fish 35 inches or greater in length including the head, but the possession limit would be reduced to two fish.

WHAT ARE THE CURRENT REGULATIONS? In the state managed waters of PWS, lingcod may be taken July 1–December 31 with a bag limit of two fish and a possession limit of four fish. Lingcod must be 35 inches or greater in length including the head, or 28 inches or greater in length with the head removed.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Using a bag limit analysis of logbook data from 2016, it is estimated that a reduction in the bag limit from two to one fish would reduce the guided angler harvest of lingcod by 17% or about 812 fish if effort stayed consistent. The majority (83%) of guided anglers do not harvest more than one lingcod on a trip. Estimated unguided angler harvest reduction is unknown since the SWHS is a household survey and therefore cannot be used to estimate the possible reduction of harvest for individual unguided anglers. The proposed lingcod bag limit of one per day in the PWSMA would align with the North Gulf Coast Management Area bag limit of one per day except for Resurrection Bay, which is closed to all retention of lingcod.

The department cannot determine the effect of harvest on the proposed area since it appears to be located outside of state waters.

BACKGROUND: Lingcod are found throughout the PWSMA but are more abundant in the outside waters and around Montague Strait and Hinchinbrook Entrance. While adult lingcod can be found to depths of 1,200 feet, they typically inhabit nearshore rocky reefs from 30–300 feet in depth. Although lingcod can live to be 29 years old, the average age of lingcod harvested in the sport fishery is 15 years, based on creel sampling. Tagging studies in other areas indicate that while most lingcod make localized movements, some move up to hundreds of miles. Females generally make greater movements than males. In some areas of the Pacific Northwest (including Puget Sound and the Strait of Georgia) localized depletion has occurred since lingcod have a preference for rocky reefs, which are easily located using charts, sonar, and GPS.

Most lingcod are caught in state waters and are often targeted by jigging near underwater pinnacles or reefs. Few anglers target lingcod exclusively; most lingcod are taken by anglers targeting other species or targeting lingcod in conjunction with other species (combination trip). The sport fishery accounts for the majority of lingcod harvest in PWS. A target sustainable level of harvest for lingcod in the PWSMA has not been defined.

Currently, the department assesses lingcod catch and harvest through saltwater guide logbook and SWHS data. It is estimated that in 2016, 10,607 lingcod were caught and 6,038 harvested (Figure 1-1), which is below the previous 10-year (2006–2015) average of 17,560 caught and 9,298 lingcod harvested.

The age structure of the lingcod harvest was highly variable, ranging from 7 to 24 years old (Figure 1-2). The population of lingcod less than 35 inches or greater in length is unknown. It is also not know what proportion of lingcod population this represents.

DEPARTMENT COMMENTS: The department **SUPPORTS** reducing the bag and possession limit for lingcod in the PWSMA, but recommends **NO ACTION** on this proposal to the extent it attempts to regulate lingcod fishing outside of the EEZ adjacent to Alaska.

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

PROPOSAL 3 – 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? Creates a single, year-round rockfish bag and possession limit and reduces the bag and possession limit of nonpelagic rockfish from two fish to one fish. The bag limit for rockfish would be four fish; possession limit of eight fish, of which one per day and in possession may be nonpelagic rockfish as defined in 5 AAC 75.995. In addition, it would continue to require that the first nonpelagic rockfish caught must be retained and become part of the bag limit of the person originally hooking the fish.

WHAT ARE THE CURRENT REGULATIONS? Rockfish may be taken year-round but there is a different bag and possession limit depending on the time of the year.

Between May 1–September 15, bag limit is four fish, possession limit is eight fish; of which two per day and in possession may be nonpelagic rockfish as defined in 5 AAC 75.995. The first two nonpelagic rockfish caught must be retained and become part of the bag limit of the person originally hooking the fish; there is no size limit.

Between September 16–April 30, the bag and possession limit for rockfish is eight fish, of which only two per day and in possession may be nonpelagic rockfish; the first two nonpelagic rockfish caught must be retained and become part of the bag limit of the person originally hooking the fish; there is no size limit.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would simplify regulations with a single year-round regulation and create a similar bag and possession limit between two adjacent areas that anglers often fish in the same day. Using a bag limit analysis of port sampler interview data from 2014–2016, it is estimated that reduction of the bag limit of nonpelagic rockfish from two to one fish would reduce sport harvest of nonpelagic rockfish by 9.6% if effort remained similar to the 2014–2016 average. In addition, this would align the rockfish bag and limits in the PWSMA with the North Gulf Coast Management Area (NGCMA) although in NGCMA you are not required to retain the first nonpelagic caught.

Many anglers returning to the Port of Seward who harvested rockfish have been fishing in the PWSMA. Anglers returning to the Port of Seward with a full rockfish bag limit from the PWSMA are not allowed to fish in NGCMA waters because they would have exceeded their bag limit for these waters (5 AAC 75.010 (b)). This would allow anglers additional opportunity to fish for other species. Because there is an overall rockfish bag limit of four fish, harvest of pelagic species may increase to replace the reduced nonpelagic harvest opportunity.

BACKGROUND: The current rockfish regulations in the PWSMA were implemented in 2009. Historically (prior to 1989), there was no limit on the harvest of rockfish by the sport fishery. Beginning in 1989, the bag and possession limit was set at 20 rockfish, with only five being "red rockfish," of which, most were yelloweye rockfish. In 1991, rockfish limits were reduced to five per day, 10 in possession from May 1–September 15, and a bag and possession limit of 10 rockfish from September 15–April 30. There were no species restrictions to assemblage during either time frame. In addition, a rockfish that was removed from the water had to be retained as part of the bag limit of the person originally hooking it. In 1997, the total bag limit remained unchanged, but a provision was added for "nonpelagic" rockfish, making the limit one per day

and two in possession from May 1–September 15, and only two per day and two in possession from September 15–April 30. In 2000, the bag and possession limits were modified to a year-round limit of two nonpelagic rockfish with an additional stipulation that the first two nonpelagic rockfish removed from the water must be retained and become part of the bag limit of the person originally hooking the fish. The bag limit change from one to two nonpelagic rockfish was based on the principle of setting the bag limit low enough to discourage targeted effort, but high enough to allow retention of incidental catch and minimize waste. The goal was to reduce discard mortality (waste) of rockfish released at the surface that were unable to submerge. In 2009, while the seasons and nonpelagic bag limit remained unchanged, total bag limits were reduced to four rockfish and eight in possession from May 1–September 15 and a bag and possession limit of eight rockfish from September 16–April 30.

In 2000, the port of Whittier was linked to the road system with the reconstruction of the Anton Anderson Memorial Tunnel. Since 2001, effort by boat anglers, expressed as a percent of total effort within PWSMA, has increased significantly in PWS (Figure 3-1). In 2001, fishing effort in the PWSMA was 83,811 angler-days and in 2016 it was up to 122,585 angler-days. A peak of 159,986 angler-days was estimated in 2007.

Nonpelagic rockfish are caught throughout the PWSMA. Nonpelagic rockfish typically have small home ranges and exhibit high site fidelity. They are long lived, reaching ages in excess of 100 years old, and are late maturing. Rockfish physiology makes management difficult, as barotrauma (caused by rapid decompression and expansion of gases in the swim bladder) occurs in rockfish caught in water depths greater than 60 ft. When released at the surface, they often do not have the ability to submerge unassisted. A deep water release mechanism (DWR) is a tool that allows rockfish to be released at depth versus at the surface, which significantly increases the likelihood of survival. A department study conducted in PWS estimated that yelloweye rockfish released at the surface had a 22% survival rate, while yelloweye released at capture depth, or 100 ft., survived at a 98% rate. Under current regulations, anglers can use a DWR to reduce mortality of released rockfish, but only after keeping the first two nonpelagic rockfish they catch. Deep water release of rockfish is highly encouraged in both the PWSMA and the NGCMA and anglers appear to be more aware of this option based on port sampling interviews. Although not all anglers utilize a DWR, many are taking it upon themselves to use the tool when releasing rockfish.

A sustainable target level of harvest for rockfish in PWS has not been established. Catch and harvest decreased from 2009 to 2012, possibly a result of the economic recession. Total rockfish catch and harvest in the PWSMA has been increasing since 2012 (Figure 3-1). In 2016, catch and harvest of all rockfish species in the PWSMA reached an all-time high of 72,303 and 55,771 rockfish, respectively.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal with modification to reduce nonpelagic rockfish harvest and to simplify regulations. The department recommends removing the mandatory retention of the first nonpelagic rockfish caught provision. Current department efforts to encourage voluntary use of DWR are a more effective means at reducing nonpelagic rockfish mortality than mandatory retention. Mandatory retention results in 100% mortality of those rockfish retained, and may not result in anglers attempting to avoid catching nonpelagic rockfish. A precautionary management strategy is necessary for this fish species since they are vulnerable to overharvest due to life history

characteristics. In addition, alignment of the PWSMA and NGCMA rockfish bag and possession limits would reduce regulation complexity.

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

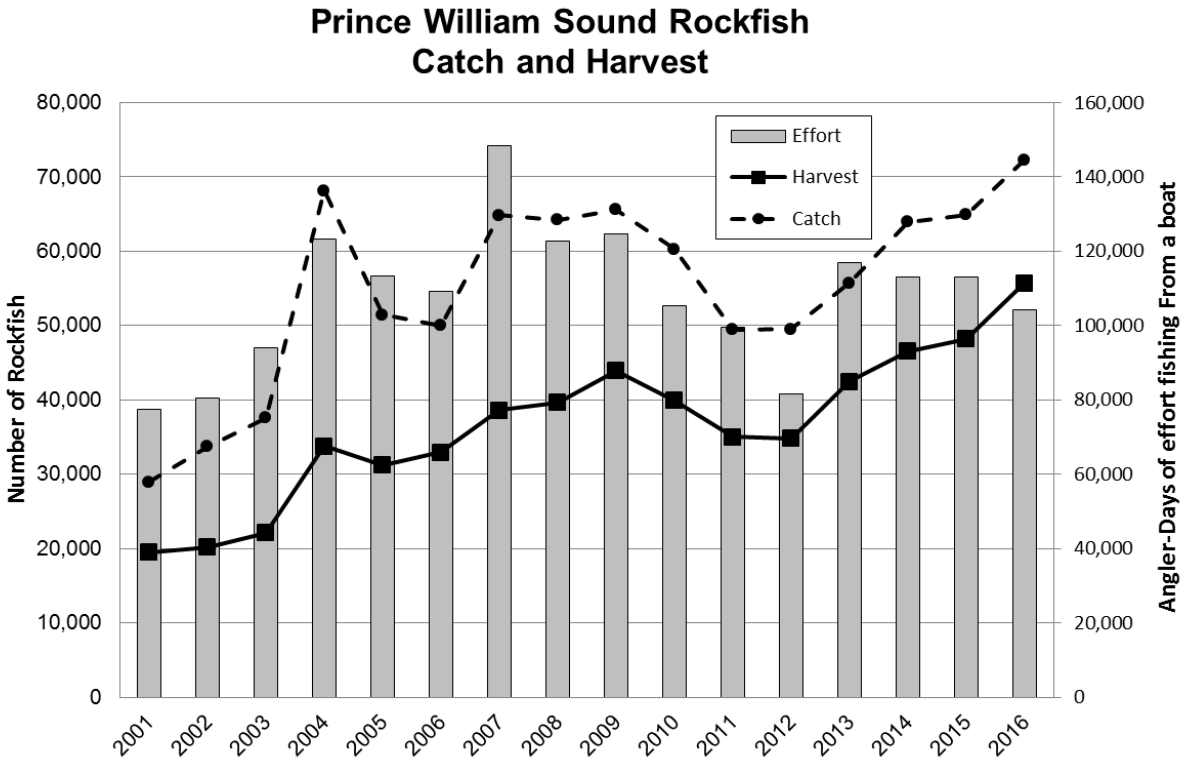

Figure 3-1.–Catch, harvest and effort of rockfish by boat angler-days, PWSMA, 2001–2016. Data from SWHS and apportioned using creel survey interviews.

Note: Angler-days of effort from a boat does not include effort from Seward originated trips and effort is for all species.

Commercial Groundfish (6 Proposals)

PROPOSAL 4 – 5 AAC 28.265. Prince William Sound Rockfish Management Plan.

PROPOSED BY: Cordova District Fisherman United Board of Directors.

WHAT WOULD THE PROPOSAL DO? Establish a directed pelagic shelf rockfish (PSR) jig fishery with a separate GHL in the Outside District of the PWS Area, Registration Area E.

WHAT ARE THE CURRENT REGULATIONS? In PWS, there is no directed commercial fishery for rockfish and rockfish may only be retained as bycatch in other directed groundfish and halibut fisheries. Under the *Prince William Sound Rockfish Management Plan* (5 AAC 28.265), all rockfish must be retained. Bycatch allowances have been established for rockfish in the following directed fisheries: 20% to sablefish, 5% to Pacific cod, 0.5% during the walleye pollock pelagic trawl fishery, and 10% to all other directed species. All rockfish in excess of the allowances must be reported as a bycatch overage. Proceeds from any overage are surrendered to the state. There is a trip limit and a vessel may not land or have on board more than 3,000 lb of rockfish within five consecutive days. The GHL for all rockfish species combined is 150,000 lb (round weight) in PWS.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? If a new directed PSR jig fishery in the Outside District were allowed, with a separate GHL, PSR rockfish harvest could increase to a level that is not sustainable.

BACKGROUND: The department does not assess rockfish abundance in PWS area. The current 150,000 lb bycatch only GHL was established in 2000 and is based on historical harvest levels. All rockfish are harvested as bycatch in other fisheries; there has been no directed fishery since 2001. Most of the rockfish bycatch is harvested in commercial longline fisheries for sablefish, Pacific cod, and halibut. The remaining rockfish harvest is taken mainly by pelagic trawl gear during the walleye pollock fishery, with a small amount taken by shrimp trawl and jig (mechanical and hand troll) gear. Rockfish bycatch limits are established in regulation, with proceeds from overages surrendered to the State of Alaska. This incentivizes moving away from areas of higher rockfish bycatch.

From 2014 to 2016, the PWS rockfish bycatch GHL of 150,000 lb was achieved each year (Table 4-1). During this period, 79 to 90 vessels reported harvest annually with between 211 and 280 landings; total rockfish harvest ranged from 152,128 lb in 2015 to 161,512 lb in 2016. The majority of the rockfish harvest was caught by longline gear, between 56% and 85% of the total harvest. For the same recent three-year period, the pollock pelagic trawl fishery had the second highest rockfish harvest, ranging from 15% to 44% of the total. Each fishery has specific associated rockfish bycatch limits. In 2014, pollock trawl vessels caught nearly 70,000 lb of rockfish, or 1.29% of the pollock harvest, the highest rockfish bycatch harvest in the history of the pollock fishery (established in 1995) and the fishery was closed after surpassing the rockfish bycatch limit of 0.5%. Rockfish harvest by pot and jig gear has been minimal since 1997.

For the past four years, 2013–2016, the rockfish harvest in the Inside District (Figure 4-1) reached the highest levels in the history of the bycatch fishery, ranging from 126,623 lb to 143,978 lb, 82% to 91% of total harvest (Table 4-2). For the recent 10-year period, 2007–2016, average participation in the Inside and Outside districts was 67 and 29 vessels, respectively. Average harvest during the recent 10-year period was 106,972 lb in the Inside District and

19,386 lb in the Outside District. Harvest in the Inside District was less than 100,000 lb from 2007 to 2012. Then, in 2013, the harvest increased to ~135,000 lb and stayed at this level for the next three years. Over the last 10 years, rockfish bycatch harvest in the Outside District remained relatively stable, ranging from 13,573 lb in 2014 to 28,419 lb in 2016, and was harvested primarily during Pacific cod and halibut longline fisheries.

Slope rockfish, including thornyhead rockfish, is the dominant rockfish assemblage when examining total rockfish harvest in PWS (Table 4-3). The average annual harvest of slope rockfish from 2014 to 2016 was 88,366 lb, or 56% of the total harvest. During this same time period, demersal shelf rockfish had an annual average harvest of 62,146 lb, which was 39% of the total, and pelagic shelf rockfish comprised an average of only 4% of the annual harvest.

Management action to reduce rockfish harvest was taken in 2014 and 2016 when the GHL was exceeded before the end of the regulatory season. In 2014, after reaching the GHL, an EO was issued, effective September 27 through December 31, stipulating that all proceeds from rockfish harvest were to be forfeited to the State of Alaska, in an attempt to deter fisherman from fishing in areas with known rockfish abundance. This action, coupled with mandatory retention, helped slow down the rockfish harvest although the GHL was still exceeded by 5% in 2014. After achieving the GHL in 2016, an EO was issued, effective August 1, which reduced the allowable rockfish bycatch levels by half for each target species, from 20% to 10% for sablefish, 5% to 2.5% for Pacific cod, and from 10% to 5% for all other groundfish and halibut fisheries. This action, along with the closure of the Pacific cod longline fisheries in PWS from September 1 through December 31, helped to reduce rockfish harvest, but the GHL was still exceeded by 8% in 2016.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. Under the current management plan and anticipated groundfish harvest levels, the annual rockfish GHL is expected to be met. Without a stock assessment survey the department is unable to determine what an appropriate PSR directed fishery GHL for the Outside District should be and therefore, PSR harvest could increase to a level that is not sustainable.

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

Table 4-1.–Prince William Sound Area commercial rockfish harvest by gear type, including black and dark rockfish from federal waters, 1988–2016.

			Harvest (lb)				
Year	Vessels	Landings [a]	Jig	Trawl	Longline	Pots	Total [b]
1988	80	195	54,097	228,417	144,228	0	426,742
1989	39	103	[c]	997	104,633	0	105,630
1990	96	402	30,088	20,238	455,789	[c]	506,115
1991	89	247	15,624	11,162	129,864	0	156,650
1992	114	299	9,946	28,510	152,945	[c]	191,401
1993	80	209	13,905	12,610	81,978	[c]	108,493
1994	92	211	94,588	[c]	104,799	[c]	199,387
1995	134	269	168,777	267	127,616	[c]	296,660
1996	99	257	57,103	3,507	124,077	0	184,687
1997	106	266	34,047	1,294	130,141	[c]	165,482
1998	88	220	2,903	1,079	104,889	[c]	108,871
1999	92	244	1,130	1,951	68,906	0	71,987
2000	100	284	2,401	2,061	117,210	247	121,919
2001	101	233	1,165	4,495	68,400	[c]	74,060
2002	87	190	0	30,553	44,059	0	74,612
2003	89	243	256	4,752	42,982	0	47,990
2004	71	197	283	3,735	48,783	0	52,801
2005	80	206	[c]	8,863	51,547	0	60,410
2006	72	226	1,008	12,391	62,866	[c]	76,265
2007	73	213	1,215	10,970	69,419	0	81,604
2008	69	203	[c]	21,656	85,113	0	106,769
2009	88	256	[c]	22,359	95,663	[c]	118,022
2010	87	262	[c]	6,500	98,117	[c]	104,617
2011	81	232	[c]	8,113	110,497	[c]	118,610
2012	94	245	881	18,054	94,587	[c]	113,522
2013	85	277	[c]	29,680	119,561	[c]	149,241
2014	90	211	0	69,132	88,419	0	157,551
2015	79	280	0	23,293	128,835	0	152,128
2016	87	265	966	25,110	135,436	83	161,512
Average 2007–2016	83	244	[b]	23,487	102,565	[b]	126,358

[a] Total landings may be less total combined district tallies due to vessels fishing multiple districts in a single trip.
[b] Confidential data excluded from total harvest; recent average harvest not calculated for jig and pot gear.
[c] Confidential data due to less than three participants.

Table 4-2.–Prince William Sound Area commercial harvest and effort of all rockfish from the Inside and Outside districts including black and dark rockfish from federal waters, 1988–2016.

	Inside District			Outside District			Total
Year	Vessels	Landings	Harvest (lb)	Vessels	Landings	Harvest (lb)	harvest (lb)
1988	64	170	113,253	18	25	313,489	426,742
1989	35	90	88,280	5	6	17,350	105,630
1990	92	390	488,801	10	11	17,314	506,115
1991	88	239	153,888	6	6	2,762	156,650
1992	106	275	178,519	16	24	12,882	191,401
1993	66	175	81,015	20	33	27,478	108,493
1994	64	151	94,894	31	51	104,493	199,387
1995	121	211	153,075	35	60	143,585	296,660
1996	86	208	108,392	31	51	76,295	184,687
1997	89	234	136,237	26	35	29,245	165,482
1998	77	194	99,957	13	23	8,914	108,871
1999	81	214	60,540	21	31	11,447	71,987
2000	98	263	111,170	18	31	10,749	121,919
2001	92	205	60,575	18	40	13,485	74,060
2002	82	168	67,243	13	26	7,369	74,612
2003	74	194	35,239	29	57	12,751	47,990
2004	64	160	40,582	23	47	12,219	52,801
2005	71	163	47,216	15	47	13,194	60,410
2006	61	168	61,089	22	51	15,176	76,265
2007	59	164	66,322	25	57	15,282	81,604
2008	58	161	92,077	20	49	14,692	106,769
2009	69	198	96,524	36	66	21,498	118,022
2010	69	210	89,712	30	53	14,905	104,617
2011	65	183	96,366	32	53	22,244	118,610
2012	72	184	90,367	28	60	23,155	113,522
2013	75	234	134,655	28	50	14,586	149,241
2014	71	171	143,978	32	46	13,573	157,551
2015	63	235	126,623	25	51	25,505	152,128
2016	71	219	133,093	29	52	28,419	161,512
Average 2007–2016	67	196	106,972	29	54	19,386	126,358
Percent of total			85%			15%	

Table 4-3.–Prince William Sound Area commercial rockfish harvest rockfish by species assemblage, 1988–2016.

Year	Pelagic shelf [a] Harvest (lb)	Pelagic shelf [a] Percent of total	Demersal shelf Harvest (lb)	Demersal shelf Percent of total	Slope-thornyhead Harvest (lb)	Slope-thornyhead Percent of total	Total harvest (lb)
1988	312,178	73%	27,733	6%	86,831	20%	426,742
1989	19,150	18%	15,674	15%	70,806	67%	105,630
1990	26,868	5%	24,239	5%	455,008	90%	506,115
1991	26,146	17%	31,893	20%	98,611	63%	156,650
1992	51,595	27%	42,921	22%	96,886	51%	191,401
1993	27,632	25%	14,246	13%	66,615	61%	108,493
1994	116,431	58%	22,904	11%	60,052	30%	199,387
1995	175,699	59%	29,154	10%	91,807	31%	296,660
1996	71,507	39%	53,719	29%	59,461	32%	184,687
1997	37,833	23%	41,315	25%	86,334	52%	165,482
1998	4,283	4%	56,952	52%	47,636	44%	108,871
1999	3,164	4%	43,395	60%	25,429	35%	71,987
2000	3,103	3%	72,742	60%	46,074	38%	121,919
2001	2,195	3%	31,203	42%	40,663	55%	74,060
2002	510	1%	14,647	20%	59,455	80%	74,612
2003	2,011	4%	22,945	48%	23,034	48%	47,990
2004	2,028	4%	23,764	45%	27,009	51%	52,801
2005	1,126	2%	21,137	35%	38,147	63%	60,410
2006	1,733	2%	22,480	29%	52,052	68%	76,265
2007	1,815	2%	24,128	30%	55,661	68%	81,604
2008	644	1%	23,948	22%	82,177	77%	106,769
2009	1,071	1%	32,195	27%	84,756	72%	118,022
2010	1,283	1%	25,124	24%	78,210	75%	104,617
2011	3,302	3%	47,002	40%	68,306	58%	118,610
2012	3,824	3%	38,304	34%	71,395	63%	113,522
2013	982	1%	50,345	34%	97,914	66%	149,241
2014	3,654	2%	31,444	20%	122,453	78%	157,551
2015	8,548	6%	60,200	40%	83,380	55%	152,128
2016	7,455	5%	94,793	59%	59,264	37%	161,512
Average 2007–2016	3,258	2%	42,748	33%	80,351	65%	126,358

[a] Includes black and dark rockfish from federal waters.

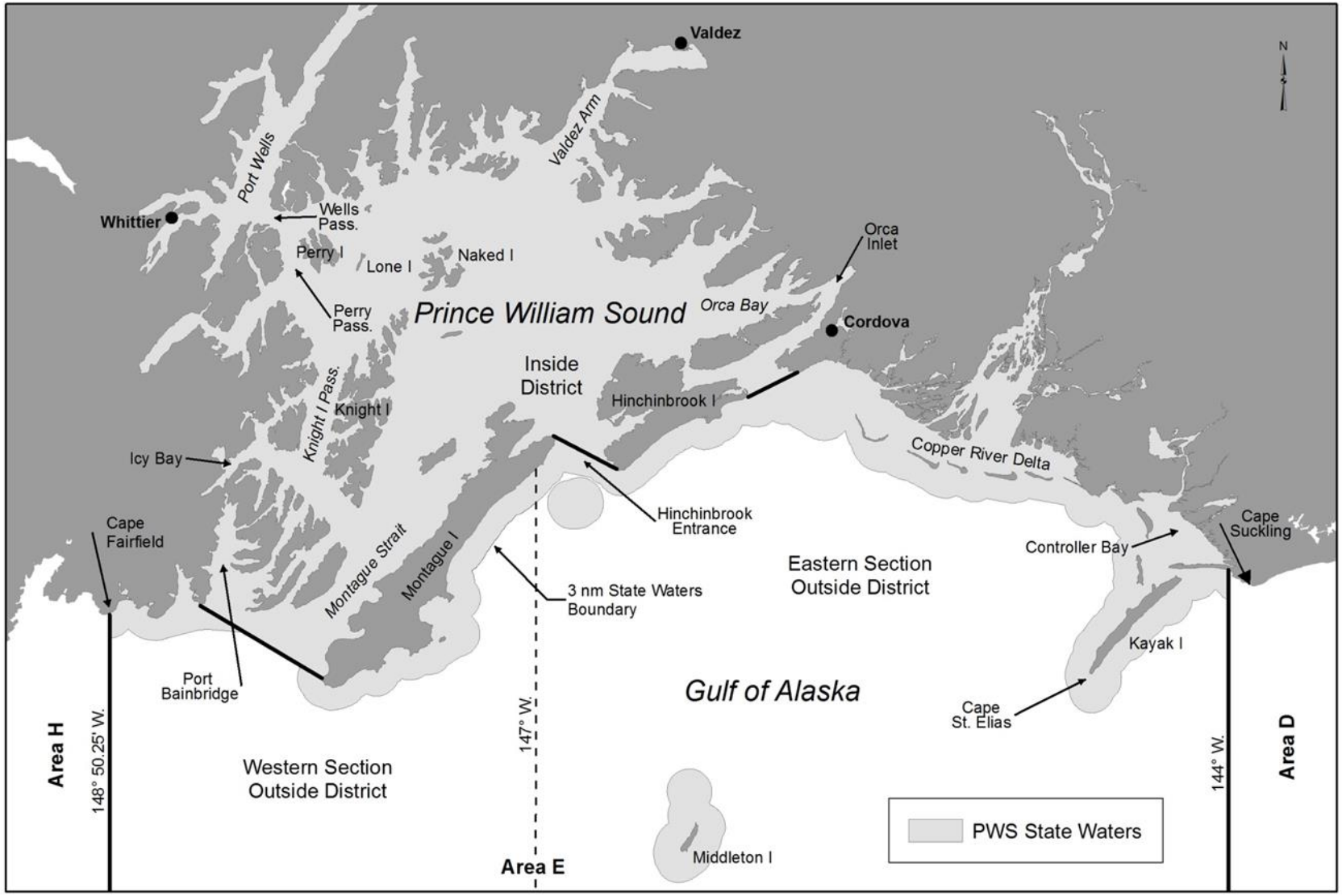

Figure 4-1.–Prince William Sound Area groundfish fishing districts.

PROPOSAL 5 – 5 AAC 28.210. Fishing seasons for Prince William Sound Area.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? Clarify that the bycatch allowance of lingcod in the PWS Area is calculated independently, regardless of other bycatch retained, and is measured as round weight.

WHAT ARE THE CURRENT REGULATIONS? Lingcod may be taken only from July 1 through December 31, unless closed earlier by emergency order (EO), in a directed fishery or as bycatch up to 20% by weight of the directed finfish species on board a vessel in accordance with 5 AAC 28.210 (c). The regulation also states that bycatch is counted as part of any bycatch limit established in 5 AAC 28.070 (b). Under 5 AAC 28.070 (b) bycatch levels of groundfish species may be established by EO, however, there is no reference to an overall bycatch cap.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would remove regulatory language that does not accurately reflect current bycatch management practices and would reduce confusion for the public in regard to bycatch allowances. Additionally, bycatch allowances are based on round weight, and stating that in regulation would provide clarity and improve compliance for fishermen retaining lingcod as bycatch and for buyers calculating allowable amounts for fish ticket reporting.

BACKGROUND: Prior to 2014, bycatch in PWS groundfish fisheries was managed with an overall bycatch limit of 20% for all bycatch species combined. This bycatch limit was a department management objective, although not in regulation. Beginning in 2014, and in accordance with 5 AAC 28.070 (b), allowable bycatch levels in PWS for each species or species group, where a bycatch allowance is not already specified in regulation, have been established annually by EO as percentages by round weight of bycatch to round weight of the target species. There is no longer an overall bycatch limit and each bycatch allowance by species or species group is assessed separately based on harvest of target species.

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.

PROPOSAL 6 – 5 AAC 28.267. Prince William Sound Pacific Cod Management Plan.

PROPOSED BY: Robert A. Smith.

WHAT WOULD THE PROPOSAL DO? Allow vessels fishing for halibut in the PWS Area to retain all Pacific cod when directed Pacific cod fisheries are closed due to reaching the federal halibut bycatch allowance.

WHAT ARE THE CURRENT REGULATIONS? Although the commercial halibut fishery is not managed by the State of Alaska, retention of groundfish species as bycatch during the commercial halibut fishery (and other directed groundfish fisheries) is managed by statewide regulation 5 AAC 28.070 (b). This regulation allows bycatch levels of groundfish species to be set by emergency order (EO) of up to 20%, by weight, of the halibut and directed groundfish species on board the vessel; the allowable bycatch level of Pacific cod in PWS is set by EO each year at the maximum level of 20% to directed species on board the vessel.

