Fishery Management Report No. 19-09

Annual Management Report for the 2018 Southeast Alaska/Yakutat Salmon Troll Fisheries

by

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and

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April 2019

Alaska Department of Fish and Game **Divisions of Sport Fish and Commercial Fisheries**

Symbols and Abbreviations

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Weights and measures (metric)

centimeter	cm
deciliter	dL
gram	g
hectare	ha
kilogram	kg
kilometer	km
liter	L
meter	m
milliliter	mL
millimeter	mm

Weights and measures (English)

cubic feet per second	ft^3/s
foot	ft
gallon	gal
inch	in
mile	mi
nautical mile	nmi
ounce	oz
pound	lb
quart	qt
yard	yd

Time and temperature

day	d
degrees Celsius	°C
degrees Fahrenheit	°F
degrees kelvin	K
hour	h
minute	min
second	s

Physics and chemistry

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

General

Alaska Administrative Code	AAC
all commonly accepted abbreviations	e.g., Mr., Mrs., AM, PM, etc.
all commonly accepted professional titles	e.g., Dr., Ph.D., R.N., etc.
at	@
compass directions:	
east	E
north	N
south	S
west	W
copyright	©
corporate suffixes:	
Company	Co.
Corporation	Corp.
Incorporated	Inc.
Limited	Ltd.
District of Columbia	D.C.
et alii (and others)	et al.
et cetera (and so forth)	etc.
exempli gratia (for example)	e.g.
Federal Information Code	FIC
id est (that is)	i.e.
latitude or longitude	lat or long
monetary symbols (U.S.)	$, ¢
months (tables and figures): first three letters	Jan,...,Dec
registered trademark	®
trademark	™
United States (adjective)	U.S.
United States of America (noun)	USA
U.S.C.	United States Code
U.S. state	use two-letter abbreviations (e.g., AK, WA)

Mathematics, statistics

all standard mathematical signs, symbols and abbreviations	
alternate hypothesis	H_A
base of natural logarithm	*e*
catch per unit effort	CPUE
coefficient of variation	CV
common test statistics	(F, t, χ^2, etc.)
confidence interval	CI
correlation coefficient (multiple)	R
correlation coefficient (simple)	r
covariance	cov
degree (angular)	°
degrees of freedom	df
expected value	*E*
greater than	>
greater than or equal to	≥
harvest per unit effort	HPUE
less than	<
less than or equal to	≤
logarithm (natural)	ln
logarithm (base 10)	log
logarithm (specify base)	$\log_2$, etc.
minute (angular)	'
not significant	NS
null hypothesis	H_O
percent	%
probability	P
probability of a type I error (rejection of the null hypothesis when true)	α
probability of a type II error (acceptance of the null hypothesis when false)	β
second (angular)	"
standard deviation	SD
standard error	SE
variance	
population	Var
sample	var

FISHERY MANAGEMENT REPORT NO. 19-09

ANNUAL MANAGEMENT REPORT FOR THE 2018 SOUTHEAST ALASKA/YAKUTAT SALMON TROLL FISHERIES

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ABSTRACT

This report describes the Southeast Alaska/Yakutat salmon troll fishery, management methods, and actions taken by the Alaska Department of Fish and Game from October 1, 2017, through September 30, 2018. Approximately 1.6 million salmon were harvested in the 2018 Southeast Alaska troll fishery. Of this, 50,000 salmon (3%) were taken by hand troll gear and 1.6 million salmon (97%) by power troll gear. The harvest included 108,000 Chinook (*Oncorhynchus tshawytscha*), 5,000 sockeye (*O. nerka*), 944,000 coho (*O. kisutch*), 54,000 pink (*O. gorbuscha*), and 531,000 chum (*O. keta*) salmon landed by 672 power troll and 227 hand troll permit holders during the calendar year. The Chinook salmon harvest ranked as the lowest on record over the last 59 years since statehood, while the coho salmon and chum salmon harvests ranked thirty-seventh and third over the same time period, respectively. The preliminary estimated Alaska hatchery contribution of Chinook salmon to the troll fishery, including hatchery terminal harvest, was 9,203 fish (9%). A total of 315,019 coho salmon produced by Alaska hatcheries were harvested by the troll fleet, which accounted for 33% of the total troll coho salmon harvest. Chinook salmon escapements for four out of 11 Southeast Alaska rivers were within the desired escapement goal ranges, while coho salmon escapements were mostly within or above the desired escapement goal ranges.

Key words: Troll, Southeast Alaska, Yakutat, Chinook salmon, *Oncorhynchus tshawytscha*, coho salmon, *Oncorhynchus kisutch*, Pacific salmon, commercial fisheries, Alaska Department of Fish and Game, Annual Management Report, Pacific Salmon Treaty, Pacific Salmon Commission

INTRODUCTION

This report describes the 2018 Southeast Alaska/Yakutat (SEAK) salmon troll fisheries. An overview of the troll fishery, statuses of Chinook (*Oncorhynchus tshawytscha*) and coho (*O. kisutch*) stocks of SEAK, and descriptions of fishery management actions and outcomes are discussed along with a summary of the 2018 harvest estimates compared to historical harvests. The status of hatchery production and contributions to the troll fishery, as well as wild Chinook and coho salmon escapements and exploitation rates are summarized. Troll effort and harvest statistics since statehood (1960 fishing season) are presented and include all-gear harvests of Chinook and coho salmon.

TROLL FISHERY OVERVIEW

The Southeast Alaska/Yakutat (Region 1) commercial salmon troll fishery occurs in State of Alaska waters and in the Federal Exclusive Economic Zone (EEZ) east of the longitude of Cape Suckling (5 AAC 29.010 and 5 AAC 29.020) (Figure 1). All other waters of Alaska are closed to commercial trolling. The troll fishery is managed according to regulations promulgated by the Alaska Board of Fisheries (BOF), the North Pacific Fishery Management Council, the National Marine Fisheries Service, and the U.S./Canada Pacific Salmon Commission (PSC). Regulations adopted by the board are listed in the State of Alaska Administrative Code, Title 5 (5 AAC), Chapter 29—Salmon Troll Fishery. The SEAK Chinook salmon fishery is managed to achieve the annual all-gear PSC allowable catch associated with the preseason abundance index (AI) generated by the Chinook Technical Committee Chinook model each spring. The harvest is allocated through regulations established by the BOF among troll, net, and sport fisheries as follows: 4.3% to the purse seine fleet, 2.9% to the drift gillnet fleet, and 1,000 fish to the set gillnet fleet. The total net gear allocation is subtracted from the all-gear harvest, and the remainder is divided between the troll and sport fisheries in an 80/20 split [5 AAC 29.060(b)]. Coho salmon are managed to ensure that escapement goals are met and to achieve BOF allocation guidelines. Coho salmon fisheries at Dixon Entrance near the U.S./Canada border are managed in cooperation with Canada, according to the Pacific Salmon Treaty (PST).

The commercial troll fleet is composed of power and hand troll gear types. Power trollers are limited to four lines on power-operated gurdies, except within the EEZ north of the latitude of the southernmost tip of Cape Spencer, where six lines may be used [5 AAC 29.120 (b)(1)(A) and (B)]. Vessels using hand troll gear are limited to two lines on two hand-operated gurdies or four fishing rods, except that following the closure of the initial summer Chinook retention period and prior to the winter troll fishery, four hand troll gurdies or four fishing rods may be onboard and operated within the EEZ north of the latitude of the southernmost tip of Cape Spencer [5 AAC 29.120 (b)(2)(C)]. During the winter troll season only, two hand troll gurdies or hand-powered downriggers can be used in conjunction with two fishing rods. While the majority of the troll fleet sells their catch to onshore processing plants or tenders, the fleet does include some catcher-processors, or "freezer boats," which harvest and freeze their catch at sea.

Limited entry for the power troll fishery was instituted in 1974 and the first permits were issued in 1975. The number of renewals has gradually decreased over time while the number of permits fished has fluctuated, reaching a high of 852 in 1991 and a low of 641 in 2003. Overall, the number of power troll permits fished has declined since 1991. After the power troll fleet came under limited entry, the hand troll fleet, which was not yet limited entry, increased dramatically. In the late 1970s, limited entry for the hand troll fleet was under consideration by the Commercial Fisheries Entry Commission (CFEC) and the number of hand troll permits fished doubled from 1,092 permits in 1975 to a high of 2,624 permits in 1978. Due to this increased effort, the CFEC initiated a selective limited entry regime for the hand troll fishery in 1980 and the first permits were issued in 1982. The number of hand troll permits fished declined steadily from 1979 through 2002, increased from 2003 to 2008, and has since declined to a record low 227 permits fished in 2018. The percentage of active hand troll permits in the fleet has declined from 76% in 1978 to 25% in 2018.

The commercial troll fishery harvests primarily Chinook and coho salmon. Historically, the troll fishery harvested about 85% to 90% of the Chinook salmon taken in Southeast Alaska. Since 1980, the percentage of the Chinook salmon harvest taken by the troll fishery has declined due to harvest ceilings imposed as part of the PST coastwide rebuilding program, as well as allocation guidelines established by the BOF. The troll fleet has been managed to harvest an average of 61% of the commercial coho salmon harvest since 1989 (5 AAC 29.065), though the actual troll harvest has averaged 65% of the commercial harvest, with a range of 53% to 78%. Most other species are harvested incidentally, but in recent years, hatchery-produced chum salmon have been the target of significant troll effort. The troll fleet harvests Pacific halibut incidentally under federal Individual Fishing Quota regulations and harvests groundfish incidentally (including lingcod and rockfish) under state regulations.

CHINOOK SALMON STOCKS

Native Chinook salmon stocks occur throughout SEAK and Yakutat, primarily in the large mainland rivers and their tributaries. In total, 34 rivers in the region are known to produce runs of Chinook salmon. The most significant are the Alsek, Taku, Stikine, Chilkat, and the Behm Canal rivers (i.e., Unuk, Chickamin, Blossom, and Keta rivers). The three major river systems (Alsek, Taku, and Stikine rivers), as well as several midsized systems (Unuk, Chickamin, and Chilkat rivers) are transboundary rivers, originating in Canada and flowing through Alaska to the Pacific Ocean. The PSC, under the terms of the PST, addresses shared ownership and coordinated management of the Alsek, Taku, and Stikine rivers.

SEAK Chinook salmon stocks are all "spring type," entering spawning streams during spring and early summer months. Fry emerge the following spring and most remain in fresh water for at least one year before migrating seaward. Ocean residency ranges from two to four years for most Chinook salmon originating in SEAK. Trollers harvest several age classes of mature spawners and immature Chinook salmon during the fishing season.

Non-Alaska hatchery-produced Chinook salmon fall under the terms of the PST and are referred to as treaty Chinook salmon. Chinook salmon originating from Alaska, British Columbia, and the Pacific Northwest are harvested in the SEAK troll fishery. Stock composition information is based on coded wire tagging (CWT) studies, genetic stock analysis, age composition, and general productivity considerations. Management of Chinook salmon stocks is coordinated through the PSC.

CHINOOK SALMON FISHERY MANAGEMENT

Recent all-gear Chinook salmon harvests in SEAK (based on a moving 10-year average) have been the highest since statehood and were an exception to the declining trend in harvests since the late 1930s (Figure 2). A guideline harvest level for all stocks and a 15-year rebuilding program for SEAK Chinook salmon stocks were established in 1981. In 1985, the PST was signed, and a coastwide rebuilding program for depressed non-Alaska Chinook salmon stocks that contribute to the SEAK fisheries began. The decline in coastwide abundance was primarily the result of overfishing of natural Chinook salmon stocks and the loss of freshwater spawning and rearing habitat in the Pacific Northwest.

In 1996, after three years without a Chinook salmon annex fishing agreement between the U.S. and Canada, the Letter of Agreement Regarding an Abundance-Based Approach to Managing Chinook Fisheries in Southeast Alaska (LOA) was signed among the U.S. members of the PST. This agreement, which was in effect from 1996 through 1998, established an annual PST harvest limit based on preseason and inseason abundance estimates. In 1999, a new set of PST agreements was signed, including an agreement for Chinook salmon. The new Chinook salmon agreement was similar to the abundance-based management of the LOA, with harvest limits based on preseason and postseason abundance estimates. However, under the PST, Alaska agreed to lower Chinook salmon harvests at lower abundance levels than had been implemented in either the PST or the LOA. In 2008, a new PST was signed which remained in effect through 2018.

Since 2014, Chinook harvests have declined, with the 2018 all-gear and troll harvests the lowest since statehood. The reductions in harvests prior to the 2000 season occurred primarily because of harvest ceilings imposed by the BOF and the PST. The all-gear harvest of treaty[1] Chinook salmon exceeded the preseason harvest limit 20 times over the 34-year period from 1985 to 2018. The troll harvest of treaty Chinook salmon has exceeded the preseason PST harvest limit 18 times from 1987 to 2018 (Table 1).

The harvest of treaty Chinook salmon by commercial salmon trollers is limited to a specific number of fish, which varies annually according to the AI estimate. The accounting of treaty

[1] Under the terms of the PST, the number of treaty fish is the total harvest minus the add-on. The add-on is the number of Alaska hatchery-produced Chinook salmon minus: 1) 5,000 fish for pre-treaty harvests of Alaska hatchery Chinook salmon, and 2) a risk factor. The risk factor is the standard deviation of the estimate of the total number of Alaska hatchery Chinook salmon.

Chinook harvested by trollers begins with the winter fishery, continues into the spring fishery, and ends with the summer fishery.

The winter fishery begins on October 11 and typically continues through April 30, or until the guideline harvest level (GHL) of 45,000 treaty Chinook salmon is met. However, as adopted under the Unuk River Chinook action plan during the BOF meeting in January 2018, notwithstanding any remaining portion of the 45,000 non-Alaska hatchery-produced Chinook salmon GHL, the commercial winter troll fishery now closes in all waters of Southeast Alaska/Yakutat on March 15. By regulation, the open area during the winter fishery is restricted to those areas lying east of the "surf line" south of Cape Spencer, and the waters of Yakutat Bay [5 AAC 29.020 (b)]. All outer coastal areas, including the EEZ, are closed during the winter fishery. Fish tickets provide inseason information on harvest and effort throughout the fishery.

The spring fishery begins on May 1 after the winter fishery closes and continues through June 30. However, the spring fishery may begin prior to May 1 if the winter fishery closes early (prior to April 30). The spring fishery is traditionally conducted in inside waters, along migration routes, and close to hatcheries and release sites with the intent to maximize the harvest of Alaska hatchery-produced Chinook salmon. Depending on the run forecasts, directed commercial fisheries on Chinook salmon in Districts 8 and 11 returning to the Taku and Stikine Rivers may occur.

While there is no ceiling on the number of Chinook salmon harvested in the spring fisheries, the take of treaty Chinook salmon is limited according to the percentage of the Alaska hatchery fish taken in the fishery. Treaty fish are counted towards the annual PST harvest limit of Chinook salmon, while most of the Alaska hatchery fish are not. Each spring troll fishing area is managed individually and closes when the treaty Chinook limit is reached.

The guideline limits of treaty fish that may be harvested in each spring area are as follows:

Alaska hatchery contribution to the harvest	Treaty fish limit
Less than 25%	1,000
At least 25% and less than 35%	2,000
At least 35% and less than 50%	3,000
At least 50% and less than 66%	5,000
66% or more	no limit

If the preseason AI is 1.15 or above (commercial troll allocation of 120,833 Chinook salmon) and the number of Chinook salmon remaining on the winter GHL to be harvested is between 10,000 and 15,000 fish, an additional 250 non-Alaska hatchery-produced Chinook salmon will be added to the treaty caps under each tier. If the number of Chinook salmon remaining on the winter GHL is greater than 15,000 fish, an additional 500 Chinook will be added to the treaty cap tiers [5 AAC 29.090 (d)(3)(A) and (B)].

To reduce encounters of wild Southeast Alaska stocks during spring troll fisheries, the BOF determined in January 2018 that fishing opportunities in May and June are to be limited to terminal harvest areas (THA), waters in close proximity to hatchery facilities or release sites, and in a few defined spring troll fishery areas located on the outside coast to target Alaska hatchery Chinook salmon. While some THAs open on May 1 and remain open for extended periods of time, others open in accordance with the fishing schedules provided in THA management plans. Fish tickets and biological sampling data provide information on harvest, effort, and stock

composition for the spring fisheries. Coded wire tag data is used in season to estimate the Alaska hatchery contribution to the harvest in each area. Fishing time for the following weeks is determined using this information in combination with historical harvest timing information.

The general summer troll fishery opens July 1 and targets the remainder of the troll treaty Chinook harvest limit during one or more openings. During the summer fishery, most waters of SEAK are open to commercial trolling, including outer coastal waters. The department collects Fisheries Performance Data (FPD) from fishermen to estimate Catch Per Boat Day (CPBD) as a measure of troll catch per unit of effort (CPUE) by area, inseason during the summer fishery. Confidential interviews are conducted with trollers to obtain detailed CPUE data. Aerial vessel surveys are conducted to obtain an immediate estimate of fishing effort. Total harvest to date is estimated by multiplying aerial vessel counts with the CPUE obtained from the interviews. Daily summaries of both conventional and electronic fish tickets are important tools in tracking harvest during the final days of each summer Chinook opening. The department also encourages trollers to report information on catch rates, effort, weather, water temperatures, and other factors that influence the pace of the fishery by phone or email during Chinook openings.

COHO SALMON STOCKS

Coho salmon are widely distributed and are believed to be present in over 2,500 streams in Southeast Alaska and Yakutat. Most coho salmon streams are small, with the number of spawners typically ranging up to 1,000 fish. Because of the large number of these systems, their collective contribution to overall production is substantial. Lake systems are also important and typically produce returns between 1,000 and 10,000 fish. Large populations occur in the Taku, Chilkat, Berners, Stikine, Unuk, and Chickamin rivers and in most Yakutat area systems. In addition to wild stocks, coho produced by 11 local hatcheries contribute to the region's harvest.

Coho salmon rear in fresh water for one or two years and spend no more than one winter in the ocean before returning to spawn as adults. Spawning takes place during the fall and early winter months. Coho salmon harvested by Southeast Alaska trollers are typically three-year-old and four-year-old fish of Alaska origin and are harvested in the year of spawning. Troll harvests of coho salmon peak between mid-July and early September, while harvests in the inside gillnet fisheries peak between late August and early October. Escapements into streams generally peak in late September through early October, though some systems are earlier.

COHO SALMON FISHERY MANAGEMENT

All-gear commercial harvests of coho salmon have fluctuated between a low decade average of 1.0 million fish in the 1970s to a high decade average of 3.2 million fish in the 1990s, with an annual record of 5.5 million fish harvested in 1994 (Figure 3). The BOF adopted a coho salmon troll fishery management plan in 1980 in response to increasing effort and efficiency in the hand troll fleet, increased capitalization and efficiency in the power troll fleet, and increased troll harvest in outside waters (Figure 4). As there are no harvest ceilings for coho salmon fisheries, the Southeast Alaska/Yakutat Area coho salmon fishery management plan (5 AAC 29.110) allows for midseason troll closures to provide for adequate coho salmon escapement and allocation to other gear groups based on inseason coho assessments. The regulatory period for coho salmon retention in the troll fishery is June 1 through September 20, with a potential extension through September 30 when wild coho salmon abundance is projected to meet escapement needs after harvest and effort are considered.

Long-term wild stock and hatchery stock CWT programs, dockside sampling programs, escapement monitoring, and the troll FPD collection program began in the early 1980s and continue through the present day. As years of data were gathered from each program, more information and understanding of stock movement, timing, and harvest were accumulated. As a result, a model was developed in 1989 to accurately estimate the end of season all-gear coho salmon commercial harvest by late July using the salmon troll FPD. In the mid-1990s, escapement goals were established for several stocks in Southeast Alaska based on spawner-recruit relationships from long-term databases of harvest rate, age composition, and escapement information. Inseason run strength is used to achieve ADF&G conservation objectives and BOF allocation objectives in the management plan (Table 2).

Coho run strength is assessed three times throughout the summer season. The first run strength assessment occurs in late July and has two objectives: determining whether a regionwide closure is needed in late July based on the projected all-gear commercial wild coho harvest, and determining whether a closure of U.S./Canada boundary waters is necessary based on troll catch rates in Southern Inside waters (Districts 1 and 2). The PST requires that the SEAK coho salmon troll fishery be closed for up to seven days on or about July 25 if the projected all-gear commercial harvest of wild coho salmon is less than 1.1 million fish [5 AAC 29.110 (b)(1)]. That projection is based on the relationship between the projected all-gear commercial wild coho harvest and regional troll catch rates during early July. When this regulation was established, the commercial harvest of wild fish was considered the best proxy for the total abundance of wild coho salmon returning to the region, based on historical fishing patterns. The PST also requires that waters in the U.S./Canada boundary area be closed for 10 days beginning in statistical week (SW) 31 if the troll average CPUE for SW 27–29 in troll Area 6 (Districts 1 and 2) is between 15 and 22 coho/day.

As part of the second assessment in August, the department is required to assess the SEAK coho salmon fishery to determine if a closure is needed to meet allocation and conservation requirements established by the BOF. The second assessment includes updated projections of the total commercial catch and regional abundance of wild coho salmon, as well as recommendations for the length and timing for a troll closure. The strength of coho salmon returns to inside areas is evaluated in part by assessing the cumulative CPUE in the four major drift gillnet fisheries; however, the drift gillnet fisheries at this early date are not necessarily indicative of the actual coho abundance, as coho salmon are not targeted by gillnet gear until later in the season. Because the District 6 fishery shows substantial numbers of hatchery fish in the catch through late July/early August, the strength of the District 6 wild component is of particular interest. A troll closure for up to ten days typically occurs in mid-August and is required to be a minimum of two days by regulation for a fair start prior to any second Chinook salmon retention period. The actual length of that closure is decided in early August, when an assessment determines whether the number of coho reaching inside areas is adequate to provide for spawning requirements, given usual or restricted inside fisheries on coho and other species[5 AAC 29.110 (b)(2)(A)]; or whether the proportional share of coho salmon harvest by the troll fishery is larger than that of inside gillnet and recreational fisheries compared to average 1971–1980 levels [5 AAC 29.110 (b)(2)(B)].

The third coho run strength assessment occurs in September and reassesses the wild commercial harvest and total all-gear commercial harvest projections. Coho catch rates, as well as cumulative harvests from the four primary drift gillnet fisheries provide support for determining whether the

troll season will be extended through September 30 in areas where the department had projected coho salmon escapement goals would be met and fish in excess of escapement needs were available for harvest [5 AAC 29.110(a)].

SUMMARY OF THE 2018 SEASON

In 2018, a total of 672 power troll permits and 227 hand troll permits were fished during the calendar year (Table 3). Both power and hand troll effort decreased in all three seasonal troll fisheries when compared to 2017 troll effort, with the 2018 hand troll effort the lowest number of annual permits fished on record since statehood. The annual combined power troll and hand troll permits fished of 899 during 2018 was below both the recent 5-year and 10-year averages, with weekly effort during the summer fishery also reflecting this trend (Figure 5). Combined power troll and hand troll effort decreased by 107 permits during the winter fishery, decreased by 120 permits during the spring fishery, and decreased by 117 permits during the summer fishery when compared to effort in 2017 (Table 4; Figure 6). The decrease in overall hand troll effort compared to 2017 was around 12%, while power troll effort decreased by 7% (Table 3). The number of boat-days of effort in 2018 during Chinook salmon retention periods was not available at the time of publication; however, historical data from 1985–2017 is presented (Table 5; Figure 7). Fluctuations in effort relate strongly to salmon prices and abundance, and to a lesser degree, the availability of alternate commercial troll opportunities in the Pacific Northwest.

The troll fleet harvested approximately 1.6 million salmon during the 2018 season, which is a 40% decrease from the 2017 harvest and a decrease of 33% when compared to the recent 10-year average (Table 6). Compared to 2017, the Chinook salmon harvest for 2018 was 17% lower. The 2018 coho harvest was 56% lower than 2017, and peaked during the week of July 22–28, when 19% of the annual harvest was taken (Table 7). The average weight for coho surpassed the 2017, 5-year, and 10-year averages, reaching 7.0 pounds for the season (Table 8). The 2018 harvest of chum salmon increased by 32% compared to the 2017 harvest, while the 2018 harvests of sockeye and pink salmon remained nearly the same compared to the 2017 harvest (Table 6). In 2018, hand troll vessels harvested 49,812 salmon and power troll vessels harvested 1,589,709 salmon. The proportion of the commercial troll harvest taken by the hand troll fleet has decreased from a peak of 32% in 1978 to a low of 3% in 2018 (Tables 9 and 10).

NEW TROLL FISHERY REGULATIONS

During the BOF meeting held in Sitka from January 11–23, 2018, new regulations were adopted that affect the management of the seasonal troll fisheries.

Action plans for Chilkat, King Salmon, and Unuk rivers Chinook salmon were adopted, giving the department direction through emergency order authority to conserve wild SEAK Chinook salmon.

1. As provided for under the action plan to conserve Unuk River Chinook salmon:
    a. Using emergency order authority, notwithstanding any remaining portion of the 45,000 non-Alaska hatchery-produced Chinook salmon guideline harvest level, the commercial winter troll fishery closes on March 15.
    b. Using emergency order authority, opportunities during May and June spring troll Chinook salmon fisheries will be limited to THAs, waters in close proximity to hatchery facilities or release sites, and in areas that have been identified as having

low proportional harvests of wild stock Southeast Alaska/Yakutat Chinook salmon. Spring troll chum fisheries, as provided for in the *District 12 and District 14 Enhanced Chum Salmon Troll Fisheries Management Plan*, will begin June 15, with retention of Chinook salmon prohibited.

2. As provided for under the action plan to conserve Chilkat and King Salmon River Chinook salmon:

    a. Using emergency order authority, close the waters of Section 15-A in Lynn Canal/Chilkat Inlet northern of the latitude of Sherman Rock to commercial trolling from April 15–December 31.

    b. Using emergency order authority, delay initial openings, reduce opening lengths, or close specified spring troll fisheries. An option that the department may close all spring troll areas from May 24 to June 14 was also provided.

For complete details of the Chinook salmon action plans for the Unuk, Chilkat, and King Salmon rivers, see the links below:

•Unuk River King Salmon Stock Status and Action Plan, 2018:
http://www.adfg.alaska.gov/FedAidPDFs/RIR.1J.2018.04.pdf

•Chilkat River and King Salmon River King Salmon Stock Status and Action Plan, 2018:
http://www.adfg.alaska.gov/FedAidPDFs/RIR.1J.2018.05.pdf

Other regulatory actions adopted are as follows:

3. The *District 9, 10, 12, and 14 Enhanced Chum Salmon Troll Fisheries Management Plan* was amended to include a new fishery in the Southeast Cove/Keku Strait vicinity.

4. The Deep Inlet Terminal Harvest Area Management Plan was modified to increase commercial salmon fishing opportunity with troll gear. The management plan now specifies that the commissioner may allow the waters of the THA to remain open to troll gear during hatchery cost recovery periods.

5. A Special Harvest Area was established and the existing Terminal Harvest Area (THA) was modified in Crawfish Inlet. The expansion of the existing THA will create additional opportunity for the commercial troll fleet primarily during June and July for Chinook salmon and late July to early September for chum salmon.

6. A commercial troll fishery in the newly established Crawfish Inlet THA to target hatchery-produced chum salmon was adopted. This fishery allows trollers to target chum during any closures of the summer coho salmon troll fishery.

7. The department may, in consultation with hatchery operators, identify specific areas that could remain open for up to 10 days of additional coho fishing time to access hatchery coho during troll fishery coho conservation closures

8. The eastern boundary of the closed troll area outside the Situk-Ahrnklin Inlet was moved approximately two miles to the northwest, while maintaining the current western boundary which was modified by the board of fisheries in 2012. This change reduced the area which is closed to trolling adjacent to the Situk-Ahrnklin Inlet by seven square miles.

CHINOOK SALMON FISHERY

The 2018 AI for SEAK was 1.07, which resulted in an all-gear harvest limit of 144,500 treaty Chinook. In response to conservation needs for SEAK, Transboundary River (TBR), and Northern British Columbia Chinook salmon stocks, a 10% reduction to the all-gear harvest limit was implemented, resulting in an all-gear harvest limit of 130,000 Chinook salmon. This corresponded to a troll treaty harvest allocation of 95,700 Chinook salmon.

The 2018 total all-gear (troll, purse seine, drift gillnet, set gillnet, Annette Island, and recreational fisheries) Chinook salmon harvest was 164,742 fish, of which 42,911 fish were of Alaska hatchery origin. The all-gear Alaska hatchery add-on of 36,966 fish was calculated by subtracting the pretreaty base hatchery harvest and risk adjustment from the Alaska hatchery contribution. Trollers harvested 107,565 Chinook salmon, of which 9,201 were of Alaska hatchery origin. Purse seiners harvested 16,563 Chinook salmon, of which 15,653 were of Alaska hatchery origin. The drift gillnet fleet harvested 14,128 Chinook salmon, of which 11,198 were of Alaska hatchery origin. Troll, purse seine, and drift gillnet harvests include terminal area and Annette Island harvests. The Yakutat set gillnet fleet harvested 86 Chinook salmon, all of which were treaty fish. The recreational sport fisheries are estimated to have harvested 26,400 Chinook salmon, of which 6,859 were of Alaska hatchery origin (Tables 11 and 12). The 2018 total all-gear treaty harvest was 127,776 Chinook salmon.

During the 2018 season, the troll harvest of Chinook salmon was managed to: 1) comply with the 2009 PST, 2) continue the Southeast Alaska natural Chinook conservation program, 3) provide maximum harvest of Alaska hatchery-produced Chinook, 4) minimize incidental mortality during Chinook nonretention periods by closing areas of high Chinook salmon abundance, 5) comply with terms of the incidental take permit issued by the National Marine Fisheries Service, and 6) follow management prescriptions provided under the action plans for wild SEAK Chinook salmon stocks of management concern.

Winter Fishery

The winter troll fishery was open from October 11, 2017, through March 15, 2018, with a total harvest of 11,967 Chinook salmon by a total of 329 permits (Tables 4, 11, and 13; Figure 8). The 2018 early winter harvest of 7,398 Chinook was 55% below the 5-year average, 41% below the 10-year average, and the fifth lowest early winter harvest since 1985. Because of the early closure specified in the *Unuk River King Salmon Stock Status and Action Plan, 2018*, the 2018 late and total winter harvests were substantially lower than the 2017 winter harvest and the 5-year and 10-year averages. The Alaska hatchery contribution of 6% in 2018 was below the 2017 hatchery contribution, the 5-year average, and the 10-year average of 7%, 8%, and 10%, respectively.

Spring Fishery

Since 1986 when hatchery access fisheries were established, the number of spring fisheries increased considerably, with more than 30 spring fishery areas open to trolling in recent years. As determined during the 2018 BOF meeting and under emergency order authority, the 2018 spring Chinook fisheries were limited to seven terminal harvest areas and eight spring troll areas located on the outer coast and/or near hatchery release sites to conserve wild SEAK Chinook salmon. A total of 20 (including the Chinook nonretention directed chum salmon areas) areas

were opened in 2018 spring fisheries, and subsequently, effort and harvest were substantially reduced compared to previous years' statistics (Figure 9).

The spring troll and terminal harvest area fisheries harvested 7,843 Chinook salmon from May 1 through June 30 (Table 14). A total of 270 vessels participated in the 2018 nonterminal spring fisheries, with a harvest of 6,962 Chinook salmon. The largest Chinook salmon harvests were taken in the Mountain Point, Sitka Sound, and Salisbury Sound spring troll areas. The 2018 nonterminal area Chinook salmon harvest was 10,659 fish less than the 2017 nonterminal harvest and below the 5-year and 10-year averages by 82% and 81%, respectively (Table 15). The Alaska hatchery contribution of 50% was above the 5-year average (29%) and the 10-year average (37%). The total spring and terminal effort in 2018 of 401 permits was 16% below 2017 and 34% below both the 5-year and 10-year averages. Other species harvested during the spring season, including Annette Island troll harvest, were 21 sockeye, 128 coho, 7 pink, and 4,437 chum salmon (Table 7).

