

**Regional Information Report No. 1J11-10**

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# **2011 Summer Troll Fishery Management Plan**

**by**

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**And**

**Grant Hagerman**

**June 2011**

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**Alaska Department of Fish and Game**

**Division of Commercial Fisheries**



## Symbols and Abbreviations

The following symbols and abbreviations, and others approved for the Système International d'Unités (SI), are used without definition in the following reports by the Divisions of Sport Fish and of Commercial Fisheries: Fishery Manuscripts, Fishery Data Series Reports, Fishery Management Reports, Special Publications and the Division of Commercial Fisheries Regional Reports. 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)		General		Measures (fisheries)	
centimeter	cm	Alaska Administrative		fork length	FL
deciliter	dL	Code	AAC	mid-eye-to-fork	MEF
gram	g	all commonly accepted		mid-eye-to-tail-fork	METF
hectare	ha	abbreviations	e.g., Mr., Mrs., AM, PM, etc.	standard length	SL
kilogram	kg			total length	TL
kilometer	km	all commonly accepted			
liter	L	professional titles	e.g., Dr., Ph.D., R.N., etc.	<b>Mathematics, statistics</b>	
meter	m			<i>all standard mathematical</i>	
milliliter	mL	at	@	<i>signs, symbols and</i>	
millimeter	mm	compass directions:		<i>abbreviations</i>	
		east	E	alternate hypothesis	H <sub>A</sub>
		north	N	base of natural logarithm	<i>e</i>
		south	S	catch per unit effort	CPUE
		west	W	coefficient of variation	CV
		copyright	©	common test statistics	(F, t, $\chi^2$ , etc.)
		corporate suffixes:		confidence interval	CI
		Company	Co.	correlation coefficient	
		Corporation	Corp.	(multiple)	R
		Incorporated	Inc.	correlation coefficient	
		Limited	Ltd.	(simple)	r
		District of Columbia	D.C.	covariance	cov
		et alii (and others)	et al.	degree (angular )	°
		et cetera (and so forth)	etc.	degrees of freedom	df
		exempli gratia		expected value	<i>E</i>
		(for example)	e.g.	greater than	>
		Federal Information		greater than or equal to	≥
		Code	FIC	harvest per unit effort	HPUE
		id est (that is)	i.e.	less than	<
		latitude or longitude	lat. or long.	less than or equal to	≤
		monetary symbols		logarithm (natural)	ln
		(U.S.)	\$, ¢	logarithm (base 10)	log
		months (tables and		logarithm (specify base)	log <sub>2</sub> , etc.
		figures): first three		minute (angular)	'
		letters	Jan.,...,Dec	not significant	NS
		registered trademark	®	null hypothesis	H <sub>0</sub>
		trademark	™	percent	%
		United States		probability	P
		(adjective)	U.S.	probability of a type I error	
		United States of		(rejection of the null	
		America (noun)	USA	hypothesis when true)	$\alpha$
		U.S.C.	United States	probability of a type II error	
			Code	(acceptance of the null	
		U.S. state	use two-letter	hypothesis when false)	$\beta$
			abbreviations	second (angular)	"
			(e.g., AK, WA)	standard deviation	SD
				standard error	SE
				variance	
				population	Var
				sample	var
<b>Weights and measures (English)</b>					
cubic feet per second	ft <sup>3</sup> /s				
foot	ft				
gallon	gal				
inch	in				
mile	mi				
nautical mile	nmi				
ounce	oz				
pound	lb				
quart	qt				
yard	yd				
<b>Time and temperature</b>					
day	d				
degrees Celsius	°C				
degrees Fahrenheit	°F				
degrees kelvin	K				
hour	h				
minute	min				
second	s				
<b>Physics and chemistry</b>					
all atomic symbols					
alternating current	AC				
ampere	A				
calorie	cal				
direct current	DC				
hertz	Hz				
horsepower	hp				
hydrogen ion activity	pH				
(negative log of)					
parts per million	ppm				
parts per thousand	ppt,				
	‰				
volts	V				
watts	W				

***REGIONAL INFORMATION REPORT NO. 1J11-10***

**MANAGEMENT PLAN FOR THE SUMMER COMMERCIAL TROLL  
FISHERY IN SOUTHEAST ALASKA**

by  
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## **ABSTRACT**

This document summarizes the plan that the Alaska Department of Fish and Game (department) will follow to manage the 2011 Southeast Alaska summer commercial salmon troll fishery from July 1 through September 30, 2011. The troll fishery will be managed according to the Board of Fisheries adopted guidelines 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 and will close by emergency order. The fishery is being managed for a target harvest of 98,796 fish. The remainder of the troll Chinook salmon Treaty allocation will be harvested following the August coho salmon closure period. The fishery will be open to harvest coho salmon July 1–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.

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

## **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 (board), the North Pacific Fishery Management Council (NPFMC), the National Marine Fisheries Service (NMFS), and the U.S./Canada Pacific Salmon Commission (PSC). The department, 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 (PSTA). The treaty agreement specifies a harvest based on a relationship between a preseason Abundance Index (AI) generated by the Pacific Salmon Commission's Chinook Technical Committee and a target harvest rate specified in the agreement. The Treaty agreement also provides for an inseason adjustment to the harvest level based on an assessment of inseason data. Coho salmon will be managed to ensure escapement goals and to achieve board allocation guidelines. Coho salmon near Dixon Entrance will be managed in cooperation with Canada according to the treaty agreement.

This management plan discusses the management objectives and methods used to achieve board, 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.

## **2011 SUMMER TROLL FISHERY DATES**

The summer troll fishing season covered in this plan is July 1 through September 20. Chinook salmon may be harvested only during open periods announced by the department. The coho salmon season may be extended no more than 10 days (September 21 through September 30) in Districts 101 through 116 (Figure 1) depending on run strength (5AAC 29.110).

## **MANAGEMENT APPROACH**

### **CHINOOK SALMON**

Most of the Chinook salmon harvested in the Alaska summer troll fishery are of wild stock origin. Hatchery stocks harvested in the fishery originate in British Columbia, Canada, Washington, and Oregon with a relatively small number from Alaskan hatcheries. As a result, the Southeast Alaska Chinook salmon harvest is managed on an annual, all-gear harvest quota established by the United States and Canada through the PSC. The ceiling is now abundance-based, with increased quotas when abundance is high, and vice versa. In addition to the harvest

ceiling of treaty fish, provisions of the treaty administered by the PSC provide for an additional harvest of Chinook salmon that have been produced in Alaskan hatcheries (add-on). The all-gear add-on is equal to the total number of Alaskan hatchery Chinook caught, minus the pre-treaty production of Chinook salmon and a risk adjustment factor of around 4,700 fish.

### **Management Objectives**

1. Achieve the allowable Chinook salmon harvest.
2. Maximize the harvest of Alaska hatchery-produced Chinook salmon.
3. Manage the fishery according to the board's Summer Salmon Troll Fishery Management Plan (5AAC 29.100)
4. Continue the coastwide natural Chinook salmon stock-rebuilding program.
5. Achieve harvest allocations among user groups as mandated by the board.
6. Minimize the incidental mortality of Chinook salmon to the extent practicable.