Additionally, a CFEC permit holder fishing for groundfish shall bring on board the vessel all Pacific cod that is caught and the permit holder shall retain all Pacific cod brought on board a vessel when a directed fishery for Pacific cod is open or retain up to the maximum retainable bycatch of Pacific cod when a directed fishery is closed. These rules do not apply to the halibut fishery, which is not considered a groundfish under state regulations; however, a participant in the halibut fishery may simultaneously participate in an open directed Pacific cod or other groundfish fishery (for the same gear type being used to fish halibut) with the appropriate CFEC permit and area registration.

The *Prince William Sound Pacific Cod Management Plan* (5 AAC 28.267) provides for Pacific cod parallel and state-waters seasons for longline, pot, and jig gear. Under 5 AAC 28.267 (d), Pacific cod fishing seasons may be opened or closed by EO at times other than those specified if the department determines it is necessary to (1) adapt to unanticipated openings or closures of the federal season, (2) maintain sustained yield management, (3) provide for orderly fisheries, or (4) allow concurrent state-waters and federal seasons for Pacific cod.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would increase the harvest of Pacific cod by an unknown amount, potentially exceeding the 20% allowable bycatch limit.

BACKGROUND: The department does not manage the commercial halibut fishery; however, the allowable level of groundfish retained as bycatch in the halibut fishery and other directed groundfish fisheries is set annually by EO to a maximum of 20% of the halibut and directed groundfish on board the vessel. For Pacific cod, the allowable bycatch level is set to the maximum of 20%. There are parallel and state-waters seasons for Pacific cod in PWS requiring CFEC permits and area registrations.

Fishermen often fish for groundfish species and halibut concurrently, longline fishing for halibut and Pacific cod are an example. If a vessel is operating longline gear in PWS to fish halibut and a Pacific cod parallel or state-waters season is open to longline gear in PWS, the vessel operator may obtain the gear-specific CFEC permit for miscellaneous saltwater finfish and the appropriate area registration, which would enable the vessel to retain all Pacific cod caught.

In 2016, directed fishing for Pacific cod closed to vessels fishing longline gear on September 1 because of actions carried out by NMFS and the rockfish GHL in PWS being achieved. NMFS did not open the federal CGOA Pacific cod "B" season to hook-and-line gear on September 1 because the 2016 Pacific halibut bycatch allowance specified for the other HAL fishery by catcher vessels in the GOA had been reached, therefore the parallel Pacific cod season in PWS also did not open on September 1. In addition, the 2016 PWS rockfish GHL had been achieved, and since the majority of rockfish is harvested as bycatch on longline gear, the department simultaneously closed the state-waters season for Pacific cod to longline gear on September 1. Although this limited the opportunity to harvest all Pacific cod caught with longline gear since directed fisheries had closed, there remained opportunities to retain Pacific cod within bycatch limits when targeting halibut and other groundfish.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. If Pacific cod was allowed to be retained above the current and maximum 20% bycatch limit when Pacific cod fisheries were closed, fishermen could essentially target Pacific cod while participating in the halibut fishery, defeating the purpose of the closure and potentially counteracting the conservation effect intended.

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

PROPOSAL 7 – 5 AAC 28.230. Lawful gear for Prince William Sound Area.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? Clarify lawful gear requirements for PWS Area groundfish fisheries.

WHAT ARE THE CURRENT REGULATIONS? Lawful gear for groundfish is described under 5 AAC 28.230, however, the regulation does not specify that only one type of gear may be on board a vessel, although fisheries are managed by gear type. The *Prince William Sound Pacific Cod Management Plan* (5 AAC 28.267) states under (e)(3)(C) that a vessel may not simultaneously be registered to fish with more than one gear type, and describes in (b) coordination of parallel seasons to coincide with federal seasons for specific gear types. Registrations as described in 5 AAC 28.206 are issued for a specific gear type.

For groundfish management, mechanical jigging machines and hand troll gear are combined as "jig" gear and allowed to be fished on a vessel simultaneously in practice. This is described for the Pacific cod fishery under 5 AAC 28.267 (e)(3)(C); however, this is not specified under lawful gear, 5 AAC 28.230, for all groundfish fisheries in PWS. This exception is included in the proposed language.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would reduce confusion for the public regarding allowable gear by clarifying that for all PWS groundfish fisheries only one gear type may be on board the vessel, with the exception of jig gear.

BACKGROUND: PWS groundfish fisheries are typically managed with different requirements depending on the gear type used, for example, harvest allocations for Pacific cod during the state-waters season. CFEC permit cards are issued for a specific gear type and harvest on fish tickets is required to be reported by gear type. Area registrations and log sheets are issued for a specific gear type. Estimates of CPUE are calculated by gear type. In current PWS regulations, it is not specified that only one gear type may be on board a vessel.

The one exception for groundfish management is jig gear, which is comprised of two gear types, mechanical jigging machines and hand troll gear, and both may be on board a vessel and used at the same time. Registrations are issued for jig gear and encompass both gear types, although the exact gear used is specified on CFEC permits and fish tickets.

Similar regulations as proposed exist for the Cook Inlet Area under 5 AAC 28.330 (e), which states that only one type of gear may be on board a vessel during a groundfish fishery, except as provided in (f) that mechanical jig and hand troll gear may be on a vessel at the same time.

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.

PROPOSAL 8 – 5 AAC 28.206. Prince William Sound Area registration.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? Fishery-specific groundfish registration requirements for PWS Area would be added for the directed lingcod fishery, parallel season for Pacific cod, and state-waters season for Pacific cod.

WHAT ARE THE CURRENT REGULATIONS? Statewide regulation *Groundfish Area Registration* (5 AAC 28.020) requires that an area registration must be obtained before a vessel operates groundfish gear. PWS regulation 5 AAC 28.206 describes fishery-specific registration requirements for some groundfish fisheries; however, it does not describe fishery-specific registration requirements for lingcod and Pacific cod fisheries. The *Prince William Sound Pacific Cod Management Plan* (5 AAC 28.267) states under (e)(3)(C) that a vessel must be registered for a specific gear type in the state-waters season, however, the same requirement for the parallel season is not defined, and the requirement for registration is not listed under 5 AAC 28.206.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This will reduce confusion for the public by clarifying specific registration requirements for PWS lingcod and Pacific cod fisheries and provide more accurate fishery participation information.

BACKGROUND: Some requirements of area registration are described under statewide regulation 5 AAC 28.020, including that a registration must be obtained before a vessel operates gear within a registration area and specifies the conditions that invalidate a registration. In the PWS Area, there are fishery-specific registration requirements listed for walleye pollock and sablefish under 5 AAC 28.206, as these two fisheries have registration deadlines. However, aside from describing exclusivity for gear types in the Pacific cod state-waters season, there are no clear requirements for registration in the Pacific cod and lingcod fisheries described under 5 AAC 28.206. This has caused some confusion for PWS fishermen registered in a nonexclusive parallel Pacific cod season to also consider themselves registered for the nonexclusive directed lingcod fishery. Although 5 AAC 28.267 states that registration for a specific gear type is required for the Pacific cod state-waters season, specifying registration requirements for each PWS groundfish fishery and identifying these requirements in regulation would provide clarity.

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.

PROPOSAL 9 – 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? Clarify procedures for obtaining, completing, and submitting log sheets for the PWS Area sablefish fishery.

WHAT ARE THE CURRENT REGULATIONS? Under 5 AAC 28.272 (f), log sheets for the PWS sablefish fishery are required and completed log sheets must be received by the department's Cordova office no later than 10 days after each landing of sablefish. Although not stipulated in regulation, log sheets are now being submitted to the department's Homer office. Also, log sheet requirements refer only to longline gear, although pot gear is also deployed in the fishery and gear-specific log sheets are issued. In addition, the information required to be reported on log sheets is not specified.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would reduce confusion for the public and improve compliance regarding the log sheet requirement. It would also clarify the requirements specified in regulation regarding the completion and submission of log sheets, remove inaccurate language on where to submit log sheets, and shorten the log sheet receipt deadline to seven days, aligning it with fish ticket reporting requirements.

BACKGROUND: Although the current regulation requires submission of completed log sheets, it does not outline the specific information required to be reported by the vessel operator. Additionally, the current deadline of 10 days for submission of log sheets does not align with the seven day deadline for fish tickets, although both correspond to a specific sablefish trip and landing. In December 2016, new regulations were adopted by the board regarding the submission of log sheets from the Cook Inlet Area sablefish fishery (5 AAC 28.360 (b)) and the submission deadline was aligned with the fish ticket deadline. Amending PWS Area sablefish regulations would provide consistency between areas in the Central Region. Fishermen delivering to a processor will often submit log sheet(s) to industry staff when completing the fish ticket and the buyer will submit the log sheet(s) with the corresponding fish ticket(s) to the department. This practice works well for timely receipt of log sheets, which is necessary for corroboration of harvest and effort data, and monitoring the fishery inseason. It is specified in regulation that fish tickets are due to the department within seven days of landing (5 AAC 39.130 (c)). However, it is still the fisherman's responsibility to submit the log sheet and, for those fishermen that do not submit their log sheets to a buyer, the deadline for submission of log sheets to the department needs to be specified in regulation. Additionally, management of PWS groundfish fisheries is now occurring from the Homer office, rather than Cordova, and specifying the office location is unnecessary and could be inaccurate; contact information is provided to fishermen at the time of registration.

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.

COMMITTEE OF THE WHOLE–GROUP B: ESCAPEMENT GOALS, SUBSISTENCE, PERSONAL USE, SPORT, and MINTO FLATS NORTHERN PIKE (19 Proposals)

Copper River Escapement Goal (1 Proposal)

PROPOSAL 10 – 5 AAC 24.360. Copper River District Salmon Management Plan.

PROPOSED BY: Fairbanks Fish and Game Advisory Committee.

WHAT WOULD THE PROPOSAL DO? This would establish an optimal escapement goal (OEG) of 700,000–1,200,000 sockeye salmon for the Copper River.

WHAT ARE THE CURRENT REGULATIONS? There is currently no OEG for Copper River sockeye salmon. The sustainable escapement goal (SEG) for Copper River sockeye salmon is 360,000–750,000. In accordance with 5 AAC 24.360(b) the department shall manage the commercial salmon fishery to achieve an inriver goal of salmon past the Miles Lake sonar based on the total of the following categories:

Spawning Escapement	360,000 sockeye salmon (lower bound of SEG)
	17,500 other salmon
Subsistence Harvest	61,000–82,500 salmon
Personal Use Harvest	100,000-150,000 salmon
Sport Fishery	15,000 salmon
Hatchery Brood	Estimated annually
Hatchery Surplus	Estimated annually
TOTAL	Announced annually

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would significantly increase salmon escapement into the Copper River drainage. Subsistence, commercial, personal use, and sport fishery harvest opportunity would likely decrease to meet the OEG. Overall sockeye salmon yield and productivity would likely decrease.

BACKGROUND: Escapement goals are reviewed every three years as part of the board cycle. The current Copper River sockeye salmon escapement goal was reviewed in 2014 and 2017 and the escapement goal committee concluded that the escapement goal should remain at its current range. The review committee determined that the current escapement goal likely encompasses S_{msy} and is the appropriate number of fish for sustainable management of the Copper River sockeye salmon stock complex. Since a sockeye salmon escapement goal was established in 1980, the goal has been met in 36 out of 37 years and the average annual escapement is approximately 519,000 fish. During the recent 10 years (2007–2016) sockeye salmon escapements have ranged from 477,000–970,000 and averaged approximately 694,000 sockeye salmon (Table 10-1).

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal because it would likely result in reduced yields and sockeye salmon productivity.

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

Table 10-1.–Upper Copper River sockeye salmon spawning escapement, 2007–2016.

Year	Upriver spawning escapement [a]	Upriver spawning escapement goal
2007	624,457	300,000–500,000
2008	491,516	300,000–500,000
2009	477,327	300,000–500,000
2010	524,692	300,000–500,000
2011	621,545	300,000–500,000
2012	970,611	360,000–750,000
2013	889,143	360,000–750,000
2014	883,029	360,000–750,000
2015	953,509	360,000–750,000
2016	503,873	360,000–750,000
10-year average	693,970	

[a] Since 1999, sockeye salmon spawning escapement has been based on the total number of fish past the Miles Lake sonar minus the king salmon inriver midpoint abundance estimate; and upriver subsistence, personal use, and sport harvest; and hatchery broodstock and onsite hatchery surplus requirements.

Upper Copper River Subsistence and Personal Use Salmon (8 Proposals)

PROPOSAL 11 – 5 AAC 01.647. Copper River Subsistence Salmon Fisheries Management Plans.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would establish, in regulation, a set season for the subsistence fishery in the Batzulnetas area of the Copper River that requires no annual action by the commissioner to open and close.

WHAT ARE THE CURRENT REGULATIONS? Salmon, other than king salmon, may be taken in the vicinity of the former Native village of Batzulnetas only from June 1 through September 1 or until closed by emergency order; fishing periods are to be established by emergency order and are two days per week during the month of June and 3.5 days per week for the remainder of the season.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would have no effect on current harvest rates, would simplify area regulations, and would eliminate the need for staff to annually write, review and issue an emergency order for a fishery with traditionally low harvest potential.

BACKGROUND: State management of the Batzulnetas area fishery first occurred by emergency regulation in 1987 and was adopted into regulation by the Board of Fisheries in 1988. Participation was limited to residents of Dot Lake and Mentasta Village. After the 1989 McDowell decision the fishery was open to all Alaska residents, but participation was still limited since overland access was through private properties. In 1999, the federal government assumed management authority over subsistence fisheries in navigable waters of Alaska adjacent to or within federal lands. Since the navigable waters of the Copper River, including the Batzulnetas area, fall within the boundaries of Wrangell-St. Elias National Park (WRSTNP), the U.S. National Park Service and U.S. Fish and Wildlife Service only recognize federal permits within these fisheries. No state subsistence permit has been issued for the Batzulnetas fishery since 2002 or waters of the Glennallen Subdistrict upstream of Indian Creek since 2005 (Figure 11–1). The federal subsistence fishery in the Batzulnetas area is open continuously from May 15–September 30 and participation is limited to residents of Dot Lake (est. pop. 49 in 2011) and Mentasta Village (est. pop. 106 in 2010).

When first established, the department, based on aerial survey data, determined that an annual harvest of 1,000 sockeye salmon from Tanada Creek or high harvest during short periods of the season would be inconsistent with sustained yield management. Therefore, the department developed a cautious approach to the fishery requiring the fishery to open only by emergency order. WRSTNP has operated a weir on Tanada Creek to monitor salmon passage since 1997. Annual passage of sockeye salmon has ranged from 1,649–52,162 fish with a mean passage from 1997–2016 of 16,031 sockeye salmon. During this same period harvest has ranged from 0–867 sockeye salmon with a mean harvest of 160 salmon.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. Participation and potential harvests from both the federal and any state-managed fishery in the Batzulnetas area appear to be sustainable, and the state-managed fishery does not require management by emergency order.

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

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.
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence uses? Under 5 AAC 01.616 (b)(1)(C) the amount necessary for subsistence in that portion of the Glennallen Subdistrict that includes Batzulnetas is 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.

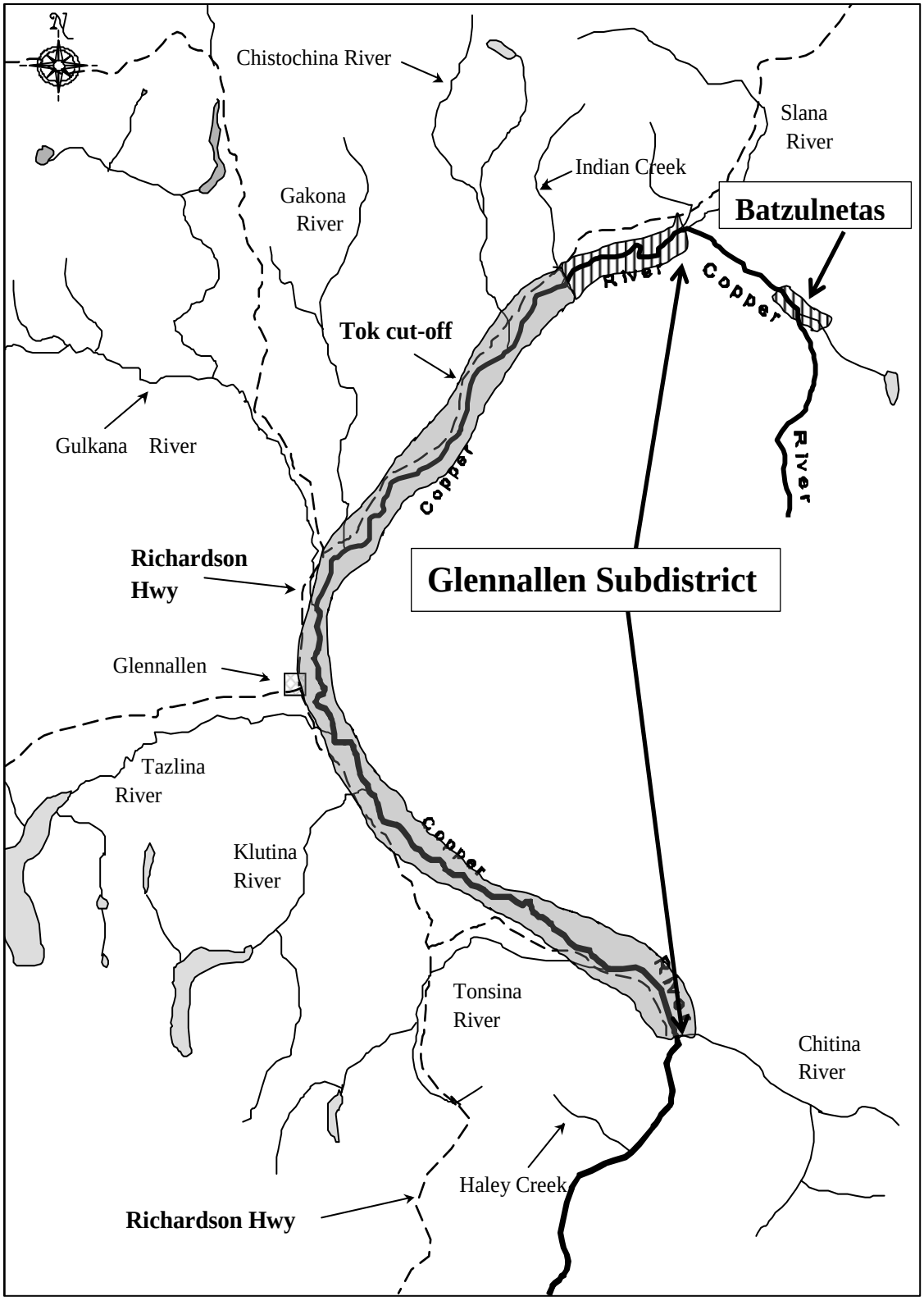

Figure 11–1.–Upper Copper River Glennallen Subdistrict and Batzulnetas Area. Shaded area may be fished under a state or federal subsistence permit while cross hatched portions may only be fished under a federal subsistence permit.

PROPOSAL 12 – 5 AAC 01.620. Lawful gear and gear specifications.

PROPOSED BY: James Marchini.

WHAT WOULD THE PROPOSAL DO? Require subsistence fish wheel operators whose fish wheels are not currently equipped with a livebox to either install a livebox to their fish wheel or closely attend that fish wheel while in operation.

WHAT ARE THE CURRENT REGULATIONS? In the Glennallen Subdistrict, a permit holder may operate only one fish wheel at a time and a fish wheel may be operated only by one permit holder at a time; that permit holder must check the fish wheel at least once every 10 hours and remove all fish caught by the fish wheel. In the Batzulnetas fishery, fish wheels must be equipped with a livebox or be monitored at all times.

The *Copper River King Salmon Management Plan* (5 AAC 24.361) provides the department the authority to set bag limits or prohibit retention of king salmon caught in fish wheels, or modify methods and means for fish wheels to provide additional conservation measures necessary to achieve king salmon escapement goals.

A "livebox" is defined as a submerged container that is attached to a fish wheel and that will keep fish caught by the fish wheel alive.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Currently, many fish wheels used in the Glennallen Subdistrict do not have liveboxes. By regulation, live boxes are not required and fish wheels must be checked and all salmon removed from the box every 10 hours. This would require the fish wheel owner/operator to construct and attach a livebox to their fish wheel or closely attend their fish wheel while in operation. This may require extensive modification to the existing fish wheel or require the operator to plan their subsistence activity on days they are not working or can take leave from work.

BACKGROUND: There are regulations pertaining to live boxes on fish wheels for the Yukon-Northern, Kuskokwim, and Yentna River subsistence salmon fisheries. These regulations all specify a size of livebox of no less than 45 cubic feet of water volume. In the Yukon-Northern Area regulations, a person may operate a fish wheel without a livebox if the fish wheel is equipped with a chute that returns fish captured by the fish wheel to the water alive and the person closely attends the fish wheel while it is in operation, and all king salmon are returned to water alive. If the fish wheel is equipped with a live box, all king salmon must be immediately released to the water alive.

In the Kuskokwim Area regulations, a person may operate a fish wheel without a livebox if the fish wheel is equipped with a chute that returns fish captured by the fish wheel to the water alive and the person closely attends the fish wheel while it is in operation, and all king salmon are returned to water alive. If the fish wheel is equipped with a livebox, the livebox must be checked at least once every 12 hours (during times of chum salmon conservation) or every six hours (during times of king salmon conservation) while the fish wheel is in operation, and all king salmon in the livebox must be returned to the water alive.

In the Yentna River regulation the permit holder shall be present to attend the fish wheel at all times while the fish wheel is in operation and all king salmon and rainbow trout must be returned to the water alive. These regulations may be implemented by emergency order in the Yukon-

Northern and Kuskokwim areas in times of salmon conservation, and are in regulation for the Yentna River.

Since 1997, all fish wheels, whether used by a state or federal permit holder, must be registered with the state. The department registers an average of 130 fish wheels each year for the Glennallen Subdistrict. Of these, on average 116 are fished, of which 16% are fished exclusively by federal permit holders. Beginning in 2006, fish wheel operators in the Glennallen Subdistrict have been required to check their fish wheels at least every 10 hours and remove all the fish from the wheel. In 2014, the board adopted changes to the *Copper River King Salmon Management Plan* giving the department authority to regulate methods and means to reduce the harvest of king salmon in the Glennallen Subdistrict subsistence fishery as needed to achieve escapement goals. Prior to the 2017 fishing season the department, by emergency order, established a total bag limit of two king salmon during the period June 1–July 15 and required that all fish wheels be closely attended during this period. This emergency order was rescinded on June 3, based on a better than projected king salmon abundance.

The Glennallen Subdistrict subsistence fishery targets sockeye, king, and coho salmon. Sockeye salmon are the predominant species harvested in this fishery (Table 12-1). Over the last 10 years (2006–2015), 35,980–57,717 sockeye salmon have been taken with fish wheels annually under state subsistence permits in the Glennallen Subdistrict. This compares to an average harvest of 1,657 king salmon over those same years. Total harvest by fish wheels averaged 49,993 fish from 2006–2015 under state subsistence permits and 66,884 fish when fish wheel harvest under federal subsistence permits is included.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. The *Copper River King Salmon Management Plan* currently provides the department emergency order authority to require fish wheels to have liveboxes or be closely attended in times of king salmon conservation. This would create a burden on subsistence permit holders who would need to either build and attach a livebox to their fish wheel or closely attend the fish wheel when in operation. Requiring liveboxes in regulation would potentially be less of a burden than requiring them by emergency order due to the time constraints of emergency order authority. If required in regulation, fish wheel operators could decide whether they wanted to install a livebox or closely attend the fish wheel and this would provide more certainty than if the department issued an emergency order inseason requiring liveboxes or fish wheels to be closely attended. If adopted, these regulations would result in state regulations diverging from federal regulations specific to fish wheels.

COST ANALYSIS: Adoption of this proposal may result in additional direct costs for private individuals to retrofit or rebuild their fish wheels to include liveboxes.

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.
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence uses? Under 5 AAC 01.616 (b)(1) the Glennallen Subdistrict has three areas, each of which has its own ANS range: (A) the portion of the Copper River beginning in the southern boundary of the subdistrict and extending upstream to the mouth of the Tonsina River, 25,500–39,000 salmon; (B) the

Copper River from the mouth of the Tonsina River upstream to the mouth of the Gakona River, 23,500–31,000 salmon; and (C) the Copper River from the Gakona River upstream to the mouth of the Slana River including the area around Batzulnetas, 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 12-1.–Number of fish wheels registered and number of fish taken by fish wheels in the state and federally permitted fisheries of the Upper Copper River Glennallen Subdistrict, 2006–2016.

		State subsistence fishery				Federal subsistence fishery [a]				
Year	Registered fish wheels	Fish wheel permits issued	King salmon	Sockeye salmon	Total [b]	Total permits issued [c]	King salmon	Sockeye salmon	Total [b]	Total harvest [b]
2006	123	646	2,434	50,540	53,258	254	445	17,977	18,513	71,771
2007	124	707	2,780	56,298	59,343	281	651	16,891	17,730	77,073
2008	126	650	1,885	35,980	38,398	270	832	14,309	15,448	53,846
2009	134	621	2,099	39,899	42,279	274	487	11,471	12,716	54,995
2010	144	701	1,427	57,717	59,520	269	281	12,736	13,845	73,365
2011	146	689	1,585	45,168	47,221	277	659	13,623	14,711	61,932
2012	138	660	1,504	55,107	56,999	275	344	14,199	14,831	71,830
2013	119	531	1,246	47,849	49,184	273	320	14,843	15,251	64,435
2014	128	508	690	45,587	46,370	315	356	20,475	20,907	67,277
2015	119	503	915	46,384	47,360	325	351	23,617	24,954	72,314
2016	125	469	1,073	36,173	37,294	320	308	14,786	15,440	52,734
Average										
2011–2015	130	578	1,188	48,019	49,427	293	406	17,351	18,131	67,558
2006–2015	130	622	1,657	48,053	49,993	281	473	16,014	16,891	66,884

[a] Federal subsistence fishery starts on May 15, two weeks earlier than the state subsistence fishery.

[b] Includes coho salmon, steelhead trout, and other harvested species.

[c] Federal subsistence permits are not gear specific, but harvest is apportioned by gear type.

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

PROPOSED BY: Ahtna Tene Nené Customary and Traditional Use Committee.

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

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

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would decrease access for subsistence dip net permit holders by restricting dip net use to be from shore only. Subsistence harvest of salmon by dip net would likely decrease by some amount.

BACKGROUND: Dip nets have been a legal gear in the Glennallen Subdistrict since the subdistrict was established in 1977, with the exception of 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 attaining their permit. Subsistence permits do not require permit holders to report whether they dip net from shore or from a boat. 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 while a household of two more may request up to 500 salmon.

The number of dip net permits issued and fished has steadily risen since 2004 while the number of fish wheel permits has decreased (Table 13-1). However, harvest per permit fished has remained relatively stable over time, averaging one king salmon and 37 sockeye salmon per dip net permit fished and three king salmon and 89 sockeye salmon per fish wheel permit fished from 2006–2015. Over the past 10 years the total number of permits fished (both gear types) has increased about 22%.

The portion of the Glennallen Subdistrict that is open to state permit holders comprises 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 along the east river bank above the Chitina-McCarthy Bridge. 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 most accessible lower ½ mile. There is also limited access directly under the Chitina-McCarthy Bridge, near the Chitina Airport (also shared by fish wheels), and walk-in and boat access (1–2 miles) at the mouth of the Klutina River. Department staff observations indicate the majority of subsistence dipnetters fish from a boat.

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

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.
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence uses? Under 5 AAC 01.616 (b)(1) the Glennallen Subdistrict has three areas, each of which has its own ANS range: (A) the portion of the Copper River beginning in the southern boundary of the subdistrict and extending upstream to the mouth of the Tonsina River, 25,500–39,000 salmon; (B) the Copper River from the mouth of the Tonsina River upstream to the mouth of the Gakon River, 23,500–31,000 salmon; and (C) the Copper River from the Gakona River upstream to the mouth of the Slana River including the area around Batzulnetas, 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 reported state permits fished and average harvest per permit fished by gear in the Upper Copper River Glennallen Subdistrict, 2000–2016.

	Dip net				Fish wheel			
Year	Permits fished	King salmon	Sockeye salmon	Coho salmon	Permits fished	King salmon	Sockeye salmon	Coho salmon
2000	394	1	21	0	740	6	67	1
2001	365	1	23	0	783	4	90	1
2002	265	2	26	1	554	5	74	1
2003	267	1	23	0	513	4	74	1
2004	188	1	26	0	544	5	87	1
2005	220	1	29	0	510	4	107	0
2006	213	1	29	0	541	4	86	0
2007	291	1	28	0	589	5	91	0
2008	325	1	20	0	533	3	63	1
2009	277	1	22	0	503	4	75	0
2010	384	2	29	0	569	2	96	0
2011	401	2	33	0	564	3	73	1
2012	507	1	35	0	540	3	93	0
2013	543	1	42	0	431	3	103	0
2014	690	1	36	0	409	2	103	0
2015	738	2	40	0	405	2	107	0
2016	789	1	29	0	348	3	91	0
Average								
2011–2015	576	1	37	0	470	2	96	0
2006–2015	437	1	31	0	508	3	89	0

PROPOSAL 14 – 5 AAC 24.361. Copper River King Salmon Management Plan.

PROPOSED BY: Wrangell-St. Elias National Park Service Subsistence Resource Commission.

WHAT WOULD THE PROPOSAL DO? Delay the opening of the Glennallen Subdistrict subsistence fishery until June 8 if the department preseason forecast for king salmon is less than 10,000 fish above the lower bound escapement goal.

