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ALASKA DEPARTMENT OF FISH AND GAME

STAFF COMMENTS ON REGULATORY PROPOSALS FOR FINFISH FOR THE KODIAK MANAGEMENT AREA

ALASKA BOARD OF FISHERIES MEETING
KODIAK, ALASKA

January 11–14, 2020

Regional Information Report No. 4K19-12

The following staff comments were prepared by the Alaska Department of Fish and Game for use at the Alaska Board of Fisheries meeting, January 11–14, 2020, in Kodiak, Alaska. The comments are forwarded to assist the public and board. The comments contained herein should be considered preliminary and subject to change, as new information becomes available. Final department positions will be formulated after review of written and oral public testimony presented to the board.

Acronyms and Abbreviations

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

Weights and measures (metric)

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

Weights and measures (English)

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

Time and temperature

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

Physics and chemistry

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

General

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

Acronyms

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

REGIONAL INFORMATION REPORT 4K19-04

ALASKA DEPARTMENT OF FISH AND GAME

STAFF COMMENTS ON REGULATORY PROPOSALS FOR FINFISH FOR THE KODIAK MANAGEMENT AREA

ALASKA BOARD OF FISHERIES MEETING KODIAK, ALASKA

January 11–14, 2020

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

December 2019

ABSTRACT

This document contains Alaska Department of Fish and Game staff comments on commercial regulatory proposals for the Kodiak Management Area finfish. These comments were prepared by the department for use at the Alaska Board of Fisheries meeting, January 11–14, 2020, in Kodiak, Alaska. The comments are forwarded to assist the public and board. The comments contained herein should be considered preliminary and subject to change, as new information becomes available. Final department positions will be formulated after review of written and oral public testimony presented to the board.

Key words: Alaska Board of Fisheries (board), Alaska Department of Fish and Game (department), staff comments, regulatory proposals, fisheries, finfish, Kodiak Management Area

This document should be cited as follows:

ADF&G (Alaska Department of Fish and Game). 2019. Alaska Department of Fish and Game staff comments on regulatory proposals for finfish for Kodiak Management Area Alaska Board of Fisheries meeting, Kodiak, Alaska, January 11–14, 2020. Alaska Department of Fish and Game, Regional Information Report 4K19-12, Kodiak.

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Summary of department positions on regulatory proposals for Kodiak finfish, Kodiak, January 11–14, 2020.

Prop. No.	Dept. Position	Issue
45	S	This would create a new saltwater boundary for the Kodiak Road Zone (KRZ) that would use lines between fixed points of land as the regulatory area boundary instead of a continuous distance from the shoreline of the KRZ.
46	S	Establish a sportfishing season for king salmon in the Dog Salmon River. Sport fishing for king salmon would be limited to catch-and-release only and the use of bait would be prohibited in the drainage during the king salmon season.
47	S	Increase the area of Monashka Creek open to sport fishing approximately 50 yards upstream from the highway bridge, effectively opening the entire intertidal zone to sportfishing and allowing anglers to access hatchery coho salmon that hold in the existing closed waters.
48	S	Establish a management plan and guideline harvest range (GHR) for the Kodiak Management Area rockfish sport fishery and a GHR for the Kodiak Area commercial black rockfish fishery.
49	N	Establish a Kodiak Area state-waters sablefish fishery with a guideline harvest level (GHL) set at 1% of the Central Gulf of Alaska sablefish total allowable catch. As proposed, the fishery would be modeled on the Cook Inlet Sablefish Management Plan (5 AAC 28.360) which allows for pot, longline, and mechanical jigging machine gear; a 2-day 3,000-pound trip limit; a minimum 6-hour notification prior to landing; and a logbook requirement. The season would be open September 1 through December 31, or until the GHL is achieved.
50	N	Increase the maximum number of mechanical jigging machines that may be operated by a groundfish vessel in the Kodiak Area from 5 to 6.
51	N	Change the Kodiak Area state-waters Pacific cod guideline harvest level allocation to 40% for vessels using jig gear and 60% for vessels using pot gear and annually adjust the allocation, up or down 5%, based on jig gear fishery performance the previous year.
52	N	Increase the Kodiak Area state-waters Pacific cod guideline harvest level (GHL) from 12.5% to 17.5% of the federal Central Gulf of Alaska Pacific cod allowable biological catch and change the GHL gear allocation to 65% for vessels using pot gear and 35% for vessels using jig gear.
53	N	Rollover unharvested Kodiak Area state-waters Pacific cod jig gear guideline harvest level to state-waters pot gear vessels the following calendar year.
54	N	Provide the department flexibility to reopen the Kodiak Area state-waters Pacific cod pot gear fishery earlier in the year to reduce foregone jig harvest. On May 1, if the department anticipates the jig gear guideline harvest level (GHL) allocation will not be fully harvested by June 10, the state-waters season may reopen to pot gear vessels on May 8. Harvest by pot gear vessels would be capped at 50% of the remaining jig gear GHL allocation (as of May 1).
44	O	This would amend the Kamishak Bay District Herring Management Plan to remove restrictions to the Shelikof Strait food and bait herring fishery. This would require that this fishery be managed based solely on surveys of spawning biomass in bays adjacent to Shelikof Strait north of Miner's Point.
55	N	This would change the start date of the Kodiak Area Herring sac roe fishery from April 15 to April 1.
56	O	This would update the regulatory language for the Kodiak food and bait herring fishery so that it is managed only on local stocks. This proposal would also allow the department to designate sections as exploratory for the food and bait fishery.
57	N	This proposal mistakenly states it would eliminate the allocation between gillnet permit holders and purse seine permit holders in the Kodiak herring food and bait fishery and allow both gear types to fish the same sections on alternating days; however, these changes would apply to the sac roe fishery.

-continued-

Page 2 of 3.–Summary of department positions on regulatory proposals for Kodiak finfish, Kodiak, January 11–14, 2020.

Prop. No.	Dept. Position	Issue
58	N	This would close the Cape Igvak Section to all commercial salmon fishing prior to July 8.
59	N	This would change the definition of the "total Chignik sockeye salmon catch" for allocation purposes in the Cape Igvak Section to only include sockeye salmon harvested in the Chignik Management Area from June 1 through July 25.
60	N	This seeks to change the harvest allocation percentage of the Chignik-bound sockeye salmon in the Cape Igvak Section from the current as near as possible 15% to the proposed less than 5.0%.
61	N	This adjusts the Chignik Area sockeye salmon harvest assurance prior to July 9 from the current 300,000 fish to 1,000,000 fish. This also changes the definition of "Chignik salmon catch" to only include sockeye salmon harvest in the Chignik Area prior to July 9. A Cape Igvak Section fishery would not be allowed within the 72 hours following the initial Chignik fishing period. Finally, the Cape Igvak Section would not be covered by a management plan from July 9 through July 25.
62	O	Prior to July 9, this would require commercial salmon fishing vessels to report to department staff prior to fishing and check out upon leaving the Cape Igvak Section.
63	N	This would institute new seaward zone closed water areas on the Mainland District to protect king salmon. From June 1 through July 25, a maximum of two 12-hour fishing periods per week would be allowed in the newly formed seaward zones.
64	N	This would institute new seaward zone closed water areas on the Mainland District between June 28 through July 25.
65	N	This would close the Cape Igvak, Alinchak Bay, and Katmai Bay sections of the Mainland District to commercial salmon fishing June 28 through July 25.
66	O	Adopt a new management plan capping weekly and seasonal commercial sockeye salmon harvest in certain portions of the Kodiak Management Area (5 AAC 18.XXX).
67	N	This would allow monofilament web in the Kodiak commercial salmon set gillnet fishery.
68	N	This would make set gillnet gear legal in the Humpy-Deadman and Cape Alitak sections north of a line from Cape Alitak to Cape Trinity in the Alitak District after September 4.
69	S	This would allow the department to manage the Central and North Cape sections of the Northwest Kodiak District from July 6 through August 15 based on pink salmon returning to the major systems of the Northwest Kodiak District or, in even-years, based on pink salmon returning to the Karluk system.
70	N	This would allow the department to manage the Central and North Cape sections of the Northwest Kodiak District from July 6 through August 15 based on pink salmon returning to the major systems of the Northwest Kodiak District or based on pink salmon returning to the Karluk system.
71	O	This would close the inner bay sections of the Northwest Kodiak District until the individual inner bay salmon escapement objectives are met.
72	O	This would limit commercial openings in the Inner Ayakulik Section of the Southwest Kodiak District between June 10 and July 15 to not more than 6 consecutive hours.
73	N	This would establish a mandatory 24-hour closure between commercial salmon openings in the Inner Ayakulik Section of the Southwest Kodiak District.
74	N	This would amend the closed waters description for the Ayakulik River in the Inner Ayakulik Section of the Southwest Kodiak District to include those waters within 500 yards of the stream terminus between June 10 through July 15.

-continued-

Page 3 of 3.–Summary of department positions on regulatory proposals for Kodiak finfish, Kodiak, January 11–14, 2020.

Prop. No.	Dept. Position	Issue
75	N	This would amend the closed waters description for the Ayakulik River in the Inner Ayakulik Section of the Southwest Kodiak District to include those waters within 500 yards of the stream terminus. Closed water GPS coordinates would be determined preseason.
76	O	This would open the Outer Karluk and Central sections concurrent with the Inner Karluk Section if the department determines the midpoint of the early-run sockeye salmon escapement goal range will be met.
77	N	This would amend the closed waters description for the Ayakulik River in the Inner Ayakulik Section of the Southwest Kodiak District to include those waters within 500 yards of the stream terminus between the dates of September 1 through October 31. Closed water GPS coordinates would be determined preseason.

PROPOSAL 45 – 5 AAC 64.005. Description of the Kodiak Area.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would create a new saltwater boundary for the Kodiak Road Zone (KRZ) that would use lines between fixed points of land as the regulatory area boundary instead of a continuous distance from the shoreline of the KRZ (Figures 45-1 and 45-2).

WHAT ARE THE CURRENT REGULATIONS? The KRZ includes all waters within 1 mile of the shoreline of Kodiak and Spruce Islands east of a line from Crag Point in the north to the westernmost point of Saltery Cove in the south (Figure 45-1). The Remote Zone includes all other waters of the Kodiak Management Area (KMA). Coho salmon bag limits in the KRZ are 2 per day January 1 through September 15 and 1 per day from September 16 through December 31, and are 5 per day for the Remote Zone year-round; salmon possession limits are equal to bag limits in the KRZ, whereas in the Remote Zone the possession limit is double the bag limit.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would aid boat-based anglers in identifying KRZ boundary lines more clearly and effectively, allowing them to more easily understand current regulations in the area they are fishing. It would also aid enforcement by using fixed geographical points rather than a continuously changing line that follows the shoreline. While the regulatory language is more complex, the regulations would provide clarity in practice since they would be more easily interpreted by simple observation of a map and geographical points rather than needing to measure the distance of an angler's boat from shore. This would provide significant protection for some of the smallest coho salmon streams of KRZ, while providing increased access to large concentrations of feeding coho salmon in nearshore saltwaters that can sustain potential harvest levels associated with Remote Zone bag limits. This would also decrease sport fishing opportunity in areas closest to salmon spawning streams, such as Kalsin Bay, while allowing additional sport fishing opportunity in areas associated with waters further offshore such as those near Cape Chiniak and Spruce Cape that often hold large aggregations of feeding coho salmon throughout the summer months (Figure 45-2).

BACKGROUND: The KRZ has more restrictive regulations than the Remote Zone for several sport fisheries since it is easily accessed from the community of Kodiak and the associated road system. More conservative regulations in the KRZ take into account increased pressure and opportunity for harvest associated with the ease of access to local salmon streams and that all KRZ salmon runs and associated drainages are relatively small in comparison to many of the Remote Zone drainages. The saltwater boundary of the KRZ is intended to provide a buffer that protects KRZ coho salmon runs by providing a reduced bag limit near coho salmon spawning streams. Other bag and possession limits are affected by the KRZ boundary, such as sockeye and pink salmon, but harvests of species other than coho salmon in KRZ saltwaters are very low and effort for these species is also very low since most effort is concentrated in freshwaters for these species.

KRZ coho salmon runs, in aggregate, make up the largest sport fishery in the KMA. There are approximately 20 coho salmon runs available to anglers (Figures 45-1 and 45-2) and fishing effort in the KRZ is the highest during August and September when coho salmon runs are ongoing. The department annually assesses the Buskin River with a weir and assesses 10 other drainages by foot surveys prior to or during spawning in October and November. However, inseason management primarily focuses on the Buskin River. Three of the drainages, the American, Olds and Pasagshak rivers, are assessed inseason via drone surveys when conditions allow. The Buskin River has had

an average weir count of 5,948 from 2009 to 2018 and the remainder of the KRZ streams vary in counts of coho salmon—from fewer than 50 fish to more than 4,000. The American, Olds and Pasagshak drainages are the largest runs after the Buskin (Table 45-1). KRZ saltwater coho salmon harvests have averaged 6,531 from 2009 to 2018, though this is harvest primarily from Chiniak Bay and includes both areas inside and outside of the KRZ boundary line; the Statewide Harvest Survey does not specify between the 2 areas within the Chiniak Bay reporting area (Table 45-2).

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

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

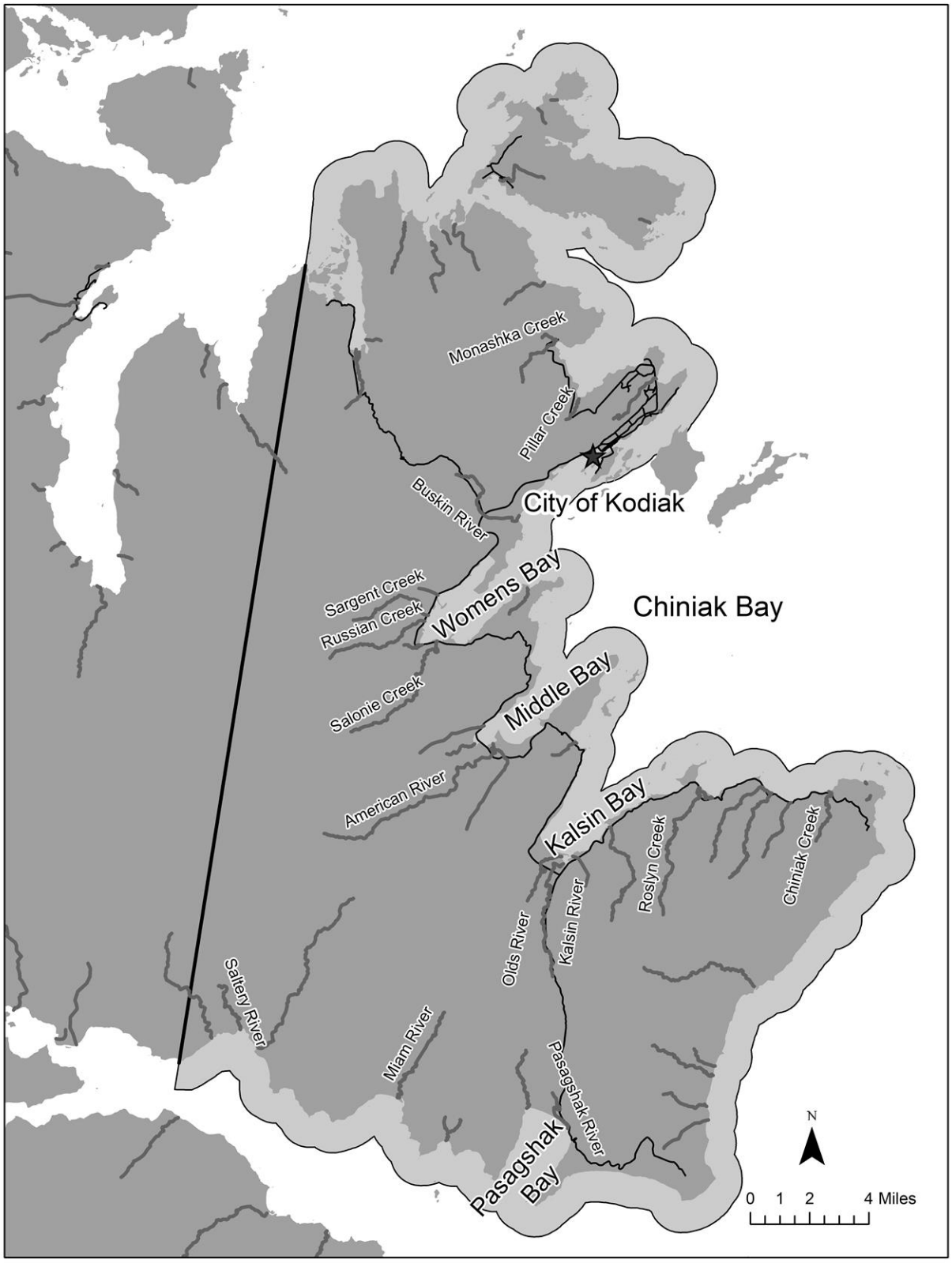

Figure 45-1.–Existing boundary of the Kodiak Road Zone.

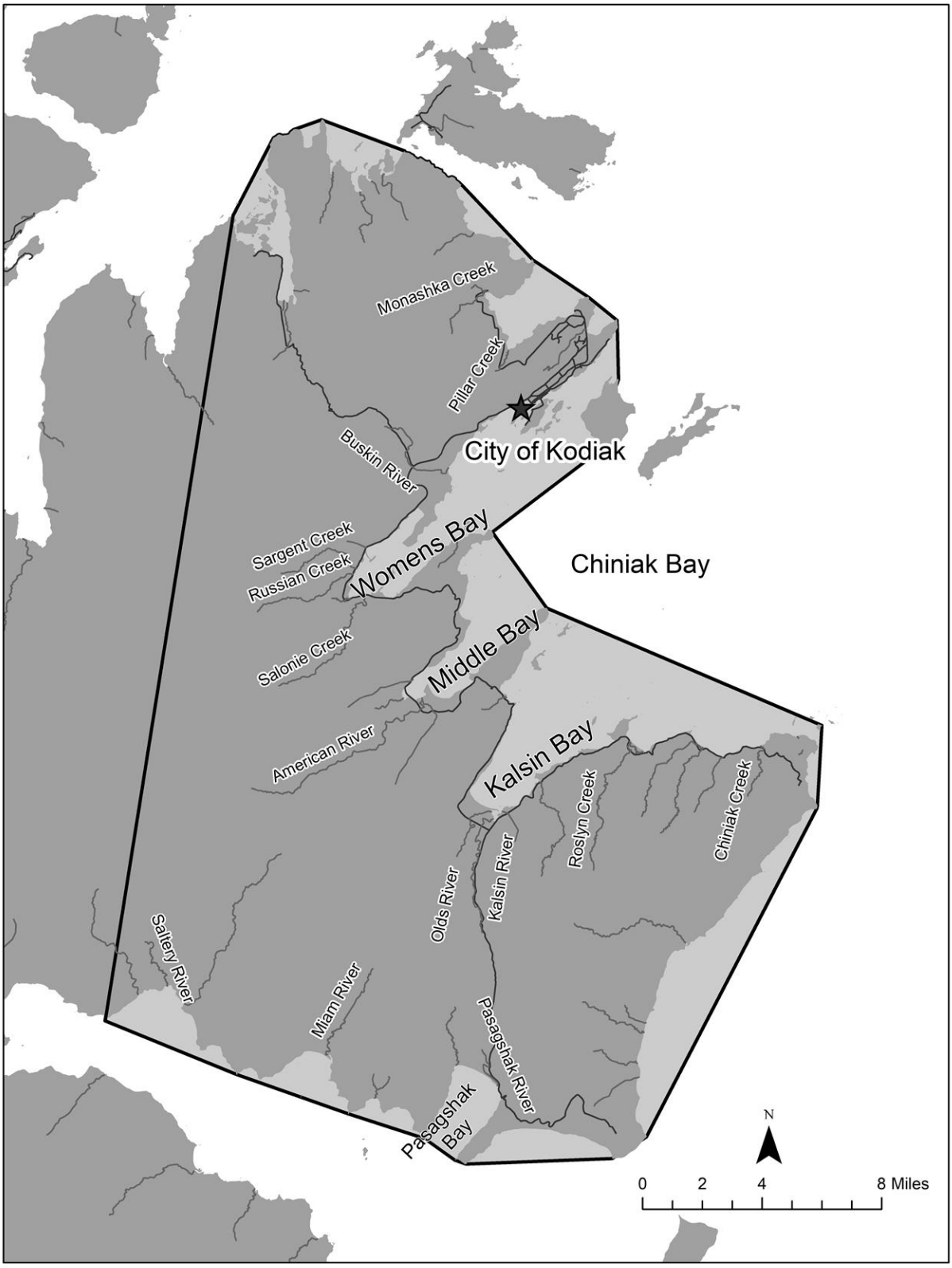

Figure 45-2.–Proposed boundary of the Kodiak Road Zone.

Table 45-1.–Buskin River weir counts and Kodiak Road Zone foot survey counts for coho salmon, 2009–2019.

Year	Buskin	Pasagshak	Olds	American	Felton	Monashka	Pillar	Roslyn	Russian	Sargent	Salonie
2009	10,624	2,385	697	639	160	132	89	ns	144	74	ns
2010	6,808	1,971	127	58	ns	37	56	18	97	44	90
2011	6,026	1,083	1,003	1,061	633	36	248	293	158	135	942
2012	5,291	3,132	624	427	17	300	858	159	39	90	304
2013	5,386	1,648	2,145	841	50	679	1,043	460	214	40	286
2014	8,413	4,934	1,320	1,595	22	230	750	3,900	246	75	509
2015	4,341	1,790	1,357	530	33	100	180	271	70	39	215
2016	2,513	667	1,634	500	27	60	116	45	345	107	218
2017	5,559	701	1,054	410	62	66	417	365	820	377	502
2018	4,523	4,335	880	78	0	210	1,273	15	35	17	7
2019	5,537	ns	ns	ns	ns	46	106	ns	151	65	ns
Avg	5,948	2,265	1,084	614	112	185	503	614	217	100	341

Note: ns = no survey.

Table 45-2.–Kodiak Road Zone coho salmon harvests and sport fishing effort in angler days, 2009–2018.

Year	Anglers	Angler-days	Saltwater Harvest [a]	Freshwater Harvest
2009	22,827	72,192	9,075	11,584
2010	20,927	55,195	4,660	8,674
2011	20,914	61,524	5,573	12,079
2012	19,299	62,389	6,947	7,792
2013	25,348	84,341	4,533	13,894
2014	26,160	79,475	3,567	21,168
2015	23,164	79,743	10,668	16,906
2016	16,947	55,659	4,486	9,930
2017	22,006	75,231	6,063	10,544
2018	17,358	51,117	9,744	6,405
Average	21,495	67,687	6,532	11,898

[a] Includes all of Chiniak Bay harvest that encompasses a portion of both the Kodiak Road Zone and Remote Zone that fall within the Chiniak Bay Statewide Harvest Survey reporting area.

PROPOSAL 46 – 5 AAC 64.022. Waters; seasons; bag, possession, annual and size limits; and special provisions for the Kodiak Area.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? Establish a sportfishing season for king salmon in the Dog Salmon River (Figure 46-1). Sport fishing for king salmon would be limited to catch-and-release only and the use of bait would be prohibited in the drainage during the king salmon season.

WHAT ARE THE CURRENT REGULATIONS? The Dog Salmon River is currently closed to sportfishing for king salmon.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would create opportunity for anglers to target and catch king salmon in the Dog Salmon River drainage from January 1 to July 25.

BACKGROUND: A small king salmon run exists in the Dog Salmon River drainage that was established through a stocking project that began in the late 1960s and was discontinued by 1970. Existing sportfishing regulations were enacted in the 1980s in hopes of allowing the run to build to a point where it could sustain itself. Escapements of king salmon have been monitored at Frazer Lake Fish Pass at the headwaters of the Dog Salmon River since the inception of the run and by a weir on the lower Dog Salmon River since 1983. Counts at the Dog Salmon weir have ranged from a low of 17 fish to a high of 723 fish and counts at the Frazer Lake Fish Pass have ranged from a low of 17 fish to a high of 485 fish (Table 46-1). Stocking has not occurred since the original stocking project and there are no plans to enhance this stock or attempt to achieve any management objective for it. The run has never been very large or very productive and is likely harvested in small numbers in nearby commercial and subsistence fisheries in Alitak, Moser, and Olga bays (Figure 46-1). Due to difficult access in the area and limitations enacted by the Kodiak National Wildlife Refuge on the number of guides that can operate in parts of the drainage, it is unlikely a large sport fishery could develop in the area and a small catch-and-release fishery will likely have minimal biological impact on the king salmon run. Based on freshwater logbook data, from 2006 to 2018 (preliminary estimates for 2017 and 2018), an average of approximately 205 guided anglers fished the Dog Salmon River and Frazer Lake annually. This is the only king salmon run in the area that can be accessed from Alitak, Moser, and Olga bays and would provide opportunity for several guide services and local unguided residents that was not previously available.

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

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

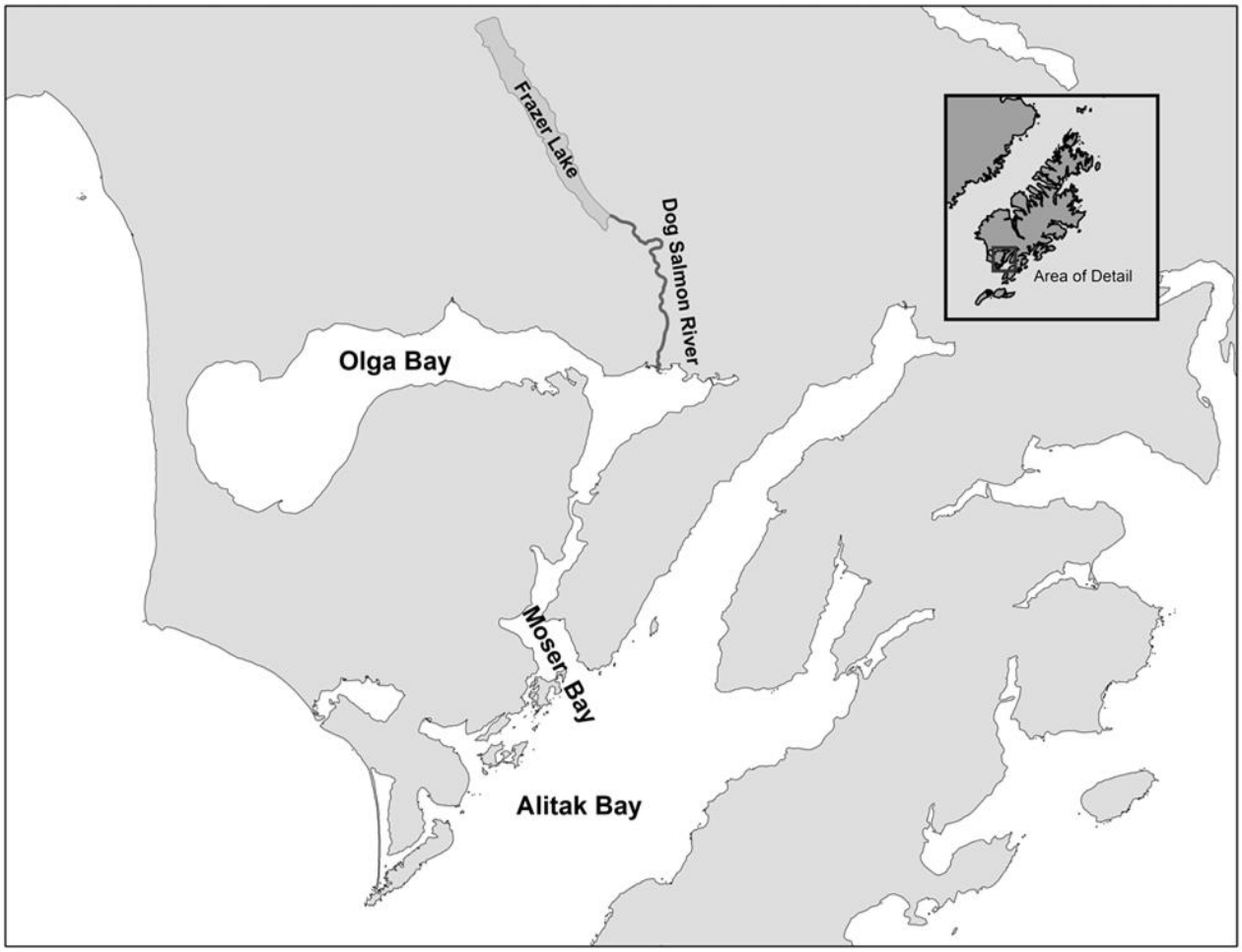

Figure 46-1.–Dog Salmon River drainage and Alitak, Moser and Olga bays.

Table 46-1.–Counts of king salmon at Dog Salmon River weir and Frazer Lake Fish Pass, 1983–2019.

Year	Dog Salmon Weir count	Frazer Lake Fish Pass count
1983	169	86
1984	137	85
1985	340	165
1986	221	127
1987	103	94
1988	303	212
1989	156	85
1990	270	183
1991	282	127
1992	265	128
1993	337	211
1994	385	189
1995	470	296
1996	683	485
1997	662	454
1998	293	147
1999	281	126
2000	357	121
2001	362	166
2002	383	211
2003	723	443
2004	575	204
2005	335	156
2006	245	59
2007	141	57
2008	90	19
2009	127	42
2010	354	41
2011	83	27
2012	152	39
2013	96	42
2014	39	17
2015	81	40
2016	94	58
2017	73	40
2018	66	39
2019	17	24

PROPOSAL 47 – 5 AAC 64.051. Waters closed to sportfishing in the Kodiak Area.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? Increase the area of Monashka Creek open to sport fishing approximately 50 yards upstream from the highway bridge, effectively opening the entire intertidal zone to sportfishing and allowing anglers to access hatchery coho salmon that hold in the existing closed waters.

WHAT ARE THE CURRENT REGULATIONS? Monashka Creek is closed to sport fishing upstream from the highway bridge (Figure 47-1).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would increase opportunity for anglers to harvest hatchery coho salmon in Monashka Creek.

BACKGROUND: Monashka Creek was previously a brood source for the Kodiak Road System King Salmon Enhancement project and the existing closed waters were enacted to protect returning king salmon used for brood stock in the project while allowing a small king salmon sport fishery in the intertidal zone. Due to poor returns of king salmon to Monashka Creek, brood stock is now collected in other locations and there are no plans for future brood collection at Monashka Creek at this time. Monashka Creek is currently stocked with coho salmon and has seen estimated total runs of up to 5,000 fish with a growing sport fishery associated with this run. Many of these fish hold in closed waters during high tides or between tide cycles when enough water is present; they are not accessible to anglers, though there is no conservation concern with allowing harvest of these fish. Upstream of the intertidal zone, Monashka Creek is extremely small and not suitable for fishing due to its size; leaving some of the drainage closed to sportfishing would allow some undisturbed natural spawning in the creek. Harvest estimates for Monashka Creek are only available for 2006 (218 fish) and 2017 (354 fish) from the Statewide Harvest Survey. An index survey of the Monashka Creek coho salmon run is counted annually by foot survey during spawning and has ranged from 36 to 679 fish in the last 20 years (Table 47-1).

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

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

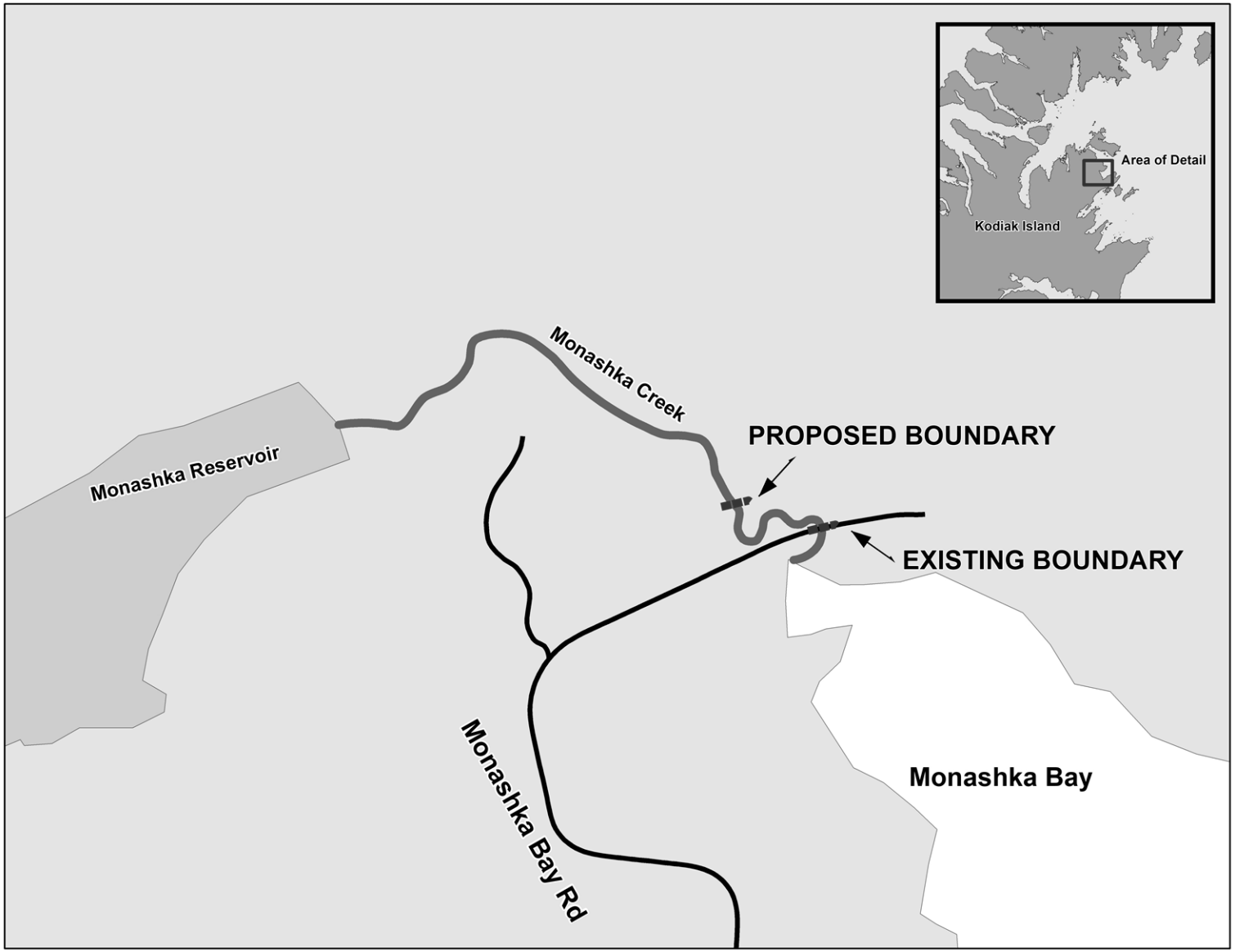

Figure 47-1.–Map of existing and proposed closed water boundaries of Monashka Creek.

Table 47-1.–Foot surveys of Monashka Creek coho salmon, 1999–2019.

Year	Count
1999	71
2000	90
2001	83
2002	343
2003	45
2004	84
2005	282
2006	238
2007	185
2008	19
2009	132
2010	37
2011	36
2012[a]	300
2013[a]	679
2014[a]	230
2015[a]	100
2016[a]	60
2017[a]	66
2018[a]	210
2019[a]	46

[a.] Hatchery production has enhanced returns since 2012.

PROPOSAL 48 – 5 AAC 28.466. Kodiak Area Rockfish Management Plan; and 5 AAC 64.XXX. New Section.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? Establish a management plan and guideline harvest range (GHR) for the Kodiak Management Area (KMA) rockfish sport fishery and a GHR for the Kodiak Area commercial black rockfish fishery.

WHAT ARE THE CURRENT REGULATIONS? Sport fishery limits are 5 rockfish per day and 10 in possession—except within Chiniak and Marmot bays, the limit is 3 rockfish per day and 6 in possession and captain and crew of charter vessels may not retain rockfish. In either of these areas only 2 per day of these may be nonpelagic rockfish with 4 in possession and 1 per day may be a yelloweye rockfish with 2 in possession (Figure 48-1). Commercial rockfish fisheries are managed according to the Kodiak Area Rockfish Management Plan (5 AAC 28.466) according to guideline harvest levels (GHL) set by the department in 7 management districts (Figure 48-1).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would institute a range of harvests set in regulation for both sport and commercial fisheries intended to keep both fisheries at or near current harvest levels. It would provide a suite of management actions prioritized and/or determined by the board for the sport fishery as well as provide a management framework of both sport and commercial rockfish fisheries in recognition that both fisheries are utilizing a single stock and should be managed accordingly. GHRs set in regulation for both fisheries would be specific to black rockfish only.

BACKGROUND: Rockfish are a long lived, slow growing, and slow reproducing group of fishes that are recognized as requiring conservative management approaches. Sport and commercial fisheries target mostly black rockfish with effort occurring throughout the KMA, and management efforts are focused primarily on this single species. The largest commercial harvests take place in 4 management districts: Afognak, Northeast, Eastside and Southeast districts (Figure 48-1). Commercial harvests are limited by both trip limits and GHLs specific to black rockfish for each district. The majority of commercial effort occurs in the spring, but the fishery can remain open throughout the year depending on when GHLs are met in each district. The largest sport harvests occur near the City of Kodiak in the Northeast District and the fishery occurs mostly from May through September, though some rockfish are taken year-round. Significant sport harvests also occur in the Afognak and Eastside districts, though they are smaller than harvests in the Northeast District. According to dockside sampling in the Port of Kodiak, about 70% of rockfish harvested are black rockfish, though several species are targeted, and this percentage can vary annually.

Interest in rockfish as a targeted species has grown substantially, first by guided anglers and more recently by unguided anglers as well. Due to this increasing interest, sport harvests of rockfish have increased substantially since 2005 and regulations were enacted by the board in 2011 and then again in 2017 to attempt to slow the growth of harvest in the sport fishery since little information was available to determine acceptable harvest rates (Figure 48-2). Sport harvests of black rockfish in the Northeast District have averaged 10,578 from 2012 to 2017 and, on average, account for a little more than half of the combined harvest in the KMA (Table 48-1). Commercial jig gear harvests in the Northeast District have averaged 20,077 lb (approximately 5,000 fish using 4 lb average weight) from 2009 to 2018 and has been relatively stable for the last 20 years (Table 48-2).

Since the most recent regulation changes were implemented in the sport fishery, several research projects have been ongoing or were recently implemented in conjunction with the department's Statewide Rockfish Initiative that have given more specific information on both harvest rates in the sport fishery and a longer time series of abundance estimates for black rockfish populations. A hydroacoustic survey has been ongoing since 2007 and has now gathered a long enough time series of data that it has allowed department managers and researchers to compare commercial and sport harvest levels of black rockfish to a preliminary index of black rockfish abundance in each of the management districts of the KMA. In addition to this, a specific estimate of the sport harvest of black rockfish for each of the commercial rockfish management districts was developed because sport harvests in the past have been measured only by rockfish as a species assemblage and in broad geographic areas that are not directly comparable to commercial management districts. Annual department rockfish meetings in the Kodiak ADF&G office have provided managers and researchers the opportunity to examine harvest data and abundance estimates from both fisheries, as well as age, length, sex, and species composition from both sport and commercial harvests.

The best information indicates that black rockfish populations appear to be stable; however, harvests may be approaching a conservative maximum harvest level in some areas, primarily in the Northeast District, when considering estimates of total removals and abundance indices (Table 48-3). Implementing a management plan for the sport fishery and providing guideline harvest ranges for both fisheries would ensure that harvests stay within a sustainable range, as well as providing an opportunity for board input into potentially allocative management tools to manage the sport fishery on a finer scale than currently available. Estimates of total removals and population abundance estimates are not refined enough to expect management to set annual harvest targets in the sport fishery at this time; however, providing a suite of management options for the sport fishery will allow the department to reduce harvests when they appear to approaching the GHR over a 2- or 3-year period. It will both allow more flexibility for managers and stability for anglers than broad bag limits, time restrictions, or area reductions; these tend to result in large reductions in harvests where smaller reductions may be more appropriate. The sportfish management plan would also provide flexibility if future data are available that would allow management actions on an even shorter time scale such as inseason or on an annual basis.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. The department is **NEUTRAL** on the allocative aspects of this proposal. If this proposal were to be adopted, the department would ask the board to prioritize the order of sportfish management actions within the plan.

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

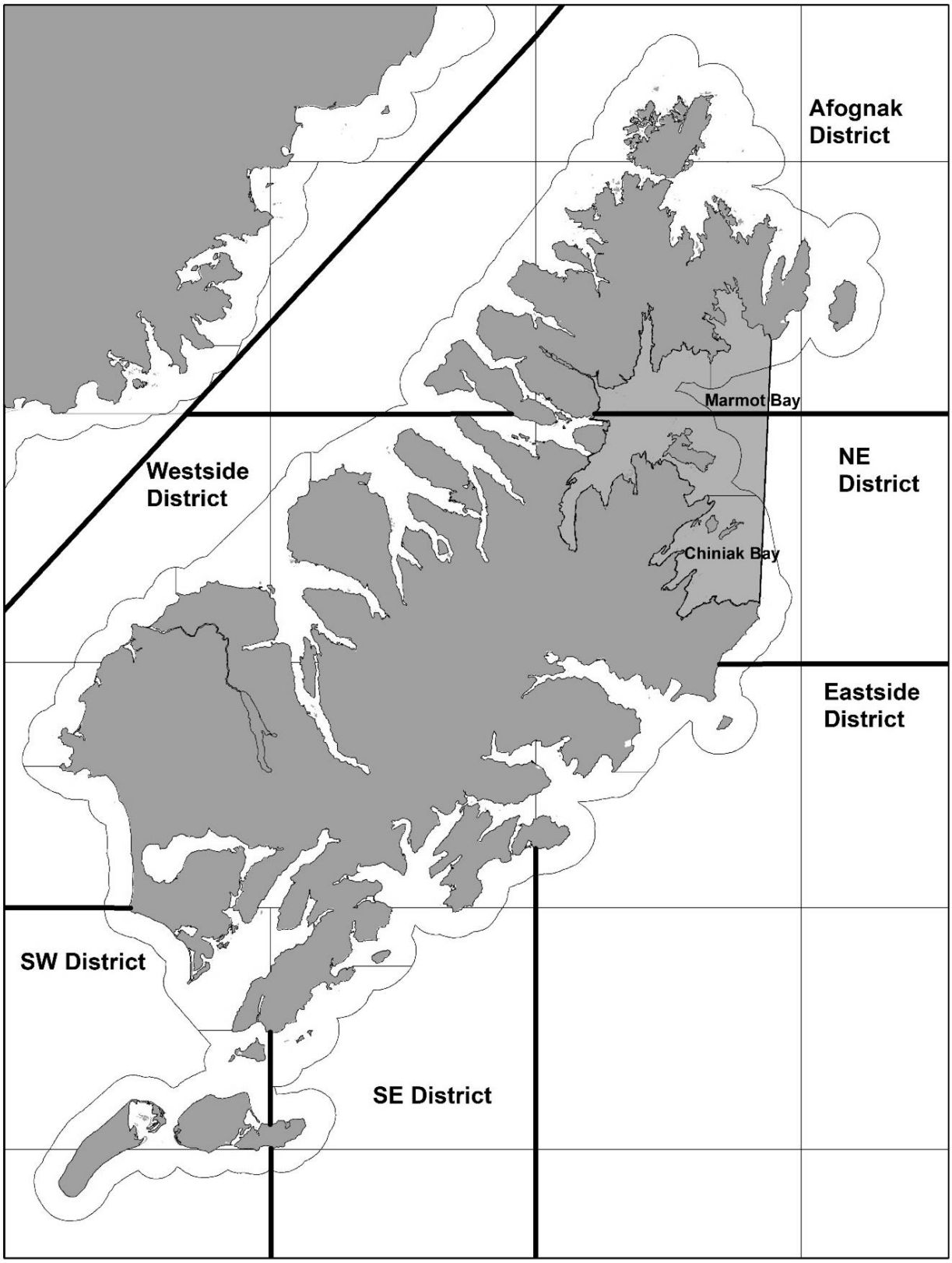

Figure 48-1.–Kodiak Area fishing districts and area of reduced sportfish bag limits (gray shaded area).

