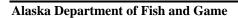
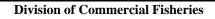
Chignik Management Area Commercial Salmon Fishery Harvest Strategy, 2021

by

Reid Johnson

May 2021







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.

Weights and measures (metric)		General		Mathematics, statistics	
centimeter	cm	Alaska Administrative		all standard mathematical	
deciliter	dL	Code	AAC	signs, symbols and	
gram	g	all commonly accepted		abbreviations	
hectare	ha	abbreviations	e.g., Mr., Mrs.,	alternate hypothesis	H_A
kilogram	kg		AM, PM, etc.	base of natural logarithm	e
kilometer	km	all commonly accepted		catch per unit effort	CPUE
liter	L	professional titles	e.g., Dr., Ph.D.,	coefficient of variation	CV
meter	m		R.N., etc.	common test statistics	$(F, t, \chi^2, etc.)$
milliliter	mL	at	@	confidence interval	CI
millimeter	mm	compass directions:		correlation coefficient	
		east	E	(multiple)	R
Weights and measures (English)		north	N	correlation coefficient	
cubic feet per second	ft ³ /s	south	S	(simple)	r
foot	ft	west	W	covariance	cov
gallon	gal	copyright	©	degree (angular)	0
inch	in	corporate suffixes:		degrees of freedom	df
mile	mi	Company	Co.	expected value	E
nautical mile	nmi	Corporation	Corp.	greater than	>
ounce	OZ	Incorporated	Inc.	greater than or equal to	≥
pound	lb	Limited	Ltd.	harvest per unit effort	HPUE
quart	qt	District of Columbia	D.C.	less than	<
yard	yd	et alii (and others)	et al.	less than or equal to	≤
y	<i>)</i>	et cetera (and so forth)	etc.	logarithm (natural)	ln
Time and temperature		exempli gratia		logarithm (base 10)	log
day	d	(for example)	e.g.	logarithm (specify base)	log ₂ , etc.
degrees Celsius	°C	Federal Information	· ·	minute (angular)	1
degrees Fahrenheit	°F	Code	FIC	not significant	NS
degrees kelvin	K	id est (that is)	i.e.	null hypothesis	Ho
hour	h	latitude or longitude	lat or long	percent	%
minute	min	monetary symbols	· ·	probability	P
second	S	(U.S.)	\$,¢	probability of a type I error	
	~	months (tables and		(rejection of the null	
Physics and chemistry		figures): first three		hypothesis when true)	α
all atomic symbols		letters	Jan,,Dec	probability of a type II error	
alternating current	AC	registered trademark	®	(acceptance of the null	
ampere	A	trademark	ТМ	hypothesis when false)	β
calorie	cal	United States		second (angular)	"
direct current	DC	(adjective)	U.S.	standard deviation	SD
hertz	Hz	United States of		standard error	SE
horsepower	hp	America (noun)	USA	variance	
hydrogen ion activity	pН	U.S.C.	United States	population	Var
(negative log of)	r		Code	sample	var
parts per million	ppm	U.S. state	use two-letter	~F	
parts per thousand	ppt,		abbreviations		
F Per modelmid	% %		(e.g., AK, WA)		
volts	V				
watts	W				

REGIONAL INFORMATION REPORT NO. 4K21-06

CHIGNIK MANAGEMENT AREA COMMERCIAL SALMON FISHERY HARVEST STRATEGY, 2021

by

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

> Alaska Department of Fish and Game Division of Commercial Fisheries 351 Research Court, Kodiak, Alaska, 99615

> > May 2021

The Regional Information Report Series was established in 1987 and was redefined in 2007 to meet the Division of Commercial Fisheries regional need for publishing and archiving information such as area management plans, budgetary information, staff comments and opinions to Alaska Board of Fisheries proposals, interim or preliminary data and grant agency reports, special meeting or minor workshop results and other regional information not generally reported elsewhere. Reports in this series may contain raw data and preliminary results. Reports in this series receive varying degrees of regional, biometric and editorial review; information in this series may be subsequently finalized and published in a different department reporting series or in the formal literature. Please contact the author or the Division of Commercial Fisheries if in doubt of the level of review or preliminary nature of the data reported. Regional Information Reports are available through the Alaska State Library and on the Internet at http://www.adfg.alaska.gov/sf/publications/.

Product names used in this publication are included for completeness and do not constitute product endorsement. The Alaska Department of Fish and Game does not endorse or recommend any specific company or their products.

Reid Johnson Alaska Department of Fish and Game, Division of Commercial Fisheries 351 Research Court, Kodiak, AK 99615 USA

This document should be cited as follows:

Johnson, R. 2021. Chignik Management Area commercial salmon fishery harvest strategy, 2021. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report No. 4K21-06, Kodiak.

The Alaska Department of Fish and Game (ADF&G) administers all programs and activities free from discrimination based on race, color, national origin, age, sex, religion, marital status, pregnancy, parenthood, or disability. The department administers all programs and activities in compliance with Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, Title II of the Americans with Disabilities Act (ADA) of 1990, the Age Discrimination Act of 1975, and Title IX of the Education Amendments of 1972.

If you believe you have been discriminated against in any program, activity, or facility please write: $\frac{1}{2}$

ADF&G ADA Coordinator, P.O. Box 115526, Juneau, AK 99811-5526 U.S. Fish and Wildlife Service, 4401 N. Fairfax Drive, MS 2042, Arlington, VA 22203

Office of Equal Opportunity, U.S. Department of the Interior, 1849 C Street NW MS 5230, Washington DC 20240

The department's ADA Coordinator can be reached via phone at the following numbers: (VOICE) 907-465-6077, (Statewide Telecommunication Device for the Deaf) 1-800-478-3648, (Juneau TDD) 907-465-3646, or (FAX) 907-465-6078

For information on alternative formats and questions on this publication, please contact: ADF&G, Division of Sport Fish, Research and Technical Services, 333 Raspberry Rd, Anchorage AK 99518 (907) 267-2375

TABLE OF CONTENTS

	Page
LIST OF TABLES	ii
LIST OF FIGURES	ii
LIST OF APPENDICES	ii
ABSTRACT	1
INTRODUCTION	1
GEAR DESCRIPTION	1
CLOSED WATERS	2
REPORTING REQUIREMENTS	2
EMERGENCY ORDERS AND ADVISORY ANNOUNCEMENTS	3
2021 SALMON FORECAST AND ESCAPEMENT GOALS	3
Total Run	3
Early Run (Black Lake)	
Late Run (Chignik Lake) Other Salmon Species	
Chinook Salmon	
Coho Salmon	
Pink Salmon	
Chum Salmon	
2019 Board of Fisheries Regulatory Changes	
June and Early July Management	
Transition Period	
July	
August and September	
2021 SUBSISTENCE SALMON FISHERY	
REFERENCES CITED	11
TABLES AND FIGURES	13
APPENDIX A. ADVISORY ANNOUNCEMENT INSTRUCTIONS	23
APPENDIX B. 2021 CHIGNIK SOCKEYE SALMON FORECAST	27
APPENDIX C. CHIGNIK SALMON SUBSISTENCE PERMIT	31

LIST OF TABLES

Table	Pag	zе
1.	Chignik River sockeye salmon interim escapement objectives, in numbers of fish, 2021	14
2.	Chignik Management Area statistical areas prior to 2016 and current statistical areas	15
	LIST OF FIGURES	
Figure	Pag	ge
1.	Map of the Alaska Peninsula and the relative locations of the Chignik, Kodiak, and Alaska Peninsula Management areas.	17
2.	Map of the Chignik Management Area commercial fishing district boundaries and statistical areas	18
3.	Map of the Inner (273-93) and Outer Castle Cape (273-95) subsections of the Western District	19
4.	Map of upper Chignik Lagoon and the location of Pillar Rock, Mensis Point, Humes Point, Mallard	
	Duck, and Schooner Bay marker locations and the location of the Chignik weir.	
5.	Map of "Jack's Box" in the Chignik Bay and Central districts.	
6.	Map of the "Cape Ikti Line" in the Western and Perryville districts.	22
	LIST OF APPENDICES	
Appen		ъe
A1.	User instructions for the Division of Commercial Fisheries advisory announcement system	_
B1.	2021 Chignik sockeye salmon forecast.	
C1.	Chignik salmon subsistence permit.	

