

# **2016 Summer Troll Fishery Management Plan**

by

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and

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June 2016

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Alaska Department of Fish and Game

Division of Commercial Fisheries



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Weights and measures (metric)		General		Mathematics, statistics	
centimeter	cm	Alaska Administrative Code	AAC	all standard mathematical signs, symbols and abbreviations	
deciliter	dL	all commonly accepted abbreviations	e.g., Mr., Mrs., AM, PM, etc.	alternate hypothesis	H <sub>A</sub>
gram	g			base of natural logarithm	e
hectare	ha	all commonly accepted professional titles	e.g., Dr., Ph.D., R.N., etc.	catch per unit effort	CPUE
kilogram	kg			coefficient of variation	CV
kilometer	km			common test statistics	(F, t, $\chi^2$ , etc.)
liter	L	at	@	confidence interval	CI
meter	m	compass directions:		correlation coefficient (multiple)	R
milliliter	mL	east	E	correlation coefficient (simple)	r
millimeter	mm	north	N	covariance	cov
		south	S	degree (angular )	°
		west	W	degrees of freedom	df
<b>Weights and measures (English)</b>		copyright	©	expected value	E
cubic feet per second	ft <sup>3</sup> /s	corporate suffixes:		greater than	>
foot	ft	Company	Co.	greater than or equal to	≥
gallon	gal	Corporation	Corp.	harvest per unit effort	HPUE
inch	in	Incorporated	Inc.	less than	<
mile	mi	Limited	Ltd.	less than or equal to	≤
nautical mile	nmi	District of Columbia	D.C.	logarithm (natural)	ln
ounce	oz	et alii (and others)	et al.	logarithm (base 10)	log
pound	lb	et cetera (and so forth)	etc.	logarithm (specify base)	log <sub>2</sub> , etc.
quart	qt	exempli gratia		minute (angular)	'
yard	yd	(for example)	e.g.	not significant	NS
		Federal Information Code	FIC	null hypothesis	H <sub>0</sub>
<b>Time and temperature</b>		id est (that is)	i.e.	percent	%
day	d	latitude or longitude	lat. or long.	probability	P
degrees Celsius	°C	monetary symbols		probability of a type I error (rejection of the null hypothesis when true)	α
degrees Fahrenheit	°F	(U.S.)	\$, ¢	probability of a type II error (acceptance of the null hypothesis when false)	β
degrees kelvin	K	months (tables and figures): first three letters	Jan.,...,Dec	second (angular)	"
hour	h	registered trademark	®	standard deviation	SD
minute	min	trademark	™	standard error	SE
second	s	United States (adjective)	U.S.	variance	
		United States of America (noun)	USA	population sample	Var
<b>Physics and chemistry</b>		U.S.C.	United States Code	sample	var
all atomic symbols		U.S. state	use two-letter abbreviations		
alternating current	AC		(e.g., AK, WA)		
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				

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**2016 SUMMER TROLL FISHERY MANAGEMENT PLAN**

by  
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## **ABSTRACT**

This document summarizes the plan that the Alaska Department of Fish and Game will follow to manage the 2016 Southeast Alaska summer commercial salmon troll fishery from July 1 through September 30, 2016. The troll fishery will be managed according to guidelines adopted by the Alaska Board of Fisheries listed in the State of Alaska Administrative Code, Title 5, Chapter 29 Salmon Troll Fishery. The first Chinook salmon fishing period will begin on July 1 to harvest 70% of the summer troll Chinook salmon quota. The remainder of the troll Chinook salmon quota will be harvested in August, following a closure period. The fishery will be open to harvest coho salmon through September 20, with inseason consideration given to a possible conservation closure period in late July, a possible conservation or allocation closure in mid-August, and consideration of an extension of the season through September 30. Chum salmon, primarily those produced by Alaska hatcheries, are also harvested during the summer troll fishery.

Key words: salmon, troll, summer, commercial, management plan, Chinook salmon, coho salmon, Southeast Alaska, chum salmon

## **INTRODUCTION**

The Southeast Alaska/Yakutat commercial salmon troll fishery occurs in State of Alaska and Federal Exclusive Economic Zone (EEZ) waters east of Cape Suckling and north of Dixon Entrance. The fishery is managed according to regulations promulgated by the Alaska Board of Fisheries (BOF), the North Pacific Fishery Management Council (NPFMC), the National Marine Fisheries Service (NMFS), and the U.S./Canada Pacific Salmon Commission (PSC). Regulations adopted by the BOF are listed in the State of Alaska Administrative Code, Title 5 (5AAC), Chapter 29 - Salmon Troll Fishery. The Alaska Department of Fish and Game (ADF&G), under emergency order authority, conducts inseason management. The all-gear Chinook salmon fishery will be managed to achieve a harvest target based on the 2008 Bilateral Pacific Salmon Treaty Agreement (PST). The PST specifies a harvest based on a relationship between a preseason Abundance Index (AI) generated by the PSC's Chinook Technical Committee (CTC) and a harvest target specified in the agreement. Coho salmon will be managed to ensure escapement goals and to achieve BOF allocation guidelines. Coho salmon near Dixon Entrance will be managed in cooperation with Canada according to the PST agreement.

This management plan discusses management objectives and methods used to achieve BOF, NPFMC, NMFS, and PSC policies and goals for the commercial summer troll fishery. This plan covers commercial trolling for Chinook, coho, and chum salmon. Other species caught and retained by trollers are considered incidental.

## **SUMMER TROLL FISHERY DATES**

The summer troll fishing season covered in this plan is July 1 through September 30. Chinook salmon may be harvested only during open periods announced by ADF&G. The coho salmon season may be extended for up to 10 days after September 20 in Districts 1–16 (Figure 1) in years when wild coho salmon abundance is projected by the department to meet escapement needs after considering harvest and effort [5 AAC 29.110(a)].

## **MANAGEMENT APPROACH**

### **CHINOOK SALMON**

The Southeast Alaska (SEAK) Chinook salmon fishery is managed to achieve the annual all-gear PSC allowable catch associated with the preseason abundance index generated by the CTC Chinook Model each spring. The catch is allocated through regulations established by the BOF

among troll, net, and sport fisheries. The summer troll fishery is managed inseason, according to the Summer Salmon Troll Fishery Management Plan (5 AAC 29.100). Most of the Chinook salmon harvested in the Alaska summer troll fishery are of non-Alaska hatchery origin and are referred to as “treaty” (PST) fish. In addition to the harvest ceiling of PST fish, provisions of the PST provide for an additional harvest of Chinook salmon produced in Alaska hatcheries (add-on). The add-on is the total estimated Alaska hatchery catch, minus the pre-treaty hatchery production of Chinook salmon (5,000 fish) minus a risk adjustment factor (1.645).

## **Management Objectives**

1. Achieve the annual all-gear PSC allowable catch associated with the preseason abundance index generated by the CTC Chinook Model each spring.
2. Comply with provisions and regulations established by the BOF, NPFMC, NMFS, and the PSC.
3. Maximize the harvest of Alaska hatchery-produced Chinook salmon.
4. Comply with the conservation goals of the PST and the BOF.
5. Achieve harvest allocations among user groups as mandated by the BOF.