General Summer Fishery

During the summer troll fishery, trollers harvested 86,734 Chinook salmon in two Chinook salmon retention periods (Table 16). The first summer troll Chinook salmon retention period began on July 1 and was managed in season with no predetermined length, targeting an estimated 53,800 Chinook. Based on catch rates observed in past years with abundance indices similar to 1.07, most recently during 2008 when the daily fleet catches reached nearly 12,000 Chinook/fleet day, catch rates were expected to be moderate (about 10,000 Chinook/fleet day). Effort was anticipated to be slightly lower compared to recent years in response to winter and spring troll restrictions that limited opportunities. The department estimated the harvest target would be taken in four to five days. A total of 386 vessels were observed during aerial vessel count surveys conducted on July 2, a decrease of approximately 72 vessels from the number counted on July 3, 2017. Using CPUE data received during the first few days of the Chinook retention period, it was estimated that daily fleet catches were considerably lower than anticipated. A closure was announced on July 13, and the first retention period closed at 11:59 p.m. on July 14, 2018. A total of 58,992 Chinook salmon were harvested during the 14-day opening by 616 permits, with a catch/fleet/day of 4,214 Chinook. The fleet included a total of 57 catcher-processors (freezer boats) during 2018, a decrease of five permits when compared to 2017 participation. The total harvest included 3,319 fish (6%) of Alaska hatchery origin, which was an increase from the 5-year and 10-year averages of 3% Alaska hatchery. After subtracting the Alaska hatchery Chinook add-on of 2,107 from the total harvest, the treaty Chinook harvest for the first retention period was 56,885 fish (Tables 11 and 16). Following the closure of the first Chinook retention period, areas described under 5 AAC 29.025 *Waters of frequent high king salmon abundance* were closed for the duration of the summer season (Figure 10).

The second Chinook salmon retention period began on August 15 and was also managed in season with no predetermined length. A total of 365 vessels were observed during aerial vessel count surveys conducted on August 15. Using CPUE data received during the first three days of the second Chinook retention period, it was estimated that daily fleet catches were higher than anticipated. A closure was announced on August 18 and the second retention period closed at 11:59 p.m. on August 19, 2018. A total of 27,742 Chinook salmon were harvested during the 5-day opening by 565 permits, with a catch/fleet/day of 5,548 Chinook. The total harvest included 1,007 fish (4%) of Alaska hatchery origin. After subtracting the Alaska hatchery Chinook add-on of 639 from the total harvest, the treaty Chinook harvest for the second retention period was

27,103 fish (Tables 11 and 16). A total of 565 permits were fished during the second opening, which was a decrease of 51 permits when compared to the first retention period.

Districts 8 and 11 Transboundary Rivers Directed Chinook Salmon Fisheries

District 8

The 2018 preseason terminal run forecast for large Stikine River Chinook salmon was 6,900 fish, which did not provide any Allowable Catch for U.S. or Canadian directed commercial fisheries to begin in May. The preliminary escapement estimate of less than 8,000 fish was below the escapement goal range of 14,000–28,000 and was likely the lowest run on record.

District 11

The 2018 preseason terminal run forecast for large Taku River Chinook salmon was 4,700 fish, which did not provide any Allowable Catch for U.S. or Canadian directed commercial fisheries to begin in May. The preliminary escapement estimate of less than 8,000 fish was below the escapement goal range of 19,000–36,000 and was likely the lowest on record.

Management Actions to Conserve Wild Southeast Alaska Chinook Salmon

In addition to the provisions of the management plans for winter, spring, and summer troll, these fisheries are also managed pursuant to the *Policy for the management of sustainable salmon fisheries* (5 AAC 39.222), whereas impacts of fishing on salmon escapement are assessed and considered in management decisions, and necessary conservation restrictions may be imposed in order to achieve escapement, rebuild, or in some other way conserve a specific salmon stock or group of stocks. Additionally, the PST requires that SEAK fisheries be managed to achieve escapement objectives for SEAK and Transboundary River stocks.

In 2018, preseason return and escapement forecasts to the four wild coded-wire-tagged SEAK Chinook salmon indicator stocks, the Unuk, Taku, Chilkat, and Stikine rivers, were below the lower bound of spawning escapement goals, with forecasts to the Taku and Stikine rivers the lowest runs on record. With the majority of SEAK wild Chinook salmon stocks in a period of poor production, restrictive management actions were necessary to help reduce encounters and conserve these stocks. Action plans adopted during the 2018 BOF meeting, emergency order restrictions, and additional commercial troll management measures were implemented during the 2018 winter, spring, and summer troll fisheries. The majority of the wild SEAK Chinook salmon harvest in the troll fishery occurs between mid-March and early July, and as a result, most management actions focused on restrictions during this time.

Unuk River

Under the provisions of the Unuk River Chinook salmon action plan, troll fishery conservation restrictions began with the early seasonal closure of the winter fishery. Notwithstanding any remaining portion of the 45,000 non-Alaska hatchery-produced Chinook salmon GHL, the winter troll fishery closed March 15, six weeks prior to the April 30 closure date in regulation. The Unuk River King Salmon Stock Status and Action Plan, 2018 (Lum and Fair, 2018), also limited opportunities during May and June spring troll Chinook salmon fisheries to THAs, waters in close proximity to hatchery facilities or release sites, and in areas that have been identified as having low proportional harvests of wild stock Southeast Alaska/Yakutat Chinook salmon. Spring troll chum fisheries, as provided for in the *District 9, 12, and District 14*

Enhanced Chum Salmon Troll Fisheries Management Plan, were delayed until June 15, with retention of Chinook salmon prohibited.

Taku, Chilkat, and King Salmon rivers

The broadscale provisions of the Unuk River King Salmon Stock Status and Action Plan, 2018 superseded most conservation restrictions adopted under the Chilkat and King Salmon rivers plan. Should the Unuk River Chinook salmon stock be delisted as a stock of management concern, however, the conservation measures adopted under the Chilkat and King Salmon rivers plan would take precedence. Although the winter fishery closes on March 15 under the Unuk River King Salmon Stock Status and Action Plan, 2018, conservation restrictions in the Chilkat River and King Salmon River King Salmon Stock Status and Action Plan, 2018 (Lum and Fair, 2018), state that waters of Sections 11-B, 11-C, 11-D are closed to troll gear from April 1–30, and Sections 12-B and 15-C are closed April 15–30. The waters of Section 15-A, north of the latitude of Sherman Rock, are closed to troll gear from April 15 through December 31. These waters remain closed during May and June, as there are no spring troll fisheries conducted in these areas. Furthermore, spring troll fisheries in Cross Sound, Icy Strait, and Chatham Strait that target Chinook salmon would have reduced opening lengths and delayed initial openings during weeks these stocks have historically been encountered, from May 1 through June 15. Conservation measures mentioned above under the Unuk River King Salmon Stock Status and Action Plan, 2018 also conserve Taku, Chilkat, and King Salmon rivers Chinook salmon. Lastly, directed troll fisheries to target Taku River Chinook salmon, under 5 AAC 29.097, were not opened in 2018.

Stikine River

Management actions taken to reduce encounters of Stikine River Chinook salmon began during the winter troll fishery. Like other SEAK and TBR stocks, Stikine River Chinook salmon are harvested during the late winter fishery and benefited from the early winter troll fishery closure on March 15. Though encounters of Stikine Chinook salmon during the March 16 through April 30 time period are not as frequent as other SEAK or TBR stocks, some harvest has occurred. Supplementary conservation measures, as described in the Unuk River section, further restricted May and June fishery opportunities, closing corridor fisheries in inside waters where Stikine River Chinook salmon have historically been encountered. These areas included, but were not limited to, spring fisheries in Districts 5–9. Also, during May and June, directed troll fisheries to target Stikine River Chinook, under 5 AAC 29.095, were not opened in 2018. The final management action taken to conserve Stikine River Chinook salmon was the implementation of Chinook nonretention in District 8 during the first general summer troll fishery Chinook salmon retention period, which occurred July 1–14 in 2018.

COHO SALMON FISHERY

The final wild coho salmon abundance for 2018 was estimated at 3.21 million, which was 6% below the initial July assessment of wild abundance of 3.40 million and 22% below the 20-year average. For regionwide power troll, 2018 catch rates remained below the 1998–2017 average for the entire season, with the exception of SW 30 (Figure 11). The 2018 total troll coho salmon harvest of 944,405 fish was the lowest since 1988 (Table 6), as a result of below-average catch rates and number of permits fished (Figure 5). The coho harvest peaked during the week of July 22–28, when 19% of the annual harvest was taken (Table 7). The average weight of coho at 7.0

pounds was above 2017, the 5-year, and 10-year averages of 5.1, 5.9, and 6.1 pounds, respectively (Table 8).

The first coho run strength assessment of 2018 projected an all-gear commercial harvest of 1.81 million wild coho, which was above the 1.1 million fish conservation threshold for an early season closure. Using the same CPUE values, the total wild coho abundance was projected at 3.40 million fish, which was 12% below the 1982–2017 average of 3.87 million fish and ranked eleventh lowest out of the most recent 37 years. The mean average CPUE for SW 27–29 in troll Area 6 hand and power troll combined for 2018 was 23 coho/day, just above the 22 coho/day trigger for a closure. Regional power troll catch rates were above average in SW 29 following the first Chinook salmon retention period. Based on these data and projections, neither a regionwide July closure nor a boundary area closure were implemented.

The second coho salmon run strength assessment occurred in early August and projected an all-gear commercial catch of 1.63 million wild coho and a total return of 3.16 million wild coho for 2018, based on average wild coho power troll CPUE for the summer troll season through SW 31. The wild abundance projection was below average (3.87 million) and ranked eighth lowest in 37 years, while the wild commercial catch projection ranked eleventh lowest in 37 years and was also below average (2.08 million). The 2018 troll coho salmon harvest through SW 31 (week beginning July 29) was approximately 422,000, which was below the 20-year average of 741,035. Regional catch rates were below the 20-year average in several of the Big Six areas from SW 29–31. Troll effort during these weeks was likely the lowest on record (Figures 5, 11–13). For the inside gillnet fisheries, the 2018 cumulative CPBD through week 31 for the Tree Point, Taku/Snettisham, and Lynn Canal fisheries were below both the 1971–1980 and 2008–2017 comparison periods, while the 2018 CPBD through SW 31 for the Prince of Wales fishery exceeded the 1971–1980 average but was below the recent 10-year average from 2008–2017 (Figure 14). At the time of the assessment, the District 6 fishery 2018 cumulative wild CPBD was 32% below the 2008–2017 average but was above the 1971–1980 base period average by 34% through SW 30. Based on wild return and commercial harvest projections, troll catch rates throughout the region since July 1, cumulative drift gillnet harvest through SW 30, and the low troll effort, a 5-day closure was recommended.

Coho salmon run strength was assessed for a third time during the third week of September. By SW 38 (week beginning September 16), returns to most systems in Southeast were projected to be near or within their escapement goal ranges. The Hugh Smith Lake adult coho weir count through SW 37 of 397 fish was running close to the 36-year average and projecting escapement near the upper bound of the biological escapement goal (BEG) of 500–1,600 fish. Escapement to the Tsiu River had already exceeded the BEG range, while escapement to the Situk River was estimated to be within the BEG. During SW 37, the return to the Taku River was projected to reach the 75,000 fish escapement target and Canyon Island fish wheel data through SW 37 indicated 52,000 fish had passed (Figure 15). Based on above average CPUE in the District 15 drift gillnet fishery and inriver cumulative fishwheel counts through SW 37 that were nearly three times the 10-year average, the Chilkat River coho return looked well on track to meet escapement (Figure 16). Historically, tracking fairly close to the total run for the Chilkat River, and with the District 15 drift gillnet fishery wild Berners River CWT recoveries 32% above the 20-year average through SW 37, the Berners River also had early indications that the return looked good. However, unlike the Chilkat and Berners rivers, low adult and jack returns through mid-September, and following a record low jack return in 2017, were early signs that production

for Auke Creek coho was down and was projecting to fall below the BEG (200-500) for the first time in 39 years.

The wild commercial harvest and total all-gear commercial harvest projections for coho salmon were down from the estimates in early August, largely due to a reduced coho troll effort during mid to late August. This reduction in effort typically corresponds to the historic timing of the second Chinook salmon retention period, which occurred from August 15-19, and may have been an effect of trollers targeting other species. Coho catch rates in the troll fisheries had improved during the time of the third assessment as troll CPUE improved in several areas in SW 35 and 36, nearing the 20-year average for the region in SW 35 (Figures 11–13). Concurrent harvests from all four of the primary drift gillnet fisheries were above long-term averages (Figure 14). The assessment provided support for extending the troll season in areas where the department had projected coho salmon escapement goals would be met and fish in excess of escapement needs were available.

On September 17, the department issued a news release announcing that the troll fishery would be extended through September 30 for most of the region, excluding the waters of Districts 1 and 2 that were south of the latitude of Foggy Point and the areas of frequent high king salmon abundance, which closed September 20. During the past 24 years (1994–2017), the coho salmon season has been extended 16 times (Table 17). Prior to 1994, extensions after September 20 were not an option. There have been only five years (2003, 2004, 2013, 2014, and 2016) in which the entire region was open through September 30. With below average troll effort and above average CPUE values in the inside gillnet fisheries at the time of the September coho assessment, the troll season was extended through September 30 for parts of the region.

CHUM SALMON FISHERY

Historically, chum salmon were harvested incidentally in the summer troll fishery and were not targeted until the Cross Sound pink and chum fishery was established in 1988 as an indicator of pink and chum salmon abundance in inside waters. The troll chum harvest increased substantially in 1992 when, for the first time, over 1.0 million chum salmon returned to the Hidden Falls Hatchery, located on eastern Baranof Island and operated by the Northern Southeast Regional Aquaculture Association (NSRAA). In 1993, the NSRAA's Medvejie/Deep Inlet facility near Sitka saw a return of over 1.0 million chum, and the troll chum salmon harvest increased to over 500,000 fish. Since that time, trollers have targeted chum, and with the exception of 1999 and 2008, the annual troll harvest of chum salmon has been consistently greater than 100,000 fish (Table 6).

Trollers target hatchery-produced chum salmon in the spring troll areas located in Icy Strait/Homeshore/Northern Chatham Strait, as well as in the new Keku Strait area, which was approved at the 2018 BOF meeting. Under the Chinook action plans and supplementary actions for conservation of SEAK and TBR Chinook salmon stocks, enhanced chum fisheries did not open until June 15. During the 2018 spring and early summer fisheries, a total of 5,620 chum salmon were harvested by 44 permit holders targeting chum in the Icy Strait/Cross Sound area, with a peak in harvest in SW 26 (Table 18). The harvest was 83% greater than 2017 but was the second lowest harvest since the directed chum fisheries began in 2010. Effort and harvest in the Keku Strait area remains confidential.

Prior to 2014, trollers also targeted hatchery-produced chum salmon in West Behm Canal and Neets Bay during the last week of June, though the West Behm Canal spring troll area has been

closed since 2014 to conserve Unuk River Chinook salmon. The majority of the harvest and effort in the Neets Bay area occurs during the summer troll fishery. The Southern Southeast Regional Aquaculture Association (SSRAA) provides an opportunity for the troll fleet to target chum salmon in the Neets Bay THA in years in which a surplus above broodstock and cost recovery are identified. Effort and harvest have fluctuated in the THA from year to year, with 93 permits harvesting 33,343 chum salmon in 2018, the second lowest annual harvest since 2010. The number of troll permits targeting chum in the West Behm Canal area increased in 2018 (114 permits) when compared to 2017 (78 permits), but the harvest of chum salmon in the West Behm Canal area decreased, making 2018 the fourth lowest annual harvest since 2010. A total of 90,840 chum salmon were harvested in the West Behm Canal area during the 2018 summer troll fishery, which represents a 22% decrease from 2017. The total troll chum salmon harvest for Neets Bay THA and all of West Behm Canal combined was 124,183 chum salmon by 120 permits, which was a 47% decrease in harvest from 2017 and a 27% decrease from the recent 5-year average (Figure 17).

In 2018, trollers targeting chum salmon harvested a total of 121,464 chum in Sitka Sound/Deep Inlet from a total return of 1,613,990 fish to the Medvejie/Deep Inlet facility. This represents the fourth highest troll chum harvest and the third highest effort for the area since 2010 with 138 permits fishing (Table 18). Crawfish Inlet provided another new enhanced chum salmon opportunity for trollers during the summer season. Throughout the summer of 2018, 134 permit holders harvested a total of 254,802 chum salmon in the Crawfish Inlet/West Crawfish areas, with peak harvest occurring in SW 34 and 35.

The 2018 chum salmon harvest of 526,171 for all troll fisheries combined was a 33% increase compared to 2017 and was 26% above the 5-year average. Effort directed at targeting hatchery-produced chum salmon peaked in 2013 but has declined since then; effort increased in some chum areas in 2018 (Figure 17). Fluctuations in effort may include price, abundance of other salmon species, marine environment, conservation measures, and fish behavior. Trollers may choose to target chum salmon during the summer Chinook salmon openings or during weeks when they would normally target coho salmon. Although the troll fishery is not managed for chum salmon, the redirection of effort away from Chinook and coho salmon, which are managed in season, has had some effect on the total harvest and catch rates of those species.

OTHER SPECIES

A total of 5,186 sockeye and 53,585 pink salmon were harvested during the 2018 troll season (Table 6). Sockeye salmon harvest for 2018 was above the 10-year averages for 1960–1979 but below those from 1980–2009. Pink salmon harvest for 2018 was below average when compared to 10-year averages for 1960–2009. When compared to 2017, the sockeye and pink salmon harvests remained nearly the same.

EXCLUSIVE ECONOMIC ZONE (EEZ) HARVESTS

In 2018, approximately 36% of the Chinook (38,889 fish) and 23% of the coho salmon (212,856 fish) harvested by the troll fishery were reported as taken outside of state waters in the EEZ (Districts 150, 152, 154, 156, 157, and 189). In addition, 1,423 sockeye, 4,106 pink, and 6,480 chum salmon were taken in the EEZ. The Chinook salmon harvest of 38,889 from the EEZ represents 45% of the harvest during the 2018 summer troll Chinook retention periods. This is considerably greater than the 5-year and 10-year averages of 18%. When all species are

combined, 16% of the annual troll harvest was taken outside state waters. This represents a 300% increase in proportion harvested in EEZ waters compared to 4% for 2017 and the 5-year and 10-year averages. Changes in harvest compared to recent years were influenced by the greater distribution of Chinook and coho salmon in offshore waters.

ALASKA HATCHERY PRODUCTION

Private non-profit and federal hatcheries in Southeast Alaska produce both Chinook and coho salmon that are harvested by the troll, drift gillnet, and purse seine fleets. Hatchery-produced Chinook salmon began appearing in significant numbers in troll harvests in 1980 when an estimated 5,900 fish were harvested. Alaska hatchery contributions are generally greatest during the spring fisheries, followed by the winter and summer fisheries (Tables 13, 15, and 16). The peak harvest of Alaska hatchery fish in the troll fishery occurred in 1996, when trollers harvested 38,365 Alaska hatchery Chinook, or 27% of the total troll Chinook salmon harvest. The all-gear Alaska hatchery Chinook harvest peaked in 1996, when 88,742 fish, or approximately 38% of the total harvest, was Alaska hatchery (Table 19; Figure 18). In 2018, the combined Alaska hatchery harvest contributed approximately 42,911 Chinook salmon to the commercial and sport fisheries, with 9,201 fish harvested in the troll fishery and 6,859 fish in the sport fishery (Table 19). Hatchery-produced coho salmon were first documented in the troll harvest in 1980. The hatchery contribution to the total coho salmon harvest has increased from less than 1% in 1980 to 33% in 2018, with Alaska hatcheries producing nearly 100% of these fish. In 2018, the hatchery coho salmon contribution was 33% of the harvest and had a total contribution of 315,019 fish. This was approximately 42,000 fish below the 20-year average (Table 20; Figure 19). Hatchery coho contributions peaked in late July during SW 30 with 44,385 hatchery coho harvested.

WILD STOCK ESCAPEMENT

CHINOOK SALMON ESCAPEMENT

Since a 15-year Chinook salmon rebuilding program began in 1981, ADF&G has annually estimated Chinook salmon escapements on 11 indicator systems. These escapements were initially measured against interim goals established prior to 1985, which in general were set as the largest escapements seen prior to 1981. As a part of the rebuilding program, ADF&G conducted CWT studies and improved escapement estimation methods. The department also sampled age and sex data in the escapement in order to collect data that would, when included with escapement data, allow the use of spawner-recruit analytical methods to set biological escapement goals (BEG). The BEG represents the number of salmon in a particular stock that should be allowed to escape fisheries and spawn, and provide the greatest potential for maximum sustained yield. With improved escapement estimation methods, BEG for the three Transboundary River stocks and the eight Southeast Alaska stocks have subsequently been revised. Current spawning escapements are determined using observer counts, mark-recapture estimates, and weirs.

In 2018, preliminary estimates indicate that four of the 11 Chinook salmon index systems monitored in Southeast Alaska met or exceeded spawning escapement goals (Table 21). This was a slight improvement over 2015–2017 escapements, when two of the 11 indexed systems met or exceeded goals. The four river systems that were within or above BEG ranges in 2018 were the Unuk, Keta, and Blossom rivers, all of which are located in East Behm Canal near Ketchikan, and the Alsek River, a large glacial system near Yakutat.

The three Transboundary River stocks that are monitored for Chinook salmon escapement are the Alsek, Taku, and Stikine rivers, two of which had preliminary escapements that were below their BEG ranges. The Alsek had an estimated escapement of 4,312 Chinook, within the BEG range of 3,500–5,300. Chinook escapement to the Stikine River, a glacial origin system near Wrangell and the largest river in Southeast Alaska, had an estimated escapement of less than 8,344 Chinook, below the BEG range of 14,000–28,000 and below the previous low escapement in 2017. The Taku River, a large glacial system near Juneau, had an escapement of 7,271 Chinook which fell below the BEG range of 19,000–36,000, and marked the second lowest observed survey counts in more than 40 years.

Escapements to all four SEAK indicator systems in East Behm Canal improved in 2018, with three of the four within or above BEG ranges. The Keta River, with an estimated escapement of 1,662, exceeded the BEG of 550–1,300 Chinook. The escapement to the Blossom River of 1,087 was within the BEG range of 500–1,400 Chinook. The Unuk River, a glacial system in northeast Behm Canal and a stock listed by the BOF in 2018 as a management concern, had an escapement of 1,971 Chinook which was an increase from 2016 and 2017, and was within the BEG (1,800–3,800) for the first time in three years. The escapement to the Chickamin River was an improvement from the past two years, but the estimated 2,052 spawners that returned was still slightly below the BEG range of 2,100–4,300 Chinook.

The remaining Southeast Alaska indicator systems, Andrew Creek, the Situk River, and the other two stocks listed as management concerns by the BOF in 2018, the Chilkat and King Salmon rivers, all had Chinook salmon escapements that were below their BEG ranges.

Andrew Creek, a small nonglacial U.S. tributary of the Lower Stikine River near Wrangell, had an estimated escapement of 482 fish (BEG 650–1,500). This was the second lowest escapement over the last 34-year period, and similar to the escapement levels prior to the Chinook rebuilding program. The Situk River, a nonglacial system near Yakutat that supports a moderate sized, outside-rearing stock, had an estimated escapement of 420 fish, slightly below the lower bound of the escapement goal range of 450–1,050. The Chilkat River, a moderate-sized glacial system near Haines, had a Chinook escapement of 873, making 2018 the sixth year out of the last seven that escapement to this system has fallen below the lower bound of the BEG (1,750–3,500), and also marks the lowest recorded run since escapement estimates began on this system in 1991. Lastly, the King Salmon River, a small river system located on Admiralty Island, had an estimated escapement of 30 Chinook which is below the BEG range (120–240), marks five of the last six years that the escapement goal has not been met, and is the lowest escapement on record.

COHO SALMON ESCAPEMENT

Only a small percentage of the coho salmon escapements in Southeast Alaska are enumerated or surveyed because of the extremely scattered distribution of stocks and difficult conditions for observation of spawners during the fall months (Table 22). In 2018, weirs were operated on two systems, while foot or aerial surveys were conducted on another 27 streams. An adult tagging and recovery program has been in operation since 1987 to estimate the escapement of coho salmon to the Taku River.

Variations in environmental conditions and run timing can cause difficulties in obtaining ground and aerial survey escapement estimates that reflect actual spawner abundance. High water events appear to trigger spawning but also adversely affect stream visibility and make it difficult or impossible to accurately count fish. Once spawning occurs, stream life is typically very short and

postspawners are quickly removed by predators or flushed downstream by high water. Survey counts are usually higher when fall weather is dry and fish continue to accumulate in streams before spawning occurs. Low peak counts are often associated with fall seasons when sequential, protracted freshets occur in October that bring fish to the spawning areas and then flush out postspawners while at the same time severely limiting survey opportunities. Improved precision can be obtained by conducting multiple surveys throughout the fall. This is feasible for some systems such as Juneau roadside streams, but it is more difficult and expensive for remote streams such as the major coho salmon producing systems in southern Southeast Alaska.

CWT studies conducted since the early 1980s have provided annual harvest rate estimates for four coho salmon stocks. These stocks include Auke Creek near Juneau, the Berners River in lower Lynn Canal, Ford Arm Lake on the outer coast north of Sitka (discontinued after 2015), and Hugh Smith Lake on the mainland southeast of Ketchikan (Figure 20). Fish are tagged in these systems and their contribution to the fisheries is estimated through ADF&G harvest sampling and CWT processing programs. Weirs are operated on the three lake systems to enumerate coho salmon escapements and to estimate the fraction of the returning population marked with CWTs. The Berners River escapement is intensively surveyed on foot. Samples for estimating the fraction of the returning population marked with CWTs are collected with beach seines. Escapement estimates for the Berners River are conservative, since a lower river weir is not employed, resulting in harvest rate estimates that are likely to be biased upward (Table 23).

Migrations into spawning streams generally peak in late September. Escapement goals for indicator streams have usually been met and have been exceeded in many cases in recent years (Tables 22–26; Figure 21). In 2018, returns to northern inside areas were either below or within escapement goals (Table 24). The estimated escapement to the Taku River above Canyon Island (51,175 spawners) was within the recently established BEG of 50,000–90,000 spawners. In Lynn Canal, escapement of 3,550 spawners in the Berners River was just under the recently revised goal (3,600–8,100 spawners) while the Chilkat River escapement estimate of 66,085 spawners was within the goal of 30,000–70,000 spawners (Table 24; Figure 21). Of the three index streams on the Juneau road system, escapement counts were within the BEG range for Peterson Creek and Montana Creek and below the BEG range for Auke Creek (Table 24).

Returns were generally average in outer coastal systems, and the escapement count of 1,502 spawners for five small streams on Baranof and Kruzof Islands was above the 1982–2017 average of 1,374 spawners and far above the goal of 400–800 spawners (Table 25).

The overall index of 15,319 spawners for 15 streams in the Ketchikan (Southern Inside) area was the fifth highest on record and well above the 1987–2017 average of 10,443 spawners (Table 26; Figure 21). The total escapement to Hugh Smith Lake of 619 spawners was within the BEG range (500–1,600 spawners) for the fourth consecutive year, following a period of seven consecutive years (2008–2014) when the BEG was consistently exceeded. The aggregate survey index count for the other 14 streams (14,700 spawners) was above the long-term average and the BEG range of 4,250–8,500 spawners.

COHO SALMON EXPLOITATION RATES

The average 2018 total exploitation rate by all fisheries on the three indicator stocks (Berners River, Auke Creek, and Hugh Smith Lake) was 53%, compared with the 1989–2017 average of 51% (Table 27; Figure 22). The estimate of 53% for the Hugh Smith Lake stock was the highest total exploitation rate since 2013, but was below the 1989–2017 average of 62%, and well below

the 1990s average of 75%, However, it was near the more recent 10-year average (51%). The low 2018 all-gear exploitation rate was influenced by a low purse seine exploitation rate of only 2.5%, similar to 2017, as a result of a poor pink salmon return that severely limited purse seine opportunity. In contrast, the average drift gillnet exploitation rate for the three inside indicator stocks (29%) was more than double the 1989–2017 average (14%) and slightly above the second highest average rate during the period (28% in 1995). Fishing effort (boat days) was only moderate in the primary drift gillnet effort exploiting these stocks, but returning fish were large (on average) and entered inside fisheries a week to two weeks earlier than average.

The 2018 troll fishery exploitation rate index of 22% was well below the 1982−2017 average of 35% (Table 28; Figure 23) and similar to previous lows of 21–22% in 2003 and 2011. The Alaska troll exploitation rate for the Hugh Smith Lake stock (17%) was just over half of the long-term average (33%) and was lower in only one previous year (16% in 2002). Troll exploitation rates for northern inside stocks (13–20% for Auke Creek and Berners River) were also well below the 1989–2017 average (28%) and 2017 rates of 28–34%.

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TABLES AND FIGURES

Table 1.–All-gear and troll treaty Chinook salmon harvest, hatchery add-on, total harvest, treaty harvest limit, terminal exclusion harvest, and the number of fish over or under the harvest limit, 1985–2018.

	All-gear							Troll			
Year	Treaty harvest	Hatchery add–on	Terminal exclusion	Total harvest	Preseason treaty harvest limit	Postseason treaty harvest limit	Over/under preseason harvest limit	Treaty harvest	Total harvest	Preseason treaty harvest limit	Over/under preseason harvest limit
1985	268,293	6,246	0	274,539	263,000	263,000	5,293	211,933	215,811	–	–
1986	271,262	11,091	0	282,353	263,000	263,000	8,262	231,649	237,703	–	–
1987	265,323	17,095	0	282,418	263,000	263,000	2,323	231,051	242,562	218,000	13,051
1988	256,787	22,525	0	279,312	263,000	263,000	-6,213	217,088	231,364	218,000	-912
1989	269,522	21,510	0	291,032	263,000	263,000	6,522	224,182	235,716	218,000	6,182
1990	320,996	45,873	0	366,869	302,000	302,000	18,996	263,528	287,939	257,000	6,528
1991	297,986	61,476	0	359,462	273,000	273,000	24,986	231,803	264,106	228,000	3,803
1992	221,980	36,811	0	258,791	243,000	243,000	-21,020	162,617	183,759	167,790	-5,173
1993	271,193	32,910	0	304,103	263,000	263,000	8,193	212,350	226,866	201,690	10,660
1994	235,165	29,185	0	264,350	240,000	240,000	-4,835	177,146	186,331	180,400	-3,254
1995	176,939	58,800	0	235,739	175,000	202,500	1,939	115,072	138,117	–	–
1996	154,997	72,599	8,663	236,259	146,700	147,500	8,297	107,581	141,452	102,000	5,581
1997	286,696	46,463	9,843	343,002	277,200	289,500	9,496	221,944	246,409	214,761	7,183
1998	243,152	25,021	2,420	270,593	261,700	260,000	-18,548	183,489	192,066	192,176	-8,687
1999	198,842	47,725	4,453	251,020	192,800	184,200	6,042	132,741	146,219	140,728	-7,986
2000	186,493	74,316	2,481	263,290	189,900	178,500	-3,407	133,963	158,717	138,507	-4,545
2001	186,919	77,287	1,528	265,734	189,900	250,300	-2,981	128,692	153,280	138,507	-9,816
2002	357,133	68,164	1,237	426,534	356,500	371,900	633	298,132	325,308	266,056	32,075
2003	380,152	57,228	2,056	439,436	366,100	439,600	14,052	307,380	330,692	273,406	33,973
2004	417,019	75,955	6,295	499,268	383,500	418,300	33,519	321,876	354,658	286,728	35,148
2005	388,640	64,408	40,154	493,202	416,400	387,400	-27,760	304,891	338,451	311,916	-7,025
2006	360,094	48,404	27,047	435,545	346,800	354,500	13,294	263,980	282,315	256,664	7,315
2007	328,268	68,364	8,051	404,683	329,400	259,200	-1,132	240,474	268,146	243,747	-3,273
2008	172,905	66,149	5,273	244,328	170,000	152,900	2,905	126,352	151,936	125,408	944
2009	227,954	61,960	3,733	293,647	218,800	176,000	9,154	159,126	175,644	161,637	-2,511
2010	230,611	53,640	501	284,752	221,800	215,800	8,811	177,982	195,620	163,864	14,118
2011	291,161	65,474	739	357,374	294,800	283,300	-3,639	220,787	242,569	218,060	2,728
2012	242,821	51,392	1,106	295,319	266,800	205,100	-23,979	191,553	209,074	197,272	-5,719
2013	191,388	65,598	266	257,252	176,000	284,900	15,388	134,580	149,541	129,862	4,718
2014	435,195	56,592	736	492,522	439,400	378,600	-4,205	340,015	355,570	325,411	14,604
2015	335,026	68,097	216	403,339	237,000	337,500	98,026	251,086	269,862	175,145	75,941
2016	350,704	35,673	664	387,042	355,600	288,200	-4,896	266,048	276,432	263,197	2,851
2017	178,348	32,659	0	211,008	209,700	215,800	-31,352	123,417	129,596	154,880	-31,463
2018	127,776	36,966	0	164,742	130,000	–	-2,224	101,469	107,565	95,700	5,769
					1985–2018 Cumulative Total		139,939			1985–2018 Cumulative Total	192,809

Note: 2018 harvest limit is based on a 10% conservation reduction to the preseason Abundance Index.

