

**2004 Annex: Chinook Salmon Plan for
Southeast Alaska**

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Weights and measures (metric)		General		Measures (fisheries)	
centimeter	cm	Alaska Administrative		fork length	FL
deciliter	dL	Code	AAC	mid-eye-to-fork	MEF
gram	g	all commonly accepted		mid-eye-to-tail-fork	METF
hectare	ha	abbreviations	e.g., Mr., Mrs., AM, PM, etc.	standard length	SL
kilogram	kg			total length	TL
kilometer	km	all commonly accepted			
liter	L	professional titles	e.g., Dr., Ph.D., R.N., etc.		
meter	m	at	@	Mathematics, statistics	
milliliter	mL	compass directions:		<i>all standard mathematical</i>	
millimeter	mm	east	E	<i>signs, symbols and</i>	
		north	N	<i>abbreviations</i>	
		south	S	alternate hypothesis	H _A
		west	W	base of natural logarithm	<i>e</i>
		copyright	©	catch per unit effort	CPUE
		corporate suffixes:		coefficient of variation	CV
		Company	Co.	common test statistics	(F, t, χ^2 , etc.)
		Corporation	Corp.	confidence interval	CI
		Incorporated	Inc.	correlation coefficient	
		Limited	Ltd.	(multiple)	R
		District of Columbia	D.C.	correlation coefficient	
		et alii (and others)	et al.	(simple)	r
		et cetera (and so forth)	etc.	covariance	cov
		exempli gratia		degree (angular)	°
		(for example)	e.g.	degrees of freedom	df
		Federal Information		expected value	<i>E</i>
		Code	FIC	greater than	>
		id est (that is)	i.e.	greater than or equal to	≥
		latitude or longitude	lat. or long.	harvest per unit effort	HPUE
		monetary symbols		less than	<
		(U.S.)	\$, ¢	less than or equal to	≤
		months (tables and		logarithm (natural)	ln
		figures): first three		logarithm (base 10)	log
		letters	Jan, ..., Dec	logarithm (specify base)	log ₂ , etc.
		registered trademark	®	minute (angular)	'
		trademark	™	not significant	NS
		United States		null hypothesis	H ₀
		(adjective)	U.S.	percent	%
		United States of		probability	P
		America (noun)	USA	probability of a type I error	
		U.S.C.	United States	(rejection of the null	
			Code	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

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	pH
(negative log of)	
parts per million	ppm
parts per thousand	ppt, ‰
volts	V
watts	W

FISHERY MANAGEMENT REPORT NO. 05-35

2004 ANNEX: CHINOOK SALMON PLAN FOR SOUTHEAST ALASKA

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ABSTRACT

This publication is the 22nd Annex to the Chinook Salmon Plan for Southeast Alaska (Holland et al. 1983) and serves as a single source of current information on enhanced Chinook salmon production and harvest in Southeast Alaska, including broodstock allocation plans and recommendations for the current year.

Key Words: Annex, Pacific Salmon Treaty, Chinook Planning Team, hatchery production, broodstock, Southeast Alaska, genetics.

INTRODUCTION

The Chinook Planning Team (CPT) was established to address Chinook salmon enhancement in Southeast Alaska from a regional stock rebuilding perspective. The team's members represent Chinook salmon producers and Alaska Department of Fish and Game (ADF&G) staff. The Chinook Planning Team developed the Chinook Salmon Plan for Southeast Alaska (Holland et al. 1983), under the direction of the commissioner of the Alaska Department of Fish and Game. This annual update (Annex) to the Chinook Salmon Plan serves as a single source of current information on enhanced Chinook salmon production and harvest in Southeast Alaska. Each Annex describes actions taken to implement the policies and achieve the goals described in the Chinook Salmon Plan. Annexes also contain broodstock allocation plans and recommendations for the current year and summarize current issues in Chinook salmon enhancement discussed at the Chinook Planning Team meeting each spring. The compilation of data in each Annex assists Chinook salmon producers and managers with plans to maximize benefits to Alaskan user groups while staying within the annual harvest quota. This publication is the 22nd Annex to the Chinook Salmon Plan.

One of the original objectives stated in both the *Comprehensive Salmon Plan for Southeast Alaska, Phase I* and the Chinook Salmon Plan was to increase the Chinook salmon harvest in Southeast Alaska to 537,000 fish annually from all sources. In 1985 the Pacific Salmon Treaty (PST) was signed, and the United States and Canada agreed to begin a coast-wide, wild Chinook salmon stock-rebuilding program. Since then annual harvest limits have been imposed on the Alaska catch of PST or "treaty" fish, defined as any Chinook salmon *not* of Alaska hatchery origin. The range in these annual limits has fluctuated between 146,000 fish in 1996 to 445,991 fish in 2003. Alaska hatchery Chinook salmon production beyond a preexisting level of 5,000 fish is exempt from the PST harvest limits. Therefore, hatchery production that can be harvested in discrete areas where the interception rate of non-Alaskan fish is low has become important to the fishing industry, particularly to the troll and recreational fleets.

SUMMARY OF CHINOOK SALMON PRODUCTION, HARVEST, AND ENHANCEMENT IN SOUTHEAST ALASKA

WILD STOCK ESCAPEMENT

The department has estimated Chinook salmon escapement in 11 indicator river systems since 1981. Originally, escapement goals for these rivers were set as the largest escapement recorded prior to 1981. Recently, coded wire tag (CWT) data, improved estimates of total escapement, and age and sex data have been used to establish maximum sustained yield (MSY) escapement goals (McPherson et al 2003, Table 1).

Mark-recapture programs were conducted on the Alsek, Chilkat, Taku, Stikine, Unuk, and Chickamin Rivers. Surveys for fish continued in other systems in order to document the escapement. There was also some increased on-ground presence in King Salmon River, Andrew

Creek, and Blossom and Keta Rivers to collect age, sex, and size data, and to look for CWTs. Wild Chinook salmon smolt tagging continued in 2003 on the Taku, Stikine, Chilkat, Unuk, and Chickamin Rivers.

In general, escapements in 2003 decreased slightly from 2002, but were considerably above the low counts of 1998 and 1999. The estimated wild systems total escapement for Chinook salmon in 2003 was 100,348 large fish; this was a 28% decrease from the 2002 estimate (Table 1).

CHINOOK SALMON HARVESTS IN SOUTHEAST ALASKA FISHERIES, 2003

The 2003 Chinook salmon harvest was managed under Pacific Salmon Treaty Agreements (PSTA). In addition to complying with the PSTA, 2003 Chinook salmon fisheries were managed to (1) continue the Southeast Alaska wild Chinook salmon conservation program; (2) provide maximum opportunity to harvest Alaska hatchery-produced Chinook salmon; (3) minimize incidental mortality during Chinook salmon non-retention periods by closing areas of high Chinook salmon abundance and; (4) meet regulatory requirements adopted by the Alaska Board of Fisheries.

The PSTA quota for the 2003 fisheries was 366,100 treaty fish, based on a preseason abundance index of 1.79. Under the current Alaska Board of Fisheries (BOF) plan, 8,600 fish plus 4.3% of the annual quota for Chinook salmon are allocated for net fisheries. The commercial troll and sport fisheries then divide the remaining quota using an 80:20 ratio. In 2003, 24,340 fish were allocated to the net fisheries. The remaining 341,800 treaty fish were split between the troll and sport fisheries, resulting in allocations of 273,400 and 68,400 fish, respectively.

Troll Fishery

The troll fleet harvests the majority of Chinook salmon in Southeast Alaska each year; therefore management of the troll harvest is critical to achieving the PSTA quota. The troll fishery is divided into two seasons: winter and summer. The summer season is further divided into a spring fishery and a general summer fishery. A catch ceiling of 45,000 fish, with a range of 43,000 to 47,000 fish, is mandated in regulation for the winter fishery. All treaty Chinook salmon harvested in the winter and spring troll fisheries, the pre-treaty production of Alaska hatchery fish, and an estimated 1,000 fish risk factor are subtracted from the troll quota in order to establish the harvest target for the summer season. Following this procedure, the 2003 summer season harvest target was calculated to be 273,400 PSTA fish. According to the BOF plan, 70% (191,400 fish) Chinook salmon were to be harvested in the first opening and the remaining 30% (82,000 fish), following any closure for coho salmon management in the month of August.

In 2003 the Commercial Fisheries Entry Commission renewed 965 power troll permits and 1,196 hand troll permits, the number of power troll permits was the same as in 2002 and the number of hand troll permits was slightly less than the number renewed in 2002. Of the permits issued, 640 power troll permits and 259 hand troll permits were actually fished. This represents a slight decrease in power troll effort and a slight increase in hand troll effort, compared to 2002. Compared to the 2002 season, participation in 2003 winter and spring troll fisheries increased, while participation in the summer troll fishery declined (Figure 1).

Winter Season

By regulation, the winter fishery occurs in those areas of Southeast Alaska east of the surf line south of Cape Spencer, including the waters of Yakutat Bay. All outer coastal areas, including

the Exclusive Economic Zone (EEZ), are closed during the winter season. The 2003 winter troll season opened on October 11, 2002 and continued through April 12, 2003. A catch ceiling of 45,000 fish, with a range of 43,000 to 47,000 fish, is mandated in regulation for this winter fishery. A total of 50,900 Chinook salmon were harvested during the 2003 winter troll fishery, representing 16% of the total Chinook salmon troll harvest for 2003 (Table 2). The harvest and harvest per landing increased 73% and 182%, respectively, from those of the previous season.

Summer Season

The summer troll season extends from May 1 through September 30. The summer fishery has been divided into two fisheries: the spring and general summer fisheries.

Two categories of fisheries occur during the spring fishery, “experimental” and “terminal.” Both fisheries target Alaska hatchery-produced Chinook salmon. Experimental fisheries occur mostly during May and June, primarily in the inside waters near hatchery release sites or along migration routes of returning hatchery fish. Terminal fisheries occur in Terminal Harvest Areas associated with hatchery release sites, where fisheries are opened in accordance with schedules developed by each hatchery corporation’s board of directors. Figures 2–6 show spring fishery areas that were open in 2003.

Harvest opportunities in the experimental fisheries have been increasing since their inception in 1989. From mid-April through June 30, 2003, 25 areas were open for varying lengths of time. The total experimental fishery Chinook salmon harvest in 2003 was 39,300 fish; of those, 40% were Alaska hatchery fish. The most productive experimental fishery areas were Tebenkof Bay (5,044 fish) and Eastern Channel (4,756 fish), Western Channel (2,460 fish), and Middle Island (2,892 fish) near the Medvejie Creek Hatchery in Sitka; and Gravina Island (2,712 fish) near the Whitman Lake Hatchery in Ketchikan (Table 3). Figure 7 shows the number of days and percent of annual harvest taken in experimental fisheries.

Five terminal area fisheries were opened in 2003. The terminal area fisheries yielded 3,800 Chinook salmon; all of these were counted as Alaska hatchery fish. Hidden Falls was the most productive terminal area, contributing 3,500 fish, or 92% of the total terminal harvest.

Two new experimental areas were opened in 2003, including one near Sitka (Shelikof Bay) and one near Ketchikan (Western Clarence Strait). These areas are located near hatcheries that expected substantial increases in their Chinook salmon returns and historically have had a high percentage of Alaska hatchery fish.

Six experimental areas open in 2002 were eliminated for 2003. These areas have had low Alaska hatchery contributions, very low effort, or both over the past few years. The six areas eliminated were West Rock, Felice Strait, Ship Island, Snow Passage, Craig Point, and Redoubt Bay.

The spring fishery’s total harvest of 39,261 Chinook salmon contained approximately 40% Alaska hatchery fish (Table 4). The Chinook salmon harvest was about 4,400 fish less than the 2002 harvest and the Alaska hatchery contribution decreased from 52% to 40%. The percentage of the annual troll harvest taken in the 2003 spring fishery was 11.9%, which is a slight decrease from the 13% taken in 2002.

Based on past fishery performance at similar abundance indices, the first summer troll Chinook salmon fishery was estimated to last for at least ten days. Due to low effort the general summer troll fishery occurred without interruption and lasted 39 days, from July 1 through August 8 with a total harvest of 240,573 Chinook salmon. Of that, 234,272 were counted as treaty fish (Table

4). The harvest per fleet day for the general summer season was 6,170 fish (Table 5). The areas of high Chinook salmon abundance (Figure 8) were closed on August 1.

Boat days of effort during the summer Chinook salmon retention period increased substantially for the fourth year in a row due to increased effort near the end of the season (Table 6). The Chinook salmon harvest per fleet day for the final week of the season was 8,000 fish per day. The Chinook salmon general summer fishery was open for 39 days in 2003, including 10,737 boat days of effort, which is the highest since 1998.

Net Fisheries

Based on the 2003 annual harvest limit of 366,100 treaty Chinook salmon (28 inches or larger), 24,340 fish were allocated to the net fisheries. The purse seine quota was 15,700 Chinook salmon, the drift gillnet quota was 7,600 fish, and the set gillnet quota was 1,000 fish. Chinook salmon less than 21 inches in length may be retained and sold in the purse seine fishery; Chinook salmon between 21 and 28 inches may be retained but not sold. Chinook salmon less than 28 inches long that are retained in the purse seine fishery do not count against the seine harvest quota. These restrictions do not apply to the gillnet fisheries. As in the troll fishery, Chinook salmon produced by Alaska hatcheries, minus adjustments for pre-treaty hatchery production and estimation error, do not count against the annual quota for treaty fish.

In order to stay within the harvest guideline for treaty fish, periods of nonretention of Chinook salmon are established each year for the purse seine fishery. In 2003, nonretention was in effect from the start of the season until July 10 in all purse seine fisheries except the Hidden Falls and Deep Inlet Terminal Harvest Areas.

The total 2003 purse seine harvest of Chinook salmon was 24,054 fish (Table 4), which was the highest harvest since 1995. Of these fish, 17,544 were considered to be treaty fish. The seine fishery harvested 6,911 Alaska hatchery fish in the common property seine fishery.

The total drift gillnet harvest of Chinook salmon in 2003 was 9,329 fish (Table 4). Of these, approximately 7,482 fish were from Alaska hatcheries and did not count against the seasonal harvest guideline. As a result, total drift gillnet harvest of treaty fish was about 2,055 fish, roughly 5,500 fish below the 7,600 harvest guideline.

In 2003, terminal exclusion zones were in effect for the net fisheries in the Taku and Stikine Rivers. Chinook salmon harvested in these areas will be excluded from the treaty quota only after escapements have been met and a baseline catch level for the fisheries has been calculated.

Recreational Fisheries

The sport fishery is allocated 20% of the quota of treaty Chinook salmon remaining after the deduction of the net fishery allocation. Under the present system, once the preseason abundance index is determined, the department sets an initial sport fish bag limit that will achieve the 20% allocation. Additional in-season management measures are taken if the sport harvest appears to be deviating more than 7.5% from the target. The 2003 sport quota was 68,400 PSTA Chinook salmon. The actual sport harvest of treaty Chinook salmon was 49,239.

The 2003 sport harvest of Chinook salmon was 69,370 fish (Table 4), a decrease of 17,687 fish from 2002. The Alaska hatchery contribution was 23,547 Chinook salmon. The calculated addition of 20,131 Chinook salmon was 29% of the total sport catch in 2003, down from 33% in 2002. Preliminary estimates of hatchery contributions are raw expansions based on CWT recoveries in

the sampled marine boat sport fisheries (Table 8). Sport harvest estimates will be adjusted with data collected in the annual Statewide Harvest Survey, which is a random postal survey of sport fishing license holders.

The sport harvest in the Juneau area contained the highest percentage of Alaskan hatchery Chinook salmon (55%) of all sampled areas. The largest contributor to the Juneau area was Macaulay Hatchery, with 2,538 out of 3,026 Alaska hatchery Chinook salmon harvested. Medvejie Hatchery contributed 2,425 Chinook salmon to the Sitka area sport fisheries. Medvejie was also the largest hatchery contributor to sport fishing in Southeast Alaska, accounting for 2,804 fish. The Blind Slough fishery, near Crystal Lake Hatchery, again produced the highest terminal area Chinook salmon sport harvest with 4,000 fish caught (Table 12).

Summary of the 2003 Harvest

The total 2003 Chinook salmon harvest by all gear types was 439,436 fish (Table 4). Of these, 380,152 were treaty fish. The remainder of the actual harvest, an estimated 67,718 Alaska hatchery Chinook salmon, translated into an add-on quota of 59,284 fish, and together with the terminal exclusion for wild Alaska fish of 2,056 fish gives the total harvest number. Contribution of Alaska hatchery Chinook salmon to the total catch was 15% in 2003, a decrease from last year's 17% (Table 9, Figure 9).

ENHANCED PRODUCTION

Figure 10 shows the locations of (1) all hatcheries that produce Chinook salmon, (2) significant remote release sites, and (3) ancestral rivers of the major hatchery stocks in Southeast Alaska. The map key associated with Figure 10 lists the stream numbers for all past and present release sites and stream numbers of ancestral Chinook salmon stocks used in region.

Hatchery Releases

A projected total of 7,750,000 brood year (BY) 2003 Chinook salmon will be released from Southeast hatcheries. This is an increase of 16,000 over projected BY02 releases and 35,000 over actual BY02 releases. The shift in production strategies by Medvejie and Tamgass Creek from age 1 & 2 smolts to age 0 smolts accounts for the difference in production between brood years.

Table 10 shows the actual and projected releases of Chinook salmon by brood year. It is organized by age at release and release sites for each hatchery. Release numbers match the on-line database of Coded Wire Tag and Otolith Processing Laboratory of the Alaska Department of Fish and Game and, therefore, the Pacific States Marine Fisheries Commission database. Figure 11 shows total release numbers by brood year. Figure 12 shows total release numbers by calendar year.

Smolt Capacity

Table 11 shows production capacity since 1996. Approximately 80% of the current capacity for Southeast Alaska hatcheries is being utilized. Chinook salmon production was added to Southeast's total smolt capacity in 2002. Hidden Falls increased production by 1 million smolts. In addition, Port Armstrong Hatchery resumed production of Chinook salmon in 2002, receiving 125,000-eyed eggs from Little Port Walter's (LPW) Unuk River stock. The release of these Chinook salmon smolts will be the first release at Port Armstrong Hatchery since 1991. If Port Armstrong reaches its production capacity of 1.5 million smolts, nearly all of the current permitted capacity for Chinook salmon production will be achieved.

Harvest of Hatchery Fish

Hatchery operators reported a total return of 136,578 Chinook salmon in 2003, based on recoveries of coded wire tags in sampled fisheries, estimates of contribution to unsampled fisheries, plus broodstock and escapement (Tables 12 & 13). Of this total return, 58,655 (43%) were harvested in common property fisheries, down from the 62,769 fish (48%) harvested in common property fisheries in 2002, but similar to the 58,400 (60%) caught in 2001. Cost recovery by hatchery operators increased from 37,667 fish (30% of return) in 2002, to 59,679 fish (44% of the return) in 2003, which is similar to the 69,425 fish (49% of return) harvested in 2001. Broodstock needs decreased in 2003 to 18,244, which is similar to 2001 (18,169). There were 29,828 fish counted as broodstock in 2002, which were either spawned or considered to be surplus (Table 13).

The troll harvest constituted 21% of the hatchery catch again in 2003. The harvest of hatchery fish by net gear decreased from 13% to 6%. The sport harvest of hatchery fish increased slightly from 14% to 15%. When comparing harvest by percent of total enhanced return, 2003 was the fourth lowest common property harvest of enhanced Chinook salmon since the beginning of the enhancement program (Figure 13).

Historically in Southeast Alaska, the northernmost hatcheries contribute primarily to the central and southern intermediate Pacific States Marine Fisheries Commission (PSMFC) areas, while the southernmost hatcheries contribute more to the southern inside areas (Figure 14, Table 14). Table 15 shows total adult returns by release site from 1980 to 2003. Table 16 shows exploitation rates by release site.

Disposition of Brood Year '03 Eggs

Southeast Alaska hatchery operators took 12,405,100 Chinook salmon eggs in 2003. After discarding fertilized eggs from BKD positive parents and making other adjustments in numbers, a total of 9,222,300 eggs were incubated (Table 17). Regionwide, the total incubation survival to the eyed stage was 91%.

Five transfers of BY '03 Chinook salmon eggs occurred within the region:

- Crystal Lake Hatchery received 455,000 eyed eggs (Chickamin River stock) from Whitman Lake Hatchery as part of the ongoing SSRAA/ADF&G Cooperative Agreement for Chinook Salmon Production in the Ketchikan Area. Resultant smolts will be transferred to Neets Bay for release in 2005.
- (split transfer) Crystal Lake Hatchery received 588,000 eyed eggs from Medvijie hatchery and 983,515 eyed eggs from Macaulay Salmon Hatchery for an adjusted total of 1,468,000 eyed eggs (Andrew Creek stock). Crystal Lake Hatchery was unable to take eggs due to low water problems.
- Macaulay Salmon Hatchery received 260,727 green eggs (Tahini River Stock) from Pullen Creek. Prior to BY03 eggs for this project came from Burro Creek Hatchery, which is currently not operating. Smolts from these eggs will be released at Pullen Creek in Skagway as part of the Tahini River broodstock development program that will eventually replace Andrew Creek stock at the Macaulay Salmon Hatchery.
- Port Armstrong received 123,800 eyed eggs (Unuk River stock) from Little Port Walter as part of a broodstock development program.

The projected total release of BY03 Chinook salmon is 8,007,700. The projected release of 6,507,700 age-one smolts is a slight decrease from the 6,963,200 age-one smolts projected from BY02. There is, however, a significant increase from the two groups of age-0 smolts produced at Medvejie and Tamgas Creek Hatcheries. The production of age-0 smolts will jump from 595,000 from BY02 to 1,250,000 from BY03 (Table 18).

BROODSTOCK ALLOCATION

BROODSTOCK DEVELOPMENT AND DIVERSITY

One of the policies for enhanced Chinook salmon production in the Chinook Salmon Plan states that “Genetic variability in enhancement stocks is to be maximized i.e., as many different hatchery stocks as feasible should be developed . . .” Maintaining all existing hatchery stocks should be the goal of this policy. Five stocks of Chinook salmon are currently being used for broodstock in hatchery production in Southeast Alaska; however, two of these stocks, Andrew Creek and Chickamin River, have accounted for the majority of releases since the 1989 brood year (Figure 15).

The Tahini River Chinook salmon stock has been the least-utilized stock, and its development would provide an opportunity to increase the genetic diversity of hatchery Chinook salmon stocks in Southeast. DIPAC, ADF&G Sport Fish Division, Burro Creek Hatchery, and the City of Skagway are carrying out a cooperative agreement (COOP-00-084) to improve sport fishing and establish a significant hatchery broodstock of Tahini River origin. DIPAC’s Macaulay Salmon Hatchery is geographically the closest major facility to the Tahini River and therefore the logical site for rearing and release of this stock. A broodstock development program that calls for a series of smolt releases in Pullen Creek, near Skagway, will eventually result in enough adults to provide gametes for Macaulay Salmon Hatchery’s Chinook salmon program. The broodstock development program remained on track in 2003 when Tahini River returns to Pullen Creek provided 260,700 eyed eggs. DIPAC staff has calculated that the development schedule will take 10–15 years to achieve the goal of converting DIPAC’s production to the Tahini stock. The schedule can be accelerated if wild egg takes supplement the return of enhanced fish.

National Marine Fisheries Service has resumed the Chinook salmon broodstock maintenance program at Little Port Walter. Little Port Walter is one of the two remaining hatchery stocks derived from the Unuk River broodstock. The other one at Deer Mountain Tribal Hatchery is at some degree of risk because of financial difficulties in maintaining that program. Port Armstrong Hatchery is utilizing Unuk River fish for the beginning phase of a broodstock development program.

EGG ALLOCATION CRITERIA AND PLAN FOR 2004

Allocation criteria, first formulated in 1987, are relevant only in cases where Chinook salmon eggs or smolts are transferred either between hatcheries or from the wild to hatcheries. Allocation_criteria for Chinook salmon eggs can be found in McGee et al. 1996.