## **Management Methods**

The majority of the annual troll Chinook salmon harvest is taken during the general summer troll fishery, when salmon may be taken throughout most of the Southeast Alaska/Yakutat region, including the outside waters of the EEZ. The summer fishery targets the number of PST Chinook remaining on the annual troll allocation after winter and spring troll PST harvests are subtracted. During years in which the summer Chinook salmon target (or quota) is relatively large, Chinook opening lengths are estimated and a closing date is determined inseason. Tabulating the inseason summer troll catch is difficult due to the large number of fish tickets and the difficulty of receiving them from remote areas in a timely manner. Therefore, a Fisheries Performance Data (FPD) program, consisting of confidential interviews with commercial trollers as they deliver catches, is used to estimate daily catch rates (catch-per-boat-day or CPBD) in six areas (Figure 2). Aerial vessel surveys are conducted to obtain an immediate estimate of fishing effort. Total harvest to date is estimated by multiplying aerial vessel counts with the CPBD obtained from FPD interviews. Daily tallies from fish processors are an important tool in tracking harvest during the final days of each summer Chinook retention period. The total number of days the fishery will be open for Chinook salmon retention is calculated by dividing the summer season harvest goal by the estimated daily catch by the troll fleet. From 1992 through 1995, and again in 2000, 2001, 2008, and 2013, ADF&G announced a fixed number of days beginning July 1, due to the low number of Chinook salmon available for harvest. From 1996–1999, 2002–2007, 2009–2012, and in 2014, the Chinook fishery was managed inseason and closed by emergency order due to the larger Chinook quotas during those years. The department will manage the summer troll season according to the BOF management plan (5 AAC 29.100) which calls for harvesting 70% of the summer Chinook salmon troll quota (see next section) in an initial opening beginning July 1. The remainder of the Chinook salmon quota is to be harvested following any closure for coho salmon conservation and/or allocation in August. Following the first Chinook opening, the waters of frequent high Chinook salmon abundance will be closed, consistent with 5 AAC 29.025 unless the department determines that less than 30% of the Chinook salmon harvest goal for the initial opening was taken in that opening (Figure 2). In



addition, during the second Chinook salmon opening, if the department determines after 10 days that the annual troll Chinook salmon harvest ceiling might not be reached by September 20 with those waters closed, the department shall reopen the waters of frequent high Chinook salmon abundance by emergency order.

The hatchery add-on is calculated inseason through port sampling programs. Chinook salmon are sampled for the presence of adipose fins. The heads from fish that have missing adipose fins are then sent to the Juneau Mark, Tag and Age lab for processing. Coded-wire tags are removed from the heads and decoded. The number of Alaska hatchery fish is calculated by expanding the number of Alaska hatchery-produced Chinook salmon in the sampled catch by the total catch.

## **COHO SALMON**

Most coho salmon harvested in the troll fishery are of Alaska origin. They spawn in approximately 2,500 streams in Southeast Alaska during the fall and early winter months. Coho salmon harvests were depressed in the mid to late 1970s but improved through most of the 1980s and 1990s. Factors contributing to the increased harvests include the improved spawning escapement levels achieved under the conservative management regime implemented in 1980, increased marine survivals due to favorable ocean conditions, increased targeting of coho salmon by trollers, and increasing Alaska hatchery production. Hatchery coho salmon production (almost entirely from Southeast Alaska facilities) first became significant in 1980. The contribution of hatchery coho salmon has varied since then from 0.4% of the total troll catch in 1980 to 30% in 2013 and 2015.

Early in the season, coho salmon stocks returning to southern Southeast Alaska are harvested by the troll fishery in northern and central outside areas, where they intermingle with coho salmon bound for northern and central areas of the region. Troll fishery harvests of coho salmon in outer coastal areas generally peak during mid-July to mid-August. Harvests in inside fisheries generally peak during late August to mid-September.

### **Management Objectives**

1. Provide adequate escapement of coho salmon, by area, to ensure sustainable populations.
2. Provide maximum opportunities for harvest consistent with conservation objectives.
3. Maintain allocation guidelines over the long-term, consistent with BOF regulations.
4. Comply with provisions of the PST Agreement in managing coho salmon on the U.S./Canada border.

### **Management Methods**

Management of coho salmon is based on aggregate abundance. Lack of a general coho salmon stock identification technique prevents assessment of run strength of individual stock groups contributing to these early-season mixed stock fisheries. The widespread and complex nature of the troll fishery necessitates a closely coordinated management program. Inseason management is accomplished through a team consisting of the Southeast regional supervisor, the regional management coordinator, two troll fishery management biologists, and 13 area management biologists. ADF&G contact information is listed at the end of this plan.

Management perspectives and approach have continued to evolve, with recent changes in environmental conditions and fishery patterns, combined with improved information about the

resource. A decade-long cooling trend in the Gulf of Alaska has affected survival rates and run strength throughout the region, as well as coastal migration patterns of returning coho salmon. Marine survival of both wild and hatchery coho salmon has shifted from favoring stocks in northern parts of the region, as was the case from the early 1980s through the mid-2000s, to strongly favoring southern stocks, as has been the case since 2007. At the same time, southern stocks have shown less tendency to be caught in northern coastal waters, and appear to be approaching more directly in the southern part of the region, with reduced exposure to the area of highest troll effort north of Cape Ommaney. Meanwhile, increased interest from trollers in harvesting chum salmon near terminal areas has reduced effort directed at coho salmon. The combined effect of these factors for the wild indicator stock in the Ketchikan area (Hugh Smith Lake) has been a substantial reduction in troll and all-fishery exploitation rates on the total return that has continued to trend near the long-term average, resulting in spawning escapements which have exceeded the biological escapement goal in each year since 2007. On the other hand, the recent cooling climatic trend in the North Pacific appears to have resulted in a substantial decrease in survival and return abundance in northern mainland systems. The current climate pattern in the Gulf of Alaska suggests that the recent trend in northern and southern parts of the region will persist in the near future. Therefore, managers will remain more cautious in making inseason assessments and decisions affecting stocks in northern areas and less cautious about stocks in southern Southeast Alaska.

The coho salmon fisheries are managed to comply with the *Southeastern Alaska/Yakutat Area coho salmon fishery management plan* [5 AAC 29.110]. Inseason run strength is used to achieve ADF&G conservation objectives and BOF allocation objectives adopted in the management plan. The management plan calls for a troll closure of up to seven days in late July if the total projected commercial harvest of wild coho salmon is less than 1.1 million fish [5 AAC 29.110 (b)(1)]. A troll closure of up to ten days typically occurs in mid-August and is required to be a minimum of two days by regulation for a fair start prior to the second Chinook salmon opening. The actual length of that closure is determined in early August, when an assessment determines whether the number of coho reaching inside areas is adequate to provide for spawning requirements, given usual or restricted inside fisheries on coho and other species [5 AAC 29.110 (b)(2)(A)] or the proportional share of coho salmon harvest by the troll fishery is larger than that of inside gillnet and recreational fisheries compared to average 1971–1980 levels [5 AAC 29.110 (b)(2)(B)]. There are no harvest ceilings for Southeast Alaska coho salmon fisheries. However, under the 2008 PST Agreement, the area near the U.S./Canada border will close if the harvest rates by Alaska trollers fishing in the border area during early July fall below specified thresholds.

The criteria for extending the coho salmon fishery after September 20 were modified in 2012, through the BOF process. The regulatory period for coho retention in the troll fishery is June 1 through September 20, with a potential extension through September 30 in years when wild coho salmon abundance is projected to meet escapement needs after harvest and effort are considered.

Long-term wild stock and hatchery stock CWT programs, dockside sampling programs to sample the harvest for CWTs, escapement monitoring, and the troll FPD collection program all began in the early 1980s and continue through the present day. As years of data were gathered from each program, more information and understanding of stock movement, stock timing, and stock harvest were accumulated. As a result, a model was developed in 1989 to accurately estimate the end of season, all-gear coho salmon commercial harvest by late July using the

salmon troll FPD. In the mid-1990s, escapement goals were established for several stocks in Southeast Alaska based on spawner-recruit relationships from long-term databases of harvest rate, harvest, age composition, and escapement information. These long-term monitoring programs have provided the backbone for successful conservation of coho salmon in Southeast Alaska.

### **Coho Salmon Allocation Regulations**

The BOF has established long-term allocation goals for the coho salmon harvest by each commercial gear type. Target percentages established by the board are 61% for troll, 19% for purse seine, 13% for drift gillnet, and 7% for set gillnet. The BOF stated that subsistence, personal use, and recreational harvests of coho salmon are not affected by the established allocations between commercial gear types. The BOF also stated that:

“These percentages are guidelines only and may vary from season to season given natural fluctuations in salmon abundance and distribution and the limitations of fisheries management. It is, however, the board’s intent that these allocation guidelines be met as closely as possible over the long term. It is not the board’s intent for the department to disrupt any of the traditional commercial fisheries that the historical allocation is founded. The department may, however, make inseason adjustments to attempt to achieve these long term allocation guidelines.”