WHAT ARE THE CURRENT REGULATIONS? There are no provisions within the *Copper River King Salmon Management Plan* to reduce the Glennallen Subdistrict subsistence fishery season based on the king salmon forecast. The plan provides the department the authority to establish a bag limit for king salmon taken by fish wheel; reduce bag limits for king salmon taken by fish wheel or dip net; prohibit retention of king salmon taken by fish wheel or dip net; or modify methods and means for fish wheels and dip nets in order to achieve king salmon escapement goals. The department has the emergency order authority under AS 16.05.060 to open or close seasons or areas when circumstances require.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would decrease subsistence opportunity for both sockeye and king salmon in the Glennallen Subdistrict subsistence salmon fishery by seven days when the preseason forecast for Copper River king salmon is less than 34,000 fish.

BACKGROUND: The current season of June 1–September 30 for the Glennallen Subdistrict subsistence salmon fishery was established in 1984. Prior to 1984 there were no season dates established in regulation, but permits were required to be returned by October 31.

The Glennallen Subdistrict subsistence fishery targets sockeye, king, and coho salmon. Sockeye salmon are the predominant species harvested in this fishery (Table 14-1). Over the last 10 years (2007–2016), 43,157–81,800 sockeye salmon have been taken annually under state subsistence permits in the Glennallen Subdistrict with an average harvest of 65,587 fish. This compares to an average harvest of 2,246 king salmon and range of 1,365–3,276 fish over those same years. Total harvest averaged 68,152 fish from 2007–2016 under state subsistence permits and 86,773 fish when harvest under federal subsistence permits is included.

From 2007–2016, 10% of the annual king salmon harvest in the Glennallen Subdistrict subsistence salmon fishery was taken by June 6 and 50% was taken by June 21 (Figure 14-1). Peak daily harvests generally occur between June 12 and June 23 each year. For sockeye salmon, 10% of the subsistence harvest occurred by June 7 and 50% by July 8 from 2007–2016.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocative aspects of this proposal. The board should discuss if delaying the season opening and the accompanying reduction in harvest still provides a normally diligent participant with a reasonable expectation of success in taking salmon for subsistence uses. The department **OPPOSES** delaying the Glennallen Subdistrict subsistence fishery season based solely on preseason king salmon forecasts because they would likely result in unnecessary foregone subsistence harvest of both king and sockeye salmon. Current regulations and emergency order authority allow for management actions to adequately reduce king salmon harvest in this fishery. If adopted, this regulation would result in further divergence in subsistence fishing seasons between state and federal subsistence fisheries in the Glennallen Subdistrict.

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

SUBSISTENCE REGULATION REVIEW:

1. Is this stock in a nonsubsistence area? No.
2. Is this stock customarily and traditionally taken or used for subsistence? Yes.
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence uses? Under 5 AAC 01.616 (b)(1) the Glennallen Subdistrict has three areas, each of which has its own ANS range: (A) the portion of the Copper River beginning in the southern boundary of the subdistrict and extending upstream to the mouth of the Tonsina River, 25,500–39,000 salmon; (B) the Copper River from the mouth of the Tonsina River upstream to the mouth of the Gakon River, 23,500–31,000 salmon; and (C) the Copper River from the Gakona River upstream to the mouth of the Slana River including the area around Batzulnetas, 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 14-1.–Number of permits issued and harvest in the Upper Copper River Glennallen Subdistrict subsistence fishery, 2006–2016.

	State subsistence fishery				Federal subsistence fishery [a]				
Year	Total permits issued	King salmon	Sockeye salmon	Total [b]	Total permits issued	King salmon	Sockeye salmon	Total [b]	Total harvest [b]
2006	984	2,769	57,710	60,774	254	460	18,346	18,920	79,694
2007	1,174	3,276	65,714	69,284	281	663	17,624	18,475	87,759
2008	1,186	2,381	43,157	46,106	270	837	14,475	15,619	61,725
2009	1,090	2,493	46,849	49,643	274	543	13,668	14,374	64,017
2010	1,321	2,099	70,719	73,260	269	326	14,137	14,648	87,908
2011	1,306	2,319	59,622	62,477	277	743	15,753	17,041	79,518
2012	1,527	2,095	76,305	78,851	275	415	16,487	17,223	96,074
2013	1,339	2,148	73,728	76,044	273	374	17,060	17,550	93,594
2014	1,656	1,365	75,501	77,131	315	420	23,034	23,552	100,683
2015	1,631	2,212	81,800	84,105	325	402	26,896	27,584	111,689
2016	1,769	2,075	62,474	64,617	320	396	19,365	20,147	84,764
Average									
2012–2016	1,584	1,979	73,962	76,150	302	401	20,568	21,211	96,312
2007–2016	1,400	2,246	65,587	68,152	288	512	17,850	18,621	86,266

[a] Federal subsistence fishery starts on May 15, two weeks earlier than the state subsistence fishery.

[b] Includes coho salmon, steelhead trout, and other harvested species.

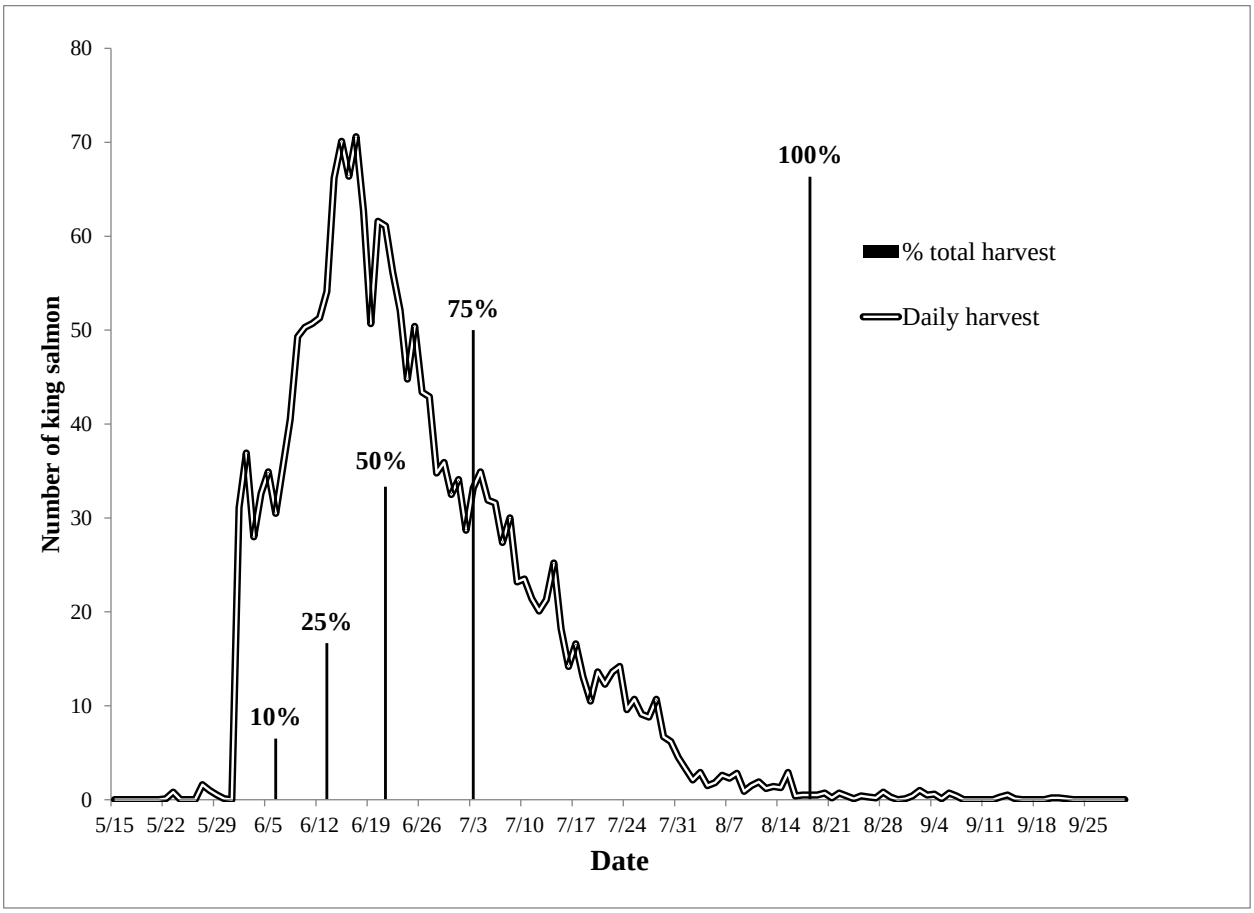

Figure 14-1.–Average daily harvest and cumulative percent harvest by date under state permits for king salmon in the Glennallen Subdistrict subsistence salmon fishery, 2007–2016.

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: Wrangell-St. Elias National Park Service Subsistence Resource Commission.

WHAT WOULD THE PROPOSAL DO? Prohibit the use of monofilament or other common "gillnet" mesh in dip net bag webbing in subsistence and personal use fisheries.

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 to the statewide regulation for the Prince William Sound Area. This is unlikely to increase survival of released king salmon since tangling in dip nets is more a function of net depth and mesh size rather than net material. Subsistence and personal use fishermen may require more time to obtain the same amount of fish. Gillnet mesh dip net bags are widely available and many dipnetters use this type of net bag and would have to replace their current nets to become compliant.

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 and other common gillnet mesh for use with a dip net in the Chitina Subdistrict personal use and Glennallen Subdistrict subsistence salmon fisheries is unlikely to resolve the issue of effectively releasing king salmon and the regulation that stipulates the design of allowable dip net is a statewide provision, under 5 AAC 39.105. A uniform statewide standard provides regulatory consistency that is easier to enforce. If adopted, this would result in further divergence in methods and means between state and federal subsistence fisheries in the Glennallen and Chitina subdistricts, and the board should discuss whether changing dip net mesh still provides a normally diligent participant with a reasonable expectation of success in taking salmon for subsistence uses.

COST ANALYSIS: Approval of this proposal would likely result in an additional direct cost for a private person to participate in these fisheries, since many of the existing dip nets in use have gillnet type mesh.

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, that harvest that occurs in the Glennallen Subdistrict.
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence uses? Under 5 AAC 01.616 (b)(1) the Glennallen Subdistrict has three areas, each of which has its own ANS range: (A) the portion of the Copper River beginning in the southern boundary of the subdistrict and extending upstream to the mouth of the Tonsina River, 25,500–39,000 salmon; (B) the Copper River from the mouth of the Tonsina River upstream to the mouth of the Gakona River, 23,500–31,000 salmon; and (C) the Copper River from the Gakona River upstream to the mouth of the Slana River including the area around Batzulnetas, 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.XXX. New Section and 5 AAC 77.XXX. New Section.

PROPOSED BY: Cordova District Fishermen United Board of Directors.

WHAT WOULD THE PROPOSAL DO? Require that vessel for hire operators (charters/transporters) in subsistence and personal use fisheries maintain a record of the number of passengers transported and the number and species of fish harvested and method of capture.

WHAT ARE THE CURRENT REGULATIONS? There are no specific regulations regarding charters or transporters in subsistence or personal use fisheries.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would place a reporting burden on charter operators in the Glennallen and Chitina subdistricts to record the harvest and harvest method of their clients in a logbook. The charter operator would be required to verify the client's harvest, which is often in coolers or totes, and it is unclear if the charter operator or client would be responsible for any violations (e.g., overlimits, failure to mark). This would create duplication in reporting for harvest of personal use or subsistence users who utilize charters, since they are required to report their harvest on the personal use or subsistence permit required for them to participate in the fishery.

BACKGROUND: Each household which is issued a Glennallen Subdistrict subsistence salmon permit or Chitina Subdistrict personal use dip net salmon fishing permit is required to record their harvest prior to concealing the fish from view or transporting the salmon from the fishing site and, for personal use permit holders, designate whether they fished from shore or a boat. The reported harvest from the returned household permits is then used to estimate participation and harvest by species post season. There are currently only 3–4 known commercial transport operations working in the Glennallen and Chitina subdistricts.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. This would duplicate harvest information already collected from household permits. Information on how subsistence or personal use fishers access the fishing areas is not necessary for the management of this fishery.

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

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, that harvest that occurs within the Glennallen Subdistrict.
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence uses? Under 5 AAC 01.616 (b)(1) the Glennallen Subdistrict has three areas, each of which has its own ANS range: (A) the portion of the Copper River beginning in the southern boundary of the subdistrict and extending upstream to the mouth of the Tonsina River, 25,500–39,000 salmon; (B) the Copper River from the mouth of the Tonsina River upstream to the mouth of the Gakona River, 23,500–31,000 salmon; and (C) the Copper River from the Gakona River upstream

to the mouth of the Slana River including the area around Batzulnetas, 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 17 – 5 AAC 77.591. Copper River Personal Use Dip Net Salmon Fishery Management Plan.

PROPOSED BY: Chitina Dipnetters Association.

WHAT WOULD THE PROPOSAL DO? Approximately double the size of the Chitina Subdistrict by extending the downstream boundary approximately 10 river miles to the Uranatina River (Figure 17-1).

WHAT ARE THE CURRENT REGULATIONS? The Upper Copper River District consists of all waters of the mainstem Copper River from the mouth of the Slana River downstream to an east-west line crossing the Copper River approximately 200 yards upstream of Haley Creek as defined by department regulatory markers. The Chitina Subdistrict consists of all waters of the Upper Copper River District downstream of the downstream edge of the Chitina-McCarthy Road Bridge.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would provide additional fishing area for dip net permit holders accessing the fishery by boat, but accessing the proposed additional area by dipnetters who access the area overland and fish from shore would be difficult due to rock slides and river crossing barriers. In addition, a portion of the shore between Haley Creek and Uranatina River is outside the Copper River Highway Right-of-Way which may increase trespass across private lands.

BACKGROUND: From 1968 to 1975, the lower boundary of the Upper Copper River District was located one and a quarter miles downstream of O'Brien Creek. This was extended to the current location, 200 yards upstream of Haley Creek, in 1975. There has been no documented subsistence or personal use in the mainstem Copper River from Haley Creek to the Uranatina River.

Current overall participation in the Chitina Subdistrict has generally increased since a low in 2003 (Table 17-1). The number of households reporting harvest from shore has followed the same trend as overall participation. The number of households reporting harvest from boats has increased from 2013–2016, but is still within historic levels.

Dip nets are effective harvest gear for salmon in the Chitina Subdistrict primarily due to the constricted channel through Wood Canyon and the flow dynamics of the Copper River near its confluence with the Chitina River and the channel characteristics under the Chitina-McCarthy Road Bridge. The braided channels above Wood Canyon provide limited dipnetting opportunities and this section of river is rarely fished by dipnetters accessing the river by boat. The Copper River below Haley Creek exhibits the same braiding and flow characteristics as the river section upstream of Woods Canyon.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocative aspects of this proposal. However, the current boundaries of the fishery have accommodated both current and higher historic use and provided for harvests up to the current allocation.

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

Table 17-1.–Chitina Subdistrict personal use dip net fishery reported participation and harvest by location, 2001–2016.

		Boat				Shore			
Year	Total permits fished[a]	Reported permits fished	Sockeye salmon	King salmon [b]	Harvest per permit	Reported permits fished	Sockeye salmon	King salmon [b]	Harvest per permit
1999	9,271	1,121	18,925	1,341	18	6,569	80,283	2,742	13
2000	7,216	1,404	17,014	628	13	6,460	67,565	1,814	11
2001	6,644	1,165	23,722	712	21	4,292	69,784	1,471	17
2002	4,480	786	13,488	411	18	2,703	40,844	907	15
2003	4,257	836	15,388	481	19	2,861	45,173	907	16
2004	4,955	876	18,387	528	22	3,394	59,969	1,223	18
2005	5,330	771	17,187	382	23	3,823	73,011	1,120	19
2006	5,291	900	18,801	496	21	3,845	71,219	1,326	19
2007	5,549	1,149	25,686	687	23	4,234	82,239	1,593	20
2008	4,803	955	17,187	480	18	3,665	49,178	1,096	14
2009	4,830	749	13,988	64	19	3,823	61,989	118	16
2010	6,075	957	21,025	141	22	4,943	89,180	370	18
2011	5,710	958	22,197	189	23	4,683	88,774	700	19
2012	5,781	989	22,253	181	23	4,733	84,593	299	18
2013	6,768	889	24,538	127	28	5,529	122,253	462	22
2014	7,116	1,041	25,280	162	24	5,918	107,921	462	18
2015	7,829	1,250	40,306	350	33	6,521	150,798	983	23
2016	6,219	1,306	34,166	164	26	4,587	90,190	383	20
Average									
2011–2015	6,641	1,025	26,915	202	26	5,477	110,868	581	20
2006–2015	5,975	984	23,126	288	23	4,789	90,814	741	19

[a] Includes permits that did not report their fishing location (boat vs shore).

[b] King salmon annual limit was four fish in 1999 and one fish since 2000. Retention of king salmon was prohibited for portions of the 2009–2014 and 2016 seasons.

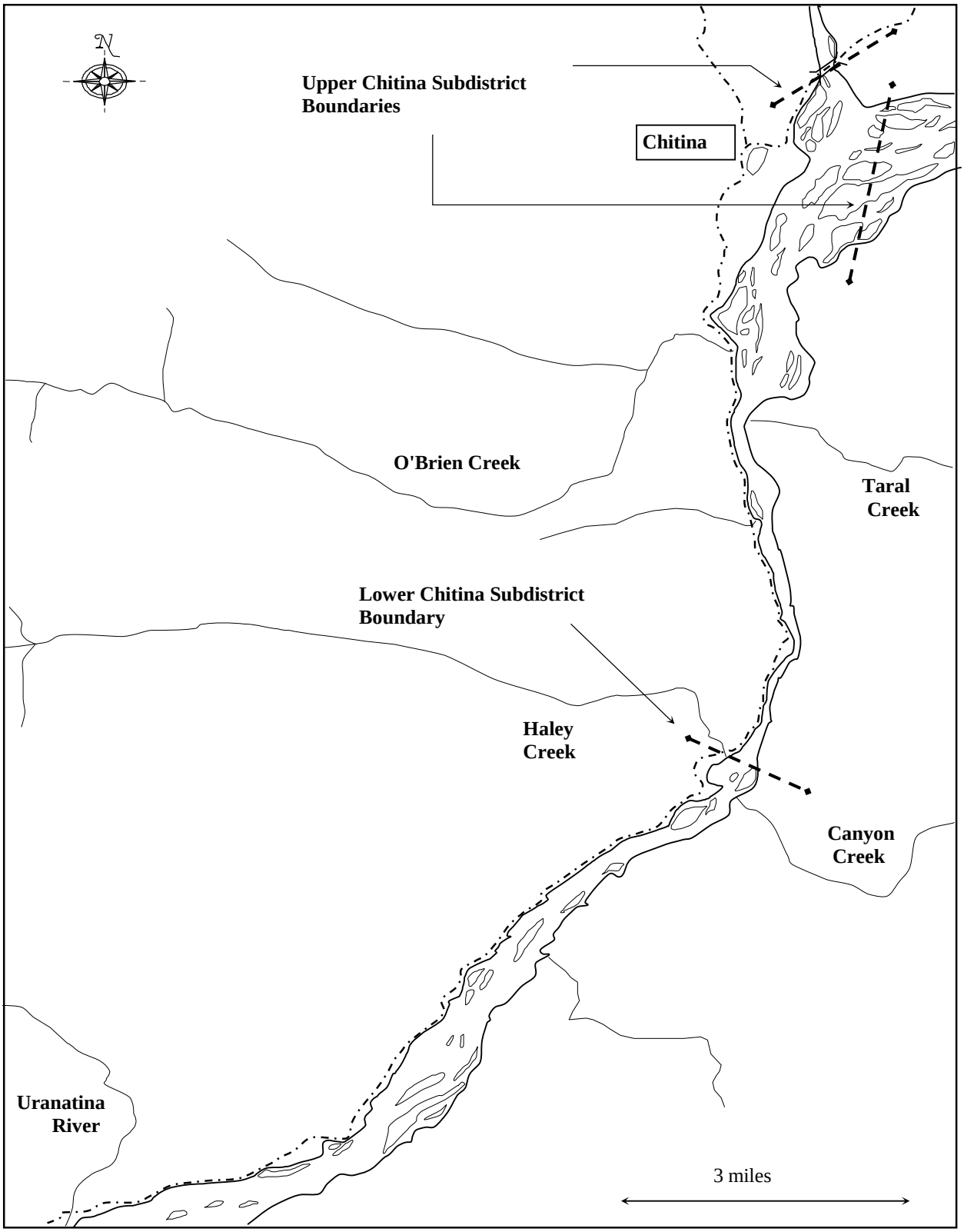

Figure 17-1.–Map of Chitina Subdistrict and proposed lower boundary extension to the Uranatina River. Dashed lines delineate the Copper River Railroad right-of-way.

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

PROPOSED BY: Chitina Dipnetters Association.

WHAT WOULD THE PROPOSAL DO? This would remove language requiring the maximum harvest level in the Chitina Subdistrict to be reduced from 100,000–150,000 salmon to 50,000 salmon when the Copper River District commercial drift gillnet fishery is closed for 13 or more consecutive days.

WHAT ARE THE CURRENT REGULATIONS? The maximum harvest level for the Chitina Subdistrict personal use salmon fishery is 100,000–150,000 salmon, not including any salmon in excess of the inriver goal or salmon taken after August 31. If the Copper River District commercial salmon fishery is closed for 13 or more consecutive days, the maximum harvest level in the Chitina Subdistrict is reduced to 50,000 salmon.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would disconnect the management of the Chitina Subdistrict personal use fishery from the Copper River District commercial salmon fishery. It would have no effect on meeting escapement goals in the Copper River because the personal use fishery is managed based on the number of salmon passing the Miles Lake sonar. It may increase fishing opportunity for Chitina Subdistrict personal use fishery participants depending on salmon passage at the Miles Lake sonar.

BACKGROUND: The board first adopted 5 AAC 77.590(f) at the 1996 meeting designating a maximum harvest level for the Chitina Subdistrict personal use salmon fishery of 100,000 salmon, not including any salmon in excess of the inriver goal or salmon taken after August 31. The board amended 5 AAC 77.590(f) in 1998 by adding "If the Copper River District commercial salmon fishery is closed for 13 or more consecutive days, the maximum harvest level in the Chitina Subdistrict is reduced to 50,000 salmon" in conjunction with adding language for a supplemental permit for 10 additional sockeye salmon when a weekly harvestable surplus of 50,000 salmon or greater would be present in the Chitina Subdistrict. In 1999, the board adopted a positive customary and traditional (C&T) use finding for the salmon stocks of the Chitina Subdistrict. Regulation 5 AAC 77.590 was repealed and re-adopted as 5 AAC 01.647(k)(3) of the *Copper River Subsistence Salmon Fisheries Management Plans* excluding the 13 day commercial fishery closure trigger to reduce the maximum harvest to 50,000 salmon in the Chitina Subdistrict. In 2003, the board made a negative C&T determination for the Chitina Subdistrict and reinstated the *Copper River Personal Use Dip Net Salmon Fishery Management Plan* as 5 AAC 77.591; including section (f) as amended in 1998. The supplemental permit language was removed in 2014 when the board revised the salmon harvest limit to 25 salmon for head of household and 10 salmon for each dependent of the permit holder, except that only one king salmon may be retained per household.

The trigger to reduce the harvest level in the Chitina Subdistrict personal use fishery to 50,000 has only been implemented once since it was first adopted in 1998. During the 2008 season, the Copper River District commercial fishery was closed for longer than 13 days, from June 19–July 4. The Chitina Subdistrict personal use fishery was managed under a 50,000 salmon harvest level from July 2 through the remainder of the season. As a result, fishing time in the personal use fishery was reduced by nearly eight days (188 hours). If the maximum harvest level had not been

reduced there would have been no reduction in fishing time during this period, based on Miles Lake sonar counts.

Total sockeye salmon harvest in 2008 was the lowest recorded for the combined Copper River fisheries for the period 1997–2016 (Table 18-1). Sockeye salmon harvest in 2008 represented the lowest for the commercial fishery, second lowest for the personal use fishery, and third lowest for the Glennallen subsistence fishery. It is unknown what effect the fishing time reductions had on total harvest in the personal use fishery. There is no inseason monitoring of harvest and thus no mechanism to adjust the fishing time based on actual harvest. From July 2–August 31, 2008, when the 50,000 salmon maximum harvest level was in place, a total of 138,598 fish in excess of the projected sonar passage were counted past the Miles Lake sonar.

The Chitina Subdistrict personal use dip net salmon fishery operates on an abundance-based management schedule. Weekly fishing time is based strictly on the weekly passage of salmon past the Miles Lake sonar. A preseason schedule is developed each spring based on projected weekly passage of salmon at Miles Lake. If actual passage is below expected passage, fishing time is reduced. If actual passage is above expected passage, fishing time may be increased. Abundance-based management effectively controls harvest to ensure the sockeye salmon sustainable escapement goal is attained. There may be instances where conservation concerns over king salmon could cause the Copper River District commercial drift gillnet fishery to be closed for 13 or more consecutive days when there are no conservation concerns over sockeye salmon. In such an instance, the existing regulation would result in an automatic and unnecessary reduction in harvest opportunity in the Chitina Subdistrict Personal Use fishery, which can be managed for sockeye salmon harvests only.

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.

Table 18-1.–Summary of sockeye salmon harvests and upriver escapement in the Copper River, 1997–2016.

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]
1997	2,955,431	1,001	13,265	82,807	148,727	3,201,231	1,107,156	4,063,588	797,882
1998	1,343,127	850	13,199	64,463	137,161	1,558,800	820,554	2,341,546	485,541
1999	1,683,892	1,330	13,956	77,369	141,658	1,918,205	818,507	2,708,888	478,661
2000	881,419	4,360	14,550	59,497	107,856	1,067,682	598,790	1,633,508	343,691
2001	1,325,690	3,072	8,467	83,787	132,108	1,553,124	838,427	2,237,918	538,681
2002	1,249,920	3,067	8,559	58,800	86,543	1,406,889	797,390	2,192,176	581,717
2003	1,192,164	1,607	7,739	60,623	81,513	1,343,646	702,327	2,043,029	507,895
2004	1,048,603	1,822	7,416	73,214	108,527	1,239,582	643,539	1,833,686	448,534
2005	1,333,574	939	8,791	86,140	122,463	1,551,907	824,792	2,276,773	515,599
2006	1,498,423	4,505	14,410	76,056	124,810	1,718,204	891,917	2,592,750	579,552
2007	1,903,858	6,184	24,713	83,338	126,154	2,144,247	873,252	2,961,568	612,102
2008	323,096	4,001	12,656	57,632	82,318	479,703	677,001	1,141,223	480,597
2009	902,940	1,810	14,374	60,517	90,917	1,070,558	677,347	1,721,640	469,089
2010	643,086	2,016	16,085	84,856	140,811	886,854	901,488	1,715,742	502,992
2011	2,061,525	1,818	8,565	75,375	129,985	2,277,268	880,342	3,097,537	607,657
2012	1,874,726	4,334	24,168	92,792	128,058	2,124,078	1,239,902	3,253,426	930,699
2013	1,617,717	5,741	26,997	90,788	182,915	1,924,158	1,234,479	3,005,333	860,929
2014	2,062,265	1,751	18,092	98,535	158,879	2,339,522	1,194,260	3,411,377	864,988
2015	1,761,443	1,555	9,901	108,696	225,425	2,107,020	1,309,239	3,205,039	925,506
2016	1,184,901	1,185	7,739	81,839	150,303	1,425,967	785,584	2,074,971	513,563
Average									
2011–2015	1,875,535	3,040	17,545	93,237	165,052	2,154,409	1,171,644	3,194,542	837,956
2006–2015	1,464,908	3,372	16,996	82,859	139,027	1,707,161	987,923	2,610,564	683,411

[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 subsistence harvest (2002–2004) and expanded federal subsistence harvest thereafter.

[e] Prior to 1999 is the Miles Lake sonar count minus the proportion of king salmon in the Glennallen and Chitina subdistrict fisheries. Starting in 1999, is the Miles Lake sonar count minus the king salmon mark-recapture point estimate.

[f] Upriver return escapement minus upriver sockeye harvests.

PWS/Copper River Subsistence and Personal Use Salmon and Herring (4 Proposals)

PROPOSALS 19 and 20 – 5ACC 01.610. Fishing seasons.

PROPOSED BY: John C. Whissel, Native Village of Eyak (Proposal 19) and Robert A. Smith (Proposal 20).

WHAT WOULD THESE PROPOSALS DO? Proposal 19 would establish a subsistence salmon fishing season from May 1 through November 30 and remove the connection between subsistence and commercial fishing opportunity as specified in 5 AAC 01.610(g)(1-3). This would apply to all Area E commercial salmon fishing district waters outside of subsistence fishing districts established near Tatitlek and Chenega.

Proposal 20 would establish a subsistence fishing season in the Copper River District from April 20 through October 15 and remove the connection between subsistence and commercial fishing opportunity as specified in 5 AAC 01.610(g)(1-3).

WHAT ARE THE CURRENT REGULATIONS?. A subsistence salmon permit is required; the permit specifies that fishers may only fish in the Copper River District, Bering River District, or in Prince William Sound since the permit is valid only for one location or the other.

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 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)).

Legal subsistence salmon gear in the Copper River District is drift gillnet no longer than 50 fathoms. Annual limits for subsistence salmon are 15 salmon for a household of one; 30 salmon for a household of two or more; and 10 salmon for each additional person in the household. There is a limit of 5 king salmon per permit. Commercial fishermen are allowed to remove salmon from their commercial catch for home use (i.e. homepack), and are required to record homepack salmon on their commercial fish tickets. Standard provisions include prohibition on sale of subsistence-caught fish and prohibition against combining commercial and subsistence gear types.

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 THESE PROPOSALS WERE ADOPTED? Subsistence salmon harvest and effort would potentially increase by an unknown amount. Participants in the subsistence salmon fishery in all districts (Proposal 19) and more specifically the Copper River District (Proposal 20) would have additional opportunity to harvest salmon outside of open commercial fishing periods. These proposals may reduce the amount of commercially caught salmon retained for personal use (homepack) by providing increased subsistence fishing opportunity. An unknown amount of commercially caught salmon that are currently retained for homepack would likely be sold. Subsistence salmon fishing opportunity would increase substantially for individuals who do not have a commercial salmon fishing permit. Overall salmon harvested in the Copper River District would likely increase.

These proposals would likely make it challenging to enforce the prohibition on the sale of subsistence-caught salmon in the commercial fishery.