### **Management Methods**

Historically, the majority of the annual troll Chinook salmon harvest is taken during the general summer opening, when salmon may be taken throughout most of the Southeast Alaska/Yakutat including the outside waters of the EEZ. Unlike the spring fishery, a quota is set for management of Chinook salmon. One of the major functions of the department's troll management plan is determining when the general summer season for Chinook salmon must be closed in order to stay within the allowable harvest. Tabulating the up-to-date 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 in six areas (Figure 2). 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 and 2008, the department 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 and in 2009 and 2010, the Chinook fishery was managed in season and closed by emergency order, due to the larger Chinook quotas during those years. In 2011, the department will again manage the first Chinook opening inseason and will close the fishery by emergency order. 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 high Chinook abundance will be closed unless the department determines that less than 30% of the Chinook salmon harvest goal for the initial opening was taken in that opening (Figure 3). 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 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 Alaskan hatchery fish is calculated by expanding the number of Alaskan hatchery-produced Chinook salmon in the sampled catch by the total catch.

### **Projected 2011 Chinook Salmon Harvests and Allocations**

The Chinook salmon fisheries will be managed according to the 2008 PSTA. In addition to the pre-treaty troll fishery “base catch” of 3,700 Alaska hatchery-produced Chinook salmon, and the hatchery harvest in the winter and spring fisheries, Alaska hatcheries are projected to contribute approximately 4,700 Chinook salmon to the summer troll harvest, for a projected 2011 total of 21,800 Alaska hatchery Chinook salmon. The actual hatchery add-on will be determined inseason and finalized postseason from coded-wire-tag (CWT) estimates.

At the February 1997 and January 2006 Board of Fisheries meetings, sharing percentages were established for the recreational and commercial troll and net Chinook salmon fisheries (not including Alaska hatchery Chinook salmon). The commercial troll fishery was allocated 80% and the recreational fishery 20% of the PST quota, after subtracting 4.3% from the total for the purse seine fisheries, 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 factors (4,700 combined) are proportionally shared between the gear groups.

Allocations of this harvest quota for 2011 are as follows:

Allocations of the All-gear harvest quota for 2011 are as follows:

<b>All-gear Treaty Quota</b>	<b>Purse Seine</b>	<b>Drift Gillnet</b>	<b>Set Gillnet</b>	<b>Total Net</b>	<b>Sport</b>	<b>Troll</b>
294,800	12,676	8,549	1,000	22,225	54,515	218,060

The Chinook Technical Committee (CTC) of the PSC has determined that the Chinook salmon abundance index for Southeast Alaska for 2011 is 1.69. This abundance index equates to an all-gear quota of 294,800 Treaty Chinook salmon, which is about 73,000 fish greater than the 2010 quota. Chinook salmon returns to many west coast rivers from Oregon to Alaska remain below the high levels seen from 2003 to 2005, but several key populations are showing improvements over the returns that led to the significantly reduced allowable harvests in 2008. According to the BOF allocation plan outlined above, the troll fishery allocation of the treaty quota is 218,060 fish.

Estimated troll fishery harvests of treaty Chinook from the winter and spring troll fisheries are:

<b>Fishery</b>	<b>Total</b>	<b>Alaska Hatchery</b>	<b>Treaty Fish</b>
Winter Fishery	50,826	3,854	46,972
Spring Fishery	38,566	13,316	25,250
Pre-summer Totals	89,392	17,170	72,222

The summer troll treaty quota is calculated by adding the winter treaty harvest of 46,972 fish, the spring treaty harvest estimated at 25,250 fish, 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 quota of **141,137** treaty fish (34,143 more than 2010). In addition, under the BOF plan, 70% of the summer quota is to be harvested during the first summer opening beginning July 1. Therefore, the target harvest for the first opening will be approximately 98,796 treaty fish, plus an estimated 3% Alaska hatchery fish, or a **total first summer opening target harvest of 101,852** fish. The second Chinook opening target harvest is projected to be approximately **44,105** fish (including 42,341 treaty fish).

The department will update the preseason projection of abundance with actual fishery harvest and effort statistics immediately following the closure of the first opening. Any adjustments to the targeted all-gear harvest based on this inseason data will be made as soon as possible.

Based on past fishery performance at similar abundance levels of treaty Chinook salmon, **the department anticipates the first opening harvest target will be taken in 8 to 12 days.** However, effort and catch rates are highly variable and the projected fishery length is based on historical effort levels. If available data indicates that the catch rates are significantly different than expected, the length of the opening would be adjusted in response. Trollers are strongly encouraged to call or email the troll managers with inseason information on catch rates and effort. Closure announcements and any updates will be made via U.S. Coast Guard marine advisory broadcasts and trollers are advised to either listen to the U.S. Coast Guard Marine Advisory broadcasts daily or stay in close contact with the department or processors for any such announcements. Closure announcements will also be recorded on troll hotline numbers listed at the end of all troll news releases.

Following the closure of the initial summer Chinook salmon period, all Chinook salmon must be offloaded prior to trolling for other species.

## **COHO SALMON**

Most coho salmon harvested in the troll fishery are of Alaskan 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 26% in 2002. The 2010 Alaska hatchery contribution of 21% was just above the 1990–2010 average of 20%, and nearly identical to the 1990-2003 average of 21%.

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 catches of coho salmon in outer coastal areas generally peak during mid-July to mid-August. Catches in inside fisheries generally peak during late August to mid-September. 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.

### **Tentative 2011 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 2011 general summer troll season opens for all salmon species; the initial troll Chinook salmon opening will close when 70% of the total summer harvest target has been harvested. The first Chinook salmon retention period will be managed in season and will close by Emergency Order. The waters of frequent high Chinook salmon abundance will close following the Chinook salmon closure.
Mid- through late-July	Coho salmon run strength in Southern Southeast Alaska is assessed. Portions of Districts 101–104 may close if run strength indicates conservation concerns for coho salmon stocks near the U.S./Canada border.
July 25 or later	If the projected run size is less than 1.1 million wild coho salmon, up to a 7-day regionwide conservation closure may be implemented. The projected total season commercial harvest will be used as index of run size.
Early August	An assessment of coho run strength will determine the need for and length of a mid-August troll closure.
Mid- to late-August	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.  Following any closure of the troll fishery, the Chinook salmon fishery will reopen to take the remaining treaty Chinook salmon. A minimum closure of 2 days is required prior to the second Chinook salmon opening to allow for a fair start (5 AAC 29.100(c)(1)(B)(ii)).
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	An assessment of coho strength to determine if the troll season may be extended beyond September 20.
September 20	Established regulatory closing date of 2011 general summer troll season. All salmon must be offloaded prior to fishing in the Winter Troll Fishery, beginning October 11.

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 biologist, two troll fishery management biologists, and 12 area management biologists. Department contact information is listed at the end of this plan.

## **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 (5AAC 29.110).
3. Manage the coho salmon fisheries to achieve allocations consistent with board regulations.
4. Manage coho salmon on the U.S./Canada border to comply with provisions of the PST Agreement.

## **Management Methods**

As with Chinook salmon, the department's primary tool for inseason assessment of coho salmon catch rates is a program of dockside interviews with vessel skippers. Catches by the net fisheries are obtained from fish tickets, while the recreational catch is estimated from a creel census conducted by the Sport Fish Division. An assessment of run strength using troll catch per unit of effort (CPUE) data from the FPD program occurs in mid to late-July. Information available on individual coho salmon indicator stocks will also be considered in management actions.

