

Regional Information Report No. 1J23-01

**Southeast Alaska Commercial Salmon Port Sampling
2020**

by

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Alaska Department of Fish and Game

Division of Commercial Fisheries



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Weights and measures (metric)		General		Mathematics, statistics	
centimeter	cm	Alaska Administrative Code	AAC	<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, χ^2 , etc.)
liter	L	north	N	confidence interval	CI
meter	m	south	S	correlation coefficient (multiple)	R
milliliter	mL	west	W	correlation coefficient (simple)	r
millimeter	mm	copyright	©	covariance	cov
		corporate suffixes:		degree (angular)	$^\circ$
Weights and measures (English)		Company	Co.	degrees of freedom	df
cubic feet per second	ft ³ /s	Corporation	Corp.	expected value	E
foot	ft	Incorporated	Inc.	greater than	>
gallon	gal	Limited	Ltd.	greater than or equal to	\geq
inch	in	District of Columbia	D.C.	harvest per unit effort	HPUE
mile	mi	et alii (and others)	et al.	less than	<
nautical mile	nmi	et cetera (and so forth)	etc.	less than or equal to	\leq
ounce	oz	exempli gratia	e.g.	logarithm (natural)	ln
pound	lb	(for example)		logarithm (base 10)	log
quart	qt	Federal Information Code	FIC	logarithm (specify base)	log ₂ , etc.
yard	yd	id est (that is)	i.e.	minute (angular)	'
		latitude or longitude	lat or long	not significant	NS
Time and temperature		monetary symbols (U.S.)	\$, ¢	null hypothesis	H_0
day	d	months (tables and figures): first three letters	Jan,...,Dec	percent	%
degrees Celsius	°C	registered trademark	®	probability	P
degrees Fahrenheit	°F	trademark	™	probability of a type I error (rejection of the null hypothesis when true)	α
degrees kelvin	K	United States (adjective)	U.S.	probability of a type II error (acceptance of the null hypothesis when false)	β
hour	h	United States of America (noun)	USA	second (angular)	"
minute	min	U.S.C.	United States Code	standard deviation	SD
second	s	U.S. state	use two-letter abbreviations (e.g., AK, WA)	standard error	SE
				variance	
Physics and chemistry				population sample	Var var
all atomic symbols					
alternating current	AC				
ampere	A				
calorie	cal				
direct current	DC				
hertz	Hz				
horsepower	hp				
hydrogen ion activity (negative log of)	pH				
parts per million	ppm				
parts per thousand	ppt, ‰				
volts	V				
watts	W				

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2020**

by

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ABSTRACT

The primary purpose of the commercial port sampling project is to collect biological samples and fishery performance data from annual commercial salmon harvests in the Southeast Alaska Management Area. In 2020, salmon species were sampled for genetic stock identification, otolith marks, age, sex, length, coded wire tags, fishery performance data, pink salmon (*Oncorhynchus gorbuscha*) sex ratios, and average pink salmon weight. Biological and catch per unit effort data provided fishery managers and research biologists with inseason and annual information used to manage fisheries, create brood tables, generate run forecasts, determine migratory patterns and routes, determine size-at-age relationships, and analyze stock contributions to Southeast Alaska fisheries. This report provides an overview of sampling objectives and methods and a summary of sampling results from the commercial harvest during the 2020 fishing season.

Keywords: Southeast Alaska, port sampling, pink salmon (*Oncorhynchus gorbuscha*), chum salmon (*O. keta*), sockeye salmon (*O. nerka*), coho salmon (*O. kisutch*), Chinook salmon (*O. tshawytscha*), coded wire tag, genetic stock identification (GSI), otolith, fishery performance data, pink salmon sex ratio, commercial fishery, commercial harvest, catch sampling

INTRODUCTION

The Alaska Department of Fish and Game (ADF&G) Port Sampling Program is conducted annually to sample commercial fishery salmon landings in the Southeast Alaska/Yakutat Management Area (Region I). The Port Sampling Program employs samplers at 8 major ports and on tenders or buying stations throughout Southeast Alaska. In 2020 these ports included Juneau, Petersburg, Sitka, Ketchikan, Craig, Wrangell, Excursion Inlet, and Yakutat. Buying stations can include Elfin Cove, Port Alexander, Pelican, and Dry Bay (near Yakutat). Port supervisors are located in Juneau, Sitka, Petersburg, and Ketchikan. Port supervisors participate in sampling and direct the day-to-day operations at their site and usually another smaller port within their local management area.

Information collected through the Port Sampling Program is used by fishery managers and research biologists to manage fisheries, analyze stock contributions, create brood tables, generate run forecasts, determine migratory patterns and routes, determine size-at-age relationships, and fulfill international harvest sharing agreements outlined in the Pacific Salmon Treaty. Commercial port samplers collect scale, otolith, and genetic stock identification (GSI) samples and coded wire tag (CWT) information, which are used to estimate stock composition and contribution. Fishery performance data are collected from troll permit holders to estimate CPUE inseason, and pink salmon (*Oncorhynchus gorbuscha*) sex ratios (PSR) are collected from purse seine landings for use in inseason harvest forecasts and to determine run timing. Sampling objectives for all salmon species and gear groups are reviewed for each fishery prior to the start of the summer season.

This report provides an overview of program objectives, general description of sampling methods, and a summary of sampling accomplished during the 2020 commercial salmon fishing season. Detailed information regarding sampling protocols (e.g., how samples and data are collected and recorded) is outlined and updated every year in the Southeast Alaska Salmon Port Sampling Manual, which is available from all port supervisors in the program.

In 2020, safety measures were implemented to reduce the spread of the COVID-19 virus. Travel between ports was restricted, sampling onboard tenders on the fishing grounds, and direct communication among port samplers, seafood processing staff, as well as permit holders, was extremely limited due to these measures. Port sampling supervisors and seafood processing operators in Southeast Alaska worked together to create sampling procedures intended to maximize processor staff and port sampler safety.

STUDY SITE

The Southeast Alaska/Yakutat Management Area, Region I, includes waters from Cape Suckling south to Dixon Entrance (Appendix A1). Region I is divided into two salmon net registration areas: Southeast Alaska and Yakutat. The Southeast Alaska area extends from Dixon Entrance north to Cape Fairweather and the Yakutat area extends from Cape Fairweather west to Cape Suckling. Southeast Alaska is divided into 17 regulatory districts, Districts 1 through 16 and the Dixon Entrance District. These districts are further divided into regulatory sections and statistical areas. The Yakutat area is divided into the Yakutat District, which extends from Cape Fairweather west to Icy Cape, and the Yakataga District, which extends westward from Icy Cape to Cape Suckling (Kelley 2008). For management and administrative purposes, Region I is also divided into six management areas with area offices in Juneau, Ketchikan, Craig, Petersburg, Sitka, Haines, and Yakutat.

Purse seine fisheries are traditionally conducted in Districts 101, 102, 103, 104, 105, 106, 107, 109, 110, 111, 112, 113, and 114 (Appendix A2). Pink salmon are the primary species targeted by the purse seine fishery and management decisions are based largely on inseason assessment of pink salmon abundance. Chum salmon (*O. keta*) are targeted by purse seiners early in the summer season in hatchery terminal harvest areas and in the fall at terminal areas near rivers that support wild chum salmon runs. The majority of the purse seine harvest of sockeye salmon (*O. nerka*), coho salmon (*O. kisutch*), and Chinook salmon (*O. tshawytscha*) are taken incidentally during the pink salmon fishing season (Clark et al. 2006).

Drift gillnet fisheries take place in 5 traditional areas in Southeast Alaska (Thynes et al. 2020). These areas include District 101 (Tree Point; Appendix A3), District 106 (Prince of Wales; Appendix A4), District 108 (Stikine; Appendix A4), District 111 (Taku-Stephens Passage; Appendix A5), and District 115 (Lynn Canal; Appendix A6). Drift gillnet fisheries are conducted weekly and typically begin on the third Sunday of June. The length of weekly openings and the duration of the fishing season in each district is determined by fishery performance, run strength of targeted stocks, and harvest sharing agreements as required by the Pacific Salmon Treaty (except District 115). Starting in the third week of July, fishing time in District 101 is also dependent on time allotted to the purse seine fleet in accordance with the pink salmon management plan (5 AAC 33.360) (Thynes et al. 2020).

In Southeast Alaska, set gillnet gear is only allowed in the Yakutat area, between Cape Fairweather and Cape Suckling. Set gillnet gear is confined primarily to intertidal areas and waters immediately adjacent to mouths of rivers, making this fishery unique in Southeast Alaska. Inseason management is based on fishery performance and escapement monitoring, which is done through survey counts and operation of a weir on the Situk River. Set gillnet fisheries primarily target sockeye salmon from mid-June through July and coho salmon in August and September (Hoffman and Christian 2021).

The troll fishery is conducted in the Southeast Alaska and the Yakutat areas but nowhere else in the state. Unique to trolling, fishing occurs in both state waters and in the federal waters of the Exclusive Economic Zone (EEZ), located between 3 and 200 mi offshore (Clark et al. 2006). Troll management is divided into four quadrants for tracking harvest and fishery effort: Northern Outside 171, Southern Outside 172, Northern Inside 173, and Southern Inside 174 (Appendix A7). Each quadrant is made up of a group of districts and subdistricts. Coho and Chinook salmon are the primary species harvested by trollers, but some targeted chum salmon fishing occurs outside

hatchery terminal areas and in areas of high hatchery fish abundance. Troll fisheries are managed according to regulations and management plans developed by the Alaska Board of Fisheries, the North Pacific Fishery Management Council, the National Marine Fisheries Service, and the U.S.-Canada Pacific Salmon Commission in accordance with the Pacific Salmon Treaty (Clark et al. 2006; Hagerman et al. 2021).

OBJECTIVES

1. Pink salmon: collect weekly district-specific pink salmon sex ratios and average weights from purse seine deliveries at seafood processing plants.
2. Chum salmon: collect fall-run chum salmon scale samples from the District 102-40 purse seine and District 115 drift gillnet fisheries.
3. Sockeye salmon: sample district and subdistrict-specific purse seine and drift gillnet landings of sockeye salmon for matched GSI, scale, and otolith samples to meet weekly sampling objectives.
4. Coho salmon: sample a minimum of 20% of the total commercial harvest for coded wire tags, stratified by gear, fishing area, and statistical week¹. Interview troll permit holders for fishery performance data to meet port-specific weekly collection objectives.
5. Chinook salmon: collect matched GSI and scale samples during troll retention periods (Winter, Spring and Summer), and sample a minimum of 20% of the total commercial harvest for coded wire tags stratified by gear, fishing area, and statistical week. Interview troll permit holders for fishery performance data to meet port-specific weekly collection objectives.