The following planned or potential egg transfers are noted for 2004:

Little Port Walter

Stock	Total Eyed Eggs Expected	Needed for LPW	Potential Transfer
Unuk	250,000	25,000	150,000
Chickamin	600,000	All	

With the resumption of Chinook salmon production at LPW, some eggs from Unuk River stock will be available for use at other facilities. Armstrong-Keta, Inc. received 123,750 green eggs of Unuk River origin from LPW in 2003 and may receive a similar number in 2004.

Deer Mountain Tribal Hatchery

Stock	Total Eyed Eggs Expected	Needed for DMTH	Potential Transfer
Unuk	154,000	All	

Deer Mountain Tribal Hatchery will maintain its production of Unuk River Chinook salmon. Klawock River Hatchery has permission to use this stock for the Coffman Cove project; however the project will not begin in 2004.

Whitman Lake Hatchery

Stock	Total Eyed Eggs Expected	Needed for WLH	Planned Transfer
Chickamin	1,600,000	All	

All expected 2004 brood year eggs are fully allocated under the SSRAA/ADF&G Cooperative Agreement for Chinook Salmon Production. According to the agreement, 500,000 eyed Chickamin Chinook salmon eggs (or the equivalent number of green eggs) will be transferred to Crystal Lake Hatchery, and the resultant smolt will be transported to SSRAA's Neets Bay hatchery for imprinting and release in 2006.

Macaulay Salmon Hatchery

Stock	Total Eggs Expected	Needed for MSH	Planned Transfer
Andrew Cr	9,650,000	650,000	9,000,000

Crystal Lake hatchery was unable to take eggs during 2003 because of low water problems. Medvejie and Macaulay Hatcheries provided eggs of Andrew Creek stock to Crystal Lake Hatchery. A similar transfer may occur in 2004.

Skagway/ Pullen Creek

Stock	Total Eggs Expected	Need for Pullen Creek	Planned Transfer
Tahini R	239,000	All	

Burro Creek Hatchery no longer has Chinook salmon returning to the facility. A planned eggtake at Pullen Creek should result in the transfer at least 227,000 Tahini River Chinook salmon eggs to Macaulay Hatchery for incubation and rearing (Cooperative Agreement COOP-00-084). Resultant smolts will be transported to Pullen Creek pond for imprinting and release in 2006.

Medvejie

Stock	Total Eggs Expected	Need for Medvejie	Planned Transfer
Andrew Cr	3,660,000	2,800,000	588,000

Crystal Lake hatchery was unable to take eggs during 2003 because of low water problems. Medvejie and Macaulay Hatcheries provided eggs of Andrew Creek stock to Crystal Lake Hatchery. A similar transfer may occur in 2004.

HATCHERY RETURN PREDICTIVE MODELS

Each year hatchery operators are asked to predict the number of Chinook salmon expected to return to hatchery facilities in Southeast Alaska. These preseason projections include total return,

number of fish expected to be harvested in traditional and terminal fisheries, and number needed for brood stock. There are no standardized procedures for making such projections, and the inaccuracy inherent in predicting future events has resulted, in some years, in substantial differences between the prediction and actual returns. Some of the techniques used to predict future Chinook salmon returns are described below; most remain the same as those used in 2002.

LITTLE PORT WALTER

The Little Port Walter facility uses a dual-model approach for predicting year-class strength of Chinook salmon in fisheries and in returns to the hatchery. The first model is an overall survival estimator for each brood year based on a linear-regression prediction using the square root-transformed percent survival of recoveries of zero-ocean-age mini-jacks at the Sashin Creek weir as an independent predictor variable (mini-jack survival is not included in the total). No other predictor variables are used with the model.

The second model is a synthesis of previous years' returns, age distributions, and sex ratios at the weir. This analysis predicts percent returns for a given cohort in a given year based on the previous year's data combined with the historic ratios between age classes.

CRYSTAL LAKE HATCHERY

During the year preceding the target year, the initial prediction for Chinook salmon returns in the target year is based on historic age-class fractions of each brood year. Survival rates of age-1.2 and age-1.3 fish returning in the year preceding the target year are used as predictors.

DEER MOUNTAIN TRIBAL HATCHERY

Predictions are based on the same technique used for predicting the Crystal Lake Hatchery return, with the exception that information from the winter fishery is not used.

SSRAA HATCHERIES

Southern Southeast Regional Aquiculture Association (SSRAA) employs a synthesis of previous year's return and distribution information similar to that for Little Port Walter to predict returns for the subsequent year at the Whitman Lake and Neets Bay Hatcheries. The analysis predicts percent return for a given cohort in a given year based on the previous year's data combined with the historic ratios among age classes. The distribution between fishery and rack components of the run is based on the most recent three-year average.

NSRAA HATCHERIES

A great deal of effort goes into regular sampling of the Chinook salmon return to Northern Southeast Regional Aquiculture Association (NSRAA) facilities to generate accurate estimates of age-at-return. These estimates are used to examine historic relationships between age classes for each hatchery. Returns of age 1.2 fish are predicted using historic averages. Return predictions for age 1.3 and 1.4 fish are based on regression analysis of the previous year's age 1.2 and 1.3 returns, respectively. Size-at-age information is also analyzed. Predictions may be adjusted if size data suggests a shift from normal age-at-return ratios.

THE 2004 CHINOOK PLANNING TEAM MEETING

The Chinook Planning Team met on May 18, 2004, in the King Conference room at ADF&G Southeast Alaska Regional Office in Douglas. Major topics of discussion are summarized below:

Steve McGee provided an update on the Port St. Nicholas and Coffman Cove projects on Prince of Wales Island. Funding has been secured for the design work of a small Chinook salmon hatchery for the Port St. Nicholas project to be located at the City of Craig water treatment plant facility. The Southern Southeast Regional Planning Team approved the plan and a public hearing is scheduled for June 1, 2004 in Craig.

Rick Focht gave an update on the Tahini broodstock development program at DIPAC. The city of Skagway is recommitting itself to the cooperative agreement to assist in developing the source for the Tahini broodstock in Skagway.

Little Port Walter resumed production of Chinook salmon in 2001. Frank Thrower gave an update on LPW and their current emphasis on wild/enhanced interactions. LPW will continue to supply eggs of Unuk River origin to Port Armstrong Hatchery's broodstock program.

Keith Pahlke updated the team on Chinook salmon research conducted by Sport Fish Division.

Chip Blair provided an update on NSRAA's Chinook salmon activities including experiments concerning release weights and release timing on age-0 smolts.

STATUS OF HATCHERY PRODUCTION

Little Port Walter Hatchery resumed production of Chinook salmon in 2001; production will be maintained on a year-to-year basis, subject to availability of funding.

For 2003, SSRAA expects a large Chinook salmon return to Whitman Lake and expects the department to hold a personal use gillnet fishery to remove excess fish from Herring Cove Creek. SSRAA began rearing the full complement of 250,000 Chinook salmon fingerlings in Long Lake beginning with the 1999 brood. This moves the entire SSRAA component of the Neets Bay Chinook salmon production out of the saltwater net pen complex and into the lake-rearing mode. The move is expected to result in better survival to smolt and better smolt quality. Long Lake Chinook salmon production constitutes SSRAA's part of the Neets Bay release described in the ADF&G/SSRAA Cooperative Agreement for Chinook Salmon Production in Southern Southeast.¹

NSRAA will release 925,000, 35-gram age-1 smolts from Hidden Falls, as well as 1.9 million 35 to 70-gram age-1 smolts from Medvejie. About 270,000 of the Medvejie age-1 smolts were reared using the Marical "super-smolt" process. NSRAA also expects to release 710,000 age-0 smolts from saltwater pens at Medvejie. These fish will be divided into three groups: 230,000 10-gram smolts released about June 20 reared in Green Lake, 250,000 10-gram smolts released about June 20 reared using the Marical "super-smolt" process in the hatchery raceways, and 230,000 20-gram smolts released about July 17 reared in Green Lake. All age-0 groups are moved to saltwater netpens for the 3–4 week period prior to their release.

The Port Armstrong Hatchery resumed production of Chinook salmon in 2001, and expects to release 120,000 age-1 smolts in 2003.

DIPAC's Chinook salmon program will be unchanged for 2003. Smolts of Andrew Creek origin will be released at three sites in the Juneau area, and Tahini River origin smolts will be transported to Skagway for imprinting and release from Pullen Creek pond. The largest release of Tahini smolts will be made in 2005 with over 240,000 smolts released. The 2004 eggtake goal

¹ See McGee et al. (1997) for a description of the cooperative agreement.

from Pullen Creek was not reached this year, and measures are being taken to improve the results for next year's eggtake. Andrews Creek origin eggs were taken at Macaulay Salmon Hatchery again this year and will continue until the returns of Tahini River origin Chinook salmon at Pullen Creek are large enough to supplement full releases in the Juneau area.

FEDERAL FUNDING

Two sources of funding have recently become available for possible use in Chinook salmon enhancement. The *Northern Boundary and Transboundary Rivers Restoration and Enhancement Fund*, associated with the 1999 U.S./Canada Pacific Salmon Treaty agreement, may be used for "enhancement of wild stock production through low technology techniques rather than through large facilities with high operating costs." The Northern Fund may also be used to develop improved information for resource management and rehabilitation and restoration of marine and freshwater habitat. The Northern Fund is administered by the Northern Fund Committee, which solicits project proposals when funds are available for distribution. Additional information related to the Northern Fund is available at:

http://www.psc.org/news_restoration.htm#proposals_north

The second source of funding is the *Southeast Sustainable Salmon Fund*. Money from this fund has been allocated to several Chinook salmon stock assessment projects throughout Southeast Alaska. For this source of funding, project proposals have been solicited for the following four areas of application: (1) habitat restoration and protection, (2) enhancing economic opportunities, (3) research and monitoring, and (4) national and international cooperation. There is a five-year period in which to expend the funds, and the Governor's office will have oversight. ADF&G staff from the commissioner's office will coordinate the process of developing priorities. As of the time of this writing (11/15/04) it is uncertain whether additional funds will be available from this source in the future. Additional information related to the Southeast Sustainable Salmon Fund is available at: <http://www.adfg.state.ak.us/special/ssf/ssf.php>

EFFECT OF THE SOUTHEAST ALASKA CHINOOK SALMON HATCHERY PROGRAM ON WILD STOCKS

Salmonid hatchery programs in the Pacific Northwest have recently been identified as being among the causal factors in the listing or pending listing of several species of salmon under the Endangered Species Act. Hatchery programs have been implicated because the genetic integrity of wild stocks has been lost through mixing of wild and hatchery fish during spawning. In addition, wild stocks there have been over-harvested because of greater fishing pressure on hatchery stocks.

The Alaska hatchery program was designed to minimize impacts on wild stocks through consideration of the topics discussed in the following sections. These topics are considered to be important factors in maintaining the genetic integrity of wild stocks.

SITE AND STOCK SELECTION

Southeast Alaska hatchery sites, remote release sites, and broodstocks were selected to minimize the chance of returning hatchery stocks mixing with wild stocks (Holland et al. 1983). No hatcheries in Southeast Alaska were built on streams with natural runs of Chinook salmon. With few exceptions, Chinook salmon hatcheries in the region are located on islands at or near

tidewater (Heard et al. 1995; Heard 1996). Most hatcheries are 50 to 240 km from any endemic Chinook salmon stock.

The Chinook Salmon Plan (Holland et al. 1983) delineates a “sensitive” and a “non-sensitive” zone for Chinook salmon stock selection and transport considerations. The zones are based on the potential for impacting wild stocks. A sensitive zone, in which wild spawning populations are present, is comprised of commercial fishing Districts 101, 107, 108, 110, 111, and 115 (Figure 16). Within the sensitive zone, movement of stocks is limited and new stock needs must be met with the closest feasible stock. Commercial fishing Districts 102, 103, 104, 105, 106, 109, 112, and 116 delineates the non-sensitive zone, in which there are no systems that contain self-sustaining populations of Chinook salmon. Stock needs in the non-sensitive zone may be met by any stock approved through the department review process.

STRAYING

An examination of several wild and hatchery systems indicates there has been very little straying. Results from surveys that examined wild Chinook salmon populations for hatchery coded wire tags (CWTs) were first reported by Heard et al. (1995), indicating that 0.30% of the fish examined in wild stock systems through 1993 were strays from hatcheries. Beginning in 1997, extensive numbers of Chinook salmon in wild systems were sampled for biological data, including CWTs. Examination of 145,849 Chinook salmon from 1979 to 2003 has indicated percent of hatchery strays averaged 0.28% (Table 19).

Historically, escapements to the Farragut River have had an unusually high incidence of hatchery strays (8.27%). Andrew Creek also shows an unusually high incidence of hatchery stays (8.72%). Prior to the 2003 Chinook Annex, Andrew Creek data was grouped into the Stikine River data. The majority of strays into Andrew Creek are from releases of Andrew Creek stock at Earl West Cove. Releases at this site, which is approximately 20 miles from the mouth of the Stikine River, have been moved to Anita Bay. Recent surveys of the Blossom, Keta, and Chickamin Rivers have shown 4.03%, 3.33%, and 1.11% of respective escapements to consist of hatchery strays.

In 2003, there were six hatchery coded wire tags, and two wild coded wire tags recovered from 13,407 Chinook salmon examined in the wild systems escapement. Four hatchery CWT's were recovered in Andrew Creek, out of 300 Chinook salmon examined. Of those tags recovered, two were from Earl West Cove, one from Hidden Falls, and one from Anita Bay. One Neets Bay Hatchery CWT was recovered in the Blossom River, out of 37 Chinook salmon examined. One Tamgass Hatchery CWT was recovered in the Keta River, out of 231 Chinook salmon examined. The two wild CWT's recovered were; one Unuk River tag found in the Chickamin River, out of 1,370 Chinook salmon examined, and one Taku River tag found in the Stikine River, out of 4,804 Chinook salmon examined.

GENETIC STUDIES

For a number of years, several organizations have been collecting and analyzing genetic data from wild-spawning and hatchery populations of Chinook salmon throughout Alaska. The goal of one recent ADF&G project was to develop a database that could be used to identify the origin of Chinook salmon harvested as trawl by-catch in Alaska waters (Crane et al. 1996). In addition, researchers sought to define relationships within and among hatchery stocks. In Southeast Alaska, collections were made from six wild-spawning populations and 11 (by site and brood

year) derivative hatchery stocks. Data were analyzed for temporal stability of allele frequencies of a broodstock within hatcheries, allele frequency homogeneity among hatcheries using the same broodstock, and homogeneity of allele frequencies between a hatchery stock and its wildstock progenitor. These studies may enable detection and tracking of genetic changes of individual stocks both through time and between hatchery broodstocks. The ADF&G genetic policy prohibits the planting of Chinook salmon offspring of wild broodstock beyond the F1 generation back into their stream of origin, to avoid introduction into the wild population of any salmon whose allele frequencies may have been altered through domestication.

DOMESTICATION EFFECTS STUDIES

National Marine Fisheries Service Auke Bay Lab, in cooperation with ADF&G, have initiated studies to evaluate any differences in performance and life history characteristics between native Southeast Alaska Chinook salmon stocks and hatchery stocks derived from them. Alaska is in the unique position of being able to compare unperturbed wild Chinook salmon with fifth and sixth generation hatchery stocks that originated from them. Gamete collections were made in 1996 and 1998 on the Chickamin and Unuk Rivers, respectively, to compare the offspring of wildstock fish with those from the Little Port Walter Hatchery's Chickamin and Unuk stocks. Comparisons made include evaluating the ability of fry to avoid predation, hatchery performance (growth and survival to smolt), the ability of smolt to act as predators on pink fry, marine survival, age at maturation, and growth. Preliminary results indicate no significant differences in the predation behavior and feeding trials. Evaluation will continue and may expand to other Chinook salmon stocks.

Based on the above information, it appears the hatchery program has had little or no deleterious effect on the genetic integrity of Southeast wild stocks. However, the higher-than-expected amount of straying into the Farragut River is a cause for concern and should be regularly monitored. Research on the effects of hatchery stock/wild stock interactions should continue to be supported.

The department manages Chinook salmon harvests primarily to sustain the health and maximum sustainable yields of wild stocks. Hatcheries and remote release sites have been situated to enable managers to maximize the harvest of hatchery returns with minimum disruption of wild stocks. The "spring" fisheries (i.e., experimental and terminal fisheries) target hatchery returns in areas where abundance of wild stocks is low. Management of the experimental fisheries is based primarily on the percentage of hatchery Chinook salmon present, as determined through extensive catch sampling. A low abundance of Alaska hatchery stocks results in reduced fishing time.

BROODSTOCK PERFORMANCE

The Chinook Planning Team, as part of the Southeast Alaska-wide Production and Management Committee, has compiled marine survival and troll harvest rate data for the major, long-standing Chinook salmon programs in Southeast. The impetus for formation of the committee in 1998 was to prepare a proposal for supplemental Chinook salmon and coho salmon production, using federal funding anticipated at that time. The survival and troll harvest rates are now included in the Chinook Annex (Figure 17). Troll harvest rates are expressed as percent of total return, including all age classes. Survival rates are based on all recoveries, from all age classes.

Marine survival rates for Chinook salmon released from most southern and central Southeast facilities have declined since the beginning of programs in the early 1980s. However, at Hidden Falls, Macaulay, and Whitman Lake there are indications that survival rates are improving.

Percentage of hatchery fish harvested by the troll fishery are on a downward trend for most facilities even though harvest managers and the fleet have become more adept at targeting enhanced fish over time. This is in accord with the diminished participation in the troll fisheries in recent years, and may ultimately be due to market forces and economics, which more strongly affect troll fisheries than net fisheries.

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TABLES

Table 1.— Estimates of total escapements of chinook salmon to escapement indicator systems and to southeast Alaska and transboundary rivers, from 1986 to 2003. Bold numbers are weir counts or mark–recapture estimates. Other numbers are index escapements expanded for survey counting rates and unsurveyed tributaries.

Year	MAJOR SYSTEMS				MEDIUM SYSTEMS								TOTAL	Expanded	
	Alsek	Taku	Stikine	Major Subt.	Situk	Chilkat	Andrew	Unuk	Chick amin	Blossom	Keta	Medium Subt.	King Salmon	All systems	Region Total
1975		12,920	7,571				520		1,914	584	609		63		
1976	5,320	24,582	5,723	35,625	1,421		404		810	272	252		98		
1977	13,490	29,496	11,445	54,431	1,732		456	4,870	1,875	448	690	10,071	201	64,703	77,027
1978	12,650	17,124	6,835	36,609	808		388	5,530	1,594	572	1,176	10,068	86	46,763	55,670
1979	15,520	21,617	12,610	49,747	1,284		327	2,880	1,233	216	1,278	7,218	113	57,078	67,950
77-79 Ave.	13,887	22,746	10,297	46,929	1,275		390	4,427	1,567	412	1,048	9,119	133	56,181	66,883
1980	12,435	39,239	30,573	82,247	905		282	5,080	2,299	356	576	9,498	104	91,849	109,344
1981	9,815	49,559	36,057	95,431	702		536	3,655	1,985	636	987	8,501	139	104,071	123,894
1982	9,845	23,847	40,488	74,180	434		672	6,755	2,952	1,380	2,262	14,455	354	88,989	105,939
1983	11,185	9,795	6,424	27,404	592		366	5,625	3,099	2,356	2,466	14,504	245	42,153	50,182
1984	7,860	20,778	13,995	42,633	1,726		389	9,185	5,697	2,032	1,830	20,859	265	63,757	75,901
1985	6,415	35,916	16,037	58,368	1,521		640	5,920	4,943	2,836	1,872	17,732	175	76,275	90,804
1986	13,035	38,110	14,889	66,034	2,067			1,414	10,630	9,022	5,112	2,070	255	96,604	115,004
1987	12,455	28,935	24,632	66,022	1,379			1,576	9,865	5,041	5,396	2,304	196	91,779	109,261
1988	9,970	44,524	37,554	92,048	868			1,128	8,730	4,064	1,536	1,725	208	110,307	131,318
1989	11,010	40,329	24,282	75,621	637			1,060	5,745	4,829	1,376	3,465	240	92,973	110,682
Average	10,403	33,103	24,493	67,999	1,083		806	7,119	4,393	2,302	1,956	17,659	218	85,876	102,233
1990	8,490	52,142	22,619	83,251	628			1,328	2,955	2,916	1,028	1,818	179	94,103	112,027
1991	11,115	51,645	23,206	85,966	889	5,897	800	3,275	2,518	956	816	15,151	134	101,251	112,501
1992	6,215	55,889	34,129	96,233	1,595	5,284	1,556	4,370	1,789	600	651	15,845	99	112,177	124,641
1993	16,105	66,125	58,962	141,192	952	4,472	2,120	5,340	2,011	1,212	1,086	17,193	263	158,648	176,276
1994	18,100	48,368	33,094	99,562	1,271	6,795	1,144	4,623	2,006	644	918	17,401	210	117,173	130,192
1995	26,985	33,805	16,784	77,574	4,330	3,790	686	3,860	2,309	868	525	16,368	146	94,088	104,542
1996	17,995	79,019	28,949	125,963	1,800	4,920	670	5,835	1,587	880	891	16,583	288	142,834	158,704
1997	14,145	114,938	26,996	156,079	1,878	8,100	586	2,970	1,406	528	738	16,206	357	172,642	191,824
1998	4,621	31,039	25,968	61,628	924	3,675	974	4,132	2,021	364	446	12,536	132	74,296	82,551
1999	11,597	20,545	19,947	52,089	1,461	2,271	1,210	3,914	2,544	848	968	13,216	300	65,605	72,894
Average	13,537	55,352	29,065	97,954	1,573	5,023	1,107	4,127	2,111	793	886	15,117	211	113,282	126,615
2000	8,295	30,529	27,531	66,355	1,785	2,035	1,380	5,872	4,141	924	913	17,050	137	83,542	92,824
2001	11,022	41,179	63,523	115,724	656	4,517	2,108	10,541	5,177	816	1,029	24,844	147	140,715	156,350
2002	8,504	48,848	50,875	108,227	1,001	4,050	1,752	6,988	5,007	896	1,233	20,927	153	129,307	143,674
2003	6,800	28,501	33,218	68,519	2,615	5,505	1,190	5,605	4,984	812	966	21,677	117	90,313	100,348
00-03 Ave	9,274	40,185	47,310	96,769	1,147	3,534	1,747	7,800	4,775	879	1,058	20,940	146	117,855	130,950
Change from 2002 to 2003															
Number	-1,704	-20,347	-17,657	-39,708	1,614	1,455	-562	-1,383	-23	-84	-267	750	-36	-38,994	-43,327
Percent	-15%	-49%	-28%	-34%	246%	32%	-27%	-13%	0%	-10%	-26%	3%	-24%	-28%	-28%
Goals															
Lower	5,500	30,000	14,000	49,500	450	1,750	650	3,250	2,326	1,000	750	10,176	120	59,796	66,440
Point	8,500	36,000	17,500	62,000	730	2,200	750	4,000	3,490	1,500	1,125	13,795	150	75,945	84,383
Upper	11,500	55,000	28,000	94,500	1,100	3,500	1,500	7,000	4,653	2,000	1,500	21,253	240	115,993	128,881

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Table 1. Page 2 of 2.

Total Escapement goals for Alsek, Unuk, Chickamin, Blossom and Keta have not been agreed on, numbers for those four are just expanded index goals for comparison.