ABSTRACT

This document outlines the Alaska Department of Fish and Game's (ADF&G) 2021 commercial salmon harvest management strategy for the Chignik Management Area (CMA). A total of 437,000 sockeye salmon Oncorhynchus nerka are forecast to return for the 2021 early run, and 438,000 sockeye salmon are forecast to return for the 2021 late run. The first commercial fishing period in the CMA may occur as early as June 1 after 20,000 sockeye salmon have escaped or are expected to escape into Chignik River. Fishing periods during June in all districts will be based upon weekly interim escapement objectives at Chignik River. The Eastern District will open concurrently with the Chignik Bay and Central Districts as well as the Inner Castle Cape Subsection of the Western District during June. Starting in June and continuing into early July, the Western District may open concurrently with fishing periods in the Chignik Bay and Central Districts and the Inner Castle Cape Subsection of the Western District. In the Perryville District, 3 fishing periods of up to 48 hours in length, separated by at least 48 hours, may occur concurrently with the Chignik Bay and Central Districts during June and early July. Fishing periods after early July in the Eastern, Western, and Perryville Districts will depend on the Chignik River sockeye salmon interim escapement objectives being met as well as local pink and chum salmon runs. Beginning July 6 and into August, inner bay fisheries may occur in the Western and Perryville Districts to target pink and chum salmon. From the end of the transition period (approximately late-June through mid-July) until the end of the season, ADF&G shall manage the CMA based upon evaluation of the local pink O. gorbuscha, chum O. keta, and coho O. kisutch salmon runs, as well as late-run sockeye salmon escapement.

Key words: Chignik, sockeye salmon, *Oncorhynchus nerka*, Chinook, *O. tshawytscha*, pink, *O. gorbuscha*, chum, *O. keta*, coho, *O. kisutch*, Chignik Management Area, CMA, 2021 management plan, subsistence fishing, commercial fishery, BEG, SEG, RIR.

INTRODUCTION

This document provides stakeholders with the basic framework of how the Alaska Department of Fish and Game (ADF&G) will manage the 2021 Chignik Management Area (CMA; Area L) commercial salmon fishery. The CMA encompasses all coastal waters and inland drainages of the northwest Gulf of Alaska between Kilokak Rocks and Kupreanof Point (Figure 1). For management purposes, the CMA is divided into 5 fishing districts: Eastern, Central, Chignik Bay, Western, and Perryville. Each district is further divided into sections and statistical reporting areas (Figure 2).

The 2021 CMA commercial salmon fishery will be managed by ADF&G in accordance with the guidelines established in the *Chignik Salmon Management Plan* (5 AAC 15.357). The goal of this management plan is to allow commercial fisheries on CMA salmon stocks and to achieve escapement goals for Black Lake and Chignik Lake sockeye salmon *Oncorhynchus nerka* as well as local stocks of pink *O. gorbuscha*, chum *O. keta*, coho *O. kisutch*, and Chinook salmon *O. tshawytscha*. Complete details of this plan are found in the 2019–2021 Alaska Peninsula, Atka-Amlia Islands, Aleutian Islands and Chignik Areas Commercial Salmon Fishing Regulations booklet² available from regional Alaska Department of Fish and Game offices, or online at http://www.adfg.alaska.gov/index.cfm?adfg=fishregulations.commercial.

GEAR DESCRIPTION

Purse and hand purse seines are the only legal commercial salmon fishing gear allowed within the CMA. No lead in the CMA may be more than 75 fathoms in length. In the Chignik Bay District, legal seine gear must be between 100 and 125 fathoms in length. In the Eastern, Central, Western, and Perryville District legal seine gear must be between 100 and 225 fathoms in length, and the aggregate length of seine and lead cannot be more than 225 fathoms in length. Seines may not be

1, 2 ADF&G, 2019. 2019–2021 Alaska Peninsula, Atka–Amlia Island, Aleutian Islands and Chignik Areas commercial salmon fishing regulations. Alaska Department of Fish and Game, Juneau. less than 3 fathoms, or more than 375 meshes in depth. A maximum of 25 meshes of chafing gear may be used, with a maximum mesh size of 7 inches. Complete seine specifications are listed under 5 AAC 15.332.³

CLOSED WATERS

Specific closed waters within the CMA are described under 5 AAC 15.350⁴ and are determined using the global positioning system (GPS; 5 AAC 15.206⁵). For general regulations regarding closed waters, please refer to 5 AAC 39.290.⁶ Where regulatory markers are posted, it is illegal to take salmon for commercial purposes on the streamward side of the markers (5 AAC 39.290 (b)).⁷

REPORTING REQUIREMENTS

Tender and processor regulatory reporting requirements may be found under 5 AAC 15.355.8 Processors are required to report the previous day's commercial harvest information to ADF&G staff by 10:00 AM daily, by email, telephone, or radio (SSB or VHF). Earlier reporting is encouraged and appreciated, as it helps in the prosecution of an orderly fishery. The preferred method of catch reporting is to email a standardized catch reporting document (template provided by ADF&G) to the Chignik Area Management Biologist (reid.johnson@alaska.gov) or the Chignik Assistant Area Management Biologist (michelle.stratton@alaska.gov). Catch reports must include the estimated number and total pounds of salmon harvested by species from each statistical area. Timely and accurate catch information reported by processors allows for informed and consistent management actions. Lack of information critical to the management of the fishery may result in more conservative management approaches to guarantee sustainability of the resource. Information needs and daily reporting templates may be obtained by contacting the Chignik management staff in Kodiak office during the winter (907-486-1806) or at the Chignik weir during the summer (May through September; 907-512-6731), or by email.

It is the responsibility of all parties (commercial fishery participants, tenders, processors, and buyers) to ensure that all fish tickets are filled out completely and accurately. Prior to completing a fish ticket, all parties must ensure that the correct statistical area is recorded, harvest information is complete, and all information is legible and accurate. If multiple statistical areas were fished, the correct percentage of fish harvested from each statistical area must be recorded. Fish caught and retained for personal use or for use as bait in a commercial fishery (5 AAC 39.010⁹) must be recorded on a fish ticket; fish retained for these purposes may not be sold or bartered. It is the responsibility of the commercial fishery participansts to secure a market for all catch before harvesting fish. Waste of salmon is prohibited by AS 16.05.831¹⁰ and 5 AAC 93.310.¹¹

In 2016, many statistical areas in the CMA were restructured. Due to the creation of these new statistical areas as well as the reassignment of stat codes in some existing statistical areas, it is very important that the most recent and up-to-date statistical charts be used when filling out fish tickets. These statistical charts are available at ADF&G offices in Chignik and Kodiak, or online (http://www.adfg.alaska.gov/index.cfm?adfg=fishingCommercialByFishery.statmaps). Statistical charts can also be obtained by contacting either the Chignik Area Management Biologist (Reid Johnson) or the Chignik Assistant Area Management Biologist (Michelle Stratton).

2

-

³⁻¹¹ ADF&G. 2019. 2019–2021 Alaska Peninsula, Atka–Amlia Island, Aleutian Islands and Chignik Areas commercial salmon fishing regulations. Alaska Department of Fish and Game, Juneau.

EMERGENCY ORDERS AND ADVISORY ANNOUNCEMENTS

Fishing periods established by emergency order and will be based on both ADF&G's assessment of the strength and health of the salmon runs and the availability of a harvestable surplus of fish. Advisory announcements will be issued prior to fishery openings to notify commercial fishery participants and processors. When possible, a 24-hour notice will be given before opening or closing a commercial fishing period. Advisory announcements will be broadcast over VHF channel 6. Those who wish to receive advisory announcements by e-mail or fax may do so by accessing ADF&G Advisory Announcement System the April http://www.adfg.alaska.gov/index.cfm?adfg=cfnews.search (accessed 2021) and subscribing to the Chignik seine fishery. Detailed instructions are located in Appendix A of this document. Catch, escapement, and other fishery information will be announced over VHF radio Channel 6 at 9:15 AM and 5:15 PM daily. The Chignik Weir Report e-mail (catch, escapement, and other fishery data) will be sent out daily during the commercial salmon fishing season. People interested in receiving the daily email may do so by contacting ADF&G staff over phone (907-512-6731) or email (michelle.stratton@alaska.gov or reid.johnson@alaska.gov) and requesting to have their email added to the distribution list.

Starting June 1, an automated information phone line (907-486-1839) will be activated to provide callers with recent escapement and harvest information, as well as any current news releases.

2021 SALMON FORECAST AND ESCAPEMENT GOALS

ADF&G publishes yearly preseason forecasts for the Chignik watershed. The preseason forecast provides Commercial fishery participants and processors with projected run strength for planning purposes. ADF&G also uses the forecasts to formulate a preseason management strategy; however, the fishery is primarily managed based on inseason escapement data that is evaluated daily. Inseason escapement data provides the most up-to-date indicators of actual run strength and health, and also includes information from weir counts/sampling, aerial surveys, test fisheries, total catch, and fishery performance trends over time. ADF&G will aim to achieve escapement within the range of established goals; however, management objectives may be adjusted during the season if there is concern over the quality of the run.