PINK SALMON

METHODS AND PROCEDURES

Pink salmon sex ratios (PSR) and average weights were collected from purse seine harvests in districts that support inseason harvest forecasts (Districts 104 and 112) and from specific areas of management interest. Samples were collected up to 2 times per week per area depending on the number of purse seine openings. PSRs were collected from up to 300 pink salmon per sampling event: up to 150 samples were collected from individual seine vessels or up to 300 samples were collected from a tender. The protocol for each sample was to collect fish throughout the delivery to help lessen the effects of size sorting in the fish hold. Each fish was cut open and the sampler visually examined the gonads and determined whether the salmon was male or female.

Sample data were recorded and entered directly into the ADF&G Region I Commercial Fisheries Database immediately after it was received, or the data were entered into a mobile application and synchronized directly to the database. Average weight of the sampled fish (total weight of sampled fish divided by number of fish) was also determined and recorded whenever possible.

¹ Statistical weeks begin on Sunday at 0001 and end the following Saturday at midnight. Statistical weeks are numbered sequentially starting from the beginning of the calendar year (Appendix C1).

RESULTS AND DISCUSSION

In 2020, a total of 67 PSRs were collected weekly at 3 ports from 6 different fishing districts (Table 1). Outside of regular sampling areas, 2 PSRs were collected from Districts 103 and 106 in statistical weeks 32 and 33. These PSRs are not included in Tables 1 and 2. Samples were collected beginning in statistical week 28 and continued through week 34. The average pink salmon weight for all districts and weeks was 3.56 lb. By statistical week and district, the highest average pink salmon weight was 3.96 lbs from District 113 in week 33, from a total of 451 fish sampled across 3 PSR samples. The lowest average weight was 3.33 lbs from District 107 in week 33, from a total of 150 fish sampled from 1 PSR sample (Table 2). In 2020, the total common property purse seine harvest was 5,876,421 pink salmon, which was well below the 10-year average harvest of 32,242,769 pink salmon (Thynes et al. 2021). The regional all-gear harvest of 8.1 million pink salmon (Conrad and Thynes 2021) was within the preseason harvest forecast of 7–19 million pink salmon (Piston et al. 2020).

CHUM SALMON

METHODS AND PROCEDURES

Chum salmon were harvested in all commercial fisheries in Southeast Alaska; however, ADF&G objectives for sampling chum salmon landings were limited to the collection of scales and length data from the commercial catch in the District 102-40 (Cholmondeley Sound) fall purse seine fishery and the District 115 (Lynn Canal) drift gillnet fishery. Sampling objectives for District 102-40 were to collect scale samples from 120 fish (40 with length measurements) at the port of Ketchikan if the fishery is open during statistical weeks 36–42. District 115 drift gillnet sampling objectives were to collect scale samples from 80 fish (20 with length measurements) per statistical week during weeks 25–35 at Excursion Inlet, preferably from the northern section of the fishery (15A), and 80 fish (20 with length measurements) during weeks 35–42 at Juneau (Table 3).

RESULTS AND DISCUSSION

In 2020, the fall purse seine fishery in District 102-40 was not opened. The District 115A and C drift gillnet fishery was opened during statistical weeks 26–39. Chum salmon samples were collected at Excursion Inlet in weeks 26–31 and at the port of Juneau in weeks 36–39 (Table 4). District 115 sampling objectives were met during statistical weeks 26–31 in Excursion Inlet and during statistical weeks 36–39 in Juneau.

SOCKEYE SALMON

METHODS AND PROCEDURES

Sockeye salmon were harvested in all three net fisheries in Southeast Alaska (purse seine, drift gillnet, and set gillnet) and rarely harvested in the troll fishery. In some Southeast Alaska fisheries, a fixed percentage of Canadian Nass, Skeena, Stikine, Alsek, and Taku River sockeye salmon are allowed to be harvested as described in the Pacific Salmon Treaty. Treaty obligations affect management of the purse seine fishery in District 104 and the drift gillnet fisheries in Districts 101, 106, 108, and 111, as well as the set net fishery near the mouth of the Alsek River, near Yakutat. Port sampling objectives for sockeye salmon harvested in the drift gillnet fisheries in Districts 106, 108, and 111, and in the Alsek River set gillnet fishery were outlined in the Transboundary Technical Committee management plan produced annually by the Pacific Salmon Commission (TTC 2020). Port samplers collected data from sockeye salmon harvested in these fisheries to

generate accurate postseason abundance estimates of the stocks of interest in these treaty-limited areas.

Sockeye salmon were sampled for biological data consisting of a scale, sex determination, and a matching axillary fin clip used for GSI. A subset of lengths (mid eye to tail fork in mm) was also collected for each fishery area. In addition, otolith objectives are set for sockeye salmon harvested in the District 106, 108, and 111 drift gillnet and 112 purse seine fishery near Hawk Inlet to estimate contribution of hatchery fish. GSI information was used postseason to estimate the contribution proportions of each major stock of sockeye salmon to the harvest of each fishery area sampled.

Port samplers at six different ports throughout Southeast Alaska sampled sockeye salmon delivered from individual purse seine and drift gillnet vessels and tenders, and at set gillnet buying stations. A total of 40 sockeye salmon from an individual vessel or up to 200 sockeye salmon from a tender could be sampled during one event. This helped ensure the samples collected each week were representative of the fishery harvest.

Meeting sockeye salmon sampling objectives was a challenge during some time-area strata. In 2020, sockeye salmon harvest, fishing time, and fishing effort in drift gillnet and purse seine fisheries were below the recent and long-term averages (Thynes et al. 2021). The set gillnet fishery harvest was only 25% of the 10-year average harvest (Hoffman and Christian 2021). Fishing vessels often move between districts and subdistricts, and tender vessels often bought fish harvested in adjacent areas and combined them in the same fish hold, regardless of district or harvest type. Mixing of purse seine harvests from all districts with sampling objectives and mixing of drift gillnet harvests within statistical areas in Districts 106, 108, and 111 continues to be a problem. As processing plants become more efficient and fuel prices rise, fishing vessels are encouraged to deliver to tenders rather than deliver directly to the processors. The advantage to the processor was that more fish could be offloaded in one event, saving substantial amounts of time. Port samplers were instructed to record instances when sampling events were prevented due to mixing of fish from different statistical areas, sub areas, harvest type, or gear onboard individual vessels and tender vessels. In 2020, samplers recorded 95 instances when vessels could not be sampled due to mixing onboard (Table 5).

RESULTS AND DISCUSSION

Purse Seine

Sockeye salmon harvested in the Districts 101–104 purse seine fisheries were sampled weekly at the ports of Ketchikan and Petersburg for matched GSI, scale, and length objectives (Tables 6 and 7). An additional weekly objective was to flag 100 sockeye salmon from purse seine harvests in Districts 111-55 and 112-16 for otolith collection. Sockeye salmon objectives for the purse seine fisheries were district specific. Samples were collected from sockeye salmon harvested in one or more subdistricts within a district but not from landings with harvest from mixed districts. Sampling objectives for District 103 were divided into northern (subdistricts 50–90) and southern (subdistricts 11–40) areas.

District 101

In 2020, the District 101 purse seine fishery was initially opened in statistical week 28 and was opened weekly through week 32. District 101 was closed during week 33 and was opened one final time in week 34. The sampling objective was to collect GSI and scale samples from 260 fish

(40 with length measurements) per week at the port of Ketchikan (Table 6). Sockeye salmon were sampled all weeks the fishery was opened, and sampling objectives were met or nearly met in all weeks except week 28 (Table 7).

District 102

In 2020, the District 102 purse seine fishery was initially opened in statistical week 26, specifically to harvest hatchery chum salmon returning to Kendrick Bay. Fishing area was limited to minimize the harvest of other species. District 102 continued to be opened regularly with increased fishing area through week 34. The sampling objective was to collect matched GSI and scale samples from 260 fish (40 with length measurements) per week at the port of Ketchikan (Table 6). Sampling objectives were met in weeks 29–33 (Table 7).

District 103

In 2020, the District 103 purse seine fishery was initially opened in statistical week 30 and was opened weekly through week 34. The District 103 sockeye salmon objectives were split between southern subdistricts 11–40 and northern subdistricts 50–90. Sockeye salmon samples were collected at the ports of Ketchikan and Petersburg. Sampling objectives for both ports were to collect matched GSI and scale samples from 100 fish (20 with length measurements) from each group of subdistricts per week (Table 6). Sockeye salmon were sampled during weeks 30–34, and sampling objectives were met for subdistricts 11–40 in week 30 and for subdistricts 50–90 in weeks 30–33 (Table 7).

District 104

In 2020, the District 104 purse seine fishery was initially opened in statistical week 30 and was open until week 34. Sockeye salmon samples from the District 104 purse seine fishery were collected at the ports of Ketchikan and Petersburg. Sampling objectives at both ports were to collect matched GSI and scale samples from 130 fish with matching length measurements per week (Table 6). In Ketchikan, sampling objectives were met all weeks the fishery was open except week 33. In Petersburg, sampling objectives were met or almost met all weeks the fishery was opened except week 30 (Table 7).

District 111-55

In 2020, Douglas Island Pink and Chum, Inc. (DIPAC) did not meet their cost recovery goals due to a poor hatchery chum salmon run, and the District 111-55 special harvest area (SHA) was not opened (Thynes et al. 2021).

District 112-16

In 2020, the District 112-16 purse seine fishery (Hawk Inlet) was not opened due to poor pink salmon runs (Thynes et al. 2021).

Drift Gillnet

Sockeye salmon harvested in the Southeast Alaska drift gillnet fisheries were sampled at the ports of Ketchikan, Petersburg, Wrangell, Juneau, and Excursion Inlet. Sockeye salmon harvested in Districts 101, 106, 108, 111, and 115 were sampled to meet weekly and seasonal objectives for matched scale, tissue (GSI), and length samples. Additional matched otolith samples were collected from Districts 106, 108, and 111 (Table 8). Samples were collected from sockeye salmon

harvested within one district but not from landings that consisted of harvest from mixed districts and subdistricts.

District 101-11

In 2020, the District 101 drift gillnet fishery (statistical area 101-11) was opened during statistical weeks 26–39. Sockeye salmon sampling objectives were to collect matched GSI and scale samples from 260 fish (40 with length measurements) per week at the port of Ketchikan during weeks 26–35 (Table 8). Sampling objectives were met or nearly met in weeks 27–31 (Table 9).