The department will however, implement applicable, existing regulations (5 AAC 29.110). These regulations indicate that:

A regionwide troll closure for up to 10 days is required during the coho salmon season to address allocations between outer coastal fisheries and inside water fisheries if the department determines that the proportional share of coho salmon harvest by the troll fishery is larger than that of inside gillnet and recreational fisheries compared to the 1971–1980 levels. Primary inside fishery indicators for this assessment are overall coho salmon harvests, escapement projections for streams where escapement goals have been established, and CPUE in the Tree Point, Prince of Wales, Taku/Snettisham, and Lynn Canal drift gillnet fisheries.

If a regionwide troll closure is implemented to conserve coho salmon during late July or early August, the length and timing of an additional closure during August will consider the combined impacts of both closures. Any potential transfer of coho salmon harvest to inside fisheries resulting from an early closure, if implemented, will be reflected in inside fishery performance indicators used for comparison against the allocation criteria.

## **Tentative 2016 Summer Season Schedule**

The following is a generalized timetable for summer salmon management. It is emphasized that some modifications to this schedule may be required.

<b>DATES</b>	<b>EXPECTED REGULATORY ACTIONS</b>
July 1	The general summer troll fishery opens in most waters of the region, including outer coastal waters. The initial Chinook salmon retention period begins July 1 and targets 70% of the Chinook remaining on the troll treaty allocation. The length of the opening varies annually and may be open for a predetermined number of days or managed inseason. The waters of frequent high Chinook salmon abundance will closest following the first retention period.
Late July	<p>Regional coho run strength is assessed. If the total projected commercial harvest of wild coho salmon is less than 1.1 million, up to a 7-day regionwide conservation closure may be implemented on or after July 25. The projected total commercial wild coho harvest will be used as an index of run strength.</p> <p>Coho salmon run strength near the U.S./Canada border is also assessed, based on Alaska Fisheries Performance Data. Portions of Districts 101–104 will close, beginning the last week of July, if harvest rates by Alaska trollers fishing in the border area during early July fall below specified thresholds.</p>
Early August	A second assessment of coho run strength will determine the need for and length of a mid-August troll closure.
Mid- to late-August	<p>A regionwide closure of up to 10 days will be implemented if required for either coho salmon conservation or allocation, based on assessment of stock and fishery performance data relative to BOF-established criteria. If a regionwide conservation closure has occurred during late July, the likelihood of a closure being implemented for allocation at this time will be reduced.</p> <p>Following any closure of the troll fishery, the Chinook salmon fishery will reopen to take the remaining treaty Chinook salmon. A minimum closure of two days is required prior to the second Chinook salmon opening to allow for a fair start (5 AAC 29.100(c)(1)(B)(ii)).</p>
Late-August to September 20	Coho salmon conservation measures may be implemented regionwide or by area, as required to protect weak coho stocks.
Mid-September	If wild coho salmon abundance is projected by the department to meet escapement needs after considering harvest and effort, the coho fishery may be extended by up to 10 days after September 20.

## 2016 Chinook Salmon Treaty Quota and Allocations

Under management provisions of the PST, the 2016 Chinook salmon abundance index (AI) for SEAK has been calculated to be 2.06, which results in an all-gear harvest quota of 355,600 treaty Chinook (non-Alaska-hatchery-produced) salmon. According to the BOF allocation plan outlined below, the troll fishery allocation of the all-gear quota is 263,197 treaty Chinook salmon. The quota is based on the SEAK abundance index from 30 stock groups originating from the north Oregon coast to Alaska. Of those, seven “driver” stocks make up the majority of the SEAK abundance index. Productivity varies over time and has increased recently for several large stock groups that typically represent a substantial portion of the SEAK harvest.

The all-gear quota is allocated among commercial and sport fisheries according to management plans established by the BOF [5AAC 29.060(b) and 47.055]. Most Chinook salmon produced by Alaska hatcheries are not factored into the AI and may be harvested in addition to the treaty limit. The commercial troll fishery is allocated 80% and the recreational fishery 20% of the PST quota, after subtracting 4.3% from the total for the purse seine fishery, 2.9% for the drift gillnet fishery, and 1,000 fish for the set gillnet fishery. The pre-treaty Chinook salmon harvest and risk adjustment factor (4,700 combined) are proportionally shared between the gear groups.

Allocations of the Chinook salmon harvest quota for 2016 are as follows:

All-gear Treaty Quota	Purse Seine	Drift Gillnet	Set Gillnet	Total Net	Sport	Troll
355,600	15,291	10,312	1,000	26,603	65,799	263,197

The summer troll treaty quota is calculated by adding the winter treaty harvest, the projected spring treaty harvest, the pre-treaty Alaska hatchery harvest of 3,700 fish, and a statistical risk factor surrounding the Alaska hatchery contribution estimate of 1,000 fish. The resultant sum is then subtracted from the troll allocation, yielding a summer troll treaty quota. In addition, under the BOF plan, 70% of the summer quota is to be harvested during the first summer opening beginning July 1. **The preliminary target harvest for the July Chinook salmon opening will be announced in a news release to be issued in late June, as will an estimate of the length of the first summer opening.**

## SUMMER TROLL FISHING PERIODS AND CLOSED WATERS

Salmon trolling is permitted in all areas during the first Chinook salmon retention period of the general summer season except for those waters described in 5 AAC 29.100 and the closed waters listed in 5 AAC 29.150. In addition, during subsequent Chinook salmon retention periods, waters designated as frequent high Chinook salmon abundance (5 AAC 29.025) (Figure 2) will be closed as necessary.

## FISHING PERIODS UNDER 5 AAC 29.100

Regulations under 5 AAC 29.100 describe open fishing periods as follows:

- (d) Sections 1-C, 1-E, and 1-F, salmon may be taken only as follows: (Figure 3)
  - (1) Section 1-C: from August 15 through September 20;
  - (2) Section 1-E:

(A) in the waters of Section 1-E, bounded by a line from the southernmost tip of Nose Point to a point in West Behm Canal at 55° 48.73' N. lat., 131°44.01' W. long., located approximately one mile west of Nose Point, then south to a point at 55°43.92' N. lat., 131°45.44' W. long., located approximately one mile west of the northernmost tip of Bushy Point, then south to a point at 55°39.09' N. lat., 131°44.69' W. long., located approximately one mile west of Escape Point, to the northernmost tip of Escape Point, and in waters of Neets Bay west of the longitude of the southernmost tip of Chin Point and in Traitors Cove west of 131°41.80' W. long., from July 1 through September 20;

(B) all other waters of Section 1-E, from July 13 through September 20;

(3) Section 1-F: open from July 1 through September 20, with the following restrictions:

(A) from July 1 through July 12, the waters of Section 1-F east of line from the northernmost tip of Kirk Point at 54°59.98' N. lat., 131°00.78' W. long., to Mary Island Light at 55°05.90' N. lat., 131°10.89' W. long., to the southernmost tip of Cone Island at 55°14.47' N. lat., 131°19.36' W. long. are closed;

(B) from July 13 through July 31, the waters of Section 1-F east of a line from the southernmost tip of Black Island at 55°07.84' N. lat., 131°04.89' W. long., to the westernmost tip of Slate Island at 55°05.68' N. lat., 131°03.92' W. long., to the westernmost tip of White Reef at 55°03.95' N. lat., 131°02.51' W. long., to the easternmost tip of Black Rock at 55°01.37' N. lat., 131°03.62' W. long., to the northernmost tip of Kirk Point at 54°59.98' N. lat., 131°00.78' W. long., are closed.

(e) In District 8, the weekly fishing periods for trolling are the same as for drift gillnetting.

The closed waters of District 8 are described by regulation in 5 AAC 29.150(i), (Figure 4).

(f) In District 11 salmon may be taken only in Sections 11-C and 11-D. (Figure 5).

(g) In District 15 salmon may be taken only in Sections 15-A and 15-C. (Figure 5).