Catch rates will be assessed in Southern Southeast Alaska from mid- through late-July to assess run strength of early-run coho salmon returning to systems in both Canada and the U.S., near the border. If run strength is weak, areas of Districts 101–104 may close for conservation for up to three weeks, from late July through mid-August, as per the terms of the 1999 and 2008 PST agreement.

Projected total season troll coho salmon harvests will be used as a relative index of total run size. Analysis of the FPD program has shown that the average area-wide catch-per-day for Statistical Weeks 29-31 for the years 1996 to 2001 and 2004 to 2010 is a good predictor of the wild coho salmon catch (Figure 4). If the projected overall run size is less than 1.1 million wild fish, the department will implement a 7-day conservation closure beginning sometime in late July (5AAC 29.110). The department will make this projection during the third or fourth week of July (Figure 4). The 2002 and 2003 catch and effort data will not be used for this projection because coho fishing or fish behavior patterns during those years did not reflect patterns consistent with other years. The department will continue to monitor all coho fisheries after the July assessment to determine if the number of coho salmon reaching inside areas will be adequate to provide for spawning requirements, given normal or even restricted inside fisheries. The primary abundance indicators for this assessment consist of relative harvest levels by all fisheries and, in particular, CPUE of wild fish in inside drift gillnet and sport fisheries compared to 1971–1980 levels. An assessment will be made in early August to determine when and how long to close the troll fishery for conservation and allocation purposes.

Cumulative catch-per-day of wild fish will be monitored in each of the six FPD areas (Figure 2) through August to assess run strength in each of the areas. Data will be compared with catches

and CPUE within these areas and, if necessary, the department will implement area-specific closures.

The department, in years of high abundance, may extend the troll season through September 30 in portions of Districts 101 through 116 if there are no conservation concerns. The department will consider the following data in determining if an extension is warranted:

1. Total run size projection,
2. Total harvests to date by gear by area,
3. CPUE relative to previous years by gear by area,
4. Percent of hatchery fish in the catch relative to previous years,
5. Survival projections for hatchery and wild stocks, and
6. Inseason escapement data.

The department will announce any extensions, if warranted, during the third week of September.

### **Allocation Actions**

The board 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 board stated that subsistence, personal use, and recreational harvests of coho salmon are not affected by the established allocations between commercial gear types. The board 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 (5AAC 29.100). These regulations are:

1. 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, and Juneau marine sport fishery.

If a regionwide troll closure is implemented to conserve coho salmon during late July or early August, the likelihood of a closure during mid-August to meet the allocation criteria will be reduced. 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.

## **Closed Waters**

1. In Sections 1-C, 1-E, and 1-F, salmon may be taken only as follows (Figure 5).
  - (a) Section 1-C: from August 15 through September 20.
  - (b) Section 1-E:
    - (1) In waters of W. Behm Canal within one nautical mile of the western shore of Revillagigedo Island north of the latitude of Escape Point 55°39.07'N. latitude, 131°43.08' W. longitude, excluding the waters of the Neets Bay SHA (5 AAC 33.370) from July 1 through September 20.
    - (2) All other waters from July 13 through September 20.
  - (c) Section 1-F: east of a line from the northernmost tip of Kirk Point to Mary Island Light to the southernmost tip of Cone Island, from July 13 through September 20.
  - (d) Section 1-F: east of a line from the southernmost tip of Black Island to the westernmost tip of Slate Island to the westernmost tip of White Reef to the easternmost tip of Black Rock to the northernmost tip of Kirk Point, including the waters of Boca de Quadra not closed under 5 AAC 29.150(b)(2), from August 1 through September 20.
2. In District 8 the weekly fishing periods for trolling are the same as for drift gillnetting (5 AAC 29.100(e)). The waters of District 8 closed to fishing are described by regulation in 5 AAC 29.150(i), (Figure 6).
3. In District 11 salmon may be taken only in Sections 11-C and 11-D (Figure 7).
4. In District 15 salmon may be taken only in Sections 15-A and 15-C (Figure 7).
5. In the Yakutat area, from August 7–September 20, salmon may not be taken in state waters within a portion of District 181 as described in 5 AAC 29.100(i). Based on new regulations adopted by the BOF in 2009, troll and set gillnet fishery openings are no longer coupled from August 7–September 20 in State waters of the Yakutat area. Troll openings will be established independently of set gillnet openings (Figure 8).

## **OPEN AREAS DURING 2011 GENERAL SUMMER TROLL SEASON**

Salmon trolling is permitted in all areas during the first Chinook salmon retention period of the 2011 general summer season except for those waters described in 5AAC 29.100 and the closed waters listed in 5AAC 29.150. In addition, during subsequent Chinook salmon retention periods, waters designated as frequent high Chinook salmon abundance (5AAC 29.025) will be closed as necessary. During the 2006 Board of Fisheries meeting in January, the northern boundary of the high Chinook salmon abundance area along Yakobi Island was changed and moved approximately 1/3 nautical miles south of the previous location. The new northern boundary is now at 58°05.00' N. latitude (5AAC 29.025(a)(3)).

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

For information on Southeast Alaska Groundfish regulations, refer to the 2010–2011 Statewide Commercial Groundfish Fishing Regulations booklet available at all Southeast ADF&G area offices. Information on groundfish bycatch allowances in the troll fishery can be found in the “Groundfish Bycatch in the 2011 Salmon Troll Fishery” news release issued on January 3, 2011.

In the state waters portion of the Eastern Gulf of Alaska, all groundfish incidentally taken by hand and power troll gear operated to take salmon consistent with applicable laws and regulations are legally taken and possessed with the following restrictions:

- The bycatch allowance for demersal shelf rockfish (DSR) is limited to 10% of the round weight of all salmon on board the vessel. All DSR in excess of 10% 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)]. The seven species of rockfish in the DSR assemblage are yelloweye, quillback, canary, rosethorn, copper, china, and tiger rockfish. DSR bycatch overages must be reported on fish tickets but may be kept for a person’s own use. The DSR bycatch allowance in federal waters is 10% as well. DSR overage from federal waters may not be sold or enter commerce.
- Black, blue, and dark rockfish are state managed species and may all be retained as incidental bycatch in both state and federal waters. In federal waters, the rockfish bycatch allowance for species other than DSR, black, blue, and dark rockfish is 5% in aggregate.
- The bycatch allowance for spiny dogfish in state waters is limited to 35%.
- Lingcod may be taken as bycatch in the commercial salmon troll fishery only from May 16 through November 30 [5AAC 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 bycatch is closed in the Icy Bay Subdistrict (IBS) for the remainder of 2011.
- Lingcod bycatch in the Northern Southeast Outside (NSEO) Section is limited to 5% (round weight) of the round weight of salmon on board. Lingcod bycatch in the East Yakutat (EYKT) Section is limited to 20%. Lingcod bycatch in the Central Southeast Outside (CSEO) Section, Southern Southeast Outer Coast (SSEOC) Sector, Northern Southeast Inside (NSEI) Subdistrict, and Southern Southeast Internal Waters (SSEIW) Sector may be retained in unlimited amounts. Management areas will remain open to lingcod bycatch until area allocations are taken or November 30, whichever occurs first. Lingcod bycatch allowances are set by the state and are consistent throughout a management area in both state and federal waters.
- The retention of lingcod is prohibited in the troll fishery in the waters of Sitka Sound [5AAC 28.150(a)]. The Sitka Sound closure area 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.

