Fishery Management Report No. 11-10

Annual Management Report for the 2010 Southeast Alaska/Yakutat Salmon Troll Fisheries

by

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and

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March 2011

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

Symbols and Abbreviations

The following symbols and abbreviations, and others approved for the Système International d'Unités (SI), are used without definition in the following reports by the Divisions of Sport Fish and of Commercial Fisheries: Fishery Manuscripts, Fishery Data Series Reports, Fishery Management Reports, and Special Publications. All others, including deviations from definitions listed below, are noted in the text at first mention, as well as in the titles or footnotes of tables, and in figure or figure captions.

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)

Measures (fisheries)

fork length	FL
mideye-to-fork	MEF
mideye-to-tail-fork	METF
standard length	SL
total length	TL

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. 11-10

ANNUAL MANAGEMENT REPORT FOR THE 2010 SOUTHEAST ALASKA/YAKUTAT SALMON TROLL FISHERIES

by

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ABSTRACT

Approximately 1.9 million salmon were harvested in the 2010 Southeast Alaska troll fishery. The harvest included 195,492 Chinook (*Oncorhynchus tshawytscha*) , 1,923 sockeye (*O. nerka*), 1,343,152 coho (*O. kisutch*), 87,639 pink (*O. gorbuscha*), and 394,695 chum (*O. keta*) salmon landed by 731 power troll and 332 hand troll permit holders. Of this, 117,607 salmon (6%) were taken by hand troll gear and 1.9 million salmon (94%) by power troll gear. The Chinook salmon harvest ranked the 12th lowest since statehood and the coho salmon harvest ranked 19th highest. The preliminary estimated Alaska hatchery contribution of Chinook salmon to the troll fishery, including hatchery terminal harvest, was 22,029 fish (11%). A total of 284,573 coho salmon produced by Alaska hatcheries were harvested by the troll fleet, which accounted for 21% of the total troll coho salmon harvest. Chinook and coho salmon escapements for Southeast Alaska rivers were generally within the desired escapement goal ranges.

Key words: Troll, Southeast Alaska, 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 Southeast Alaska troll fishery, actions taken by the Alaska Department of Fish and Game (ADF&G) in management of the fishery from October 1, 2009, through September 30, 2010, and salmon harvest and effort statistics since statehood (1960 fishing season). Status of wild coho (*Oncorhynchus kisutch*) and Chinook salmon (O. *tshawytscha*) stocks of Southeast Alaska and Yakutat, as well as hatchery contributions to the troll fishery are presented. Harvest statistics for all species include Annette Island harvests. Only Chinook salmon harvest statistics include hatchery terminal area harvests, unless otherwise noted.

CHINOOK SALMON AND COHO SALMON STOCK DESCRIPTION AND STATUS

CHINOOK SALMON STOCKS

Native Chinook salmon stocks occur throughout Southeast Alaska 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 important are the Alsek, Taku, Stikine, Chilkat, and the Behm Canal rivers (i.e., Unuk, Chickamin, Blossom, and Keta rivers). The 3 major river systems (Alsek, Taku, and Stikine rivers), as well as several mid-sized systems (Unuk, Chickamin and Chilkat rivers) are transboundary rivers, originating in Canada and flowing through Alaska to the Pacific Ocean. The Pacific Salmon Commission, under the terms of the Pacific Salmon Treaty (PST), addresses shared ownership and coordinated management of the Taku, Stikine, and Alsek rivers.

Southeast Alaska 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 freshwater for at least one year before migrating seaward. Ocean residency ranges from two to four years for most Chinook salmon originating in Southeast Alaska. Trollers harvest several age classes of mature spawners and immature Chinook salmon during the fishing season.

Current information indicates that the majority of Chinook salmon harvested in the Southeast Alaska troll fishery are produced from spawning streams and hatcheries in the Pacific Northwest and Canada. This information is based on age composition, coded wire tagging (CWT) studies, and general productivity considerations. Management of Chinook salmon stocks is coordinated through the Pacific Salmon Commission.

COHO SALMON STOCKS

Coho salmon occur in more than 2,000 streams in Southeast Alaska. 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, they collectively contribute substantially to overall production. 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. Spawning takes place during the fall and early winter months. Most coho salmon rear in freshwater for one or two years, and spend no more than one winter in the ocean before returning to spawn as adults. Most coho salmon harvested by Southeast Alaska trollers are 3-year-old and 4-year-old fish of Alaska origin and are harvested in the year of spawning.

DESCRIPTION OF THE TROLL FISHERY

The commercial troll fishery in Southeast Alaska and Yakutat (Region 1) 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 commercial troll fleet is comprised of hand and power troll gear types. 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)]. Another exception permits two hand troll gurdies or hand-powered downriggers to be used in conjunction with two fishing rods and is allowed only during the winter troll season. Vessels using power troll gear are generally larger than those using hand troll gear. 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)]. Alaska residents held 85% of troll permits renewed in 2010. While the majority of the troll fleet sells their catch to processing plants onshore, the fleet does include approximately 57 catcher-processors, who harvest and freeze their catch at sea. The number of catcher-processors, or “freezer boats”, had been increasing over time but now appears to have stabilized at around 55 to 60.

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 Alaska Board of Fisheries (BOF). Since 1989, the troll fleet has been managed to harvest an average of 61% of the commercial coho salmon harvest over the long-term [5 AAC 29.065], though the actual troll harvest has averaged 64% of the commercial harvest, with a range of 55% to 75%.

Other species are harvested incidentally, though in recent years, hatchery-produced chum salmon have been the target of troll effort in a few locations. The troll fleet also incidentally harvests Pacific halibut under federal Individual Fishing Quota (IFQ) regulations, and lingcod and rockfish under state regulations.

CHINOOK SALMON FISHERY

Commercial trolling for Chinook salmon occurs during both winter and summer seasons. The winter season is defined as October 1–April 30, or until 45,000 Chinook salmon are harvested, followed by the summer season from May 1 (or the end of the winter season) to September 30.

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. The summer season is divided into the spring and general summer fisheries. The spring fisheries are intended to increase the harvest of Alaska hatchery-produced Chinook salmon and occur primarily in inside waters near hatchery release areas or along migration routes of returning hatchery fish. These fisheries begin after the winter fishery closes and may continue through June 30. The spring troll fisheries can begin prior to May 1 if the winter fishery closes early, when the harvest cap of 45,000 Chinook salmon is reached. The general summer fishery opens July 1 and harvests the majority of the annual Chinook salmon quota. During the summer fishery, most waters of the Southeast Alaska/Yakutat area are open to commercial trolling, including outer coastal waters.

Recent all-gear Chinook salmon harvests in Southeast Alaska have been the highest since statehood and are an exception to the declining trend in harvests since the late 1930s (Figure 2). The reductions in harvests prior to the 2000 season occurred primarily because of harvest ceilings imposed by the BOF and the PST. A guideline harvest level for all stocks and a 15-year rebuilding program for Southeast Alaska 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 Southeast Alaska 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. Abundance of Chinook salmon stocks harvested by the Southeast Alaska fisheries has generally increased since the rebuilding programs began, with peak abundance approximately twice the average 1979–1982 base period abundance.

In 1996, after 3 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 treaty quota based on preseason and inseason abundance estimates. In 1999, a new set of Pacific Salmon Treaty Agreements (PSTA) was signed under the PST, including an agreement for Chinook salmon. The new Chinook salmon agreement was similar to the abundance-based management of the LOA, with quotas based on preseason and postseason abundance estimates. However, under the PSTA, Alaska agreed to lower Chinook salmon harvests at lower abundance levels than had been implemented in either the PST or the LOA.

Over the past 24 years, since 1985, the harvest of treaty Chinook salmon has exceeded the quota 15 times and has been less than the quota in 9 of the last 25 years through 2010 (the 1996 and 1997 quotas were ranges). Since 1996, annual Chinook salmon troll harvests have averaged about 230,718 fish.

In 2010, fisheries were managed to not exceed the preseason all-gear treaty quota of 221,823 fish. The final all-gear treaty harvest was approximately 227,720, which is approximately 5,897 (2.7%) over the all-gear quota (Table 1).

Chinook Salmon Management Methods

The harvest of treaty Chinook salmon by commercial salmon trollers is limited to a specific number of fish, which varies annually according to an abundance estimate. The accounting of Treaty Chinook harvested by trollers begins with the winter fishery and ends with the summer fishery.

The winter troll fishery is managed to not exceed the guideline harvest level (GHL) of 45,000 Chinook salmon. Fish tickets provide inseason information on harvest and effort throughout the fishery. In years when the winter fishery closed prior to April 30 because the GHL was reached (2003–2006), daily tallies from regional processors were an important tool in tracking harvest during the final weeks of the fishery.

Spring fisheries are conducted along migration routes or close to the following hatcheries and release sites: Little Port Walter Hatchery (NMFS), Whitman Lake Hatchery, Crystal Lake Hatchery, Neets Bay and Anita Bay release sites (Southern Southeast Regional Aquaculture Association (SSRAA)), Medvejie and Hidden Falls Hatcheries (Northern Southeast Aquaculture Association, (NSRAA)).

Spring troll and terminal troll fisheries target Alaska hatchery Chinook salmon, though non-Alaska hatchery *(*treaty) Chinook are also harvested. 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 Alaskan hatchery fish taken in the fishery. Non-Alaska hatchery fish are counted towards the season treaty quota of Chinook salmon under the Pacific Salmon Treaty, but most of the Alaska hatchery fish are not. The guideline limits of treaty fish that may be harvested in each spring fishing area 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

Each spring fishing area is managed individually. Fish tickets and biological sampling data provide information on harvest, effort and stock composition. This information is processed on a daily basis and is essential for the inseason management of the spring fisheries.

Some spring troll areas open on May 1 and are open continually, rather than on a weekly schedule. These areas have had historically high Alaska hatchery contributions or have had both a low harvest and a treaty Chinook component that was well below the limit for that area. Those areas could be closed, however, if the Treaty Chinook limit is exceeded. Other spring troll areas open by emergency order for two days per week (Monday–Tuesday) at the start of the season. However, some of the more remote areas may be opened for longer periods initially, in order to attract trollers to these areas so that larger samples could be obtained and more precise estimates made of Alaska hatchery contributions. While most Terminal Harvest Areas (THA) open on May 1 and remain open for extended periods of time, some open in accordance with the fishing schedules provided for in the Terminal Harvest Area management plans. ADF&G personnel examine fish deliveries, and the heads of adipose fin-clipped fish are shipped to the ADF&G Mark, Tag and Age Lab in Juneau. Coded wire tag data, provided by the tag lab, 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 historic harvest timing information in each area. Fishing time is extended or curtailed during the week by emergency order as more tag data and harvest information becomes available.

If the preseason Abundance Index is 1.15 or above (commercial troll allocation of 120,833 Chinook salmon) and the number of Chinook remaining on the winter GHL to be harvested is between 10,000 and 15,000 fish, then an additional 250 non-Alaska hatchery-produced Chinook salmon will be added to the treaty caps in each tier under. If the number of Chinook salmon remaining on the GHL is greater than 15,000 fish, then an additional 500 Chinook salmon will be added to the Treaty caps [29.090(d)(3)]. These regulations did not go into effect during 2010, since the winter fishery harvest of 42,536 was only 2,464 fish below the GHL of 45,000 fish.

The summer troll Chinook salmon fishery targets the remainder of the troll Treaty Chinook quota during one or more openings. Due to the time lag between when fish are harvested and when the harvest information is received through fish ticket receipts, ADF&G conducts a fisheries performance data program (FPD) to estimate the catch per unit of effort (catch per boat day (CPBD)) inseason during the summer fishery. Confidential interviews are conducted with trollers to obtain detailed CPBD data. Aerial vessel surveys are conducted to obtain an immediate estimate of fishing effort. Total harvest to date is estimated by multiplying vessel counts observed during weekly overflights with the CPBD data obtained from the interviews. Daily tallies from processors are an important tool in tracking harvest during the final days of each summer Chinook opening, similar to the winter fishery.

COHO SALMON FISHERY

The regulatory period for coho retention in the troll fishery is June 15 through September 20, with a potential extension through September 30 in years of high coho salmon abundance [5 AAC 29.110(a)]. 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 (Figure 3). Escapements into streams generally peak in late September through early October, though escapement timing into some systems is earlier. Figure 3 presents combined run timing for three coho index lake systems which have relatively early escapement timing, with peak returns in late August.

All-gear harvests of coho salmon averaged 2.0 million fish during the 1940s (Figure 4). A decline in average harvest occurred during the next 3 decades, with a low decade average of 1.0 million fish in the 1970s. The BOF adopted a coho salmon fishery management plan 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 5). This plan, adopted in 1980, provides for conservation and allocation of coho salmon stocks in Southeast Alaska. The initial plan set the precedent for a mid-season troll closure to provide for adequate distribution of coho salmon escapement and for allocation to other gear groups.

The average all-gear commercial coho salmon harvest increased to 1.9 million fish in the 1980s and to 3.2 million fish in the 1990s, with a record 5.5 million fish harvested in 1994 (Figure 4). Factors contributing to the increased harvests over the past 2 decades include better spawning escapement levels achieved under the conservative management regime implemented in 1980, and increased marine survivals due to favorable environmental conditions (Table 2). The coho salmon fisheries are managed to comply with the Southeastern Alaska/Yakutat Area coho

salmon fishery management plan [5 AAC 29.110]. Inseason run strength is used to achieve ADF&G conservation objectives and BOF allocation objectives adopted in the management plan (Table 3). The current coho management plan calls for a troll closure for up to seven day in late July if the total projected commercial harvest of wild coho salmon is less than 1.1 million fish [5 AAC 29.110 (b)(1)]. 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 the second Chinook salmon opening. The actual length of that closure is determined 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 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)]. If the department has concerns for coho escapement or allocation, the closure would be longer than two days and could last as many as ten.

There are no harvest ceilings for Southeast Alaska coho salmon fisheries. However, under the 2008 PSTA, the area near the U.S./Canada border will close if the harvest rates by Alaska trollers fishing in the border area fall below specified thresholds.

Coho Salmon Assessments and Management Tools

Long-term wild stock and hatchery stock CWT programs, dockside sampling programs to sample the harvest for CWTs, escapement monitoring, and the troll FPD collection program all 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, stock timing, and stock 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, harvest, age composition, and escapement information. These long-term monitoring programs have provided the backbone for successful conservation of coho salmon in Southeast Alaska.

EFFORT IN THE TROLL FISHERY

Limited entry for the power troll fishery was adopted in 1974 and the first permits were issued in 1975, when 1,078 permits were renewed and 760 were fished. The number of renewals gradually decreased over time while the number of permits fished fluctuated between a low of 641 in 2003 to a peak of 852 in 1991. In 2010, 915 power troll permits were renewed and 731 permits were fished (Table 4; Figure 6). Power troll effort has been relatively stable when compared to hand troll effort.

After the power troll fleet came under limited entry, the hand troll fleet, which was not yet limited, 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 1,100 permits in 1975 to a peak [high] of 2,644 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. Of the 2,161 permits issued that year, 1,107 hand troll permits have been revoked due to non–renewal through 2009. The number of hand troll permits fished declined steadily from 1979 through 2002, when hand troll participation reached a low point of 254 permits. From 2003–2008, the number of hand troll

permits fished increased to 376 but has since declined to 332. The percentage of active hand troll permits in the fleet declined from 76% in 1978 to a low of 28% in 2002, followed by an increasing trend through 2008. The percentage has remained relatively stable at 31% to 33% since then (Table 4). During the 2010 spring and summer troll fisheries, both hand and power troll effort decreased when compared to 2009. This was not the case during the 2010 winter troll fishery, when both hand and power troll effort increased significantly compared to 2009 (Table 5; Figure 7). Fluctuations in effort relate strongly to salmon prices and, to a lesser degree, to the availability of alternate commercial troll opportunities in the Pacific Northwest.

Historically, the number of fishing days in the Chinook salmon general summer fishery dropped from a high of 169 days in 1978 and 1979 to a low of 4.5 days in 1992. Prior to 1980, there were no regional closures during the summer season, April 15–September 30. Summer fishery boat-days of effort have ranged from a high of 35,646 in 1986 to a low of 3,878 boat-days in 1992. The number of boat-days of effort in 2010 during Chinook retention periods was 5,791, down from 7,589 boat-days in 2009. Effort data was derived from dockside interviews of trolling vessels in conjunction with harvest and effort data from troll fish tickets. (Table 6; Figure 8).

SUMMARY OF THE 2010 SEASON

The troll fleet harvested approximately 1.9 million salmon during the 2010 season, which is slightly below last year and the recent 10-year average. The chum salmon harvest was the highest since 2001 (Table 7). The majority of the Chinook salmon harvest occurred during the summer openings of July 1–8 and August 15–19. The coho salmon harvest peaked during the week of July 25–31 (Table 8). Regional coho salmon harvest rates were average to below average for most of the season. Because 2010 was not considered to be one of high coho salmon abundance, the fishery closed by regulation on September 20. The average weight of coho salmon was one pound greater than it was in 2009 and well above the 5-year and 10-year averages (Table 9).

In 2010, hand troll vessels harvested 114,889 salmon and power troll vessels harvested 1.81 million salmon. The proportion of the commercial troll harvest taken by the hand troll fleet has decreased from 32% in 1978 to 6% in 2010 (Tables 10 and 11). The CFEC renewed 915 power troll permits and 891 hand troll permits, which were 105 fewer hand troll permits and 36 fewer power troll permit renewed than in 2009. Preliminary estimates indicate that 731 power troll permits and 332 hand troll permits were actually fished (Table 4). The decrease in hand troll effort compared to the 2008 season was around 10%, while the decrease in power troll effort was only 2%. Overall troll participation decreased by 57 permits during the summer fishery and by 37 permits during the spring fishery, in contrast to the increase in participation by 79 permits during the winter fishery when compared to 2009 (Table 5).

The winter troll fishery was open from October 11–April 30 with a harvest of 42,536 Chinook salmon. A total of 27 spring troll areas and 5 terminal area fisheries were open for various lengths of time during 61-day spring troll fishery in May and June, with a harvest of 29,612 Chinook salmon. There were two Chinook salmon retention periods during the summer, from July 1–8 and from August 15–19, for a total of 13 days. Trollers harvested 123,087 Chinook salmon during those openings (Table 12).

CHINOOK SALMON FISHERY

During the 2010 season, the troll harvest of Chinook salmon was managed to: 1) comply with the 2008 PSTA, 2) continue the Southeast Alaska natural Chinook conservation program, 3) provide maximum harvest of Alaska hatchery-produced Chinook, 4) minimize incidental mortality during Chinook non-retention periods by closing areas of high Chinook salmon abundance, and 5) to comply with terms of the incidental take permit issued by the National Marine Fisheries Service (NMFS). The 2010 Chinook fishery was managed to achieve an all-gear harvest of 221,800 treaty[1] Chinook salmon.

The 2010 total all-gear (troll, purse seine, drift gillnet, set gillnet, Annette Island, and recreational fisheries) Chinook salmon harvest was 280,601 fish, of which 227,720 were treaty fish. Trollers harvested 195,492 Chinook salmon of which 177,688 were treaty fish. Purse seiners harvested 15,876 Chinook salmon of which 2,912 were treaty fish. The drift gillnet fleet harvested 17,417 Chinook salmon, of which 5,680 were treaty fish. (Troll, purse seine and drift gillnet harvests include terminal area and Annette Island harvests). The Yakutat set gillnet fleet harvested 501 Chinook salmon, all of which were treaty fish. Recreational fisheries (including anglers and charters) harvested 51,315 Chinook salmon, of which 40,940 were treaty fish. The combined Alaska hatchery Chinook salmon and wild terminal exclusion contribution to all the fisheries was estimated at 58,875 Chinook salmon, of which 5,994 (Alaska hatchery harvest minus Alaska hatchery addon) counted towards the treaty quota (Tables 12 and 13).

Winter Fishery

The 2010 winter troll fishery began October 11, 2009 and continued through April 30, 2010. A total of 459 vessels participated in the 2010 winter fishery, with a harvest total of 42,536 Chinook salmon which represents 22% of the 2010 total troll Chinook salmon harvest (Tables 5, 12 and 14, Figure 9). The harvest increased by 41% and the catch per landing increased by 18% when compared to the 2009 season. The 2010 harvest was 9% above the 5-year average harvest and 10% above the 10-year average harvest (Table 14; Figure 10). This was the fourth time in the past five years that the winter season was not closed prior to April 30 due to the harvest reaching the 45,000 fish GHL, though it did come close. While the harvest during the early portion of the fishery was fairly low, weekly harvests were relatively high during the later weeks of the fishery. Effort was similar to the 5-year average, though higher by 79 permits when compared to 2009.

Spring Fishery

A total of 549 vessels participated in the 2010 non-terminal spring fisheries, with a harvest of 28,614 Chinook salmon (Table 15). The Chinook salmon harvest was 3,967 fish fewer than the 2009 harvest, while the Alaska hatchery contribution increased from 38% to 39% (Table 16). The 2010 harvest was the lowest since 2000, yet effort was well above the 10-year average and close to effort seen during the past two spring fisheries. The 2010 total Spring Fishery harvest

[1] Under the terms of the PST, the number of PST (or quota) 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.

was the 11th highest on record, while the total Alaska hatchery harvest was the 13th highest on record. The largest Chinook salmon harvests were taken in the Ketchikan, Tebenkof Bay and Sitka Sound spring troll areas (Table 15). This was the first time that the Ketchikan area harvest exceeded that of all other areas, reflecting the relatively strong returns forecast for hatcheries near Ketchikan in 2010. The majority of the Ketchikan area harvest was taken during the last three weeks of the spring fishery. Terminal area harvests taken in the spring and summer fisheries included 1,123 Chinook, 25 sockeye, 940 coho, 1,449 pink salmon and 96,228 chum salmon (Table 8). The majority of the Chinook were caught in the Hidden Falls Terminal Harvest Area. A total of 27 spring areas and five terminal fisheries were open during 2010 (Figure 11). Other species harvested during the spring season, including Annette Island troll, were 108 sockeye, 8,000 coho, 8,223 pink and 28,591 chum salmon (Table 8).

Districts 8 And 11 Transboundary Rivers Directed Chinook Salmon Fisheries

An agreement was approved between the United States and Canada during the Pacific Salmon Commission meeting held in February, 2005. This agreement allows directed commercial and sport fisheries on Chinook salmon returning to the Taku and Stikine Rivers, depending on the run forecasts. Management plans were adopted by the Alaska Board of Fisheries in January of 2006, which describe fishing areas and schedules for commercial and sport fisheries in Districts 8 and 11.

District 8

The 2010 preseason terminal run forecast for large Stikine River king salmon was 23,000 fish. A terminal run of that size resulted in no U.S. Allowable Catch (AC) of large Stikine kings. Therefore, directed fisheries did not occur in early May. An inseason terminal run estimate was to be produced in late May. If that first inseason estimate was significantly greater than the preseason forecast, limited directed king salmon fisheries could occur. Prior to that time, three spring troll areas within District 8 opened in early May and were managed based on the composition of Alaska hatchery-produced king salmon and the catch of non-Alaska hatchery-produced king salmon, per 5 AAC 29.090(d)(1)(D). In late May, it was not possible to make a reliable inseason forecast due to low water conditions and other factors, so the preseason forecast was used again and no directed fisheries occurred.

The 2010 forecast is the second consecutive Stikine River king salmon preseason terminal run forecast in the past six seasons that does not allow for directed fisheries. During the 2005, 2006, 2007, 2008 and 2009 seasons the preseason forecasts were 80,300, 60,600, 37,400, 46,100 and 32,000 fish, respectively.

District 11

The 2010 preseason terminal run forecast for large Taku River king salmon was 41,328 fish. A terminal run of this size yields a U.S. Allowable Catch of 1,781 large Taku king salmon. Given the relatively small Allowed Catch and taking into consideration forecast confidence intervals**,** no directed fisheries occurred in early May. An inseason terminal run estimate was produced in late May, which projected terminal run was large enough to implement directed Chinook salmon fisheries, though not large enough to provide for manageable fisheries when apportioned over several weeks. No directed fisheries were implemented in 2010 as a result.

In 2009, the U.S. and Canada agreed to a revised escapement goal range for large Taku River king salmon of 19,000 to 36,000 fish, with a point goal of 25,500 large king salmon. The prior escapement goal range was 30,000 to 55,000 fish with a point goal of 36,000 large king salmon.

Yakutat Spring Troll Fishery

The BOF at its January, 2006 meeting established regulations that allow the department to open, by Emergency Order, a spring salmon troll fishery for one day per week during the months of May and June in the Yakutat Bay area east of a line from Point Manby to Ocean Cape. The maximum harvest is 1,000 king salmon and is not based on the composition of Alaska hatchery fish. This fishery may be open only if the projected inriver run of three-ocean age and older king salmon to the Situk River weir is greater than 1,050 fish [5 AAC 30.365(c)(5)]. Each year since those regulations went into effect, the return forecast to the Situk weir has been below the 1,050 fish minimum.

In 2010, a spring fishery did not open in Yakutat Bay due to the return forecast to the Situk weir of approximately 750 large king salmon. The actual return was 167 large king salmon. This was the fourth consecutive year that a spring troll fishery has not taken place in Yakutat Bay since the regulations went into effect in 2006.

General Summer Chinook Fishery

In 2010, ADF&G received the preseason abundance index of 1.35 at the end of March, which translated to an all-gear quota under the PSTA of 221,823 treaty Chinook salmon (Table 1). Under the current BOF commercial fisheries plan, the purse seine fleet was allocated 9,538 (4.3%) fish, the drift gillnet fleet 6,433 (2.9%) fish, and the set gillnet fleet 1,000 fish. The remainder of 204,852 fish was then divided between the troll and sport fisheries in an 80/20 split, which translated to 163,882 fish to the troll fishery and 40,970 fish to the sport fishery [5 AAC 29.060(b)].

The summer troll Chinook quota is calculated by subtracting the pre-summer treaty harvest, as estimated on around June 23, from the troll treaty allocation. The pre-summer harvest is the sum of the winter treaty harvest (37,176 fish), the spring treaty harvest (15,012 fish), the pre-Treaty Alaska hatchery harvest (3,700 fish), a statistical risk factor related to the Alaska hatchery contribution estimate (1,000 fish), and the Transboundary River directed harvest (above the base period harvest), which was zero in 2010. The resultant sum is then subtracted from the troll allocation, (163,882 fish) yielding an initial estimate of 106,994 treaty Chinook for the general summer quota.

According to 5 AAC 29.100, MANAGEMENT OF THE SUMMER SALMON TROLL FISHERIES, 70% of the summer troll quota is to be taken in the first opening beginning July 1, and the remaining 30% harvested following any closure for coho salmon management in August. The Chinook salmon target harvest for the first opening was announced as 78,180 fish, which included an estimated 4% Alaska hatchery fish component and 74,896 treaty fish.

The first summer troll Chinook salmon fishery was projected to last 6–10 days, based on average July catch rates in recent years as well as past fishery performance at similar abundance indices. The opening was managed in season rather than for a pre-determined number of days. Aerial vessel count surveys conducted from July 2–4 counted a total of 516 vessels, a drop of approximately 76 vessels compared to survey counts done at the same time last year. The department estimated actual effort at 785 permits, since an average of 67% of the permits fished

were counted in aerial surveys during the past five years. Stormy weather that began on the third day moderated effort, especially in offshore areas, and had the effect of slowing the pace of the fishery. Fishing time was reduced by a day or more for many trollers due to weather. By July 7, the department estimated, based on inseason data, regional average catch rates to be approximately 21 Chinook/boat/day and the catch/fleet/day to be approximately 9,800 Chinook per day. The department projected that the harvest target would soon be reached and a news release was issued that day, announcing the closure of the first summer Chinook salmon retention period at 11:59 p.m., July 8. The fleet (793 permits) actually harvested 74,575 fish during the 8–day opening, at an average of 9,322 fish per day (Table 17), of which 72,204 were counted as treaty fish (Table 12). Effort during this opening was down by 9% when compared to the same opening last summer, with approximately 72 fewer permits participating. Following the first opening, the areas of high Chinook salmon abundance (5 AAC 29.050) were closed for the remainder of the season (Figure 12).

