

**2005 Annex: Chinook Salmon Plan for Southeast
Alaska**

by

Flip Pryor,

Brian Lynch

and

Patti Skannes

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2005 ANNEX: CHINOOK SALMON PLAN FOR SOUTHEAST ALASKA

by

Flip Pryor

Alaska Department of Fish and Game, Division of Commercial Fisheries, Douglas,
Brian Lynch

Alaska Department of Fish and Game, Division of Commercial Fisheries, Petersburg
and

Patti Skannes

Alaska Department of Fish and Game, Division of Commercial Fisheries, Sitka

Alaska Department of Fish and Game
Division of Sport Fish, Research and Technical Services
333 Raspberry Road, Anchorage, Alaska, 99518-1599

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Flip Pryor

*Alaska Department of Fish and Game, Division of Commercial Fisheries
Douglas Island Center Building, 802 3rd Street, Douglas, AK 99824*

Brian Lynch

*Alaska Department of Fish and Game, Division of Commercial Fisheries
16 Sing Lee Alley, P.O. Box 667, Petersburg, AK 99833-0667*

And

Patti Skannes

*Alaska Department of Fish and Game, Division of Commercial Fisheries
304 Lake Street, Room 103, Sitka, Alaska, 99835-7563*

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ADF&G Division of Sport Fish, Research and Technical Services, 333 Raspberry Road, Anchorage AK 99518 (907) 267-2375.

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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. The harvest target for the general summer season 2004 was established by subtracting 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 from the troll quota of 286,800. The 2004 summer season harvest target was calculated to be 204,340 PSTA fish. According to the Alaska Board of Fisheries plan, 70% (143,000 fish) of the target is to be harvested in the first opening and the remaining 30% (61,340 fish), following any closure for coho salmon management in the month of August.

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, are closed during the winter season. The 2004 winter troll season opened on October 11, 2003 and continued through April 20, 2004. A guideline harvest level of 45,000 fish, with a range of 43,000 to 47,000 fish, is mandated in regulation for this winter fishery. 52,866 Chinook salmon were harvested during the 2004 winter troll fishery, representing 15% of the total Chinook salmon troll harvest for 2004 (Table 2).

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, “spring” and “terminal.” Both fisheries target Alaska hatchery-produced Chinook salmon. Spring fisheries occur soon after the winter fishery closes 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. Spring fishery areas that were open in 2004 are shown in Figures 1 to 5.

Harvest opportunities in the spring fisheries have been increasing since their inception in 1986. From April 22 through June 30, 2004, thirty one spring areas and five terminal areas were open for varying lengths of time. The most productive spring fishery areas were Eastern Channel (10,253 fish), Tebenkof Bay (5,710 fish), Middle Island (5,596 fish) and Salisbury Sound (4,302 fish) (Table 3 to Table 8). The total spring troll harvest in 2004 was 56,772 Chinook salmon; of those, 21,371 (38%) were Alaska hatchery fish (Table 9). The Chinook salmon harvest was about 17,500 fish greater than 2003 spring harvest, and the Alaska hatchery contribution decreased from 40% to 38%. However, both the 2004 total spring fishery harvest and the Alaska hatchery harvest were the highest on record. The percentage of the annual troll harvest taken in the 2004 spring fishery was 15.5%, which is an increase from the 11% taken in 2003 (Figure 6).

Five terminal area fisheries yielded 1,603 Chinook salmon in 2004, all of which were counted as Alaska hatchery fish.

Two new experimental areas near Wrangell (Chichagof Pass and Zimovia Strait) were opened in 2004, and three other areas near Wrangell (Craig Point, Ernest Sound, and Deer Island) that had been closed in prior years were re-opened to harvest enhanced Chinook returning to the Southern Southeast Regional Aquaculture Association (SSRAA) facility in Anita Bay. These areas are located near hatcheries that were expecting substantial increases in their Chinook salmon returns and historically have had a high percentage of Alaska hatchery fish. No areas that had been open in 2003 were eliminated in 2004.

The first general summer troll Chinook salmon fishery was managed inseason and was open for 15 days, from July 1 to 15 (Table 10). Approximately 194,000 Chinook salmon were harvested, or 92% of the summer troll Chinook quota. Following the first opening, the areas of high Chinook salmon abundance were closed (Figure 7). The second fishery was open for a predetermined length of four days, from August 12 to 15. Approximately 51,000 fish were harvested, for a summer harvest of nearly 245,000. Catch per fleet day averaged nearly 12,900, the highest seen since the 1992 average of 16,000.

Relevant information concerning open and closed periods for Chinook salmon in the Southeast Alaska general troll fishery is presented in Tables 11 to 13. The 2004 boat days of effort during the summer Chinook salmon retention period were almost half of what they were in 2003. In contrast, the 2004 boat days of effort during Chinook salmon non-retention was nearly double that of 2003. The hatchery contribution was 37,607 Chinook salmon, or 11% of the 354,636 total Chinook salmon harvested in the 2004 troll fisheries (Tables 14 and 15).

Troll Participation

In 2004, the Commercial Fisheries Entry Commission renewed 905 power troll permits and 934 hand troll permits, which was a 2% increase in power troll permit renewals and a 2.7% increase in hand troll permits, compared to 2003. Of the permits issued, 693 power troll and 319 hand troll permits were actually fished. This represents an 8.5% increase in power troll effort and a 24% increase in hand troll effort, compared to 2003. The majority of effort continued to be directed toward the summer fishery, where over 50% of the active trollers participated (Figure 8).

Net Fisheries

Based on the 2004 annual harvest limit of 383,538 treaty Chinook salmon, 25,100 fish were allocated to the net fisheries. The purse seine quota was 16,500 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 can not be 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 size 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 non-retention of Chinook salmon are established each year in the course of management of the purse seine fishery. In 2004, non-retention was in effect after August 14 in all purse seine fisheries, except the Hidden Falls and Deep Inlet Terminal Harvest Areas.

Hatchery Releases

Tables 13 to 21 show the actual releases of Chinook salmon from each release site by brood year from 1978 to 1995. The tables are organized by age at release (fry, age-0, age-1 and age-2). Table 22 shows the actual release numbers by brood year from each release site from 1996 to 2003 and the projected release numbers for 2004 for all three age classes. Release numbers match the online 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.

A projected 7,682,000 Chinook salmon smolts from brood year 2004 (BY04) will be released from Southeast hatcheries (Table 22). This is an increase of 98,000 smolts over the projected brood year 2003 (BY03) releases and 12,000 smolts over the actual brood year 2002 releases. The shift in production strategies by Medvejie and Tamgass Creek Hatchery, from traditional production of age-1. and age-2. smolts, to production of age-0. smolts, allows for the increase.

Smolt Capacity

Table 23 shows estimated production capacity since 1996. Alaska hatcheries are permitted for maximum egg capacity, so smolt production is estimated to be 70% of maximum egg capacity. Approximately 80% of the current permitted capacity for Southeast Alaska hatcheries is being utilized. Hidden Falls increased production by 1 million smolts in 2002, which added to Southeast's total smolt capacity. 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. 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 169,847 Chinook salmon in 2004, which was based on recoveries of coded wire tags in sampled fisheries, estimates of contribution to unsampled fisheries, plus broodstock and cost recovery (Tables 24 and 25). Of this total Chinook salmon return, 45% or 75,038 fish were harvested in common property fisheries, up from the 58,655 fish (43% of the 136,578 total return) harvested in common property fisheries in 2003. Cost recovery by hatchery operators increased in numbers of fish from 59,679 fish (44% of return) in 2003, to 66,201 fish (39% of the return) in 2004, but the percentage of the return used for cost recovery decreased. Broodstock needs increased in 2004 to 28,608 fish, from the 18,244 fish used in 2003. Fish counted as broodstock are either spawned or considered surplus.

The troll harvest constituted 20% of the 2004 catch of Alaska hatchery produced Chinook salmon. Net gear harvested 16% of the hatchery catch. The sport harvest of hatchery fish was 8%. When comparing common property harvest percentages to the total enhanced return, 44% in 2004 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 areas, while the southernmost hatcheries contribute more to the southern inside areas (Figure 14, Tables 26 and 27). Table 28 shows total adult returns by release site from 1980 to 2004. Table 29 shows exploitation rates by release site.

Macaulay Salmon Hatchery

Macaulay Salmon Hatchery expects to collect 6,651,000 eggs from returning Andrew Creek stock Chinook salmon in 2005. Macaulay Salmon Hatchery requires 618,000 eggs, which leaves a potential 6,033,000 surplus eggs available for transfer to other hatcheries. Macaulay Hatchery provided 797,000 picked eyed eggs of Andrew Creek stock to Crystal Lake Hatchery in 2004.

Macaulay Salmon Hatchery expects to collect 352,000 eggs from Tahini River stock Chinook salmon returning to Pullen Creek in 2005. Macaulay Salmon Hatchery requires 264,000 eggs for its broodstock development program, which leaves a potential 88,000 surplus eggs available for transfer to other hatcheries. A planned egg take at Pullen Creek will result in a transfer of 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 2007.

Medvejie

Medvejie Hatchery expects to collect 4,500,000 eggs from returning Andrew Creek stock Chinook salmon in 2005. Medvejie Hatchery requires 4,200,000 eggs, which leaves a potential 300,000 surplus eggs available for transfer to other hatcheries. A transfer of Chinook salmon eggs may potentially be made to Sheldon Jackson College Hatchery in 2005.

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:

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 proceeding 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.

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 151,420 Chinook salmon from 1979 to 2004 has indicated percent of hatchery strays averaged 0.33% (Table 32). 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 (7.67%). 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 Chinook salmon at Earl West Cove, which is approximately 20 miles from the mouth of the Stikine River. Earl West Cove releases were moved to Anita Bay beginning in 2001. Recent surveys of the Blossom, Keta, and Chickamin Rivers have shown 3.69%, 2.44%, and 2.35% of respective escapements to consist of hatchery strays.

In 2004, there were seven hatchery coded wire tags, and seven wild coded wire tags recovered from 16,437 Chinook salmon examined in the wild systems escapement. Five hatchery CWTs and 5 wild CWTs were recovered in the Chickamin River, out of 1,739 Chinook salmon examined. Four of the hatchery CWTs recovered were from Neets Bay Hatchery (Chickamin River stock) and one was from Anita Bay (Andrew Creek stock). All five wild CWTs found in the Chickamin River were from fish tagged as juveniles in the Unuk River. Two hatchery CWTs and 2 wild CWTs were recovered in the Stikine River, out of 6,329 salmon examined. Both hatchery CWTs were from Little Port Walter, with one being of Unuk River stock and the other being of Chickamin river stock. Both wild CWTs found in the Stikine River were from fish tagged as juveniles in the Taku River.

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 wild stock 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 wild stock 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 Alaska wild stocks. However, the Farragut River is a cause for concern due to the high amount of straying. Research on the effects of hatchery stock/wild stock interactions should continue to be supported.

Management of the spring fisheries is based primarily on the percentage of hatchery Chinook salmon present, as determined through extensive catch sampling. 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 target hatchery returns in areas where abundance of wild stocks is low. 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 traditionally included in the Chinook Annex, but were eliminated from this edition because of missing data.

