

**Regional Operational Plan CF.4K.2015.01**

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**Chignik Lagoon Sockeye Salmon Test Fishery  
Operational Plan, 2015–2016**

by

**Dawn M. Wilburn**

March 2015

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Alaska Department of Fish and Game

Divisions of Sport Fish and 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, and Special Publications. 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.

<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	$\geq$
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	$\leq$
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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Dawn M. Wilburn

Alaska Department of Fish and Game, Division of Commercial Fisheries, Kodiak

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Division of Commercial Fisheries

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**SIGNATURE PAGE**

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**Approval**

Title	Name	Signature	Date
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## **ABSTRACT**

The Alaska Department of Fish and Game (AGF&G) annually conducts test fisheries in Chignik Lagoon primarily to determine the relative abundance of Chignik River-bound sockeye salmon *Oncorhynchus nerka* prior to the first commercial salmon fishery in the Chignik Management Area (CMA). To conduct test fisheries, the department charters interested local fishing vessels from the CMA and follows established test fishing protocols. This report documents the purpose of test fishing in Chignik Lagoon and summarizes the specific procedures for the Chignik test fishery program.

Key words: Chignik Management Area, CMA, Chignik Lagoon, test fishery, sockeye salmon, salmon management, *Oncorhynchus nerka*

## **INTRODUCTION**

Commercial salmon fishing periods in the Chignik Management Area (CMA) are primarily based on achieving Chignik River sockeye salmon *Oncorhynchus nerka* escapement objectives throughout the season. Sockeye salmon return to the Chignik River in two distinct, but overlapping runs; the early run returns primarily to Black Lake during June, and the late run returns primarily to Chignik Lake during July and August.

To ensure the escapement objectives for both runs are achieved, the Alaska Department of Fish and Game (ADF&G) uses the Chignik River weir to enumerate escapement in addition to assessing run strength using commercial catch data. When catch data are not available due to commercial fishery closures, test fisheries are conducted to evaluate inseason run strength in the Chignik Lagoon.

Under current regulation, 5 AAC 15.357 (b)(1), the CMA may open to commercial salmon fishing when there is an expectation that 20,000 sockeye salmon will escape into the Chignik River. Based on this regulation, the department conducts a test fishery in Chignik Lagoon during early June to assess the early-season run strength of the sockeye salmon returning to the Chignik River.

## **GOALS**

The CMA test fishery program has the following goals:

- 1) Obtain relative abundance estimates of sockeye salmon in Chignik Lagoon, and
- 2) Provide partial funding for the management of the Chignik Management Area salmon fishery.

## **2015 TEST FISHERY**

### **ESTABLISHMENT OF CHARTER VESSEL SELECTION LIST**

To conduct salmon test fisheries in the Chignik Management Area, the department charters local commercial fishing vessels. A list of vessel operators interested in participating in the program will be established prior to all test fisheries. The initial enrollment period will open on approximately May 15 and will close just before the first test fishing date. Interested vessel operators can enroll by calling the Chignik weir at (907)845-2243 during this period. At the close of this initial enrollment period, the department will perform a random drawing to determine the sequence of the participating vessel operators. This sequential list will be maintained throughout the season. Additional vessel operators may enroll after the initial enrollment and drawing; however, these operators will be placed at the end of the established list in the order they are

received. If a vessel operator is unable to participate when their opportunity arises, the department will contact the next vessel operator on the established list. The vessel operator that was unable to participate will be reassigned to the end of the established list.

## **REQUIREMENTS FOR CHARTER CONTRACT**

Fishermen wishing to participate in the department's test fishing program must agree to the terms of the department's short-term vessel charter agreement (Appendix A1) and meet the following minimum requirements: Vessel operators must have a minimum of three years commercial fishing experience within Chignik Lagoon. All vessels must contain a refrigerated seawater (RSW) system to chill the catch. Legal Chignik Lagoon seine gear is required, as is vessel compliance with U.S. Coast Guard safety regulations and insurance requirements.

A Chignik Commercial Fisheries Entry Commission (CFEC) permit is not required as the department is chartering the vessel and operating under the department's test fishing permit. An ADF&G observer will be onboard the test fishing vessel for the duration of the charter. Prior to test fishing, vessel operators are required to complete the *State of Alaska Short-Term Vessel Charter Agreement* (Appendix A1). Test fishing vessel operators will be paid \$1,800 per day to cover the boat, crew, fuel, lubricants, gear, and transportation of the catch to the appropriate processor.

## **TEST FISHING SCHEDULING**

The department will schedule the time and date of the 2015 sockeye salmon test fishery based upon inseason data and funding requirements. The first test fishery is expected to take place on or about June 8. Subsequent test fishing may be necessary during times when harvest data are not available due to extended closures or low fishing effort.