Total Run

The total 2021 sockeye salmon run for the Chignik River watershed is forecast to be 875,000 fish (range 182,000–2,362,000). The total projected commercial sockeye salmon harvest for 2021 is 165,000 fish (Appendix B1).

Early Run (Black Lake)

The total early-run sockeye salmon forecast is approximately 437,000 fish (range 145,000–1,320,000). The Chignik River early-run sockeye salmon harvest is projected to be approximately 37,000 fish. The early-run sockeye salmon biological escapement goal range is 350,000–450,000 fish (Table 1; Schaberg et al. 2019). The early run typically peaks in late June and returns primarily to Black Lake and its tributaries.

Late Run (Chignik Lake)

The total late-run sockeye salmon forecast is approximately 438,000 fish (range 37,000–1,042,000; Appendix B1; Brenner et al. 2021). The late-run sockeye salmon sustainable escapement goal (SEG) range is 200,000–400,000 fish. To increase the opportunity for late-season subsistence harvest, an additional inriver run goal (IRRG) of 20,000 sockeye salmon is added to the lower bound of the late-run goal (220,000–400,000 fish; Table 1; Schaberg et al. 2019). The 2021 Chignik late-run sockeye salmon harvest is projected to be 128,000 fish.

OTHER SALMON SPECIES

There are no forecasts produced for other salmon species in the CMA. For historical harvest information, please refer to the Chignik River Management Area Annual Management Report, 2020 (Renick and Stratton *In prep*)

Chinook Salmon

Commercial harvest of Chinook salmon in the CMA is largely incidental to targeted sockeye salmon fishing effort occurring in July. There is not a targeted Chinook salmon harvest in the CMA. The Chignik River Chinook salmon escapement goal is 1,300–2,700 fish (Schaberg et al. 2019).

Coho Salmon

The commercial coho salmon harvest may vary depending on commercial fishing effort targeting local pink and chum salmon runs in the Eastern, Central, Western, and Perryville Districts. Market conditions late in the season may also limit commercial salmon harvest effort targeting coho salmon during the months when coho salmon are prevalent in Chignik Lagoon. There is no established escapement goal for coho salmon in the CMA.

Pink Salmon

In past years, the Western District has provided the largest proportion of the annual pink salmon commercial harvest.

The CMA odd-year escapement goal for pink salmon is an areawide SEG of 260,000–450,000 fish (Schaberg et al. 2019). This SEG range was developed using 8 index streams that have historically accounted for most pink salmon enumerated in the CMA (more than 50%; Schaberg et al. 2015). ADF&G will survey the 8 index streams in order to obtain an escapement index and will monitor all streams (49 streams total) to assess the quality and geographic distribution of the runs.

Chum Salmon

Historically, the Central and Western Districts have provided the largest proportion of the annual chum salmon commercial harvest.

The CMA chum salmon escapement goal is an areawide SEG of 45,000–110,000 fish (Schaberg et al. 2019). This SEG was developed using 6 index streams that have historically accounted for more than 50% of the escapement (Schaberg et al. 2015). ADF&G will survey the 6 index streams in order to obtain an escapement index and will monitor all streams (42 total) in order to assess the quality and geographic distribution of the runs.

2021 CHIGNIK SALMON MANAGEMENT

2019 BOARD OF FISHERIES REGULATORY CHANGES

At the February 2019 Alaska Peninsula/Aleutian Island/Chignik Finfish Board of Fisheries (BOF) meeting, regulations were adopted that altered the *Chignik Area Salmon Management Plan* (5 AAC 15.357). The changes that occurred are described below.

- 1. The number of sockeye salmon required to meet the inriver run goal (IRRG) for the late sockeye salmon run was reduced from 75,000 fish to 20,000 fish. Of the 20,000 sockeye salmon required for the IRRG, 10,000 fish are required to pass the weir in August in addition to minimum escapement objectives, and the remainder are required to escape during September.
- 2. The Western District, excluding the Inner Castle Cape subsection, may open concurrently with the Chignik Bay District, Central District, and Inner Castle Cape subsection of the Western District from June 1 through July 5. Previously the Western District, excluding the Inner Castle Cape subsection, was limited to two 48-hour openers during this time period.
- 3. The Perryville District may open concurrently with the Chignik Bay and Central Districts and the Inner Castle Cape subsection of the Western District from June 1 through July 5 for up to three 48-hour fishing periods with a minimum closure of at least 48 hours between each fishing period. Previously, the Perryville District could not open to commercial salmon fishing before July 6.
- 4. Management of the Eastern, Western, and Perryville Districts after July 31 is based on the evaluation of local pink, chum, and coho salmon runs, or the strength of the Chignik Lake sockeye salmon run. This amendment changed the word "and" to "or" prior to "the strength of the Chignik Lake sockeye salmon run".

JUNE AND EARLY JULY MANAGEMENT

Commercial salmon fishing may occur as early as June 1 if at least 20,000 sockeye salmon have escaped into Chignik River, or if it is determined that a large buildup of sockeye salmon exists in the Chignik Lagoon and at least 20,000 sockeye salmon are expected to escape into the Chignik River (5 AAC 15.357(b)(1)). The purpose of allowing at least 20,000 sockeye salmon into the Chignik River system is to allow subsistence fishing opportunity prior to the commercial fishing season, and to avoid a large buildup of salmon in the lagoon.

During June and early July, commercial salmon fishing may occur in all 5 districts of the CMA (Figure 2). The Chignik Bay, Central, and Eastern Districts, as well as the Inner Castle Cape subsection of the Western District (Figure 3), must all open and close concurrently by regulation during the month of June (5 AAC 15.357(c)(1)). ¹⁴ From June 1 through July 5, the Western District may also open and close concurrently with the Chignik Bay, Central, and Eastern Districts, as well as the Inner Castle Cape subsection of the Western District. From June 1 through July 5, the Perryville District may also open and close concurrently with the aforementioned areas; however, fishing time will be limited to a maximum of three 48-hour fishing periods, each of which must be separated by a closure of at least 48 hours.

5

¹²⁻¹⁴ ADF&G. 2019. 2019–2021 Alaska Peninsula, Atka–Amlia Island, Aleutian Islands and Chignik Areas commercial salmon fishing regulations. Alaska Department of Fish and Game, Juneau.

Fishing periods during June will be based upon achieving the Black Lake sockeye salmon management objectives, except during the transition period. The transition from Black Lake to Chignik Lake sockeye salmon has historically occurred from late June through mid-July. Management decisions will consider opportunity to harvest surplus Black Lake fish without jeopardizing Chignik Lake escapement (Table 1).

Within Chignik Lagoon, ADF&G will primarily use the Humes Point and Mensis Point markers to designate closed waters (Figure 4). Alternating between Humes Point and Mensis Point allows ADF&G to control escapement of sockeye salmon entering the Chignik River. The Pillar Rock and Chignik River weir markers may be used during periods of high escapement and/or limited harvest capacity by the fleet (Figure 4). If estimated cumulative sockeye salmon escapement is projected to exceed the upper bound of the early-run escapement goal, closed waters may be reduced in the Mallard Duck Bay and Schooner Bay areas of Chignik Lagoon during the month of June to provide additional opportunities to target sockeye salmon.

ADF&G test fishing may begin in early June to assess the salmon buildup in Chignik Lagoon. Test fishing may occur on several days in early June depending on vessel catch rates and escapement levels (Stratton and Johnson *In prep*). Subsequent commercial fishing periods during June will be based on the evaluation of interim escapement objectives (Table 1). Additional test fisheries may also occur in the Chignik Lagoon or other areas of the CMA, if necessary, to generate revenue to fund management operations in the CMA. Details of these test fisheries will be released via the Fish and Game advisory announcement system.

TRANSITION PERIOD

The transition from early-run sockeye salmon bound for Black Lake and late-run sockeye salmon bound for Chignik Lake is variable. Historically, the transition starts in late-June and continues into mid-July. During this period, ADF&G pays very close attention to the following: the latest genetic composition estimates (if available), scale ages, harvest, escapement, spatial distribution, and other indicating variables.