BACKGROUND: The ANS range was adopted by the board after presentation of estimates based on Cordova household harvest surveys conducted the late 1980s and 1990s. The average 10-year average for subsistence harvest is 3,367 salmon, and the recent 5-year average harvest of salmon is 3,112 salmon (Table 19/20-1). The ANS has not been achieved in six out of the last ten years, including the most recent 3 years (Figure 19/20-1). During years the ANS was not achieved subsistence effort (permits fished) was consistently below the 10-year average. Some of the household need in these low harvest years was likely met through salmon retained from commercial harvest as homepack: 10-year average of 9,400 salmon (Table 19/20-2) (Figure 19/20-1).

In 2014, the most recent year a comprehensive household harvest survey was conducted in Cordova, residents harvested an estimated 21,551 pounds of salmon in subsistence fisheries for an average of 23 pounds per household. Of all the subsistence caught salmon, 62% were sockeye salmon and 30% were king salmon. Residents also harvested 43,673 pounds of salmon through sport and federal subsistence rod and reel harvest (46 pounds per household) and removed 48,800 pounds of salmon (51 pounds per household) from their commercial harvests as homepack. Salmon harvested in the subsistence fisheries represented 19% of the overall salmon harvest by Cordova residents, while sport and federal subsistence rod and reel and commercial home pack removal represented 38% and 43% respectively.

Department practice is to open the commercial season on or about May 15. Opening dates do not generally allow subsistence harvesters the opportunity to harvest salmon outside of the commercial fishing season. Regulations limit fishing opportunities for subsistence users primarily to commercial fishing periods, which traditionally fall on a Monday-and-Thursday schedule. Subsistence fishing is generally only allowed in an area currently open to commercial fishing, although subsistence has been allowed to proceed in some instances when commercial fishing was restricted, such as during the first weeks of the season in 2013, and during 2017 in nearshore areas where commercial boats were restricted (Figure 19/20-2). Commercial harvesters who want fish for home use may choose to retain salmon from their commercial harvest (homepack) or forgo commercial harvesting to participate in the subsistence fishery. The ANS for salmon during years when there is no commercial fishery was adopted after the board was presented community harvest data estimates for salmon retained through subsistence permits, sport and federal subsistence rod and reel fishing, and homepack.

Both Copper River sockeye and king salmon are fully allocated fisheries. King salmon have been near the lower end of the escapement goal range for the past five years and are particularly vulnerable during mid-May to early June.

Proposal 19 refers to data in the Division of Subsistence Technical Paper No. 412, pages 220 and 222, where research findings from the 2014 data year highlight Cordova residents' concerns about access to subsistence salmon opportunities. The report is posted online at http://www.adfg.alaska.gov/techpap/TP412.pdf. The study asked respondents whether or not they got enough salmon that year: 24% of Cordova household responding said they did not get enough salmon in 2014, while 67% said they did get enough and 9% did not use the resource (Technical Paper No. 412, page 252). As a follow up question, Cordova households were asked to give reasons for their inability to get sufficient subsistence fish: the main reasons given were

related to the lack of motorized equipment to reach the fishing grounds, the burden of paying for gas and boat maintenance, and the need to work a job at the time of commercial fishing openings (which during 2014 occurred only on weekdays).

Over the past 12 years the board has considered other similar proposals to provide additional subsistence opportunity and/or decouple subsistence fishing opportunities from the commercial fishery openings, all of which have failed. Comments from the department included concerns for increased harvests, sale of subsistence harvests in the commercial fishery, and the adequacy of homepack to supplement household needs.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on these allocative proposals.

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

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(4) that salmon in the Copper River District, as described in 5 AAC 24.200(a), 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 3,000–5,000 salmon reasonably necessary for subsistence purposes in a year when there is a harvestable surplus that allows for a commercial fishery, and 19,000–32,000 in a year when there is no commercial fishery (5 AAC 01.616(b)(2)).
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

Table 19/20-1.–Salmon harvest and effort in the Copper River District subsistence drift fishery, 1997–2016.

	Permits				Reported harvest			
Year	Issued	Returned	Fished	Not fished[a]	King	Sockeye	Coho	Total
1997	269	243	165	78	200	1,001	1,777	2,978
1998	245	231	144	87	295	850	680	1,825
1999	294	275	175	100	353	1,330	682	2,365
2000	416	400	293	107	689	4,360	44	5,093
2001	468	439	288	151	826	3,072	70	3,968
2002	355	331	199	132	549	3,067	28	3,644
2003	384	365	225	140	710	1,607	36	2,353
2004	511	482	321	161	1,106	1,822	46	2,974
2005	237	224	121	103	260	830	15	1,105
2006	421	399	300	121	779	4,355	1	5,135
2007	469	440	295	145	1,145	6,148	15	7,308
2008	506	480	248	232	470	3,969	53	4,492
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
Average								
10-year	353	333	172	161	380	2,971	16	3,367
5-year	327	308	160	148	297	2,812	3	3,112

[a] As reported on returned permits.

Table 19/20-2.–Salmon home pack harvest in the Copper River District drift gillnet fishery, 1996–2016.

Copper River District (all drift gillnet)					
Year [a]	Permit holders	King	Sockeye	Coho	Total
1996	345	2,169	0	0	2,169
1997	284	1,243	0	0	1,243
1998	309	1,411	1,435	14	2,860
1999	297	1,115	1,333	36	2,484
2000	245	740	651	0	1,391
2001	289	935	2,113	24	3,072
2002	247	773	1,138	187	2,098
2003	287	1,073	4,077	0	5,150
2004	174	539	525	2	1,066
2005	228	760	1,785	119	2,664
2006	264	779	1,539	137	2,455
2007	280	1,019	2,023	340	3,382
2008	223	537	2,172	423	3,132
2009	328	876	6,528	767	8,171
2010	333	906	7,064	1,026	8,996
2011	336	1,282	9,070	543	10,895
2012	378	853	7,985	1,037	9,875
2013	331	564	9,448	249	10,261
2014	386	768	12,072	1,146	13,986
2015	359	1,145	10,590	1,423	13,158
2016	340	727	9,598	1,353	11,678
10-year average	322	868	7,655	831	9,353

[a] Starting in 2007, reporting of home pack harvest on commercial fish tickets was required by regulation. Prior to 2007, home pack harvest was voluntarily reported on commercial fish tickets.

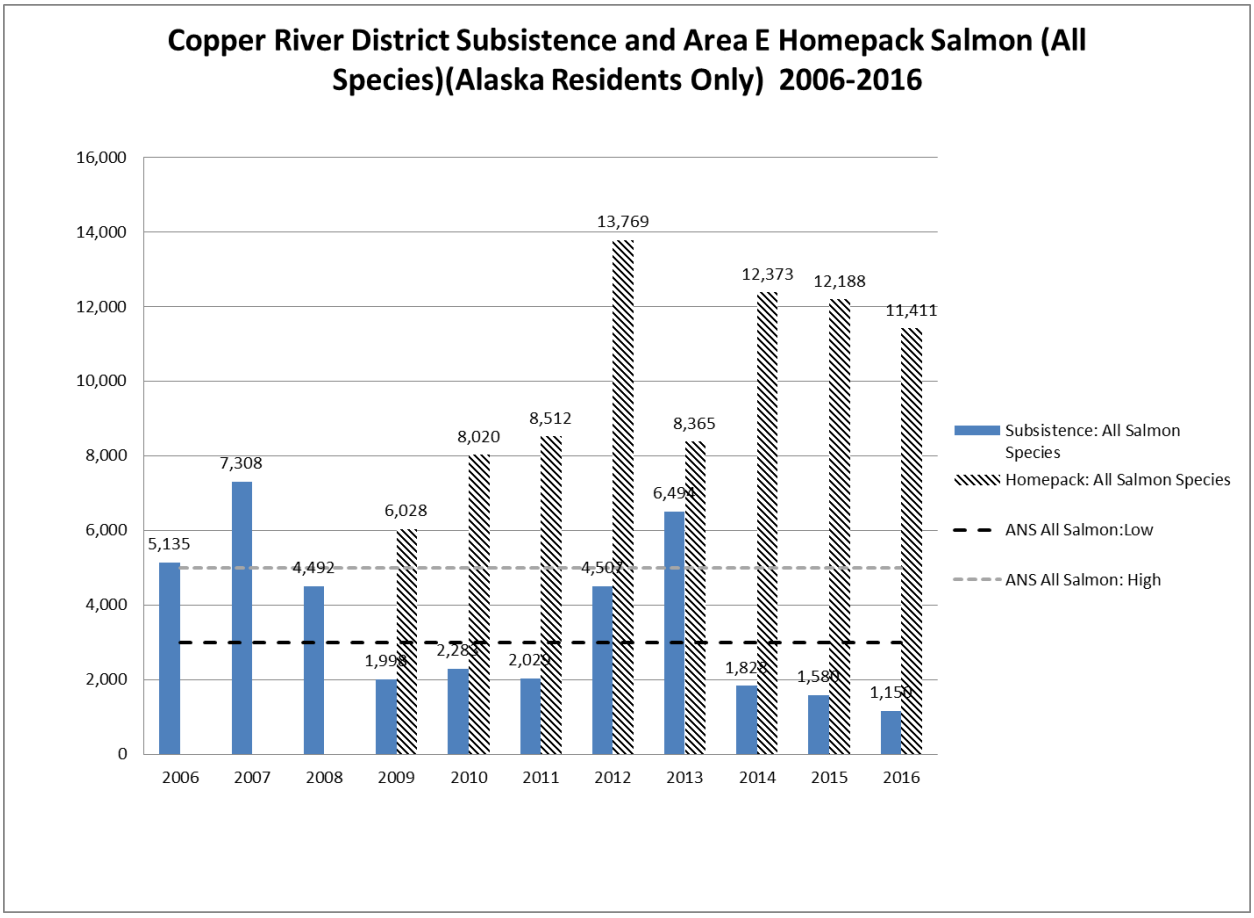

Figure 19/20-1.–Copper River District Subsistence and Area E Homepack Salmon. All Species Salmon, Alaska Residents Only, with ANS range for years when there is a commercial fishery (Source FMR 17-37.)

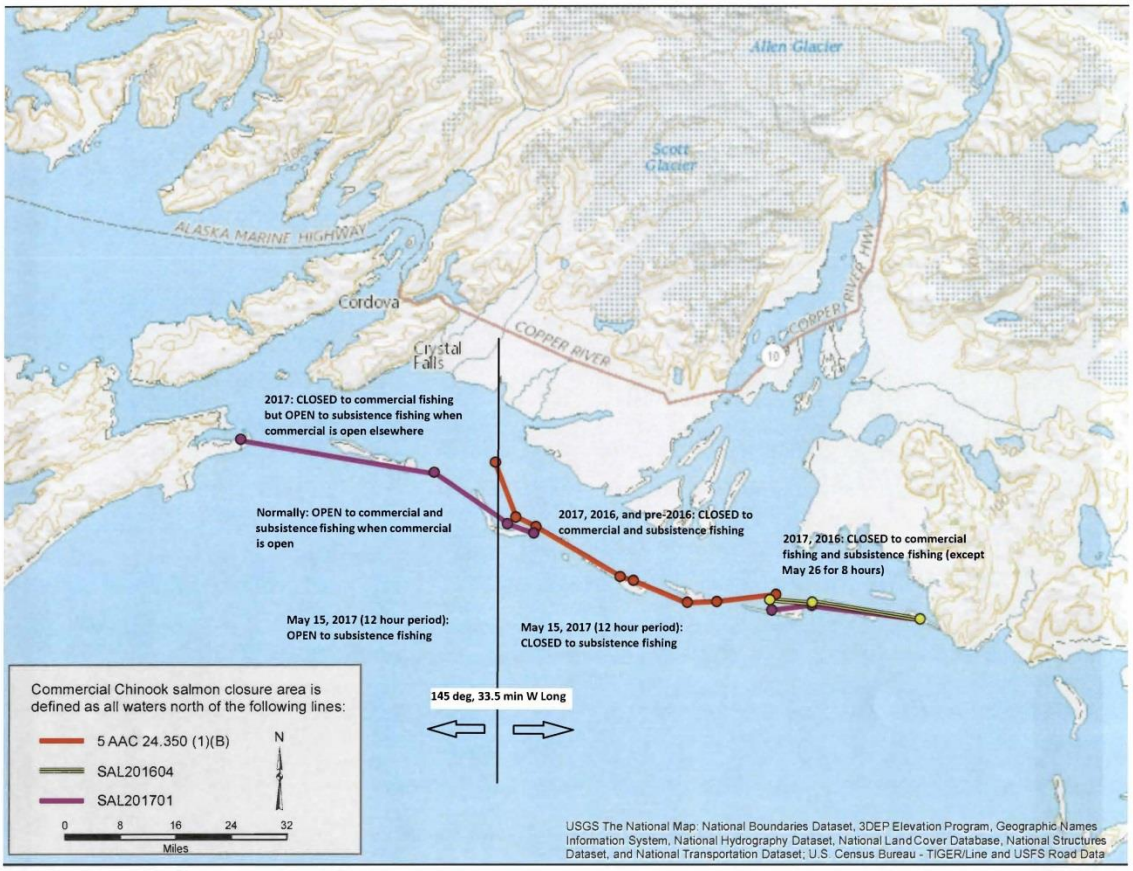

Figure 19/20-2.–Copper River District, Map of Commercial and Subsistence Open Areas, 2016-2017. (Source Press Releases SAL201604 and SAL201701).

PROPOSAL 21 – 5 AAC 01.620. Lawful gear and gear specifications; 5 AAC 01.630. Subsistence fishing permits; and 5 AAC 01.645. Subsistence bag, possession, and size limits; annual limits.

PROPOSED BY: David Totemoff.

WHAT WOULD THE PROPOSAL DO? This would close the subsistence herring fishery for an unspecified number of years, limit subsistence gillnet gear for herring to 60 feet, and add subsistence fishing permit requirements for fishery monitoring.

WHAT ARE THE CURRENT REGULATIONS? Subsistence fishing for herring with gillnets is permitted in the PWS Area and the board has found that 12,000–18,000 pounds of herring and 4,000–6,000 pounds of spawn on kelp are reasonably necessary for subsistence uses in PWS. There are currently no permits issued and no length limits for gillnets in the subsistence herring fishery.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Herring harvest would likely decrease by an unknown amount and be reduced to no harvest at all if the fishery were closed for any amount of time. By requiring a permit and reporting, the department would have more timely subsistence harvest information than what is currently available.

BACKGROUND: The PWS herring population dramatically declined in the early 1990s and has remained at low productivity levels since that time (Figure 21-1). The commercial fishery has largely remained closed since the stock decline and no commercial fishery has occurred since 1999. PWS is closed to personal use harvest of all finfish except in the Chitina Subdistrict. The department does not issue a permit and does not regularly collect harvest information in the PWS subsistence herring fishery. Data from household harvest surveys for Cordova indicate gillnet herring harvest has been below the lower-limit ANS for several decades (Figure 21-2). The department has heard concerns from Cordova residents and PWS fishermen that subsistence-caught herring are being sold illegally, and residents believe the illegal harvest is affecting herring abundance in traditional subsistence harvest areas. Subsistence harvest is believed to be small compared to overall spawning biomass in PWS, and there is no biological concern for the current subsistence harvest level at current estimated spawning biomass and harvestable surplus.

DEPARTMENT COMMENTS: The department **OPPOSES** closure of the subsistence herring fishery. Subsistence harvest of herring is believed to be sustainable, and is not preventing herring stocks from rebuilding. The department **SUPPORTS** clarification of lawful gear and the addition of subsistence fishing permit requirements to better monitor the fishery as tools that would aid the department in managing the PWS subsistence herring fishery.

COST ANALYSIS: Approval of this proposal may result in an additional direct cost for a private person to participate in this fishery if subsistence fishermen needed to travel in order to obtain a permit.

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. Under 5 AAC 01.616(d)(4) the board has found that, for those portions of the Prince William Sound Area that are outside the boundaries of the Valdez Non-Subsistence Use Area

described in 5 AAC 99.015(a)(5), herring, herring spawn on kelp, smelt and groundfish are customarily and traditionally taken or used for subsistence.

3. Can a portion of the stock be harvested consistent with sustained yield? This is a board determination.
4. What amount is reasonably necessary for subsistence uses? 5 AAC 01.616 (d)(4), the board determined that 12,000–18,000 pounds of herring and 4,000–6,000 pounds of spawn on kelp are reasonably necessary for subsistence uses in the Prince William Sound area.
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

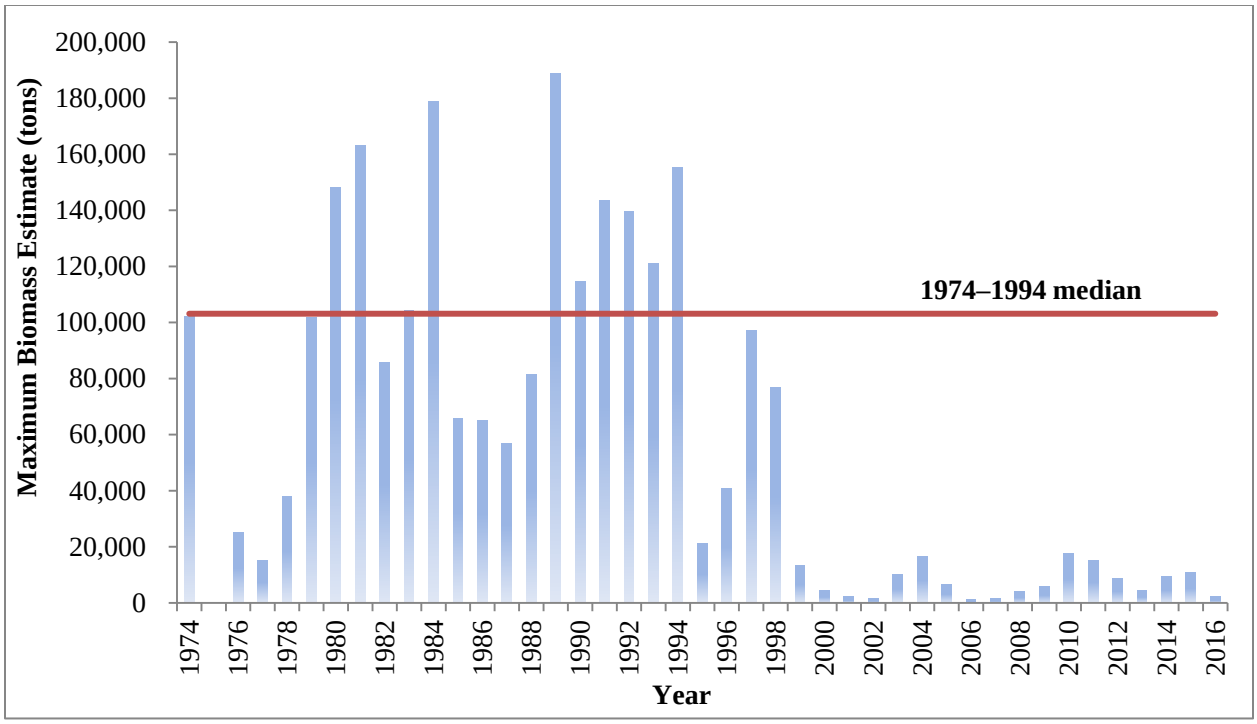

Figure 21-1.–Maximum possible observed herring biomass from aerial surveys of Prince William Sound, 1974–2016. Excludes Kayak Island.

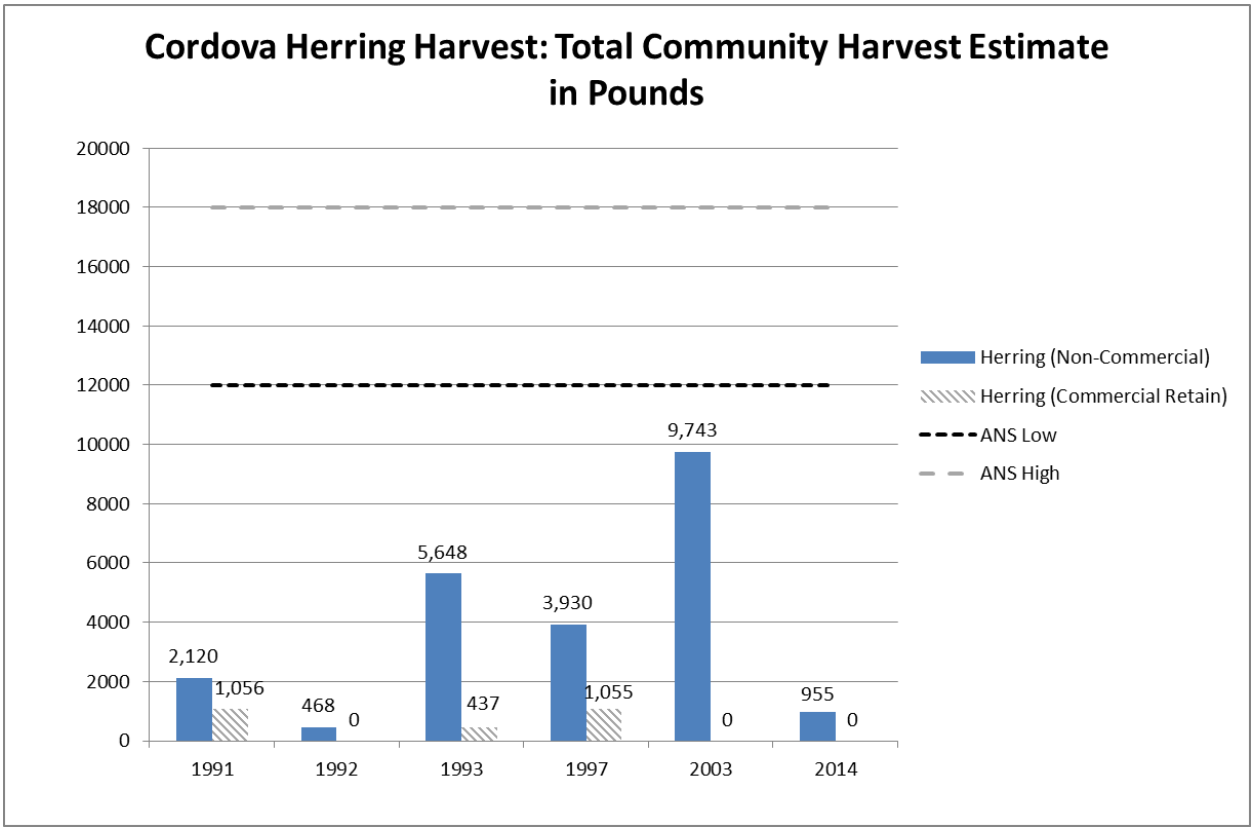

Figure 21-2.–Cordova Herring Harvest: Total Community Harvest Estimate in Pounds. Source: Department Household Harvest Surveys

PROPOSAL 22 – 5 AAC 77.5xx. Personal use herring fishery and 5 AAC 77.570. Waters closed to personal use fishing.

PROPOSED BY: Ronald Jordan.

WHAT WOULD THE PROPOSAL DO? This would establish a personal use herring fishery in PWS using either dip nets, set gillnets, or drift gillnets.

WHAT ARE THE CURRENT REGULATIONS? There is no personal use herring fishery in PWS.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would increase herring harvest in PWS by an unknown amount.

BACKGROUND: There are currently no personal use fisheries for any finfish in Area E except for salmon in the Chitina Subdistrict. No gear restrictions (other than the statewide provisions under 5 AAC 01.010) are in place for subsistence uses of herring, and dip nets are not currently a legal subsistence gear type in the Prince William Sound area. The department collects harvest information in the Prince William Sound subsistence herring fishery as funding allows, and no commercial fishery has occurred since 1999; thus, no harvest or catch information post-2014 is available (see Proposal 21 for more background on the status of herring in Prince William Sound). Alaska residents are currently able to harvest herring for subsistence purposes with limited gear and area restrictions.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal because herring biomass in PWS is very low and the stock is unable to sustain harvest above what is currently allowed under subsistence fishing regulations.

COST ANALYSIS: Approval of this proposal may result in an additional direct cost for a private person to participate in this fishery if travel were required to obtain a personal use permit.

Upper Copper/Upper Susitna Sport (3 Proposals)

PROPOSAL 23 – 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: Ahtna Tene Nené.

WHAT WOULD THIS PROPOSAL DO? This would prohibit all catch-and-release fishing in the Upper Copper Upper Susitna Management Area (UCUSMA).

WHAT ARE THE CURRENT REGULATIONS? While there are regulations closing specified waters to fishing for king salmon, all salmon, or all finfish for the entire year or portions of the year, there are no regulations prohibiting catch-and-release fishing in the UCUSMA. In the Gulkana River drainage, Hanagita River drainage, and Tebay River downstream of its confluence with the Hanagita River, rainbow trout and steelhead may not be retained, but catch-and-release is permitted. In times of king salmon conservation, catch-and-release only regulations have been put in place by emergency order.

WHAT WOULD BE THE EFFECT IF THIS PROPOSAL WAS ADOPTED? This would require anglers to retain all targeted fish caught from UCUSMA waters until they reached their bag limit for each species and then cease fishing until the following day. In addition, this would require the retention of all nontarget species caught, which may require closure of all sport fishing in all waters where retention of a single species is currently prohibited.

BACKGROUND: Angler effort on waters of the UCUSMA has ranged from 30,227 to 77,619 angler-days since 1997 and has averaged 42,626 angler days over the last 10 years (2006–2016) (Table 23-1). Average retention of sport caught fish over the last 10 years has ranged from 11–71% depending on the species (Table 23-2). As well as being an important management tool, catch-and-release fishing is a large component of the sport fishing experience. Anglers practice catch-and-release for numerous reasons: some do not want to retain a fish, in some fisheries there are size limits that require fish outside those limits to be released, and others may not want to retain a fish based on its condition. Of the four most caught sport fishes in the UCUSMA (Table 23-3), three of them (Arctic grayling, lake trout, and king salmon) have average retention rates of 33% or less. The fourth species, sockeye salmon, which is the second most caught species over the last 10 years, has the largest average retention rate at 71%.

Levels of hooking mortality vary widely between studies. Hook location, gear type used, species, size of species, environmental factors such as water temperature, use of bait or no bait, angler experience, and other factors all play a role in the level of observed mortality. Under average conditions, an assumed rate of catch-and-release mortality of 10% is well within sustainable levels for all UCUSMA fish stocks. The department encourages anglers to use best practices through outreach efforts. The board has adopted regulations to promote best practices for releasing fish and reducing release-related mortality by prohibiting removal of fish (king salmon in the UCUSMA) from the water if they are to be released.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. The department encourages anglers to use best practices through outreach efforts, but does not support regulation prohibiting catch-and-release practices because of the added complexity to regulations and the

negative effects it would cause to sport fishing harvest and opportunity in the absence of a measurable biological benefit.

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

Table 23-1.–Sport fishing effort (angler-days) in the UCUSMA by drainage, 1997–2016.

Year	Gulkana River	Klutina River	Tazlina River	Tonsina River	Copper River [a]	Stocked waters	Upper Susitna River	UCUSMA total
1997	29,056	11,644	1,489	1,099	4,814	2,160	5,995	56,257
1998	31,909	9,408	1,592	1,054	3,754	3,346	5,643	56,706
1999	37,867	15,687	1,617	1,230	5,374	3,841	12,003	77,619
2000	25,721	11,125	1,583	1,182	4,248	3,689	10,646	58,194
2001	24,852	8,960	902	1,100	3,508	4,396	5,161	48,879
2002	23,970	9,111	751	1,381	3,501	2,377	5,522	46,613
2003	25,846	8,897	773	879	4,108	2,858	8,778	52,139
2004	20,608	10,472	241	1,007	5,968	1,406	6,890	46,592
2005	20,486	10,516	613	593	2,686	2,313	4,594	41,801
2006	14,455	12,285	587	716	3,131	2,790	5,143	39,107
2007	22,620	16,512	593	562	2,367	1,974	8,209	52,837
2008	20,893	12,677	641	653	3,582	1,453	8,472	48,371
2009	17,713	15,665	802	645	7,485	2,254	8,845	53,409
2010	16,714	16,534	1,540	725	3,350	2,049	11,320	52,232
2011	8,541	9,915	1,366	535	2,487	3,117	6,032	31,993
2012	8,117	18,030	1,067	380	2,476	2,510	7,788	40,368
2013	8,980	16,357	1,331	898	3,877	1,163	6,998	39,604
2014	8,475	17,276	741	436	1,406	1,331	6,188	35,853
2015	9,225	12,371	742	737	2,268	2,171	4,967	32,481
2016	9,177	9,974	693	437	2,548	3,014	4,384	30,227
Average								
2011–2015	8,668	14,790	1,049	597	2,503	2,058	6,395	36,060
2006–2015	13,573	14,762	941	629	3,243	2,081	7,396	42,626

[a] Includes mainstem Copper River and other lakes and streams not covered under other reported drainages within the Copper River basin.

Table 23-2.–Percent retention of sport caught fish by species in the UCUSMA, 1997–2016.

Year	King salmon	Sockeye salmon	Coho salmon [a]	Rainbow trout stocked	Dolly Varden [a]	Lake trout	Arctic grayling [a]	Burbot
1997	30%	46%	49%	37%	32%	22%	12%	51%
1998	37%	52%	27%	42%	38%	22%	11%	52%
1999	37%	53%	67%	68%	34%	16%	13%	59%
2000	30%	64%	54%	32%	30%	18%	13%	53%
2001	31%	52%	30%	15%	26%	18%	10%	60%
2002	26%	64%	82%	42%	29%	18%	9%	57%
2003	29%	45%	47%	51%	42%	15%	7%	58%
2004	27%	59%	27%	24%	38%	25%	8%	69%
2005	42%	51%	42%	35%	35%	21%	8%	64%
2006	31%	66%	75%	39%	35%	18%	13%	55%
2007	42%	75%	0%	34%	20%	16%	9%	38%
2008	46%	68%	98%	25%	22%	16%	9%	83%
2009	32%	68%	100%	40%	29%	15%	6%	82%
2010	29%	76%	79%	20%	63%	12%	9%	51%
2011	25%	65%	100%	18%	22%	19%	9%	48%
2012	29%	77%	NC	18%	44%	16%	13%	54%
2013	24%	73%	0%	21%	45%	13%	12%	73%
2014	41%	72%	69%	18%	30%	18%	9%	56%
2015	32%	69%	100%	53%	32%	14%	17%	48%
2016	22%	87%	NC	29%	61%	23%	7%	73%
Average								
2011–2015	30%	71%	67%	26%	35%	16%	12%	56%
2006–2015	33%	71%	69%	29%	34%	16%	11%	59%

Note: "NC" means no catch.