## **SEINING PROCEDURES**

Department policy requires notification of the U.S. Coast Guard (USCG) prior to beginning test fishing activities. Chignik weir staff will contact Dave Mitchell by phone (907-465-4131) or e-mail (dave.mitchell@alaska.gov) to provide the name of the fishing vessel, the duration, and location of the charter. This information will then be provided to the USCG.

The set locations for the test fishery are distributed throughout Chignik Lagoon (Figure 1). Typically, the first set is made at Mensis Point (1) and the last set is made at Ocean Beach (8). The alternative site location (Figure 1) will be fished when it is determined by the vessel operator and department observer that seas are too rough to fish the Ocean Beach site. Department staff will meet the charter vessel near the location of the first set on a morning flood tide. The first set will be made as soon as the vessel operator determines there is enough water to make the set. The seine will be fished for 10 minutes, as measured from the time the skiff begins pulling the net off the deck of the fishing vessel to the time the skiff returns the net back to the vessel. The skipper and the biologist will estimate the number of sockeye salmon caught. The biologist will record the estimate of catch at each location on the *Chignik Lagoon Test Fishery Data Form* (Figure 2).

Upon completion of the final set, the vessel will transport the catch to a processor. All fish are sold using the department's test fish permit card, and the revenue will be deposited into the Chignik Test Fish Account.

## **DATA ANALYSIS**

Chignik management biologists use information collected from the test fishery in conjunction with escapement data to estimate sockeye salmon abundance. The following factors are considered when estimating abundance: 1) environmental and tidal conditions, 2) observed sockeye salmon activity, 3) abundance estimate from the vessel skipper and onboard biologist, and 4) test fishery catches and escapement estimates from previous years.

The department will distribute the results of test fishing activities with a news release at the end of each test fishery and during regularly scheduled radio updates.