Average percent of point goal

77-79	163%	63%	59%	76%	175%		52%	111%	45%	27%	93%	66%	89%	74%
80-89	122%	92%	140%	110%	148%		108%	178%	126%	153%	174%	128%	145%	113%
90-99	159%	154%	166%	158%	215%	228%	148%	103%	60%	53%	79%	110%	141%	149%
00-03	109%	112%	270%	156%	157%	161%	233%	195%	137%	59%	94%	152%	97%	155%

Table 2.—Southeast Alaska winter troll fishery chinook salmon harvest, vessel landings, and catch per landing, by troll accounting year (October 1–September 30), from 1980 to 2003.^a

Year	Early Winter (October–December)			Late Winter (January–April 14)			Total Winter (October–April 14)			Annual Total	Winter % of Annual Total
	Chinook	Landings	Catch/ Landing	Chinook	Landings	Catch/ Landing	Chinook	Landings	Catch/ Landing		
1980	4,002	528	8	3,608	406	9	7,610	934	8	304,000	3%
1981	1,737	279	6	7,027	744	9	8,764	1,023	9	249,000	4%
1982	4,865	535	9	6,857	764	9	11,722	1,299	9	242,000	5%
1983	12,517	926	14	17,340	1,424	12	29,857	2,350	13	270,000	11%
1984	14,223	1,217	12	17,153	1,980	9	31,376	3,197	10	236,000	13%
1985	14,235	1,016	14	7,234	1,090	7	21,469	2,106	10	216,000	10%
1986	16,779	1,202	14	6,147	832	7	22,926	2,034	11	238,000	10%
1987	18,453	1,404	13	10,075	994	10	28,528	2,398	12	243,000	12%
1988	44,774	2,626	17	15,684	1,784	9	60,458	4,410	14	231,000	26%
1989	24,426	2,354	10	9,872	1,402	7	34,298	3,756	9	236,000	15%
1990	17,617	1,128	16	15,513	1,476	11	33,130	2,604	13	287,000	12%
1991	19,920	1,094	18	20,622	1,915	11	40,542	3,009	13	263,000	15%
1992	28,277	1,952	14	43,554	2,673	16	71,831	4,625	16	183,000	39%
1993	20,275	1,210	17	42,447	2,365	18	62,722	3,575	18	227,000	28%
1994	35,193	1,132	31	21,175	1,498	14	56,368	2,630	21	186,000	30%
1995	10,382	642	16	7,486	871	9	17,868	1,513	12	138,000	13%
1996	6,008	430	14	3,393	447	8	9,401	877	11	141,000	7%
1997	13,252	627	21	7,705	524	15	20,957	1,151	18	246,000	9%
1998	9,783	578	17	23,021	1,423	16	32,804	2,001	16	192,000	17%
1999	13,989	594	24	16,988	1,432	12	30,977	2,026	15	146,000	21%
2000	17,494	813	22	18,561	1,486	12	36,055	2,299	16	158,700	23%
2001	11,198	939	12	11,384	1,359	8	22,582	2,298	10	153,218	15%
2002	17,178	755	23	12,237	1,361	9	29,415	2,116	14	325,335	9%
2003	18,506	724	26	32,348	2,365	14	50,854	3,089	16	326,884	16%

^a Includes Annette Island troll harvest.

Table 3.—The number of Chinook salmon harvested and permits fished in the 2003 spring troll fisheries (experimental and terminal). Due to confidentiality concerns, harvests are omitted where less than 3 permits made landings, therefore totals may not reflect the sum of weekly values.

Stat Area	Fishery Name	Stat Week	Open	Close	Permits	Chinook	AK%
101-29	Gravina Island	17	20-Apr	26-Apr	a	a	0%
		18	27-Apr	3-May	a	a	0%
		19	4-May	10-May	3	10	b
		20	11-May	17-May	0	0	b
		21	18-May	24-May	4	19	0%
		22	25-May	31-May	9	170	57%
		23	1-Jun	7-Jun	8	150	63%
		24	8-Jun	14-Jun	9	292	38%
		25	15-Jun	21-Jun	16	1,088	60%
		26	22-Jun	28-Jun	19	958	41%
		27	29-Jun	30-Jun	0	0	
Gravina Island Total					38	2,712	50%
101-45	Mountain Point	17	20-Apr	26-Apr			
		18	27-Apr	3-May			
		19	4-May	10-May	4	18	0%
		20	11-May	17-May	a	a	79%
		21	18-May	24-May	a	a	0%
		22	25-May	31-May	3	31	87%
		23	1-Jun	7-Jun	8	255	57%
		24	8-Jun	14-Jun	8	179	76%
		25	15-Jun	21-Jun	8	274	52%
		26	22-Jun	28-Jun	13	630	83%
		27	29-Jun	30-Jun	5	293	100%
Mountain Point Total					23	1,693	77%
101-90	West Behm Canal	18	1-May	3-May			
		19	5-May	8-May			
		20	12-May	15-May			
		21	19-May	22-May			
		22	26-May	29-May	a	a	0%
		23	2-Jun	25-Jun			
		24	9-Jun	13-Jun			
		25	16-Jun	21-Jun	a	a	b
		26	22-Jun	28-Jun	a	a	b
		27	29-Jun	30-Jun			
West Behm Canal Total					3	9	
101-95	Neets Bay Term. Area	17	20-Apr	26-Apr			
		18	27-Apr	3-May			
		19	4-May	10-May	a	a	
		20	11-May	17-May			
		21	18-May	24-May			
		22	25-May	31-May			
		23	1-Jun	7-Jun			
		24	8-Jun	14-Jun			
		25	15-Jun	21-Jun			
		26	22-Jun	28-Jun	a	a	
		27	29-Jun	5-Jul			
Total	Neets Bay Total				3	46	100%

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Table 3.—Page 2 of 7.

Stat Area	Fishery Name	Stat Week	Open	Close	Permits	Chinook	AK%
102-50	West Clarence Strait	18	1-May	3-May	a	a	0%
		19	5-May	8-May	a	a	0%
		20	12-May	15-May	a	a	31%
		21	19-May	22-May	4	41	35%
		22	26-May	29-May	a	a	0%
		23	2-Jun	5-Jun	4	182	24%
		24	9-Jun	13-Jun	3	105	100%
		25	16-Jun	21-Jun	5	137	17%
		26	22-Jun	28-Jun	4	158	14%
	27	29-Jun	30-Jun				
W. Clarence Strait Total					11	697	33%
105-41	Sumner Strait	18	1-May	3-May	6	6	b
		19	5-May	8-May	6	114	0%
		20	12-May	15-May	6	117	20%
		21	19-May	22-May	9	158	20%
		22	26-May	29-May	5	149	17%
		23	2-Jun	5-Jun	6	121	0%
		24	9-Jun	12-Jun	4	88	0%
		25	16-Jun	19-Jun	4	104	0%
		26	23-Jun	26-Jun	3	15	
	27	29-Jun	30-Jun				
Sumner Strait Total					19	867	9%
106-30	Steamer Point	18	1-May	3-May			
		19	5-May	8-May			
		20	12-May	15-May			
		21	19-May	22-May	a	a	b
		22	26-May	29-May	a	a	0%
		23	2-Jun	5-Jun	4	42	0%
		24	9-Jun	12-Jun	3	20	0%
		25	16-Jun	20-Jun	5	140	16%
		26	23-Jun	27-Jun	9	135	97%
Steamer Point Total					11	344	45%
106-44	Wrangell Narrows Term. Area	23	1-Jun	7-Jun	12	74	
		24	8-Jun	14-Jun	17	162	
		25	15-Jun	21-Jun	16	307	
		26	22-Jun	28-Jun	closed	for kings	
		27	29-Jun	5-Jul	closed	for kings	
Wrangell Narrows Total					23	543	100%
107-45	Earl West Cove Term. Area	25	15-Jun	21-Jun	a	a	
		26	22-Jun	28-Jun			
		27	29-Jun	5-Jul			
Earl West Cove Total					a	a	0%
108-30	Baht Harbor	18	1-May	3-May	a	a	b
		19	5-May	7-May	3	10	0%
		20	12-May	14-May	4	17	100%
		21	19-May	21-May	9	62	32%
		22	26-May	28-May	10	179	21%
		23	2-Jun	7-Jun	23	274	19%
		24	9-Jun	14-Jun	11	132	19%

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Table 3.—Page 3 of 7.

Stat Area	Fishery Name	Stat Week	Open	Close	Permits	Chinook	AK%
		25	16-Jun	21-Jun	4	67	31%
		26	23-Jun	28-Jun			
	Baht Harbor Total				28	741	24%
109-10	Little Port Walter	18	1-May	2-May			
		19	8-May	9-May	3	7	b
		20	13-May	16-May			
		21	20-May	23-May			
		22	27-May	30-May	a	a	b
		23	3-Jun	6-Jun			
		24	10-Jun	13-Jun			
		25	17-Jun	21-Jun	a	a	b
		26	22-Jun	27-Jun	3	32	0%
	Little Port Walter Total				7	143	10%
109-51	Kingsmill Point	17	20-Apr	26-Apr	6	52	8%
		18	27-Apr	3-May	3	60	4%
		19	4-May	10-May	11	249	15%
		20	11-May	17-May	a	a	28%
		21	18-May	24-May	15	463	22%
		22	25-May	31-May	10	250	32%
		23	1-Jun	7-Jun	9	351	14%
		24	8-Jun	14-Jun	6	174	54%
		25	15-Jun	21-Jun	8	334	0%
		26	22-Jun	28-Jun	7	277	36%
		27	29-Jun	30-Jun			
	Kingsmill Point Total				42	2,210	21%
109-62	Tebenkof Bay	18	1-May	3-May			
		19	6-May	9-May	5	174	26%
		20	13-May	16-May	3	112	40%
		21	20-May	23-May	11	317	36%
		22	27-May	30-May	10	270	4%
		23	3-Jun	6-Jun	11	681	33%
		24	10-Jun	13-Jun	19	1,677	30%
		25	17-Jun	20-Jun	24	1,180	21%
		26	23-Jun	26-Jun	11	633	27%
	Tebenkof Bay Total				46	5,044	27%
110-31	Frederick Sound	17	20-Apr	26-Apr			
		18	27-Apr	3-May	a	a	b
		19	4-May	10-May	4	63	0%
		20	11-May	17-May	a	a	0%
		21	18-May	24-May	4	21	0%
		22	25-May	31-May	a	a	0%
		23	1-Jun	7-Jun	a	a	0%
		24	8-Jun	14-Jun			
		25	15-Jun	21-Jun	3	21	0%
		26	22-Jun	28-Jun	a	a	b
		27	29-Jun	30-Jun			
	Frederick Sound Total				11	130	2%

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Table 3.—Page 4 of 7.

Stat Area	Fishery Name	Stat Week	Open	Close	Permits	Chinook	AK%		
112-12	Chatham Strait	17	20-Apr	26-Apr					
		18	27-Apr	3-May					
		19	4-May	10-May	a	a	60%		
		20	11-May	17-May					
		21	18-May	24-May	a	a	20%		
		22	25-May	31-May	8	196	70%		
		23	1-Jun	7-Jun	13	404	46%		
		24	8-Jun	14-Jun	11	359	70%		
		25	15-Jun	21-Jun	10	349	90%		
		26	22-Jun	28-Jun	9	220	33%		
		27	29-Jun	30-Jun					
Chatham Strait Total					29	1,598	61%		
112-22	Hidden Falls Term. Area	17	20-Apr	26-Apr					
		18	27-Apr	3-May					
		19	4-May	10-May					
		20	11-May	17-May					
		21	18-May	24-May					
		22	25-May	31-May	12	149			
		23	1-Jun	7-Jun	20	461			
		24	8-Jun	14-Jun	17	860			
		25	15-Jun	21-Jun	8	363			
		26	22-Jun	28-Jun	14	1,300			
		27	29-Jun	30-Jun	a	360			
Hidden Falls Total					36	3,493	100%		
113-01	Western Channel	18	1-May	2-May	4	8	0%		
		19	5-May	6-May	a	a	0%		
		20	12-May	14-May	8	63	0%		
		21	19-May	21-May	19	159	22%		
		22	26-May	28-May	31	628	28%		
		23	2-Jun	4-Jun	31	719	23%		
		24	9-Jun	9-Jun	24	209	42%		
		25	16-Jun	17-Jun	29	674	24%		
		Western Channel Total					74	2,460	25%
		113-31	Biorka Island	18	1-May	2-May	19	184	26%
19	5-May			6-May	21	350	5%		
20	12-May			12-May	11	63	0%		
21	19-May			19-May	14	300	9%		
24	9-Jun			9-Jun	17	311	39%		
25	16-Jun			16-Jun	17	437	13%		
Biorka Island Total					54	1,645	17%		
113-35	Eastern Channel	17	20-Apr	26-Apr	a	a	b		
		18	27-Apr	3-May	a	a	0%		
		19	4-May	10-May	5	10	b		
		20	11-May	17-May	5	71	0%		
		21	18-May	24-May	14	196	55%		
		22	25-May	31-May	29	273	10%		
		23	1-Jun	7-Jun	38	508	27%		
		24	8-Jun	14-Jun	43	1,206	58%		

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Stat Area	Fishery Name	Stat Week	Open	Close	Permits	Chinook	AK%
		25	15-Jun	21-Jun	47	1,286	30%
		26	22-Jun	28-Jun	37	1,176	45%
		27	29-Jun	30-Jun	a	a	
	Eastern Channel Total				98	4,756	40%
113-37	Inner Silver Bay	17	20-Apr	26-Apr			b
		18	27-Apr	3-May	a	a	b
		19	4-May	10-May	a	a	
		20	11-May	17-May			
		21	18-May	24-May	a	a	0%
		22	25-May	31-May	a	a	b
		23	1-Jun	7-Jun	4	43	b
		24	8-Jun	14-Jun	5	68	100%
		25	15-Jun	21-Jun	8	275	93%
		26	22-Jun	28-Jun	9	483	51%
		27	29-Jun	30-Jun	a	a	
	Inner Silver Bay Total				17	1,013	62%
113-41	Middle Island	17	20-Apr	26-Apr	4	5	b
		18	27-Apr	3-May	4	6	b
		19	4-May	10-May	7	52	65%
		20	11-May	17-May	7	93	19%
		21	18-May	24-May	11	214	29%
		22	25-May	31-May	4	55	55%
		23	1-Jun	7-Jun	14	268	39%
		24	8-Jun	14-Jun	25	596	75%
		25	15-Jun	21-Jun	36	1,066	53%
		26	22-Jun	28-Jun	21	516	52%
		27	29-Jun	30-Jun	3	21	0%
	Middle Island Total				63	2,892	53%
113-45	Shelikof Bay	19	5-May	5-May	27	272	5%
		20	12-May	12-May	3	16	36%
		21	19-May	19-May	13	216	12%
		23	2-Jun	2-Jun	29	873	4%
	Shelikof Bay Total				47	1,377	6%
113-62	Salisbury Sound	18	1-May	3-May	a	a	b
		19	5-May	8-May	4	12	0%
		20	12-May	15-May	6	59	21%
		21	19-May	22-May	5	32	3%
		22	26-May	29-May	a	a	0%
		23	2-Jun	5-Jun	3	39	22%
		24	9-Jun	12-Jun	4	62	0%
		25	15-Jun	21-Jun	6	271	100%
		26	22-Jun	27-Jun	10	393	74%
	Salisbury Sound Total				27	882	76%
113-95	Lisianski Inlet	19	3-May	4-May	8	116	0%
		20	10-May	11-May	11	268	19%
		21	17-May	18-May	15	247	15%
		22	24-May	25-May	16	454	13%
		23	1-Jun	1-Jun	4	34	0%

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Stat Area	Fishery Name	Stat Week	Open	Close	Permits	Chinook	AK%
		24	8-Jun	8-Jun	a	a	0%
	Lisianski Inlet Total ^c				23	1,119	13%
113-97	Stag Bay	19	1-May	4-May	a	a	b
		20	8-May	11-May			
		21	15-May	18-May	4	33	0%
		22	22-May	25-May	3	33	0%
		23	29-May	1-Jun	3	16	0%
		24	5-Jun	8-Jun	*	*	0%
		25	11-Jun	15-Jun	4	110	10%
		26	18-Jun	22-Jun	6	121	6%
		27	25-Jun	29-Jun	3	19	b
	Stag Bay Total ^c				11	351	5%
114-21	Cross Sound Pink and Chum	24	9-Jun	13-Jun	6	74	0%
		25	16-Jun	20-Jun	5	32	94%
		26	23-Jun	27-Jun	7	40	0%
	Cross Sound Total				13	146	21%
114-23	South Passage	19	3-May	4-May			
		20	10-May	11-May			
		21	17-May	18-May	a	a	17%
		22	22-May	25-May	4	118	0%
		23	29-May	1-Jun	a	a	b
		24	5-Jun	8-Jun			
		25	11-Jun	15-Jun			
		26	18-Jun	22-Jun			
		27	25-Jun	29-Jun			
	South Passage Total ^c				7	132	1%
114-25	Homeshore	17	20-Apr	26-Apr	4	82	0%
		18	27-Apr	3-May	3	31	0%
		19	4-May	10-May	6	71	0%
		20	11-May	17-May	9	64	35%
		21	18-May	24-May	7	62	0%
		22	25-May	31-May	4	31	0%
		23	1-Jun	7-Jun	10	85	78%
		24	8-Jun	14-Jun	a	a	0%
		25	15-Jun	21-Jun			
		26	22-Jun	28-Jun	a	a	b
		27	29-Jun	30-Jun			
	Homeshore Total				28	456	19%
114-27	Point Sophia	17	20-Apr	26-Apr	a	a	b
		18	27-Apr	3-May	3	9	b
		19	4-May	10-May	a	a	0%
		20	11-May	17-May	a	a	100%
		21	18-May	24-May	4	15	100%
		22	25-May	31-May	7	37	75%
		23	1-Jun	7-Jun	10	89	81%
		24	8-Jun	14-Jun	7	45	100%
		25	15-Jun	21-Jun	a	a	0%
		26	22-Jun	28-Jun	3	55	25%

-continued-

Table 3.—Page 7 of 7.

Stat Area	Fishery Name	Stat Week	Open	Close	Permits	Chinook	AK%
		27	29-Jun	30-Jun	a	a	70%
	Point Sophia Total				23	314	71%
114-50	Port Althorp	19	3-May	4-May	a	a	0%
		20	10-May	11-May	4	120	6%
		21	17-May	18-May	9	167	16%
		22	24-May	25-May	4	78	53%
		23	31-May	1-Jun	13	163	16%
		24	6-Jun	8-Jun	8	164	41%
		25	12-Jun	15-Jun	14	322	11%
		26	18-Jun	22-Jun	12	385	14%
		27	28-Jun	29-Jun	6	89	18%
	Port Althorp Total ^c				28	1,488	18%
	Spring Experimental Subtotal				365	35,429	36%
	Spring Terminal Subtotal				66	3,826	100%
	Total Spring Troll				380	39,255	40%

^a Confidential data. Totals given may or may not include individual weeks confidential data.

^b Indicates that harvest was not sampled for coded-wire tags.

^c Pelican fisheries (Lisianski Inlet, Port Althorp, South Passage and Stag Bay) are summarized by week in which the fishery closed.

Table 4.—2003 Southeast Alaska Chinook Salmon Harvests.

Wild Terminal Exclusion Catches									
Fishery	Total Catch	Common Property Catch	Alaska Wild Total Contribution				Terminal Exclusion Base	Treaty Catch	
			General Fisheries	Terminal	Subtotal	Exclusion			
Gillnet	Stikine	66	66	0	0	0	0	402	66
	Taku	1,311	1,311	0	0	0	0	1,708	1,311
Setnet	Yakutat	2,342	776	0	1,566	1,566	1,566	776	776
Sport	Stikine	2,031	2,031	0	0	0	0	2,302	2,031
	Taku	1,749	1,749	0	0	0	0	1,857	1,749
	Yakutat	700	210	0	490	490	490	210	210
Total Terminal Exclusion		8,199	6,143	0	2,056	2,056	2,056		6,143
Annette Island Catches									
Fishery	Total Catch	Common Property Catch	Alaska Hatchery Total Contribution				Treaty Catch		
			General Fisheries	Terminal	Subtotal	Addon			
Seine		80	80	0	0	0	0		80
Gillnet		692	692	597	0	597	490		202
Trap		0	0	0	0	0	0		0
Troll		4	4	0	0	0	0		4
Total Annette Island		776	776	597	0	597	490		286
General Purse Seine And Gillnet									
Fishery	Total Catch	Common Property Catch	Alaska Hatchery Total Contribution				Terminal Exclusion Base	Treaty Catch	
			General Fisheries	Terminal	Subtotal	Addon			
Seine		24,054	19,381	2,238	4,673	6,911	6,510	288	17,544
Gillnet		9,329	3,008	1,161	6,321	7,482	7,274		2,055
Setnet		1,500	1,500	0	0	0	0		1,500
Total Net Fisheries ^a (Including Annette Island)		39,374	26,814	3,996	12,560	16,557	15,840		23,534
Troll									
Fishery	Total Catch	Common Property Catch	Alaska Hatchery Total Contribution				Terminal Exclusion Base	Treaty Catch	
			General Fisheries	Terminal	Subtotal	Addon			
Winter Fishery									
	Oct 11–Dec 31	18,672		1,546	0	1,546	1,269		17,403
	Jan 1–Apr 14	32,182		2,829	0	2,829	2,322		29,860
Winter Total		50,854		4,375	0	4,375	3,591		47,263
Spring Fishery									
	Spring Hatchery	35,435		11,949	0	11,949	9,807		25,628
	Hatchery Access	0		0	0	0	0		0
	Terminal	3,826		0	3,614	3,614	3,614	212	212
Spring Total		39,261		11,949	3,614	15,562	13,420		25,841
Summer Fishery									
	July 1–Aug. 8	240,573		7,677	0	7,677	6,301		234,272
		0		0	0	0	0		0
		0		0	0	0	0		0
		0		0	0	0	0		0
Summer Total		240,573		7,677	0	7,677	6,301		234,272
Total Troll (Including Annette Is.)		330,692		24,001	3,614	27,614	23,312		307,380

-continued-

Table 4.—Page 2 of 2.

Sport								
Fishery	Common		Alaska Hatchery Total Contribution				Terminal	
	Total Catch	Property Catch	General Fisheries	Terminal	Subtotal	Addon	Exclusion Base	Treaty Catch
Traditional	64,890	60,890	19,057	4,000	23,057	19,641		45,249
Total Sport ^a	69,370	64,880	19,057	4,490	23,547	20,131		49,239
Grand Totals ^a	439,436		47,054	20,664	67,718	59,284	7,755	380,152
Hatchery Base								5,000
Risk Adjustment Factor								3,434
Wild Terminal Exclusion								2,056
Alaska Hatchery Add-On								57,228

^a The Net, Sport And Grand Hatchery Contribution Totals Include The Contributions From The Wild Terminal Exclusion Areas.

Table 5.– Southeast Alaska troll chinook catch per fleet day during the general summer fishery, from 1984 to 2003. ^{a,b}

Year	Fishing Period	Days	Chinook Harvest	Catch/Fleet Day	Chinook Abundance Index ^b
1984	June 5–30	26	130,000	5,000	1.34
	July 11–29	19	77,000	4,100	
		45	207,000	4,600	
1985	June 3–12	10	66,000	6,600	1.27
	July 1–22	22	114,000	5,200	
	August 25–26	2	13,000	8,300	
		34	193,000	5,700	
1986	June 20–July 15	26	155,000	6,000	1.48
	August 21–26	6	31,900	5,300	
	September 1–9	9	27,500	3,000	
		41	214,400	5,200	
1987	June 20–July 12	23	209,000	9,100	1.78
1988	July 1–12	12	162,000	13,500	2.04
1989	July 1– 13	13	167,000	12,800	1.85
1990	July 1–22	22	200,000	9,100	1.84
	August 23–24	2	12,000	6,000	
		24	212,000	8,800	
1991	July 1–8	8	154,000	20,500	1.82
1992	July 1–4	4	66,000	18,900	1.65
	23–Aug	1	7,000	7,000	
		5	73,000	16,200	
1993	July 1–6	6	101,000	16,800	1.71
	August 21–25	5	25,000	5,000	
	September 12–20	9	19,000	2,100	
		20	145,000	7,300	
1994	July 1–7	7	98,000	14,000	1.55
	August 29–September 2	5	20,000	4,000	
		12	118,000	9,800	
1995	July 1–10	10	76,000	7,600	0.99
	July 30–August 5	7	21,000	3,000	
		17	97,000	5,700	
1996	July 1–10	10	76,000	7,600	0.9
	August 19–20	2	8,000	4,000	
		12	84,000	7,000	

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Table 5. Page 2 of 2.

