

**Fishery Management Report No. 11-02**

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**Fishery Management Plan for the State-Waters Pacific  
Cod Season in the Kodiak Registration Area, 2011**

by

**Nicholas H. Sagalkin**

January 2011

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Alaska Department of Fish and Game

Divisions of Sport Fish and Commercial Fisheries



## Symbols and Abbreviations

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<b>Weights and measures (metric)</b>		<b>General</b>		<b>Mathematics, statistics</b>	
centimeter	cm	Alaska Administrative Code	AAC	<i>all standard mathematical signs, symbols and abbreviations</i>	
deciliter	dL	all commonly accepted abbreviations	e.g., Mr., Mrs., AM, PM, etc.	alternate hypothesis	$H_A$
gram	g	all commonly accepted professional titles	e.g., Dr., Ph.D., R.N., etc.	base of natural logarithm	$e$
hectare	ha	at	@	catch per unit effort	CPUE
kilogram	kg	compass directions:		coefficient of variation	CV
kilometer	km	east	E	common test statistics	(F, t, $\chi^2$ , etc.)
liter	L	north	N	confidence interval	CI
meter	m	south	S	correlation coefficient	
milliliter	mL	west	W	(multiple)	R
millimeter	mm	copyright	©	correlation coefficient (simple)	r
		corporate suffixes:		covariance	cov
<b>Weights and measures (English)</b>		Company	Co.	degree (angular)	$^\circ$
cubic feet per second	ft <sup>3</sup> /s	Corporation	Corp.	degrees of freedom	df
foot	ft	Incorporated	Inc.	expected value	$E$
gallon	gal	Limited	Ltd.	greater than	>
inch	in	District of Columbia	D.C.	greater than or equal to	≥
mile	mi	et alii (and others)	et al.	harvest per unit effort	HPUE
nautical mile	nmi	et cetera (and so forth)	etc.	less than	<
ounce	oz	exempli gratia	e.g.	less than or equal to	≤
pound	lb	(for example)		logarithm (natural)	ln
quart	qt	Federal Information Code	FIC	logarithm (base 10)	log
yard	yd	id est (that is)	i.e.	logarithm (specify base)	log <sub>2</sub> , etc.
		latitude or longitude	lat. or long.	minute (angular)	'
<b>Time and temperature</b>		monetary symbols (U.S.)	\$, ¢	not significant	NS
day	d	months (tables and figures): first three letters	Jan, ..., Dec	null hypothesis	$H_0$
degrees Celsius	°C	registered trademark	®	percent	%
degrees Fahrenheit	°F	trademark	™	probability	P
degrees kelvin	K	United States (adjective)	U.S.	probability of a type I error (rejection of the null hypothesis when true)	$\alpha$
hour	h	United States of America (noun)	USA	probability of a type II error (acceptance of the null hypothesis when false)	$\beta$
minute	min	U.S.C.	United States Code	second (angular)	"
second	s	U.S. state	use two-letter abbreviations (e.g., AK, WA)	standard deviation	SD
<b>Physics and chemistry</b>				standard error	SE
all atomic symbols				variance	
alternating current	AC			population sample	Var
ampere	A			sample	var
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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## ABSTRACT

The Kodiak Area state-waters Pacific cod *Gadus macrocephalus* season is scheduled to open 7 days after the closure of the federal/parallel Central Gulf of Alaska Pacific cod season. Legal gear types for the state-waters season are pots, mechanical jigging machines, and hand troll gear. Gear limits are 60 pots (buoy tags required) or 5 jigging machines. The guideline harvest level (GHL) for the 2011 state-waters season is 14.8 million pounds. The GHL is split evenly between vessels using pot and jig gear (50%); however, vessels over 58 feet using pot gear are capped at 25% of the total GHL prior to September 1. Managing the fishery close to the GHL is dependent upon the amount of communication between the Alaska Department of Fish and Game (ADF&G) and the fishing fleet. In the absence of information, ADF&G makes conservative estimates of season length. This fishery management plan summarizes regulations, reporting requirements, and anticipated inseason management actions necessary to prosecute the state-waters Pacific cod season in Kodiak Area.