Table 2.–Harvest and percent of commercially harvested coho salmon by gear type in Southeast Alaska, 1989–2018.

	Commercial troll		Purse seine		Drift gillnet		Set gillnet		All–gear total	
Year	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1989	1,415,517	65%	333,116	15%	255,689	12%	176,816	8%	2,181,138	100%
1990	1,832,604	67%	379,334	14%	377,803	14%	148,891	5%	2,738,632	100%
1991	1,719,082	59%	411,854	14%	601,179	21%	166,731	6%	2,898,846	100%
1992	1,929,945	56%	505,135	15%	699,448	20%	290,149	8%	3,424,677	100%
1993	2,395,887	67%	477,006	13%	445,880	13%	237,446	7%	3,556,219	100%
1994	3,467,599	63%	970,100	18%	744,558	13%	343,903	6%	5,526,160	100%
1995	1,750,262	56%	627,472	20%	456,820	15%	295,030	9%	3,129,584	100%
1996	1,906,769	64%	447,005	15%	404,627	14%	227,802	8%	2,986,203	100%
1997	1,170,534	64%	189,036	10%	156,725	9%	322,776	18%	1,839,071	100%
1998	1,636,711	59%	475,232	17%	441,458	16%	197,669	7%	2,751,070	100%
1999	2,272,653	69%	422,926	13%	394,260	12%	187,186	6%	3,277,025	100%
2000	1,125,219	67%	210,528	12%	181,796	11%	170,948	10%	1,688,491	100%
2001	1,845,627	63%	556,193	19%	338,083	11%	205,344	7%	2,945,247	100%
2002	1,315,062	53%	479,489	19%	491,683	20%	200,888	8%	2,487,122	100%
2003	1,223,458	56%	400,988	19%	467,337	22%	74,343	3%	2,166,126	100%
2004	1,916,675	67%	405,151	14%	339,466	12%	196,930	7%	2,858,222	100%
2005	2,038,296	74%	348,072	13%	297,878	11%	82,887	3%	2,767,133	100%
2006	1,362,983	74%	114,313	6%	277,853	15%	86,085	5%	1,841,234	100%
2007	1,378,062	72%	252,575	13%	204,081	11%	76,550	4%	1,911,268	100%
2008	1,293,030	63%	215,648	11%	377,469	19%	153,712	8%	2,039,859	100%
2009	1,591,547	67%	298,614	13%	351,367	15%	133,808	6%	2,375,336	100%
2010	1,343,032	59%	203,631	9%	579,830	25%	161,584	7%	2,288,077	100%
2011	1,314,210	63%	352,128	17%	285,983	14%	126,215	6%	2,078,536	100%
2012	1,201,724	64%	280,116	15%	303,041	16%	98,677	5%	1,883,558	100%
2013	2,393,790	67%	553,501	15%	482,433	13%	158,046	4%	3,587,770	100%
2014	2,248,371	66%	394,174	12%	599,606	18%	161,977	5%	3,404,128	100%
2015	1,241,100	64%	294,550	15%	274,909	14%	129,069	7%	1,939,628	100%
2016	1,387,590	66%	267,213	13%	299,645	14%	144,032	7%	2,098,480	100%
2017	2,151,782	78%	276,635	10%	187,898	7%	140,844	5%	2,757,159	100%
2018	942,449	64%	156,810	11%	272,951	19%	95,640	7%	1,467,850	100%
1989–2017 Average:	1,719,625	65%	384,198	14%	390,304	15%	175,736	7%	2,669,862	100%
Board of Fisheries Allocations (Est. 1989)		61%		19%		13%		7%		
1989–2017 Deviation from Allocations		6%		-26%		13%		-4%		
2018 Deviation from Allocations		5%		-44%		43%		-7%		

Note: Annette Island and terminal harvest are included.

Table 3.–Southeast Alaska commercial troll permits fished, 1975–2018.

Year	Hand troll permits fished	Power troll permits fished	Total fished	HT/Total fished
1975	1,092	762	1,854	59%
1976	1,238	745	1,983	62%
1977	1,836	750	2,586	71%
1978	2,624	816	3,440	76%
1979	2,207	819	3,026	73%
1980	1,667	842	2,509	66%
1981	1,153	793	1,946	59%
1982	1,067	810	1,877	57%
1983	946	810	1,756	54%
1984	860	795	1,655	52%
1985	903	830	1,733	52%
1986	804	827	1,631	49%
1987	763	828	1,591	48%
1988	777	828	1,605	48%
1989	694	830	1,524	46%
1990	701	840	1,541	45%
1991	704	852	1,556	45%
1992	648	843	1,491	43%
1993	603	842	1,445	42%
1994	550	808	1,358	41%
1995	462	819	1,281	36%
1996	413	739	1,152	36%
1997	389	745	1,134	34%
1998	306	735	1,041	29%
1999	340	722	1,062	32%
2000	317	714	1,031	31%
2001	307	703	1,010	30%
2002	254	666	920	28%
2003	267	641	908	29%
2004	325	692	1,017	32%
2005	353	718	1,071	33%
2006	371	741	1,112	33%
2007	377	744	1,121	34%
2008	377	747	1,124	34%
2009	367	748	1,115	33%
2010	341	730	1,071	32%
2011	374	760	1,134	33%
2012	355	744	1,099	32%
2013	366	723	1,089	34%
2014	348	758	1,106	31%
2015	361	754	1,115	32%
2016	273	745	1,018	27%
2017	258	722	980	26%
2018	227	672	899	25%

Note: Permits renewed available from CFEC. Permits fished based on calendar year. 1975–2016 permits fished data from CFEC, 2017–2018 data from ADFG.

Table 4.–Number of permits fished, by gear type and fishery, 1980–2018.

	Winter fishery			Spring[a] fishery			General summer fishery			
	Troll gear type		Total	Troll gear type		Total	Troll gear type		Total	Summer
Year	Hand	Power	winter	Hand	Power	spring	Hand	Power	summer	% HT
1980	262	204	466	–	–	–	1,661	843	2,504	66%
1981	183	165	348	–	–	–	1,135	791	1,926	59%
1982	183	211	394	–	–	–	1,060	813	1,873	57%
1983	254	331	585	–	–	–	923	805	1,728	53%
1984	221	366	587	–	–	–	833	787	1,620	51%
1985	196	303	499	–	–	–	887	829	1,716	52%
1986	174	318	492	23	47	70	777	822	1,599	49%
1987	195	319	514	36	69	105	732	825	1,557	47%
1988	295	433	728	149	260	399	726	821	1,547	47%
1989	262	475	737	54	142	195	664	834	1,498	44%
1990	167	356	523	107	170	277	645	830	1,475	44%
1991	182	383	565	220	352	245	626	840	1,466	43%
1992	186	431	617	182	281	463	599	827	1,426	42%
1993	127	366	493	181	338	519	558	832	1,390	40%
1994	77	306	383	76	220	296	531	798	1,329	40%
1995	71	227	298	110	271	381	424	809	1,233	34%
1996	50	180	230	127	336	463	381	726	1,107	34%
1997	49	207	256	144	334	478	339	736	1,075	32%
1998	50	232	282	86	277	363	282	728	1,010	28%
1999	53	233	286	90	253	343	306	713	1,019	30%
2000	67	244	311	109	287	396	257	696	953	27%
2001	80	242	322	120	318	438	242	688	930	26%
2002	72	228	300	105	329	434	186	641	827	22%
2003	96	264	360	89	295	384	191	610	801	24%
2004	129	310	439	114	334	448	238	675	913	26%
2005	142	302	444	125	374	499	283	702	985	29%
2006	152	317	469	151	366	517	269	718	987	27%
2007	153	350	503	172	367	539	284	729	1,013	28%
2008	136	333	469	182	405	587	298	726	1,024	29%
2009	131	299	430	157	401	558	306	737	1,043	29%
2010	131	328	459	154	396	550	270	715	985	27%
2011	134	330	464	169	456	625	304	730	1,034	29%
2012	132	375	507	155	433	588	286	729	1,015	28%
2013	127	315	442	163	456	619	301	701	1,002	30%
2014	133	331	464	158	433	591	274	735	1,009	27%
2015	111	296	407	164	453	617	265	728	993	27%
2016	98	331	429	133	456	589	198	726	924	21%
2017	97	339	436	94	340	434	214	702	916	23%
2018	73	256	329	62	252	314	156	643	799	20%

[a] Spring includes experimental and terminal fisheries; does not include permits fished in the hatchery access fisheries in 1989–1992; includes terminal area permits for both spring and summer fisheries.

Table 5.–Number of days and dates the summer troll salmon fishery was open to Chinook retention (CR), closed to Chinook retention (Chinook non-retention or CNR), closed to all salmon species (all) and effort during CR and CNR periods, 1985–2018.

Year	Days open	Days closed	Open dates	CR days	CR effort (boat days)	Closed dates	Days closed	CNR days	CNR effort (boat days)
1985	10	18	6/3–6/12	10		6/13–6/30	18 (all)		
	23.6	68.4	7/1–7/22	22		7/23–8/14	23		
			8/25–8/26	1.6	31,197	8/15–8/24	10 (all)		
						8/26–9/20	25.4		
						9/21–9/30	10 (all)	48.4	30,567
1986	41	62	6/20–7/15	26		7/16–8/10	26		
						8/11–8/20	10 (all)		
						8/27–8/31	5		
			8/21–8/26	6		9/10–9/20	11		
			9/1–9/9	9	35,646	9/21–9/30	10 (all)	42	29,901
1987	17	2	6/1–6/17	17		6/18-6/19	2 (all)		
	23	80	6/20–7/12	23	21,819	7/13–8/2	21		
						8/3–8/12	10 (all)		
						8/13–9/20	39		
						9/21–9/30	10 (all)	60	34,604
1988	23	2	6/6–6/28	23		6/29–6/30	2 (all)		
	12	80	7/1–7/12	12	11,357	7/13–7/25	13		
						7/26–8/4	10 (all)		
						8/5–8/14	10		
						8/15–8/24	10 (all)		
						8/25–8/31	7		
						9/1–9/3	3 (all)		
						9/4–9/20	17[a]		
						9/21–9/30	10 (all)	47	22,820
1989	25	0	6/6–6/30	25		none	0		
	13	79	7/1–7/13	13	10,507	7/14–8/13	31		
						8/14–8/23	10 (all)		
						8/24–9/20	28		
						9/21–9/30	10 (all)	59	33,278
1990	26	0	6/5–6/30	26		none	0		
	24	68	7/1–7/22	22		7/23–8/12	21		
						8/13–8/22	10 (all)		
			8/23–8/24	2	17,988	8/25–9/20	27		
						9/21–9/30	10 (all)	48	27,742
1991	24	5	6/2–6/25	24		6/26–6/30	5 (all)		
	7.5	84.5	7/1–7/8	7.5	6,898	7/8–8/15	38.5		
						8/16–8/25	10 (all)		
						8/26–9/20	26		
						9/21–9/30	10 (all)	64.5	30,720

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Table 5.–Page 2 of 4.

Year	Days open	Days closed	Open dates	CR days	CR effort (boat days)	Closed dates	Days closed	CNR days	CNR effort (boat days)
1992	36	0	5/26–6/30	36		none	0		
	4.5	87.5	7/1–7/4	3.5		7/4–8/12	39.5		
						8/13–8/22	10 (all)		
			23-Aug	1	3,878	8/24–9/20	28		
						9/21–9/30	10 (all)	67.5	34,367
1993	38	0	5/24–6/30	38		none	0		
	20	72	7/1–7/6	6		7/7–7/11	5 (all)		
						7/12–8/12	32		
						8/13–8/20	8 (all)		
			8/21–8/25	5		8/26–9/11	17		
			9/12–9/20	9	12,094	9/21–9/30	10 (all)	49	27,009
1994	38	1	5/23–6/29	38		6/30	1 (all)		
	12	80	7/1–7/7	7		7/8–8/26	50		
						8/27–8/28	2 (all)		
			8/29–9/2	5	7,489	9/3–9/30	28	78	34,216
1995	38	2	5/22–6/28	38		6/29– 6/30	2 (all)		
	17	75	7/1–7/10	10		7/11–7/29	19		
			7/30–8/5	7	9,013	8/6–8/12	7		
						8/13–8/22	10 (all)		
						8/23–9/30	39	65	19,963
1996	54	2	5/6–6/28	54		6/29– 6/30	2 (all)		
	12	80	7/1–7/10	10		7/11–8/13	34		
						8/14–8/18	5 (all)		
			8/19–8/20	2	5,446	8/21–9/20	31		
						9/21–9/30	10 (all)	65	20,489
1997	52	5	5/5–6/25	52		6/26– 6/30	5 (all)		
	21	71	7/1–7/7	7		7/8–8/7	31		
						8/8–8/17	10 (all)		
			8/18–8/24	7		8/25–8/29	5		
			8/30–9/5	7	9,161	9/6–9/20	15[b]		
						9/21–9/30	10 (all)	51	14,054
1998	57	1	5/4–6/29	57		6/30	1 (all)		
	53	39	7/1–7/11	11		7/12–8/11	31		
			8/20–9/30	42	12,068	8/12–8/19	8 (all)	31	11,091
1999	59	0	5/3–6/30	59		none	0		
	11	81	7/1–7/6	6		7/7–8/12	37		
						8/13–8/17	5 (all)		
			8/18–8/22	5	4,328	8/23–9/30	39	76	22,037

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Table 5.–Page 3 of 4.

Year	Days open	Days closed	Open dates	CR days	CR effort (boat days)	Closed dates	Days closed	CNR days	CNR effort (boat days)
2000	74	1	4/17–6/29	74		6/30	1 (all)		
	24	68	7/1–7/5	5		7/6–8/10	36		
			8/11–8/12	2		8/13–8/22	10 (all)		
			8/23–8/30	8		8/31–9/11	12		
			9/12–9/20	9	6,237	9/21–9/30	10 (all)	48	13,399
2001	76	0	4/16–6/30	76		none	0		
	25	67	7/1–7/6	6		7/7–8/12	37		
						8/13–8/17	5(all)		
			8/18–9/5	19	7,458	9/6–9/20	15		
						9/21–9/24	4(all)		
						9/25–9/30	6	58	13,438
2002	77	0	4/15–6/30	77		none	0		
	40	52	7/1–7/18	18		7/19–8/9	22		
						8/10–8/11	2(all)		
			8/12–9/2	22	11,104	9/3–9/30	28	50	8,072
2003	72	0	4/20–6/30	72		none	0		
	39	53	7/1–8/8	39	10,811	8/9–9/30	53	53	8,422
2004	70	0	4/22–6/30	70		none	0		
	19	73	7/1–7/15	15		7/16–8/9	25		
						8/10–8/11	2(all)		
			8/12–8/15	4	7,353	8/16–9/30	46	71	14,665
2005	77	0	4/15–6/30	77		none	0		
	29.5	62.5	7/1–7/17	17		7/18–8/9	23		
						8/10–8/13	4(all)		
			8/14–8/20	6.5		8/20–9/14	25.5		
			9/15–9/20	6	10,083	9/21–9/30	10(all)	48.5	12,688
2006	69	0	4/23–6/30	69		none	0		
	22	70	7/1–7/12	12		7/13–8/8	27		
						8/9–8/12	4(all)		
			8/13–8/22	10	9,821	8/23–8/27	5(all)		
						8/28–9/30	34	61	13,486
2007	61	0	5/1–6/30	61		none	0		
	26	66	7/1–7/20	20		7/21–8/10	21		
						8/11–8/15	5(all)		
			8/16–8/21	6	10,628	8/22–9/20	30		
						9/21–9/30	10(all)	51	12,819
2008	61	0	5/1–6/30	61		none	0		
	11	81	7/1–7/5	5		7/6–8/10	36		
						8/11–8/15	5(all)		
						8/22–9/20	30		
			8/16–8/21	6	5,745	9/21–9/30	10(all)	66	15,855

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Table 5.–Page 4 of 4.

Year	Days open	Days closed	Open dates	CR days	CR effort (boat days)	Closed dates	Days closed	CNR days	CNR effort (boat days)
2009	61	0	5/1–6/30	61		none	0		
	19	73	7/1–7/10	10		7/11–8/11	32		
			8/17–8/25	9	7,589	8/12–8/16	5(all)		
						8/26–9/30	36	68	15,307
2010	61	0	5/1–6/30	61		none	0		
	13	79	7/1–7/8	8		7/9–8/10	33		
			8/15–8/19	5	5,549	8/11–8/14	4(all)		
						8/20–9/20	32		
						9/21–9/30	10(all)	65	16,641
2011	66	0	4/25–6/30	66		none	0		
	15	77	7/1–7/12	12		7/13–8/10	29		
			8/15–8/17	3	5,479	8/11–8/14	4(all)		
						8/18–9/20	34		
						9/21–9/30	10(all)	63	12,611
2012	61	0	5/1–6/30	61		none	0		
	38	54	7/1–7/9	9		7/10–8/6	28		
			8/11–9/8	29	13,024	8/7–8/10	4(all)		
						9/9–9/30	22	50	8,495
2013	61	0	5/1–6/30	61		none	0		
	6	86	7/1–7/6	6	2,671	7/7–9/30	86	86	19,785
2014	61	0	5/1–6/30	61		none	0		
	12	80	7/1–7/7	7		7/8–8/9	33		
			8/14–8/18	5	5,405	8/10–8/13	4(all)		
						8/19–9/30	43	76	16,973
2015	76	0	4/16–6/30	76		none	0		
	8	84	7/1–7/8	8	3,174	7/9–9/30	84	84	12,758
2016	77	0	4/15–6/30	77		none	0		
	27	65	7/1–7/5	5		7/6–8/8	34		
			8/13–9/3	22	10,183	8/9–8/12	4(all)		
						9/4–9/30[c]	27	61	11,077
2017	44	17	5/1–6/30	44		5/29–6/14	17 (all)		
	21	71	7/1–7/4	4		none	0		
					2,177	7/5–9/30[d]	88	88	19,751
2018[e]	61	0	5/1–6/30	61		none	0		
	19	73	7/1–7/14	14		7/15–8/9	26		
			8/15–8/19	5		8/10–8/14	5(all)		
					–	8/20–9/30	42	68	–

Note: Spring fishery date ranges indicate only the first and last date that fisheries were open prior to July 1, when the general summer troll season began. "Days open" indicates the actual number of days open prior to July 1. "Days closed" indicates days not open between the start of the spring fisheries through June 30.

[a] In 1988, the southern areas of Southeast Alaska were closed due to coho salmon conservation concerns.

[b] In 1997, the northern areas of Southeast Alaska were closed due to coho salmon conservation concerns.

[c] In 2016, a mark-selective fishery was conducted from September 4–30, when the directed Chinook fishery was closed.

[d] In 2017, a mark-selective fishery was conducted from July 5–21, when the directed Chinook fishery was closed.

[e] In 2018, CR and CNR effort (boat days) data were not available at the time of publication.

Table 6.–Annual commercial troll salmon harvest in numbers of fish by species, 1960–2018.

Year	Chinook	Sockeye	Coho	Pink	Chum	Total
1960	282,404	939	396,211	25,563	2,453	707,570
1961	204,289	1,264	399,932	19,303	2,679	627,467
1962	173,597	1,181	643,740	75,083	2,676	896,277
1963	243,679	2,014	693,050	106,939	6,230	1,051,912
1964	329,461	1,004	730,766	124,566	2,576	1,188,373
1965	258,902	1,872	695,887	81,127	6,359	1,044,147
1966	282,083	679	528,621	63,623	5,203	880,209
1967	274,678	157	443,677	57,372	7,051	782,935
1968	304,455	574	779,500	126,271	2,791	1,213,591
1969	290,168	444	388,443	83,727	1,708	764,490
1970	304,602	477	267,647	70,072	3,235	646,033
1971	311,439	929	391,279	104,557	7,602	815,806
1972	242,282	1,060	791,941	166,771	11,634	1,213,688
1973	307,806	1,222	540,125	134,586	10,460	994,199
1974	322,101	2,603	845,109	263,083	13,818	1,446,714
1975	287,342	584	214,219	76,844	2,784	582,276
1976	231,239	1,241	525,270	194,370	4,251	955,304
1977	271,735	5,713	506,432	281,009	11,621	1,077,142
1978	375,433	2,804	1,100,902	617,633	26,193	2,122,965
1979	337,672	7,018	918,835	629,117	24,661	1,913,968
1980	303,643	2,921	697,181	267,213	12,168	1,281,888
1981	248,782	7,476	861,146	579,436	8,680	1,705,254
1982	241,938	2,459	1,315,871	503,306	5,639	2,069,700
1983	269,821	7,973	1,276,380	498,530	20,308	2,072,756
1984	235,622	9,658	1,133,366	573,004	28,060	1,978,455
1985	215,811	7,724	1,600,230	963,719	52,793	2,839,930
1986	237,703	6,884	2,128,003	181,900	51,398	2,604,994
1987	242,562	9,722	1,041,055	486,385	12,848	1,793,327
1988	231,364	9,341	500,227	519,390	88,264	1,348,572
1989	235,716	20,171	1,415,517	1,771,409	68,986	3,511,643
1990	287,939	9,176	1,832,604	771,674	62,817	2,963,990
1991	264,106	9,805	1,719,082	427,348	28,438	2,447,994
1992	183,759	22,854	1,929,945	673,851	85,030	2,894,420
1993	226,866	25,337	2,395,887	902,872	525,160	4,075,603
1994	186,331	21,777	3,467,599	942,783	330,375	4,942,822
1995	138,117	27,323	1,750,262	714,312	277,455	2,907,329
1996	141,452	11,024	1,906,769	812,899	406,260	3,278,309
1997	246,409	39,431	1,170,534	545,309	312,042	2,313,649
1998	192,066	6,474	1,636,711	261,104	117,642	2,213,767
1999	146,219	5,730	2,272,653	540,859	74,704	3,039,905

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Table 6.–Page 2 of 2.

Year	Chinook	Sockeye	Coho	Pink	Chum	Total
2000	158,717	4,467	1,125,219	187,364	478,144	1,953,546
2001	153,280	8,992	1,845,627	258,943	467,837	2,733,039
2002	325,308	1,247	1,315,062	86,399	117,672	1,840,686
2003	330,692	4,596	1,223,458	159,643	286,410	2,001,850
2004	354,658	5,010	1,916,675	57,323	171,326	2,493,066
2005	338,451	13,277	2,038,296	109,640	174,599	2,662,529
2006	282,315	8,084	1,362,983	60,323	153,545	1,867,250
2007	268,146	6,440	1,378,062	104,440	191,685	1,948,773
2008	151,936	1,253	1,293,030	28,183	60,829	1,535,231
2009	175,644	2,929	1,591,547	75,843	342,998	2,188,961
2010	195,614	1,923	1,343,151	87,640	394,695	2,023,023
2011	242,193	5,190	1,313,594	496,171	702,914	2,760,062
2012	209,036	3,231	1,201,614	168,584	476,531	2,058,996
2013	149,528	5,020	2,393,900	684,691	1,054,273	4,287,412
2014	355,570	7,319	2,248,271	75,920	200,062	2,887,142
2015	269,862	6,977	1,241,200	259,411	424,550	2,202,000
2016	276,432	6,691	1,386,634	53,359	164,933	1,888,049
2017	129,525	5,426	2,148,015	53,769	402,843	2,739,578
2018	107,565	5,186	944,405	53,585	530,736	1,641,477
1960–69 Avg	264,372	1,013	569,983	76,357	3,973	915,697
1970–79 Avg	299,165	2,365	610,176	253,804	11,626	1,176,810
1980–89 Avg	246,296	8,433	1,196,898	634,429	34,914	2,120,652
1990–99 Avg	201,326	17,893	2,008,205	659,301	221,992	3,107,779
2000–09 Avg	253,915	5,630	1,508,996	112,810	244,505	2,122,493
2008–17 Avg	215,534	4,596	1,616,096	198,357	422,463	2,457,045

Note: Harvest data for all species includes terminal and Annette Island harvest. Data is by calendar year from 1960–1978, from January 1–September 30 for 1979, and by troll season (October 1–September 30) for 1980–2018.

Table 7.–Southeast Alaska commercial troll salmon harvest in numbers of fish by species by statistical week, for the 2018 troll season.

Year	SW	Week of	Chinook	Sockeye	Coho	Pink	Chum	Total
2017	41	8-Oct	1,403	–	–	–	–	1,403
	42	15-Oct	1,156	–	–	–	–	1,156
	43	22-Oct	792	–	–	–	–	792
	44	29-Oct	1,124	–	–	–	–	1,124
	45	5-Nov	522	–	–	–	–	522
	46	12-Nov	254	–	–	–	–	254
	47	19-Nov	403	–	–	–	–	403
	48	26-Nov	315	–	–	–	–	315
	49	3-Dec	360	–	–	–	–	360
	50	10-Dec	553	–	–	–	–	553
	51	17-Dec	314	–	–	–	–	314
	52	24-Dec	197	–	–	–	–	197
	53	31-Dec	5	–	–	–	–	5
2018	1	1-Jan	142	–	–	–	–	142
	2	8-Jan	266	–	–	–	–	266
	3	15-Jan	154	–	–	–	–	154
	4	22-Jan	536	–	–	–	–	536
	5	29-Jan	371	–	–	–	–	371
	6	5-Feb	531	–	–	–	–	531
	7	12-Feb	541	–	–	–	–	541
	8	19-Feb	457	–	–	–	–	457
	9	26-Feb	160	–	–	–	–	160
	10	4-Mar	768	–	–	–	1	769
	11	11-Mar	643	–	–	–	–	643
	12	18-Mar	–	–	–	–	–	0
	13	25-Mar	–	–	–	–	–	0
	14	1-Apr	–	–	–	–	–	0
	15	8-Apr	–	–	–	–	–	0
	16	15-Apr	–	–	–	–	–	0
	17	22-Apr	–	–	–	–	–	0
	18	29-Apr	289	–	–	–	–	289
	19	6-May	196	–	–	–	–	196
	20	13-May	231	–	–	–	–	231
	21	20-May	310	–	–	–	–	310
	22	27-May	464	–	–	–	1	465
	23	3-Jun	894	–	1	–	–	895
	24	10-Jun	1,837	6	12	–	422	2,277
	25	17-Jun	1,808	11	24	2	1,184	3,029
	26	24-Jun	941	4	81	4	2,827	3,857
	27	1-Jul	28,702	139	14,010	540	4,696	48,087
	28	8-Jul	30,292	226	76,441	5,400	23,486	135,845
	29	15-Jul	–	130	56,993	11,161	29,253	97,537
	30	22-Jul	–	160	174,715	7,546	31,965	214,386

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Table 7.–Page 2 of 2.

Year	SW	Week of	Chinook	Sockeye	Coho	Pink	Chum	Total
2018	31	29-Jul	–	68	99,938	6,063	28,793	134,862
	32	5-Aug	–	211	85,959	6,805	12,958	105,933
	33	12-Aug	10,493	894	56,965	2,607	59,536	130,495
	34	19-Aug	17,249	1,701	116,789	2,847	96,145	234,731
	35	26-Aug	–	793	98,102	742	80,870	180,507
	36	2-Sep	–	662	89,404	44	30,359	120,469
	37	9-Sep	–	126	50,534	13	13,881	64,554
	38	16-Sep	–	25	17,728	1	3,294	21,048
	39	23-Sep	–	2	2,695	–	13	2,710
	40	30-Sep	–	–	–	–	–	0
		Winter fishery subtotal	11,967	0	0	0	1	11,968
		Spring fishery subtotal	7,431	21	128	7	4,437	12,024
		Summer fishery subtotal	86,734	5,137	940,352	43,769	415,251	1,491,243
		Hatchery terminal area subtotal	1,433	28	1,969	9,809	111,047	124,286
		Grand total	107,565	5,186	942,449	53,585	530,736	1,639,521

Note: Weekly totals do not include hatchery terminal area and Annette Island troll harvests. Annette Island and confiscated harvests are included in spring totals.

Table 8.–Average troll coho salmon dressed weight by week and weighted annual average, 2001–2018.

	Average weekly dressed weight, by year																		Averages	
Week of	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2013–2017	2008–2017
1-Jul	5.7	5.9	5.6	5.7	5.2	5.6	5.0	6.3	5.3	5.9	5.3	4.9	4.8	5.8	5.7	5.8	4.4	6.1	5.3	5.4
8-Jul	5.6	6.2	5.6	6.1	5.2	5.7	5.1	6.5	5.3	6.0	5.3	4.9	4.8	5.7	5.8	5.8	4.7	6.2	5.4	5.5
15-Jul	5.6	6.5	5.7	6.2	5.2	5.6	5.3	6.5	5.2	6.2	5.4	5.0	4.9	5.8	5.7	5.8	4.5	6.3	5.3	5.5
22-Jul	5.7	6.4	5.8	6.1	5.3	5.7	5.3	6.8	5.2	6.4	5.1	5.1	5.1	5.7	5.6	6.0	4.7	6.5	5.4	5.6
29-Jul	6.0	6.5	6.0	6.0	5.2	5.9	5.4	6.8	5.6	6.6	5.2	5.2	5.3	5.9	5.7	6.2	4.9	6.6	5.6	5.7
5-Aug	6.1	6.4	6.2	6.2	5.3	6.1	5.5	7.0	5.7	6.6	5.3	5.4	5.5	5.9	5.8	6.4	5.0	6.8	5.7	5.9
12-Aug	6.2	6.8	6.3	6.4	5.5	6.6	5.9	7.0	5.7	6.8	5.3	6.2	5.5	6.3	5.9	6.5	5.1	7.2	5.9	6.0
19-Aug	6.6	7.0	6.6	6.8	6.0	6.8	5.9	7.6	6.3	7.1	5.5	6.2	5.9	6.5	6.0	7.1	5.3	7.2	6.2	6.4
26-Aug	6.6	7.1	6.9	7.0	6.1	7.4	6.2	8.0	6.3	7.2	5.4	6.5	6.2	6.7	6.2	7.4	5.4	7.6	6.4	6.5
2-Sep	6.8	7.6	7.2	7.4	6.3	7.6	6.7	8.7	6.4	7.5	5.4	6.6	6.5	7.0	6.4	7.8	5.7	7.7	6.7	6.8
9-Sep	7.2	7.8	7.4	7.7	6.7	7.9	7.2	9.0	6.6	7.8	5.5	6.8	6.4	7.2	6.5	8.0	6.0	7.9	6.8	7.0
16-Sep	7.7	7.9	7.5	7.7	6.9	8.0	7.4	9.1	6.6	8.1	5.6	6.8	6.7	7.5	6.5	8.1	6.3	8.1	7.0	7.1
23-Sep	7.3	7.9	7.6	7.9	6.9	7.9	9.3	–	6.7	8.4	5.9	7.6	6.7	7.4	6.3	8.4	6.4	8.2	7.0	7.1
30-Sep	7.5	7.6	7.8	8.6	–	–	–	–	6.9	–	–	7.8	7.2	7.6	6.5	8.6	6.3	8.7	7.2	7.3
Weighted Average	6.1	6.9	6.5	6.6	5.7	6.4	5.8	7.4	5.8	6.9	5.4	5.8	5.5	6.3	5.9	6.6	5.1	7.0	5.9	6.1
Troll Harvest (Millions)	1.8	1.3	1.2	1.9	2.0	1.4	1.4	1.3	1.6	1.3	1.3	1.2	2.4	2.2	1.2	1.4	2.1	0.9	1.9	1.6

Table 9.–Southeast Alaska annual commercial hand troll salmon harvest in numbers of fish by species, 1975–2018.