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TABLES

Table 2.—Chinook salmon harvest, number of vessel landings, and catch per landing in the Southeast Alaska winter troll fishery, as delineated by troll accounting year (October 1 to September 30), from 1980 to 2004.^a

Year	Early Winter (October–December)			Late Winter (January–April 14)			Total Winter (October–April 14)			Annual Total	Winter Percent of Annual Total
	Number of Chinook	Landings	Catch/Landing	Number of Chinook	Landings	Catch/Landing	Number of Chinook	Landings	Catch/Landing		
1980	4,002	528	8	3,608	406	9	7,610	934	8	303,643	3%
1981	1,737	279	6	7,027	744	9	8,764	1,023	9	248,782	4%
1982	4,865	535	9	6,857	764	9	11,722	1,299	9	241,938	5%
1983	12,517	926	14	17,340	1,424	12	29,857	2,350	13	269,821	11%
1984	14,223	1,217	12	17,153	1,980	9	31,376	3,197	10	235,622	13%
1985	14,235	869	16	7,234	1,148	6	21,469	2,017	11	215,811	10%
1986	16,779	1,049	16	6,147	832	7	22,926	1,881	12	237,703	10%
1987	18,453	1,235	15	10,075	996	10	28,528	2,231	13	242,562	12%
1988	44,774	2,404	19	15,684	1,785	9	60,458	4,189	14	231,364	26%
1989	24,426	2,239	11	9,872	1,403	7	34,298	3,642	9	235,716	15%
1990	17,617	868	20	15,513	1,477	11	33,130	2,345	14	287,939	12%
1991	19,920	787	25	20,622	2,037	10	40,542	2,824	14	264,106	15%
1992	28,277	1,653	17	43,554	2,679	16	71,831	4,332	17	183,759	39%
1993	20,275	1,194	17	42,447	2,366	18	62,722	3,560	18	226,866	28%
1994	35,193	1,106	32	21,175	1,499	14	56,368	2,605	22	186,331	30%
1995	10,382	627	17	7,486	871	9	17,868	1,498	12	138,117	13%
1996	6,008	427	14	3,393	447	8	9,401	874	11	141,452	7%
1997	13,252	626	21	7,705	514	15	20,957	1,151	18	246,409	9%
1998	9,810	534	18	23,008	1,372	17	32,804	2,001	16	192,066	17%
1999	13,989	579	24	16,988	1,435	12	30,977	2,026	15	146,219	21%
2000	17,494	783	22	18,561	1,508	12	36,055	2,291	16	158,717	23%
2001	11,198	907	12	11,388	1,382	8	22,586	2,298	10	153,280	15%
2002	17,152	754	23	12,237	1,351	9	29,415	2,116	14	325,308	9%
2003	18,672	725	26	32,182	2,365	14	50,854	3,090	16	330,692	15%
2004	12,686	982	13	40,200	2,595	15	52,886	3,577	15	354,636	15%

^a Includes Annette Island troll harvest.

Table 3.—The number of Chinook salmon harvested and permits fished in the 2004 spring troll fisheries (experimental and terminal) in statistical areas within fishing districts 101, 102, and 105. Due to confidentiality concerns, harvests are omitted where less than three permits made landings.

Stat Area	Fishery Name	Stat Week	First Day	Last Day	Permits	Chinook	Percent AK	
101-29	Gravina Island	17	22-Apr	24-Apr	—	—	—	
		18	25-Apr	1-May	—	—	—	
		19	2-May	8-May	a	a	0%	
		20	9-May	15-May	5	91	100%	
		21	16-May	22-May	7	171	27%	
		22	23-May	29-May	9	250	24%	
		23	30-May	5-Jun	23	924	51%	
		24	6-Jun	12-Jun	21	1,106	53%	
		25	13-Jun	19-Jun	26	1,244	40%	
		26	20-Jun	26-Jun	24	1,082	54%	
		27	27-Jun	30-Jun	11	715	72%	
	Total			44	5,584	51%		
101-45	Mountain Point	17	22-Apr	24-Apr	—	—	—	
		18	25-Apr	1-May	—	—	—	
		19	2-May	8-May	a	a	0%	
		20	9-May	15-May	—	—	—	
		21	16-May	22-May	4	24	100%	
		22	23-May	29-May	4	35	74%	
		23	30-May	5-Jun	4	102	0%	
		24	6-Jun	12-Jun	8	160	100%	
		25	13-Jun	19-Jun	15	736	27%	
		26	20-Jun	26-Jun	11	411	64%	
		27	27-Jun	30-Jun	3	106	100%	
	Total			20	1,579	67%		
101-90	West Behm Canal	19	3-May	6-May	—	—	—	
		20	10-May	13-May	—	—	—	
		21	17-May	20-May	—	—	—	
		22	24-May	27-May	—	—	—	
		23	31-May	3-Jun	a	a	30%	
		24	7-Jun	11-Jun	a	a	71%	
		25	14-Jun	18-Jun	—	—	—	
		26	21-Jun	26-Jun	a	a	77%	
		27	27-Jun	30-Jun	a	a	0%	
	Total			3	158	26%		
101-95	Neets Bay Terminal Area	17	22-Apr	24-Apr	—	—	—	
		18	25-Apr	1-May	—	—	—	
		19	2-May	8-May	—	—	—	
		20	9-May	15-May	—	—	—	
		21	16-May	22-May	—	—	—	
		22	23-May	29-May	—	—	—	
		23	30-May	5-Jun	—	—	—	
		24	6-Jun	12-Jun	—	—	—	
		25	13-Jun	19-Jun	—	—	—	
		26	20-Jun	26-Jun	—	—	—	
		27	27-Jun	30-Jun	—	—	—	
	Total			0	b	—		
102-50	West Clarence Strait	19	3-May	6-May	—	—	—	
		20	10-May	13-May	3	38	0%	
		21	17-May	20-May	a	a	100%	
		22	24-May	29-May	4	126	21%	
		23	30-May	5-Jun	7	117	43%	
		24	6-Jun	12-Jun	4	118	87%	
		25	13-Jun	19-Jun	a	a	138%	
		26	20-Jun	26-Jun	a	a	31%	
		27	27-Jun	30-Jun	a	a	10%	
			Total			13	645	63%
		105-41	Sumner Strait	19	3-May	4-May	3	66
20	10-May			11-May	4	59	32%	
21	17-May			18-May	5	30	0%	
22	24-May			27-May	10	329	9%	
23	31-May			3-Jun	11	287	10%	
24	7-Jun			9-Jun	5	110	49%	
25	14-Jun			15-Jun	a	a	0%	
26	21-Jun			22-Jun	a	a	0%	
27	28-Jun			30-Jun	a	a	0%	
	Total			15	971	14%		

^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.

Table 4.—The number of Chinook salmon harvested and permits fished in the 2004 spring troll fisheries (experimental and terminal) in statistical areas within fishing districts 106 and 107. Due to confidentiality concerns, harvests are omitted where less than three permits made landings. Therefore, totals may not reflect the sum of weekly values.

Stat Area	Fishery Name	Stat Week	First Day	Last Day	Permits	Chinook	Percent AK
106-30	Steamer Point	19	3-May	4-May	a	a	0%
		20	10-May	11-May	a	a	0%
		21	17-May	19-May	3	26	0%
		22	24-May	27-May	3	48	25%
		23	31-May	3-Jun	4	58	38%
		24	7-Jun	10-Jun	5	115	56%
		25	14-Jun	17-Jun	6	95	74%
		26	21-Jun	26-Jun	6	62	0%
	Total				14	504	33%
106-44	Wrangell Narrows Terminal	23	1-Jun	2-Jun	4	24	—
		24	7-Jun	10-Jun	15	105	—
		25	14-Jun	17-Jun	10	134	—
		26	20-Jun	26-Jun	—	—	—
		27	27-Jun	30-Jun	—	—	—
	Total				17	263	100%
107-10	Ernest Sound	19	3-May	5-May	—	—	—
		20	10-May	12-May	a	a	0%
		21	17-May	20-May	—	—	—
		22	24-May	27-May	—	—	—
		23	31-May	3-Jun	a	a	0%
		24	7-Jun	10-Jun	a	a	46%
		25	14-Jun	17-Jun	a	a	0%
		26	21-Jun	26-Jun	a	a	0%
	Total				3	96	19%
107-20	Deer Island	19	3-May	5-May	a	a	0%
		20	10-May	12-May	—	—	—
		21	17-May	20-May	—	—	—
		22	24-May	27-May	a	a	0%
		23	31-May	3-Jun	—	—	—
		24	7-Jun	10-Jun	—	—	—
		25	14-Jun	17-Jun	—	—	—
		26	21-Jun	26-Jun	a	a	0%
	Total				4	48	0%
107-30	Zimovia Strait	19	3-May	4-May	—	—	—
		20	10-May	11-May	3	27	24%
		21	17-May	19-May	a	a	0%
		22	24-May	27-May	3	72	0%
		23	31-May	3-Jun	a	a	0%
		24	7-Jun	10-Jun	—	—	—
		25	14-Jun	17-Jun	—	—	—
		26	21-Jun	26-Jun	—	—	—
	Total				4	110	6%
107-35	Anita Bay Terminal Area	23	1-Jun	5-Jun	—	—	—
		24	6-Jun	12-Jun	—	—	—
		25	13-Jun	19-Jun	—	—	—
		26	20-Jun	26-Jun	—	—	—
		27	27-Jun	30-Jun	—	—	—
	Total				0	b	—
107-45	Earl West Cove Terminal Area	25	15-Jun	19-Jun	a	a	0%
		26	20-Jun	26-Jun	—	—	—
		27	27-Jun	30-Jun	—	—	—
	Total				a	a	100%

^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.

Table 5.—The number of Chinook salmon harvested and permits fished in the 2004 spring troll fisheries (experimental and terminal) in statistical areas within fishing districts 108 and 109. Due to confidentiality concerns, harvests are omitted where less than three permits made landings. Therefore, totals may not reflect the sum of weekly values.

Stat Area	Fishery Name	Stat Week	First Day	Last Day	Permits	Chinook	Percent AK
108-10	Chichagof Pass	19	3-May	4-May	a	a	0%
		20	10-May	11-May	a	a	0%
		21	17-May	18-May	a	a	0%
		22	24-May	27-May	5	65	66%
		23	31-May	5-Jun	8	108	32%
		24	6-Jun	12-Jun	12	308	44%
		25	13-Jun	19-Jun	15	372	38%
		26	20-Jun	26-Jun	5	68	34%
		27	27-Jun	30-Jun	a	a	0%
Total					25	969	39%
108-30	Baht Harbor	19	3-May	4-May	6	16	0%
		20	10-May	11-May	10	38	25%
		21	17-May	18-May	12	52	0%
		22	24-May	27-May	15	236	6%
		23	1-Jun	5-Jun	19	145	0%
		24	7-Jun	12-Jun	9	77	0%
		25	14-Jun	19-Jun	6	18	0%
		26	21-Jun	26-Jun	3	16	0%
		27	28-Jun	30-Jun	a	a	0%
Total					27	600	4%
108-40	Craig Point	19	3-May	4-May	a	a	0%
		20	10-May	11-May	a	a	0%
		21	17-May	18-May	a	a	0%
		22	24-May	27-May	a	a	0%
		23	31-May	3-Jun	8	157	8%
		24	7-Jun	9-Jun	a	a	0%
		25	14-Jun	16-Jun	3	69	0%
		26	21-Jun	22-Jun	a	a	0%
		27	28-Jun	30-Jun	a	a	0%
Total					15	343	3%
109-10	Little Port Walter	19	5-May	7-May	—	—	—
		20	12-May	14-May	—	—	—
		21	19-May	21-May	—	—	—
		22	26-May	28-May	a	a	0%
		23	1-Jun	4-Jun	—	—	—
		24	8-Jun	11-Jun	a	a	0%
		25	15-Jun	18-Jun	—	—	—
		26	22-Jun	25-Jun	a	a	0%
27	28-Jun	30-Jun	—	—	—		
Total					a	a	0%
109-51	Kingsmill Point	17	22-Apr	24-Apr			
		18	25-Apr	1-May	11	176	43%
		19	2-May	8-May	7	153	3%
		20	9-May	15-May	6	88	9%
		21	16-May	22-May	a	a	36%
		22	23-May	29-May	6	125	34%
		23	30-May	5-Jun	5	70	0%
		24	6-Jun	12-Jun	12	365	68%
		25	13-Jun	19-Jun	11	327	1%
		26	20-Jun	26-Jun	15	693	55%
27	27-Jun	30-Jun	a	a	0%		
Total					46	2,020	38%
109-62	Tebenkof Bay	19	3-May	5-May	17	615	14%
		20	10-May	12-May	18	531	32%
		21	17-May	18-May	16	271	58%
		22	24-May	24-May	—	—	—
		23	31-May	2-Jun	13	595	44%
		24	7-Jun	9-Jun	15	709	35%
		25	14-Jun	19-Jun	20	1,060	40%
		26	20-Jun	24-Jun	20	1,929	27%
Total					57	5,710	33%

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

Table 6.—The number of Chinook salmon harvested and permits fished in the 2004 spring troll fisheries (experimental and terminal) in statistical areas within fishing districts 110 and 112. Due to confidentiality concerns, harvests are omitted where less than three permits made landings. Therefore, totals may not reflect the sum of weekly values.