Key words: Pacific cod, *Gadus macrocephalus*, Kodiak Area, harvest strategy, regulations, jigging machine, pot, guideline harvest level

## INTRODUCTION

### AREA DESCRIPTION

The Kodiak groundfish registration area consists of all waters south of the latitude of Cape Douglas (58°51.10' N lat), north of 55°30' N lat, west of the 149° W long, and east of a line extending south from the southern entrance of Imuya Bay near Kilokak Rocks (156°20.22' W long; Figure 1).

### OVERVIEW

There are two Pacific cod *Gadus macrocephalus* fisheries that occur inside state waters of the Kodiak Area. During the federal Central Gulf of Alaska (CGOA) Pacific cod fishery (Area 620 and 630), the state opens a concurrent “parallel” season inside state waters. The parallel Pacific cod season is separate from the state-waters Pacific cod season that occurs after the closure of the federal/parallel CGOA Pacific cod fishery. More information regarding the federal Pacific cod fishery can be obtained from National Marine Fisheries Service (NMFS; <http://www.fakr.noaa.gov>).

In 1996, the Alaska Board of Fisheries (BOF) adopted state-waters Pacific cod season management plans in five groundfish areas: Prince William Sound, Cook Inlet, Kodiak, Chignik, and the South Alaska Peninsula (Sagalkin et al. 2010). Legal gear types during the Kodiak, Chignik, and South Alaska Peninsula state-waters season are limited to pot gear, mechanical jigging machines, and hand troll gear types. The Kodiak Area Pacific cod management plan is contained in 5 AAC 28.467 on pages 45–47 of the 2010–2011 Statewide Commercial Groundfish Fishing Regulations.

## STATE-WATERS PACIFIC COD SEASON

The Kodiak Area state-waters Pacific cod season will open 7 days after the closure of the CGOA federal Pacific cod season. The Kodiak Area state-waters Pacific cod season is exclusive registration (5 AAC 28.406). A vessel validly registered for the state-waters Pacific cod season in the Kodiak Area may not be used to take Pacific cod in any other state-waters exclusive or superexclusive Pacific cod registration area. Exclusive area designations may be relaxed in the Kodiak Area after October 30 if a significant portion of the GHL remains unharvested.

- Operators must possess a 2011 CFEC interim use permit card for the appropriate gear type for miscellaneous finfish.
- State-waters Pacific cod registrations may be obtained at the ADF&G offices in Kodiak and Dutch Harbor, or via FAX to the Kodiak office (907) 486-1824. Please note that a Westward Region Parallel Groundfish Registration is a separate registration.
- Vessel operators may not use pot and jig gear at the same time (5 AAC 28.467 (e) (3)). However, operators may change gear registration by written request, in person, or by FAX to the Kodiak ADF&G office.
- Vessel operators may operate both hand troll and mechanical jigging machine gear at the same time. Separate fish tickets are required for each gear type at the time of landing.
- The GHL is allocated 50% for jig gear and 50% for pot gear. If the jig gear GHL is not harvested before September 1, the season may be opened to pot and jig gear by emergency order (5 AAC 28.467 (c) (2)).
- Harvest by pot vessels over 58 feet is capped at 25% of the total GHL (1/2 of the pot allocation) until September 1 (5 AAC 28.467 (c) (4)).
- If a significant portion of the state-waters season GHL remains to be harvested after September 1, limits on the number of pots and mechanical jigging machine gear may be lifted (5 AAC 28.467 (g) (1)).
- No more than 60 groundfish pots may be operated from a vessel, unless the pot limit has been rescinded by emergency order on or after September 1. Buoy tags are required when the 60 pot limit is in effect. Tags are available from the Kodiak office and Dutch Harbor office (5 AAC 28.467 (e) (3) and 5 AAC 28.050 (f)).
- No more than 5 hand troll lines or mechanical jigging machines may be operated from a vessel unless the jigging machine limit has been rescinded on or after September 1 (5 AAC 28.467 (e) (3)).
- Tenders for Pacific cod must obtain a tender registration prior to their operation in the state-waters season. Tenders may also actively fish with either gear type. In this scenario, tenders must register to fish and register to tender. Separate fish tickets must be filled out for all fish landed by the tender vessel and accepted as deliveries from other vessels (5 AAC 28.033).
- Vessels may be registered to use jig gear in the state-waters Pacific cod season and simultaneously register for Dungeness crab when the fisheries are open.

## **VOLUNTEER CATCH REPORTING**

ADF&G encourages fishery participants to provide volunteer catch reports to increase the amount of information used to manage this fishery. In recent years, the pot fleet has harvested the quota quickly.