Over the years, many different methods have been used to track the transition from early-run sockeye salmon to late-run sockeye salmon. During the 2021 transition period, the Black and Chignik Lakes daily stock composition will be estimated inseason primarily by applying the average stock proportion curve developed from genetics data collected during the 2010–2020 seasons. Age classes are also a strong indicator of stock composition during the transition period; the Chignik sockeye salmon runs are predominantly made up of freshwater age-1 fish during the early run, and freshwater age-2 fish during the late run. The proportional shift in ages and the timing of that shift is a very strong indicator of transition timing. Comparisons of historical escapement and harvest information to real time escapement and harvest information also provide further run timing information. Typically, during a normal run with normal strength, management will aim for the midpoint of the escapement objectives during the transition period. If run timing appears to be abnormal, management action may be taken to aim for the lower or upper end of the objectives to avoid over- or underescaping the run. Management actions may include restricting or liberalizing fishing time and/or area.

JULY

During July, the Chignik Bay and Central Districts will be managed primarily on the Chignik River watershed sockeye salmon run strength, with consideration given to Chinook salmon. ADF&G

may adjust closed waters in Chignik Lagoon based on Chinook salmon escapement goals. The Chinook salmon escapement goal for the Chignik River watershed is 1,300–2,700 fish (Schaberg et. al 2019). If Chinook salmon escapement during early July is weak and the escapement goal is unlikely to be met, waters upstream of the Humes Point markers may be closed to improve escapement by removing commercial fishing pressure from areas where Chinook salmon are known to hold before entering the river system (5 AAC 15.357(b)(3)(C)¹⁵; Figure 4). If necessary, the commercial salmon fleet may be required to return Chinook salmon greater than 28 inches of length to the water quickly and with minimal handling in the Chignik Bay District.

During July, portions of the Eastern District will be primarily managed on pink and chum salmon. The first commercial fishing period post-transition period may occur as early as July 12 and is likely to be at least 48 hours in duration. Extensions to this first fishing period will occur primarily based on pink and chum salmon harvest compared to historical records, local pink and chum salmon escapements, and Chignik River watershed sockeye salmon escapement. The Eastern District will be opened to commercial salmon fishing contingent upon sockeye salmon interim escapement objectives being met or expected to be met, and a harvestable surplus of sockeye salmon.

If the Chignik River late-run sockeye salmon escapement is lower than expected, then fishing periods in terminal areas in the Eastern District may be announced via emergency order to target pink and chum salmon. If such an opener occurs, the Eastern District may close on short notice if substantial numbers of sockeye salmon are harvested. Closed waters may be expanded around individual streams if pink and chum salmon escapements are not sufficient in those areas, or closed waters may be reduced if escapement is substantial and large harvestable surplus exists.

Commercial fishing periods in the Western and Perryville Districts (Figure 2) may be allowed starting July 6 if Chignik River interim escapement objectives are expected to be met and surplus Chignik River sockeye salmon are available for harvest. Depending on expected Chignik River sockeye salmon run strength, those portions of the Chignik Bay and Central Districts known as "Jack's Box" may also open concurrently with the Western and Perryville Districts (Figure 5). Fishing periods beginning around mid-July will depend on pink and chum salmon harvest compared to historical records, local pink and chum salmon escapements, and Chignik River watershed sockeye salmon escapement levels.

Prior to 2016, several new inner bay statistical areas were created in the Eastern, Central, Western, and Perryville Districts (Table 2; Figure 2). One purpose of these new statistical areas was to provide more detailed harvest and effort information from selected bays. In an attempt to provide more early harvest opportunity on pink and chum salmon, ADF&G may conduct a 48-hour inner bay fishery as early as July 6 in the new inner bay statistical areas in the Western and Perryville Districts, as well as the Kujulik Bay Section of the Central District. If a sockeye salmon fishery is already occurring (which would mean that the inner bays are already open), the date of the inner bay fishery may be pushed back as late as July 15. Areas may not open if the CMA is experiencing low water and dry river mouths. After July 15, other inner bay fishing periods may occur; however, management will primarily be based upon pink and chum salmon escapement.

ADF&G. 2019. 2019–2021 Alaska Peninsula, Atka–Amlia Island, Aleutian Islands and Chignik Areas commercial salmon fishing regulations. Alaska Department of Fish and Game, Juneau.

If surplus Chignik River sockeye salmon are not expected to be available for harvest, commercial fisheries in the Western and Perryville Districts may occur north of the Cape Itki line beginning in mid-July to target local pink and chum salmon and avoiding Chignik River-bound sockeye salmon (Figure 6). If escapement is adequate in Ivanof Bay, the Inner Ivanof Bay statistical area will likely open as well (Figure 2). In the case of substantial numbers of sockeye salmon being harvested while fishing north of the Cape Itki line, ADF&G will restrict fishing further into the remaining inner bay statistical areas. Specific areas may be closed if pink and chum salmon escapements are not sufficient. If a large harvestable surplus of fish is available and escapement is adequate, closed waters may be reduced.

AUGUST AND SEPTEMBER

In August and September, the Chignik Bay District, Central District, and Inner Castle Cape subsection of the Western District (Figures 2 and 3) will be managed based on the Chignik River watershed sockeye salmon run strength. ADF&G plans to operate the Chignik River weir through August 15 for the 2021 commercial salmon season.

Starting September 15, commercial salmon fishing periods in the Chignik Bay and Central Districts will be based upon the evaluation of the sockeye salmon run strength and late season subsistence needs. Fishing periods in the Chignik Bay and Central Districts will be limited to a maximum of 48 hours per week (5 AAC 15.357(b)(4)). Management options beginning September 15 include the following:

- the maximum fishing time of 48 hours per week may be divided into as many as 4 commercial fishing periods depending upon estimated sockeye and/or coho salmon escapements (for example, the fishing time could be distributed over 4 days with 12-hour fishing periods per day within a floating 7-day period);
- a weekly fishing schedule of less than 48 hours if the sockeye and/or coho salmon run strength is determined to be weak or the September IRRG is not being met; or
- a complete closure.

During August and September, the Eastern District (Figure 2) will be managed based on local pink, chum, and coho salmon runs or the strength of the Chignik Lake sockeye salmon run (5 AAC 15.357(c)(4)). Fishing times and areas will be based on ADF&G's inseason assessment of the run strength. During the month of August, inner bay fisheries may occur concurrently with the Western and Perryville Districts in areas with adequate pink and chum salmon abundance to warrant fisheries, with possible extensions of fishing time depending on escapement and harvest levels. Districtwide openings will not be allowed unless Chignik River sockeye salmon interim escapement objectives (including the IRRG) are expected to be met and overall pink and chum salmon abundance is sufficient to meet Eastern District escapement objectives.

In the Western and Perryville Districts, fishing periods will be based on Chignik River sockeye salmon escapement or local pink, coho, and chum salmon abundance (5 AAC 15.357(d)(3)). Inner bay fisheries, or fisheries north of the Cape Itki line may occur in August in areas with adequate pink and chum salmon abundance to warrant fisheries with the possibility of extended

_

^{16,17} ADF&G. 2019. 2019–2021 Alaska Peninsula, Atka–Amlia Island, Aleutian Islands and Chignik Areas commercial salmon fishing regulations. Alaska Department of Fish and Game, Juneau.

fishing time. Districtwide openers will not occur unless the Chignik River is meeting interim sockeye salmon escapement objectives (including the IRRG) and overall pink and chum salmon abundance is sufficient to meet Western and Perryville Districts escapement objectives.

2021 SUBSISTENCE SALMON FISHERY

This section of the document briefly covers state subsistence regulations only. For more information on federal subsistence fishing regulations, contact the Federal Office of Subsistence Management.

All state subsistence salmon fishery participants must obtain a Chignik Area subsistence salmon permit issued by the ADF&G for the 2021 season (5 AAC 01.015¹⁸; Appendix C1). ADF&G will not be distributing subsistence permits to local vendors during the 2021 salmon season. Due to the recent progression of Covid-19, ADF&G staff in Chignik will distribute subsistence permits by mail and email only. Prior to May 15, individuals seeking a subsistence permit should contact the Chignik Assistant Area Management Biologist Michelle Stratton at michelle.stratton@alaska.gov or 907-486-1815. After May 15, please contact the Chignik weir at 907-512-6731. Catch information obtained from subsistence permits is compiled annually and used to assess regional subsistence salmon fisheries. Subsistence fishing regulations can be found in the 2020–2021 Statewide Subsistence and Personal Use Fishing Regulations¹⁹ which is available online at http://www.adfg.alaska.gov/index.cfm?adfg=subsistenceregulations.finfish

An Alaska resident who obtains a state subsistence permit and who does not hold a commercial salmon fishing license (Commercial Fisheries Entry Commission permit) may subsistence fish for salmon at any time. Commercial salmon license holders may subsistence fish for salmon during the commercial fishing season at any time except for 12 hours preceding and 12 hours following a commercial salmon fishing period (5 AAC 01.485).²⁰

Subsistence salmon fishing is permitted in the Chignik River. The Chignik River, starting 100 yards below the weir, is open to subsistence salmon fishing year-round. However, salmon may not be taken upstream from the weir to the outlet of Chignik Lake from July 1 to August 31 (5 AAC 01.475(1)).²¹ Subsistence fishing in this area is prohibited to protect spawning Chinook salmon. All fishing is prohibited 100 yards upstream and downstream of the weir while it is operational.