Year[a]	Chinook[b]	Sockeye[b]	Coho[b]	Pink[b]	Chum[b]	Total
1975	28,000	95	40,920	28,815	541	98,371
1976	26,324	507	88,859	44,406	2,061	162,157
1977	33,136	1,751	155,731	116,763	4,146	311,527
1978	54,377	1,155	378,927	243,469	9,573	687,501
1979	57,722	2,448	244,805	281,684	7,926	594,585
1980	52,415	1,257	179,912	111,666	4,652	349,902
1981	34,583	2,171	181,466	173,517	2,582	394,319
1982	37584	518	260,610	132,097	1,127	431,936
1983	38,625	1,530	235,692	136,646	2,777	415,270
1984	35,357	1,982	178,414	151,278	4,894	371,925
1985	33,985	1,696	260,737	251,652	9,748	557,818
1986	30912	809	339,393	40,098	6,697	417,909
1987	30,173	2,126	183,220	134,354	3,015	352,888
1988	33,889	1,894	92,341	147,609	14,534	290,267
1989	30,306	2,441	220,262	301,413	6,576	560,998
1990	40,158	1,245	273,546	154,800	6,489	476,238
1991	41,309	1,073	239,019	72,365	3,840	357,606
1992	26,154	1,905	249,506	95,481	6,027	379,073
1993	26,726	1,669	315,590	101,754	34,449	480,188
1994	14,897	1,878	436,323	56,958	32,062	542,118
1995	13,968	1,822	145,189	63,877	21,284	246,140
1996	12,569	694	197,939	31,747	53,485	296,434
1997	15,280	1,208	104,602	35,104	20,042	176,236
1998	9,305	271	119,576	11,782	2,051	142,985
1999	6,466	286	180,119	12,214	583	199,668
2000	8,697	126	67,499	5,386	6,427	88,135
2001	9,819	301	111,472	6,267	12,480	140,339
2002	11,481	34	77,961	2,753	579	92,808
2003	13,840	135	80,893	3,627	4,800	103,295
2004	18,871	148	108,629	2,403	861	130,912
2005	16,856	340	143,278	6,203	418	167,095
2006	16,366	242	74,414	3,429	437	94,888
2007	18,258	220	91,499	4,196	1,389	115,562
2008	15,416	155	83,430	1,593	863	101,457
2009	13,638	171	104,212	5,074	5,427	128,522
2010	13,030	63	88,975	5,681	9,861	117,610
2011	18,166	205	98,968	26,025	13,500	156,864
2012	13,176	226	82,068	11,037	8,193	114,700
2013	11,746	343	174,103	23,510	28,719	238,421
2014	18,412	215	120,291	5,285	2,997	147,200
2015	12,883	353	61,738	17,397	7,823	100,194
2016	10,229	291	53,702	6,775	2,240	73,237
2017	7,302	178	102,507	4,279	5,444	119,710
2018	3,952	107	37,646	2,405	5,702	49,812
1975–2017 Average	23,438	907	166,367	72,468	8,883	272,063
2008–2017 Average	13,400	220	96,999	10,666	8,507	129,792

[a] Prior to 1975, hand and power troll harvests were not reported separately. Troll harvests prior to 1980 are reported by calendar year. From 1980–present, harvests are by season, Oct. 1–Sept. 30. Harvest for 1979 Jan. 1–Sept. 30.

[b] Harvest for all species includes Annette Island Reserve and terminal fisheries.

Table 10.–Southeast Alaska annual commercial power troll salmon harvest in numbers of fish by species, 1975–2018.

Year[a]	Chinook[b]	Sockeye[b]	Coho[b]	Pink[b]	Chum[b]	Total
1975	259,646	489	173,299	48,029	2,243	483,869
1976	203,777	734	436,411	149,964	2,190	793,646
1977	237,578	3,962	350,701	164,246	7,475	765,494
1978	321,050	1,649	721,975	374,164	16,620	1,435,458
1979	277,274	4,570	674,030	347,433	16,735	1,319,574
1980	251,137	1,664	517,269	155,547	7,516	933,635
1981	214,923	5,305	679,680	405,919	6,098	1,311,679
1982	205,286	1,941	1,055,261	371,209	4,512	1,638,818
1983	231,144	6,443	1,040,688	361,884	17,531	1,657,398
1984	202,768	7,676	954,952	421,726	23,166	1,607,731
1985	182,576	6,026	1,339,493	712,067	43,045	2,283,392
1986	208,048	6,075	1,788,610	141,802	44,701	2,189,591
1987	213,342	7,596	857,835	352,031	9,831	1,440,632
1988	197,197	7,446	407,886	371,781	73,728	1,058,921
1989	211,417	17,730	1,195,255	1,469,996	62,410	2,952,174
1990	248,976	7,931	1,559,058	616,874	56,328	2,488,081
1991	221,442	8,732	1,480,063	354,983	24,598	2,091,281
1992	154,465	20,949	1,680,439	578,370	79,003	2,515,572
1993	202,807	23,668	2,080,297	801,118	490,711	3,598,021
1994	171,434	19,899	3,031,276	885,825	298,313	4,400,941
1995	124,705	25,501	1,605,073	650,435	256,171	2,661,840
1996	129,857	10,330	1,708,830	781,152	352,775	2,982,486
1997	231,562	38,223	1,065,932	510,205	292,000	2,137,929
1998	183,052	6,203	1,517,135	249,322	115,591	2,071,073
1999	140,157	5,444	2,092,534	528,645	74,121	2,840,376
2000	150,101	4,341	1,057,720	181,978	471,717	1,865,794
2001	143,462	8,691	1,734,155	252,676	455,357	2,594,217
2002	313,913	1,213	1,237,101	83,646	117,093	1,753,034
2003	317,213	4,461	1,142,565	156,016	281,610	1,805,391
2004	335,789	4,862	1,808,046	54,920	170,465	2,362,166
2005	321,595	12,937	1,895,018	103,437	174,181	2,495,626
2006	265,949	7,842	1,288,569	56,894	153,108	1,759,469
2007	249,890	6,220	1,286,563	100,244	190,296	1,833,213
2008	136,653	1,098	1,209,600	26,590	59,966	1,433,907
2009	162,006	2,758	1,487,335	70,769	337,571	2,060,439
2010	182,465	1,860	1,254,161	81,959	384,834	1,905,279
2011	223,957	4,985	1,214,626	470,146	689,269	2,602,983
2012	195,898	3,005	1,119,546	157,547	468,338	1,944,334
2013	137,795	4,677	2,219,797	661,181	1,025,554	4,049,004
2014	337,158	7,104	2,127,980	70,635	197,065	2,739,942
2015	256,954	6,624	1,179,462	242,014	416,727	2,101,781
2016	266,203	6,400	1,332,932	46,584	162,693	1,814,812
2017	122,282	5,248	2,045,508	49,490	397,399	2,619,927
2018	103,613	5,079	904,803	51,180	525,034	1,589,709
1975–2017 Average	216,316	8,096	1,344,794	348,177	203,057	2,117,073
2008–2017 Average	202,137	4,376	1,519,095	187,692	413,942	2,327,241

[a] Prior to 1975, hand and power troll harvests were not reported separately. Troll harvests prior to 1980 are reported by calendar year. From 1980–present, harvests are by season, Oct. 1–Sept. 30. Harvest for 1979 Jan. 1–Sept. 30.

[b] Harvest for all species includes Annette Island Reserve and terminal fisheries.

Table 11.–Southeast Alaska Chinook Salmon harvests by gear and troll harvest by fishery, 2018.

Gear/Fishery	Total harvest	Alaska hatchery harvest	Alaska hatchery add-on	Wild Terminal exclusion harvest	Wild Terminal exclusion/ Alaska hatchery add-on	Treaty harvest
Winter Troll	11,967	744	472	0	472	11,495
Spring Troll[a]	8,395	4,131	2,878	0	2,878	5,517
Summer Troll						
First Period	58,992	3,319	2,107	0	2,107	56,885
Second Period	27,742	1,007	639	0	639	27,103
Summer Total[b]	86,734	4,326	2,745	0	2,745	83,989
Total Traditional Troll	107,106	9,201	6,096	0	6,096	101,010
Annette Is. Troll	459	0	0	0	0	459
Total Troll Harvest	107,565	9,201	6,096	0	6,096	101,469
Purse Seine	16,563	15,653	15,653	0	15,653	910
Drift Gillnet	14,128	11,198	10,061	0	10,061	4,067
Setnet	86	0	0	0	0	86
Total Net[c]	30,777	26,851	25,714	0	25,714	5,063
Sport[c]	26,400	6,859	5,157	0	5,157	21,243
All-gear Total	164,742	42,911	36,966	0	36,966	127,776

[a] Spring troll harvest includes all HC 12 and wild terminal exclusion harvests for year.

[b] Total summer harvest includes confiscated harvest for year.

[c] All net gear and sport totals include the general, Annette Island, and wild terminal exclusion harvests.

Table 12.–Annual Southeast Alaska commercial and recreational Chinook salmon harvests and Alaska hatchery contribution, in thousands of fish, 1965–2018.

Year	Troll[a]	Net[b]	Subtotal	Sport[c]	Total	Alaska hatchery contribution	Total less Alaska hatchery contribution
1965	309	28	337	13	350	–	–
1966	282	26	308	13	321	–	–
1967	275	26	301	13	314	–	–
1968	304	27	331	14	345	–	–
1969	290	24	314	14	328	–	–
1970	305	18	323	14	337	–	–
1971	311	23	334	15	349	–	–
1972	242	44	286	15	301	–	–
1973	308	36	344	16	360	–	–
1974	322	24	346	17	363	–	–
1975	287	13	300	17	317	–	–
1976	231	10	241	17	258	–	–
1977	272	13	285	17	302	–	–
1978	375	25	400	17	417	–	–
1979	338	28	366	17	383	–	–
1980	304	20	324	20	344	6	338
1981	249	19	268	21	289	2	287
1982	242	47	289	26	315	1	314
1983	270	20	289	22	312	3	309
1984	236	32	268	22	290	6	284
1985	216	34	250	25	275	13	262
1986	238	22	260	23	282	17	265
1987	243	16	258	24	282	24	259
1988	231	22	253	26	279	29	250
1989	236	24	260	31	291	29	262
1990	288	28	316	51	367	54	314
1991	264	35	299	60	359	70	289
1992	184	32	216	43	259	44	215
1993	227	28	255	49	304	40	264
1994	186	36	222	42	264	36	228
1995	138	48	186	50	236	69	167
1996	141	37	179	58	237	89	148
1997	246	25	271	72	340	63	280
1998	192	24	216	55	271	34	237
1999	146	33	179	72	251	59	192
2000	159	41	200	63	252	85	179
2001	153	40	193	72	266	87	179
2002	325	32	357	70	427	78	349
2003	331	39	370	69	439	68	372
2004	355	64	419	81	499	91	408
2005	338	68	407	87	493	74	420
2006	282	67	350	86	436	57	379

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Year	Troll[a]	Net[b]	Subtotal	Sport[c]	Total	Alaska hatchery contribution	Total less Alaska hatchery contribution
2007	268	54	322	83	405	77	328
2008	152	43	195	49	244	75	169
2009	176	48	224	70	294	71	222
2010	196	31	226	59	285	62	223
2011	242	48	290	67	357	74	283
2012	209	39	249	46	295	61	234
2013	150	51	201	56	257	73	184
2014	356	50	406	80	485	59	427
2015	270	54	324	80	403	75	328
2016	276	42	319	71	389	42	348
2017	130	25	155	54	209	30	179
2018	108	31	138	26	165	37	128

Note: Years 1985–2001 were updated in 2001, based on Add-on tables for BOF reports. All subsequent years also based on Add-on tables.

[a] Troll harvests prior to 1980 are reported by calendar year. From 1980–present, harvests are by season, Oct. 1–Sept. 30.

[b] Purse seine harvests from 1986–present do not include Chinook less than five pounds reported on fish tickets.

[c] Estimates of sport catches for 1965–1976 based on 1977–1980 average catch per capita data. Sport catches for 1977–1999 based on statewide postal harvest surveys. Sport harvest for 2018 based on preliminary creel survey data, pending completion of statewide postal harvest surveys.

Table 13.–Southeast Alaska winter troll fishery Chinook salmon harvest, permits fished, vessel landings, catch per landing, and Alaska hatchery percent of harvest by troll accounting year (October 1–September 30), 1985–2018.

	Early Winter (October-December)				Late Winter (January-April)				Total Winter (October-April)						
Year	Chinook	Permits	Landings	Catch/ landing	Chinook	Permits	Landings	Catch/ landing	Chinook	Permits	Landings	Catch/ landing	Annual total	Winter % of annual total	Alaskan hatchery % of catch
1985	14,235	371	869	16	8,590	316	1,148	7	22,825	499	2,017	11	215,811	11%	6%
1986	16,779	353	1,049	16	6,147	257	832	7	22,926	492	1,881	12	237,703	10%	6%
1987	18,453	365	1,235	15	10,075	290	996	10	28,528	514	2,231	13	242,562	12%	10%
1988	44,765	605	2,404	19	15,684	411	1,785	9	60,449	728	4,189	14	231,364	26%	14%
1989	24,425	630	2,239	11	9,872	337	1,403	7	34,297	737	3,642	9	235,716	15%	14%
1990	17,617	314	868	20	15,513	319	1,477	11	33,130	523	2,345	14	287,939	12%	13%
1991	19,920	310	787	25	22,719	405	2,037	11	42,639	565	2,824	15	264,106	16%	24%
1992	28,277	403	1,653	17	43,554	440	2,679	16	71,831	617	4,332	17	183,759	39%	10%
1993	20,275	310	1,194	17	42,447	418	2,366	18	62,722	493	3,560	18	226,866	28%	6%
1994	35,193	264	1,106	32	21,175	303	1,499	14	56,368	383	2,605	22	186,331	30%	4%
1995	10,382	186	627	17	7,486	223	871	9	17,868	298	1,498	12	138,117	13%	12%
1996	6,008	144	427	14	3,393	159	447	8	9,401	230	874	11	141,452	7%	18%
1997	13,252	162	626	21	7,705	185	514	15	20,957	256	1,151	18	246,409	9%	8%
1998	9,810	152	534	18	23,008	247	1,372	17	32,818	306	2,001	16	192,066	17%	7%
1999	13,989	150	579	24	16,988	253	1,435	12	30,977	286	2,026	15	146,219	21%	7%
2000	17,494	172	783	22	18,561	262	1,508	12	36,055	311	2,291	16	158,717	23%	9%
2001	11,198	198	907	12	11,388	259	1,382	8	22,586	322	2,298	10	153,280	15%	12%
2002	17,152	168	754	23	12,237	248	1,351	9	29,389	300	2,116	14	325,308	9%	7%
2003	18,672	193	725	26	32,182	313	2,365	14	50,854	360	3,090	16	330,692	15%	9%
2004	12,686	267	982	13	40,200	378	2,595	15	52,886	439	3,577	15	354,658	15%	12%
2005	12,991	275	1,103	12	37,479	375	2,955	13	50,470	444	4,058	12	338,446	15%	11%
2006	13,952	293	1,418	10	34,970	416	3,102	11	48,922	469	4,520	11	282,315	17%	8%
2007	7,642	297	1,092	7	39,230	420	2,808	14	46,872	503	3,900	12	268,149	17%	10%
2008	5,169	247	950	5	16,655	409	2,347	7	21,824	467	3,297	7	151,926	14%	13%
2009	5,511	197	770	7	19,378	379	1,983	10	24,889	380	2,753	9	175,644	14%	11%
2010	8,715	221	1,061	8	33,821	416	2,677	13	42,536	459	3,738	11	195,492	22%	13%
2011	12,867	257	1,339	10	37,959	393	2,437	16	50,826	464	3,776	13	242,123	21%	7%
2012	10,683	315	1,246	9	37,217	408	2,670	14	47,900	507	3,916	12	209,366	23%	13%
2013	8,188	248	1,070	8	18,424	376	2,255	8	26,612	442	3,325	8	148,584	18%	15%
2014	14,271	271	1,320	11	42,267	388	2,603	16	56,538	464	3,923	14	355,570	16%	6%
2015	24,138	278	1,346	18	26,535	320	2,172	12	50,673	407	3,518	14	269,862	19%	5%
2016	29,363	360	1,910	15	22,928	309	2,050	11	52,291	429	3,960	13	276,432	19%	5%
2017	6,573	244	994	7	37,316	380	2,643	14	43,889	435	3,637	12	129,596	34%	7%
2018	7,398	258	1,032	7	4,569	200	782	6	11,967	329	1,814	7	107,565	11%	6%
2013–17 Avg	16,507	280	1,328	12	29,494	355	2,345	12	46,001	435	3,673	12	236,009	21%	8%
2008–17 Avg	12,548	264	1,201	10	29,250	378	2,384	12	41,798	445	3,584	11	215,459	20%	10%

Note: Data include Annette Island troll harvests.

Table 14.–The number of Chinook salmon harvested and permits fished in the 2018 spring troll fisheries by statistical week, including spring fishery areas as well as terminal harvest areas.

Stat area	Fishery name	SW	Open	Close	Days	Permits	Chinook
101-45	Mountain Point	20	5/15	5/16	2	8	48
		21	5/21	5/22	2	10	98
		22	5/28	5/29	2	18	143
		23	6/4	6/5	2	27	199
		24	6/11	6/14	4	35	483
		25	6/18	6/21	4	48	1,084
		26	6/25	6/28	4	46	540
	Mountain Point Total				*20*	*65*	*2,595*
103-50	Bucareli Bay	18	5/1	5/2	2	25	190
		19	5/7	5/8	2	15	53
		20	5/14	5/15	2	20	64
		21	5/21	5/22	2	12	44
		22	5/28	5/29	2	16	73
		23	6/4	6/5	2	20	140
		24	6/11	6/12	2	20	53
		25	6/18	6/19	2	15	68
		26	6/25	6/26	2	8	20
	Bucareli Bay Total				*18*	*44*	*705*
113-01	Western Channel	23	6/4	6/4	1	23	125
		24	6/11	6/11	1	32	244
		25	6/18	6/18	1	28	113
		26	6/25	6/25	1	12	15
	Western Channel Total				*4*	*64*	*498*
113-30	Redoubt Bay	18	5/1	5/2	2	11	25
		19	5/7	5/8	2	6	39
		20	5/14	5/15	2	8	38
		21	5/22	5/23	2	5	21
		22	5/29	5/30	2	5	20
		23	6/4	6/5	2	8	30
		24	6/11	6/12	2	6	21
		25	6/18	6/19	2	5	23
		26	6/25	6/26	2	8	19
	Redoubt Bay Total				*18*	*31*	*236*
113-32	Goddard	23	6/4	6/4	1	6	21
		24	6/11	6/11	1	*	*
		25	6/18	6/18	1	*	*
		26	6/25	6/25	1	8	29
	Goddard Area Total				*4*	*15*	*67*
113-41	Sitka Sound	18	5/1	5/3	3	29	64
		19	5/7	5/9	3	20	90
		20	5/14	5/16	3	26	66
		21	5/22	5/24	3	34	120
		22	5/29	5/31	3	39	157
		23	6/4	6/6	3	27	140
		24	6/11	6/15	5	59	615
		25	6/18	6/22	5	56	317
		26	6/25	6/30	6	28	158
	Sitka Sound Total				*34*	*110*	*1,727*

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Stat area	Fishery name	SW	Open	Close	Days	Permits	Chinook
113-62	Salisbury Sound	18	5/1	5/2	2	*	*
		19	5/7	5/8	2	*	*
		20	5/14	5/15	2	*	*
		21	5/22	5/23	2	*	*
		22	5/29	5/30	2	6	35
		23	6/4	6/6	3	11	197
		24	6/11	6/14	4	25	367
		25	6/18	6/21	4	25	189
		26	6/25	6/30	6	15	139
	Salisbury Sound Total				*27*	*44*	*944*
183-10	Yakutat Bay	18	5/1	5/1	1	5	9
		19	5/7	5/7	1	6	13
		20	5/14	5/14	1	4	9
		21	5/21	5/21	1	3	17
		22	5/28	5/28	1	9	36
		23	6/4	6/4	1	10	42
		24	6/14	6/14	1	9	34
		25	6/21	6/21	1	5	9
		26	6/28	6/28	1	9	21
	Yakutat Bay Total				*9*	*21*	*190*
	Spring Fishery Total					270	6,962
	Terminal Area Total					59	881
	Spring Season Total					291	7,843

Note: Totals do not include Annette Island harvests or summer terminal harvest and effort. Weekly and total permits fished include effort for both Chinook and chum salmon.

* Denotes confidential data. Totals given may or may not include individual week's confidential data.

Table 15.–Spring troll Chinook salmon fishery harvest, effort, and Alaska hatchery contributions, 1986–2018.

Year	Non-terminal area spring harvest	Alaska hatchery harvest	Alaska hatchery %	Number of non-terminal areas open	Terminal area harvest[a]	Number of terminal areas open[a]	Total harvest	Total Alaska hatchery %	Total permits fished[b]
1986	776	240	31%	3	0	0	776	31%	70
1987	4,488	1,548	34%	7	0	0	4,488	34%	105
1988	8,505	2,931	34%	9	100	2	8,605	35%	382
1989	2,366	922	39%	11	913	4	3,279	56%	195
1990	7,052	4,255	60%	9	16	2	7,068	60%	277
1991	13,984	6,129	44%	10	5,863	1	19,847	60%	572
1992	11,229	5,604	50%	11	4,118	2	15,347	63%	463
1993	15,826	6,525	41%	13	2,853	3	18,679	50%	442
1994	11,269	4,939	44%	12	100	4	11,369	44%	283
1995	21,750	13,990	64%	15	1,333	4	23,083	66%	377
1996	30,963	15,672	51%	16	16,416	5	47,379	68%	461
1997	32,791	13,556	41%	17	9,931	6	42,722	55%	476
1998	19,195	5,012	26%	21	1,313	4	20,508	31%	361
1999	18,351	8,766	48%	23	2,367	5	20,718	54%	339
2000	20,924	11,217	53%	25	7,966	7	28,956	66%	435
2001	28,250	13,726	49%	26	7,081	5	35,331	59%	470
2002	37,610	17,398	46%	31	6,040	4	43,650	54%	435
2003	35,435	11,949	34%	26	3,840	5	39,292	40%	401
2004	55,191	19,924	36%	31	1,610	5	56,796	38%	450
2005	56,812	18,833	33%	30	2,280	5	59,092	36%	512
2006	35,854	9,919	28%	24	1,018	6	36,872	30%	527
2007	47,193	18,202	39%	25	1,310	5	48,503	40%	541
2008	39,309	21,195	54%	22	4,494	7	43,803	59%	620
2009	32,611	12,314	38%	27	278	7	32,889	38%	586
2010	29,187	11,582	40%	27	1,221	8	30,408	42%	584
2011	40,490	16,952	42%	28	2,144	8	42,634	45%	640
2012	24,777	10,003	40%	33	794	7	25,571	42%	625
2013	37,665	11,374	30%	32	979	8	38,644	32%	650
2014	42,024	9,313	22%	34	1,260	9	43,284	24%	616
2015	53,843	15,486	29%	35	779	8	54,622	30%	665
2016	42,444	8,815	23%	36	322	9	42,795	24%	609
2017	17,621	3,151	18%	34	863	8	18,484	22%	477
2018	6,962	3,454	50%	8	1,433	11	8,395	58%	401

Note: Does not include Annette Island harvest or Hatchery Access fishery harvest, which occurred in 1989–1992.

[a] Terminal harvest and areas open include troll harvest and openings from both spring and summer terminal fisheries.

[b] Total permits fished includes spring troll effort and terminal effort during spring and summer for vessels that landed Chinook.

Table 16.–Southeast Alaska troll Chinook salmon catch-per-fleet-day during the general summer fishery, 1985–2018.

Year	Fishing period	Days	Chinook harvest[a]	Catch/Fleet day	Permits[b]	Abundance index[c]	AK hatchery harvest	AK hatchery percent
1985	June 3–12	10	65,377	6,538	1,119		3,644	6%
	July 1–22	22	114,372	5,199	1,334		2,733	2%
	August 25–26	2	13,229	8,268	859		407	3%
		34	192,978	5,743		1.68	6,784	4%
1986	June 20–July 15	26	154,623	5,947	1,321		5,789	4%
	August 21–26	6	31,878	5,313	1,124		1,346	4%
	September 1–9	9	27,496	3,055	936		1,203	4%
		41	213,997	5,219		1.37	8,338	4%
1987	June 20–July 12	23	209,513	9,109	1,331	1.60	11,712	6%
1988	July 1–12	12	162,047	13,504	1,343	1.93	8,141	5%
1989	July 1–13	13	167,492	12,884	1,234	1.79	5,831	3%
1990	July 1–22	22	200,090	9,095	1,311		13,037	7%
	August 23–24	2	11,858	5,929	834		1,250	11%
		24	211,948	8,831		1.78	14,287	7%
1991	July 1–8	8	154,020	20,536	1,304	1.66	6,605	4%
1992	July 1–4	4	65,627	18,751	1,105		2,268	3%
	August 23	1	6,941	6,941	717		189	3%
		5	72,568	16,126		1.63	2,457	3%
1993	July 1–6	6	101,164	16,861	1,148		3,189	3%
	August 21–25	5	24,865	4,973	732		446	2%
	September 12–20	9	19,131	2,126	547		1,300	7%
		20	145,160	7,258		1.92	4,935	3%
1994	July 1–7	7	98,338	14,048	1,011		4,252	4%
	August 29–September 2	5	20,224	4,045	708		1,100	5%
		12	118,562	9,880		1.67	5,352	5%
1995	July 1–10	10	75,889	7,589	1,001		8,139	11%
	July 30–August 5	7	21,277	3,040	805		1,581	7%
		17	97,166	5,716		0.91	9,720	10%
1996	July 1–10	10	76,392	7,639	825		4,639	6%
	August 19–20	2	8,275	4,138	418		203	2%
		12	84,667	7,056		0.90	4,842	6%
1997	July 1–7	7	122,490	17,499	847		3,532	3%
	August 18–24	7	37,525	5,361	719		657	1%
	August 30–September 5	7	22,702	3,243	504		118	1%
		21	182,717	8,701		1.37	4,307	2%
1998	July 1–11	11	102,765	9,342	808		2,699	3%
	August 20–September 30	42	35,975	857	667		1,090	3%
		53	138,740	2,618		1.27	3,789	3%

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Year	Fishing period	Days	Chinook harvest[a]	Catch/Fleet day	Permits[b]	Abundance index[c]	AK hatchery harvest	AK hatchery percent
1999	July 1–6	6	78,126	13,021	696		3,007	4%
	August 18–22	5	16,397	3,279	554		698	4%
		11	94,523	8,593		1.12	3,705	4%
2000	July 1–5	5	50,768	10,154	714		2,608	5%
	August 11–12	2	12,423	6,212	475		853	7%
	August 23–30	8	24,862	3,108	537		2,594	10%
	September 12–20	9	5,712	635	207		792	14%
		24	93,765	3,907		1.10	6,847	7%
2001	July 1–6	6	64,854	10,809	712		3,700	6%
	August 18–September 5	19	30,509	1,606	610		1,327	4%
		25	95,363	3,815		1.29	5,027	5%
2002	July 1–18	18	187,003	10,389	677		4,866	3%
	August 12–September 2	22	65,326	2,969	517		1,563	2%
		40	252,329	6,308		1.82	6,429	3%
2003	July 1–August 8	39	240,573	6,169	664	2.17	7,677	3%
2004	July 1–15	15	193,992	12,933	710		8,670	4%
	August 12–15	4	50,933	12,733	598		1,258	2%
		19	244,925	12,891		2.06	9,928	4%
2005	July 1–17	17	151,128	8,890	782		7,078	5%
	August 14–20	6.5	70,422	10,834	657		2,735	4%
	September 15–20	6	5,303	884	289		507	10%
		29.5	226,853	7,690		1.90	10,320	5%
2006	July 1–12	12	129,810	10,818	791		3,331	3%
	August 13–22	10	65,590	6,559	723		2,865	4%
		22	195,400	8,882		1.73	6,196	3%
2007	July 1–20	20	140,549	7,027	831		5,392	4%
	August 16–21	6	30,778	5,130	691		888	3%
		26	171,327	6,590		1.34	6,280	4%
2008	July 1–5	5	59,913	11,983	763		3,451	6%
	August 16–21	6	28,983	4,831	715		416	1%
		11	88,896	8,081		1.01	3,867	4%
2009	July 1–10	10	84,575	8,458	854		3,375	4%
	August 17–25	9	33,012	3,668	678		1,848	6%
		19	117,587	6,189		1.20	5,223	4%
2010	July 1–8	8	74,575	9,322	782		2,914	4%
	August 15–19	5	48,455	9,691	681		1,443	3%
		13	123,030	9,464		1.31	4,357	4%
2011	July 1–12	12	120,916	10,076	795		3,333	3%
	August 15–17	3	29,736	9,912	605		923	3%
		15	150,652	10,043		1.62	4,256	3%

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Year	Fishing period	Days	Chinook harvest[a]	Catch/Fleet day	Permits[b]	Abundance index[c]	AK hatchery harvest	AK hatchery percent
2012	July 1–9	9	61,624	6,847	790		1,950	3%
	August 11–September 8	29	73,970	2,551	783		3,672	5%
		38	135,594	3,568		1.24	5,622	4%
2013	July 1–6	6	84,653	14,109	714	1.63	3,573	4%
2014	July 1–7	7	199,431	28,490	811		3,460	2%
	August 14–18	5	55,653	11,131	654		2,227	4%
		12	255,084	21,257		2.20	5,687	2%
2015	July 1–8	8	164,640	20,580	768	1.95	4,310	3%
2016	July 1–5	5	106,630	21,326	741		1,197	1%
	August 13–September 3	22	74,240	3,375	659		954	1%
	September 4–30 MSF[d]	27	459	17	150		10	
		27	181,329	6,716		2.06	2,161	1%
2017	July 1-4	4	64,325	16,081	700		1,808	3%
	July 5-21 MSF[d]	17	2,680	158	365		135	5%
		4	67,005	16,751		1.31	1,950	3%
2018	July 1-14	14	58,992	4,214	616		3,319	6%
	August 15-19	5	27,742	5,548	565		1,007	4%
		19	86,734	4,565		1.07	4,326	5%

[a] The general summer fishery does not include experimental, terminal, or hatchery access fisheries, which target Alaska hatchery stocks. Also, these catch numbers do not include Annette Island or confiscated harvest.

[b] The number of permits fished is for vessels that landed Chinook.

[c] The abundance index given for 1984–2017 is the first post season index and for 2018 is the preseason index. The AIs are estimated by the Chinook Technical Committee of the Pacific Salmon Commission.

[d] In 2016 and 2017, a mark-selective fishery (MSF) to target adipose-clipped surplus hatchery origin Chinook salmon was opened.

Table 17.–Coho salmon mid-season closure dates and extensions, 1980–2018.

Year	Closure dates	Days closed	Extension	Area extensions and restrictions
1980	July 15–24	10	None	
1981	August 10–19	10	None	
1982	July 29–August 7	10	None	
1983	August 5–14	10	None	
1984	August 15–24	10	None	
1985	August 15–24	10	None	
1986	August 11–20	10	None	
1987	August 3–12	10	None	
1988	August 15–24	10	None	
1989	August 14–23	10	None	
1990	August 13–22	10	None	
1991	August 16–24	10	None	
1992	August 13–22	10	None	
1993	August 13–20	8	None	
1994	August 27–28	2	9/21–9/30	Districts 1-16 open with area restrictions
1995	August 13–22	10	9/21–9/30	Districts 1-16 open with area restrictions
1996	August 14–18	5	None	
1997	August 8–17	10	None	
1998	August 12–19	8	9/21–9/30	Districts 1-13 open with area restrictions
1999	August 13–17	5	9/21–9/30	Districts 1-16 open with area restrictions
2000	August 13–22	10	None	
2001	August 13–17	5	9/25–9/30	Districts 1-16 and 183 open (all state waters)[a]
2002	August 10–11	2	9/21–9/30	Entire region open except portion of Sitka Sound[a]
2003	No closure	0	9/21–9/30	Entire region open[a]
2004	August 10–11	2	9/21–9/30	Entire region open[a]
2005	August 10–13	4	None	
2006	August 9–12	4		
	August 23–27	5	9/21–9/30	Dist.10–15, 181, 183 and 191 open with area restrictions
2007	August 11–15	5	None	
2008	August 11–15	5	None	
2009	August 12–16	5	9/21–9/30	Districts 1–11, 181, 183, 189, 191 open; Districts 12, 13, 154 open with area restrictions
2010	August 11–14	4	None	
2011	August 10–14	5	None	
2012	August 7–10	4	9/21–9/30	Districts 1–11, 13, 16, 181, 183, 189, 191 open; 12 and 14 open with area restrictions.
2013	No closure	0	9/21–9/30	Entire region open[a]
2014	August 10–13	4	9/21–9/30	Entire region open[a]
2015	No Closure	0	9/21–9/30	Districts 3–11, 13, 16, 181, 183, 189, 191 open; 1, 2, 12 and 14 open with area restrictions.
2016	August 9–12	4	9/21–9/30	Entire region open[a]
2017	No Closure	0	9/21-9/30	Districts 103, 104, 181, 183, 189, 191, 152 open; 113 and 154 open with area restrictions
2018	August 10–14	5	9/21–9/30	Entire region open[a] except portion of Districts 1 and 2

[a] During these years, areas of high Chinook abundance remained closed and Yakutat area closures were in effect during coho salmon extension periods.