At the time the harvest target for the second Chinook salmon opening was announced, the treaty catch was estimated to be 71,595 fish and the troll fishery was assumed to have approximately 32,600 fish left on their treaty allocation. Assuming a 3% Alaska hatchery component, the target harvest in the second opening was 33,600 Chinook salmon. The results of the second coho run strength assessment during the first week of August determined that an August coho closure of four days was appropriate. The second Chinook salmon opening was announced on August 6 and would be managed in season and closed by emergency order. It was estimated that the second opening target harvest would be taken in approximately 6–7 days, based mainly on the average catch rates during recent August openings. Anecdotal reports received prior to the opening indicated a high abundance of Chinook salmon offshore. While that is not unusual for the time period between Chinook openings, abundance normally declines by mid-August, when trollers are able to target Chinook salmon. Aerial vessel surveys counted approximately 493 boats, which was projected to indicate actual effort at approximately 760 permits. Initial reports indicated catch rates in some parts of the region were significantly higher than that seen in recent years. Weather became an issue by the third day, bringing many trollers into port. Preliminary catch rate information from those early landings indicated average regional catch rates to be 22 Chinook/boat/day, double the 2006–2009 average and the highest seen during August since 2005. On August 18, a news release was issued, announcing the closure of the second Chinook retention period at 11:59 p.m., August 19. The fleet harvested 48,512 fish during the 5–day opening, at a catch-rate of 9,702 Chinook/day (Table 17). If one day is subtracted to account for lost fishing time due to weather, catch rates would average 12,128 Chinook/fleet/day. The Alaska hatchery composition was 3%, resulting in a Treaty catch of 47,337 fish, which was 13,737 fish more than the harvest target announced.

The total summer fishery Chinook salmon harvest was 123,087 fish, of which 4,359 fish, or 3.5%, were of Alaska hatchery origin. Approximately 3,546 of these or 2.9% were counted as hatchery add-on and not counted against the Treaty quota (Table 12). The total summer Treaty harvest of Chinook was 119,541 fish, which was 12,547 more that the summer harvest target of 106,994 fish.

COHO SALMON FISHERY

Coho salmon retention began by regulation [5 AAC 29.110 (a)] on June 15, during the spring troll fisheries, when 8,000 coho were harvested outside terminal harvest areas. While this harvest

was almost twice the ten-year average, it was 62% of the record 2009 spring coho harvest. The majority of the troll coho salmon harvest occurred after July 1 during the general summer season.

The late-July run strength assessment indicated a total commercial harvest forecast of 1.84 million wild coho, well above the 1.1 million fish conservation threshold for an early season closure [5 AAC 29.110 (b) (1)]. The assessment also projected the total wild coho abundance at 3.10 million fish, which was below the 1982–2009 average of 3.70 million fish. Run strength initially appeared to be average to below average, based on power troll catch/boat/day (CPUE) through statistical week 29 (Figures 13 to 15), which also included the first Chinook retention period. The regionwide CPUE was at or below the 1990 to 2009 average through week 29, and was above average in only one of six troll FPD areas, that being the Northern Inside (Area 4). Regional catch rates increased during weeks 30–32 to above average levels, as did CPUE's in four of the six troll areas. CPUE's in the Central Inside area were average at best and were below average in the Southern Inside troll area. Some of the best catch rates were found ten or more miles offshore and in deep water.

The second run strength assessment in early August concluded that the 2010 coho salmon run strength appeared to be average and did not have any significant conservation concerns at that time. The assessment forecast a total commercial harvest of 2.02 million wild coho and a total wild return of 3.42 million fish, based on the statistical weeks 27–31 power troll CPUE, slightly below the 1990–2009 average. Both the wild commercial harvest and the wild return forecasts were higher than what was forecast in late July. The preliminary troll fishery harvest through August 1 (week 31) was estimated at 469,075 coho salmon, which is above the 1971–1980 average, but below the 1990–2009 average. As part of the August assessment, the strength of the returns to inside areas was evaluated by assessing the performance of the drift gillnet and inside sport fisheries. The cumulative drift gillnet harvest through week 31 was above average for the region as a whole as well as in two of the four major drift gillnet fisheries. Those fisheries are the Prince of Wales (District 6) and Taku/Snettisham (District 11). In contrast, the cumulative harvests were below average in the Tree Point (District 1) and Lynn Canal (District 15) drift gillnet fisheries. One of the best measures of coho run strength is the catch-per-boat-day (CPBD) in the four major drift gillnet fisheries, though it was still early in the drift gillnet season. The CPBD was above the 1971–1980 average in all of the fisheries except Lynn Canal (Figure 16). The coho salmon management plan is directed toward achieving adequate escapements in wild systems, so it is necessary to look at the CPBD of wild coho salmon in the drift gillnet fisheries. Only the District 6 fishery shows substantial numbers of hatchery fish in the catch through late July/early August, so the strength of the District 6 wild component is of particular interest. The cumulative wild CPBD in District 6 was well above average in 2010.

The Juneau sport fishery, as the primary indicator of inside sport fishery performance, had cumulative catch rates which were similar to the 1990–2009 average through week 31, though below the 1971–1980 average. Catch rates were similar to the 1990–2009 average through late August, then remained below average the rest of the season. Catch rates were below the 1971–1980 average throughout the season (Figure 17).

A 4-day closure of the troll fishery was implemented from August 11–14, in order to provide for adequate escapement and transition to inside water fisheries. Regional power troll catch rates fell below the 1990–2009 average for the two weeks following the coho closure, which coincided with the second Chinook retention period. While it is normal for coho CPUE's to fall while trollers target Chinook salmon, the change was more pronounced than usual. Coho returns to the

Taku River fish wheels were above average (Figure 18) and below average to the Chilkat River fish wheels (Figure 19).

By regulation, the troll coho salmon fishery begins on June 15 and ends on September 20, though in years of high coho salmon abundance, the fishery may be extended for up to ten days after September 20. Based on power troll CPUE for weeks 29–36, the wild coho abundance was calculated as 3.21 million and the total wild commercial harvest was estimated at 1.89 million, both of which are down from early-August projections and below the 1990–2009 averages. On September 13, the department issued a news release announcing that 2010 was not considered to be a high coho abundance year and that the fishery would close by regulation on September 20. An extension of the troll season was not warranted due to the below-average regionwide power troll catch rates seen after the August closure and the below-average cumulative troll coho harvest. The all-gear commercial fishery coho salmon harvest was projected to be 32% below the 1990–2009 average, while the total wild coho return was projected to be 18% below the 1990–2009 average. While minimum escapement goals for some coho systems had been met, returns to other systems appeared to be low or unknown by mid-September. As an indicator of coho salmon abundance in inside waters, catch rates in the Juneau marine sport fishery had been below average during four recent weeks.

During the past 16 years (1994–2009), the coho salmon season has been extended ten times (Table 18). Prior to 1994, extensions after September 20 were not allowed. The final 2010 estimated wild coho salmon abundance of 3.76 million fish was 3% below the recent 20-year (1990–2009) average and ranked in the middle (15th) out of the past 29 years (1982–2010).The troll coho salmon harvest of 1,342,212 fish was the 19th highest in the 50 years since statehood (Table 7). Coho size and quality were exceptional throughout the season.

OTHER SPECIES

A total of 1,898 sockeye, 86,190 pink, and 298,467 chum salmon were harvested during the general 2010 troll seasons (Table 7). Sockeye and pink salmon harvests were below average when compared to all 10–year averages except 1960–1969. The chum salmon harvest exceeds all 10–year averages from 1960–2009 and is the 8th highest since statehood.

EXCLUSIVE ECONOMIC ZONE (EEZ) HARVESTS

In 2010, approximately 15% of the Chinook (29,066 fish) and 8% of the coho salmon (103,153 fish) harvested by the troll fishery was reported taken outside of State waters in the EEZ (Districts 150, 152, 154, 156, 157, and 189). In addition, 104 sockeye, 1,081 pink, and 471 chum salmon were taken in the EEZ. When all species are combined, 7% of the troll harvest was reported to be taken outside State waters, a 2% increase when compared to 2009. That increase was due mainly to the higher percentage of coho salmon harvested in offshore waters (twice that of 2009), indicative of their distribution during much of the season.

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 16 and 19).The peak

harvest of Alaska hatchery fish occurred in 1996, when trollers harvested 42,100 Alaska hatchery Chinook or 30% of the total troll Chinook salmon harvest, and over 85,000 fish to the all-gear harvest (Table 20; Figure 20). In 2010, the combined Alaska hatchery harvest contributed about 60,211 Chinook salmon to the commercial and sport fisheries, with 21,698 fish harvested in the troll fishery and 12,075 fish in the sport fishery (Table 20).

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 26% in 2002, with Alaska hatcheries producing approximately 98% of these fish. In 2010, the hatchery coho salmon contribution was 21% of the harvest for a total contribution of 285,485 fish (Table 21; Figure 21).

CHUM SALMON

Historically, chum salmon were harvested incidentally in the general 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 significantly in 1992, when for the first time over 1 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 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 outside of terminal harvest areas has been consistently greater than 100,000 fish (Table 7). Effort directed at targeting hatchery-produced chum salmon has increased in recent years (Figure 22), as has the price paid for them. Some trollers have chosen to target chum salmon during the July Chinook salmon opening or during weeks when they would normally target coho salmon. Though the troll fishery is not managed for chum salmon, the redirection of effort away from troll fisheries which are managed in season is of interest.

In 2010, trollers harvested a total of 117,838 chum salmon in Sitka Sound from a total return of 1.5 million fish. The majority (96,868) were harvested during the general summer fishery in Sitka Sound/Eastern Channel, with peak harvests occurring from late July through mid-August. Trollers also harvested 14,492 chum salmon in a specific portion of Sitka Sound/Eastern Channel during the August 11–14 troll closure [5 AAC 29.112] and 6,478 chum salmon in the Deep Inlet THA.

The Southern Southeast Regional Aquaculture Association (SSRAA) allows the troll fleet to target chum salmon in the Neets Bay THA only in years in which a surplus above broodstock and cost recovery needs is identified. In 2010, trollers harvested 74,816 chum salmon in the Neets Bay THA from July 12–15. The THA was closed to trolling the rest of the summer to allow SSRAA to meet their broodstock and cost recovery goals. Trollers also harvested 141,297 chum salmon in West Behm Canal, adjacent to the Neets Bay THA, There were a total of 216,113 chum salmon harvested in Neets Bay and West Behm Canal combined.

Trollers also fished for chum salmon in at Homeshore (Icy Strait), from late June through mid-July, to target returns to the Macaulay Hatchery in Juneau, operated by DIPAC (Douglas Island Pink and Chum, Inc.). Though trollers have always been able to retain chum in this area during spring and summer troll fisheries, it is the first time chum have been targeted in this area. A total of 50,169 chum salmon were harvested by approximately 40 trollers (Figure 22). Just over half

of that harvest was taken during the last two weeks of June, in the Icy Strait spring troll area. The remainder was harvested in early July, during the first Chinook salmon retention period, indicating that some trollers chose to forego the 8-day opportunity to target Chinook salmon in favor of targeting chum salmon.

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) to achieve maximum sustained yield.

Establishment of BEG goals indicated that the Alsek, Situk, Unuk, and Keta rivers were within the ranges of desired escapement prior to the rebuilding program while only the Blossom River was below desired escapements. Since 1985, the four indicator systems in Behm Canal, The Unuk, Chickamin, Blossom, and Keta, have consistently been above or within escapement goal ranges. These MSY goals for all of the Behm Canal stocks are under review, and may be revised within the coming year. Escapement values for indicator stocks in the Wrangell vicinity, the Stikine River and Andrew Creek, have been above or within their escapement goal ranges for 24 of the last 25 years and 23 of the last 25 years, respectively. With the exception of 2007, both the Taku and Chilkat Rivers have been above or within the desired escapement ranges for the past 20 years. Prior to 2006, the indicator systems near Yakutat, the Alsek and Situk, were consistently above or within the escapement goal range. Since then, the Alsek escapement values have been below the lower end goal in three of the last five years. The Situk escapements over the past five years have been above or within the desired escapement range, with 2010 the exception, when an estimated all time low of 167 spawners returned. In 2010, escapements generally increased from those in 2009, with only 2 of the 11 index counts below the 2009 escapement values. In summary, 9 of the 11 systems had escapements above or within the escapement goal range (Table 22).

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 23). In 2010, weirs were operated on four systems, while foot or aerial surveys were conducted on another 28 streams. An adult tagging program has been in use since 1987 to estimate the escapement of coho salmon to the Taku River (Figure 18).

Variations in environmental conditions and run timing can cause serious problems 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, therefore, make it difficult or impossible to accurately count fish. Once spawning occurs, stream life is typically very short and post–spawners 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 seasons when numerous protracted freshets occur in October that bring fish to the spawning areas and then flush out the post–spawners, 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 those for the Juneau roadside streams, but is more difficult and expensive for remote streams such as the major coho salmon producing systems in southern Southeast Alaska.

Coded wire tagging (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, and Hugh Smith Lake on the mainland southeast of Ketchikan (Figure 23). Fish are tagged in these systems and their contribution to the fisheries is estimated through ADF&G's 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 24).

Migrations into spawning streams generally peak in late September. Escapement goals of indicator streams are usually met, and have been exceeded in many cases in recent years (Tables 23–27; Figure 24). In 2010, escapements to systems in the northern inside areas were all within or above goal for stocks with a goal range, and above the threshold goal for the Taku River (Table 25). The estimated total run of 21,812 fish to the Berners River was the largest return since 2004 (Figure 23) but was still 22% below the long-term average. The increase resulted from a combination of improved smolt production and a marine survival rate of 14% (Table 2) that was above the recent 5-year average of (11%) although below the 1990–2009 average of 16%. Even though the troll exploitation rate of 30% was below average (Table 28, Figure 25) a near-average total exploitation rate of 66% (Table 29; Figure 26) resulted in an escapement of 7,520 spawners (Figure 23), which was well within the goal range (4,000–9,200 spawners). The estimated escapement to the Chilkat River (87,381 spawners) was also within the goal range (30,000–70,000 spawners) while the estimated escapement of 103,992 coho salmon to the Taku River above Canyon Island was well-above the threshold U.S. management objective of 38,000 fish. Escapement counts were within or above goal for the three Juneau roadside systems that have associated escapement goals, including Montana, Peterson Creek and Auke Creeks (Table 25).

The escapement count for five small streams on Baranof and Kruzof Islands totaled 1,273 spawners compared with a goal of 400–800 spawners. The overall escapement index of 3,335 spawners in all seven monitored streams in the Sitka area, including two streams on Chichagof Island (Ford Arm Lake and Black River), was well-below the historical (1982–2009) average of 5,476 spawners (Table 26; Figure 24). The total escapement of 1,610 spawners to Ford Arm Lake, while within the goal range of 1,300–2,900 spawners, was less than half of the long-term average of 3,471 spawners and was the second lowest escapement in 28 years of observations. The relatively low escapement to that system resulted from the third lowest return on record (Figure 23), largely because of low marine survival (7%) compared with the historical average (11%). Although the 46% troll exploitation rate on the stock was well below the historical

average of 53% (Figure 25; Table 28), intensive purse seining on an exceptional pink salmon return resulted in a record 16% seine exploitation rate that, in addition to a 3% marine sport exploitation rate, brought the total exploitation rate on the Ford Arm stock to 65% (Figure 26; Table 29). The above-average exploitation rate also contributed to the relatively low escapement.

The overall index of 7,534 spawners for 15 streams in the Ketchikan (Southern Inside) area was below the 1987–2008 average of 9,651 spawners (Table 27; Figure 24). The total escapement of 2,878 spawners to Hugh Smith Lake was the second largest escapement on record and was well above the recently revised goal range (500–1,600 spawners) for the third year in a row. The aggregate survey index count for the other 14 streams (4,656 spawners) was within the goal range of 4,250–8,500 spawners. However, counts for other streams besides Hugh Smith Lake were likely affected by a lack of suitable survey conditions from late-September to mid-October due to sequential freshets.

COHO SALMON EXPLOITATION RATES

The 2010 average troll fishery exploitation rate of 31% for the four primary indicator stocks (Berners River, Auke Creek, Ford Arm Lake, and Hugh Smith Lake) was well-below the 1982−2009 average of 39% (Table 28; Figure 25). Troll fishery exploitation rates for all four stocks was below average, with the greatest decrease occurring at Hugh Smith Lake where trollers took an estimated 22% of the stock compared with a long-term average of 35%. This is the third year in a row in which the troll exploitation rate on that stock has been low, with estimates of only 19% and 24% in 2008 and 2009, respectively. It appears likely that a recent change in migratory behavior has been a factor in the decline in Alaska troll exploitation on the Hugh Smith Lake stock where the rate in 2008−2010 has averaged 22% compared with 37% in 1982−2007. Of the decline of 15% in the troll exploitation between the periods, 11% occurred in northern Southeast where there has been little change in the average troll exploitation rate on the Ford Arm stock, a more stationary milling local stock caught almost entirely in northern Southeast waters. That stock has exhibited a much smaller change in average troll exploitation rate from 53% in 1982−2007 to 51% in 2008−2010.

The average 2010 total exploitation rate by all fisheries on the four stocks was 56%, compared with the 1982–2009 average of 58% (Table 29; Figure 26). In the northern inside area, the Auke Creek stock was exploited at an estimated 46%, up from the historical average of 41%. Although the troll exploitation rate was below average, the increase in the total exploitation rate resulted largely from a record drift gillnet exploitation rate of 17% compared with a historical average of 5%. The Berners River stock was exploited at an estimated rate of 66%, very close to the historical average of 65%. Although the troll exploitation rate on that stock was below average, drift gillnetters took an estimated 33% of the total return compared with a recent 20-year average of 28%.

The total exploitation rate of 48% for the Hugh Smith Lake stock was the same as the 2009 estimate and far below the 1982–2009 average of 64%. The low exploitation rate on the Hugh Smith Lake stock was a major factor contributing to the second largest escapement on record (2,282 spawners) from a total return of about 5,512 fish that was the fifth largest run in 29 years. In contrast, the all-gear exploitation rate on the Ford Arm stock of 65% was above the long-term average of 60%, owing to a record purse seine exploitation rate (16%) that compensated for a below-average troll exploitation rate (46%) and an average marine sport exploitation rate (3%).

TABLES

Table 1.–All-gear Treaty Chinook salmon harvest, hatchery add-on, total harvest, Treaty quota, terminal exclusion harvest and the number of fish over or under the quota, 1985–2010.

Year	Treaty Harvest	Hatchery Add–on	Terminal Exclusion	Total Harvest	Treaty Quota	Over/Under Quota
1985	268,293	6,246	0	274,539	263,000	5,293
1986	271,262	11,091	0	282,353	263,000	8,262
1987	265,323	17,095	0	282,418	263,000	2,323
1988	256,787	22,525	0	279,312	263,000	-6,213
1989	269,522	21,510	0	291,032	263,000	6,522
1990	320,996	45,873	0	366,869	302,000	18,996
1991	297,986	61,476	0	359,462	273,000	24,986
1992	221,980	36,811	0	258,791	243,000	-21,020
1993	271,193	32,910	0	304,103	263,000	8,193
1994	235,165	29,185	0	264,350	240,000	-4,835
1995	176,939	58,800	0	235,739	175,000	1,939
1996	154,997	72,599	8,663	236,259	140,000–155,000	0
1997	286,696	46,463	9,843	343,002	277,000–302,000	0
1998	243,152	25,021	2,420	270,593	260,000	-16,848
1999	198,842	47,725	4,453	251,020	184,200	14,642
2000	186,493	74,316	2,481	263,290	178,500	7,993
2001	186,919	77,287	1,528	265,734	250,300	-63,381
2002	357,133	68,164	1,237	426,534	371,900	-14,767
2003	380,152	57,228	2,056	439,436	439,613	-59,461
2004	417,019	75,955	6,295	499,268	418,342	-1,323
2005	387,749	65,294	43,596	496,639	387,403	346
2006	358,601	49,111	30,781	438,493	354,530	4,071
2007	328,419	69,647	8,815	406,881	259,184	69,235
2008	172,322	68,163	6,856	247,340	152,850	19,472
2009	229,509	65,179	4,658	299,346	218,789	10,720
2010	**227,720**	**52,315**	**566**	**280,601**	**221,823**[a]	**5,897**
					2000–2009 Sum:	-27,096

[a] 2010 quota is based on the pre-season Abundance Index..The final quota is based on the first post-season calibration of the Abundance Index.

Table 2.–Estimated marine survival rate (percent) of coho salmon juveniles from wild and hatchery stocks in Southeast Alaska, 1980–2010.

	Wild Stocks						Lakes			Hatchery Releases				Hatchery Remote Releases					
	Auke Creek	Berners River		Ford Arm Lake	Hugh Smith Lake	Taku River	Deer Lake	Neck Lake	Hidden Falls	Medvejie	DIPAC	Whitman Lake[a]	Neets Bay[a]	Burnett Inlet	Anita Bay	Shamrock Bay	Deep Inlet	Nakat Inlet	Earl West Cove
Return Year	Smolts	Pre-smolts	Smolts	Pre-smolts	Smolts	Smolts	Smolts	Smolts	Smolts	Smolts	Smolts	Smolts	Smolts	Smolts	Smolts	Smolts	Smolts	Smolts	Smolts
1980	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1981	9	—	—	—	—	—	—	—	—	—	—	4	8	—	—	—	—	—	—
1982	11	3	—	6		—	—	—	—	—	—	3	10	—	—	—	—	—	—
1983	18	7	—	10	13	—	—	—	—	—	—	9	13	—	—	—	—	—	—
1984	16	—	—		8	—	—	—	—	—	—	3	9	—	—	—	—	9	—
1985	25	6	—	12	8	—	—	—	—	—	—	13	12	—	—	—	—	—	—
1986	17	5	—	9	19	—	—	—	—	—	—	17	11	—	—	—	—	—	—
1987	21	3	—	5	10	—	6	—	—	—	—	3	4	—	—	—	—	5	10
1988	17	5	—	7	4	—		—	—	—	—	5	1	—	—	—	—	6	5
1989	14	4	—	12	9	—	7	—	—	—	—	2	1	—	—	—	—	3	2
1990	21	9	21	10	18	—	17	—	—	—	—	7	14	—	—	—	—	7	14
1991	23	—	25	11	17	—	24	—	16	—	24	12	13	—	—	—	10	14	12
1992	33	—	24	15	21	20	20	—	29	—	18	9	17	—	—	—	8	17	16
1993	24	—	15	22	13	14	13	—	20	20	10	5	11	—	—	—	16	11	12
1994	35	—	29	14	20	23	23	—	23	14	17	9	7	—	—	15	14	8	16
1995	11	—	16	5	14	12	13	—	14	12	6	4	6	—	—	14	16	10	7
1996	23	—	12	6	18	10	11	—	13	9	6	5	7	—	—	5	8	10	7
1997	19	—	12	15	8	7	6	—	6	3	5	8	5	—	—	1	—	6	5
1998	23	—	17	20	12	14	5	16	12	15	10	5	7	—	—	8	—	5	5
1999	19	0	13	8	14	10	17	4	16	14	15	10	8	6	—	7	—	8	10
2000	19	—	12	13	7	8	1	5	10	11	10	4	6	2	—	—	—	5	4
2001	28	—	12	8	13	9	15	5	12	7	9	6	8	14	—	2	—	5	5
2002	27	—	19	15	15	13	30	5	24	10	14	9	13	15	8	3	—	4	—
2003	25	—	19	17	14	11	6	6	10	14	10	8	10	13	9	2	—	8	—
2004	20	—	18	12	11	8	22	4	10	5	8	4	7	3	3	5	—	4	—
2005	16	—	8	8	9	8	13	2	9	6	7	6	5	2	8	6	3	6	—
2006	20	—	13	10	7	10	13	2	10	3	6	4	2	2	11	2	—	6	—
2007	12	—	7	10	9	4	8	3	2	4	4	8	5	7	8	—	4	9	—
2008	24	—	16	15	13	8	4	2	10	2	8	11	7	12	9	—	2	8	—
2009	16	—	9	7	18	7	8	6	5	0	5	14	4	21	12	—	0	7	—
2010	**16**		**14**	**7**	**21**	**9**	**5**	**7**	**7**		**8**	**8**	**8**	**11**	**9**		**0**	**8**	
Average	20	5	16	11	13	11	12	5	13	9	10	7	8	9	9	6	7	8	9

Note: Wild stock survival represents survival from the time of tagging until return to the fisheries. Hatchery stock survival represents survival from the time of smolt release to return to the fisheries.

[a] Whitman Lake and Neets Bay returns from 1981 to 1983 represent hatchery-raised releases from wild broodstock.

Table 3.–Harvest and percent of commercially harvested coho salmon by gear type in Southeast Alaska, 1989–2010.

	Commercial Troll		Purse Seine		Drift Gillnet		Set Gillnet		All–Gear Total	
Year	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
1989	1,415,512	65%	331,684	15%	252,516	12%	176,816	8%	2,181,092	100%
1990	1,832,604	67%	377,844	14%	372,645	14%	148,891	5%	2,738,632	100%
1991	1,719,060	59%	408,872	14%	595,719	21%	166,731	6%	2,898,846	100%
1992	1,929,899	56%	499,792	15%	696,767	20%	290,149	8%	3,424,623	100%
1993	2,395,711	67%	464,524	13%	431,543	13%	237,446	7%	3,556,219	100%
1994	3,466,782	63%	954,415	18%	735,465	13%	343,903	6%	5,525,285	100%
1995	1,750,221	56%	595,039	20%	446,730	15%	295,030	9%	3,129,584	100%
1996	1,906,740	64%	440,235	15%	398,103	14%	227,802	8%	2,986,172	100%
1997	1,170,460	64%	184,729	10%	149,835	9%	322,776	18%	1,838,904	100%
1998	1,636,707	59%	460,885	17%	436,352	16%	197,669	7%	2,750,969	100%
1999	2,272,619	69%	403,597	13%	391,480	12%	187,186	6%	3,276,855	100%
2000	1,124,854	67%	206,601	12%	176,726	11%	170,948	10%	1,688,378	100%
2001	1,843,997	63%	549,730	19%	335,301	11%	205,344	7%	2,934,372	100%
2002	1,310,060	55%	423,903	18%	453,622	19%	200,888	8%	2,388,473	100%
2003	1,220,782	58%	384,425	18%	430,902	20%	74,343	4%	2,110,452	100%
2004	1,915,007	68%	386,663	14%	316,589	11%	196,930	7%	2,815,188	100%
2005	2,036,104	75%	339,661	12%	281,418	10%	82,887	3%	2,708,296	100%
2006	1,361,267	75%	103,447	6%	272,112	15%	86,085	5%	1,820,657	100%
2007	1,376,753	72%	247,463	13%	197,083	10%	76,550	7%	1,897,833	100%
2008	1,273,710	64%	219,655	11%	358,657	18%	153,712	8%	2,005,734	100%
2009	1,590,259	67%	296,127	13%	345,025	15%	133,808	6%	2,716,275	100%
2010	**1,342,212**	**60%**	**189,851**	**8%**	**557,435**	**25%**	**161,584**	**7%**	**2,251,082**	**100%**
1989–2010 Average:	**1,722,332**	**64%**	**384,961**	**14%**	**392,365**	**15%**	**188,067**	**7%**	**2,695,130**	**100%**
Board of Fisheries Allocations (Established 1989)		61%		19%		13%		7%		
89-10 Deviation from Allocations		+3%		-5%		+2%		0%		
2010 Deviation from Allocations		-1%		-11%		+12%		0%		

Note: Annette Island harvest is included; terminal area harvest is not included.

Table 4.–Southeast Alaska commercial troll permits renewed and fished, 1975 to 2010.

Year	Hand Troll Permits		Power Troll Permits		Total	HT/total
	Renewed	Fished	Renewed	Fished	Fished	Fished
1975	2,087	1,100	1,078	760	1,860	59%
1976	2,082	1,242	998	742	1,984	63%
1977	2,951	1,852	970	746	2,598	71%
1978	3,922	2,644	976	817	3,461	76%
1979	3,700	2,195	978	813	3,008	73%
1980	2,436	1,713	973	848	2,561	67%
1981	2,048	1,172	969	797	1,969	60%
1982	1,906	1,185	967	819	2,004	59%
1983	2,031	1,016	967	820	1,836	55%
1984	1,983	875	961	799	1,674	52%
1985	1,954	917	959	835	1,752	52%
1986	1,893	809	957	827	1,636	49%
1987	1,825	767	956	829	1,596	48%
1988	1,788	795	956	843	1,638	49%
1989	1,747	699	955	843	1,542	45%
1990	1,702	700	956	840	1,540	45%
1991	1,644	703	958	852	1,555	45%
1992	1,596	646	957	842	1,488	43%
1993	1,552	603	956	841	1,444	42%
1994	1,514	561	954	808	1,369	41%
1995	1,479	461	954	819	1,280	36%
1996	1,423	414	965	739	1,153	36%
1997	1,384	387	964	744	1,131	34%
1998	1,338	305	965	733	1,038	29%
1999	1,305	339	965	722	1,061	32%
2000	1,257	316	962	714	1,030	31%
2001	1,212	307	964	703	1,010	30%
2002	1,158	254	962	666	920	28%
2003	1,120	266	961	641	907	29%
2004	1,101	325	960	692	1,017	32%
2005	1,084	353	961	718	1,071	33%
2006	1,068	371	961	741	1,112	33%
2007	1,051	376	961	744	1,120	34%
2008	1,044	376	960	747	1,123	33%
2009	996	367	951	748	1,115	33%
2010	**891**	**332**	**915**	**731**	**1,063**	**31%**

Note: Permits renewed from CFEC, both renewed and fished based on calendar year from 1985-2010

Table 5.–Number of permits fished, by gear type and fishery, 1980–2010.