District 106

In 2020, the District 106 drift gillnet fishery was opened during statistical weeks 26–39. Weekly sockeye salmon sampling objectives for statistical area 106-30 were to collect matched GSI and scale samples from 300 fish (60 with length measurements) during weeks 26–35. Weekly sampling objectives for statistical area 106-41 were to collect matched GSI, scale, and otolith samples from 300 fish (60 with length measurements) during weeks 26–35 (Table 8). Sampling objectives for statistical area 106-30 were not met in any week in 2020 due to fishery dynamics. Sampling objectives for statistical area 106-41 were met or nearly met in weeks 27, 30, and 34 (Tables 9 and 10).

District 108

In 2020, the District 108 drift gillnet fishery was opened for a total of 11 weeks during statistical weeks 27–29 and 32–39. During statistical weeks 30 and 31, the fishery was closed due to poor inseason abundance of the mainstem component of the Stikine River sockeye salmon run (Thynes et al. 2021). Sockeye salmon sampling objectives for each statistical area (108-30/40 and 108-50/60) were to collect matched GSI, scale, and otolith samples from 520 fish per week (80 with length measurements; Table 8). Sockeye salmon harvests from statistical area 108-30/40 were sampled in weeks 27–28, 32–33, and 35 at the port of Wrangell, and sockeye salmon harvests from statistical area 108-50/60 were sampled in weeks 27–29, 32–33 and 35 at the port of Petersburg. Sampling objectives were not met in 2020 (Tables 9 and 10). Low sockeye salmon harvest in District 108 and mixing of district harvests onboard tenders prior to delivery were the primary reasons for not meeting sampling objectives.

District 111

In 2020, the District 111 drift gillnet fishery was opened during statistical weeks 26–38. Sockeye salmon sampling objectives were to collect matched GSI, scale, and otolith samples from 400 fish per week from statistical area 111-31 and 400 fish from statistical area 111-32 during weeks 26–35. Sampling objectives were shared between the ports of Juneau and Petersburg (Table 8). The number of samples collected in each port fluctuated in response to fishery dynamics each week. Sampling objectives for 111-31 were not met in any week in 2020 and objectives for 111-32 were only met in week 29 (Tables 9 and 10).

District 115

In 2020, the District 115 drift gillnet fishery was opened during statistical weeks 26–39. Sockeye salmon sampling objectives were to collect matched GSI, scale, and length samples from 150 fish per week at the ports of Excursion Inlet and Juneau and from 100 fish per week at the port of Petersburg (Table 8). In some weeks, the sampling goals were shared among ports to ensure the

weekly objective of 400 samples was obtained. Sampling objectives were met or nearly met in weeks 29–33 (Table 9).

Set Gillnet

In 2020, the Alsek River (statistical area 182-30) set gillnet fishery was opened during statistical weeks 24–41; however, there was no fishing effort the last 11 weeks of the season (Hoffman and Christian 2021). Sockeye salmon sampling objectives were to collect matched GSI and scale samples from a total of 800 fish during weeks 23–31 (TTC 2020). Samples were collected on the grounds by ADF&G Yakutat Area management staff. A total of 486 samples were collected during weeks 24–30, after which fishing effort ceased (Table 11).

COHO SALMON

METHODS AND PROCEDURES

Coho salmon were harvested throughout Southeast Alaska in the commercial troll, purse seine, drift gillnet, and set gillnet fisheries. Port samplers collected data from coho salmon to assist with management of these fisheries to achieve maximum sustained yield, the primary management objective (Shaul et al. 2011). Coho salmon are harvested by troll gear in Southeast Alaska from 1 June to 20 September, with the possibility of an extension to 30 September in years of high coho salmon abundance. The troll fisheries management plan and regulations set by the Alaska Board of Fisheries and the Pacific Salmon Treaty include provisions which can generate early or midseason closures dependent on CPUE or fishery performance (Hagerman et al. 2021). Fishery Performance Data (FPD) interviews collected by port samplers during the summer troll fishery provide CPUE data used to assess coho salmon run strength. In addition, the coho salmon harvest was sampled for CWT fish. Information from CWT recoveries is used by hatcheries and wild stock assessment programs to estimate commercial harvest contribution and distribution and to assess harvest and marine survival rates (Clark et al. 2006).

Coho salmon harvested in commercial troll, purse seine, and drift gillnet fisheries were sampled for CWTs at a minimum rate of 20% of all harvested fish by statistical week, gear, and fishery area. Port samplers examined landed fish for the absence of the adipose fin (indicating a tagged fish), enumerated the number of fish sampled (i.e., the number of fish inspected for adipose fins), and recorded information on area fished. Coho salmon with a missing adipose fin were measured (mid eye to tail fork) and a CWT cinch strap was applied to the fish's head. Recovered heads from those marked fish were then shipped to the ADF&G Mark, Tag and Age Laboratory in Juneau so that CWTs could be removed and decoded. Due to size bias, tender deliveries with coho salmon that had been sorted into size-specific totes were not sampled unless the port sampler could ensure the entire delivery would be examined.

During the summer troll fishery, each port was assigned a weekly number of FPD interviews to collect based on historical delivery rates (Table 12). FPD interviews were conducted at the time of delivery, usually concurrently with CWT sampling (Table 13). Permit holders were asked to estimate the percent of each species of fish caught and the number of hours fished for each district and subdistrict fished. Samplers recorded this information on an electronic handheld tablet or on a paper FPD form. Tablets were downloaded directly into the ADF&G database at the end of each sampling day. Paper forms were scanned and emailed daily to the ADF&G Troll Management Biologists during Chinook salmon retention periods and weekly during Chinook salmon non-

retention periods. FPD interviews were collected throughout the entirety of each period of the troll fishery.

RESULTS AND DISCUSSION

Troll

Coho salmon retention for the Southeast Alaska Troll fishery began on 1 June of 2020 and ended 20 September, the first time since 2011 the 10-day extension was not granted at the end of the season (Hagerman et al. 2021). The overall CWT sampling percentage for coho harvested during the spring troll period was 33%. During the traditional summer troll fishery (statistical weeks 27–39), the CWT sampling objective of 20% was met all weeks in quadrant 174, and in most weeks in quadrant 172. Objectives were frequently not met in quadrants 171 and 173 (Table 15), where port samplers were not located at all ports of delivery and harvest was routinely mixed with harvest from other quadrants on tenders. The overall sampling rate for coho salmon harvested in the Summer Troll fishery in Region 1 was 21%. In 2020, 2,732 FPDs were collected (Table 13).

Purse Seine

In 2020, the traditional purse seine fishery was initially opened in statistical week 26 in Districts 102 and 112. More districts were opened as the season progressed through week 39. The CWT sampling objective of 20% per week and district was met all season in District 106. The sampling objective was met most weeks in Districts 101–105, 107, 112 and 113 (Tables 16 and 17). The overall sampling rate for coho salmon harvested in traditional purse seine fisheries in Region 1 was 26%. There were 44 reports of mixed deliveries of fish harvested by purse seine gear in 2020 (Table 5).

Drift Gillnet

In 2020, the traditional drift gillnet fisheries were opened during statistical weeks 26–39. The CWT sampling objective of 20% by time-area strata was met all weeks in District 101, most weeks in Districts 108, 111, and 115, and in 8 of 14 weeks in District 106 (Table 18). The overall sampling rate of coho salmon harvested in traditional drift gillnet fisheries in Region 1 was 31%.

CHINOOK SALMON

METHODS AND PROCEDURES

Chinook salmon were harvested throughout Southeast Alaska in the commercial troll, purse seine, drift gillnet, and set gillnet fisheries. Unlike other species of salmon, the annual harvest of Chinook salmon was based on a coast wide abundance index (except in the spring troll fishery where management is based on Alaska hatchery contribution). This index was calculated by the Chinook Technical Committee of the Pacific Salmon Commission as outlined in the Pacific Salmon Treaty. Each gear group in Southeast Alaska was allotted a percent of the total allowable catch (TAC). Troll management biologists used CPUE and harvest estimates to manage the fishery in season based on the TAC. In the spring troll fishery, the only way to estimate Alaska hatchery contribution is through the collection of CWT data.

In 2020, commercial fishery landings of Chinook salmon were to be sampled for CWTs at the coastwide standard minimum rate of 20% by gear, fishing area, and statistical week, except for drift gillnet fisheries in Districts 108 and 111, where the objective was to sample a minimum of 30% of the harvest in each statistical week. CWT sampling of troll fisheries was stratified by

quadrant (Appendix B1) and statistical week, and sampling of purse seine and drift gillnet fisheries was stratified by district and statistical week.

Troll permit holders were interviewed for FPD (as described above in the coho salmon section), and matched GSI and scale samples were collected from all non-terminal troll fisheries, stratified by quadrant and period (Table 19). Note that port sampling objectives shown in Table 19 were set *larger* than required to ensure enough fish were sampled in each stratum to meet objective criteria outlined by Gilk-Baumer et al. (2018) for genetic mixed stock analysis. GSI sampling objectives were divided among ports based on where the harvest was historically delivered and availability of samplers (Gilk-Baumer et al. 2018). Chinook salmon harvested in the District 108 and 111 drift gillnet fisheries were sampled for matched GSI and scales as outlined in the Transboundary Technical Committee management plan (TTC 2020).

RESULTS AND DISCUSSION

Troll

In 2020, five Chinook salmon troll fishing periods were conducted: winter (early and late), spring, and 1st and 2nd summer retentions (Hagerman et al. 2021). There were 5 reports of mixed deliveries of fish harvested by troll gear in 2020 (Table 5).

Winter

There are two winter troll fishing periods in SEAK: early and late. In 2020, the late winter troll fishery began on 1 January and closed on 15 March (statistical weeks 1–12). A total of 1,249 Chinook salmon were sampled for matched GSI and scales (Table 19). The CWT sampling objective of 20% was exceeded for each quadrant (Table 20), and FPDs were collected from 265 deliveries in Sitka, Craig, Ketchikan, and Petersburg during statistical weeks 1–12 (Table 13). The early winter troll fishery opened on 11 October and remained open through 31 December (statistical weeks 42–53). A total of 874 Chinook salmon were sampled for matched GSI and scales (Table 19). The CWT sampling objective of 20% was exceeded for each quadrant (Table 20), and 255 FPDs were collected from deliveries in Sitka, Craig, Ketchikan, Petersburg, and Wrangell during statistical weeks 42–53 (Table 13).

Spring

In 2020, the spring troll fisheries opened on 1 May and closed on 30 June (statistical weeks 18–27). Eleven spring areas and 8 terminal areas were opened during the spring troll fishery (Hagerman et al. 2021). A total of 2,327 Chinook salmon were sampled for matched GSI and scales during the spring troll period (Table 19). The CWT sampling objective of 20% was exceeded in all quadrants that were opened, and sampling rates ranged from 58% to 81% (Table 20).