- Lingcod and other groundfish 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. [5AAC 28.150(c)]

Lingcod harvest allocations for the troll fishery are set by Lingcod Management Area (Figure 9) and area closures will occur as allocations are taken. In-season closures will be announced by news release and marine radio broadcast by the U.S. Coast Guard and National Weather Service. 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.

Vessels trolling for salmon in the exclusive economic zone (EEZ) in the Gulf of Alaska that retain groundfish bycatch must have a Federal Fisheries Permit (FFP) endorsed for troll gear. For information on FFP requirements and bycatch allowances in federal waters contact the National Marine Fisheries Service at 907-586-7225 (Juneau), 907-747-6940 (Sitka), 907-772-2285 (Petersburg), or 907-247-5804 (Ketchikan).

### **Other regulations:**

Halibut incidentally taken during an open commercial halibut season by power and hand troll gear being operated for salmon consistent with applicable state laws and regulations are legally taken and possessed [5AAC 28.133 (c)]. Commercial halibut may be legally retained only by IFQ permit holders during the open season for halibut, March 12–November 18, 2011. Trollers making an IFQ halibut landing of 500 lbs or less of IFQ weight as determined pursuant to 50 CFR 679.42(h) are exempted from the 3 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 a fish ticket using the CFEC salmon permit. For information on regulations and landing requirements for the federal IFQ halibut fishery contact the National Marine Fisheries Service.

Trollers are allowed to longline for groundfish and troll for salmon on the same trip as long as fish are not onboard the vessel in an area closed to commercial fishing or closed to retention of that species and the fisher has both a commercial salmon permit and the appropriate commercial longline permit.

A vessel may not target groundfish with dinglebar troll or mechanical jig gear if they have commercial caught salmon 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 [5AAC 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 [5AAC 28.135 (c)].



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

1. Sport fishing is allowed from a registered commercial salmon troll vessel (5AAC 47.041 (a)).
2. If sport fishing in **waters closed** to commercial trolling, the dorsal fin must be removed immediately from any salmon brought onboard the vessel (5AAC 47.041(c)). This regulation also applies when a person is sport fishing for a **species closed** to commercial trolling.
3. Sport fishing from a commercially licensed vessel, while commercially caught salmon are in possession, is illegal in waters closed to commercial salmon fishing (5AAC 47.041(d)). No person may possess sport-caught halibut aboard a vessel when other fish or shellfish on the vessel are destined for sale, trade or barter [5 AAC 75.995(8)].
4. A vessel registered for commercial trolling may also be registered as a charter vessel, though a vessel may not be used for both activities on the same day (5AAC 75.995 (8)). Sport-caught fish may not be sold.
5. A troll gurdy may NOT be used in conjunction with a fishing rod while fishing commercially but may be legally used as a downrigger to *sport fish* from a hand or power troll vessel (5AAC 29.120 (e)).

These regulations can be found in the 2011 Sport Fishing regulation booklet.

## **REGIONAL AQUACULTURE TERMINAL HARVEST AREAS**

Terminal harvest areas (THAs) are described in the Southeast Alaska and Yakutat Commercial Salmon and Miscellaneous Finfish Regulations book. Hidden Falls, Neets Bay, Anita Bay, Deep Inlet, and Nakat Inlet THAs will be open to the harvest of all salmon species unless closed by emergency order. Trollers are requested to consult the appropriate terminal harvest area News Releases or contact any department office for the exact harvest schedules for each THA.

### **SITKA SOUND AND NEETS BAY CHUM SALMON PLANS FOR 2011**

#### **Sitka Sound**

NSRAA has projected a return of approximately 1,060,000 chum salmon to the Deep Inlet THA and Medvejie Hatchery in 2011, with approximately 880,000 chum salmon available for common property fisheries. Compared to 2010, this projected return is smaller by 18,000 fish, but will have 5,000 more fish available for common property harvest. The Deep Inlet THA rotational fishing schedule began on May 29 to intercept Medvejie hatchery Chinook salmon. The THA is open to trolling one day per week, each Saturday, between May 29 and August 6. The department issued a news release on April 8, describing common property net and troll fisheries in the Deep Inlet THA.

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 troll coho closure in August. During the coho closure, trollers may not have coho salmon onboard while fishing for chum salmon (5 AAC 29.112).

## **Neets Bay**

The Neets Bay THA has been closed to trolling since noon on June 28 and may remain closed throughout the summer season. SSRAA is expecting approximately 1,169,000 summer chum salmon to return to the Neets Bay THA, which is 23% more than the 894,400 summer chum that were projected to return in 2010. Trollers may target Neets Bay chum salmon outside the THA in West Behm Canal when those waters are open to trolling (Figure 5). SSRAA will monitor troll harvest and effort on a daily basis and a portion of the THA may open to trolling at a later time.