Table 18.–Weekly troll chum salmon harvest and effort in Icy Straits/Homeshore, Neets Bay/West Behm Canal, Sitka Sound, Crawfish Inlet, and the regionwide totals 2013–2018.

Icy Strait/Homeshore/Northern Chatham Strait

	2013		2014		2015		2016		2017		2018	
SW	Harvest	Permits	Harvest	Permits	Harvest	Permits	Harvest	Permits	Harvest	Permits	Harvest	Permits
23	14,103	43	–	–	–	–	[a]	[a]	–	–	–	–
24	35,710	118	99	5	4,376	22	239	5	18	4	404	11
25	140,859	154	2,290	30	5,556	35	1,841	14	452	10	1,178	20
26	99,977	141	15,405	36	6,507	28	2,252	17	367	4	2,824	18
27	18,810	57	2,196	19	4,152	15	1,708	11	[a]	[a]	970	17
28	1,111	15	[a]	[a]	[a]	[a]	464	7	–	–	141	4
29	[a]	[a]	–	–	–	–	83	3	–	–	103	7
Total	311,236	193	19,990	51	20,970	61	6,591	38	970	15	5,620	44

Neets Bay/West Behm Canal

	2013		2014		2015		2016		2017		2018	
SW	Harvest	Permits	Harvest	Permits	Harvest	Permits	Harvest	Permits	Harvest	Permits	Harvest	Permits
26	2,227	11	–	–	[a]	[a]	3,251	6	7,960	19	255	8
27	18,250	41	1,680	11	3,549	11	7,820	16	65,511	52	9,562	65
28	54,597	106	12,141	43	38,888	46	22,380	38	85,600	82	30,564	87
29	67,987	115	47,889	85	37,513	96	36,747	60	47,724	81	33,234	98
30	22,383	77	32,729	68	34,284	73	30,964	52	699	7	36,213	73
31	10,554	20	15,748	47	5,686	34	4,686	18	9,944	18	12,056	50
32	3,877	15	9,438	18	3,222	15	2,797	5	8,535	22	377	11
33	328	4	1,306	10	2,295	12	628	5	337	8	175	7
34	369	4	1,024	5	6,552	19	–	–	465	6	172	7
35	914	5	1,331	7	9,168	31	381	4	2614	21	139	6
36	2,643	7	6,666	13	9,908	27	2,892	9	2,950	19	732	11
37	2,007	7	13,494	26	4,026	31	2,713	12	3,447	13	653	12
38	–	–	4,866	18	1,114	16	3,751	11	[a]	[a]	33	10
Total	186,701	137	148,330	98	156,212	114	119,010	72	235,786	95	124,183	120

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Sitka Sound/Deep Inlet

	2013		2014		2015		2016		2017		2018	
SW	Harvest	Permits	Harvest	Permits	Harvest	Permits	Harvest	Permits	Harvest	Permits	Harvest	Permits
25	831	3	–	–	–	–	–	–	–	–	–	–
26	7,305	14	–	–	–	–	–	–	–	–	–	–
27	2,495	12	–	–	–	–	–	–	–	–	–	–
28	5,599	13	–	–	–	–	[a]	[a]	–	–	–	–
29	5,531	18	–	–	1,443	8	[a]	[a]	–	–	–	–
30	33,582	46	–	–	–	–	[a]	[a]	778	5	–	–
31	80,843	94	522	4	874	8	[a]	[a]	30,497	55	324	5
32	122,081	101	9,485	34	42,235	55	1,004	7	83,547	100	31,719	83
33	153,748	106	198	8	106,052	123	385	7	28,402	78	42,027	88
34	42,120	78	180	3	51,361	109	[a]	[a]	7,326	44	24,786	65
35	1,198	8	871	5	13,074	42	12,703	22	4,334	25	20,191	60
36	[a]	[a]	[a]	[a]	2,157	23	4,572	16	147	3	2,203	25
Total	455,510	147	11,411	42	217,265	157	19,599	32	155,031	115	121,464	138

Crawfish Inlet

	2013		2014		2015		2016		2017		2018	
SW	Harvest	Permits	Harvest	Permits	Harvest	Permits	Harvest	Permits	Harvest	Permits	Harvest	Permits
31	–	–	–	–	–	–	–	–	–	–	17,953	55
32	–	–	–	–	–	–	–	–	–	–	868	5
33	–	–	–	–	–	–	–	–	–	–	34,688	44
34	–	–	–	–	–	–	–	–	–	–	85,635	95
35	–	–	–	–	–	–	–	–	–	–	70,715	68
36	–	–	–	–	–	–	–	–	–	–	28,629	54
37	–	–	–	–	–	–	–	–	–	–	13,081	18
38	–	–	–	–	–	–	–	–	–	–	3,210	4
39	–	–	–	–	–	–	–	–	–	–	–	–
40	–	–	–	–	–	–	–	–	–	–	–	–
Total	–	–	–	–	–	–	–	–	–	–	254,802	134

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Region	2013		2014		2015		2016		2017		2018	
SW	Harvest	Permits	Harvest	Permits	Harvest	Permits	Harvest	Permits	Harvest	Permits	Harvest	Permits
23	14,105	44	[a]	[a]	–	–	13	8	–	–	–	–
24	35,727	120	151	8	4,392	27	322	17	19	5	230	6
25	141,851	162	2,359	32	5,627	47	1,993	26	457	12	1,190	22
26	109,594	167	15,453	40	6,525	31	5,534	35	8,323	23	2,599	24
27	41,355	101	4,089	33	7,806	29	9,523	33	65,516	56	13,073	95
28	63,492	137	12,523	49	39,207	48	22,852	47	85,676	84	34,470	100
29	74,708	139	47,893	86	40,081	109	37,648	65	47,899	84	34,401	101
30	56,088	123	32,764	72	34,515	75	31,075	55	1,748	15	39,192	75
31	92,533	117	16,414	55	7,151	44	4,752	20	41,504	74	31,777	107
32	127,392	117	20,126	58	48,225	74	3,802	12	93,468	121	33,898	96
33	154,152	111	1,546	19	110,616	136	1,021	13	28,812	86	79,245	101
34	44,037	84	1,297	9	59,622	132	291	3	7,844	50	114,055	137
35	2,112	13	2,240	13	23,453	77	13,328	27	7,081	46	92,385	117
36	2,817	9	11,464	28	13,315	55	7,485	25	3,097	22	32,411	77
37	2,156	8	13,494	26	4,026	31	2,719	13	3,456	14	13,940	24
38	[a]	[a]	4,866	18	1,121	17	3,751	11	[a]	[a]	3,290	11
Total	962,181	366	186,710	183	405,682	284	146,109	156	394,900	191	526,171	267

Note: Numbers for harvest and permits fished are based on vessels that targeted chum salmon.
Regionwide totals do not reflect the sum of these directed fisheries.
An en dash (–) denotes no effort or harvest.
[a] Confidential data.

Table 19.–Total Chinook salmon harvest and Alaska hatchery harvest by gear, 1985–2018.

	Seine		Drift gillnet		Set gillnet		Troll		Sport		All-gear	
Year	Total	AK hatchery	Total	AK hatchery	Total	AK hatchery	Total	AK hatchery	Total	AK hatchery	Total	AK hatchery
1985	21,593	150	10,679	976	1,232	0	215,811	8,071	24,858	3,365	274,539	12,562
1986	12,132	813	8,539	1,437	1,428	0	237,703	9,886	22,551	5,239	282,353	17,375
1987	4,503	162	8,957	1,846	2,072	4	242,562	16,195	24,324	5,336	282,418	23,544
1988	11,142	320	9,658	4,474	894	0	231,364	19,503	26,160	5,112	279,312	29,410
1989	13,171	2,298	9,948	4,106	798	0	235,716	16,366	31,071	5,859	291,032	28,629
1990	11,389	2,529	15,217	9,240	663	3	287,939	29,834	51,218	11,546	366,869	53,152
1991	13,793	2,618	19,254	11,849	1,747	40	264,106	37,498	60,492	18,022	359,462	70,027
1992	18,339	1,224	11,740	7,484	2,025	10	183,759	25,738	42,892	9,464	258,791	43,920
1993	8,364	1,751	18,280	11,378	1,311	0	226,866	18,226	49,246	8,321	304,103	39,676
1994	14,839	3,201	16,918	11,767	3,897	2	186,331	12,389	42,365	9,083	264,350	36,442
1995	25,117	17,319	13,464	7,504	9,374	0	138,117	27,174	49,667	16,524	235,739	68,521
1996	22,225	20,692	10,219	6,245	4,854	2,854	141,452	38,365	57,509	20,586	236,259	88,742
1997	10,338	6,223	11,467	6,759	3,264	1,262	246,409	28,795	71,524	20,275	343,002	63,314
1998	14,503	6,054	6,207	3,903	2,804	804	192,066	12,397	55,013	10,549	270,593	33,707
1999	17,900	11,933	9,712	5,255	5,108	3,108	146,219	16,935	72,081	22,169	251,020	59,400
2000	22,905	18,401	16,035	12,323	2,460	460	158,717	28,963	63,173	24,510	263,290	84,657
2001	20,439	14,991	17,091	11,968	2,633	631	153,280	28,480	72,291	30,862	265,734	86,932
2002	17,695	11,717	11,484	6,508	2,510	510	325,308	31,647	69,537	27,598	426,534	77,979
2003	24,134	6,911	11,398	8,080	3,842	1,566	330,692	27,614	69,370	23,547	439,436	67,718
2004	39,633	11,848	21,671	13,753	2,734	446	354,658	37,511	80,572	27,599	499,268	91,158
2005	19,867	7,233	47,539	5,387	685	0	338,451	35,678	86,575	25,178	493,117	73,476
2006	24,969	10,302	41,867	7,361	560	0	282,315	20,783	85,794	18,168	435,505	56,614
2007	27,267	11,091	25,152	12,747	1,225	0	268,146	30,409	82,849	22,822	404,639	77,069
2008	15,540	12,204	27,050	15,019	439	0	151,936	28,837	49,265	18,766	244,230	74,826
2009	29,012	16,241	19,015	9,856	437	0	175,644	20,411	69,565	24,988	293,674	71,496
2010	15,876	13,428	14,426	10,817	280	0	195,614	21,347	58,503	16,335	284,699	61,927
2011	26,404	17,752	21,293	15,817	523	0	242,193	25,247	66,575	14,325	356,988	73,141
2012	21,145	15,347	17,964	12,337	382	0	209,036	21,135	46,495	10,315	295,022	63,144
2013	23,104	17,039	27,316	22,613	900	0	149,541	17,914	56,392	15,387	257,252	72,953
2014	27,378	11,649	22,369	18,616	243	0	355,570	18,391	86,942	15,066	492,502	63,722
2015	30,274	18,582	22,982	17,925	462	0	269,862	22,107	79,759	16,822	403,339	75,436
2016	28,244	8,303	13,789	9,489	230	0	276,432	13,778	70,777	10,300	389,472	41,871
2017	10,916	8,013	13,854	10,959	367	0	129,525	8,608	54,000	8,488	208,662	36,068
2018	16,563	15,653	14,128	11,198	86	0	107,565	9,201	26,400	6,859	164,742	42,911

Note: Data include terminal area and Annette Island harvests.

Table 20.–Annual troll coho salmon harvest and estimated wild and hatchery contributions, 1960–2018.

Year	Total harvest	Wild contribution	Alaska hatchery	Other hatchery	Total hatchery	Percent hatchery
1960	396,211	396,211	–	–	–	–
1961	399,932	399,932	–	–	–	–
1962	643,740	643,740	–	–	–	–
1963	693,050	693,050	–	–	–	–
1964	730,766	730,766	–	–	–	–
1965	695,887	695,887	–	–	–	–
1966	528,621	528,621	–	–	–	–
1967	443,677	443,677	–	–	–	–
1968	779,500	779,500	–	–	–	–
1969	388,443	388,443	–	–	–	–
1970	267,647	267,647	–	–	–	–
1971	391,279	391,279	–	–	–	–
1972	791,941	791,941	–	–	–	–
1973	540,125	540,125	–	–	–	–
1974	845,109	845,109	–	–	–	–
1975	214,219	214,170	–	–	–	–
1976	525,270	524,762	–	–	–	–
1977	506,432	506,845	–	–	–	–
1978	1,100,902	1,100,902	–	–	–	–
1979	918,835	918,845	–	–	–	–
1980	697,181	694,019	2,881	281	3,162	<1%
1981	861,146	845,007	15,920	218	16,139	2%
1982	1,315,871	1,279,950	35,486	435	35,921	3%
1983	1,276,380	1,223,558	51,882	940	52,822	4%
1984	1,133,366	1,061,739	69,480	2,147	71,627	6%
1985	1,600,230	1,493,476	106,575	179	106,754	7%
1986	2,128,003	1,849,726	269,396	8,881	278,277	13%
1987	1,041,055	949,680	87,882	3,493	91,375	9%
1988	500,147	472,404	25,795	1,948	27,743	6%
1989	1,415,512	1,293,847	116,906	4,759	121,665	9%
1990	1,832,604	1,542,036	278,996	11,573	290,568	16%
1991	1,719,060	1,334,370	368,824	15,866	384,690	22%
1992	1,929,899	1,509,056	403,208	17,636	420,843	22%
1993	2,395,711	1,999,697	382,645	13,369	396,014	17%
1994	3,467,597	2,950,482	503,675	13,441	517,115	15%
1995	1,750,221	1,416,322	325,838	8,061	333,899	19%
1996	1,906,753	1,457,108	440,086	9,558	449,645	24%
1997	1,170,460	927,411	240,545	2,504	243,049	21%
1998	1,636,707	1,307,089	322,026	7,593	329,618	20%
1999	2,271,769	1,757,702	500,582	13,485	514,067	23%
2000	1,124,854	873,853	244,139	6,862	251,001	22%

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Table 20.–Page 2 of 2.

Year	Total harvest	Wild contribution	Alaska hatchery	Other hatchery	Total hatchery	Percent hatchery
2001	1,843,997	1,472,486	367,856	3,655	371,511	20%
2002	1,310,060	973,936	335,229	895	336,124	26%
2003	1,220,782	934,291	283,723	2,767	286,491	23%
2004	1,915,066	1,602,704	307,638	4,723	312,362	16%
2005	2,036,104	1,701,804	329,687	4,613	334,300	16%
2006	1,360,267	1,143,672	215,729	866	216,595	16%
2007	1,376,753	1,071,758	304,144	851	304,995	22%
2008	1,273,716	1,002,963	269,789	964	270,753	21%
2009	1,590,259	1,342,777	246,040	1,442	247,482	16%
2010	1,342,092	1,057,087	284,112	892	285,005	21%
2011	1,302,926	959,039	343,330	557	343,887	26%
2012	1,200,150	906,923	292,239	987	293,227	24%
2013	2,376,100	1,643,066	731,971	1,063	733,034	31%
2014	2,227,696	1,607,184	618,812	1,700	620,512	28%
2015	1,241,090	872,564	368,270	256	368,526	30%
2016	1,386,634	1,048,766	335,770	2,098	337,868	24%
2017	2,148,015	1,759,542	387,578	895	388,473	18%
2018	944,405	629,002	315,019	384	315,403	33%
1988–1997 Avg	1,808,796	1,490,273	308,652	9,871	318,523	17%
1998–2017 Avg	1,609,252	1,251,960	354,433	2,858	357,291	22%

Note: Data include Annette Island troll harvests and excludes terminal area harvests.

Table 21.–Estimates of total escapements of Chinook salmon to escapement indicator systems and to Southeast Alaska and transboundary rivers, 1975–2018.

	Southeast Alaska stocks								Transboundary river stocks		
Year	Situk River	Chilkat River	King Salmon River	Andrew Creek	Unuk River	Chickamin River[a]	Blossom River	Keta River	Alsek River	Taku River	Stikine River
1975	–	–	64	507	–	1,758	565	611		12,920	7,571
1976	1,421	–	99	404	–	746	263	253	5,282	24,582	5,723
1977	1,732	–	204	465	4,706	1,724	433	692	12,706	29,496	11,445
1978	808	–	87	388	5,344	1,463	553	1,180	12,034	17,124	6,835
1979	1,284	–	134	327	2,783	1,135	209	1,282	17,354	21,617	12,610
1980	905	–	106	282	4,909	2,114	344	578	10,862	39,239	30,573
1981	702	–	154	536	3,532	1,824	615	990	8,502	49,559	36,057
1982	434	–	394	672	6,528	2,712	1,335	2,270	9,475	23,847	40,488
1983	592	–	245	366	5,436	2,845	2,279	2,474	10,344	9,795	6,424
1984	1,726	–	265	389	8,876	5,235	1,966	1,836	7,238	20,778	13,995
1985	1,521	–	175	622	5,721	4,541	2,744	1,878	6,127	35,916	16,037
1986	2,067	–	255	1,379	10,273	8,289	4,946	2,077	11,069	38,110	14,889
1987	1,379	–	196	1,537	9,533	4,631	5,221	2,312	11,141	28,935	24,632
1988	868	–	208	1,100	8,437	3,734	1,486	1,731	8,717	44,524	37,554
1989	637	–	240	1,034	5,552	4,437	1,331	3,477	10,119	40,329	24,282
1990	628	–	179	1,295	2,856	2,679	995	1,824	8,609	52,143	22,619
1991	889	5,897	134	780	3,165	2,313	925	819	11,625	51,645	23,206
1992	1,595	5,284	99	1,517	4,223	1,644	581	653	5,773	55,889	34,129
1993	952	4,472	266	2,067	5,160	1,848	1,173	1,090	13,855	66,125	58,962
1994	1,271	6,795	213	1,115	3,435	1,843	623	921	15,863	48,368	33,094
1995	4,330	3,790	147	669	3,730	1,691	840	527	24,772	33,805	16,784
1996	1,800	4,920	292	653	5,639	1,587	851	894	15,922	79,019	28,949
1997	1,878	8,100	362	571	2,970	1,292	511	740	12,494	114,938	26,996
1998	924	3,675	134	950	4,132	1,857	364	542	6,833	31,039	25,968
1999	1,461	2,271	304	1,180	3,914	2,337	820	831	14,597	16,786	19,947
2000	1,785	2,035	138	1,346	5,872	3,805	894	903	7,905	34,997	27,531
2001	656	4,517	149	2,055	10,541	5,177	789	1,032	6,705	46,554	63,523
2002	1,000	4,051	155	1,708	6,988	5,007	867	1,237	5,569	55,044	50,875
2003	2,117	5,657	119	1,160	5,546	4,579	786	969	5,904	36,435	46,824
2004	698	3,422	135	2,991	3,963	4,268	1,289	1,132	7,083	75,032	48,900

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Table 21. –Page 2 of 2.

	Southeast Alaska stocks								Transboundary river stocks		
Year	Situk River	Chilkat River	King Salmon River	Andrew Creek	Unuk River	Chickamin River[a]	Blossom River	Keta River	Alsek River	Taku River	Stikine River
2005	595	3,366	143	1,979	4,742	4,257	1,722	1,496	4,478	38,725	40,501
2006	295	3,039	150	2,124	5,645	6,318	1,312	2,248	2,323	42,296	24,405
2007	677	1,442	181	1,736	5,668	4,242	522	936.11	2,827	14,854	14,560
2008	413	2,905	120	981	3,104	5,277	995	1,093	1,885	27,383	18,352
2009	902	4,429	109	628	3,157	2,902	476	659.19	6,239	22,801	11,086
2010	166	1,797	158	1,205	3,835	5,491	1,405	1,430	9,526	28,769	15,116
2011	240	2,674	192	936	3,195	4,052	569	671.23	6,850	27,523	14,480
2012	322	1,723	155	587	956	2,109	793	725.41	3,027	19,538	22,327
2013	912	1,719	94	920	1,135	2,223	987	1,484	4,992	18,002	16,783
2014	475	1,529	68	1261	1,691	3,097	840	1,321	3,357	23,532	24,366
2015	174	2,452	50	796	2,623	2,760	642	915	5,697	28,827	21,597
2016	329	1,373	149	402	1,502	964	522	1,342	2,574	12,000	10,343
2017	1,187	1,231	85	349	1,203	722	341	903	1,800	7,000	10,000
2018	420	873	30	482	1,971	2,052	1,087	1,662	4,312	7,271	8,344
Goals:											
Lower	450	1,750	120	650	1,800	2,100	500	550	3,500	19,000	14,000
Upper	1,050	3,500	240	1,500	3,800	4,300	1,400	1,300	5,300	36,000	28,000

Note: Preliminary estimates, pending final report publication (for past 5 years). Spawning escapement goals are for large (≥660 mm mid-eye to fork length, or fish age 1.3 and older) fish, except for the Alsek River which is germane to fish age 1.2 and older and can include fish <660 mm mid-eye to fork length.

[a] Escapement goal ranges are germane to survey counts for the Blossom, Keta, and Chickamin. Total (expanded) spawning escapements are reported for all other systems.

Table 22.–Escapement goal performance for indicator coho salmon streams in Southeast Alaska (SEAK) and Yakutat, 1993–2018.

	Southeast Alaska									Yakutat			All-Gear Commercial Harvest (Millions)
Year	Auke Creek	Berners River	Ford Arm Lake	Hugh Smith Lake	Chilkat River	Montana Creek	Petersen Creek	Sitka Index[a]	Ketchikan Index[b]	Tawah Creek	Situk River	Tsiu/Tsivat River	
1993	E	E	E	I	E	E	I	E	I	I	E	I	3.56
1994	E	E	E	E	E	E	E	E	E	E	E	E	5.52
1995	I	I	I	E	E	I	E	E	E	I	I	I	3.13
1996	E	I	I	I	I	I	E	E	E	I	I	I	2.99
1997	E	E	E	I	I	I	I	E	I	I	I	I	1.84
1998	E	I	E	I	I	I	I	E	I	NA	NA	NA	2.75
1999	E	E	E	E	E	I	E	I	I	NA	NA	NA	3.28
2000	E	E	I	I	E	I	I	E	E	NA	NA	I	1.69
2001	E	E	I	E	E	I	I	E	E	NA	NA	NA	2.95
2002	E	E	E	E	E	E	I	E	E	E	E	E	2.49
2003	E	E	E	E	E	I	I	E	E	E	I	NA	2.17
2004	I	E	E	I	E	U	E	E	E	I	E	NA	2.86
2005	I	I	E	E	I	U	I	E	E	U	U	I	2.77
2006	E	I	E	I	E	I	E	E	I	I	I	I	1.84
2007	I	U	I	E	U	U	I	E	I	I	I	I	1.91
2008	E	I	E	E	I	I	E	E	E	NA	NA	I	2.04
2009	I	I	I	E	I	I	I	E	I	E	I	I	2.38
2010	I	I	I	E	E	I	E	E	I	E	E	I	2.29
2011	E	I	I	E	I	I	I	E	I	U	I	I	2.08
2012	E	I	I	E	I	U	I	E	E	I	U	I	1.88
2013	E	I	I	E	I	U	I	E	E	I	E	E	3.60
2014	E	E	E	E	E	I	E	E	E	I	I	I	3.40
2015	E	E	E	I	I	E	I	E	E	NA	I	I	1.90
2016	I	I	NA	I	U	I	U	E	E	U	I	E	2.10
2017	I	I	NA	I	I	I	U	E	E	I	I	E	2.80
2018	U	U	NA	I	I	I	I	E	E	**I**	**I**	**E**	1.47

Note: E = exceeded goal, U = under goal, I = within goal, NA = no escapement estimate available.

[a] The Sitka survey index is the sum of peak survey counts on five streams.

[b] The Ketchikan survey index is the sum of peak survey counts on 14 streams.

Table 23.–Escapement estimates for four Southeast Alaska coho salmon indicator stocks, 1980–2018.

Year	Auke Creek	Berners River	Ford Arm Lake	Hugh Smith Lake
1980	698	N/A	N/A	N/A
1981	646	N/A	N/A	N/A
1982	447	7,505	2,655	2,144
1983	694	9,840	1,931	1,487
1984	651	2,825	N/A	1,407
1985	942	6,169	2,324	903
1986	454	1,752	1,552	1,782
1987	668	3,260	1,694	1,117
1988	756	2,724	3,119	513
1989	502	7,509	2,176	433
1990	697	11,050	2,192	870
1991	808	11,530	2,761	1,836
1992	1,020	15,300	3,866	1,426
1993	859	15,670	4,202	832
1994	1,437	15,920	3,227	1,753
1995	460	4,945	2,446	1,781
1996	515	6,050	2,500	950
1997	609	10,050	4,718	732
1998	862	6,802	7,049	983
1999	845	9,920	3,800	1,246
2000	683	10,650	2,304	600
2001	842	19,290	2,209	1,580
2002	1,112	27,700	7,109	3,291
2003	585	10,110	6,789	1,510
2004	416	14,450	3,539	840
2005	450	5,220	4,257	1,732
2006	582	5,470	4,737	891
2007	352	3,915	2,567	1,244
2008	600	6,870	5,173	1,741
2009	360	4,230	2,181	2,281
2010	417	7,520	1,610	2,878
2011	517	6,050	1,908	2,137
2012	837	5,480	2,282	1,908
2013	736	6,280	1,573	3,048
2014	1,533	15,480	3,025	4,110
2015	577	9,940	3,281	944
2016	204	6,733	N/A	979
2017	283	7,040	N/A	1,266
1980–2017 Average	675	8,924	3,235	1,533
2018	146	3,550	N/A	619
Escapement goal range:	200-500	3,600-8,100	1,300-2,900	500-1,600

Note: Years when no escapement assessment occurred are indicated by "N/A."

Table 24.–Northern Inside area coho salmon escapements, 1981–2018.

Year	Auke Creek (weir)	Montana Creek	Peterson Creek	Total roadside index	Berners River	Chilkat River	Taku River[a]
1981	646	227	219	1,092	—	—	—
1982	447	545	320	1,312	7,505	—	—
1983	694	636	219	1,549	9,840	—	—
1984	651	581	189	1,421	2,825	—	—
1985	942	810	276	2,028	6,169	—	—
1986	454	60	363	877	1,752	—	—
1987	668	314	204	1,186	3,260	37,432	55,457
1988	756	164	542	1,462	2,724	29,495	39,450
1989	502	566	242	1,310	7,509	48,833	56,808
1990	697	1,711	324	2,732	11,050	79,807	72,196
1991	808	1,415	410	2,633	11,530	84,517	127,484
1992	1,020	2,512	403	3,935	15,300	77,588	84,853
1993	859	1,352	112	2,323	15,670	58,217	109,457
1994	1,437	1,829	318	3,584	15,920	194,425	96,343
1995	460	600	277	1,337	4,945	56,737	55,710
1996	511	798	263	1,572	6,050	37,331	44,635
1997	609	1,018	186	1,813	10,050	43,519	32,345
1998	862	1,160	102	2,124	6,802	50,758	61,382
1999	845	1,000	272	2,117	9,920	57,140	60,844
2000	683	961	202	1,846	10,650	88,620	64,700
2001	842	1,119	106	2,067	19,290	107,697	104,394
2002	1,112	2,448	195	3,755	27,700	204,787	219,360
2003	585	808	203	1,596	10,110	133,109	183,112
2004	416	364	284	1,064	14,450	67,053	129,327
2005	450	351	139	940	5,220	34,575	135,558
2006	582	1,110	439	2,131	5,470	79,050	122,384
2007	352	324	226	902	3,915	24,770	74,369
2008	600	405	660	1,665	6,870	56,369	95,360
2009	360	698	123	1,181	4,230	47,911	103,950
2010	417	630	467	1,514	7,520	84,909	126,830
2011	517	709	138	1,364	6,050	61,099	70,745
2012	837	394	190	1,421	5,480	36,961	70,742
2013	736	367	126	1,229	6,280	51,324	68,118
2014	1,533	911	284	2,728	15,480	130,200	124,171
2015	577	1,204	202	1,983	9,940	47,342	60,178
2016	204	746	52	1,002	6,733	26,280	87,704
2017	283	634	20	937	7,040	34,482	57,868
1981–2017 Average	674	851	251	1,777	8,924	69,959	90,465
2018	146	1,160	110	1,416	3,550	66,085	51,175
Goals:							
Point	340	—	—		6,300	50,000	—
Lower	200	400	100		4,000	30,000	50,000
Upper	500	1,200	250		9,200	70,000	90,000

[a] The listed Taku River lower bound of the BEG is the inriver run threshold of 38,000 specified in the Pacific Salmon Treaty minus an allowance of 3,000 fish caught in inriver fisheries.

Table 25.–Sitka area coho salmon escapement index, 1982–2018.

Year	Starrigavan Creek	Sinitsin Creek	St. John's Creek	Nakwasina River	Eagle River	Total index[a]	Ford Arm Lake (Weir)
1982	317	46	***116***	***580***	***486***	1,545	2,655
1983	45	31	20	217	***144***	457	1,931
1984	385	160	154	715	***649***	2,063	***4,765***
1985	193	144	109	408	***392***	1,246	2,324
1986	57	***72***	***53***	275	245	702	1,552
1987	36	21	***22***	47	167	293	1,694
1988	45	56	71	104	***127***	403	3,119
1989	101	76	89	129	***181***	576	2,176
1990	39	80	38	195	214	566	2,192
1991	142	186	107	621	454	1,510	2,761
1992	241	265	110	654	629	1,899	3,866
1993	256	213	90	***644***	513	1,716	4,202
1994	304	313	227	404	717	1,965	3,227
1995	274	152	99	626	336	1,487	2,446
1996	59	150	201	553	488	1,451	2,500
1997	55	90	68	300	296	809	4,718
1998	123	109	57	653	300	1,242	7,049
1999	167	48	25	291	***245***	776	3,800
2000	144	62	30	459	108	803	2,304
2001	133	132	80	753	417	1,515	2,209
2002	227	169	100	713	659	1,868	7,109
2003	95	102	91	440	373	1,101	6,789
2004	143	112	79	399	391	1,124	3,539
2005	76	67	173	892	460	1,668	4,257
2006	386	152	121	996	992	2,647	4,737
2007	130	39	86	385	426	1,066	2,567
2008	96	73	43	839	66	1,117	5,173
2009	128	160	140	335	393	1,156	2,181
2010	70	171	85	307	640	1,273	1,610
2011	230	392	163	636	801	2,222	1,908
2012	59	133	144	296	525	1,157	2,282
2013	113	125	179	412	585	1,414	1,573
2014	274	255	156	600	876	2,161	3,025
2015	286	252	152	1,133	421	2,244	3,281
2016	328	199	398	1,098	920	2,943	N/A
2017	122	62	73	545	478	1,280	N/A
2018	88	174	134	569	537	1,502	N/A
1982-2017 Average	163	135	110	518	448	1,374	3,280

Note: Interpolated values are shown in bold italic print.

[a] Total index is the sum of counts and interpolated values, excluding Ford Arm Lake (weir).

Table 26.–Southern inside (Ketchikan) area coho salmon escapement index, 1987–2018.