	Winter Fishery			Spring [a] Fishery			General Summer Fishery		
	Troll Gear Type		Total	Troll Gear Type		Total	Troll Gear Type		Total
Year	Hand	Power	Winter	Hand	Power	Spring	Hand	Power	Summer
1980	262	204	466				1,661	843	2,504
1981	183	165	348				1,135	791	1,926
1982	183	211	394				1,060	813	1,873
1983	254	331	585				923	805	1,728
1984	221	366	587				833	787	1,620
1985	196	303	499				887	829	1,716
1986	174	318	492	23	47	70	777	822	1,599
1987	195	319	514	36	69	105	732	825	1,557
1988	295	433	728	149	260	399	726	821	1,547
1989	262	475	737	54	142	195	664	834	1,498
1990	167	356	523	107	170	277	662	834	1,496
1991	182	383	565	76	169	245	670	849	1,519
1992	186	431	617	182	281	463	599	835	1,434
1993	127	366	493	181	338	519	553	831	1,384
1994	77	306	383	75	221	296	531	798	1,329
1995	71	227	298	110	276	386	422	809	1,231
1996	50	180	230	126	336	462	380	725	1,105
1997	49	207	256	145	336	481	338	734	1,072
1998	53	253	306	81	273	354	284	740	1,024
1999	53	233	286	83	253	336	307	718	1,025
2000	67	244	311	111	287	398	255	714	969
2001	80	242	322	122	321	443	252	711	963
2002	72	228	300	94	236	330	251	671	922
2003	96	264	360	79	289	368	187	605	792
2004	129	310	439	111	332	443	238	675	913
2005	142	302	444	125	374	499	283	702	985
2006	152	317	469	151	366	517	270	718	988
2007	153	350	503	158	365	523	284	726	1,010
2008	134	333	467	170	405	575	291	726	1,017
2009	111	269	380	158	428	586	306	735	1,041
2010	**131**	**328**	**459**	**157**	**427**	**584**	**268**	**716**	**984**

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

Table 6.–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, 1985–2010.

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

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Table 6.–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)
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
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

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Table 6.–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)
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
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

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Table 6.–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)
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
2009	61	0	5/1–6/30	61		none	0		
	19	73	7/1–7/10	10		7/11–8/11	32		
			8/17–25	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**	**5,791**	**8/11–8/14**	**4(all)**		
						8/20–9/20	**32**		
						9/21–9/30	**10(all)**	**65**	**18,186**

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.

Table 7.–Annual commercial troll salmon harvest in numbers of fish by species, 1960–2010.

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	1,098	214,170	76,882	2,784	582,276
1976	231,239	1,266	524,762	193,786	4,251	955,304
1977	271,735	5,701	506,845	281,244	11,617	1,077,142
1978	375,433	2,804	1,100,902	617,633	26,193	2,122,965
1979	334,317	7,018	918,842	629,130	24,661	1,913,968
1980	303,643	2,921	696,391	266,885	12,048	1,281,888
1981	248,782	7,476	860,792	579,524	8,680	1,705,254
1982	241,938	2,365	1,316,119	503,578	5,700	2,069,700
1983	269,821	8,018	1,276,363	498,245	20,309	2,072,756
1984	235,622	9,559	1,132,644	572,578	28,052	1,978,455
1985	215,811	7,818	1,599,777	963,737	52,787	2,839,930
1986	237,703	6,891	2,127,334	181,677	51,389	2,604,994
1987	242,562	9,727	1,041,059	487,133	12,846	1,793,327
1988	231,364	9,339	500,218	519,390	88,261	1,348,572
1989	235,716	20,173	1,415,512	1,771,24	68,988	3,511,643
1990	287,939	9,175	1,832,604	771,665	62,818	2,963,990
1991	264,106	9,806	1,719,060	427,326	28,438	2,447,994
1992	183,759	22,830	1,929,899	673,805	85,013	2,894,420
1993	226,866	25,336	2,395,711	902,758	525,138	4,075,603
1994	186,331	21,761	3,467,597	942,747	330,376	4,942,822
1995	138,117	27,323	1,750,221	714,312	277,453	2,907,329
1996	141,452	11,024	1,906,753	812,899	406,244	3,278,309
1997	246,409	39,428	1,170,460	545,308	312,042	2,313,649
1998	192,066	6,487	1,636,707	261,093	117,642	2,213,767
1999	146,219	5,725	2,272,619	540,670	74,672	3,039,905
2000	158,717	4,467	1,124,854	187,364	478,144	1,953,546
2001	153,280	8,989	1,843,997	258,943	467,830	2,733,039
2002	325,308	1,247	1,310,060	86,399	117,672	1,840,686
2003	330,692	4,572	1,220,782	159,394	286,410	2,001,850
2004	354,664	5,010	1,915,069	57,315	161,070	2,493,066
2005	338,442	13,276	2,036,104	109,635	165,393	2,662,529
2006	282,307	8,004	1,360,256	60,114	143,030	1,853,711
2007	268,147	6,440	1,376,737	104,377	185,800	1,941,501
2008	151,906	1,252	1,273,710	28,151	60,291	1,515,310
2009	175,644	2,835	1,590,259	75,597	153,770	1,998,105
2010	195,492	1,898	1,342,212	86,190	298,467	1,924,259
1960–69 Avg	264,372	1,013	569,983	76,357	3,973	915,697
1970–79 Avg	298,830	2,418	610,162	253,774	11,626	1,176,810
1980–89 Avg	246,296	8,429	1,196,621	634,400	34,906	2,120,652
1990–99 Avg	201,326	17,890	2,008,163	659,258	221,984	3,107,779
2000–09 Avg	253,911	5,609	1,505,183	112,729	221,941	2,099,334

Note: Only Chinook salmon statistics include hatchery terminal area harvest. Harvest data for all species includes Annette Island harvest. Data is by calendar year from 1960 to 1978, from January 1 to September 30 for 1979, and by troll season (October 1–September 30) from 1980 to 2010.

Table 8.–Southeast Alaska commercial troll salmon harvest in numbers of fish by species, by statistical week, for the 2010 troll season.

Year	Week	Week Of	Chinook	Sockeye	Coho	Pink	Chum	Total
2009	42	11-Oct	1,807	0	0	0	1	1,808
	43	18-Oct	1,600	0	0	0	0	1,600
	44	25-Oct	572	0	0	0	0	572
	45	1-Nov	778	0	0	0	0	778
	46	8-Nov	775	0	0	0	0	775
	47	15-Nov	601	0	0	0	0	601
	48	22-Nov	357	0	0	0	0	357
	49	29-Nov	336	0	0	0	0	336
	50	6-Dec	757	0	0	0	0	757
	51	13-Dec	335	0	0	0	0	335
	52	20-Dec	215	0	0	0	0	215
	53	27-Dec	582	0	0	0	0	582
2010	1	1-Jan	16	0	0	0	0	16
	2	3-Jan	197	0	0	0	0	197
	3	10-Jan	197	0	0	0	0	197
	4	17-Jan	336	0	0	0	0	336
	5	24-Jan	187	0	0	0	0	187
	6	31-Jan	660	0	0	0	0	660
	7	7-Feb	302	0	0	0	0	302
	8	14-Feb	378	0	0	0	0	378
	9	21-Feb	2,012	0	0	0	0	2,012
	10	28-Feb	319	0	0	0	0	319
	11	7-Mar	123	0	0	0	0	123
	12	14-Mar	915	0	0	0	0	915
	13	21-Mar	4,068	0	0	0	0	4,068
	14	28-Mar	1,458	0	0	0	0	1,458
	15	4-Apr	1,850	0	0	0	0	1,850
	16	11-Apr	2,866	0	0	0	1	2,867
	17	18-Apr	8,074	0	0	0	4	8,078
	18	25-Apr	9,864	0	0	0	2	9,866
	19	2-May	797	0	0	0	0	797
	20	9-May	1,339	0	0	0	3	1,342
	21	16-May	1,460	0	0	0	0	1,460
	22	23-May	2,407	0	0	0	2	2,409
	23	30-May	3,158	1	0	0	7	3,166
	24	6-Jun	4,759	1	0	6	24	4,790
	25	13-Jun	6,816	15	1,993	96	86	9,006
	26	20-Jun	5,862	53	3,945	4,563	16,726	31,149
	27	27-Jun	27,210	220	25,488	5,704	20,286	78,908
	28	4-Jul	49,510	553	61,616	7,040	56,064	174,783
	29	11-Jul	0	164	69,487	6,003	44,738	120,392
	30	18-Jul	0	270	159,977	9,627	47,060	216,934

–continued–

Table 8.–Page 2 of 2.

Year	Week	Week Of	Chinook	Sockeye	Coho	Pink	Chum	Total
2010	31	25-Jul	0	152	200,676	15,843	19,760	236,431
	32	1-Aug	0	76	156,455	20,638	37,704	214,873
	33	8-Aug	0	33	88,728	8,573	16,264	113,598
	34	15-Aug	48,512	95	93,395	5,814	24,720	172,536
	35	22-Aug	0	77	124,655	1,599	1,801	128,132
	36	29-Aug	0	109	163,327	578	2,466	166,480
	37	5-Sep	0	43	86,417	81	3,722	90,263
	38	12-Sep	0	32	93,513	25	6,932	100,502
	39	19-Sep	0	4	12,540	0	95	12,639
		Winter fishery subtotal	42,536	0	0	0	0	42,536
		Spring fishery subtotal	28,746	108	8,000	8,223	28,591	73,666
		Summer fishery subtotal	123,087	1,790	1,334,212	77,967	269,876	1,806,932
		Hatchery terminal area	1,123	25	940	1,449	96,228	99,765
		Grand Total:	195,492	1,923	1,343,152	87,639	394,695	2,022,901

Note: Weekly totals do not include hatchery terminal area .harvests. Includes Annette Island troll harvests.

Table 9.–Average troll coho salmon dressed weight by week and weighted annual average, 1995–2010.

	Average Weekly Dressed Weight, by Year																Averages	
Week of	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2005–2009**	**2000–2009**
1-Jul	5.6	5.9	5.3	6.6	4.7	5.7	5.7	5.9	5.5	5.7	5.2	5.3	4.9	6.3	5.4	**5.9**	5.4	5.6
8-Jul	5.6	5.9	5.2	6.8	4.7	5.7	5.6	6.2	5.5	6.1	5.2	5.6	5.1	6.5	5.4	**6.0**	5.6	5.7
15-Jul	6	6	5.4	6.8	4.8	6	5.6	6.5	5.6	6.1	5.2	5.6	5.3	6.7	5.3	**6.2**	5.6	5.8
22-Jul	6.4	6.3	5.6	6.9	5	6.1	5.7	6.4	5.8	6.1	5.3	5.6	5.3	6.9	5.4	**6.4**	5.7	5.9
29-Jul	6.6	6.5	5.8	7	5.2	6.3	6	6.5	6	6	5.2	5.7	5.4	6.9	5.7	**6.6**	5.8	6.0
5-Aug	7	6.7	6	7.1	5.4	6.5	6.1	6.8	6.2	6.2	5.3	5.9	5.5	7.1	5.8	**6.6**	5.9	6.1
12-Aug	7.1	6.8	—	7.2	5.4	6.6	6.2	7	6.3	6.4	5.5	6.1	5.9	7.4	5.8	**6.8**	6.1	6.3
19-Aug	7.7	7.3	7	7.7	5.8		6.6	7.1	6.6	6.8	6	6.6	5.9	8.2	6.3	**7.1**	6.6	6.7
26-Aug	7.8	7.5	7.6	7.8	6	7.5	6.6	7.6	6.9	7	6.2	6.8	6.2	8.4	6.3	**7.2**	6.8	6.9
2-Sep	8.2	7.8	8.2	8.5	6.1	8	6.8	7.8	7.2	7.4	6.3	7.4	6.7	8.8	6.4	**7.5**	7.1	7.3
9-Sep	8.4	8.1	8.8	8.8	6.4	8.2	7.2	8	7.4	7.7	6.7	7.7	7.2	9	6.5	**7.8**	7.4	7.6
16-Sep	8.7	8	8.9	9.2	6.6	8.4	7.7	8.1	7.6	7.8	6.9	7.9	7.4	9.1	6.6	**8.1**	7.6	7.7
23-Sep	8.6	—	—	9.4	6.4	8.5	7.1	8.0	7.8	7.8	6.7	7.8	—	—	6.6	**8.3**	7.1	7.5
30-Sep	—	—	—	9.5	6.6	7.8	7.7	8.1	7.7	8.5	—	—	—	—	6.9	—	6.9	7.8
Weighted Average:	7	6.8	6.5	7.4	5.4	6.5	6.1	6.9	6.5	6.6	5.7	6.4	5.8	7.6	5.9	**6.9**	6.4	6.4
Troll Harvest (Millions)	1.8	1.9	1.2	1.6	2.3	1.1	1.8	1.3	1.2	1.9	2.0	1.4	1.4	1.3	1.6	**1.3**	1.6	1.6

Table 10.–Southeast Alaska annual commercial hand troll salmon harvest in numbers of fish by species, 1975–2010.

Year[a]	Chinook[bc]	Sockeye[c]	Coho[c]	Pink[c]	Chum[c]	Total
1975	27,995	96	40,922	28,853	541	98,407
1976	26,294	516	88,733	44,054	2,061	161,658
1977	33,176	1,740	155,813	116,776	4,143	311,648
1978	54,383	1,155	378,927	243,469	9,573	687,507
1979	57,494	2,448	244,815	281,711	7,926	594,394
1980	52,025	1,257	179,122	111,548	4,532	348,484
1981	33,892	2,171	181,422	173,517	2,582	393,584
1982	36,677	513	260,747	132,135	1,187	431,259
1983	38,635	1,574	235,685	136,656	2,777	415,327
1984	34,287	1,982	178,407	151,231	4,894	370,801
1985	33,136	1,697	260,592	251,645	9,746	556,816
1986	29,714	810	338,312	39,875	6,687	415,398
1987	29,217	2,131	183,229	135,102	3,016	352,695
1988	33,107	1,894	92,326	147,609	14,536	289,472
1989	28,667	2,442	220,262	301,413	6,578	559,362
1990	39,179	1,245	273,359	154,798	6,489	475,070
1991	39,987	1,073	238,456	72,343	3,839	355,698
1992	25,548	1,904	249,487	95,481	6,023	378,443
1993	23,887	1,668	315,521	101,752	34,449	477,277
1994	14,873	1,878	435,947	56,958	32,061	541,717
1995	13,412	1,822	145,094	63,877	21,282	245,487
1996	11,581	698	201,376	31,748	53,646	299,049
1997	14,850	1,207	104,527	35,104	20,042	175,730
1998	9,014	271	119,576	11,782	2,051	142,694
1999	6,010	286	180,072	12,214	583	199,165
2000	8,678	126	67,499	5,386	6,427	88,116
2001	9,811	301	111,059	6,267	12,480	139,918
2002	11,460	33	77,811	2,753	578	92,635
2003	13,510	134	80,882	3,562	3,095	101,183
2004	18,864	148	108,624	2,403	861	130,900
2005	16,847	340	143,095	6,203	418	166,903
2006	16,366	242	74,412	3,429	437	94,242
2007	18,258	220	91,499	4,196	1,385	115,558
2008	15,280	155	82,722	1,571	511	100,239
2009	13,638	171	104,062	5,073	5,412	128,356
2010	**13,030**	**63**	**88,949**	**5,629**	**7,218**	**114,889**
Average 1975–2009	25,421	1,039	178,411	84,928	8,367	298,148
Average 2000–2009	14,271	187	94,167	4,084	3,160	115,805

[a] Only Chinook salmon catch statistics include hatchery terminal area catches.

[b] Prior to 1975, hand and power troll harvests were not reported separately.

[c] Harvest for all species include Annette Island Reserve.

Table 11.–Southeast Alaska annual commercial power troll salmon harvest in numbers of fish by species, 1975–2010.

Year[a]	Chinook[bc]	Sockeye[c]	Coho[c]	Pink[c]	Chum[c]	Total
1975	259,347	1,002	173,248	48,029	2,243	483,869
1976	204,945	750	436,029	149,732	2,190	793,646
1977	238,559	3,961	351,032	164,468	7,474	765,494
1978	321,050	1,649	721,975	374,164	16,620	1,435,458
1979	276,823	4,570	674,027	347,419	16,735	1,319,574
1980	251,849	1,664	517,269	155,337	7,516	933,635
1981	214,899	5,305	679,370	406,007	6,098	1,311,679
1982	205,638	1,852	1,055,372	371,443	4,513	1,638,818
1983	231,155	6,444	1,040,678	361,589	17,532	1,657,398
1984	201,412	7,577	954,237	421,347	23,158	1,607,731
1985	182,953	6,121	1,339,185	712,092	43,041	2,283,392
1986	207,984	6,081	1,789,022	141,802	44,702	2,189,591
1987	213,345	7,596	857,830	352,031	9,830	1,440,632
1988	198,078	7,445	407,892	371,781	73,725	1,058,921
1989	206,942	17,731	1,195,255	1,469,836	62,410	2,952,174
1990	247,921	7,930	1,559,034	616,867	56,329	2,488,081
1991	223,104	8,733	1,479,862	354,983	24,599	2,091,281
1992	157,806	20,926	1,679,526	578,324	78,990	2,515,572
1993	202,674	23,668	2,079,984	801,006	490,689	3,598,021
1994	171,294	19,883	3,025,660	885,789	298,315	4,400,941
1995	124,703	25,501	1,605,030	650,435	256,171	2,661,840
1996	129,827	10,329	1,708,420	781,152	352,758	2,982,486
1997	231,569	38,221	1,065,935	510,204	292,000	2,137,929
1998	183,052	6,216	1,516,903	249,311	115,591	2,071,073
1999	139,890	5,439	2,092,502	528,456	74,089	2,840,376
2000	150,098	4,341	1,057,660	181,978	471,717	1,865,794
2001	143,408	8,688	1,734,095	252,676	455,350	2,594,217
2002	313,875	1,214	1,237,205	83,646	117,094	1,753,034
2003	317,172	4,441	1,139,901	155,829	188,048	1,805,391
2004	335,800	4,862	1,806,383	54,912	160,209	2,362,166
2005	321,595	12,936	1,892,688	103,432	164,975	2,495,626
2006	265,941	7,762	1,285,844	56,685	142,593	1,759,469
2007	249,889	6,220	1,285,238	100,181	184,415	1,825,943
2008	136,626	1,097	1,190,988	26,578	59,780	1,415,069
2009	162,006	2,664	1,486,197	70,525	148,358	1,869,750
2010	**182,462**	**1,835**	**1,253,263**	**80,561**	**291,250**	**1,809,371**
Average 1975–2009	217,807	8,595	1,260,614	368,287	127,710	1,983,031
Average 2000–2009	239,641	5,423	1,411,620	108,644	209,254	1,974,646

[a] Only Chinook salmon catch statistics include hatchery terminal area catches.

[b] Prior to 1975, hand and power troll harvests were not reported separately.

[c] Harvest for all species include Annette Island Reserve.

Table 12.–2010 Southeast Alaska Chinook salmon total harvest and treaty harvest by gear type, showing troll harvest by fishery.

Gear/Fishery	Total Harvest	Alaska Hatchery Harvest	Alaska Hatchery Addon	Terminal Exclusion Harvest	Total Term. Exclusion+ Alaska Hatchery Addon	Treaty Harvest
Winter Troll	42,536	5,358	4,359	0	4,359	38,177
Spring Troll[a]	29,737	11,161	9,900		9,900	19,837
Summer Troll						
First Period	74,575	2,914	2,371	0	2,371	72,204
Second Period	48,512	1,445	1,175	0	1,175	47,337
Summer Total	123,087	4,359	3,546	0	3,546	119,541
Total Traditional Troll	195,360	20,878	17,805	0	17,805	177,555
Annette Is. Troll	132	0	0	0	0	132
Total Troll Harvest	**195,492**	**20,878**	**17,805**	**0**	**17,805**	**177,687**
Purse Seine[b]	15,876	13,421	12,964	0	12,964	2,912
Drift Gillnet[b]	17,417	12,127	11,171	566	11,737	5,680
Setnet[b]	501	0	0	0	0	501
Sport[b]	51,315	11,883	10,375	0	10,375	40,940
All Gear Total	**280,601**	**58,309**	**52,315**	**566**	**52,881**	**227,720**

[a] Spring troll harvest includes terminal area harvest for entire year.

[b] All net gear and sport totals include the General, Annette Island, and Wild Terminal Exclusion harvests.

Table 13.–Annual Southeast Alaska commercial and recreational Chinook salmon harvests and Alaska hatchery contribution, in thousands of fish, 1965–2010.

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	48	290	26	316	1	315
1983	270	19	289	22	311	3	308
1984	236	32	268	22	290	6	284
1985	216	33	249	25	274	13	261
1986	238	22	260	23	283	17	266
1987	243	16	259	24	283	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	313
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	178	58	237	89	148
1997	246	25	271	72	340	63	277
1998	192	24	216	55	271	34	237
1999	146	33	179	72	251	59	192
2000	159	41	200	63	252	85	167
2001	153	38	191	68	259	87	172
2002	325	32	357	85	442	78	364
2003	331	39	370	73	443	68	375
2004	355	64	419	84	503	83	420
2005	338	71	409	93	502	73	429
2006	282	70	352	91	443	89	354
2007	268	56	324	86	410	76	334
2008	152	46	198	38	236	80	156
2009	176	54	230	43	273	61	212
2010	**195**	**34**	**229**	**42**	**271**	**60**	**211**

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 harvest prior to 1980 is reported by calendar year. From 1980 to present, harvest is by season, October 1 to September 30.

[b] Purse seine harvest from 1986 to the present do not include Chinook less than 5 pounds reported on fish tickets.

[c] Estimates of sport catches for 1965–76 based on 1977–80 average catch per capita data. Sport catches for 1977–2007 based on statewide postal harvest surveys. Sport harvest for 2008 is based on preliminary creel survey data, pending completion of statewide postal harvest surveys.

Table 14.–Southeast Alaska winter troll fishery Chinook salmon harvest, vessel landings, and catch per landing, by troll accounting year (October 1–September 30), 1980–2010.

	Early Winter (Oct.–Dec.)			Late Winter (Jan.–April)			Total Winter (Oct.–April)				
Year	Chinook	Landings	Catch/ Landing	Chinook	Landings	Catch/ Landing	Chinook	Landings	Catch/ Landing	Annual Total	Winter % of Annual Total
1980	3,993	528	8	4,046	406	10	8,039	934	9	303,643	3%
1981	1,737	279	6	7,907	744	11	9,644	1,023	9	248,782	4%
1982	4,865	535	9	7,721	764	10	12,586	1,299	10	241,938	5%
1983	12,517	926	14	18,736	1,424	13	31,253	2,350	13	269,821	12%
1984	14,211	1,217	12	19,049	1,980	10	33,260	3,197	10	235,622	14%
1985	14,235	869	16	8,590	1,148	7	22,825	2,017	11	215,811	11%
1986	16,779	1,049	16	6,147	832	7	22,926	1,881	12	237,703	10%
1987	18,453	1,235	15	10,075	996	10	28,528	2,231	13	242,562	12%
1988	44,765	2,404	19	15,684	1,785	9	60,449	4,189	14	231,364	26%
1989	24,425	2,239	11	9,872	1,403	7	34,297	3,642	9	235,716	15%
1990	17,617	868	20	15,513	1,477	11	33,130	2,345	14	287,939	12%
1991	19,920	787	25	22,719	2,037	11	42,639	2,824	15	264,106	16%
1992	28,277	1,653	17	43,554	2,679	16	71,831	4,332	17	183,759	39%
1993	20,275	1,194	17	42,447	2,366	18	62,722	3,560	18	226,866	28%
1994	35,193	1,106	32	21,175	1,499	14	56,368	2,605	22	186,331	30%
1995	10,382	627	17	7,486	871	9	17,868	1,498	12	138,117	13%
1996	6,008	427	14	3,393	447	8	9,401	874	11	141,452	7%
1997	13,252	626	21	7,705	514	15	20,957	1,151	18	246,409	9%
1998	9,810	534	18	23,008	1,372	17	32,818	2,001	16	192,066	17%
1999	13,989	579	24	16,988	1,435	12	30,977	2,026	15	146,219	21%
2000	17,494	783	22	18,561	1,508	12	36,055	2,291	16	158,717	23%
2001	11,198	907	12	11,388	1,382	8	22,586	2,298	10	153,280	15%
2002	17,152	754	23	12,237	1,351	9	29,389	2,116	14	325,308	9%
2003	18,672	725	26	32,182	2,365	14	50,854	3,090	16	330,692	15%
2004	12,686	982	13	40,200	2,595	15	52,886	3,577	15	354,658	15%
2005	12,991	1,103	12	37,479	2,955	13	50,470	4,058	12	338,446	15%
2006	13,952	1,418	10	34,970	3,102	11	48,922	4,520	11	282,315	17%
2007	7,642	1,092	7	39,230	2,808	14	46,872	3,900	12	268,149	17%
2008	5,169	950	5	16,655	2,347	7	21,824	3,297	7	151,926	14%
2009	5,511	770	7	19,378	1,983	10	24,889	2,753	9	175,644	14%
2010	**8,715**	**1,061**	**8**	**33,821**	**2,677**	**13**	**42,536**	**3,738**	**11**	**195,492**	**22%**
2005–09 avg	9,053	1,067	8	29,542	2,639	11	38,595	3,706	10	243,296	16%
2000–09 avg	12,247	948	14	26,228	2,240	11	38,475	3,190	12	253,913	15%

Table 15.–The number of Chinook salmon harvested and permits fished in the 2010 spring troll fisheries by statistical week, including experimental and terminal areas.

Stat Area	Fishery Name	Stat Week	Open	Close	Days	Permits	Chinook	AK%
101-29	Ketchikan Area	18	1-May	1-May	1	*	*	
		19	2-May	8-May	7	9	40	0%
		20	9-May	15-May	7	11	104	0%
		21	16-May	22-May	7	16	123	30%
		22	23-May	29-May	7	19	188	39%
		23	30-May	5-Jun	7	29	373	28%
		24	6-Jun	12-Jun	7	47	723	46%
		25	13-Jun	19-Jun	7	67	1,817	35%
		26	20-Jun	26-Jun	7	70	2,178	48%
		27	27-Jun	30-Jun	4	47	1,067	55%
	Ketchikan Area Total				*61*	*98*	*6,614*	*42%*
101-41	Point Alava	21	17-May	18-May	2	4	10	0%
		22	24-May	25-May	2	3	29	62%
		23	31-May	1-Jun	2	4	24	0%
		24	7-Jun	8-Jun	2	*	*	
		25	14-Jun	15-Jun	2	*	*	
		26	21-Jun	22-Jun	2	*	*	
		27	26-Jun	27-Jun	2			
	Cape Alava Shore Total				*14*	*12*	*106*	*17%*
101-90	West Behm Canal	18	1-May	1-May	1			
		19	2-May	8-May	7			
		20	9-May	15-May	7			
		21	16-May	22-May	7			
		22	23-May	29-May	7	*	*	
		23	30-May	5-Jun	7	*	*	
		24	6-Jun	12-Jun	7	*	*	
		25	13-Jun	19-Jun	7	*	*	
		26	20-Jun	26-Jun	7	6	94	0%
		27	27-Jun	30-Jun	4	6	191	
	West Behm Canal Total				*61*	*18*	*349*	*2%*
102-10	Kendrick Bay	21	17-May	18-May	2			
		22	24-May	25-May	2			
		23	31-May	1-Jun	2	3	20	0%
		24	7-Jun	8-Jun	2	6	157	32%
		25	14-Jun	19-Jun	4	4	210	45%
		26	24-Jun	25-Jun	2			
		27	26-Jun	30-Jun	5			
	Kendrick Bay Total				*19*	*8*	*387*	*38%*

Note: * Denotes confidential data. Totals given may or may not include individual weeks' confidential data.

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Table 15.–Page 2 of 7.