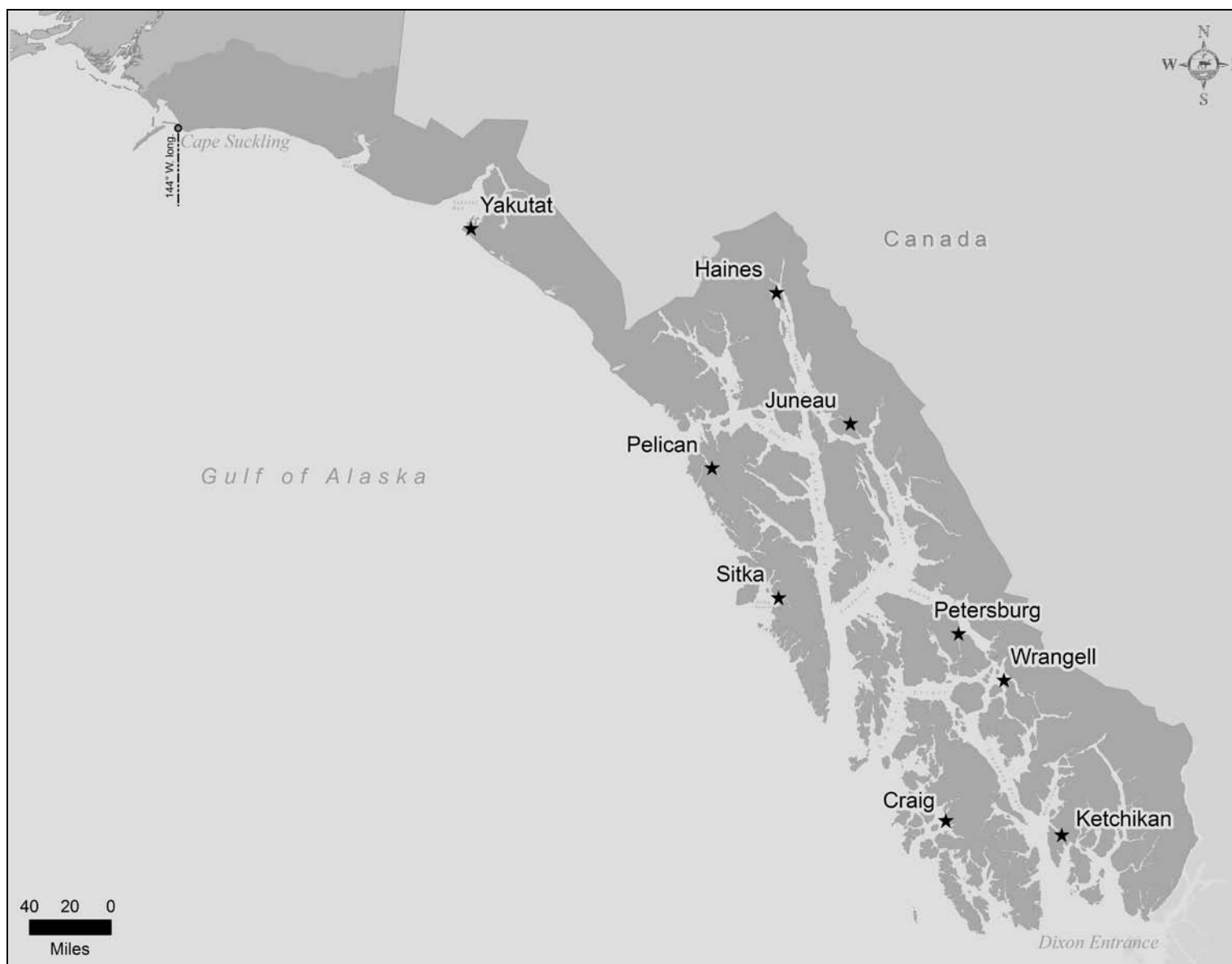


Figure 1.—Southeast Alaska commercial troll fishing area, Cape Suckling to Dixon Entrance.

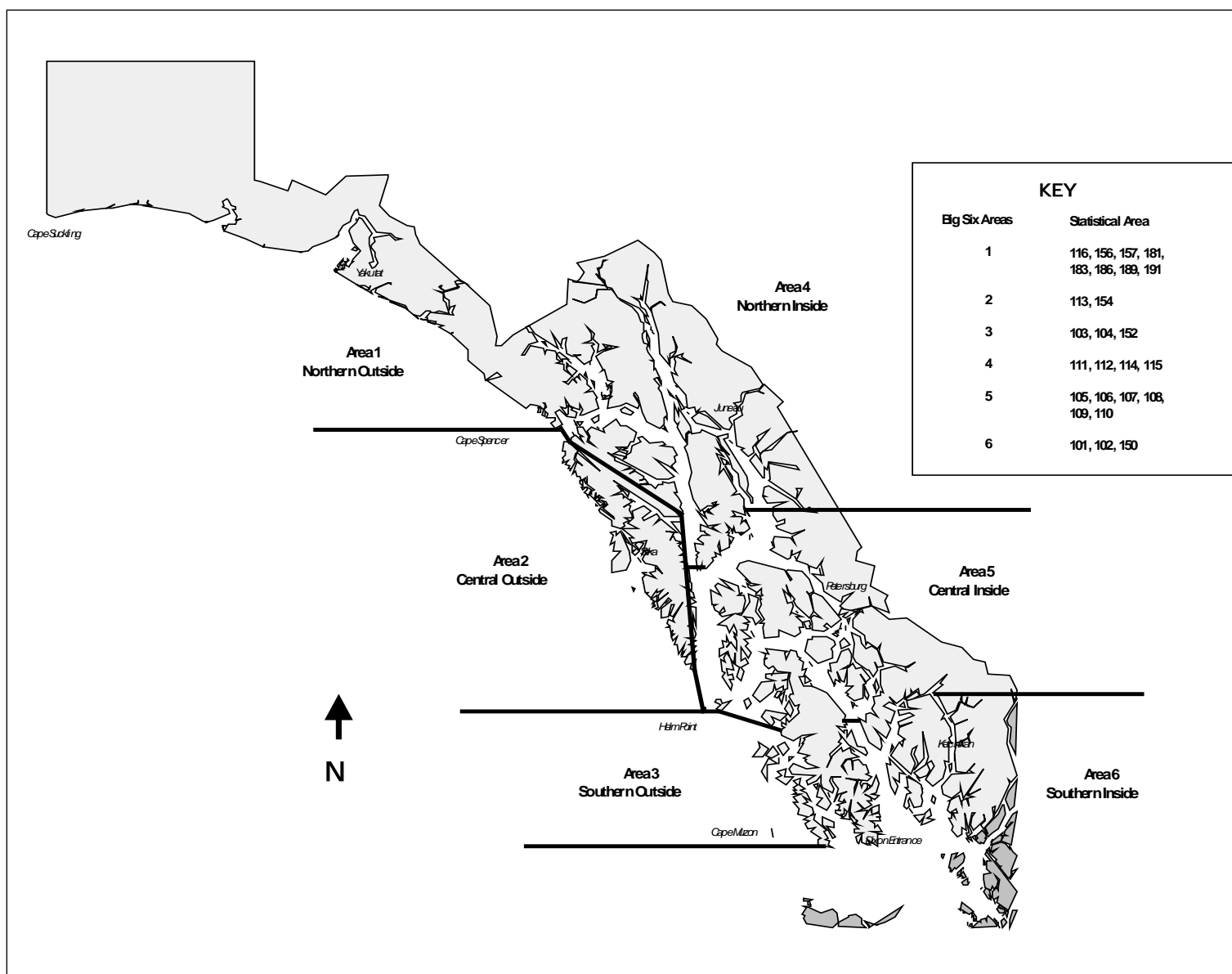


Figure 2.—Fisheries Performance Data program reporting areas in Southeast Alaska.