Year	Herman Creek	Grant Creek	Eulachon River	Klahini River	Indian River	Barrier Creek	King Creek	Choca Creek	Carroll River	Blossum River	Keta River	Marten River	Hugh Smith L. (weir)	Humpback Creek	Tombstone River	Total index[a]
1987	92	***75***	154	***65***	***355***	***70***	***279***	***113***	180	700	800	740	1,117	650	532	5,921
1988	72	150	205	20	300	50	175	150	193	790	850	600	513	52	1,400	5,520
1989	75	101	290	15	925	450	510	200	70	1,000	650	1,175	433	350	950	7,194
1990	150	30	235	150	***255***	***50***	35	***81***	***129***	800	550	575	870	135	275	4,320
1991	245	50	285	50	550	100	300	220	375	725	800	575	1,836	671	775	7,557
1992	115	270	860	90	675	100	250	150	360	650	627	1,285	1,426	550	1,035	8,443
1993	90	175	460	50	475	325	110	300	310	850	725	1,525	832	600	1,275	8,102
1994	265	220	755	200	560	175	325	225	475	775	1,100	2,205	1,753	560	850	10,443
1995	250	94	435	165	600	220	415	180	400	800	1,155	1,385	1,781	82	2,446	10,408
1996	94	92	383	40	570	230	457	220	240	829	1,506	1,924	950	440	1,806	9,781
1997	75	***78***	420	60	***372***	***73***	***292***	175	140	1,143	571	759	732	32	847	5,770
1998	94	130	460	120	304	50	411	190	***265***	1,004	1,169	1,961	983	256	666	8,063
1999	75	127	657	150	356	25	627	225	425	598	1,895	1,518	1,246	520	840	9,284
2000	135	94	600	110	380	72	620	180	275	1,354	1,619	1,421	600	102	1,672	9,234
2001	80	110	929	151	1,140	***165***	891	450	173	1,561	***1,662***	1,956	1,580	506	***1,587***	12,941
2002	88	138	1,105	20	940	70	700	220	270	1,359	1,368	2,302	3,291	2,004	1,639	15,514
2003	242	***185***	875	39	690	57	1,140	380	***444***	1,940	1,934	1,980	1,510	214	1,745	13,374
2004	150	230	801	170	935	250	640	180	455	1,005	1,200	1,835	840	1,230	823	10,744
2005	510	300	1,240	360	890	190	810	270	500	3,680	3,290	1,130	1,732	500	1,170	16,572
2006	165	***107***	190	176	280	30	405	130	***257***	2,300	645	335	891	260	1,600	7,771
2007	134	75	***270***	35	245	15	290	210	***163***	990	970	351	1,244	3	***609***	5,604
2008	115	55	570	25	1,250	23	420	100	***620***	7,100	***2,426***	925	1,741	2,600	360	18,331
2009	***149***	330	330	340	750	110	1,050	100	1,100	***1,518***	315	1,675	2,281	700	225	10,973
2010	85	102	370	***63***	880	90	570	190	***173***	350	550	350	2,878	200	***645***	7,495
2011	***88***	***80***	350	***70***	175	***75***	110	85	***192***	1,235	***749***	350	2,137	850	***716***	7,260
2012	25	60	400	***162***	170	40	***693***	110	330	2,400	3,300	2,650	1,908	360	1,250	13,858
2013	***193***	***176***	***698***	***153***	***834***	***164***	***655***	***265***	215	2,140	1,560	2,370	3,048	530	1,340	14,342
2014	425	80	660	***226***	1,500	***242***	850	400	220	2,000	1,300	***2,651***	4,110	***1,075***	5,000	20,738
2015	20	200	550	***136***	1,200	***146***	550	200	450	2,310	1,470	1,555	956	210	1,035	10,988
2016	160	25	810	***450***	370	***90***	540	315	750	3,070	2,470	2,120	944	280	1,970	14,364
2017	40	167	540	***280***	850	***20***	100	240	285	3,100	2,450	1,675	1,266	830	980	12,823
2018	75	***55***	280	70	610	***95***	595	***110***	160	3,100	3,300	1,750	619	***1,800***	2,700	15,319
1987–2017 Average	145	132	545	134	638	122	491	208	337	1,615	1,344	1,415	1,530	560	1,228	10,443

Note: Interpolated values are shown in bold italic print.

[a] Total index is the sum of counts and interpolated values.

Table 27.–Overall coho salmon percentage exploitation rates by indicator stock for all fisheries combined, 1982–2018.

Year	Auke Creek	Berners River	Hugh Smith Lake	Average	Ford Arm Lake
1982	40	—	65	—	43
1983	44	—	62	—	69
1984	41	—	65	—	—
1985	44	—	63	—	52
1986	53	—	59	—	62
1987	43	—	50	—	48
1988	37	—	65	—	48
1989	55	57	82	64	65
1990	53	63	82	66	58
1991	31	62	68	54	54
1992	46	62	71	59	59
1993	46	64	80	63	67
1994	53	74	81	70	72
1995	44	80	73	66	64
1996	55	70	76	67	57
1997	20	30	73	41	52
1998	39	66	78	61	56
1999	41	65	70	59	63
2000	30	45	55	43	71
2001	38	35	49	41	74
2002	27	39	39	35	53
2003	35	60	59	51	49
2004	44	51	66	54	71
2005	38	54	53	48	58
2006	34	60	54	49	52
2007	34	50	62	49	70
2008	39	47	54	46	53
2009	39	49	48	45	69
2010	46	61	47	51	64
2011	35	44	46	42	82
2012	22	31	54	36	63
2013	42	65	56	54	78
2014	20	37	47	35	72
2015	25	32	51	36	52
2016	25	28	61	38	—
2017	41	46	45	44	—
2018	56	49	53	53	—
1982–2017 Average	38	53	62	51	63

Table 28.–Overall coho salmon percentage exploitation rates by indicator stock for the Alaska troll fishery, 1982–2018.

Year	Auke Creek	Berners River	Ford Arm Lake	Hugh Smith Lake	Weighted average
1982	20	—	41	45	34
1983	31	—	54	35	37
1984	34	—	—	31	37
1985	35	—	52	36	39
1986	43	—	61	37	44
1987	37	—	45	29	36
1988	25	—	47	28	31
1989	48	49	62	51	52
1990	43	41	57	38	43
1991	17	17	53	36	32
1992	32	31	56	38	39
1993	38	36	62	53	48
1994	35	35	60	46	44
1995	32	29	53	30	35
1996	39	42	53	40	43
1997	12	14	48	49	34
1998	31	42	49	41	41
1999	34	36	58	42	42
2000	24	20	57	36	35
2001	31	24	67	22	33
2002	18	15	38	16	21
2003	23	22	31	24	25
2004	27	29	64	41	40
2005	33	33	51	32	36
2006	22	24	39	36	32
2007	25	30	65	38	39
2008	30	24	41	19	27
2009	30	27	65	24	34
2010	25	27	48	22	29
2011	17	28	24	20	22
2012	20	21	46	20	25
2013	32	33	48	25	33
2014	14	14	46	24	24
2015	20	20	45	24	27
2016	7	8	—	31	24
2017	34	28	—	29	34
2018	20	13	—	17	22
1982–2017 Average	28	28	51	33	35

Note: The weighted average gives a 20% weighting each to Auke Creek, Berners River and Ford Arm Creek and a 40% weighting to Hugh Smith Lake. Auke Creek was given a 40% weighting prior to 1989 and the index after 2015 was based on only three stocks (Auke Creek 25%, Berners River 25%, Hugh Smith Lake 50%) with an expansion for missing Ford Arm Creek estimates based on the historical linear relationship between weighted average troll exploitation rates computed with and without Ford Arm Creek.

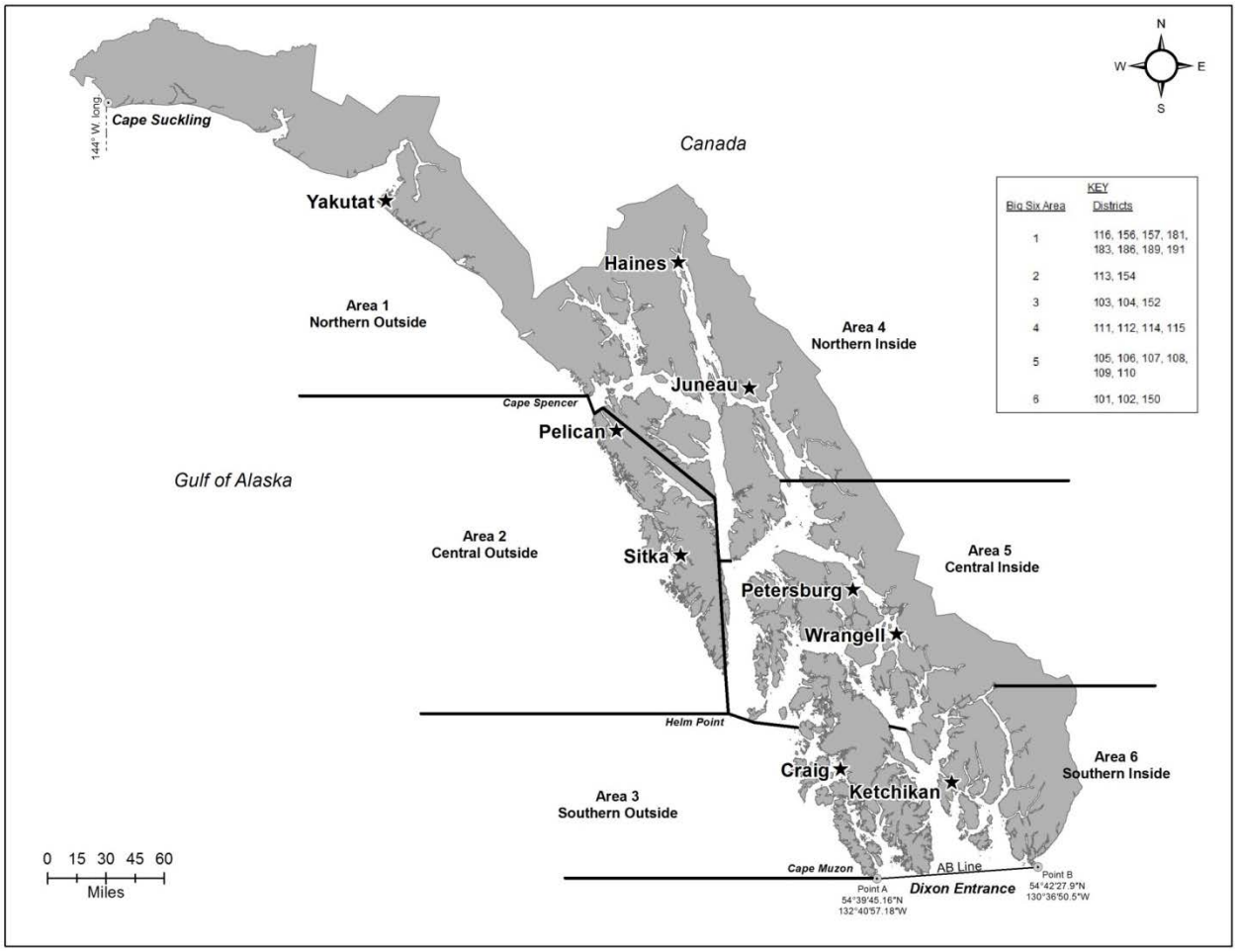

Figure 1.–Map of Southeast Alaska commercial troll fishing and Big Six management areas, Cape Suckling to Dixon Entrance.

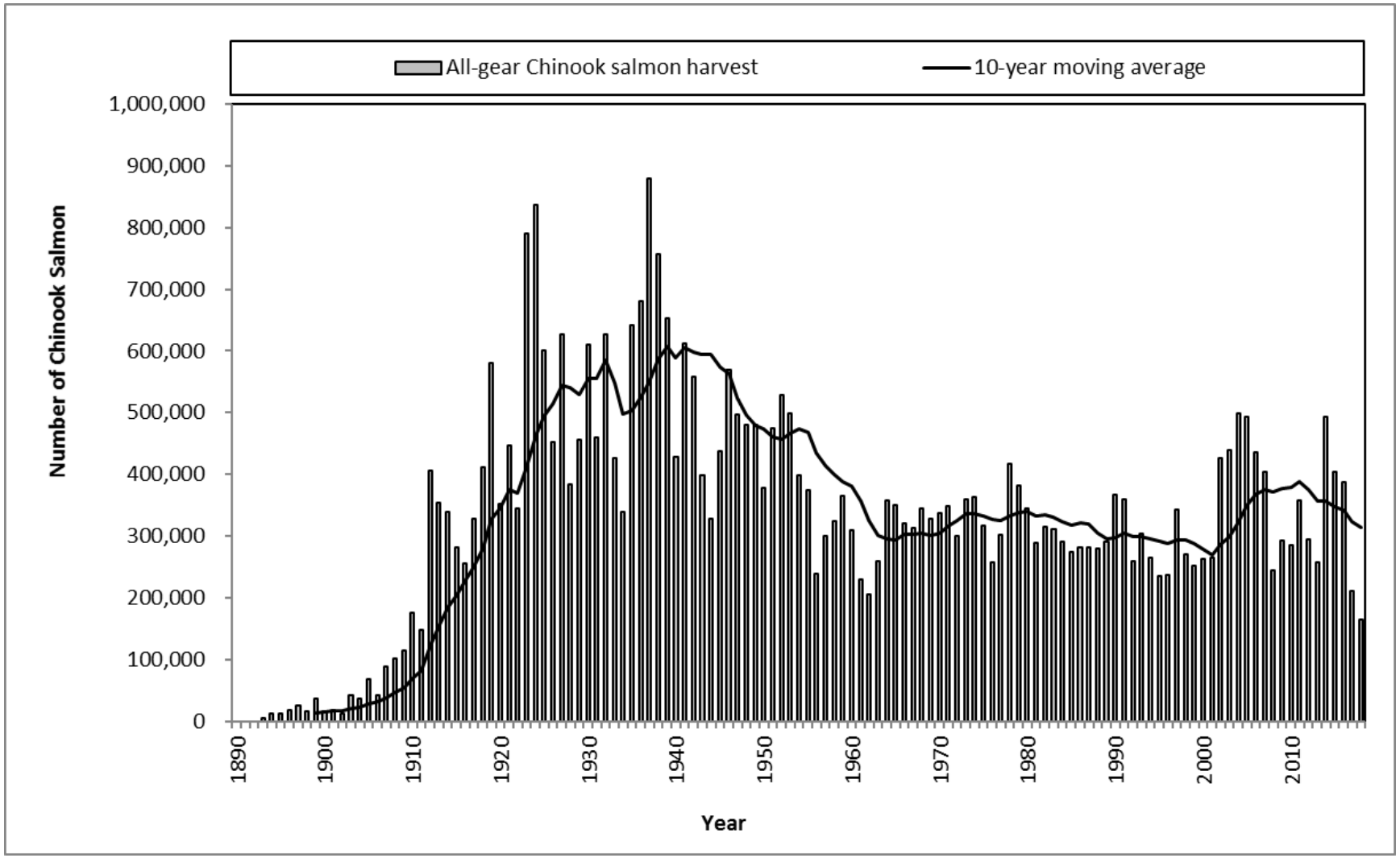

Figure 2.–All-gear harvests of Chinook salmon in common property fisheries, 1891–2018.

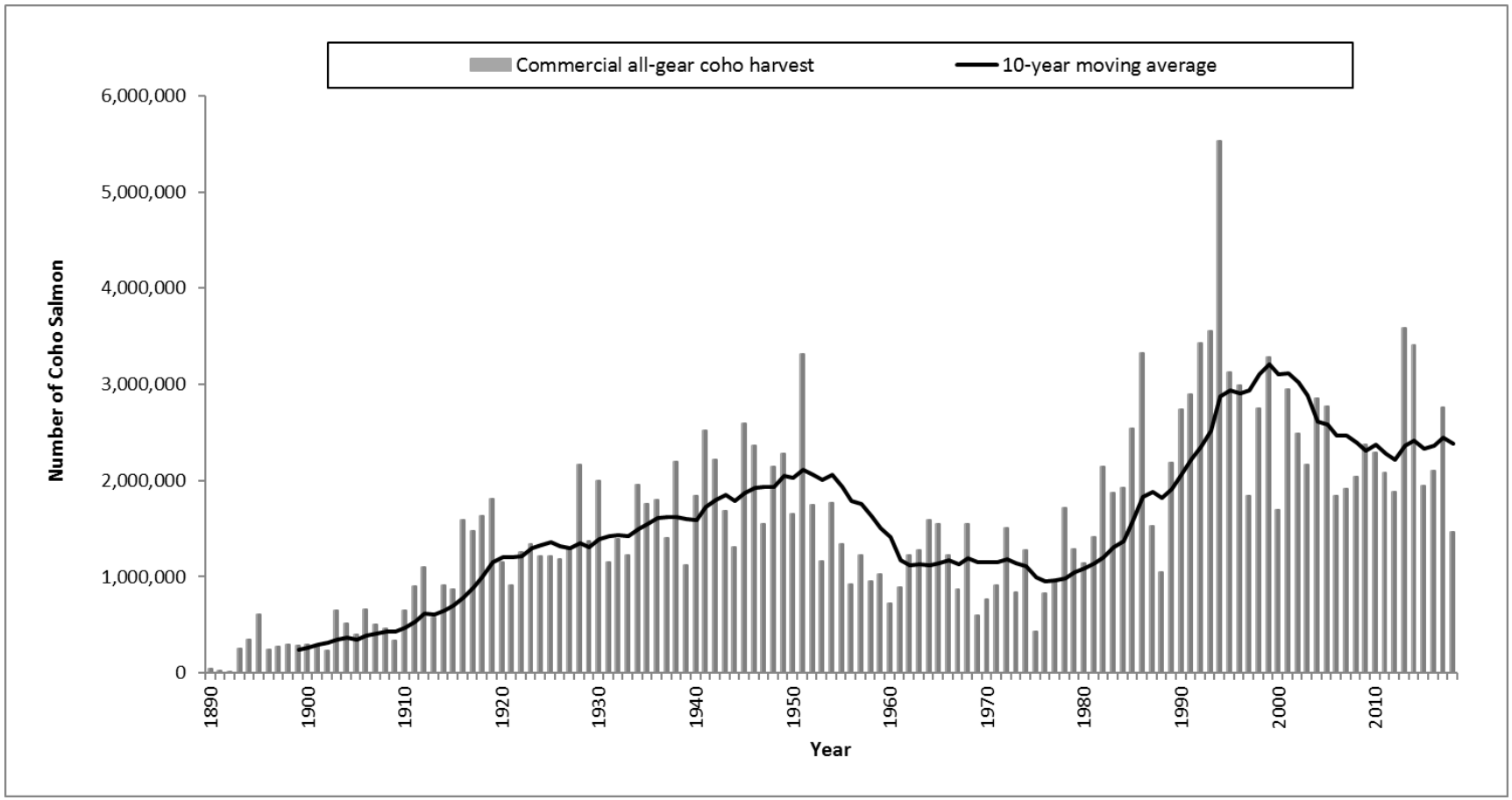

Figure 3.–Commercial all-gear harvests of coho salmon in common property fisheries, 1890–2018.

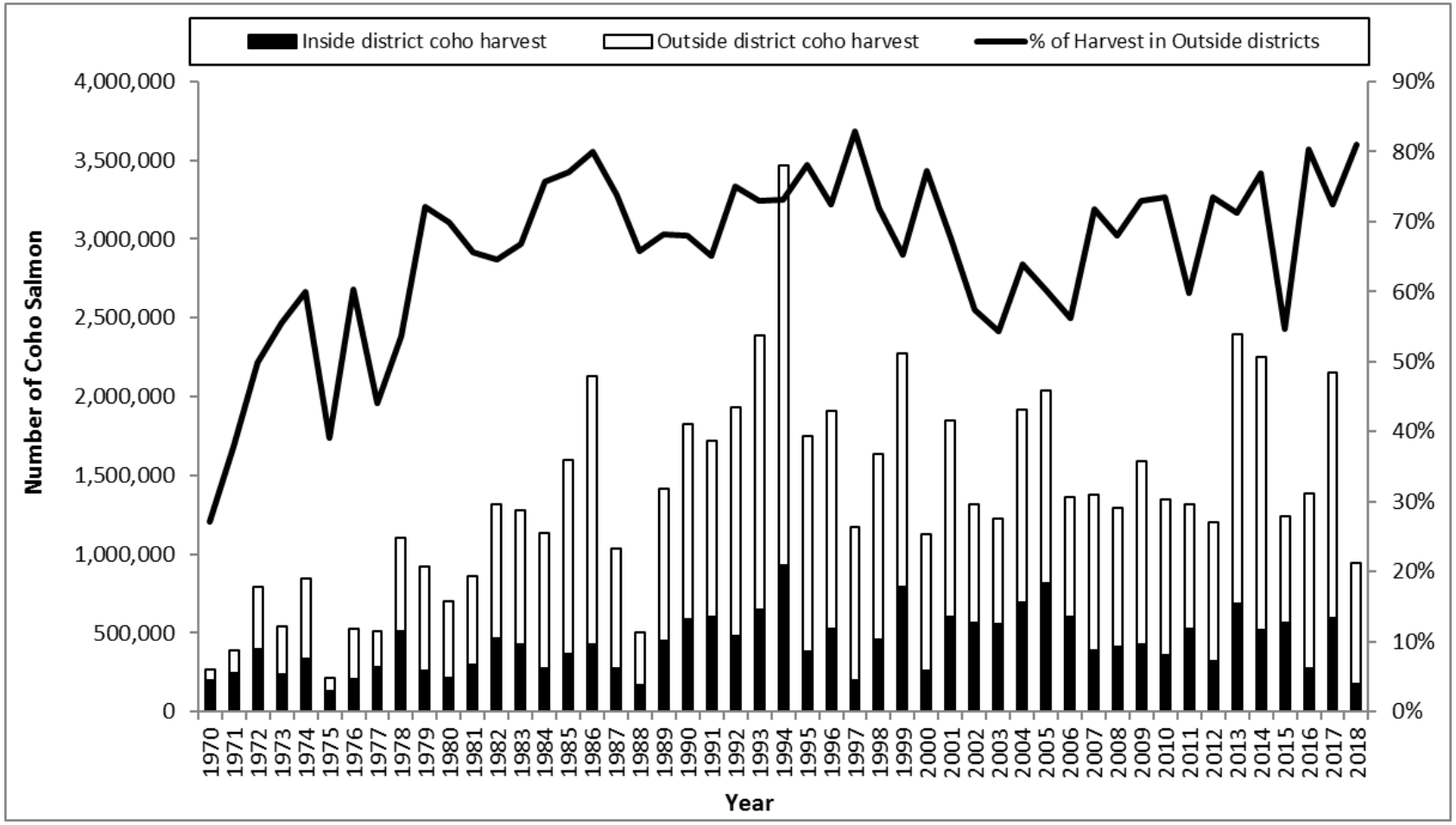

Figure 4.–Southeast Alaska troll coho salmon harvest in the outside (Gulf of Alaska) districts, the inside districts and the percentage of the harvest taken in the outside districts, 1970–2018.

Note: Outside districts are 103, 104, 113, 116, 152, 154, 156, 157, 181, 183, 189, 191; inside districts are 101, 102, 105, 106, 107, 108, 109, 110, 111, 112, 114, 115.

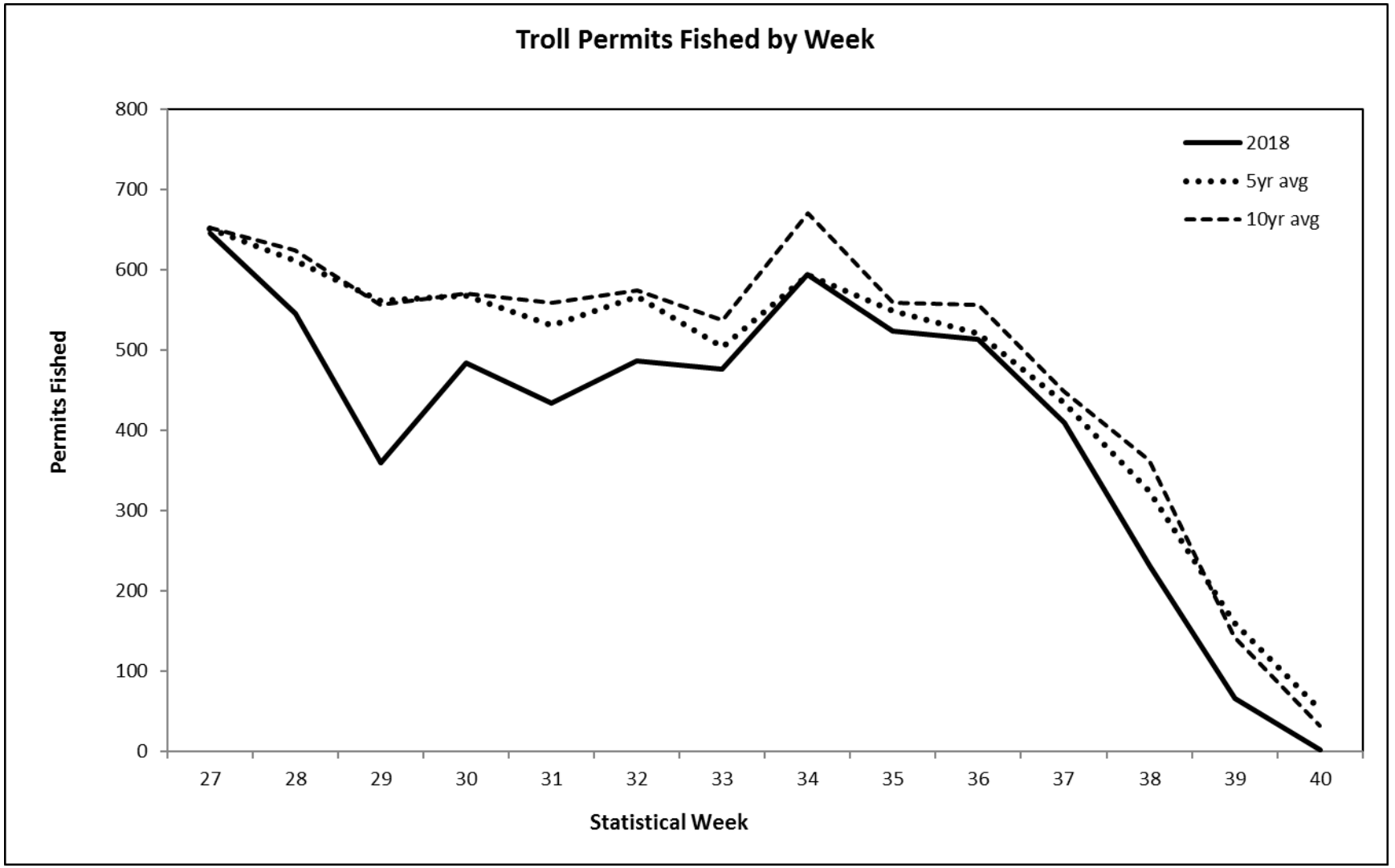

Figure 5.–Number of troll permits fished by week, 2018 vs. 5-year and 10-year averages.

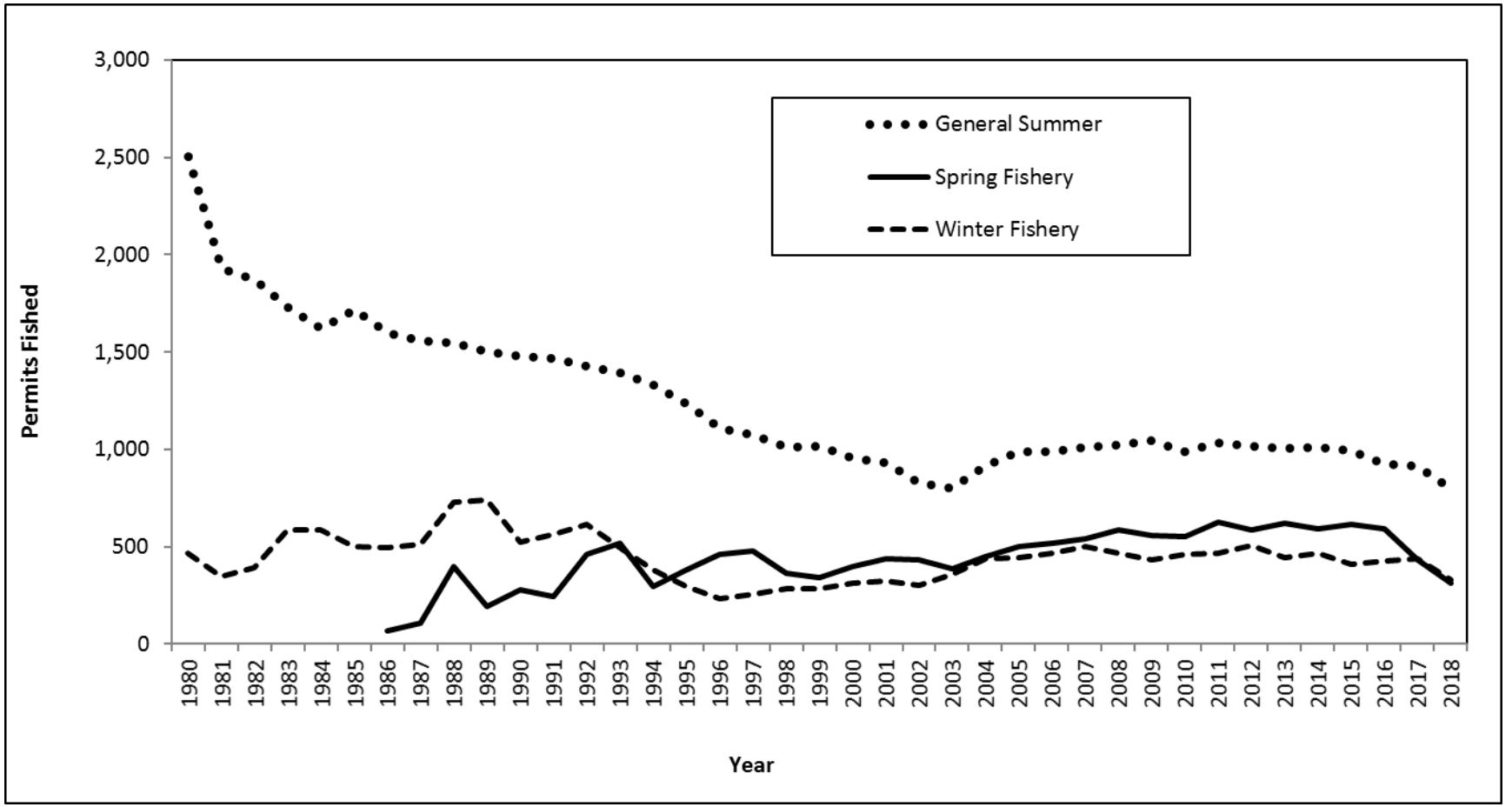

Figure 6.–Number of troll permits fished in the general summer, winter, and spring fisheries, 1980–2018.

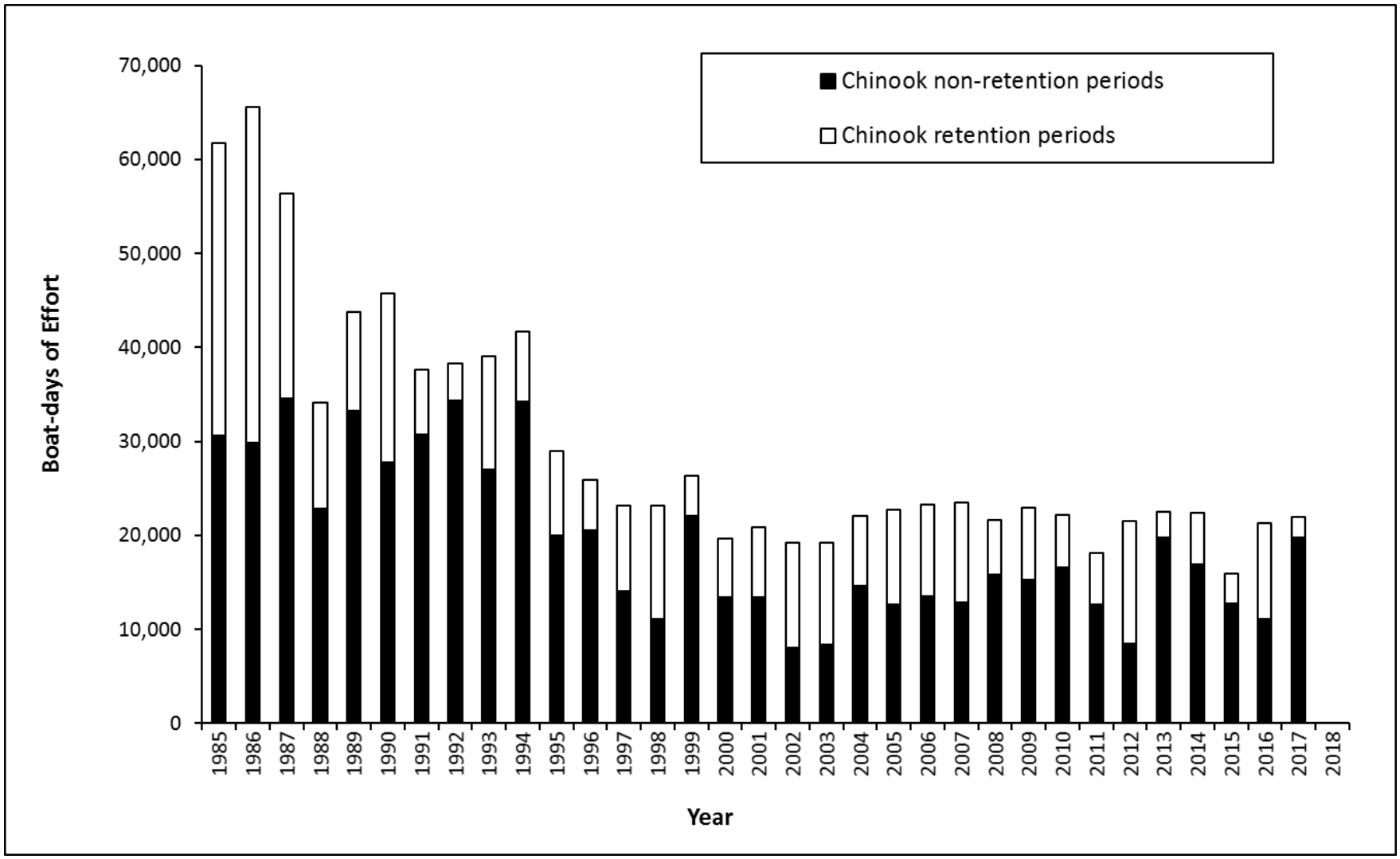

Figure 7.–General summer troll fishery boat-days of effort during Chinook salmon retention and non-retention fishing periods, 1985–2017. Boat-days of effort data for 2018 were not available at the time of publication.