Stat Area	Fishery Name	Stat Week	Open	Close	Days	Permits	Chinook	AK%
105-41	Sumner Strait	19	3-May	4-May	2	3	12	0%
		20	10-May	12-May	3	8	56	29%
		21	17-May	20-May	4	14	184	11%
		22	24-May	26-May	3	12	137	0%
		23	31-May	2-Jun	3	18	190	36%
		24	7-Jun	9-Jun	3	16	119	0%
		25	14-Jun	16-Jun	3	12	105	0%
		26	21-Jun	23-Jun	3	15	83	48%
		27	28-Jun	30-Jun	3	11	36	0%
	Sumner Strait Total				*27*	*35*	*922*	*16%*
106-20	Clarence Strait	18	1-May	1-May	1			
		19	2-May	8-May	7			
		20	9-May	15-May	7			
		21	16-May	22-May	7			
		22	23-May	29-May	7			
		23	30-May	5-Jun	7			
		24	6-Jun	12-Jun	7	*	*	
		25	13-Jun	19-Jun	7	3	70	
		26	20-Jun	26-Jun	7	*	*	
		27	27-Jun	30-Jun	4	*	*	
	Clarence Strait Total				*61*	*6*	*90*	*0%*
106-30	Steamer Point	18	1-May	1-May	1			
		19	2-May	8-May	7	*	*	
		20	9-May	15-May	7			
		21	16-May	22-May	7	*	*	
		22	23-May	29-May	7	5	21	76%
		23	30-May	5-Jun	7	6	50	38%
		24	6-Jun	12-Jun	7	11	175	23%
		25	13-Jun	19-Jun	7	9	360	33%
		26	20-Jun	26-Jun	7	13	123	97%
		27	27-Jun	30-Jun	4	3	60	100%
	Steamer Point Total				*61*	*24*	*794*	*47%*
106-41	Snow Pass	19	3-May	6-May	4	*	*	
		20	10-May	13-May	4			
		21	17-May	20-May	4			
		22	24-May	27-May	4			
		23	31-May	3-Jun	4	*	*	
		24	7-Jun	10-Jun	4	3	42	43%
		25	14-Jun	19-Jun	6	*	*	
		26	20-Jun	26-Jun	7	*	*	
		27	27-Jun	30-Jun	4	*	*	
	Snow Pass Total				*41*	*6*	*74*	*51%*

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Table 15.–Page 3 of 7.

Stat Area	Fishery Name	Stat Week	Open	Close	Days	Permits	Chinook	AK%
107-10	Ernest Sound	18	1-May	1-May	1			
		19	2-May	8-May	7	*	*	
		20	9-May	15-May	7	*	*	
		21	16-May	22-May	7	3	12	0%
		22	23-May	29-May	7	7	88	73%
		23	30-May	5-Jun	7	5	45	71%
		24	6-Jun	12-Jun	7	8	95	21%
		25	13-Jun	19-Jun	7	5	90	83%
		26	20-Jun	26-Jun	7	8	114	46%
		27	27-Jun	30-Jun	4	*	*	
	Ernest Sound Total				*61*	*24*	*502*	*48%*
108-10	Chichagof Pass	19	3-May	4-May	2	*	*	
		20	10-May	11-May	2	3	13	0%
		21	17-May	18-May	2	3	18	67%
		22	24-May	25-May	2	11	50	0%
		23	1-Jun	2-Jun	2	11	56	59%
		24	7-Jun	8-Jun	2	16	114	46%
		25	14-Jun	16-Jun	3	22	345	84%
		26	20-Jun	23-Jun	4	13	70	98%
		27	26-Jun	30-Jun	5	8	39	65%
	Chichagof Pass Total				*24*	*32*	*717*	*67%*
108-30	Baht Harbor	21	17-May	18-May	2	3	13	0%
		22	24-May	25-May	2	8	35	0%
		23	1-Jun	1-Jun	1	3	11	0%
		24	7-Jun	7-Jun	1	9	22	0%
		25	14-Jun	14-Jun	1	3	8	100%
		26	20-Jun	22-Jun	3	8	30	0%
		27	26-Jun	28-Jun	3	*	*	
	Baht Harbor Total				*13*	*16*	*128*	*19%*
108-40	Craig Point	21	17-May	18-May	2	*	*	
		22	24-May	25-May	2	5	40	28%
		23	1-Jun	1-Jun	1	*	*	
		24	7-Jun	7-Jun	1	*	*	
		25	14-Jun	14-Jun	1	3	12	0%
		26	20-Jun	22-Jun	3	*	*	
		27	26-Jun	28-Jun	3	*	*	
	Craig Point Total				*13*	*11*	*105*	*10%*

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Stat Area	Fishery Name	Stat Week	Open	Close	Days	Permits	Chinook	AK%
109-10	Little Port Walter	19	5-May	7-May	3	6	30	
		20	12-May	14-May	3	4	24	96%
		21	19-May	21-May	3	*	*	
		22	25-May	28-May	4	3	7	0%
		23	1-Jun	4-Jun	4	*	*	
		24	8-Jun	11-Jun	4	3	25	4%
		25	15-Jun	18-Jun	4	*	*	
		26	22-Jun	25-Jun	4			
		27	26-Jun	30-Jun	5			
	Little Port Walter Total				*34*	*12*	*103*	*23%*
109-62	Tebenkof Bay	19	3-May	5-May	3	10	307	38%
		20	10-May	13-May	4	30	557	27%
		21	17-May	20-May	4	24	205	46%
		22	24-May	27-May	4	21	234	40%
		23	31-May	4-Jun	5	24	629	34%
		24	7-Jun	11-Jun	5	31	893	52%
		25	14-Jun	19-Jun	6	23	914	98%
		26	20-Jun	26-Jun	7	39	1,342	44%
		27	27-Jun	30-Jun	4	5	89	56%
	Tebenkof Bay Total				*42*	*99*	*5,170*	*52%*
110-31	Frederick Sound	18	1-May	1-May	1			
		19	2-May	8-May	7	5	75	100%
		20	9-May	15-May	7	8	93	41%
		21	16-May	22-May	7	8	82	77%
		22	23-May	29-May	7	7	44	45%
		23	30-May	5-Jun	7	13	93	55%
		24	6-Jun	12-Jun	7	15	121	39%
		25	13-Jun	19-Jun	7	10	61	0%
		26	20-Jun	26-Jun	7	8	44	100%
		27	27-Jun	30-Jun	4	*	*	
	Frederick Sound Total				*61*	*33*	*623*	*72%*
112-12	Chatham Strait	18	1-May	1-May	1			
		19	2-May	8-May	7	7	106	61%
		20	9-May	15-May	7	19	231	93%
		21	16-May	22-May	7	16	118	67%
		22	23-May	29-May	7	19	362	54%
		23	30-May	5-Jun	7	18	145	28%
		24	6-Jun	12-Jun	7	23	286	41%
		25	13-Jun	19-Jun	7	15	305	54%
		26	20-Jun	26-Jun	7	9	96	12%
		27	27-Jun	30-Jun	4	3	26	13%
	Chatham Strait Total				*61*	*67*	*1,675*	*53%*

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Stat Area	Fishery Name	Stat Week	Open	Close	Days	Permits	Chinook	AK%
113-01	Western Channel	21	17-May	17-May	1	9	23	0%
		22	24-May	24-May	1	11	68	19%
		23	1-Jun	2-Jun	2	9	40	0%
		24	7-Jun	8-Jun	2	32	281	18%
		25	14-Jun	15-Jun	2	25	186	0%
		26	21-Jun	22-Jun	2	20	150	37%
		27	28-Jun	29-Jun	2	11	55	91%
	Western Channel Total				*12*	*71*	*803*	*21%*
113-30	Redoubt Bay	19	3-May	4-May	2	8	35	0%
		20	10-May	11-May	2	*	*	
		21	17-May	18-May	2	6	34	0%
		22	24-May	25-May	2	7	48	0%
		23	1-Jun	2-Jun	2	5	51	0%
		24	7-Jun	8-Jun	2	6	43	0%
		25	14-Jun	15-Jun	2	9	133	0%
		26	21-Jun	22-Jun	2	20	294	13%
		27	28-Jun	29-Jun	2	6	50	36%
	Redoubt Bay Total				*18*	*46*	*695*	*10%*
113-31	Biorka Island	21	17-May	17-May	1	13	56	0%
		22	24-May	24-May	1	13	210	0%
		23	1-Jun	1-Jun	1	31	220	0%
		24	7-Jun	7-Jun	1	31	278	26%
		25	14-Jun	14-Jun	1	28	267	6%
	Biorka Island Total				*5*	*65*	*1,031*	*8%*
113-41	Sitka Sound	18	1-May	1-May	1			
		19	2-May	8-May	7	19	70	0%
		20	9-May	15-May	7	22	102	0%
		21	16-May	22-May	7	42	272	37%
		22	23-May	29-May	7	39	259	60%
		23	30-May	5-Jun	7	62	529	30%
		24	6-Jun	12-Jun	7	81	845	57%
		25	13-Jun	19-Jun	7	111	1,249	43%
		26	20-Jun	26-Jun	7	77	695	23%
		27	27-Jun	30-Jun	4	28	321	69%
	Sitka Sound Total				*61*	*176*	*4,342*	*42%*
113-62	Salisbury Sound	20	10-May	12-May	3	10	34	0%
		21	17-May	19-May	3	4	33	0%
		22	24-May	26-May	3	12	130	49%
		23	1-Jun	3-Jun	3	11	176	22%
		24	7-Jun	11-Jun	5	15	261	23%
		25	14-Jun	17-Jun	4	14	160	90%
		26	21-Jun	24-Jun	4	12	162	6%
		27	26-Jun	30-Jun	5	4	93	0%
	Salisbury Sound Total				*30*	*47*	*1,049*	*30%*

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Stat Area	Fishery Name	Stat Week	Open	Close	Days	Permits	Chinook	AK%
113-95	Lisianski Inlet	19	2-May	4-May	3	*	*	
		20	9-May	11-May	3	*	*	
		21	16-May	18-May	3	4	29	0%
		22	23-May	25-May	3	4	35	0%
		23	30-May	1-Jun	3	6	87	100%
		24	6-Jun	8-Jun	3	7	62	0%
		25	12-Jun	16-Jun	5	5	61	11%
		26	19-Jun	23-Jun	5	6	48	0%
		27	26-Jun	30-Jun	5	*	*	
	Lisianski Inlet Total				*33*	*16*	*365*	*26%*
113-97	Stag Bay	18	1-May	1-May	1			
		19	2-May	8-May	7	*	*	
		20	9-May	15-May	7	*	*	
		21	16-May	22-May	7			
		22	23-May	29-May	7			
		23	30-May	5-Jun	7			
		24	6-Jun	12-Jun	7			
		25	13-Jun	19-Jun	7			
		26	20-Jun	26-Jun	7			
		27	27-Jun	30-Jun	4			
	Stag Bay Total				*61*	*	*	
114-21	Cross Sound	19	2-May	4-May	3	*	*	
		20	9-May	11-May	3	*	*	
		21	16-May	18-May	3	*	*	
		22	23-May	25-May	3			
		23	30-May	1-Jun	3	*	*	
		24	6-Jun	8-Jun	3	*	*	
		25	12-Jun	16-Jun	5	*	*	
		26	19-Jun	23-Jun	5	*	*	
		27	26-Jun	30-Jun	5	*	*	
	Cross Sound Total				*33*	*8*	*76*	*15%*
114-23	South Passage	18	1-May	1-May	1			
		19	2-May	8-May	7	*	*	
		20	9-May	15-May	7			
		21	16-May	22-May	7			
		22	23-May	29-May	7	*	*	
		23	30-May	5-Jun	7	*	*	
		24	6-Jun	12-Jun	7	*	*	
		25	13-Jun	19-Jun	7	*	*	
		26	20-Jun	26-Jun	7			
		27	27-Jun	30-Jun	4			
	South Passage Total				*61*	*5*	*28*	*0%*

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Stat Area	Fishery Name	Stat Week	Open	Close	Days	Permits	Chinook	AK%
114-25	Icy Strait	18	1-May	1-May	1			
		19	2-May	8-May	7	3	19	0%
		20	9-May	15-May	7	3	10	
		21	16-May	22-May	7	3	13	0%
		22	23-May	29-May	7	8	31	0%
		23	30-May	5-Jun	7	15	55	80%
		24	6-Jun	12-Jun	7	7	45	0%
		25	13-Jun	19-Jun	7	8	70	0%
		26	20-Jun	26-Jun	7	29	158	0%
		27	27-Jun	30-Jun	4	20	32	
	Icy Strait Area Total				*61*	*58*	*433*	*10%*
114-50	Port Althorp	19	2-May	4-May	3	2	11	0%
		20	9-May	11-May	3	8	63	0%
		21	16-May	18-May	3	17	195	12%
		22	23-May	25-May	3	27	324	17%
		23	30-May	1-Jun	3	19	306	19%
		24	6-Jun	7-Jun	2	21	126	28%
		25	12-Jun	16-Jun	5	22	272	4%
		26	19-Jun	23-Jun	5	14	124	19%
	Port Althorp Total				*27*	*49*	*1,421*	*14%*
Spring Experimental Total						**549**	**28,614**	**39%**
Terminal Area Total						**41**	**998**	**100%**
Spring Season Total						**549**	**29,612**	**41%**

Note: *Denotes confidential data. Totals given may or may not include individual weeks confidential data.
Note: Totals do not include Annette Island harvests. Absence of AK% when harvest is listed indicates fish were not sampled for coded-wire tags. Spring Total Permits Fished are not additive, since some permits fish both spring and terminal areas.

Table 16.–Spring troll fishery Chinook salmon harvests and Alaska hatchery contributions, 1986-2010.

Year	Non-Terminal Area Spring Harvest	Alaska Hatchery Harvest	Alaska Hatchery Percent	Number of Non-Terminal Areas Open	Terminal Area Harvest[a]	Number of Terminal Areas Open	Total Harvest	Total Permits Fished
1986	776	240	31%	3	0	0	776	70
1987	4,488	1,548	34%	7	0	0	4,488	105
1988	8,505	2,931	34%	9	100	2	8,605	382
1989	2,366	922	39%	11	913	4	3,279	161
1990	7,052	4,255	60%	9	16	2	7,068	258
1991	13,984	6,129	44%	10	5,863	1	19,847	559
1992	11,229	5,604	50%	11	4,118	2	15,347	454
1993	15,826	6,525	41%	13	2,853	3	18,679	442
1994	11,269	4,939	44%	12	100	4	11,369	283
1995	21,750	13,990	64%	15	1,333	4	23,083	377
1996	30,963	15,672	51%	16	16,416	5	47,379	461
1997	32,791	13,556	41%	17	9,931	6	42,722	476
1998	19,195	5,012	26%	21	1,313	4	20,508	361
1999	18,351	8,766	48%	23	2,367	5	20,718	339
2000	20,990	11,217	53%	25	7,966	4	28,956	392
2001	28,250	13,726	49%	26	7,081	5	35,331	435
2002	37,610	17,398	46%	31	6,040	4	43,650	433
2003	35,452	11,949	34%	26	3,840	4	39,292	382
2004	55,186	19,863	36%	31	1,610	5	56,796	445
2005	58,421	18,195	31%	30	2,280	4	60,701	498
2006	36,918	9,430	26%	24	1,018	5	37,936	511
2007	48,479	18,263	38%	25	1,310	4	49,789	539
2008	36,638	17,769	49%	22	4,494	5	41,132	591
2009	32,581	12,374	38%	27	278	5	32,859	586
2010	**28,614**	**11,161**	**39%**	**27**	**1,123**	**5**	**29,737**	**584**

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

[a] Terminal harvest numbers includes troll catch from both spring and summer terminal fisheries.

Table 17.–Southeast Alaska troll Chinook salmon catch-per-fleet-day during the general summer fishery, 1984–2010.

Year	Fishing Period	Days	Chinook Harvest	Catch/Fleet Day	Chinook Abundance Index[a]
1984	June 5–30	26	127,300	4,896	—
	July 11–29	19	75,000	3,947	—
		45	202,300	4,496	1.34
1985	June 3–12	10	65,400	6,540	—
	July 1–22	22	114,400	5,200	—
	August 25–26	2	13,200	8,250	—
		34	193,000	5,744	1.27
1986	June 20–July 15	26	154,600	5,946	—
	August 21–26	6	31,900	5,317	—
	September 1–9	9	27,500	3,056	—
		41	214,000	5,220	1.48
1987	June 20–July 12	23	209,500	9,109	1.78
1988	July 1–12	12	162,000	13,500	2.04
1989	July 1–13	13	167,500	12,885	1.85
1990	July 1–22	22	200,000	9,091	—
	August 23–24	2	11,900	5,950	—
		24	211,900	8,829	1.78
1991	July 1–8	8	154,000	20,533	1.66
1992	July 1– 4	4	65,600	18,743	—
	August 23	1	6,900	6,900	—
		5	72,500	16,111	1.77
1993	July 1–6	6	101,100	16,850	—
	August 21–25	5	24,900	4,980	—
	September 12–20	9	19,100	2,122	—
		20	145,100	7,255	1.92
1994	July 1–7	7	98,300	14,043	—
	August 29 – September 2	5	20,200	4,040	—
		12	118,500	9,875	1.67
1995	July 1–10	10	75,900	7,590	—
	July 30– August 5	7	21,300	3,043	—
		17	97,200	5,718	0.91

–continued–

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Year	Fishing Period	Days	Chinook Harvest	Catch/Fleet Day	Chinook Abundance Index[a]
1996	July 1–10	10	76,400	7,640	—
	August 19 – 20	2	8,300	4,150	—
		12	84,700	7,058	0.90
1997	July 1–7	7	122,500	17,500	—
	August 18– 24	7	49,600	7,086	—
	August 30–September 5	7	10,600	1,514	—
		21	182,700	8,700	1.37
1998	July 1–11	11	102,800	9,345	—
	August 20 – Sept. 30	42	36,000	857	—
		53	138,800	2,619	1.27
1999	July 1–6	6	78,100	13,017	—
	August 18 – 22	5	16,400	3,280	—
		11	94,500	8,591	1.12
2000	July 1–5	5	50,768	10,154	—
	August 11–12	2	12,423	6,212	—
	August 23–30	8	24,895	3,112	—
	September 12–20	9	5,679	631	—
		24	93,765	3,907	1.10
2001	July 1–6	6	64,854	10,809	—
	August 18 – September 5	19	30,509	1,606	—
		25	95,363	3,815	1.14
2002	July 1–18	18	187,003	10,389	—
	August 12 – September 2	22	65,266	2,967	—
		40	252,269	6,307	1.74
2003	July 1–August 8	39	240,573	6,169	2.17
2004	July 1–15	15	193,992	12,933	—
	August 12–15	4	50,933	12,733	—
		19	244,925	12,891	2.06

–continued–

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Year	Fishing Period	Days	Chinook Harvest	Catch/Fleet Day	Chinook Abundance Index[a]
2005	July 1–17	17	151,128	8,890	—
	August 14–20	6.5	70,424	10,834	—
	September 15–20	6	5,307	885	—
		29.5	226,859	7,690	1.90
2006	July 1–12	12	129,809	10,817	—
	August 13–22	10	65,588	6,559	—
		22	195,397	8,882	1.73
2007	July 1-20	20	140,547	7,027	—
	August 16–21	6	30,885	5,148	—
		26	171,432	6,594	1.60
2008	July 1–5	5	59,903	11,981	—
	August 16–21	6	28,983	4,831	—
		11	88,886	8,081	1.07
2009	July 1–10	10	84,575	8,458	—
	August 17–25	9	33,012	3,668	—
		19	117,587	12,126	1.33
2010	**July 1–8**	**8**	**74,575**	**9,322**	**—**
	August 15–19	**5**	**48,512**	**9,702**	**—**
		13	**123,087**	**9,468**	**1.35**

Note: Annette Island harvests are not included. The general summer fishery does not include experimental, terminal, or hatchery access fisheries.

[a] The Abundance Indices given for 1984 to 2009 are the first postseason estimates and for 2010 the preseason AI is used. The AI's are estimated by the Chinook Technical Committee of the Pacific Salmon Commission.

Table 18.–Coho salmon mid-season closure dates and extensions, 1980–2010.

Year	Closure dates	Days closed	Extension	Area 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 some restrictions
1995	August 13–22	10	9/21–9/30	Districts 1–16 open with some 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 some restrictions
1999	August 13–17	5	9/21–9/30	Districts 1–16 open with some 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)*
2002	August 10–11	2	9/21–9/30	Entire region open except portion of Sitka Sound*
2003	No closure	0	9/21–9/30	Entire region open*
2004	August 10–11	2	9/21–9/30	Entire region open*
2005	August 10–13	4	None	
2006	August 9–12	4	9/21–9/30	Districts 10, 12, 14, 15, 181, 183, 191, Sect. 11–C
	August 23–27	5		and portions of Districts 9 and 13
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 and 191 open; Districts 12, 13, 154 open with area restrictions
2010	**August 11- 14**	**4**	**None**	

Note: *During these years, Areas of High King Salmon Abundance remained closed and Yakutat area closures were in effect during coho salmon extension periods.

Table 19.–Contribution in numbers and percent of Chinook salmon produced by Alaskan hatcheries in the winter and general summer troll fisheries, 1985–2010.

			Alaskan Hatcheries	
Fishery	**Year**	**Total Harvest**	**Number**	**Percent**
Winter	1985	22,825	1,288	6%
	1986	22,926	1,308	6%
	1987	28,528	2,935	10%
	1988	60,449	8,316	14%
	1989	34,297	4,916	14%
	1990	33,130	4,434	13%
	1991	42,639	10,243	24%
	1992	71,831	6,988	10%
	1993	62,722	3,863	6%
	1994	56,368	1,974	4%
	1995	17,868	2,131	12%
	1996	9,401	1,653	18%
	1997	20,957	1,743	8%
	1998	32,818	2,366	7%
	1999	30,977	2,172	7%
	2000	36,055	3,067	9%
	2001	22,586	2,806	12%
	2002	29,389	1,958	7%
	2003	50,854	4,375	9%
	2004	52,886	6,181	12%
	2005	50,470	5,476	11%
	2006	48,922	3,993	8%
	2007	46,872	4,719	10%
	2008	21,824	2,854	13%
	2009	24,889	2,756	11%
	2010	**42,536**	**5,358**	**13%**
	1985–2010 Averages	37,501	3,841	10%
General	1985	192,986	6,783	4%
	1986	214,001	8,338	4%
	1987	209,546	11,712	6%
	1988	162,310	8,141	5%
	1989	167,614	5,831	3%
	1990	212,787	14,288	7%
	1991	154,973	6,605	4%
	1992	72,972	2,457	3%
	1993	145,465	4,935	3%
	1994	118,594	5,352	5%
	1995	97,166	9,702	10%
	1996	84,672	4,843	6%
	1997	182,730	4,308	2%
	1998	138,740	3,789	3%
	1999	94,528	3,706	4%
	2000	93,772	6,848	7%
	2001	95,363	5,027	5%
	2002	252,269	6,429	3%
	2003	240,577	7,677	3%
	2004	244,978	9,928	4%
	2005	227,280	10,321	5%
	2006	195,457	6,196	3%
	2007	171,488	6,279	4%
	2008	88,970	3,867	4%
	2009	117,896	5,224	4%
	2010	**123,219**	**4,359**	4%
	1985–2010 Averages	157,706	6,652	4%

Note: Summer data includes Annette Island troll harvests

Table 20.–Total Chinook salmon harvest and Alaska hatchery harvest by gear, 1985–2010.

	Seine		Drift Gillnet		Set Gillnet		Troll		Sport		All Gear	
Year	Total	Alaska Hatchery	Total	Alaska Hatchery	Total	Alaska Hatchery	Total	Alaska Hatchery	Total	Alaska Hatchery	Total	Alaska Hatchery
1985	21,593	150	10,679	976	1,232	0	215,811	8,071	24,858	3,365	274,539	12,563
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	29,409
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	39,677
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	68,520
1996	22,225	20,692	10,219	5,793	4,854	0	141,452	38,365	57,509	15,229	236,259	80,079
1997	10,338	6,223	11,467	4,538	3,264	0	246,409	28,795	71,524	13,914	343,002	53,471
1998	14,503	6,054	6,207	3,903	2,804	0	192,066	12,397	55,013	8,933	270,593	31,286
1999	17,900	11,933	9,712	5,255	5,108	0	146,219	16,935	72,081	20,824	251,020	54,948
2000	22,905	18,401	16,035	11,902	2,460	0	158,717	28,963	63,173	22,910	263,290	82,176
2001	20,439	14,991	17,091	11,968	2,633	0	153,280	28,480	72,291	29,965	265,734	85,405
2002	17,695	11,717	11,484	6,508	2,510	0	325,308	31,647	69,537	26,871	426,534	76,742
2003	24,134	6,911	11,398	8,080	3,842	0	330,692	27,614	69,370	23,057	439,436	65,662
2004	39,633	11,848	21,671	8,482	2,734	0	354,658	37,511	80,572	27,022	499,268	84,863
2005	19,867	7,206	51,033	5,806	718	0	338,446	38,204	86,575	25,178	496,639	76,394
2006	24,969	10,021	44,220	7,959	1,195	0	282,315	22,004	85,794	18,168	438,493	58,152
2007	27,267	11,070	27,068	13,440	1,549	0	268,149	31,381	82,848	22,822	406,881	78,714
2008	15,540	12,204	29,765	16,630	844	0	151,926	29,542	49,265	18,766	247,340	77,142
2009	29,012	15,973	23,592	12,808	1,533	0	175,644	20,522	69,565	24,988	299,346	74,291
2010	**15,876**	**13,421**	**17,417**	**12,452**	**501**	**0**	**195,492**	**21,698**	**51,315[a]**	**11,883**	**280,601**	**59,453**

Note: Data includes Terminal area and Annette Island harvests.

[a] 2010 sport fish data are inseason estimates. Final estimates pending analyses of mail–in survey data.

Table 21.–Total Southeast Alaska troll coho salmon harvest and estimated wild and hatchery contributions, 1960–2010.

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	214,170	214,170	–	–	–	–
1976	524,762	524,762	–	–	–	–
1977	506,845	506,845	–	–	–	–
1978	1,100,902	1,100,902	–	–	–	–
1979	918,845	918,845	–	–	–	–
1980	707,360	704,297	2,876	187	3,063	<1%
1981	862,177	846,088	15,918	171	16,089	2%
1982	1,321,546	1,285,969	35,400	177	35,577	3%
1983	1,279,518	1,227,242	51,709	567	52,276	4%
1984	1,131,936	1,062,327	68,594	1,015	69,609	6%
1985	1,605,953	1,499,661	106,111	181	106,292	7%
1986	2,126,159	1,850,004	268,215	7,940	276,155	13%
1987	1,041,175	950,757	87,074	3,344	90,418	9%
1988	499,819	472,334	25,885	1,600	27,485	5%
1989	1,417,966	1,248,491	165,516	3,959	169,475	12%
1990	1,832,393	1,559,530	249,598	11,913	261,511	14%
1991	1,718,318	1,336,889	366,850	16,002	382,852	22%
1992	1,929,013	1,509,115	402,445	17,552	419,997	22%
1993	2,395,505	2,013,913	365,786	13,545	379,331	16%
1994	3,461,607	2,946,740	501,188	13,331	514,519	15%
1995	1,750,124	1,414,052	328,150	7,864	336,014	19%
1996	1,906,690	1,456,794	438,808	9,360	448,168	24%
1997	1,170,462	927,301	240,590	2,571	243,161	21%
1998	1,636,479	1,306,516	321,821	8,142	329,963	20%
1999	2,272,619	1,772,608	499,966	13,521	513,487	23%
2000	1,124,854	876,142	241,844	6,868	248,712	22%
2001	1,843,997	1,472,073	368,538	3,386	371,924	20%
2002	1,310,060	973,893	339,962	1,161	341,123	26%
2003	1,220,782	936,969	282,939	2,759	285,526	23%
2004	1,915,007	1,606,041	304,337	4,629	308,966	16%
2005	2,035,783	1,703,640	327,908	4,235	332,143	16%
2006	1,360,256	1,144,770	214,654	832	215,486	16%
2007	1,376,737	1,072,328	303,582	827	304,409	22%
2008	1,273,710	1,014,460	258,293	957	259,250	20%
2009	1,590,259	1,343,183	245,906	1,170	247,076	16%
2010	**1,342,212**	**1,056,771**	**284,573**	**868**	**285,441**	**21%**
Avg. 1981–1990	1,311,864	1,200,240	107,402	3,087	110,489	8%
Avg. 1991–2010	1,731,724	1,394,210	331,907	6,479	338,377	20%

Table 22.–Estimates of total escapements of Chinook salmon to escapement indicator systems and to Southeast Alaska and transboundary rivers, 1975–2010.