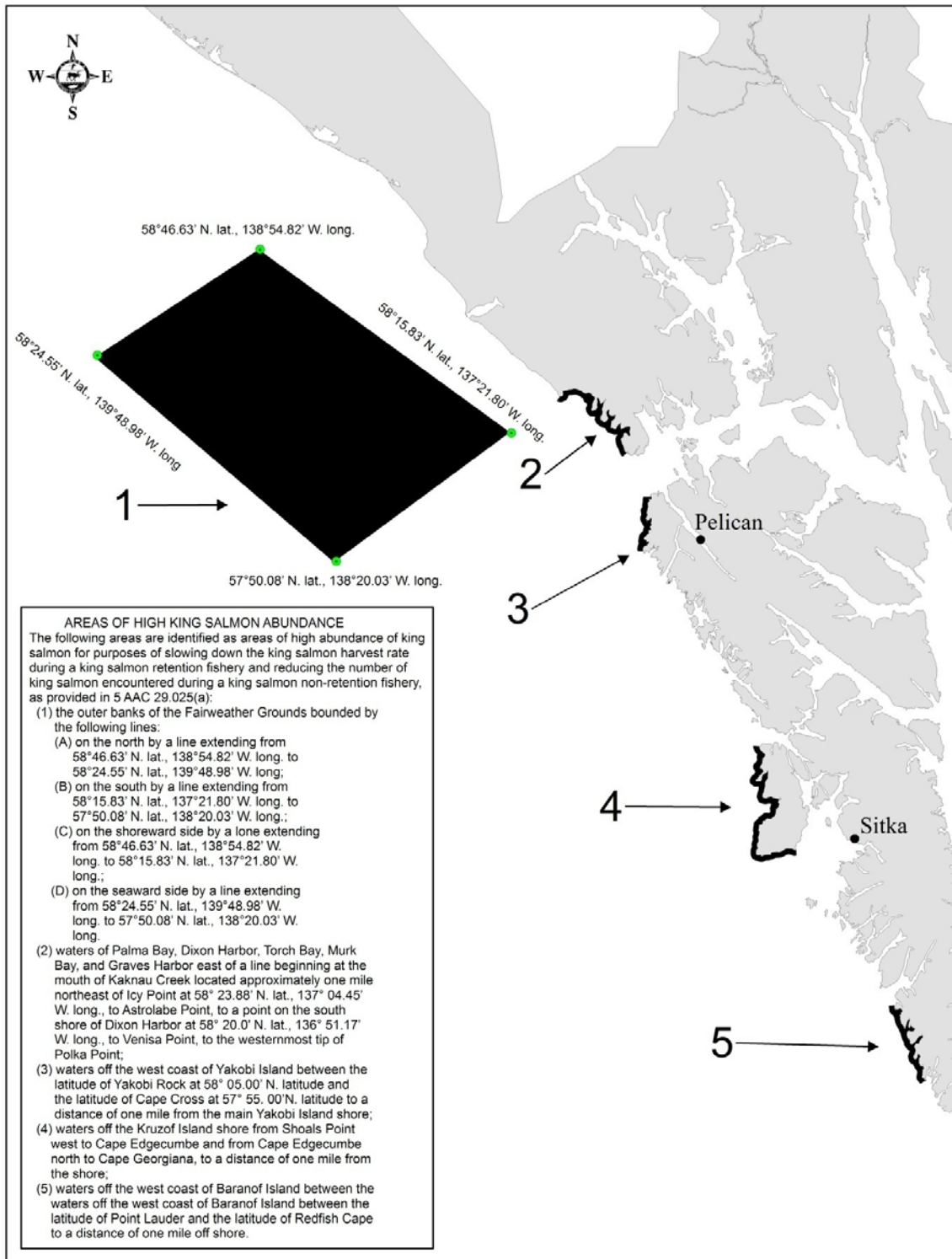


Figure 3.—Southeast Alaska areas closed to trolling for all species following the initial Chinook salmon opening in the Southeast Alaska summer troll season.

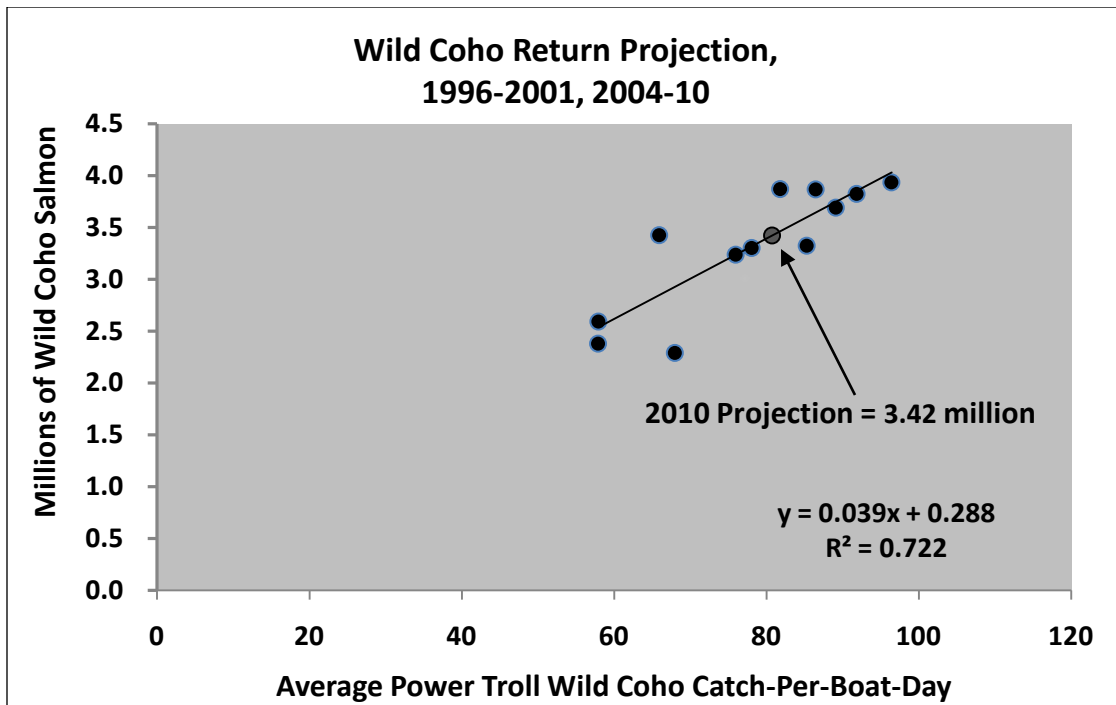


Figure 4.—The regression model that is used in season to predict the wild Southeast Alaska coho salmon return.

*Note:* Y axis = Region total commercial wild coho salmon return prediction.

X axis = Troll fishery average power troll wild coho catch per boat day for statistical Weeks 29–31 (July 11–31), which is calculated by adding the average daily catch rate for boats that make a landing in week 29 (July 11–17), week 30 (July 18–24), and week 31 (July 25–31).