Year	Fishing Period	Days	Chinook Catch	Catch/Fleet Day	Chinook Abundance Index ^b
1997	July 1–7	7	122,000	17,400	1.37
	August 18–24	7	38,000	5,400	
	August 30–September 5	7	22,000	3,100	
		21	182,000	8,700	
1998	July 1–11	11	103,000	9,400	1.25
	August 20–Sept. 30	42	36,000	960	
		53	139,000	2,600	
1999	July 1–6	6	78,000	13,000	1.16
	August 18– August 22	5	16,000	3,200	
		11	94,000	8,500	
2000	July 1–5	5	50,768	10,150	1.1
	August 11–12	2	12,423	6,210	
	August 23–30	8	24,895	3,110	
	September 12–20	9	5,679	630	
		24	93,765	3,910	
2001	July 1–6	6	64,854	10,809	1.14
	August 18–September 5	19	30,509	1,606	
		25	95,363	3,810	
2002	July 1–18	18	186,998	10,389	1.74
	August 12–September 2	22	65,266	2,967	
		40	252,264	6,310	
2003	July 1–August 8	39	240,601	6,169	1.79

^a The general summer fishery does not include experimental, terminal, or hatchery access fisheries, which target Alaska hatchery stocks.

^b Abundance index is estimated by the chinook technical committee of the Pacific Salmon Commission.

Table 6.—Number of days, effort (boat days) and dates the Southeast Alaska troll fishery was open to chinook fishing (chinook retention (CR)), closed to chinook salmon retention (chinook non-retention (CNR)), and closed to all salmon species (all) during the general summer season. (April 15–September 30) from 1978 to 2003.

Year	Open Periods					Closed Periods				
	Days Open	Days Closed	Dates open	CR Days	CR Effort (Boat days)	Closed Dates	Days Closed	CNR Days	CNR Effort (Boat Days)	
1978	169	0	4/15–9/30	169		None	0			
1979	169	0	4/15–9/31	169		None	0			
1980	149	20	4/15–7/14	91		7/15–7/24	10 (all)			
1981	101	69	7/25–9/20	58		9/21–9/30	10 (all)			
			5/15–6/25	42		4/15–5/14	30 (all)			
						6/26–7/4	9 (all)			
						7/5–8/9	36	8/10–8/19	10 (all)	
						8/20–9/3	15	9/4–9/12	9	
1982	65	104	9/13–9/20	8	76,691	9/21–9/30	10 (all)	9	3,526	
			5/15–6/6	23		4/15–5–14	30 (all)			
						6/7–6/16	10 (all)			
						6/17–7/28	42	7/29–8/7	10 (all)	
1983	60	109				8/8–9/20	44			
						9/21–9/30	10 (all)	44	32,727	
			5/15–6/8	25		4/15–5/14	30 (all)			
						6/9–6/30	22 (all)			
						7/1–8/4	35	8/5–8/14	10 (all)	
1984	45	124				8/15–9/20	37			
						9/21–9/30	10 (all)	37	18,385	
			6/5–6/30	26		4/15–6/4	51 (all)			
						7/1–7/10	10 (all)			
						7/11–7/29	19	7/30–8/14	16	
								8/15–8/24	10 (all)	
1985	33.6	135.4				8/25–9/20	27			
						9/21–9/30	10 (all)	43	29,583	
			6/3–6/12	10		4/15–6/2	49 (all)			
						6/13–6/30	18 (all)			
						7/1–7/22	22	7/23–8/14	23	
						8/25–8/26	1.6	8/15–8/24	10 (all)	
					8/26–9/20	25.4				
					30,628	9/21–9/30	10 (all)	48.4	35,725	

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Table 6. Page 2 of 4.

Year	Open Periods				Closed Periods				
	Days Open	Days Closed	Dates open	CR Days	CR Effort (Boat days)	Closed Dates	Days Closed	CNR Days	CNR Effort (Boat Days)
1986	41	128	6/20-7/15	26		4/15-6/19	66 (all)		
						7/16-8/10	26		
			8/21-8/26	6		8/11-8/20	10 (all)		
			9/1-9/9	9	33,079	8/27-8/31	5		
						9/10-9/20	11		
						9/21-9/30	10 (all)	42	34,173
1987	23	146	6/20-7/12	23	19,077	4/15-6/19	66 (all)		
						7/13-8/2	21		
						8/3-8/12	10 (all)		
1987						8/13-9/20	39		
						9/21-9/30	10 (all)	60	37,214
1988	12	157	7/1-7/12	12	9,507	4/15-6/30	77 (all)		
						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	27,275
1989	13	156	7/1-7/13	13	9,585	4/15-6/30	77 (all)		
						7/14-8/13	31		
						8/14-8/23	10 (all)		
						8/24-9/20	28		
						9/21-9/30	10 (all)	59	38,404
1990	24	145	7/1-7/22	22		4/15-6/30	77 (all)		
						7/23-8/12	21		
			8/23-8/24	2	17,172	8/13-8/22	10 (all)		
						8/25-9/20	27		
						9/21-9/30	10 (all)	48	29,525
1991	7.5	161.5	7/1-7/8	7.5	4,718	4/15-6/30	77 (all)		
						7/8-8/15	38.5		
						8/16-8/24	10 (all)		
						8/25-9/20	26		

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Year	Open Periods				Closed Periods				
	Days Open	Days Closed	Dates open	CR Days	CR Effort (Boat days)	Closed Dates	Days Closed	CNR Days	CNR Effort (Boat Days)
1991						9/21-9/30	10 (all)	64.5	32,565
1992	4.5	164.5	7/1-7/4	3.5		4/15-6/30	77 (all)		
						7/4-8/12	39.5		
						8/13-8/22	10 (all)		
			23-Aug	1	2,881	8/24-9/20	28		
1993	20	149	7/1-7/6	6		9/21-9/30	10 (all)	67.5	36,306
						4/15-6/30	77 (all)		
						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		
1994	12	157	9/12-9/20	9	12,036	9/21-9/30	10 (all)	49	30,502
			7/1-7/7	7		4/15-6/30	77 (all)		
						7/8-8/26	50		
			8/29-9/2	5	6,434	8/27-8/28	2 (all)		
1995	17	152	7/1-7/10	10		9/3-9/30	28	78	35,716
						4/15-6/30	77 (all)		
						7/11-7/29	19		
			7/30-8/5	7	8,420	8/6-8/12	7		
						8/13-8/22	10 (all)		
1996	12	157	7/1-7/10	10		8/23-9/30	39	65	23,435
						4/15-6/30	77 (all)		
						7/11-8/13	34		
						8/14-8/18	5 (all)		
			8/19-8/20	2	5,282	8/21-9/20	30		
1997	21	148	7/1-7/7	7		9/21-9/30	10 (all)	64	23,167
						4/15-6/30	77 (all)		
						7/8-8/7	30		
						8/8-8/17	10 (all)		
			8/18-8/24	7		8/25-8/29	5		
			8/30-9/5	7	9,126	9/6-9/20	14b	49	17,653
1998	53	116	7/1-7/11	11		4/15-6/30	77 (all)		
						7/12-8/11	30		
						8/12-8/19	8 (all)	30	11,928

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Year	Open Periods					Closed Periods			
	Days Open	Days Closed	Dates open	CR Days	CR Effort (Boat days)	Closed Dates	Days Closed	CNR Days	CNR Effort (Boat Days)
1998			8/20-9/30	42	12,517				
1999	11	158	7/1-7/6	6		4/15-6/30	77 (all)		
						7/7-8/12	36		
						8/13-8/17	5 (all)		
			8/18-8/22	5	4,678				
2000	24	68	7/1-7/5	5		8/23-9/30	39	75	21,879
			8/11-8/12	2		4/15-6/30	77 (all)		
			8/23-8/30	8		7/6-8/10	36		
			9/12-9/20	9	6,784	8/13-8/22	10 (all)		
2001	25	67	7/1-7/6	6		8/31-9/11	12	48	15,422
						4/15-6/30	77 (all)		
						7/7-8/12	37		
			8/18-9/5	19		8/13-8/17	5(all)		
						9/6-9/30	25		
2002	40	52	7/1-7/18	18	7,364	9/21-9/24	4(all)	58	15,434
						4/15-6/30	77 (all)		
						7/19-8/9	22		
			8/12-9/2	22		8/10-8/11	2(all)		
						9/3-9/30	28		
2003	39	53	7/1-8/8	39	10,482			50	10,214
						4/15-6/30	77 (all)		
						8/9-9/30	53	53	9,209

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.– Contribution in numbers and percent of chinook salmon produced by Alaskan hatcheries in the winter, experimental, terminal, hatchery access and general summer troll fisheries, from 1989 to 2003.^a

Fishery	Year	Total Harvest	Alaskan Hatcheries	
			Number	Percent
Winter	1989	34,300	4,900	14%
	1990	33,100	4,400	13%
	1991	42,600	10,200	24%
	1992	71,800	7,000	10%
	1993	62,700	3,900	6%
	1994	56,400	2,000	4%
	1995	17,900	2,100	12%
	1996	9,400	1,700	18%
	1997	21,000	1,700	8%
	1998	32,800	2,400	7%
	1999	31,000	2,200	7%
	2000	36,100	3,100	9%
	2001	22,600	2,800	12%
	2002	29,400	2,000	7%
	2003	50,854	4,380	9%
	1989–2003 Averages	36,797	3,652	11%
Experimental	1989	2,500	900	36%
	1990	7,100	4,300	61%
	1991	14,000	6,200	44%
	1992	11,200	5,600	50%
	1993	15,800	6,500	41%
	1994	11,300	4,900	43%
	1995	21,700	14,000	65%
	1996	31,000	15,000	48%
	1997	33,200	13,600	41%
	1998	19,200	5,000	26%
	1999	21,000	8,800	42%
	2000	21,005	11,300	54%
	2001	28,200	13,700	49%
	2002	37,600	17,000	45%
	2003	35,429	11,971	34%
	1989–2003 Averages	20,682	9,251	45%
Terminal ^a	1989	900	900	100%
	1990	16	16	100%
	1991	5,900	5,900	100%
	1992	4,100	4,100	100%
	1993	2,800	2,800	100%
	1994	100	100	100%
	1995	1,300	1,300	100%
	1996	16,400	16,400	100%
	1997	9,500	9,500	100%
	1998	1,300	1,300	100%
	1999	2,400	2,400	100%
	2000	8,000	8,000	100%
	2001	7,100	7,100	100%
	2002	6,000	6,000	100%
	2003	3,826	3,826	100%

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Fishery	Year	Total Harvest	Alaskan Hatcheries	
			Number	Percent
Hatchery Access	1989–2003 Averages	4,643	4,643	100%
	1989	30,500	3,800	12%
	1990	35,000	6,800	19%
	1991	46,500	8,600	18%
	1992	23,600	6,500	28%
General Summer	1989–1992 Averages	33,900	6,425	19%
	1989	167,500	5,800	3%
	1990	211,900	14,300	7%
	1991	154,000	6,600	4%
	1992	72,600	2,500	3%
	1993	145,200	4,900	3%
	1994	118,400	5,300	4%
	1995	97,200	9,700	10%
	1996	84,600	4,800	6%
	1997	182,700	4,300	2%
	1998	138,700	3,800	3%
	1999	94,500	3,700	4%
	2000	93,800	6,900	7%
	2001	95,400	5,000	5%
	2002	252,300	6,400	3%
2003	240,573	7,692	3%	
Total	1989–2003 Averages	143,292	6,113	5%
	1989	235,700	16,300	7%
	1990	287,116	29,816	10%
	1991	263,000	37,500	14%
	1992	183,300	25,700	14%
	1993	226,500	18,100	8%
	1994	186,200	12,300	7%
	1995	138,100	27,100	20%
	1996	141,400	37,900	27%
	1997	246,400	29,100	12%
	1998	192,000	12,500	7%
	1999	149,900	17,100	11%
	2000	159,905	29,300	18%
	2001	153,200	28,400	19%
	2002	325,335	31,300	10%
2003	330,686	27,651	8%	
	1989–2003 Averages	214,583	25,338	13%

^a Includes Annette Island troll harvests.

Table 8.—Minimum estimated contributions of hatchery Chinook salmon to sampled marine boat sport fisheries of Southeast Alaska, 2003 (Preliminary)

	Marine Boat Sport Fishery								Total
	Ketchikan 4/28–9/28	Craig 4/28–9/14	Petersburg 5/05–7/06	Wrangell 4/28–6/29	Sitka 4/28–9/28	Juneau 4/28–9/28	Gustavus 5/05–9/14	Elfin Cove 6/01–9/06	
Conuma (WCVI) ^a	0	643	0	0	1,053	0	51	0	1,747
Nitinat (WCVI) ^a	0	263	0	0	990	0	0	0	1,253
Robertson Creek (WCVI) ^a	90	808	0	0	2,015	0	0	0	2,913
Other Non-Alaska	295	1,005	140	10	2,087	11	1	146	3,695
Non Alaska Total	385	2,719	140	10	6,145	11	52	146	9,608
ALASKA									
Crystal Lake	90		56	30	47	95			318
Crystal Lake/Earl West			12	136	50			40	238
Crystal Lake/Neets Bay	751				104				855
Deer Mountain	318								318
Macaulay (Gastineau)	4					2,538	3		2,545
Hidden Falls					182	283	19	117	601
Little Port Walter		8	1		23	23	1		56
Medvejie	41	235			2,425	30	34	39	2,804
Neets Bay	180	45	31		42	35			333
Sheldon Jackson					0				0
Tamgas Creek	543				220	15			778
Whitman Lake	2,025			104	196	7	13		2,345
Alaska Total	3,952	288	100	270	3,289	3,026	70	196	11,191
All area total	4,337	3,007	240	280	9,434	3,037	122	342	20,799
Creel Survey Harvest ^a	7,715	8,234	691	2,115	24,124	5,516	242	1,142	49,779
Percent Alaska Hatchery	51%	3%	14%	13%	14%	55%	29%	17%	22%
Percent Alaska Hatchery 5-Yr. Avg.	55%	5%	28%	18%	12%	55%	NA	NA	22%
Percent Total Hatchery	56%	37%	35%	13%	39%	55%	50%	30%	42%

Note: Not all expanded to entire area. Craig, Petersburg, Wrangell, Gustavus, and Elfin Cove estimates are based on catch sampling programs only. Additional terminal area Alaska hatchery harvests included about 1,500 fish (Gastineau/Snettisham) in the Juneau area and 2,500 fish (Crystal Lake) in the Petersburg area.

^a WCVI = West Coast Vancouver Island hatchery stock..

Table 9.—Annual Southeast Alaska commercial and recreational chinook salmon harvests and Alaska hatchery contribution, in thousands of fish, from 1965 to 2003.

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	7	337
1981	249	19	268	21	289	2	287
1982	242	48	290	26	316	1	315
1983	270	19	289	22	311	2	309
1984	236	32	268	22	290	5	285
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	56	311
1991	264	35	299	60	359	66	293
1992	184	32	216	43	259	44	215
1993	227	28	255	49	304	41	263
1994	186	36	222	42	264	37	227
1995	138	48	186	50	236	69	167
1996	141	37	178	58	237	88	149
1997	246	25	271	72	340	62	278
1998	192	24	216	55	271	33	238
1999	146	33	179	72	251	58	193
2000	159	41	200	63	252	84	168
2001	153	38	191	68	259	79	180
2002	325	32	357	85	442	77	365
2003	331	39	370	76	446	68	378

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

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

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

^c Estimates of sport catches for 1965–1976 based on 1977–1980 average catch per capita data. Sport catches for 1977–1999 based on statewide postal harvest surveys. Sport harvest for 2003 based on preliminary creel survey data, pending completion of statewide postal harvest surveys.

Table 10.—Actual and projected releases of chinook salmon by brood year (thousands).

Fry	Facility	Release Site	Brood Year																									
			1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
	Beaver Falls	Brennan Lk					109.3																					
	Big Boulder Instream	Big Boulder Cr															25.5	24.3	45.1	62								
	Crystal Lake	Farragut Lk						21.5	12						66.5	95.8	125.1											
	Crystal Lake	Farragut R					22.8	23.8																				
	Crystal Lake	Gen Gen Lk Ohmer Cr					13.4																					
	Crystal Lake	Harding R								30.5			31.2		41.8													
	Crystal Lake	Tahini R						43	46.5																			
	Deer Mountain	Bold Is Lk						27.9																				
	Deer Mountain	Brennan Lk						225.7																				
	Macaulay	Big Boulder Cr														44.8	23.4	28.1										
	Macaulay	Tahini R														62.6												
	Hidden Falls	Eliza Lk								130																		
	Hidden Falls	Farragut Lk											29.4															
	Hidden Falls	Indian R							51							122.1												
	Jerry Myers	Tahini R											30.1	36.3														
	Little Port Walter	Banner Lk							96.1																			
	Little Port Walter	Larry Lk				15.5																						
	Little Port Walter	Osprey Lk						141.9																				
	Little Port Walter	Tranquil Lk				6.6																						
	Neets Bay	Long Lk																				29.8	273.6	248.7	301	257	250	250
	Snettisham	Indian Lk															283											
	Snettisham	Indian R										269																
	Snettisham	Redoubt Lk							911																			
	Whitman Lake	Carroll R				78.3																						
		<i>Total Fry Releases</i>	0	0	0	100	0	287	438	1,151	31	269	0	91	36	216	241	461	45	62	0	30	274	249	301	257	250	250
	<hr/>																											
	Age 0 Smolts		Brood Year																									
	Facility	Release Site	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
	Deer Mountain	Crab Bay								71	48																	
	Deer Mountain	Ward Cove									171																	
	Crystal Lake	Crystal Cr	14.6	13.7		59.1																						
	Deer Mountain	Ketchikan Cr																							90	90	97.5	
	Deer Mountain	Thomas Basin				20.6	304.9	227	284																			
	Deer Mountain	Thorne Bay							68	83																		
	Hidden Falls	Kasnyku Bay																									236.7	
	Little Port Walter	L Port Walter	28.9							102.4	90.2	4.2																
	Medvejje	Bear Cove																						205.6	309.5	0	261.6	749.5
	Neets Bay	Neets Bay					152.1	407.2	2299.7	2733	8.5			29.5														
	Port Armstrong	Jetty Cr								75.6																		
	Tamgas Creek	Tamgas Cr				70	150	555.4	1947.3	1756.3				770.6	179	968	996.4	411.1	964	197.1			102.2	187.5	300	271	500	
	Whitman Lake	Carroll Inlet							281	435				27.3														

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Age 0 Smolts		Brood Year																										
Facility	Release Site	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	
Whitman Lake	Herring Cove							12.6																				
Whitman Lake	Neets Bay						53.9																					
	<i>Total Age 0 Smolt Releases</i>	44	14	0	59	21	581	797	3,662	5,583	1,769	0	27	800	179	968	996	411	964	197	0	0	308	497	300	533	1,250	
Age 1 & 2 Smolts		Brood Year																										
Facility	Release Site	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	
Bell Island Net Pens	Bell Island											5.9	5.3	5.7	5.3													
Burnett Inlet	Burnett Inlet									170	192.4	100.2	54.2															
Burro Creek	Burro Cr												7.1								16.4							
Burro Creek	Taiya Inlet													8.6	8.7	1.9	34.9	12.8	16									
Crystal Lake	Anita Bay																						369	0	450	470.8	450	
Crystal Lake	Crystal Cr		42.2	273.8	137.9	566	135	351	432.5	550	479.4	542.3	434.1	520.4	463	443.4	451.9	501.3	540	610.1	670.9	713.6	595.7	554.1	600	665.3	600	
Crystal Lake	Earl West Cove							98	251.9	482.7	394.2	486.5	399.6	368.1	436.3	316.1	203.6	241.6		396.8	386.4	364.4	441					
Crystal Lake	Neets Bay																		338.8	404.3	347.3	421.8	416.3	452.6	450	491.9	450	
Crystal Lake	Ohmer Cr					100		201			228.6	342.5																
Deer Mountain	Big Salt									51		25																
Deer Mountain	Ketchikan Cr	72.1	65.7	118.8	127.9			46.4	42	70	166.8	85.6	79.1	127.8	71.3	85.1	98.7	80.8	97.9	101.3	51.4	90.3	89.5	96	100	100		
Deer Mountain	Thomas Basin				18.7							30.6	19.2															
Deer Mountain	Thorne Bay									24.3	35.5	24.4																
Macaulay	Auke Bay																193.5	106.3	176.2	174.2	173.2	56.9	157.4	85		104.9	90	
Macaulay	Fish Cr																196.5	109.3	179.2	179.1	183.7	166.7	183.2	178.5	121.8	171.9	180	
Macaulay	Gastineau Ch											43.6	191.8	207.5	241.4	158.7	64.4	171.9	212.3	221.4	208.6	213.2	213.3	122.9	177.4	235		
Macaulay	Sheep Cr																28.5	35.4	44.7						70.5	100		
Macaulay	Pullen Cr																					91.6	32.1	95	59	130	235	
Hidden Falls	Kasnyku Bay				80.5	70	97	92.1	98	159	337.9	310.8	184.1	1554	1755	1053	923.5	888.5	944.5	1070.9	1104.4	1232.7	1214.6	1145.8	1248.3	922.4	1250	
Hidden Falls	Lutak Inlet											38.7																
Hidden Falls	Taiya Inlet													30.2	56.4	38.8												
Jerry Myers	Taiya Inlet								6.1	4.7	1.7	6.4	7.2	11.9	12.9	1.7	5.6	1.5		8.6	1.9			3	3	3		
Little Port Walter	L Port Walter	166.7	30.6	20.3	120.2	175.3	215.1	207	212.2	287.1	142.1	173.5	186.8	275.5	215.3	150.4	208.4	152.2	202.2	107.7	106.5	134.1	109	0	200	150		
Medveje	Bear Cove					26.6	21.9	108	227.5	174.6	743.5	921	866.8	1144.7	762.4	1083.4	1130.2	1004.9	1053	1119.5	1596.9	2043.1	1872.6	1953.4	1502.2	1929.6	1700	
Neets Bay	Neets Bay						131.7	930.1	731.2	708.2	691.1	1608	388.2	728.5	377.4	215		556.8	1	138.1	194.1							
Port Armstrong	Jetty Cr								69.9		89.9	144.3	62.2	110												120	98	95
Sheldon Jackson	Crescent Bay														89.4	103.4	78.4	57.8	79.1	41.3	11.4	88.1	53	28	0	0		
Sheldon Jackson	Sitka Sound							54.2	45.6	32.3	96.7	100.5	50.6	103.1														
Snettisham	Auke Bay							58.7	40	92	117	276.4	46	50.1	100.5	141												
Snettisham	Auke Cr							26.9	50.5																			
Snettisham	Fish Cr							60.3	62.7	74	67	254.5	45.2	345	105.7	143												
Snettisham	Gastineau Ch										11	101.5																
Snettisham	Montana Cr							28.3	30.7	52	33																	
Snettisham	Port Armstrong													308.8	1264.4													

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Age 1 & 2 Smolts		Brood Year																									
Facility	Release Site	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Snettisham	Sheep Cr							30.3	31.1	31.6	120	222.7															
Snettisham	Speel Arm		26.7	39.2	234.1	286.2	109.1	192.7	832.4	181.4	876	1075.8															
Tamgas Creek	Tamgas Cr					48	391.2	424	2445.7	164.4	888.1	1233.8	671	527.2	338.6	284	142.2	167.2	381.7	523.3	501.2	485.6	369.3	540	245	340	150
Whitman Lake	Carroll Inlet							51.3	816.6	892.3	702.5	1004.8	1100	1217.8	1062.7	1147.9	513.3										
Whitman Lake	Herring Cove			145.6			27.2	119.1	98	151	55	75.4	73.7	106.2	109	123.2	233.6	239	697.2	713.3	741.9	779.8	782.6	689.6	706.9	715.4	750
Whitman Lake	Neets Bay				135.2	144.2	100.2																				
	<i>Total Age 1&2 Smolt Releases</i>	239	165	598	854	1,416	1,224	3,079	6,525	4,158	6,366	9,175	4,813	7,788	7,442	5,585	4,460	4,242	5,317	5,707	6,314	6,954	6,458	6,034	5,929	6,541	6,285
All Total		282	179	598	1,014	1,437	2,092	4,314	11,337	9,772	8,404	9,175	4,931	8,624	7,837	6,794	5,916	4,698	6,343	5,904	6,344	7,228	7,014	6,832	6,486	7,324	7,785

Table 11.—Chinook smolt capacity of Southeast Alaska hatcheries, from 1996 to 2004.