High CWT sampling rates were particularly important for management of the spring troll fishery, as weekly openings are based on estimated contribution of Alaska hatchery fish in each area. During statistical weeks 18–27, 659 FPDs were collected from troll deliveries (Table 13).

Summer-First Retention

The first summer Chinook salmon retention period of 2020 opened on 1 July and closed at midnight on 6 July (statistical weeks 27–28). A total of 1,853 Chinook salmon were sampled for matched GSI and scales (Table 19). The CWT sampling objective of 20% was met for each quadrant (Table 20), and FPDs were collected from 381 deliveries during statistical weeks 27–28 (Table 13).

Summer-Second Retention

The second summer Chinook salmon retention period of 2020 opened on 15 August and closed at midnight on 8 September (statistical weeks 34–37). A total of 2,039 Chinook salmon were sampled for matched GSI and scales (Table 19). The CWT sampling objective of 20% was met for each quadrant (Table 20), and FPDs were collected from 234 deliveries during this period (Table 13).

Purse Seine

In 2020, Chinook salmon harvested in traditional purse seine fisheries that measured greater than 28 inches in total length could be retained and sold began in statistical week 32 and continued through the fishery. Chinook salmon less than 28 inches in total length were allowed to be retained but not sold during the entire season. A total of 1,123 Chinook salmon that were greater than 28 inches in total length were sampled for CWTs, and the overall sampling rate for all traditional purse seine fisheries in Region I was 24%.

Drift Gillnet

In 2020, the District 101, 106, 111, and 115 drift gillnet fisheries began in statistical week 26. The District 108 drift gillnet fishery began in statistical week 27 and was closed in weeks 30 and 31. Weekly objectives were set for matched GSI and scale samples for Districts 101, 108, 111, and 115 (Table 21). Throughout the summer, 490 Chinook salmon were sampled from District 101, 247 were sampled from District 108, 385 were sampled from District 111, and 400 were sampled in District 115 (Table 22). The CWT sampling objective of 20% per week and district was met most weeks in District 101, but it was not always met in Districts 106, 108, 111 and 115 due to low harvest and mixing of terminal and traditional area fish onboard tenders prior to delivery (Table 23). A total of 2,456 Chinook salmon were sampled for CWTs, and the overall sampling rate for all drift gillnet fisheries in Region 1 was 32%.

Set Gillnet

The 2020 Alsek River set gillnet fishery began in statistical week 24. A total of 78 matched GSI and scale samples were collected from Chinook salmon during weeks 24–27 (Table 24).

ANNETTE ISLAND FISHERIES

The Annette Island Reserve was established by Presidential Proclamation in 1916. The proclamation includes waters within 3000 feet from the shorelines of Annette and adjacent islands, wherein members of the Metlakatla Indian Community and other Alaskan Natives have joined or may join them in residence and have exclusive fishing rights.

Salmon are harvested in the Annette Island Reserve by purse seine, drift gillnet, and troll gear. Most of the harvest in recent years has been taken by the drift gillnet and purse seine fleets (Thynes et al. 2021). In 2020, a total of 800 Chinook salmon, 15,000 sockeye salmon, 7,600 coho salmon, 524,000 pink salmon, and 76,000 chum salmon were harvested by all gear groups within the Annette Island Reserve, in District 101 (Thynes et al. 2021). Across all gear groups, 164 Chinook salmon and 825 coho salmon were sampled for CWTs by samplers at Metlakatla (not employed by ADF&G). Salmon harvests landed at Metlakatla were not included in sampling rates presented in this report.

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TABLES

Table 1.—Number of pink salmon sex ratio samples collected from the commercial purse seine fisheries by port, district, and statistical week in 2020.

Statistical week	Ketchikan		Petersburg				Sitka
	101	104	104	105	107	112	113
28	4	Closed	Closed	Closed	3	2 ^a	Closed
29	4	Closed	Closed	Closed	2	1	Closed
30	2	2	0	0	2	2	Closed
31	3	2	4	2	Closed	1	Closed
32	3	2	2	3	3	1	2
33	Closed	2	1	0	1	Closed	3
34	1	2	1	1	0	Closed	1
Total	17	10	8	6	11	7	6

^a One sample collected in Excursion Inlet.

Table 2.—Pink salmon sex composition (proportion of males), average weight (pounds), and sample size in the commercial purse seine fisheries by district and statistical week in 2020.

Statistical week		District					
		101	104	105	107	112	113
28	Prop. male	0.66	Closed	Closed	0.72	0.69	Closed
	avg. weight	3.76	Closed	Closed	3.66	3.36	Closed
	sample size	590	Closed	Closed	300	582	Closed
29	Prop. male	0.54	Closed	Closed	0.57	0.57	Closed
	avg. weight	3.63	Closed	Closed	3.48	3.41	Closed
	sample size	902	Closed	Closed	297	303	Closed
30	Prop. male	0.46	0.55	ND	0.53	0.50	Closed
	avg. weight	3.65	3.48	ND	3.67	3.48	Closed
	sample size	602	263	ND	300	302	Closed
31	Prop. male	0.50	0.53	0.72	Closed	0.46	Closed
	avg. weight	3.57	3.39	3.39	Closed	3.73	Closed
	sample size	601	1215	300	Closed	300	Closed
32	Prop. male	0.47	0.48	0.48	0.53	0.40	0.55
	avg. weight	3.47	3.37	3.48	3.62	3.68	3.78
	sample size	954	753	450	542	303	248
33	Prop. male	Closed	0.43	ND	0.36	Closed	0.40
	avg. weight	Closed	3.57	ND	3.33	Closed	3.96
	sample size	Closed	710	ND	150	Closed	451
34	Prop. male	0.47	0.44	0.43	ND	Closed	0.38
	avg. weight	3.36	3.71	3.83	ND	Closed	ND
	sample size	310	464	150	ND	Closed	150

ND (no data) indicates fishery was opened, but no samples were collected.

Table 3.—Chum salmon scale and length sampling objectives in 2020.

Port	Gear	District	Statistical weeks sampled	Weekly scale objective	Weekly length objective
Ketchikan	Purse seine	102-40	36–42	120	40
Juneau	Gillnet	115	35–42	80	20
Excursion Inlet	Gillnet	115(A)	25–35	80	20

Table 4.–Number of chum salmon sampled for scales and length by area, port, and statistical week in 2020. (Number of lengths is in parentheses if different from the number of scales collected.)

Statistical week	115 Drift gillnet	
	Juneau	Excursion Inlet
26	–	81(20)
27	–	80(20)
28	–	80(19)
29	–	80(20)
30	–	80(20)
31	–	80(20)
32–35	0	0
36	23	–
37	46(30)	–
38	80(20)	–
39	80(20)	–
Total	229(93)	481(119)

En dashes (–) indicate weeks with no chum salmon sampling objectives.

Table 5.–Mixed delivery numbers by port, and gear group in 2020.

Gear group	Ketchikan	Petersburg	Wrangell
Drift gillnet	16 ^a	31 ^a	2
Purse seine	31	12 ^a	0
Troll	0	2	1
Total	47	45	3

^a One delivery was also mixed by gear group.

Table 6.—Sockeye salmon scale, tissue (GSI), length and otolith sampling objectives by port for the purse seine fisheries in 2020.

Port	District	Weekly matched scale/GSI objective	Weekly length objective	Weekly otolith objective
Ketchikan	101	260	40	0
	102	260	40	0
	103 (11–40)	100	20	0
	103 (50–90)	100	20	0
	104	130	130	0
Petersburg	103 (11–40)	100	20	0
	103 (50–90)	100	20	0
	104	130	130	0
	112-16 (traditional)	0	0	100
Excursion Inlet	111-55	0	0	100
	112-16 (traditional)	0	0	100
Sitka	103 (11–40)	100	20	0
	103 (50–90)	100	20	0
	104	100	100	0
	111-55 (SHA)	0	0	120
	112-16 (test fishery)	0	0	100

Table 7.—Sockeye salmon tissue (GSI) and scale samples collected from the purse seine fisheries by area, port, and statistical week in 2020. (Number of lengths is in parentheses if different from the number of scales collected.)

Statistical week	101	102	103 (11–40)	103 (50–90)	104	
	Ketchikan	Ketchikan	Ketchikan	Petersburg	Ketchikan	Petersburg
26	Closed	54	Closed	Closed	Closed	Closed
27	Closed	87(44)	Closed	Closed	Closed	Closed
28	92(57)	3	Closed	Closed	Closed	Closed
29	243(40)	282(180)	Closed	Closed	Closed	Closed
30	267(100)	237(141)	116(40)	200(40) ^a	280(212)	0
31	295(98)	260(57)	0	300(60) ^a	250(210)	130
32	520(161)	260(40)	47	100(66)	270	130
33	Closed	260(81)	0	107(30) ^a	40	115
34	240(80)	0	0	80(20)	130	130
Total	1,657(536)	1443(600)	163(87)	787(216)	970(862)	505

^a Samples also collected in Ketchikan.

Table 8.—Sockeye salmon scale, tissue (GSI), and length sampling objectives for the drift gillnet fisheries by port in 2020.

Port	District	Weekly matched scale/GSI objective	Weekly length objective	Weekly otolith objective
Ketchikan	101-11	260	40	0
	106-30 ^a	300	60	0
Petersburg	106-41	300	60	300 ^d
	108-30/40 ^b	520	80	520
	108-50/60 ^b	520	80	520
	111-31	200	80	200
	115	100	100	0
Juneau	111-31	200	80	200
	111-32 ^c	400	240	400
	115	150	150	0
Excursion Inlet	115	150	150	0

^a Objective shared between Ketchikan and Wrangell.

^b Objective shared between Petersburg and Wrangell.

^c Objective shared between Juneau and Petersburg.

^d Collected statistical weeks 25–31.

Table 9.—Sockeye salmon tissue (GSI) and scale samples collected from the drift gillnet fisheries by area, port, and statistical week in 2020. (Number of lengths is in parentheses if different from the number of scales collected.)