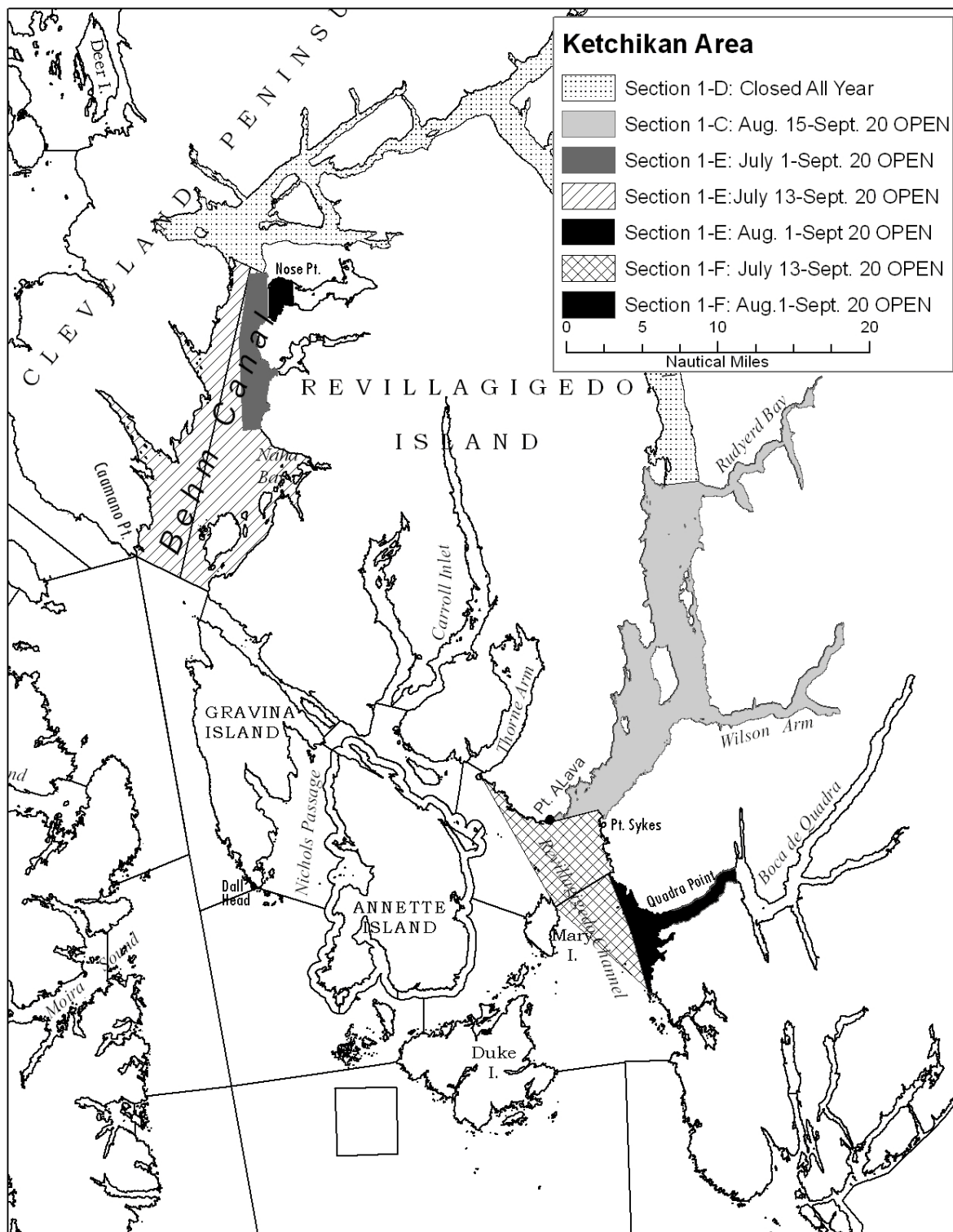


Figure 5.—Ketchikan area general summer trolling areas and seasons.

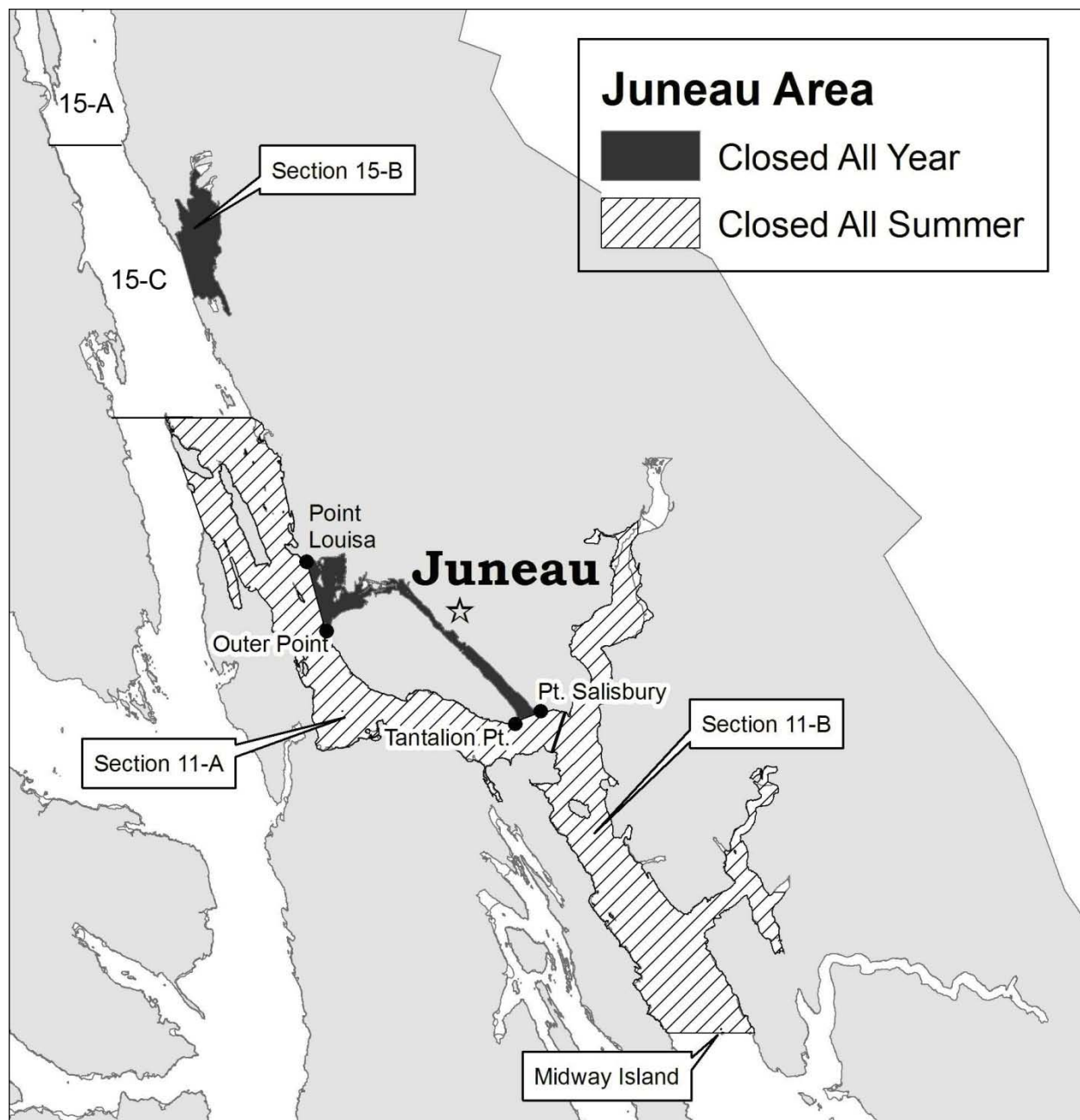
*Note:* This map is for general information only and does not exempt trollers from provisions in 5 AAC 29.150 (CLOSED WATERS) or Emergency Orders issued by the Department of Fish and Game. The general summer troll fishing season applies to those areas not specified in the key or in 5 AAC 29.150.



Figure 6.—District 8 general summer troll closed waters.

*Note:* This map is for general information only and does not exempt trollers from provisions in (5 AAC 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 5 AAC 29.150





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Figure 7.—Juneau area general summer trolling areas and seasons.

*Note:* This map is for general information only and does not exempt trollers from provisions in (5 AAC 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 5 AAC 29.150.