	Major Systems				Medium Systems								Small Systems		
Year	Alsek	Taku	Stikine	Major Subtotal	Situk	Chilkat	Andrew	Unuk	Chickamin	Blossom	Keta	Medium Subtotal	King Salmon	Total All Systems	Expanded Region Total
1975	—	12,917	7,571	—	—	—	508	—	1,758	439	611	—	64	—	—
1976	5,765	24,575	5,723	36,063	**1,421**	—	**404**	—	745	205	253	—	99	—	—
1977	10,496	29,489	11,445	51,430	**1,732**	—	**456**	4,739	1,722	337	692	9,679	204	61,313	72,992
1978	11,754	17,118	6,835	35,707	**808**	—	**388**	5,382	1,465	430	1,180	9,653	87	45,447	54,103
1979	18,670	21,611	12,610	52,891	**1,284**	—	**327**	2,803	1,133	162	1,283	6,992	134	60,016	71,448
77–79 Avg	13,640	22,740	10,297	46,676	1,275	—	390	4,308	1,440	310	1,052	8,775	141	55,592	66,181
1980	8,077	39,229	30,573	77,879	**905**	—	**282**	4,944	2,112	268	578	9,089	106	87,074	103,659
1981	8,327	49,546	36,057	93,929	**702**	—	**536**	3,557	1,824	478	990	8,088	153	102,170	121,631
1982	9,174	23,842	40,488	73,504	**434**	—	**672**	6,574	2,712	1,038	2,270	13,700	393	87,597	104,282
1983	11,028	9,792	6,424	27,243	**592**	—	**366**	5,474	2,847	1,772	2,475	13,526	**245**	41,014	48,826
1984	7,494	20,774	13,995	42,263	**1,726**	—	**389**	8,939	5,235	1,528	1,836	19,653	**265**	62,181	74,025
1985	5,758	35,906	16,672	58,336	**1,521**	—	625	5,761	4,541	2,133	1,879	16,460	**175**	74,970	89,251
1986	9,981	38,100	15,478	63,559	**2,067**	—	1,383	10,345	8,289	3,844	2,077	28,006	**255**	91,820	109,310
1987	11,395	28,928	25,607	65,929	**1,379**	—	1,540	9,601	4,631	4,058	2,312	23,520	**196**	89,645	106,721
1988	8,227	44,512	39,040	91,778	**868**	—	1,102	8,496	3,734	1,155	1,731	17,086	**208**	109,072	129,848
1989	9,105	**40,329**	25,243	74,676	**637**	—	1,036	5,591	4,437	1,035	3,477	16,212	**240**	91,129	108,486
80–89 Avg	8,856	33,096	24,958	66,910	1,083	—	793	6,928	4,036	1,731	1,963	16,534	224	83,667	99,604
1990	8,794	**52,142**	23,514	84,449	**628**		1,298	2,876	2,679	773	1,824	10,078	**179**	94,706	112,745
1991	12,722	51,645	24,124	88,491	**889**	**5,897**	782	3,187	2,313	719	819	14,606	**134**	103,231	114,701
1992	5,519	55,889	35,479	96,887	**1,595**	**5,284**	1,520	4,253	1,644	451	653	15,400	**99**	112,386	124,874
1993	12,688	66,125	61,295	140,108	**952**	**4,472**	2,071	5,197	1,848	911	1,090	16,541	266	156,915	174,350
1994	12,312	48,368	34,403	95,083	**1,271**	**6,795**	1,118	**4,623**	1,843	484	921	17,055	213	112,351	124,834
1995	25,322	**33,805**	17,448	76,575	**4,330**	**3,790**	670	3,757	**2,309**	653	527	16,035	147	92,758	103,064
1996	14,443	**79,019**	**28,949**	122,411	**1,800**	**4,920**	655	5,679	**1,587**	662	894	16,196	292	138,899	154,332
1997	12,697	**114,938**	**26,996**	154,631	**1,878**	**8,100**	**478**	**2,970**	1,292	397	741	15,856	361	170,848	189,831
1998	**4,969**	31,039	**25,968**	61,976	**924**	**3,675**	952	**4,132**	1,857	**364**	**446**	12,350	134	74,460	82,733
1999	**13,617**	**19,734**	**19,947**	53,298	**1,461**	**2,271**	1,182	**3,914**	2,337	638	**968**	12,771	304	66,373	73,747
90–99 Avg	12,308	55,270	29,812	97,391	1,573	5,023	1,073	4,059	1,971	605	888	14,689	213	112,293	125,521

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Table 22.–Page 2 of 2.

Year	Major Systems				Medium Systems								Small Systems
	Alsek	Taku	Stikine	Major Subtotal	Situk	Chilkat	Andrew	Unuk	Chickamin	Blossom	Keta	Medium Subtotal	King Salmon
2000	**6,835**	**30,529**	**27,531**	64,895	**1,785**	**2,035**	1,348	**5,872**	3,805	695	**913**	16,453	138
2001	**6,111**	**42,980**	**63,523**	112,614	**656**	**4,517**	2,060	**10,541**	**5,177**	614	1,033	24,597	149
2002	**5,396**	**52,409**	**50,875**	108,680	**1,000**	**4,050**	1,712	**6,988**	**5,007**	674	1,237	20,668	155
2003	**4,782**	**36,435**	**46,824**	88,041	**2,117**	**5,657**	1,163	**5,546**	**4,579**	611	969	20,642	118
2004	**6,995**	**68,199**	**48,900**	124,094	**755**	**3,422**	2,998	**3,963**	**4,268**	**734**	1,132	17,272	135
2005	4,462	**38,806**	**39,833**	83,101	**613**	**3,366**	1,979	**4,742**	**4,257**	**926**	1,496	17,379	143
2006	1,883	**41,831**	**24,400**	68,114	**749**	**3,039**	2,124	**5,645**	6,318	**1,270**	2,248	21,393	150
2007	2,618	**17,516**	**15,916**	36,050	**677**	**1,452**	1,736	**5,718**	4,242	406	936	15,167	181
2008	1,337	**24,121**	**18,843**	44,301	**453**	**2,833**	981	**3,104**	5,277	774	1,093	14,515	120
2009	6,401	**20,500**	**11,086**	37,987	**902**	**4,463**	628	**3,103**	2,902	370	614	12,982	109
2010[a]	9,428	**29,307**	**15,177**	53,912	**167**	**1,852**	1,205	**4,290**	4,859	542	1,430	14,345	158
00–09 Avg	4,651	37,563	34,773	76,988	971	3,480	1,673	5,528	4,583	707	1,167	18,107	140
Goals:[b]													
Lower	3,500	19,000	14,000	36,500	450	1,750	650	1,800	450	250	250	5,600	120
Upper	5,300	36,000	28,000	69,300	1,050	3,500	1,500	3,800	900	500	500	11,750	240

Note: Bold numbers in table are weir counts or mark-recapture estimates. Other numbers are index escapements expanded for survey counting rates and unsurveyed tributaries.

[a] 2010 escapement numbers are preliminary.

[b] Total escapement goals for Alsek, Unuk, Chickamin, Blossom and Keta have not been agreed on, numbers for those five are just expanded index goals for comparison.

Table 23.– Escapement goal performance for indicator coho salmon streams in Southeast Alaska. E = exceeded goal, U = under goal, I = within goal, NA = no escapement estimate available.

Year	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Southeast Alaska Area																		
Auke Creek	E	E	I	E	E	E	E	E	E	E	E	I	I	E	I	E	I	I
Berners River	E	E	I	I	E	I	E	E	E	E	E	E	I	I	U	I	I	I
Ford Arm Lake	E	E	I	I	E	E	E	I	I	E	E	E	E	E	I	E	I	I
Hugh Smith Lake	I	E	E	I	I	I	E	I	E	E	E	I	E	I	E	E	E	E
Chilkat River	E	E	E	I	I	I	E	E	E	E	E	E	I	E	U	I	I	E
Montana Creek	E	E	I	I	I	I	I	I	I	E	I	U	U	I	U	I	I	I
Petersen Creek	I	E	E	E	I	I	E	I	I	I	I	E	I	E	I	E	I	E
Sitka Index	E	E	E	E	E	E	I	E	E	E	E	E	E	E	E	E	E	E
Ketchikan Index	I	E	E	E	I	I	I	E	E	E	E	E	E	I	I	E	I	I
Yakutat Area																		
Lost River	I	E	I	I	I	NA	NA	NA	NA	E	E	I	U	I	I	NA	E	E
Situk River	E	E	I	I	I	NA	NA	NA	NA	E	I	E	U	I	I	NA	I	E
Tsiu/Tsivat River	I	E	I	I	I	NA	NA	I	NA	E	NA	NA	I	I	I	I	I	I
All-Gear Commercial Harvest (in Millions)	3.6	5.5	3.1	3.0	1.8	2.8	3.3	1.7	2.9	2.5	2.2	2.9	2.8	1.8	1.9	2.0	2.4	2.3

Table 24.–Escapement estimates for four Southeast Alaska coho salmon indicator stocks, 1980–2010.

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	2,662	2,144
1983	694	9,840	1,938	1,490
1984	651	2,825	N/A	1,408
1985	942	6,169	2,324	903
1986	454	1,752	1,546	1,783
1987	668	3,260	1,694	1,118
1988	756	2,724	3,028	513
1989	502	7,509	2,177	433
1990	697	11,050	2,190	870
1991	808	11,530	2,761	1,826
1992	1,020	15,300	3,847	1,426
1993	859	15,670	4,202	830
1994	1,437	15,920	3,228	1,753
1995	460	4,945	2,445	1,781
1996	515	6,050	2,500	950
1997	609	10,050	4,965	732
1998	862	6,802	7,049	983
1999	845	9,920	3,598	1,246
2000	683	10,650	2,287	600
2001	842	19,290	2,178	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	1,224
2008	600	6,870	5,173	1,741
2009	360	4,230	2,164	2,282
2010	**417**	**7,520**	**1,610**	**2,878**
Average,				
1980-2009	685	9,169	3,447	1,354
Escapement Goal Range:				
	200–500	4,000–9,200	1,300–2,900	500–1,600

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

Table 25.–Northern Inside area coho salmon escapements, 1981–2010.

Year	Auke Creek (Weir)	Montana Creek	Peterson Creek	Total Roadside Index	Berners River	Chilkat River	Taku River
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	108,698	104,460
2002	1,112	2,448	195	3,755	27,700	205,429	219,360
2003	585	808	203	1,596	10,110	134,340	183,038
2004	416	364	284	1,064	14,450	67,465	132,405
2005	450	351	139	940	5,220	38,589	91,830
2006	582	1,110	439	2,131	5,470	80,683	140,028
2007	352	324	226	902	3,915	25,493	49,632
2008	600	405	660	1,665	6,870	57,376	95,360
2009	360	698	123	1,181	4,230	47,548	104,320
2010	**417**	**630**	**467**	**1,514**	**7,520**	**87,381**	**103,992**
Average	684	893	270	1,847	9,169	74,365	90,503
Goals:							
Point	340				6,300	50,000	
Lower	200	400	100		4,000	30,000	35,000
Upper	500	1,200	250		9,200	70,000	

Table 26.–Sitka area coho salmon escapement index, 1982–2010.

Year	Starrigavan Creek	Sinitsin Creek	St. John's Creek	Nakwasina River	Eagle River	Black River	Ford Arm Lake (Weir)	Total Index
1982	317	46	***116***	***577***	***482***	***749***	2,662	4,950
1983	45	31	20	217	***143***	***427***	1,938	2,821
1984	385	160	154	715	***645***	425	***4,232***	6,716
1985	193	144	109	408	***390***	1,628	2,324	5,196
1986	57	***73***	***53***	275	245	312	1,546	2,561
1987	36	21	***22***	47	167	262	1,694	2,249
1988	45	56	71	104	***126***	280	3,028	3,710
1989	101	76	89	129	***180***	181	2,177	2,933
1990	39	80	38	195	214	842	2,190	3,598
1991	142	186	107	621	454	690	2,761	4,961
1992	241	265	110	654	629	866	3,847	6,612
1993	256	213	90	***644***	513	764	4,202	6,682
1994	304	313	227	404	717	758	3,228	5,951
1995	274	152	99	626	336	1,265	2,445	5,197
1996	59	150	201	553	488	500	2,500	4,451
1997	55	90	68	300	296	686	4,965	6,460
1998	123	109	57	653	300	1,520	7,049	9,811
1999	167	48	27	291	***243***	1,590	3,598	5,964
2000	144	62	30	459	108	880	2,287	3,970
2001	133	132	80	703	417	1,080	2,178	4,723
2002	227	169	100	713	659	1,194	7,109	10,171
2003	95	102	91	440	373	1,055	6,789	8,945
2004	143	112	79	399	391	380	3,539	5,043
2005	76	67	173	892	460	160	4,257	6,085
2006	386	152	121	996	992	1,100	4,737	8,484
2007	130	39	86	385	426	745	2,567	4,378
2008	96	73	43	839	66	500	5,173	6,790
2009	128	160	140	335	393	590	2,164	3,910
2010	**70**	**171**	**85**	**307**	**640**	**452**	**1,610**	**3,335**
Average	157	117	93	485	388	765	3,471	5,476

Note: Total index is the sum of counts and interpolated values. Interpolated values are shown in bold italic print.

Table 27.–Southern inside (Ketchikan) area coho salmon escapement index, 1987–2010.

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
1987	92	*88*	154	*62*	*387*	*98*	*304*	*145*	180	700	800	740	1,118	650	532	6,051
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	*282*	*72*	35	*105*	*139*	800	550	575	870	135	275	4,403
1991	245	50	285	50	550	100	300	220	375	725	800	575	1,826	671	775	7,547
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	830	600	1,275	8,100
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	958	440	1,806	9,789
1997	75	*85*	420	60	*371*	*94*	*292*	175	140	1,143	571	759	732	32	847	5,795
1998	94	130	460	120	304	50	411	190	*255*	1,004	1,169	1,961	983	256	666	8,053
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	*212*	891	450	173	1,561	*1,612*	1,956	1,580	506	*1,704*	13,055
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	*197*	875	39	690	57	1,140	380	*427*	1,940	1,934	1,980	1,615	214	1,745	13,474
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	*124*	190	176	280	30	405	130	*272*	2,300	645	335	891	260	1,600	7,803
2007	134	*75*	298	35	245	15	290	210	*171*	990	970	351	1,224	3	*701*	5,712
2008	115	55	570	25	1,250	23	420	100	*613*	7,100	*2,524*	925	1,741	2,600	360	18,421
2009	*160*	330	330	340	750	110	1,050	100	1,100	*1,041*	315	1,675	2,282	700	225	10,508
2010	**85**	**102**	**370**	**0**	**880**	***90***	**570**	**190**	***209***	**350**	**550**	**350**	**2,878**	**200**	***710***	**7,534**
Avg.	151	142	545	113	602	131	486	205	340	1,435	1,212	1,310	1,311	566	1,102	9,651

Note: Total index is the sum of counts and interpolated values. Interpolated values are shown in italic print.

Table 28.–Overall coho salmon percentage exploitation rates by indicator stock for the Southeast Alaska troll fishery, 1982–2010.

Year	Auke Lake	Berners River	Ford Arm Lake	Hugh Smith	Weighted Average
Troll Fishery:					
1982	20	42	41	46	37
1983	31	50	54	35	43
1984	34	—	—	31	39
1985	35	45	51	36	42
1986	43	55	61	35	49
1987	37	53	45	28	41
1988	25	40	48	27	35
1989	48	53	62	50	53
1990	43	44	56	39	46
1991	17	18	53	37	31
1992	32	33	56	38	40
1993	38	39	62	53	48
1994	35	37	60	46	44
1995	32	31	48	30	35
1996	39	44	53	40	44
1997	12	16	48	48	31
1998	31	44	49	41	41
1999	34	40	59	42	44
2000	24	25	57	36	35
2001	31	28	68	22	37
2002	18	17	38	17	22
2003	23	24	31	24	26
2004	27	32	64	41	41
2005	33	37	51	32	38
2006	22	26	40	37	31
2007	25	34	66	40	41
2008	30	27	41	19	29
2009	30	30	65	25	38
2010	**25**	**30**	**46**	**22**	**31**
1982–2009 Avg.	30	36	53	35	39

Table 29.–Overall coho salmon percentage exploitation rates by indicator stock for all fisheries combined, 1982–2010.

Year	Auke Lake	Berners River	Ford Arm Lake	Hugh Smith Lake	Weighted Average
All Fisheries:					
1982	40	76	44	65	56
1983	44	71	69	62	61
1984	41	—	—	65	58
1985	44	75	51	63	58
1986	53	93	62	60	67
1987	43	77	48	52	55
1988	37	82	49	66	59
1989	55	62	65	82	66
1990	53	67	58	81	65
1991	31	67	54	68	55
1992	46	67	59	71	60
1993	46	68	67	81	65
1994	53	78	72	81	71
1995	44	83	67	74	67
1996	55	75	58	76	66
1997	20	35	51	72	45
1998	39	71	56	77	61
1999	41	70	64	70	61
2000	30	51	72	55	52
2001	38	40	75	49	51
2002	27	45	53	39	41
2003	35	65	49	59	52
2004	44	56	71	66	59
2005	37	59	58	53	52
2006	33	66	52	53	51
2007	34	54	71	61	55
2008	39	51	53	52	49
2009	39	55	69	46	52
2010	**46**	**66**	**65**	**48**	**56**
1982–2009 Avg.	41	65	60	64	58

FIGURES

Figure 1.–Map of Southeast Alaska Region 1 commercial troll fishing area, Cape Suckling to Dixon Entrance.

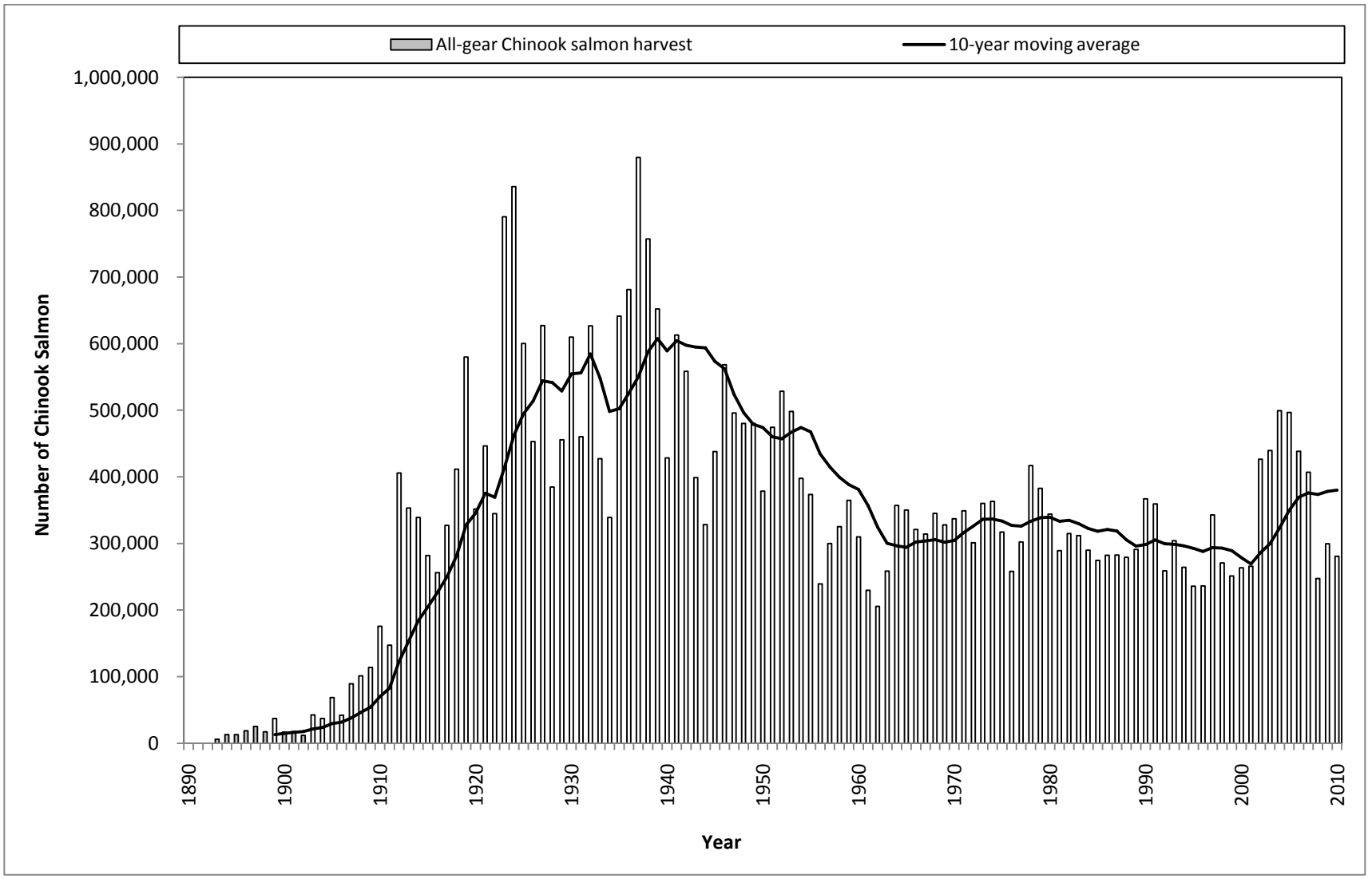


Figure 2.–All-gear harvests of Chinook salmon in common property fisheries, 1890–2010.

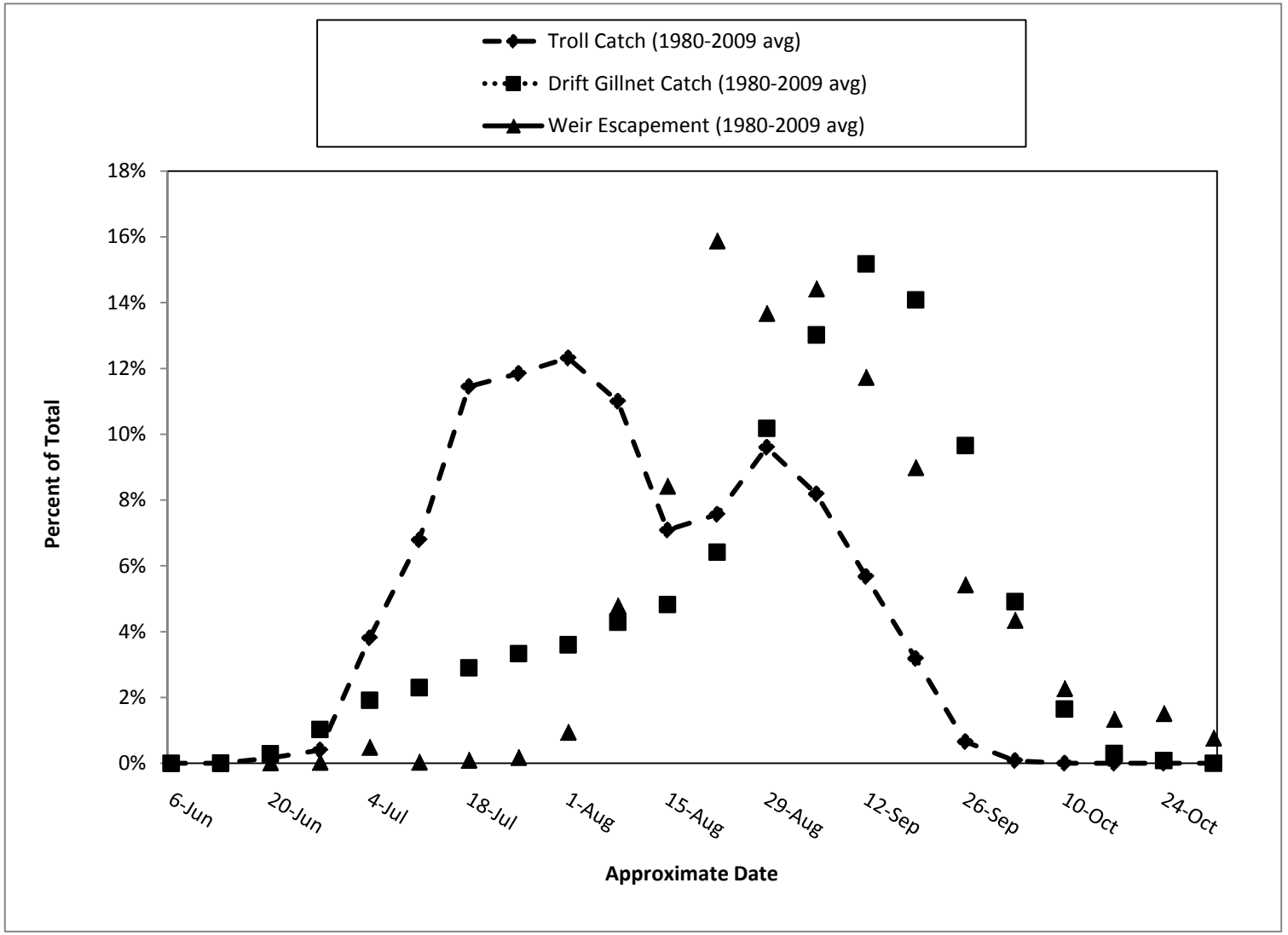


Figure 3.–Average weekly coho harvest timing of the Southeast Alaska commercial troll and drift gillnet fisheries (1980–2009), and the average weekly coho salmon escapement timing of the Hugh Smith Lake, Ford Arm Lake and Auke Creek weirs (1980–2009).

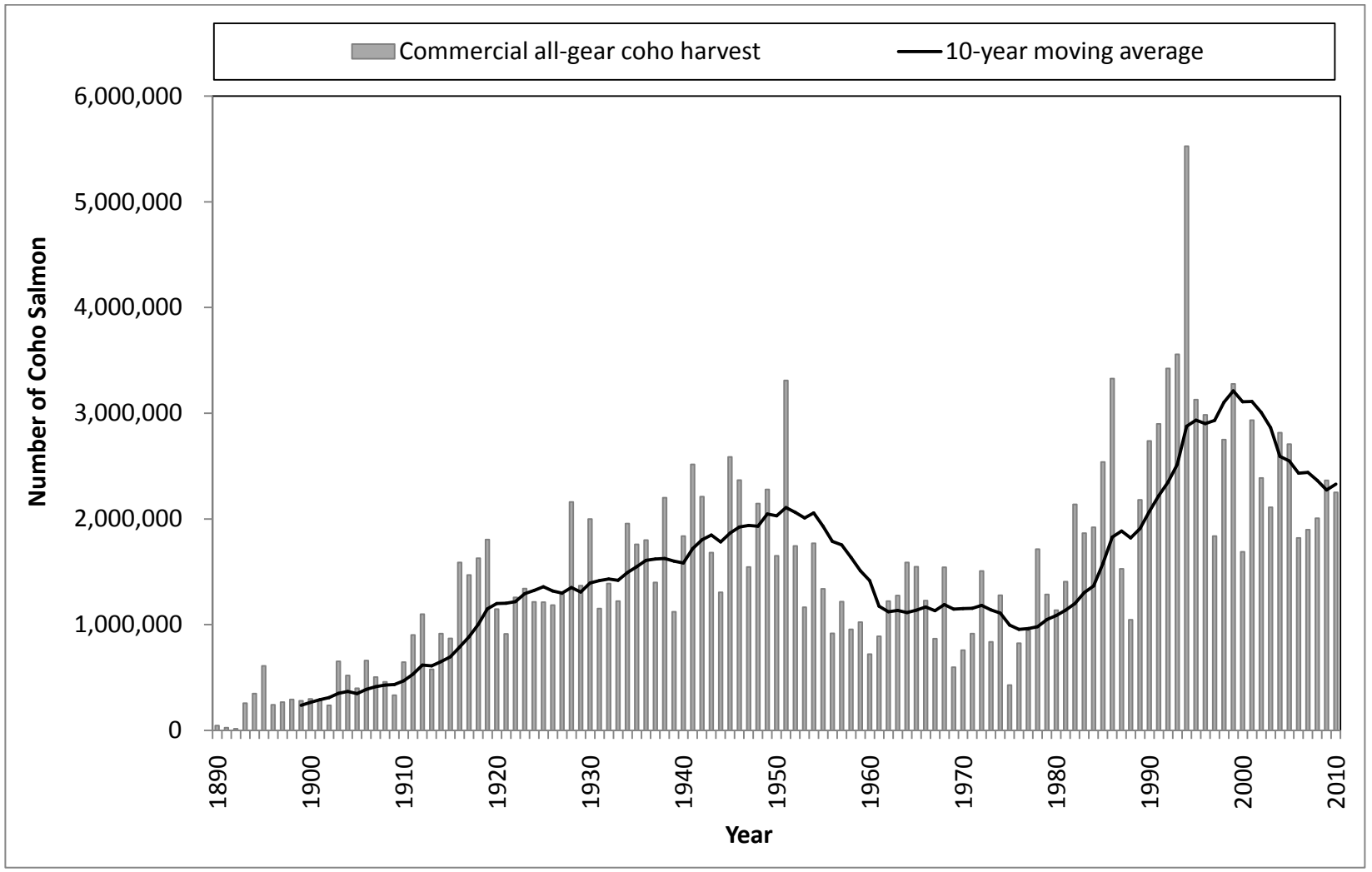


Figure 4.–Commercial all-gear harvests of coho salmon in common property fisheries, 1890–2010.