Stat. week	101-11	106-30	106-41	108-50/60	108-30/40	111-31	111-32	115 Combined		
	Ketchikan	Ketchikan	Petersburg	Petersburg	Wrangell	Juneau/Petersburg	Juneau/Petersburg	Petersburg	Juneau	Excursion Inlet
26	64	0	197(67)	Closed	Closed	36	40	100(40)	42	13
27	242(48)	19	300(60)	106	30	182(88)	136	100	104	181
28	275(176)	120(60)	200(121)	51(46)	23	0	85	100	200	200(195)
29	246(124)	45	118(71)	155(100)	0	197(80)	400(300)	100	200	205
30	334(86)	23	270(60)	Closed	Closed	300	200	154(80)	200	202
31	300(104)	240 ^a	219(63)	Closed	Closed	200	290(171)	0	150	195
32	180(141)	81 ^b	111(61)	10	34	313	158(106)	200(80)	200	0
33	116(89)	158 ^b	173(60)	15	45	303	258(138)	200(80)	280	0
34	219(79)	54	300(60)	0	0	187(157)	0	100	160	0
35	155(80)	24 ^b	0	12	3	40	45	200(84) ^c	100	0
Total	2,131(991)	764(704)	1,888(623)	349(289)	135	1,750(1,509)	1,612(1,221)	1,294(804)	1,636	996(991)

^a Additional samples collected in Wrangell and Petersburg.

^b Additional samples collected in Wrangell.

^c 40 Samples collected in week 36.

Table 10.—Sockeye salmon otolith samples collected from the drift gillnet fisheries by area, port, and statistical week in 2020.

Stat. week	106-41	108- 50/60	108- 30/40	111-31	111-32
	Petersburg	Petersburg	Wrangell	Juneau/Petersburg	Juneau/ Petersburg
26	197	Closed	Closed	28	40
27	300	106	30	182	236
28	200	51	23	0	85
29	118	155	0	197	400
30	270	Closed	Closed	300	200
31	219	Closed	Closed	200	290
32	0	10	34	313	158
33	0	15	45	303	258
34	0	0	0	187	0
35	0	12	3	40	45
Total	1,304	349	135	1,750	1,712

^a Samples collected in Juneau.

Table 11.—Sockeye salmon tissue (GSI) and scale samples collected weekly from the Alsek River (statistical area 182-30) set gillnet fishery in 2020. (Number of lengths is in parenthesis if different from the number of scales collected).

Statistical week	Number of samples
24	40
25	55
26	80
27	120
28	120(119)
29	37
30	34
Total	486(485)

Table 12.–Troll fishery performance data (FPD) interview objectives by port for each statistical week during the summer troll fishery in 2020.

Port	Weekly FPD interviews
Sitka	40
Excursion Inlet	As many as possible
Petersburg	10
Wrangell	As many as possible
Ketchikan	10
Craig	40
Juneau	As many as possible

Table 13.—Number of troll fishery performance data (FPD) interviews collected by port and statistical week for coho salmon and Chinook salmon in 2020. (Late and early winter troll statistical weeks are grouped together in groups of 4.)

Stat. week	Craig	Juneau	Ketchikan	Petersburg	Sitka	Excursion Inlet	Total
1–4	11	0	1	9	18	0	39
5–8	22	0	5	23	39	0	89
9–12	39	0	5	17	76	0	137
18 ^a	4	0	0	0	11	0	15
19 ^a	17	0	1	0	14	0	32
20 ^a	15	0	0	0	18	0	33
21 ^a	20	0	0	0	20	0	40
22 ^a	9	0	0	0	37	0	46
23 ^a	11	0	8	0	78	0	97
24 ^a	5	0	16	0	107	0	128
25 ^a	15	0	15	1	97	0	128
26 ^a	9	0	14	1	116	0	140
27 ^a	20	0	7	4	121	1	153
28	48	3	22	7	147	1	228
29	29	0	5	2	86	0	122
30	43	0	5	4	76	0	128
31	38	0	6	5	88	0	137
32	39	1	5	10	80	0	135
33	1	0	2	1	7	0	11
34	41	1	13	10	136	0	201
35	32	1	15	6	159	0	213
36	7	0	14	0	29	0	50
37	13	0	11	5	55	0	84
38	3	1	13	3	65	0	85
39	0	0	4	0	2	0	6
42–45	6	0	11	42	95	0	154
46–49	6	0	1	22	34	0	63
50–53	1	0	0	27	10	0	38
Total	504	7	199	199	1,821	2	2732

^aSpring troll openings.

Table 14.—Coho salmon number sampled, and CWT sampling rate by quadrant and statistical week from the spring troll fishery in 2020.

Statistical week	171		172		174	
	Number sampled	Percent sampled	Number sampled	Percent sampled	Number sampled	Percent sampled
23	2	67%	—	—	—	—
24	—	—	—	—	—	—
25	0	0%	2	50%	—	—
26	11	39%	1	20%	0	0%
27	3	60%	—	—	0	0%

En dashes (—) indicate no harvest

Table 15.—Coho salmon number sampled, and CWT sampling rate by quadrant and statistical week from the traditional summer troll fishery in 2020.

Statistical week	171		172		173		174	
	Number sampled	Percent sampled	Number sampled	Percent sampled	Number sampled	Percent sampled	Number sampled	Percent sampled
27	2,366	19%	343	22%	16	4%	194	71%
28	9,127	24%	2,249	39%	284	26%	321	62%
29	8,722	23%	4,788	40%	603	12%	226	57%
30	8,046	19%	9,581	38%	345	7%	2,343	37%
31	10,675	20%	8,228	41%	440	7%	1,502	29%
32	11,331	22%	6,853	44%	880	14%	2,922	72%
33	261	12%	15	7%	4	1%	16	100%
34	13,002	19%	3,037	43%	1,187	10%	1,300	72%
35	15,679	19%	1,840	47%	1,794	18%	1,773	65%
36	2,315	4%	385	18%	309	5%	760	66%
37	5,322	7%	1,058	80%	284	4%	1,480	47%
38	6,791	27%	21	16%	90	4%	867	48%
39	98	16%	—	—	0	0%	397	69%

En dashes (—) indicate no harvest.

Table 16.–Coho number sampled, and CWT sampling rate from traditional purse seine fisheries in Districts 101–105 in 2020.

Statistical week	101		102		103		104		105	
	Number sampled	Percent sampled	Number sampled	Percent sampled	Number sampled	Percent sampled	Number sampled	Percent sampled	Number sampled	Percent sampled
26	Closed	Closed	330	46%	Closed	Closed	Closed	Closed	Closed	Closed
27	Closed	Closed	700	51%	Closed	Closed	Closed	Closed	Closed	Closed
28	269	39%	111	39%	Closed	Closed	Closed	Closed	Closed	Closed
29	696	43%	562	34%	Closed	Closed	Closed	Closed	Closed	Closed
30	414	34%	131	12%	390	22%	597	27%	0	0%
31	871	49%	223	19%	960	27%	1,726	25%	94	45%
32	990	34%	1,276	27%	796	10%	494	11%	148	65%
33	Closed	Closed	648	37%	1,178	76%	799	27%	–	–
34	462	18%	0	0%	228	13%	664	22%	45	100%

En dashes (–) indicate no harvest.

Table 17.—Coho salmon harvest, number sampled, and CWT sampling rates from the purse seine fisheries in Districts 106, 107, 112, and 113 in 2020.

Statistical week	106		107		112		113	
	Number sampled	Percent sampled	Number sampled	Percent sampled	Number sampled	Percent sampled	Number sampled	Percent sampled
27	Closed	Closed	Closed	Closed	0	0%	Closed	Closed
28	Closed	Closed	Closed	Closed	69	56%	Closed	Closed
29	Closed	Closed	10	100%	152	50%	Closed	Closed
30	Closed	Closed	15	44%	221	64%	Closed	Closed
31	Closed	Closed	15	32%	37	24%	Closed	Closed
32	1,094	89%	92	14%	0	0%	0	0%
33	165	44%	73	23%	Closed	Closed	0	0%
34	48	30%	16	14%	Closed	Closed	66	20%
35	Closed	Closed	Closed	Closed	Closed	Closed	11	33%
36	Closed	Closed	Closed	Closed	Closed	Closed	0	0%
37	Closed	Closed	Closed	Closed	Closed	Closed	0	0%
38	Closed	Closed	Closed	Closed	Closed	Closed	0	0%
39	Closed	Closed	Closed	Closed	Closed	Closed	0	0%

Table 18.—Coho salmon harvest, number sampled, and CWT sampling rates from the drift gillnet fisheries in Districts 101, 106, 108, 111, and 115 in 2020.

Statistical week	101		106		108		111		115	
	Number sampled	Percent sampled	Number sampled	Percent sampled	Number sampled	Percent sampled	Number sampled	Percent sampled	Number sampled	Percent sampled
26	70	32%	69	36%	Closed	Closed	3	100%	9	100%
27	136	25%	148	15%	4	15%	0	0%	29	62%
28	963	100%	506	44%	3	23%	4	31%	54	72%
29	359	29%	611	40%	5	23%	31	22%	110	63%
30	872	66%	750	54%	Closed	Closed	341	60%	77	55%
31	653	70%	1,233	60%	Closed	Closed	450	61%	37	34%
32	1,030	80%	267	30%	20	7%	231	44%	93	52%
33	186	34%	815	41%	355	56%	212	42%	69	55%
34	1,594	100%	551	19%	365	58%	672	36%	120	20%
35	1,396	43%	1,093	31%	485	44%	1,137	36%	40	17%
36	2,900	66%	1,223	17%	972	21%	1,329	32%	619	16%
37	706	27%	1,432	12%	1,401	17%	969	31%	1,100	24%
38	1,472	72%	1,249	18%	1,085	24%	440	45%	926	22%
39	Closed	Closed	75	8%	22	3%	Closed	Closed	780	28%

Table 19.—Chinook salmon matched scale, length, and tissue sampling objectives and number sampled from the traditional troll fisheries by quadrant in 2020.

Fishery	Statistical weeks	Quadrant							
		171		172		173		174	
		Objective	Number sampled	Objective	Number sampled	Objective	Number sampled	Objective	Number sampled
Late winter	1–12	380	867	80	57	170	192	160	133
Spring	18–27	1000	1,511	400	558	Closed	Closed	400	258
Summer 1 st retention	27–28	900	866	500	544	500	230	250	213
Summer 2 nd retention	34–37	900	982	350	318	400	304	320	435
Early winter	42–53	500	589	100	30	90	124	200	131

Table 20.—Chinook salmon harvest, number sampled, and CWT sampling rates by quadrant from the troll fisheries in 2020.

Fishery	Statistical weeks	Quadrant							
		171		172		173		174	
		Number sampled	Percent sampled	Number sampled	Percent sampled	Number sampled	Percent sampled	Number sampled	Percent sampled
Late winter	1–12	4,490	36%	248	69%	1,051	80%	1,651	64%
Spring	18–27	9,246	58%	2,103	81%	Closed	Closed	2,103	81%
Summer 1 st retention	27–28	47,949	27%	16,329	38%	5,491	20%	1,725	38%
Summer 2 nd retention	34–37	58,964	22%	2,400	56%	5,304	31%	2,266	56%
Early winter	42–53	3,133	42%	53	72%	1,506	52%	1,620	72%

Table 21.—Chinook salmon weekly tissue (GSI), scale, and length sampling objectives for the drift gillnet fisheries in 2020.