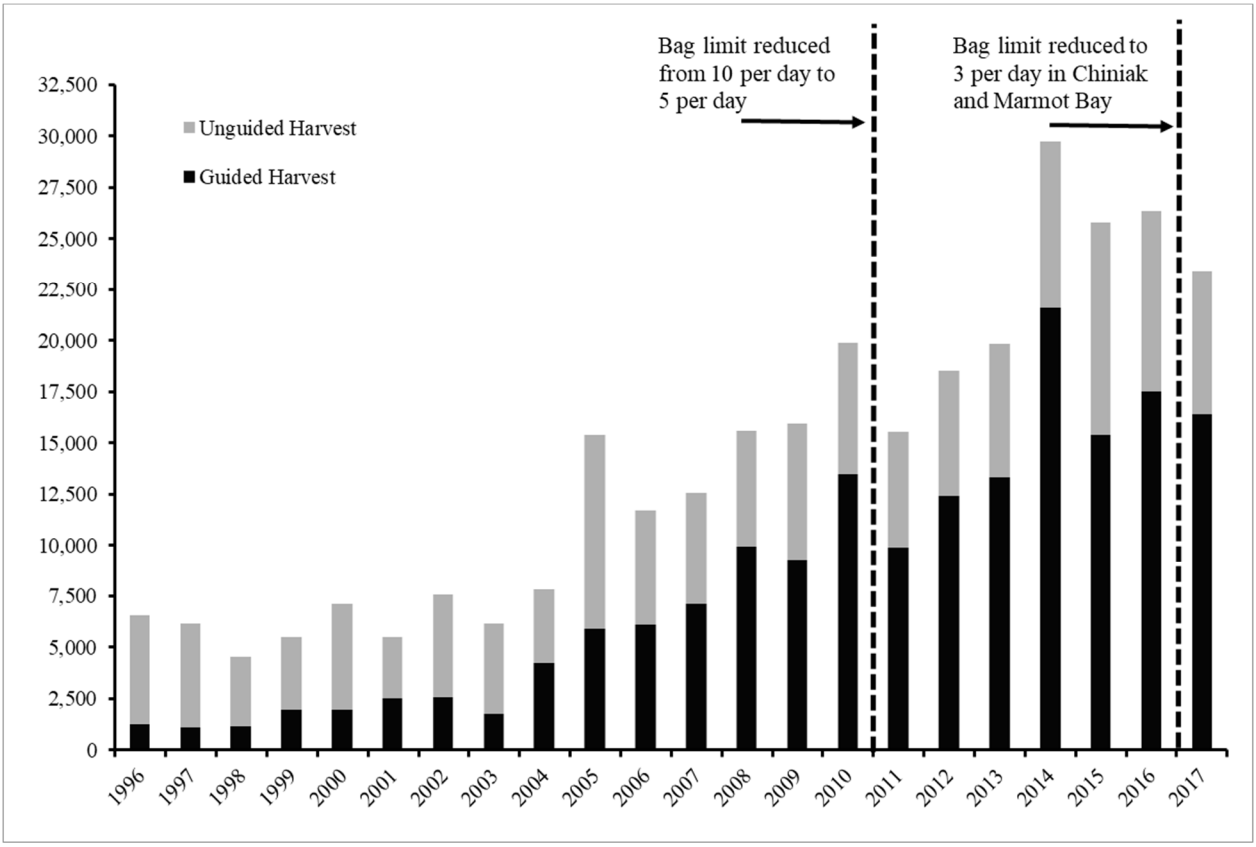

Figure 48-2.–Statewide Harvest Survey estimates of rockfish harvest in the KMA by guided and unguided anglers, 1996–2018.

Table 48-1.–Estimated sport harvests of black rockfish by fishing district, 2005–2018.

Year	KMA	NE	Afognak	East	West	Other KMA
2005	ND	4,833	ND	ND	ND	ND
2006	ND	3,493	ND	ND	ND	ND
2007	ND	6,907	ND	ND	ND	ND
2008	ND	5,148	ND	ND	ND	ND
2009	ND	4,887	ND	ND	ND	ND
2010	ND	5,823	ND	ND	ND	ND
2011[a]	13,724	7,348	2,856	1,486	1,174	860
2012	17,282	8,059	3,105	2,805	2,193	1,119
2013	14,495	8,825	1,892	1,446	1,361	971
2014	20,999	12,384	2,889	2,854	2,186	686
2015	20,296	11,002	3,892	2,576	1,981	846
2016	24,581	14,945	3,733	2,535	2,564	804
2017	19,702	8,260	4,033	4,162	2,893	354
2018	21,403	8,781	4,921	3,199	3,749	753
2014–2018 avg	21,396	11,074	3,894	3,065	2,675	689

Source: Polum and Huang, 2018.

Note: Black rockfish harvests estimated by district using a combination of logbook data, Statewide Harvest Survey guided/unguided ratios, and dockside sampling data beginning in 2018.

Note: ND = no data

[a] Statewide Harvest Survey began estimating guided and unguided harvest separately in 2011 and is a key element in estimating sport fish harvests in the KMA. The NE district uses guided and unguided harvest ratios from the dockside sampling data and is available prior to 2011.

Table 48-2.–Commercial harvest of black rockfish in the Northeast District, 1998–2018.

Year	GHL (lb)	Vessels	Landings	Harvest (lb)
1998	25,000	35	123	34,672
1999	20,000	33	77	17,679
2000	20,000	36	84	28,656
2001	20,000	17	48	19,355
2002	20,000	16	45	36,026
2003	20,000	18	43	24,575
2004	20,000	27	68	22,637
2005	20,000	12	40	20,563
2006	20,000	11	33	27,388
2007	20,000	11	29	23,104
2008	20,000	8	20	20,017
2009	20,000	6	17	19,071
2010	20,000	6	18	19,444
2011	20,000	9	23	20,168
2012	20,000	4	10	17,148
2013	20,000	8	19	23,694
2014	20,000	6	21	17,394
2015	20,000	19	55	21,336
2016	20,000	28	111	25,816
2017	20,000	10	45	19,005
2018	20,000	4	24	17,692
Average				
2014–2018		13	51	20,249
2009–2018		10	34	20,077

Table 48-3.–Total sport and commercial removals of black rockfish from the Northeast District, 2005–2018.

Year	Sport Harvest	Average Weight (lb)	Sport Harvest (lb)[a]	Commercial Harvest (lb)	Average Weight (lb)[a]	Commercial Harvest	Total Harvest
2005	4,833	4.64	22,412	20,611	4.30	4,793	9,626
2006	3,493	4.16	14,533	27,688	5.58	4,965	8,458
2007	6,907	5.54	38,264	24,219	4.41	5,497	12,404
2008	5,148	5.36	27,588	20,087	4.41	4,558	9,706
2009	4,887	5.05	24,685	19,271	4.49	4,289	9,176
2010	5,823	4.91	28,574	19,548	4.39	4,451	10,274
2011	7,348	4.97	36,518	22,072	4.01	5,507	12,855
2012	8,059	4.81	38,726	17,309	3.69	4,695	12,754
2013	8,825	4.53	39,987	23,744	4.17	5,688	14,513
2014	12,384	5.48	67,879	17,462	4.28	4,078	16,462
2015	11,002	4.85	53,359	21,482	4.23	5,076	16,078
2016	14,945	4.52	67,520	28,906	4.08	7,088	22,033
2017	8,260	4.18	34,501	19,359	3.78	5,117	13,377
2018	8,781	4.32	37,932	18,844	3.78	4,986	13,768

[a] Average weights from annual dockside sampling in the respective fisheries are used to convert from fish to pounds of fish.

PROPOSAL 49 – 5 AAC 28.410. Fishing seasons for Kodiak Area; and 5 AAC 28.4XX. New section.

PROPOSED BY: Dia Kuzmin.

WHAT WOULD THE PROPOSAL DO? Establish a Kodiak Area state-waters sablefish fishery with a guideline harvest level (GHL) set at 1% of the Central Gulf of Alaska (CGOA) sablefish total allowable catch (TAC). As proposed, the fishery would be modeled on the Cook Inlet Sablefish Management Plan (5 AAC 28.360) which allows for pot, longline, and mechanical jigging machine gear; a 2-day 3,000-pound trip limit; a minimum 6-hour notification prior to landing; and a logbook requirement. The season would be open September 1 through December 31, or until the GHL is achieved.

WHAT ARE THE CURRENT REGULATIONS? There is no directed sablefish fishery inside state waters of the Kodiak Area. Sablefish may only be retained as bycatch, up to 1% of the directed groundfish or halibut on board a vessel.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Given the limited history of sablefish fishing inside state waters around Kodiak the effects of this proposal are largely unknown. Based on CGOA sablefish TACs set from 2010 through 2019, on average, the proposed 1% CGOA sablefish TAC would have resulted in an annual Kodiak Area state-waters sablefish GHL of 108,000 pounds (Table 49-1). By comparison, the adjacent Cook Inlet Area state-waters sablefish fishery GHL is based on approximately 0.5% of the CGOA TAC. From 2010 through 2019, an average of 7 vessels participated in the Cook Inlet Area state-waters sablefish fishery, harvesting 42,414 pounds (73% of the GHL) annually. Expected harvest rates in Kodiak Area are projected to be lower than Cook Inlet, potentially resulting in forgone harvest if annual GHLs are not fully taken.

The federal CGOA sablefish is fully prosecuted and the entire TAC is harvested in most years. Reallocating 1% of the sablefish TAC to a state-waters sablefish GHL would result in a corresponding decrease in federal sablefish fishing opportunity. In other areas of the state with established state-waters sablefish fisheries, federal sablefish individual fishing quota (IFQ) holders can simultaneously participate in the adjacent state-managed fisheries, but harvest within state-waters by federal sablefish IFQ holders is deducted from both the GHL and the federal TAC.

Sablefish typically yield a high exvessel value so the cost of entry into the federal IFQ fishery is also high relative to other groundfish fisheries. A new open access state-waters sablefish fishery would most benefit vessels that currently do not participate in the federal IFQ fishery. The department anticipates most new entrants would use longline gear should this proposal be adopted. Additional fishing gear in state-waters may increase bycatch and discard of nontarget groundfish species. Current Kodiak Area groundfish regulations largely prohibit longline and bottom trawl gear inside state-waters to minimize bycatch of nontarget species. The State of Alaska does not have an established at-sea groundfish observer program so any additional sablefish fishing activity inside state waters would be largely unmonitored.

BACKGROUND: Five state-waters sablefish fisheries occur in Alaska (Chatham Strait, Clarence Strait, Prince William Sound, Cook Inlet, and the Aleutian Islands). State-waters sablefish fisheries were initially established to coordinate with implementation of the federal sablefish IFQ management program and only occur in areas with known historical catch and sablefish habitat.

From 2009 through 2018, reported sablefish bycatch by all gear types in state waters of the Kodiak Area averaged 5,290 pounds annually. Sablefish are not surveyed or assessed inside state waters around Kodiak Island. Mature sablefish are typically found in deep water (150–1,500 m) along the continental slope, shelf gullies, and fjords. Little of this habitat occurs within state-waters around Kodiak. It is unknown if sufficient sablefish abundance exists within state-waters to fully prosecute a fishery.

The department currently has authority to issue groundfish commissioner permits allowing exploratory fishing under 5 AAC 28.479 and adjusting sablefish bycatch allowance inside state waters. Should future evidence suggest greater availability of sablefish inside state waters, the department could increase bycatch limits or allow for exploratory fishing to further develop a potential fishery.

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. The department would incur some additional direct costs related to managing this new fishery. Currently, the department does not have adequate funding to fully monitor the fishery during the proposed 4-month season.

Table 49-1.–Central Gulf of Alaska (CGOA) sablefish total allowable catch (TAC), by year, 2010–2019.

Year	CGOA TAC (pounds)	1% of TAC (pounds)
2010	9,942,836	99,428
2011	10,449,899	104,499
2012	12,698,611	126,986
2013	12,213,595	122,136
2014	10,319,826	103,198
2015	10,269,120	102,691
2016	8,869,186	88,692
2017	9,951,655	99,517
2018	11,371,430	113,714
2019	11,415,522	114,155
2010–2019 avg.	10,750,168	107,502

PROPOSAL 50 – 5 AAC 28.430. Lawful gear for Kodiak Area; and 5 AAC 28.467. Kodiak Area Pacific Cod Management Plan.

PROPOSED BY: Christian Trosvig.

WHAT WOULD THE PROPOSAL DO? Increase the maximum number of mechanical jigging machines that may be operated by a groundfish vessel in the Kodiak Area from 5 to 6.

WHAT ARE THE CURRENT REGULATIONS? Vessels targeting groundfish in the Kodiak Area are limited to operating no more than 5 mechanical jigging machines (i.e., 5 lines) with no more than 30 hooks per line.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Some vessel operators may improve yield or efficiency by using 6 jigging machines, but overall harvest rates are anticipated to remain largely unchanged since most jig gear vessel operators use fewer than the maximum number of mechanical jigging machines currently permissible in regulation.

BACKGROUND: Mechanical jigging machines in the Kodiak Area are predominately used to target Pacific cod and black rockfish. Based on information provided on vessel registrations, participants in the Kodiak Area state-waters Pacific cod and black rockfish jig gear fisheries used an average of 4 mechanical jigging machines per vessel from 2015 through 2019.

The Kodiak Area state-waters Pacific cod GHL is allocated between vessels using pot gear (50%) and jig gear (50%). From 1997 through 2019, the jig gear GHL allocation was fully harvested 7 out of 23 seasons. On average, 54% of the jig gear GHL allocation is harvested annually (Table 50-1). Participation and harvest generally fluctuate with Pacific cod abundance over time.

There are no gear allocations in the Kodiak Area black rockfish fishery; mechanical jigging machine and hand troll are the only allowable gear types. Relative to the Kodiak Area Pacific cod jig gear fishery, participation is lower, GHLs are smaller, and a larger percentage of the GHL is harvested annually (84%; Table 50-2). Rockfish harvest is constrained by regulatory trip limit which restricts vessels to no more than 5,000 pounds of catch within a 5-day period.

Many vessels that participate in the black rockfish fishery also participate in the Pacific cod jig gear fishery. Vessels cannot simultaneously participate in both directed fisheries but can easily transition between fisheries.

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

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

Table 50-1.–Kodiak Area state-waters Pacific cod jig gear effort, guideline harvest level (GHL), and harvest, by year, 1997–2019.

Year	Vessels	Landings	GHL (pounds)	Harvest (pounds)	% of GHL harvested
1997	72	483	4,249,410	1,976,546	46.5%
1998	88	662	4,057,608	2,114,685	52.1%
1999	113	793	5,860,989	2,294,837	39.2%
2000	139	1,226	6,000,707	2,814,481	46.9%
2001	69	433	5,325,542	1,252,692	23.5%
2002	51	340	4,365,153	1,389,838	31.8%
2003[a]	100	688	3,995,878	3,195,605	80.0%
2004[a]	120	961	4,932,843	4,210,284	85.4%
2005	117	849	4,563,155	4,570,327	100.2%
2006	77	477	5,218,480	1,446,881	27.7%
2007	63	457	5,218,480	1,249,753	23.9%
2008	76	647	5,222,338	2,042,082	39.1%
2009	94	833	4,343,244	4,450,423	102.5%
2010	81	707	6,757,444	6,504,733	96.3%
2011	132	980	7,415,248	7,135,466	96.2%
2012	145	1,160	7,845,701	7,938,727	101.2%
2013	55	199	6,791,340	587,942	8.7%
2014	77	520	7,316,583	3,170,713	43.3%
2015	100	809	8,449,216	3,879,512	45.9%
2016	108	747	6,794,647	3,327,887	49.0%
2017	23	50	6,087,452	101,991	1.7%
2018	10	21	1,118,559	29,016	2.6%
2019[b]	33	100	1,056,417	363,639	34.4%
1997–2019 avg.	84	615	5,347,236	2,871,655	53.7%
2015–2019 avg.	55	345	4,701,258	1,540,409	32.8%

[a] Full jig gear GHL allocation not available for harvest due to pot gear overage.

[b] Harvest through October 10, 2019.

Table 50-2.–Kodiak Area state-waters black rockfish jig gear effort, guideline harvest level (GHL), and harvest, by year, 1997–2019.

Year	Vessels	Landings	GHL (pounds)	Harvest (pounds)	% of GHL harvested
1998	64	348	190,000	196,548	103%
1999	70	300	185,000	128,008	69%
2000	72	260	185,000	245,891	133%
2001	36	168	185,000	213,629	115%
2002	25	123	185,000	196,166	106%
2003	33	90	185,000	84,237	46%
2004	37	124	185,000	122,180	66%
2005	23	85	175,000	116,726	67%
2006	25	97	175,000	123,443	71%
2007	21	96	175,000	135,386	77%
2008	17	91	175,000	132,325	76%
2009	18	90	175,000	122,249	70%
2010	12	74	175,000	103,698	59%
2011	21	67	175,000	124,900	71%
2012	19	53	135,000	80,940	60%
2013	20	62	135,000	141,226	105%
2014	17	74	125,000	109,053	87%
2015	26	120	125,000	112,340	90%
2016	45	192	120,000	132,181	110%
2017	20	91	120,000	108,269	90%
2018	8	65	120,000	107,725	90%
2019[a]	12	68	120,000	109,687	91%
1997–2019 avg.	29	124	160,227	133,946	84%
2015–2019 avg.	22	107	121,000	114,040	94%

[a] Harvest through October 10, 2019.

PROPOSAL 51 – 5 AAC 28.467. Kodiak Area Pacific Cod Management Plan.

PROPOSED BY: Frank Miles.

WHAT WOULD THE PROPOSAL DO? Change the Kodiak Area state-waters Pacific cod guideline harvest level (GHL) allocation to 40% for vessels using jig gear and 60% for vessels using pot gear and annually adjust the allocation, up or down 5%, based on jig gear fishery performance the previous year.

WHAT ARE THE CURRENT REGULATIONS? The Kodiak Area state-waters Pacific cod GHL is allocated 50% to vessels using jig gear and 50% to vessels using pot gear. The pot gear fishery opens 7 days after the closure of the federal/parallel Central Gulf of Alaska (CGOA) pot gear A season; and the jig gear fishery opens 48 hours after the closure of the federal/parallel CGOA jig gear A season, or March 15. State-waters seasons generally close when their respective gear allocations are taken. If any state-waters jig gear GHL remains unharvested after the closure of the fall federal/parallel CGOA pot gear B season, the department may reopen the state-waters season to both pot and jig gear vessels to facilitate full harvest of the GHL prior to the regulatory season closure on December 31. Reopening of the state-waters season is commonly referred to as a rollover season.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Beginning with the 2021 season, the jig gear GHL allocation would be reduced from 50% to 40% and the pot gear GHL allocation would increase from 50% to 60%. In subsequent years, the GHL allocations would adjust annually based on jig gear fishery performance. If the jig gear allocation is not fully harvested within a regulatory year (harvest <90% of allocation), the jig gear allocation would be reduced by 5%, and the pot gear allocation would increase by 5%, the following year. Conversely, if the jig gear allocation is fully harvested within a regulatory year (harvest ≥90% of allocation), the jig gear allocation would increase by 5% and the pot gear allocation decrease by 5% the following year. As specified in the proposal, the jig gear allocation would not be reduced below 20% or exceed 50% of the GHL and the pot gear allocation would not be reduced below 50% or exceed 80% of the GHL regardless of jig gear fishery performance (Table 51-1).

During some years, lower jig gear allocations could result in smaller yields and shorter seasons for jig vessels. Additional GHL would improve harvest opportunity for pot gear vessels and increase the potential to fully harvest the overall fishery GHL. From 2014 through 2018, 19.8 million pounds of Kodiak Area state-waters Pacific cod GHL went unharvested largely due to foregone harvest by jig gear vessels. The estimated value of the foregone harvest was approximately $6.9 million (using an average exvessel value of $0.35/pound).

BACKGROUND: The equal distribution of GHL across Kodiak Area jig and pot gear vessels was first established at inception of the state-waters fishery in 1997 and has remained unchanged. Since that time, the pot gear allocation was fully harvested in all but 2 seasons (2001 and 2017; Table 51-2). The jig gear GHL was fully harvested 7 out of 23 seasons. From 1997 through 2019, jig vessels harvested an average of 54% of their annual jig gear allocations (Table 51-3). Unharvested jig gear GHL was rolled over to pot vessels during 7 seasons; 5 of those rollover seasons (1997–1999, 2002, and 2008) resulted in harvesting the full GHL. Although GHL was available, rollover seasons were precluded for an additional 7 years because the federal/parallel CGOA pot gear B season did not close—which is necessary for the state-waters season to reopen.

Kodiak Area Pacific cod harvest rates are higher in the pot gear fishery compared to jig gear resulting in relatively fast-paced pot gear seasons (averaging 26 days in length during years when the GHL was achieved). Pot gear seasons typically open in February and generally conclude by late March. Jig gear seasons frequently remain open for most of the year, but the majority harvest occurs in each spring. On average, from 2015 to 2019, twice as many jig gear vessels (55 vessels) annually participated in the Kodiak Area state-waters fishery compared to pot gear vessels (23 vessels;Tables 51-2 and 51-3)

Pacific cod abundance in the Gulf of Alaska recently experienced significant declines due to changes in the marine environment. In 2018, the CGOA Pacific cod allowable biological catch (ABC) was reduced by 80% in response to declining abundance which translated into less fishing opportunity for all fishery participants. The 2019 assessment estimated additional declines in abundance and the federal Gulf of Alaska Pacific cod fisheries will not open in 2020 due to regulations intended to protect forage for Steller sea lions. Additionally, it is possible that the GOA Pacific cod stock will continue to decline over the next several years, potentially dropping below the overfished level. The substantial and ongoing reductions in Gulf of Alaska Pacific cod harvest opportunity has changed historical fishing patterns and recently focused attention on underutilized allocations.

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

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

Table 51-1.–Current Kodiak Area state-waters Pacific cod guideline harvest level (GHL) allocation and proposed maximum and minimum GHL allocation in pounds, by gear type, by year, 1997–2019.

		GHL Allocation (50/50)		GHL Allocation (80/20)	
Year	GHL	Pot	Jig	Pot	Jig
1997	8,498,820	4,249,410	4,249,410	6,799,056	1,699,764
1998	8,115,216	4,057,608	4,057,608	6,492,173	1,623,043
1999	11,721,978	5,860,989	5,860,989	9,377,582	2,344,396
2000	12,001,414	6,000,707	6,000,707	9,601,131	2,400,283
2001	10,651,084	5,325,542	5,325,542	8,520,867	2,130,217
2002	8,730,306	4,365,153	4,365,153	6,984,245	1,746,061
2003	7,991,756	3,995,878	3,995,878	6,393,405	1,598,351
2004	9,865,686	4,932,843	4,932,843	7,892,549	1,973,137
2005	9,126,310	4,563,155	4,563,155	7,301,048	1,825,262
2006	10,436,960	5,218,480	5,218,480	8,349,568	2,087,392
2007	10,436,960	5,218,480	5,218,480	8,349,568	2,087,392
2008	10,444,676	5,222,338	5,222,338	8,355,741	2,088,935
2009	8,686,488	4,343,244	4,343,244	6,949,190	1,737,298
2010	13,514,888	6,757,444	6,757,444	10,811,910	2,702,978
2011	14,830,496	7,415,248	7,415,248	11,864,397	2,966,099
2012	15,691,402	7,845,701	7,845,701	12,553,122	3,138,280
2013	13,582,680	6,791,340	6,791,340	10,866,144	2,716,536
2014	14,633,166	7,316,583	7,316,583	11,706,533	2,926,633
2015	16,898,432	8,449,216	8,449,216	13,518,746	3,379,686
2016	13,589,294	6,794,647	6,794,647	10,871,435	2,717,859
2017	12,174,904	6,087,452	6,087,452	9,739,923	2,434,981
2018	2,237,118	1,118,559	1,118,559	1,789,694	447,424
2019	2,112,834	1,056,417	1,056,417	1,690,267	422,567
1997–2019 avg.	10,694,473	5,347,236	5,347,236	8,555,578	2,138,895
2015–2019 avg.	9,402,516	4,701,258	4,701,258	7,522,013	1,880,503

Table 51-2.–Kodiak Area state-waters Pacific cod jig gear effort, guideline harvest level (GHL), and harvest, by year, 1997–2019.

Year	Vessels	Landings	Jig GHL (pounds)	Jig harvest (pounds)	% of jig GHL harvested	Total GHL	% of total GHL harvested by jig
1997	72	483	4,249,410	1,976,546	46.5%	8,498,820	23.3%
1998	88	662	4,057,608	2,114,685	52.1%	8,115,216	26.1%
1999	113	793	5,860,989	2,294,837	39.2%	11,721,978	19.6%
2000	139	1,226	6,000,707	2,814,481	46.9%	12,001,414	23.5%
2001	69	433	5,325,542	1,252,692	23.5%	10,651,084	11.8%
2002	51	340	4,365,153	1,389,838	31.8%	8,730,306	15.9%
2003[a]	**100**	**688**	**3,995,878**	**3,195,605**	**80.0%**	**7,991,756**	**40.0%**
2004[a]	**120**	**961**	**4,932,843**	**4,210,284**	**85.4%**	**9,865,686**	**42.7%**
2005	**117**	**849**	**4,563,155**	**4,570,327**	**100.2%**	**9,126,310**	**50.1%**
2006	77	477	5,218,480	1,446,881	27.7%	10,436,960	13.9%
2007	63	457	5,218,480	1,249,753	23.9%	10,436,960	12.0%
2008	76	647	5,222,338	2,042,082	39.1%	10,444,676	19.6%
2009	**94**	**833**	**4,343,244**	**4,450,423**	**102.5%**	**8,686,488**	**51.2%**
2010	**81**	**707**	**6,757,444**	**6,504,733**	**96.3%**	**13,514,888**	**48.1%**
2011	**132**	**980**	**7,415,248**	**7,135,466**	**96.2%**	**14,830,496**	**48.1%**
2012	**145**	**1,160**	**7,845,701**	**7,938,727**	**101.2%**	**15,691,402**	**50.6%**
2013	55	199	6,791,340	587,942	8.7%	13,582,680	4.3%
2014	77	520	7,316,583	3,170,713	43.3%	14,633,166	21.7%
2015	100	809	8,449,216	3,879,512	45.9%	16,898,432	23.0%
2016	108	747	6,794,647	3,327,887	49.0%	13,589,294	24.5%
2017	23	50	6,087,452	101,991	1.7%	12,174,904	0.8%
2018	10	21	1,118,559	29,016	2.6%	2,237,118	1.3%
2019[b]	33	100	1,056,417	363,639	34.4%	2,112,834	17.2%
1997–2019 avg.	84	615	5,347,236	2,871,655	53.7%	10,694,473	26.9%
2015–2019 avg.	55	345	4,701,258	1,540,409	32.8%	9,402,516	16.4%

Note: **Bold** indicates years when the jig gear GHL allocation was fully harvested.

[a] Full jig gear GHL allocation not available for harvest due to pot gear overage.

[b] Harvest through October 10, 2019.

Table 51-3.–Kodiak Area state-waters Pacific cod pot gear effort, guideline harvest level (GHL), and harvest, by year, 1997–2019.

Year	Vessels	Landings	GHL (pounds)	Harvest (pounds)	% of GHL harvested
1997[a]	38	243	4,249,410	5,769,129	135.8%
1998[a]	47	310	4,057,608	6,070,139	149.6%
1999[a]	77	471	5,860,989	8,492,710	144.9%
2000	69	481	6,000,707	5,748,334	95.8%
2001[a]	34	236	5,325,542	3,591,049	67.4%
2002[a]	33	212	4,365,153	7,436,013	170.3%
2003	42	149	3,995,878	4,959,262	124.1%
2004	47	161	4,932,843	5,823,605	118.1%
2005	51	162	4,563,155	3,977,835	87.2%
2006	41	169	5,218,480	4,883,637	93.6%
2007	33	182	5,218,480	5,157,212	98.8%
2008[a]	37	341	5,222,338	8,506,792	162.9%
2009	38	138	4,343,244	4,141,054	95.3%
2010	36	173	6,757,444	7,061,573	104.5%
2011	46	190	7,415,248	8,132,657	109.7%
2012	45	196	7,845,701	7,477,802	95.3%
2013	34	242	6,791,340	6,689,382	98.5%
2014[a]	28	233	7,316,583	9,176,488	125.4%
2015	30	236	8,449,216	8,300,600	98.2%
2016	36	184	6,794,647	6,834,008	100.6%
2017	25	177	6,087,452	3,737,195	61.4%
2018	10	35	1,118,559	1,137,175	101.7%
2019[b]	14	39	1,056,417	1,153,892	109.2%
1997–2019 avg.	39	216	5,347,236	5,837,284	109.2%
2015–2019 avg.	23	134	4,701,258	4,232,574	90.0%

[a] Rollover season occurred resulting in additional pot gear harvest.

[b] Harvest through October 10, 2019.

PROPOSAL 52 – 5 AAC 28.467. Kodiak Area Pacific Cod Management Plan.

PROPOSED BY: Frank Miles.

WHAT WOULD THE PROPOSAL DO? Increase the Kodiak Area state-waters Pacific cod guideline harvest level (GHL) from 12.5% to 17.5% of the federal Central Gulf of Alaska (CGOA) Pacific cod allowable biological catch (ABC) and change the GHL gear allocation to 65% for vessels using pot gear and 35% for vessels using jig gear.

WHAT ARE THE CURRENT REGULATIONS? The Kodiak Area state-waters Pacific cod GHL is based on 12.5% of the federal CGOA Pacific cod ABC. The corresponding GHL is allocated 50% to vessels using jig gear and 50% to vessels using pot gear.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Provide additional harvest opportunity for state-waters pot gear vessels and largely maintain existing opportunity for state-waters jig gear vessels. The 5% increase in ABC combined with the proposed (65/35) gear allocation yields an 82% increase in the pot gear allocation and a 2% decrease in the jig gear allocation (Table 52-1).

Conversely, reallocating 5% of the CGOA ABC would result in a corresponding decrease in federal Pacific cod total allowable catches (TAC) yielding lower harvests, shorter seasons, and increased competition among vessels and processors that have historically participated in the CGOA federal/parallel Pacific cod fisheries. During periods of low Pacific cod abundance some federal sector TAC allocations could become too small to support directed or incidental fisheries resulting in fishery closures.

BACKGROUND: State-waters Pacific cod fisheries are allocated 25% of the federal CGOA Pacific cod ABC. The state-waters ABC allocation is further apportioned across the 3 state-waters management areas located in the CGOA: Kodiak (12.5%), Chignik (8.75%), and Cook Inlet (3.75%). The corresponding GHL for Kodiak state-waters fishery is divided 50% to pot gear vessel and 50% to jig gear vessels. Since inception of the fishery in 1997, the pot gear allocation was fully harvested in all but 2 seasons (2001 and 2017; Table 52-2). The jig gear GHL was fully harvested 7 out of 23 seasons. From 1997 through 2019, jig vessels harvested an average of 54% of their annual jig gear allocation (Table 52-3).

Pot gear harvest rates are higher compared to jig gear, resulting in relatively fast-paced pot gear seasons, averaging 26 days in length during years when the GHL was achieved. Pot gear season typically opens early to mid-February and generally concludes by late-March. Jig gear seasons frequently remain open for most of the year, with most harvest occurring during spring.

The North Pacific Fishery Management Council (NPFMC) annually adopts a Pacific cod ABC for the federal CGOA management area. State and federal Pacific cod removals (GHL + TAC) are coordinated to not exceed the annual Pacific cod ABC. The federal/parallel CGOA Pacific cod TAC is subdivided across 7 harvesting sectors with each receiving a separate TAC allocation (Table 52-4). Federal/parallel TAC allocations are further divided into A and B seasons. The A season opens for most harvesting sectors on January 1 and the B season opens September 1 for most harvesting sectors. Any increase in the state-waters GHL proportionally reduces federal TAC available to federal harvesting sectors. In 2019, 108 vessels participated in CGOA federal/parallel

Pacific cod fisheries with most harvest coming from the trawl catcher vessel, pot, and longline catcher vessel sectors.

From 2009 through 2018, harvest of Pacific cod during the Kodiak Area parallel fishery averaged 9.4 million pounds, accounting for 9.4% of the total CGOA Pacific cod ABC (Table 52-5). During that time, total harvest from state waters (state waters and parallel catch combined) averaged 19.3% of the total CGOA Pacific cod ABC (Table 52-5).

Pacific cod abundance in the Gulf of Alaska recently experienced significant declines due to changes in the marine environment. In 2018, the CGOA Pacific cod ABC was reduced by 80% in response to declining abundance, translating into less fishing opportunity for all fishery participants. The 2019 assessment estimated additional declines in abundance, and the federal Gulf of Alaska Pacific cod fisheries will not open in 2020 due to regulations intended to protect forage for Steller sea lions. Additionally, it is possible that the GOA Pacific cod stock will continue to decline over the next several years, potentially dropping below the overfished level. The substantial and ongoing reductions in Gulf of Alaska Pacific cod harvest opportunity has changed historical fishing patterns and recently focused attention on underutilized allocations.

In 2001, the NPFMC established no fishing zones around Steller sea lion haulouts and rookeries in federal waters in response to declining sea lion populations and their listing as an endangered species under the Endangered Species Act (ESA). The State of Alaska subsequently adopted most federal Steller sea lion closure areas for parallel Pacific cod fisheries under 5 AAC 28.087 Management measures in parallel groundfish fisheries for protection of Steller sea lions. However, state-waters Pacific cod management plans only adopt a small subset of federal/parallel Steller sea lion closure areas. Allocating additional Pacific cod ABC to the state-waters fishery could allow for higher Pacific cod harvest in areas that would be otherwise closed by federal regulation which could trigger a Steller sea lion reconsultation process under ESA.

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

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

Table 52-1.–Central Gulf of Alaska (CGOA) allowable biological catch (ABC), current and proposed Kodiak Area state-waters Pacific cod guideline harvest levels (GHLs), and GHL allocations by gear type, by year, 1997–2019.

		Current			Proposed		
Year	CGOA ABC	12.5% Kodiak state-waters GHL	50% pot gear GHL allocation	50% jig gear GHL allocation	17.5% Kodiak state-waters GHL	65% pot gear GHL allocation	35% jig gear GHL allocation
1997	11,331,644	1,416,456	708,228	708,228	1,983,038	1,288,975	694,063
1998	10,820,176	1,352,522	676,261	676,261	1,893,531	1,230,795	662,736
1999	11,721,858	1,465,232	732,616	732,616	2,051,325	1,333,361	717,964
2000	96,010,330	12,001,291	6,000,646	6,000,646	16,801,808	10,921,175	5,880,633
2001	85,207,790	10,650,974	5,325,487	5,325,487	14,911,363	9,692,386	5,218,977
2002	69,841,728	8,730,216	4,365,108	4,365,108	12,222,302	7,944,497	4,277,806
2003	63,933,400	7,991,675	3,995,838	3,995,838	11,188,345	7,272,424	3,915,921
2004	78,924,680	9,865,585	4,932,793	4,932,793	13,811,819	8,977,682	4,834,137
2005	73,009,738	9,126,217	4,563,109	4,563,109	12,776,704	8,304,858	4,471,846
2006	83,494,815	10,436,852	5,218,426	5,218,426	14,611,593	9,497,535	5,114,057
2007	83,494,815	10,436,852	5,218,426	5,218,426	14,611,593	9,497,535	5,114,057
2008	83,556,544	10,444,568	5,222,284	5,222,284	14,622,395	9,504,557	5,117,838
2009	69,491,196	8,686,400	4,343,200	4,343,200	12,160,959	7,904,624	4,256,336
2010	108,117,993	13,514,749	6,757,375	6,757,375	18,920,649	12,298,422	6,622,227
2011	118,642,754	14,830,344	7,415,172	7,415,172	20,762,482	13,495,613	7,266,869
2012	125,529,924	15,691,241	7,845,620	7,845,620	21,967,737	14,279,029	7,688,708
2013	108,660,325	13,582,541	6,791,270	6,791,270	19,015,557	12,360,112	6,655,445
2014	117,064,260	14,633,033	7,316,516	7,316,516	20,486,246	13,316,060	7,170,186
2015	135,186,072	16,898,259	8,449,130	8,449,130	23,657,563	15,377,416	8,280,147
2016	108,713,235	13,589,154	6,794,577	6,794,577	19,024,816	12,366,131	6,658,686
2017	97,399,228	12,174,904	6,087,452	6,087,452	17,044,865	11,079,162	5,965,703
2018	17,896,943	2,237,118	1,118,559	1,118,559	3,131,965	2,035,777	1,096,188
2019	16,902,668	2,112,834	1,056,417	1,056,417	2,957,967	1,922,679	1,035,288
1997–2019 avg.	77,171,831	9,646,479	4,823,239	4,823,239	13,505,070	8,778,296	4,726,775

Table 52-2.–Kodiak Area state-waters Pacific cod pot gear effort, guideline harvest level (GHL), and harvest, by year, 1997–2019.

Year	Vessels	Landings	GHL (pounds)	Harvest (pounds)	% of GHL harvested
1997[a]	38	243	4,249,410	5,769,129	135.8%
1998[a]	47	310	4,057,608	6,070,139	149.6%
1999[a]	77	471	5,860,989	8,492,710	144.9%
2000	69	481	6,000,707	5,748,334	95.8%
2001[a]	34	236	5,325,542	3,591,049	67.4%
2002[a]	33	212	4,365,153	7,436,013	170.3%
2003	42	149	3,995,878	4,959,262	124.1%
2004	47	161	4,932,843	5,823,605	118.1%
2005	51	162	4,563,155	3,977,835	87.2%
2006	41	169	5,218,480	4,883,637	93.6%
2007	33	182	5,218,480	5,157,212	98.8%
2008[a]	37	341	5,222,338	8,506,792	162.9%
2009	38	138	4,343,244	4,141,054	95.3%
2010	36	173	6,757,444	7,061,573	104.5%
2011	46	190	7,415,248	8,132,657	109.7%
2012	45	196	7,845,701	7,477,802	95.3%
2013	34	242	6,791,340	6,689,382	98.5%
2014[a]	28	233	7,316,583	9,176,488	125.4%
2015	30	236	8,449,216	8,300,600	98.2%
2016	36	184	6,794,647	6,834,008	100.6%
2017	25	177	6,087,452	3,737,195	61.4%
2018	10	35	1,118,559	1,137,175	101.7%
2019[b]	14	39	1,056,417	1,153,892	109.2%
1997–2019 avg.	39	216	5,347,236	5,837,284	109.2%
2015–2019 avg.	23	134	4,701,258	4,232,574	90.0%

[a] Rollover season occurred resulting in additional pot gear harvest.
[b] Harvest through October 10, 2019.

Table 52-3.–Kodiak Area state-waters Pacific cod jig gear effort, guideline harvest level (GHL), and harvest, by year, 1997–2019.

Year	Vessels	Landings	GHL (pounds)	Harvest (pounds)	% of GHL harvested
1997	72	483	4,249,410	1,976,546	46.5%
1998	88	662	4,057,608	2,114,685	52.1%
1999	113	793	5,860,989	2,294,837	39.2%
2000	139	1,226	6,000,707	2,814,481	46.9%
2001	69	433	5,325,542	1,252,692	23.5%
2002	51	340	4,365,153	1,389,838	31.8%
2003[a]	**100**	**688**	**3,995,878**	**3,195,605**	**80.0%**
2004[a]	**120**	**961**	**4,932,843**	**4,210,284**	**85.4%**
2005	**117**	**849**	**4,563,155**	**4,570,327**	**100.2%**
2006	77	477	5,218,480	1,446,881	27.7%
2007	63	457	5,218,480	1,249,753	23.9%
2008	76	647	5,222,338	2,042,082	39.1%
2009	**94**	**833**	**4,343,244**	**4,450,423**	**102.5%**
2010	**81**	**707**	**6,757,444**	**6,504,733**	**96.3%**
2011	**132**	**980**	**7,415,248**	**7,135,466**	**96.2%**
2012	**145**	**1,160**	**7,845,701**	**7,938,727**	**101.2%**
2013	55	199	6,791,340	587,942	8.7%
2014	77	520	7,316,583	3,170,713	43.3%
2015	100	809	8,449,216	3,879,512	45.9%
2016	108	747	6,794,647	3,327,887	49.0%
2017	23	50	6,087,452	101,991	1.7%
2018	10	21	1,118,559	29,016	2.6%
2019[b]	33	100	1,056,417	363,639	34.4%
1997–2019 avg.	84	615	5,347,236	2,871,655	53.7%
2015–2019 avg.	55	345	4,701,258	1,540,409	32.8%

Note: **Bold** indicates years when the jig gear GHL allocation was fully harvested.

[a] Full jig gear GHL allocation not available for harvest due to pot gear overage.

[b] Harvest through October 10, 2019.

Table 52-4.–Central Gulf of Alaska (CGOA) federal Pacific cod harvesting sectors, total allowable catch (TAC) allocations, effort, and harvest, 2019.

CGOA federal Pacific cod harvesting sectors	TAC allocation (%)	TAC allocation (pounds)
Jig[a]	1.0%	127,867
Longline catcher vessel <50 ft LOA	14.6%	1,832,023
Longline catcher vessel ≥50 ft LOA	6.7%	842,157
Longline catcher processor	5.1%	641,539
Trawl catcher vessel	41.6%	5,218,288
Trawl catcher processor	4.2%	526,899
Pot	27.8%	3,489,882
Total	100.0%	12,678,655

[a] Jig allocation taken off the top of the TAC.
[b] Vessel count and harvest through October 10, 2019.

Table 52-5.–Kodiak Area Pacific cod harvest during state-waters and parallel fisheries, as a percent of allowable biological catch (ABC), all gear combined, 2009–2018.

		State-waters (GHL)			Parallel (TAC)			State-waters and parallel		
Year	CGOA ABC (pounds)	Vessels	Harvest (pounds)	% of ABC	Vessels	Harvest (pounds)	% of ABC	Vessels	Harvest (pounds)	% of ABC
2009	69,491,196	130	8,591,477	12.4%	187	5,861,069	8.4%	262	14,452,546	20.8%
2010	108,117,993	114	13,566,306	12.5%	203	8,809,066	8.1%	262	22,375,372	20.7%
2011	118,642,754	161	15,268,123	12.9%	225	13,741,269	11.6%	309	29,009,391	24.5%
2012	125,529,924	179	15,416,530	12.3%	225	15,392,961	12.3%	321	30,809,491	24.5%
2013	108,660,325	88	7,277,324	6.7%	167	6,040,309	5.6%	214	13,317,633	12.3%
2014	117,064,260	100	12,347,200	10.5%	159	7,951,533	6.8%	214	20,298,733	17.3%
2015	135,186,072	127	12,180,112	9.0%	199	13,770,560	10.2%	260	25,950,671	19.2%
2016	108,713,235	140	10,161,895	9.3%	169	14,046,799	12.9%	229	24,208,694	22.3%
2017	97,399,228	48	3,839,186	3.9%	129	7,281,674	7.5%	145	11,120,860	11.4%
2018	17,896,943	20	1,166,191	6.5%	83	1,233,774	6.9%	98	2,399,965	13.4%
Avg.	100,670,193	111	9,981,434	9.9%	175	9,412,901	9.4%	231	19,394,336	19.3%

PROPOSAL 53 – 5 AAC 28.467. Kodiak Area Pacific Cod Management Plan.