### **CLOSED WATERS UNDER 5 AAC 30.365**

In the Yakutat area, **waters near the mouth of the Situk River will be closed to the harvest of Chinook salmon by troll gear effective July 1** in accordance with the Situk-Ahrnklin Inlet and Lost River King Salmon Fisheries Management Plan. The Situk River is managed for a biological escapement goal (BEG) of 450 to 1,050 large Chinook salmon. The 2016 preseason forecast is for a total return of 684 large Chinook salmon. The inriver run goal was not achieved in 2010, 2011, 2012, and 2015, and restrictive management measures were deemed necessary. The 2016 preseason forecast suggests that the Situk River Chinook salmon run will again fall short of the lower bound of the BEG if normal fisheries are prosecuted. Conservation actions are necessary to ensure adequate levels of escapement. A portion of District 181 south of Yakutat Bay, in State waters, will close to Chinook salmon retention by troll gear beginning at 12:01 a.m., July 1. This area is displayed in Figure 6, and described as follows:

“...in the waters of Alaska bounded on the west by the seaward limit of the three-nautical-mile territorial sea and on the north by a line extending seaward from 59°32.49' N. lat., 139°51.79' W. long. (Ocean Cape) and intersecting the three-nautical-mile limit at

59°39.69' N. lat., 139°55.49' W. long., and on the south by a line extending seaward from 59°21.92' N. lat., 139°23.15' W. long., and intersecting the three-nautical-mile limit at 59°19.90' N. lat., 139°26.39' W. long.”

## **CLOSED WATERS UNDER 5 AAC 33.384**

Due to a low preseason forecast for Chilkat River Chinook salmon abundance, all commercial salmon fisheries in Chilkat Inlet north of Seduction Point will be closed through July 15, 2015.

## **SPORT FISHING AND CHARTERING FROM A REGISTERED COMMERCIAL TROLL VESSEL**

- A person may sport fish from a registered commercial salmon hand troll or power troll vessel [5 AAC 47.041 (a)], though **may not sport fish and commercial fish for salmon from the same vessel on the same day** [5 AAC 47.041 (f)]. A person sport fishing from a vessel licensed for commercial salmon fishing, other than a charter vessel when paying clients are onboard, shall immediately mark harvested salmon by **removing its dorsal fin** when fishing in waters closed to commercial salmon fishing [5 AAC 47.041 (c)].
- Sport fishing from a commercially licensed vessel while commercially-caught salmon are in possession is illegal in waters closed to commercial fishing [5 AAC 47.041(d)].
- A downrigger may be used in conjunction with a fishing rod when sport fishing. However, a downrigger may **not** be used in conjunction with a fishing rod to take salmon when engaged in commercial hand trolling [5 AAC 29.120 (b)(2)(B)].
- A **registered troll vessel may also be registered as a charter vessel**, though that vessel may not be used to troll commercially and charter on the same day [5 AAC 75.995(8)]. Charter boat registration applications are available at ADF&G offices.
- A person **may not possess unpreserved sport-caught salmon** on any commercial salmon vessel while engaging in commercial salmon fishing [5 AAC 47.041(g)]. The definition of “preserved fish” excludes unfrozen fish temporarily stored in coolers that contain ice or dry ice or fish that are lightly salted [5 AAC 75.995(21)].

## **CHUM SALMON FISHERIES**

The following sections give information for areas where trollers have targeted chum salmon during recent years.

### **ICY STRAIT**

Douglas Island Pink and Chum, Inc. (DIPAC) projects total returns of 2.52 million chum salmon to the Macaulay Hatchery and other release sites in 2016, up by 19% from the 2015 preseason projection of 2.11 million (postseason online return is 2.92 million). Trollers have targeted DIPAC-produced chum salmon in Icy Strait during June and early July since 2010.

### **NEETS BAY TERMINAL HARVEST AREA**

SSRAA is expecting 1.24 million summer chum salmon to return to the Neets Bay THA in 2016, which is 5% more than the 1.18 million summer chum projected to return in 2015. Trollers may target Neets Bay chum salmon outside the THA in West Behm Canal when those waters are open to trolling (Figure 3). From Friday, July 1, through Monday, July 4, the Neets Bay THA

will be open for trolling in those waters of Neets Bay west of the Mid-bay Line from 55°47.62' N. latitude, 131°34.50' W. longitude, on the northern shore of Neets Bay, to 55°46.83' N. latitude, 131°34.36' W. longitude, on the southern shore of Neets Bay. From Tuesday, July 5, until closed by emergency order, the Neets Bay THA will be open for trolling in those waters of Neets Bay west of the easternmost tip of Bug Island. The Neets Bay THA east of Bug Island will close to the harvest of salmon by all gear groups at 11:59 p.m., Monday, July 4, so that cost recovery and brood stock collection can take place. If openings can be scheduled, they will be announced by News Release once cost recovery and broodstock needs have been met.

### **HIDDEN FALLS TERMINAL HARVEST AREA**

NSRAA has projected total returns of 1.43 million chum salmon to the Hidden Falls THA in 2016, which is 39% higher than the 2015 projection of 1.03 million fish. As of July 1, the number of chum salmon may not exceed the number of Chinook salmon onboard a troll vessel or on a fish ticket.

This will be the fifth season NSRAA intends to use a tax assessment on the common property harvest of chum salmon to fund hatchery operations. For the 2016 season, the NSRAA Board has recommended to the Department of Revenue an assessment rate of 10 cents per pound of chum salmon harvested. All chum salmon landed from a vessel that reports on the fish ticket all or a portion of the harvest from Subsection 112-11, 112-21, or 112-22 during the period of June 15 through July 31 will be assessed the tax. Fish ticket reporting requirements will be strictly monitored and enforced to ensure compliance with the tax assessment program. NSRAA will be deploying observers on the grounds to document participating vessels to further facilitate enforcement. Please refer to the *2016 Southeast Alaska Purse Seine Fishery Management Plan* for more details.

### **SITKA SOUND**

NSRAA has projected total returns of 1.78 million chum salmon to the Deep Inlet THA and Medvejie Hatchery in 2016, an increase of 33% over the 2015 projected run of 1.34 million. The Deep Inlet THA rotational fishing schedule began on May 29 to harvest Medvejie Hatchery Chinook salmon. The THA is open to trolling during periods when the net fisheries are closed, including each Saturday from May 29 through October 1, except if closed for cost recovery harvest. The troll fishing schedule can be found in the Deep Inlet news release issued on April 7, along with a description of THA boundaries and net fishing schedules.

Troll harvest of returning chum salmon typically takes place in Eastern Channel and in Sitka Sound from the last week of July through the mid-August troll closure. An area has been established in Sitka Sound where trollers may target chum salmon during the mid-August troll closure. Coho salmon cannot be retained in that area during the mid-August closure [5 AAC 29.112].

### **TERMINAL HARVEST AREA CHINOOK RETENTION**

Retention of Chinook salmon 28" and greater will be allowed in the following areas:

The **Herring Bay THA** will be open to troll gear for retention of all salmon species from July 1 through August 30 (5 AAC 33.369). The **Silver Bay SHA** will open to troll gear from July 1–30 for retention of all salmon species (5 AAC 33.375). The **Anita Bay THA** will be open to troll gear for retention of all species through November 10 (5 AAC 33.383). The **Port Armstrong**



**SHA** is open to troll gear for retention of all species through June 30, but may be extended into the summer season by emergency order. Any extension of the fishery would be announced in a future news release. The **Deep Inlet THA** will be open to troll gear each Saturday through October 1 for retention of all species (5 AAC 33.376).

The Nakat Inlet, Neets Bay and Hidden Falls THAs will close to Chinook salmon retention whenever the first Chinook retention period closes.

## **REGULATIONS PERTAINING TO COMMERCIAL TROLL BYCATCH OF GROUNDFISH AND HALIBUT**

For information on Southeast Alaska Groundfish regulations, refer to the current Statewide Commercial Groundfish Fishing Regulations booklet available at ADF&G area offices. For details on groundfish bycatch allowances in the troll fishery refer to the “Groundfish Bycatch in the 2016 Commercial Salmon Troll Fishery” news release, issued on January 4, 2016.