## **FIGURES**

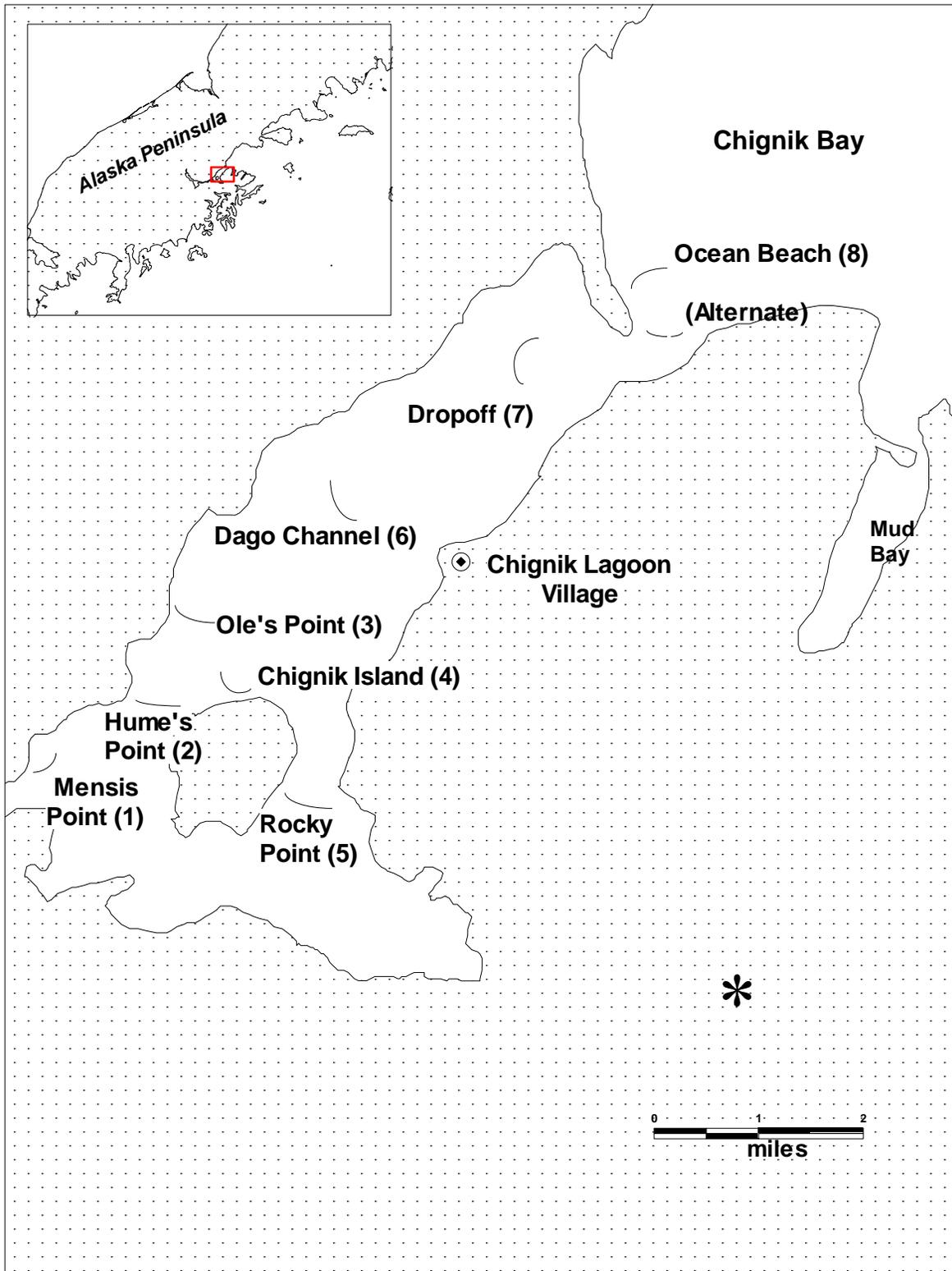


Figure 1.-Chignik Lagoon test fishing locations.

### Chignik Lagoon Test Fishery Data Form

Date \_\_\_\_\_

Kodiak High Tide

Vessel \_\_\_\_\_

Time \_\_\_\_\_

Observer \_\_\_\_\_

Height \_\_\_\_\_

Processor \_\_\_\_\_

SET \_\_\_\_\_

Lat. \_\_\_\_\_

Long. \_\_\_\_\_

Wind dir/vel \_\_\_\_\_

H2O Temp \_\_\_\_\_

Cloud Cover \_\_\_\_\_

Time Out \_\_\_\_\_

Time Closed \_\_\_\_\_

Catch

	Caught	Sold
Sockeye		
Chinook		
Pink		
Chum		
Coho		
Total		

Bycatch

	Caught	Sold
Total		

Comments:

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SET \_\_\_\_\_

Lat. \_\_\_\_\_

Long. \_\_\_\_\_

Wind dir/vel \_\_\_\_\_

H2O Temp \_\_\_\_\_

Cloud Cover \_\_\_\_\_

Time Out \_\_\_\_\_

Time Closed \_\_\_\_\_

Catch

	Caught	Sold
Sockeye		
Chinook		
Pink		
Chum		
Coho		
Total		

Bycatch

	Caught	Sold
Total		

Comments:

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Figure 2.-Chignik Lagoon test fishery data form.



**APPENDIX A. STATE OF ALASKA SHORT-TERM VESSEL  
CHARTER AGREEMENT**

Appendix A1.–State of Alaska Short-Term Vessel Charter Agreement.



State of Alaska
Department of Fish and Game
SHORT TERM VESSEL CHARTER AGREEMENT

This agreement shall cover chartering of the vessel described and under the conditions set forth below between the State of Alaska, Department of Fish and Game and:

Name \_\_\_\_\_ Mailing address \_\_\_\_\_
Telephone \_\_\_\_\_ City/State/Zip \_\_\_\_\_
VESSEL S.S.# or Tax ID \_\_\_\_\_
Name and/or Number \_\_\_\_\_ Type & Keel length \_\_\_\_\_
Equipment & supplies needed provided by the contractor (food, bait, skiff, etc.) \_\_\_\_\_

Fishing gear provided by contractor \_\_\_\_\_

Fuel \_\_\_\_\_ will be \_\_\_\_\_ will not be provided by the State of Alaska.

PURPOSE OF CHARTER \_\_\_\_\_

Charter will begin at \_\_\_\_\_ on \_\_\_\_\_ and end at \_\_\_\_\_ on \_\_\_\_\_.
(Location) (Date) (Location) (Date)

(Agreement cannot exceed fourteen (14) working days. No extension or sequential contract allowed.)

Cost of Charter: \$ \_\_\_\_\_ (cannot exceed \$30,000)

TERMS AND CONDITIONS

- 1. The state will have general direction of activities of the vessel, but contractor (if aboard) will be responsible for safe operation of vessel.
2. The contractor will hold the State harmless from any liability caused by loss of vessel or damage caused to or by the vessel, and against any loss, damage, and/or liability occasioned by or arising from, any negligent act on the part of the contractor.
3. The State will provide insurance coverage for the state employees only.
4. The length of the charter shown above is estimated and can be terminated at anytime by the State but cannot exceed fourteen (14) days.
5. Vessel may be required to submit to an inspection by the U.S. Coast Guard (State's option).
6. Upon completion of the contract, Department of Fish and Game representatives will initiate payment processing. A warrant will be mailed to the above address after processing.
7. Special conditions \_\_\_\_\_

The terms and conditions are understood and agreed to.

/s/ \_\_\_\_\_ /s/ \_\_\_\_\_
Department of Fish and Game Representative Owner or Master of Vessel

INSURANCE INFORMATION

- 1. Value of hull insurance \$ \_\_\_\_\_
2. Amount of protection and indemnity insurance \$ \_\_\_\_\_
3. Name of Insurance Carrier \_\_\_\_\_
4. Expiration date of policy \_\_\_\_\_
5. Number of Contractors \_\_\_\_\_
6. Name(s) of Department of Fish and Game personnel aboard: \_\_\_\_\_