PROPOSED BY: DJ Vinberg.

WHAT WOULD THE PROPOSAL DO? Rollover unharvested Kodiak Area state-waters Pacific cod jig gear guideline harvest level (GHL) to state-waters pot gear vessels the following calendar year.

WHAT ARE THE CURRENT REGULATIONS? The Kodiak Area state-waters Pacific cod GHL is based on 12.5% of the annual Central Gulf of Alaska (CGOA) Pacific cod allowable biological catch (ABC). The Kodiak Area state-waters Pacific cod GHL is allocated between vessels using pot gear (50%) and vessels using jig gear (50%).

The pot gear fishery opens 7 days after the closure of the CGOA federal/parallel pot gear A season, and the jig gear fishery opens 48 hours after the closure of the federal/parallel CGOA jig gear A season, or March 15. State-waters seasons close when the respective gear allocations are taken, or December 31. If any state-waters GHL remains unharvested after the closure of the fall federal/parallel CGOA pot gear B season, the department may reopen the state-waters season to both pot and jig gear vessels to facilitate full harvest of the GHL prior to the regulatory season closure on December 31.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The regulatory 50/50 pot and jig gear GHL allocation would remain unchanged; however, pot gear vessels would receive additional GHL equal to the portion of unharvested jig gear GHL from the previous year resulting a net increase in the total Kodiak Area GHL. On average, from 2000 through 2019, this proposal would have resulted in an additional 2.5 million-pound annual GHL increase for vessels using pot gear (Table 53-1).

BACKGROUND: State-waters Pacific cod fisheries are allocated 25% of the federal CGOA Pacific cod ABC. The state-waters ABC allocation is further apportioned across the 3 state-waters management areas located in the CGOA: Kodiak (12.5%), Chignik (8.75%), and Cook Inlet (3.75%). Since inception of state-waters Pacific cod fisheries in 1997, the Kodiak Area pot gear GHL was fully harvested in all but 2 seasons (2001 and 2017; Table 53-2). The jig gear GHL was fully harvested 7 out of 23 seasons (Table 53-3). Unharvested jig gear GHL was rolled over to pot vessels 7 seasons; 5 of those rollover seasons (1997–1999, 2002, and 2008) resulted in harvesting the full GHL. Although GHL was available, rollover seasons were precluded for an additional 7 years because the federal/parallel CGOA pot gear B season did not close.

The Kodiak Area state-waters Pacific cod fishery receives 12.5% of the annual CGOA Pacific cod ABC. From 2000 through 2019, the proposed GHL rollover would result in ABCs that varied annually between 12.5% and 45.9% (averaging 14.9%), depending on how much of the previous year's state-waters jig gear GHL was harvested (Table 53-1). Seven federal CGOA harvesting sectors receive separate total allowable catch (TAC) allocations (Table 53-4). State and federal Pacific cod removals (GHL + TAC) are coordinated to prevent exceeding the annual CGOA Pacific cod ABC as required under the federal Magnuson-Stevens Fisheries Conservation and Management Act. Any increase in state-waters GHL due to a rollover would increase the amount of ABC allocated to the state and would proportionally reduce the amount of TAC available to federal harvesting sectors.

GHL rollovers would result in higher pot gear harvests, longer pot gear seasons, and may attract additional pot gear vessels to participate in the Kodiak Area state-waters Pacific cod fishery. Access to Pacific cod by jig gear vessels would largely remain unchanged and the pattern of under harvesting the jig gear GHL allocation would likely continue. Conversely, during years when GHL is rolled across seasons, federal participants would see lower TACs, shorter seasons, and increased competition among users that participate in federal/parallel Pacific cod fisheries. During periods of low abundance or instances where a high volume of unharvested jig GHL is rolled from one year to the next (i.e., 2018), some federal harvesting sector TAC allocations could become too small to effectively manage, resulting in fishery closures (Table 53-4).

Pacific cod are targeted during directed fisheries and are incidental catch during other federal groundfish fisheries throughout the year. The North Pacific Fishery Management Council (NPFMC) adopts Pacific cod ABCs each December which inform state and federal fishery openings starting January 1. The stability and predictability of anticipated TAC allocations for federal participants would be diminished if the amount of ABC directed towards federal fisheries varied year to year based on the prior year state-waters jig fishery performance (Table 53-4).

In 2016, NOAA fisheries revised their guidelines for National Standard 1 of the Magnuson-Stevens Fishery Conservation and Management Act. The revised guidelines provide guidance to the regional fisheries management councils on ending overfishing and achieving optimum yield from federal fisheries and introduce a new concept of carrying over unused quota from one year to the next. The carry-over concept has not been considered by the NPFMC. The NPFMC annual harvest specification process utilizes a stock assessment model for Gulf of Alaska Pacific cod that incorporates the current years' preliminary harvest to establish harvest limits for the following year. Substantial changes to the NPFMC's annual harvest specification process would be required to incorporate the carry-over concept.

DEPARTMENT COMMENTS: The department supports efficient and equitable use of state-waters Pacific cod GHLs. As written, the potential effects of this proposal on the groundfish harvest specification process and Pacific cod fishery participants in general are wide ranging and not fully understood. Coordinating this proposal with ongoing NPFMC efforts to fully consider the implications of carry-over ABC is recommended to ensure for continued and effective comanagement of the Gulf of Alaska Pacific cod stock.

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

Table 53-1.–Kodiak Area state-waters unharvested Pacific cod jig gear guideline harvest level (GHL) allocation, pot gear GHL allocation, calculated pot gear GHL as proposed, and percent increase in GHL, by year, 2000–2019.

Year	Previous year unharvested jig gear GHL (pounds)	Current year pot gear GHL (pounds)	New calculated pot gear GHL (pounds)	New calculated total GHL	% of CGOA ABC to Kodiak GHL
2000	3,566,152	6,000,707	9,566,859	15,567,566	16.2%
2001	3,186,226	5,325,542	8,511,768	13,837,310	16.2%
2002	4,072,850	4,365,153	8,438,003	12,803,156	18.3%
2003	2,975,315	3,995,878	6,971,193	10,967,071	17.2%
2004	0	4,932,843	4,932,843	9,865,686	12.5%
2005	0	4,563,155	4,563,155	9,126,310	12.5%
2006	0	5,218,480	5,218,480	10,436,960	12.5%
2007	3,771,599	5,218,480	8,990,079	14,208,559	17.0%
2008	3,968,727	5,222,338	9,191,065	14,413,403	17.2%
2009	3,180,256	4,343,244	7,523,500	11,866,744	17.1%
2010	0	6,757,444	6,757,444	13,514,888	12.5%
2011	252,711	7,415,248	7,667,959	15,083,207	12.7%
2012	279,782	7,845,701	8,125,483	15,971,184	12.7%
2013	0	6,791,340	6,791,340	13,582,680	12.5%
2014	6,203,398	7,316,583	13,519,981	20,836,564	17.8%
2015	4,145,870	8,449,216	12,595,086	21,044,302	15.6%
2016	4,569,679	6,794,647	11,364,326	18,158,973	16.7%
2017	3,466,760	6,087,452	9,554,212	15,641,664	16.1%
2018	5,985,461	1,118,559	7,104,020	8,222,579	45.9%
2019	1,089,543	1,056,417	2,145,960	3,202,377	18.9%
2000–2019 avg.	2,535,716	5,440,921	7,976,638	13,417,559	14.9%
2015–2019 avg.	3,851,463	4,701,258	8,552,721	13,253,979	17.6%

Table 53-2.–Kodiak Area state-waters Pacific cod pot gear effort, guideline harvest level (GHL), and harvest, by year, 1997–2019.

Year	Vessels	Landings	GHL (pounds)	Harvest (pounds)	% of GHL harvested
1997[a]	38	243	4,249,410	5,769,129	135.8%
1998[a]	47	310	4,057,608	6,070,139	149.6%
1999[a]	77	471	5,860,989	8,492,710	144.9%
2000	69	481	6,000,707	5,748,334	95.8%
2001[a]	34	236	5,325,542	3,591,049	67.4%
2002[a]	33	212	4,365,153	7,436,013	170.3%
2003	42	149	3,995,878	4,959,262	124.1%
2004	47	161	4,932,843	5,823,605	118.1%
2005	51	162	4,563,155	3,977,835	87.2%
2006	41	169	5,218,480	4,883,637	93.6%
2007	33	182	5,218,480	5,157,212	98.8%
2008[a]	37	341	5,222,338	8,506,792	162.9%
2009	38	138	4,343,244	4,141,054	95.3%
2010	36	173	6,757,444	7,061,573	104.5%
2011	46	190	7,415,248	8,132,657	109.7%
2012	45	196	7,845,701	7,477,802	95.3%
2013	34	242	6,791,340	6,689,382	98.5%
2014[a]	28	233	7,316,583	9,176,488	125.4%
2015	30	236	8,449,216	8,300,600	98.2%
2016	36	184	6,794,647	6,834,008	100.6%
2017	25	177	6,087,452	3,737,195	61.4%
2018	10	35	1,118,559	1,137,175	101.7%
2019[b]	14	39	1,056,417	1,153,892	109.2%
1997–2019 avg.	39	216	5,347,236	5,837,284	109.2%
2015–2019 avg.	23	134	4,701,258	4,232,574	90.0%

[a] Rollover season occurred resulting in additional pot gear harvest.
[b] Harvest through October 10, 2019.

Table 53-3.–Kodiak Area state-waters Pacific cod jig gear effort, guideline harvest level (GHL), and harvest, by year, 1997–2019.

Year	Vessels	Landings	GHL (pounds)	Harvest (pounds)	% of GHL harvested
1997	72	483	4,249,410	1,976,546	46.5%
1998	88	662	4,057,608	2,114,685	52.1%
1999	113	793	5,860,989	2,294,837	39.2%
2000	139	1,226	6,000,707	2,814,481	46.9%
2001	69	433	5,325,542	1,252,692	23.5%
2002	51	340	4,365,153	1,389,838	31.8%
2003[a]	**100**	**688**	**3,995,878**	**3,195,605**	**80.0%**
2004[a]	**120**	**961**	**4,932,843**	**4,210,284**	**85.4%**
2005	**117**	**849**	**4,563,155**	**4,570,327**	**100.2%**
2006	77	477	5,218,480	1,446,881	27.7%
2007	63	457	5,218,480	1,249,753	23.9%
2008	76	647	5,222,338	2,042,082	39.1%
2009	**94**	**833**	**4,343,244**	**4,450,423**	**102.5%**
2010	**81**	**707**	**6,757,444**	**6,504,733**	**96.3%**
2011	**132**	**980**	**7,415,248**	**7,135,466**	**96.2%**
2012	**145**	**1,160**	**7,845,701**	**7,938,727**	**101.2%**
2013	55	199	6,791,340	587,942	8.7%
2014	77	520	7,316,583	3,170,713	43.3%
2015	100	809	8,449,216	3,879,512	45.9%
2016	108	747	6,794,647	3,327,887	49.0%
2017	23	50	6,087,452	101,991	1.7%
2018	10	21	1,118,559	29,016	2.6%
2019[b]	33	100	1,056,417	363,639	34.4%
1997–2019 avg.	84	615	5,347,236	2,871,655	53.7%
2015–2019 avg.	55	345	4,701,258	1,540,409	32.8%

Note: **Bold** indicates years when the jig gear GHL allocation was fully harvested.

[a] Full jig gear GHL allocation not available for harvest due to pot gear overage.

[b] Harvest through October 10, 2019.

Table 53-4.–Central Gulf of Alaska (CGOA) federal Pacific cod harvesting sectors, total allowable catch (TAC) allocations, effort, and harvest, 2019.

CGOA federal Pacific cod harvesting sectors	TAC allocation (%)	Vessels[b]	TAC allocation (pounds)	Harvest[b] (pounds)
Jig[a]	1.0%	13	127,867	65,098
Longline catcher vessel <50 ft LOA	14.6%	28	1,832,023	1,878,186
Longline catcher vessel ≥50 ft LOA	6.7%	5	842,157	313,082
Longline catcher processor	5.1%	1	641,539	confidential
Trawl catcher vessel	41.6%	48	5,218,288	3,749,064
Trawl catcher processor	4.2%	3	526,899	330,831
Pot	27.8%	14	3,489,882	3,220,578
Total	100.0%	108	12,678,655	confidential

[a] Jig allocation taken off the top of the TAC.

[b] Vessel count and harvest through October 10, 2019.

PROPOSAL 54 – 5 AAC 28.467. Kodiak Area Pacific Cod Management Plan.

PROPOSED BY: Alaska Jig Association.

WHAT WOULD THE PROPOSAL DO? Provide the department flexibility to reopen the Kodiak Area state-waters Pacific cod pot gear fishery earlier in the year to reduce foregone jig harvest. On May 1, if the department anticipates the jig gear guideline harvest level (GHL) allocation will not be fully harvested by June 10, the state-waters season may reopen to pot gear vessels on May 8. Harvest by pot gear vessels would be capped at 50% of the remaining jig gear GHL allocation (as of May 1).

WHAT ARE THE CURRENT REGULATIONS? The Kodiak Area state-waters Pacific cod GHL is allocated equally across vessels using pot and jig gear. The pot gear fishery opens 7 days after the closure of the federal/parallel Central Gulf of Alaska (CGOA) pot gear A season and the jig gear fishery opens 48 hours after the closure of the federal/parallel CGOA jig gear A season, or March 15. State-waters seasons generally close when their respective gear allocations are taken or on December 31. If any state-waters GHL remains unharvested after the closure of the fall federal/parallel CGOA pot gear B season, the department may reopen the state-waters season to both pot and jig gear vessels to facilitate full harvest of the GHL.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? On average (2015–2019), this proposal would have provided pot gear vessels opportunity to access to an additional 1.79 million pounds of jig gear GHL annually (Table 54-1). It is unknown if reopening the season on May 8 would result in additional participation by pot gear vessels due to the costs of moving pot gear to and from the fishing grounds, timing relative to start of the salmon season on June 1, and availability of Pacific cod during late spring and early summer.

BACKGROUND: Since inception of state-waters Pacific cod fisheries in 1997, the Kodiak Area pot gear GHL has been fully harvested in all but 2 seasons (2001 and 2017; Table 54-2). The jig gear GHL has been fully harvested 7 out of 23 seasons (Table 54-3). Unharvested jig gear GHL was rolled over to pot vessels during 7 seasons; 5 of those rollover seasons (1997–1999, 2002, and 2008) resulted in harvesting the full GHL. Although GHL was available, rollover seasons were precluded for an additional 7 years because the federal/parallel CGOA pot gear B season did not close which is necessary for the state-waters season to reopen.

Kodiak Area Pacific cod harvest rates are higher for pot gear compared to jig gear, resulting in relatively fast-paced pot gear seasons. Pot gear seasons typically occur during February and March and averaged 26 days in length during years when the GHL was achieved. Jig gear seasons frequently remain open most of the year, with majority of the harvest occurring March to May. From 2015 to 2019, 72% of annual jig gear harvest occurred before May 1 (Table 54-3).

Pacific cod annually form large spawning aggregations that generally peak in March. This schooling behavior contributes to increased catch rates during spring fisheries. After spawning, Pacific cod generally disperse for remainder of the year. Pacific cod catch rates across all gear types and fisheries are typically highest during the spring spawning season. During years when pot gear fisheries extended into May, CPUE (number of cod per pot) was approximately 1/2 of the CPUEs observed in February and March of the same year.

Most Kodiak Area pot gear vessels also participate in salmon fisheries as either catcher vessels or tenders. Salmon seasons typically open in June. Pot gear vessels may opt out of a spring Pacific cod rollover season due to limited GHL availability, low exvessel value of Pacific cod relative to salmon, and the short transition time between May 8 and the start of the salmon season.

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

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

Table 54-1.–Kodiak Area state-waters Pacific cod jig gear guideline harvest level (GHL), harvest through May 1, total harvest, and proposed GHL available for harvest by pot gear on May 8, by year, 1997–2019.

Year	Jig gear GHL	Jig gear harvest through May 1	Total jig gear harvest	Percent of total jig gear harvest through May 1	Jig gear GHL remaining on May 1	Proposed GHL available for harvest by pot gear on May 8
1997	4,249,410	100,857	1,976,546	5.1%	4,148,553	2,074,277
1998	4,057,608	469,489	2,114,685	22.2%	3,588,119	1,794,060
1999	5,860,989	260,700	2,294,837	11.4%	5,600,289	2,800,145
2000	6,000,707	726,349	2,814,481	25.8%	5,274,358	2,637,179
2001	5,325,542	329,738	1,252,692	26.3%	4,995,804	2,497,902
2002	4,365,153	216,904	1,389,838	15.6%	4,148,249	2,074,125
2003	3,995,878	2,252,067	3,195,605	70.5%	1,743,811	871,906
2004	4,932,843	4,210,284	4,210,284	100.0%	722,559	361,280
2005	4,563,155	4,570,328	4,570,327	100.0%	0	0
2006	5,218,480	758,675	1,446,881	52.4%	4,459,805	2,229,903
2007	5,218,480	338,137	1,249,753	27.1%	4,880,343	2,440,172
2008	5,222,338	733,685	2,042,082	35.9%	4,488,653	2,244,327
2009	4,343,244	1,833,668	4,450,423	41.2%	2,509,576	1,254,788
2010	6,757,444	3,447,016	6,504,733	53.0%	3,310,428	1,655,214
2011	7,415,248	7,135,212	7,135,466	100.0%	280,036	140,018
2012	7,845,701	5,698,229	7,938,727	71.8%	2,147,472	1,073,736
2013	6,791,340	417,927	587,942	71.1%	6,373,413	3,186,707
2014	7,316,583	1,730,138	3,170,713	54.6%	5,586,445	2,793,223
2015	8,449,216	2,596,036	3,879,512	66.9%	5,853,180	2,926,590
2016	6,794,647	2,543,867	3,327,887	76.4%	4,250,780	2,125,390
2017	6,087,452	78,676	101,991	77.1%	6,008,776	3,004,388
2018	1,118,559	6,926	29,016	23.9%	1,111,633	555,817
2019[a]	1,056,417	332,503	363,639	91.4%	723,914	361,957
1997–2019 avg.	5,347,236	1,773,366	2,871,655	61.8%	3,574,182	1,787,091
2015–2019 avg.	4,701,258	1,111,602	1,540,409	72.2%	3,589,657	1,794,828

[a] Harvest through October 10, 2019.

Table 54-2.–Kodiak Area state-waters Pacific cod pot gear effort, guideline harvest level (GHL), and harvest, by year, 1997–2019.

Year	Vessels	Landings	GHL (pounds)	Harvest (pounds)	% of GHL harvested
1997[a]	38	243	4,249,410	5,769,129	135.8%
1998[a]	47	310	4,057,608	6,070,139	149.6%
1999[a]	77	471	5,860,989	8,492,710	144.9%
2000	69	481	6,000,707	5,748,334	95.8%
2001[a]	34	236	5,325,542	3,591,049	67.4%
2002[a]	33	212	4,365,153	7,436,013	170.3%
2003	42	149	3,995,878	4,959,262	124.1%
2004	47	161	4,932,843	5,823,605	118.1%
2005	51	162	4,563,155	3,977,835	87.2%
2006	41	169	5,218,480	4,883,637	93.6%
2007	33	182	5,218,480	5,157,212	98.8%
2008[a]	37	341	5,222,338	8,506,792	162.9%
2009	38	138	4,343,244	4,141,054	95.3%
2010	36	173	6,757,444	7,061,573	104.5%
2011	46	190	7,415,248	8,132,657	109.7%
2012	45	196	7,845,701	7,477,802	95.3%
2013	34	242	6,791,340	6,689,382	98.5%
2014[a]	28	233	7,316,583	9,176,488	125.4%
2015	30	236	8,449,216	8,300,600	98.2%
2016	36	184	6,794,647	6,834,008	100.6%
2017	25	177	6,087,452	3,737,195	61.4%
2018	10	35	1,118,559	1,137,175	101.7%
2019[b]	14	39	1,056,417	1,153,892	109.2%
1997–2019 avg.	39	216	5,347,236	5,837,284	109.2%
2015–2019 avg.	23	134	4,701,258	4,232,574	90.0%

[a] Rollover season occurred resulting in additional pot gear harvest.

[b] Harvest through July 31, 2019.

Table 54-3.–Kodiak Area state-waters Pacific cod jig gear effort, guideline harvest level (GHL), and harvest, by year, 1997–2019.

Year	Vessels	Landings	GHL (pounds)	Harvest (pounds)	% of GHL harvested
1997	72	483	4,249,410	1,976,546	46.5%
1998	88	662	4,057,608	2,114,685	52.1%
1999	113	793	5,860,989	2,294,837	39.2%
2000	139	1,226	6,000,707	2,814,481	46.9%
2001	69	433	5,325,542	1,252,692	23.5%
2002	51	340	4,365,153	1,389,838	31.8%
2003[a]	**100**	**688**	**3,995,878**	**3,195,605**	**80.0%**
2004[a]	**120**	**961**	**4,932,843**	**4,210,284**	**85.4%**
2005	**117**	**849**	**4,563,155**	**4,570,327**	**100.2%**
2006	77	477	5,218,480	1,446,881	27.7%
2007	63	457	5,218,480	1,249,753	23.9%
2008	76	647	5,222,338	2,042,082	39.1%
2009	**94**	**833**	**4,343,244**	**4,450,423**	**102.5%**
2010	**81**	**707**	**6,757,444**	**6,504,733**	**96.3%**
2011	**132**	**980**	**7,415,248**	**7,135,466**	**96.2%**
2012	**145**	**1,160**	**7,845,701**	**7,938,727**	**101.2%**
2013	55	199	6,791,340	587,942	8.7%
2014	77	520	7,316,583	3,170,713	43.3%
2015	100	809	8,449,216	3,879,512	45.9%
2016	108	747	6,794,647	3,327,887	49.0%
2017	23	50	6,087,452	101,991	1.7%
2018	10	21	1,118,559	29,016	2.6%
2019[b]	33	100	1,056,417	363,639	34.4%
1997–2019 avg.	84	615	5,347,236	2,871,655	53.7%
2015–2019 avg.	55	345	4,701,258	1,540,409	32.8%

Note: **Bold** indicates years when the jig gear GHL allocation was fully harvested.

[a] Full jig gear GHL allocation not available for harvest due to pot gear overage.

[b] Harvest through July 31, 2019.

PROPOSAL 44 – 5 AAC 27.465. Kamishak Bay District Herring Management Plan.
(This proposal will be heard at the Lower Cook Inlet and Kodiak meetings, and deliberated at the Kodiak meeting).

PROPOSED BY: Sam Mutch.

WHAT WOULD THE PROPOSAL DO? This would amend the Kamishak Bay District Herring Management Plan to remove restrictions to the Shelikof Strait food and bait herring fishery. This would require that this fishery be managed based solely on surveys of spawning biomass in bays adjacent to Shelikof Strait north of Miner's Point.

WHAT ARE THE CURRENT REGULATIONS? The Kamishak Bay District Herring Management Plan (5 AAC 27.465) sets guidelines for the allocation of the Kamishak Bay herring stock to the Shelikof Strait food and bait herring fishery, as described in 5 AAC 27.535.

- The allocation of the allowable harvest of the Kamishak Bay herring stock is 90 percent to the Kamishak Bay sac roe fishery, and 10 percent to the Shelikof Strait food and bait fishery.
- The guideline harvest level (GHL) for the fall Shelikof Strait food and bait fishery and the following spring Kamishak Bay sac roe fishery will be based on the projected biomass as determined by the most recent aerial surveys, age class composition, historical mortality, recruitment trends, and other relevant data that are collected by the department.
- If the projected spawning biomass is less than the minimum threshold of 6,000 short tons, the Kamishak Bay sac roe fishery and the Shelikof Strait food and bait fishery north of the latitude of Miners Point (57° 54.00' N. lat.) will be closed.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Fishing could occur in the Kodiak Management Area (KMA) on local stocks north of Miners Point in years when local abundance is sufficient to establish a herring sac roe GHL which in turn would establish a herring food and bait GHL of 10% the herring sac roe GHL. The contribution from the Kamishak stock toward the Shelikof Strait GHL would be removed regardless of observations or lack of observations in the Kamishak District (Figure 44-1). This could result in an increase in the commercial harvest of herring in the Shelikof Strait area with an unknown effect on sustainability of the Kamishak stock.

BACKGROUND: Prior to the Harvest strategies for the Kodiak Area (5 AAC 27.535), the department set the KMA food and bait GHL by regulation at 1,000 tons. This annual GHL did not reflect a realistic harvest level of the local stocks and the annual food and bait harvest was less than 400 tons.

During the fall and winter months of the early 1980s, large concentrations of herring were observed in eastern Shelikof Strait and adjacent bays along the west side of the Kodiak Archipelago. The biomass exceeded that of known Kodiak area spawning stocks. Herring food and bait fisheries targeted these herring, but the stock composition was unknown. In 1986, a stock identification study, based on scale pattern analysis, was conducted on herring harvested from a large biomass located in the northeastern part of the Shelikof Strait (unpublished department report by Johnson et al., Kodiak, Alaska). Results of the study indicated that at least 80% of the Shelikof herring

catch sampled were Kamishak Bay stocks, which spawn within the Lower Cook Inlet Management Area.

To alleviate the problem of identifying the spawning stock of a harvest in areas where intermixing may occur, the harvest strategy combines the Kamishak stock GHL with the Kodiak stock GHL for food and bait management units along the Shelikof Strait. When this combined GHL is achieved the Shelikof Strait food and bait management units are closed collectively. Also, when the Kamishak spawning biomass is below 6,000 tons the Shelikof Strait food and bait fishery north of the latitude of Miners Point (Figure 44-1) stays closed (5 AAC 27.535(d)).

Aerial surveys of herring spawning biomass occurred annually in the Kamishak District from 1978–2015. These surveys, and all other herring stock assessment activities in Kamishak Bay, were suspended in 2016 due to a lack of funding (Table 44-2).

Prior to cessation of the herring monitoring program in Kamishak Bay, herring stock biomass remained generally below 6,000 short tons, the regulatory threshold specified in 5 AAC 27.465(e)(3) where a Kamishak Bay commercial herring fishery and a Kodiak food and bait fishery would be permitted (Table 44-1).

Currently, the KMA sets food and bait GHLs at 10% of the previous sac roe herring GHL for a particular district. For example, if the Uganik District had a sac roe GHL of 1,000 short tons, the food and bait fishery in the Uganik District, south of latitude of Miners Point would have a GHL of 100 tons.

Hydroacoustic surveys conducted by the department recently have estimated a biomass in Kukak Bay of the North Mainland District in excess of 30,000 tons. This section has been designated as exploratory for the sac roe fishery, but no harvest has occurred since 1997. This section has been unable to open for the food and bait fishery due to low Kamishak abundance and the lack of a GHL during the sac roe fishery.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal as written. However, the department would **SUPPORT** this proposal if certain safeguards were added to the current management plan that would allow for a food and bait fishery to occur based on local stocks, while limiting openings in the Shelikof Strait. The Kamishak Bay herring fishery has been closed since 1998 due to spawning biomass estimates that have consistently been below the threshold needed to open the fishery. This is the same stock that would be potentially harvested in the fishery proposed here.

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

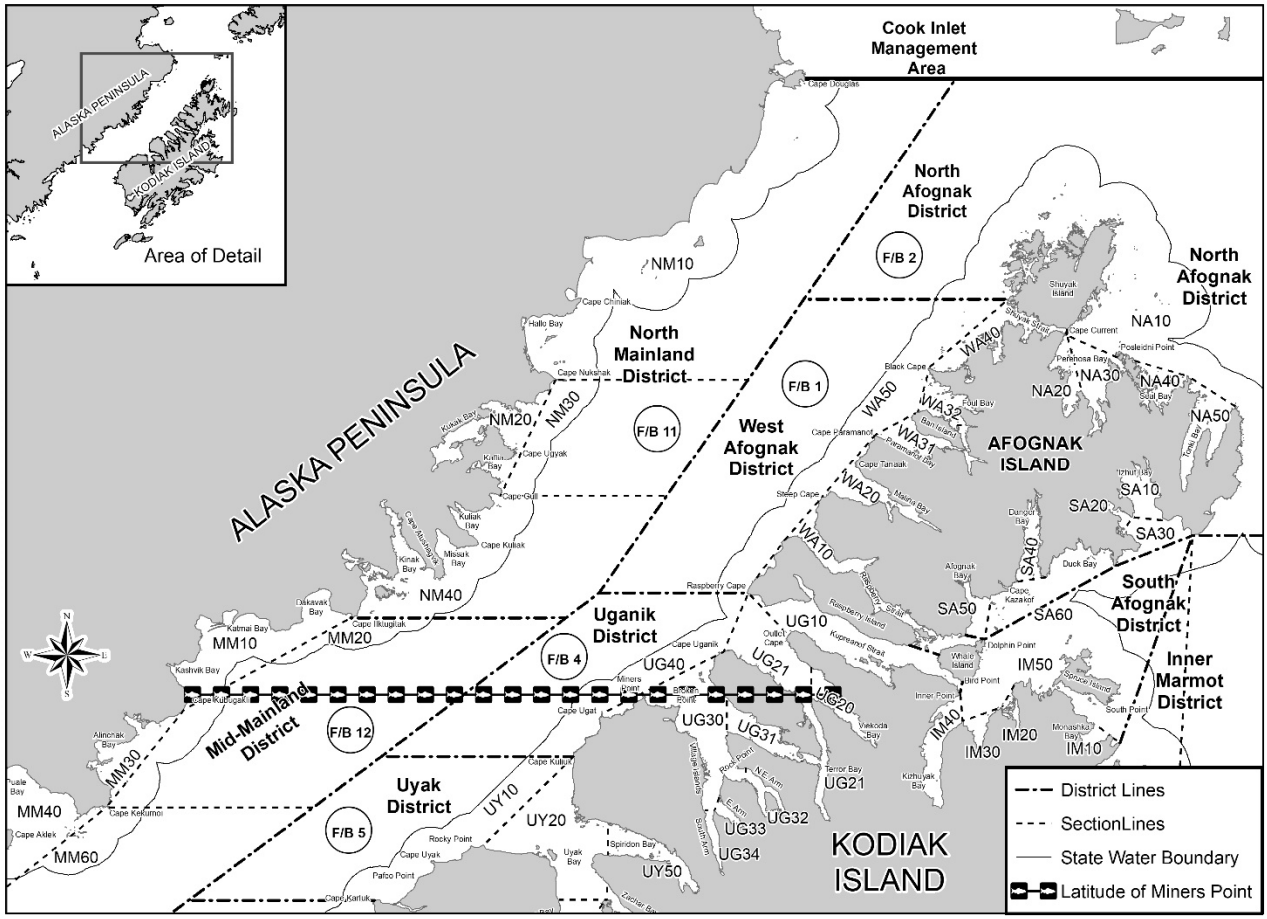

Figure 44-1.–Map showing the latitude of Miners Point.

Table 44-1.–Kodiak food and bait herring harvests, 1999–2018.

	Harvest (st) and location (F/B Management District)				
Year	South Afognak	Uganik	Eastside	Inner Marmot	Total
1999	-	-	-	-	0
2000	-	-	-	-	0
2001	-	63	52	-	115
2002	-	74	61	-	135
2003	-	116	83	-	199
2004	-	97	92	-	190
2005	-	167	-	-	167
2006	-	169	-	-	169
2007	-	154	-	-	154
2008	-	202	-	-	202
2009	89	174	-	-	263
2010	45	118	-	28	191
2011	85	127	-	-	212
2012	102	198	-	-	300
2013	112	179	-	-	291
2014	124	-	-	-	124
2015	-	-	106	-	106
2016	-	-	-	-	0
2017	50	27	-	-	77
2018	59		-	-	59

Note: st = short ton.

Table 44-2.–Comparison of preseason biomass forecast/projected harvest and actual commercial herring sac roe seine harvest versus hindcast (age structured assessment [ASA]) estimates of total biomass and exploitation rate in Kamishak Bay District, Lower Cook Inlet, 1990–2017.

Year	Preseason		Actual commercial harvest (st)[a]	Estimated exploitation rate (%)[b]	ASA Hindcast total biomass estimate (st)[c,d,e]	Hindcast exploitation rate (%)[c,f]
	Forecasted biomass (st)	Projected harvest (st)[a]				
1990	28,658	2,292	2,264	7.9	17,102	13.2
1991	17,256	1,554	1,992	11.5	18,108	11.0
1992	16,431	1,479	2,282	13.9	16,583	13.8
1993	28,805	2,592	3,570	12.4	14,777	24.2
1994	25,300	3,421	2,167	8.6	12,183	17.8
1995	21,998	2,970	3,378	15.4	9,805	34.5
1996	20,925	2,250	2,984	14.3	7,559	39.5
1997	25,300	3,420	1,746	6.9	5,710	30.6
1998	19,800	1,780	331	1.7	5,074	6.5
1999	[g]		CLOSED[h]		5,030	
2000	6,330		CLOSED		5,074	
2001	11,352		CLOSED		4,751	
2002	9,020		CLOSED		4,548	
2003	4,771		CLOSED		4,666	
2004	3,554		CLOSED		4,825	
2005	3,058		CLOSED		5,245	
2006	2,650		CLOSED		5,143	
2007	2,286		CLOSED		5,979	
2008	2,069		CLOSED		6,652	
2009	[i]		CLOSED		5,852	
2010	2,963		CLOSED		6,327	
2011	3,830		CLOSED		5,619	
2012	[i]		CLOSED		4,810	
2013	[i]		CLOSED		3,743	
2014	6,318		CLOSED		2,778	
2015	5,699		CLOSED		2,015	
2016	1,603		CLOSED		[i]	
1990–2016 Average[j]	11,738	2,418	2,302	10	7,306	21.2
2017	[i]		CLOSED		[i]	

Note: st = short ton.

Sources: Otis 2004; Otis and Cope 2004; Yuen 1994.

[a] Kamishak Bay allocation only; does not include Shelikof Strait food/bait allocation.

[b] Estimated exploitation rate based on preseason forecasted biomass and actual commercial harvest for each year.

[c] Figures are based on the best available data at the time of publishing and are subject to change as new data are incorporated into the model; therefore, all figures herein supersede those previously reported.

[d] Age-structured-assessment (ASA) model integrates heterogeneous data sources and simultaneously minimizes differences between observed and expected return data to forecast the following year's biomass as well as hindcast previous years' biomass.

[e] ASA estimates based on the most recent available hindcast, run after the 2015 survey season.

[f] Estimated exploitation rate based on ASA hindcast estimates of biomass divided by actual commercial harvest.

[g] 1999 preseason biomass calculated as a range of 6,000 to 13,000 short ton.

[h] Department test fishing harvested 100 short ton.

[i] No ASA forecasted or hind-casted abundance estimate possible due to lack of age composition samples.

[j] Averages based only on years with data presented.

PROPOSAL 55 – 5 AAC 27.510. Fishing seasons and periods for the Kodiak Area.

PROPOSED BY: Malcom Jamie Ross.

WHAT WOULD THE PROPOSAL DO? This would change the start date of the Kodiak Area herring sac roe fishery from April 15 to April 1.

WHAT ARE THE CURRENT REGULATIONS? 5 AAC 27.510. Fishing seasons and periods for Kodiak Area. (a) Unless otherwise provided for by emergency order, herring may be taken during the sac roe season from April 15 through June 30.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Opening the fishery April 1 would provide opportunity to harvest herring that spawn prior to the April 15 opening. There may be increased participation early in the fishery and herring harvests may increase as well. This could potentially concentrate the fleet in areas with early spawn timing such as the Eastside District. Herring that historically spawn prior to the April 15 opening would be more susceptible to harvest. If effort rises from current levels, it would become more difficult to monitor the fishery early in the season.

BACKGROUND: The sac roe herring fishery has opened on April 15 since 1981. Historically, the April 15 date was intended to slow harvest rates to a more manageable level. Herring are usually first observed in sections of the Eastside District and often spawn prior to April 15. In recent years, early spawn observations have increased throughout the Kodiak Management Area (KMA).

Participation has declined substantially in recent years. During the last 5 seasons, participation has averaged only 4 purse seine vessels (Table 55-1). Since 2016, the department has required seiners to register prior to fishing. Registration requirements include notifying the department daily of fishing location, and reporting harvest immediately upon landing.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal due to the allocation aspects between purse seiners that fish in the Sitka, Kodiak, and Togiak fisheries. Prior manageability concerns of an earlier opening date are minimal with current effort levels and registration requirements.

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

Table 55-1.–Herring sac roe fishery guideline harvest levels (GHL), harvests, harvests and percent harvested by gear type, 1992–2019.

Year	GHL (tons)	Total harvest (tons)	Harvest (tons) by gear type		Units of gear fished		Percent harvested by by gear type	
			Seine	Gillnet	Seine	Gillnet	Seine	Gillnet
1992	2,720	4,283	3,260	1,023	40	74	76%	24%
1993	3,525	4,929	4,203	726	41	86	85%	15%
1994	4,550	5,893	4,976	917	66	57	84%	16%
1995	4,480	4,604	3,837	768	73	71	83%	17%
1996	4,180	3,386	2,322	1,064	57	74	69%	31%
1997	3,435	3,235	2,629	606	64	59	81%	19%
1998	2,030	2,057	1,954	103	35	7	95%	5%
1999	1,495	1,651	1,589	62	31	5	96%	4%
2000 [a]	1,735	1,370	1,290	80	31	10	94%	6%
2001	1,540	1,694	1,412	282	33	9	83%	17%
2002	1,860	1,677	1,274	403	30	14	76%	24%
2003	2,600	1,992	1,738	254	31	11	87%	13%
2004	2,850	3,167	2,894	273	27	11	91%	9%
2005	3,475	3,463	2,932	531	32	12	85%	15%
2006	3,705	2,643	2,617	[b]	21	[b]	99%	1%
2007	4,000	2,546	2,510	36	21	3	99%	1%
2008	4,290	3,099	3,086	[b]	22	[b]	100%	0%
2009	4,765	4,759	4,549	210	31	6	96%	4%
2010	6,075	5,701	5,538	163	36	7	97%	3%
2011	6,135	2,957	2,937	20	14	3	99%	1%
2012	5,355	4,260	4,253	[b]	23	[b]	100%	0%
2013	5,410	4,447	4,298	149	33	5	97%	3%
2014	5,830	2,463	2,463	0	21	0	100%	0%
2015	3,190	357	357	0	9	0	100%	0%
2016	1,670	365	365	0	3	0	100%	0%
2017	1,645	125	124	[b]	3	[b]	99%	1%
2018	1,185	226	226	0	3	0	100%	0%
2019	1,405	[b]	[b]	0	[b]	0	100%	0%
10-year avg. 2000–2019	3,436	2,366	2,244	150	21	6	95%	5%
5-year avg. 2015–2019	1,819	217	217	0	4	0	100%	0%

[a] Beginning in 2000, an allocative harvest strategy was in effect.

[b] Confidential

PROPOSAL 56 – 5 AAC 27.535. Harvest strategies for Kodiak Area.

PROPOSED BY: Sam Mutch.

WHAT WOULD THE PROPOSAL DO? This would update the regulatory language for the Kodiak food and bait herring fishery so that it is managed only on local stocks. This proposal would also allow the department to designate sections as exploratory for the food and bait fishery.

WHAT ARE THE CURRENT REGULATIONS? 5 AAC 27.535. Harvest strategies for Kodiak Area (a) The department shall manage the Shelikof Strait food and bait herring fishery in the West Afognak, North Afognak, Uganik, and Uyak districts, so that the total harvest does not exceed the combined guideline harvest level (GHL) for these districts and the allowable harvest of the Kamishak spawning stocks that overwinter in Shelikof Strait. The North Mainland and Mid Mainland districts shall be managed based on their GHLs, however, they will be closed when the GHL is reached in the Shelikof Strait fishery. The department establishes GHLs for the herring food and bait districts which may not exceed 10% percent of the GHL of the previous sac roe season.

When the Kamishak Bay herring spawning biomass is below 6,000 short tons, the commissioner shall close, by emergency order, the food and bait fishery in Shelikof Strait north of the latitude of Miners Point (lat 57°54.00'N).

5AAC 27.535 (e)(4) A section that does not have an extensive history of sac roe production may be designated as exploratory with no specified guideline harvest level; permit holders for either gear type may fish in an exploratory section; a section listed as exploratory under this paragraph may be opened or closed, based on inseason information such as observed stock abundance, harvest levels, and changes in fish behavior or harvest patterns, including such changes in adjacent sections.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Fishing could occur in the Kodiak Management Area (KMA) on local stocks north of Miners Point in years when local abundance is sufficient to establish a herring sac roe GHL, which in turn would establish a herring food and bait GHL of 10% the herring sac roe GHL. The contribution from the Kamishak stock toward the Shelikof Strait GHL would be removed regardless of observations or lack of observations in the Kamishak District (Figure 56-1). This could result in an increase in the commercial harvest of herring in the Shelikof Strait area with an unknown effect on sustainability of the Kamishak stock. Sections that were designated as exploratory for the sac roe fishery could be designated as exploratory for the food and bait fishery.

BACKGROUND: Prior to the Harvest strategies for the Kodiak Area (5 AAC 27.535), the department set the KMA food and bait GHL by regulation at 1,000 tons. This annual GHL did not reflect a realistic harvest level of the local stocks and the annual food and bait harvest was less than 400 tons.

During the fall and winter months of the early 1980s, large concentrations of herring were observed in eastern Shelikof Strait and adjacent bays along the west side of the Kodiak Archipelago. The biomass exceeded that of known Kodiak area spawning stocks. Herring food and bait fisheries targeted these herring, but the stock composition was unknown. In 1986, a stock identification study, based on scale pattern analysis, was conducted on herring harvested from a large biomass

located in the northeastern part of the Shelikof Strait (unpublished ADF&G report by Johnson et al., Kodiak, Alaska). Results of the study indicated that at least 80% of the Shelikof herring catch sampled were Kamishak Bay stocks, which spawn within the Lower Cook Inlet Management Area.

To alleviate the problem of identifying the spawning stock of a harvest in areas where intermixing may occur, the harvest strategy combines the Kamishak stock GHL with the Kodiak stock GHL into food and bait management units along the Shelikof Strait. When this combined GHL is achieved, the Shelikof Strait food and bait management units are closed collectively. Also, when the Kamishak spawning biomass is below 6,000 tons, the Shelikof Strait food and bait fishery north of the latitude of Miners Point (Figure 56-1) stays closed (5 AAC 27.535(d)).

Aerial surveys of herring spawning biomass occurred annually in the Kamishak District from 1978 to 2015. These surveys, and all other herring stock assessment activities in Kamishak Bay, were suspended in 2016 due to a lack of funding (Table 56-2).

Prior to cessation of the herring monitoring program in Kamishak Bay, herring stock biomass remained generally below 6,000 short tons, the regulatory threshold specified in 5 AAC 27.465(e)(3) where a Kamishak Bay commercial herring fishery and a Kodiak food and bait fishery would be permitted (Table 44-1).