The Chignik Lake tributaries of Clark River and Home Creek, starting from their confluence with Chignik Lake upstream 1 mile, are open to subsistence salmon fishing (5 AAC 01.475(2)).²² The BOF amended the subsistence regulations to include these tributaries for the purposes of providing additional harvest opportunities for subsistence users.

Subsistence users are reminded that purse seine gear is not allowed for taking of subsistence salmon in Chignik Lake (5 AAC 01.470(a)).²³ Additionally, any set gillnet may not obstruct more than one-half of the width of any stream open to subsistence fishing. All subsistence salmon fishing gear must be marked with a buoy listing the first initial, last name, and address of the person operating the gear (5 AAC 01.010(h)).²⁴ Due to the potential delay in issuing subsistence permits by mail, subsistence users in the Chignik area are permitted to subsistence fish without a permit as

9

¹⁸⁻²⁴ ADF&G. 2019. 2019–2021 Alaska Peninsula, Atka-Amlia Island, Aleutian Islands and Chignik Areas commercial salmon fishing regulations. Alaska Department of Fish and Game, Juneau.

long as they have contacted the Area Management Biologist, Reid Johnson, or the Assistant Area Management Biologist, Michelle Stratton, prior to subsistence fishing. Subsistence users will still be required to record all fish harvested for the entirety of the season and return permits to the address listed on the permit by December 31, 2021. The adipose fin must be removed from all subsistence-caught salmon immediately after harvest.

REFERENCES CITED

- Brenner, R. E., S. J. Larsen, A. R. Munro, and A. M. Carroll, editors. 2021. Run forecasts and harvest projections for 2021 Alaska salmon fisheries and review of the 2020 season. Alaska Department of Fish and Game, Special Publication No. 21-07, Anchorage.
- Renick, R. L., and M. E. Stratton. *In prep*. Chignik Management Area salmon annual management report, 2020. Alaska Department of Fish and Game, Fishery Management Report, Anchorage.
- Stratton, M. E. and R. H. Johnson *In prep*. Chignik Management Area sockeye salmon test fishery operational plan, 2021–2023. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Operational Plan, Kodiak
- Schaberg, K. L., D. A. Tracy, M. B. Foster, and M. Loewen. 2015. Review of salmon escapement goals in the Chignik Management Area, 2015. Alaska Department of Fish and Game, Fishery Manuscript Series No. 15-02, Anchorage.
- Schaberg, K. L., M. B. Foster, and A. St. Saviour. 2019. Review of salmon escapement goals in the Chignik Management Area, 2018. Alaska Department of Fish and Game, Fishery Manuscript Series No. 19-02, Anchorage.

TABLES AND FIGURES

Table 1.-Chignik River sockeye salmon interim escapement objectives, in numbers of fish, 2021.

	Black Lake		Chignik	Lake	Combine	Combined	
Date	Lower	Upper	Lower	Upper	Lower	Upper	
5-Jun	12,000 -	17,000			12,000 -	17,000	
10-Jun	45,000 -	55,000			45,000 -	55,000	
15-Jun	95,000 -	125,000			95,000 -	125,000	
20-Jun	150,000 -	230,000	1,000 -	2,000	151,000 -	232,000	
25-Jun	215,000 -	320,000	3,000 -	5,000	218,000 -	325,000	
30-Jun	270,000 -	360,000	6,000 -	12,000	276,000 -	372,000	
5-Jul	300,000 -	390,000	12,000 -	30,000	312,000 -	420,000	
10-Jul	330,000 -	410,000	20,000 -	50,000	350,000 -	460,000	
15-Jul	340,000 -	430,000	40,000 -	85,000	380,000 -	515,000	
20-Jul	350,000 -	440,000	70,000 -	140,000	420,000 -	580,000	
25-Jul	350,000 -	448,000	110,000 -	200,000	460,000 -	648,000	
30-Jul	350,000 -	450,000	140,000 -	250,000	490,000 -	700,000	
4-Aug			160,000 -	290,000	510,000 -	740,000	
9-Aug			170,000 -	320,000	520,000 -	770,000	
14-Aug			180,000 -	335,000	530,000 -	785,000	
19-Aug			190,000 -	350,000	540,000 -	800,000	
24-Aug			200,000 -	360,000	550,000 -	810,000	
29-Aug			208,000 -	375,000	558,000 -	825,000	
31-Aug			210,000 -	380,000	560,000 -	830,000	
September			220,000 -	400,000	570,000 -	850,000	
Escapement Goals							
Black Lake	350,000 -	450,000					
Chignik Lake ^a	220,000 -	400,000					

^a The late-run escapement objective includes the late-run sockeye salmon sustainable escapement goal (SEG; 200,000–400,000) plus an additional 20,000 sockeye salmon inriver run goal (10,000 in August and 10,000 in September) to meet late-season subsistence needs.

Table 2.—Chignik Management Area statistical areas prior to 2016 and current statistical areas.

	Statistical are	a	
Area	Prior to 2016	Post 2016	
Perryville District			
Ivanof Bay Section			
Inner Ivanof Bay	N/A	275-41	
Ivanof Bay	275-40	275-42	
Humpback Bay Section			
Inner Humpback Bay	N/A	275-51	
Humpback Bay	275-50	275-52	
Perryville Section			
Perryville Area	275-60	275-60	
Western District			
Mitrofania Section			
Coal Cape Area	273-70	273-70	
Ivan Bay	N/A	273-71	
Fishrack Bay	N/A	273-73	
Mitrofania Island	273-74	273-74	
Mitrofania Bay	273-72	273-75	
Dorner Bay Section			
Dorner Bay	N/A	273-81	
Outer Kuiukta Bay	273-80	273-85	
Windy Bay	273-82	273-82	
Inner Kuiukta/Portage Bay	273-84	273-84	
Castle Cape Section			
Castle Cape/Cape Itki	273-90	273-90	
Inner Castle Cape	273-93	273-93	
Outer Castle Cape	273-95	273-95	
Chignik Bay District			
Chignik Lagoon	271-10	271-10	
Central District			
Outer Chignik Bay Section			
Chignik Bay	272-20	272-20	
Hook Bay	272-30	272-30	
Nakchamik Island	272-40	272-40	
Kujulik Section			
Inner Kujulik Bay	N/A	272-51	
Kujulik Bay	272-50	272-53	
Kumlik Section			
Cape Kumlik	272-62	272-62	
Sutwik Island	-continued-	272-64	

-continued-

Table 2.—Page 2 of 2.

	Statistical area			
Area	Prior to 2016	Post 2016		
Eastern District				
Big River Section				
Aniakchak Bay	272-60	272-60		
Inner Amber Bay	N/A	272-71		
Amber Bay	272-70	272-74		
Nakalilok/ Yantarni Bay Section				
Inner Yantarni Bay	N/A	272-73		
Yantarni Bay	272-72	272-75		
Inner Nakalilok Bay	N/A	272-82		
Nakalilok Bay	272-80	272-81		
Chiganagak Section				
Inner Chiganagak Bay	N/A	272-91		
Chiganagak Bay	272-90	272-93		
Agripina Section				
Port Wrangell	272-92	272-92		
Inner Agripina Bay	N/A	272-95		
Agripina to Kilokak	272-96	272-97		

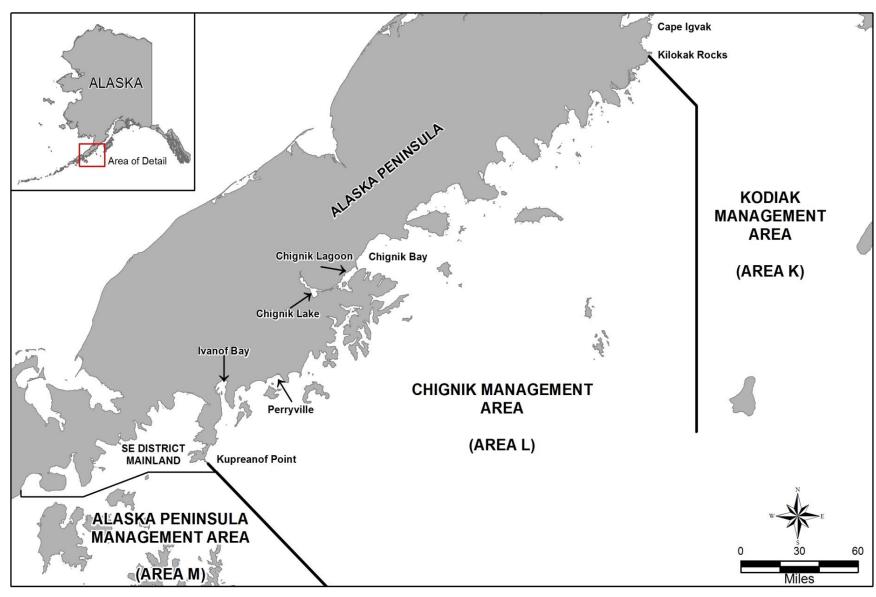


Figure 1.—Map of the Alaska Peninsula and the relative locations of the Chignik, Kodiak, and Alaska Peninsula Management areas.