In the state waters portion of the Eastern Gulf of Alaska Area, commercial salmon trollers operating hand or power troll gear during an open commercial salmon fishing period may legally retain and possess incidentally-taken groundfish in unlimited amounts, except as noted below. The bycatch allowance for each species or species group reflects the percentage that may be retained and sold and is based on the round weight of salmon on board. Bycatch percentages are listed in Table 1.

Table 1.—Bycatch Provisions for the Salmon Troll Fishery in State Waters

<b>Species</b>	<b>Bycatch Allowance</b>
Lingcod	100% IBS, EYKT, CSEO, NSEI and SSEIW 30% SSEOC 5% NSEO
Demersal Shelf Rockfish (DSR)	10%
Other rockfish	No limit on incidental harvest
Spiny dogfish	35%
Sablefish	0%
Other groundfish	No limit on incidental harvest

Groundfish taken as bycatch must be reported on an ADF&G fish ticket by **species code, six-digit groundfish statistical area, delivery condition code, disposition code** and **pounds** landed. The number of fish taken does not need to be documented for groundfish bycatch.

Lingcod may be taken as bycatch in the commercial salmon troll fishery only from May 16 through November 30 [5 AAC 28.113 (c)]. Lingcod must measure at least 27 inches from the tip of the snout to the tip of the tail, or 20.5 inches from the front of the dorsal fin to the tip of the tail. Lingcod harvest allocations for the troll fishery are set by area and area closures will occur as allocations are taken. Inseason closures will be announced by ADF&G news release, the United States Coast Guard “Notice to Mariners” report, and the National Weather Service broadcast. For updates on lingcod area closures, call the Groundfish Hotline at (907) 747-4882 or contact the Groundfish staff in Sitka at (907) 747-6688.

Lingcod Management Areas include: Icy Bay Subdistrict (IBS), East Yakutat (EYKT) Section, Northern Southeast Outside (NSEO) Section, Central Southeast Outside (CSEO) Section, Southern Southeast Outer Coast (SSEOC) Sector, Northern Southeast Inside (NSEI) Subdistrict, and Southern Southeast Internal Waters (SSEIW) Sector (Figure 7). Lingcod bycatch allowances in federal waters are identical to those set for state waters. Lingcod taken in excess of bycatch allowances shall be reported on fish tickets as overage and forfeited to the State of Alaska.

Lingcod harvest is restricted in the waters of Sitka Sound [5 AAC 28.150 (b) and 5 AAC 28.173 (a)(4)]. Commercial salmon trollers are permitted to retain and possess up to two lingcod aboard a vessel while actively fishing for salmon within the Sitka Sound Local Area Management Plan (LAMP) during the open CSEO lingcod season. Lingcod taken within the LAMP may be retained for a permit holder's personal use only and may not be sold. Upon taking a lingcod in this area, the permit holder shall mark that lingcod for personal use by immediately removing the dorsal fin of that fish. The head of each personal use lingcod must remain attached to the fish as evidence of meeting the 27-inch minimum size restriction, until that lingcod is weighed and reported on the ADF&G troll salmon fish ticket documenting that fishing trip.

Having taken no more than two lingcod outside of the LAMP area, a permit holder may fish for salmon within the LAMP only after removing the dorsal fin of those lingcod. Vessels in possession of more than two lingcod may not fish for salmon within the LAMP until those lingcod are offloaded.

The Sitka Sound LAMP is defined as the waters that are enclosed on the north by lines from Kruzof Island at 57°20.50' N. lat., 135°45.17' W. long. to Chichagof Island at 57°22.05' N. lat., 135°43.00' W. long., and from Chichagof Island at 57°22.58' N. lat., 135°41.30' W. long. to Baranof Island at 57°22.28' N. lat., 135°40.95' W. long., and on the south and west by a line running from the southernmost tip of Sitka Point at 56°59.38' N. lat., 135°49.57' W. long., to Hanus Point at 56°51.92' N. lat., 135°30.50' W. long. to the green day marker in Dorothy Narrows at 56°49.28' N. lat., 135°22.75' W. long., to Baranof Island at 56°49.28' N. lat., 135°22.60' W. long.

All DSR taken in state waters in excess of 10% of the round weight of salmon on board the vessel must be weighed and reported as bycatch overage on an ADF&G fish ticket. All proceeds from the sale of excess DSR bycatch taken in state waters shall be surrendered to the state [5 AAC 28.171 (a)]. DSR bycatch overages must be reported on fish tickets but may be retained for personal use by the permit holder. The seven species in the DSR assemblage are yelloweye, quillback, canary, copper, china, tiger, and rosethorn rockfish.

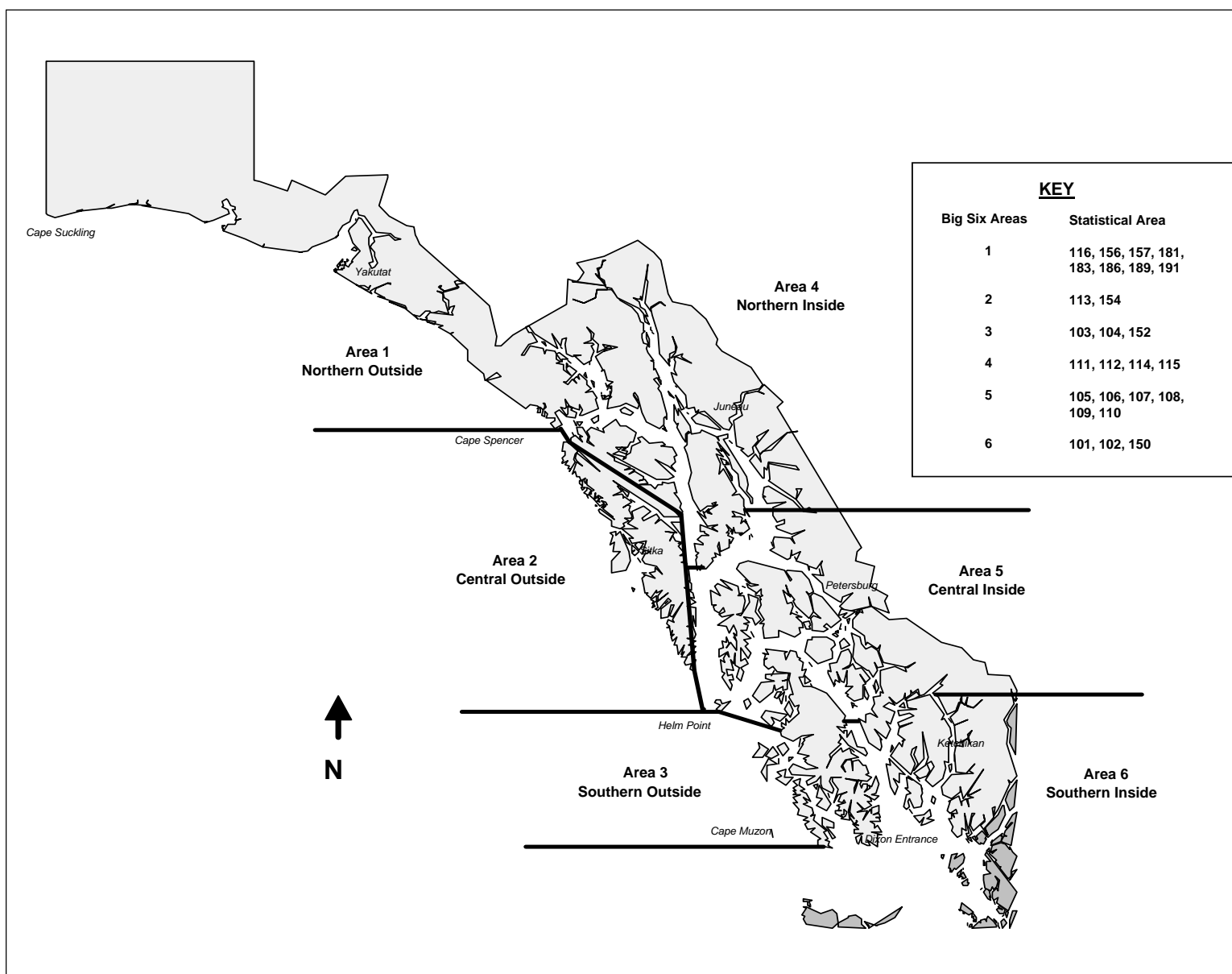
In federal waters of the Eastern Gulf of Alaska, all incidental troll bycatch of black, blue, and dark rockfish may be retained. In federal waters east of 140° W. long. (Southeast Outside District), the troll bycatch allowance for DSR is 10% and all other rockfish are limited to 5% in aggregate. In federal waters west of 140° W. long., rockfish bycatch (including DSR) is limited to 5% in aggregate.