[a] Includes fish caught in stocked lakes.

Table 23-3.–Number of fish caught, by species, by recreational anglers fishing UCUSMA waters, 1997–2016.

Year	King salmon	Sockeye salmon	Coho salmon [a]	Steelhead trout	Rainbow trout stocked	Rainbow trout wild	Dolly Varden [a]	Lake trout	Arctic grayling [a]	Burbot	Other fish [b]	Total fish
1997	27,699	26,724	748	81	4,525	16,342	3,439	9,101	71,432	2,646	2,251	164,988
1998	22,312	21,359	2,574	192	11,224	11,059	4,156	8,184	73,014	2,849	3,400	160,323
1999	18,034	20,782	382	276	4,505	10,304	6,993	14,184	68,860	3,173	1,274	148,767
2000	18,503	19,348	1,396	334	8,038	10,292	3,332	9,388	53,421	4,316	2,877	131,245
2001	16,000	15,843	1,246	234	13,204	6,327	6,188	6,913	49,901	2,527	3,815	122,198
2002	19,497	12,181	471	129	6,870	9,735	4,714	12,197	106,424	3,878	4,783	180,879
2003	19,400	15,718	585	112	4,777	12,806	3,720	12,425	90,190	2,496	2,863	165,092
2004	12,664	10,912	478	64	6,624	6,212	5,622	8,212	51,219	1,626	3,057	106,690
2005	9,704	16,093	172	64	4,096	6,858	2,551	11,057	50,760	2,150	2,570	106,075
2006	10,971	21,778	72	50	4,125	3,790	2,189	4,043	25,524	1,054	1,176	74,772
2007	12,109	30,875	11	99	1,666	4,253	3,647	6,125	29,815	1,503	299	90,402
2008	7,827	16,912	57	61	2,819	7,414	1,814	9,140	47,718	1,482	1,641	96,885
2009	4,231	19,788	36	20	2,563	4,607	3,211	12,843	76,559	3,471	1,711	129,040
2010	8,213	19,489	114	84	5,044	4,926	1,089	14,082	54,882	5,897	2,286	116,106
2011	7,025	11,873	21	0	4,498	3,794	1,058	3,846	19,738	1,157	516	53,526
2012	1,869	30,336	0	0	5,155	4,141	1,712	4,217	30,320	1,853	439	80,042
2013	1,195	36,246	229	58	1,149	4,826	2,304	8,218	29,991	2,162	733	87,111
2014	2,248	24,943	129	0	1,931	3,405	493	4,491	26,163	821	2,400	67,024
2015	4,165	13,654	16	0	2,846	2,313	3,163	7,680	28,702	493	721	63,753
2016	1,514	8,700	0	0	5,416	5,532	2,420	6,326	44,698	759	300	75,665
Average												
2011–2015	3,300	23,410	79	12	3,116	3,696	1,746	5,690	26,983	1,297	962	70,291
2006–2015	5,985	22,589	69	37	3,180	4,347	2,068	7,469	36,941	1,989	1,192	85,866

[a] Includes fish caught in stocked lakes.

[b] Includes unidentified species, whitefish, and landlocked salmon.

PROPOSAL 24 – 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? This would simplify area sport fish regulations by replacing seasonal closures of the sockeye salmon fisheries in Paxson and Summit lakes and Gunn Creek with complete closures.

WHAT ARE THE CURRENT REGULATIONS? Under general regulations for the Upper Copper River drainage (5 AAC 52.022(a)(4)) salmon, other than king salmon, may be taken from January 1–December 31. This general season applies to all waters of the Gulkana River downstream of the confluence of the Middle and East forks of the Gulkana River.

In the East Fork Gulkana River drainage the season for salmon, other than king salmon, is from September 10–December 31 for all flowing waters from 100 yards upstream from the narrows at the Paxson Lake outlet downstream to the confluence with the Middle Fork (5 AAC 52.023(9)), from July 20–December 31 in Paxson Lake (5 AAC 52.023(18)(A)) and Summit Lake (5 AAC 52.023(20)(A)), and from August 1–December 31 in Gunn Creek (5 AAC 52.023(20)(B)).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would align sockeye salmon regulations in all waters of the East Fork Gulkana River drainage; upstream of the Middle Fork confluence, including Paxson Lake, Summit Lake, and Gunn Creek. These waters would be closed to salmon fishing year-round. Salmon fishing regulations for the Gulkana River drainage would be greatly simplified. However, some existing fishing opportunity for sockeye salmon would be lost in these waters.

BACKGROUND: The Statewide Harvest Survey has recorded sport fish harvest and catch from Paxson Lake, Summit Lake and Gunn Creek (tributary to Summit Lake) since 1984. From 1984–2007 sport fish harvest of sockeye salmon from Paxson and Summit lakes and Gunn Creek has ranged from 0–401 fish and zero fish since 2007 (Table 24-1). Sockeye salmon harvest from these three water bodies accounted for 0–8.9% of the overall sport harvest of sockeye salmon in the UCUSMA and has been less than 1.0% since 1998.

The seasonal closures for sockeye salmon in the East Fork Gulkana River drainage were established to protect specific sockeye salmon stocks within that drainage. However, these seasonal closures greatly complicate the sport fishing regulations for the Gulkana River drainage.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. Complete closure of the specific sockeye salmon fisheries in will better protect sockeye salmon stocks specific to these waters while simplifying area sport fish regulations and without significant loss of sport fishing opportunity.

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

Table 24-1.–Sport harvest of sockeye salmon from selected waters of the East Fork Gulkana River, 1984–2007.

Year	Paxson Lake	Summit Lake	Gunn Creek	UCUSMA total
1984	205	0	ND	3,267
1985	37	0	ND	4,752
1986	0	0	ND	4,137
1987	0	0	ND	4,876
1988	0	0	0	3,038
1989	34	273	94	4,509
1990	70	160	70	3,569
1991	20	190	110	6,317
1992	25	16	66	6,138
1993	48	9	29	6,609
1994	95	0	133	9,599
1995	0	65	177	6,658
1996	0	201	0	14,086
1997	122	200	ND	13,265
1998	34	0	0	13,199
1999	0	0	0	13,956
2000	95	0	0	14,550
2001	12	0	0	8,467
2002	10	0	ND	8,559
2003	0	0	0	7,739
2004	0	0	68	7,416
2005	0	0	0	8,791
2006	0	0	0	14,410
2007	0	44	0	24,713
Average	62	129	93	8,859

Note: ND indicates no effort reported.

PROPOSAL 25 – 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: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would allow sport fish anglers to use bait and treble hooks in the flowing waters of the Upper Susitna River drainage with the exception of the Tyone River drainage.

WHAT ARE THE CURRENT REGULATIONS? Unless otherwise specified in special regulations or by emergency order in all flowing waters of the Upper Copper River and Upper Susitna River Area only unbaited, single-hook, artificial lures may be used.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Regulations for the use of bait and treble hooks would be consistent for all flowing waters along the Denali Highway.

BACKGROUND: Sport fish anglers fishing along both the north and south sides of the Denali Highway from Cantwell to Tangle Lakes transition twice between the UCUSMA and the Tanana River Management Area (TRMA). Each time they make this transition they must change their terminal gear if they fish with bait or with lures equipped with treble hooks. Regulations restricting sport fish anglers to unbaited, single-hook, artificial lures in UCUSMA flowing waters were implemented to protect wild rainbow trout populations in the Upper Copper River drainage. There are no wild rainbow trout populations in the Upper Susitna River drainage. In the Tyone River drainage, which is not easily accessible from the Denali Highway, unbaited, single-hook, artificial lure restrictions are designed to protect lake trout within that drainage.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. Removing the unbaited, single-hook, artificial lure restrictions within most of the Upper Susitna River drainage will simplify regulations and reduce angler confusion along the Denali Highway with no foreseeable effect on local fish 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.

Prince William Sound/Copper River Sport (2 Proposals)

PROPOSAL 26 – 5 AAC 55.023. Special provisions for seasons, bag, possession, and size limits, and methods and means for the Prince William Sound Area.

PROPOSED BY: Charles Upicksoun.

WHAT WOULD THE PROPOSAL DO? Allow bowfishing as a methods and means for harvesting pink and coho salmon in the Valdez Terminal Harvest Area (THA).

WHAT ARE THE CURRENT REGULATIONS? Currently, the use of bowfishing equipment in Alaska is only allowed for freshwater fish species with no bag limits or with liberal harvest limits (i.e., whitefish, suckers), invasive northern pike in the Southcentral Region, or burbot and northern pike in the AYK Region. The use of bowfishing equipment is not permitted in any salt waters of Alaska.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would create a salt water bowfishing opportunity for pink and coho salmon in the Valdez THA (Figure 26-1). This may increase the harvest of salmon by an unknown, but likely small amount. This may lead to the illegal harvest of salmon if the angler misidentified the salmon species prior to taking it with an arrow, or increase mortality by some unknown amount in salmon that are injured or wounded when not hit in an appropriate location and escape.

BACKGROUND: Anglers use archery equipment (bowfishing) in other states to target "rough" fish that generally are not targeted by sport anglers. The use of archery equipment for salmon has not been allowed in Alaska. Unless otherwise provided in specific area regulations, sport fishing in Alaska may only be conducted by the use of a single line attached to not more than one plug, spoon, spinner, series of spinners, or two flies, or two hooks attached to a pole or rod. Snagging is allowed year-round in Prince William Sound salt water.

The Valdez Municipal Code states that no person shall "take wildlife" in the Duck Flats and other specific areas that fall within the Valdez THA (Figure 26-2). The definition of "taking of wildlife" includes intentionally fishing by means of bow and arrow.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. The department has concerns with establishing archery gear as legal means and methods for the taking of salmon because it is a lethal gear type. The identification of salmon species may also be an issue; for example, an angler would not be able to release a fish taken by arrow. The Valdez THA has all of Alaska's five species of salmon present, with wild stocks of king, sockeye and chum salmon, all of which may be misidentified as coho or pink salmon.

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

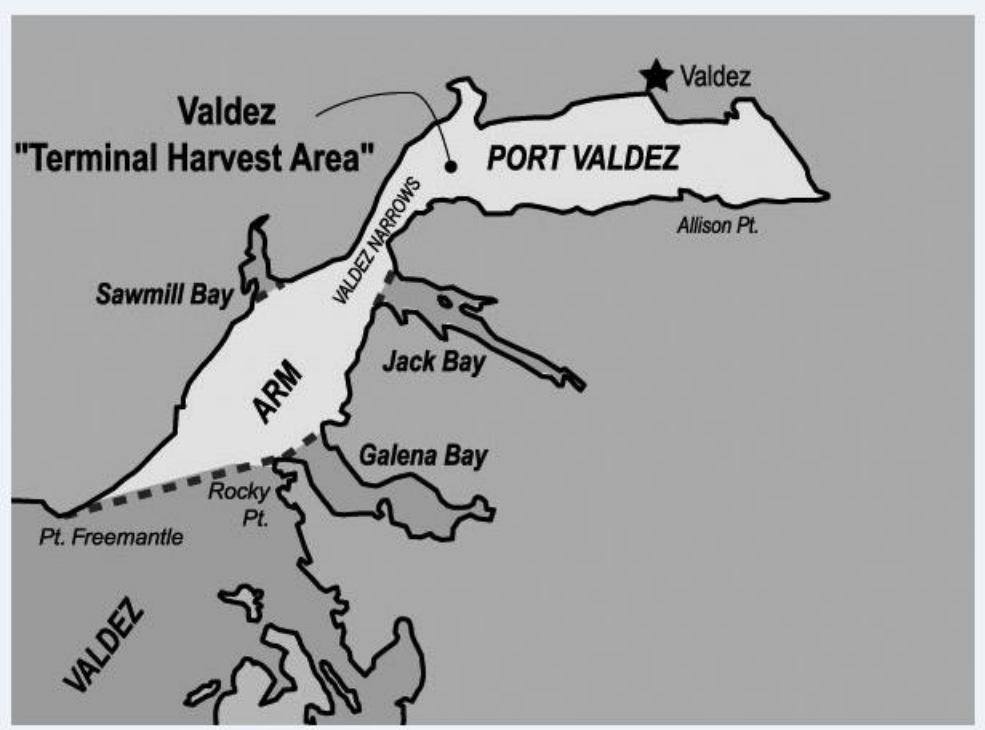

Figure 26-1.–Location of the Valdez Terminal Harvest Area.

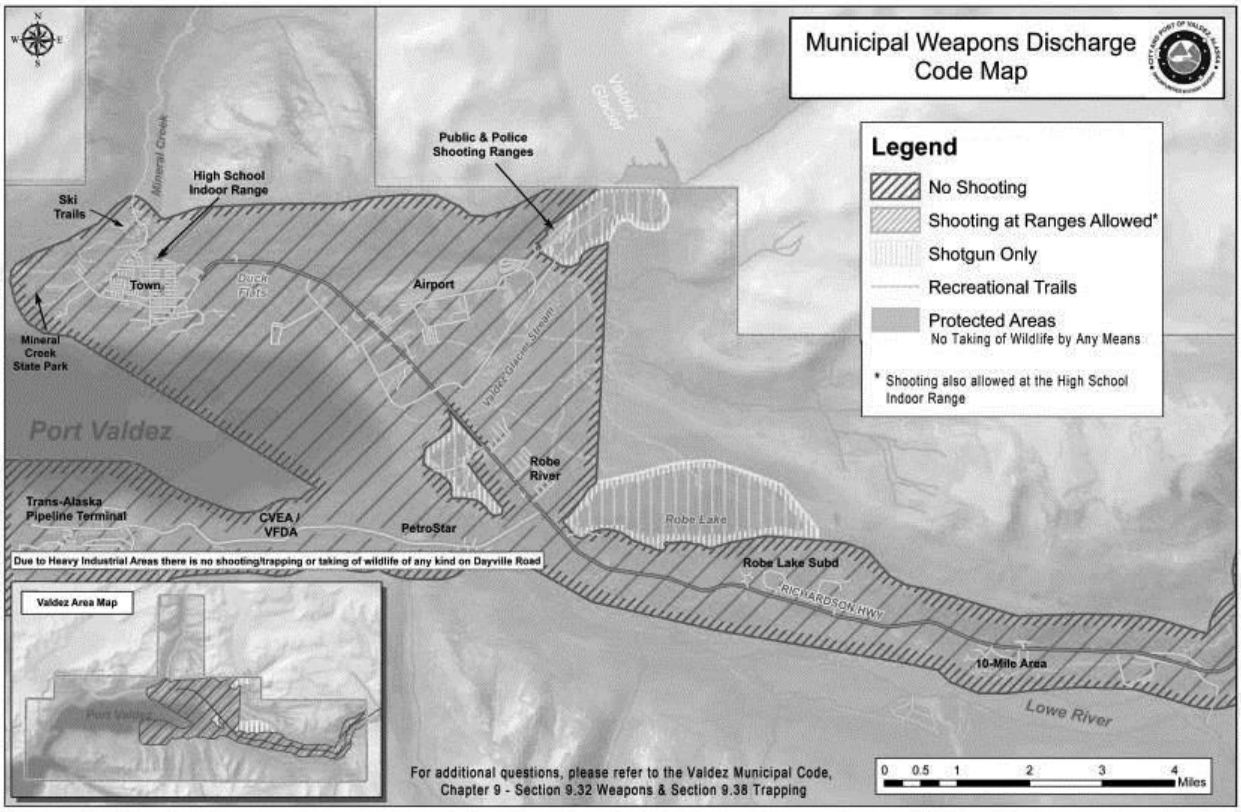

Figure 26-2.–Boundaries of the Valdez Municipal Code restricting discharge of weapons, including the shooting of bow and arrow. (Image from Valdez Municipal Code).

PROPOSAL 27 – 5 AAC 55.023. Special provisions for seasons, bag, possession, and size limits, and methods and means for the Prince William Sound Area.

PROPOSED BY: Lucas Borer.

WHAT WOULD THE PROPOSAL DO? Removes the restriction prohibiting salmon fishing upstream of the Carbon Mountain Road Bridge on Clear Creek.

WHAT ARE THE CURRENT REGULATIONS? Clear Creek, upstream of the Carbon Mountain Road Bridge, located at mile 42 of the Copper River Highway, is closed to sport fishing for salmon. In all freshwater drainages crossed by the Copper River Highway, from and including Eyak River to the Million Dollar Bridge, including Clear Creek at mile 42 downstream of the Carbon Mountain Road Bridge (Figure 27-1), the bag and possession limit for salmon other than king salmon is three fish; a coho salmon removed from the water shall be retained and becomes part of the bag limit of the person originally hooking it. A person may not remove a coho salmon from the water before releasing the fish.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Sport fishing opportunity would be reestablished in this area, the area open to sport fishing would revert back to waters open prior to 1999. This would likely increase the harvest of coho salmon in this Copper River drainage stream by some small amount. Access to this area is difficult and water clarity of this creek is now poor at the bridge.

BACKGROUND: In 1999, Clear Creek was closed to salmon fishing upstream of the Carbon Mountain Bridge to protect spawning grounds from potential increased fishing effort resulting from the proposed construction of the Carbon Mountain Road. Catch and harvest decreased significantly after 1999 as the area that was left open to fishing on Clear Creek had very limited clear water to fish for salmon.

Prior to 2011, all Copper River Delta streams were accessible by the Copper River Highway to the Million Dollar Bridge at Mile 50. In 2011, Copper River streams on the east side of mile 37 became less accessible due to the river washing out the road. For the last 6 years, access has been limited to boat or air and currently there are only two transporters that have vehicles capable of taking people on the east side of mile 37. Members of the public who are being transported are usually focused on accessing the U.S. Forest Service campground located at mile 50 for glacier and wildlife viewing, not fishing. These same transporters can already drop unguided anglers at the Carbon Mountain Road Bridge to access fishing; currently, no sport fishing guides are registered for this area. To date, it does not appear that any sport anglers have focused efforts on Clear Creek since the river washed out the road. Statewide Harvest Survey data does not show a report of catch or harvest in Clear Creek since 2012. Since 2007, there have been no more than nine respondents that have fished on Clear Creek. Access upstream of the Carbon Mountain Bridge on Clear Creek is very difficult and limited to foot traffic or jet boat on high water.

Commercial fisheries staff conducts aerial surveys to assess coho and sockeye salmon escapement into the Copper River Delta. Since 2008, the goals for both species have been met or exceeded, with the exception of 2016 sockeye salmon escapement, which fell just below the lower bound of the goal. There is no escapement goal on Clear Creek for any species.

DEPARTMENT COMMENTS: The department **SUPPORTS** this proposal, which reverses a prior restriction applied by the board that is no longer necessary. It also simplifies regulations, and provides additional harvest opportunities that are sustainable. Due to changes in the Copper River, Clear Creek no longer runs clear in the area around the Carbon Mountain Road Bridge. Minimal catch and harvest is likely to occur because it is unlikely this area will receive much additional fishing pressure unless the Copper River Highway is reopened.

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

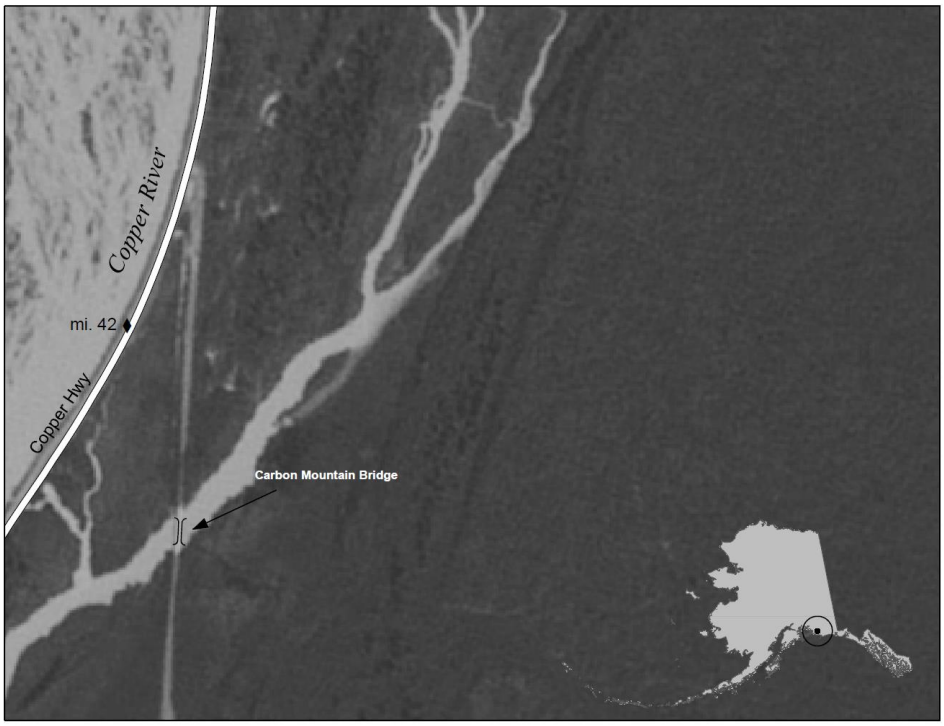

Figure 27-1.–Satellite image of the Carbon Mountain Road Bridge area.

Minto Flats Northern Pike Management Plan (1 Proposal)

PROPOSAL 228 – 5 AAC 01.244. Minto Flats Northern Pike Management Plan.

PROPOSED BY: Fairbanks Fish and Game Advisory Committee.

WHAT WOULD THE PROPOSAL DO? Reduce the area closed to subsistence fishing for northern pike through the ice in the Chatanika River drainage from three river miles to one river mile upstream of the confluence of the Chatanika River and Goldstream Creek.

WHAT ARE THE CURRENT REGULATIONS? Prohibits subsistence fishing for northern pike through the ice in the Chatanika River from the confluence of Goldstream Creek to a department marker three miles upstream from the confluence (5 AAC 01.244(b)(2)(G)).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Subsistence hook and line fishing through the ice would be opened for an additional two river miles of the Chatanika River upstream of its confluence with Goldstream Creek. Winter subsistence harvests of northern pike would increase by an unknown amount, but would likely be less than recent harvests prior to adoption of the three mile closed area as this still provides a one mile closed area.

BACKGROUND: The 15 river miles of the Chatanika River between Goldstream Creek and the boundary of the Fairbanks Nonsubsistence Area are referred to as the Chatanika River Harvest Area (CRHA). This area is the most significant of the three known overwintering areas for northern pike within Minto Flats (Figure 228-1). Telemetry investigations have shown that 100% of fish utilizing Minto Lakes overwinter within the CRHA. By the early 1960s a winter sport fishery developed in the CRHA and participation and harvests grew, particularly with access by the Murphy Dome Road in 1982. From 1961–1986, sport fishing was permitted within the CRHA with a 10 fish bag limit and evolving gear and size restrictions. Due to concerns over growing harvests, the winter sport fishery in the CRHA was closed in 1987, but remained open from June 1 to Oct 14 with a bag and possession limit of five fish, only one of which may be over 30 inches.

Excluding the CRHA, subsistence fishing for northern pike within Minto Flats has been permitted without bag and possession limits until 2010. Subsistence permits have been required for the taking of northern pike in the Tolovana River drainage since at least 1988 and users fishing the Chatanika River were required to call-in weekly catches since 1994. The CRHA winter subsistence fishery was closed from 1961–1987. The fishery was open from 1988–2009 with no bag or possession limits. Due to concerns over increased harvest during the winter fishery, in 1998 the *Minto Flats Northern Pike Management Plan* (MFNPMP) was established under subsistence and sport regulations, and subsistence fishing gear was restricted to single hooks in the CRHA.

The *Minto Flats Northern Pike Management Plan* (5 AAC 01.244 and 5 AAC 74.044) was adopted to manage stocks consistent with the sustained yield principle, provide reasonable opportunity for the subsistence fishery, and provide sport fishing opportunity. The plans established annual harvest thresholds with attendant regulatory actions to ensure that the overall exploitation rate for northern pike within Minto Flats does not exceed 20%. Subsistence harvests are required to be reported weekly, and when reported harvest exceeds 750 northern pike the sport fish bag limit is reduced from five to two fish for the remainder of the calendar year. If

harvests exceed 1,500, the winter subsistence fishery within the CRHA is closed – all other areas in Minto Flats remain open.

In 2007, the 1,500-fish threshold was exceeded and in 2008, the 750 fish threshold was exceeded and resulted in restrictions in each of those years. In 2010, the 10 fish daily bag limit within the CRHA was imposed to limit exploitation. In the winter of 2016, a record number of subsistence CRHA permits were issued, and harvests again triggered restrictive measures (Table 228-1). In 2017, the lower three miles of the CRHA was closed in an effort to ensure exploitation remained sustainable and to protect large, female fish that spawn in Minto Lakes. Previous research has shown that virtually all northern pike >30 inches fork length (FL) are females.

Since adoption of the MFNPMP several studies have been conducted related to abundance, size composition, and overwintering distribution. Four radiotelemetry studies have demonstrated that on average for most of the winter over half of overwintering fish are upstream of the three-mile closed area (Table 228-2). The most recent estimate (2008) of abundance in the Minto Lakes assessment area was 9,854 northern pike greater than 16 inches FL. This study was conducted immediately after relatively large subsistence harvests in the CSRA during 2007 and 2008 (Table 228-1). The 2008 estimated abundance of northern pike ≥ 24 inches was 2,092 compared to the previous estimate of 7,683 fish of that size during 2003. Little information on length composition exists prior to significant increases in harvests in the sport or subsistence fisheries in the CSRA, however ADF&G sampling in 1969 sampled a relatively high proportion (41%) of 30 inch or larger fish with a mean age of 12 years.

Comprehensive studies on length and sex composition of winter harvest from the CSRA specifically have not been conducted. However, female northern pike are aggressive feeders in late winter due to reproductive requirements for spring spawning. During departmental sampling within the CRHA using hook-and-line during late winter of 2007 and 2008, a disproportionate number of females were captured. Because of their concentrated abundance and aggressive feeding behavior, large, prespawning, female pike are extremely susceptible to harvest within this overwintering area.

The effects on the northern pike population due to disproportionate harvest of females within the CRHA are also magnified because of their age structure. The median age of a 24-inch female northern pike in Minto Flats is 6–8 years, and a 30-inch female is 9–13 years. Because nearly 100% of northern pike from Minto Lakes overwinter within the CRHA, a female fish must survive up to 7 years of the winter fishery prior to spawning. The ecological importance of large mature northern pike has not been studied in Minto Flats, however, it well documented that these fish play a significant role in reproductive potential and recruitment elsewhere. The MFNPMP however does not include length- or sex-based criteria, and uses only total harvest and abundance.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. The current three-mile closed area provides protection to large, prespawning, female pike of the Minto Lakes/Goldstream Creek overwintering population while allowing reasonable subsistence harvest opportunity on approximately half of that overwintering population for most of the through-the-ice fishing season. Radiotelemetry work on northern pike within the CRHA during the winter indicates that a very small proportion of the overwintering population is typically found within one river mile of the confluence of the Chatanika and Goldstream Creek. Moreover, unrestricted subsistence opportunities exist year-round throughout Minto Flats. The department

believes that participation and harvests from this fishery are at least somewhat related to weather and access issues, and that low participation and harvests during the 2017 winter season may have been related to the perception among users that fishing success would be poor upstream of the three-mile closure area.

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

SUBSISTENCE REGULATION REVIEW:

1. Is this stock in a non-subsistence area? Yes, but a portion of this northern pike stock migrates through the Fairbanks Nonsubsistence Area (5 AAC 99.015 (a) (4)).
2. Is the stock customarily and traditionally taken or used for subsistence? Yes: the board made a positive customary and traditional use finding for freshwater fish species, including pike in the Yukon Area in 1987 (and reconfirmed in 1993) (5 AAC 01.236 (a) (2)).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence uses? The board adopted an administrative amount reasonably necessary for subsistence (ANS) finding in December 1997 for Yukon Area freshwater fishes and established an ANS of 133,000 to 2,850,000 pounds of freshwater fishes.
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination. Pike in this area are managed under the Minto Flats Northern Pike Management Plan (5 AAC 01.244).
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence use? This is a board determination.