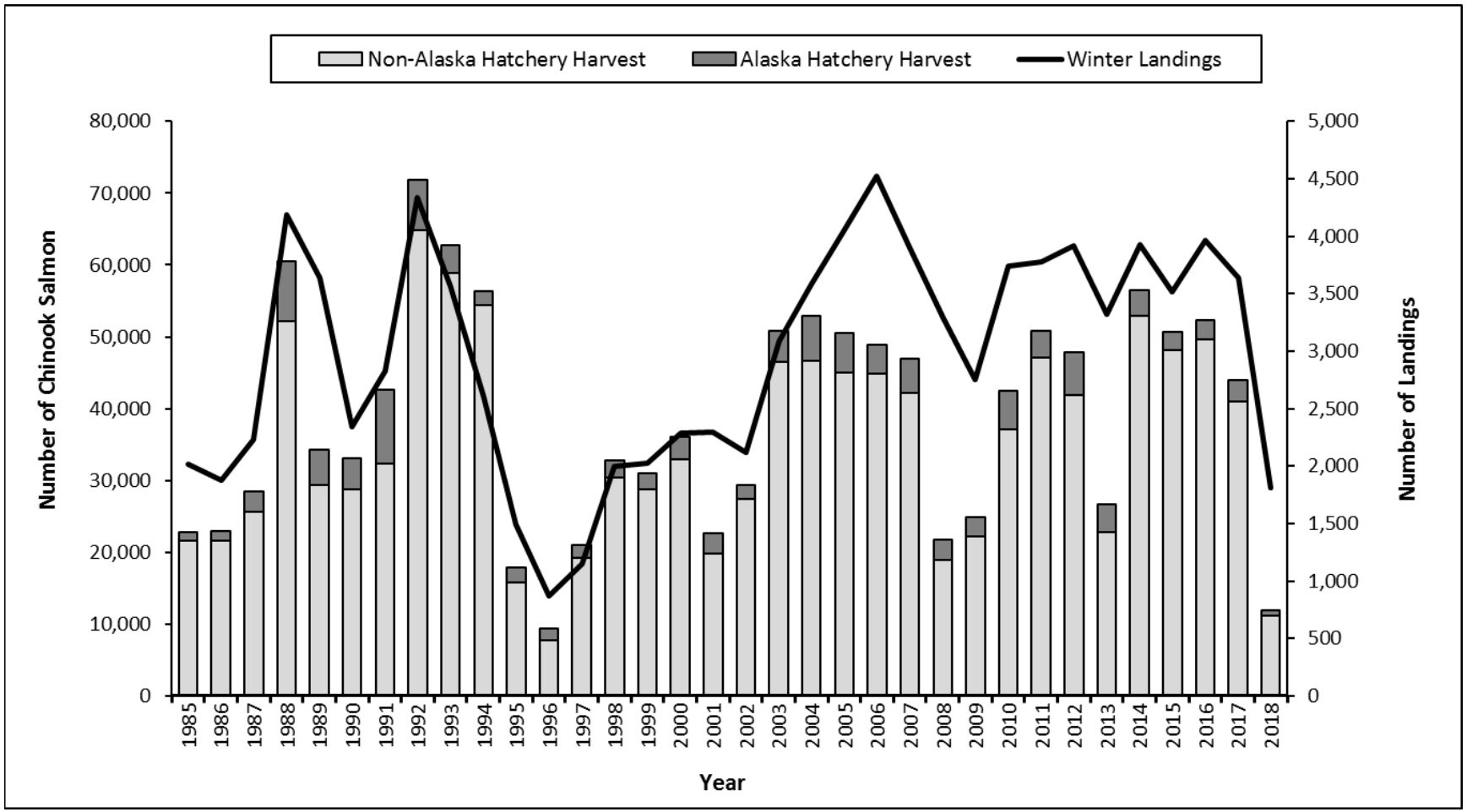

Figure 8.–Southeast Alaska winter troll fishery non-Alaska and Alaska hatchery Chinook salmon harvests and landings, 1985–2018.

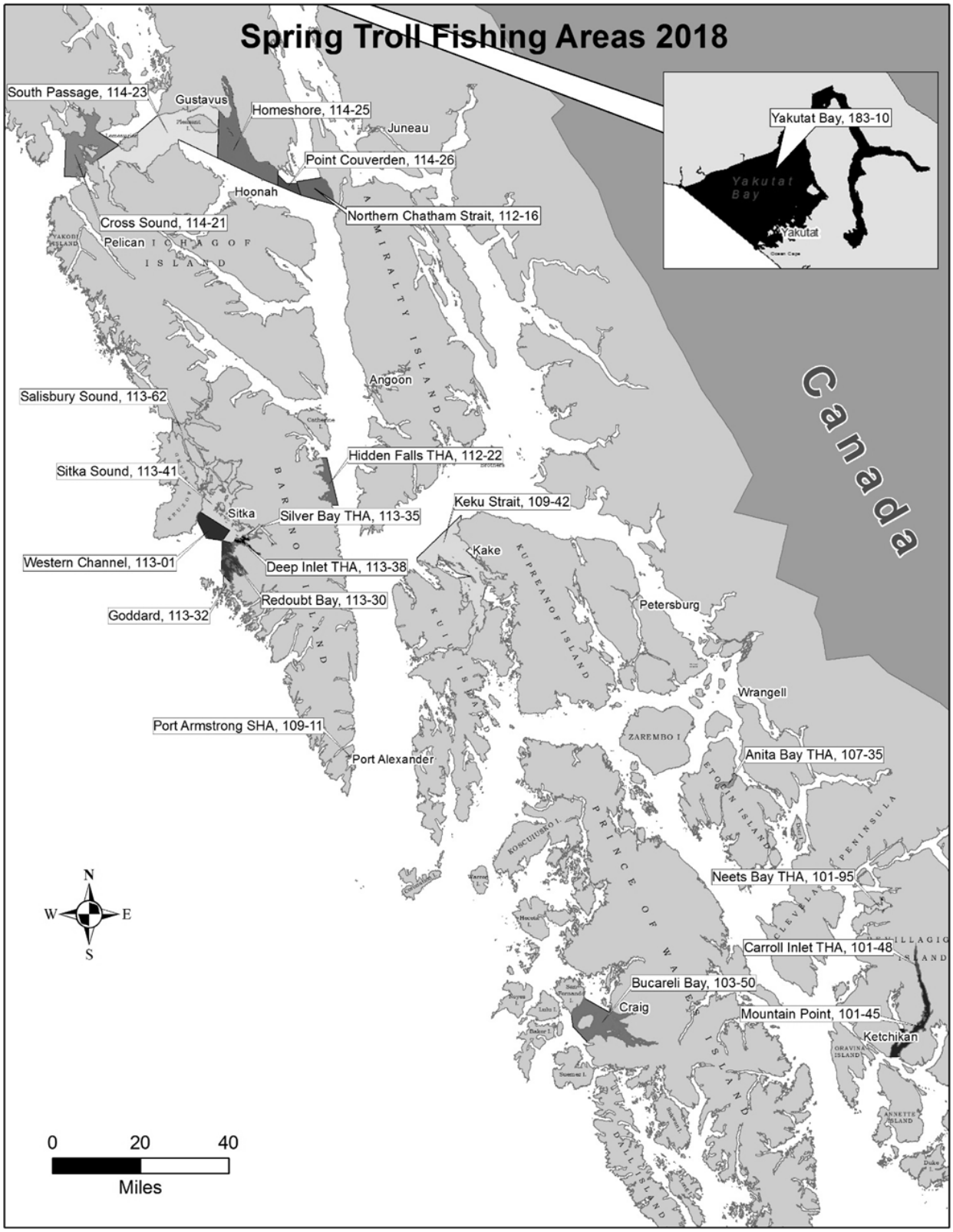

Figure 9.–Map of spring troll fishing areas, 2018.

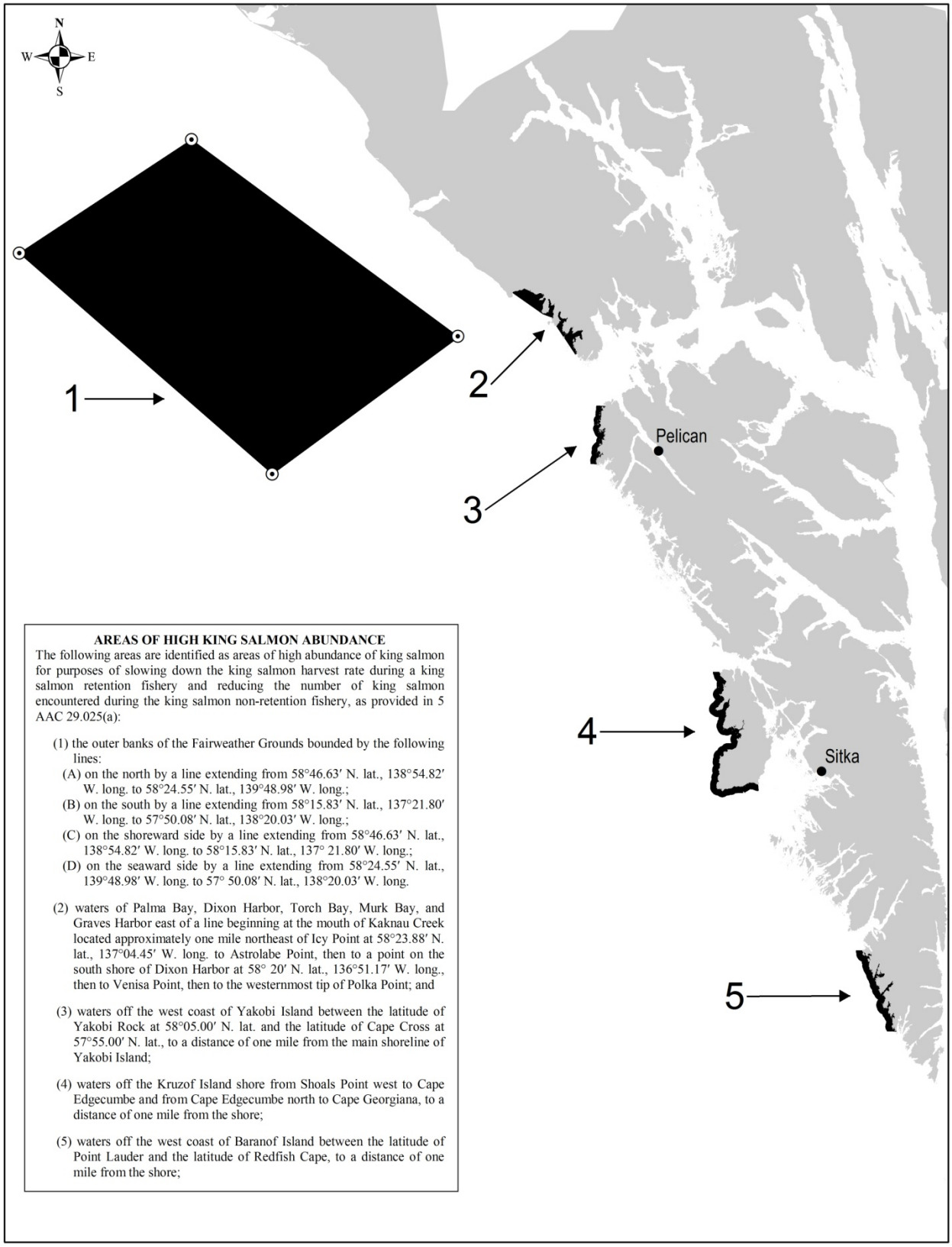

Figure 10.–Map of Areas of High King Salmon Abundance (shaded areas), which close during part of the summer fishery.

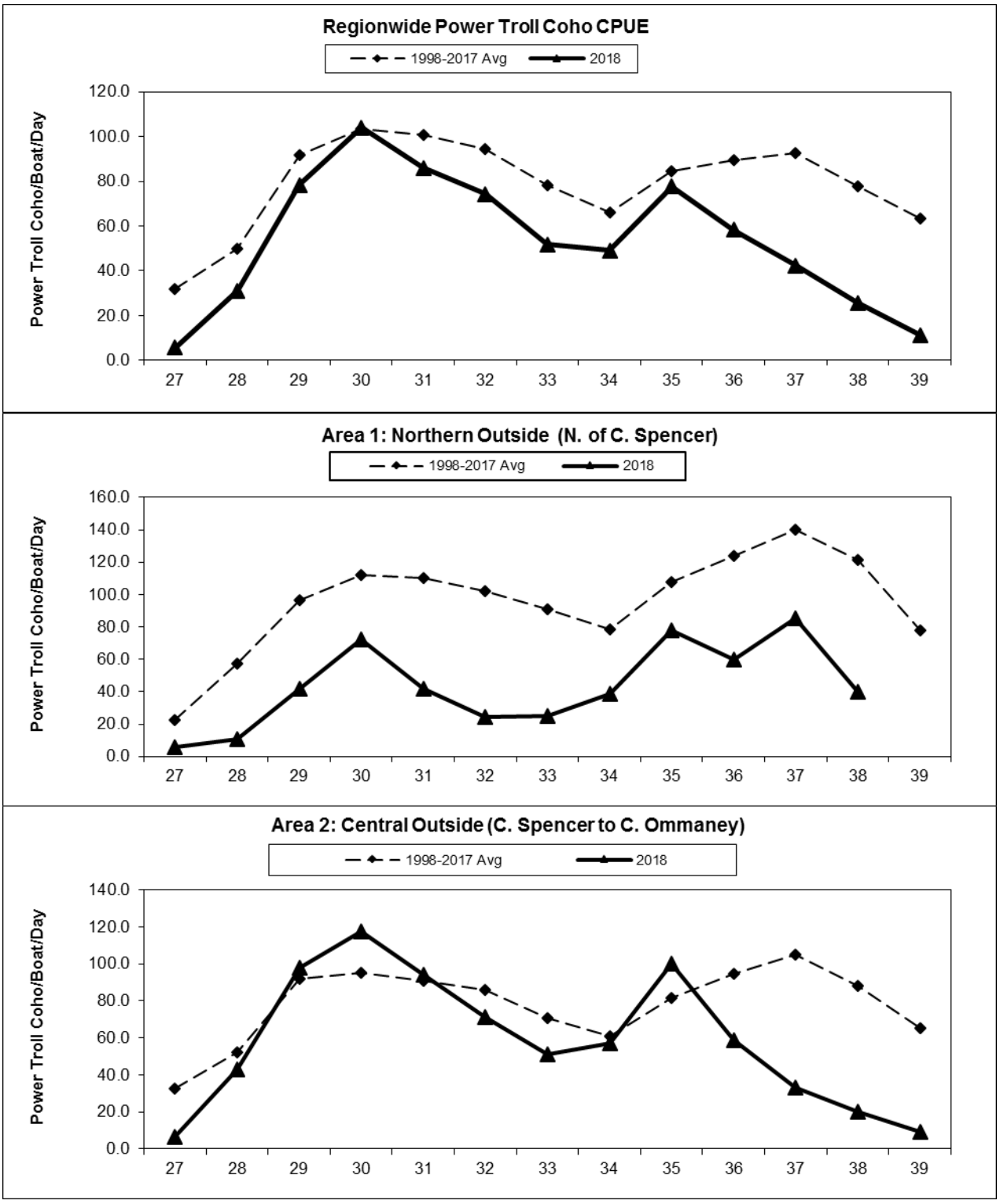

Figure 11.–Average power troll coho salmon harvest per boat day (CPUE) by statistical week, comparing 2018 results with the 1998–2017 average, for Southeast Alaska, regionwide, Northern Outside, and Central Outside (Areas 1 and 2).

Note: Declines in CPUE for SW 27–28 are influenced by vessels targeting Chinook instead of coho. Weeks with fewer than three permits interviewed are confidential and have been omitted.

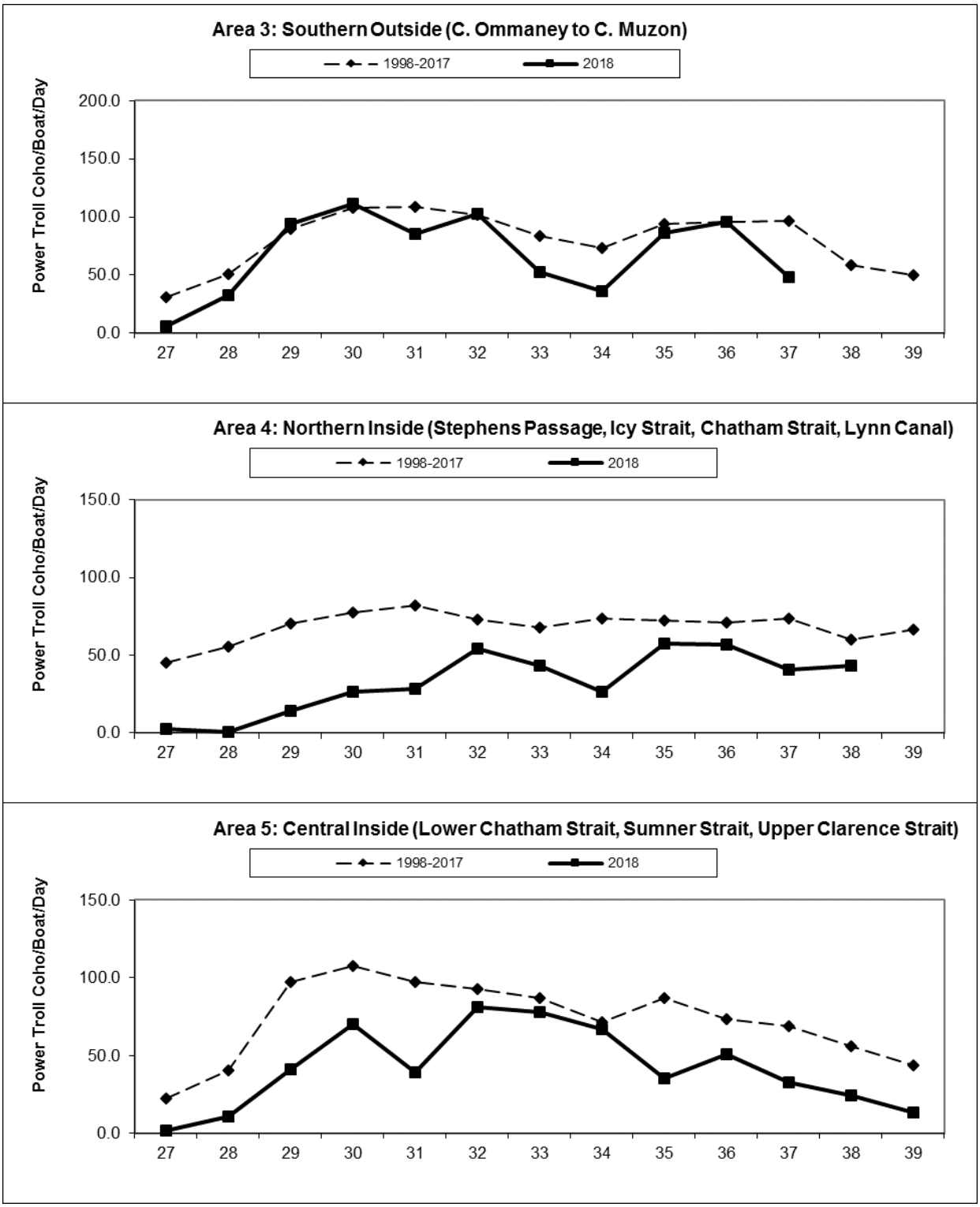

Figure 12.–Average power troll coho salmon harvest per boat day (CPUE) by statistical week, comparing 2018 results with the 1998–2017 average, for Southeast Alaska, Southern Outside, Northern Inside, and Central Inside (Areas 3, 4, and 5).

Note: Declines in CPUE for SW 27–28 are influenced by vessels targeting Chinook instead of coho. Weeks with fewer than three permits interviewed are confidential and have been omitted.

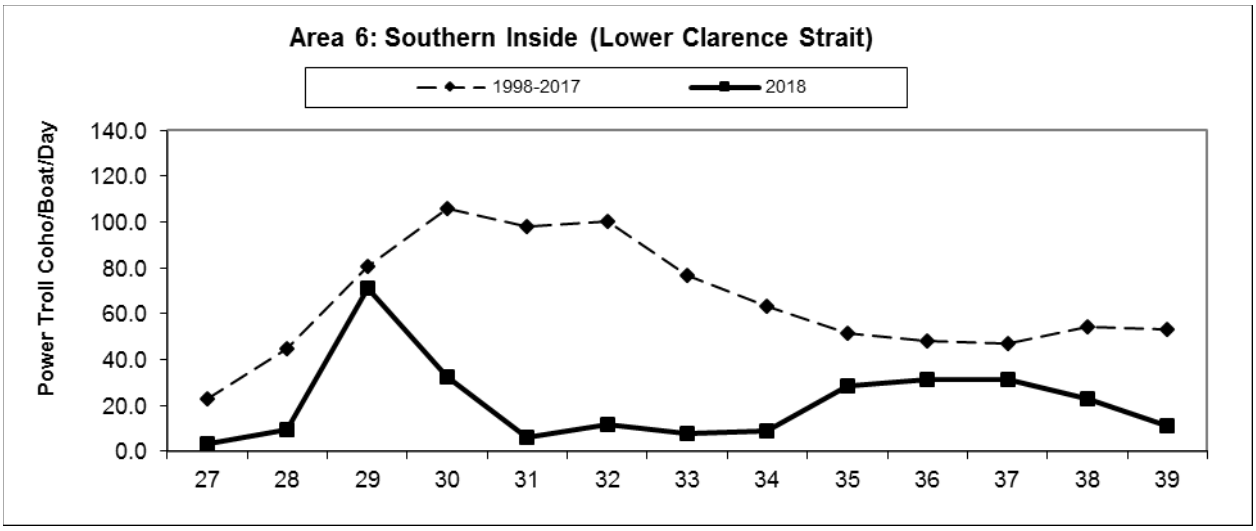

Figure 13.–Average power troll coho salmon harvest per boat day (CPUE) by statistical week, comparing 2018 results with the 1998–2017 average, for Southeast Alaska, Southern Inside (Area 6).

Note: Declines in CPUE for SW 27–28 are influenced by vessels targeting Chinook instead of coho. Weeks with fewer than three permits interviewed are confidential and have been omitted.

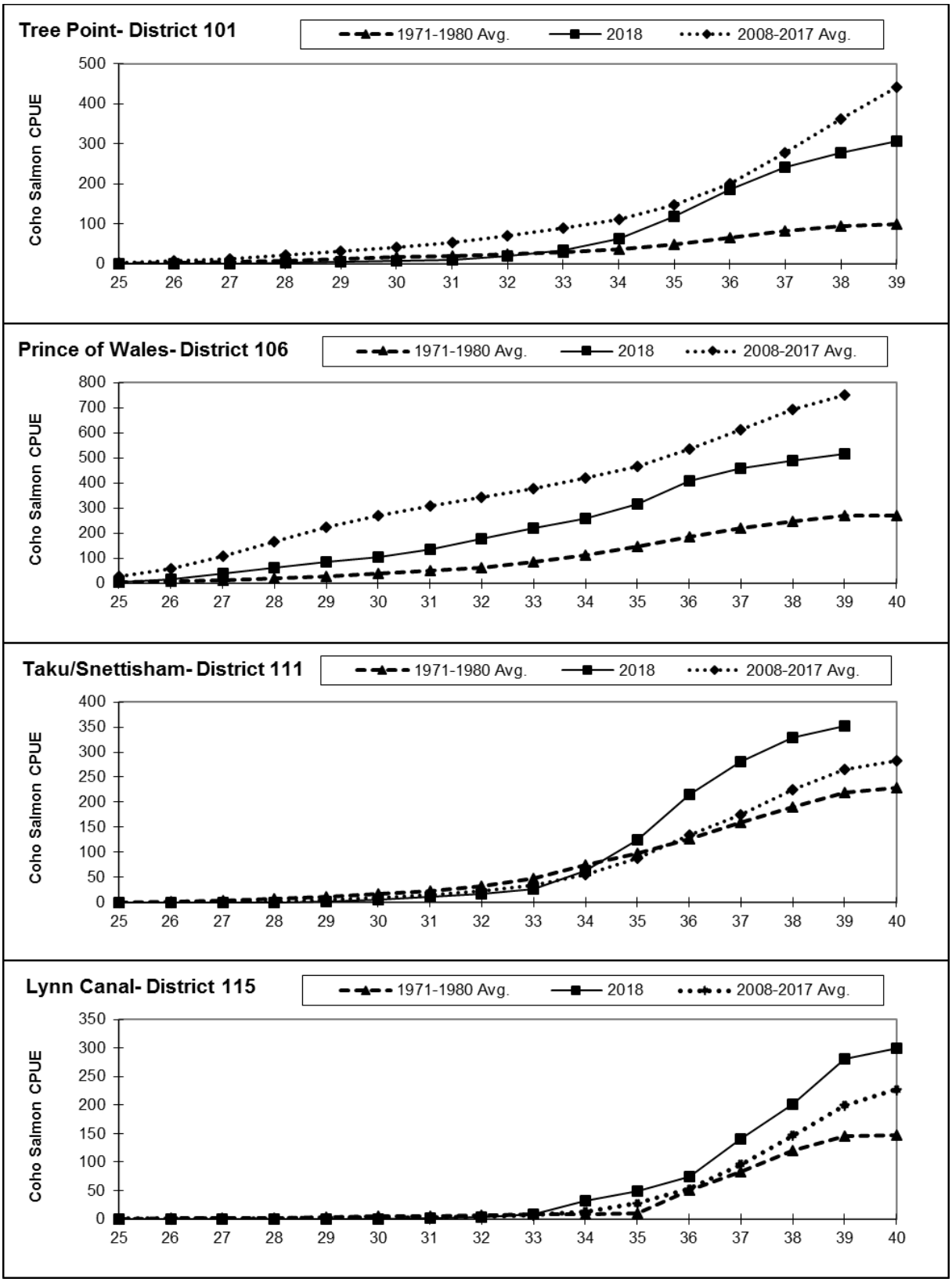

Figure 14.–Cumulative coho salmon catch-per-boat-day by statistical week, comparing 2018 to the 1971–1980 and 2008–2017 averages, for the four indicator drift gillnet fisheries.

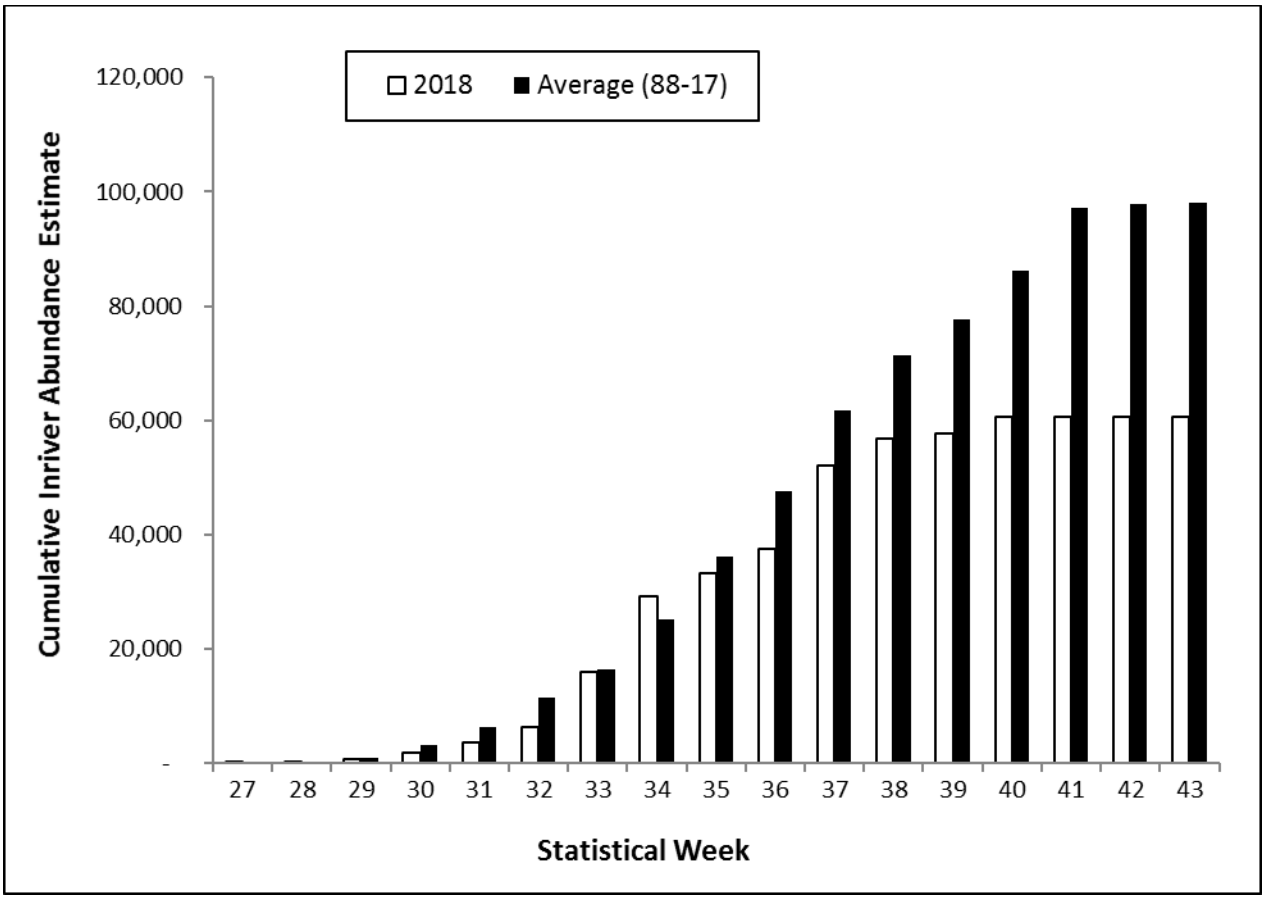

Figure 15.–Cumulative mark-recapture abundance estimates for Taku River coho salmon from Canyon Island fish wheels, for 2018 and the 1988–2017 average.

Note: Much of the weekly data are interpolated due to a paucity of available data from the Canadian inriver fishery for most weeks.

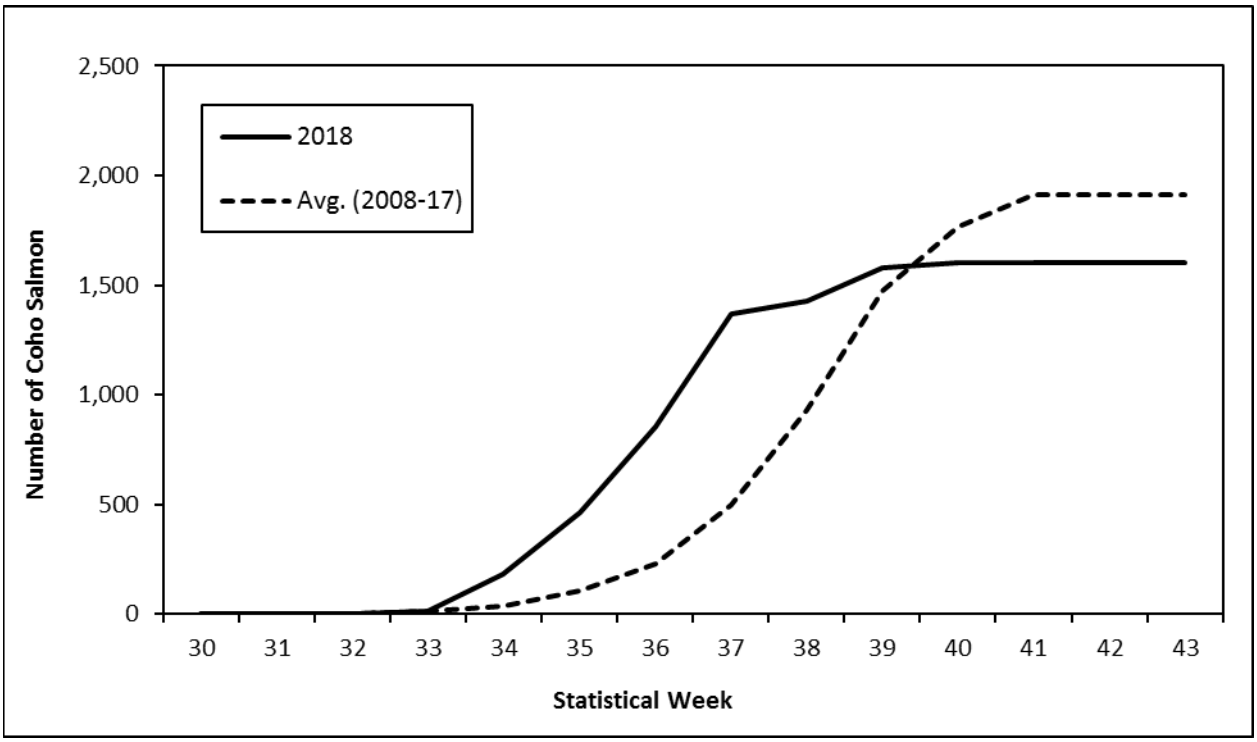

Figure 16.–Cumulative weekly catch of coho salmon in the Chilkat River fish wheels, for 2018 and the 2008–2017 average.