Currently, the KMA sets food and bait GHLs at 10% of the previous sac roe herring GHL for a particular district. For example, if the Uganik District had a sac roe GHL of 1,000 short tons, the food and bait fishery in the Uganik District, south of latitude of Miners Point would have a GHL of 100 tons. Sac roe GHLs are established based on biomass estimates from hydroacoustic and aerial surveys, trends in age composition, observations of spawn and juvenile herring, and fishery performance during previous seasons. Sections without an extensive history of sac roe production may be designated as exploratory without an established GHL. Exploratory sections may be opened or closed based on observed stock abundance, harvest levels, or changes in fish behavior.

Hydroacoustic surveys conducted by the department recently have estimated a biomass in Kukak Bay in excess of 30,000 tons. This section has been designated as exploratory for the sac roe fishery, but no harvest has occurred since 1997. This section has been unable to open for the food and bait fishery due to low Kamishak abundance and the lack of a GHL during the sac roe fishery.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal as written. However, the department would **SUPPORT** this proposal if certain safeguards were added to the current management plan that would allow for a food and bait fishery to occur based on local stocks, while limiting openings in the Shelikof Strait. The Kamishak Bay herring fishery has been closed since 1998 due to spawning biomass estimates that have consistently been below the threshold needed to open the fishery. This is the same stock that would be potentially harvested in the fishery proposed here.

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

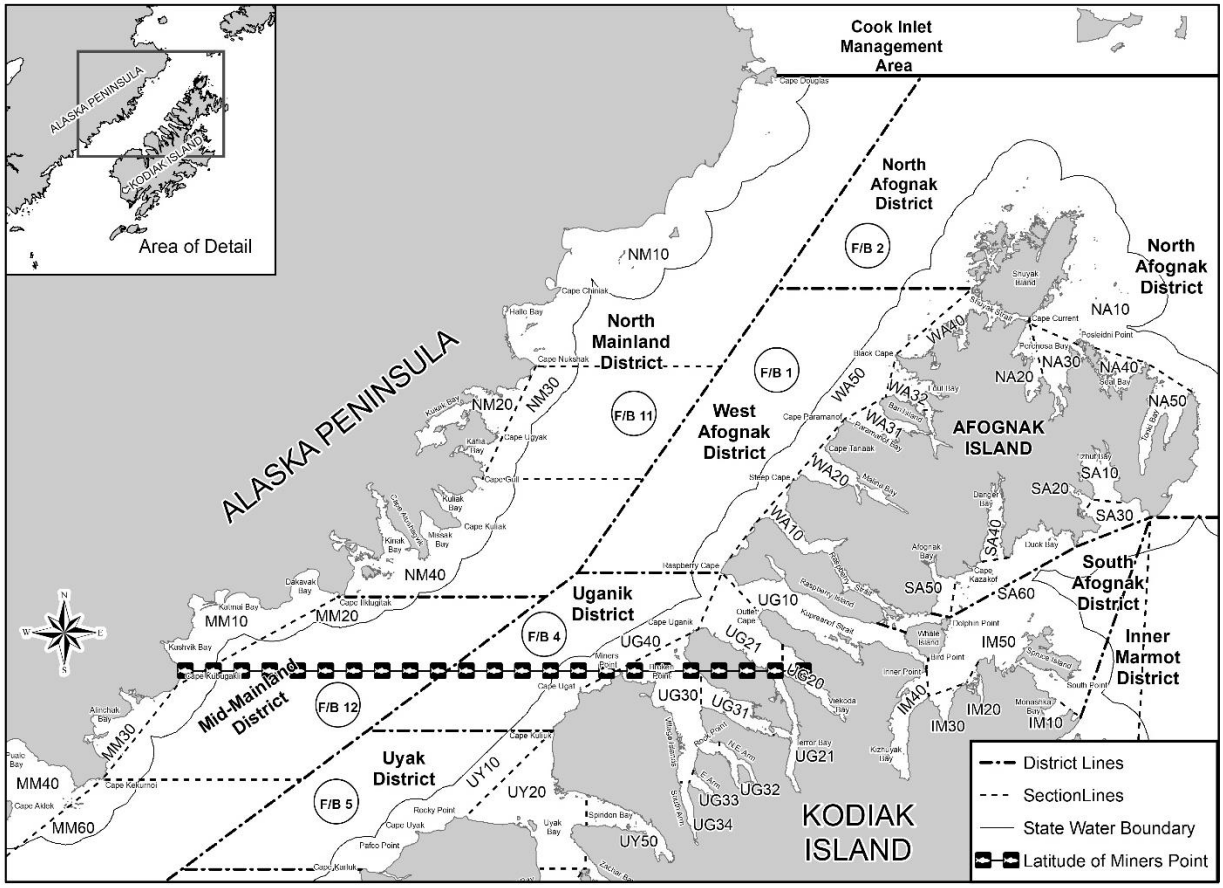

Figure 56-1.–Map showing the latitude of Miners Point.

Table 56-1.–Kodiak food and bait herring harvests, 1999–2018.

	Harvest (st) and Location (food/bait Management District)				
Year	South Afognak	Uganik	Eastside	Inner Marmot	Total
1999	-	-	-	-	0
2000	-	-	-	-	0
2001	-	63	52	-	115
2002	-	74	61	-	135
2003	-	116	83	-	199
2004	-	97	92	-	190
2005	-	167	-	-	167
2006	-	169	-	-	169
2007	-	154	-	-	154
2008	-	202	-	-	202
2009	89	174	-	-	263
2010	45	118	-	28	191
2011	85	127	-	-	212
2012	102	198	-	-	300
2013	112	179	-	-	291
2014	124	-	-	-	124
2015	-	-	106	-	106
2016	-	-	-	-	0
2017	50	27	-	-	77
2018	59		-	-	59

Note: st = short ton.

Table 56-2.–Comparison of preseason biomass forecast/projected harvest and actual commercial herring sac roe seine harvest versus hindcast (age structured assessment [ASA]) estimates of total biomass and exploitation rate in Kamishak Bay District, Lower Cook Inlet, 1990–2017.

	Preseason		Actual	Estimated	ASA Hindcast	Hindcast
Year	Forecasted biomass (st)	Projected harvest (st)[a]	commercial harvest (st)[a]	exploitation rate (%)[b]	total biomass estimate (st)[c,d,e]	exploitation rate (%)[c,f]
1990	28,658	2,292	2,264	7.9	17,102	13.2
1991	17,256	1,554	1,992	11.5	18,108	11.0
1992	16,431	1,479	2,282	13.9	16,583	13.8
1993	28,805	2,592	3,570	12.4	14,777	24.2
1994	25,300	3,421	2,167	8.6	12,183	17.8
1995	21,998	2,970	3,378	15.4	9,805	34.5
1996	20,925	2,250	2,984	14.3	7,559	39.5
1997	25,300	3,420	1,746	6.9	5,710	30.6
1998	19,800	1,780	331	1.7	5,074	6.5
1999	[g]		CLOSED[h]		5,030	
2000	6,330		CLOSED		5,074	
2001	11,352		CLOSED		4,751	
2002	9,020		CLOSED		4,548	
2003	4,771		CLOSED		4,666	
2004	3,554		CLOSED		4,825	
2005	3,058		CLOSED		5,245	
2006	2,650		CLOSED		5,143	
2007	2,286		CLOSED		5,979	
2008	2,069		CLOSED		6,652	
2009	[i]		CLOSED		5,852	
2010	2,963		CLOSED		6,327	
2011	3,830		CLOSED		5,619	
2012	[i]		CLOSED		4,810	
2013	[i]		CLOSED		3,743	
2014	6,318		CLOSED		2,778	
2015	5,699		CLOSED		2,015	
2016	1,603		CLOSED		[i]	
1990–2016 Average[j]	11,738	2,418	2,302	10	7,306	21.2
2017	[i]		CLOSED		[i]	

Note: st = short ton.

Sources: Otis 2004; Otis and Cope 2004; Yuen 1994.

[a] Kamishak Bay allocation only; does not include Shelikof Strait food/bait allocation.

[b] Estimated exploitation rate based on preseason forecasted biomass and actual commercial harvest for each year.

[c] Figures are based on the best available data at the time of publishing and are subject to change as new data is incorporated into the model; therefore, all figures herein supersede those previously reported.

[d] Age-structured-assessment (ASA) model integrates heterogeneous data sources and simultaneously minimizes differences between observed and expected return data to forecast the following year's biomass as well as hindcast previous years' biomass.

[e] ASA estimates based on the most recent available hindcast, run after the 2015 survey season.

[f] Estimated exploitation rate based on ASA hindcast estimates of biomass divided by actual commercial harvest.

[g] 1999 preseason biomass calculated as a range of 6,000 to 13,000 short ton.

[h] department test fishing harvested 100 short ton.

[i] No ASA forecasted or hind-casted abundance estimate possible due to lack of age composition samples.

[j] Averages based only on years with data presented.

PROPOSAL 57 – 5 AAC 27.535. Harvest strategies for Kodiak Area.

PROPOSED BY: Dave Hilty.

WHAT WOULD THE PROPOSAL DO? This proposal mistakenly states it would eliminate the allocation between gillnet permit holders and purse seine permit holders in the Kodiak herring food and bait fishery and allow both gear types to fish the same sections on alternating days; however, these changes would apply to the sac roe fishery.

WHAT ARE THE CURRENT REGULATIONS? 5 AAC 27.535. Harvest strategies for Kodiak Area (e) The department shall manage the sac roe herring fishery to provide opportunities for gillnet permit holders to harvest approximately 25 percent and purse seine permit holders to harvest approximately 75 percent of the total preseason guideline harvest level (GHL) for the management area. For each district that has more than 1 section open to fishing, department is required to assign 20 percent to 30 percent of the GHL to gillnet permit holders and 70 percent to 80 percent of the GHL to purse seine permit holders (5 AAC 27.535(e)(2)(D)).

From May 1 through June 30, the department may open any area with a remaining GHL to any gear group if the fishery is not likely to result in overharvest (5 AAC 27.535(e)(1)(C)). Also, after April 30, permit holders must be registered with department before participating in the fishery (5 AAC 27.510(a)(4)).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would increase opportunity for both gear types to harvest herring that are unavailable after the May 1 rollover date.

BACKGROUND: Prior to 1974, the sac roe fishery was unregulated with regard to harvest quotas, gear types, seasons, and fishing periods. From 1977 through 1982, the fishery went through a developmental phase that focused on gear efficiency, gear restrictions, and gear conflicts. Gear was limited to purse seines and gillnets, and a relatively stable sac roe herring fishery occurred through 1991. Record harvests occurred from 1992 to 1995 when catches ranged between 4,283 (1992) to 5,893 tons (1994; Table 57-1). This increase in herring abundance occurred during years of high prices and fishery participation grew. In 1997, herring prices declined followed by herring abundance throughout most of the Kodiak Management Area (KMA). Gillnet permit holders had little harvest opportunity when competing against purse seine permit holders, and they promoted a change in fishery management.

An allocative harvest strategy was developed through the efforts of a board herring task force (established in 1999) that consisted of purse seine permit holders, gillnet permit holders, and department staff. The task force developed a harvest strategy that provides opportunity for gillnet permit holders to harvest approximately 25% and purse seine permit holders to harvest approximately 75% of the total preseason GHL for the KMA.

The harvest strategy requires the department to establish GHLs by section, based on historical harvest data, current and past fishery performance, commercial catch samples, and aerial biomass surveys. The department is then required, for each district that has more than 1 section open to fishing, to assign, by section, 20–30% of the GHL to gillnet permit holders and 70–80% of the GHL to purse seine permit holders. This is accomplished by designating 1 gear type for each section.

Effort and harvest by the gillnet fleet declined dropped substantially after 2005, and the majority of herring allocated to the gillnet fleet went unharvested. In order to provide opportunity on herring unharvested by a gear type, regulation changes made in 2009 allow the department, from May 1 through June 30, to open any area with a remaining GHL to any gear group if the fishery is not likely to result in overharvest (5 AAC 27.535(e)(1)(C)).

Since 2015, effort and harvests have been low for both gear types. From 2015 to 2019, harvests have averaged 217 tons and participation has averaged 4 purse seine vessels. Less than 3 gillnet permit holders have participated during this time period (Table 57-1).

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

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

Table 57-1.–Herring sac roe fishery guideline harvest levels (GHL), total harvests, harvests and percent harvested by gear type, 1992–2019.

Year	GHL (tons)	Total harvest (tons)	Harvest (tons) by gear type		Units of gear fished		Percent harvested by by gear type	
			Seine	Gillnet	Seine	Gillnet	Seine	Gillnet
1992	2,720	4,283	3,260	1,023	40	74	76%	24%
1993	3,525	4,929	4,203	726	41	86	85%	15%
1994	4,550	5,893	4,976	917	66	57	84%	16%
1995	4,480	4,604	3,837	768	73	71	83%	17%
1996	4,180	3,386	2,322	1,064	57	74	69%	31%
1997	3,435	3,235	2,629	606	64	59	81%	19%
1998	2,030	2,057	1,954	103	35	7	95%	5%
1999	1,495	1,651	1,589	62	31	5	96%	4%
2000 [a]	1,735	1,370	1,290	80	31	10	94%	6%
2001	1,540	1,694	1,412	282	33	9	83%	17%
2002	1,860	1,677	1,274	403	30	14	76%	24%
2003	2,600	1,992	1,738	254	31	11	87%	13%
2004	2,850	3,167	2,894	273	27	11	91%	9%
2005	3,475	3,463	2,932	531	32	12	85%	15%
2006	3,705	2,643	2,617	[b]	21	[b]	99%	1%
2007	4,000	2,546	2,510	36	21	3	99%	1%
2008	4,290	3,099	3,086	[b]	22	[b]	100%	0%
2009	4,765	4,759	4,549	210	31	6	96%	4%
2010	6,075	5,701	5,538	163	36	7	97%	3%
2011	6,135	2,957	2,937	20	14	3	99%	1%
2012	5,355	4,260	4,253	[b]	23	[b]	100%	0%
2013	5,410	4,447	4,298	149	33	5	97%	3%
2014	5,830	2,463	2,463	0	21	0	100%	0%
2015	3,190	357	357	0	9	0	100%	0%
2016	1,670	365	365	0	3	0	100%	0%
2017	1,645	125	124	[b]	3	[b]	99%	1%
2018	1,185	226	226	0	3	0	100%	0%
2019	1,405	[b]	[b]	0	[b]	0	100%	0%
10 year avg. 2000 to 2019	3,436	2,366	2,244	150	21	6	95%	5%
5 year avg. 2015 to 2019	1,819	217	217	0	4	0	100%	0%

[a] Beginning in 2000, an allocative harvest strategy was in effect.
[b] Confidential.

PROPOSAL 58 – 5 AAC 18.360. Cape Igvak Salmon Management Plan.

PROPOSED BY: Chignik Intertribal Coalition.

WHAT WOULD THE PROPOSAL DO? This would close the Cape Igvak Section to all commercial salmon fishing prior to July 8.

WHAT ARE THE CURRENT REGULATIONS? From the beginning of the commercial salmon fishing season (as early as June 1) through July 25, commercial fishing opportunity in the Cape Igvak Section is dependent on the number of sockeye salmon harvested in the Chignik Management Area. If biological and allocative requirements are met in the Chignik Management Area, then the Cape Igvak fishery would be managed to harvest as near as possible 15% of the total harvest of Chignik-bound sockeye salmon through July 25. The sockeye salmon harvest in the Cape Igvak Section at any time before July 25 may be permitted to fluctuate above or below 15% of the cumulative Chignik sockeye salmon catch (5 AAC 18.360 (d)). The first fishing period of the commercial salmon fishing season in the Cape Igvak Section will not occur before the first fishing period of the commercial salmon fishing season in the Chignik Area (5 AAC 18.360 (e)). During the period from approximately June 26 through July 8, the strength of the second run of Chignik River system sockeye salmon cannot be evaluated. In order to prevent overharvest of the second run, commercial salmon fishing in the Cape Igvak Section will, in the department's discretion, be disallowed or severely restricted during this period (5 AAC 18.360 (f)).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL IS ADOPTED? The Cape Igvak Section (Figure 58-1) would not be permitted to open for commercial salmon fishing periods from June 1 through July 7 resulting in a potential Kodiak Management Area (KMA) purse seine loss in harvest of 192,000 sockeye salmon (20-yr average; Table 58-1). From July 8 until July 25, the department would manage the Cape Igvak Section to achieve 15% of the total Chignik-bound sockeye salmon harvest from July 8 through July 25. It may become more difficult to achieve the board-mandated 15% of the total Chignik-bound sockeye salmon harvest in the Cape Igvak Section without fishing prior to July 8 because of reduced presence of sockeye salmon transiting the area and lower fishing effort that is common during this timeframe (Table 58-1).

BACKGROUND: Beginning in 1964, a purse seine fishery developed along the capes in the Cape Igvak Section of the Mainland District. Tagging studies and stock identification studies using average weight and age composition conducted in 1968 and 1969 concluded that up to 80% of the sockeye salmon harvested in the Cape Igvak Section were of Chignik origin. The issue of interception of Chignik-bound sockeye salmon in the Cape Igvak Section came before the board several times over the next 10 years, and management of this section was modified many times. From 1974 through 1977, this area was managed for "day for day" equal fishing time with the Chignik Bay District of the Chignik Management Area.

In 1978, a specific management plan for the Cape Igvak Section was adopted by the board. The Cape Igvak Salmon Management Plan (CISMP; 5 AAC 18.360) covers the time period from the start of the season through July 25 for fishing activity in the Cape Igvak Section of the Mainland District. This management plan stipulated that 80% of the sockeye salmon harvest from the Cape Igvak Section through July 25 period will be considered Chignik-bound. In 2002, the board modified the CISMP such that 90% of the Cape Igvak Section sockeye salmon catch was now considered to be Chignik-bound. The CISMP allows the KMA fleet to harvest up to 15% of the

Chignik-bound sockeye salmon harvest. The CISMP also stipulates strict allocative and biological requirements. Through July 25 in Chignik, a minimum harvest of 600,000 sockeye salmon must be expected (300,000 for both the early and late run), and sockeye salmon escapement must be at desired levels. Commercial fisheries must begin in the Chignik Management Area before fisheries are allowed in the Cape Igvak Section.

During the early part of the season, the department manages the Cape Igvak sockeye salmon catch percentage to climb above 15%. 5 AAC 18.360 (f) requires that the Cape Igvak fishery be closed or severely restricted during the period from approximately June 26 to July 9 because of uncertainty in the strength of the second run to Chignik. There is no such restriction on the Chignik Management Area fishery, and the Chignik Management Area can be open to fishing during this "overlap" period to harvest first run fish in excess of escapement requirements. These harvests over the past 20 years have averaged 274,861 sockeye salmon, which has driven down the Cape Igvak percentage, on average, 7.7 percentage points during the overlap period (Table 58-2). By the end of the overlap period, and by the time the department determines if there is a harvestable surplus for the second run, the Cape Igvak percentage often decreases to near the 15% allocation (Table 58-2). Additionally, as the season progresses toward the end of the Cape Igvak management period, the abundance of sockeye salmon in the Cape Igvak Section often decreases, resulting in difficulties increasing the allocation percent to the target of 15%.

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

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

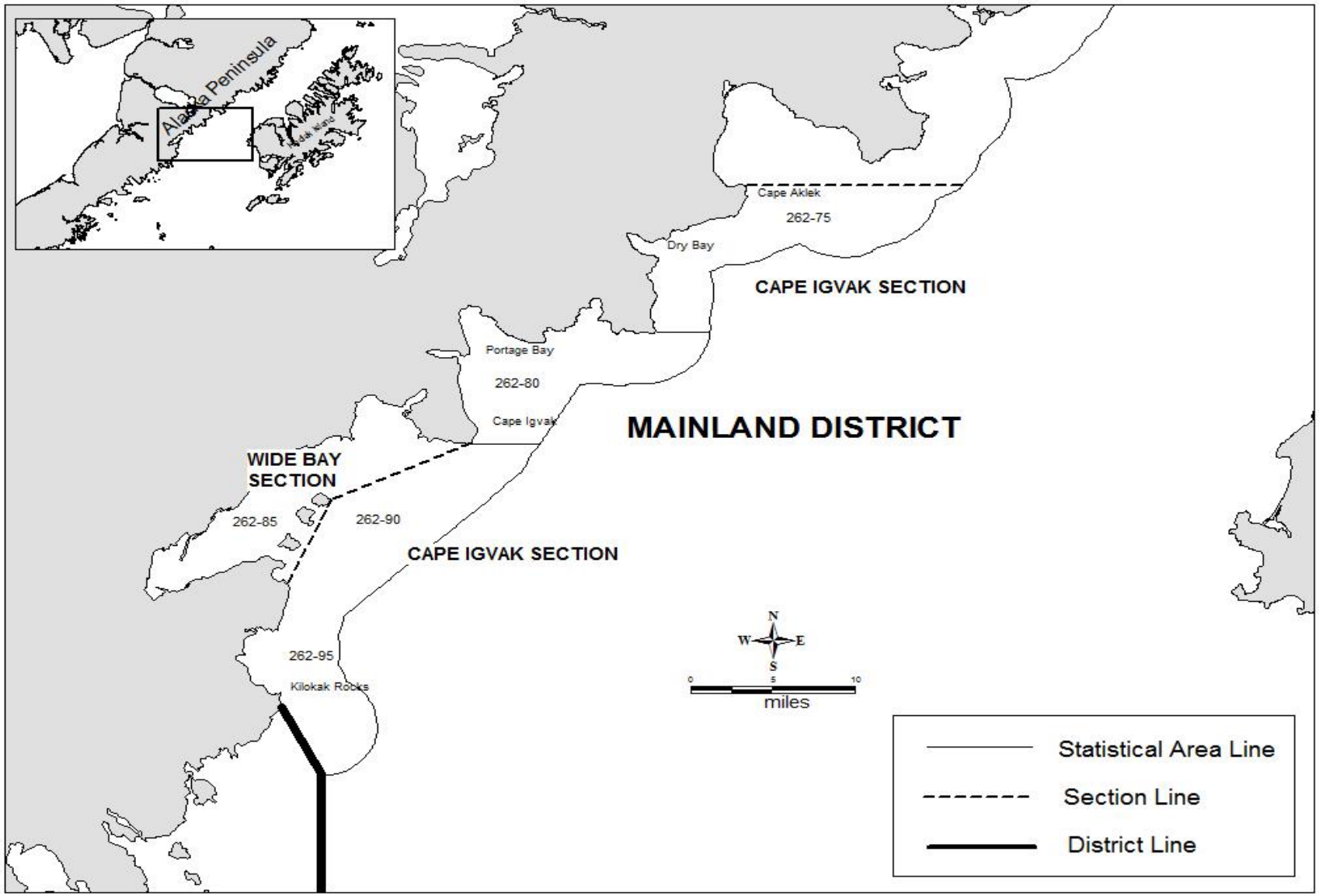

Figure 58-1.–Cape Igvak Section of the Mainland District.

Table 58-1.–Number of permits, number of sockeye harvested, and percent of harvest in the Cape Igvak Section prior to, and after July 9, 1999–2018.

	June 1–July 8 Cape Igvak sockeye harvest			July 9 – July 25 Cape Igvak sockeye harvest		
Year	Permits	Number of sockeye	Percent of season	Permits	Number of sockeye	Percent of season
1999	104	383,340	67.2%	80	186,709	32.8%
2000	106	276,276	81.5%	68	62,904	18.5%
2001	72	194,298	72.2%	60	74,719	27.8%
2002	68	143,930	94.9%	20	7,723	5.1%
2003	77	118,777	87.7%	10	16,653	12.3%
2004	37	178,517	89.5%	16	20,874	10.5%
2005	71	304,809	100.0%	-	0	0.0%
2006	43	25,608	100.0%	-	0	0.0%
2007	32	58,363	100.0%	-	0	0.0%
2008	-	-	-	-	-	-
2009	2	3,677	2.6%	28	137,399	97.4%
2010	58	175,955	85.5%	34	29,815	14.5%
2011	79	549,487	100.0%	-	0	0.0%
2012	57	269,859	74.8%	21	91,135	25.2%
2013	72	295,561	75.1%	39	97,971	24.9%
2014	-	-	-	-	-	-
2015	-	0	0.0%	15	6,595	100.0%
2016	60	154,318	46.5%	19	177,315	53.5%
2017	78	131,223	100.0%	-	0	0.0%
2018	-	-	-	-	-	-
5-year avg.	69	95,180	48.8%	17	61,303	51.2%
10-year avg.	58	197,510	60.6%	26	67,529	39.4%
20-year avg.	64	192,000	75.2%	34	53,518	24.8%

Table 58-2.–Chignik-bound sockeye salmon harvest percentages, change in percentage, and total Chignik Management Area (CMA) sockeye salmon harvest during the overlap period of June 26–July 8, 2000–2019.

	Igvak harvest percentage of Chignik-Bound harvest		Percentage point change	CMA sockeye salmon
Year	through June 25	through July 8	June 26–July 8	harvest June 26–July 8
2000	20.3%	14.5%	-5.8%	432,798
2001[a]	22.3%	13.5%	-8.8%	578,555
2002	24.5%	17.9%	-6.7%	197,108
2003[a]	19.6%	14.7%	-4.9%	210,604
2004	28.8%	20.3%	-8.5%	222,892
2005	26.9%	23.6%	-3.4%	130,073
2006	12.9%	4.8%	-8.1%	302,142
2007	43.9%	18.2%	-25.7%	168,948
2008	--	--	--	272,174
2009	--	--	--	367,061
2010	25.0%	16.0%	-8.9%	352,978
2011	21.5%	18.1%	-3.5%	391,003
2012	24.9%	16.8%	-8.0%	457,605
2013	17.0%	12.3%	-4.8%	591,585
2014	--	--	--	0
2015	--	--	--	235,677
2016	21.0%	15.3%	-5.7%	236,492
2017	21.2%	16.4%	-4.8%	163,823
2018	--	--	--	128
2019	--	--	--	185,567
20-y avg[b]	23.5%	15.9%	-7.7%	274,861

[a] In 2001 and 2003 the Cape Igvak fishery was open on June 26 and is included in the through June 25 column.

[b] Average percentages and percentage point change do not include years where the Cape Igvak fishery was closed before and immediately after the overlap period.

PROPOSAL 59 – 5 AAC 18.360. Cape Igvak Salmon Management Plan.

PROPOSED BY: George Anderson.

WHAT WOULD THE PROPOSAL DO? This would change the definition of the "total Chignik sockeye salmon catch" for allocation purposes in the Cape Igvak Section to only include sockeye salmon harvested in the Chignik Management Area from June 1 through July 25.

WHAT ARE THE CURRENT REGULATIONS? The total Chignik sockeye salmon catch constitutes those sockeye salmon caught within the Chignik Area plus 80% of the sockeye salmon caught in the East Stepovak, Southwest Stepovak, Stepovak Flats, Balboa Bay, and Beaver Bay sections of Area M, as described in 5 AAC 09.200(f), plus 90% of the sockeye salmon caught in the Cape Igvak Section. The harvest in the Cape Igvak Section at any time before July 25 may be permitted to fluctuate above or below 15% of the cumulative Chignik sockeye salmon catch.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL IS ADOPTED? This would reduce the number of sockeye salmon allocated for harvest in the Cape Igvak Section of the Kodiak Management Area (KMA) by approximately 21%. The mathematical adjustment (loss of harvest) in percent of Chignik bound sockeye salmon harvest is derived from the following:

$$T = C + I + S \quad (1)$$

where

T = the total Chignik sockeye salmon harvest before July 26,

C = the Chignik Area sockeye salmon harvest before July 26,

I = the Cape Igvak Section sockeye salmon harvest bound for Chignik (90% of the Cape Igvak total harvest) before July 26,

S = the Southeastern District Mainland (SEDM) sections of Area M sockeye salmon harvest bound for Chignik (80% of the SEDM total harvest) before July 26.

By current regulation

$$I = 0.15T \quad (2)$$

and

$$S = 0.076C. \quad (3)$$

In other words, 15% of the total Chignik sockeye salmon harvest can be taken in the Cape Igvak Section, and 7.6% of the Chignik area harvest can be harvested in the SEDM sections. Therefore, equation (1) can be rewritten as:

$$T = C + 0.15T + (0.076)C. \quad (4)$$

Rearranging and simplifying we get

$$C = 0.79T. \quad (5)$$

In other words, approximately 21% of the total Chignik sockeye salmon harvest can be harvested outside the Chignik Area, so 79% is harvested within the Chignik Area.

Equation (5) can be rewritten as

$T = C/0.79.$ (6)

Combining equations (2) and (6) we get

$I = 0.15(C/0.79) = 0.18987C$ or about $0.19C.$ (7)

Without modification to this proposal, the Cape Igvak Section would be managed to harvest as near as possible to 15% of the Chignik Management Area harvest instead of 19%.

$1 – (.15/.19) = .21$ or 21%. (8)

This results in a 21% reduction in the number of sockeye salmon allocated for harvest in the Cape Igvak Section.

Although a 21% reduction in harvest can be calculated mathematically, it is also appropriate to calculate the lost harvest for past salmon seasons if this proposal were in effect. If this proposal were in effect over the past 20 years, there would have been an average reduction of 19.0% in the number of sockeye salmon harvested in the Cape Igvak Section (Table 59-1).

Without modification, this proposal would result in a Cape Igvak Section mathematical allocation reduction of 21% in number of sockeye salmon harvested by KMA seine fisherman.

BACKGROUND: Beginning in 1964, a purse seine fishery developed along the capes of the southern Mainland District of the KMA, in what is now defined as the Cape Igvak Section. Tagging studies and stock identification studies using average weight and age composition conducted in 1968 and 1969 concluded that up to 80% of the sockeye salmon harvested in the Cape Igvak Section were of Chignik origin. The issue of interception of Chignik sockeye salmon in the Cape Igvak Section came before the board several times over the next 10 years, and management of this section was modified many times. From 1974 through 1977, this area was managed for "day-for-day" equal fishing time with Chignik.

In 1978, a specific management plan for the Cape Igvak Section was adopted by the board. Based on the long-standing harvest of sockeye salmon in the Cape Igvak Section during June and July, 80% of which could be Chignik-bound, the board chose to create an allocative harvest strategy, the Cape Igvak Salmon Management Plan (CISMP). In 2002, the board increased the percentage of Cape Igvak Section sockeye harvest considered bound for Chignik from 80% to the current 90%. Subsequent to the increase to 90% in 2002, the CISMP has remained unchanged.

A sockeye salmon genetics study was implemented for the KMA from 2014 through 2016. For stock composition data in the Cape Igvak fishery see *Genetic Stock Composition of the Commercial Harvest of Sockeye in Kodiak Management Area,* 2014–2016 (Shedd et al. 2016) for results.

The harvest of sockeye salmon in the Cape Igvak fishery has averaged approximately 209,000 fish a season over the past 20 years and comprise approximately 12.2% of the total KMA areawide harvest of sockeye salmon (Table 59-2).

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

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

Table 59-1.–Cape Igvak Section percent of Chignik Area harvest, and the Cape Igvak Section harvest, adjusted harvest, harvest loss, and percent reduction if this proposal were in effect, 2000–2019.

Year	Igvak harvest percent of Chignik Area harvest[a]	Igvak harvest	Adjusted Harvest	Harvest loss	Reduction
2000	18.0%	271,344	217,380	53,964	19.9%
2001	19.0%	215,214	170,906	44,308	20.6%
2002	16.1%	136,488	110,541	25,947	19.0%
2003	14.3%	121,887	99,546	22,341	18.3%
2004	23.6%	160,665	122,011	38,654	24.1%
2005	25.0%	274,328	194,338	79,990	29.2%
2006	5.6%	41,834	36,697	5,137	12.3%
2007	8.7%	52,527	48,307	4,220	8.0%
2008	-	0	0	0	-
2009	14.6%	126,968	105,715	21,253	16.7%
2010	16.5%	185,193	149,303	35,890	19.4%
2011	21.7%	494,538	384,587	109,951	22.2%
2012	19.8%	324,895	254,840	70,055	21.6%
2013	15.8%	354,179	287,235	66,944	18.9%
2014	-	0	0	0	-
2015	0.6%	5,936	5,382	554	9.3%
2016	25.6%	298,470	223,257	75,213	25.2%
2017	17.4%	118,101	95,382	22,719	19.2%
2018	-	0	0	0	-
2019	-	0	0	0	-
20-yr avg.[b]	16.4%	198,910	156,589	42,321	19.0%

[a] Percentage attained from actual number of sockeye salmon harvested in Cape Igvak Section compared to the Chignik Area harvest only and not to the total harvest estimated to be Chignik-bound.

[b] Average does not include years in which a Cape Igvak Section fishery did not occur.

Table 59-2.–Percent of sockeye harvested in Cape Igvak compared to the total sockeye salmon harvest during the allocation period June 1–July 25 and the yearly total Kodiak Management Area sockeye salmon harvest.

	June 1–July 25 purse seine sockeye harvest			Season purse seine sockeye harvest	
Year	Igvak	Total KMA	Percent in Igvak	Total KMA	Percent in Igvak
1999	570,049	2,114,552	27.0%	3,129,348	18.2%
2000	339,180	1,533,478	22.1%	1,866,363	18.2%
2001	269,017	1,446,282	18.6%	1,679,985	16.0%
2002	151,653	937,618	16.2%	1,233,683	12.3%
2003	135,430	1,710,163	7.9%	2,511,993	5.4%
2004	178,517	1,774,518	10.1%	2,422,918	7.4%
2005	304,809	1,299,132	23.5%	1,697,637	18.0%
2006	46,482	575,881	8.1%	932,417	5.0%
2007	58,363	700,163	8.3%	1,236,731	4.7%
2008	0	675,129	0.0%	1,063,568	0.0%
2009	141,076	744,205	19.0%	973,879	14.5%
2010	205,770	917,137	22.4%	1,109,885	18.5%
2011	549,487	1,630,543	33.7%	1,808,056	30.4%
2012	360,994	1,233,059	29.3%	1,610,345	22.4%
2013	393,532	1,285,116	30.6%	1,739,398	22.6%
2014	0	1,238,197	0.0%	2,401,969	0.0%
2015	6,595	1,250,724	0.5%	2,437,792	0.3%
2016	331,633	719,225	46.1%	1,547,476	21.4%
2017	131,223	635,096	20.7%	1,671,980	7.8%
2018	0	33,750	0.0%	1,309,676	0.0%
5-year avg.	93,890	775,398	13.5%	1,873,779	5.9%
10-year avg.	212,031	968,705	20.2%	1,661,046	13.8%
20-year avg.	208,691	1,122,698	17.2%	1,719,255	12.2%

PROPOSAL 60 – 5 AAC 18.360 Cape Igvak Salmon Management Plan.

PROPOSED BY: George Anderson.

WHAT WOULD THE PROPOSAL DO? This seeks to change the harvest allocation percentage of the Chignik-bound sockeye salmon in the Cape Igvak Section from the current as near as possible 15% to the proposed less than 5.0%.

WHAT ARE THE CURRENT REGULATIONS? The Cape Igvak Salmon Management Plan (CISMP) covers the time period from June 1 through July 25. Chignik sockeye salmon are considered, by regulation, to be the principal stock harvested in the Cape Igvak Section. The management plan stipulates that 90% of the sockeye salmon harvested in the Cape Igvak Section through July 25 are considered Chignik bound. Kodiak Management Area (KMA) fishermen are allocated as near as possible 15% of the Chignik-bound sockeye salmon harvest. The plan stipulates allocative and biological requirements that must be met prior to any fisheries occurring in the Cape Igvak Section, and the harvest allocation is permitted to fluctuate.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL IS ADOPTED? This would reduce the Cape Igvak allocated percentage of Chignik-bound sockeye salmon from as near as possible to 15% to less-than 5.0%.

If the Kodiak allocation of Chignik-bound sockeye salmon was decreased, there would be less fishing time in the Cape Igvak Section during June and July, and the KMA purse seine exvessel value would decrease by an unknown amount; harvests by the Chignik fleet may increase by an unknown amount. This would have no net effect on Chignik sockeye salmon escapements or the fulfillment of escapement objectives because the CISMP requires that escapement objectives for Chignik sockeye salmon must be met prior to the opening of any Cape Igvak fishery.

BACKGROUND: Beginning in 1964, a purse seine fishery developed along the capes of the southern Mainland District of the KMA, in what is now defined the Cape Igvak Section. Tagging studies and stock identification studies using average weight and age composition conducted in 1968 and 1969 concluded that up to 80% of the sockeye salmon harvested in the Cape Igvak Section were of Chignik origin. The issue of interception of Chignik-bound sockeye salmon in the Cape Igvak Section came before the board several times over the next 10 years, and management of this section was modified many times. From 1974 through 1977, this area was managed for "day-for-day" equal fishing time with Chignik.

In 1978, a specific management plan for the Cape Igvak Section was adopted by the board. Based on the long-standing harvest of sockeye salmon in the Cape Igvak Section during June and July, 80% of which could be Chignik-bound, the board chose to create an allocative harvest strategy, the CISMP. In 2002, the board increased the percentage of Cape Igvak Section sockeye salmon harvest considered bound for Chignik from 80% to the current 90%. Subsequent to the increase to 90% in 2002, the CISMP has remained unchanged.

A sockeye salmon genetics study was implemented for the KMA from 2014 through 2016. For stock composition data see *Genetic Stock Composition of the Commercial Harvest of Sockeye in Kodiak Management Area, 2014–2016* (Shedd et al. 2016).

The harvest of sockeye salmon in the Cape Igvak fishery has averaged approximately 209,000 fish a year over the past 20 years and comprise approximately 12.2% of the total KMA areawide harvest of sockeye salmon (Table 60-1).

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

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

Table 60-1.–Percent of sockeye salmon harvested in Cape Igvak compared to the total sockeye salmon harvest during the allocation period June 1–July 25 and the season total Kodiak Management Area sockeye salmon harvest, in number of fish, 1999–2018.

	June 1–July 25 purse seine sockeye harvest			Season purse seine sockeye harvest	
Year	Igvak	Total KMA	Percent in Igvak	Total KMA	Percent in Igvak
1999	570,049	2,114,552	27.0%	3,129,348	18.2%
2000	339,180	1,533,478	22.1%	1,866,363	18.2%
2001	269,017	1,446,282	18.6%	1,679,985	16.0%
2002	151,653	937,618	16.2%	1,233,683	12.3%
2003	135,430	1,710,163	7.9%	2,511,993	5.4%
2004	178,517	1,774,518	10.1%	2,422,918	7.4%
2005	304,809	1,299,132	23.5%	1,697,637	18.0%
2006	46,482	575,881	8.1%	932,417	5.0%
2007	58,363	700,163	8.3%	1,236,731	4.7%
2008	0	675,129	0.0%	1,063,568	0.0%
2009	141,076	744,205	19.0%	973,879	14.5%
2010	205,770	917,137	22.4%	1,109,885	18.5%
2011	549,487	1,630,543	33.7%	1,808,056	30.4%
2012	360,994	1,233,059	29.3%	1,610,345	22.4%
2013	393,532	1,285,116	30.6%	1,739,398	22.6%
2014	0	1,238,197	0.0%	2,401,969	0.0%
2015	6,595	1,250,724	0.5%	2,437,792	0.3%
2016	331,633	719,225	46.1%	1,547,476	21.4%
2017	131,223	635,096	20.7%	1,671,980	7.8%
2018	0	33,750	0.0%	1,309,676	0.0%
5-year avg.	93,890	775,398	13.5%	1,873,779	5.9%
10-year avg.	212,031	968,705	20.2%	1,661,046	13.8%
20-year avg.	208,691	1,122,698	17.2%	1,719,255	12.2%

PROPOSAL 61 – 5 AAC 18.360. Cape Igvak Salmon Management Plan.

PROPOSED BY: Axel S. Kopun.

WHAT WOULD THE PROPOSAL DO? This adjusts the Chignik Area sockeye salmon harvest assurance prior to July 9 from the current 300,000 fish to 1,000,000 fish. This also changes the definition of "Chignik salmon catch" to only include sockeye salmon harvest in the Chignik Area prior to July 9. A Cape Igvak Section fishery would not be allowed within the 72 hours following the initial Chignik fishing period. Finally, the Cape Igvak Section would not be covered by a management plan from July 9 through July 25.

WHAT ARE THE CURRENT REGULATIONS? The Cape Igvak Salmon Management Plan (CISMP) provides a management framework for the Cape Igvak Section. This framework is based on 2 things: (1) the preseason forecast of the harvestable surplus of sockeye salmon returning to the Chignik River watershed and (2) a harvest assurance within Chignik Area as follows:

- In years when a harvestable surplus beyond escapement goals for the first (Black Lake) and second (Chignik Lake) runs of Chignik River system sockeye salmon is expected to be less than 600,000 sockeye salmon, there will be no commercial salmon fishery allowed in the Cape Igvak Section until a harvest of 300,000 sockeye salmon in the Chignik Area is achieved. After July 8, after at least 300,000 sockeye salmon have been harvested in the Chignik Area, and if escapement goals are being met, the department shall manage the Cape Igvak Section so that the number of sockeye salmon harvested in the Chignik Area will be at least 600,000 sockeye salmon and the harvest in the Cape Igvak Section will approach as near as possible 15% of the total Chignik sockeye salmon catch.
- In years when a harvestable surplus beyond escapement goals for the first and second runs of Chignik River system sockeye salmon is expected to be more than 600,000 sockeye salmon, but the first run fails to develop as predicted and it is determined that a total sockeye salmon harvest in the Chignik Area of 600,000 sockeye salmon or more may not be achieved, the Cape Igvak Section commercial salmon fishery will be curtailed in order to allow at least a minimum harvest in the Chignik Area of 300,000 sockeye salmon by July 9 if that number of fish are determined to be surplus to the escapement goals of the Chignik River system. After July 8, after at least 300,000 sockeye salmon have been harvested in the Chignik Area, and if escapement goals are being met, the department shall manage the Cape Igvak Section so that the number of sockeye salmon harvested in the Chignik Area will be at least 600,000 sockeye salmon and the harvest in the Cape Igvak Section will approach as near as possible 15% of the total Chignik sockeye salmon catch.
- In years when a harvestable surplus beyond the escapement goals for the first and second runs of Chignik River system sockeye salmon is expected to be more than 600,000 sockeye salmon and the department determines the runs are as strong as expected, the department will manage the fishery in such a manner whereby the number of sockeye salmon taken in the Cape Igvak Section will approach as near as possible 15% of the total Chignik sockeye salmon catch.
- The total Chignik sockeye salmon catch constitutes those sockeye salmon caught within the Chignik Area plus 80% of the sockeye salmon caught in the East Stepovak, Southwest Stepovak, Stepovak Flats, Balboa Bay, and Beaver Bay Sections, as described in 5 AAC

9.200(f), plus 90% of the sockeye salmon caught in the Cape Igvak Section. The harvest in the Cape Igvak Section at any time before July 25 may be permitted to fluctuate above or below 15% of the cumulative Chignik sockeye salmon catch.

- The first fishing period of the commercial salmon fishing season in the Cape Igvak Section will not occur before the first fishing period of the commercial salmon fishing season in the Chignik Area.
- This allocation method will be in effect from June 1 through July 25.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL IS ADOPTED? This would greatly decrease the likelihood of a salmon fishery in the Cape Igvak Section. In years that a Cape Igvak fishery could occur, the department anticipates there would be less fishing time during June/July and the Kodiak Management Area (KMA) purse seine exvessel value would decrease. If the Cape Igvak fishery remains closed, Chignik Management Area fishermen would likely see an increase in sockeye salmon harvest and fishery exvessel value, though the exact increase cannot be calculated.

This would have no net effect on Chignik River system sockeye salmon escapements or the fulfillment of escapement objectives, because the *CISMP* requires that escapement objectives for Chignik River system sockeye salmon must be met prior to the opening of any Cape Igvak fishery.

Without modification to this proposal, from July 9 through July 25, the Cape Igvak Section would not be covered by a management plan and would remain closed to commercial salmon fishing.