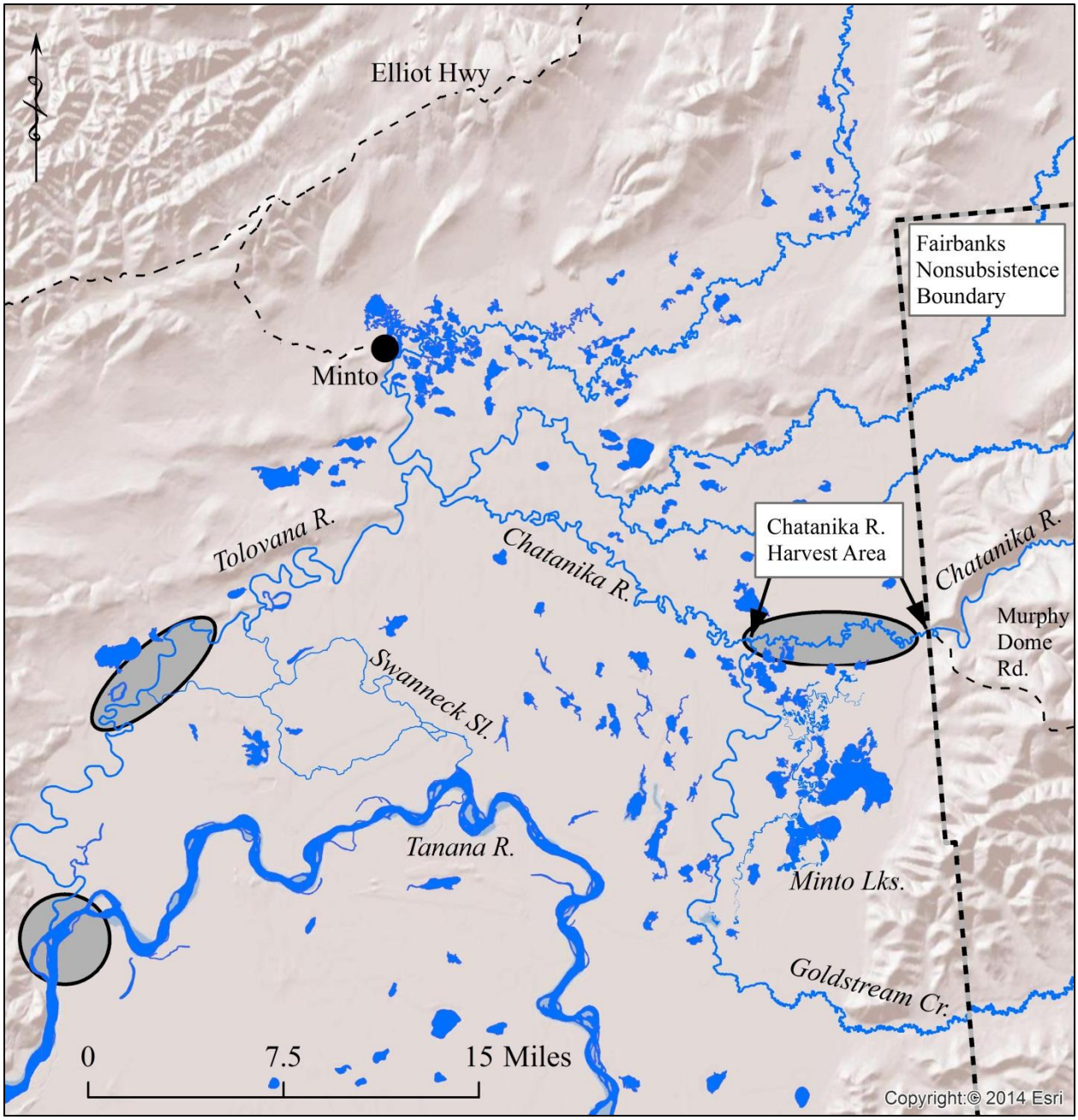

Figure 228-1.–Tolvana Drainage depicting primary overwintering areas (shaded), Minto Lakes, and the Chatanika River Harvest Area.

Table 228-1.–Subsistence and sport harvests of northern pike in Tolovana/Minto Flats reporting area, 1996–2017.

Year	Permits issued	Permits returned	Permits fished	Subsistence harvest	Sport harvest	Total harvest
1996	72	66	29	1,916	2,539	4,455
1997	88	74	41	1,344	1,074	2,418
1998	70	66	32	431	732	1,163
1999	54	50	24	400	908	1,308
2000	34	29	13	352	266	618
2001	49	43	19	214	641	855
2002	32	31	13	521	482	1,003
2003	119	105	57	966	1,260	2,226
2004	99	91	42	393	1,198	1,591
2005	79	69	31	386	1,880	2,266
2006	101	97	56	788	935	1,723
2007	118	109	54	1,837	1,712	3,549
2008	146	136	79	1,339	258	1,586
2009	112	107	52	563	765	1,328
2010	96	91	43	125	569	694
2011	70	70	28	110	396	506
2012	73	68	35	525	303	828
2013	77	74	45	231	350	581
2014	106	105	57	478	485	963
2015	120	119	66	765	360	1,125
2016	201	196	129	1,020	75	1,095
2017	87	14	22	17	ND	ND

Table 228-2.–Number (and percent of total) of radio-tagged northern pike in the Chatanika River between Goldstream Creek and the Fairbanks Nonsubsistence Boundary (~15 river miles) relative to the current 3-mile and the proposed 1-mile closed areas.

	Proposed 1-mile closure		Current 3-mile closure	
Survey month	Closed: milepost 0–1	Open: milepost 1–15	Closed: milepost 0–3	Open: milepost 3–15
March 1988	1 (4%)	26 (96%)	1 (4%)	26 (96%)
March 1996	N/A	N/A	3 (11%)	25 (89%)
March 1997	N/A	N/A	3 (11%)	17 (85%)
February 2009	2 (4%)	43 (96%)	26 (58%)	19 (42%)
April 2009	2 (4%)	43 (96%)	26 (58%)	19 (42%)
February 2017	9 (41%)	13 (59%)	15 (68%)	7 (32%)
March 2017	11 (55%)	9 (45%)	13 (65%)	7 (35%)

COMMITTEE OF THE WHOLE–GROUP C: COMMERCIAL FINFISH (25 Proposals)

Copper River Commercial Salmon (10 Proposals)

PROPOSAL 28 – 5 AAC 24.361. Copper River King Salmon Management Plan.

PROPOSED BY: Cordova District Fishermen United, Gillnet Division.

WHAT WOULD THE PROPOSAL DO? This would repeal the limit on the number of commercial fishing periods within the inside closure area of the Copper River District.

WHAT ARE THE CURRENT REGULATIONS? Current regulations stipulate that during statistical weeks 20 and 21 (the first two weeks of the season), only one 12-hour fishing period is allowed within the inside waters (Figure 28-1) of the Copper River District.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would provide the department greater flexibility to harvest surplus salmon in the Copper River District during years of high abundance. In years of greater abundance, where concern for king salmon is reduced, this would likely increase commercial salmon harvest of king and sockeye salmon by an unknown amount. Inside-waters closures would continue to be employed as a tool to conserve Copper River king salmon.

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 the majority of 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 nine seasons.

Over the past 15 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 2008–2016, during the current period of reduced productivity, average Copper River District commercial king salmon harvest was approximately 13,600 fish, and average combined subsistence, sport, and personal use harvests were 5,100 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 (2008–2016), king salmon spawning escapement ranged from 11,900–32,500, with an average escapement of 24,700 (Figure 28-2). The average subsistence harvests have declined during the reduced productivity period as well. In spite of low king salmon abundance, 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 28-2).

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 sockeye 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 designed for sockeye salmon management (achieving the sockeye salmon SEG of 360,000–750,000 fish) with inside closures meant to protect king salmon.

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

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

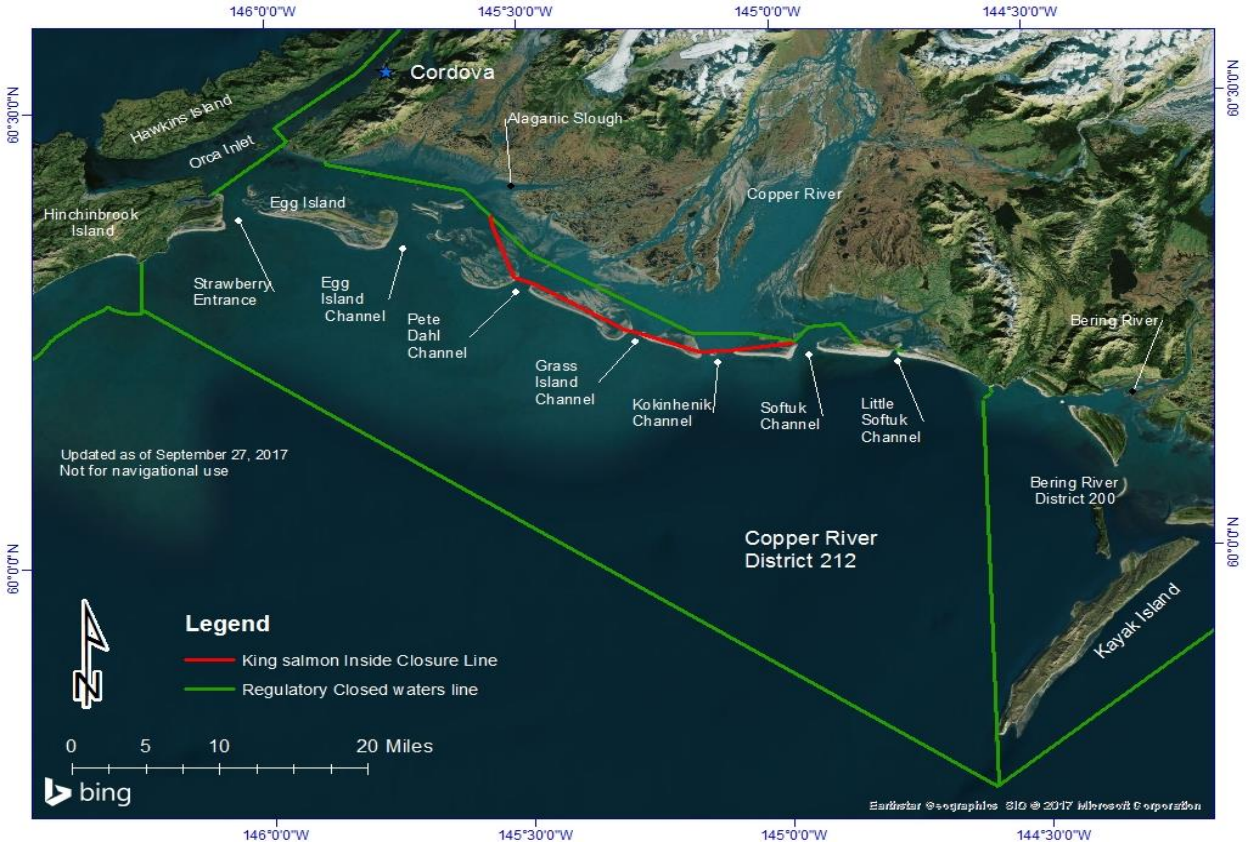

Figure 28-1.–Copper River District showing inside closure area.

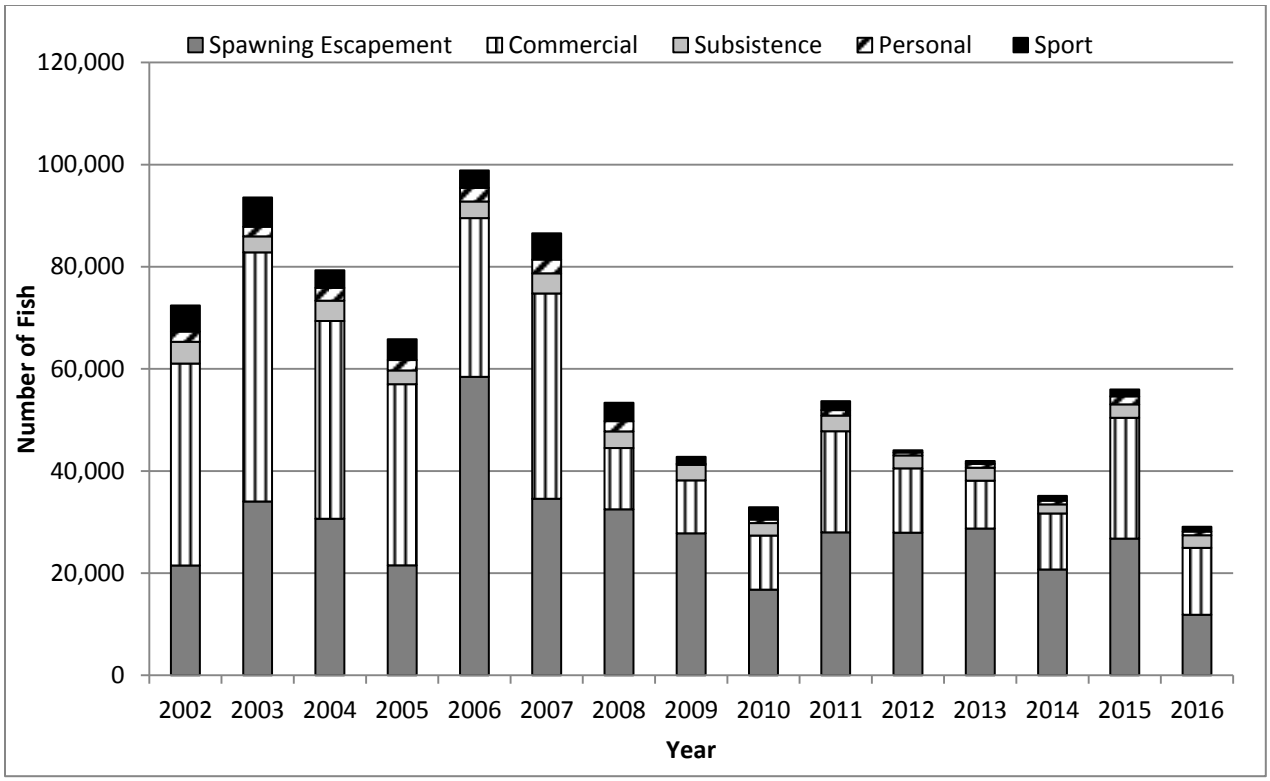

Figure 28-2.–Copper River king salmon escapement and harvest by user group, 2002–2016.

PROPOSALS 29 and 30 – 5 AAC 24.350. Closed waters.

PROPOSED BY: Fairbanks Fish and Game Advisory Committee (Proposal 29) and Warren Chappell (Proposal 30).

WHAT WOULD THESE PROPOSALS DO? These proposals seek to adjust the Copper River District closed waters. Proposal 29 would extend the inside closure area to ¼ mile off the southern shores of all barrier islands. Proposal 30 would reduce closed waters to the grass banks of the Copper River Delta (Figure 29/30-1). These proposals would modify the area traditionally opened to concurrent commercial and subsistence fishing.

WHAT ARE THE CURRENT REGULATIONS? The Copper River District inside closure area is described in 5 AAC 24.350(1)(B) and commercial fishing is restricted to a single fishing period during statistical weeks 20 and 21. Additionally, the shoreward closed waters boundaries of the district are described in 5 AAC 24.350(1)(A) and are approximately two miles seaward of the Copper River Delta grass banks. The *Copper River King Salmon Management Plan* (5 AAC 24.361(a)) stipulates that the department will manage the commercial fishery in a manner to achieve an escapement goal of 24,000 or more king salmon and the *Copper River District Salmon Management Plan* (5 AAC 24.360(a)) identifies the sustainable escapement goal of 360,000–750,000 sockeye salmon.

WHAT WOULD BE THE EFFECT IF THESE PROPOSAL WERE ADOPTED? If the inner closed water boundary is moved closer to fresh water, the efficiency of the gillnet fleet to harvest salmon, particularly king salmon, would increase, necessitating a reduction in fishing time to provide for adequate escapement. If the area of the inside closure is expanded to include the area ¼ mile off the southern shores of all barrier islands, fishing time may need to be liberalized to compensate for reduced fishing area. Any change to fishing area outside of traditional management practices will require adjustments in management approach to compensate for changes in harvest efficiency, likely resulting in changes in harvest opportunity for the various user groups.

BACKGROUND: The closed waters area outlined in 5 AAC 24.350(1)(A) has not changed since the earthquake in 1964. The earthquake raised the Copper River Delta approximately six feet exposing a large portion of the previous fishing area at tides less than 5.5 feet. Marker placement was moved seaward after the earthquake.

Since 1997, the department has used inside closures (either voluntarily by EO or as mandated by regulation) as a tool to minimize king salmon harvest in Copper River District in the early season. This strategy was developed based on catch data that show the majority of king salmon are harvested in the inside areas. Inside closures are thought to be effective at reducing the number of king salmon harvested because they tend to travel deeper in the water column than sockeye salmon. In shallow waters inside the barrier islands where nets may rest on the bottom, king salmon that encounter the nets are unable to swim beneath the lead line and instead become tangled and bagged in the 6-inch mesh. Larger king salmon are not as easily gilled in 6-inch mesh gillnet as are the smaller sockeye salmon. When commercial drift gillnets are fished in deeper waters outside the barrier islands, king salmon are more likely to escape harvest than they are in the shallow waters inside the barrier islands. In general, fishing periods with an inside closure are believed to reduce harvest of king salmon and the number of sockeye salmon

harvested during a commercial period with an inside closure is believed to be lower than harvest during a period when the entire district is open.

Over the past 15 years, Copper River king salmon runs have declined and the department has responded by implementing commercial fishing restrictions to reduce harvest proportionally. From 2008–2016, during the current period of reduced productivity, average Copper River District commercial king salmon harvest was approximately 13,600 fish, and average combined subsistence, sport, and personal use harvests were 5,100 fish (Figure 29/30-2). During this time (2008–2016) king salmon spawning escapement ranged from 11,900–32,500, with an average escapement of approximately 24,700 (Table 29/30-1). In spite of low king salmon abundance, department management restrictions in subsistence, commercial, personal use, and sport fisheries resulted in spawning escapements above the lower bound SEG in seven out of 10 of these years (Figure 29/30-2).

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocative aspects of these proposals. The department has used EO authority to adjust closed waters based on inseason indices of salmon abundance.

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

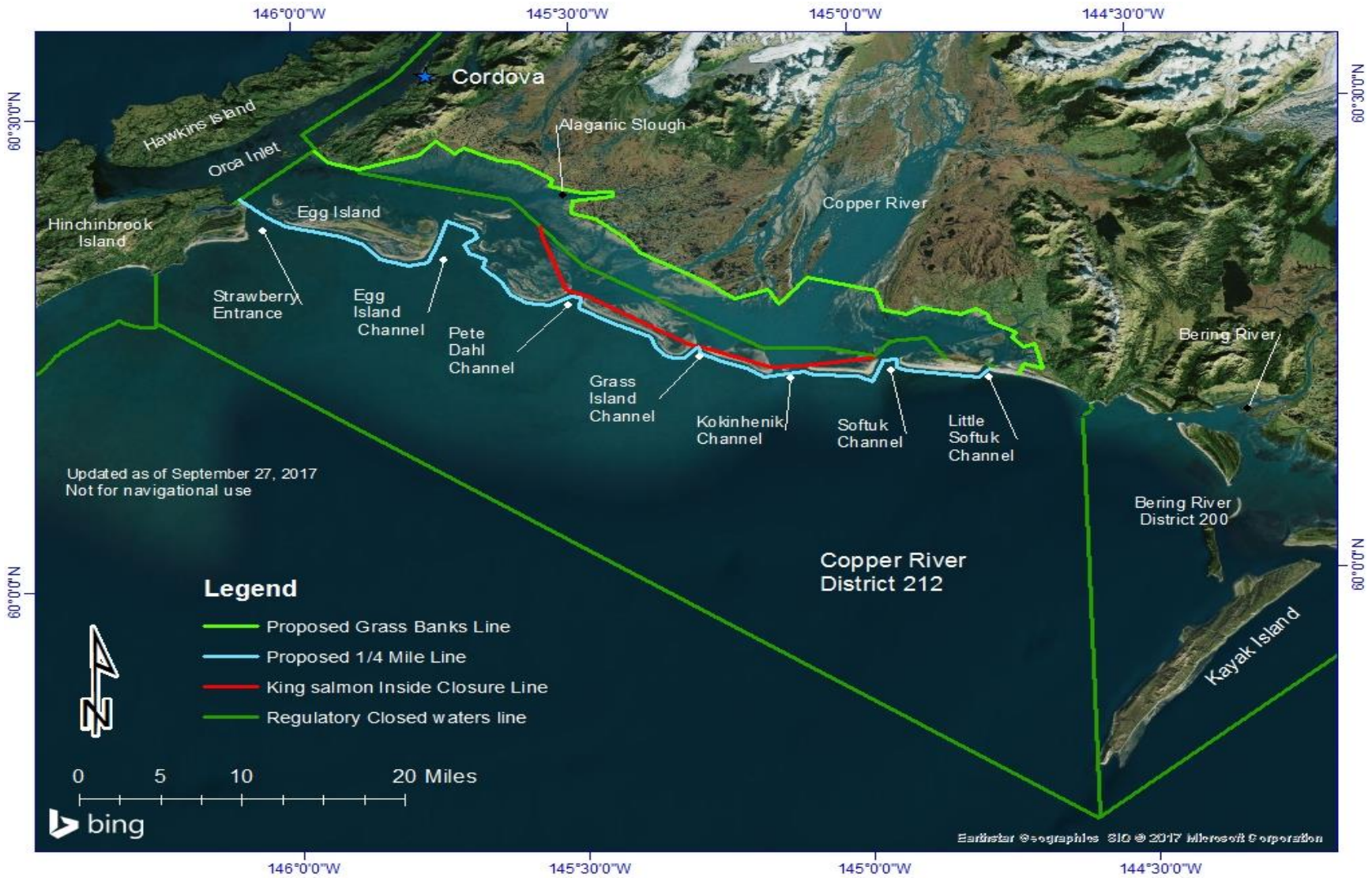

Figure 29/30-1.–Copper River and Bering River districts showing regulatory closed waters, including current king salmon inside closure area, along with 2017 expanded king salmon inside closure area, and proposed expanded and retracted closed waters.

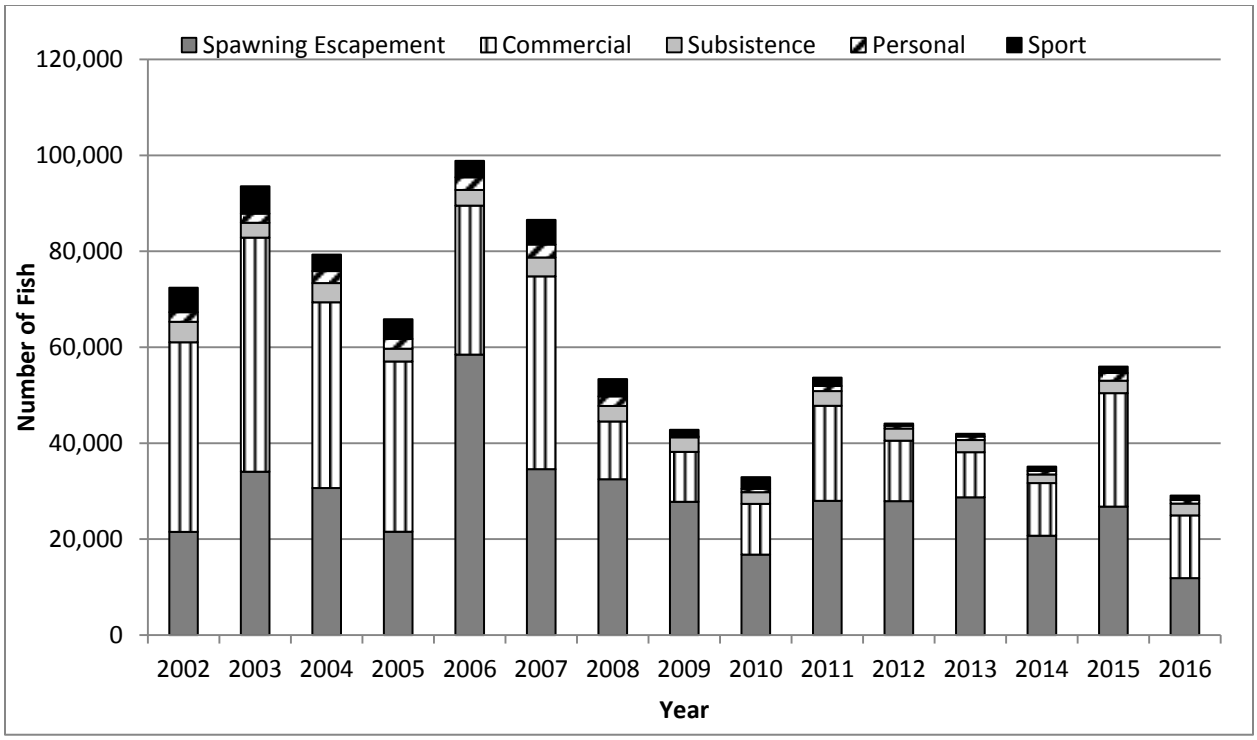

Figure 29/30-2.–Copper River king salmon escapement and harvest by user group, 2002–2016.

Table 29/30-1.–Copper River king salmon inriver abundance, total upper Copper River (UCR) harvest, and estimated spawning escapement, 2007–2016.

Run year	Estimator	Inriver abundance	SE	Total UCR harvest [a]	Estimated spawning escapement [b]	Sustainable Escapement Goal (SEG)	Spawning escapement vs. goal
2007	NVE	46,349	3,283	11,774	34,575	24,000 or greater	Above
2008	NVE	41,343	2,166	8,858	32,485	24,000 or greater	Above
2009	NVE	32,400	2,365	4,614	27,786	24,000 or greater	Above
2010	NVE	22,323	2,492	5,559	16,764	24,000 or greater	Below
2011	NVE	33,889	3,329	5,895	27,994	24,000 or greater	Above
2012	NVE	31,452	5,242	3,617	27,835	24,000 or greater	Above
2013	NVE	32,581	4,425	3,569	29,012	24,000 or greater	Above
2014	NVE	24,158	2,100	3,318	20,710	24,000 or greater	Below
2015	NVE	32,306	3,977	5,699	27,842	24,000 or greater	Above
2016	NVE	16,009	1,193	4,145	11,864	24,000 or greater	Below

Note: "NVE" is Native Village of Eyak.

[a] The total upper Copper River (UCR) harvest estimate includes the 1) State Batzulnetas subsistence fishery, 2) State Glennallen Subdistrict Subsistence fishery, 3) Federal Glennallen Subdistrict Subsistence fishery, 4) State Chitina Subdistrict Personal Use Fishery, 5) Federal Chitina Subdistrict Subsistence Fishery, and 6) the State Sport Fishery. Data provided by Mark Somerville, ADF&G.

[b] Upriver king salmon spawning escapement is estimated using the inriver abundance estimate and subtracting subsistence, personal use, and sport king salmon harvests.

PROPOSAL 31 – 5 AAC 24.331. Gillnet specifications and operations.

PROPOSED BY: Fairbanks Fish and Game Advisory Committee.

WHAT WOULD THE PROPOSAL DO? This would reduce the maximum depth of commercial drift gillnets to 29 meshes through the start of stat week 24 (end of May).

WHAT ARE THE CURRENT REGULATIONS? A drift gillnet vessel in the Copper River District may operate no more than one gillnet and no drift gillnet may exceed 150 fathoms in length, hung measure. In the Copper River and Bering River districts, gillnets with mesh size less than eight inches may not be more than 60 meshes in depth. Prior to July 15, gillnets with mesh size greater than six inches are not allowed unless specified by emergency order.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would reduce the depth of a drift gillnet in the Copper River District by approximately 50%, thereby reducing overall harvest efficiency of the commercial drift gillnet fleet in the Copper River District. A reduction in harvest efficiency could reduce commercial harvest by an unknown amount and potentially reallocate harvest of Copper River salmon to other fisheries, and/or increase spawning escapement. Drift gillnet permit holders would likely adjust their fishing locations to maximize effectiveness of shallower gear, likely concentrating the fleet in inside-waters and areas closer to shore, resulting in a more congested and less orderly fishery.

BACKGROUND: Shallow gillnets are thought to be effective at reducing the number of king salmon harvested because king salmon tend to travel deeper than sockeye salmon in the water column. In the shallow waters inside Copper River barrier islands where nets may rest on the bottom, king salmon that encounter the nets are unable to swim beneath the lead line. Similar proposals were considered by the board in 1994 and 1999 and not adopted. At that time, concern for Dungeness crab mortality from increased shallow water fishing was a consideration and the 1994 proposal included a provision to close inshore waters less than five fathoms deep.

DEPARTMENT COMMENTS: The department **OPPOSES** mandating use of 29-mesh deep drift gillnets in the Copper River District as a means to conserve king salmon. Current EO authority over fishing time and area provides adequate tools to regulate the commercial fishery and achieve escapement goals. The department is **NEUTRAL** on the allocative aspects of this proposal.

COST ANALYSIS

Approval of this proposal would result in an additional direct cost for all PWS area drift gillnet fishermen that choose to fish in the Copper River District.

PROPOSAL 32 – 5 AAC 24.361. Copper River King Salmon Management Plan.

PROPOSED BY: Fairbanks Fish and Game Advisory Committee.

WHAT WOULD THE PROPOSAL DO? This would close commercial salmon fishing in the Copper River District until the first week of June in years when the preseason Copper River king salmon forecast is below the 20-year average or below 35,000 fish (Table 32-1).

WHAT ARE THE CURRENT REGULATIONS? The commercial salmon fishing season in the Copper River District is open and closed by emergency order 5 AAC 24.310(a). Copper River salmon runs are managed to assure sustained yield as outlined in 5 AAC 24.360, *Copper River District Salmon Management Plan* as well as 5 AAC 24.361 *Copper River King Salmon Management Plan* which directs the department to manage the Copper River commercial, sport, personal use and subsistence fisheries to achieve a sustainable goal of 24,000 or more for king salmon. For the purposes of managing these fisheries, the department considers the best available information regarding harvest, age composition, and escapement, including escapement information obtained from mark-recapture studies, aerial surveys, or by other means.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would result in foregone commercial harvest of sockeye and king salmon in years when commercial fishing is closed through the first week of June. More salmon would likely be available for harvest by inriver fisheries. Escapement of both sockeye and king salmon would likely increase. This would reduce the department's ability to use commercial harvest as an early inseason index of run strength and inhibit department's ability to provide harvest opportunity on surplus fish or spread harvest across the run. Having the fishery closed for an extended period of time may front load escapement and may necessitate extended or liberalized fishing time later in the season to meet escapement goals.

BACKGROUND: The department, with direction from the board, manages salmon runs to the Copper River District (Figure 32-1) to ensure sustained yield and meet all user group allocations, as described in 5 AAC 24.360, *Copper River District Salmon Management Plan*, and also manages Copper River king salmon stocks under 5 AAC 24.361, *Copper River King Salmon Management Plan*. In 2003, the king salmon SEG was set at 24,000 or more fish. Salmon in the Copper River are counted at the Miles Lake sonar site, located ~30 miles upstream from the commercial fishing district. The Miles Lake sonar project does not apportion salmon by species and there is no inseason king salmon escapement assessment. Nevertheless, the vast majority of salmon passing that site are sockeye salmon, where the 10-year (2007–2016) average total run was 2.6 million fish, compared to an average total run of 54,000 king salmon during that same time period. Annual king salmon abundance is estimated by a mark–recapture project operated by the Native Village of Eyak, but is only available post season. The department operates a counting tower on the Gulkana River that provides an index of that component of the Copper River king salmon population.

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 sockeye 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 designed for sockeye salmon management (achieving the sockeye salmon SEG of 360,000–750,000 fish) with inside closures meant to protect king salmon.