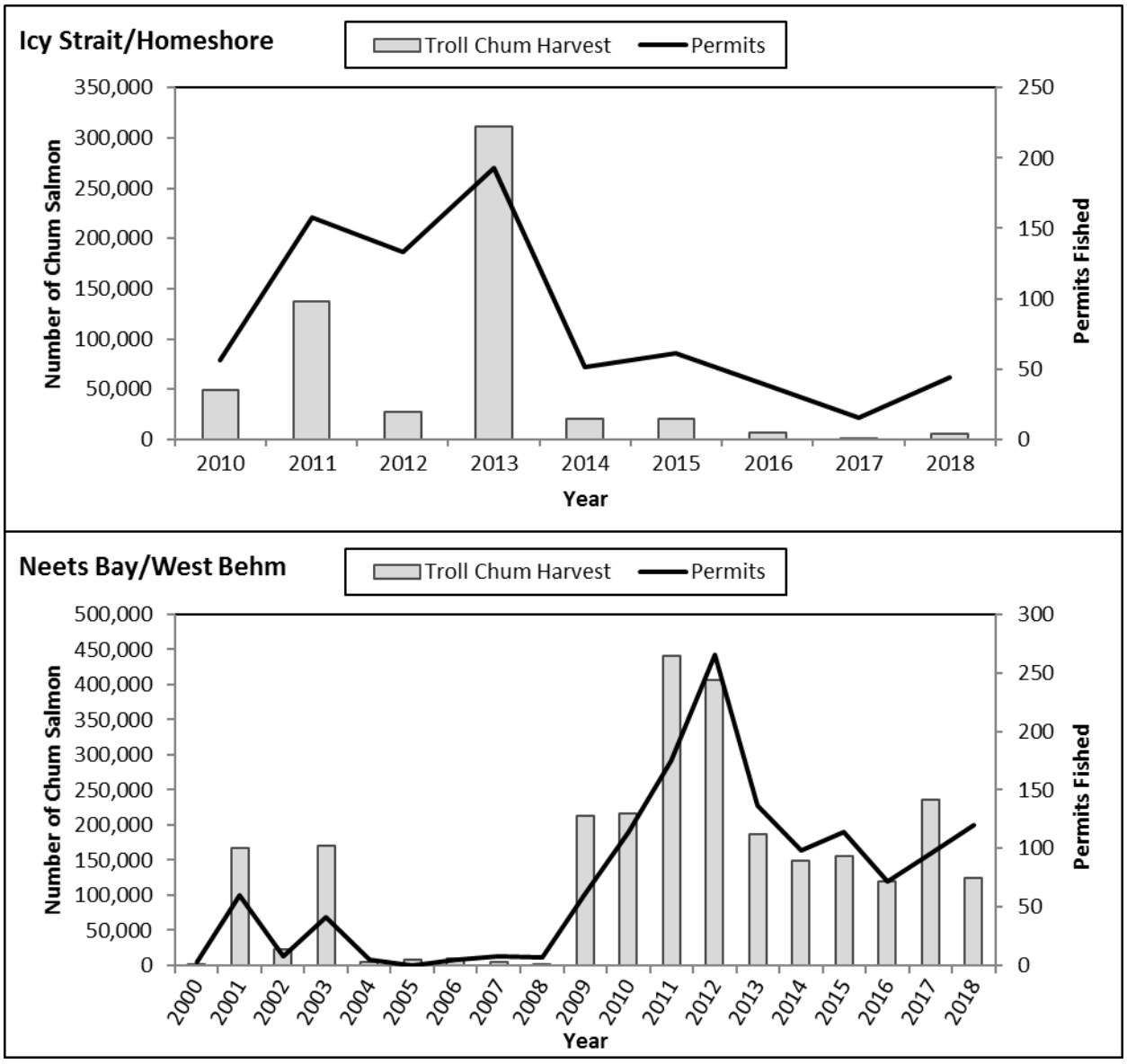

Figure 17.–Annual harvest and number of permits fished for chum salmon caught in Icy Strait/Homeshore 2010–2018 and Neets Bay/West Behm Canal 2000–2018. Both harvest and effort based on all troll vessels that targeted chum salmon.

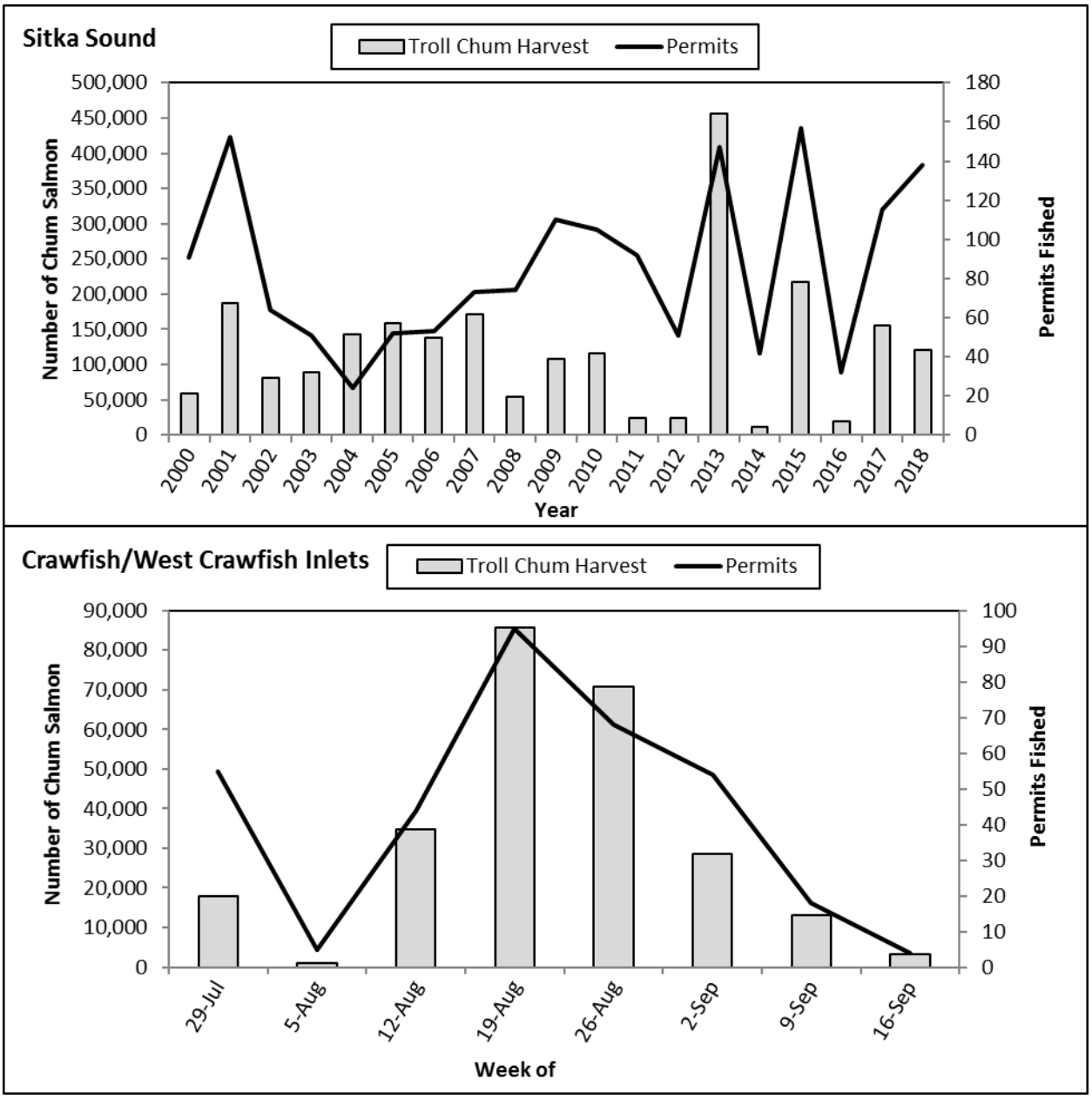

Figure 17.– Continued. Annual harvest and number of permits fished for chum salmon caught in Sitka Sound 2000–2018 and Crawfish/West Crawfish Inlets for 2018. Both harvest and effort based on all troll vessels that targeted chum salmon.

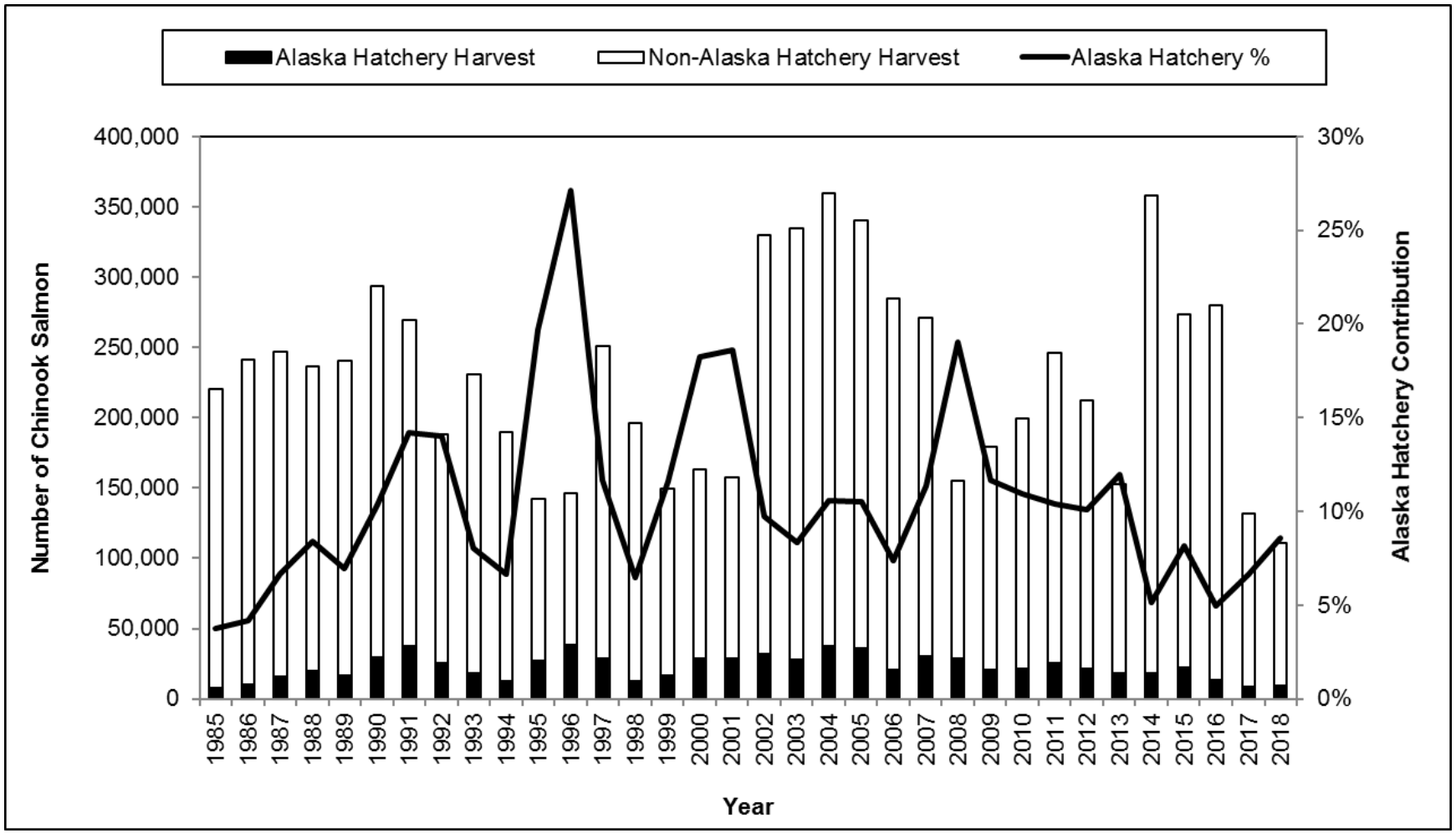

Figure 18.–Alaska hatchery Chinook salmon contributions to the Southeast Alaska troll fishery, 1985–2018.

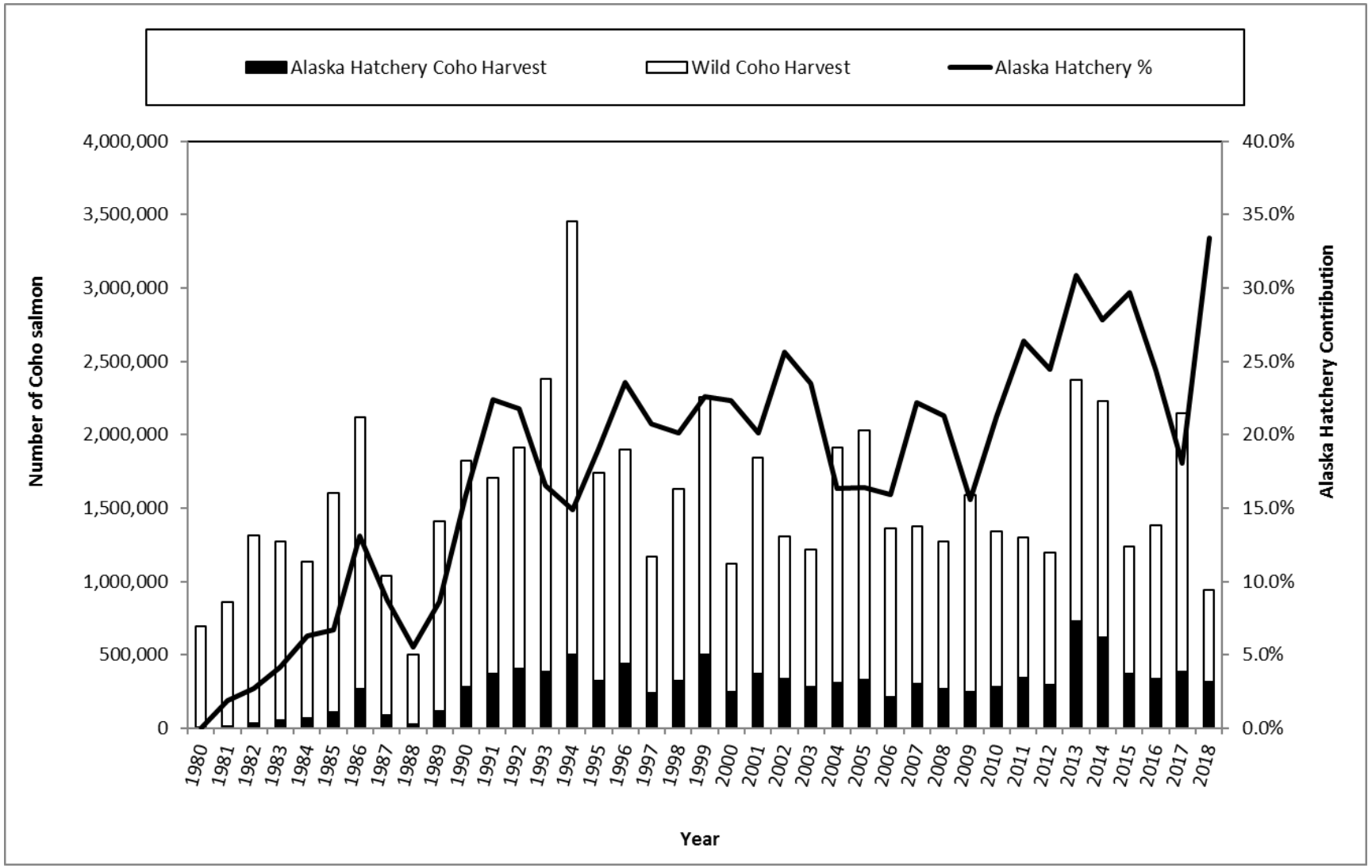

Figure 19.–Hatchery contributions of coho salmon from all sources to the Southeast Alaska troll fishery, 1980–2018.

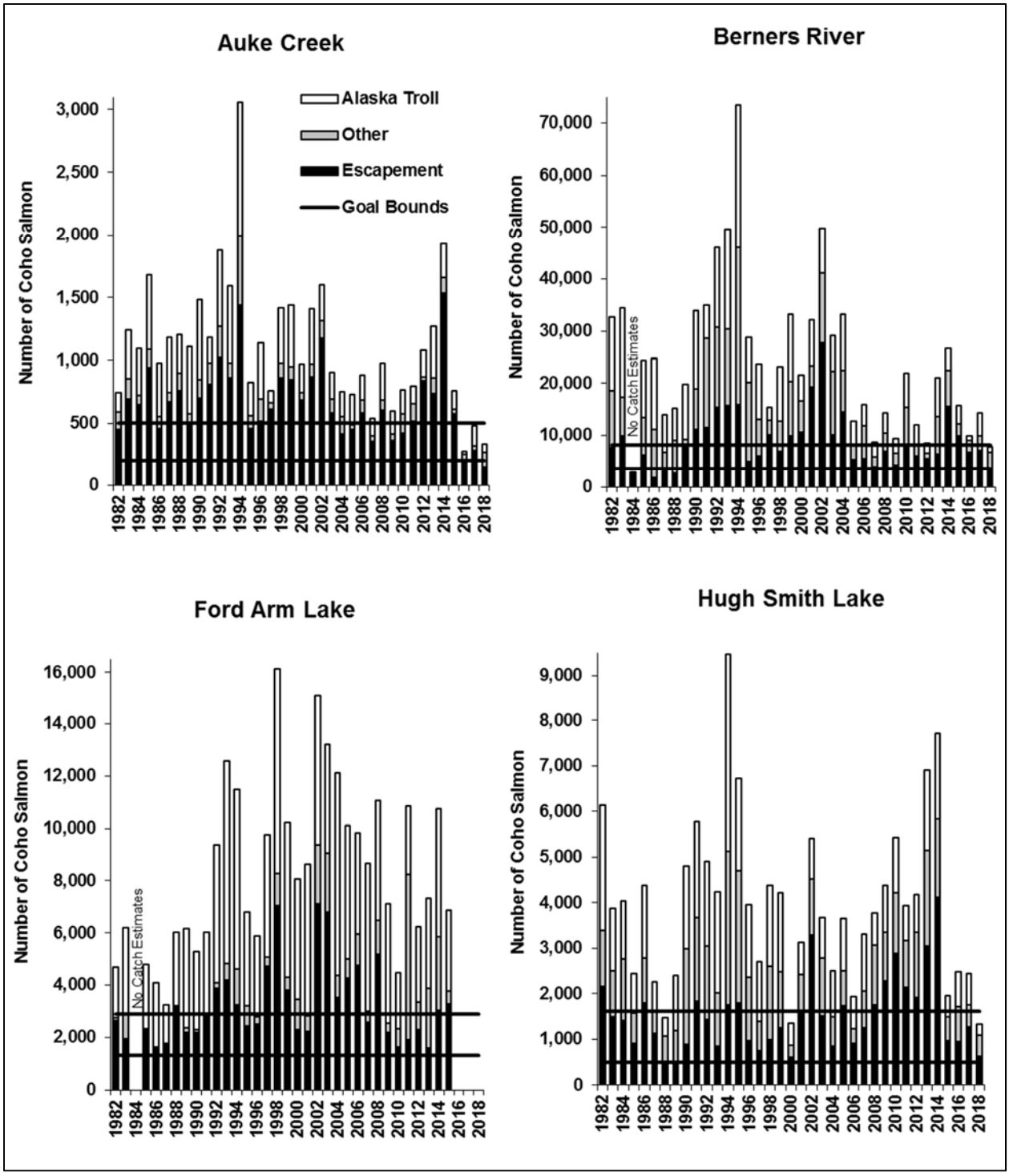

Figure 20.–Total run size, catch, escapement, and biological escapement goal range for four wild Southeast Alaska coho salmon indicator stocks, 1982–2018.

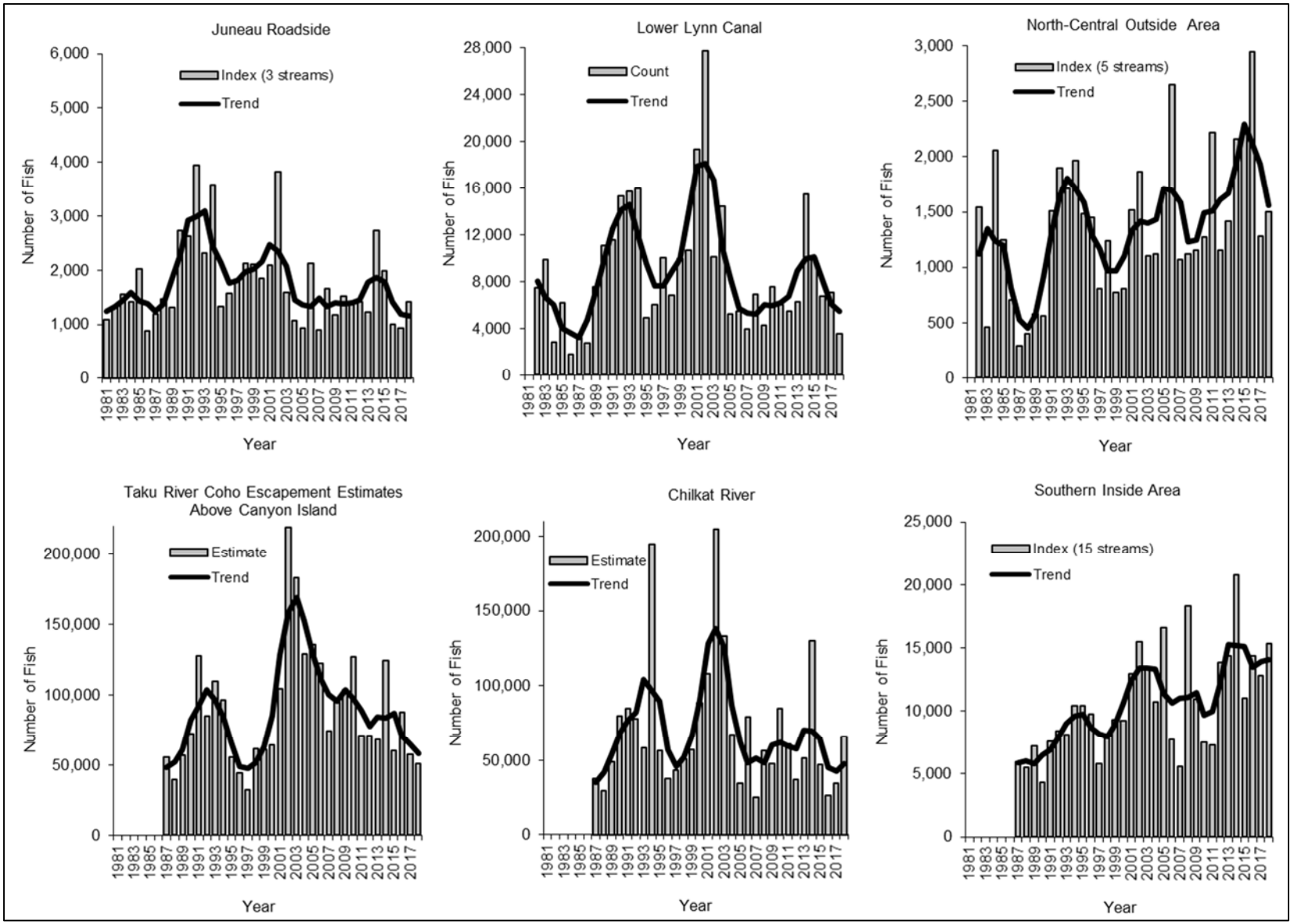

Figure 21.–Coho salmon escapement counts and estimates in index streams in six areas of Southeast Alaska, 1981–2018.

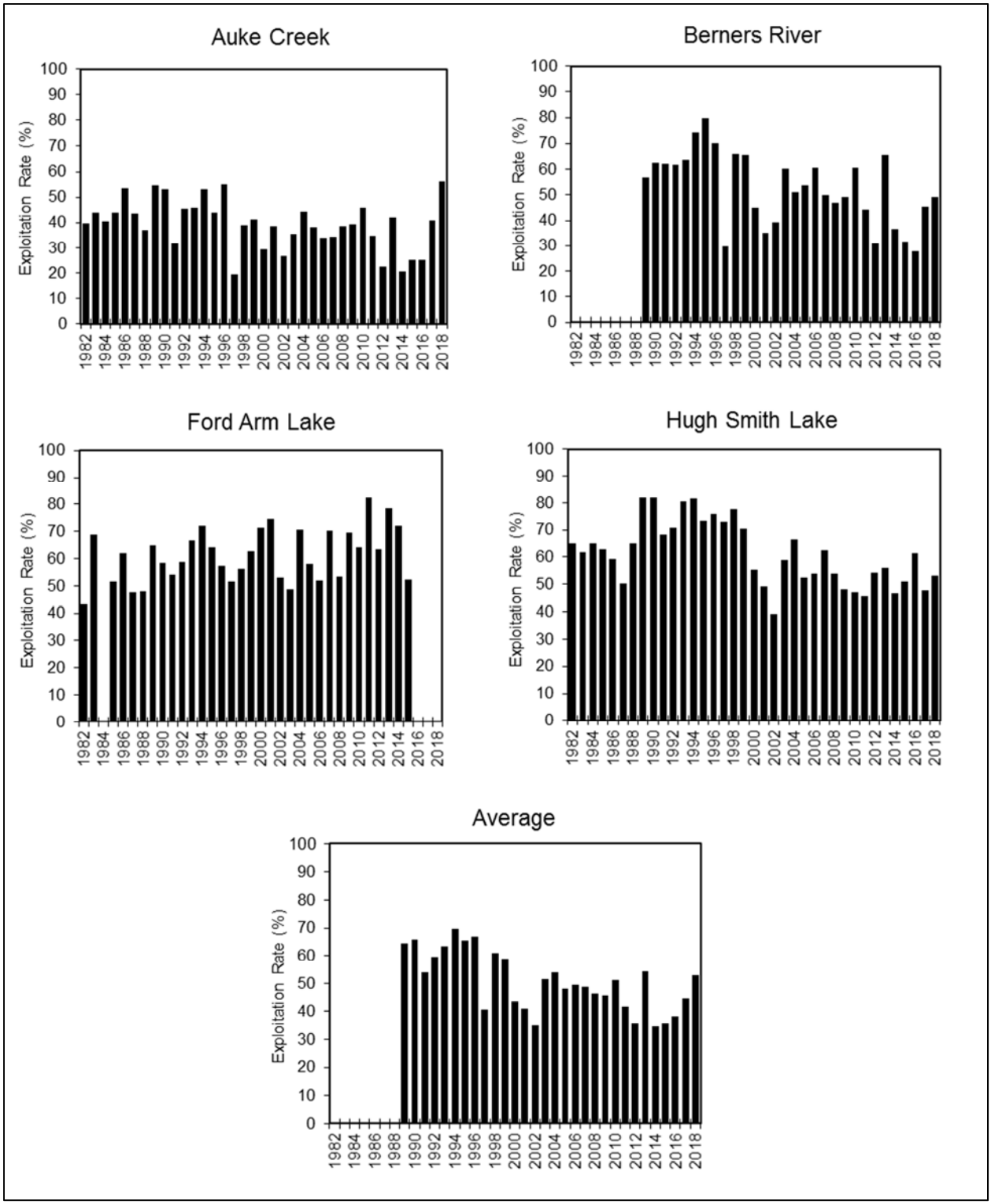

Figure 22.–Estimated total exploitation rates by all fisheries for four coded wire tagged Southeast Alaska coho salmon stocks, 1982–2018.

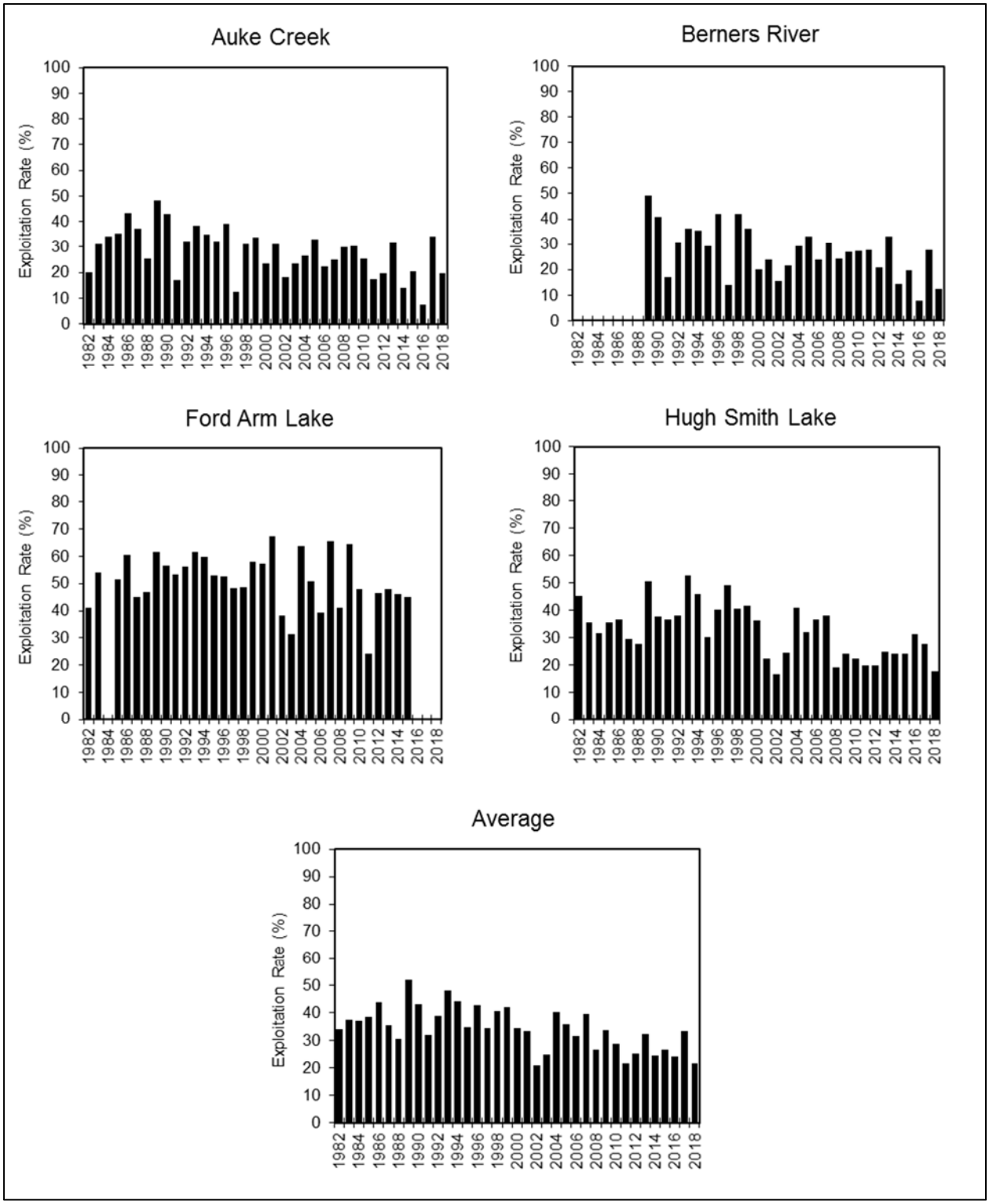

Figure 23.–Estimated exploitation rates by the Alaska troll fishery for four coded wire tagged Southeast Alaska coho salmon stocks, 1982–2018.