BACKGROUND: Beginning in 1964 a purse seine fishery developed along the capes of the southern Mainland District of the KMA in what is now defined as the Cape Igvak Section. Tagging studies and stock identification studies using average weight and age composition conducted in 1968 and 1969 concluded that up to 80% of the sockeye salmon harvested in the Cape Igvak Section were of Chignik origin. The issue of interception of Chignik sockeye salmon in the Cape Igvak Section came before the board several times over the next 10 years, and management of this section was modified many times. From 1974 through 1977, this area was managed for "day-for-day" equal fishing time with Chignik.

In 1978, a specific management plan for the Cape Igvak Section was adopted by the board. Based on the long-standing harvest of sockeye salmon in the Cape Igvak Section during June and July, 80% of which could be Chignik bound, the board chose to create an allocative harvest strategy, the CISMP. In 2002, the board increased the percentage of Cape Igvak Section sockeye harvest considered bound for Chignik from 80% to the current 90%. Subsequent to the increase to 90% in 2002, the CISMP has remained unchanged.

A sockeye salmon genetics study was implemented for the KMA from 2014 through 2016. For stock composition data see *Genetic Stock Composition of the Commercial Harvest of Sockeye in Kodiak Management Area, 2014–2016* (Shedd et al. 2016).

The harvest of sockeye salmon in the Cape Igvak fishery has averaged approximately 209,000 fish a season over the past 20 years and comprise approximately 12.2% of the total KMA purse seine harvest of sockeye salmon (Table 61-1).

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

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

Table 61-1.–Percent of sockeye harvested in Cape Igvak compared to the total sockeye salmon harvest during the allocation period June 1–July 25 and the yearly total Kodiak Management Area sockeye salmon harvest, 1999–2018.

	June 1–July 25 purse seine sockeye harvest			Season purse seine sockeye harvest	
Year	Igvak	Total KMA	Percent in Igvak	Total KMA	Percent in Igvak
1999	570,049	2,114,552	27.0%	3,129,348	18.2%
2000	339,180	1,533,478	22.1%	1,866,363	18.2%
2001	269,017	1,446,282	18.6%	1,679,985	16.0%
2002	151,653	937,618	16.2%	1,233,683	12.3%
2003	135,430	1,710,163	7.9%	2,511,993	5.4%
2004	178,517	1,774,518	10.1%	2,422,918	7.4%
2005	304,809	1,299,132	23.5%	1,697,637	18.0%
2006	46,482	575,881	8.1%	932,417	5.0%
2007	58,363	700,163	8.3%	1,236,731	4.7%
2008	0	675,129	0.0%	1,063,568	0.0%
2009	141,076	744,205	19.0%	973,879	14.5%
2010	205,770	917,137	22.4%	1,109,885	18.5%
2011	549,487	1,630,543	33.7%	1,808,056	30.4%
2012	360,994	1,233,059	29.3%	1,610,345	22.4%
2013	393,532	1,285,116	30.6%	1,739,398	22.6%
2014	0	1,238,197	0.0%	2,401,969	0.0%
2015	6,595	1,250,724	0.5%	2,437,792	0.3%
2016	331,633	719,225	46.1%	1,547,476	21.4%
2017	131,223	635,096	20.7%	1,671,980	7.8%
2018	0	33,750	0.0%	1,309,676	0.0%
5-year avg.	93,890	775,398	13.5%	1,873,779	5.9%
10-year avg.	212,031	968,705	20.2%	1,661,046	13.8%
20-year avg.	208,691	1,122,698	17.2%	1,719,255	12.2%

PROPOSAL 62 – 5 AAC 18.355. Reporting requirements; and 5 AAC 18.360. Cape Igvak Salmon Management Plan.

PROPOSED BY: Axel S. Kopun.

WHAT WOULD THE PROPOSAL DO? Prior to July 9, this would require commercial salmon fishing vessels to report to department staff prior to fishing and check out upon leaving the Cape Igvak Section.

WHAT ARE THE CURRENT REGULATIONS? There are currently no registration or reporting requirements specific to the Cape Igvak Section.

In General Provisions 5 AAC 39.130. Reports Required of Processors, Buyers, Fishermen, and Operators of Certain Commercial Fishing Vessels; Transporting Requirements, it is stated that fishermen and processors must complete a department fish ticket at the time of delivery, and that the fish ticket record must include

- The CFEC permit card information
- Buyer/processor codes and information
- The date of landing
- The nearest headland or bay or statistical area in which the fish were taken, and
- The number and pounds of salmon by species

AS 16.05.690. Record of Purchases states that a person may not knowingly enter false information on a fish ticket or supply false information to a person who is recording information on a fish ticket.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL IS ADOPTED? Prior to July 9, commercial fisheries participants would be required to contact a department representative by phone, radio, or in person prior to commercial fishing in and upon leaving the Cape Igvak Section. Fishing vessels would not be required to deliver their catch prior to leaving the Cape Igvak Section. This proposal does not provide any specific guidelines for reporting requirements for harvested salmon.

In order to accommodate this proposal, a department representative would be required to remain on standby duty during all hours of the commercial salmon fishing period before and during a Cape Igvak commercial salmon fishing period in order to check vessels in and out.

BACKGROUND: The department collects verbal harvest reports from Kodiak commercial salmon fishery vessels and processors several times daily. Estimates of the number of fishing vessels on the grounds in the Cape Igvak Section and the average catch per unit effort are used to estimate the catch and manage the commercial fishery. Verbal catch reports from Southeastern District Mainland and Chignik fisheries are also used inseason to determine the total catch of sockeye salmon considered to be Chignik-bound. As fish tickets are received, these verbal catch estimates are revised to reflect the more accurate information. Cooperation between the department and Kodiak salmon processors is excellent, and there seldom are significant discrepancies between verbal and fish ticket reports. Kodiak salmon processors strongly discourage holding or travelling with salmon taken in the Cape Igvak Section, to ensure the highest quality product.

There are no processing plants located in the Cape Igvak Section. Most Kodiak processors currently require their fleet to deliver to tenders in the Cape Igvak Section. Two processing plants, located on the south and west side of Kodiak Island, may irregularly take deliveries from fishing vessels that have traveled from Cape Igvak.

Alaska Wildlife Troopers routinely check the fishing vessels leaving the Cape Igvak fishery and since most processors require their fleet to deliver to tenders do not find any fish on board.

The Cape Igvak fishery requires a 24-hour advance notice, and normally begins at midnight, in order to provide notification and travel time for a fair start. Fishing periods are normally prosecuted in increments of 24 hours (a minimum time fishery would be 24 hours long), and extensions to fishing time are also allowed in 24-hour increments, with the fishery closing at midnight.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. This proposal is based on a belief that salmon caught in the Cape Igvak Section are being misreported and not properly counted against the current allocation framework. The department recognizes that harvest data reported inseason and on fish tickets are the best information available and its accuracy is protected by current regulations and statutes.

COST ANALYSIS: The department does not believe that approval of this proposal would result in an additional direct cost for a private person to participate in this fishery. However, it would likely increase personnel costs to the department due to increased staff time necessary to monitor permit holders leaving the Cape Igvak Section.

PROPOSAL 63 – 5 AAC 18.360. Cape Igvak Salmon Management Plan; 5 AAC 18.363. North Shelikof Strait Sockeye Salmon Management Plan; and 5 AAC 18.396. Mainland District Salmon Management Plan.

PROPOSED BY: Dan Anderson.

WHAT WOULD THE PROPOSAL DO? This would institute new seaward zone closed water areas on the Mainland District to protect king salmon. From June 1 through July 25, a maximum of two 12-hour fishing periods per week would be allowed in the newly formed seaward zones.

WHAT ARE THE CURRENT REGULATIONS? The Cape Igvak Salmon Management Plan (5 AAC 18.360) covers the time period from June 1 through July 25. Chignik sockeye salmon are considered, by regulation, to be the principal stock harvested in the Cape Igvak Section (Figure 63-1). The management plan stipulates that 90% of the sockeye salmon harvested in the Cape Igvak Section through July 25 are considered Chignik bound. Kodiak Management Area (KMA) fishermen are allocated as near as possible 15% of the Chignik-bound sockeye salmon harvest. The plan stipulates allocative and biological requirements that must be met prior to any fisheries occurring in the Cape Igvak Section and the harvest allocation is permitted to fluctuate.

The North Shelikof Strait Sockeye Salmon Management Plan (5 AAC 18.363) covers the timeframe from July 6 through July 25. The purpose of the plan is to prevent the repetition of a nontraditional harvest pattern that occurred in 1988 (Figure 63-2). When sockeye salmon harvest caps are achieved, the department restricts the fishery by emergency order to areas inside boundaries of the North Shelikof Management Unit and Southwest Afognak Management Unit. Since the implementation of the management plan in 1989 the large harvest of sockeye salmon in 1988 has never happened again (Figure 63-2).

The Mainland District Management Plan (5 AAC 18.369) covers the timeframe from June 1 through the end of the season. The purpose of the plan is to achieve escapement and harvest objectives of sockeye, pink, coho, and chum salmon returning to the natal spawning streams within the Mainland District. The plan closes the Wide Bay Section of the Mainland District until July 26 to protect local stocks when fishing time is allowed to harvest Chignik-bound sockeye salmon. The plan also restricts the July 6 through July 25 pink salmon openings north of Cape Aklek to three 57-hour weekly fishing periods to protect local pink and chum salmon.

The 3 Mainland District management plans work in tandem to allocate Chignik-bound sockeye salmon to KMA fishermen, limit the harvest of Cook Inlet sockeye salmon, and protect local salmon stocks using sustainable management practices while maintaining traditional fishing opportunities.

Beginning in 2014, the board established nonretention of king salmon 28 inches or greater in length in the commercial seine fishery in the KMA prior to July 6.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL IS ADOPTED? This would establish new seaward zones areas in the Cape Igvak Section of the Mainland District (Figure 63-1). From June 1 through July 25, a maximum of two 12-hour fishing periods per week would occur in newly formed seaward zone of the Cape Igvak Section. It would make it more difficult to achieve the 15% Chignik sockeye salmon allocation and would likely lead to longer

commercial salmon openings in the shoreward zone on the Cape Igvak Section. Longer openings within the Cape Igvak Section will likely result in an increased incidental harvest of king salmon.

This proposal would establish new seaward zones areas from July 6 through July 25, in Alinchak Bay, Katmai Bay, and use the preexisting outer cape closed water areas of the Dakavak Bay, Outer Kukak Bay, Hallo Bay, and Big River sections of the Mainland District (Figure 63-1). From July 6 through July 25 a maximum of two 12-hour fishing periods per week would be allowed in the newly formed seaward zones and would make it more difficult to evaluate and control local pink and chum salmon escapements. Less area open in July to control local pink and chum salmon escapement will decrease the commercial fleet's ability to control local salmon escapement and could lead to longer commercial salmon openings on the Mainland District after July 25. Longer openings within on the Mainland District will likely result in an increased incidental harvest of king salmon.

While it is difficult to estimate lost harvest due to this reduction in fishing periods, it is approximately half of the current allowable fishing time in the mid and north mainland sections. The openings in the Cape Igvak Section is variable and depends on the departments assessment of attaining the board mandated allocation of Chignik bound sockeye salmon to the Kodiak fleet. On top of the reduction in fishing time there would also be a reduction in area which would further reduce harvest.

BACKGROUND: Beginning in the late 1970s the board established numerous management plans defining how the Mainland District of KMA will be managed (e.g., Cape Igvak Management Plan 5 AAC 18.360 [1978]; the North Shelikof Strait Sockeye Salmon Management Plan 5 AAC 18.363 [1989]; and the Mainland District Salmon Management Plan 5 AAC 18.369 [1999]). Central to these plans was to protect local salmon stocks using sustainable management practices while maintaining traditional fishing opportunities (Mainland District Salmon Management Plan). Two of these plans also provide direction regarding the KMA and allocations with areas outside of the KMA (Cape Igvak and North Shelikof). Inherent to these plans was the recognition that some of these fisheries include the harvest of nonlocal salmon, including stocks traveling to other areas of Kodiak Island and the mainland as well as salmon originating outside of the KMA (Table 63-1)—of which king salmon make up only a small fraction of the overall harvest. A king salmon genetics study was implemented for the KMA from 2014 through 2016. In those years, the estimated total Cook Inlet king salmon harvest for the Mainland District was 7 fish in 2014, 29 fish in 2015, and 62 fish in 2016 (Shedd et al. 2016).

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal. New seaward zones areas in the Cape Igvak Section of the Mainland District would make it more difficult to achieve the 15% Chignik sockeye salmon allocation and potentially increase harvest of king salmon.

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

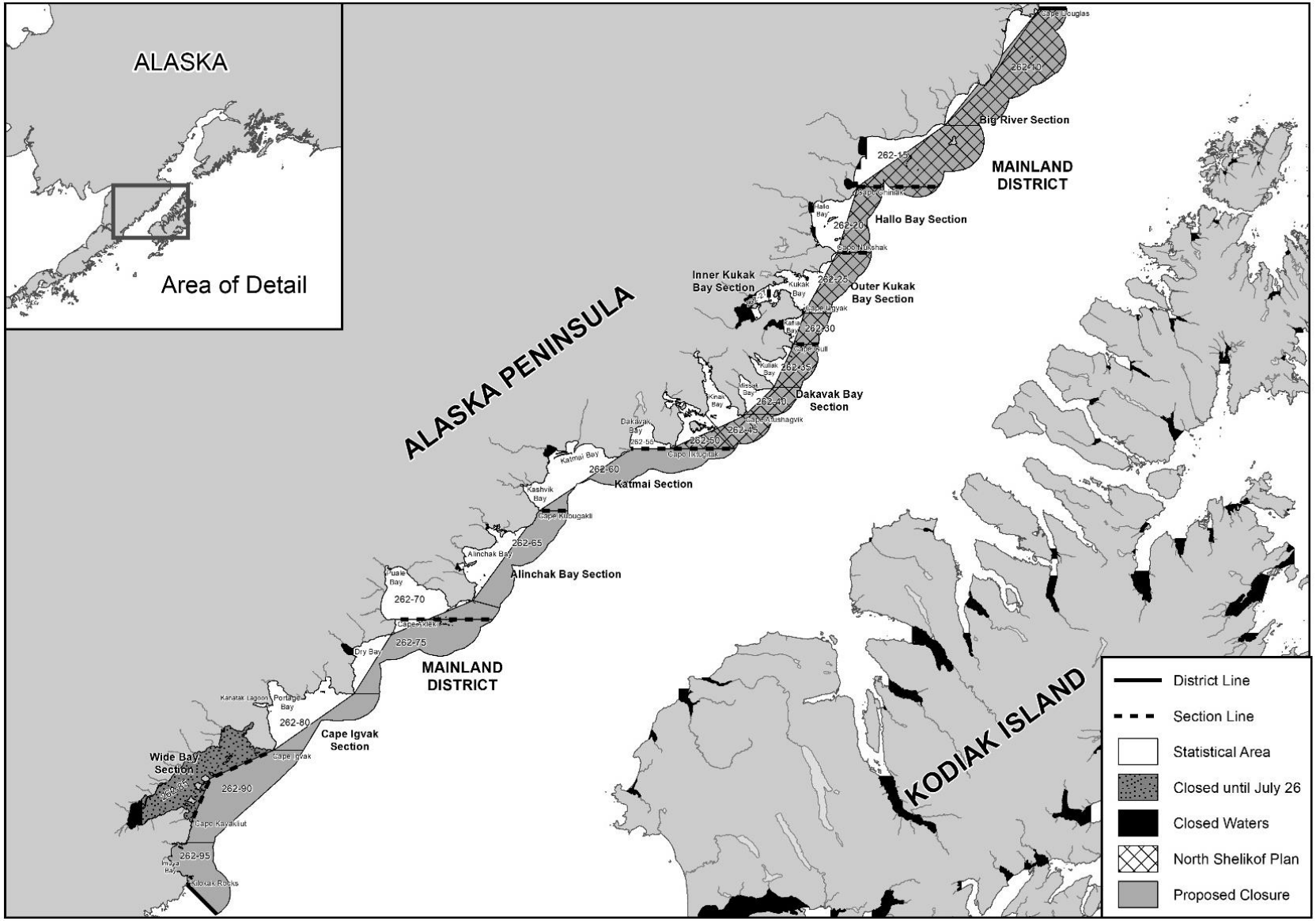

Figure 63-1.–KMA Mainland District with proposed Outer Cape closed waters.

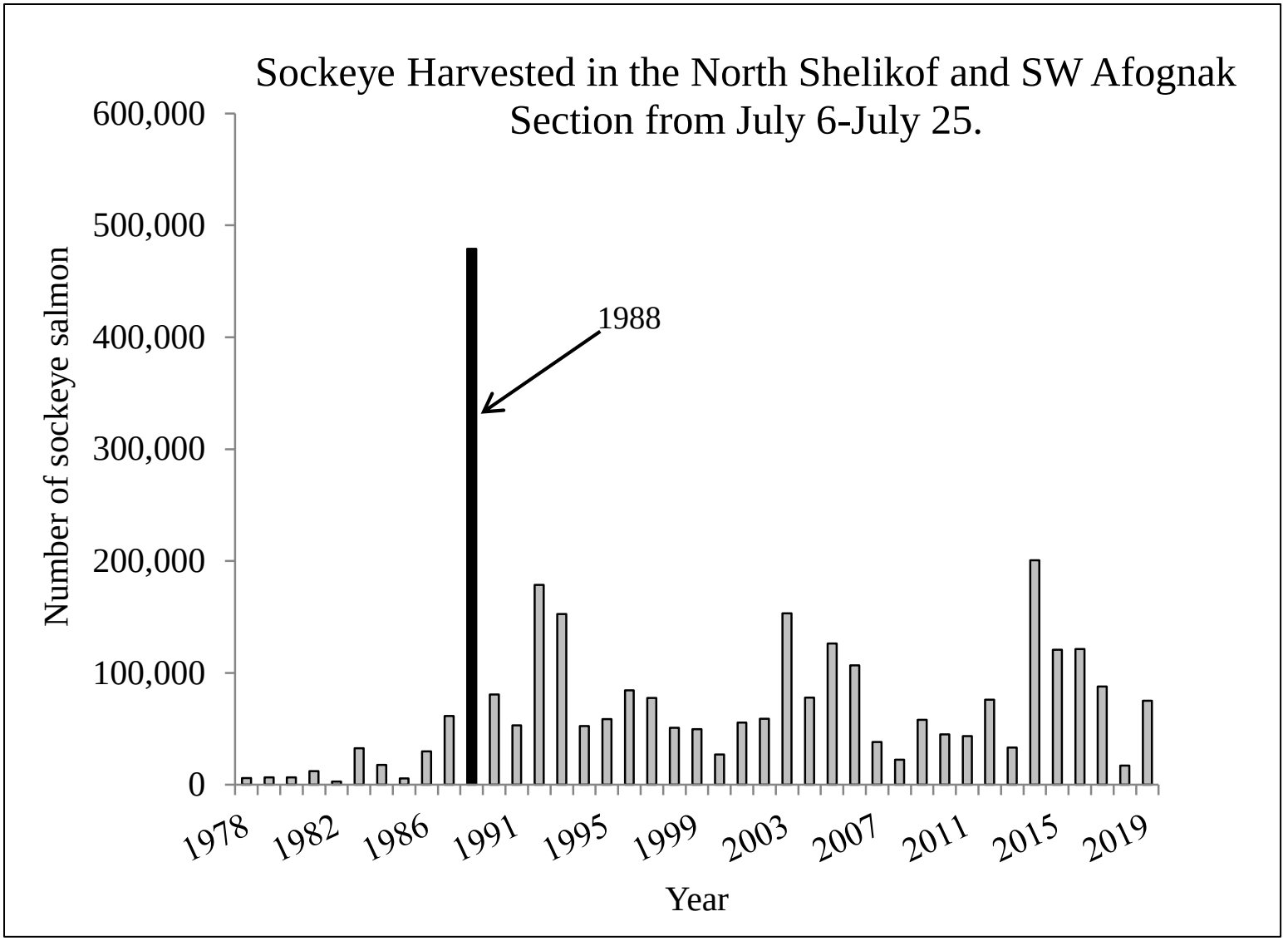

Figure 63-2.–North Shelikof Strait sockeye salmon harvest, with emphasis added to the nontraditional harvest that occurred in 1988.

Table 63-1.–KMA salmon harvest taken on the Mainland District in the Cape Igvak Management Plan (5 AAC 18.360), the North Shelikof Strait Sockeye Salmon Management Plan (5 AAC 18.363), and the Mainland District Salmon Management Plan (5 AAC 18.369), 1995–2019.

Mainland District Salmon Harvest					
Year	King	Sockeye	Coho	Pink	Chum
1995	1,315	293,430	19,726	695,745	100,874
1996	1,160	478,182	10,817	49,824	40,358
1997	3,405	153,885	9,116	727,628	34,928
1998	393	59,934	10,711	558,457	25,264
1999	2,967	678,933	19,550	383,459	210,072
2000	813	381,644	24,027	116,948	195,024
2001	3,090	313,168	17,751	398,338	208,445
2002	1,141	205,109	20,076	322,886	89,677
2003	1,515	166,754	5,736	172,711	204,526
2004	978	238,950	18,193	283,560	149,393
2005	1,918	552,751	10,963	473,812	49,902
2006	1,966	147,731	32,690	899,213	187,139
2007	1,583	120,329	16,811	617,342	52,413
2008	496	36,956	23,211	652,238	213,810
2009	1,833	171,411	9,567	631,800	121,807
2010	3,406	255,445	21,773	141,308	175,340
2011	2,783	589,449	6,930	249,245	112,168
2012	2,683	397,895	1,621	97,687	71,492
2013	8,018	439,770	11,571	204,611	83,366
2014	422	246,315	14,546	154,841	25,174
2015	316	277,702	29,710	787,280	31,085
2016	2,694	452,542	18,953	90,097	67,852
2017	1,311	273,120	32,004	1,434,099	366,864
2018	385	17,540	1,496	27,326	17,816
2019	275	147,129	64,119	2,784,129	84,049
10 Year Av.	2,229	309,691	20,272	597,062	103,521
15 Year Av.	2,006	275,072	19,731	616,335	110,685

PROPOSAL 64 – 5 AAC 18.360. Cape Igvak Salmon Management Plan; 5 AAC 18.363. North Shelikof Strait Sockeye Salmon Management Plan; and 5 AAC 18.396. Mainland District Salmon Management Plan.

PROPOSED BY: Dan Anderson.

WHAT WOULD THE PROPOSAL DO? This would institute new seaward zone closed water areas on the Mainland District between June 28 through July 25.

WHAT ARE THE CURRENT REGULATIONS? The Cape Igvak Salmon Management Plan (5 AAC 18.360) covers the time period from June 1 through July 25. Chignik sockeye salmon are considered, by regulation, to be the principal stock harvested in the Cape Igvak Section (Figure 64-1). The management plan stipulates that 90% of the sockeye salmon harvested in the Cape Igvak Section through July 25 are considered Chignik bound. Kodiak Management Area (KMA) fishermen are allocated as near as possible 15% of the Chignik-bound sockeye salmon harvest. The plan stipulates allocative and biological requirements that must be met prior to any fisheries occurring in the Cape Igvak Section, and the harvest allocation is permitted to fluctuate.

The North Shelikof Strait Sockeye Salmon Management Plan (5 AAC 18.363) covers the timeframe from July 6 through July 25. The purpose of the plan is to prevent the repetition of a nontraditional harvest pattern that occurred in 1988 (Figure 64-2). When sockeye salmon harvest caps are achieved the department restricts the fishery by emergency order to areas inside boundaries of the North Shelikof Management Unit and Southwest Afognak Management Unit.

The Mainland District Management Plan (5 AAC 18.369) covers the timeframe from June 1 through the end of the season. The purpose of the plan is to achieve escapement and harvest objectives of sockeye, pink, coho, and chum salmon returning to the natal spawning streams within the Mainland District. The plan closes the Wide Bay Section of the Mainland District until July 26 to protect local stocks when fishing time is allowed to harvest Chignik bound sockeye. The plan also restricts the July 6 through July 25 pink salmon openings north of Cape Aklek to three 57-hour weekly fishing periods to protect local pink and chum.

The 3 Mainland District management plans work in tandem to allocate Chignik-bound sockeye to KMA fishermen, limit the harvest of Cook Inlet sockeye salmon, and protect local salmon stocks using sustainable management practices while maintaining traditional fishing opportunities (Table 64-1).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL IS ADOPTED? This would establish new seaward zones areas in the Cape Igvak Section of the Mainland District (Figure 64-1). From June 28 through July 25, a maximum of two 12-hour fishing periods per week would be allowed in the newly formed seaward zones. Fishing periods within the shoreward zone of the Cape Igvak Section would likely need to be longer in order to harvest the Chignik-bound sockeye salmon allocation as specified in the board mandated Cape Igvak Management Plan. Longer openings within the Cape Igvak Section will likely result in an increased incidental harvest of king salmon.

This would also establish new seaward zones areas, from July 6 through July 25, in Alinchak Bay, Katmai Bay, and use the preexisting outer cape closed water areas of the Dakavak Bay, Outer Kukak Bay, Hallo Bay, and Big River sections of the Mainland District (Figure 64-1).

From July 6 through July 25 a maximum of two 12-hour fishing periods per week would be allowed in the newly formed seaward zones and would make it more difficult to evaluate and control local pink and chum salmon escapements. Less area open in July to control local pink and chum salmon escapement will decrease the commercial fleet's ability to control local salmon escapement and could lead to longer commercial salmon openings on the Mainland District after July 25. Longer openings within on the Mainland District will likely result in an increased incidental harvest of king salmon.

BACKGROUND:

Cape Igvak Management Plan

Beginning in 1964, a purse seine fishery developed along the capes of the southern Mainland District of the KMA, in what is now defined the Cape Igvak Section. Tagging studies and stock identification studies using average weight and age composition conducted in 1968 and 1969 concluded that up to 80% of the sockeye salmon harvested in the Cape Igvak Section were of Chignik origin. The issue of interception of Chignik-bound sockeye salmon in the Cape Igvak Section came before the board several times over the next 10 years, and management of this section was modified many times. From 1974 through 1977, this area was managed for "day-for-day" equal fishing time with Chignik.

In 1978, a specific management plan for the Cape Igvak Section was adopted by the board. Based on the long-standing harvest of sockeye salmon in the Cape Igvak Section during June and July, 80% of which could be Chignik-bound, the board chose to create an allocative harvest strategy, the Cape Igvak Salmon Management Plan 5 AAC 18.362. In 2002, the board increased the percentage of Cape Igvak Section sockeye salmon harvest considered bound for Chignik from 80% to the current 90%. Subsequent to the increase to 90% in 2002, the Cape Igvak Salmon Management Plan has remained unchanged.

North Shelikof Strait Sockeye Salmon Management Plan

In 1988, between July 6 and July 25, approximately 478,000 sockeye salmon were harvested in the North Shelikof and Southwest Afognak Areas (Figure 64-1). Later studies suggested that many of these sockeye salmon were of Cook Inlet origin (Barrett 1989; Barret and Swanton 1991). In 1989, the board recognized the North Shelikof fishery was a significant increase in sockeye salmon harvest from previous years and felt that an allocation plan was necessary. In 1989, the North Shelikof Strait Sockeye Salmon Management Plan was adopted.

The stated purpose of the plan was to allow traditional fisheries of KMA salmon stocks while minimizing the directed harvest of Cook Inlet sockeye salmon—specifically, to prevent a repetition of the nontraditional harvest pattern that occurred in 1988. The board clarified the regulation prohibiting commercial salmon fishing beyond the 3-mile limit. Two distinct management units were created: the North Shelikof management unit and the Southwest Afognak management unit, and boundaries for seaward zones were created.

The Southwest Afognak management unit was defined separately because it was known that the local sockeye salmon stocks bound for the major KMA systems of Karluk, Ayakulik, and Spiridon migrate through this section. There is also 1 minor sockeye salmon system, Malina Lake, located within this unit.

Sockeye salmon harvest caps were set for these 2 management units. The North Shelikof cap was set at 15,000 sockeye salmon. The Southwest Afognak cap was set at 50,000 sockeye salmon. Caps were set based upon previous average sockeye salmon harvest levels during the July pink

and chum salmon fishery. Department staff monitor the fisheries on the grounds, and if it is determined that a cap may be exceeded the seaward zones were closed. Since the implementation of the management plan in 1989 the large harvest of sockeye salmon in 1988 has never happened again (Figure 64-2).

Mainland District Management Plan

For over 41 years, the Alinchak Bay, Dakavak Bay, Inner Kukak Bay, Outer Kukak Bay, Hallo Bay, and Big River sections of the Mainland District (Figure 64-1) opened on July 6 to commercial salmon fishing targeting local pink and chum salmon. In 1989, the *Exxon Valdez* oil spill affected the waters and beaches of the KMA, particularly the Mainland District. Since then, the initial 3 weekly July Mainland District pink salmon and chum salmon commercial salmon openings have been limited to a maximum of 57 hours to protect local chum salmon runs. The Mainland District Salmon Management Plan 5 AAC (18.369) was finally put into regulation in 1999.

A sockeye salmon genetics study was implemented for the KMA from 2014 through 2016. For stock composition data see *Genetic Stock Composition of the Commercial Harvest of Sockeye in Kodiak Management Area, 2014–2016* (Shedd et al. 2016).

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

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

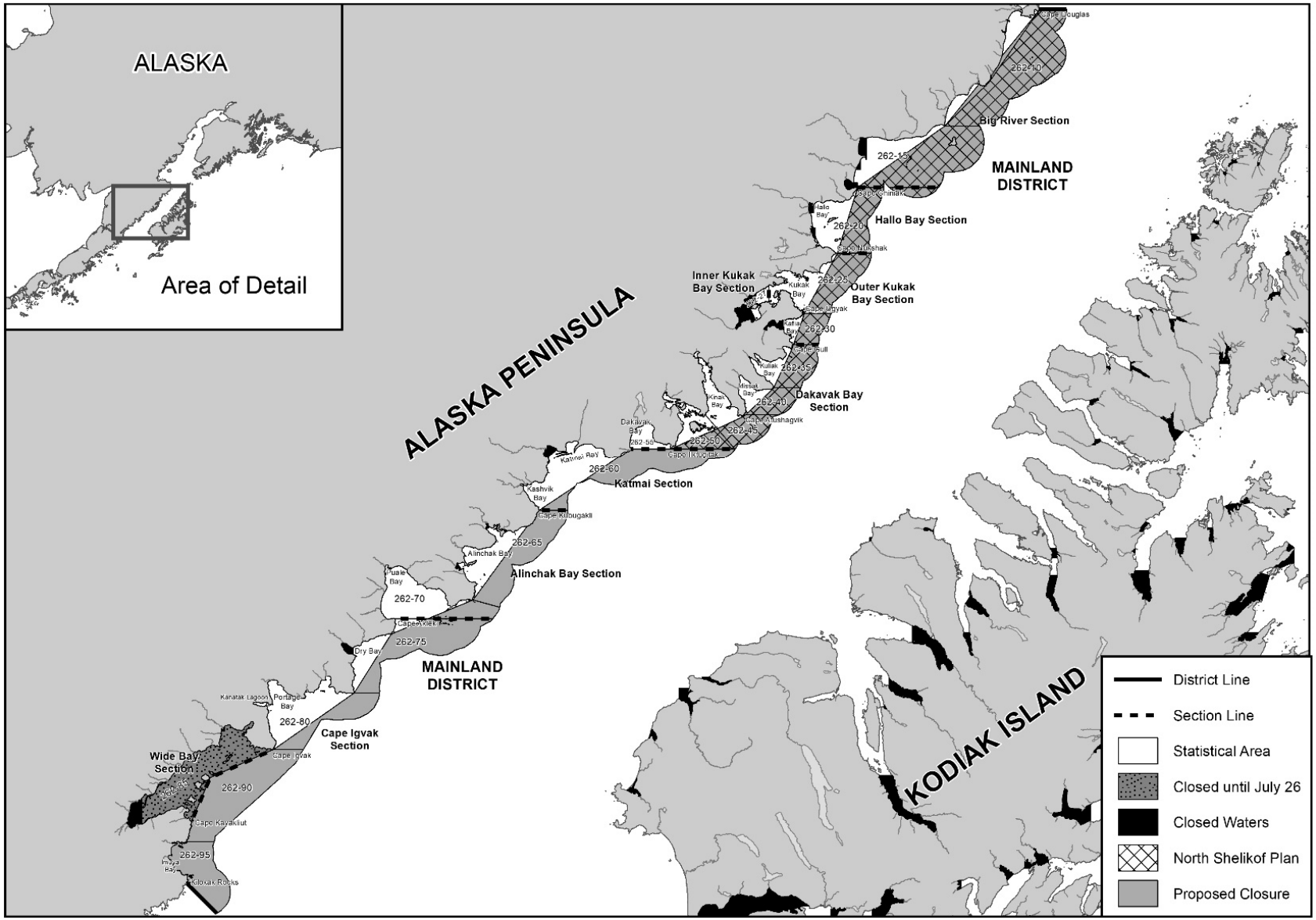

Figure 64-1.–KMA Mainland District with proposed outer cape closed waters.

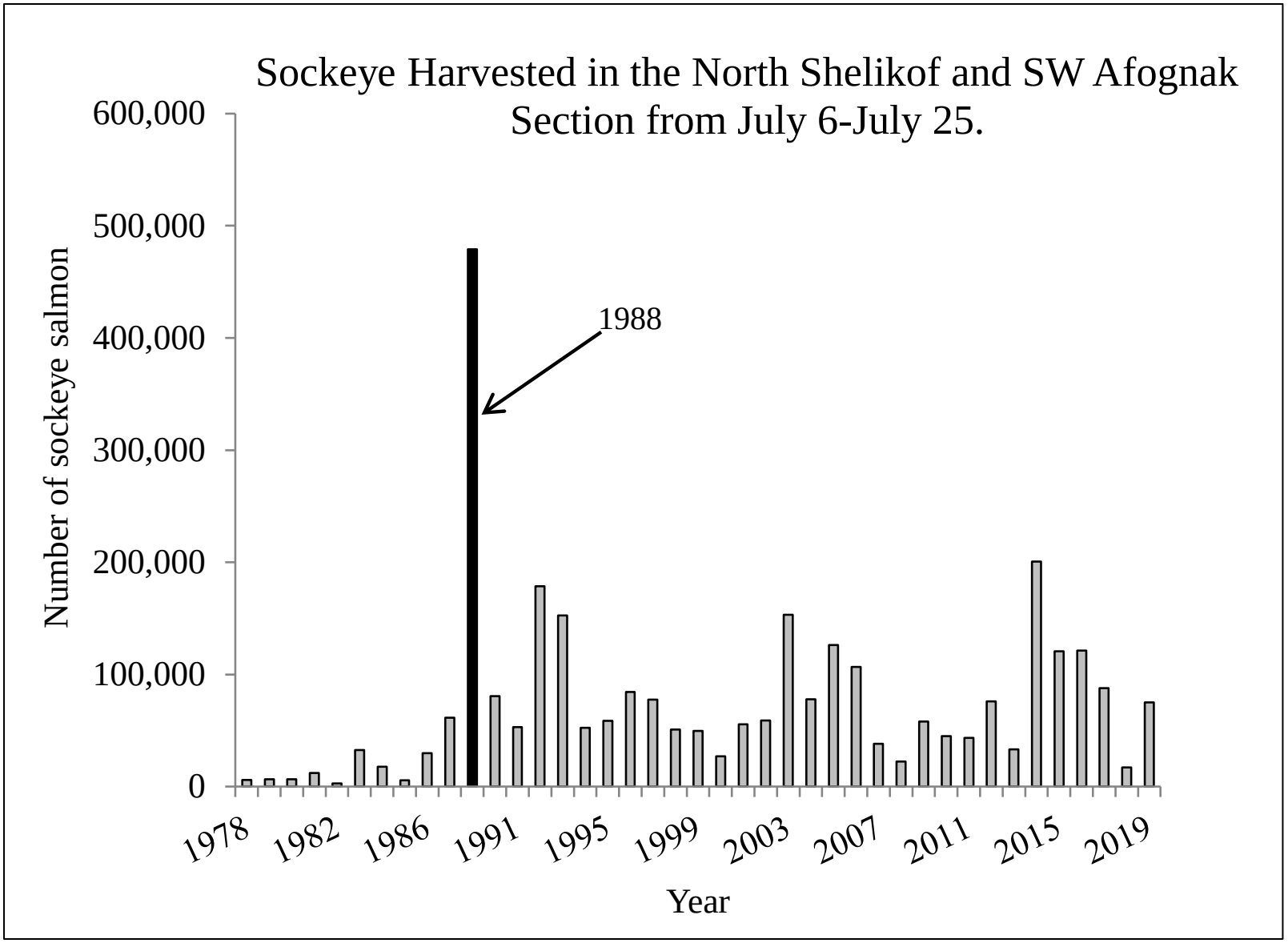

Figure 64-2.–North Shelikof Strait sockeye salmon harvest, with emphasis added to the nontraditional harvest that occurred in 1988.

Table 64-1.–KMA salmon harvest taken on the Mainland District in the Cape Igvak Management Plan (5 AAC 18.360), the North Shelikof Strait Sockeye Salmon Management Plan (5 AAC 18.363), and the Mainland District Salmon Management Plan (5 AAC 18.369), 1995–2019.

Mainland District Salmon Harvest					
Year	King	Sockeye	Coho	Pink	Chum
1995	1,315	293,430	19,726	695,745	100,874
1996	1,160	478,182	10,817	49,824	40,358
1997	3,405	153,885	9,116	727,628	34,928
1998	393	59,934	10,711	558,457	25,264
1999	2,967	678,933	19,550	383,459	210,072
2000	813	381,644	24,027	116,948	195,024
2001	3,090	313,168	17,751	398,338	208,445
2002	1,141	205,109	20,076	322,886	89,677
2003	1,515	166,754	5,736	172,711	204,526
2004	978	238,950	18,193	283,560	149,393
2005	1,918	552,751	10,963	473,812	49,902
2006	1,966	147,731	32,690	899,213	187,139
2007	1,583	120,329	16,811	617,342	52,413
2008	496	36,956	23,211	652,238	213,810
2009	1,833	171,411	9,567	631,800	121,807
2010	3,406	255,445	21,773	141,308	175,340
2011	2,783	589,449	6,930	249,245	112,168
2012	2,683	397,895	1,621	97,687	71,492
2013	8,018	439,770	11,571	204,611	83,366
2014	422	246,315	14,546	154,841	25,174
2015	316	277,702	29,710	787,280	31,085
2016	2,694	452,542	18,953	90,097	67,852
2017	1,311	273,120	32,004	1,434,099	366,864
2018	385	17,540	1,496	27,326	17,816
2019	275	147,129	64,119	2,784,129	84,049
10-year avg.	2,229	309,691	20,272	597,062	103,521
15-year avg.	2,006	275,072	19,731	616,335	110,685

PROPOSAL 65 – 5 AAC 18.360. Cape Igvak Salmon Management Plan; and 5 AAC 18.396. Mainland District Salmon Management Plan.

PROPOSED BY: United Cook Inlet Drift Association.

WHAT WOULD THE PROPOSAL DO? This would close the Cape Igvak, Alinchak Bay, and Katmai Bay sections of the Mainland District to commercial salmon fishing June 28 through July 25.

WHAT ARE THE CURRENT REGULATIONS? The Cape Igvak Salmon Management Plan (5 AAC 18.360) covers the time period from June 1 through July 25. Chignik sockeye salmon are considered, by regulation, to be the principal stock harvested in the Cape Igvak Section (Figure 65-1). The management plan stipulates that 90% of the sockeye salmon harvested in the Cape Igvak Section through July 25 are considered Chignik bound. Kodiak Management Area (KMA) fishermen are allocated as near as possible 15% of the Chignik-bound sockeye salmon harvest. The plan stipulates allocative and biological requirements that must be met prior to any fisheries occurring in the Cape Igvak Section, and the harvest allocation is permitted to fluctuate.

The Mainland District Management Plan (5 AAC 18.369) covers the timeframe from June 1 through the end of the season. The purpose of the plan is to achieve escapement and harvest objectives of sockeye, pink, coho, and chum salmon returning to the natal spawning streams within the Mainland District. The plan restricts the July 6 through July 25 pink salmon fishery in the Alinchak Bay and Katmai Bay sections to three 57-hour weekly fishing periods to protect local pink and chum salmon.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL IS ADOPTED: This would the close the Katmai Bay, Alinchak Bay, and Cape Igvak sections of the Mainland District to commercial salmon fishing from June 28 through July 25. This would lead to the loss of local salmon stock harvest opportunity in the Katmai Bay and Alinchak Bay sections. It would also result in difficulty achieving the targeted 15% Chignik-bound sockeye salmon allocation. From June 29 to July 25, sockeye salmon harvests and fishing opportunity would continue to fluctuate in the Chignik Management Area and Southeastern District Mainland of Area M while KMA fisherman would not be provided the opportunity to target the 15% allocation—potentially resulting in foregone harvests. In years where the Chignik early- and late-sockeye salmon forecasts are average or above average, this would likely result in more fishing time in June than is currently afforded to KMA fisherman. Less area open in July to control local pink and chum salmon escapement will decrease the commercial fleet's ability to control local salmon escapement and could lead to longer commercial salmon openings on the Mainland District after July 25. Longer openings within on the Mainland District will likely result in an increased incidental harvest of king salmon.

BACKGROUND: Beginning in the late 1970s the board established numerous management plans defining how the Mainland District of KMA will be managed (e.g., Cape Igvak Management Plan 5 AAC 18.360 [1978]; the North Shelikof Strait Sockeye Salmon Management Plan 5 AAC 18.363 [1989]; and the Mainland District Salmon Management Plan 5 AAC 18.369 [1999]). Central to these plans was to protect local salmon stocks using sustainable management practices while maintaining traditional fishing opportunities (Mainland District Salmon Management Plan). Inherent to these plans was the recognition that some of these fisheries include the harvest of

nonlocal salmon, including stocks traveling to other areas of Kodiak Island and the mainland as well as salmon originating outside of the KMA (Table 65-1).

Cape Igvak Management Plan

Beginning in 1964, a purse seine fishery developed along the capes of the southern Mainland District of the KMA, in what is now defined the Cape Igvak Section. Tagging studies and stock identification studies using average weight and age composition conducted in 1968 and 1969 concluded that up to 80% of the sockeye salmon harvested in the Cape Igvak Section were of Chignik origin. The issue of interception of Chignik-bound sockeye salmon in the Cape Igvak Section came before the board several times over the next 10 years, and management of this section was modified many times. From 1974 through 1977, this area was managed for "day-for-day" equal fishing time with Chignik.

In 1978, a specific management plan for the Cape Igvak Section was adopted by the board. Based on the long-standing harvest of sockeye salmon in the Cape Igvak Section during June and July, 80% of which could be Chignik bound, the board chose to create an allocative harvest strategy, the Cape Igvak Salmon Management Plan (5 AAC 18.362). In 2002, the board increased the percentage of Cape Igvak Section sockeye salmon harvest considered bound for Chignik from 80% to the current 90%. Subsequent to the increase to 90% in 2002, the Cape Igvak Salmon Management Plan has remained unchanged.

Mainland District Management Plan

For over 41 years, the Alinchak Bay, Dakavak Bay, Inner Kukak Bay, Outer Kukak Bay, Hallo Bay, and Big River sections of the Mainland District (Figure 65-1) opened on July 6 to commercial salmon fishing targeting local pink and chum salmon. In 1989, the *Exxon Valdez* oil spill affected the waters and beaches of the KMA, particularly the Mainland District. Since then, the initial 3 weekly July Mainland District pink salmon and chum salmon commercial salmon openings have been limited to a maximum of 57 hours to protect local chum salmon runs. The Mainland District Salmon Management Plan 5 AAC 18.369 was finally put into regulation in 1999.