Facility	Release	1996	1997	1998	1999	2000	2001	2002	2003	2004
Burro Creek	1	40	50	100	100	100	100	0	0	0
Crystal Lake	1	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800
Deer Mountain	1	100	100	100	100	100	100	100	100	100
Macaulay	1	590	590	600	600	600	600	600	600	600
Hidden Falls	1	1,100	1,100	1,100	1,100	1,100	1,100	2,100	2,100	2,100
Jerry Myers	1	10	10	10	10	10	10	10	10	10
Klawock River	1				250	250	250	250	250	250
Little Port Walter	1	200	200	200	200	200	200	200	200	200
Medvejie Creek	0						300	300	300	1,000
Medvejie Creek	1	1,100	1,100	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Neets Bay	1	325	325	325	325	325	325	325	250 ^a	250 ^a
Port Armstrong	1	200	200	200	200	200	200	200	200	200
Sheldon Jackson	1	100	100	100	100	100	100	100	100	100
Tamgas	0	250	250	250	250	250	250	300	300	300
Tamgas	1	500	500	500	500	500	500	500	500	500
Whitman Lake	1	775	775	775	775	775	775	775	775	775
Subtotal	0	250	250	250	250	250	550	600	600	1,300
Subtotal	1	6,840	6,850	7,810	8,060	8,060	8,060	8,960	8,635	8,635
Grand total		7,090	7,100	8,060	8,310	8,310	8,610	9,560	9,235	9,935

^a Planted into Long Lake as pre-smolts; volitional outmigration from Long Lake into Neets Bay as age-1 smolts.

Table 12.—Estimated harvest and escapement of Chinook salmon from Southeast Alaska enhancement sites in 2003.

Release Site	Harvest								Rack returns ^b				Total		
	Troll ^a	Terminal Troll ^a	Adults	Net ^a Terminal	Jacks	Sport ^a	Terminal Sport ^b	Canadian ^c	Cost recovery ^b Adults	Jacks	Adults	Excess		Jacks	Mini-Jacks
Anita Bay	158		125			30									313
Auke Bay	35		87			382	404				317		47	63	1,335
Burro Creek	0		0		0	0	0	0	0	0					0
Crystal Lake	988		53			594	4,000	89			290	290			6,304
Deer Mountain	278		43			318	250				154	215			1,258
Earl West Cove	657		174			238									1,069
Fish Creek	244		88			1,438	195				176			27	2,168
Gastineau(Macaulay)	525		524			701	2,460				907	1,238	64	81	6,500
Hidden Falls	5,114	1,322	4,235	546		601	50		11,920	146	3,643	1,000	651	18	29,246
Jerry Meyers	0		0			0									0
Little Port Walter	702		47			54		19							822
Long Lake	301		48			332			1,900		80	80			2,741
Medvejie Creek	9,216	646	973	290		2,804	336		29,101	944	3,218	758	478		48,764
Neets Bay ^b	1,825		49			945		137	4,800		520	520			8,796
Pullen Creek	18		13			23									54
Sheldon Jackson	12		0			0									12
Tamgas Creek	1,187		1,299			779	550	389	4,500		300		1,225		10,229
Whitman Lake	5,758		287			2,347	2,000	345	6,190		1,157	1,670			19,754
Totals	27,018	1,968	8,045	836	0	11,586	10,245	979	58,411	1,090	10,762	5,771	2,465	189	139,365
Troll		28,986													
Net		8,881													
Sport		21,831													
Canadian		979													
Cost Recovery		59,501													
Rack		18,998													
Total		139,176													

^a From reports generated 09/01/04 on the Alaska Department of Fish and Game's Mark, Tag, and Age website at <http://www.taglab.org/>

^b Reported by hatchery operators in 2003.

^c Provided by the Alaska Department of Fish and Game's Mark, Tag, and Age Lab.

Table 13.—Estimated harvest and escapement of Alaska hatchery-produced chinook salmon in Southeast Alaska, from 1980 to 2003.

Year	Gear Type			Cost	Brood	Total Return ^b
	Troll	Net ^a	Sport	Recovery ^a	Escapement ^a	
1980	5,877	363	N/A	0	N/A	8,571
1981	1,949	59	N/A	0	N/A	3,985
1982	943	212	N/A	0	N/A	2,105
1983	1,857	113	872	0	1,451	4,293
1984	3,626	563	1,904	0	6,029	12,122
1985	8,100	2,400	3,372	2,011	9,819	25,702
1986	9,900	2,700	5,010	1,900	10,063	29,573
1987	16,600	2,300	5,108	2,466	15,426	41,900
1988	19,716	5,154	5,545	8,670	13,732	52,817
1989	18,804	8,831	6,351	17,748	13,071	64,805
1990	30,040	12,341	16,612	20,824	14,696	94,513
1991	38,336	14,488	18,818	25,854	14,425	111,921
1992	25,687	9,432	9,983	20,523	13,004	78,629
1993	17,805	13,999	9,279	22,929	14,712	78,724
1994	12,069	5,726	6,110	17,401	25,009	66,315
1995	26,187	22,506	9,983	23,690	29,680	112,046
1996	33,344	23,196	10,515	30,003	18,737	115,795
1997	28,111	7,984	9,605	30,487	15,652	91,839
1998	11,504	9,749	8,014	17,413	28,886	75,566
1999	17,203	19,049	11,250	17,249	20,022	84,773
2000	28,944	31,184	24,500	38,106	16,995	139,729
2001	24,700	12,505	16,469	69,425	18,169	141,268
2002	29,581	17,028	20,924	37,667	29,828	135,028
2003	28,775	8,649	21,231	59,679	18,244	136,578

^a Includes jacks

^b Totals do not include chinook caught in Canadian fisheries.

Table 14.—Percent distribution of troll catch of hatchery chinook by Pacific Salmon Marine Fisheries Council (PSMFC) area, from 1972 to 2003.

Sum Of Contribution		PSMFC AREA										Grand Total	
Location	Stock	Season	LYNN	NOUT	COUT	CNTR	STEP	SNTR	CIN	SOUT	SIN		
Bell Island Net Pens	Unuk River	Summer	0%	0%	36%	16%	0%	20%	0%	0%	28%	8	100%
Big Boulder Instream	Big Boulder Cr	Summer	0%	0%	52%	38%	0%	10%	0%	0%	0%	9	64%
		Winter	0%	0%	0%	60%	0%	40%	0%	0%	0%	5	36%
Burnett Inlet	Andrews Cr	Summer	0%	4%	5%	6%	0%	15%	31%	9%	31%	622	74%
		Winter	0%	0%	7%	30%	0%	63%	0%	0%	0%	221	26%
Burro Creek	Tahini R	Summer	0%	0%	0%	88%	0%	12%	0%	0%	0%	18	88%
		Winter	0%	0%	100%	0%	0%	0%	0%	0%	0%	2	12%
Carroll Inlet	Chickamin R	Summer	0%	6%	11%	4%	0%	12%	4%	14%	48%	21,810	83%
		Winter	0%	0%	30%	7%	0%	38%	5%	3%	17%	4,481	17%
Crystal Lake	Andrews Cr	Summer	0%	2%	8%	12%	2%	63%	11%	2%	1%	37,922	69%
		Winter	0%	0%	7%	6%	1%	80%	5%	0%	0%	17,149	31%
Crystal Lk/Anita Bay	Andrews Cr	Summer	0%	0%	0%	0%	0%	0%	38%	0%	62%	94	100%
Crystal Lk/Neets Bay	Andrews Cr	Summer	0%	10%	32%	2%	0%	12%	2%	11%	30%	663	62%
		Winter	0%	0%	53%	0%	0%	15%	8%	0%	24%	410	38%
	Chickamin R	Summer	0%	7%	26%	2%	0%	11%	9%	2%	44%	3,634	85%
		Winter	0%	0%	70%	0%	3%	14%	5%	0%	8%	646	15%
	Unuk River	Summer	0%	0%	29%	0%	0%	17%	6%	0%	49%	297	83%
		Winter	0%	0%	62%	0%	0%	38%	0%	0%	0%	59	17%
Crystal Lk/Earl West	Andrews Cr	Summer	0%	4%	10%	10%	0%	35%	25%	6%	12%	8,605	68%
		Winter	0%	0%	21%	8%	2%	59%	6%	1%	4%	4,037	32%
Deer Mountain	Unuk River	Summer	0%	5%	20%	6%	0%	9%	6%	11%	43%	4,827	89%
		Winter	0%	1%	16%	6%	0%	37%	3%	6%	32%	612	11%
Hidden Falls	Andrews Cr	Summer	0%	3%	12%	68%	0%	17%	0%	0%	0%	34,494	91%
		Winter	0%	0%	34%	15%	3%	47%	1%	0%	0%	3,534	9%

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Table 14. Page 2 of 3.

Sum Of Contribution			PSMFC AREA									Grand Total	
Location	Stock	Season	LYNN	NOUT	COUT	CNTR	STEP	SNTR	CIN	SOUT	SIN		
Jerry Myers	Tahini R	Summer	0%	4%	9%	65%	0%	22%	0%	0%	0%	216	45%
		Winter	0%	0%	21%	63%	1%	15%	1%	0%	0%	259	55%
	Tahini R	Summer	8%	2%	13%	66%	0%	11%	0%	0%	0%	146	67%
		Winter	0%	0%	59%	18%	0%	20%	2%	0%	0%	72	33%
Little Port Walter	Chickamin R	Summer	0%	4%	15%	17%	1%	62%	0%	1%	0%	9,764	72%
		Winter	0%	0%	24%	4%	2%	68%	2%	0%	0%	3,724	28%
	King Salmon R	Summer	0%	1%	15%	21%	0%	62%	0%	0%	0%	980	68%
		Winter	0%	0%	22%	1%	1%	70%	6%	0%	0%	464	32%
Macaulay	Unuk River	Summer	0%	3%	12%	16%	0%	65%	1%	2%	0%	16,066	78%
		Winter	0%	0%	14%	11%	1%	73%	1%	0%	0%	4,657	22%
	Andrews Cr	Summer	0%	4%	18%	61%	0%	16%	0%	0%	0%	3,590	89%
		Winter	0%	0%	16%	6%	3%	75%	0%	0%	0%	434	11%
Medvejie	King Salmon R	Summer	8%	0%	12%	80%	0%	0%	0%	0%	0%	266	90%
		Winter	0%	0%	0%	0%	71%	29%	0%	0%	0%	29	10%
	Andrews Cr	Summer	0%	1%	92%	1%	0%	4%	0%	1%	0%	73,806	93%
		Winter	0%	0%	86%	9%	0%	5%	0%	0%	0%	5,516	7%
Neets Bay	Chickamin R	Summer	0%	3%	90%	1%	0%	4%	1%	1%	0%	11,656	94%
		Winter	0%	0%	91%	0%	0%	9%	0%	0%	0%	755	6%
	Chickamin R	Summer	0%	4%	47%	0%	0%	15%	6%	3%	25%	2,108	74%
		Winter	0%	0%	65%	0%	2%	12%	15%	0%	5%	744	26%
Port Armstrong	Unuk River	Summer	0%	5%	7%	10%	0%	15%	14%	12%	37%	20,963	79%
		Winter	0%	0%	14%	16%	0%	42%	9%	1%	18%	5,570	21%
	Andrews Cr	Summer	0%	2%	6%	5%	0%	86%	0%	1%	0%	1,481	92%
		Winter	0%	0%	52%	0%	0%	48%	0%	0%	0%	120	8%
Sheldon Jackson	Unuk	Summer	0%	1%	10%	16%	0%	70%	1%	1%	0%	2,558	76%
		Winter	0%	1%	23%	29%	2%	45%	0%	0%	0%	818	24%
	Andrews Cr	Summer	0%	0%	96%	1%	0%	2%	0%	0%	0%	3,456	99%
		Winter	0%	0%	100%	0%	0%	0%	0%	0%	0%	36	1%
Snettisham	Andrews Cr	Summer	0%	1%	8%	21%	4%	64%	0%	1%	1%	2,169	55%
		Winter	0%	0%	8%	17%	3%	71%	1%	0%	0%	1,751	45%
	King Salmon R	Summer	1%	0%	1%	18%	15%	60%	0%	5%	0%	296	62%
		Winter	0%	0%	0%	3%	5%	92%	0%	0%	0%	177	38%

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Table 14. Page 3 of 3.

Sum Of Contribution			PSMFC AREA									Grand Total	
Location	Stock	Season	LYNN	NOUT	COUT	CNTR	STEP	SNTR	CIN	SOUT	SIN		
Tamgas Creek	Unuk River	Summer	0%	3%	12%	3%	0%	6%	3%	7%	66%	11,339	80%
		Winter	0%	0%	51%	6%	0%	30%	2%	1%	10%	2,844	20%
Whitman Lake	Chickamin R	Summer	0%	3%	20%	3%	0%	8%	3%	6%	57%	21,699	79%
		Winter	0%	0%	57%	2%	0%	17%	3%	3%	17%	5,706	21%
	Unuk River	Summer	0%	6%	17%	9%	0%	7%	3%	16%	41%	1,764	90%
		Winter	0%	0%	6%	8%	0%	43%	7%	2%	34%	203	10%
Grand Total			0%	2%	35%	13%	0%	28%	4%	3%	14%	362,363	

Table 15.—Total return of chinook salmon released from various enhancement sites in Southeast Alaska, by return year ^a.

Return Year	Auke Bay ^b	Big Boulder ^c	Burro Creek	Carroll Inlet ^d	Crystal Lake	Deer Mountain	Earl West Cove ^e	Fish Creek ^b	Gastineau Channel	Hidden Falls	Jerry Myers
1980					5,258	160					
1981					2,531	310					
1982					1,284	1,577					
1983					1,633	2,481					
1984					4,186	2,246				18	
1985					8,879	3,144				83	
1986					7,081	2,511				257	
1987	21				16,681	565		3		661	
1988	257			653	10,076	539	384	52		573	
1989	580			5,003	11,213	1,541	2,807	441	5	571	
1990	865			22,045	18,693	1,370	11,226	536	11	1,566	60
1991	1,959			28,810	15,657	1,324	15,595	1,648	113	2,179	91
1992	1,001			9,868	12,676	1,002	9,570	690	87	2,613	32
1993	1,545			3,008	8,361	1,171	9,264	1,083	707	2,784	55
1994	636		1	1,409	6,143	1,113	8,523	1,077	2,471	10,185	250
1995	515	3	7	2,775	6,558	841	4,516	1,136	3,771	32,295	214
1996	1,035	35	34	1,999	10,310	483	4,678	885	3,075	40,813	29
1997	361	9	46	2,758	7,474	614	1,866	809	3,985	25,440	
1998	246	22	76	1,906	5,394	761	3,183	337	2,687	11,913	6
1999	3,005	6	40	275	8,583	1,322	4,771	1,198	1,239	23,629	
2000	2,585	4	73		5,784	1,216	10,547	1,353	849	37,197	
2001	2,706	4	60		8,795	1,020	1,195	1,767	3,828	32,975	28
2002	2,551		46		6,974	727	5,754	2,677	6,913	18,605	1
2003	-		0		6,234	1,243	7,560	-	8,533	28,994	0

Return Year	L. Port Walter	Lynn Canal ^f	Medveje Creek	Montana Creek ^g	Neets Bay ^h	Port Armstrong ⁱ	Sheep Creek ^j	Sheldon Jackson	Snettisham	Tamgas Creek	Whitman Lake
1980	1,877										
1981	896										
1982	1,441								14		2,672
1983	1,577								34		
1984	2,670				400				265		3,356
1985	3,363		686		2,796				431		3,815
1986	6,338		86		9,872				1,016	529	770
1987	9,517		426		7,126		2		3,373	1,829	2,987
1988	7,592		775	2	17,320		136		1,099	1,821	4,220
1989	5,144		680	12	26,148	2,069	407	176	507	2,562	8,730
1990	7,271	11	3,829	95	15,217	1,163	671	351	1,407	2,571	39,169
1991	7,587	74	7,589	156	9,470	846	1,309	490	1,130	8,617	3,800
1992	3,026	189	17,382	95	8,908	1,355	858	467	1,614	7,233	714
1993	2,995	267	28,980	17	11,326	1,515	2,040	892	2,493	3,008	428
1994	3,873	295	21,462	14	3,254	1,241	1,180	1,280	1,969	2,163	399
1995	5,190	200	45,921	14	2,279	1,270	406	1,194	293	1,940	1,019
1996	4,270	201	37,868		715	2,526	4	1,316		1,834	1,039
1997	3,953	138	37,077		765	1,086	7	638		3,926	1,508
1998	2,121	60	21,031		874	17	5	273		4,638	19,949
1999	3,195	0	20,109		2,456		170	352		6,268	8,122

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Return Year	L. Port Walter	Lynn Canalf	Medveje Creek	Montana Creekg	Neets Bay h	Port Armstrongi	Sheep Creekj	Sheldon Jackson	Snettisham	Tamgas Creek	Whitman Lake
2000	2,861		29,020		4,536			392		16,335	15,905
2001	2,413		32,718		12,795			46		20,448	20,302
2002	1,869		40,452		10,847			36		10,189	23,121
2003	2,491		48,914		9,090			132		-	19,065

^a Includes all ages and Canadian recoveries

^b Reared at Snettisham (BY 84-92) and Gastineau (BY 93-97)

^c Releases of fed fry incubated and reared at Gastineau Hatchery

^d Reared at Whitman Lake Hatchery

^e Reared at Crystal Lake Hatchery

^f smolts reared at Hidden Falls and Gastineau hatcheries, released in Lynn Canal

^g Reared at Snettisham

^h Includes smolts reared at Crystal Lake and released at Neets Bay

ⁱ includes smolts reared at Snettisham and released at Port Armstrong

^j brood years 1984-1988 reared at Snettisham; brood year 1993 reared at Gastineau

Table 16.—Common property exploitation rate (%) of chinook salmon returning to enhancement sites with reasonably complete counts in terminal areas and at the rack, by return year. Excludes 0-ocean and 1-ocean fish in cost recovery fisheries, escapements, and/or Canadian fisheries.

Return Year	Crystal Lake	Deer Mountain	Hidden Falls	L. Port Walter	Medveje Creek	Neets Bay	Port Armstrong	Sheldon Jackson	Tamgas Creek	Whitman Lake
1980	86.4			97.0						
1981	66.3	79.2		67.5						
1982	40.6	62.2		66.0						
1983	28.4	51.0		46.5						
1984	51.6	47.7		39.2						39.5
1985	58.2	51.1	79.1	60.1		47.9				34.7
1986	63.6	40.8	95.7	44.1		61.1				25.0
1987	63.2	59.7	81.0	44.4		44.9			94.6	38.0
1988	43.4	34.7	52.5	36.2	26.1	42.6			51.7	52.2
1989	42.0	34.9	38.6	37.5	43.0	32.8			54.2	42.2
1990	51.4	47.5	59.0	63.9	44.0	23.4	54.2	25.5	48.8	66.2
1991	88.1	38.1	63.2	70.5	25.8	46.2	47.9	23.3	39.5	54.5
1992	85.1	19.9	46.9	50.9	38.0	35.0	53.3	58.0	38.4	30.5
1993	92.0	57.6	58.0	44.1	34.8	28.7	26.4	43.5	50.9	41.4
1994	20.1	49.3	40.0	49.2	41.4	32.0	64.5	43.2	39.9	41.1
1995	80.9	61.5	63.1	59.5	50.5	51.3	35.5	73.2	30.4	41.4
1996	85.1	31.1	81.8	62.1	33.3	82.5	73.1	88.6	11.0	39.6
1997	75.0	21.6	62.7	69.5	35.8	28.8	98.3	53.6	18.5	47.6
1998	63.5	53.6	65.0	69.2	27.0	78.1	100.0	42.9	12.2	47.9
1999	56.8	52.3	74.0	55.9	49.2	43.6		80.1	23.0	53.9
2000	76.1	64.1	68.1	53.7	25.9	46.6		96.4	35.1	95.0
2001	65.2	84.4	48.0	41.3	27.6	24.4		68.2	19.7	41.1
2002 ^a	71.1	53.1	43.1	38.7	40.1	32.0		100.0	42.9	37.2
2003	90.7	85.2	35.1	100.0	27.4	32.6		100.0	44.3	53.5

^a Preliminary data.

Table 17.—Chinook salmon egg takes in southeast Alaska in 2003 (numbers of eggs in thousands).

Facility	Stock	Females Spawmed	Green Eggs	Facility	Disposition of Eggs		
					Total Adjusted # Green Eggs	Total # of Eyed Eggs	# eggs Shipped
Burro Creek	Tahini River	50	290.3	Macaulay	290.3	260.7	
Crystal Lake	Andrew Creek			Crystal Lake ^c		1,459.4	
Macaulay	Andrew Creek	478	1,834.5	Macaulay	1,834.5	647.1	983.5
Deer Mountain	Unuk River	35	192.5	Deer Mountain	192.5	163.8	
Hidden Falls	Andrew Creek	356	2,028.2	Hidden Falls	1,416.4	1,400.0	
Little Port Walter	Unuk River	42	225.6	Little Port Walter	225.6	25.0	123.8
Little Port Walter	Chickamin River	151	830.0	Little Port Walter	400.0	250.0	
Medveje	Andrew Creek	747	3,660.0	Medveje	2,793.0	2,539.0	588
Port Armstrong	Unuk River			Port Armstrong ^b		123.8	
Sheldon Jackson	Andrew Creek			Sheldon Jackson			
Tamgas Creek	Unuk/Chickamin	170	1,100.0	Tamgas Creek	530.0	530.0	
Whitman Lake	Chickamin River	408	2,244.0	Whitman Lake	1,540.0	1,083.2	455
Whitman Lake	Chickamin River			Crystal Lake ^a		455.0	
Totals	Hatchery Return		12,405.1		9,222.3	8,937.0	2,150.3

^a Transferred to Crystal Lake Hatchery from Whitman Lake Hatchery for eventual release into Neets Bay.

^b Transferred to Port Armstrong Hatchery from Little Port Walter Hatchery for eventual release at Port Armstrong.

^c Transferred from Macaulay Hatchery (983.5) and Medveje Hatchery (588) for release at Anita Bay and Crystal Creek.

Table 18.— Rearing strategies and release sites of 2003 brood chinook salmon eggs in enhancement programs (numbers in thousands).

Rearing Facility	Stock	Eyed Eggs	Release Site	Fry Plants	Age-0 Smolts	Age-1 Smolts				
						FW-R ^a	FW-l ^b	SW-R ^c	SW-l ^b	
Crystal Lake	Chickamin River	455.0	Neets Bay						450.0	
Crystal Lake	Andrew Creek	1,468.0	Crystal Creek						600	
Crystal Lake	Andrew Creek		Anita Bay						450.0	
Deer Mountain	Unuk River	163.8	Ketchikan Creek			90.0				
Little Port Walter	Chickamin River		Little Port Walter					165.0		
Little Port Walter	Unuk River		Little Port Walter					25.0		
Macauly	Tahini River	260.7	Pullen Creek				235.0			
Macauly	Andrew Creek	647.1	Gastineau Channel					210.0 ^d		
Macauly	Andrew Creek		Auke Bay					90 ^d		
Macauly	Andrew Creek		Fish Creek					180 ^d		
Macauly	Andrew Creek		Thane					90 ^d		
Hidden Falls	Andrew Creek	1,400.0	Hidden Falls					1,250.0 ^d		
Jerry Myers	Tahini River	4.0 ^f	Taiya Inlet			2.7				
Medvejie	Andrew Creek	2,539.0	Bear Cove		750.0			1,700.0 ^e		
Port Armstrong	Unuk River	123.7	Port Armstrong					95.0		
Sheldon Jackson	Andrew Creek	0.0	Crescent Bay					^f		
Tamgas Creek	Unuk/Chickamin		Tamgas Creek		500.0			125.0		
Whitman Lake	Chickamin River	1,083.0	Herring Cove			750.0 ^g				
Whitman Lake	Chickamin River		Long Lake	250.0 ^g						
Total		8,144.3		250.0	1,250.0	842.7	235.0	3,930.0	1,500.0	8,007.7

^a Released from fresh water rearing.