Over the past 15 years king salmon returns have declined and the department has adapted to reduce harvest proportionally. Copper River king salmon appear to be in a cycle of reduced productivity similar to other areas in the state. The use of inside closures has ranged from minimal, as required in regulation, in years with high king salmon abundance to expanded use through the first month of the fishery in years of low king salmon abundance. In 2017, inside-waters areas were closed for almost the entire time period king salmon were present in the Copper River District. 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 2008–2016, during the current period of reduced productivity, average Copper River District commercial king salmon harvest was approximately 13,600 fish, and average combined subsistence, sport, and personal use harvests were 5,100 fish. During the period of increased productivity, king salmon spawning escapement ranged from 21,500–58,500, with an average escapement of 33,500. During the period of reduced productivity (2008–2016) king salmon spawning escapement ranged from 11,900–32,500, with an average escapement of 24,700 (Figure 32-2).

The department manages the Copper River fisheries to provide reasonable opportunity for subsistence uses of salmon, and restricts commercial and inriver sport and personal use fisheries as needed to achieve the king salmon SEG. Recent below average harvests are a result of the relatively weak king salmon runs and restrictive actions by the department in the subsistence, commercial, personal use, and sport fisheries to reduce king salmon harvests in most of those years. Average subsistence harvests have declined during the reduced productivity period as well. In spite of low king salmon abundance, department management restrictions in 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 (Table 32-2).

DEPARTMENT COMMENTS: The department **OPPOSES** mandatory commercial fishery closures based on preseason king salmon forecasts because they would likely result in unnecessary foregone harvest of sockeye salmon, reduce ability to manage for the Copper River sockeye salmon SEG, and concentrate harvest on later-returning components of the sockeye salmon run. The department is **NEUTRAL** on the allocative aspects of this proposal.

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

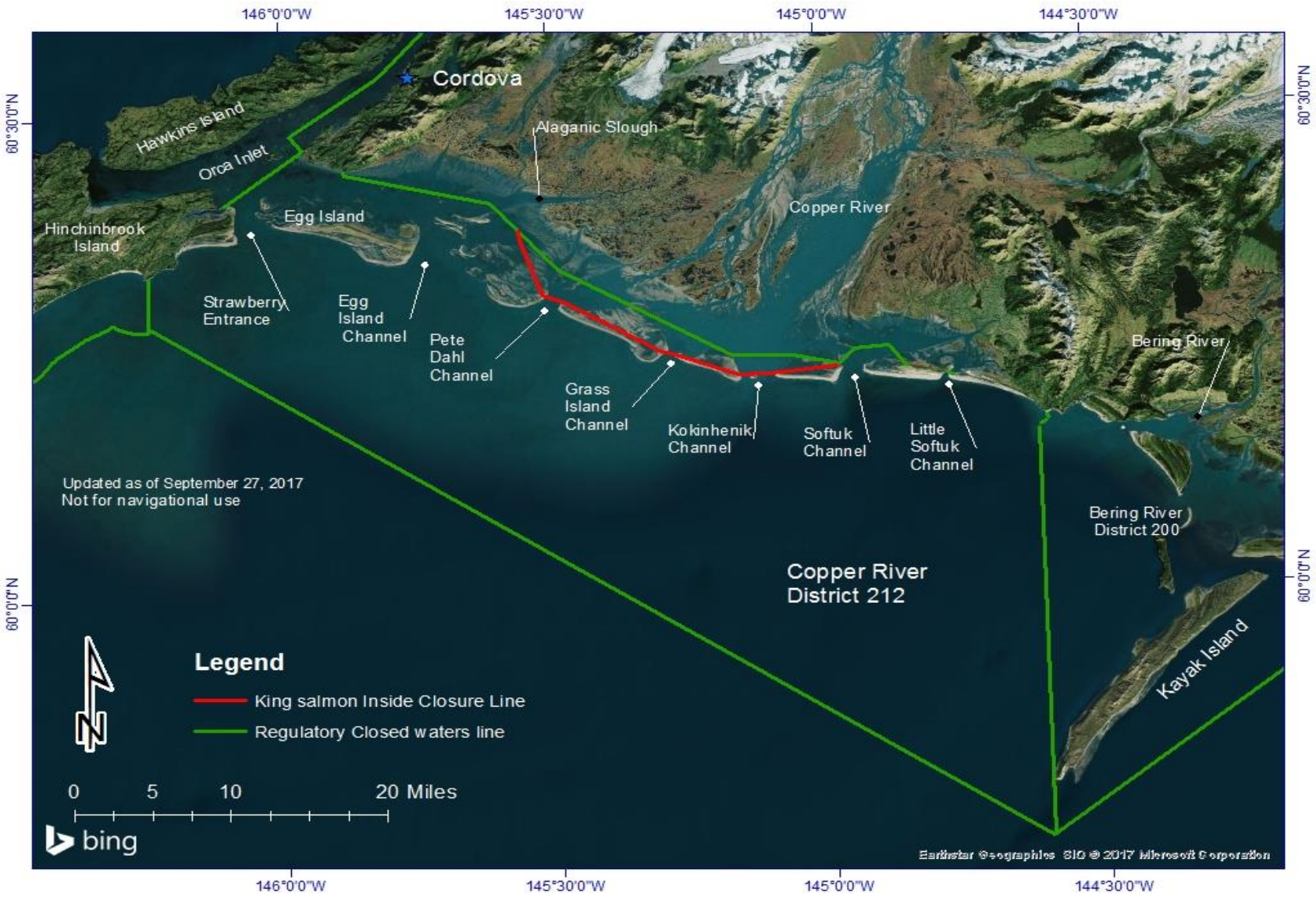

Figure 32-1.–Copper River and Bering River districts showing regulatory closed waters, including king salmon inside closure area.

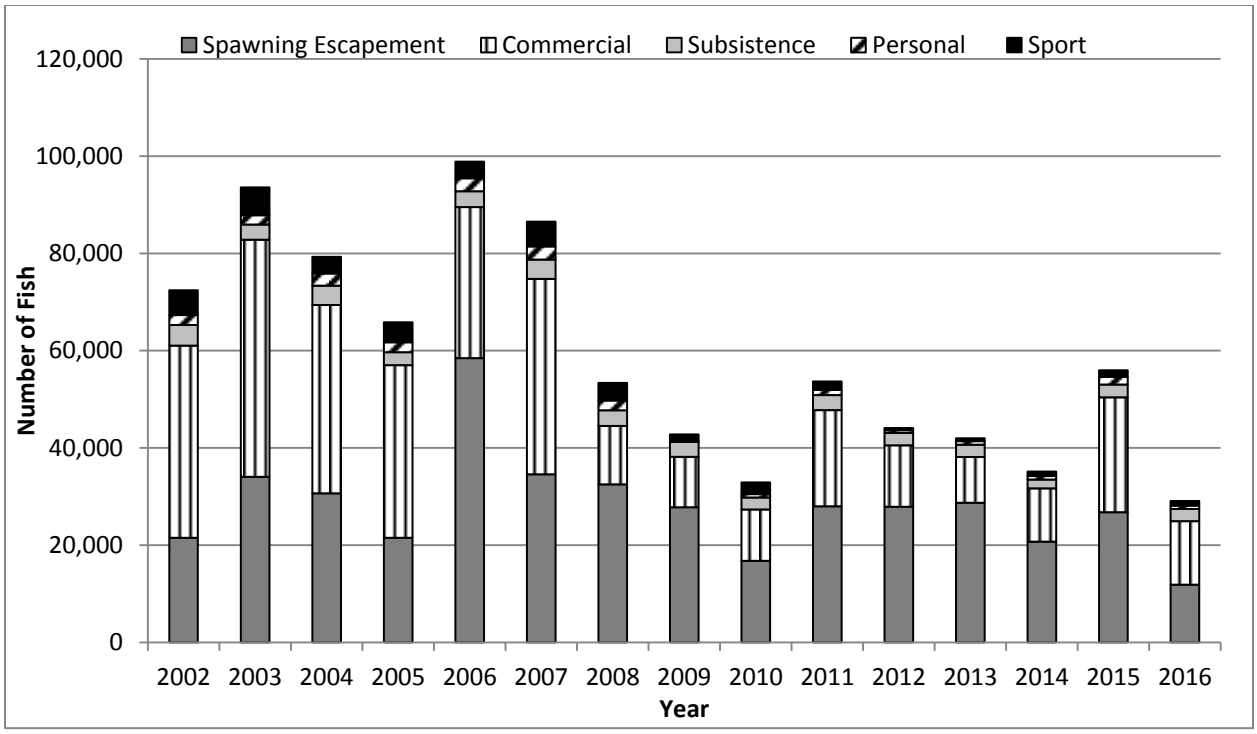

Figure 32-2.–Copper River king salmon escapement and harvest, 2002–2016.

Table 32-1.–Copper River king salmon total run forecast versus actual run, 2008–2017.

Copper River king salmon total run			
Year	Forecast	Actual	Percent error
2008	85,657	53,847	59.07%
2009	77,546	42,992	80.37%
2010	48,420	33,184	45.91%
2011	38,088	53,889	−29.32%
2012	53,889	46,442	16.03%
2013	46,442	42,886	8.29%
2014	62,000	35,322	75.52%
2015	35,500	56,207	−36.84%
2016	56,207	29,221	92.34%
2017	29,221	53,864	−45.75%
Average			26.6%

Table 32-2.–Copper River king salmon inriver abundance, total upper Copper River (UCR) harvest, and estimated spawning escapement, 2007–2016.

Run year	Estimator	Inriver abundance	SE	Total UCR harvest [a]	Estimated spawning escapement [b]	Sustainable Escapement Goal (SEG)	Spawning escapement vs. goal
2007	NVE	46,349	3,283	11,774	34,575	24,000 or greater	Above
2008	NVE	41,343	2,166	8,858	32,485	24,000 or greater	Above
2009	NVE	32,400	2,365	4,614	27,786	24,000 or greater	Above
2010	NVE	22,323	2,492	5,559	16,764	24,000 or greater	Below
2011	NVE	33,889	3,329	5,895	27,994	24,000 or greater	Above
2012	NVE	31,452	5,242	3,617	27,835	24,000 or greater	Above
2013	NVE	32,581	4,425	3,569	29,012	24,000 or greater	Above
2014	NVE	24,158	2,100	3,318	20,710	24,000 or greater	Below
2015	NVE	32,306	3,977	5,699	27,842	24,000 or greater	Above
2016	NVE	16,009	1,193	4,145	11,864	24,000 or greater	Below

Note: "NVE" is Native Village of Eyak.

[a] The total upper Copper River (UCR) harvest estimate includes the 1) State Batzulnetas subsistence fishery, 2) State Glennallen Subdistrict Subsistence fishery, 3) Federal Glennallen Subdistrict Subsistence fishery, 4) State Chitina Subdistrict Personal Use Fishery, 5) Federal Chitina Subdistrict Subsistence Fishery, and 6) the State Sport Fishery. Data provided by Mark Somerville, ADF&G.

[b] Upriver king salmon spawning escapement is estimated using the inriver abundance estimate and subtracting subsistence, personal use, and sport king salmon harvests.

PROPOSAL 33 – 5 AAC 24.361. Copper River King Salmon Management Plan.

PROPOSED BY: Fairbanks Fish and Game Advisory Committee.

WHAT WOULD THE PROPOSAL DO? This would prohibit commercial sale of king salmon from the Copper River District if any subsistence fishing restrictions are in place on the stock.

WHAT ARE THE CURRENT REGULATIONS? Commercial sale of king salmon from the Copper River District is allowed and is not restricted based on restrictions placed on Copper River subsistence fisheries.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would require that all commercially harvested king salmon taken during fishing periods when any Copper River drainage subsistence fisheries were restricted would have to be retained for personal use. It would result in a reduction in the exvessel value of the commercial fishery by an unknown amount. There likely would be no reduction in king salmon harvest during commercial fishing periods, though some commercial fishermen may not participate in Copper River District subsistence fisheries if their king salmon homepack needs were met through the mandatory retention of king salmon during commercial fishing periods.

BACKGROUND: Although the commercial salmon fishery in the Copper and Bering river districts is primarily managed to harvest surplus sockeye salmon returning to the Copper and Bering rivers, king salmon are also caught and represent an important component of commercial harvest. In March 2017, the department issued preseason emergency orders closing the Upper Copper River king salmon sport fishery, prohibiting retention of king salmon in the Chitina Subdistrict personal use fishery, limiting the Glennallen Subdistrict subsistence fishery to a two fish king salmon limit, and requiring fish wheels to be closely attend based on poor king salmon runs in past years, not achieving the SEG in 2016, and a poor king salmon outlook for 2017. On June 3, 2017 the restrictions were rescinded on the Glennallen Subdistrict subsistence fishery when commercial harvests of king salmon were better than anticipated during the first two weeks of the season under restrictive fishing time and area, indicating the 2017 king salmon run was better than anticipated. Current regulations couple the subsistence and commercial fishery openings in order to limit potential sale of subsistence caught fish.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. Prohibiting sale of king salmon caught in drift gillnets in the Copper River District is not an effective tool to conserve king salmon. The department's EO authority for time and area of commercial fishing openings provides adequate tools to manage for escapement goals.

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

SUBSISTENCE REGULATION REVIEW:

1. Is this stock in a nonsubsistence area? No.
2. Is this stock customarily and traditionally taken or used for subsistence? The board has determined under 5 AAC 01.616(4) that salmon in the Copper River District, as described in 5 AAC 24.200(a), 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 3,000–5,000 salmon reasonably necessary for subsistence purposes in a year when there is a harvestable surplus that allows for a commercial fishery, and 19,000–32,000 in a year when there is no commercial fishery (5 AAC 01.616(b)(2)).
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

PROPOSAL 34 – 5 AAC 24.310. Fishing seasons.

PROPOSED BY: Fairbanks Fish and Game Advisory Committee.

WHAT WOULD THE PROPOSAL DO? This would prohibit commercial salmon fishing in the Copper River District until a salmon has been counted at the Miles Lake sonar.

WHAT ARE THE CURRENT REGULATIONS? The Copper River District is open and closed by EO.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would result in foregone commercial harvest of surplus sockeye and king salmon and inhibit the department's ability to assess early season run strength of both species. More salmon would likely be available to upriver user groups early in the season and escapement of both sockeye and king salmon may increase, but would lead to uneven distribution of harvest across the entire run of salmon to the Copper River system. This would also lead to potential front-loaded escapement by the earliest returners to the system, which has implications on future stock compositions. In years of strong and/or early returns, this would introduce greater uncertainty into decisions to extend or liberalize fishing time to manage for salmon escapement into the Copper River. This would also limit commercial harvest opportunity in years when late breakup ice delays installation of the Miles Lake sonar.

BACKGROUND: Copper River salmon runs are managed to provide sustained yield as outlined in 5 AAC 24.360, *Copper River District Salmon Management Plan* as well as 5 AAC 24.361 *Copper River King Salmon Management Plan* which directs the department to manage the Copper River commercial, sport, personal use and subsistence fisheries to achieve a sustainable goal of 24,000 or more king salmon. In managing Copper River District fisheries, the department considers the best available information regarding harvest, age composition, and escapement, including escapement information obtained from mark-recapture studies, aerial surveys, or by other means.

Copper River sockeye salmon escapement goals have been consistently achieved and often exceeded in recent years (Table 34-1). King salmon escapement goals have been achieved in seven of the last 10 years (Table 34-2). Historically, the Copper River District has opened to commercial fishing near May 15 each year. In some years, sonar deployment is delayed due to shore ice and river flows (Table 34-3). In the absence of sonar deployment, early season management is based on environmental conditions and harvest rates. Depending upon water level in the Copper River, it takes between three and 10 days for salmon to migrate from the fishing district to the sonar site. By the time a salmon is counted at the sonar, considering the distance (~30 miles) between the sonar site and the fishing district, it is possible that large numbers of salmon could have migrated into the river between the district and the sonar (Figure 34-1). See proposal 32 for additional background.

DEPARTMENT COMMENTS: The department **OPPOSES** delaying opening the Copper River District commercial fishery until a salmon has been enumerated at the Miles Lake sonar site. Timing of this closure may occur during early run peak sockeye salmon migration in the Copper River District and may make it difficult for the department to achieve the Copper River sockeye salmon escapement goal. The department is **NEUTRAL** on the allocative aspects of this proposal.

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

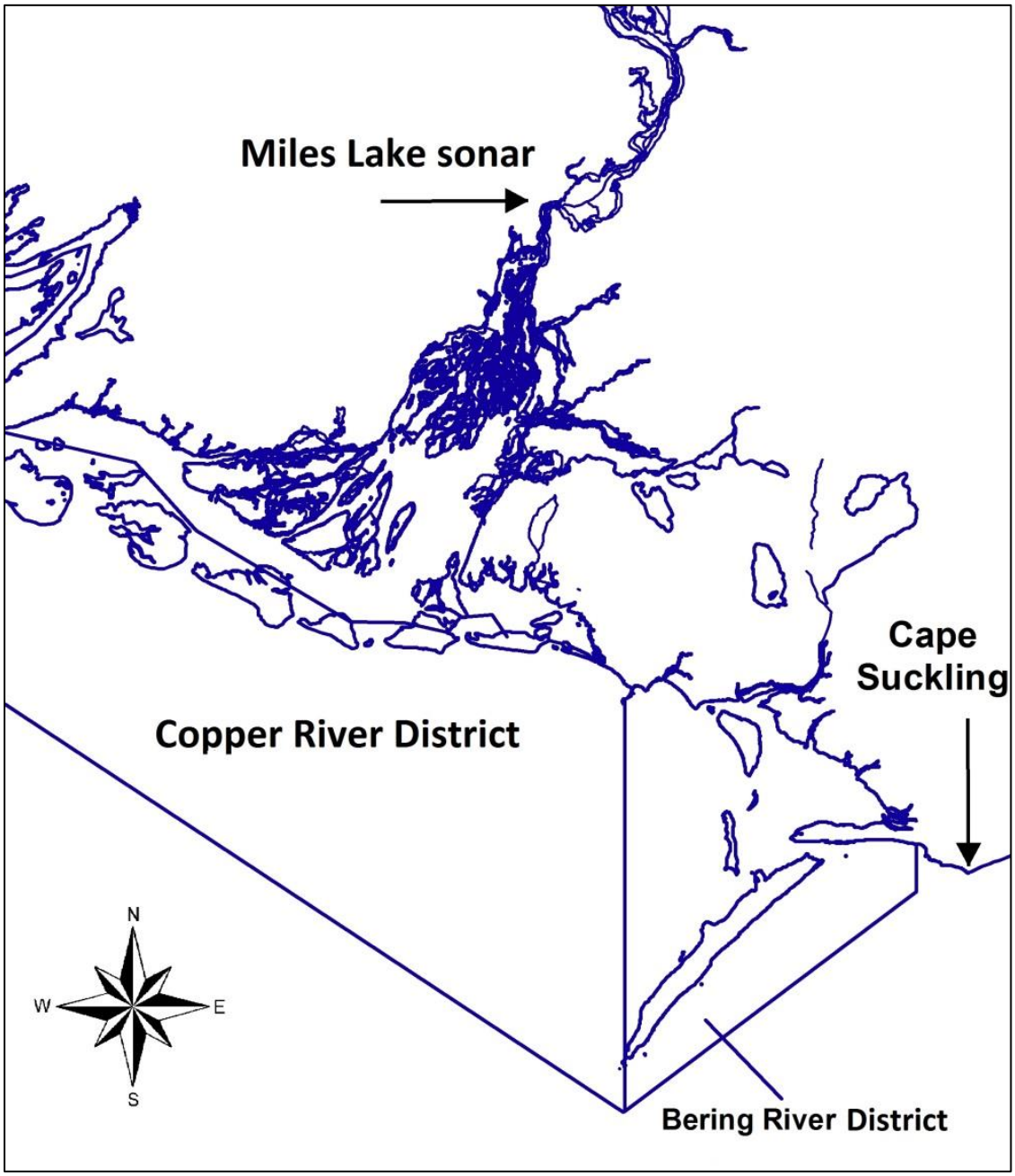

Figure 34-1.–Copper River and Bering River districts showing Miles Lake sonar site.

Table 34-1.–Copper River sockeye salmon spawning escapement, 2007–2016.

Year	Upriver spawning escapement [a]	Upriver spawning escapement goal	Delta spawning escapement [b]	Delta spawning escapement goal
2007	624,457	300,000-500,000	176,570	55,000–130,000
2008	491,516	300,000-500,000	135,900	55,000–130,000
2009	477,327	300,000-500,000	138,584	55,000–130,000
2010	524,692	300,000-500,000	167,810	55,000–130,000
2011	621,545	300,000-500,000	153,014	55,000–130,000
2012	970,611	360,000-750,000	133,700	55,000–130,000
2013	889,143	360,000-750,000	151,410	55,000–130,000
2014	883,029	360,000-750,000	128,410	55,000–130,000
2015	953,509	360,000-750,000	133,330	55,000–130,000
2016	503,873	360,000-750,000	103,100	55,000–130,000
10-year average	693,970		142,183	

[a] Since 1999, sockeye salmon spawning escapement has been based on the total number of fish past the Miles Lake sonar minus the king salmon inriver midpoint abundance estimate; and upriver subsistence, personal use, and sport harvest; and hatchery broodstock and onsite hatchery surplus requirements.

[b] Delta spawning escapement estimated by doubling the peak aerial survey index.

Table 34-2.–Copper River king salmon inriver abundance, total upper Copper River (UCR) harvest, and estimated spawning escapement, 2007–2016.

Run year	Estimator	Inriver abundance	SE	Total UCR harvest [a]	Estimated spawning escapement [b]	Sustainable Escapement Goal (SEG)	Spawning escapement vs. goal
2007	NVE	46,349	3,283	11,774	34,575	24,000 or greater	Above
2008	NVE	41,343	2,166	8,858	32,485	24,000 or greater	Above
2009	NVE	32,400	2,365	4,614	27,786	24,000 or greater	Above
2010	NVE	22,323	2,492	5,559	16,764	24,000 or greater	Below
2011	NVE	33,889	3,329	5,895	27,994	24,000 or greater	Above
2012	NVE	31,452	5,242	3,617	27,835	24,000 or greater	Above
2013	NVE	32,581	4,425	3,569	29,012	24,000 or greater	Above
2014	NVE	24,158	2,100	3,318	20,710	24,000 or greater	Below
2015	NVE	32,306	3,977	5,699	27,842	24,000 or greater	Above
2016	NVE	16,009	1,193	4,145	11,864	24,000 or greater	Below

Note: "NVE" is Native Village of Eyak.

[a] The total upper Copper River (UCR) harvest estimate includes the 1) State Batzulnetas subsistence fishery, 2) State Glennallen Subdistrict Subsistence fishery, 3) Federal Glennallen Subdistrict Subsistence fishery, 4) State Chitina Subdistrict Personal Use Fishery, 5) Federal Chitina Subdistrict Subsistence Fishery, and 6) the State Sport Fishery. Data provided by Mark Somerville, ADF&G.

[b] Upriver king salmon spawning escapement is estimated using the inriver abundance estimate and subtracting subsistence, personal use, and sport king salmon harvests.

Table 34-3.–Copper River District first fishing period, and Miles Lake sonar start date and first fish count, 2008–2017.

Year	First commercial fishing period	Miles Lake sonar start date	Miles Lake sonar first fish count
2008	5/15	5/15	5/15
2009	5/14	5/18	5/18
2010	5/13	5/20	5/20
2011	5/16	5/10	5/16
2012	5/17	5/16	5/16
2013	5/16	5/15	5/25
2014	5/15	5/7	5/12
2015	5/14	5/8	5/12
2016	5/16	5/8	5/8
2017	5/18	5/11	5/16

PROPOSAL 35 – 5 AAC 24.310. Fishing seasons.

PROPOSED BY: Robert A. Smith.

WHAT WOULD THE PROPOSAL DO? This would open commercial salmon fishing in the Copper River District on the Monday or Thursday closest to May 1. It is unclear whether this would require the commercial opening on this date by regulation or if the department would still have the emergency order authority to open the commercial fishery based on environmental conditions.

WHAT ARE THE CURRENT REGULATIONS? The Copper River District commercial salmon fishery is opened and closed by emergency order.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would open the Copper River commercial gillnet fishery earlier than in recent history and likely increase harvest of the earliest returning Copper River salmon stocks. If adopted, this would require the board to consider changing 5 AAC 01.610(g) to continue the current subsistence fishing strategy of fishing concurrently with commercial openings. As written, this would allow commercial fishing for salmon prior to the start of the first possible subsistence salmon fishing period on May 15. In years of weak and/or early returns, this would hinder the department's ability to restrict fishing time to control escapement in the Copper River.

BACKGROUND: Historically, the Copper River District has opened to commercial salmon fishing on or about May 15 each year. Since 2002, the earliest start date in the Copper River District was May 13 during the 2010 fishing season. Early season management is based on environmental conditions and harvest rates until the Miles Lake sonar camp is deployed in the second week of May. There are many scenarios that might lead to time and area restrictions in the district in the early portion of the season, particularly when king salmon runs have been poor, as in recent years.

Salmon may be taken for subsistence in the Copper River District 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 3) from two days following the closure of the commercial salmon fishing season in that district through October 31, seven days a week.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal because it would limit the department's ability to manage for escapement goals in the Copper River. While early-season harvest information would provide insight on strength of the earliest returning stocks, inherent lack of flexibility in this proposal relative to status quo introduces additional uncertainty into management decisions. The department is **NEUTRAL** on the allocative aspects of this proposal. If the board adopts this proposal it should consider whether the current subsistence salmon fishing season is still 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.

PROPOSAL 36 – 5 AAC 24.320. Weekly fishing periods.

PROPOSED BY: Robert A. Smith.

WHAT WOULD THE PROPOSAL DO? This would open the Copper River District commercial salmon fishery for a minimum of two 12-hour periods per week from the commencement of the fishing season.

WHAT ARE THE CURRENT REGULATIONS? In the Copper River District, salmon may be taken only during periods established by emergency order.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This may lead to increased harvest of sockeye and king salmon, potentially during times of needed restrictions for salmon escapement, which could result in an increasingly conservative management approach as the season progresses. In years of weak and/or early returns, this would hinder the department's ability to restrict fishing time to control escapement in the Copper River. The department may need to take a more conservative approach to commercial fishing opportunity in order to ensure escapement goals are achieved.

BACKGROUND: The Copper River District typically opens with a 12-hour period on or about May 15 each year, with time adjusted according to early season abundance indices including sonar counts past Miles Lake sonar camp, environmental conditions, and harvest rates. In extreme cases, such as the 2017 season, poor preseason forecasts of salmon returning to the Copper River required the department to limit time and area to ensure fish passage; specifically only one 12-hour period in the first week of the commercial season to limit king salmon harvest. There are instances where commercial fishing has been closed because of poor inseason indicators. Two mandatory 12-hour fishing periods per week may exceed sustainable harvest levels in seasons with weak salmon returns.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal as it reduces the department's ability to manage for Copper River salmon escapement goals. The department is **NEUTRAL** on the allocative aspects of this proposal.

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

PROPOSAL 37 – 5 AAC 24.350. Closed waters.

PROPOSED BY: Warren Chappell.

WHAT WOULD THE PROPOSAL DO? This would reopen waters of eastern Kayak Island in the Bering River District.

WHAT ARE THE CURRENT REGULATIONS? The area east of Kayak Island is closed to commercial salmon fishing (Figure 37-1).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would likely result in increased sockeye and king salmon harvest in the Bering River District. The proposal would also reopen the area to subsistence salmon fishing.

BACKGROUND: A 1985 department tagging study attempted to estimate harvest of nonlocal sockeye salmon in waters seaward of Kayak Island (Figure 37-1). The study was conducted due to concerns for incidental harvest of Yakutat-bound sockeye salmon, Coghill River wild sockeye salmon, and other nonlocal stocks. Of the tagged sockeye salmon, 19.7% were recovered in all major sockeye salmon fisheries ranging from Cook Inlet to Yakutat, with the majority of tagged fish being recovered in the Copper River and Coghill districts. Smaller percentages of tagged sockeye salmon were recovered in the remaining PWS districts, Bering River, Yakutat, and Cook Inlet fisheries (mostly in the commercial fisheries). The closure of the seaward side of Kayak Island to commercial fishing was enacted by the board in 1986.

Salmon may be taken for subsistence in the Copper River District 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 3) from two days following the closure of the commercial salmon fishing season in that district through October 31, seven days a week.

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

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

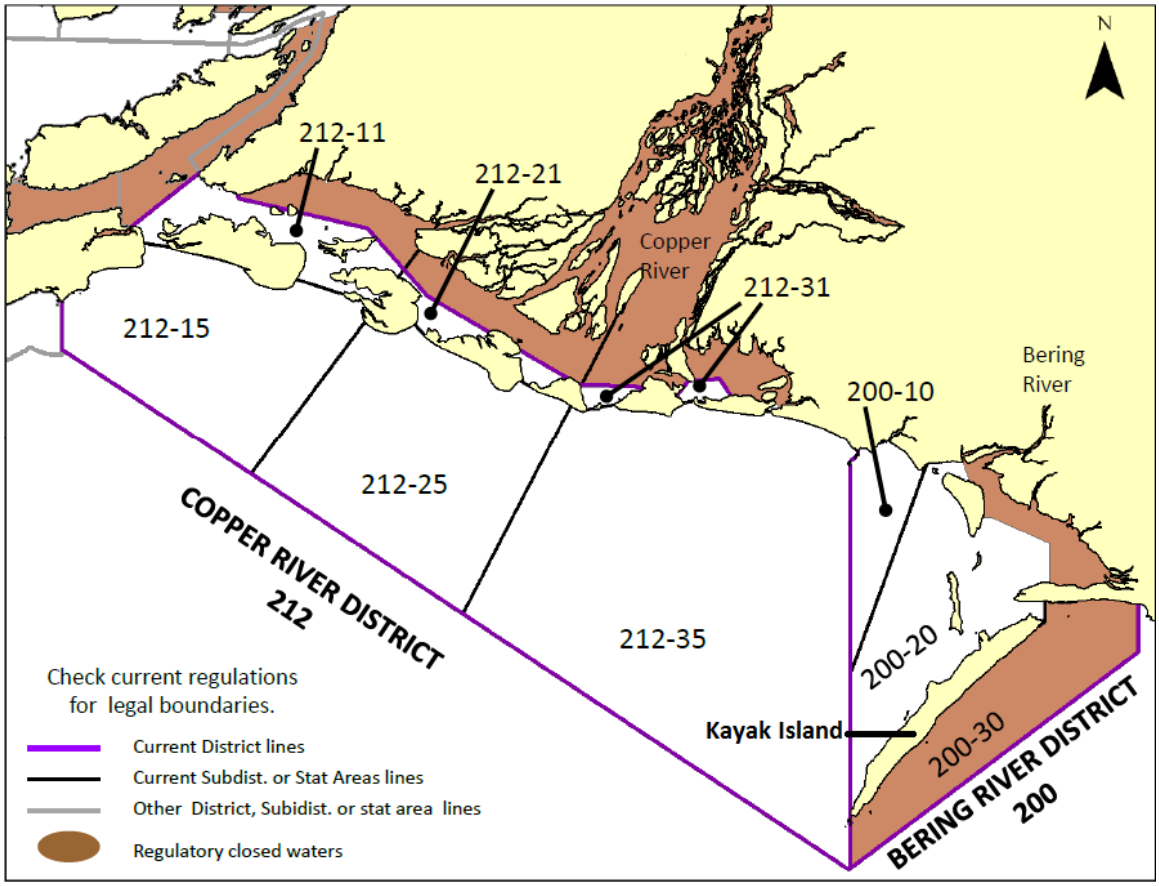

Figure 37-1.–Map of Copper and Bering River districts showing commercial fishing boundaries and current Kayak Island closure.