A sockeye salmon genetics study was implemented for the KMA from 2014 through 2016. Stock composition data can be found in the *Genetic Stock Composition of the Commercial Harvest of Sockeye in Kodiak Management Area, 2014—2016* (Shedd et al. 2016). While the Cape Igvak Section was sampled during this study in 2015 and 2016, the Alinchak and Katmai Bay sections were not included in this program. The department does not have new information identifying stocks harvested in the KMA by commercial salmon seine permit holders in those sections.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this allocative proposal. The department is **OPPOSED** to restrictive aspects of this proposal that result in lost harvest opportunity on local KMA stocks, reduced ability to manage for KMA salmon escapement goals, and the added difficulty of targeting the board-mandated 15% of the Chignik-bound sockeye salmon in the Cape Igvak Section. From June 29 to July 25, sockeye salmon harvests and fishing opportunity would continue to fluctuate in the Chignik Management Area and Southeastern District Mainland, while KMA fisherman would not be provided the opportunity to target the 15% allocation potentially resulting in foregone harvests.

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

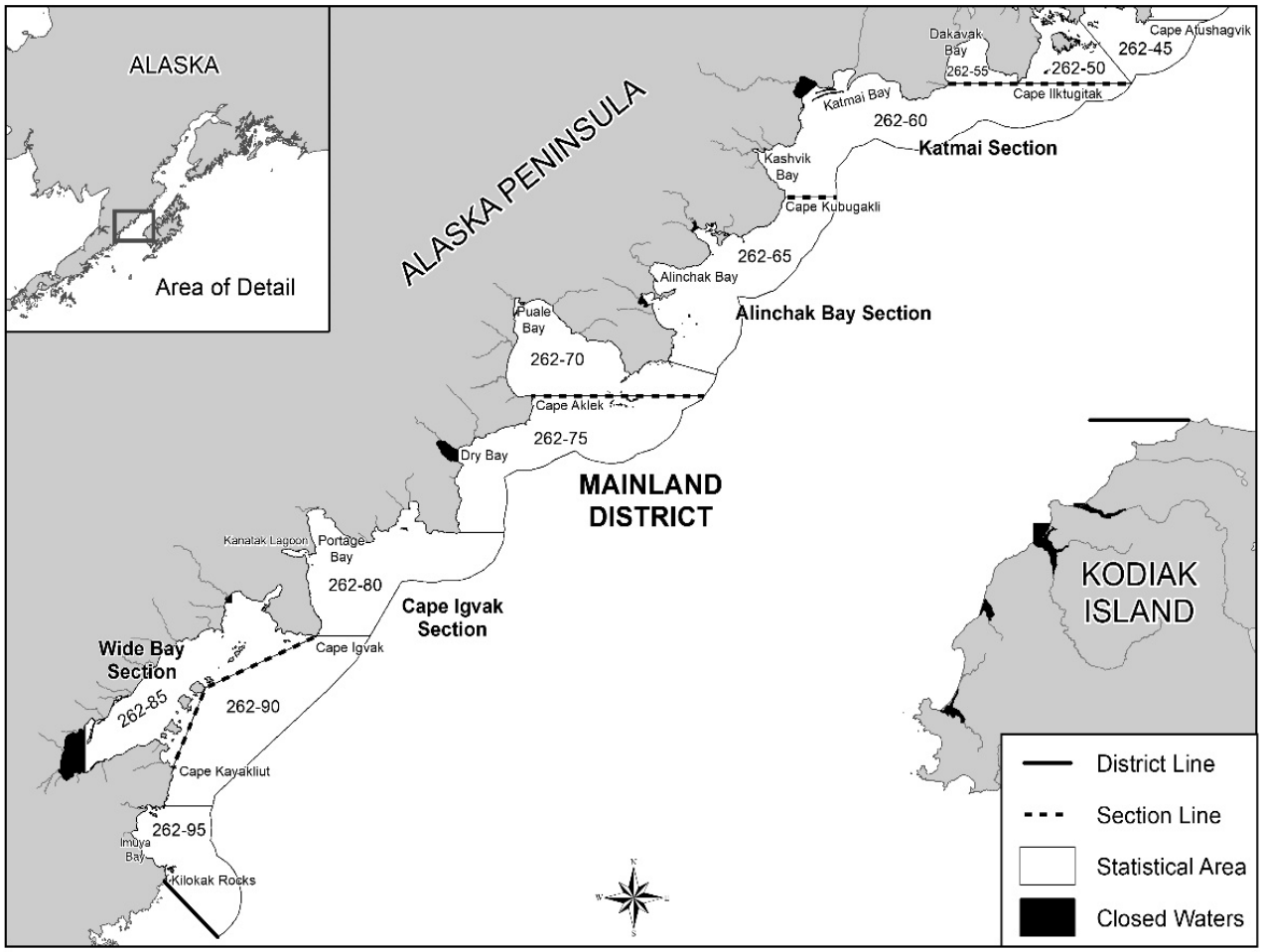

Figure 65-1.–Wide Bay, Cape Igvak, Alinchak Bay, and Katmai Bay sections of the Mainland District.

Table 65-1.–KMA salmon harvest taken in the Katmai Bay and Alinchak Bay sections of the Mainland, 1995–2019.

Katmai Bay and Alinchak Bay Salmon Harvest 7/6-7/25					
Year	King	Sockeye	Coho	Pink	Chum
1995	33	13,809	994	15,853	8,178
1996	284	19,915	1,691	9,358	3,689
1997	1,504	74,687	2,774	40,781	3,751
1998	3	1,223	43	1,500	184
1999	347	27,217	541	16,913	13,135
2000	294	36,199	5,415	19,430	50,468
2001	174	16,166	2,745	20,007	24,320
2002	296	21,096	319	27,980	8,926
2003	5	4,730	253	17,524	3,235
2004	46	7,876	1,262	52,986	18,391
2005	130	23,708	251	7,799	2,030
2006	262	7,222	316	44,878	18,200
2007	181	7,374	777	8,472	905
2008	59	12,189	213	28,027	19,636
2009	287	22,756	988	53,678	11,233
2010	620	17,564	1,437	5,622	9,934
2011	20	5,186	326	2,333	1,391
2012	187	14,278	176	7,162	4,446
2013	2,866	31,876	1,136	22,278	12,695
2014	57	54,463	2,371	20,397	2,795
2015	0	361	30	2,596	849
2016	14	9,746	341	2,627	990
2017	125	8,986	100	12,830	39,262
2018	78	3,246	475	7,303	11,974
2019	34	3,615	94	9,417	4,151
5-year avg.	50	5,191	208	6,955	11,445
10-year avg.	400	14,932	649	9,257	8,849
15-year avg.	328	14,838	602	15,695	9,366

PROPOSAL 66 – 5 AAC 18.XXX. New Kodiak Management Area Management Plan.

PROPOSED BY: United Cook Inlet Drift Association.

WHAT WOULD THE PROPOSAL DO? Adopt a new management plan capping weekly and seasonal commercial sockeye salmon harvest in certain portions of the Kodiak Management Area (5 AAC 18.XXX).

WHAT ARE THE CURRENT REGULATIONS? The Alitak District Salmon Management Plan (5 AAC 18.361), the Westside Kodiak Salmon Management Plan, (5 AAC 18.362), and the Eastside Kodiak Salmon Management Plan (5 AAC 18.367) encompass 6 districts and 36 sections and are all based on traditional salmon fisheries targeting local Kodiak Management Area (KMA) sockeye, pink, chum and coho salmon. These plans are the long-term realization of past management practices that have been in place for nearly 50 years.

These 3 management plans target local salmon species with overlapping run timing. The plans provide a predictable management framework for local early-run and late-run sockeye salmon as well as Kodiak's pink, chum, and coho salmon stocks. This blended management between multiple salmon species throughout numerous sections and over varying time periods helps ensure local salmon escapement, orderly fisheries between gear groups, as well as providing the highest quality fish.

In addition to the 3 management plans, the KMA harvest strategy for pink salmon also utilizes a fixed opening date (July 6). The wild stock pink forecasts set the length of the initial fishing periods, and there is coordination of multiple fisheries whenever possible to disperse the purse seine fleet. This strategy has been employed for over 40 years, allowing the department to manage for multiple salmon species that share the same local streams. Weekly openings allow for the harvest of local pink salmon, while large closed water areas ensure chum, sockeye, and coho salmon make it to the natal streams.

The purpose of the North Shelikof Strait Sockeye Salmon Management Plan (5 AAC 18.363) is to prevent the repetition of a nontraditional harvest pattern that occurred in 1988. When sockeye salmon harvest caps are achieved, the department restricts the fishery by emergency order to areas inside boundaries of the North Shelikof Management Unit and Southwest Afognak Management Unit.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL IS ADOPTED? This would establish a new KMA management plan. The plan would institute a series of complex weekly and seasonal sockeye salmon harvest catch limits on KMA seine fisheries which are currently managed based on local sockeye, pink, and chum salmon. The plan would encompass the timeframe between the third week of June through the fourth week of July. When specific weekly or seasonal sockeye salmon harvest caps are achieved, commercial salmon fishing will be restricted for the remainder of the week or season to 0.5 nautical miles inside an undefined headland to headland area. This proposal will lead to lost commercial fishing opportunity, routinely exceeding KMA salmon escapement goals, and reduced harvest quality because fish would tend to be taken closer to stream mouths.

The proposal is premised on the idea that the department can close outer cape areas and force KMA seine fishermen inside bays and headlands to avoid migrating, nonlocal sockeye salmon

harvest. However, many of the KMA's largest pink salmon runs are not inside bays or headlands. For example, in 2018, Malina Creek, Little River, Karluk River, Sturgeon River, Ayakulik River, Humpy Creek, and Seven Rivers accounted for 70% of the 2018 KMA pink salmon escapement of 5.1 million fish. None of these systems are at the head of a bay. Outer cape closure areas will effectively act as larger closed water areas and lead to lost opportunity and routinely exceeding the KMA salmon escapement goals.

The KMA pink salmon run is the largest salmon run in the Westward Region and is managed based on local abundance. For management, the department has 2 main tools to measure inseason abundance: weekly commercial salmon openings to gauge CPUE, followed by weekly aerial surveys to compare to past results. Fundamentally changing the area that is open to commercial salmon fishing would reduce the department's ability to use CPUE. This may make pink salmon management much less reliable.

Decreasing the total area to harvest KMA pink salmon will lead to longer commercial salmon fishery openings to control local pink salmon escapement. Currently, the department is able to manage for multiple species that share the same streams in July by pulsing fishery openings and established closed waters. Fishery closures ensure local salmon make it to natal streams, while large closed waters allow for protection for the different species during longer pink salmon openings. With less area open to commercial salmon fishing, pink salmon harvest will not be sufficient in such a confined area, and the department would be forced to open traditional closed waters. This will lead to more poor quality, pink, chum, and sockeye salmon harvested and it will make it more difficult for the department to achieve local salmon escapement goals and objectives.

Any closure that would cause more terminal fisheries on the Westside of Kodiak would reallocate fish from KMA set gillnet areas to seine-only areas. In the Alitak District, more terminal fisheries would allocate from the KMA seine area to the gillnet areas.

BACKGROUND: Beginning in the late 1970s, the board established numerous management plans defining how different portions of KMA will be managed (e.g., Cape Igvak, Alitak Bay, and Westside). Central to these plans was to protect local salmon stocks using sustainable management practices while maintaining traditional fishing opportunities. Parts of these plans also provide direction with regard to allocations among gear types within the KMA and allocations between areas outside of the KMA. Inherent to these plans was the recognition that some of the local stock managed fisheries include the harvest of nonlocal salmon and stocks traveling to other areas of Kodiak Island and the mainland, as well as salmon originating outside of the KMA.

Previous boards have recognized that changes to long-established traditional KMA fisheries would significantly reallocate local stocks between different gear groups within the KMA, and would make managing local stocks in accordance to sustained yield principles more difficult.

On average, 80% of the KMA sockeye harvest takes place in the Northwest Kodiak District, Southwest Kodiak District, and Alitak District. Much of the management of these districts is based on the local stock management of the 4 major sockeye salmon runs returning to the Karluk, Ayakulik, Frazer, and Upper Station systems (Figure 66-1) as well as local pink chum and coho salmon. A significant portion of several KMA sockeye salmon runs return during the proposed new management plans timeframe (Figure 66-2).

A sockeye salmon genetics study was implemented for the KMA from 2014 through 2016 (Shedd et al. 2016). In those years, Cook Inlet sockeye salmon never made up the majority of salmon

harvested in any of the sampling areas covered by Proposal 66 (Tables 66-1, 66-2, and 66-3). Restricting these proposed areas will lead to lost commercial fishing opportunity, exceeding KMA salmon escapement goals, and poorer quality fish.

The Kodiak area escapes 30% to 65% of its local wild pink salmon escapement during the proposed timeframe. KMA odd-year pink salmon sustainable escapement goal is 2,000,000 to 5,000,000; and in even years it is 3,000,000 to 7,000,000. In the past, Kodiak fishermen have harvested as many as 12 million pink salmon during the timeframe in this proposed management plan.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal based on biological, management, and quality concerns. In the proposal area, Cook Inlet-origin sockeye salmon are incidentally harvested in local stock fisheries targeting KMA sockeye, pink, and chum salmon and make up a small fraction of the overall harvest (Tables 66-1, 66-2, and 66-3).

COST ANALYSIS: Creating a new management plan with the intent of capping salmon harvest in the KMA would likely increase costs to the department due to the increase in staff time necessary to monitor the fishery.

Table 66-1.–KMA pink, chum, and sockeye salmon harvest by sampling strata during 2014, genetic stock specific harvest and subregional genetic stock specific harvest.

2014 Harvest data and genetic stock specific harvest[a]											
		Species comp of harvest		Genetic stock specific harvest		Cook Inlet sockeye as a percentage of total pink, chum, and sockeye harvest	Subregional genetic stock specific harvest[b]				Kenai & Kasilof sockeye as a percent of Cook Inlet sockeye harvested in the KMA
Geographic Area	Temporal Stratum	Pink and Chum	Sockeye	Non-Cook Inlet Sockeye	Cook Inlet Sockeye		Other Cook Inlet	Susitna	Kenai	Kasilof	
Uganik - Kupreanof	Early	8,389	79,494	78,858	636	0.7%	*	*	*	*	ND
	Middle	186,927	128,836	127,833	1,003	0.3%	*	*	*	*	ND
	Late	461,022	163,843	158,880	4,963	0.8%	*	*	*	*	ND
Uyak	Early	13,207	102,346	100,332	2,014	1.7%	*	*	*	*	ND
	Middle	118,545	126,840	119,739	7,101	2.9%	12	1,191	2,927	2,970	83.0%
	Late	302,204	155,658	154,435	1,223	0.3%	*	*	*	*	ND
Karluk - Sturgeon	Early	3,792	52,109	50,293	1,816	3.2%	*	*	*	*	ND
	Middle	60,017	68,438	66,059	2,379	1.9%	*	*	*	*	ND
	Late	313,916	124,879	124,320	559	0.1%	*	*	*	*	ND
Ayakulik - Halibut Bay	Early	3,285	162,984	151,261	11,723	7.1%	1,596	18	1,739	8,371	86.2%
	Middle	357,595	175,205	133,771	41,434	7.8%	3,166	1,602	29,518	7,148	88.5%
	Late	212,487	57,066	54,060	3,006	1.1%	614	67	2,323	3	77.4%
Cape Alitak - Humpy - Deadman	Early	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Middle	525,937	115,998	78,510	37,488	5.8%	4,340	1,397	18,717	13,034	84.7%
	Late	82,253	5,437	5,149	288	0.3%	10	6	272	0	94.4%

Note: Stock composition estimates may not sum to 100% and stock-specific harvest estimates may not sum to the total due to rounding error.

Note: * = Results for Cook Inlet subregional reporting groups are only reported if the overall contribution to the Cook Inlet group in the stratum or any contributing strata is greater than 5% of the sockeye salmon harvest.

Note: ND = No data available.

[a] Shedd et al. 2016.

[b] Shedd et al. 2017.

Table 66-2.–KMA pink, chum, and sockeye salmon harvest by sampling strata during 2015, genetic stock specific harvest from and subregional genetic stock specific harvest.

2015 Harvest data and genetic stock specific harvest[a]											
		Species comp of harvest		Genetic stock specific harvest		Cook Inlet sockeye as a percentage of total pink, chum, and sockeye harvest	Subregional genetic stock specific harvest[b]				Kenai & Kasilof sockeye as a percent of Cook Inlet sockeye harvested in the KMA
Geographic Area	Temporal Stratum	Pink and Chum	Sockeye	Non-Cook Inlet Sockeye	Cook Inlet Sockeye		Other Cook Inlet	Susitna	Kenai	Kasilof	
Uganik - Kupreanof	Early	23,412	31,607	28,995	2,612	4.7%	1,367	1	270	974	47.6%
	Middle	886,666	215,645	177,711	37,934	3.4%	4,760	12,140	15,809	5,225	55.4%
	Late	4,289,972	143,567	98,779	44,788	1.0%	3,449	5,852	34,876	611	79.2%
Uyak	Early	34,602	49,515	40,989	8,526	10.1%	5,534	1	1,331	1,680	35.3%
	Middle	1,035,610	174,009	80,100	93,909	7.8%	13,115	16,336	56,470	7,988	68.6%
	Late	1,978,909	126,126	86,080	40,046	1.9%	1,498	9,017	29,517	14	73.7%
Karluk - Sturgeon	Early	14,036	35,183	35,025	158	0.3%	*	*	*	*	ND
	Middle	108,529	29,915	21,143	8,772	6.3%	1,844	1,732	3,749	1,397	58.7%
	Late	469,677	63,532	57,768	5,764	1.1%	490	1,176	4,093	5	71.1%
Ayakulik - Halibut Bay	Early	11,676	203,170	145,724	57,446	26.7%	8,565	41	10,128	38,712	85.0%
	Middle	840,950	384,390	199,290	185,100	15.1%	28,723	14,603	103,805	37,969	76.6%
	Late	567,240	20,619	18,883	1,736	0.3%	139	14	1,560	23	91.2%
Cape Alitak - Humpy - Deadman	Early	10,297	28,723	21,000	7,723	ND	1,999	5	892	4,828	74.1%
	Middle	1,469,688	165,894	38,283	127,611	7.8%	8,192	15,041	100,744	3,634	81.8%
	Late	3,974,166	31,294	30,399	895	0.0%	*	*	*	*	ND

Note: Stock composition estimates may not sum to 100% and stock-specific harvest estimates may not sum to the total due to rounding error.

Note: * = Results for Cook Inlet subregional reporting groups are only reported if the overall contribution to the Cook Inlet group in the stratum or any contributing strata is greater than 5% of the sockeye salmon harvest.

Note: ND = No data available.

[a] Shedd et al. 2016.

[b] Shedd et al. 2017.

Table 66-3.–KMA pink, chum, and sockeye salmon harvest by sampling strata during 2016, genetic stock specific harvest and subregional genetic stock specific harvest.

2016 Harvest data and genetic stock specific harvest[a]											
		Species comp of harvest		Genetic stock specific harvest		Cook Inlet sockeye as a percentage of total pink, chum, and sockeye harvest	Subregional genetic stock specific harvest[b]				Kenai & Kasilof sockeye as a percent of Cook Inlet sockeye harvested in the KMA
Geographic Area	Temporal stratum	Pink and chum	Sockeye	Non-Cook Inlet sockeye	Cook Inlet sockeye		Other Cook Inlet	Susitna	Kenai	Kasilof	
Uganik -	Early	10,108	62,771	58,149	4,622	6.3%	3,022	41	447	1,111	33.7%
Kupreanof	Middle	265,463	138,281	102,193	36,088	8.9%	7,671	7,781	18,378	2,258	57.2%
	Late	451,468	137,434	103,423	34,011	5.8%	3,636	5,561	24,371	443	73.0%
Uyak	Early	9,140	37,238	33,905	3,333	7.2%	2,543	10	18	763	23.4%
	Middle	125,060	69,803	58,467	11,336	5.8%	874	2,716	6,533	1,213	68.3%
	Late	216,948	126,734	114,817	11,917	3.5%	436	2,454	8,994	33	75.7%
Karluk -	Early	2,741	13,856	13,853	3	0.0%	*	*	*	*	ND
Sturgeon	Middle	4,344	10,700	9,532	1,168	7.8%	175	321	321	350	57.4%
	Late	27,045	113,445	111,807	1,638	1.2%	*	*	*	*	ND
Ayakulik -	Early	0	3,937	3,914	23	0.6%	*	*	*	*	ND
Halibut Bay	Middle	61,297	120,068	69,399	50,669	27.9%	3,698	7,173	36,677	3,152	78.6%
	Late	58,354	33,721	24,092	9,629	10.5%	1,232	514	6,938	949	81.9%
Cape Alitak -	Early	707	11,118	8,527	2,591	ND	1,154	18	782	637	54.8%
Humpy - Deadman	Middle	46,525	61,930	20,808	41,122	37.9%	1,928	3,480	34,056	1,658	86.8%
	Late	104,350	21,243	19,706	1,537	1.2%	144	104	1,198	91	83.9%

Note: Stock composition estimates may not sum to 100% and stock-specific harvest estimates may not sum to the total due to rounding error.

Note: * = Results for Cook Inlet subregional reporting groups are only reported if the overall contribution to the Cook Inlet group in the stratum or any contributing strata is greater than 5% of the sockeye salmon harvest.

Note: ND = No data available.

[a] Shedd et al. 2016.

[b] Shedd et al. 2017.

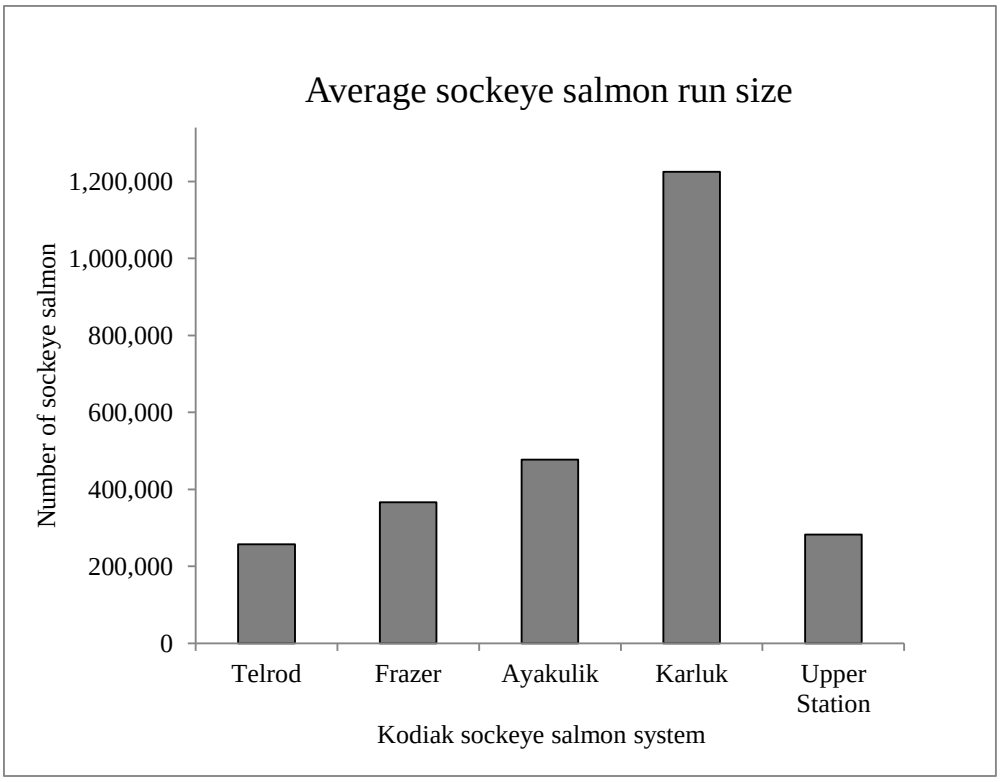

Figure 66-1.–Average sockeye salmon run size for the 5 largest runs in the KMA.

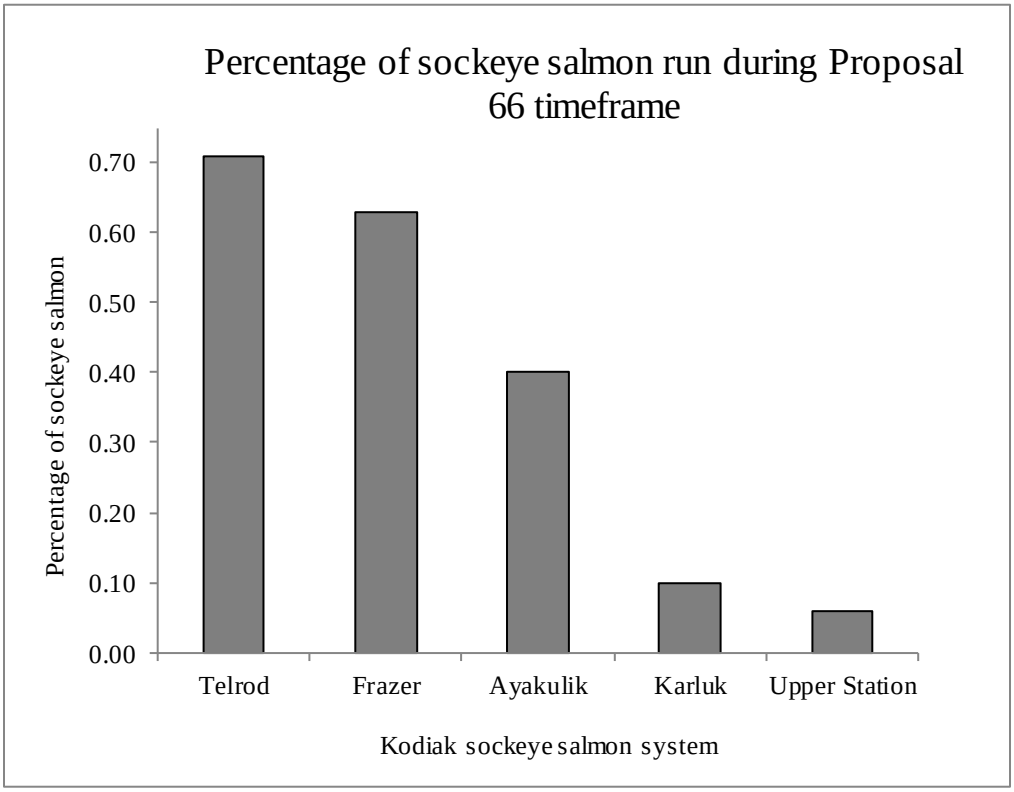

Figure 66-2.–Percentage of local KMA sockeye salmon escapement and Telrod Cove harvest that takes place during Proposal 66 timeframe.

PROPOSAL 67 – 5 AAC 18.331. Gillnet specifications and operation.

PROPOSED BY: Northwest Setnetters Association.

WHAT WOULD THE PROPOSAL DO? This would allow monofilament web in the Kodiak commercial salmon set gillnet fishery.

WHAT ARE THE CURRENT REGULATIONS? Current general provisions for gillnet specifications within the majority of Alaska (5 AAC 39.250), including Kodiak, require salmon gillnet web contain either 30 filaments of equal diameter or contain at least 6 filaments with each filament having a minimum of .20-millimeter diameter.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL IS ADOPTED? Monofilament web would be allowed in the Kodiak commercial set gillnet fishery. Use of monofilament gillnet web may change CPUE information but is not likely to affect the department's ability to manage the commercial fishery.

BACKGROUND: Monofilament gillnets are utilized to harvest salmon in Puget Sound, the Columbia River, and California. British Columbia prohibits the use of monofilament gillnets. Monofilament web is used in Alaska herring gillnet fisheries and the Cook Inlet salmon gillnet fishery. In the Cook Inlet salmon gillnet fishery, from 2005 through 2007, monofilament was allowed for up to 1/3 of a set or drift gillnet and required permit holders to register. Since 2008, all set and drift gillnet gear in the Cook Inlet commercial gillnet fishery may be constructed with monofilament web and there is no longer a registration requirement.

Several topics were discussed at the 2005 Upper Cook Inlet board meeting, but persistence of heavy "slime" was not one of them. Topics of discussion at the meeting were based on the *Gillnet Gear Evaluation Study in Southeast Alaska, 1987* by Alexandersdottir et. al (1988) and included the following information: catch efficiency of pink salmon increased with reduction of filament strands, there was increased harvest of chum and coho salmon taken in clear water but not turbid (glacial) water, and no significant catch efficiencies were found for sockeye salmon. Waters open to gillnet gear in the Upper Cook Inlet area tend to be far more turbid than the waters of Kodiak Island open to gillnet gear.

As stated in the proposal, 4 Commissioner's Permits were issued for the 2019 salmon season allowing monofilament web in subsistence gillnets for the purpose of documenting any benefits during "heavy slime events." During the 2020 board meeting, the department expects the proposer(s) to present any information gathered from the use of monofilament subsistence gillnets during the 2019 salmon season.

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

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

PROPOSAL 68 – 5 AAC 18.330. Gear.

PROPOSED BY: Rick Metzger and Pete Hannah.

WHAT WOULD THE PROPOSAL DO? This would make set gillnet gear legal in the Humpy-Deadman and Cape Alitak sections north of a line from Cape Alitak to Cape Trinity in the Alitak District after September 4.

WHAT ARE THE CURRENT REGULATIONS?

5 AAC 18.330. Gear

(d) In the Alitak District, salmon may be taken

(1) in the Humpy-Deadman and Cape Alitak Sections by purse seines and beach seines only;

(2) in the Alitak Bay, Moser Bay, Olga Bay, Dog Salmon Flats, Outer and Inner Upper Station, and Outer and Inner Akalura Sections by set gillnets only, except that after September 4, salmon may be taken also by purse seines and beach seines.

5 AAC 18.361. Alitak District Salmon Management Plan

(h) …From August 26 through the end of the fishing season, the Alitak Bay, Moser Bay, and Olga Bay Sections shall be managed based on the coho and late sockeye salmon returns to all Olga Bay systems.

(i) …After July 15, the Humpy-Deadman Section shall be managed based on the strength of salmon returns to systems located within the Humpy-Deadman Section.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL IS ADOPTED? This would allow set gillnet gear to fish the Humpy-Deadman and Cape Alitak sections north of a line from Cape Trinity at lat 56°44.80'N, long 154°08.90'W, to Cape Alitak at lat 56°50.58' N, long 154°18.50'W (Figure 68-1), after September 4. This provision sunsets after the 2019 season. This may cause gear conflicts within the Cape Alitak and Humpy-Deadman sections although no gear conflicts were reported 2017–2019.

BACKGROUND: The Alitak District Salmon Management Plan (5AAC 18.361) was formulated as a regulatory management plan and adopted by the board in 1987. The Humpy-Deadman Section is managed after July 15 on the strength of salmon returns to systems located within the Humpy-Deadman Section. After August 26 the Cape Alitak, Alitak Bay, Moser Bay, and Olga Bay sections are managed based on late sockeye and coho salmon returns to Olga Bay.

Set gillnet gear is the only legal gear type in the Alitak Bay, Moser Bay, Olga Bay, Dog Salmon Flats, Outer and Inner Upper Station, and Outer and Inner Akalura sections until September 5, when purse seines and beach seines become legal. In the Cape Alitak and Humpy-Deadman sections, purse seines and beach seines are the only legal gear type for the duration of the season.

In recent years, poor returns of late-run sockeye salmon to Upper Station have led to long closures for the Cape Alitak, Alitak Bay, Moser Bay, and Olga Bay sections. Meanwhile, extended fishing in the Humpy Deadman Section is often necessary due to strong pink salmon returns to systems within the Humpy-Deadman Section (Tables 68-1 and 68-2).

At the 2017 Kodiak board meeting, the board allowed set gillnet gear to operate in the Humpy-Deadman and Cape Alitak sections north of a line from Cape Trinity at lat 56°44.80'N, long 154°08.90'W, to Cape Alitak at lat 56°50.58'N, long 154°18.50'W (Figure 68-1), after September 4. This provision sunsets after the 2019 season. Set gillnet harvests during this timeframe are confidential (fewer than 3 permits fished).

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

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

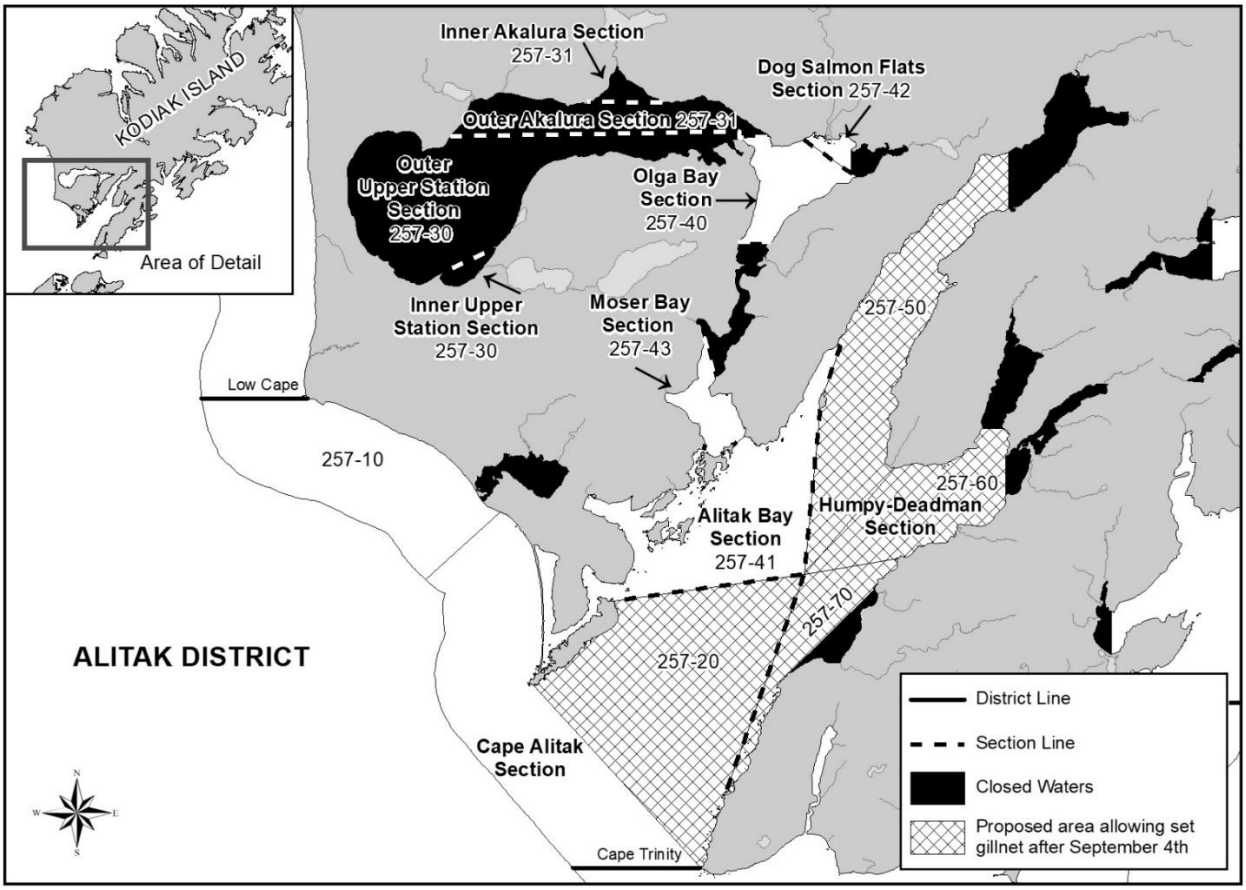

Figure 68-1.–Alitak District commercial salmon fishing section and statistical areas with proposed waters open to gillnet gear after September 4.

Table 68-1.–Olga Bay, Moser Bay, Alitak Bay, and Humpy-Deadman sections number of days open: August 1 through September 15, 2006–2018.

Year	Olga, Moser, Alitak days open	Humpy-Deadman days open
2006	17	46
2007	20	42
2008	31	9
2009	28	46
2010	16	7
2011	10	35
2012	14	16
2013	6	46
2014	9	31
2015	9	34
2016	14	9
2017	26	39
2018	37	26

Table 68-2.–Upper Station Late-run sockeye salmon and Alitak District pink salmon escapement.

Year	Upper Station late run sockeye salmon	Alitak pink samon
2006	153,153	844,236
2007	149,709	243,305
2008	184,856	176,346
2009	161,736	895,853
2010	141,139	323,379
2011	101,893	532,322
2012	149,325	825,167
2013	125,573	599,159
2014	181,411	491,533
2015	132,864	1,742,659
2016	145,013	311,878
2017	209,298	1,355,352
2018	235,669	690,029

[a] Upper Station late run sockeye salmon escapement goal of 120,000–200,000 fish.

[b] Alitak District pink salmon escapement objectives of 162,000–486,000 fish during even years and 212,000–636,000 fish during odd years.

PROPOSAL 69 – 5 AAC 18.362. Westside Kodiak Salmon Management Plan.

PROPOSED BY: Chris Berns.

WHAT WOULD THE PROPOSAL DO? This would allow the department to manage the Central and North Cape sections of the Northwest Kodiak District from July 6 through August 15 based on pink salmon returning to the major systems of the Northwest Kodiak District or, in even-years, based on pink salmon returning to the Karluk system.

WHAT ARE THE CURRENT REGULATIONS? 5 AAC 18.362 Westside Kodiak Salmon Management Plan (b)(3). The Central and North Cape sections must be managed from approximately July 6 through August 15 based on pink salmon returning to the major pink salmon systems in the Northwest Kodiak District.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL IS ADOPTED? This would enable the department to manage the Central and North Cape sections of the Northwest Kodiak District from July 6 through August 15 based on either pink salmon returning to the major systems of the Northwest Kodiak District, or in even years based on pink salmon returning to the Karluk system. In even years when the pink salmon run to Karluk is strong and the Northwest Kodiak District is weak, managers could open the Central and North Cape sections to more harvest opportunity. Because the pink salmon escapement to the smaller systems of the Northwest Kodiak District are typically earlier in the season, most of the escapement has passed the fishery and is in protected waters.

BACKGROUND: The Westside Kodiak Salmon Management Plan is the achievement of long-term management strategies which were initially implemented in 1971 and placed into regulation in 1990. Placing the management plan in regulation clarified the management strategy and helped maintain the biological integrity of local salmon stocks while alleviating allocative concerns of local fishermen.

The intent of this management plan is to harvest salmon bound to local systems in traditional fisheries. Due to the mixing of various local salmon stocks during the inshore migration, the plan is complex, but provides a predictable framework for the major sockeye, pink, chum, and coho salmon stocks from the west side of Kodiak. The plan is in effect for the entire salmon season and covers the Southwest Kodiak and Northwest Kodiak districts, as well as the Southwest Afognak Section (Figure 69-1).

The management plan guides the prosecution of early- and late-run sockeye salmon fisheries, including those targeting the major systems of Karluk Lake, Ayakulik River, and other minor sockeye salmon systems, as well as local pink, chum, and coho salmon fisheries. This blended management has allowed for protection of both salmon present within the Northwest Kodiak District and sockeye salmon returning to the Karluk Lake system.

In the Northwest Kodiak District, the Central and North Cape sections are managed from June 1 through July 5 based on early-run sockeye salmon returning to Karluk Lake. The pink salmon fishery opens on July 6, and the length of the initial weekly fishing periods is based on the current year's (wild stock) pink salmon forecast. During the peak pink salmon harvest period, from late July to mid-August, fishing periods are adjusted based on pink salmon escapement to the major pink salmon systems in the Northwest Kodiak District.

This blended management strategy has allowed for protection of both salmon present within the Northwest Kodiak District and sockeye salmon returning to the Karluk Lake system.

DEPARTMENT COMMENTS: The department **SUPPORTS** this proposal. On even years, the Karluk pink salmon run can at times be 4 times as large as all the major systems in the Northwest Kodiak District (Figure 69-2). This would allow the department more flexibility to harvest excess Karluk pink salmon at a time when most of the Northwest Kodiak District pink salmon have already escaped.

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

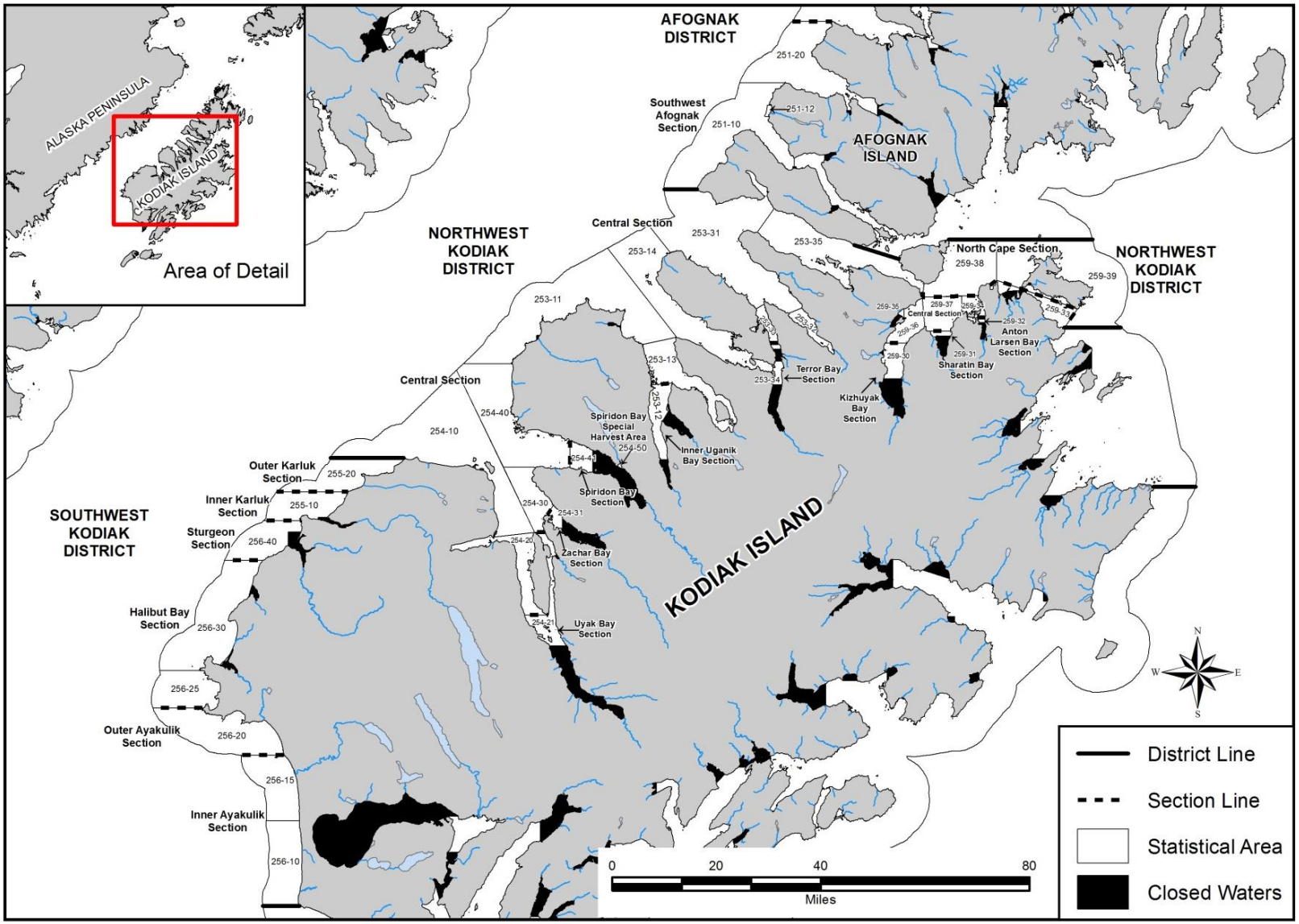

Figure 69-1.–Commercial salmon fishing sections and statistical lines identified in the Westside Kodiak Salmon Management Plan.