Stat Area	Fishery Name	Stat Week	First Day	Last Day	Permits	Chinook	Percent AK
110-31	Frederick Sound	17	22-Apr	24-Apr	—	—	—
		18	25-Apr	1-May	a	a	46%
		19	2-May	8-May	a	a	0%
		20	9-May	15-May	a	a	0%
		21	16-May	22-May	a	a	15%
		22	23-May	29-May	a	a	0%
		23	30-May	5-Jun	9	111	7%
		24	6-Jun	12-Jun	5	46	28%
		25	13-Jun	19-Jun	7	103	17%
		26	20-Jun	26-Jun	a	a	0%
		27	27-Jun	30-Jun	a	a	100%
	Total			18	413	14%	
112-12	Chatham Strait	17	22-Apr	24-Apr	—	—	—
		18	25-Apr	1-May	—	—	—
		19	2-May	8-May	—	—	—
		20	9-May	15-May	a	a	0%
		21	16-May	22-May	4	44	41%
		22	23-May	29-May	a	a	0%
		23	30-May	5-Jun	8	242	73%
		24	6-Jun	12-Jun	6	251	38%
		25	13-Jun	19-Jun	10	572	63%
		26	20-Jun	26-Jun	7	168	34%
		27	27-Jun	30-Jun			
	Total			20	1,315	54%	
112-22	Hidden Falls Terminal Area	17	22-Apr	24-Apr	—	—	—
		18	25-Apr	1-May	—	—	—
		19	2-May	8-May	—	—	—
		20	9-May	15-May	—	—	—
		21	16-May	22-May	—	—	—
		22	23-May	29-May	a	a	—
		23	30-May	5-Jun	6	293	—
		24	6-Jun	12-Jun	5	189	—
		25	13-Jun	19-Jun	5	242	—
		26	20-Jun	26-Jun	6	522	—
		27	27-Jun	30-Jun	—	—	—
	Total			14	1,294	100%	

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

Table 7.—The number of Chinook salmon harvested and permits fished in the 2004 spring troll fisheries (experimental and terminal) in statistical areas within district 113, that are in the vicinity of Sitka, Alaska. Due to confidentiality concerns, harvests are omitted where less than three permits made landings. Therefore, totals may not reflect the sum of weekly values.

Stat Area	Fishery Name	Stat Week	First Day	Last Day	Permits	Chinook	Percent AK
113-01	Western Channel	20	10-May	11-May	17	247	24%
		21	19-May	21-May	22	229	0%
		22	26-May	28-May	46	1,216	19%
		Total			60	1,692	17%
113-31	Biorka Island	21	17-May	18-May	34	812	11%
		25	14-Jun	14-Jun	29	1,335	7%
		Total			56	2,147	8%
113-35	Eastern Channel	17	22-Apr	24-Apr	a	a	0%
		18	25-Apr	1-May	5	14	0%
		19	2-May	8-May	11	30	0%
		20	9-May	15-May	4	29	52%
		21	16-May	22-May	12	89	0%
		22	23-May	29-May	35	331	28%
		23	30-May	5-Jun	45	891	65%
		24	6-Jun	12-Jun	72	2,325	57%
		25	13-Jun	19-Jun	84	3,577	58%
		26	20-Jun	26-Jun	62	2,084	40%
		27	27-Jun	30-Jun	37	880	29%
Total			151	10,253	50%		
113-37	Inner Silver Bay	17	22-Apr	24-Apr	—	—	—
		18	25-Apr	1-May	—	—	—
		19	2-May	8-May	a	a	0%
		20	9-May	15-May	a	a	0%
		21	16-May	22-May	a	a	0%
		22	23-May	29-May	6	48	100%
		23	30-May	5-Jun	a	a	0%
		24	6-Jun	12-Jun	11	180	88%
		25	13-Jun	19-Jun	13	529	47%
		26	20-Jun	26-Jun	9	311	55%
		27	27-Jun	30-Jun	3	72	0%
Total			26	1,164	54%		
113-41	Middle Island	17	22-Apr	24-Apr	5	43	0%
		18	25-Apr	1-May	19	125	54%
		19	2-May	8-May	12	52	0%
		20	9-May	15-May	22	343	24%
		21	16-May	22-May	25	460	14%
		22	23-May	29-May	54	996	22%
		23	30-May	5-Jun	26	433	75%
		24	6-Jun	12-Jun	35	903	54%
		25	13-Jun	19-Jun	33	856	36%
		26	20-Jun	26-Jun	27	962	33%
		27	27-Jun	30-Jun	25	422	68%
Total			106	5,596	39%		
113-45	Shelikof Bay	21	17-May	17-May	25	969	10%
		25	14-Jun	14-Jun	30	1,674	15%
		Total			45	2,643	13%
113-62	Salisbury Sound	19	3-May	5-May	5	16	0%
		20	10-May	12-May	4	18	0%
		21	17-May	19-May	4	82	0%
		22	24-May	26-May	12	230	2%
		23	1-Jun	3-Jun	26	561	46%
		24	7-Jun	9-Jun	16	419	27%
		25	14-Jun	17-Jun	26	1,666	19%
		26	21-Jun	24-Jun	30	1,310	10%
Total			65	4,302	19%		

Table 8–Page 2 of 2.

Stat Area	Fishery Name	Stat Week	Open	Close	Permits	Chinook	Percent AK
114-50	Port Althorp	19	3-May	4-May	11	153	20%
		20	10-May	11-May	9	147	18%
		21	17-May	18-May	9	167	1%
		22	24-May	25-May	15	335	6%
		23	31-May	1-Jun	9	245	32%
		24	7-Jun	9-Jun	9	190	19%
		25	14-Jun	15-Jun	11	357	22%
		26	21-Jun	22-Jun	13	159	12%
Total					37	1,753	17%
Grand Total Spring Experimental Fishery					442	55,169	36%
Grand Total for Spring Terminal Fishery					34	1,603	100%
Grand Total for Spring Troll Fishery					445	56,772	38%

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

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

Table 13.—Number of days, effort (boat days) and dates the Southeast Alaska troll fishery was open to Chinook fishing (Chinook retention), closed to Chinook salmon fishing (Chinook non-retention), and closed to all salmon species (all) during the general summer season (April 15-September 30) from 2000 to 2004.

Year	Open Periods				Closed Periods					
	Days Open	Days Closed	Dates open	Chinook Retention Days	Chinook Retention Effort (Boat days)	Closed Dates	Days Closed	Chinook Non-Retention Days	Chinook Non-Retention Effort (Boat days)	
2000	24	68	7/1-7/5	5	—	4/15-6/30	77 (all)	—	—	
	—	—	8/11-8/12	2	—	7/6-8/10	36	—	—	
	—	—	8/23-8/30	8	—	8/13-8/22	10 (all)	—	—	
	—	—	9/12-9/20	9	6,784	8/31-9/11	12	48	15,422	
2001	25	67	7/1-7/6	6	—	4/15-6/30	77 (all)	—	—	
	—	—	—	—	—	7/7-8/12	37	—	—	
	—	—	—	—	—	8/13-8/17	5(all)	—	—	
	—	—	8/18-9/5	19	7,364	9/6-9/30	25	—	—	
	—	—	—	—	—	9/21-9/24	4(all)	62	15,434	
2002	40	52	7/1-7/18	18	—	4/15-6/30	77 (all)	—	—	
	—	—	—	—	—	7/19-8/9	22	—	—	
	—	—	—	—	—	8/10-8/11	2(all)	—	—	
	—	—	8/12-9/2	22	—	9/3-9/30	28	—	—	
	—	—	—	—	10,482	—	—	50	10,214	
2003	39	53	7/1-8/8	39	—	4/15-6/30	77 (all)	—	—	
	—	—	—	—	10,743	8/9-9/30	53	53	9,228	
2004	19	—	7/1-7/15	15	—	4/15-6/30	77 (all)	—	—	
	—	—	—	—	—	7/16-8/9	25	—	—	
	—	—	—	—	—	8/10-8/11	2(all)	—	—	
	—	—	8/12-8/15	4	5,885	8/16-9/30	46	71	17,428	

Table 14.—Contribution of Chinook salmon produced by Alaskan hatcheries in the winter, experimental, and terminal troll fisheries, 1989 to 2004.

Fishery	Year	Total Harvest ^a	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%
2004	52,886	6,176	12%	
Average, 1989-2004		37,803	3,810	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	15,700	51%
	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	17,400	46%
	2003	35,429	11,949	34%
2004	55,169	19,894	36%	
Average, 1989-2004		22,838	9,984	45%
Terminal ^b	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%
2004	1,603	1,603	100%	
Average, 1989-2004		4,453	4,453	100%

^a Does not include Annette Island troll harvests

^b Terminal areas are accounted as 100% Alaskan Hatchery.

Table 15.—Contribution of Chinook salmon produced by Alaskan hatcheries in the hatchery access and general summer troll fisheries, and the annual total for all troll fisheries from 1989 to 2004.

Fishery	Year	Total Catch ^a	Alaskan Hatcheries	
			Number	Percent
Hatchery Access	1989	30,500	3,800	12%
	1990	35,000	6,800	19%
	1991	46,500	8,600	18%
	1992	23,600	6,500	28%
	1989-1992 Averages	33,900	6,425	19%
General Summer	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	240,577	7,692	3%
	2004	244,978	9,934	4%
1989-2004 Averages	149,647	6,352	5%	
Total	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	24,525	11%
	1994	186,200	12,300	7%
	1995	138,100	32,900	24%
	1996	141,400	52,900	37%
	1997	246,400	35,700	14%
	1998	192,000	15,000	8%
	1999	148,900	22,000	15%
	2000	158,905	34,600	22%
	2001	153,300	38,300	25%
	2002	325,300	36,600	11%
	2003	330,686	32,147	10%
	2004	354,636	37,607	11%
1989-2004 Averages	223,215	30,243	15%	

^a Does not include Annette Island troll harvest.

Table 20.—Releases of Age-0 Chinook salmon smolts by brood year (in thousands) from 1978 to 1995.

Release Site	Facility	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Crystal Cr	Crystal Lake	14.6	13.7	—	59.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Crab Bay	Deer Mountain	—	—	—	—	—	—	—	71	48	—	—	—	—	—	—	—	—	—
Ward Cove	Deer Mountain	—	—	—	—	—	—	—	—	171	—	—	—	—	—	—	—	—	—
Thomas Basin	Deer Mountain	—	—	—	—	20.6	304.9	227	284	—	—	—	—	—	—	—	—	—	—
Thorne Bay	Deer Mountain	—	—	—	—	—	—	—	68	83	—	—	—	—	—	—	—	—	—
LittlePort Walter	Little Port Walter	28.9	—	—	—	—	—	—	102.4	90.2	4.2	—	—	—	—	—	—	—	—
Neets Bay	Neets Bay	—	—	—	—	—	152.1	407.2	2299.7	2733	8.5	—	—	29.5	—	—	—	—	—
Jetty Cr	Port Armstrong	—	—	—	—	—	—	—	—	75.6	—	—	—	—	—	—	—	—	—
Tamgas Cr	Tamgas Creek	—	—	—	—	—	70	150	555.4	1947.3	1756.3	—	—	770.6	179	968	996.4	411.1	964
Carroll Inlet	Whitman Lake	—	—	—	—	—	—	—	281	435	—	—	27.3	—	—	—	—	—	—
Herring Cove	Whitman Lake	—	—	—	—	—	—	12.6	—	—	—	—	—	—	—	—	—	—	—
Neets Bay	Whitman Lake	—	—	—	—	—	53.9	—	—	—	—	—	—	—	—	—	—	—	—
Total Released		44	14	0	59	21	581	797	3,662	5,583	1,769	0	27	800	179	968	996	411	964

Table 22.—Releases of Chinook salmon smolts, by brood year (in thousands of fish), from 1996 to 2004.