^b Smolt transport to release site for imprinting

^c Released from salt water rearing.

^d Apportioned from the 647.1 Andrew Creek Stock at the Macaoulay facility

^e Includes the Green Lake project.

^f Released from saltwater-filled onshore ponds.

^g Apportioned from the 1,083 Chickamin River stock at the Whitman Lake facility; volitional outmigration from Long Lake as age-1 smolts.

Table 19.—Incidence of hatchery strays in ten wild stock streams in Southeast Alaska.

Stream	Years Examined	Total No. years	Number Examined	Hatchery Tags	Hatchery Fish	% from hatcheries
Andrew Creek	1997–2003	7	1,502	14	131	8.72%
Chickamin	1985–1993;1995–2003	18	4,912	10	70	1.43%
Chilkat	1983–1987;1989–2003	20	11,164	7	7	0.06%
Farragut	1983–1985;1989;1991–1993	7	617	34	51	8.27%
Harding	1986;1989–1993	6	363	2	4	1.10%
King Salmon	1979;1981–1992;1998–2003	19	725	0	0	0.00%
Stikine ^a	1979–1996;1997–2003	24	43,653	8	35	0.08%
Taku	1979–1990;1994–2003	22	56,438	0	0	0.00%
Unuk	1985–2003	19	16,071	8	33	0.21%
Keta	1998–2003	6	1,691	2	40	2.37%
Blossom	1998–2003	6	410	1	8	1.95%
Total			137,546	86	379	0.28%

^a includes Andrew Creek thru 1996.

FIGURES

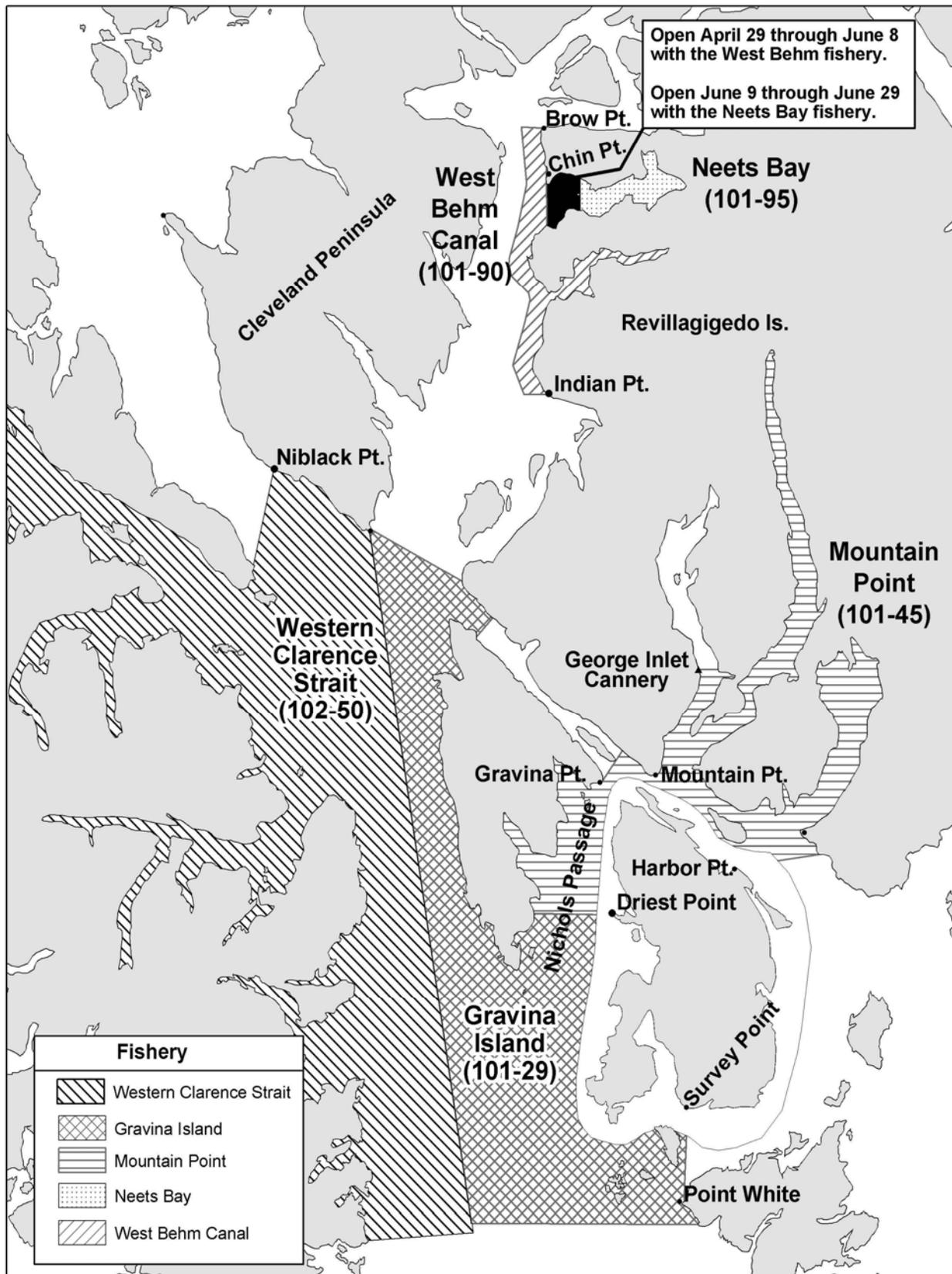


Figure 1.—Ketchikan area spring trolling areas, 2003.

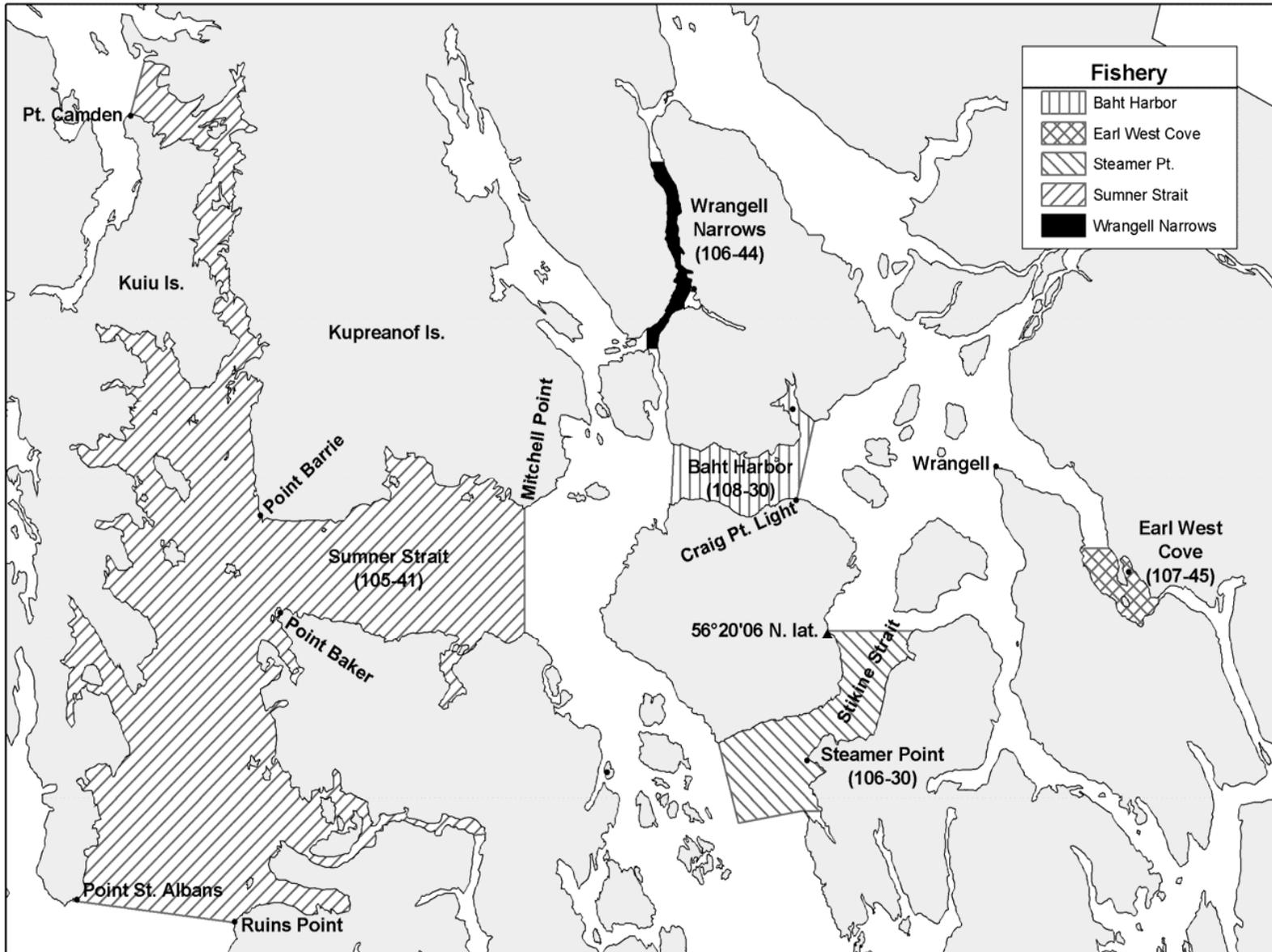


Figure 2.—Wrangell and Prince of Wales spring trolling areas, 2003.

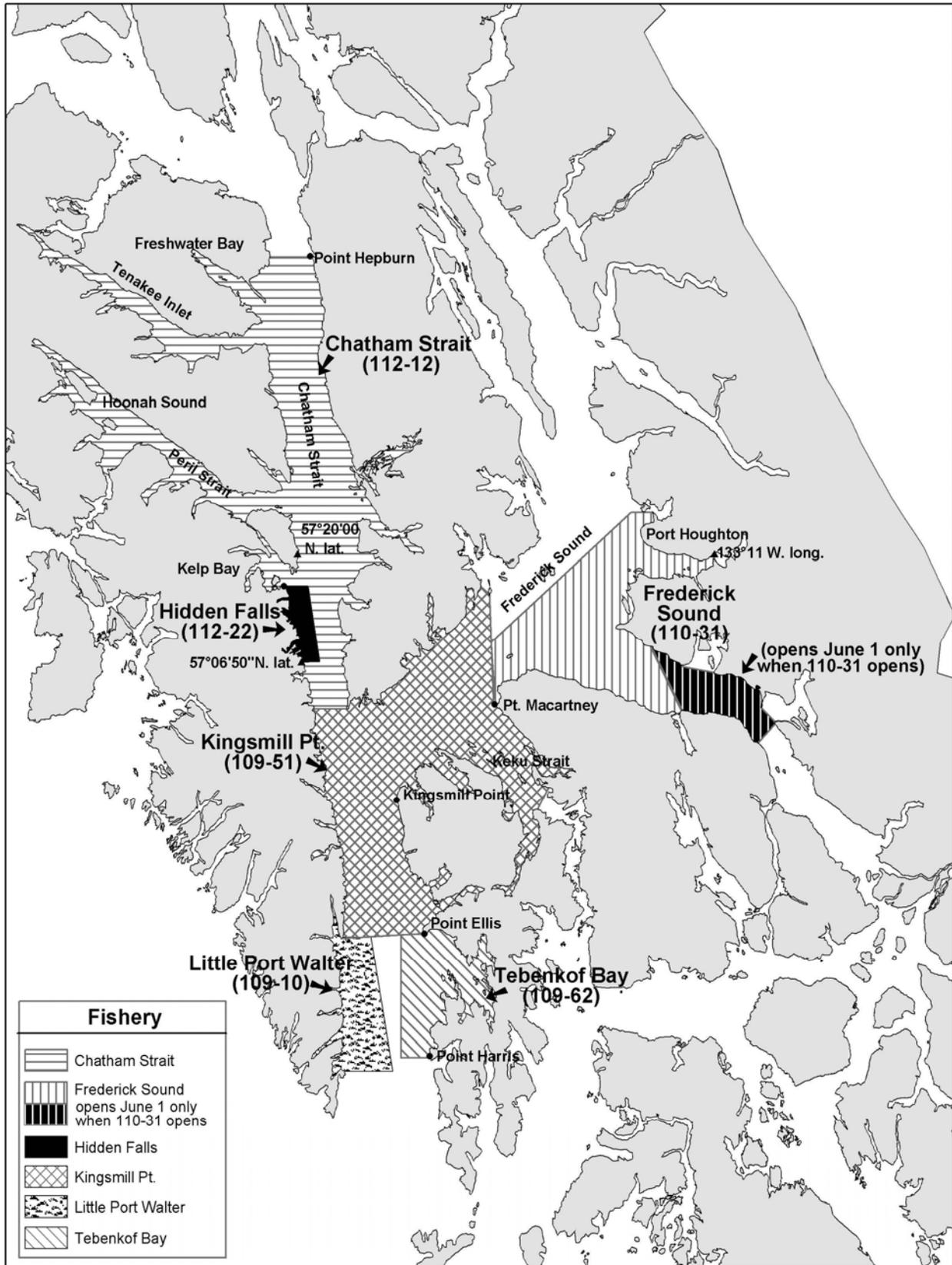


Figure 3.—Chatham Strait and Fredrick Sound spring troll areas, 2003.

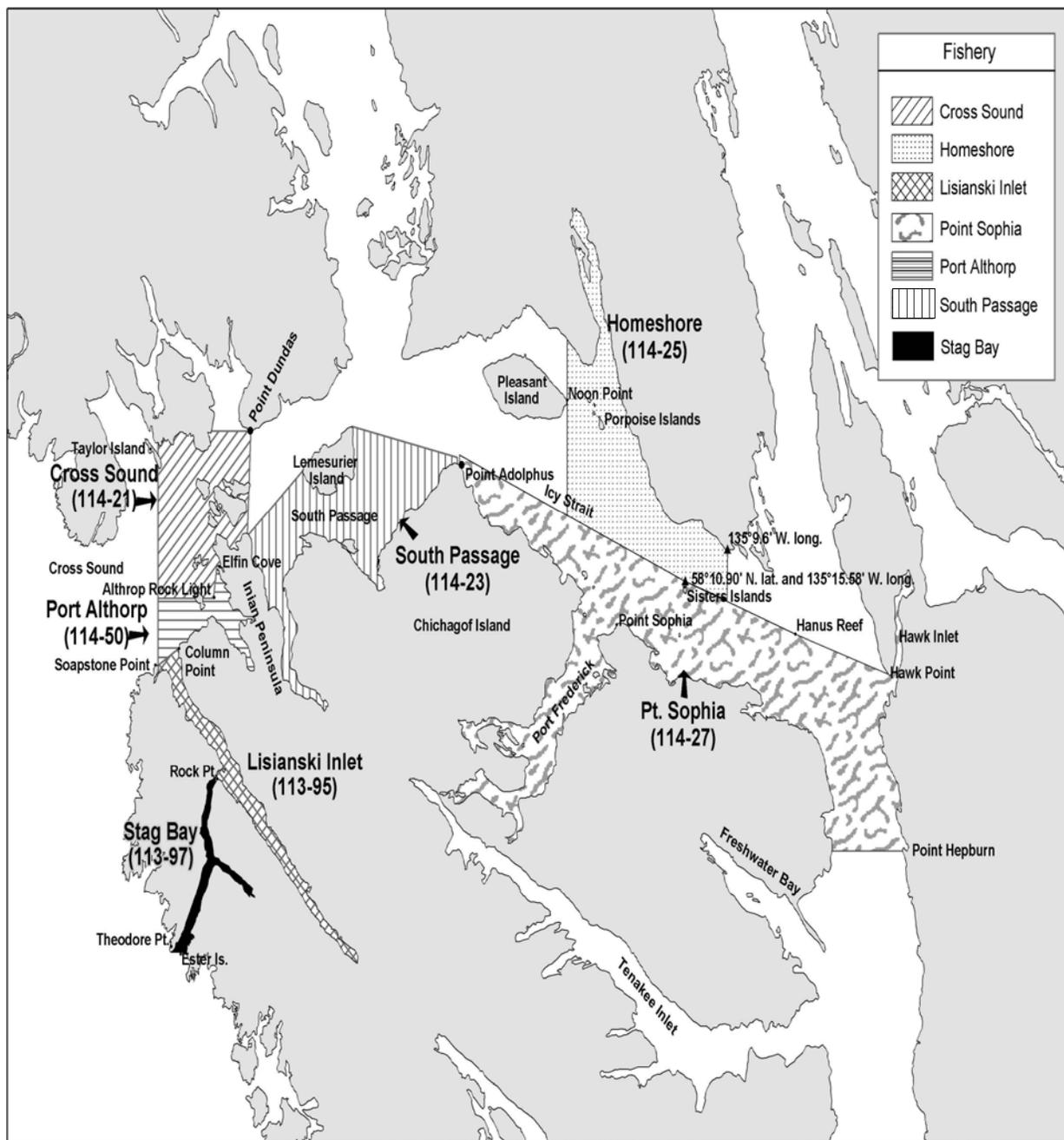


Figure 4.—North Chatham and Ice Strait spring trolling areas, 2003.

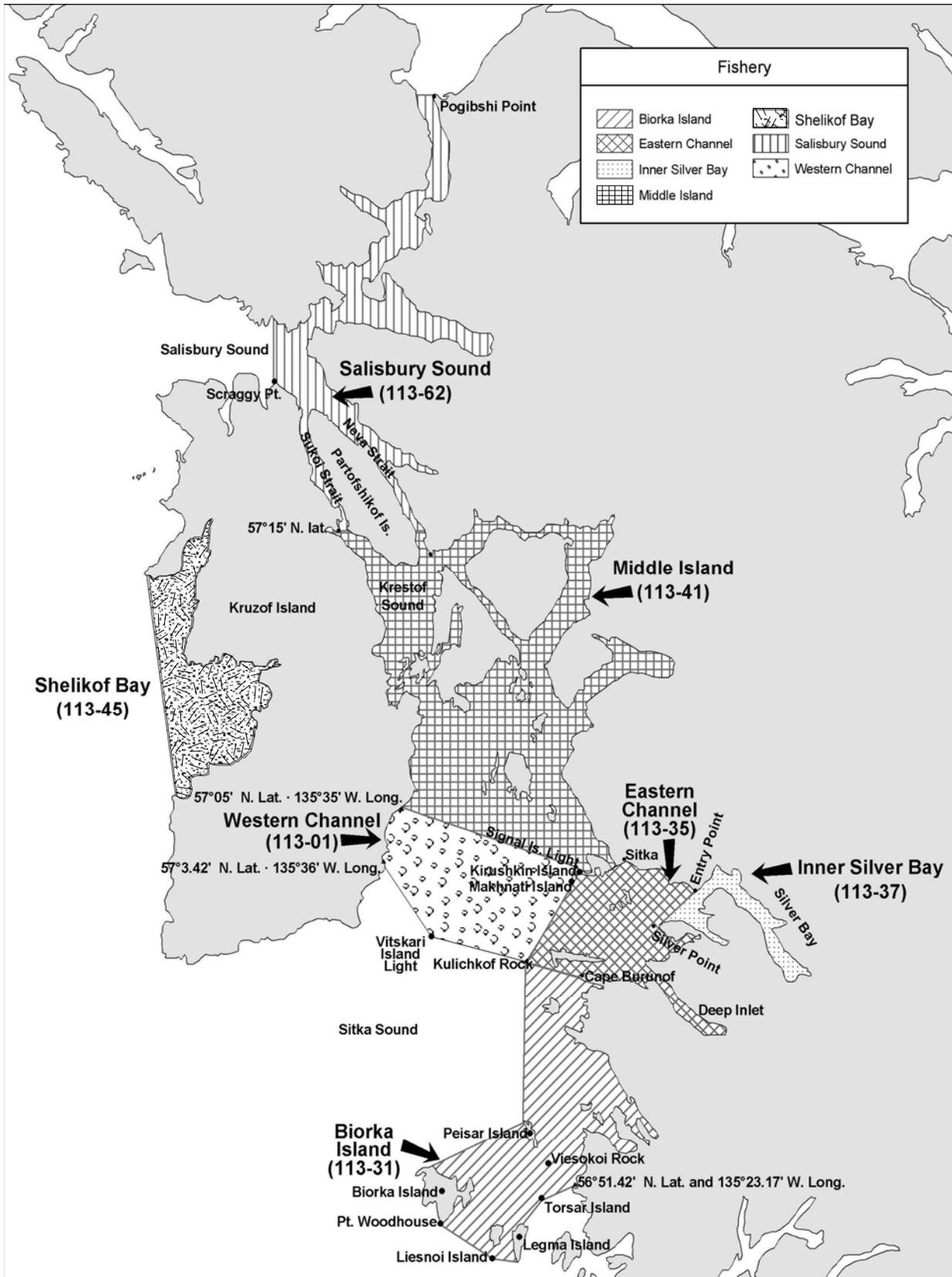


Figure 5.—Sitka area spring trolling areas, 2003.

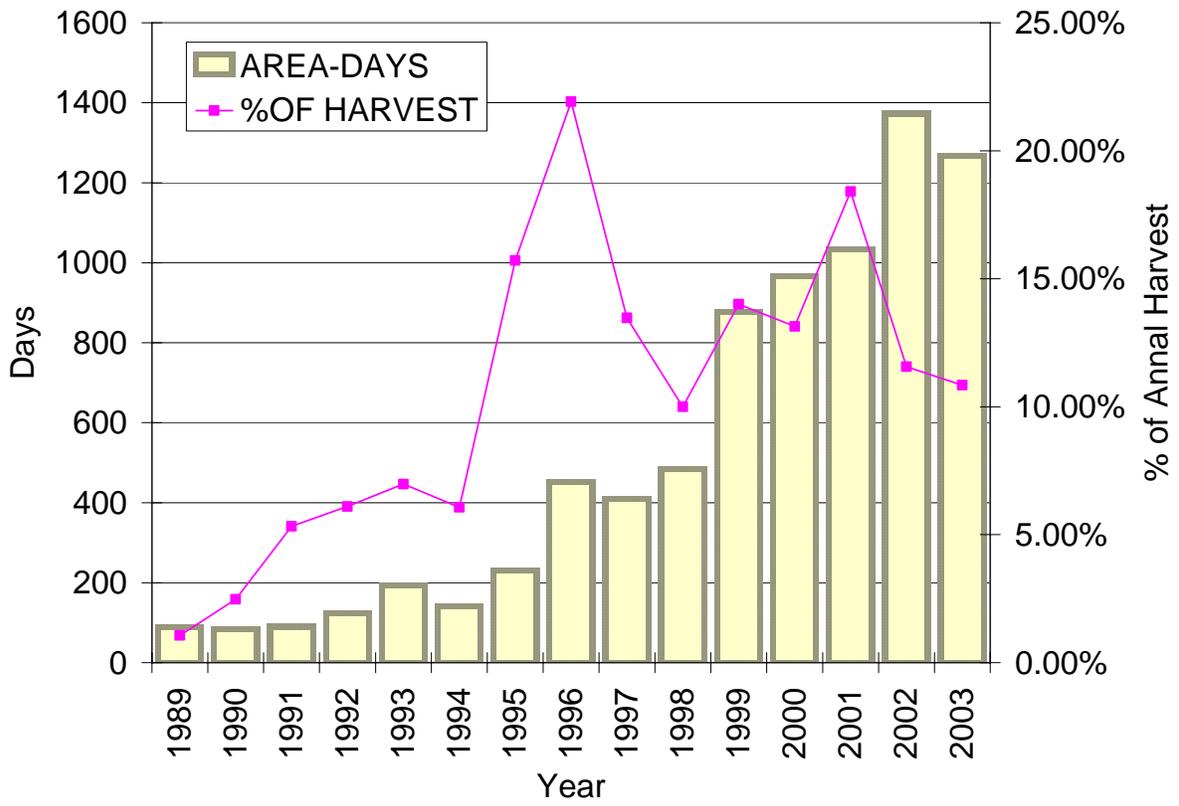


Figure 6.—Number of days and percent of annual harvests taken in experimental fisheries, from 1989 to 2003.