District	Ketchikan	Juneau	Petersburg	Wrangell	Excursion inlet
101	100	—	—	—	—
108	—	—	20	60	—
111	—	Any	Any	—	Any
115	—	Any	Any	Any	Any

En dashes (—) indicate weeks with no Chinook salmon sampling objectives.

Table 22.—Chinook salmon tissue (GSI), length, and scale samples collected from the drift gillnet fisheries by district and statistical week in 2020.

Statistical week	District			
	101	108	111	115
26	135	Closed	54	81
27	183	146	127	165
28	73	35	90	57
29	99	66	52	54
30	—	Closed	35	28
31	—	Closed	4	5
32	—	0	15	7
33	—	0	1	1
34	—	0	0	1
35	—	0	0	0
36	—	0	6	0
37	—	0	0	1
38	—	0	1	0
Total	490	247	385	400

En dashes (—) indicate weeks with no Chinook salmon sampling objectives.

Table 23.—Chinook salmon harvest, number sampled, and CWT sampling rates from the drift gillnet fisheries by district and statistical week in 2020.

Statistical week	101		106		108		111		115	
	Number sampled	Percent sampled	Number sampled	Percent sampled	Number sampled	Percent sampled	Number sampled	Percent sampled	Number sampled	Percent sampled
26	96	28%	22	24%	Closed	Closed	55	21%	81	32%
27	254	49%	53	9%	197	26%	205	72%	151	67%
28	200	66%	33	21%	106	10%	90	49%	34	27%
29	97	49%	36	23%	66	10%	53	28%	30	38%
30	252	85%	34	57%	Closed	Closed	33	38%	27	61%
31	59	68%	32	42%	Closed	Closed	4	14%	3	11%
32	17	100%	5	36%	44	48%	19	61%	7	18%
33	10	100%	6	67%	7	35%	2	67%	1	5%
34	8	100%	1	8%	2	50%	1	20%	1	3%
35	3	38%	1	20%	1	6%	0	0%	0	0%
36	3	50%	0	0%	2	50%	6	100%	—	—
37	0	0%	0	0%	1	10%	—	—	0	0%
38	2	33%	0	0%	2	13%	0	0%	—	—
39	Closed	Closed	0	0%	—	—	Closed	Closed	1	100%

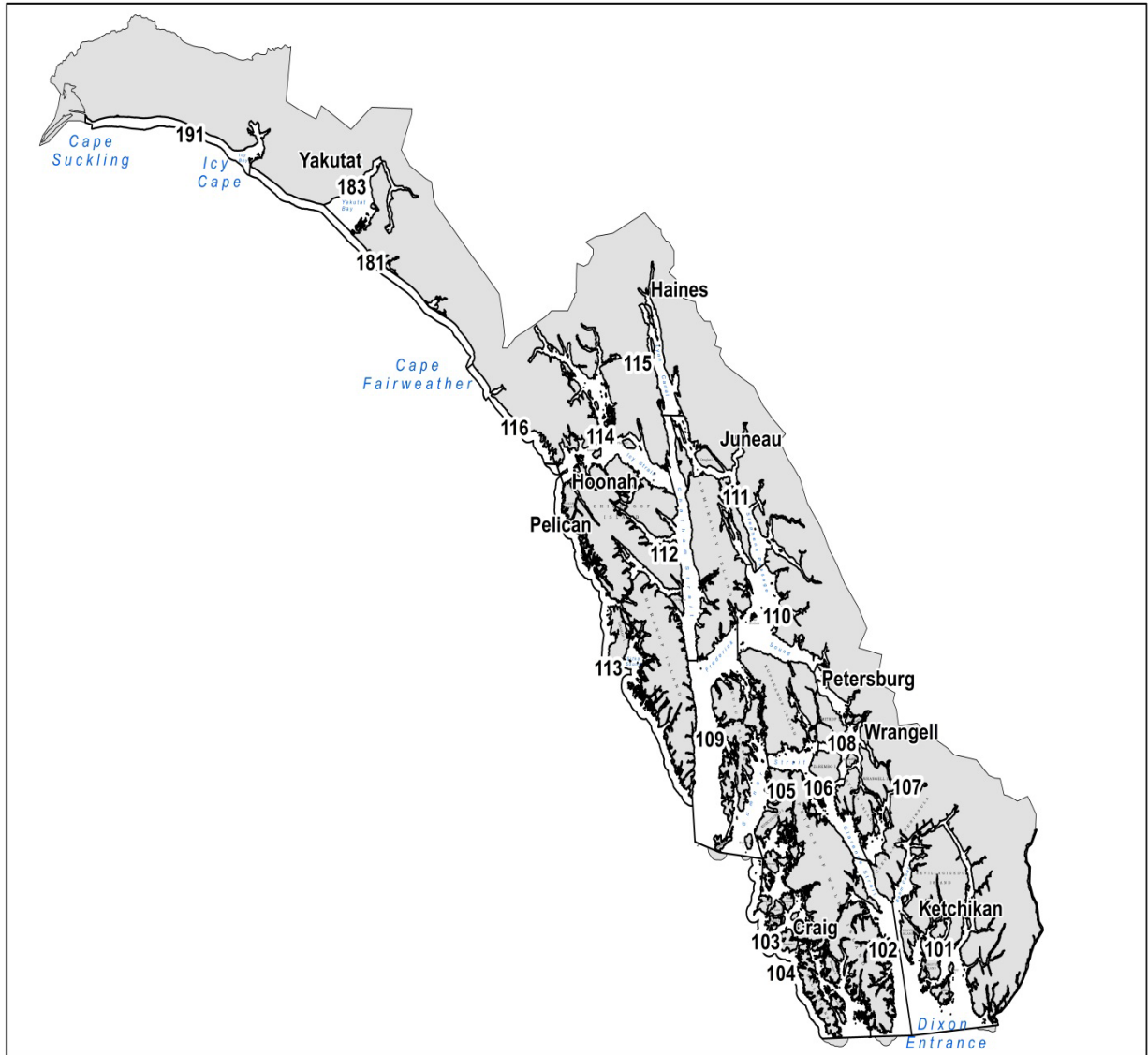
En dashes (—) indicate weeks with no Chinook salmon harvest.

Table 24.—Chinook salmon tissue (GSI), scale, and length samples collected from the set gillnet fishery on the Alsek River by statistical week in 2020.

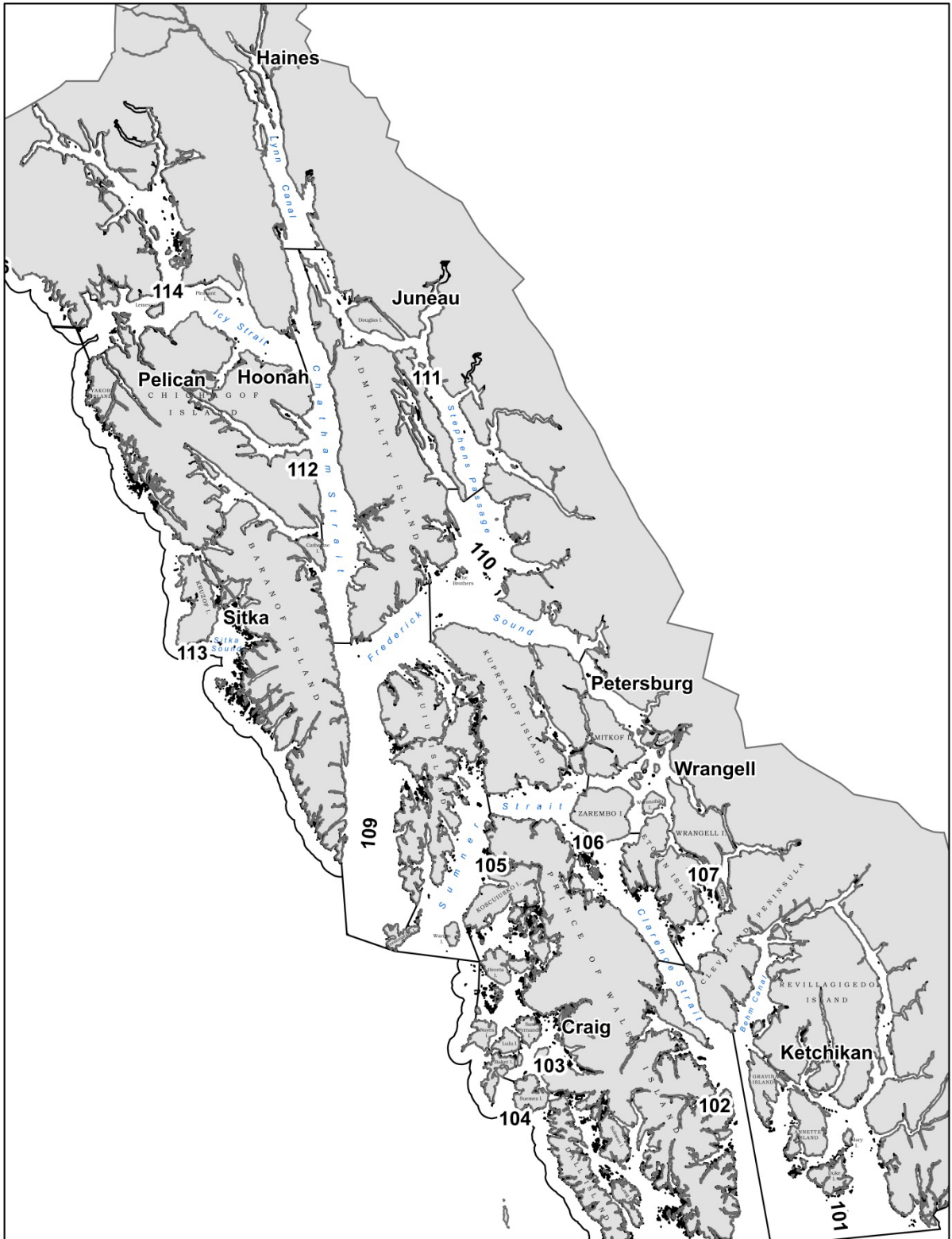
Statistical week	Number of matched tissue-scale samples and lengths
24	35
25	25
26	10
27	8
Total	78