Vessels trolling for salmon in federal waters of the EEZ in the Gulf of Alaska that retain federal groundfish bycatch must have a Federal Fisheries Permit (FFP) endorsed for troll/jig gear. FFPs are not required to retain lingcod or black, blue, or dark rockfish as these species are not managed under the Federal Management Plan. For information on FFP requirements and bycatch allowances in federal waters contact NOAA Fisheries at (907) 586-7225 (Juneau), (907) 747-6940 (Sitka), (907) 772-2285 (Petersburg) or (907) 247-5804 (Ketchikan).

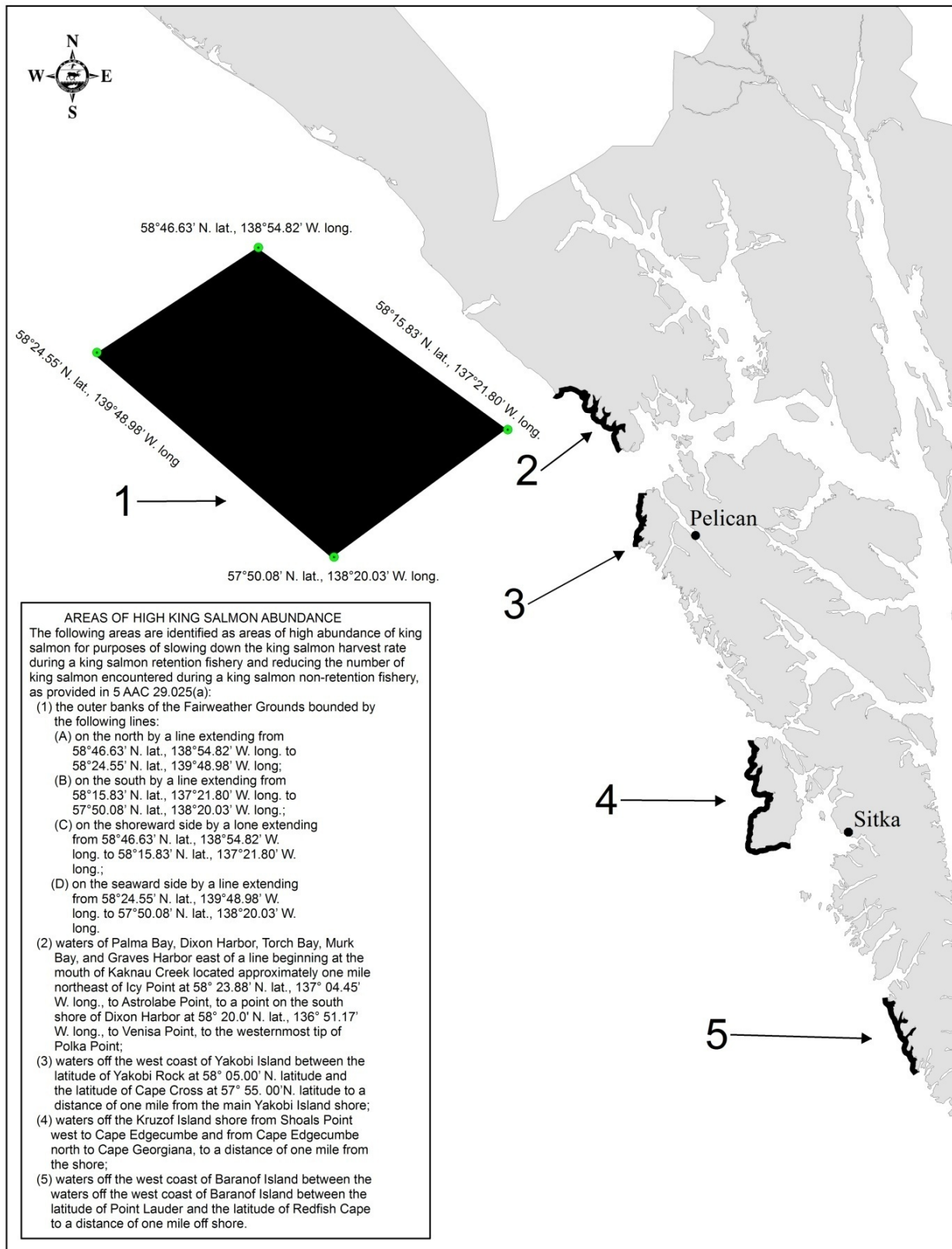
Groundfish and halibut may not be taken in the waters off Cape Edgecumbe (Edgecumbe Pinnacles Marine Reserve) enclosed by a box defined as 56°55.50' N. lat., 56°57.00' N. lat., 135°54.00' W. long., and 135°57.00' W. long. [5 AAC 28.150(c)].

Halibut incidentally taken during an open commercial halibut season by power and hand troll gear operated for salmon consistent with applicable state laws and regulations are legally taken and possessed [5 AAC 28.133(c)]. Commercial halibut may be legally retained only by Individual Fishing Quota (IFQ) permit holders during the open season for halibut. Trollers making an IFQ halibut landing of 500 pounds or less of IFQ weight as determined pursuant to 50 CFR 679.42(h) are exempted from the three-hour prior notice of landing (PNOL) if landed concurrently with a legal landing of salmon [50 CFR 679.5(l)(1)(iv)(A)]. Halibut taken incidentally during the troll fishery shall be reported on the troll fish ticket documenting the salmon landing. For information on regulations and landing requirements for the federal IFQ halibut fishery contact NOAA Fisheries.