TYPE OF RELEASE		Brood Year								
Release Site	Incubating Facility	1996	1997	1998	1999	2000	2001	2002	2003	2004 ^a
FRY RELEASE										
Long Lake	Neets Bay	0	29.8	273.6	248.7	301	257	250	250	0
Total Fry Releases		0	30	274	249	301	257	250	250	0
AGE-0. SMOLT RELEASES										
Ketchikan Creek	Deer Mountain	—	—	—	—	—	90	90	97.5	0
Kasnyku Bay	Hidden Falls	—	—	—	—	—	—	236.7	—	—
Bear Cove	Medvejie	—	—	—	205.6	309.5	0	300	750	1,000
Tamgas Creek	Tamgas Creek	197.1	—	—	102.2	187.5	300	271	535	535
Total Age 0 Smolt Releases		197	0	0	308	497	300	571	1,285	1,535
AGE-1. and AGE-2. SMOLT RELEASES										
Burro Creek	Burro Creek	—	16.4	—	—	—	—	—	—	—
Taiya Inlet	Burro Creek	16	—	—	—	—	—	—	—	—
Anita Bay	Crystal Lake	—	—	—	369	0	450	470.8	330	400
Crystal Creek	Crystal Lake	610.1	670.9	713.6	595.7	554.1	600	665.3	600	600
Earl West Cove	Crystal Lake	386.4	364.4	441	—	—	—	—	—	—
Neets Bay	Crystal Lake	404.3	347.3	421.8	416.3	452.6	450	491.9	521.9	250
Ketchikan Creek	Deer Mountain	101.3	51.4	90.3	89.5	96	100	100	78	30
Auke Bay	Macaulay	174.2	173.2	56.9	157.4	85	—	104.9	90	90
Fish Creek	Macaulay	179.1	183.7	166.7	183.2	178.5	121.8	171.9	180	180
Gastineau Channel	Macaulay	212.3	221.4	208.6	213.2	213.3	122.9	177.4	235	210
Sheep Creek	Macaulay	—	—	—	—	—	—	70.5	100	90
Pullen Creek	Macaulay	—	—	91.6	32.1	95	59	130	245	72
Kasnyku Bay	Hidden Falls	1,070.9	1,104.4	1,232.7	1,214.6	1,145.8	1,248	1,160	1,260	1,250
Taiya Inlet	Jerry Myers	8.6	1.9	—	—	3	3	3	—	—
Little Port Walter	Little Port Walter	107.7	106.5	134.1	109	0	200	150	—	—
Bear Cove	Medvejie	1,119.5	1,596.9	2,043.1	1,872.6	1,953.4	1,502	2,000	1,540	1,900
Neets Bay	Neets Bay	138.1	194.1	—	—	—	—	—	—	—
Jetty Creek	Port Armstrong	—	—	—	—	—	120	98	79	335
Crescent Bay	Sheldon Jackson	41.3	11.4	88.1	53	28	0	0	—	—
Tamgas Creek	Tamgas Creek	523.3	501.2	485.6	369.3	540	245	340	150	—
Herring Cove	Whitman Lake	713.3	741.9	779.8	782.6	689.6	706.9	715.4	640	740
Total Age-1. and Age-2. Smolt Releases		5,707	6,314	6,954	6,458	6,034	5,929	6,849	6,049	6,147
Grand Total All Releases		5,904	6,344	7,228	7,014	6,832	6,486	7,670	7,584	7,682

^a Projected releases of Chinook salmon in 2004.

Table 23.—Chinook salmon smolt capacity of Southeast Alaska Hatcheries, 1996 to 2004.

Facility	Age at Release	Number of Smolts Released (in Thousands)								
		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	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
Sheldon Jackson	1	100	100	100	100	100	100	100	100	100
Tamgas	0	250	250	250	250	250	250	300	300	500
Tamgas	1	500	500	500	500	500	500	500	500	150
Whitman Lake	1	775	775	775	775	775	775	775	775	775
Subtotal	0	250	250	250	250	250	550	600	600	1,500
Subtotal	1	8,140	8,150	9,110	9,360	9,360	9,360	10,260	9,935	9,835
Grand total		8,390	8,400	9,360	9,610	9,610	9,910	10,860	10,535	11,335

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

Table 24.—Estimated harvest by fishery type and brood stock of Chinook salmon for each enhancement site in 2004.

Release Site	Troll		Net			Sport		Personal Use ^b	Canadian ^c	Cost Recovery		Rack Return			Grand Total
	Traditional ^a	Terminal ^a	Traditional	Terminal	Jack	Traditional ^a	Terminal ^b			Adults	Jacks	Adults	Excess	Jacks	
Anita Bay	559	—	1,189	1,689	—	565	—	—	12	—	—	—	—	—	4,014
Auke Bay	273	—	122	—	—	1,203	74	—	—	—	—	170	—	—	1,842
Burro Creek	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Crystal Lake	1,272	263	304	—	—	1,110	—	—	—	—	—	—	—	—	2,949
Deer Mountain	246	—	55	—	—	278	250	9	—	—	—	106	126	—	1,070
Earl West Cove	100	24	—	389	—	—	—	—	—	—	—	—	420	—	933
Fish Creek	269	—	301	—	—	906	266	—	—	—	—	603	7	—	2,352
Gastineau(Macaulay)	408	—	472	—	—	948	1,259	—	—	170	—	2,699	14	—	5,970
Hidden Falls	3,301	1,316	5,252	4,180	7	695	250	50	—	12,790	72	3,519	1,952	33	33,417
Jerry Meyers	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Little Port Walter	548	—	214	—	52	40	—	—	—	—	—	2,000	78	—	2,932
Long Lake	192	—	—	—	—	—	—	—	—	580	—	—	—	—	772
Medvejie Creek	15,593	7	3,504	3,194	1	2,105	377	170	24	37,519	—	2,479	3,685	26	68,684
Neets Bay ^b	2,357	—	725	1,426	—	764	—	—	228	7,700	—	—	1,430	—	14,630
Pullen Creek	32	—	33	—	1	13	—	—	—	—	—	—	—	—	79
Port Armstrong	—	—	66	—	1	—	—	—	—	—	—	—	—	1,283	1,350
Sheldon Jackson	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tamgas Creek	1,643	—	2,752	—	—	527	150	250	—	4,000	150	500	5,088	—	15,060
Whitman Lake	5,591	—	1,045	—	1	2,289	—	11,100	358	3,220	—	570	1,820	—	25,994
Totals	32,384	1,610	16,034	10,878	63	11,443	2,626	11,579	622	65,979	222	12,646	14,620	1,342	182,048

^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 2004.

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

Table 25.—Estimated harvest and escapement of Alaska hatchery-produced Chinook salmon in Southeast Alaska, 1980-2004

Year	Numbers of Chinook Salmon						Percent of Total				
	Troll	Net ^a	Sport	Cost Recovery ^a	Brood Escapement ^a	Total Return ^b	Troll	Net	Sport	Common Property Harvest	Cost Recovery
1980	5,877	363	N/A	0	—	8,571	69	4	—	73	0
1981	1,949	59	N/A	0	—	3,985	49	1	—	50	0
1982	943	212	N/A	0	—	2,105	45	10	—	55	0
1983	1,857	113	872	0	1,451	4,293	43	3	20	66	0
1984	3,626	563	1,904	0	6,029	12,122	30	5	16	50	0
1985	8,100	2,400	3,372	2,011	9,819	25,702	32	9	13	54	8
1986	9,900	2,700	5,010	1,900	10,063	29,573	33	9	17	60	6
1987	16,600	2,300	5,108	2,466	15,426	41,900	40	5	12	57	6
1988	19,716	5,154	5,545	8,670	13,732	52,817	37	10	10	58	16
1989	18,804	8,831	6,351	17,748	13,071	64,805	29	14	10	52	27
1990	30,040	12,341	16,612	20,824	14,696	94,513	32	13	18	62	22
1991	38,336	14,488	18,818	25,854	14,425	111,921	34	13	17	64	23
1992	25,687	9,432	9,983	20,523	13,004	78,629	33	12	13	57	26
1993	17,805	13,999	9,279	22,929	14,712	78,724	23	18	12	52	29
1994	12,069	5,726	6,110	17,401	25,009	66,315	18	9	9	36	26
1995	26,187	22,506	9,983	23,690	29,680	112,046	23	20	9	52	21
1996	33,344	23,196	10,515	30,003	18,737	115,795	29	20	9	58	26
1997	28,111	7,984	9,605	30,487	15,652	91,839	31	9	10	50	33
1998	11,504	9,749	8,014	17,413	28,886	75,566	15	13	11	39	23
1999	17,203	19,049	11,250	17,249	20,022	84,773	20	22	13	56	20
2000	28,944	31,184	24,500	38,106	16,995	139,729	21	22	18	61	27
2001	24,700	12,505	16,469	69,425	18,169	141,268	17	9	12	38	49
2002	29,581	17,028	20,924	37,667	29,828	135,028	22	13	15	50	28
2003	28,775	8,649	21,231	59,679	18,244	136,578	21	6	16	43	44
2004	33,994	26,975	14,069	66,201	28,608	169,847	20	16	8	45	39

^a Includes jacks

^b Totals do not include Chinook caught in Canadian, or personal use fisheries.

Table 26.—Percent distribution of enhanced Chinook salmon released in Southern Southeast Alaska (Alaska fishing districts 101 to 108), caught in winter and summer troll fisheries by Pacific Salmon Marine Fisheries Council (PSMFC) districts from 1972 to 2004.

Location	Stock	Season	Pacific Marine Fisheries Commission Districts									Percent Annual Harvest	Total Seasonal Harvest
			Lynn Canal	Northern Outside	Central Outside	Central Intermediate	Stephens Passage	Southern Intermediate	Central Inside	Southern Outside	Southern Inside		
Burnett Inlet	Andrews Cr.	Summer	—	4%	5%	6%	—	15%	31%	9%	31%	74%	622
		Winter	—	—	7%	30%	—	63%	—	—	—	26%	221
Carroll Inlet	Chickamin R.	Summer	—	6%	21%	3%	—	14%	5%	11%	39%	75%	7,016
		Winter	—	—	45%	1%	—	25%	6%	4%	18%	25%	2,378
Carroll Inlet	Unuk R.	Summer	—	6%	6%	5%	—	11%	4%	16%	53%	88%	14,793
		Winter	—	—	13%	12%	—	52%	5%	2%	16%	12%	2,103
Crystal Lake	Andrews Cr.	Summer	—	2%	8%	12%	1%	62%	11%	2%	1%	67%	40,517
		Winter	—	—	8%	6%	1%	78%	6%	—	—	33%	19,667
Crystal Lake / Anita Bay	Andrews Cr.	Summer	—	—	12%	—	—	8%	59%	—	21%	59%	618
		Winter	—	7%	—	—	—	17%	23%	53%	—	41%	435
Crystal Lake/ Earl West Cove	Andrews Cr.	Summer	—	4%	9%	10%	—	35%	25%	5%	12%	68%	8,705
		Winter	—	—	22%	8%	2%	58%	6%	1%	4%	32%	4,150
Crystal Lake / Neets Bay	Andrews Cr.	Summer	—	10%	36%	2%	—	11%	2%	10%	30%	58%	716
		Winter	—	—	60%	—	—	15%	6%	—	19%	42%	516
Crystal Lake / Neets Bay	Chickamin R.	Summer	—	7%	24%	2%	—	11%	7%	3%	47%	72%	5,440
		Winter	—	—	46%	—	1%	20%	6%	19%	9%	28%	2,151
Crystal Lake / Neets Bay	Unuk R.	Summer	—	—	29%	—	—	17%	6%	—	49%	83%	297
		Winter	—	—	62%	—	—	38%	—	—	—	17%	59
Deer Mountain	Unuk R.	Summer	—	3%	13%	5%	—	9%	5%	7%	57%	84%	3,273
		Winter	—	—	15%	7%	—	37%	11%	3%	26%	16%	633
Hidden Falls	Andrews Cr.	Summer	—	3%	13%	66%	—	18%	—	—	—	88%	37,255
		Winter	—	1%	39%	10%	3%	45%	2%	—	—	12%	5,246
Hidden Falls	Tahini R.	Summer	—	4%	9%	65%	—	22%	—	—	—	45%	216
		Winter	—	—	21%	63%	1%	15%	1%	—	—	55%	259
Neets Bay	Chickamin R.	Summer	—	3%	44%	—	—	17%	5%	3%	27%	72%	2,252
		Winter	—	—	54%	—	2%	15%	18%	—	11%	28%	891
Neets Bay	Unuk R.	Summer	—	5%	5%	11%	—	17%	14%	12%	37%	79%	15,514
		Winter	—	—	16%	19%	—	49%	6%	—	8%	21%	4,161
Tamgas Cr.	Unuk Ri.	Summer	—	2%	13%	3%	—	6%	2%	7%	66%	80%	12,781
		Winter	—	—	51%	6%	—	32%	1%	1%	9%	20%	3,235
Whitman Lake	Chickamin R.	Summer	—	3%	19%	2%	—	8%	3%	6%	58%	79%	26,717
		Winter	—	—	52%	2%	—	19%	4%	7%	16%	21%	7,312
Whitman Lake	Unuk R.	Summer	—	6%	11%	7%	—	23%	6%	18%	35%	59%	515
		Winter	—	—	12%	13%	—	40%	12%	9%	15%	41%	359