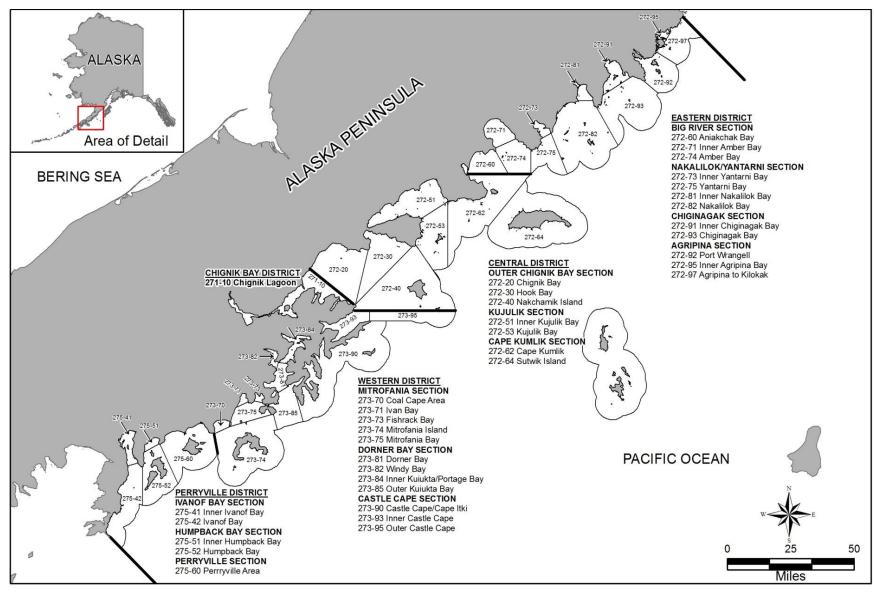


Figure 2.—Map of the Chignik Management Area commercial fishing district boundaries and statistical areas.

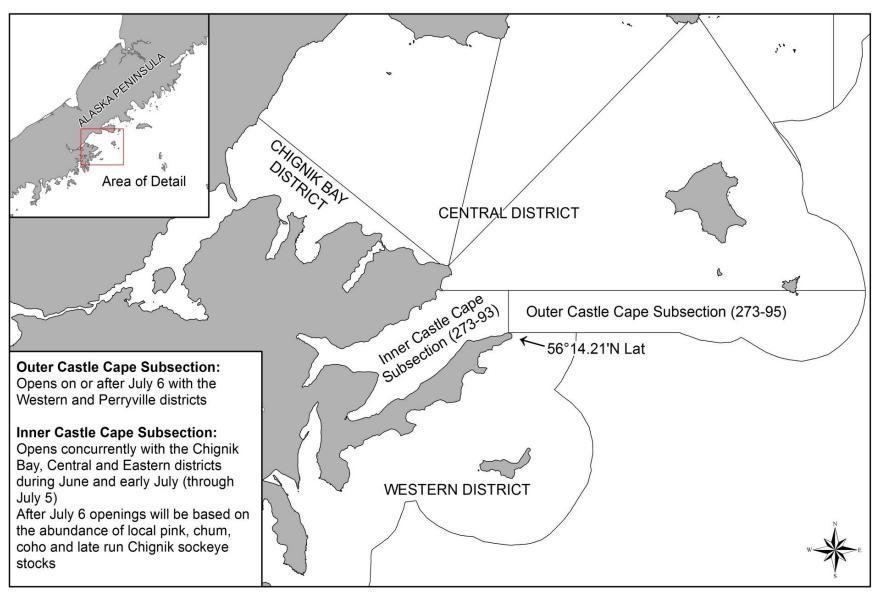


Figure 3.—Map of the Inner (273-93) and Outer Castle Cape (273-95) subsections of the Western District.

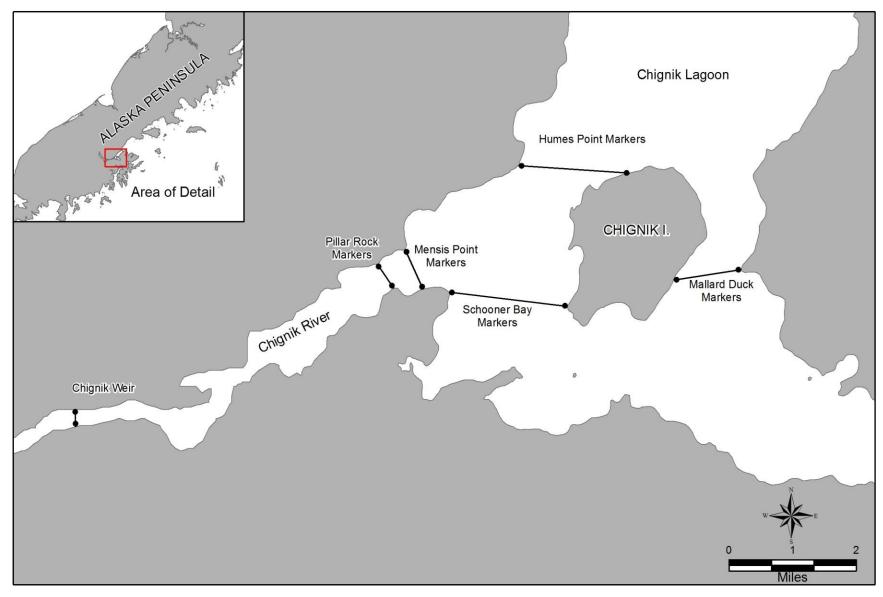


Figure 4.—Map of upper Chignik Lagoon and the location of Pillar Rock, Mensis Point, Humes Point, Mallard Duck, and Schooner Bay marker locations and the location of the Chignik weir.

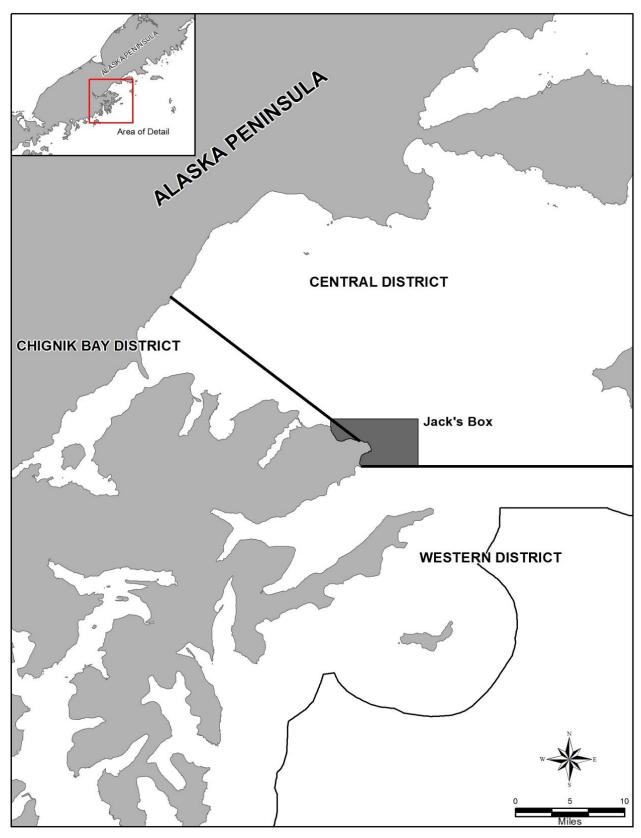


Figure 5.-Map of "Jack's Box" in the Chignik Bay and Central Districts.