**APPENDIX A:
REGION AND FISHERY AREA MAPS**

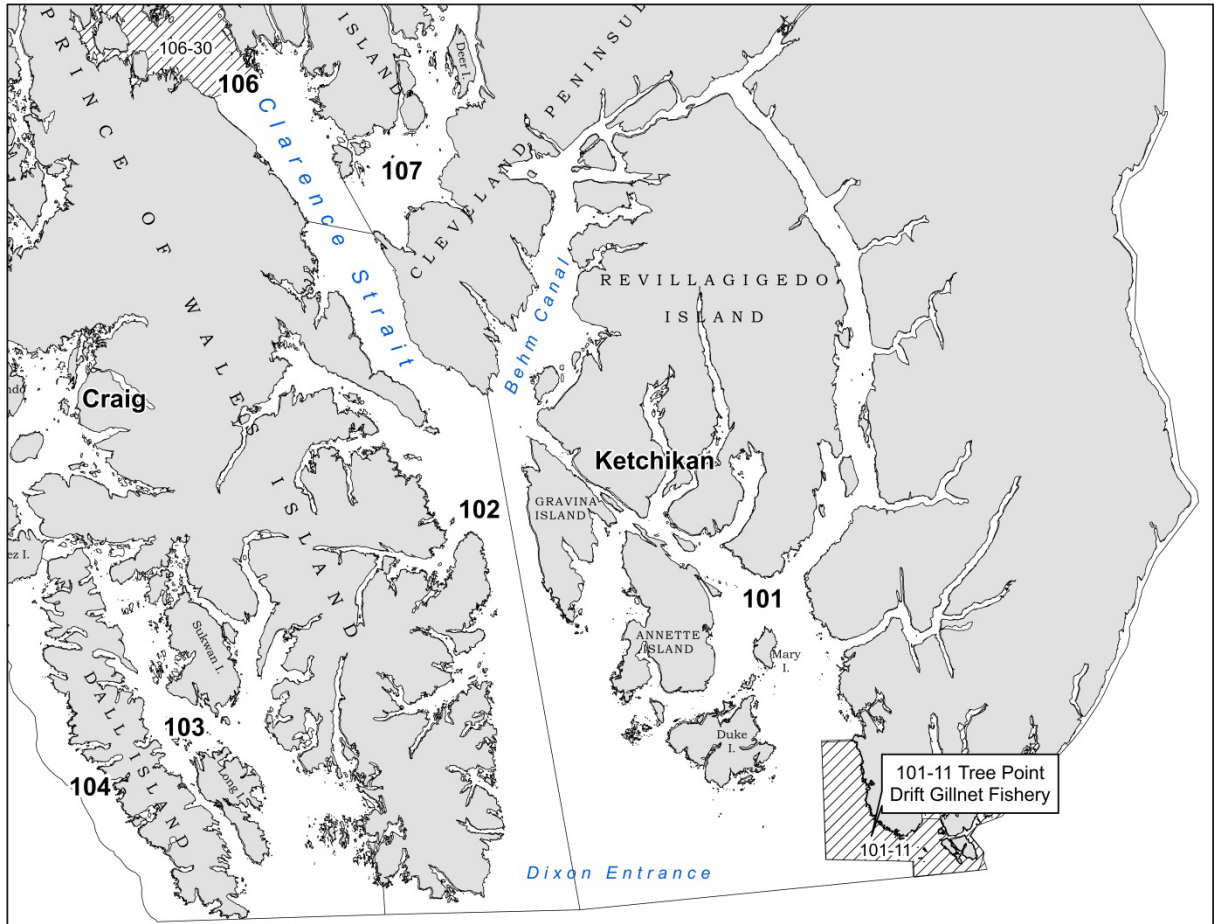
Appendix A1.—Map of the commercial salmon fishing districts in the Southeast Alaska/Yakutat management area, Region I.



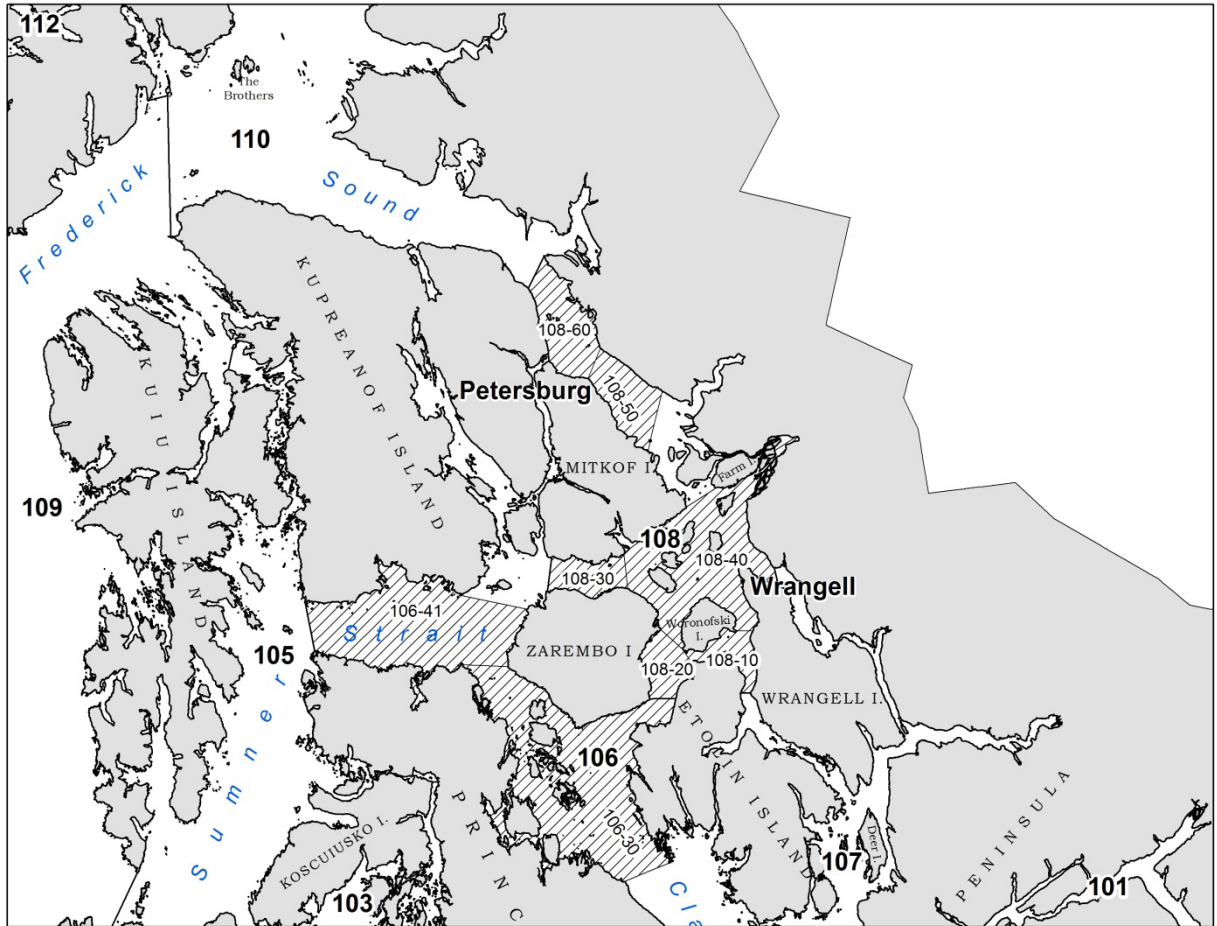
Appendix A2.—Map of the purse seine fishing districts in Southeast Alaska.



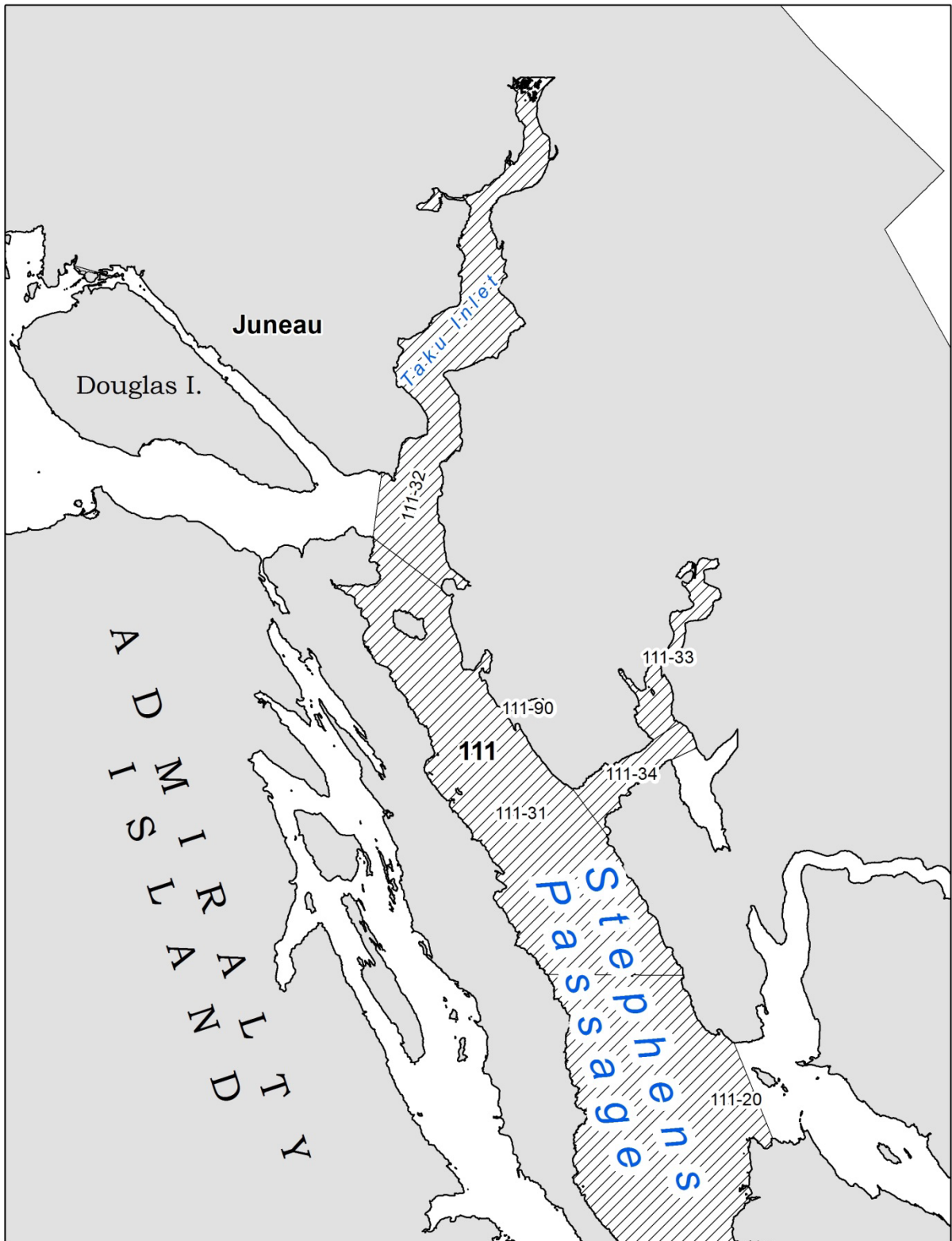
Appendix A3.—Map of the District 101-11 Tree Point drift gillnet fishery.