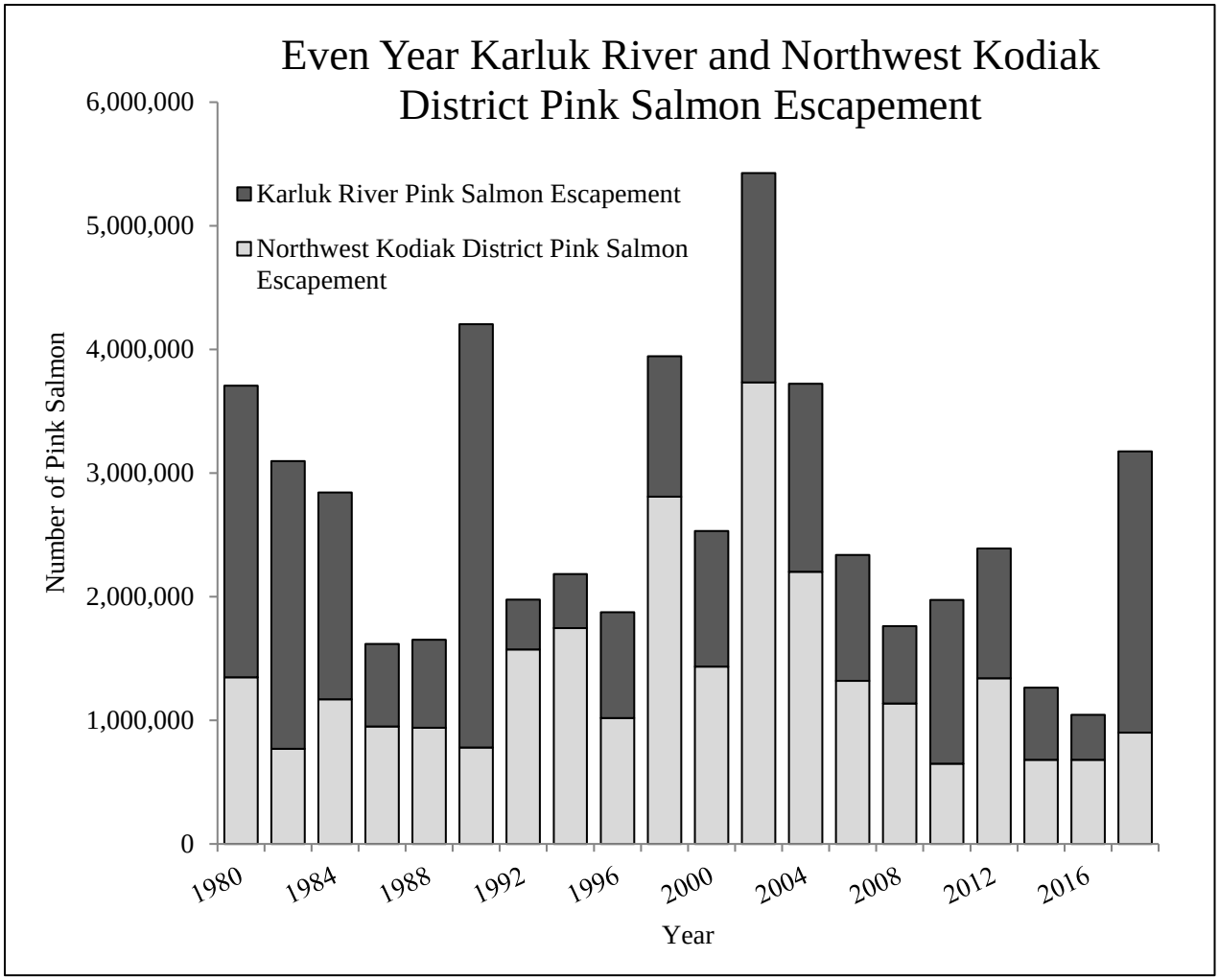

Figure 69-2.–Even-year Karluk pink salmon escapement and Northwest Kodiak District pink salmon escapement. To make the Karluk River pink salmon weir count comparable an expansion factor of 1.9 was applied to the Northwest Kodiak District pink salmon index aerial survey count.

Source: Nemeth et al. 2010, Barrett et. al. 1990.

PROPOSAL 70 – 5 AAC 18.362. Westside Kodiak Salmon Management Plan.

PROPOSED BY: Northwest Setnetters Association.

WHAT WOULD THE PROPOSAL DO? This would allow the department to manage the Central and North Cape sections of the Northwest Kodiak District from July 6 through August 15 based on pink salmon returning to the major systems of the Northwest Kodiak District or based on pink salmon returning to the Karluk system.

WHAT ARE THE CURRENT REGULATIONS? 5 AAC 18.362 Westside Kodiak Salmon Management Plan (b)(3). The Central and North Cape Sections must be managed from approximately July 6 through August 15 based on pink salmon returning to the major pink salmon systems in the Northwest Kodiak District.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL IS ADOPTED? This would enable the department to manage the Central and North Cape sections of the Northwest Kodiak District from July 6 through August 15 based on either pink salmon returning to the major systems of the Northwest Kodiak District or based on pink salmon returning to the Karluk system. While this proposal may provide more harvest opportunity in the Central and North Cape sections on even year pink salmon returns to the Karluk system, it is unlikely to provide added opportunity on odd-year pink salmon returns due to run timing.

BACKGROUND: The Westside Kodiak Salmon Management Plan is the achievement of long-term management strategies which were initially implemented in 1971 and placed into regulation in 1990. Placing the management plan in regulation clarified the management strategy and helped maintain the biological integrity of local salmon stocks while alleviating allocative concerns of local fishermen.

The intent of this management plan is to harvest salmon bound to local systems in traditional fisheries. Due to the mixing of various local salmon stocks during the inshore migration, the plan is complex, but provides a predictable framework for the major sockeye, pink, chum, and coho salmon stocks from the west side of Kodiak. The plan is in effect for the entire salmon season and covers the Southwest Kodiak and Northwest Kodiak districts, as well as the Southwest Afognak Section of the Afognak District (Figure 70-1).

The management plan guides the prosecution of early- and late-run sockeye salmon fisheries, including those targeting the major systems of Karluk Lake, Ayakulik River, and other minor sockeye salmon systems, as well as local pink, chum, and coho salmon fisheries. This blended management has allowed for protection of both salmon present within the Northwest Kodiak District and sockeye salmon returning to the Karluk Lake system.

In the Northwest Kodiak District, the Central and North Cape sections are managed from June 1 through July 5 based on early-run sockeye salmon returning to Karluk Lake. The pink salmon fishery opens on July 6, and the length of the initial weekly fishing periods is based on the current year's (wild stock) pink salmon forecast. During the peak pink salmon harvest period, from late July to mid-August, fishing periods are adjusted based on pink salmon escapement to the major pink salmon systems in the Northwest Kodiak District.

This blended management strategy has allowed for protection of both salmon present within the Northwest Kodiak District and sockeye salmon returning to the Karluk Lake system.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal because it is unlikely that the department would take management action in the Northwest Kodiak District based on Karluk pink salmon runs in odd years. In even years, the Karluk pink salmon run can at times be 4 times as large as all the major systems in the Northwest Kodiak District, on odd years it makes up only 10% to 12% (Figure 70-2; 70-3). However, the department **SUPPORTS** the added flexibility to management for even-year pink salmon runs in years of large Karluk pink salmon runs. This would allow the department to provide more opportunity to both gillnet and seine gear groups and still protect weaker stocks in the Northwest Kodiak District.

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

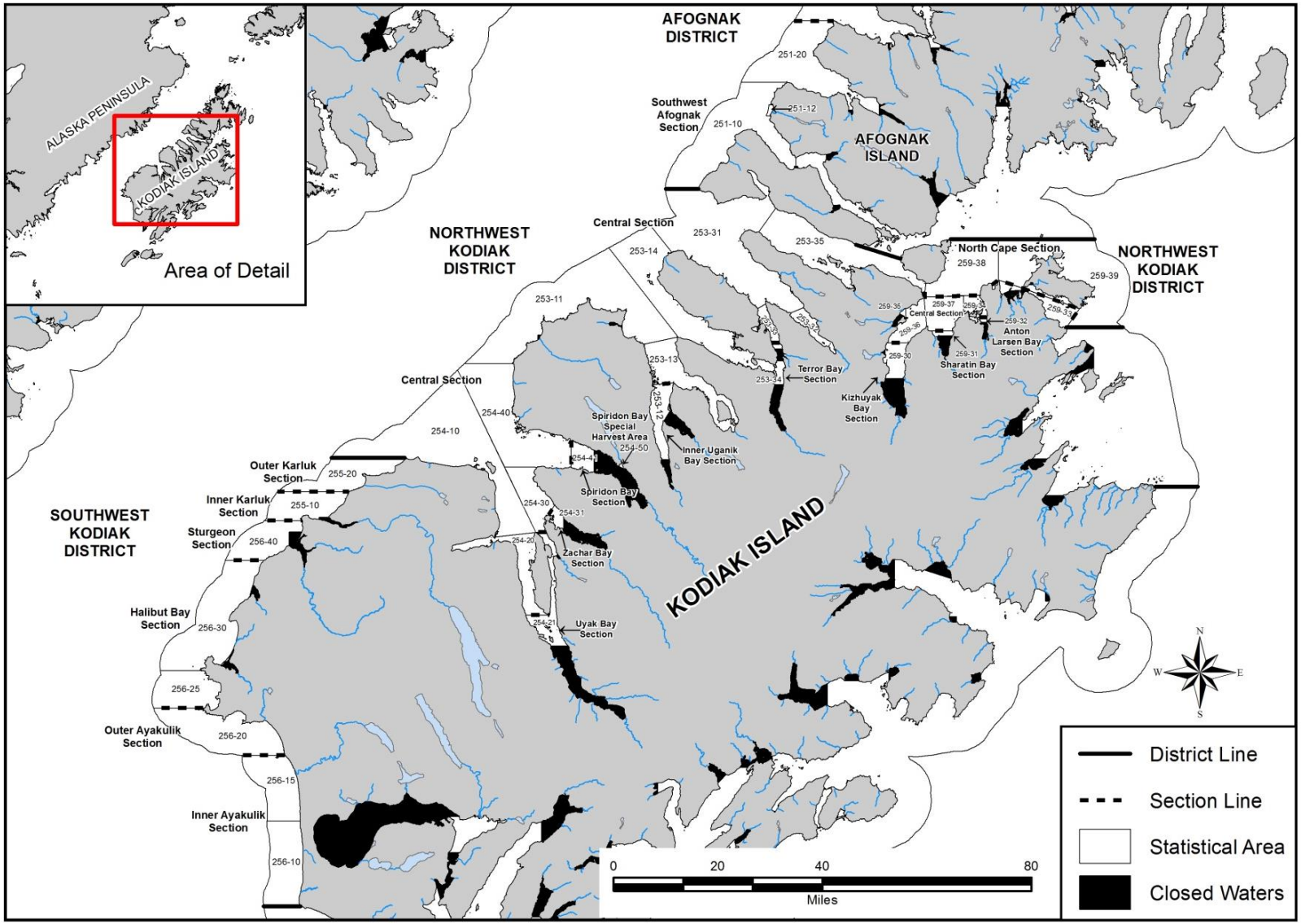

Figure 70-1.–Commercial salmon fishing sections and statistical lines identified in the Westside Kodiak Salmon Management Plan.

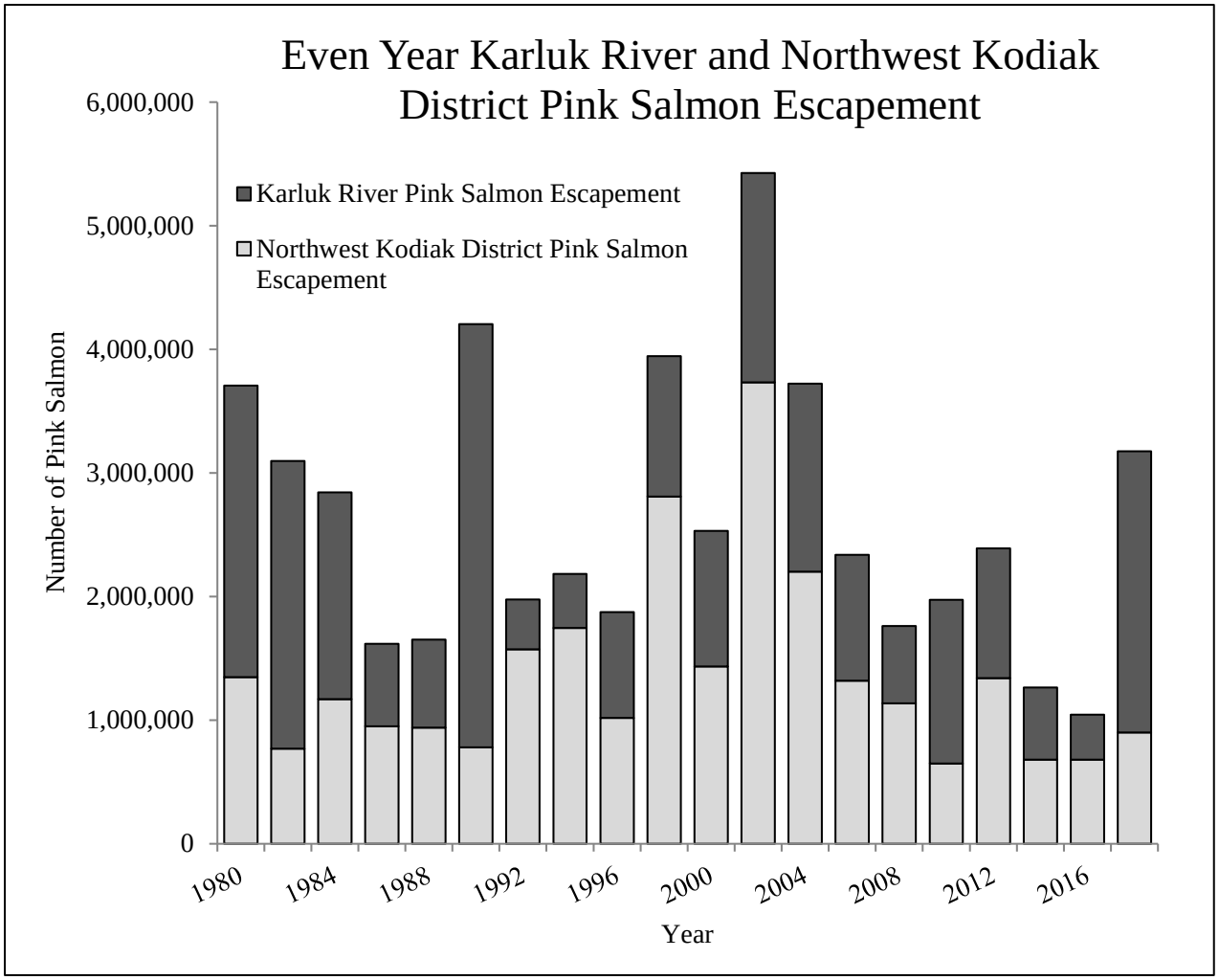

Figure 70-2.–Even-year Karluk pink salmon escapement and Northwest Kodiak District pink salmon escapement. To make the Karluk River pink salmon weir count comparable, an expansion factor of 1.9 was applied to the Northwest Kodiak District pink salmon index aerial survey count.

Source: Nemeth et al. 2010, Barrett et. al. 1990.

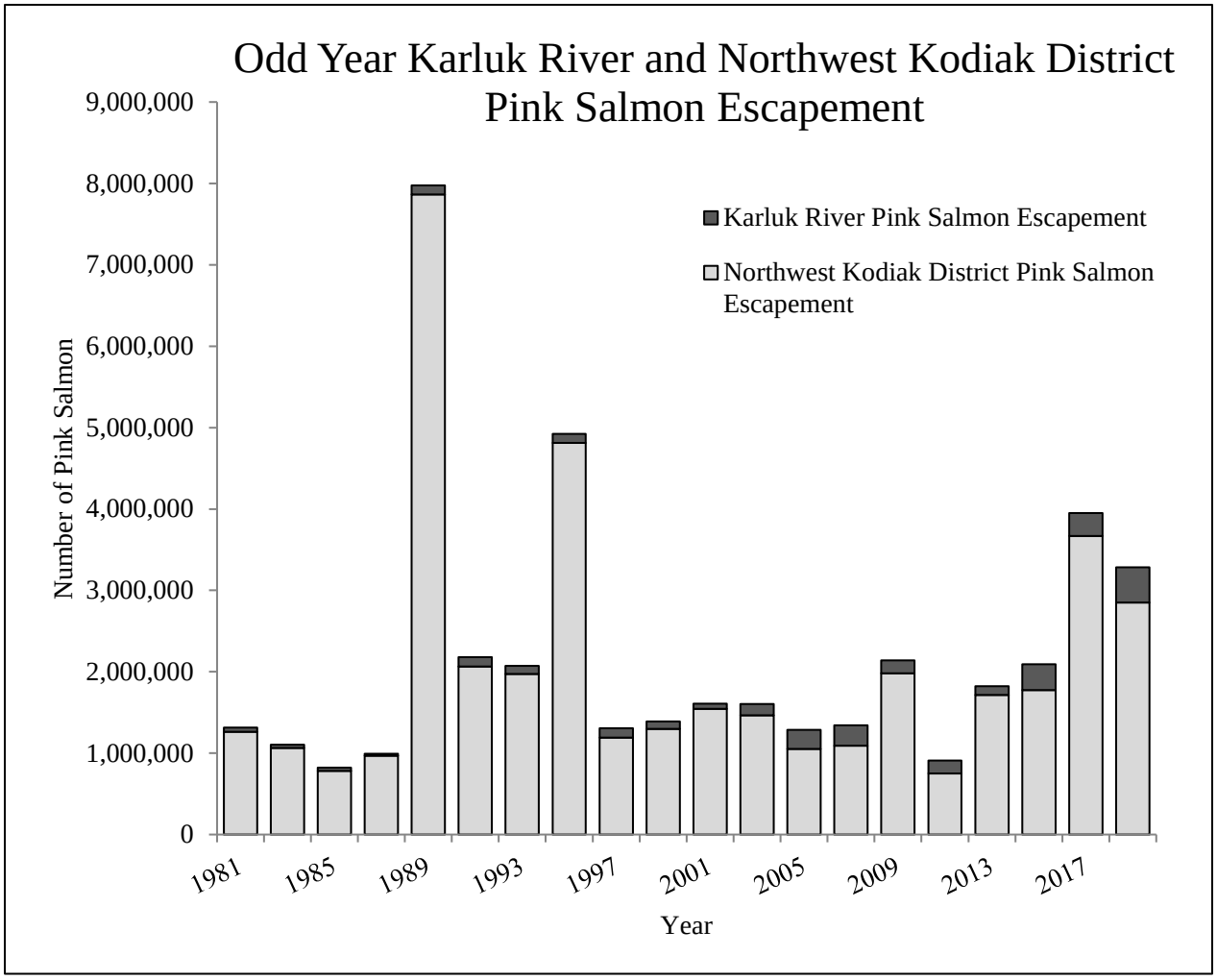

Figure 70-3.–Odd-year Karluk pink salmon escapement and Northwest Kodiak District pink salmon escapement. To make the Karluk River pink salmon weir count comparable, an expansion factor of 1.9 was applied to the Northwest Kodiak District pink salmon index aerial survey count.

Source: Nemeth et al. 2010, Barrett et. al. 1990.

PROPOSAL 71 – 5 AAC 18.362. Westside Kodiak Salmon Management Plan.

PROPOSED BY: Northwest Setnetters Association.

WHAT WOULD THE PROPOSAL DO? This would close the inner bay sections of the Northwest Kodiak District until the individual inner bay salmon escapement objectives are met.

WHAT ARE THE CURRENT REGULATIONS? Under the Westside Kodiak Salmon Management Plan 5AAC 18.362(c) The Anton Larsen Bay, Sheratin Bay, Kizhuyak Bay, Terror Bay, Inner Uganik Bay, Spiridon Bay, Zachar Bay, and Uyak Bay sections must be managed;

> (1)(2) from June 1 through approximately July 5, based on local sockeye and early-run chum returning to the major systems in each section;
>
> (3) from July 6 through July 31, based on local sockeye, pink, and chum salmon returning to the major systems in each section;
>
> (4) from August 1 through August 24, based on local pink and late-run chum salmon returning to the major systems in each section;
>
> (5) from approximately August 25 through September 5, based on local pink, late-run chum, and coho salmon returning to the major salmon systems in each section;

Also under the Westside Kodiak Salmon Management Plan 5AAC 18.362 (b) The Central and North Cape Sections must be managed;

> (3) from approximately July 6 through August 15, based on pink salmon returning to the major systems in the Northwest Kodiak District;
>
> (4) from approximately August 16 through August 24, based on pink salmon returning to the Northwest Kodiak District and on late-run sockeye salmon returning to the Karluk system;
>
> (5) from approximately August 25 through September 5, based on late-run sockeye salmon returning to the Karluk system;

WHAT WOULD BE THE EFFECT IF THE PROPOSAL IS ADOPTED? This would inhibit the department's ability to control Northwest Kodiak District sockeye, pink, chum, and coho salmon escapement and likely lead to more Central Section commercial salmon openings.

If the department was limited to opening the inner bay sections of the Northwest Kodiak District after achieving their individual midpoint escapement objectives, the Northwest Kodiak District would routinely exceed its pink salmon escapement objective. In years of poor pink salmon abundance, the majority of the pink salmon are harvested in the much larger Central Section and very few pink salmon are harvested in the inner bays (Figure 71-1).

BACKGROUND: The inner bay sections (Anton Larsen Bay, Sheratin Bay, Kizhuyak Bay, Terror Bay, Inner Uganik Bay, Spiridon Bay, Zachar Bay, and Uyak Bay) of the Northwest Kodiak District (Figure 71-2) have been seine-only areas since before statehood. These small terminal harvest areas are managed throughout the salmon season based on local stocks returning to each individual inner bay.

Currently, the department has the ability to manage for multiple species on the Westside of Kodiak that share the same natal streams with a pulse fishery and large closed waters. Fishery closures ensure sockeye, pink, chum, and coho salmon make it to natal streams, and large closed waters allow for protection during pink salmon openings. Currently, if Northwest Kodiak District sockeye, chum, or coho salmon escapement objectives look like they will not be achieved, the relevant inner bay is closed until escapement improves.

During the pink salmon fishery, all the sections of the Northwest Kodiak District open and close to commercial salmon fishing at the same time, unless an individual inner bay is closed due to the low abundance of sockeye, chum, or coho salmon. Depending on the pink salmon run strength, the major systems of the Northwest Kodiak District receive between 9% and 60% of their pink salmon escapement in July (Figure 71-3). In years of large pink salmon abundance, the inner bay sections can harvest as much as 64% of the yearly pink salmon harvest (Figure 71-1).

During the management timeframe from approximately August 16 through August 24, the Central Section is opened and closed based on both Karluk Lake late-run sockeye and pink salmon returning to the major systems of the Northwest Kodiak District. From August 25 through September 5, the Central and North Cape sections are managed based on late-run sockeye salmon returning to Karluk Lake. After September 5, the fishery is managed both on late-run sockeye salmon returning to Karluk Lake and coho salmon returning to major systems of the Northwest Kodiak District. This blended management has allowed for protection of both salmon present within the Northwest Kodiak District and sockeye salmon returning to the Karluk Lake system.

In years with robust pink salmon runs to the Northwest Kodiak District and weak Karluk Lake late-run sockeye salmon, any of the inner bays may be open while the Central Section remains closed.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal based on biological concerns for Northwest Kodiak District salmon escapement. The current plan allows managers to protect Northwest Kodiak District sockeye, pink, chum, and coho salmon escapement. The department is **NEUTRAL** on the allocative aspects of this proposal.

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

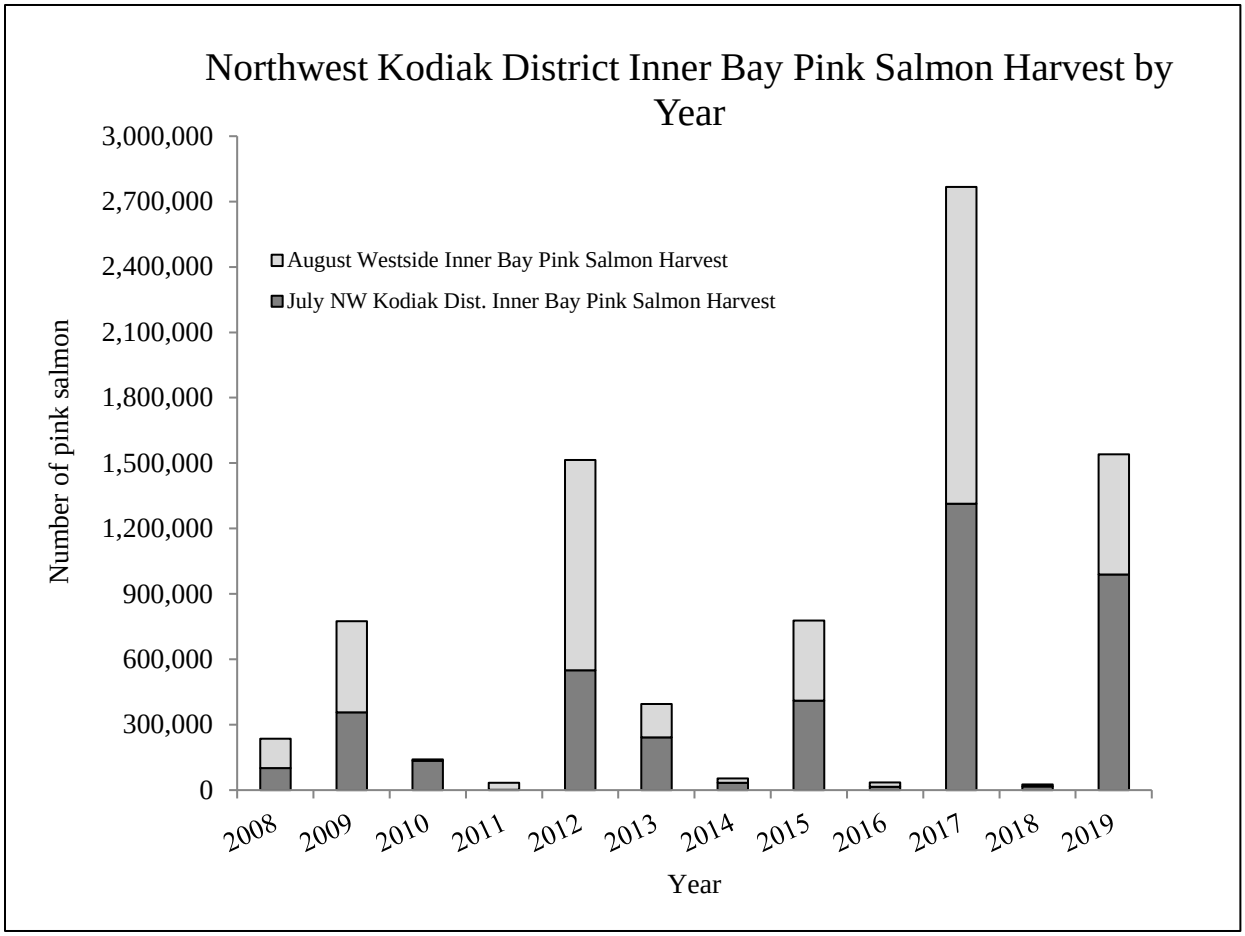

Figure 71-1.–Northwest Kodiak District inner bay pink salmon harvest in July and August.

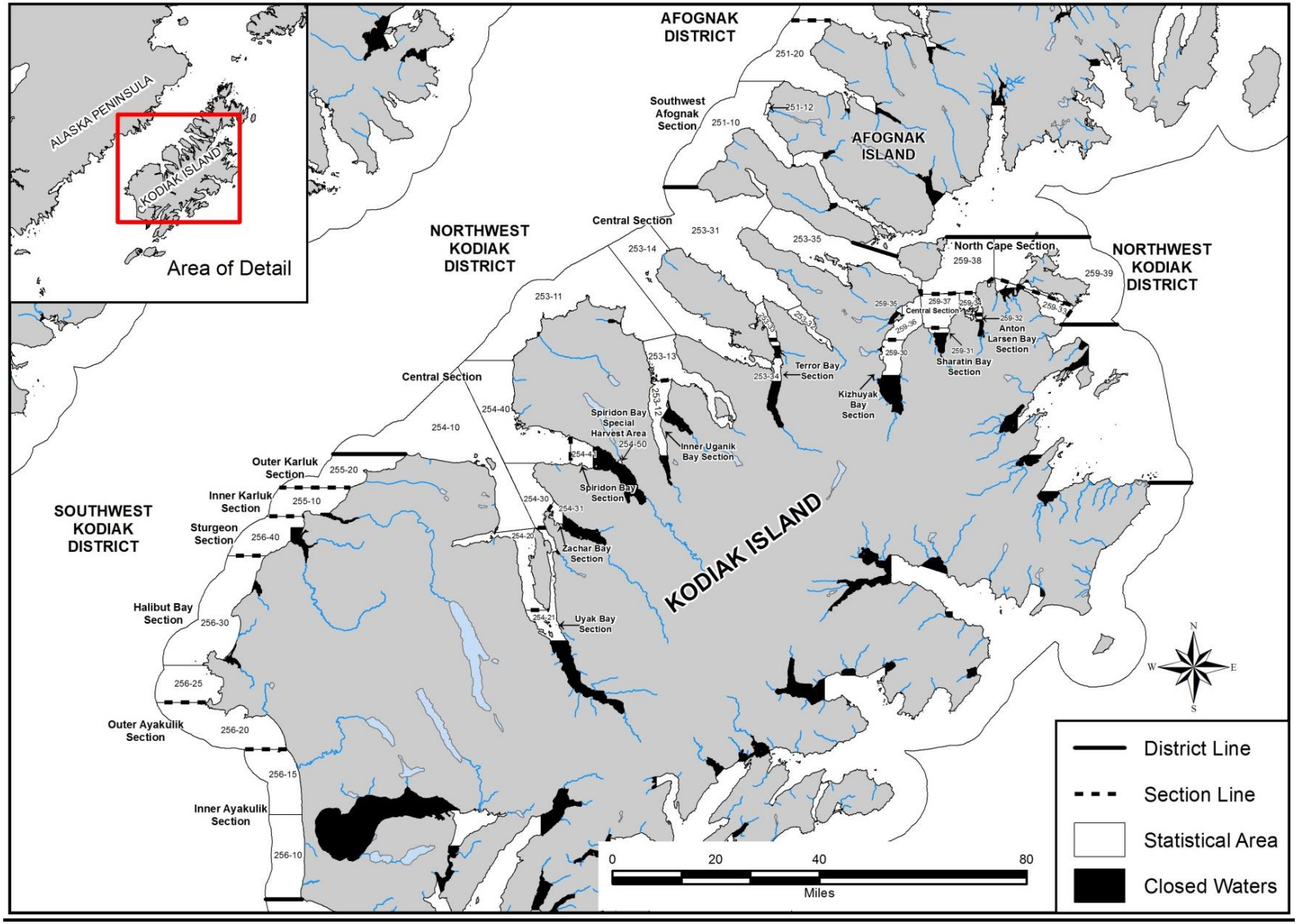

Figure 71-2.–Commercial salmon fishing sections and statistical lines identified in the Westside Kodiak Salmon Management Plan.

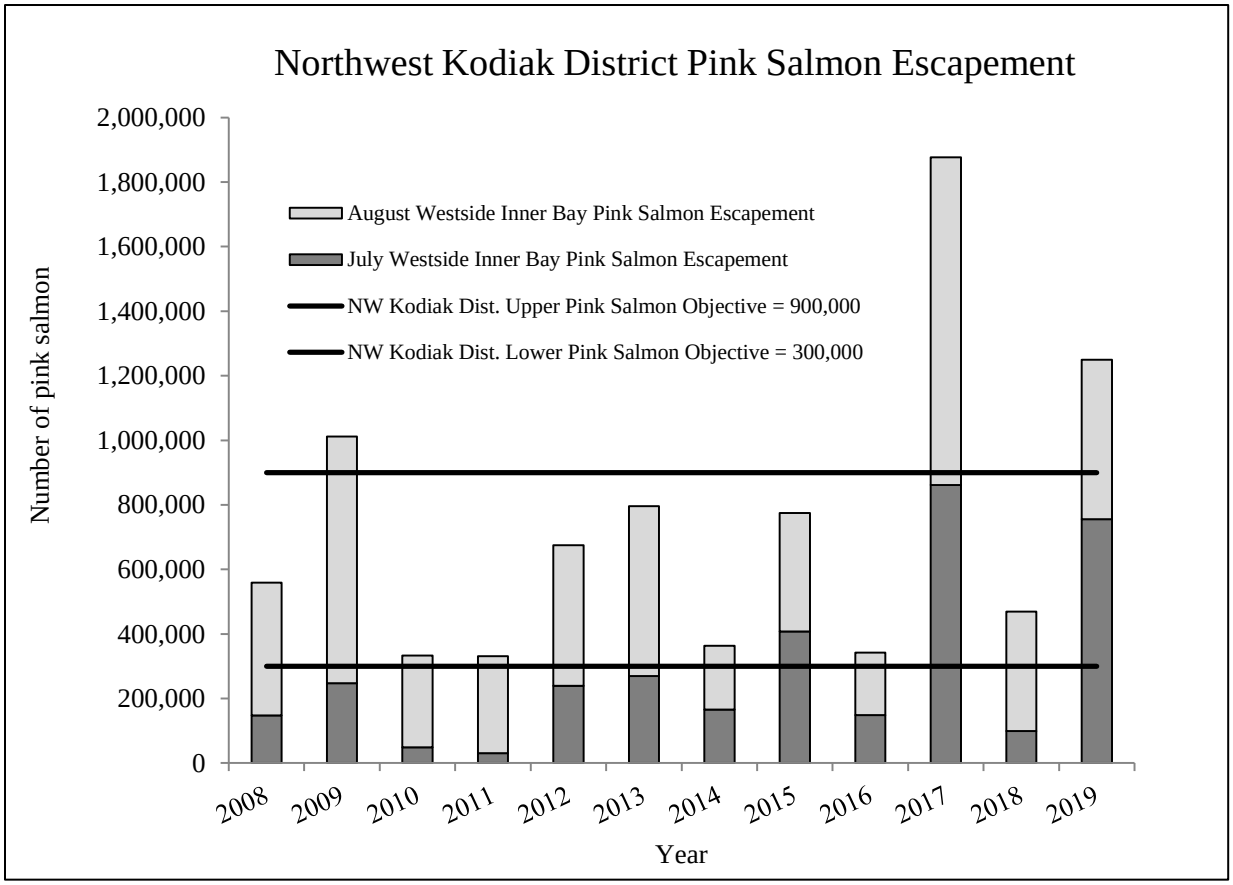

Figure 71-3.–Northwest Kodiak District index aerial survey pink salmon escapement in July and August.

PROPOSAL 72 – 5 AAC 18.362. Westside Kodiak Salmon Management Plan.

PROPOSED BY: Stig Yngve.

WHAT WOULD THE PROPOSAL DO? This would limit commercial openings in the Inner Ayakulik Section of the Southwest Kodiak District between June 10 and July 15 to not more than 6 consecutive hours.

WHAT ARE THE CURRENT REGULATIONS? 5 AAC 18.362 Westside Kodiak Salmon Management Plan (g)(1). The Inner and Outer Ayakulik Sections must be managed from approximately June 1 through July 15 based on early-run sockeye salmon returning to the Ayakulik system.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would limit commercial salmon openings in the Inner Ayakulik Section of the Southwest Kodiak District (Figure 72-1) to only 6-hour fishing periods between the dates of June 10 through July 15. Short 6-hour periods on strong runs would decrease the department's ability to open those sections for longer periods in order to control runs and prevent overescapement. While the department typically keeps the Inner Ayakulik Section closed during average runs, it is a necessary tool to use when runs are strong. Longer commercial salmon closures around the mouth of Ayakulik River will decrease the commercial fleet's ability to control salmon escapement and could lead to longer commercial salmon openings in the Outer Ayakulik Section. Longer openings within the Outer Ayakulik Section will likely result in increased incidental harvest of king salmon.

BACKGROUND: Since 2003, the department has managed the Ayakulik commercial salmon fishery conservatively due to low sockeye salmon returns (Table 72-1). The department targets the mid-range of the Ayakulik early-run sockeye salmon sustainable escapement goal (SEG 140,000–280,000), and the late-run SEG (60,000–120,000). To be conservative, the department establishes the majority of the commercial salmon openings in the Outer Ayakulik Section of the Southwest Kodiak District (Table 72-1) while keeping the Inner Ayakulik Section closed except when added time and area are needed to control escapement.

The Inner Ayakulik Section of the Southwest Kodiak District only opens to commercial salmon fishing if the sockeye or pink salmon escapement is well above average or there is a large buildup of salmon at the mouth per the Westside Kodiak Salmon Management Plan (5 AAC 18.362). A short Inner Ayakulik Section opening with no expanded closed waters enables fishermen to harvest large numbers of sockeye and pink salmon in a short period of time. Short openings with no established closed waters increase the ability of the commercial fishery to control the sockeye and pink salmon escapement allowing for longer commercial salmon closed periods (Table 72-1). Typically Inner Ayakulik Section fishing periods are 12 hours but the department requires the ability to extend those periods on strong runs.

Beginning in 2005, if the department determines that the Ayakulik River king salmon biological escapement goal (BEG 4,800–8,400) will not be met, nonretention of king salmon 28 inches or greater is established in the commercial salmon fishery in the Inner Ayakulik and Outer Ayakulik sections. Beginning in 2014, the board established nonretention of king salmon 28 inches or greater in length in the commercial seine fishery in the Kodiak Area prior to July 6 regardless of escapement levels.

The Ayakulik River king salmon run has not achieved the biological escapement goal (BEG 4,800–8,400) in 9 of the past 15 years. In 6 of the 9 years that the Ayakulik River did not achieve the established king salmon BEG, there were no Inner Ayakulik Section openings (Table 72-1). In 3 of the 9 years that Ayakulik River did not achieve the established king salmon BEG, there were no commercial openings in the Inner and Outer Ayakulik sections during the king salmon run. In the past 4 years, there have been no Inner Ayakulik Section openings during the king salmon run; in 3 of those years, the Ayakulik River did not achieve the king salmon BEG. In only 3 of the 9 years that the Ayakulik River did not achieve the established king salmon BEG was Inner Ayakulik open.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal based on biological concerns for Ayakulik sockeye and pink salmon escapement. The department already attempts to limit commercial salmon openings in the Inner Ayakulik Section of the Southwest Kodiak District by targeting the midpoint of the Ayakulik early-run sockeye salmon sustainable escapement goal (SEG 140,000–280,000) and prosecutes most openings in the Outer Ayakulik Section (Table 71-1; Figure 72-1). The current plan allows managers to open the Inner Ayakulik Section for the required amount of time to control Ayakulik system salmon escapement. Currently in June and July commercial salmon fishermen cannot retain king salmon 28 inches or greater in length in the Inner and Outer Ayakulik sections.

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

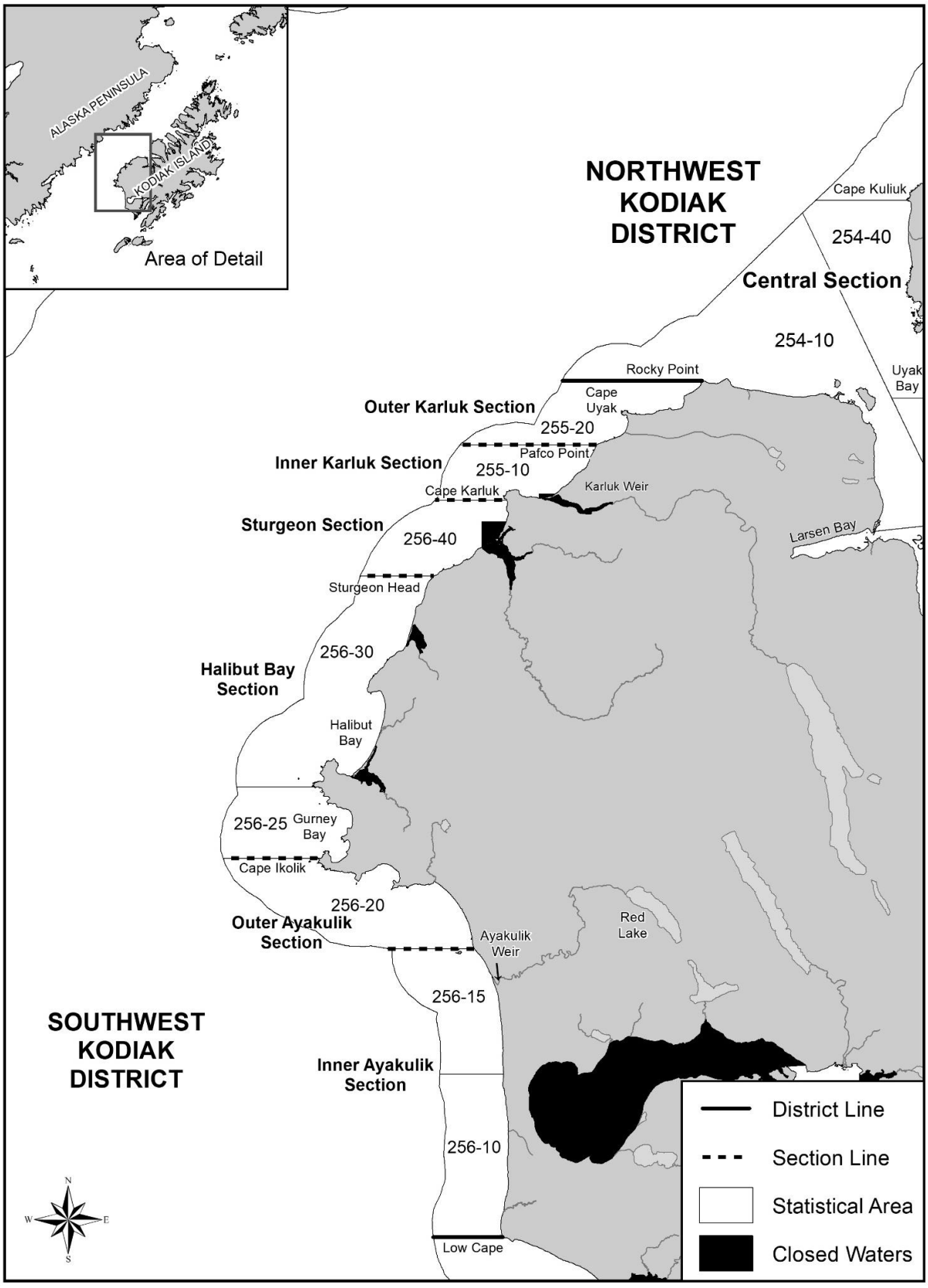

Figure 72-1.–Outer Ayakulik and Inner Ayakulik sections of the Southwest Kodiak District.