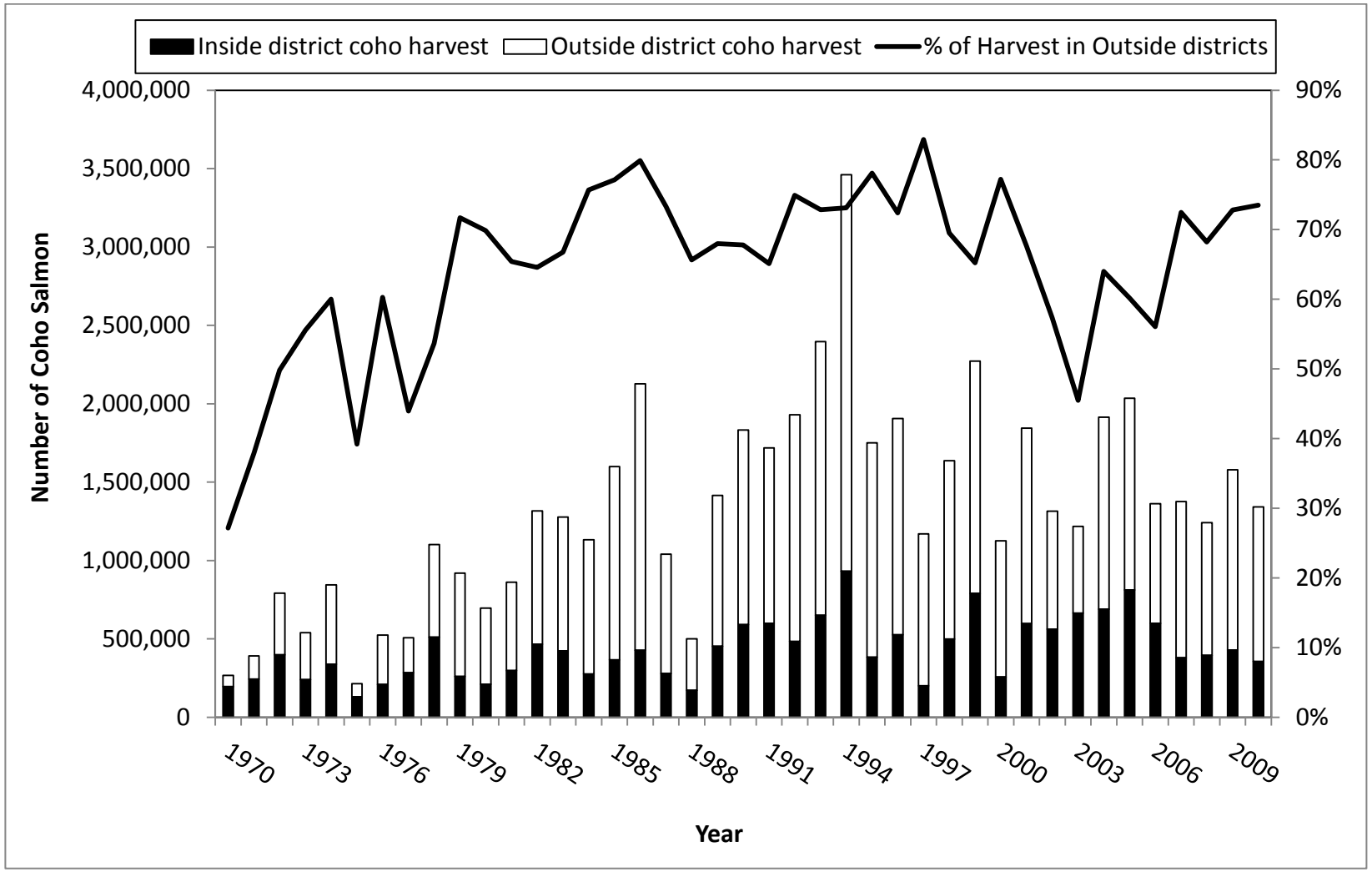


Figure 5.–Southeast Alaska troll coho salmon harvest in the outside (Gulf of Alaska) districts, the inside districts and the percentage of harvest taken in the outside districts, 1970–2010.

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.

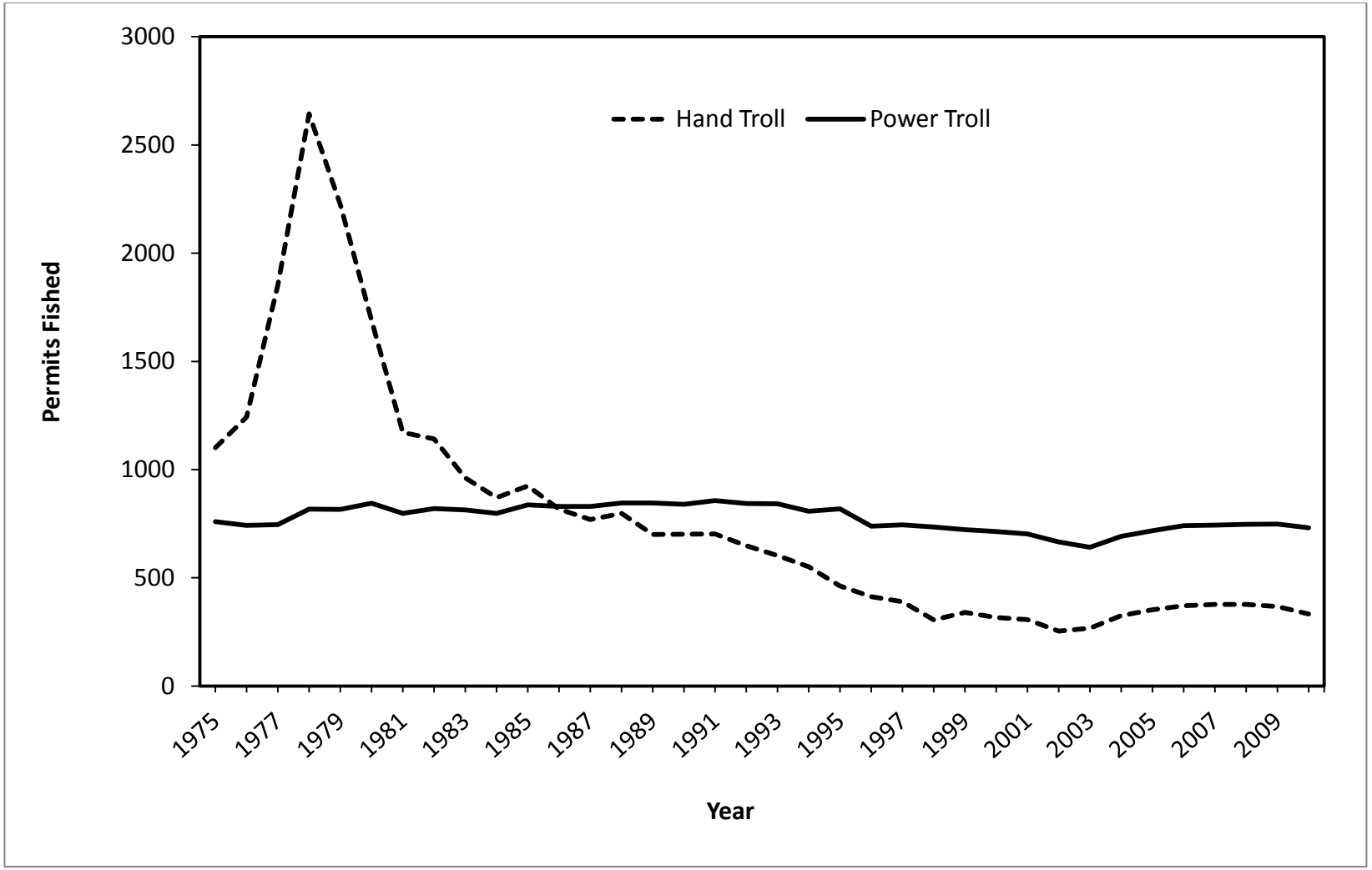


Figure 6.–Number of troll permits fished by gear type, 1975–2010.

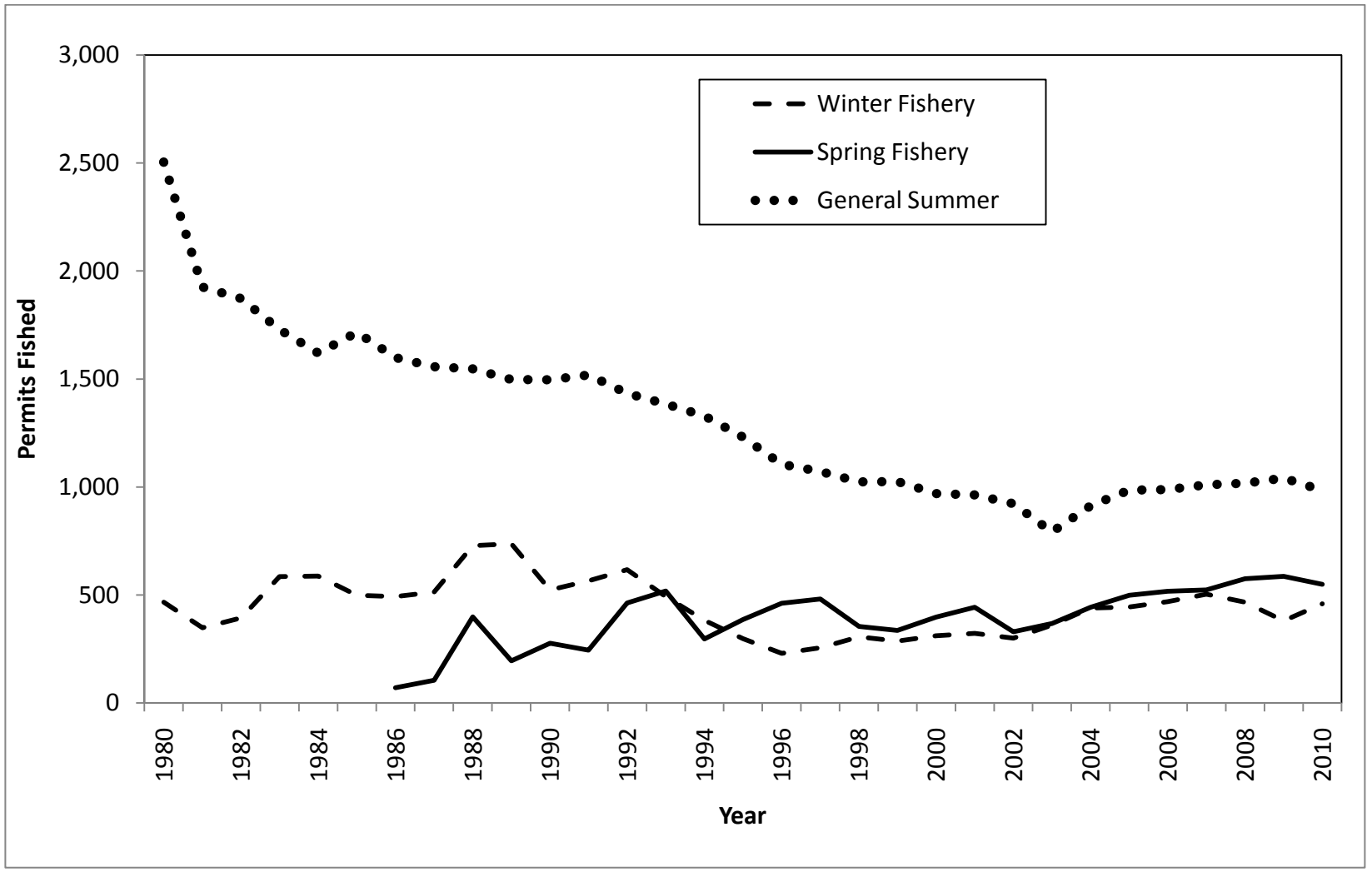


Figure 7.–Number of troll permits fished in the general summer, winter, and spring fisheries, 1980–2010.

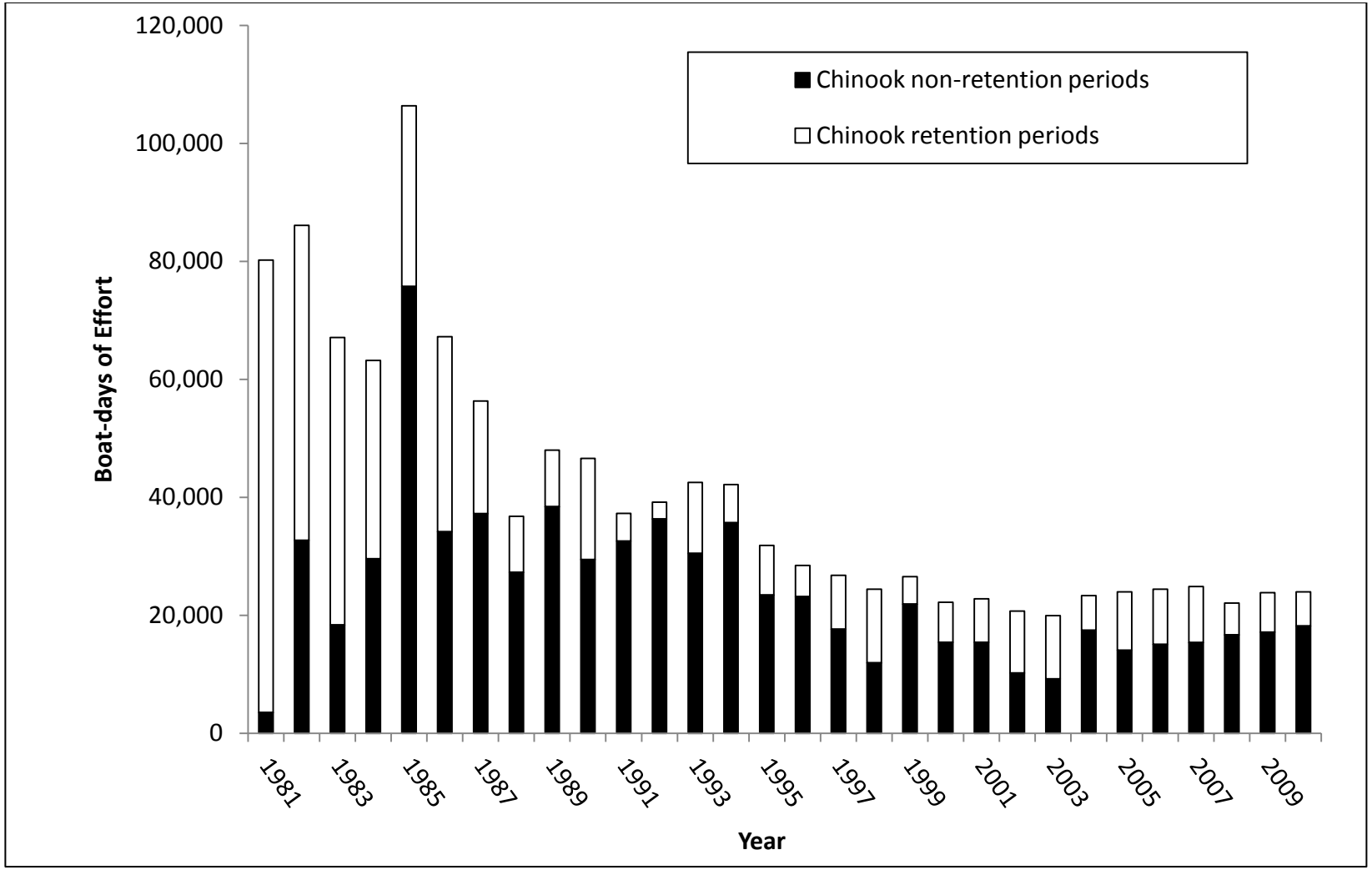


Figure 8.–General summer troll fishery boat-days of effort during Chinook retention and Chinook non-retention fishing periods, 1981–2010.

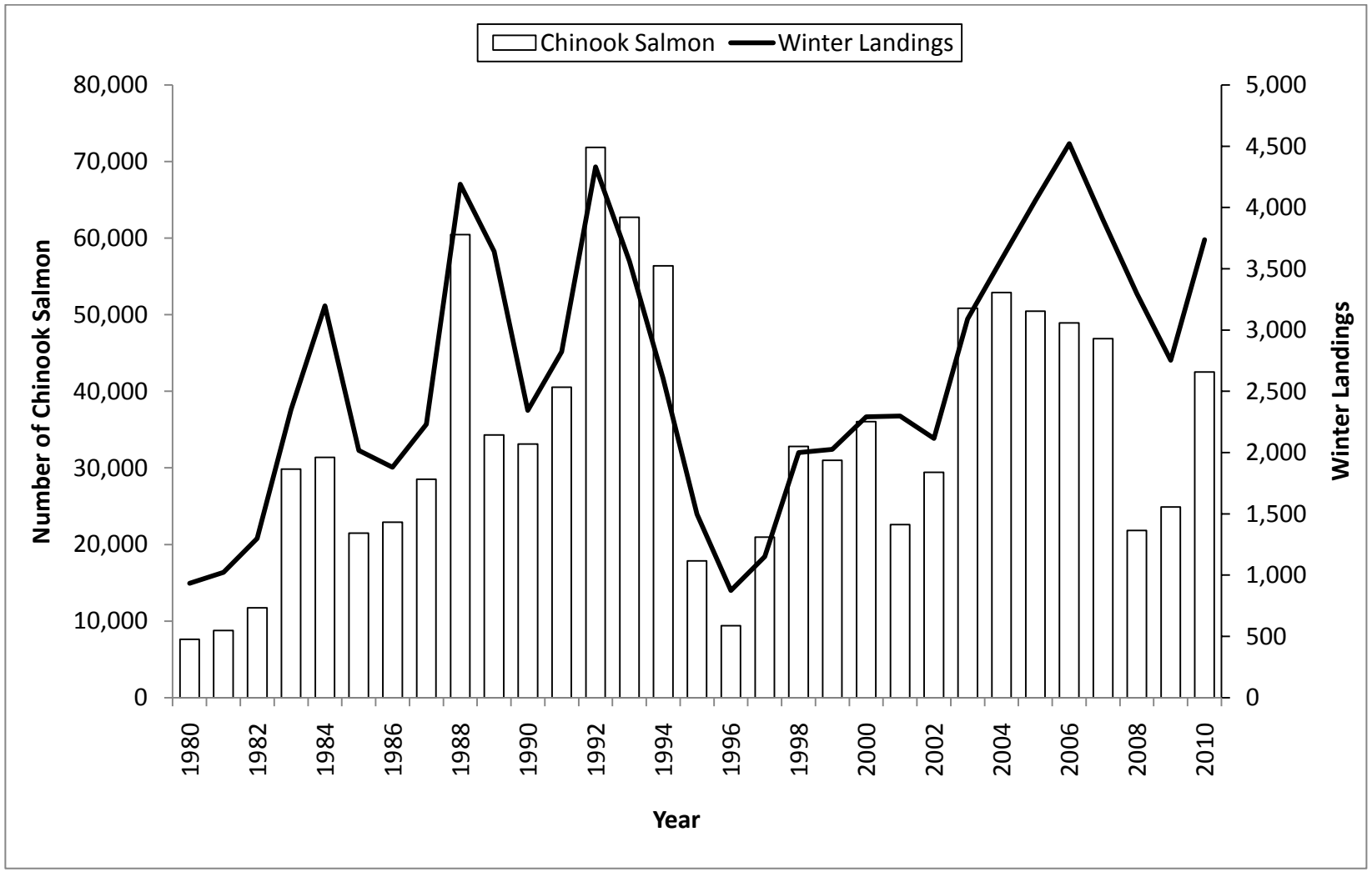


Figure 9.–Southeast Alaska winter troll fishery Chinook salmon harvests and landings, 1980–2010.

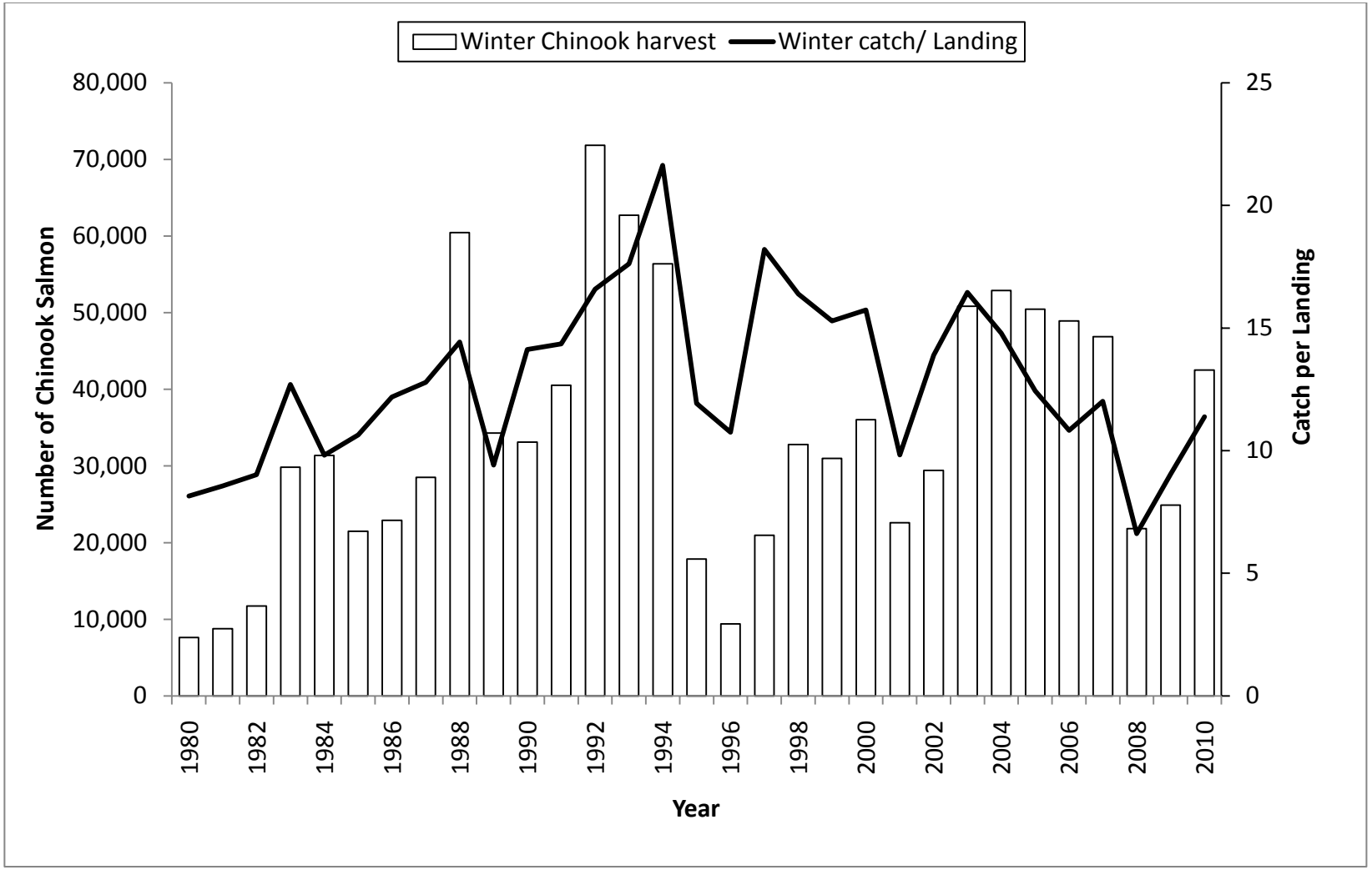


Figure 10.–Southeast Alaska winter troll harvest and catch per landing for troll gear, 1980–2010.

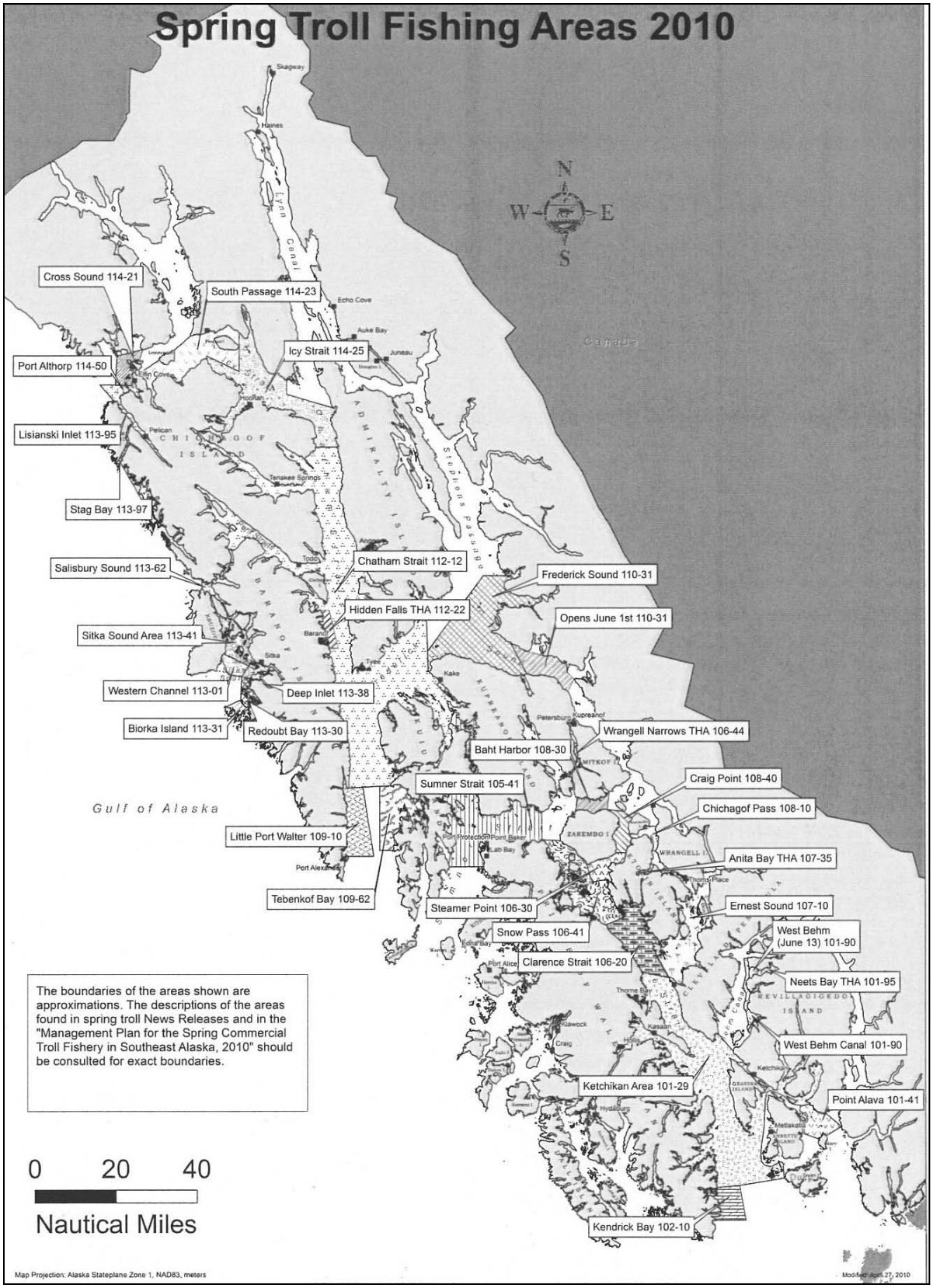


Figure 11.–Map of spring troll areas. Shaded areas were open in 2010.