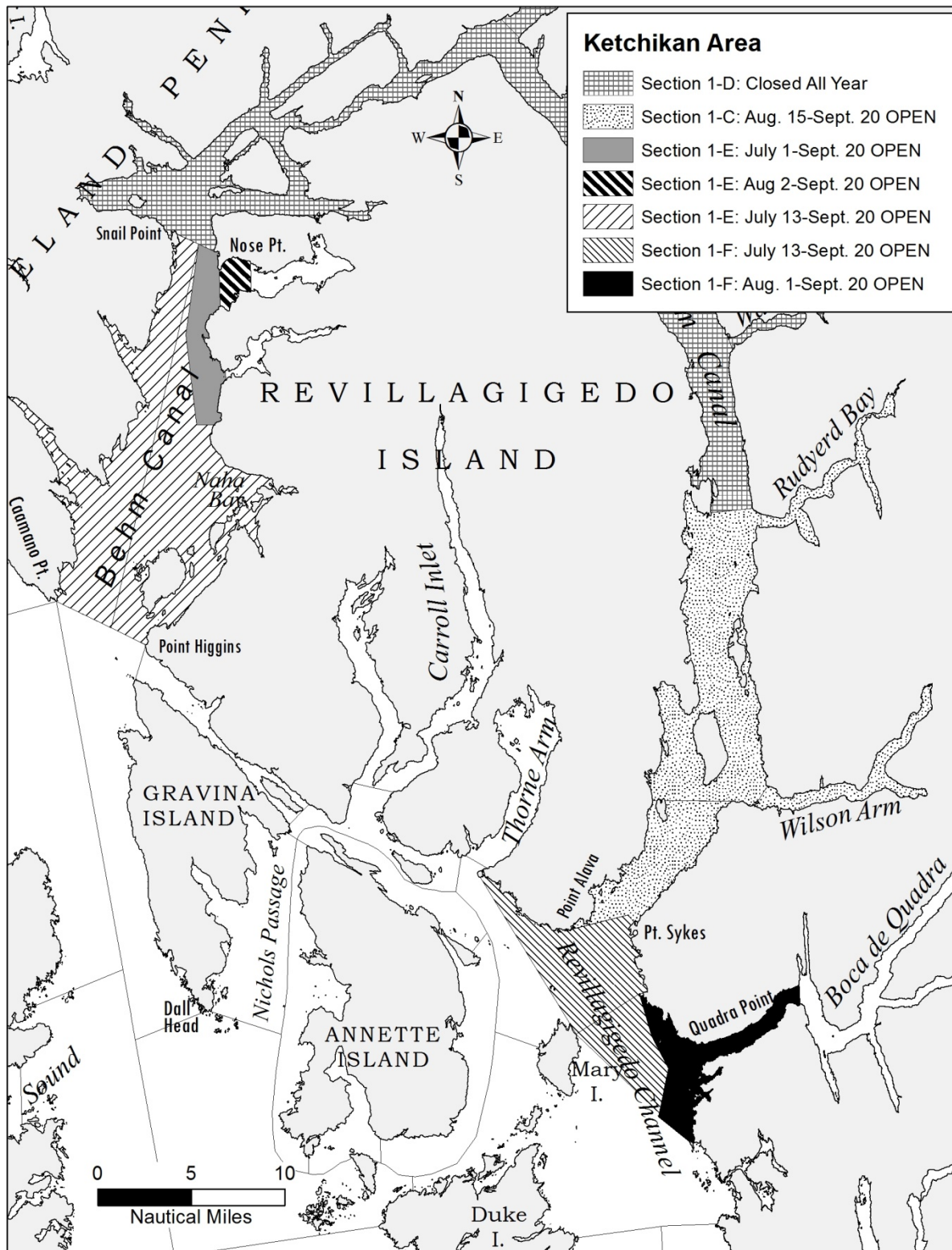
A person aboard a vessel may not fish for groundfish with dinglebar troll or mechanical jig gear if salmon are on board. A vessel fishing for groundfish with dinglebar troll gear must display the letter “D” and a vessel fishing for groundfish with mechanical jigging machines must display the letter “M” at all times when fishing with or transporting fish taken with dinglebar troll gear or mechanical jigging machines [5 AAC 28.135 (a)(4)]. A person may not operate a vessel that is displaying one of these letters when the vessel is being used to fish for salmon [5 AAC 28.135 (c)].



**Figure 1.**—Fisheries Performance Data program reporting areas in Southeast Alaska.



**Figure 2.**—Southeast Alaska areas closed to trolling for all species following the initial Chinook salmon opening in the summer troll season.



**Figure 3.**—Ketchikan area general summer trolling areas and seasons.

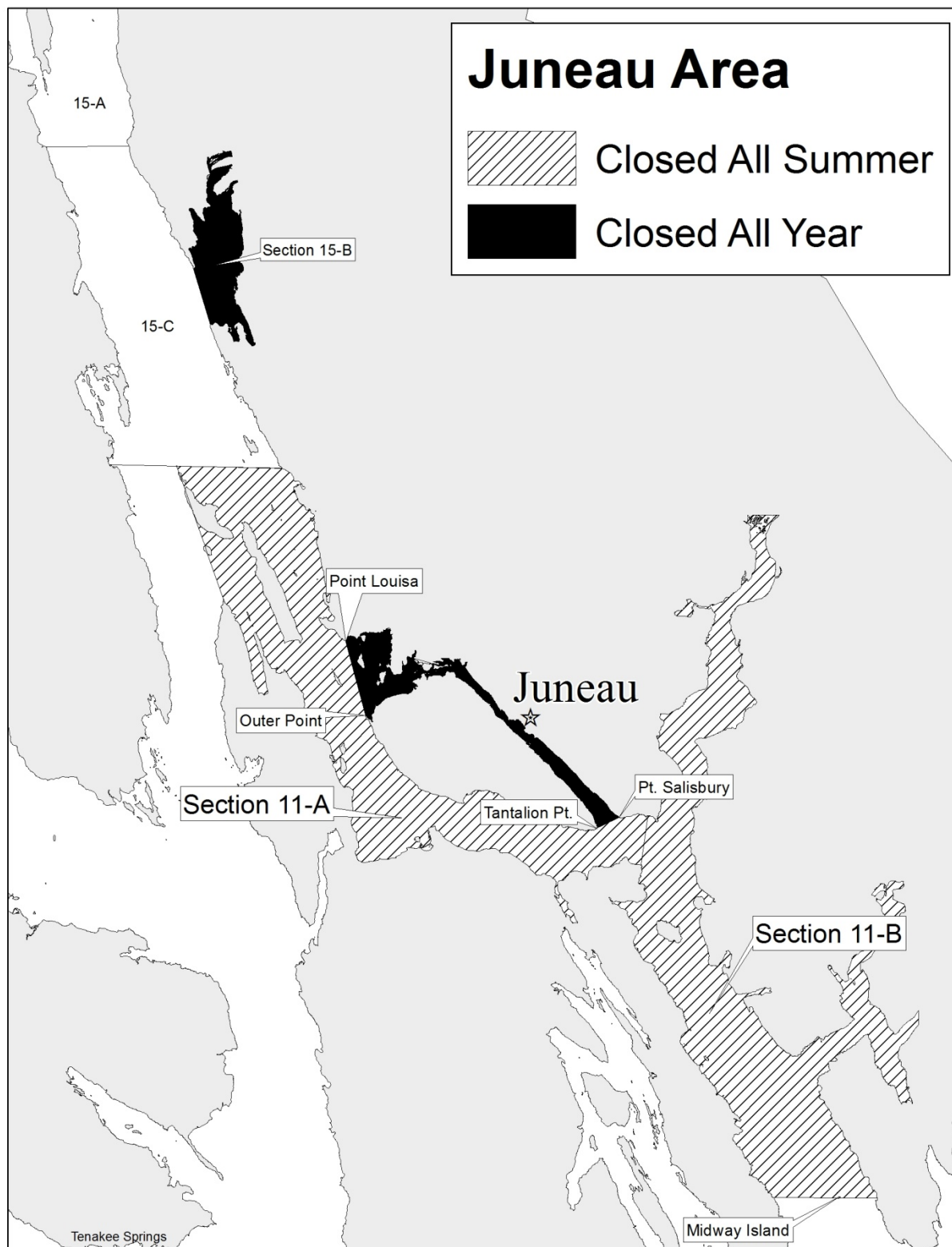
*Note:* This map is for general information only and does not exempt trollers from provisions in 5AAC 29.150 (CLOSED WATERS) or Emergency Orders issued by the Department of Fish and Game. The general summer troll fishing season applies to those areas not specified in the key or in 5AAC 29.150.