Table 27.—Percent distribution of enhanced Chinook salmon released in Northern Southeast Alaska (Alaska fishing districts 109 to 115), caught in winter and summer troll fisheries by Pacific Salmon Marine Fisheries Council (PSMFC) districts from 1972 to 2004.

Location	Stock	Season	Pacific Marine Fisheries Commission Districts									Percent Annual Harvest	Total Seasonal Harvest
			Lynn Canal	Northern Outside	Central Outside	Central Intermediate	Stephens Passage	Southern Intermediate	Central Inside	Southern Outside	Southern Inside		
Jerry Myers	Tahini R	Summer	17%	—	5%	78%	—	—	—	—	—	78%	69
		Winter	—	—	33%	67%	—	—	—	—	—	22%	20
Little Port Walter	Chickamin R	Summer	—	4%	16%	17%	1%	61%	—	1%	—	72%	10,080
		Winter	—	—	25%	4%	2%	67%	2%	—	—	28%	3,947
Little Port Walter	Unuk R.	Summer	—	—	12%	16%	—	65%	1%	2%	—	77%	16,388
		Winter	—	—	14%	11%	1%	73%	1%	—	—	23%	4,777
Macaulay	Andrews Cr	Summer	—	—	19%	62%	—	13%	—	—	—	85%	4,426
		Winter	—	—	21%	3%	4%	66%	6%	—	—	15%	781
Macaulay	King Salmon R.	Summer	8%	—	12%	80%	—	—	—	—	—	90%	266
		Winter	—	—	—	—	71%	29%	—	—	—	10%	29
Medvejie	Andrews Cr	Summer	—	1%	91%	1%	—	5%	—	1%	—	94%	88,881
		Winter	—	—	86%	8%	—	6%	—	—	—	6%	6,164
Medvejie	Chickamin R	Summer	—	—	90%	1%	—	4%	1%	1%	—	94%	11,656
		Winter	—	—	91%	—	—	9%	—	—	—	6%	755
Port Armstrong	Andrews Cr	Summer	—	2%	6%	5%	—	86%	—	1%	—	92%	1,481
		Winter	—	—	52%	—	—	48%	—	—	—	8%	120
Port Armstrong	Unuk R.	Summer	—	1%	10%	16%	—	70%	1%	1%	—	76%	2,558
		Winter	—	1%	23%	29%	2%	45%	—	—	—	24%	818
Sheldon Jackson	Andrews Cr	Summer	—	—	96%	1%	—	2%	—	—	—	99%	3,456
		Winter	—	—	100%	—	—	—	—	—	—	1%	36
Snettisham	Andrews Cr	Summer	1%	2%	8%	36%	2%	49%	—	1%	1%	59%	3,615
		Winter	—	—	8%	27%	3%	62%	1%	—	—	41%	2,544
Snettisham	King Salmon R.	Summer	1%	—	1%	18%	15%	60%	—	5%	—	62%	296
		Winter	—	—	—	3%	5%	92%	—	—	—	38%	177
Average number of enhanced fish harvested within Pacific States Marine Fisheries Commission Districts in Southeast Alaska			89	9,013	144,579	50,519	1,692	110,030	15,556	12,804	51,476	—	—

Table 30.—Number of Chinook salmon females spawned, and number of eggs collected (in thousands) in Southeast Alaska during 2004.

Incubation Facility	Egg Take Location	Stock	Number Females Spawned	Disposition of Eggs (numbers in thousands)			
				Green Eggs	Total Adjusted Number of Green Eggs	Total Number of Eyed Eggs	Number of Eggs Shipped
Macaulay	Pullen Creek	Tahini River	13	83	83	79	—
Crystal Lake	Crystal Lake	Andrew Creek	240	1,130	1,130 ^a	1,230	—
Macaulay	Macaulay	Andrew Creek	1,077	1,630	679	644	951
Deer Mountain	Deer Mountain	Unuk River	21	70	39	39	—
Hidden Falls	Hidden Falls	Andrew Creek	364	2,035	1,400	1,380	—
Little Port Walter	Little Port Walter	Unuk River	240	1,300	1,100	300	800
Little Port Walter	Little Port Walter	Chickamin River	71	426	400	180	—
Medvejie	Medvejie	Andrew Creek	811	3,800	3,481	3,073	—
Port Armstrong	Little Port Walter	Unuk River	—	—	—	800 ^b	—
Port Armstrong	Port Armstrong	Unuk River	187	908	908	479	—
Sheldon Jackson	Sheldon Jackson	Andrew Creek	—	—	—	—	—
Tamgas Creek	Tamgas Creek	Unuk/Chickamin	117	662	620	620	—
Crystal Lake	Whitman Lake	Chickamin River	572	2,183	2,183	1,185	—
Totals			3,713	14,227	12,023	10,009	1,751

^a Includes 780K picked eyed eggs transferred from Macaulay, and 450K transferred to Crystal Lake for release at Neets Bay Hatchery.

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

Table 31.—Rearing strategies and release sites of brood year 2004 Chinook salmon eggs in enhancement programs (numbers in thousands).

Rearing Facility	Release Site	Stock	Eyed Eggs	Age-0 Smolts	Age-1 Smolts				Total Number Smolts
					Released from Freshwater Rearing	Transported to Freshwater Release Site for Imprinting	Released from Saltwater Rearing	Transported to Saltwater Release Site for Imprinting	
Crystal Lake	Crystal Creek	Andrew Creek	1,130	—	600 ^a	—	—	—	600
Crystal Lake	Anita Bay	Andrew Creek	—	—	—	—	—	450 ^a	450
	Ketchikan Cr.								
Deer Mountain	Creek	Unuk River	39	—	30	—	—	—	30
Little Port	Little Port								
Walter	Walter	Chickamin River	180	—	50	—	—	—	50
Little Port	Little Port								
Walter	Walter	Unuk River	300	—	100	—	—	—	100
Macaulay	Pullen Creek	Tahini River	79	—	—	72	—	—	72
	Gastineau								
Macaulay	Channel	Andrew Creek	644	—	—	—	210 ^b	—	210
Macaulay	Auke Bay	Andrew Creek	—	—	—	—	90 ^b	—	90
Macaulay	Fish Creek	Andrew Creek	—	—	—	—	180 ^b	—	180
Macaulay	Thane	Andrew Creek	—	—	—	—	90 ^b	—	90
Hidden Falls	Hidden Falls	Andrew Creek	1,380	—	—	—	1,250	—	1,250
Jerry Myers	Taiya Inlet	Tahini River	4	—	3	—	—	—	3
Medvejie	Bear Cove	Andrew Creek	3,073	1,000	—	—	1,900	—	2,900
Port Armstrong	Port Armstrong	Unuk River	479 ^c	—	—	—	335	—	335
Sheldon									
Jackson	Crescent Bay	Andrew Creek	—	—	—	—	36 ^d	—	36
Tamgas Creek	Tamgas Creek	Unuk/Chickamin	620	535	—	—	—	—	535
Whitman Lake	Herring Cove	Chickamin River	1,185	—	740 ^e	—	—	—	740
Whitman Lake	Neets Bay	Chickamin River	—	—	—	—	250 ^e	—	250
Crystal Lake	Neets Bay	Chickamin River	—	—	—	—	—	400 ^e	400
Totals			9,113	1,535	1,523	72	4,341	850	8,321

^a Apportioned from the 1,130k Andrew Creek Stock at the Crystal Lake Facility.

^b Apportioned from the 643.6 Andrew Creek Stock at the Macaulay facility.

^c Eyed eggs received from Little Port Walter.

^d 40K fry transferred from Medvejie and released from saltwater-filled onshore ponds.

^e Apportioned from the 1,185 Chickamin River stock at the Whitman facility.

Table 32.—Incidence of hatchery strays in ten wild stock streams in Southeast Alaska.

Stream	Years Examined	Number Years	Number Examined	Number Hatchery Tags	Est. No. Hatchery Fish	Est. Percentage Hatchery Fish
Andrew Ck.	1997–2004	8	1,707	14	131	7.67%
Chickamin	1985–1993; 1995–2004	19	6,651	15	156	2.35%
Chilkat	1983–1987; 1989–2004	21	12,225	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; 1998–2004	20	748	0	0	0.00%
Stikine ^a	1979–1996; 1997–2004	25	49,982	10	39	0.08%
Taku	1979–1990; 1994–2004	23	58,600	0	0	0.00%
Unuk	1985–2004	20	17,912	8	33	0.18%
Keta	1998–2004	7	1,801	2	44	2.44%
Blossom	1998–2004	7	814	3	30	3.69%
Totals			151,420	95	495	0.33%

^a Includes Andrew Creek thru 1996.