Prince William Sound Commercial Salmon (12 Proposals)

PROPOSAL 38 – 5 AAC 24.332. Seine specifications and operations.

PROPOSED BY: Rob Nelson.

WHAT WOULD THE PROPOSAL DO? This would increase maximum commercial purse seine length from 150 fathoms to 225 fathoms within the PWS Area. No combination of purse seine and lead would be allowed to exceed 225 fathoms.

WHAT ARE THE CURRENT REGULATIONS? No purse seine used in a commercial fishery in the PWS Area may be less than 200 meshes or more than 325 meshes in depth, or less than 125 fathoms or more than 150 fathoms in length, hung measure, or with a mesh size greater than four inches, except that the first 25 meshes immediately above the leadline may be a "chafing strip" with a mesh size no larger than seven and one-half inches. Leads deeper than the seine, exceeding 75 fathoms in length, or with mesh size less than six and one-quarter inches may not be used, except that no more than three hung fathoms may have a minimum mesh size of three inches stretch measure. Leads deeper than the seine or exceeding 75 fathoms in length, or leads with mesh size less than six and one-quarter inches may not be used, except as specified in 5 AAC 39.260(f).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would increase commercial purse seine length by 50%, likely increasing purse seine harvest efficiency. This would introduce increased uncertainty into fishery management decisions because it would complicate interpretation of fishery CPUE data and, in years of lower salmon abundance, likely lead to changes in fishing time and area of openings to compensate for increased harvest efficiency.

BACKGROUND: The use of a lead is an effective means to bring fish out of shallow water so that purse seine gear can be operated without the danger of snagging rocks and damaging the net. Using leads is a common practice where salmon purse seine gear is a legal gear type. The six and one-quarter mesh lead channels fish toward the body of the purse seine, but is not a fish barrier and is not counted toward the maximum 150 fathom purse seine length. If that currently fish-porous mesh in the lead becomes a fish barrier, it will increase the harvest efficiency of the net.

This proposal cites the use of a lead to achieve the legal gear length. The length of a lead is not considered when determining whether seine gear achieves the legal length of 125-150 fathoms. If Area E permit holders use a lead with their seine gear, the aggregate length of seine plus lead is already up to 225 fathoms.

The number of active commercial salmon purse seine fishing permits in Area E has steadily increased over the last ten years. The number of active purse seine permits has increased from a low of 101 permits in 2004 to 229 in 2017 (Table 38-1). An increase in seine length, combined with an increase in participation in the fishery, may result in increased harvest efficiency across the PWS seine fleet.

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, unless they choose to modify their purse seine.

Table 38-1.–Active Prince William Sound Area purse seine permits by year, 1997–2017.

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	209
2017	229
Most recent 5-year average	216
Most recent 10-year average	185

PROPOSAL 39 – 5 AAC 24.332. Seine specifications and operations.

PROPOSED BY: Leroy L. Cabana.

WHAT WOULD THE PROPOSAL DO? This would allow a CFEC vessel registered with two PWS purse seine permit holders on board to use four-inch mesh in the body of their purse seine lead.

WHAT ARE THE CURRENT REGULATIONS? Current regulations allow one permit holder to fish one legal complement of gear per vessel, with a minimum mesh size of six and one quarter inches for the lead.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This could increase the number of active PWS CFEC salmon permits and decrease the number of purse seine vessels fishing in PWS. This could lead to increased CFEC permit prices, reduced permit availability, and present a barrier to new entrants in the fishery. The elimination of the six and one quarter inch mesh restriction in the lead would effectively give vessels operating with two permits the advantage of a 225 fathom purse seine rather than a 150 fathom purse seine with a 75 fathom lead that is current practice, thus increasing harvest efficiency of the gear. The increased harvest efficiency associated with smaller mesh may affect allocation because of potential increased harvest of fish intended for other gear groups and provide a competitive advantage to purse seine vessel operations choosing to have two CFEC permit holders onboard.

BACKGROUND: Leads were primarily developed to access shallow water and secondarily, as a means for small boats to carry a full 225 fathom purse seine net even though the entire net could not fit on their decks. Using leads is a common practice where salmon purse seine gear is a legal gear type. The six and one-quarter mesh lead channel fish toward the body of the purse seine, but is not an active fishing barrier and is not counted toward the maximum 150 fathom purse seine length. If that currently fish-porous mesh in the lead becomes a fish barrier, it will increase the harvest efficiency of the net.

The number of active commercial salmon purse seine fishing permits in Area E has steadily increased over the last ten years. The number of active purse seine permits has increased from a low of 101 permits in 2004 to 229 in 2017 (Table 38-1). Since the last board cycle, hatchery production increases have been approved at the Armin F. Koernig and Solomon Gulch hatcheries that will benefit the purse seine gear group. These production increases combined with improved markets and recent record returns have led to increased participation in the fishery. As participation has increased so has congestion and competition amongst the purse seine fleet, this can lead to a decrease in time and area during years of low salmon abundance.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal. However, the department is concerned about adoption of regulations that make it more difficult for a person to acquire a CFEC limited entry permit and enter a new fishery by creating additional competition and demand for available permits. If the board chooses to adopt 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 additional direct costs for private individuals to participate in this fishery.

PROPOSAL 40 – 5 AAC 24.335. Minimum distances between units of gear.

PROPOSED BY: Michael Brown.

WHAT WOULD THE PROPOSAL DO? This would increase the minimum distance between commercial set gillnet and drift gillnet operations in the Crafton Island Subdistrict from 60 fathoms to 90 fathoms when the shoreward end of the drift gillnet is operated in water less than four fathoms at any stage of the tide.

WHAT ARE THE CURRENT REGULATIONS? There is a required minimum distance of 60 fathoms between commercial set gillnet and drift gillnet operations in the Crafton Island Subdistrict, excluding the zone outside of the offshore end of a set gillnet.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? If minimum distance separating set and drift gillnet gear were to increase from 60 fathoms to 90 fathoms when the shoreward end of the drift gillnet is fished in water less than four fathoms depth, drift gillnets would not be allowed to legally fish between set gillnets sites spaced up to 180 fathoms apart. Nearshore fishing opportunity would be reduced for the drift gillnet fleet in the Crafton Island Subdistrict.

BACKGROUND: The Eshamy District is divided into two subdistricts: Crafton Island and Main Bay. The Main Bay Subdistrict is often opened while the Crafton Island Subdistrict is closed to allow harvest of returning hatchery salmon and protection of migrating salmon bound to other districts. In 1996, the board considered and took action on a similar proposal that addressed 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 gillnet. This created a theoretical line between two adjacent set nets where a drift gillnet could 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 gillnet gear to 60 fathoms in the Crafton Island Subdistrict thereby eliminating this ambiguity in regulation.

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.

PROPOSAL 41 – 5 AAC 24.335. Minimum distances between units of gear.

PROPOSED BY: Shawna Williams.

WHAT WOULD THE PROPOSAL DO? This would allow commercial drift gillnet operations within 60 fathoms of the zone inside the shoreward end of a set gillnet in the Crafton Island Subdistrict.

WHAT ARE THE CURRENT REGULATIONS? There is a required minimum distance of 60 fathoms between set gillnet and drift gillnet operations in the Crafton Island Subdistrict, except in the zone outside the offshore end.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would increase harvest opportunity for drift gillnet fishermen operating near set gillnets and potentially result in increased gear conflicts.

BACKGROUND: The Eshamy District is divided into two subdistricts: Crafton Island and Main Bay. The Main Bay Subdistrict is often opened while the Crafton Island Subdistrict is closed to allow harvest of returning hatchery salmon and protection of migrating salmon bound to other districts. In 1996 the board considered and took action on a similar proposal that addressed 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 gillnet. This created a theoretical line between two adjacent set nets where a drift gillnet could 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 gillnet gear to 60 fathoms in the Crafton Island Subdistrict thereby eliminating this ambiguity in regulation.

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.

PROPOSAL 42 – 5 AAC 24.367. Main Bay Salmon Hatchery Harvest Management Plan.

PROPOSED BY: Cordova District Fishermen United, Gillnet Division.

WHAT WOULD THE PROPOSAL DO? This would allow commercial drift gillnet operations within 20 fathoms of a set gillnet in the Main Bay Hatchery Terminal Harvest Area and would allow set gillnets up to 100 fathoms in length.

WHAT ARE THE CURRENT REGULATIONS? There is a required 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 standard 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 allow drift gillnets to be deployed in the 10 fathom band of water between set gillnets and double the length of set gillnets. It is difficult to determine how adoption of this proposal would affect harvest or harvest opportunity for each gear group, but the proposed reduction in gear spacing and increase in set gillnet length would increase crowding and gear conflicts, reduce safety, increase chaotic fishery behavior, and be difficult to enforce.

BACKGROUND: At the 1996 PWS board meeting, the board considered and took action on 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 loophole in regulation.

For conservation purposes, the Main Bay Subdistrict is sometimes opened by itself and is used as a terminal fishery to target enhanced stocks and 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.

PROPOSAL 43 – 5 AAC 24.367. Main Bay Salmon Hatchery Harvest Management Plan.

PROPOSED BY: Cordova District Fishermen United, Gillnet Division.

WHAT WOULD THE PROPOSAL DO? This would clarify commercial drift and set gillnet access in the Main Bay Subdistrict so that a drift operation cannot be deemed illegal upon deployment of a set net. It would allow the drift operation time to retrieve its gear and/or navigate to legal waters.

WHAT ARE THE CURRENT REGULATIONS? There are no regulations specific to the Main Bay Subdistrict Terminal Harvest Area (THA) addressing priority by gear type. There are, however, regulations specifying that no portion of a drift gillnet may be operated within 25 fathoms of a set gillnet, except in the zone outside of the offshore end of the set gillnet.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would clarify that if a set gillnet is deployed in the MBH THA, a drift gillnet already deployed would have time to retrieve its gear and/or navigate to legal waters before that drift gillnet operation is deemed to be illegally deployed.

BACKGROUND: Each set gillnet site in the Main Bay Subdistrict may be outfitted with buoys and running lines that are in place throughout the season with the exception of the Alternating Gear Zone (5 AAC 24.367(d)(2)) where buoys or floats used to mark the seaward end of set gillnets are required to be removed from the fishing grounds during open commercial fishing periods when the site is not being operated. There is no current regulatory language that specifies a drift gillnet operation is illegal upon the deployment of a set gillnet. However, 5 AAC 24.367(b)(1) could be interpreted as such. This has been the cause of contention between gear groups in the past and input from the board would be helpful to clarify the language and intent of current regulations.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocative aspects of this proposal. The department **SUPPORTS** clarification on the priority of set gillnets in the Main Bay Subdistrict, as well as providing reasonable time to retrieve a previously deployed drift gillnet gear in the event that a set gillnet is subsequently deployed nearby.

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

PROPOSAL 44 – 5 AAC 24.331. Gillnet specifications and operations.

PROPOSED BY: Cordova District Fishermen United, Gillnet Division.

WHAT WOULD THE PROPOSAL DO? This would clarify the existing regulation on operations of commercial gillnet gear in the Eshamy District of the Prince William Sound Area, where both set and drift gillnet gear are permitted.

WHAT ARE THE CURRENT REGULATIONS? The operation of gillnet gear must be performed or assisted by the fisherman who holds the valid interim use or entry permit for that gear. A person who holds this permit for set gillnet gear must be physically present or within a reasonable distance of the gear during the operation of gear at the site, except when the permit holder is at or traveling to or from a point of sale, or at the location of other stationary gear of that permit holder. A "reasonable distance" means a distance that ensures that the permit holder can actively supervise the gear.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would not provide clarification on regulatory ambiguity because all gillnet types are included in current regulation.

BACKGROUND: The current regulatory language already encompasses all gillnet types as defined in 5 AAC 39.105, thus, if the intent of this proposal is to require a permit holder to be present to perform or assist with operation of gear, that requirement is already in regulation.

DEPARTMENT COMMENTS: The department is **OPPOSED** to this proposal because it provides no additional regulatory clarification.

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

PROPOSAL 45 – 5 AAC 24.331. Gillnet specifications and operations.

PROPOSED BY: Cordova District Fishermen United, Gillnet Division.

WHAT WOULD THE PROPOSAL DO? This would limit the number of deployed line and buoy setups in the PWS Area commercial set gillnet fishery to four per permit holder during an announced commercial salmon fishing period.

WHAT ARE THE CURRENT REGULATIONS? Set gillnet gear may be legally operated in the Eshamy District. There is no limit to the number of deployed line and buoy setups (not including nets) per permit holder, except for restrictions in the Alternating Gear Zone (AGZ) of the Main Bay Subdistrict.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would reduce the amount of set gillnet running gear deployed in the Eshamy District at any one time. This would provide additional area for drift gillnet fishermen to operate.

BACKGROUND: Set gillnet permit holders may hold an unlimited number of sites in the Eshamy District, with each site registered with the Alaska Department of Natural Resources. Each of these sites may be outfitted with buoys and running lines that are in place throughout the season, with the exceptions of the AGZ of the Main Bay Subdistrict (5 AAC 24.367(d)(2)) where buoys and floats used to mark the seaward end of set gillnets are required to be removed from the fishing grounds during the open commercial periods when that site is not being operated.

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.

PROPOSAL 46 – 5 AAC 24.200. Fishing districts and subdistricts.

PROPOSED BY: David Fleming.

WHAT WOULD THE PROPOSAL DO? This would move the southern end of the Main Bay Subdistrict boundary line west to a new set of coordinates further inside Main Bay.

WHAT ARE THE CURRENT REGULATIONS? The Main Bay Subdistrict outer boundary is defined as a line between lat 60°33.36′N, long 148°02.35′W and lat 60°32.78′N, long 148°01.86′W.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The size of the Main Bay Subdistrict would be reduced. This would alter the number of set gillnet sites in the Main Bay Subdistrict.

BACKGROUND: Since being defined in regulation in 1985, the Main Bay Subdistrict outer line has been defined with latitude and longitude coordinates. Initially there was a transposition error with the coordinates listed in regulation with the longitude portion of the coordinates being swapped between the two endpoints of the line. This error was fixed in regulation in1989. Another change to the line occurred after June 1, 1997, when PWS Area coordinates were transformed from NAD 27 to NAD 83. The line was further changed, extending both endpoints to shore, through the regulatory error and omissions process prior to the 2016 season (Figure 46-1). There is no record of the department posting or maintaining physical markers to define this subdistrict line.

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

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

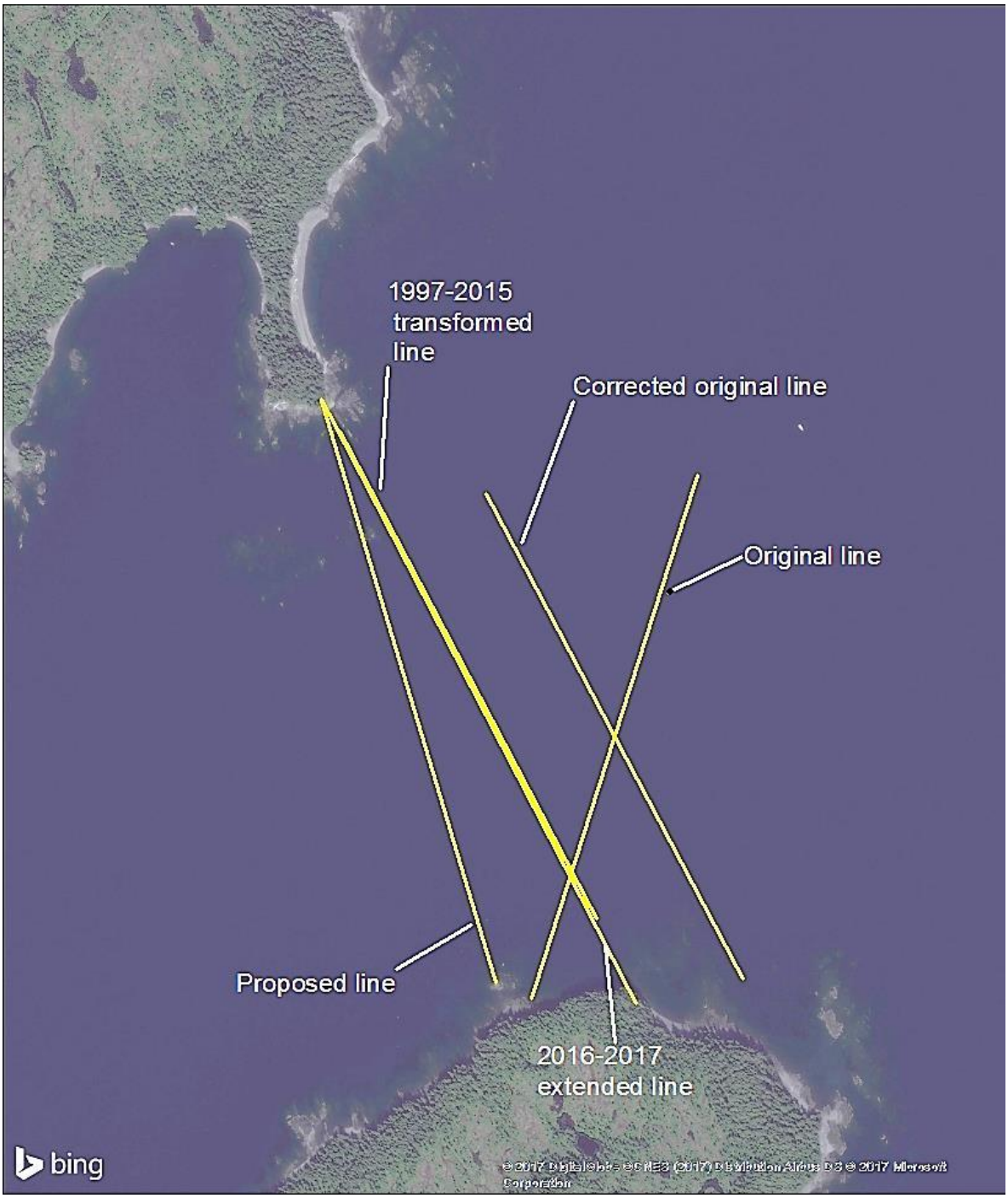

Figure 46-1.–Main Bay Subdistrict line versions, 1985–2017.

PROPOSAL 47 – 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's (VFDA) enhanced salmon harvest value in the *Prince William Sound Management and Salmon Enhancement Allocation Plan* (5 AAC 24.370).

WHAT ARE THE CURRENT REGULATIONS? Under *Prince William Sound Management and Salmon Enhancement Allocation* Plan (5 AAC 24.370(j)), "enhanced salmon stocks" are limited to those salmon produced by Prince William Sound Aquaculture Corporation (PWSAC).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would cause a change in the overall allocation (five-year rolling average) for all gear groups; most notably increasing purse seine value (Table 47-1 and Table 47-2). As a result, the purse seine gear group would not likely have access to the Port Chalmers Subdistrict and the set gillnet gear group would rarely be limited to 36 hours per week in the Eshamy District.

BACKGROUND: The 2007–2016 average annual purse seine harvest of VFDA pink salmon is 15.3 million fish or $16.2 million. During the same ten year period, PWSAC pink salmon average annual purse seine harvest is 22.1 million fish or $25.3 million. The VFDA pink salmon production level is increasing. Beginning in 2016 the permitted capacity at VFDA's Solomon Gulch Hatchery was increased from 230 million to 250 million pink salmon green eggs. Pink salmon from that production increase have not returned. An additional permitted capacity of 20 million green eggs will be added in 2018, increasing the permitted capacity at SGH from 250 million to 270 million pink salmon green eggs, contingent on demonstrated physical capacity for this level of production. Assuming recent average marine survivals and a 94% green egg to fry survival, this production increase could lead to increases in the average annual adult run of approximately 2.2 million for odd-years brood line and approximately 1.6 million for even-years brood line. VFDA also produces coho salmon with a 5-year average purse seine harvest (2012–2016) of VFDA coho salmon of 39,040 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 Prince William Sound 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 in 2005 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.

Table 47-1.–Values and percentages by gear type for PWSAC enhanced stocks, 2007–2016.

	Drift gillnet		Purse seine		Set gillnet	
Year	Value	Percent	Value	Percent	Value	Percent
2007	$30,375,938	58.7%	$21,361,107	41.3%	$1,287,859	4.9%
2008	$25,052,932	31.2%	$55,194,763	68.8%	$1,300,085	2.3%
2009	$20,330,294	57.7%	$14,894,564	42.3%	$1,578,785	5.9%
2010	$13,178,750	35.6%	$23,825,054	64.4%	$3,408,733	3.2%
2011	$13,947,405	86.0%	$2,279,015	14.0%	$2,867,582	6.9%
2012	$30,375,938	58.7%	$21,361,107	41.3%	$3,125,836	5.7%
2013	$25,052,932	31.2%	$55,194,763	68.8%	$2,405,648	2.9%
2014	$20,330,294	57.7%	$14,894,564	42.3%	$2,725,780	7.2%
2015	$13,178,750	35.6%	$23,825,054	64.4%	$1,930,673	5.0%
2016	$13,947,405	86.0%	$2,279,015	14.0%	$1,821,330	10.1%
Grand total	$206,646,752		$258,522,975		$22,452,310	
5-yr average		46.7%		53.3%		5.2%

Table 47-2.–Values and percentages by gear type for PWSAC and VFDA enhanced stocks, 2007–2016.

	Drift gillnet		Purse seine		Set gillnet	
Year	Value	Percent	Value	Percent	Value	Percent
2007	$8,369,927	22.6%	$28,671,689	77.4%	$1,288,350	5.7%
2008	$18,061,741	26.5%	$49,993,820	73.5%	$1,300,278	2.9%
2009	$15,560,084	61.5%	$9,742,664	38.5%	$1,578,807	7.2%
2010	$36,635,693	29.7%	$86,685,100	70.3%	$3,411,756	5.0%
2011	$25,240,526	46.4%	$29,143,723	53.6%	$2,867,876	10.1%
2012	$30,438,464	42.9%	$40,467,239	57.1%	$3,132,507	5.7%
2013	$25,153,004	23.8%	$80,553,028	76.2%	$2,413,363	2.9%
2014	$20,365,621	35.4%	$37,147,046	64.6%	$2,727,022	7.2%
2015	$13,193,346	22.0%	$46,833,330	78.0%	$1,931,730	5.0%
2016	$13,962,508	53.3%	$12,237,321	46.7%	$1,821,765	10.1%
Grand total	$206,980,913		$421,474,960		$22,473,453	
5-yr average		32.2%		67.8%		3.6%

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

PROPOSED BY: Leroy L. Cabana.

WHAT WOULD THE PROPOSAL DO? This would allow commercial fishing for salmon in the Arming F. Koering (AFK) Hatchery Special Harvest Area (SHA) and Terminal Harvest Area (THA) located in the Southwestern District prior to July 18.

WHAT ARE THE CURRENT REGULATIONS? The Southwestern District is closed to commercial fishing before July 18.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would update regulations to accommodate an existing fishery targeting hatchery-produced chum salmon.

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 in order to provide additional fish for the purse seine fleet. As this program developed, regulations were never updated to allow for the harvest of these fish in a common property fishery in the AFK SHA and THA.

The AFK hatchery is situated in one of the primary salmon migration corridors in PWS. Returning enhanced chum salmon share run timing with wild sockeye salmon in Coghill Lake and other systems within PWS, with wild chum and pink salmon returning to systems in the Northern, Eastern, and Coghill Districts, and with enhanced sockeye salmon returning to 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; for example, in recent years, increased fishery participation has resulted in a reduction in fishing area and time from 144 hours per week to 24 hours per week to limit harvest of wild 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 2012, approximately 270,000 MBH and 26,000 wild sockeye salmon have been harvest in this fishery (Table 48-1). MBH sockeye are intended to be harvested by the drift and set gillnet fleets, consequently 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 **SUPPORTS** this proposal.

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

Table 48-1.–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
2005	0	0	0	26.9%
2006	0	15,376	15,376	0.0%
2007	141	361	502	28.1%
2008	3,959	33,044	37,003	10.7%
2009	4,034	54,389	58,423	6.9%
2010	3,106	56,108	59,214	5.3%
2011	2,751	18,679	21,430	12.8%
2012	11,952	57,097	69,049	17.3%
2013	4,396	37,134	41,530	10.6%
2014	2,027	26,151	28,178	7.2%
2015	5,185	99,175	104,360	5.0%
2016	2,323	49,208	51,531	4.5%
2017	N/A	N/A	36,507	N/A
5-year average	5,177	53,753	58,930	8.78%
10-year average	3,987	43,135	47,122	8.46%

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

PROPOSED BY: Michael Bowen.

WHAT WOULD THE PROPOSAL DO? Two options are provided to amend the *Prince William Sound Management and Salmon Enhancement Allocation Plan* which closes salmon fishing in the Southwestern District before July 18.

Option one instructs the department and PWSAC to follow existing regulations and close the AFK Hatchery enhanced chum salmon fishery prior to July 18 within the AFK SHA and THA and have PWSAC harvest returning chum for cost recovery purposes.

Option two instructs the department to develop a management plan to address wild and enhanced sockeye harvest within the AFK SHA and THA.

WHAT ARE THE CURRENT REGULATIONS? The Southwestern District is closed to commercial fishing before July 18.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Option one would eliminate the common property enhanced chum salmon fishery within the AFK SHA and THA and direct PWSAC to harvest those chum salmon for cost recovery purposes.

Under option two, the department would be tasked with developing a management plan for the common property enhanced chum salmon fishery within the AFK SHA and THA.

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 wasn't 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 in order to provide additional opportunity for the purse seine fleet. As this program developed, regulations were never updated to allow for the harvest of these fish in a common property fishery in the AFK SHA and THA.

The AFK hatchery is situated in one of the primary salmon migration corridors in PWS. Returning enhanced chum salmon share run timing with wild sockeye salmon in Coghill Lake and other systems within PWS, with wild chum and pink salmon returning to systems in the Northern, Eastern, and Coghill 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; for example, in recent years, increased fishery participation has resulted in a reduction in fishing area and time from 144 hours per week to 24 hours per week to limit harvest of wild 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 2012, approximately 270,000 MBH and 26,000 wild sockeye salmon have been harvest in this fishery (Table 48-1). MBH sockeye are intended to be harvested by the drift and set gillnet fleets, consequently 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.

Prince William Sound/Copper River Commercial Salmon Area Definitions (3 Proposals)

PROPOSAL 50 – 5 AAC 24.301. Seaward boundary of districts.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would describe waters of the Copper and Bering River district seaward boundaries with geographic coordinates.

WHAT ARE THE CURRENT REGULATIONS? Regulatory language defines a line three miles due south of a line defined by a combination of two onshore geographic coordinates and an ambiguous headland.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This clarifies the Copper River and Bering River district waters with latitude and longitude coordinates, provides a legal description of the fishing area for fishermen and law enforcement personnel, and promotes regulatory compliance.

BACKGROUND: Seaward boundaries of the Copper River and Bering River district, as described in regulation, have proven confusing and difficult to interpret. Current regulatory language defines a line three miles due south of a line defined by a combination of two onshore geographic coordinates and an ambiguous headland. The department proposes to simplify this district boundary description by defining a point to point line with coordinates for each of the vertices.

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.

PROPOSAL 51 – 5 AAC 24.200. Fishing districts and subdistricts.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would describe the district and subdistrict boundaries to match department statistical area boundaries within the Prince William Sound Management Area with geographic coordinates.

WHAT ARE THE CURRENT REGULATIONS? Regulatory language describes districts and subdistrict boundaries using ambiguous lines and undefined points.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This clarifies district and subdistrict boundary descriptions in Prince William Sound with latitude and longitude coordinates. This would provide a legal description of the fishing area for fishermen and law enforcement. This would avoid confusion from commercial fishermen and enforcement in the future.

BACKGROUND: The department has reviewed and identified district and subdistrict boundary descriptions in Prince William Sound that need to be clarified or amended for consistency and accuracy.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. The proposed district and subdistrict boundary lines align with statistical area boundaries.

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

PROPOSAL 52 – 5 AAC 24.100. Description of area.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would amend Prince William Sound Area description to specify lines of longitude for the eastern and western boundaries

WHAT ARE THE CURRENT REGULATIONS? The Prince William Sound Area is defined as all waters between Cape Fairfield and Cape Suckling.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would clarify the western and eastern boundaries of Prince William Sound and provides a legal description of the fishing area for fishermen and law enforcement. This would avoid confusing from commercial fishermen and enforcement in the future and will allow for a consistent and repeatable point of reference for those involved in area fisheries.

BACKGROUND: There are no geographic coordinates in regulation to accurately define the western and eastern boundaries of the Prince William Sound Area.

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

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