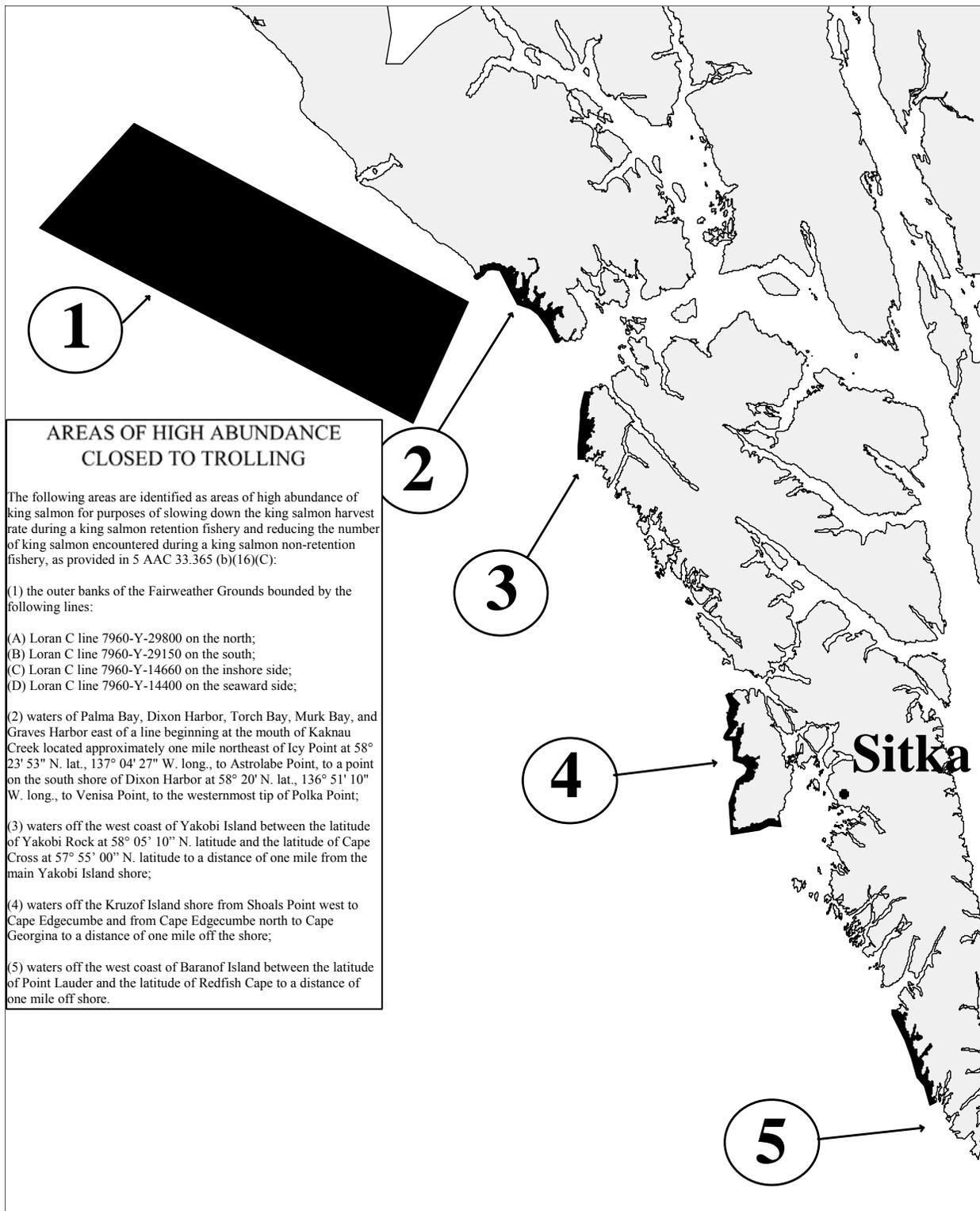


Figure 7.—Southeast Alaska areas closed to trolling for all species following the initial Chinook salmon opening in the Southeast Alaska summer troll season.

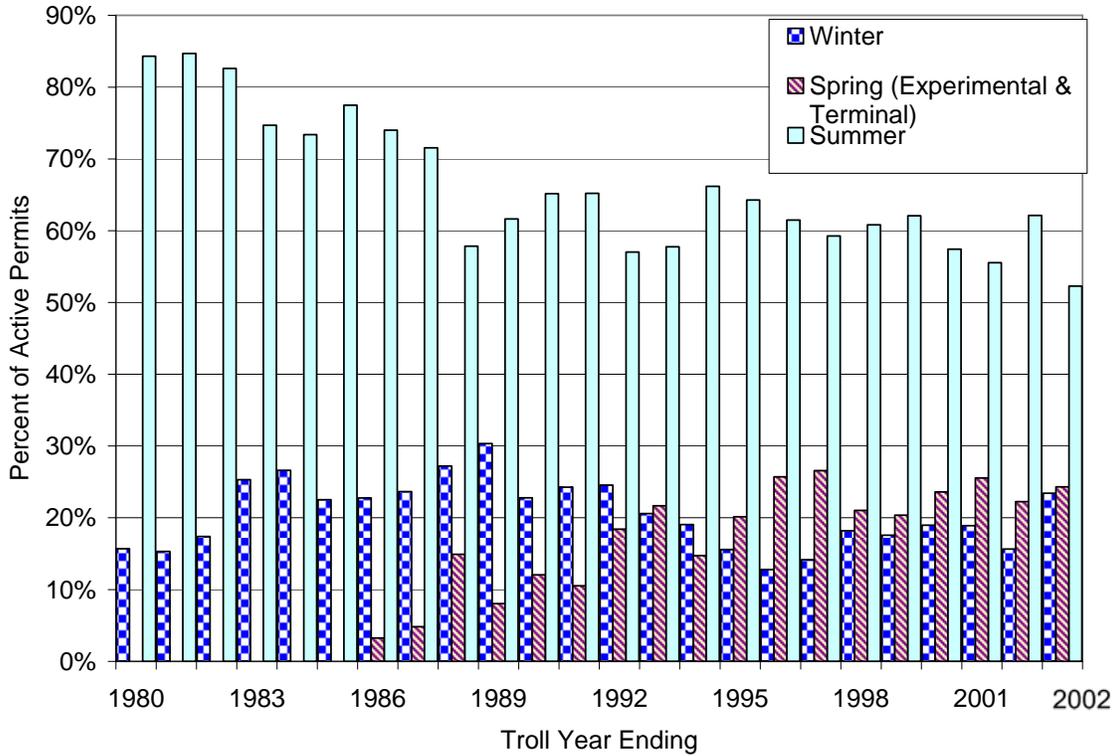


Figure 8.—Percent of active troll permits fished by season, from 1980 to 2002.

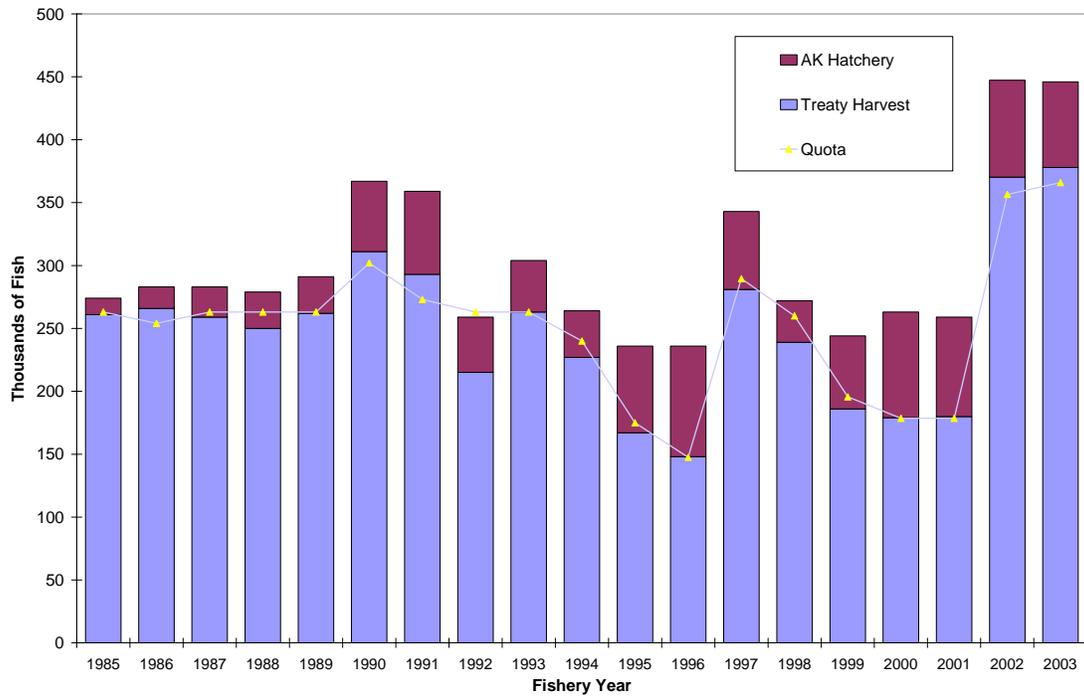


Figure 9.—Number of Chinook salmon harvested under the Pacific Salmon Treaty quota, from 1985 to 2003.

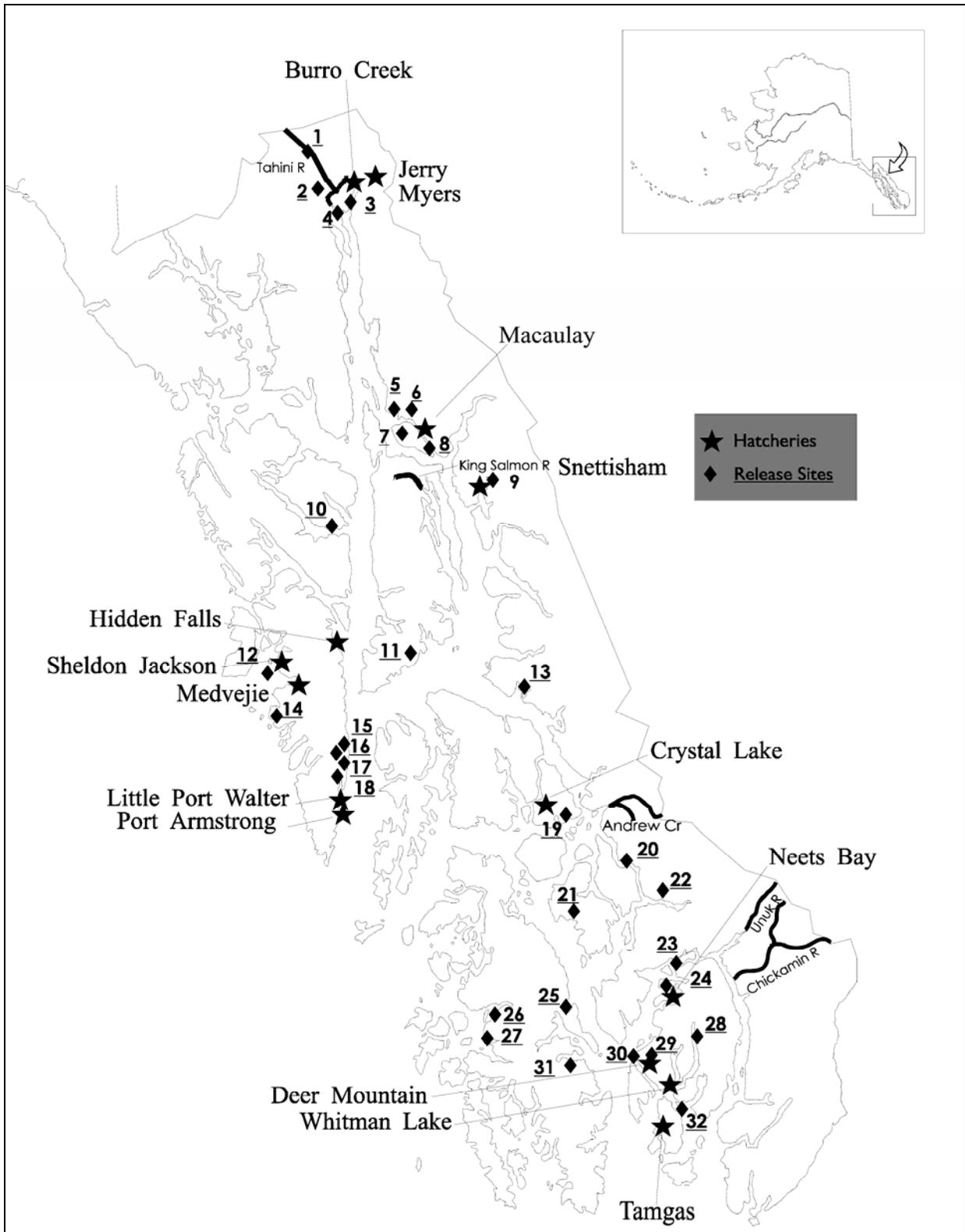


Figure 10.—Location of Chinook salmon hatcheries, remote release sites, and primary ancestral stock rivers in Southeast Alaska.

Figure 10.—Page 2 of 2.

Key to remote release sites shown in **Figure 10**, and stream numbers of Chinook salmon release sites and ancestral stocks.

Remote Release Sites					Hatchery Release Sites					
<i>No.</i>	<i>Site</i>	<i>District</i>	<i>Sub-district</i>	<i>Stream</i>	<i>Site</i>	<i>Hatchery</i>	<i>Site</i>	<i>District</i>	<i>Sub-district</i>	<i>Stream</i>
33	Anita Bay	107	35	10810		Deer Mountain	Ketchikan Cr	101	47	10250
5	Auke Bay	111	50	0 ^a		Port Armstrong	Jetty Creek	109	10	0
5	Auke Cr	111	50	10420		Sheldon Jackson	Crescent Bay	113	41	0
16	Banner Lk	109	10	Na ^b		Whitman Lake	Herring Cove	101	45	0
23	Bell Island	101	80	0		Neets Bay	Neets Bay	101	90	0
2	Big Boulder Cr	115	32	10250		Tamgas Creek	Tamgas Cr	101	25	10250
26	Big Salt	103	60	0		Hidden Falls	Kasnyku Bay	112	11	0
32	Bold Island Lk	101	41	10070		Snettisham	Speel Arm	111	33	0
31	Brennan Lk	102	40	10280		Gastineau	Gastineau Channel	111	40	0
21	Burnett Inlet	106	22	0		Crystal Creek	Crystal Cr	106	44	0
28	Carroll Inlet	101	45	0		Jerry Myers	Pullen Cr	115	34	10310
28	Carroll R	101	45	10780		Burro Creek	Burro Cr	115	34	10230
27	Crab Bay	103	60	0		Medvejie	Bear Cove	113	41	0
20	Earl West Cove	107	40	0		Little Port Walter	Little Port Walter	109	10	0
11	Eliza Lk	109	30	10060						
13	Farragut Lk	110	14	10070	na	Ancestral Stocks				
13	Farragut R	110	14	10070						
7	Fish Cr	111	50	0		<i>River</i>	<i>District</i>	<i>Sub-district</i>	<i>Stream</i>	<i>Site</i>
19	Gengen Lk	108	40	10500	2002	Andrew Creek	108	40	10150	2008
22	Harding R	107	40	10490		Big Boulder Creek	115	32	10250	
9	Indian Lk	111	33	10300		Chickamin River	101	71	10040	2018
10	Indian R	112	42	10080		Farragut River	110	14	10070	
15	Larry Lk	109	10	na		Harding River	107	40	10490	
24	Long Lk	101	95	na		King Salmon River	111	17	10100	
4	Lutak Inlet	115	33	0		Tahini River	115	32	10250	2175
6	Montana Cr	111	50	10520		Unuk River	101	75	10300	2030
19	Ohmer Cr	108	40	10500						
17	Osprey Lk	109	10	na						
14	Redoubt Lk	113	41	10430						
8	Sheep Cr	111	40	10280						
12	Sitka Sound	113	41	0						
1	Tahini R	115	32	10250	2175					
3	Taiya Inlet	115	34	0						
30	Thomas Basin	101	47	10250						
25	Thorne Bay	102	70	0						
18	Tranquil Lk	109	10	na						
29	Ward Cove	101	47	0						

^a Stream = 0 indicates return to a terminal harvest site or hatchery.

^b non-anadromous; site is barriered and adults are unable to access.

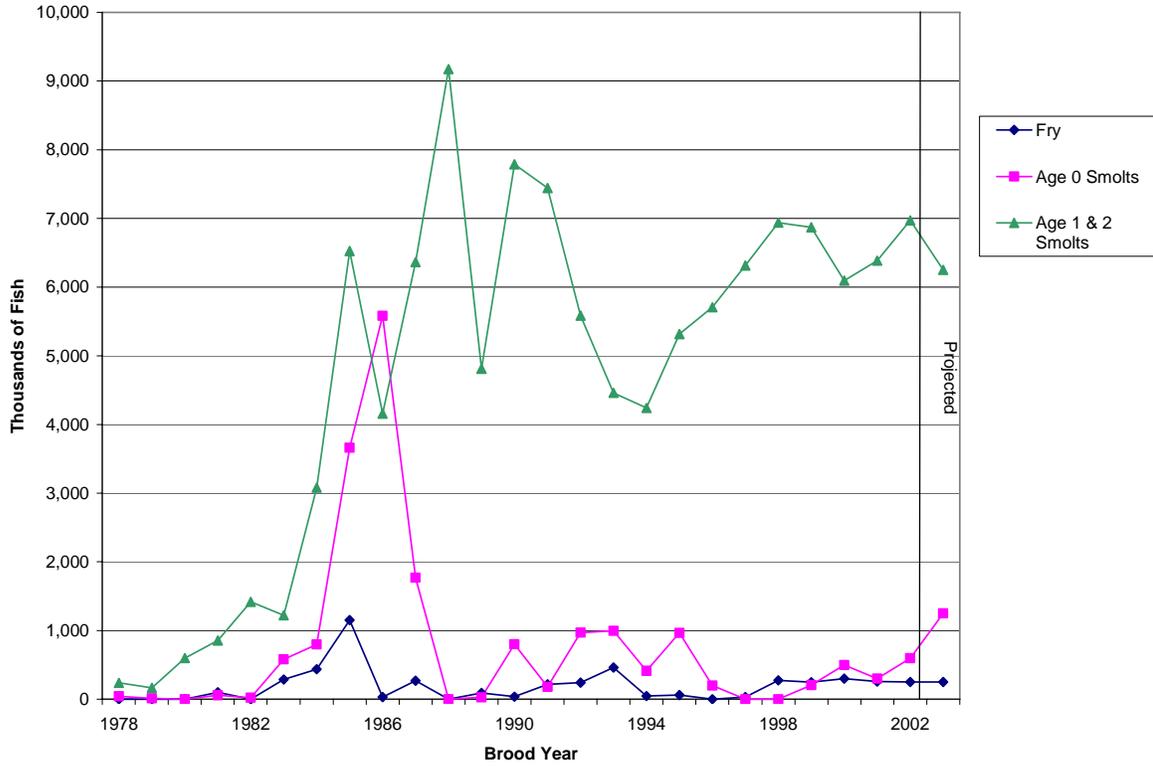


Figure 11.—Actual and projected releases of hatchery-produced Chinook salmon in Southeast Alaska by brood year, from 1978 to 2003.

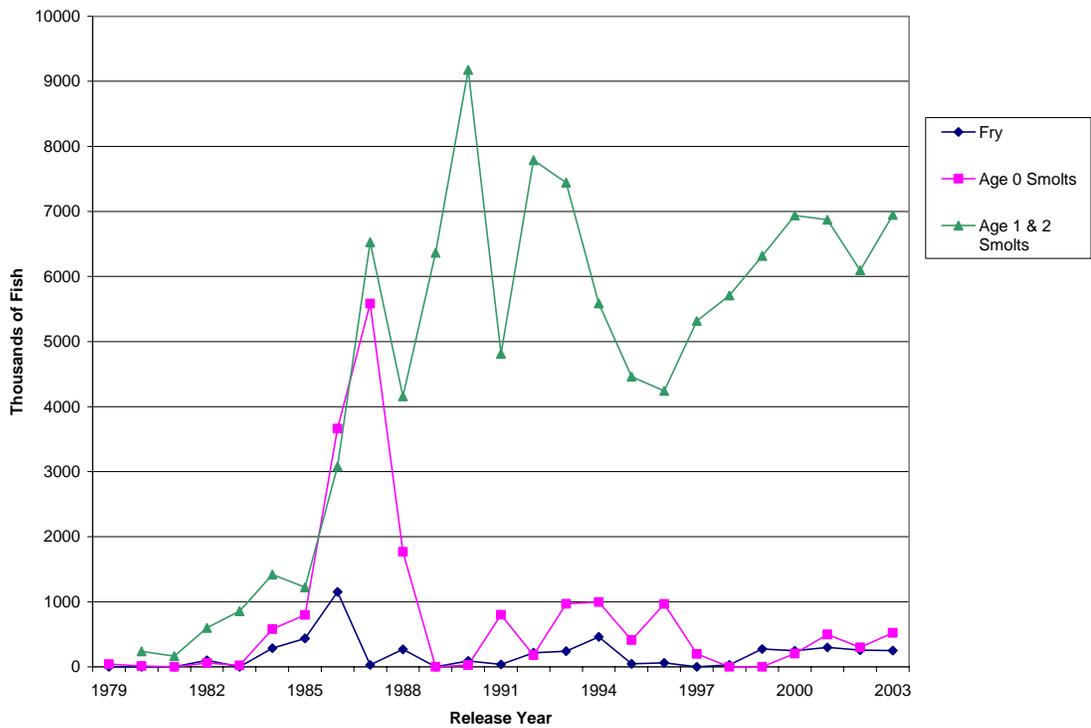


Figure 12.—Actual and projected releases of hatchery-produced Chinook salmon in Southeast Alaska by calendar year, from 1979 to 2003.