FIGURES

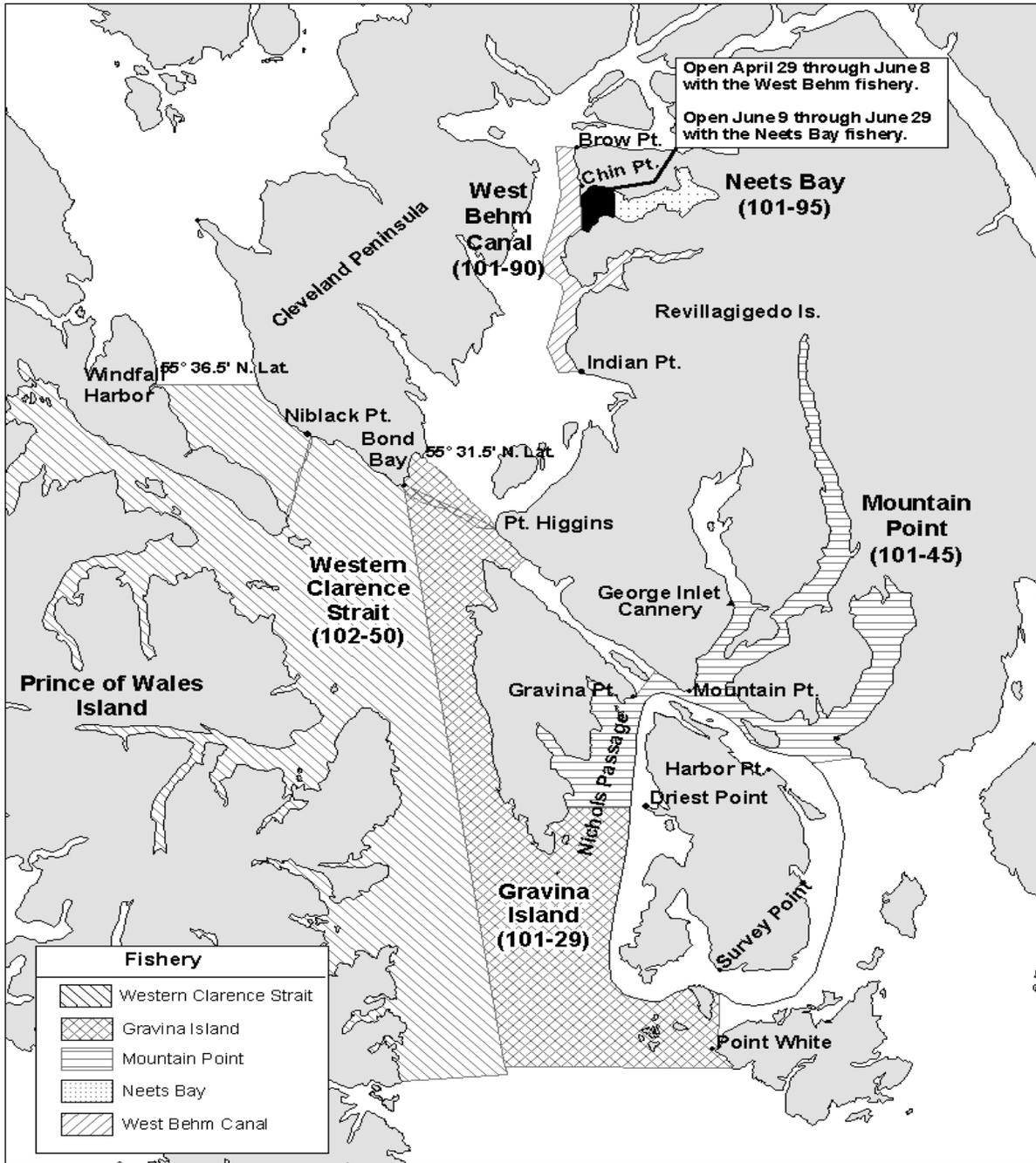


Figure 1.—Ketchikan area spring trolling areas, 2004.

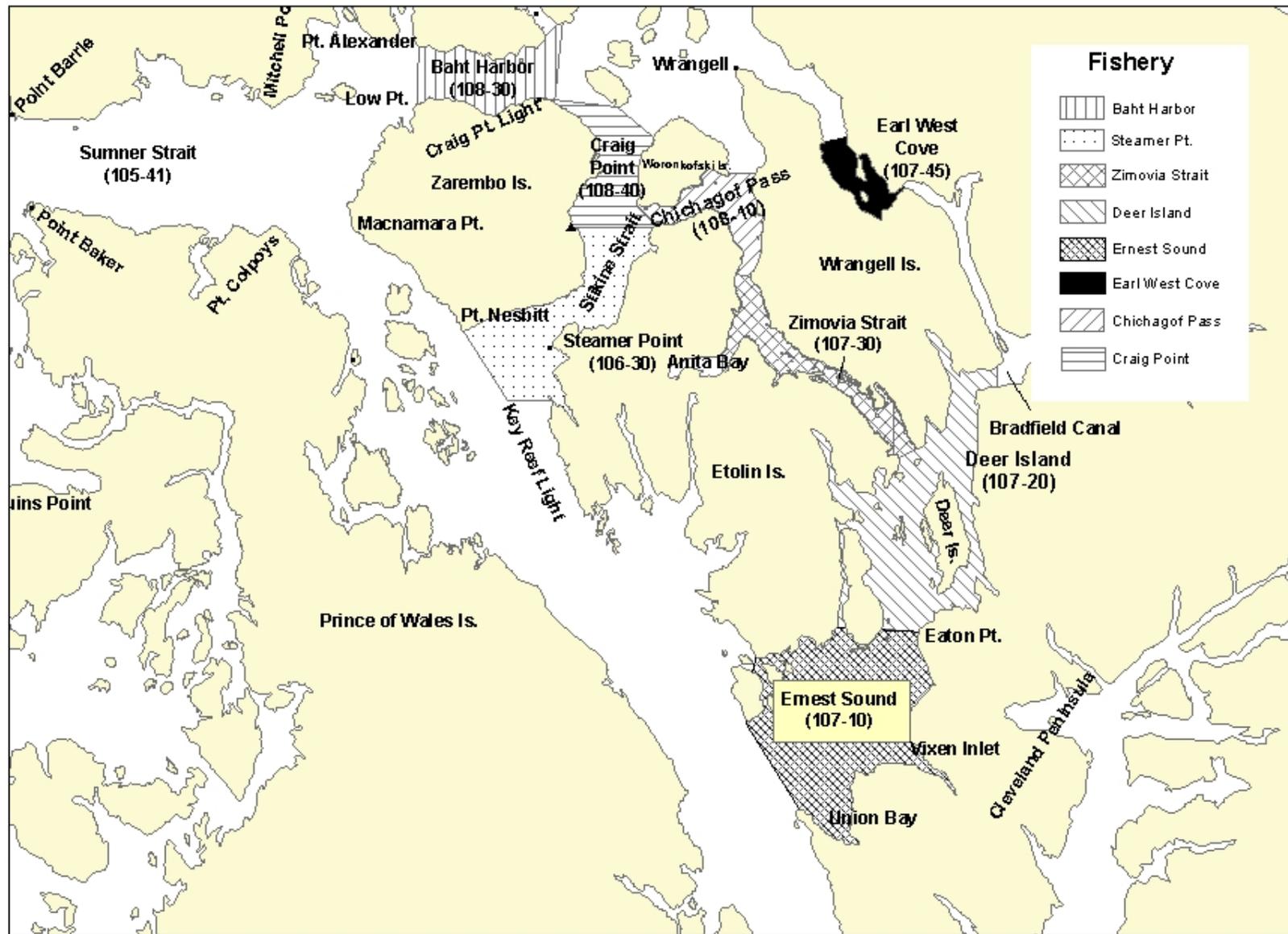


Figure 2.—Wrangell and Prince of Wales spring trolling areas, 2004.

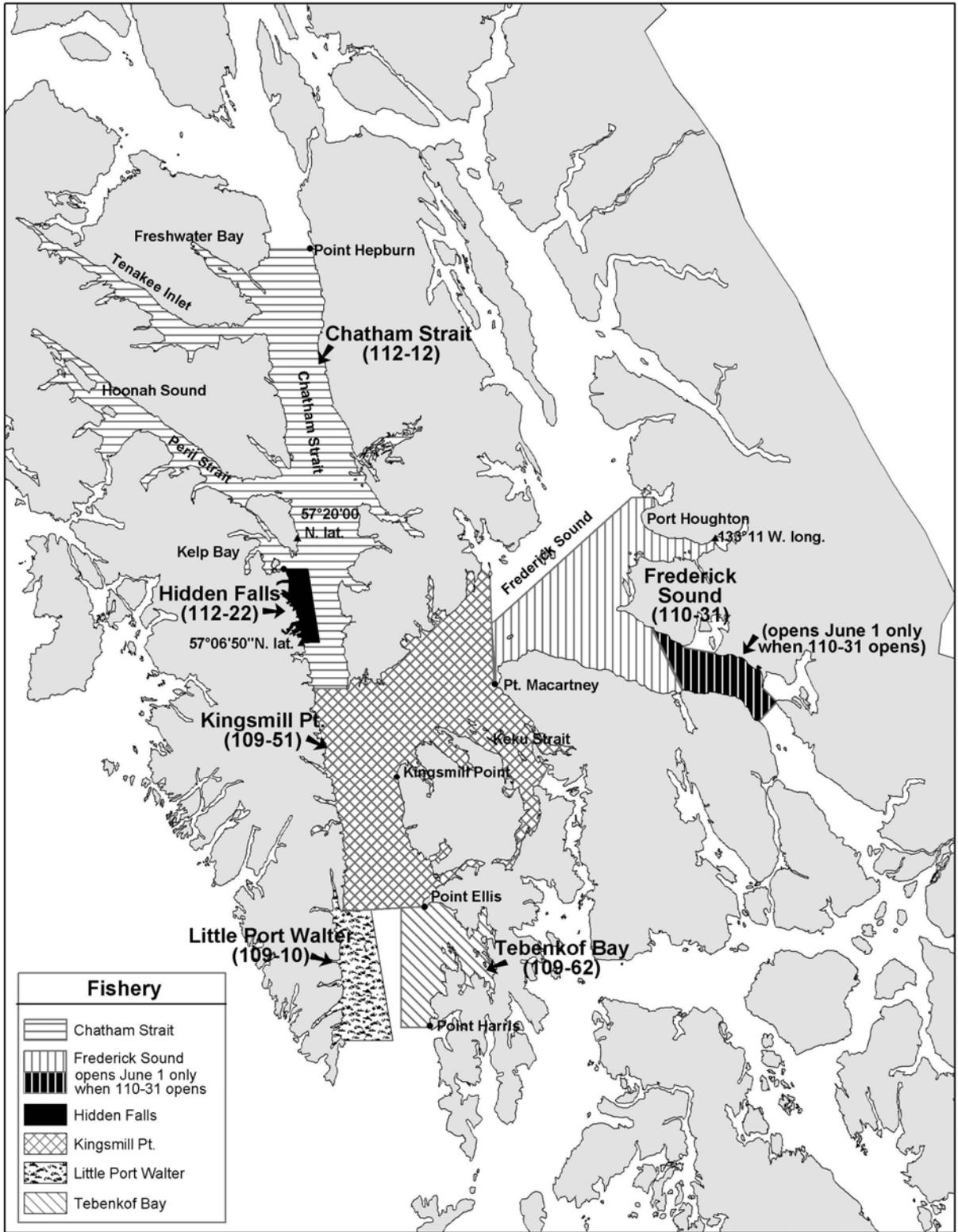


Figure 3.—Chatham Strait and Fredrick Sound spring troll areas, 2004.