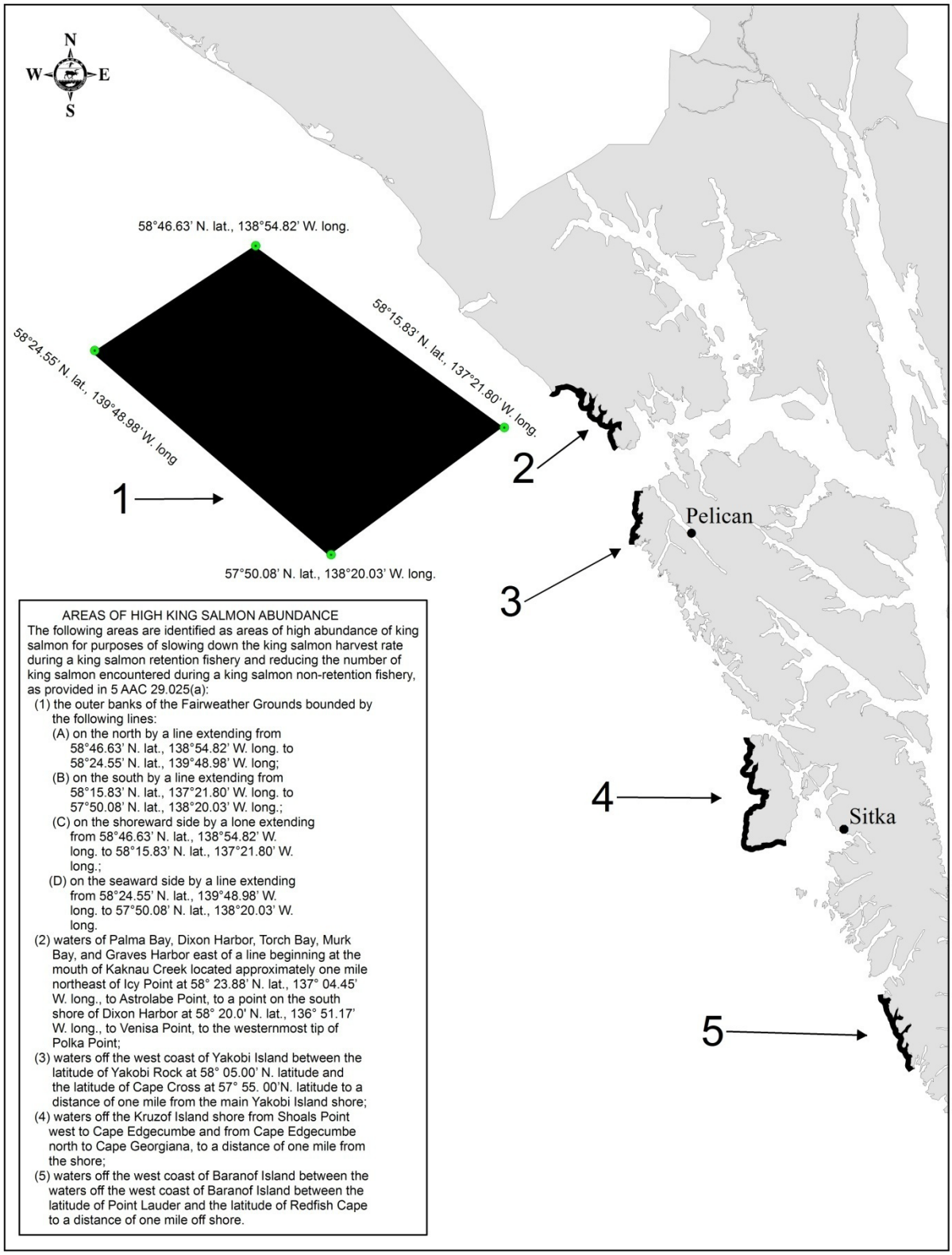
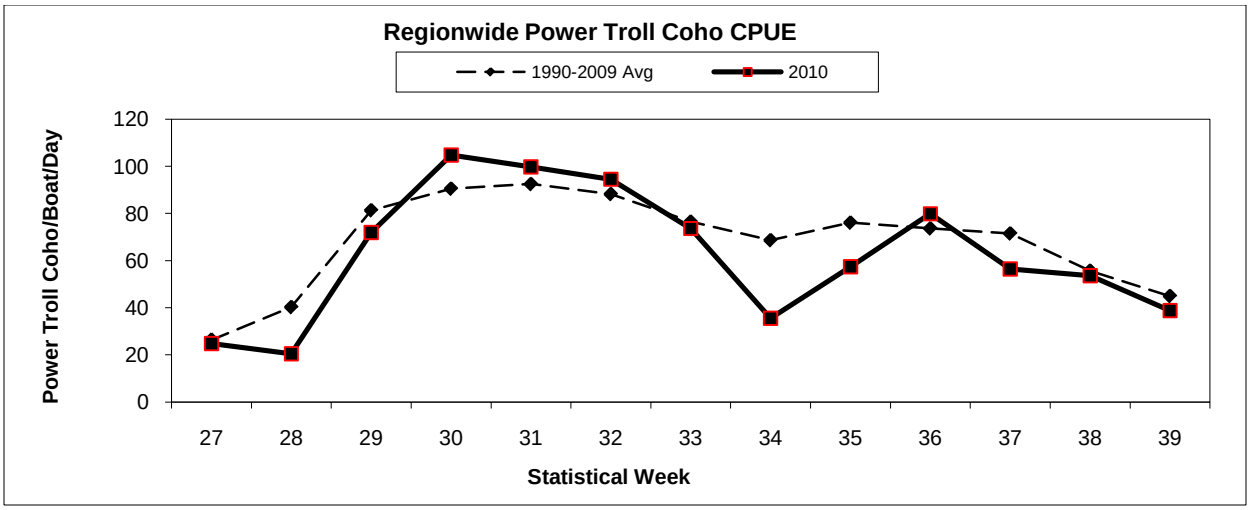
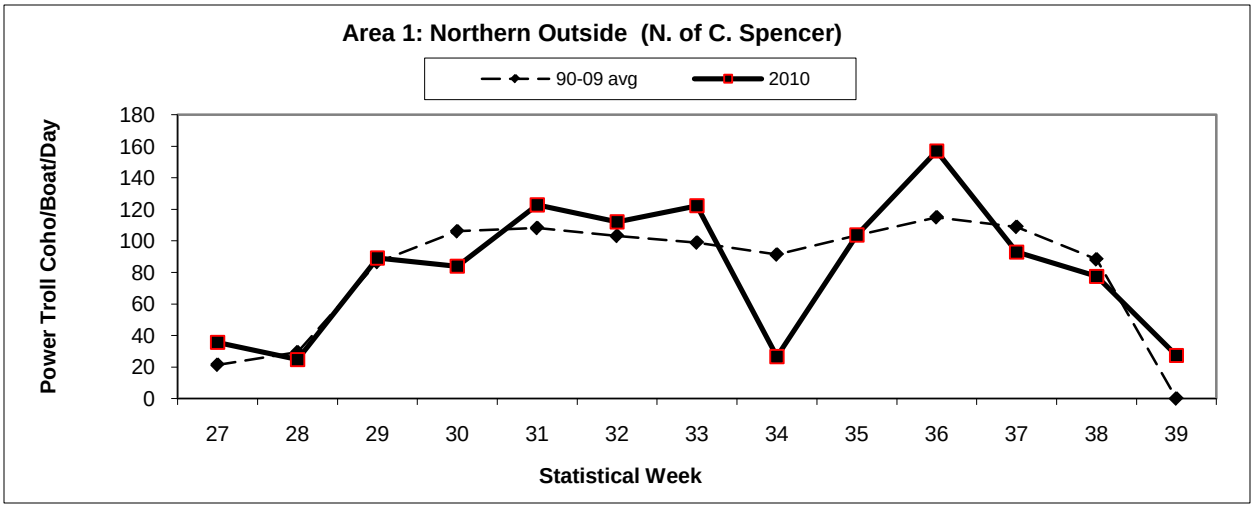


Figure 12.–Map of Areas of High King Salmon Abundance (shaded areas), which close during part of the summer fishery.





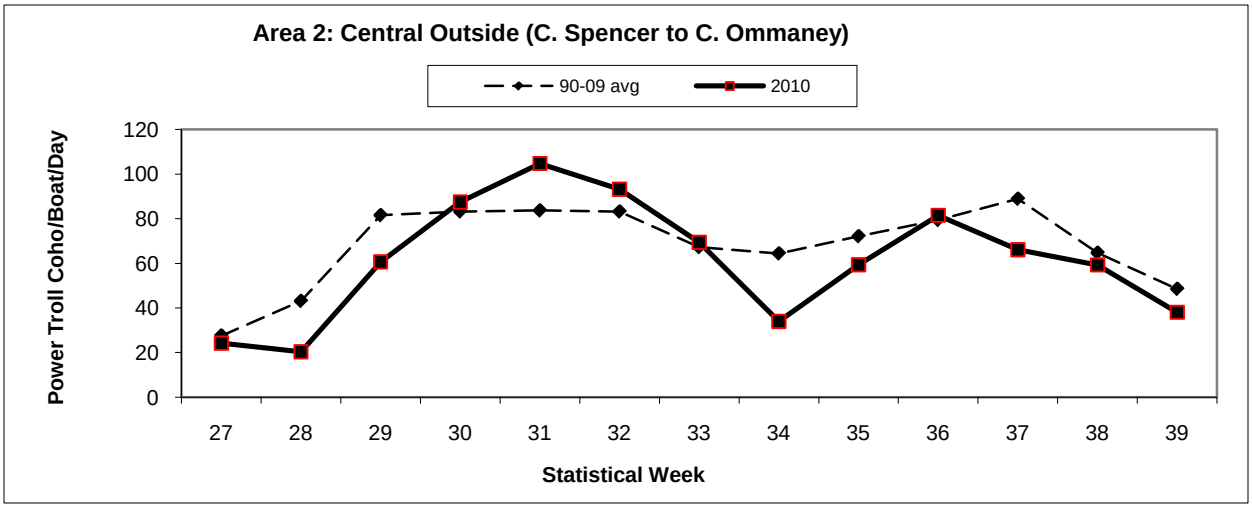


Figure 13.–Average power troll coho salmon harvest per boat day (CPUE) comparing 2010 results with the 1990–2009 average, for Southeast Alaska, regionwide, Northern Outside, and Central Outside (Areas 1 and 2).

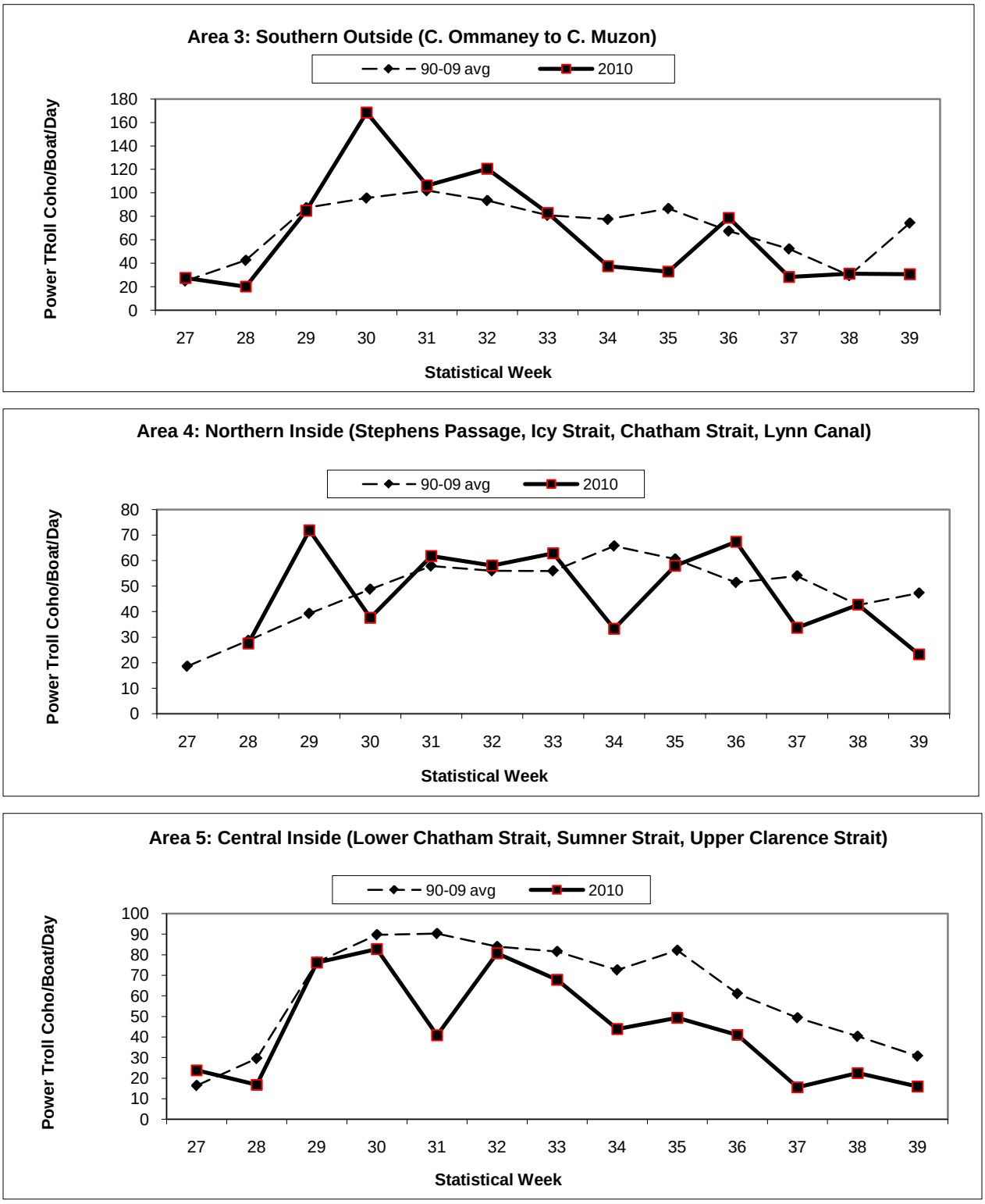


Figure 14.–Average power troll coho salmon harvest per boat day (CPUE) comparing 2010 results with the 1990–2009 average, for Southeast Alaska, Southern Outside, Northern Inside, and Central Inside (Areas 3, 4, and 5).

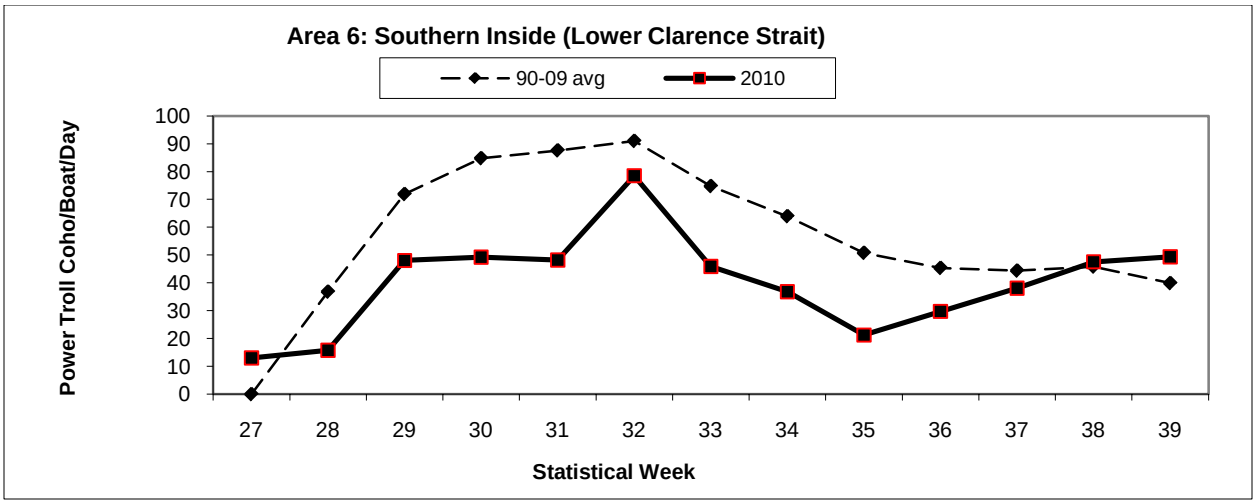
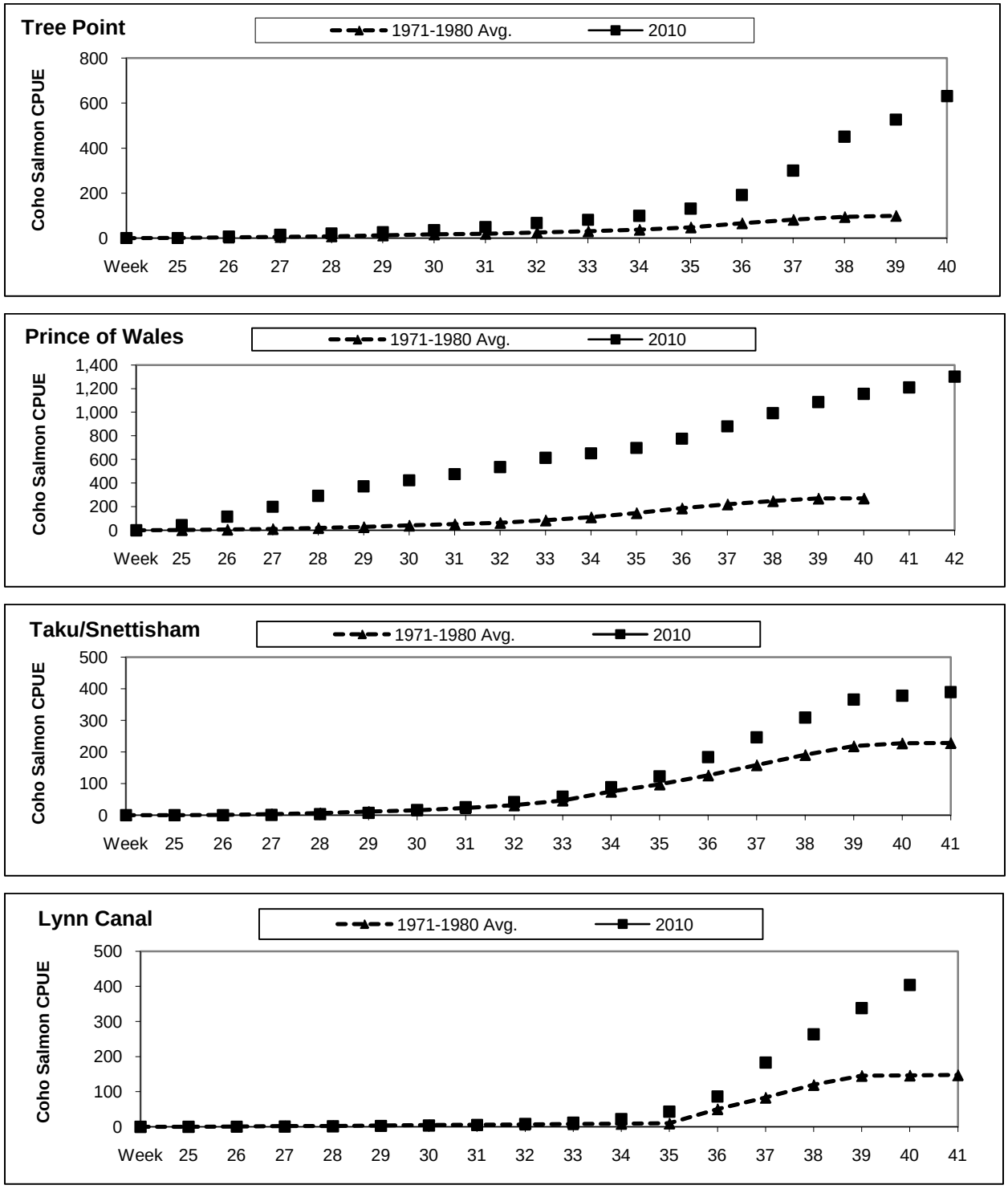


Figure 15.–Average power troll coho salmon harvest per boat day (CPUE) comparing 2010 results with the 1990–2009 average, for Southeast Alaska, Southern Inside (Area 6).



Statistical Week

Figure 16.–Cumulative coho salmon catch-per-boat-day comparing 2010 to the 1971–1980 average, for the four indicator drift gillnet fisheries.

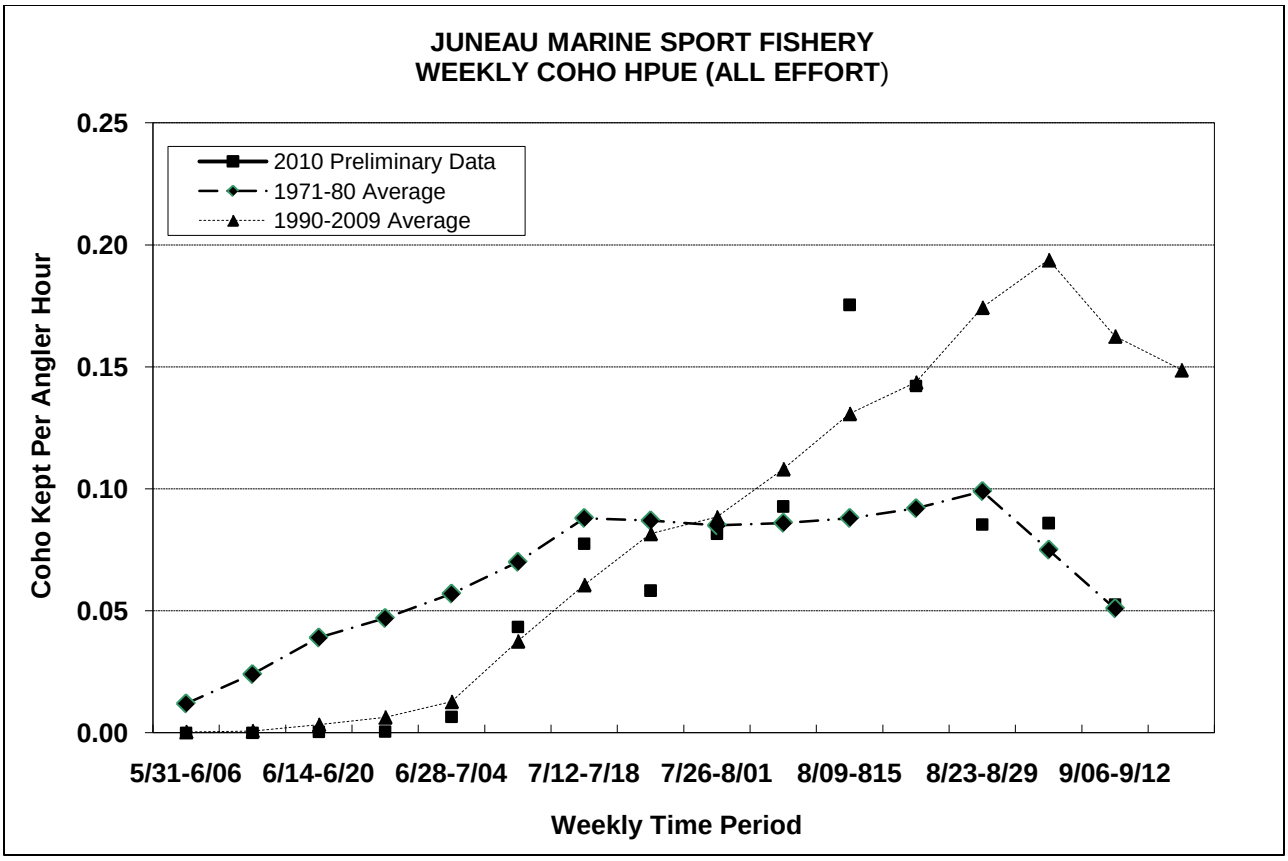


Figure 17.–Cumulative coho salmon catch-per-boat-day (CPUE) comparing 2010 to the 1971 to 1980 average and the 1990–2009 average, for the Juneau marine sport fishery harvest.

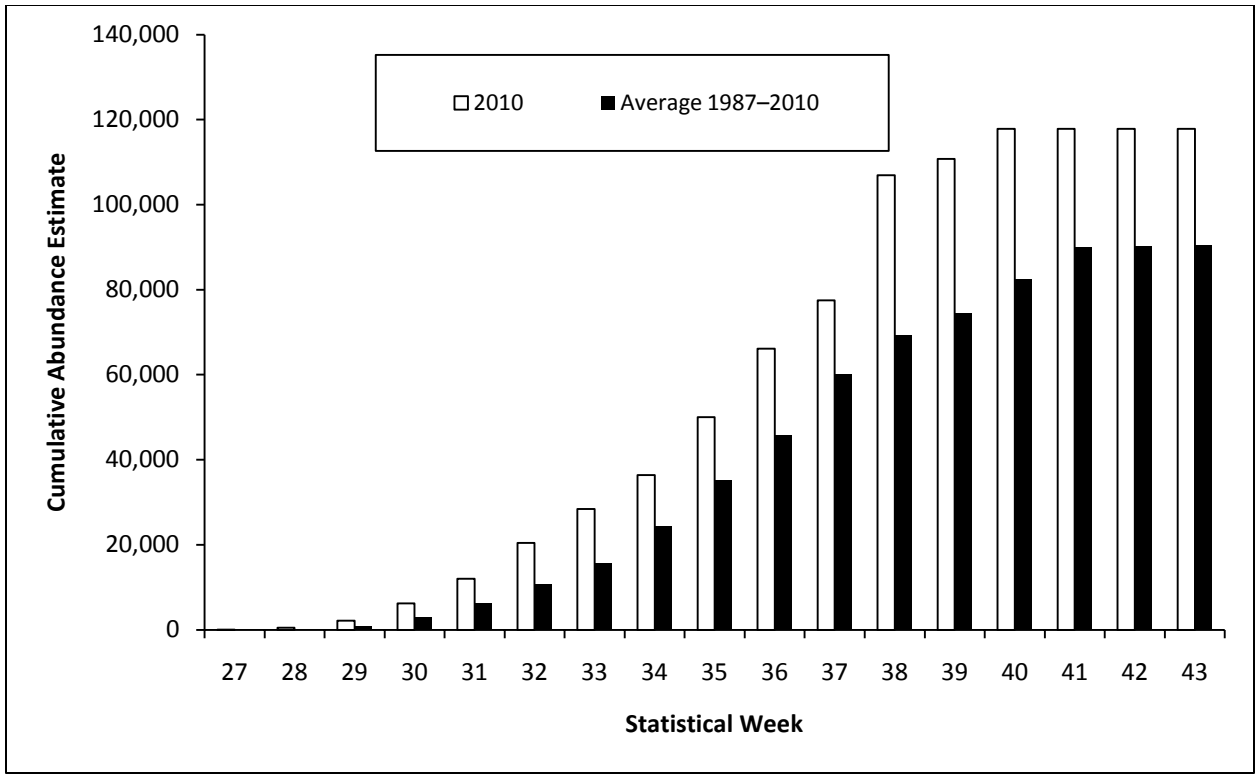


Figure 18.–Cumulative mark-recapture abundance estimate for Taku River coho salmon from Canyon Island fish wheels, for 2010 and the 1987–2010 average.

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

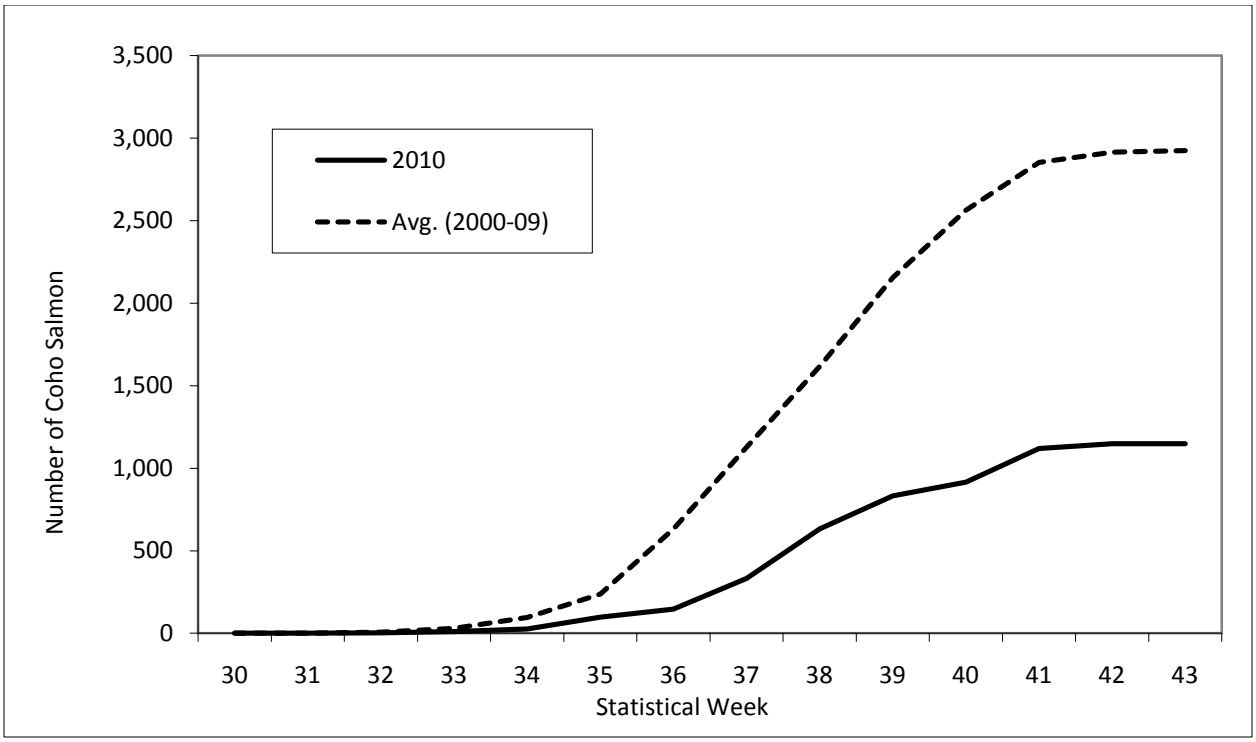


Figure 19.–Cumulative weekly catch of coho salmon in the Chilkat River fish wheels, for 2010 and the 2000–2009 average.