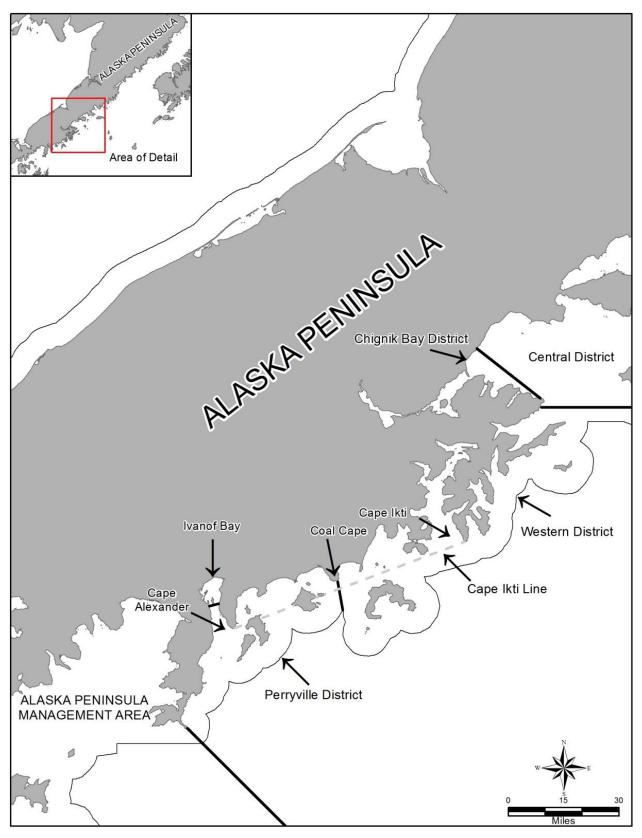


Figure 6.-Map of the "Cape Ikti Line" in the Western and Perryville Districts.

APPENDIX A. ADVISORY ANNOUNCEMENT INSTRUCTIONS

Appendix A1.—User instructions for the Division of Commercial Fisheries advisory announcement system.

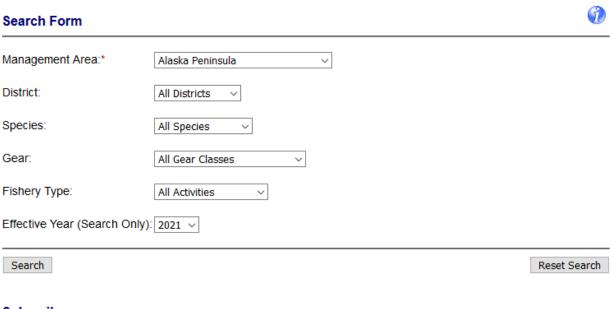
All advisory announcements are issued through this single system. The public may subscribe to electronic notification via e-mail for specific fisheries that may be of interest. All fishery advisory announcements will appear in the system as they are issued. If the public has subscribed to any specific fishery those advisory announcements are delivered to the user's e-mail inbox as they are issued.

This system can be located on the Alaska Department of Fish and Game website. A visitor to the site should look for the "News and Events" icon which can be found by clicking on the "Home" or "Fishing" menus at the top of any webpage on the site. A "News and Events" icon is located on these pages and clicking on this icon takes the user to the "News and Events" page. By clicking "Regulation Announcements, News Releases, Emergency Orders" and then the "Search and Subscribe" button, the user will bring up the application for finding advisory announcements, emergency orders, and fishery updates. The user can also go directly to this application by copying the following link into their browser. It might be a good idea to bookmark this link for ease of returning to the site for subsequent visits.

https://www.adfg.alaska.gov/index.cfm?adfg=cfnews.search

Commercial Fishery Announcements

(Includes Subsistence and Personal Use)



Subscribe

Create the type of broad or narrow news coverage you would like to receive with the form selections above, then tap the **Subscribe** button.

Subscribe

-continued-

Searching for Advisory Announcements

The Commercial Fishing Regulation Announcements, News Release, and Updates web page allows you to select the advisory announcements of interest by using the search screen. Drop down menus are available for all selection categories, to assist in filtering the search of advisory announcements. Using the drop down menus, you can narrow your search and the results of that search.

It is possible to view a list of all announcements issued by the commercial fisheries division in an entire year or, as is usually the case, search for a specific fishery, like the Bristol Bay salmon fishery or Kodiak black rockfish fishery. To select the Chignik set of announcements, the management area should be set to "Chignik" and every drop-down menu should have "all" selected, except for year, which should be set for the current year, 2021. Press the "Search" button and the results will be displayed within the "Search Results" box. The following screen shot shows the selection criteria and search results for all announcements and updates from Chignik for 2020.

Commercial Fishery Announcements

(Includes Subsistence and Personal Use)

PDF Search Results



Modify Search or Subscribe

New Search

- 2020 Chignik Salmon Season Summary
 - 11/30/2020 9:00 AM
- 2021 Commercial Tanner Crab Fisheries In The Kodiak, Chignik, And South Peninsula Districts

 10/30/2020 3:00 PM
- <u>Dungeness Crab Season Closure Reminder For Kodiak, Chignik, And Alaska Peninsula Districts</u>
 09/30/2020 9:30 AM
- 2020/21 Kodiak, Chignik, And South Peninsula District Red Sea Cucumber Guideline Harvest Levels And Fishery Information
 - 09/04/2020 3:15 PM
- Chignik Weir Sockeye Salmon Stock Composition Summary #6
 - 08/06/2020 5:15 PM
- Chignik Area State-Waters Pacific Cod Season Guideline Harvest Level Allocation Rollover
 - 08/04/2020 12:15 PM
- Chignik Weir Sockeye Salmon Stock Composition Summary #5
 - 07/25/2020 5:15 PM
- Chignik Weir Sockeye Salmon Stock Composition Summary #4
 - 07/20/2020 5:15 PM
- 2020 Chignik Subsistence News Release #02 Revised
 - 07/16/2020 4:00 PM
- 2020 Chignik Subsistence News Release #02
 - 07/16/2020 9:15 AM
- Chiqnik Weir Sockeve Salmon Stock Composition Summarv #3

-continued-

To view a particular news release that is displayed in the Search Results section, the user will click on that item in the list, and it will open as a PDF document. The user will need to have Acrobat Reader installed on their computer to display and print the document.

Subscribing to News Releases

After making a news release selection, it is possible to subscribe and receive, via e-mail, future news releases for the specific fishery selected, by pushing the "Subscribe" button at the left lower corner of the search screen. The subscription web page will display, as shown below.

ADF&G Home » News & Events » Advisory Announcements » Commercial, Subsistence, & Personal Use Fishing

Sign in

<u>m</u>y

Commercial Fishery Announcements

(Includes Subsistence and Personal Use)

Email Subscription

You are about to subscribe to All Activities news releases for

- All Species Groups
- All Gear Classes
- . in Chignik / All Districts

Tap the Subscribe button to confirm, or tap Cancel to return to the search screen.

Email address	
☐ Text-only (emails will not include PDF document of news release, charts, or other graphics)	
Subscribe	

Simply type in an e-mail address in the box provided and then confirm this e-mail address in the box provided for confirming e-mail addresses, push the "Subscribe" button, and the subscription process is finished. News releases for the fisheries selected by the user will begin to appear in the user's mailbox as they are published by ADF&G staff.

A user may unsubscribe to any subscription by clicking on the link "Unsubscribe" that is included within each e-mail sent to a subscriber.

APPENDIX B. 2021 CHIGNIK SOCKEYE SALMON FORECAST

Forecast Area: Chignik Species: Sockeye Salmon

Preliminary Forecast of the 2021 Run (Brenner et al. 2021)

Total production		Forecast estimate (thousands)	Forecast range (thousands)
Early run (Black Lake)	Total run estimate	437	145–1,320
	Escapement goala	400	350–450
	Harvest estimate	37	
Late run (Chignik Lake)	Total run estimate	438	37–1,042
	Escapement goala	310	220–400
	Harvest estimate	128	
Total Chignik system	Total run estimate	875	182-2,362
	Harvest estimate ^b	165	
	Chignik Area	165	
	SEDM Area	0	
	Cape Igvak Section	0	

Note: Column numbers may not total or correspond exactly with numbers in text due to rounding.

Forecast Methods: Simple linear regression models using age class relationships were used to forecast the 2021 early and late Chignik sockeye salmon runs. Each regression model was assessed with standard regression diagnostic procedures. Data were log transformed to address nonnormality or unequal variance. Prediction intervals (80%) for the regression estimates were calculated using the variances of the regression models. Age class returns not estimated with statistical models utilized pooled medians with data from 1995 to the present; median prediction intervals were calculated from the 10th and 90th percentiles of the data.