Table 72-1.–Commercial salmon fishing openings in the Inner Ayakulik and Outer Ayakulik sections of the Southwest Kodiak District with associated Ayakulik sockeye and Chinook salmon escapements and harvests, 1998–2019.

	Closed waters														Stream team									10-yr av %
Date	1998	1999	2000	2001	2002	2003	2004	2005	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Chinook esc.
5-Jun																		open						6%
6-Jun																		open						8%
7-Jun																		open						9%
8-Jun																		open						10%
9-Jun	open			open	open													open						14%
10-Jun	open			open	open													open						16%
11-Jun				open	open													open						17%
12-Jun				open	open													open						19%
13-Jun				open	open													open						23%
14-Jun	open			open														open						25%
15-Jun	open	open		open											open			open	open					28%
16-Jun		open		open											open				open					31%
17-Jun	open	open	open	open											open		open		open		open			33%
18-Jun	open	open	open	open													open		open		open			35%
19-Jun	open	open	open	open	open												open		open		open			40%
20-Jun	open	open	open	open	open														open					44%
21-Jun	open	open	open	open										open					open					47%
22-Jun	open	open	open	open										open		open			open					51%
23-Jun	open	open	open	open										open		open		open						54%
24-Jun	open	open	open	open												open		open						58%
25-Jun	open	open	open	open												open		open				open		61%
26-Jun	open	open	open	open												open	open					open		65%
27-Jun	open	open	open	open													open					open		68%
28-Jun	open	open	open	open													open		open			open		71%
29-Jun	open	open		open													open		open					74%
30-Jun	open	open		open			open										open		open					78%
1-Jul	open	open		open			open										open		open					80%
2-Jul	open	open		open			open																	82%
3-Jul	open	open		open			open																	84%
4-Jul	open	open					open															open		86%
5-Jul	open	open					open															open		88%
6-Jul	open	open					open												open			open		90%
7-Jul	open	open					open												open			open		91%
8-Jul	open	open					open												open			open		92%
9-Jul	open	open					open												open					93%
10-Jul	open	open					open																	94%
11-Jul	open	open																						95%
12-Jul	open	open																						95%
13-Jul	open	open												open		open	open	open	open		open	open	open	96%
14-Jul	open	open												open		open	open	open	open	open	open	open	open	96%
15-Jul	open	open												open	open	open	open	open	open	open	open	open	open	97%
ER sockeye esc	313,739	204,552	174,297	177,822	194,187	162,708	245,123	139,246	139,246	59,315	173,241	96,912	200,648	201,933	177,480	213,501	214,969	210,040	218,209	182,589	204,497	189,760	162,430	
Total Chinook esc	14,038	13,503	20,527	13,929	12,552	17,557	24,830	8,309	3,822	8,340	3,106	6,535	3,071	5,301	4,316	4,760	2,369	917	2,392	4,594	3,712	2,149	1,948	
Ayakulik Sockeye harv	907,652	569,520	225,432	383,622	4,313	0	130,916	0	0	0	0	0	0	91,916	25,868	77,426	51,473	237,481	400,443	48,619	30,194	94,045	49,902	
Ayakulik Chinook harv	1,423	1,197	491	801	16	0	164	0	0	0	0	0	0	74	51	43	68	70	356	93	138	207	8	

Open — Outer Ayakulik Open

Open — Inner Ayakulik Open

Years Ayakulik did not Achieve King Goal

PROPOSAL 73 – 5 AAC 18.362. Westside Kodiak Salmon Management Plan.

PROPOSED BY: Stig Yngve.

WHAT WOULD THE PROPOSAL DO? This would establish a mandatory 24-hour closure between commercial salmon openings in the Inner Ayakulik Section of the Southwest Kodiak District.

WHAT ARE THE CURRENT REGULATIONS? 5 AAC 18.320 Fishing periods. Salmon may be taken only during fishing periods established by emergency order.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would, from June 10 through July 15, create a mandatory stand down period of not less than 24 hours between commercial salmon openers in the Inner Ayakulik Section of the Southwest Kodiak District. The current minimum closed time in the Kodiak Management Area (KMA) is not in regulation, but present management practices have a standard minimum closure of 39 hours. A mandatory 24-hour closure would have no management effect.

BACKGROUND: The standard practice for commercial salmon openings and closures in the KMA is published every year in the Kodiak Management Area Harvest Strategy. From June 1 through August 15, most fishing periods open at noon and close at 9:00 p.m. Notable exceptions are the Cape Igvak fishery which opens and closes at 12:01 a.m., and the Inner Ayakulik Section which opens at noon, but can close before 9:00 p.m.

All commercial salmon openings in the KMA require at least 18 hours advanced notice. Currently, if a fishery closes at 9:00 p.m. and the department wanted to reopen the fishery, there would be a minimum of 18 hours advanced notice given for a noon opening 2 days following the closure, or a minimum closure of 39 hours. For example, if the Inner Ayakulik Section closed on July 1 at 9:00 p.m., and department wanted to reopen the fishery, we would announce the opening at 10:00 a.m. on July 2 for a noon opening on July 3.

The Inner Ayakulik Section of the Southwest Kodiak District only opens to commercial salmon fishing if the sockeye or pink salmon escapement is well above average or if there is a large buildup of salmon at the mouth per the Westside Kodiak Salmon Management Plan (5 AAC 18.362). A short Inner Ayakulik opening with no expanded closed waters enables fishermen to harvest large numbers of sockeye and pink salmon in a short period of time. Short fisheries with no established closed waters increase the ability of the commercial fishery to control the sockeye and pink salmon escapement, allowing for longer commercial salmon closed periods (Table 73-1).

Beginning in 2005, if the department determines that the Ayakulik River king salmon biological escapement goal (BEG 4,800–8,400) will not be met, nonretention of king salmon 28 inches or greater is established in the commercial salmon fishery in the Inner Ayakulik and Outer Ayakulik sections. Beginning in 2014, the board established nonretention of king salmon 28 inches or greater in length in the commercial seine fishery in the Kodiak Area prior to July 6.

The Ayakulik River king salmon run has not achieved the king salmon BEG 9 of the past 15 years. In 6 of the 9 years that Ayakulik River did not achieve the established king salmon BEG, there were no Inner Ayakulik openings (Table 73-1). In 3 of the 9 years that Ayakulik River did not achieve the king salmon BEG there were no commercial openings in the Inner and Outer Ayakulik sections during the king salmon run. In the past 4 years, there have been no Inner Ayakulik Section openings during

the king salmon run; in 3 of those years, the Ayakulik River did not achieve the king salmon BEG. In only 3 of the 9 years that the Ayakulik River did not achieve the established king salmon BEG was Inner Ayakulik open.

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

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

Table 73-1.–Commercial salmon fishing openings in the Inner Ayakulik and Outer Ayakulik sections of the Southwest Kodiak District with associated Ayakulik sockeye and king salmon escapements and harvests, 1998–2019.

	Closed waters														Stream team									10-yr av %
Date	1998	1999	2000	2001	2002	2003	2004	2005	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Chinook esc.
5-Jun																		open						6%
6-Jun																		open						8%
7-Jun																		open						9%
8-Jun																		open						10%
9-Jun	open			open	open													open						14%
10-Jun	open			open	open													open						16%
11-Jun				open	open													open						17%
12-Jun				open	open													open						19%
13-Jun				open	open													open						23%
14-Jun	open			open														open						25%
15-Jun	open	open		open											open			open	open					28%
16-Jun		open		open											open				open					31%
17-Jun	open	open	open	open											open		open		open		open			33%
18-Jun	open	open	open	open													open		open		open			35%
19-Jun	open	open	open	open	open												open		open		open			40%
20-Jun	open	open	open	open	open														open					44%
21-Jun	open	open	open	open										open					open					47%
22-Jun	open	open	open	open										open		open			open					51%
23-Jun	open	open	open	open										open		open		open						54%
24-Jun	open	open	open	open												open		open						58%
25-Jun	open	open	open	open												open		open				open		61%
26-Jun	open	open	open	open												open	open					open		65%
27-Jun	open	open	open	open													open					open		68%
28-Jun	open	open	open	open													open		open			open		71%
29-Jun	open	open		open													open		open					74%
30-Jun	open	open		open			open										open		open					78%
1-Jul	open	open		open			open										open		open					80%
2-Jul	open	open		open			open																	82%
3-Jul	open	open		open			open																	84%
4-Jul	open	open					open															open		86%
5-Jul	open	open					open															open		88%
6-Jul	open	open					open												open			open		90%
7-Jul	open	open					open												open			open		91%
8-Jul	open	open					open												open			open		92%
9-Jul	open	open					open												open					93%
10-Jul	open	open					open																	94%
11-Jul	open	open																						95%
12-Jul	open	open																						95%
13-Jul	open	open												open		open	open	open	open		open	open	open	96%
14-Jul	open	open												open		open	open	open	open	open	open	open	open	96%
15-Jul	open	open												open	open	open	open	open	open	open	open	open	open	97%
ER sockeye esc	313,739	204,552	174,297	177,822	194,187	162,708	245,123	139,246	139,246	59,315	173,241	96,912	200,648	201,933	177,480	213,501	214,969	210,040	218,209	182,589	204,497	189,760	162,430	
Total Chinook esc	14,038	13,503	20,527	13,929	12,552	17,557	24,830	8,309	3,822	8,340	3,106	6,535	3,071	5,301	4,316	4,760	2,369	917	2,392	4,594	3,712	2,149	1,948	
Ayakulik Sockeye harv	907,652	569,520	225,432	383,622	4,313	0	130,916	0	0	0	0	0	0	91,916	25,868	77,426	51,473	237,481	400,443	48,619	30,194	94,045	49,902	
Ayakulik Chinook harv	1,423	1,197	491	801	16	0	164	0	0	0	0	0	0	74	51	43	68	70	356	93	138	207	8	

Open — Outer Ayakulik Open

Open — Inner Ayakulik Open

Years Ayakulik did not Achieve King Goal

PROPOSAL 74 – 5 AAC 18.350. Closed waters.

PROPOSED BY: Stig Yngve.

WHAT WOULD THE PROPOSAL DO? This would amend the closed waters description for the Ayakulik River in the Inner Ayakulik Section of the Southwest Kodiak District to include those waters within 500 yards of the stream terminus between June 10 through July 15 (Figure 74-1).

WHAT ARE THE CURRENT REGULATIONS? 5 AAC 18.360. Closed waters. (a) salmon may not be taken in the following waters:

(2)(A) all waters east of the terminus of the Ayakulik River (Red River)

Currently, there are no saltwater closed waters described in regulation for the Ayakulik River. The current regulation essentially describes the Ayakulik River lagoon. The department can use emergency order (EO) authority to establish closed water areas around the mouth of Ayakulik River. If the sockeye salmon escapement past Ayakulik River weir necessitates a prolonged commercial salmon fishery in the Inner Ayakulik Section, the department establishes closed waters to protect king, pink, and coho salmon returning to the Ayakulik River.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? A larger closed water area around the mouth of Ayakulik River will decrease the commercial fleet's ability to control salmon escapement and could lead to longer commercial salmon openings in the Inner and Outer Ayakulik sections. Longer openings within the Inner Ayakulik Section will likely result in more incidental harvest of king salmon within the section.

BACKGROUND: Since 2003, the department has managed the Ayakulik system commercial salmon fishery conservatively due to low sockeye salmon returns (Table 74-1). The department targets the midrange of the Ayakulik system early-run sockeye salmon sustainable escapement goal (SEG 140,000–280,000 fish), and the late-run SEG (60,000–120,000). To be conservative, the department establishes the majority of the commercial salmon openings in the Outer Ayakulik Section of the Southwest Kodiak District (Table 74-1) while keeping the Inner Ayakulik Section closed except when added time and area are needed to control escapement. Of the approximately 436 salmon streams in the Kodiak Management Area (KMA), 340 streams have 500-yard saltwater closures, and the remaining streams, including the Ayakulik River, have no saltwater closed waters described in regulation.

The Inner Ayakulik Section of the Southwest Kodiak District only opens to commercial salmon fishing if the sockeye or pink salmon escapement is well above average, or if there is a large buildup of salmon at the mouth per the Westside Kodiak Salmon Management Plan (5 AAC 18.362). A short Inner Ayakulik Section opening with no expanded closed waters enables the commercial salmon fishery to harvest large numbers of sockeye and pink salmon in a short period of time. Short fisheries with no established closed waters increase the ability of the commercial fishery to control the sockeye and pink salmon escapement, allowing for longer commercial salmon closed periods (Table 74-1).

Beginning in 2005, if the department determines that the Ayakulik king salmon biological escapement goal (BEG 4,800–8,400) will not be met, nonretention of king salmon 28 inches or greater is established in the commercial salmon fishery in the Inner Ayakulik and Outer Ayakulik sections.

Beginning in 2014, the board established nonretention of king salmon 28 inches or greater in length in the commercial seine fishery in the Kodiak Area prior to July 6 regardless of escapement levels.

The Ayakulik River king salmon run has not achieved the established king salmon BEG 9 of the past 15 years. In 6 of the 9 years that Ayakulik River did not achieve the king salmon BEG, there were no Inner Ayakulik openings (Table 74-1). In 3 of the 9 years that Ayakulik River did not achieve the king salmon BEG, there were no commercial openings in the Inner and Outer Ayakulik sections during the king salmon run. In the past 4 years, there have been no Inner Ayakulik Section openings during the king salmon run; in 3 of those years, the Ayakulik River did not achieve the king salmon BEG. In only 3 of the 9 years that the Ayakulik River did not achieve the established king salmon BEG was Inner Ayakulik open.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal since there would be no change to current management strategy. Establishing a closed water area in regulation would not limit the department's ability to modify it by EO.

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

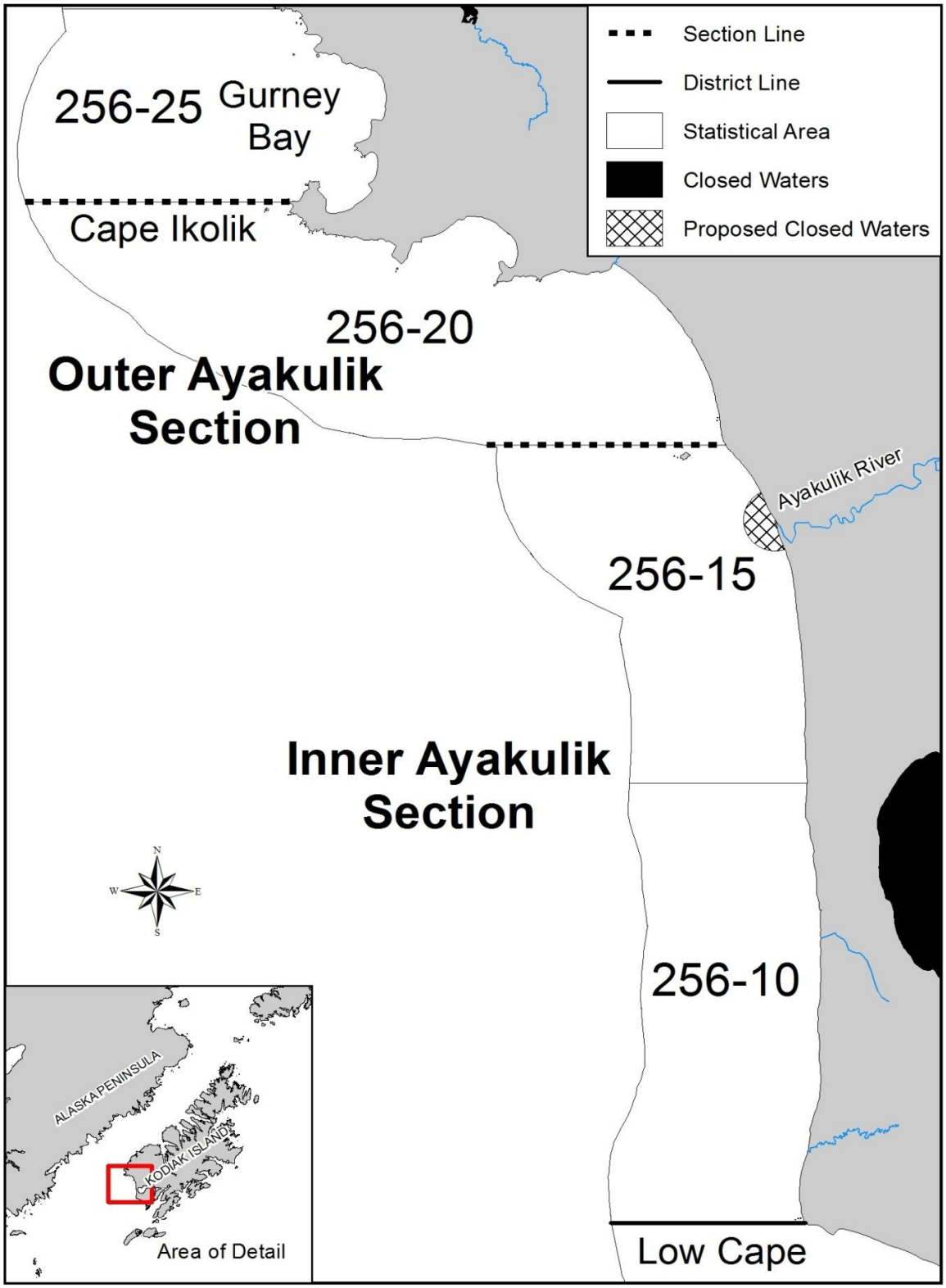

Figure 74-1.–Outer Ayakulik and Inner Ayakulik sections of the Southwest Kodiak District and the proposed closed waters around the mouth of the Ayakulik River.

Table 74-1.–Commercial salmon fishing openings in the Inner Ayakulik and Outer Ayakulik sections of the Southwest Kodiak District with associated Ayakulik sockeye and king salmon escapements and harvests, 1998–2019.

	Closed waters														Stream team									10-yr av %
Date	1998	1999	2000	2001	2002	2003	2004	2005	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Chinook esc.
5-Jun																		open						6%
6-Jun																		open						8%
7-Jun																		open						9%
8-Jun																		open						10%
9-Jun	open			open	open													open						14%
10-Jun	open			open	open													open						16%
11-Jun				open	open													open						17%
12-Jun				open	open													open						19%
13-Jun				open	open													open						23%
14-Jun	open			open														open						25%
15-Jun	open	open		open											open			open	open					28%
16-Jun		open		open											open				open					31%
17-Jun	open	open	open	open											open		open		open		open			33%
18-Jun	open	open	open	open													open		open		open			35%
19-Jun	open	open	open	open	open												open		open		open			40%
20-Jun	open	open	open	open	open														open					44%
21-Jun	open	open	open	open										open					open					47%
22-Jun	open	open	open	open										open		open			open					51%
23-Jun	open	open	open	open										open		open		open						54%
24-Jun	open	open	open	open												open		open						58%
25-Jun	open	open	open	open												open		open				open		61%
26-Jun	open	open	open	open												open	open					open		65%
27-Jun	open	open	open	open													open					open		68%
28-Jun	open	open	open	open													open		open			open		71%
29-Jun	open	open		open													open		open					74%
30-Jun	open	open		open			open										open		open					78%
1-Jul	open	open		open			open										open		open					80%
2-Jul	open	open		open			open																	82%
3-Jul	open	open		open			open																	84%
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7-Jul	open	open					open												open			open		91%
8-Jul	open	open					open												open			open		92%
9-Jul	open	open					open												open					93%
10-Jul	open	open					open																	94%
11-Jul	open	open																						95%
12-Jul	open	open																						95%
13-Jul	open	open												open		open	open	open	open		open	open	open	96%
14-Jul	open	open												open		open	open	open	open	open	open	open	open	96%
15-Jul	open	open												open	open	open	open	open	open	open	open	open	open	97%
ER sockeye esc	313,739	204,552	174,297	177,822	194,187	162,708	245,123	139,246	139,246	59,315	173,241	96,912	200,648	201,933	177,480	213,501	214,969	210,040	218,209	182,589	204,497	189,760	162,430	
Total Chinook esc	14,038	13,503	20,527	13,929	12,552	17,557	24,830	8,309	3,822	8,340	3,106	6,535	3,071	5,301	4,316	4,760	2,369	917	2,392	4,594	3,712	2,149	1,948	
Ayakulik Sockeye harv	907,652	569,520	225,432	383,622	4,313	0	130,916	0	0	0	0	0	0	91,916	25,868	77,426	51,473	237,481	400,443	48,619	30,194	94,045	49,902	
Ayakulik Chinook harv	1,423	1,197	491	801	16	0	164	0	0	0	0	0	0	74	51	43	68	70	356	93	138	207	8	

Open — Outer Ayakulik Open

Open — Inner Ayakulik Open

Years Ayakulik did not Achieve King Goal

PROPOSAL 75 – 5 AAC 18.350. Closed waters.

PROPOSED BY: Stig Yngve.

WHAT WOULD THE PROPOSAL DO? This would amend the closed waters description for the Ayakulik River in the Inner Ayakulik Section of the Southwest Kodiak District to include those waters within 500 yards of the stream terminus (Figure 75-1). Closed water GPS coordinates would be determined preseason.

WHAT ARE THE CURRENT REGULATIONS? 5 AAC 18.360. Closed waters. (a) salmon may not be taken in the following waters:

(2)(A) all waters east of the terminus of the Ayakulik River (Red River)

Currently, there are no saltwater closed waters described in regulation for the Ayakulik River. The current regulation essentially describes the Ayakulik River lagoon. The department uses emergency order (EO) authority to establish closed water areas around the mouth of Ayakulik River. If the sockeye salmon escapement past Ayakulik River weir necessitates a prolonged commercial salmon fishery in the Inner Ayakulik Section, the department establishes closed waters to protect king, pink, and coho salmon returning to the Ayakulik River.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? A larger closed water area around the mouth of Ayakulik River will decrease the commercial fleet's ability to control salmon escapement and could lead to longer commercial salmon openings in the Inner and Outer Ayakulik sections. Longer openings within the Inner Ayakulik Section will likely result in more incidental harvest of king salmon within the section.

BACKGROUND: Since 2003, the department has managed the Ayakulik commercial salmon fishery conservatively due to low sockeye salmon returns (Table 75-1). The department targets the mid-range of the Ayakulik early-run sockeye salmon sustainable escapement goal (SEG 140,000–280,000 fish), and the late-run SEG (60,000–120,000). To be conservative, the department establishes the majority of the commercial salmon openings in the Outer Ayakulik Section of the Southwest Kodiak District (Table 75-1) while keeping the Inner Ayakulik Section closed except when added time and area are needed to control escapement. Of the approximately 436 salmon streams in the Kodiak Management Area (KMA), 340 streams have 500-yard saltwater closures, and the remaining streams, including the Ayakulik River, have no saltwater closed waters described in regulation.

The Inner Ayakulik Section of the Southwest Kodiak District only opens to commercial salmon fishing if the sockeye or pink salmon escapement is well above average, or if there is a large buildup of salmon at the mouth per the Westside Kodiak Salmon Management Plan (5 AAC 18.362. A short Inner Ayakulik Section opening with no expanded closed waters enables the commercial salmon fishery to harvest large numbers of sockeye and pink salmon in a short period of time. Short fisheries with no established closed waters increase the ability of the commercial fishery to control the sockeye and pink salmon escapement, allowing for longer commercial salmon closed periods (Table 75-1).

Beginning in 2005, if the department determines that the Ayakulik king salmon biological escapement goal (BEG 4,800–8,400) will not be met, nonretention of king salmon 28 inches or greater is established in the commercial salmon fishery in the Inner Ayakulik and Outer Ayakulik sections.

Beginning in 2014, the board established nonretention of king salmon 28 inches or greater in length in the commercial seine fishery in the Kodiak Area prior to July 6.

The Ayakulik River king salmon run has not achieved the king salmon BEG in 9 of the past 15 years. In 6 of the 9 years that Ayakulik River did not achieve the king salmon BEG, there were no Inner Ayakulik openings (Table 75-1). In 3 of the 9 years that Ayakulik River did not achieve the established king salmon BEG, there were no commercial openings in the Inner and Outer Ayakulik sections during the king salmon run. In the past 4 years, there have been no Inner Ayakulik Section openings during the king salmon run; in 3 of those years, the Ayakulik River did not achieve the king salmon BEG. In only 3 of the 9 years that the Ayakulik River did not achieve the established king salmon BEG was Inner Ayakulik open.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal since there would be no change to current management strategy. Establishing a closed water area in regulation would not limit the department's ability to modify it by EO.

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

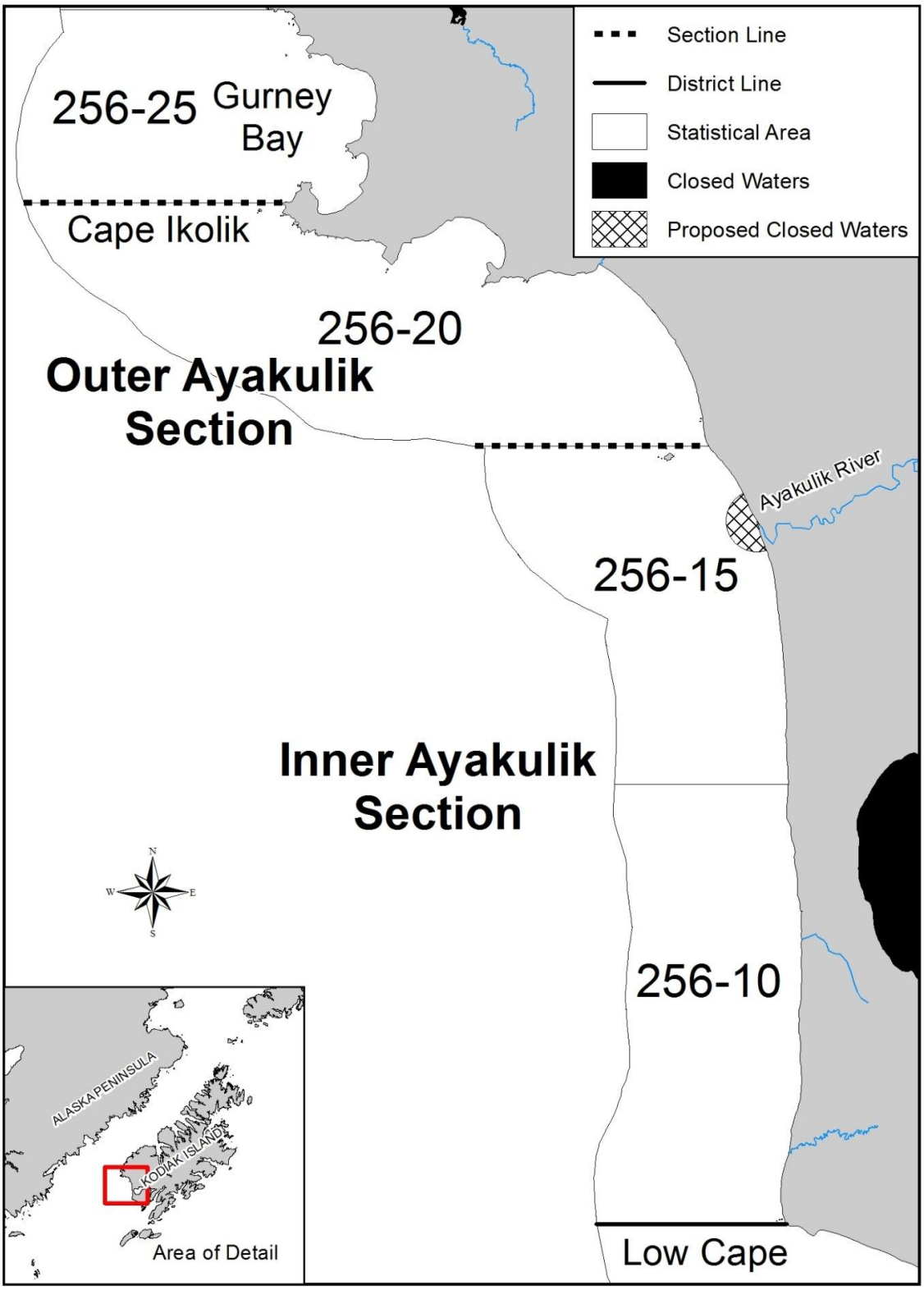

Figure 75-1.–Outer Ayakulik and Inner Ayakulik sections of the Southwest Kodiak District and the proposed closed waters around the mouth of the Ayakulik River.

Table 75-1.–Commercial salmon fishing openings in the Inner Ayakulik and Outer Ayakulik sections of the Southwest Kodiak District with associated Ayakulik River sockeye and king salmon escapements and harvests, 1998–2019.

	Closed waters														Stream team									10-yr av %
Date	1998	1999	2000	2001	2002	2003	2004	2005	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Chinook esc.
5-Jun																		open						6%
6-Jun																		open						8%
7-Jun																		open						9%
8-Jun																		open						10%
9-Jun	open			open	open													open						14%
10-Jun	open			open	open													open						16%
11-Jun				open	open													open						17%
12-Jun				open	open													open						19%
13-Jun				open	open													open						23%
14-Jun	open			open														open						25%
15-Jun	open	open		open											open			open	open					28%
16-Jun		open		open											open				open					31%
17-Jun	open	open	open	open											open		open		open		open			33%
18-Jun	open	open	open	open													open		open		open			35%
19-Jun	open	open	open	open	open												open		open		open			40%
20-Jun	open	open	open	open	open														open					44%
21-Jun	open	open	open	open										open					open					47%
22-Jun	open	open	open	open										open		open			open					51%
23-Jun	open	open	open	open										open		open		open						54%
24-Jun	open	open	open	open												open		open						58%
25-Jun	open	open	open	open												open		open				open		61%
26-Jun	open	open	open	open												open	open					open		65%
27-Jun	open	open	open	open													open					open		68%
28-Jun	open	open	open	open													open		open			open		71%
29-Jun	open	open		open													open		open					74%
30-Jun	open	open		open			open										open		open					78%
1-Jul	open	open		open			open										open		open					80%
2-Jul	open	open		open			open																	82%
3-Jul	open	open		open			open																	84%
4-Jul	open	open					open															open		86%
5-Jul	open	open					open															open		88%
6-Jul	open	open					open												open			open		90%
7-Jul	open	open					open												open			open		91%
8-Jul	open	open					open												open			open		92%
9-Jul	open	open					open												open					93%
10-Jul	open	open					open																	94%
11-Jul	open	open																						95%
12-Jul	open	open																						95%
13-Jul	open	open												open		open	open	open	open		open	open	open	96%
14-Jul	open	open												open		open	open	open	open	open	open	open	open	96%
15-Jul	open	open												open	open	open	open	open	open	open	open	open	open	97%
ER sockeye esc	313,739	204,552	174,297	177,822	194,187	162,708	245,123	139,246	139,246	59,315	173,241	96,912	200,648	201,933	177,480	213,501	214,969	210,040	218,209	182,589	204,497	189,760	162,430	
Total Chinook esc	14,038	13,503	20,527	13,929	12,552	17,557	24,830	8,309	3,822	8,340	3,106	6,535	3,071	5,301	4,316	4,760	2,369	917	2,392	4,594	3,712	2,149	1,948	
Ayakulik Sockeye harv	907,652	569,520	225,432	383,622	4,313	0	130,916	0	0	0	0	0	0	91,916	25,868	77,426	51,473	237,481	400,443	48,619	30,194	94,045	49,902	
Ayakulik Chinook harv	1,423	1,197	491	801	16	0	164	0	0	0	0	0	0	74	51	43	68	70	356	93	138	207	8	

Open — Outer Ayakulik Open

Open — Inner Ayakulik Open

Years Ayakulik did not Achieve King Goal

PROPOSAL 76 – 5 AAC 18.362. Westside Kodiak Salmon Management Plan.

PROPOSED BY: Susan Payne.

WHAT WOULD THE PROPOSAL DO? This would open the Outer Karluk and Central sections concurrent with the Inner Karluk Section if the department determines the midpoint of the early-run sockeye salmon escapement goal range will be met.

WHAT ARE THE CURRENT REGULATIONS? 5 AAC 18.362 Westside Kodiak Salmon Management Plan (e)(1). The Inner and Outer Karluk sections must be managed from approximately June 1 through July 15 based on sockeye salmon returning to the Karluk system. The commissioner may open, by emergency order (EO), fishing periods in the Inner Karluk Section only if the department determines that the midpoint of the early-run sockeye salmon escapement goal will be achieved. From June 16 through approximately July 15, the commissioner shall open fishing periods to occur at the same time as open fishing periods in the Central Section.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL IS ADOPTED? This would have no effect on current management practices and may lead to confusion. There would be no effect to harvests.

BACKGROUND: The Westside Kodiak Salmon Management Plan is the achievement of long-term management strategies which were initially implemented in 1971 and placed into regulation in 1990. Placing the management plan in regulation clarified the management strategy and helped maintain the biological integrity of local salmon stocks while alleviating allocative concerns of local fishermen.

Fishing periods in the Inner Karluk and Outer Karluk sections are based on Karluk salmon abundance and announced inseason by EO. In years of low Karluk Lake sockeye, pink, and coho salmon abundance, the department provides little to no fishing time in the Outer Karluk Section. In year of high abundance, more fishing periods occur. Currently, from June 1 through July 15, the Inner Karluk Section is not opened unless the department determines that the midpoint early-run sockeye salmon escapement goal (200,000) will be achieved. Currently, from June 16 through approximately July 15, the commissioner shall open fishing periods in the Outer Karluk Section to occur at the same time as open fishing periods in the Central Section.

The inability to open the Inner and Outer Karluk sections before the Karluk early-run exceeded its escapement goal resulted in the run routinely exceeding its sustainable escapement goal (SEG 150,000–250,000) from 1999 to 2005. This produced a highly competitive rearing environment, taxing the forage base of Karluk Lake, and led to the poor Karluk Lake sockeye salmon runs in 2008 through 2011.

Changes to the Westside Kodiak Salmon Management Plan in 2002 allowed the department to open the Outer Karluk Section prior to June 16. Since then, the department has been better able to control Karluk early-run sockeye salmon escapement (Figure 76-1).

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal because it increases regulatory complexity by adding redundant language that may be confusing to commercial fishermen.

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

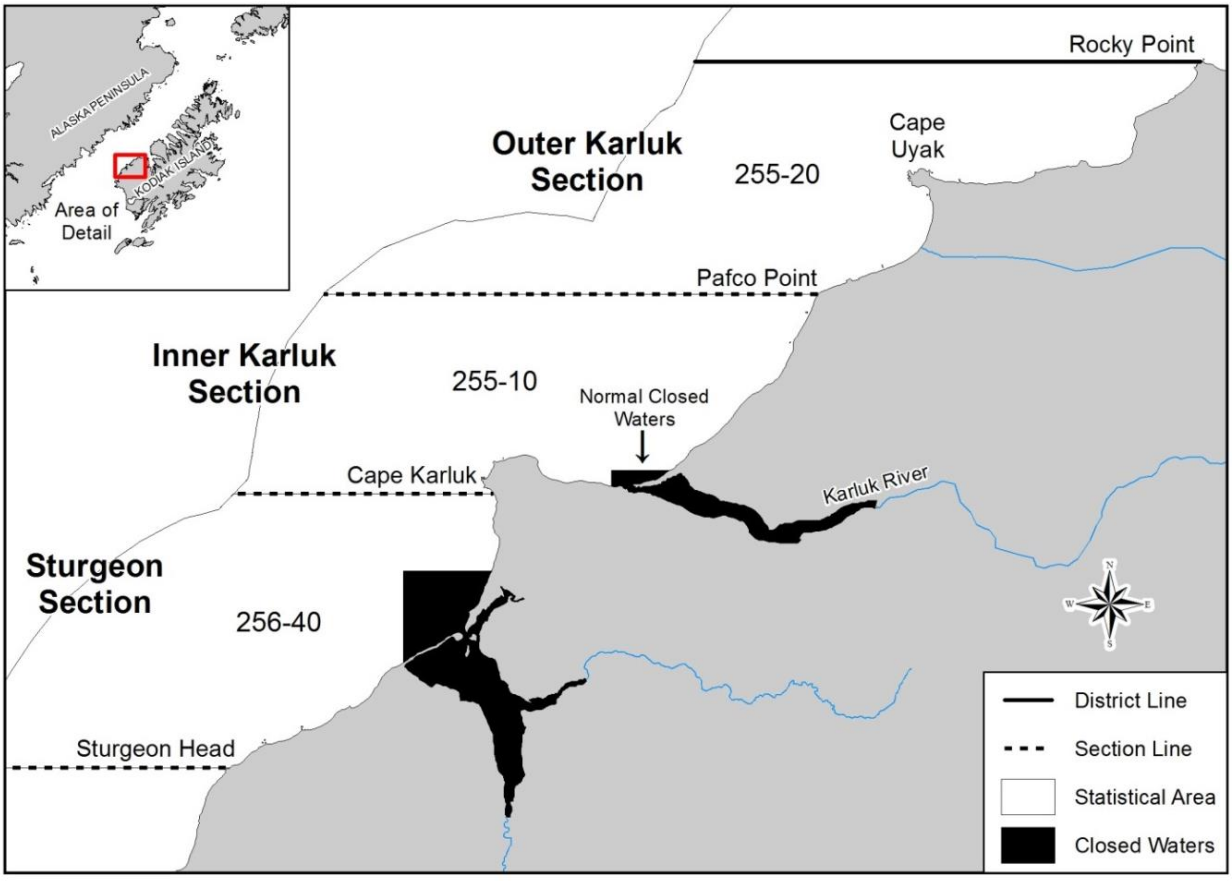

Figure 76-1.–Inner Karluk and Outer Karluk sections of the Southwest Kodiak District.

PROPOSAL 77 – 5 AAC 18.350. Closed waters.

PROPOSED BY: Stig Yngve.

WHAT WOULD THE PROPOSAL DO? This would amend the closed waters description for the Ayakulik River in the Inner Ayakulik Section of the Southwest Kodiak District to include those waters within 500 yards of the stream terminus between the dates of September 1 through October 31. Closed water GPS coordinates would be determined preseason.

WHAT ARE THE CURRENT REGULATIONS? 5 AAC 18.360. Closed waters. (a) salmon may not be taken in the following waters:

(2)(A) all waters east of the terminus of the Ayakulik River (Red River)

Currently, there are no saltwater closed waters described in regulation for the Ayakulik River. The current regulation essentially describes the Ayakulik River lagoon. The department uses emergency order (EO) authority to establish closed water areas around the mouth of Ayakulik River. If the sockeye salmon escapement past Ayakulik River weir necessitates a prolonged commercial salmon fishery in the Inner Ayakulik Section, the department establishes closed waters to protect king, pink, and coho salmon returning to the Ayakulik River.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This proposal would change the description of the closed waters from the current description to include all waters within a 500-yard radius from the stream terminus (Figure 77-1). The effects would be minimal.

BACKGROUND: As per the Westside Kodiak Salmon Management Plan (5 AAC 18.362), after August 24, the Inner Ayakulik and Outer Ayakulik Sections of the Southwest Kodiak District are managed based on coho salmon returning to the Ayakulik River system. The escapement objective for Ayakulik coho salmon is 12,000 to 18,000 fish by September 10. However, due to continued budget cuts, the Ayakulik weir is usually pulled between August 22 and August 27, and the department is unable to count the majority of the coho salmon run.

With limited data, the department has deployed a conservative approach to management. If the coho salmon escapement count is average to above average by the time the weir is pulled, the Outer Ayakulik Section of the Southwest Kodiak District opens for a short weekly fishing period. To create large closed waters around the mouth of Ayakulik River, the department restricts most openings to the Outer Ayakulik Section and keeps the Inner Ayakulik Section closed (Figure 77-1). There has been no commercial salmon harvest in the Inner Ayakulik Section of the Southwest Kodiak District in the past 14 years.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal since there would be no change to current management strategy. Establishing a closed water area in regulation would not limit the department's ability to modify it by EO.

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

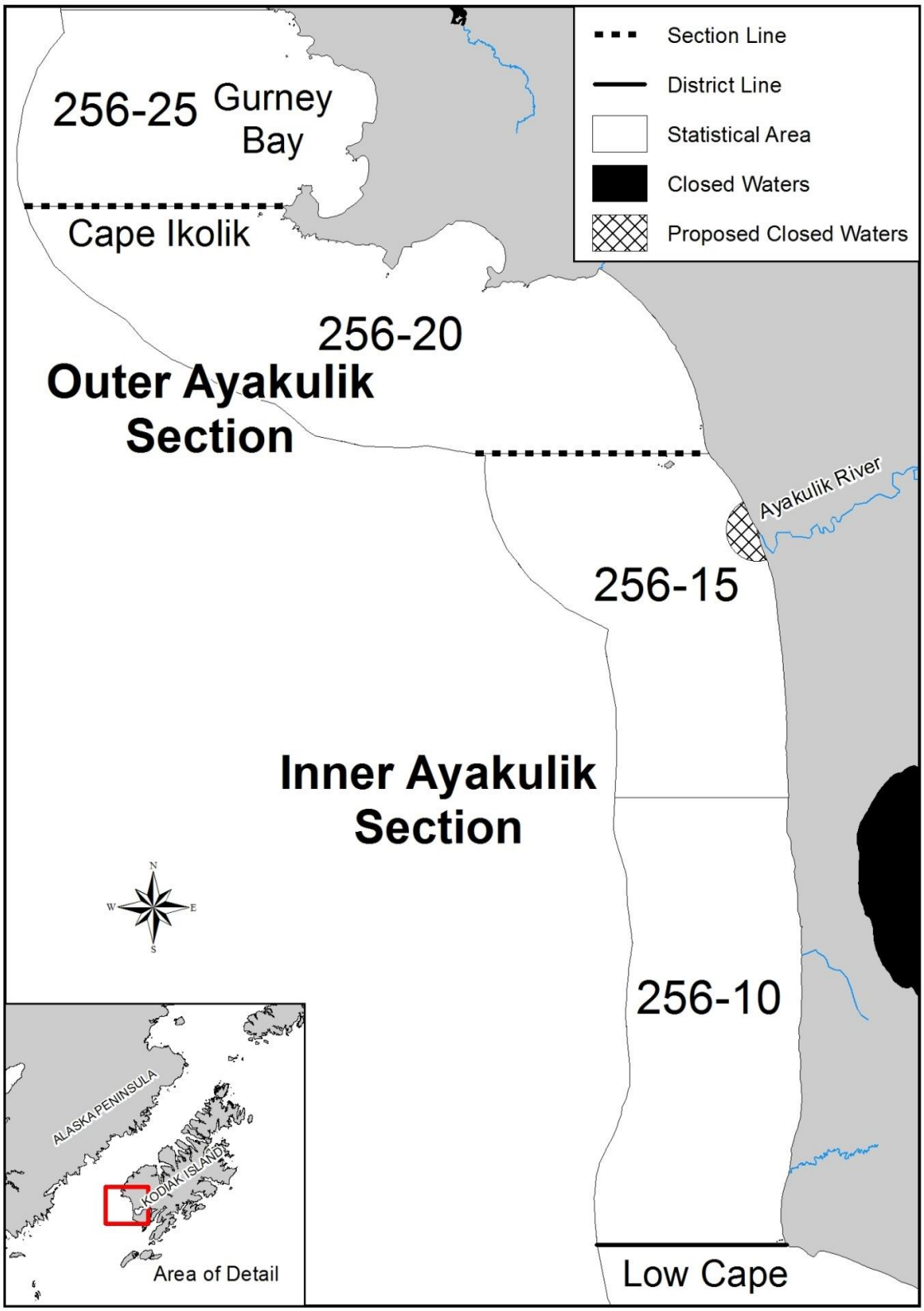

Figure 77-1.–Outer Ayakulik and Inner Ayakulik sections of the Southwest Kodiak District and proposed closed waters around the mouth of the Ayakulik River.

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