**Figure 4.**–District 8 summer troll closed waters.

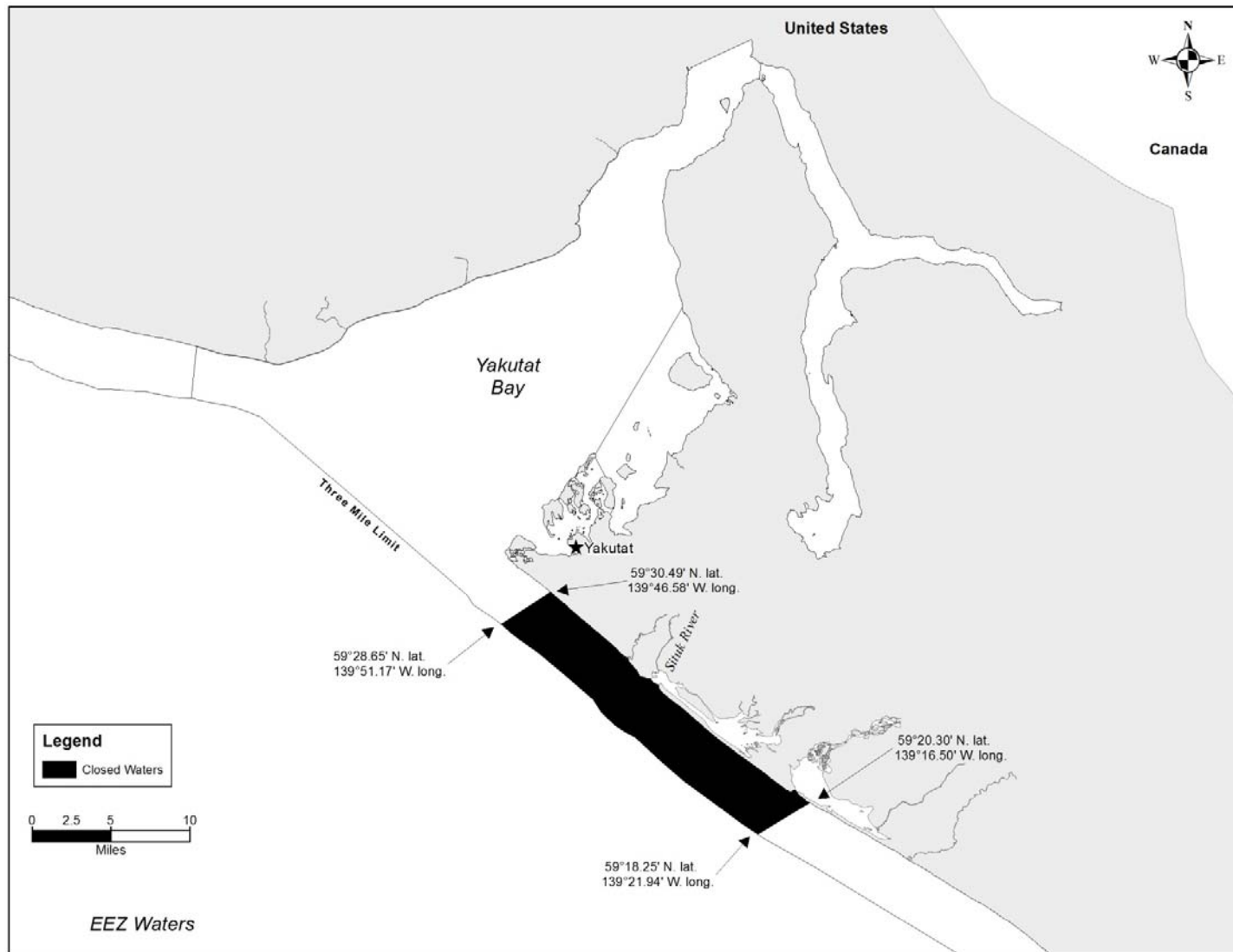
*Note:* This map is for general information only and does not exempt trollers from provisions in (5AAC 29.150 (CLOSED WATERS)) or Emergency Orders issued by the Department of Fish and Game. The general summer troll fishing season applies to those areas not specified in the key or in 5AAC 29.150.



**Figure 5.**–Juneau area summer troll closed waters.

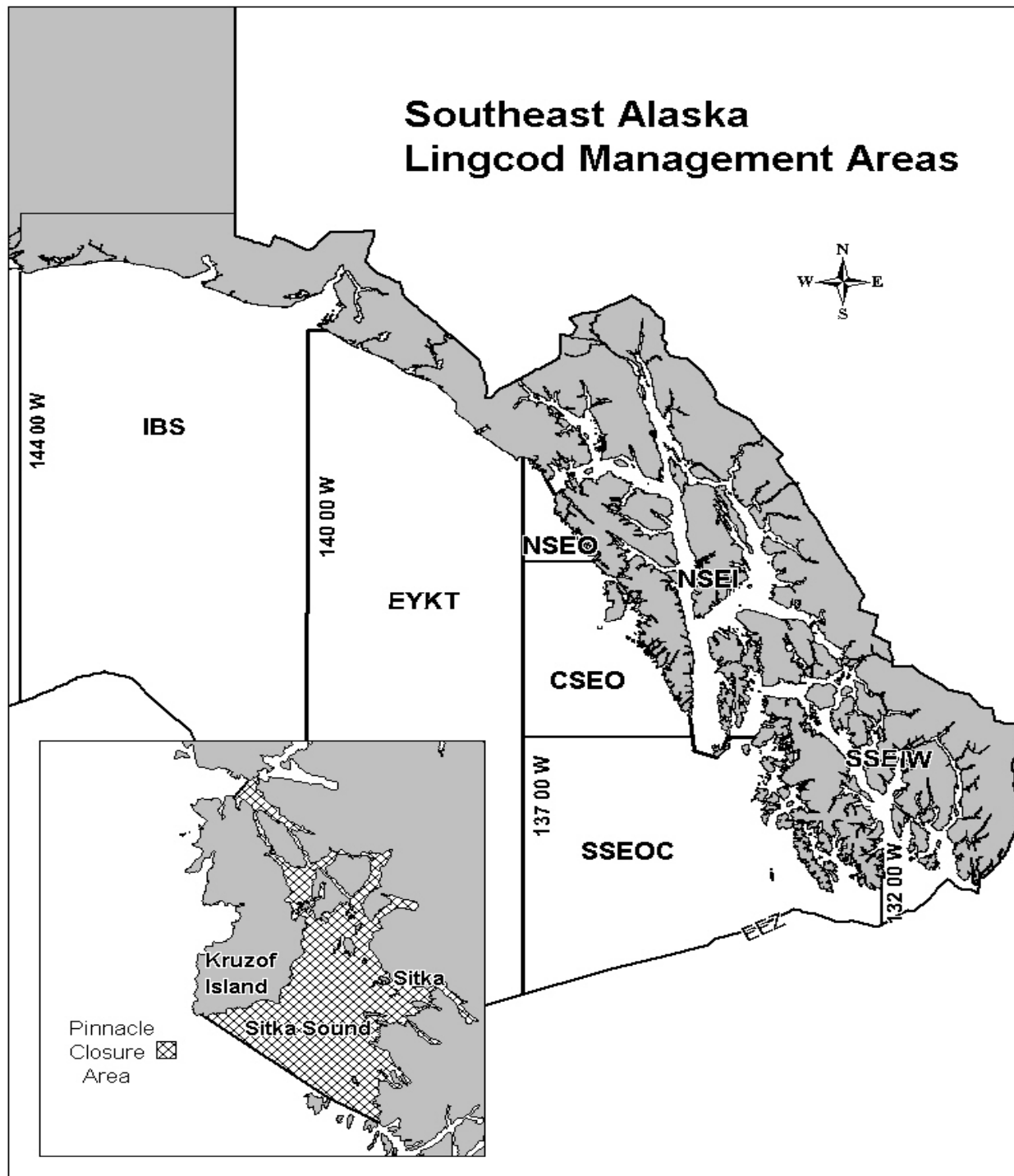
*Note:* This map is for general information only and does not exempt trollers from provisions in (5AAC 29.150 (CLOSED WATERS)) or Emergency Orders issued by the Department of Fish and Game. The general summer troll fishing season applies to those areas not specified in the key or in 5AAC 29.150.





**Figure 6.**—Yakutat area closed waters to Chinook salmon retention by troll gear, beginning July 1.

*Note:* This map is for general information only and does not exempt trollers from provisions in 5AAC 29.150 (CLOSED WATERS) or Emergency Orders issued by the Department of Fish and Game. The general summer troll fishing season applies to those areas not specified in the key or in 5AAC 29.150.



**Figure 7.**—Southeast Alaska lingcod management areas and Sitka area closed waters.

## FISHERY CONTACTS

The following are commercial fisheries division contacts regarding this management plan:

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For up-to-date troll information, call the 24-hour information line in the Douglas Office at 465-TROL (8765). In addition, the following telephone numbers may be called during the troll fishing season to obtain recorded announcements concerning areas open to trolling.

Ketchikan-(907) 225-6870

Sitka-(907) 747-8765

Petersburg-(907) 772-3700

### SOUTHEAST ALASKA TROLL WEBSITE INFORMATION:

<http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareasoutheast.salmon>