ADF&G will primarily manage the Kodiak Area state-waters Pacific cod season from inseason catch reports provided by permit holders. Inseason management will allow for real-time fishery decisions and the ability to consider changes in effort, fleet behavior, and weather. ADF&G will try to provide permit holders sufficient time to configure gear for storage or to place gear

onboard the vessel before a closure; however, the potential exists for a short advance-notice closure. Managing the fishery close to the GHL is dependent upon accurate inseason catch reporting from the fishing fleet. In the absence of information, ADF&G makes conservative estimates of season length.

Catch reports will be taken using satellite dispatch system and e-mail. **The ADF&G office uses Matrix<sup>1</sup> dispatch services; the office dispatch number is 7894.** Vessel operators will be issued a reporting worksheet during registration to participate in inseason reporting. Operators will be asked during the registration process which method they will use to submit daily reports.

Reports will initially be taken daily from 8:00 to 8:30 AM.

Current fishery status will be available on the ADF&G recorded message phone at 486-5176. Messages on the recorded message phone will be updated daily after the morning reports. Updates, changes to the reporting schedule, and closure announcements will be distributed via e-mail, FAX, and passed along to all participating processors.

## **2011 GUIDELINE HARVEST LEVEL**

The guideline harvest level for the state-waters Pacific cod season is determined annually as a percentage of the Acceptable Biological Catch (ABC) for the CGOA. The ABC is submitted annually by the Plan Team for the Groundfish Fisheries of the Gulf of Alaska to the North Pacific Fishery Management Council (NPFMC). Additional information on the annual ABC derivation can be found in the Stock Assessment and Fishery Evaluation (SAFE) report published annually by NMFS (NMFS 2009).

The percentage of the ABC for the CGOA that is allocated to the Kodiak Area state-waters Pacific cod season is 12.5% (5 AAC 28.467 (e)(1) and (e)(2)). The 2011 GHL for the Kodiak Area state-waters Pacific cod fishery is 14.8 million pounds.

## **BYCATCH**

- Lingcod may be retained from July 1 to December 31. Retained lingcod must be at least 35” from tip of the snout to tip of the tail, or 28” from the front of the dorsal fin to the tip of the tail. Lingcod must not be mutilated or altered in such a manner that prevents determination of the minimum size. Lingcod may be retained up to 5% of Pacific cod catch by weight.
- Skates may be retained as bycatch up to 20% of Pacific cod catch by weight.
- Black rockfish may be retained up to 5% of Pacific cod catch by weight.
- Bycatch of octopus may be retained as bycatch up to 20% of the Pacific cod catch by weight and the octopus bycatch must be landed on the miscellaneous finfish card.
- The state adopts the NMFS bycatch percentages for all other groundfish species in state waters. Permissible bycatch percentages vary under the federal system, so it is advisable to check with NMFS management for the status of all species except black and dark rockfish and lingcod (contacts listed in Appendix A1).

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<sup>1</sup> Use of trade names does not constitute an endorsement from ADF&G.

## **INSEASON ANNOUNCEMENTS**

The state-waters Pacific cod season will be managed inseason from information gathered from volunteer daily catch reports, weekly processor reports, dockside sampling information, and fish ticket data. All inseason management actions pertaining to regulatory changes in the state-waters season will be published in news releases and emergency orders. Weekly harvest updates will be available each Monday during the state-waters season. News releases, weekly catch updates, and emergency orders are

- available in the shellfish and groundfish management office, ADF&G office building 2<sup>nd</sup> floor, 211 Mission Road, Kodiak
- distributed to a list of recipients maintained by management staff in Kodiak via FAX, e-mail, and standard mail
- posted on the ADF&G website at:  
[http://www.cf.adfg.state.ak.us/region4/finfish/grndfish/grndhom4\\_kod.php](http://www.cf.adfg.state.ak.us/region4/finfish/grndfish/grndhom4_kod.php)

## **LEGAL GEAR**

Lawful gear types are defined under 5 AAC 28.050 *Lawful Gear for Groundfish* and contain the following:

All commercial groundfish pot buoys must be marked with the permanent ADF&G vessel license plate number of the vessel operating the gear. This number must include leading zeros as applicable.