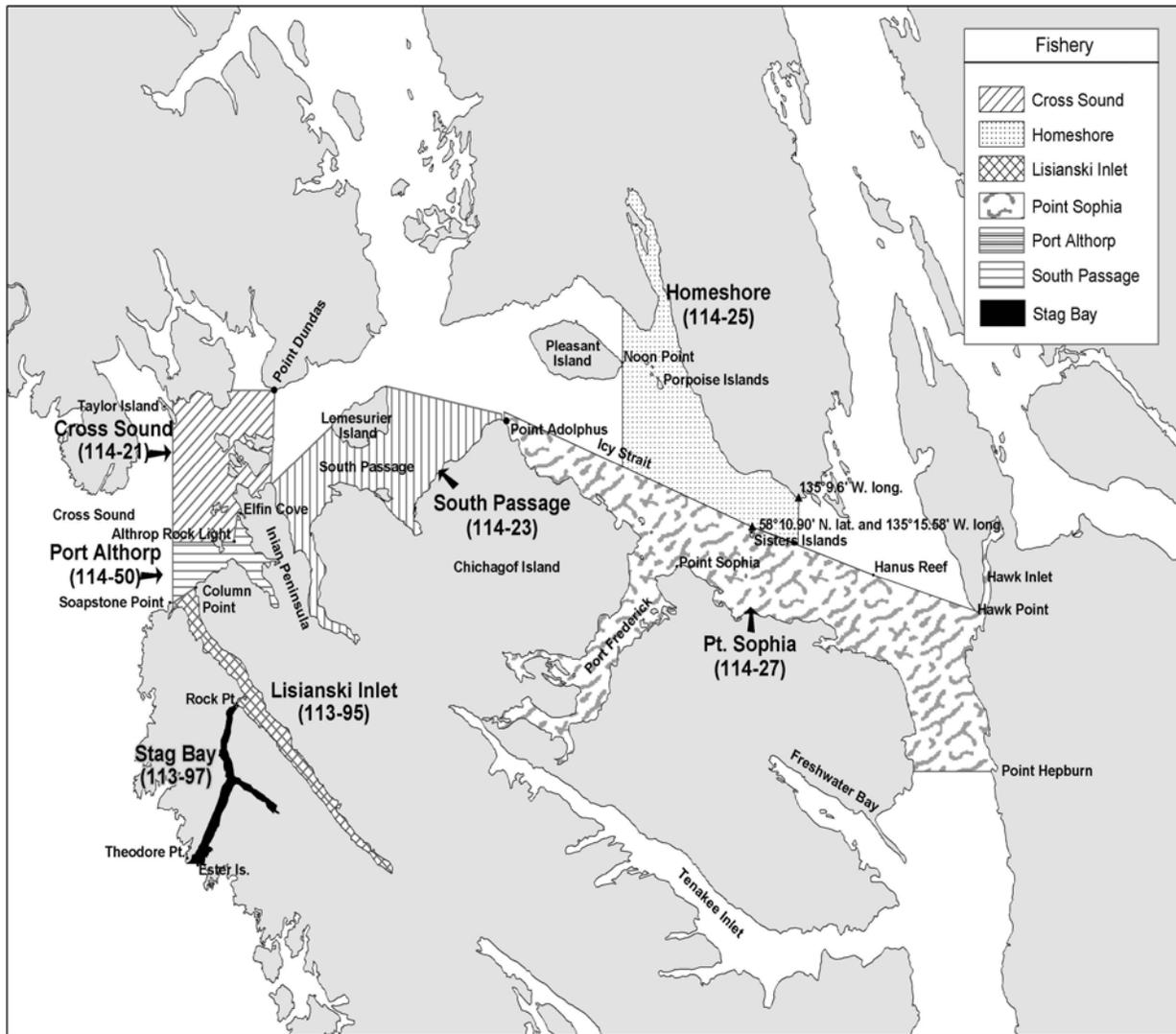


Figure 4.—North Chatham and Ice Strait spring trolling areas, 2004.

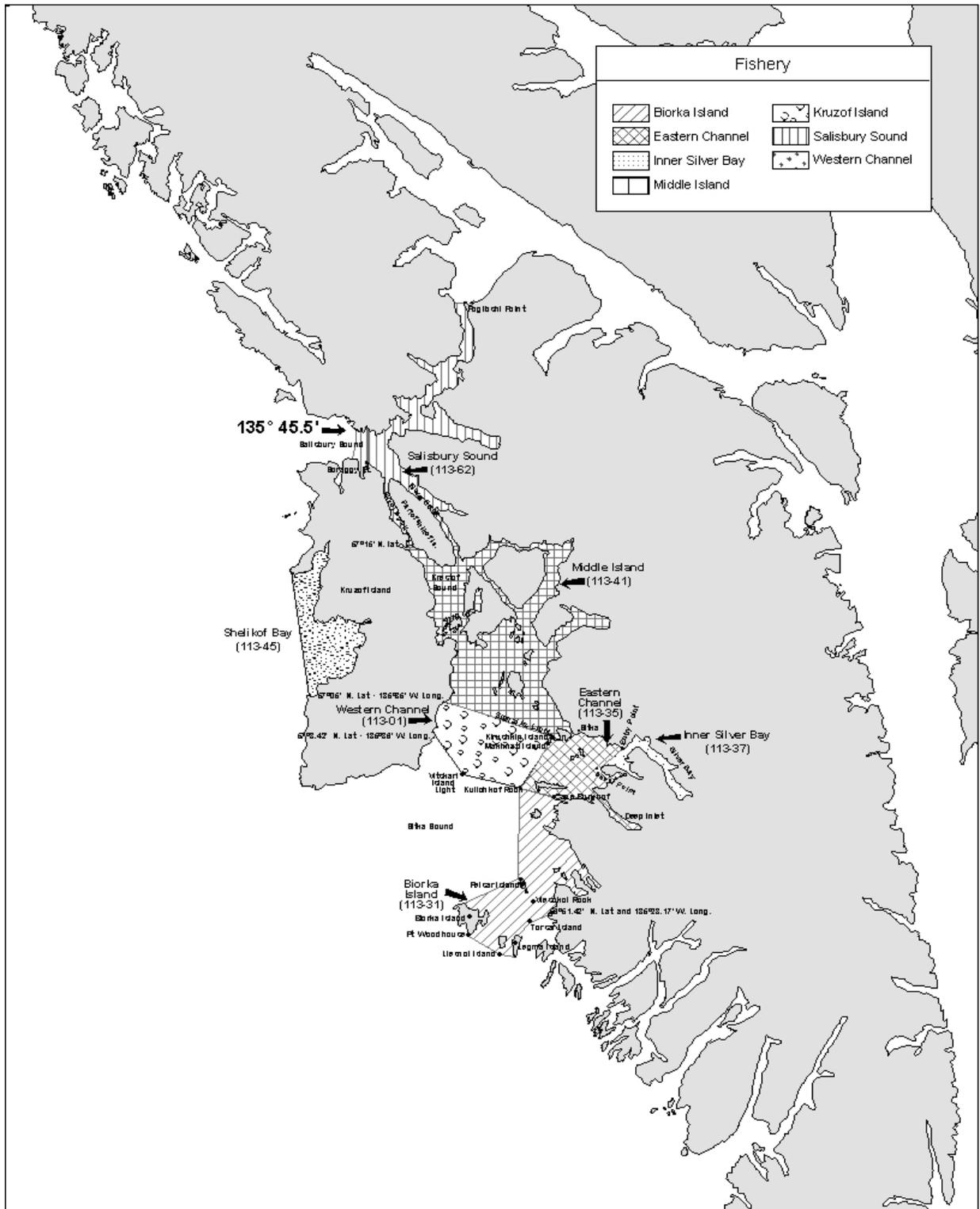


Figure 5.—Sitka area spring trolling areas, 2004.

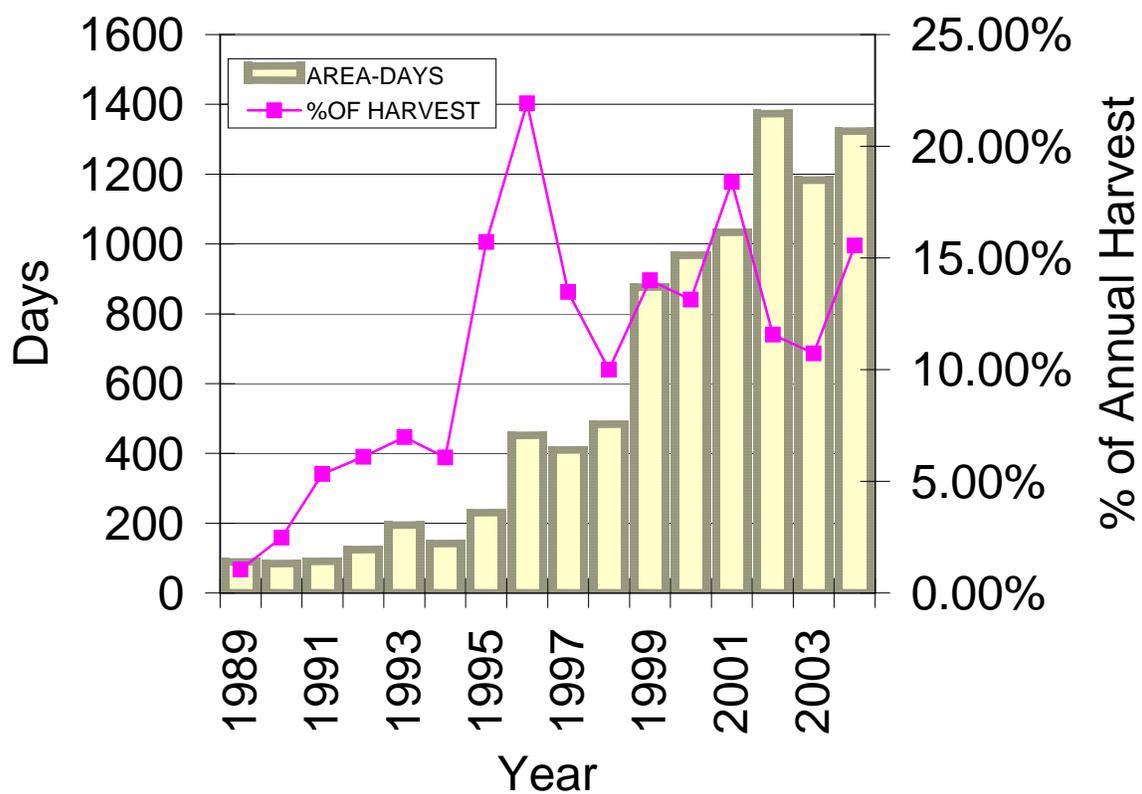


Figure 6.—Number of days and percent of annual harvests taken in experimental fisheries, from 1989 to 2004.

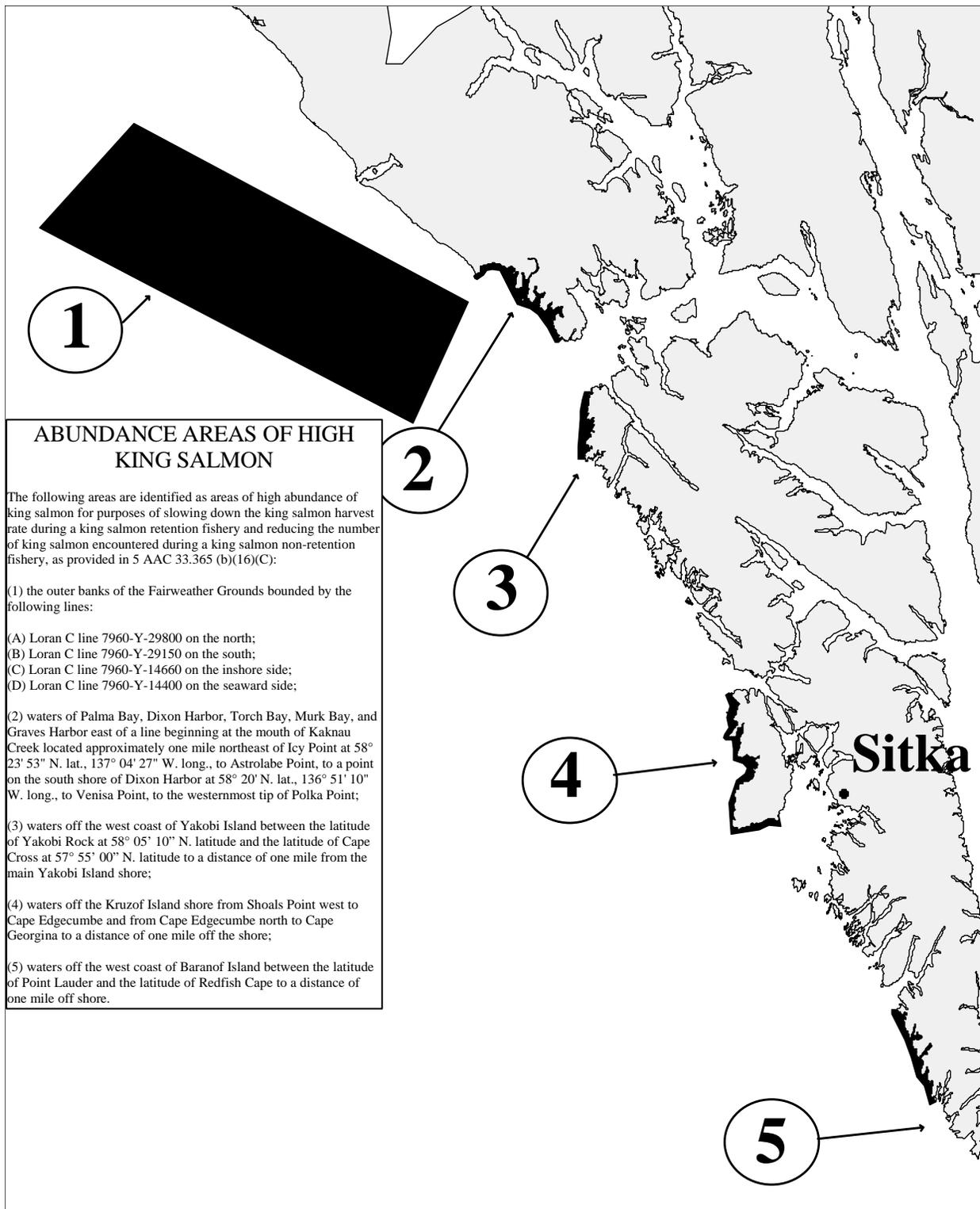


Figure 7.—Southeast Alaska areas closed to trolling for all species following the initial Chinook salmon opening in the Southeast Alaska summer troll season.