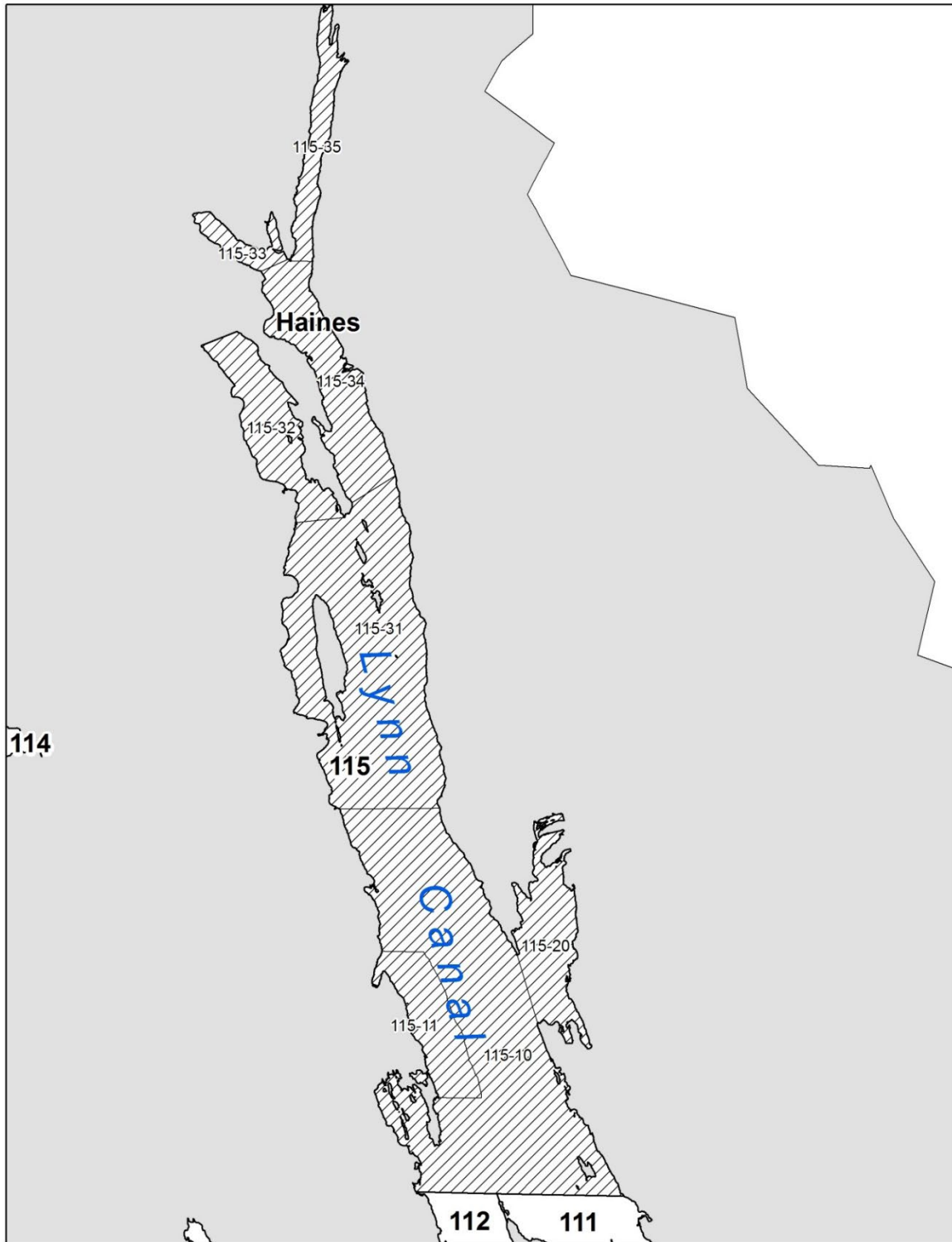
Appendix A4.—Map of the District 106 Prince of Wales and District 108 Stikine drift gillnet fisheries.



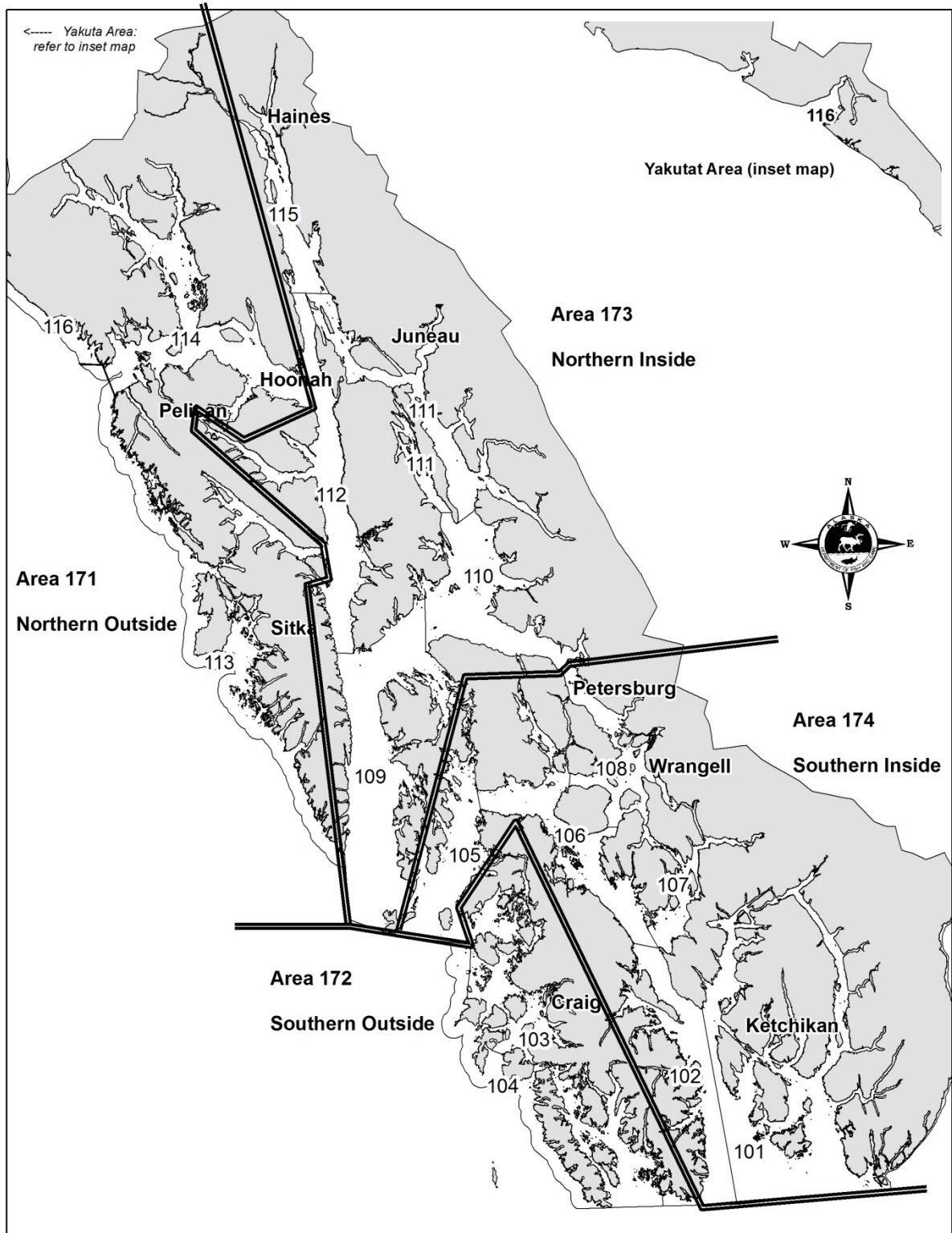
Appendix A5.—Map of the District 111 Taku-Stephens Passage drift gillnet fishery.



Appendix A6.—Map of the District 115 Lynn Canal drift gillnet fishery.



Appendix A7.—Map of Southeast Alaska commercial troll quadrants and districts.



APPENDIX B: FISHERY DEFINITIONS

Appendix B1.–Quadrant definitions.

Quadrant	Districts included
171	113, 114, 116, 150, 154, 156, 157, 181, 183, 186, 189, 191
172	103, 104, 152
173	109, 110, 111, 112, 115
174	101, 102, 105, 106, 107, 108, 150

APPENDIX C: STATISTICAL WEEK CALENDAR

Appendix C1.—ADFG statistical week calendar, 2020.

Week	Start	End	Week	Start	End
1	1-Jan	4-Jan	28	5-Jul	11-Jul
2	5-Jan	11-Jan	29	12-Jul	18-Jul
3	12-Jan	18-Jan	30	19-Jul	25-Jul
4	19-Jan	25-Jan	31	26-Jul	1-Aug
5	26-Jan	1-Feb	32	2-Aug	8-Aug
6	2-Feb	8-Feb	33	9-Aug	15-Aug
7	9-Feb	15-Feb	34	16-Aug	22-Aug
8	16-Feb	22-Feb	35	23-Aug	29-Aug
9	23-Feb	29-Feb	36	30-Aug	5-Sep
10	1-Mar	7-Mar	37	6-Sep	12-Sep
11	8-Mar	14-Mar	38	13-Sep	19-Sep
12	15-Mar	21-Mar	39	20-Sep	26-Sep
13	22-Mar	28-Mar	40	27-Sep	3-Oct
14	29-Mar	4-Apr	41	4-Oct	10-Oct
15	5-Apr	11-Apr	42	11-Oct	17-Oct
16	12-Apr	18-Apr	43	18-Oct	24-Oct
17	19-Apr	25-Apr	44	25-Oct	31-Oct
18	26-Apr	2-May	45	1-Nov	7-Nov
19	3-May	9-May	46	8-Nov	14-Nov
20	10-May	16-May	47	15-Nov	21-Nov
21	17-May	23-May	48	22-Nov	28-Nov
22	24-May	30-May	49	29-Nov	5-Dec
23	31-May	6-Jun	50	6-Dec	12-Dec
24	7-Jun	13-Jun	51	13-Dec	19-Dec
25	14-Jun	20-Jun	52	20-Dec	26-Dec
26	21-Jun	27-Jun	53	27-Dec	31-Dec
27	29-Jun	4-Jul			