Tunnel eye openings of groundfish pots must have a perimeter 36 inches or less. This opening may be achieved for pots with larger tunnel eye openings by placing rigid excluder bars across the tunnel eye opening.

Some additional gear regulations are referenced in the following table:

Table 1.–Some gear regulations for the Kodiak state-waters Pacific cod state season.

<b>Gear</b>		<b>Regulations</b>
Pot	60 pots	5 AAC 39.105 (11) Types of Legal Gear
	Escape mechanism	5 AAC 39.145 (1) (2) Escape Mechanisms for Shellfish and Bottomfish Pots
	Buoy tags	5 AAC 28.467 Kodiak Pacific cod Management Plan 5 AAC 28.050 (1) (2) Lawful gear for groundfish
Jig	5 mechanical jigging machines	5 AAC 39.105 (25) Types of Legal Gear
	5 lines per machine	5 AAC 28.467 (e) (3) Kodiak Pacific cod Management Plan
	30 hooks per line	5 AAC 28.430 (f) Lawful Gear for Kodiak Area

## **BUOY TAGS**

Each pot used to fish for Pacific cod in Kodiak Area state-waters season is required to be tagged with an ADF&G supplied buoy tag (5 AAC 28.050). Buoy tags are available prior to the fishing season in Kodiak and Dutch Harbor offices. Each tag should be placed on the main buoy or trailer buoy. If tags are lost, replacement tags are available at the offices listed above. If pot limits are relaxed on September 1, the requirement for buoy tags is eliminated.

## **POT STORAGE**

Groundfish pots may be stored with all bait and bait containers removed and doors secured fully open on rectangular pots and with the doors not secured closed for pyramid and conical pots in water 25 fathoms or less (5 AAC 28.432).

Vessels that participate in the federal/parallel Pacific cod season prior to the opening of the Kodiak state-waters Pacific cod season may leave their pots unbaited, doors open, and deeper than 25 fathoms for the 7 days between seasons. No more than 60 pots may be in operation at the time of the state-waters Pacific cod season opening and those 60 pots must have a buoy tag attached. Gear in excess of the 60-pot limit may be in shallow water storage (less than 25 fathoms) or on the vessel for seven days after the opening of the state-waters season. After the seven-day period beyond the state-waters season opening, no more than 60 pots may be in the water or on the vessel (5 AAC 28.467 (e) (3) (D)).

## **LANDING REQUIREMENTS**

The landing requirements are specified in 5 AAC 28.471 (1) and (2). After 48 hours from the time of closure of the state-waters Pacific cod season, vessels that have participated in the fishery may not have Pacific cod onboard unless cod has been designated as bycatch for another fishery and the amount onboard does not exceed the bycatch percentage limit. If the vessel has been delayed due to extraordinary circumstances beyond the control of the vessel operator, and the

vessel has contacted ADF&G, allowances may be made for additional time on a case by case basis. Vessels requesting additional time to arrive at their delivery location must have departed the fishing grounds immediately after the closure and proceeded directly to their port of delivery or processing location. At the time of closure all gear must comply with applicable state and federal storage requirements (5 AAC 28.432).

## **REFERENCES CITED**

- NMFS (National Marine Fisheries Service). 2009. Stock Assessment and fishery evaluation (SAFE) report for the groundfish resources of the GOA Region, 2009. NPFMC Plan Team for the Groundfish Fisheries of the GOA. National Marine Fisheries Service. Alaska Regional Office, Juneau.
- Sagalkin, N. H., K. Phillips, and P. Converse . 2010. Annual management report for the groundfish fisheries in the Kodiak, Chignik, and South Alaska Peninsula Management Areas, 2009. Alaska Department of Fish and Game, Fishery Management Report No. 10-33, Anchorage.