For the early run, prior year log-transformed age-.2 returns predicted log-transformed age-.3 returns using data from the 1995 outmigration year to the present. Prior year early-run age-.1 returns predicted log-transformed age-.2 returns (outmigration years 1998 to present). For the late run, prior year age-.2 returns predicted age-.3 returns using data from the 2007 outmigration year to the present.

The early- and late-run regression and median estimates were summed to estimate the total Chignik River sockeye salmon run for 2021. The combined early- and late-run 80% prediction interval was calculated by summing the lower and upper prediction bounds of the 2 runs.

-continued-

^a Harvest represents the midpoint of the escapement goal. An inriver run goal of 20,000 sockeye salmon is added to the lower bound of the late-run escapement goal.

b A harvestable surplus of Chignik River system sockeye salmon is forecast to be below 600,000 fish in the Chignik Area; therefore, as outlined in regulations 5 AAC 09.360 and 5 AAC 18.360, no commercial fisheries are anticipated in the Southeastern District Mainland and Cape Igvak during the regulatory timeframes, thus the harvest of Chignik-bound sockeye salmon in those areas is projected to be zero.

Forecast Discussion: The 2021 Chignik sockeye salmon early run is forecasted to be 437,000 fish, which is 747,000 fewer fish than the 10-year average run of 1.18 million fish and almost 300,000 fish more than the 2020 early run of 137,000 fish. The early run is predicted to be composed of approximately 59% age-.3 and 39% age-.2 fish. The late run is forecasted to be 438,000 fish, which is approximately 473,000 fewer fish than the 10-year average run of 911,000 fish and 244,000 fish more than the 2020 late run of 194,000 fish. The 2021 late run is predicted to be composed of approximately 72% age-.3 and 26% age-.2 fish. The 2021 total Chignik sockeye salmon run is expected to be 875,000 fish, which is approximately 1.22 million fewer fish than the 10-year average of 2.10 million, and roughly 544,000 fish more than the 2020 total run of 331,000 fish.

The projected 2021 early-run total harvest estimate of 37,000 fish is based on achieving the midpoint of the early-run escapement goal range. The projected late-run harvest estimate of 128,000 fish is based on achieving the midpoint (310,000 fish) of the late-run goal, which includes the inriver run goal of 20,000 fish added to the lower bound (200,000 fish) of the escapement goal. For 2021, it is projected that sockeye salmon harvests for both early and late runs in the Chignik Management Area will not exceed a 600,000 fish surplus beyond escapement goals and, by regulation, preclude commercial fisheries from harvesting Chignik-bound fish in the Cape Igvak Section of the Kodiak Management Area and in the Southeastern District Mainland of the Alaska Peninsula Management Area during the regulatory period through July 5.

The wide confidence intervals around the point estimate of the 2021 forecasts reflect the uncertainty inherent in the forecast models. Given the sibling relationships used for forecasting both runs and the poor 2020 age-.3 returns, the 2021 forecast may overestimate returns if environmental variables, which are unknown at this time, remain spurious. Due to the range of variation in the relationships used in these forecasts and their historical accuracy, our confidence in them is fair.

Forecast by Heather Finkle, Finfish Research Biologist, ADF&G, Westward Region.

APPENDIX C	. CHIGNIK SA	ALMON SUE	BSISTENCE 1	PERMIT

2021 CHIGNIK AREA SUBSISTENCE SALMON FISHING PERMIT						
Permit expires December 31, 2021						
Name: Address:	nat I am an Alaska resident, and a	any fish taken will		s valid in the Chig		Area Only.
Permittee signatu	re					Date
Email address:	table below must be filled out (ev	en if the permit wa	as not used) and r	Renew permit f	•	ent of Fish and
	to December 31, 2021. Failure to					
	SUBSIS	TENCE SALM	ON HARVEST	REPORT		
		Number of salr	non by species	:		
DATE	SPECIFIC LOCATION	KING	SOCKEYE	соно	PINK	СНИМ
ALL PERSONS SALMON.	MUST HAVE A VALID SUBSISTEN	CE PERMIT IN POS	SESSION WHILE	TAKING OR ATTE	EMPTING TO TAKE	SUBSISTENCE
	E SUBSISTENCE HARVEST REPOR	TS IMMEDIATELY	UPON LANDING S	SALMON, UNSUCC	ESSFUL TRIPS SI	HOULD ALSO BE
THE LIMIT IS 250 SALMON PER PERMIT. ADDITIONAL PERMITS MAY BE ISSUED IF ADDITIONAL SALMON ARE NEED FOR SUBSISTENCE.						
	REFER TO THE CURRENT SUB	SISTENCE REGU	LATION BOOK F	OR COMPLETE	REGULATIONS	
Return permit to: Chignik Salmon Management, ADF&G, 351 Research Court, Kodiak, AK 99615 by December 31, 2021.						
Department repre	sentative					Date
	(SEE OPPOSITE SIDE FOR SUBSISTENCE REGULATIONS)					

-continued-

SELECTED SUBSISTENCE REGULATIONS

These listed regulations are not inclusive of all the regulations that apply to subsistence salmon fishing in the Chignik Area.

5 AAC 01.015. SUBSISTENCE FISHING PERMITS AND REPORTS. (b)(3) Permits must be retained in the possession of the permittee and be readily available for inspection while taking fish. A person who transports subsistence-taken fish shall have a subsistence fishing permit in their possession.

5 AAC 01.460. FISHING SEASONS. Fish, other than rainbow trout and steelhead trout, may be taken at any time, except as may be specified by a subsistence fishing permit. Rainbow trout and steelhead trout, taken incidental in other subsistence finfish net fisheries, are lawfully taken and may be retained for subsistence purposes.

5 AAC 01.470. LAWFUL GEAR AND GEAR SPECIFICATIONS. (a) Salmon may be taken by seines and gillnets, or with gear specified by a subsistence fishing permit, except that salmon in Chignik Lake may not be taken with purse seines. A gillnet may not be set while staked, anchored, or otherwise fixed in a stream while it obstructs more than one-half of the width of the waterway.

5 AAC 01.475. WATERS CLOSED TO SUBSISTENCE FISHING. Salmon may not be taken (1) from July 1 through August 31, in the Chignik River from a point 300 feet upstream from the Chignik weir to Chignik Lake; (2) in Black Lake or any tributary to Black Lake or tributary to Chignik Lake except in the Clark River and Home Creek from their confluence with Chignik Lake upstream one mile.

AAC 01.480. SUBSISTENCE FISHING PERMITS.

- a. Salmon, trout and char may only be taken under the authority of a subsistence fishing permit.
- b. Not more than 250 salmon may be taken for subsistence purposes unless otherwise specified on the subsistence fishing permit.
- c. A record of subsistence-caught fish must be kept on this permit. The record must be completed immediately upon taking subsistence-caught fish and must be returned to the local representative of the department no later than December 31 of the year issued.

5 AAC 01.485. RESTRICTIONS ON COMMERCIAL FISHERMAN. (a) In the Chignik Area, a commercial salmon fishing license holder may not subsistence fish for salmon during the 12 hours before the first commercial salmon fishing period and the 12 hours following the closure of a commercial salmon fishing period. However, a commercial salmon fishing license holder may subsistence fish for salmon during a commercial salmon fishing period.

SPECIAL PERMIT PROVISIONS

- 1. The adipose fin must be removed from all subsistence-caught salmon immediately upon capture.
- A commercial license holder may not fish for both subsistence and commercial salmon at the same time. Further, a commercial salmon vessel may not carry both the subsistence and commercially caught salmon at the same time.
- 3. A commercial fishing vessel may not simultaneously carry both commercial seine and subsistence gillnet gear.
- Commercial fisherman may always remove salmon from their commercial catch for home pack. Record the number of salmon taken by species for home pack use on your fish ticket.
- 5. This permit can be withdrawn at any time.

NOTICE TO FISHERMAN:

Before you fish, be sure you know whose land you are on and check the regulations. State regulations apply on all state, private, and federal lands where authorized. Private landowners may restrict entry on their land. Federal lands may be closed to fishing except by certain rural residents. Persons standing on state or private lands should be sure their fishing activities are legal under state regulations. If you have questions regarding the federal subsistence fisheries, please contact the Federal Office of Subsistence Management at 1-800 478-1456.

Return permit by December 31, 2021 to: Alaska Department of Fish and Game, Chignik Salmon Management, 351 Research Court, Kodiak AK 99615. Questions or concerns please contact your local Fish and Game Office: Chignik (907) 845-2243 (May 15 to September 15) or Kodiak (907) 486-1830.