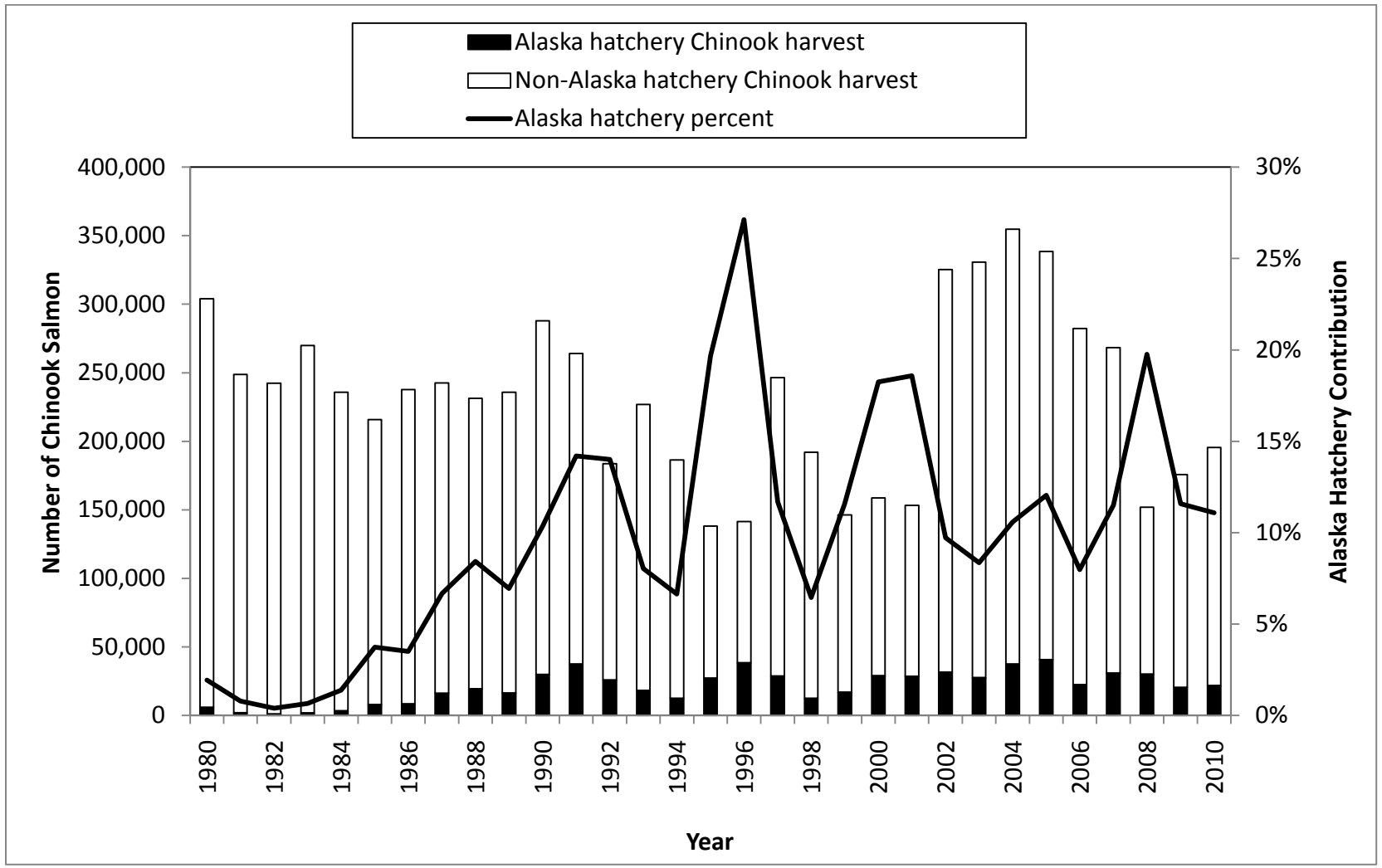


Figure 20.–Alaska hatchery Chinook salmon contributions to the Southeast Alaska troll fishery, 1980–2010.

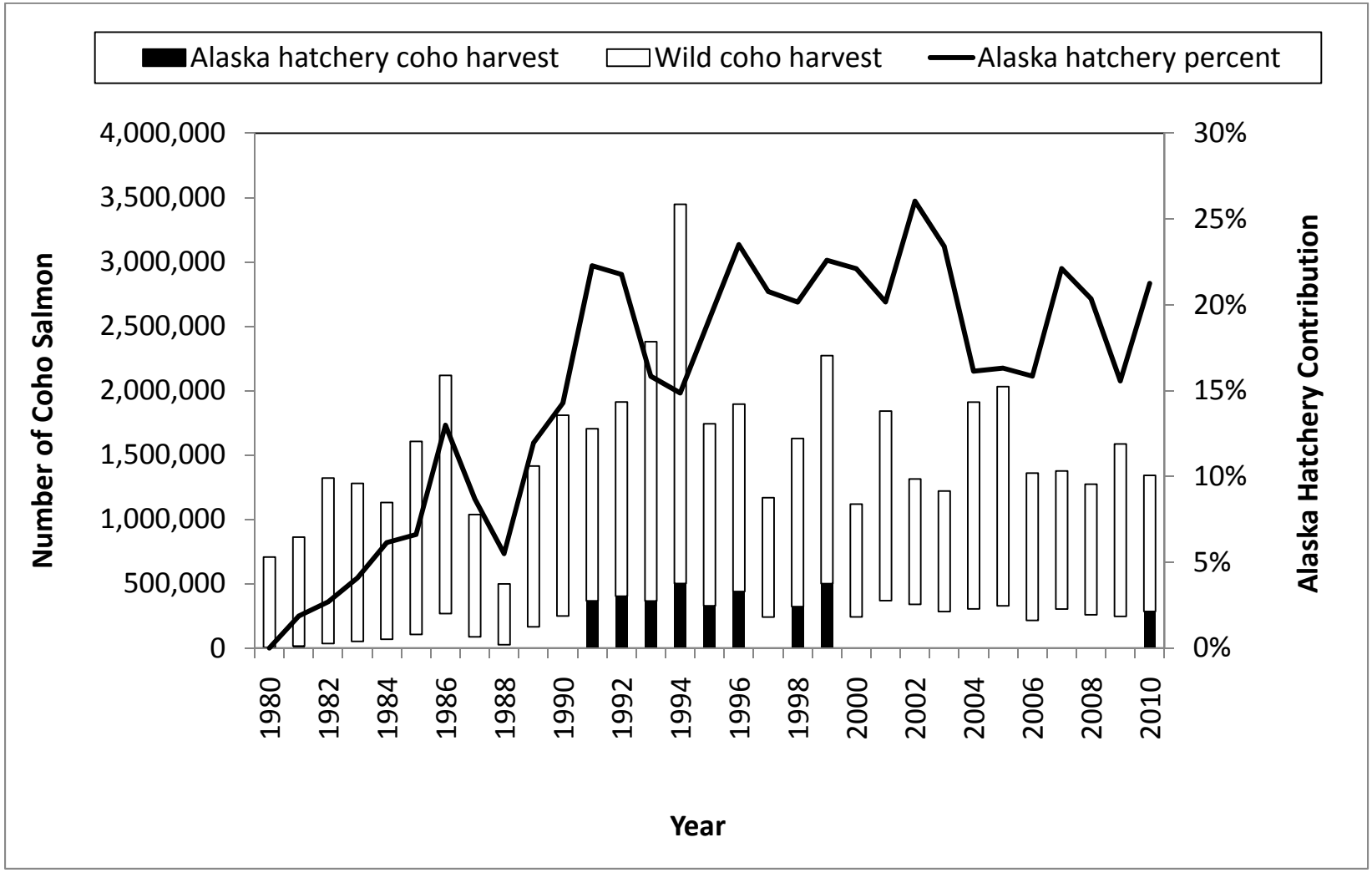


Figure 21.–Hatchery contributions of coho salmon to the Southeast Alaska troll fishery, 1980–2010.

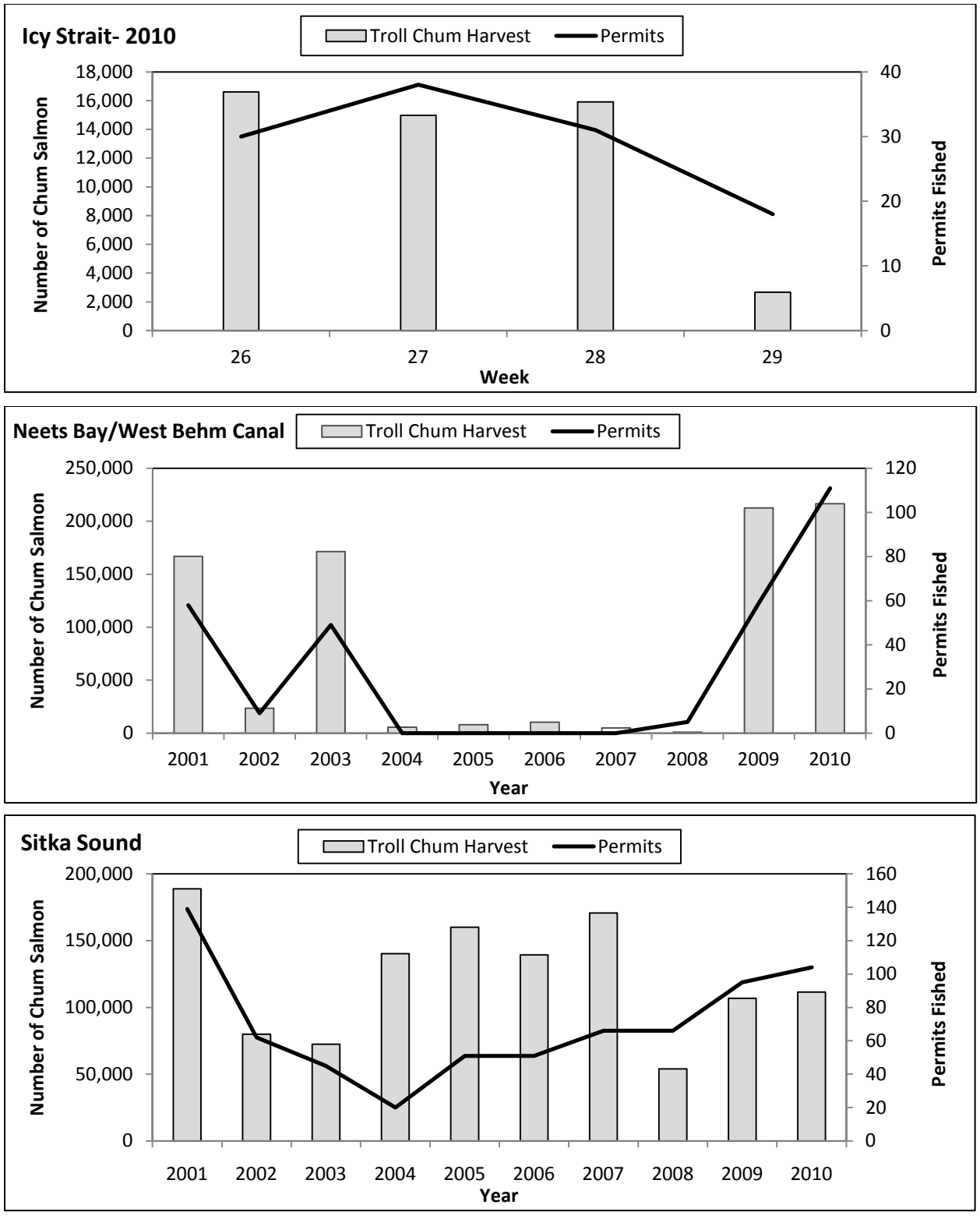


Figure 22.–Icy Strait (Homeshore) troll harvest and weekly permits targeting chum in 2010, annual harvest and number of permits targeting chum in Neets Bay/West Behm Canal and Sitka Sound, 2001–2010.

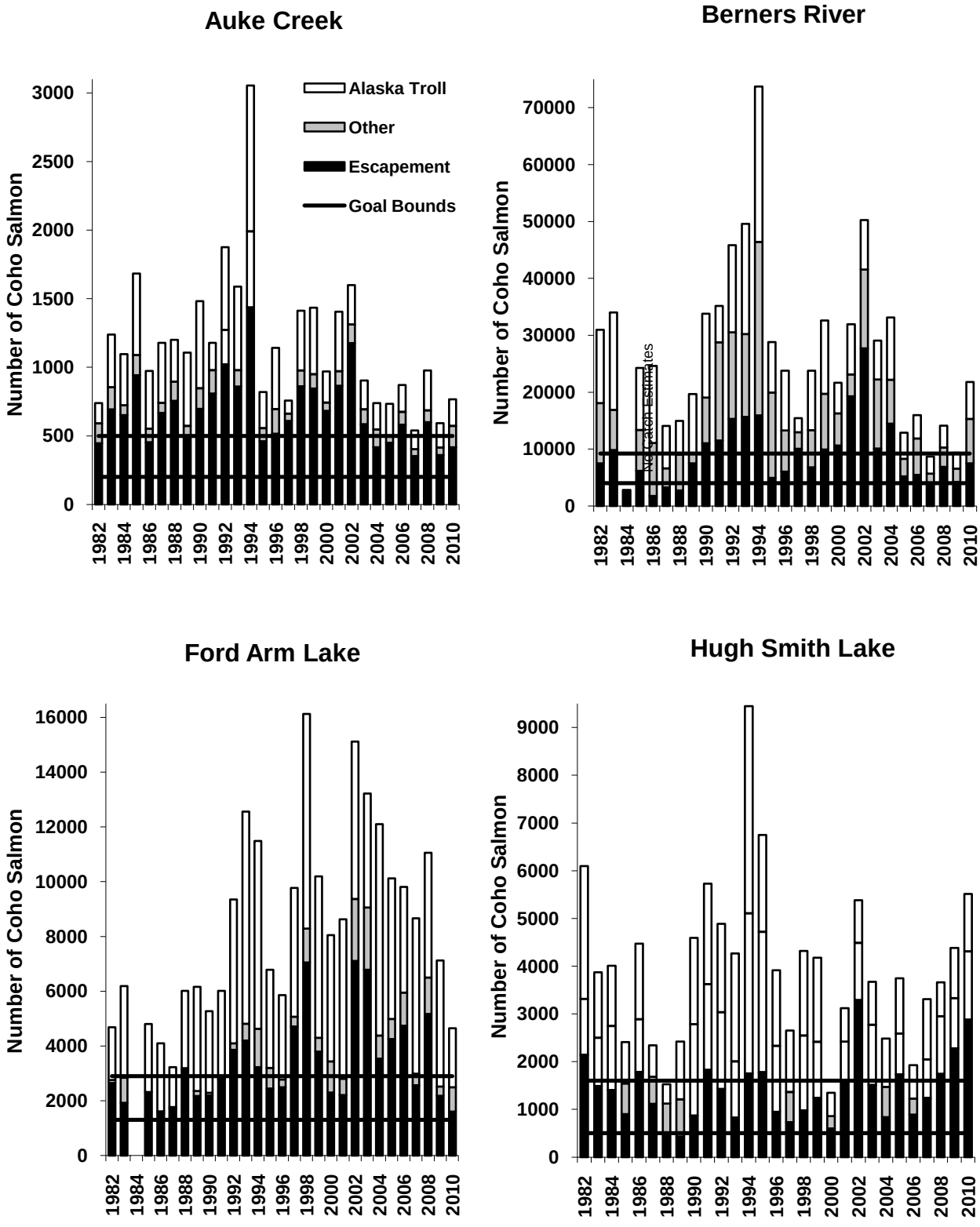


Figure 23.–Total run size, catch, escapement and biological escapement goal range for four wild Southeast Alaska coho salmon stocks, 1982–2010.

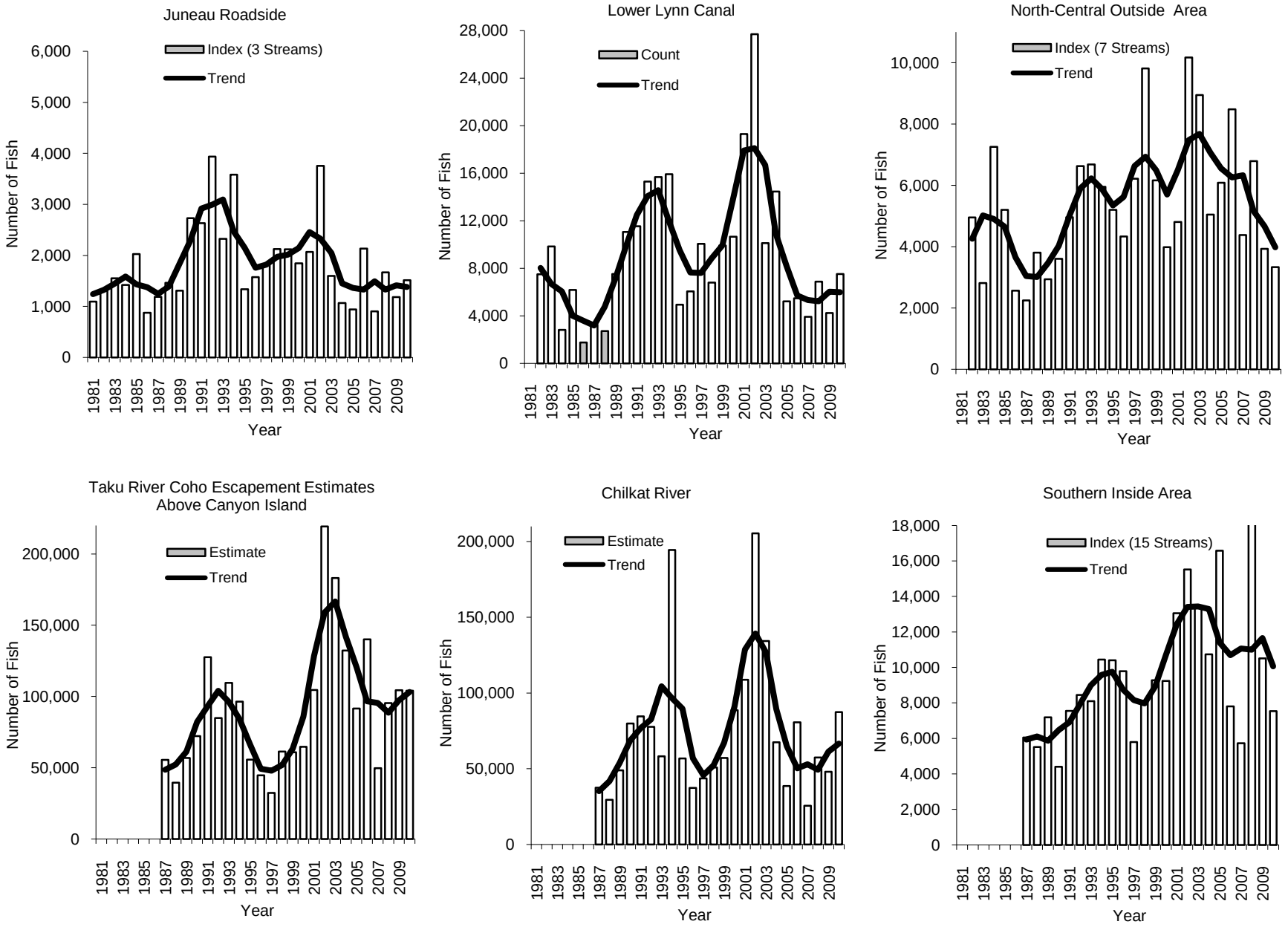


Figure 24.–Coho salmon escapement counts and estimates in index streams in six areas of Southeast Alaska, 1981–2010.

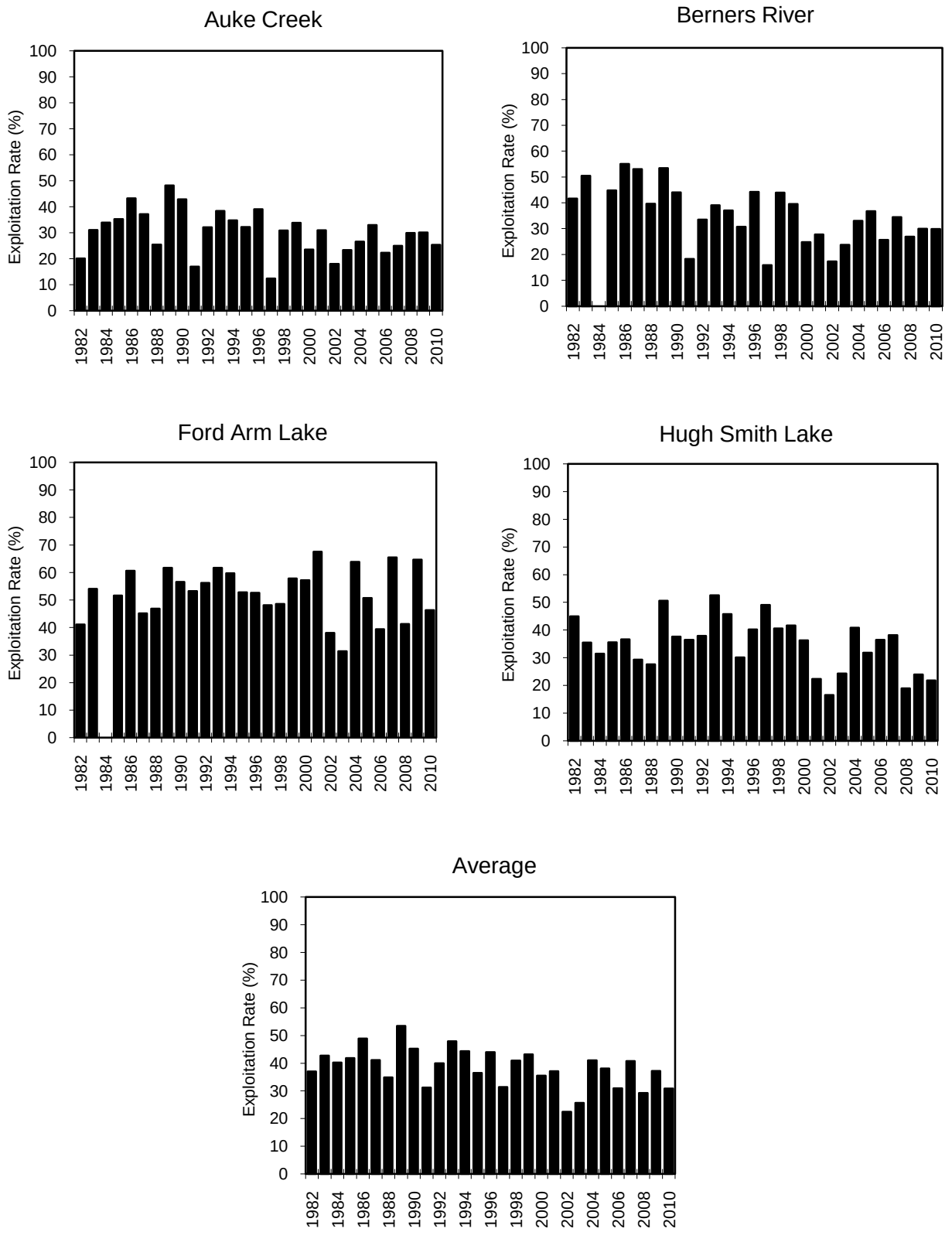


Figure 25.–Estimated exploitation rates by the Alaskan troll fishery for four coded-wire tagged Southeast Alaska coho salmon stocks, 1982–2010.

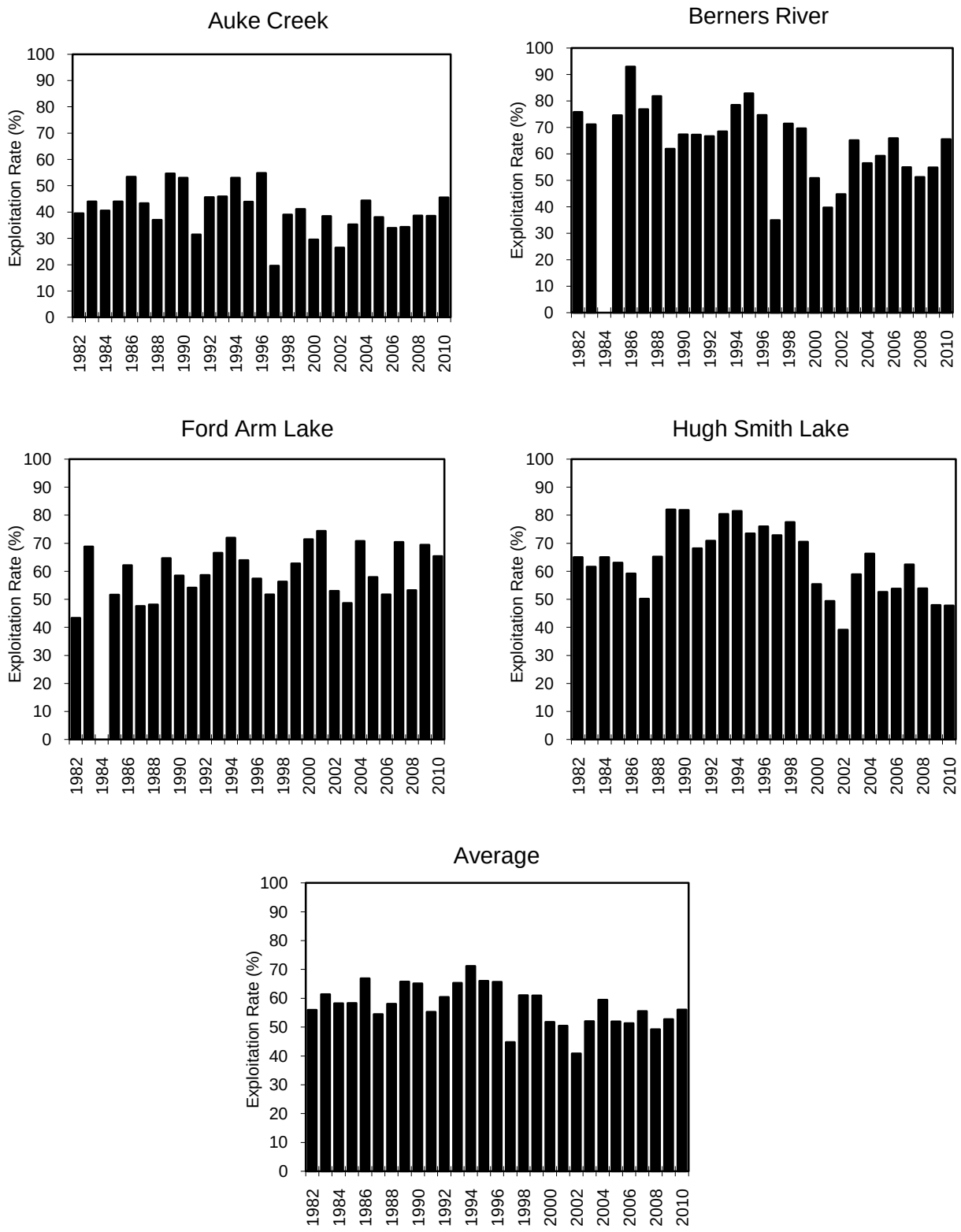


Figure 26.–Estimated total exploitation rates by all fisheries for four coded-wire tagged Southeast Alaska coho salmon stocks, 1982–2010.