# FIGURE

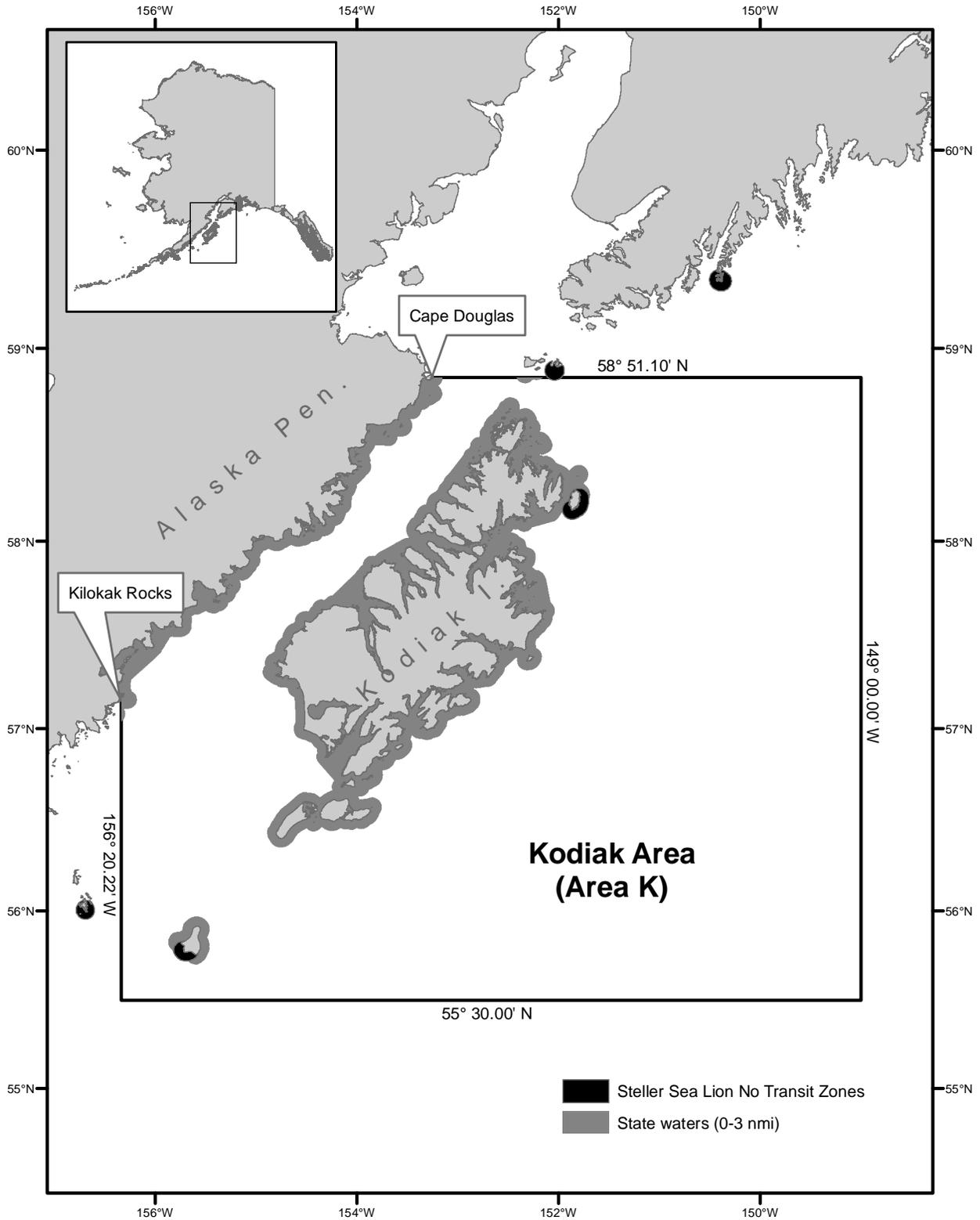


Figure 1.—Kodiak Area for state-waters Pacific cod.

## **APPENDIX A. LISTING OF CONTACT PERSONS**

**Alaska Department of Fish and Game web site: <http://www.cf.adfg.state.ak.us/region4/rgn4home.php>**

Kodiak ADF&G  
211 Mission Road  
Kodiak, Alaska 99615  
(907) 486-1840  
FAX: (907) 486-1824

Dutch Harbor ADF&G  
PO Box 920587  
Dutch Harbor, AK 99692-0587  
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Kodiak, Chignik, Alaska Peninsula Area Shellfish/Groundfish Biologist

Mark Stichert  
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Kodiak, Chignik, Alaska Peninsula Asst. Area Shellfish/Groundfish Biologist

**Division of Alaska Wildlife Troopers**

**web site: <http://www.dps.state.ak.us/AWT/>**

2921 A Mill Bay Road  
Kodiak, Alaska 99615  
(907) 486-4762  
FAX: (907) 486-5480

**National Marine Fisheries Service**

**web site: <http://www.fakr.noaa.gov/>**

P. O. Box 1638  
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