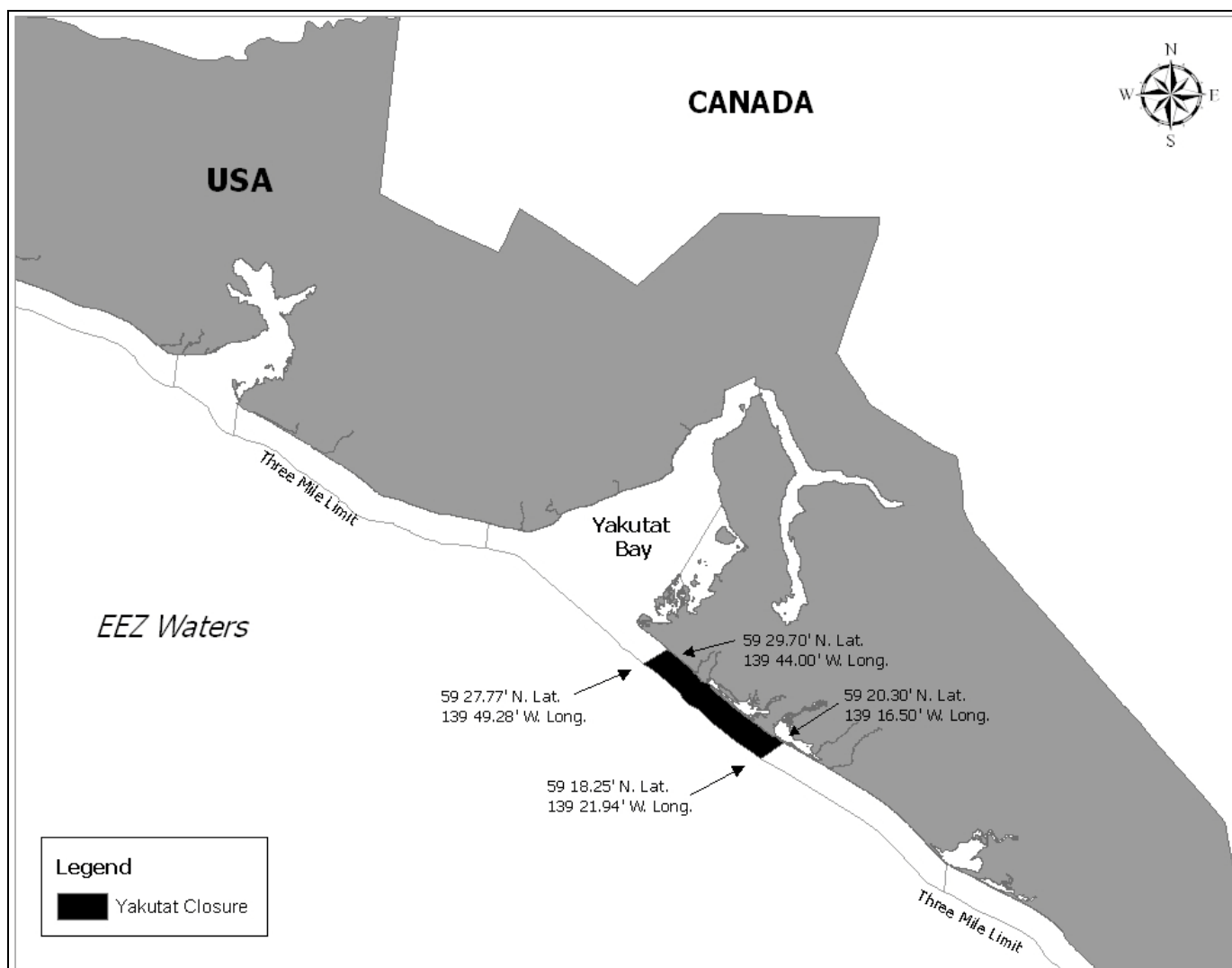


Figure 8.—Trolling times and areas for the Yakutat area, beginning August 7.

*Note:* This map is for general information only and does not exempt trollers from provisions in 5 AAC 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 5 AAC 29.150.

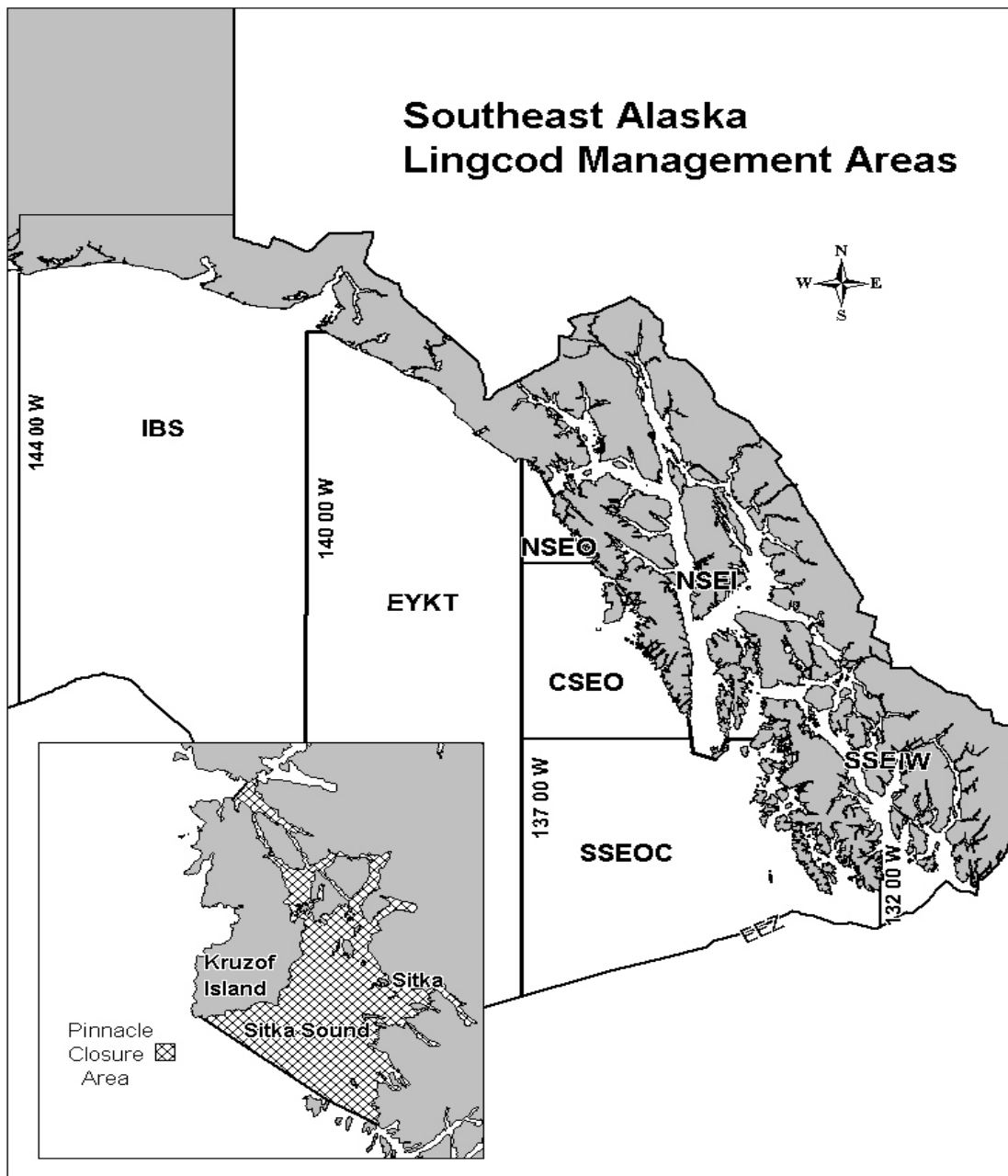


Figure 9.—Southeast Alaska lingcod management areas and Sitka area closed waters.

## 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:**

[www.cf.adfg.state.ak.us/region1/finfish/salmon/troll/trolinfo.php](http://www.cf.adfg.state.ak.us/region1/finfish/salmon/troll/trolinfo.php)