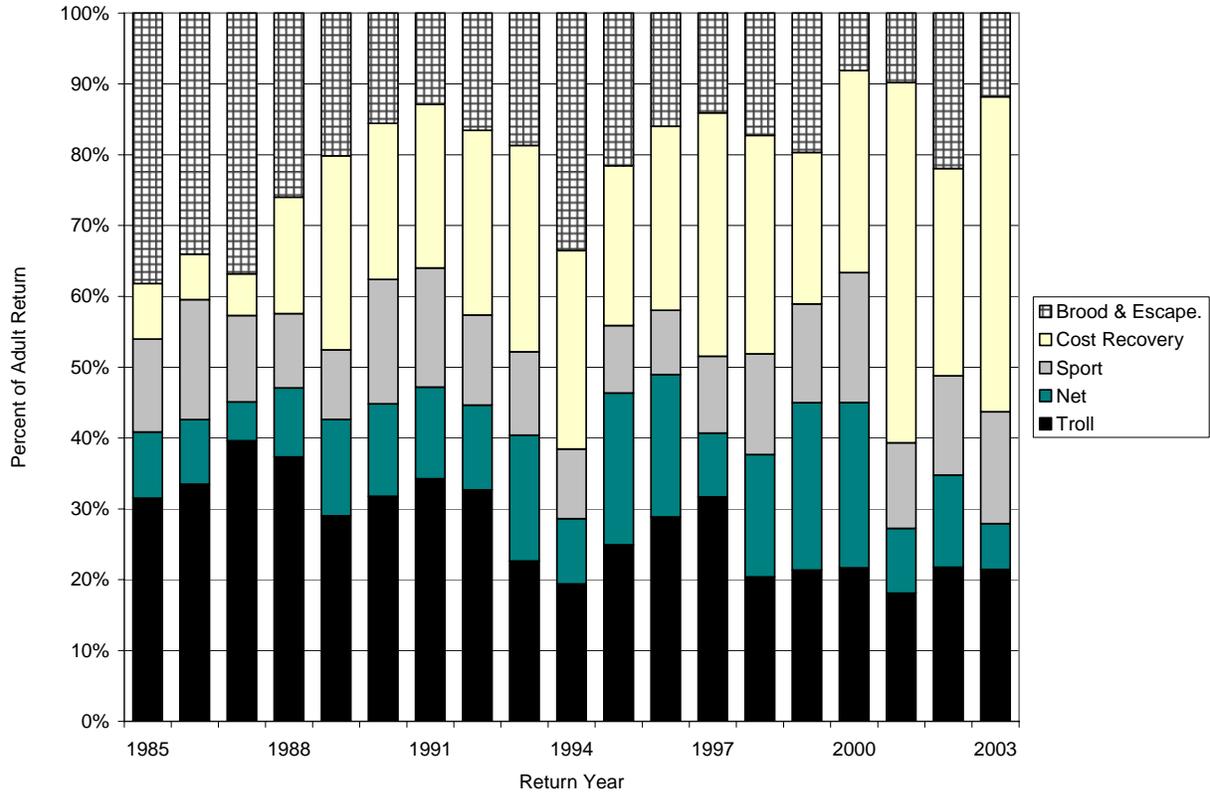


Figure 13.—Percentages of Alaska hatchery-produced Chinook salmon harvested in common property fisheries and utilized by hatchery operators for cost recovery or broodstock and escapement, from 1985 to 2003.

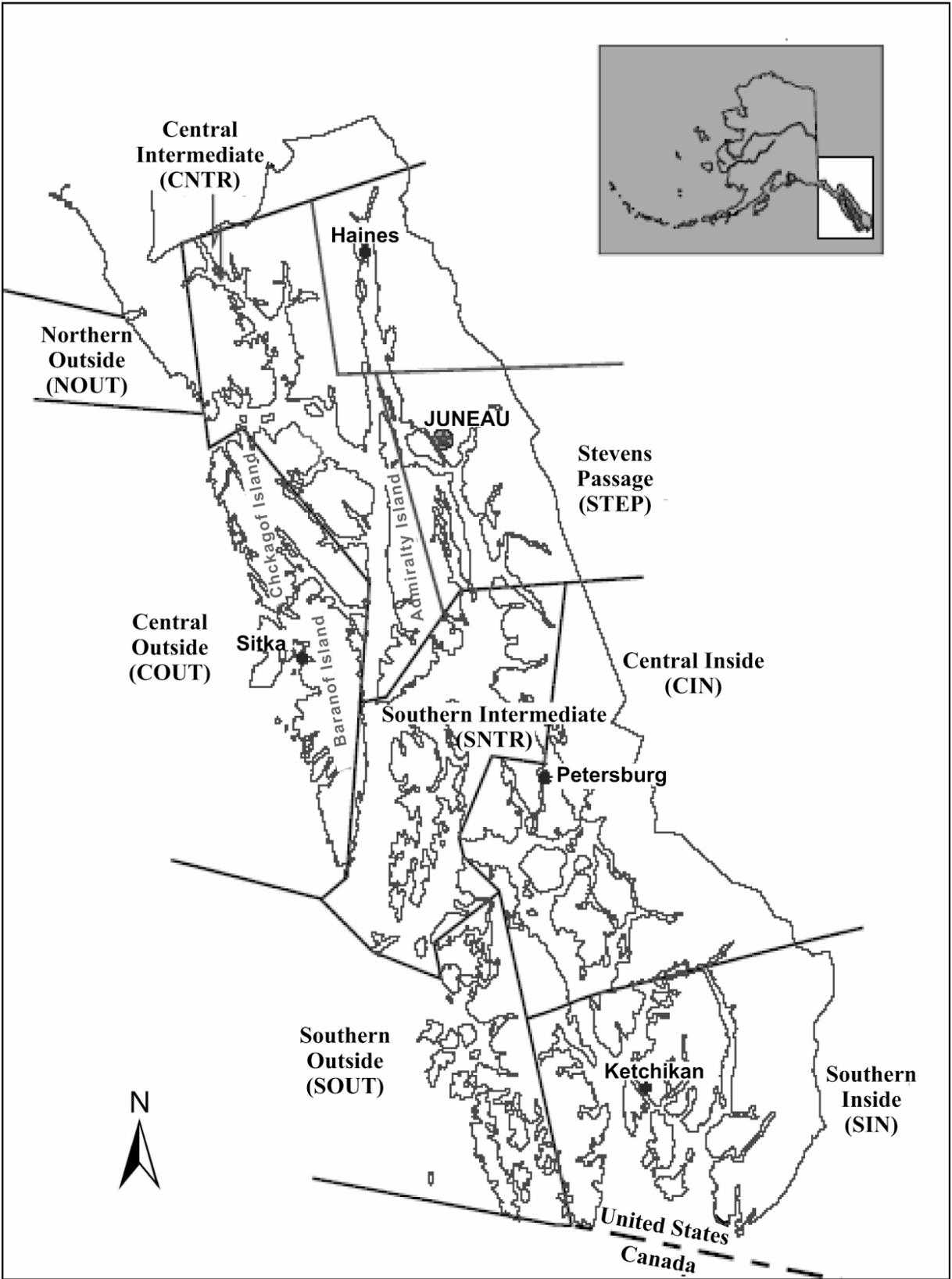


Figure 14.—Pacific States Marine Fisheries Commission areas in Southeast Alaska.

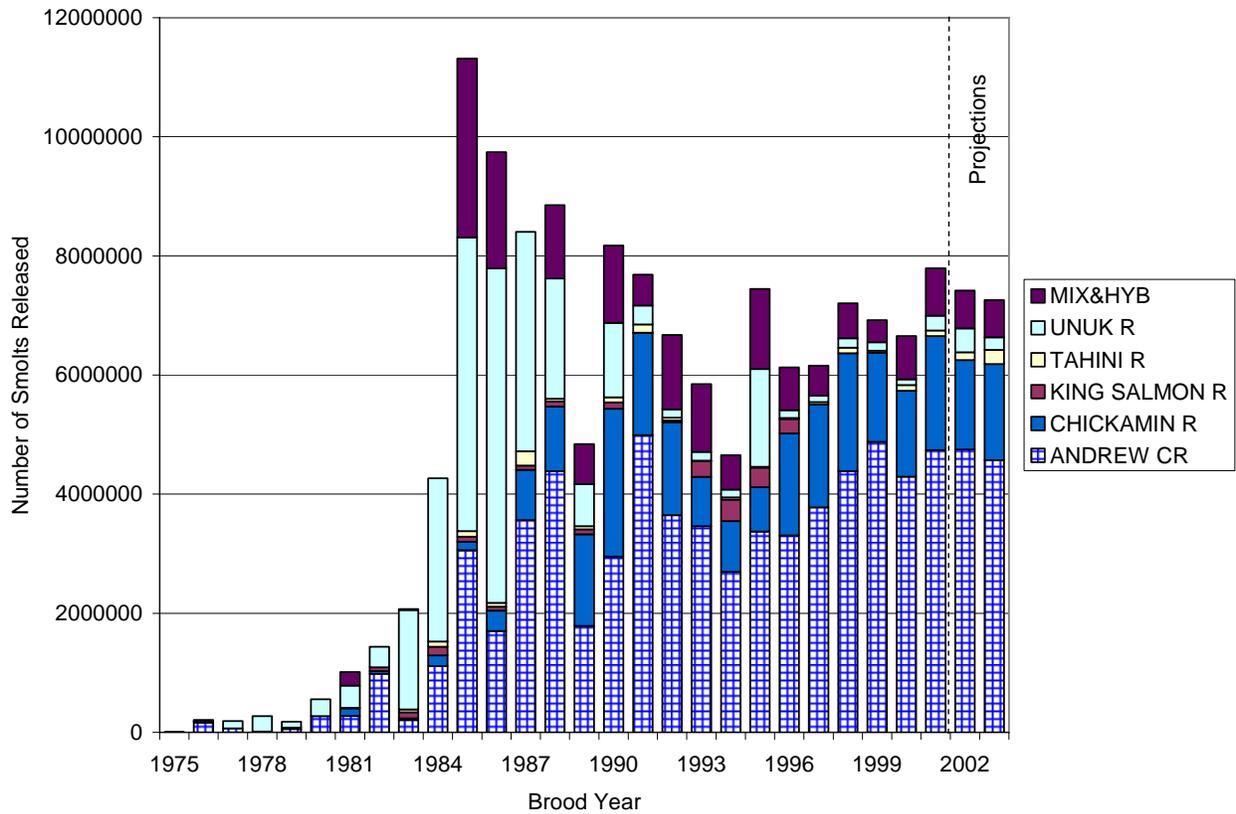


Figure 15.—Number of Chinook salmon released by Southeast Alaska hatcheries, by ancestral stock, brood years 1976 to 2003.

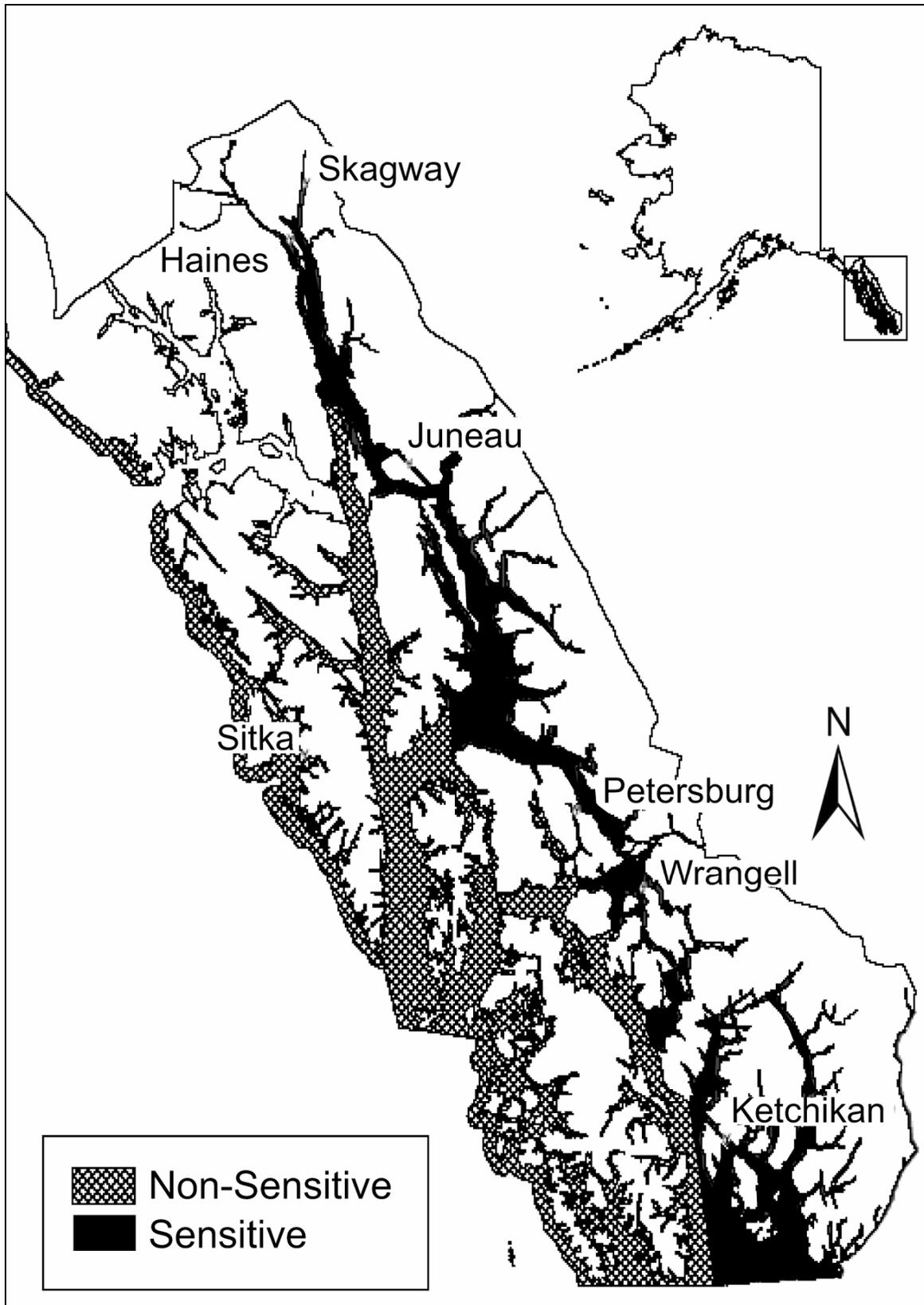


Figure 16.—Chinook salmon sensitive and non-sensitive areas in Southeast Alaska.

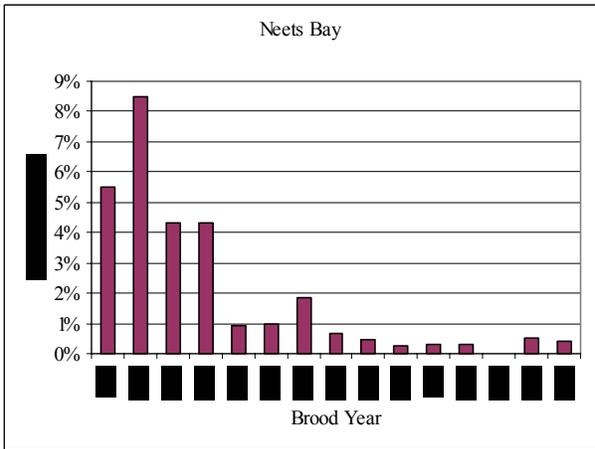
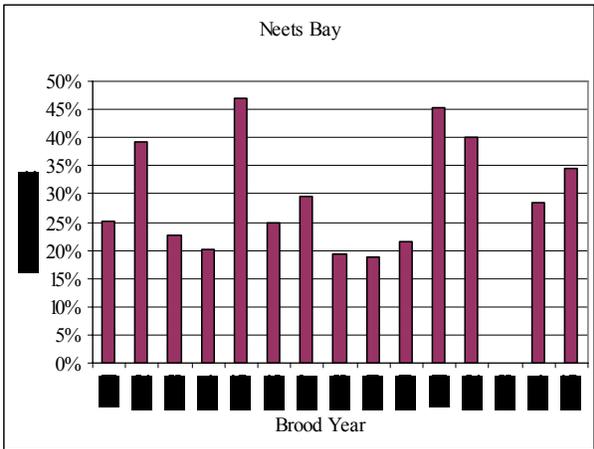
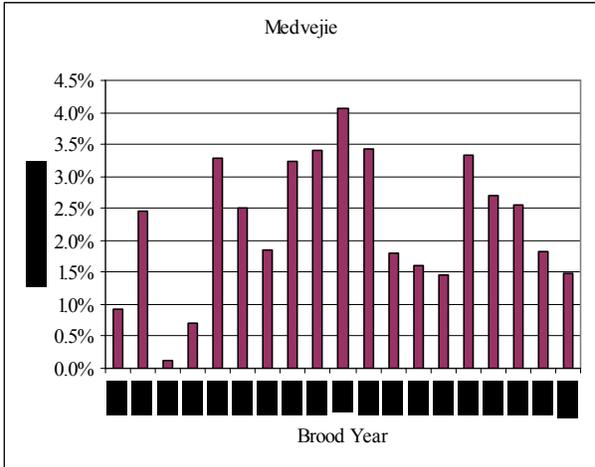
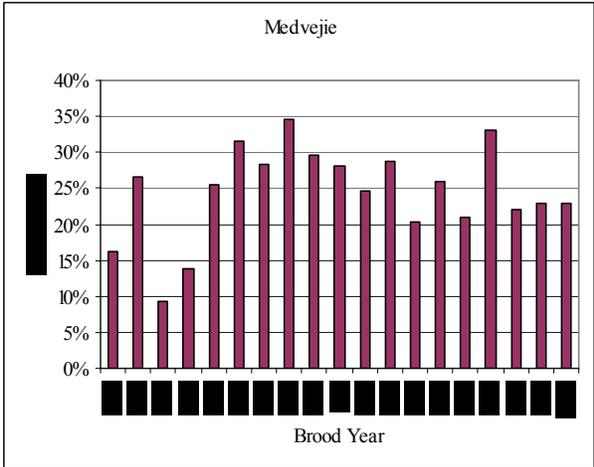
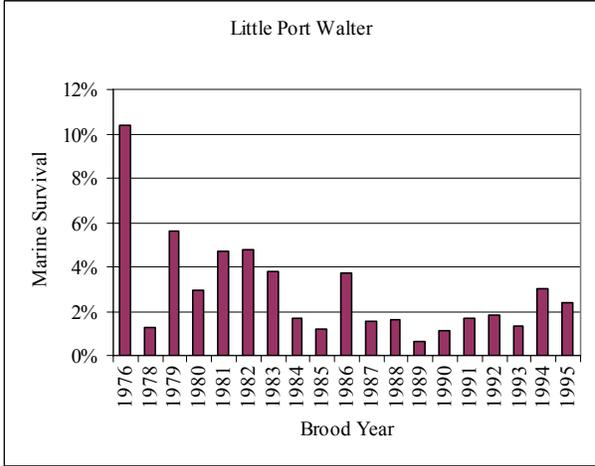
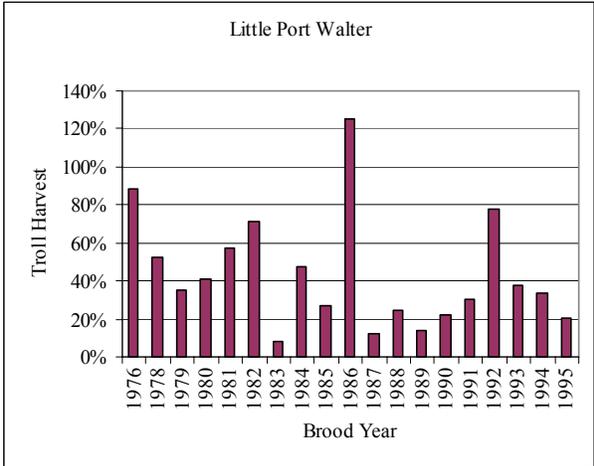


Figure 17.—Troll harvest rate and marine survival of Chinook salmon released from Southeast Alaska enhancement sites.

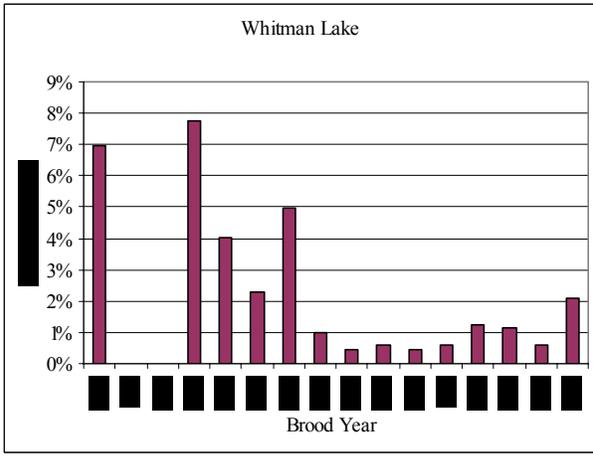
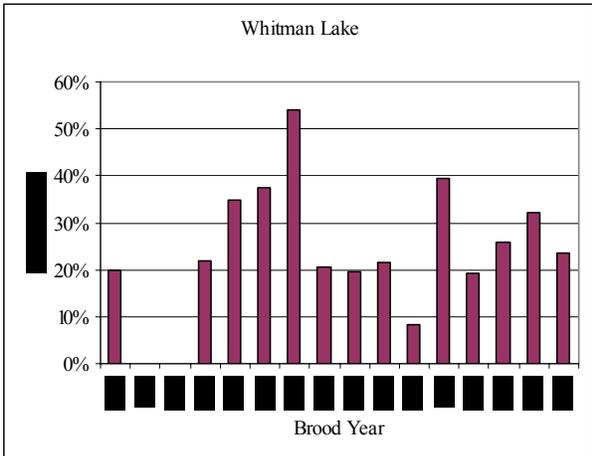
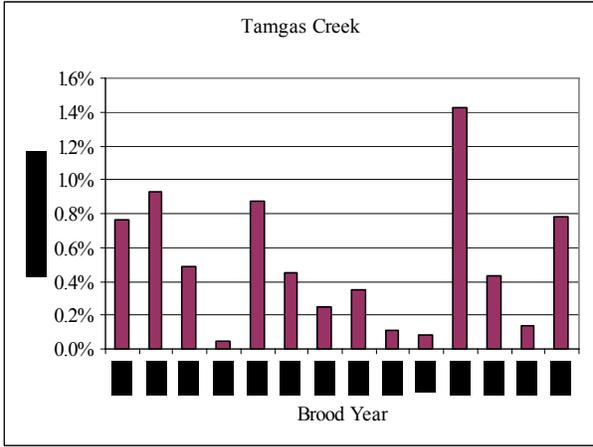
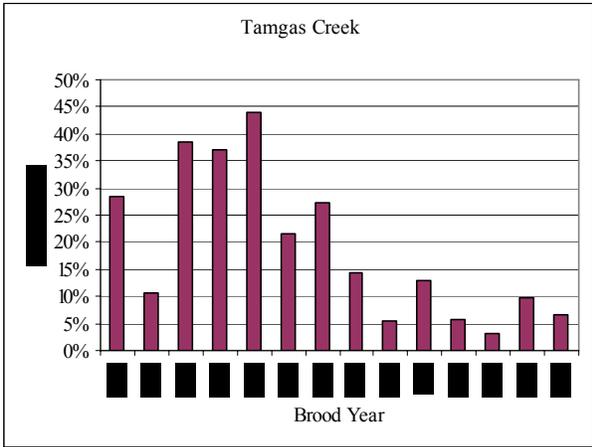
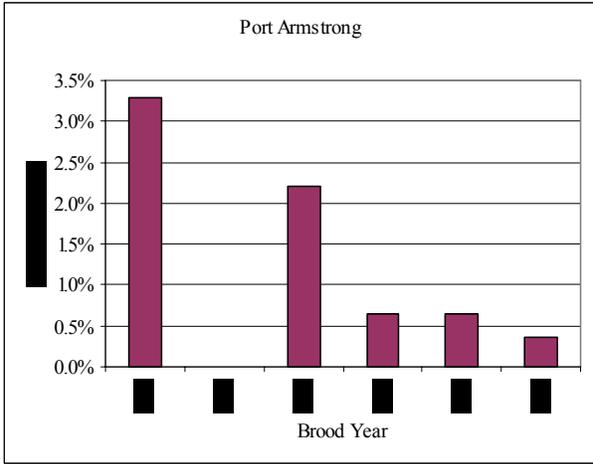
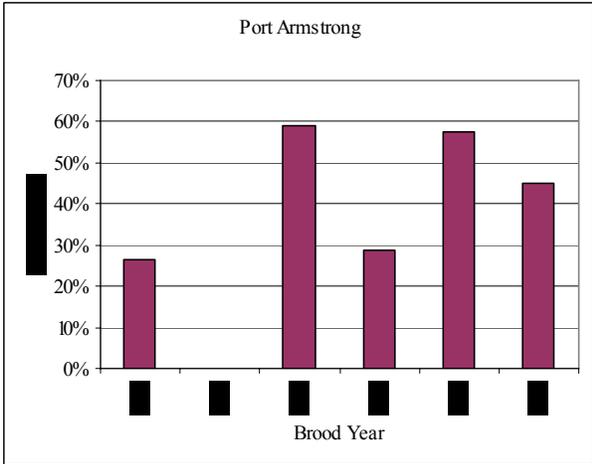


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