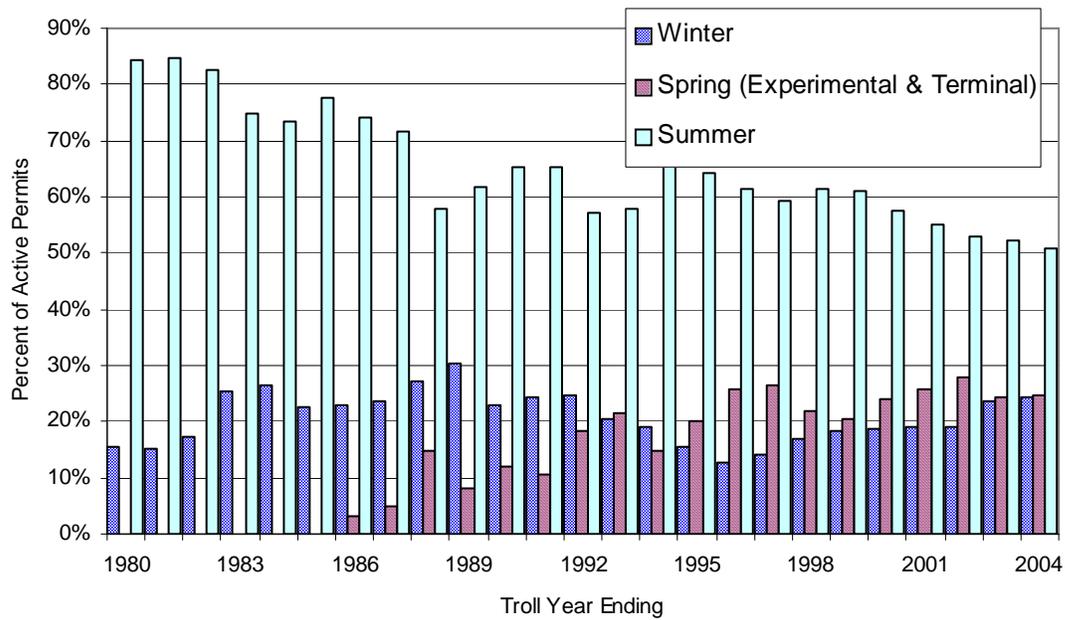


Figure 8.—Percent of active troll permits fished by season, from 1980 to 2004.

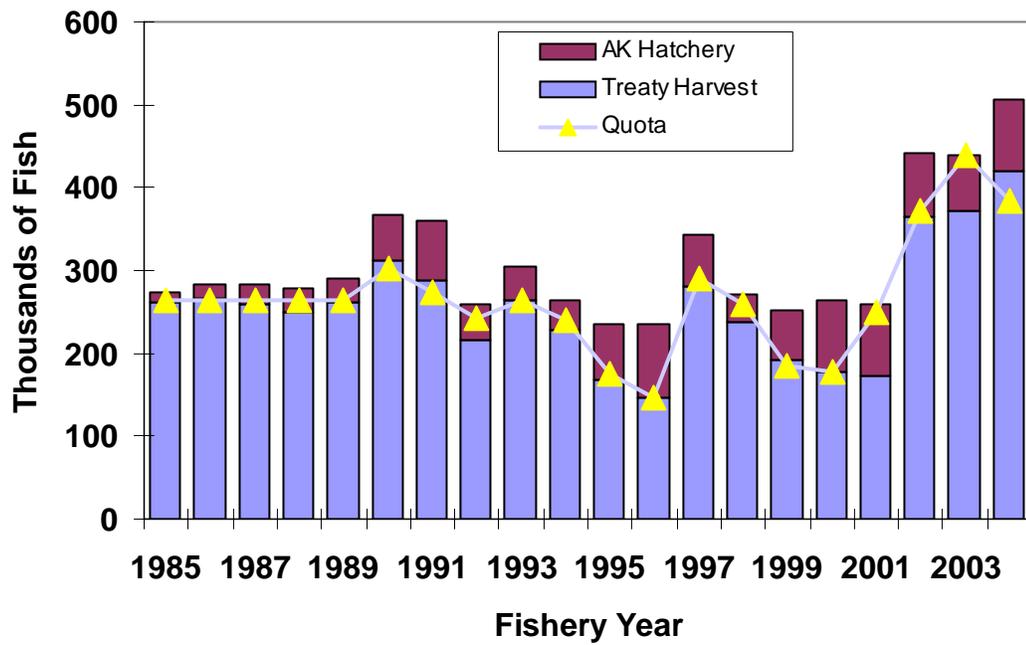


Figure 9.—Number of Chinook salmon harvested under the Pacific Salmon Treaty quota, from 1985 to 2004.

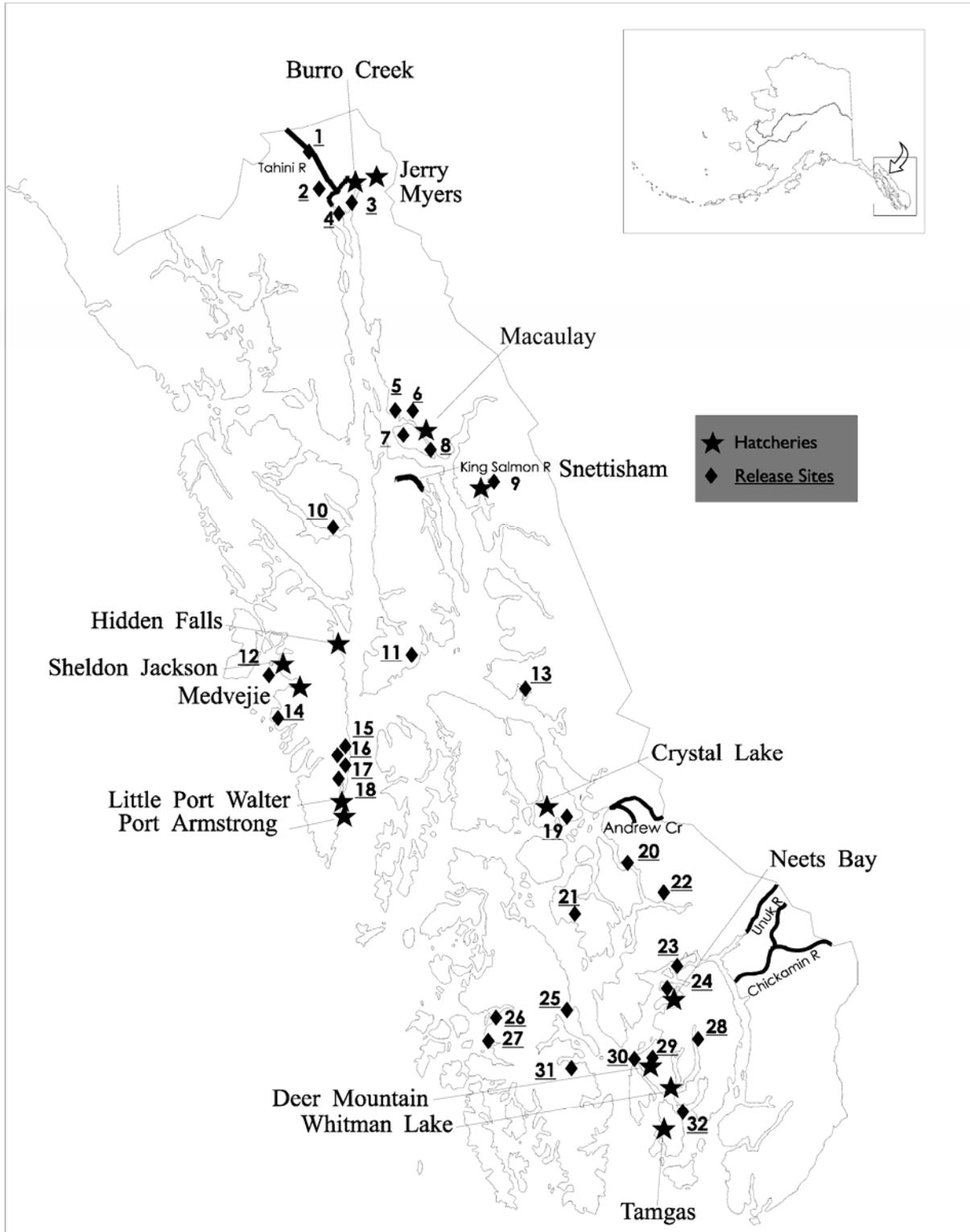


Figure 10.—Location of Chinook salmon hatcheries, remote release sites, and primary ancestral stock rivers in Southeast Alaska. Map key to Figure 10 shown in Table 18.

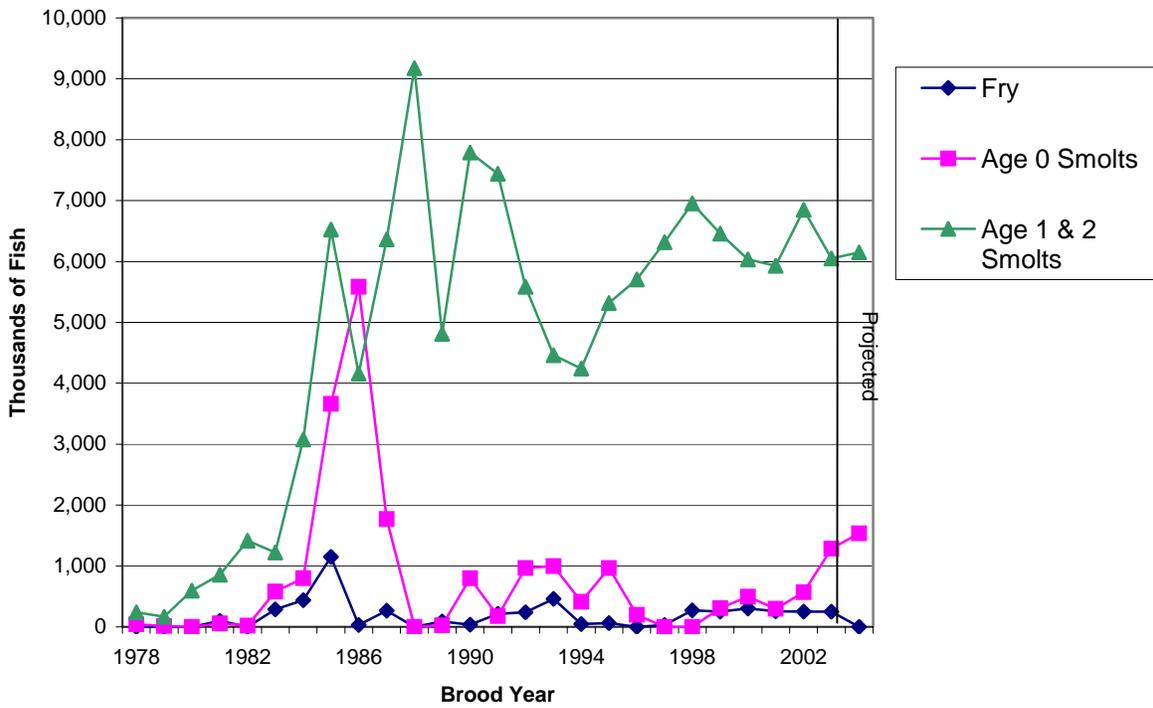


Figure 11.—Actual and projected releases of hatchery-produced Chinook salmon in Southeast Alaska by brood year, from 1978 to 2004.

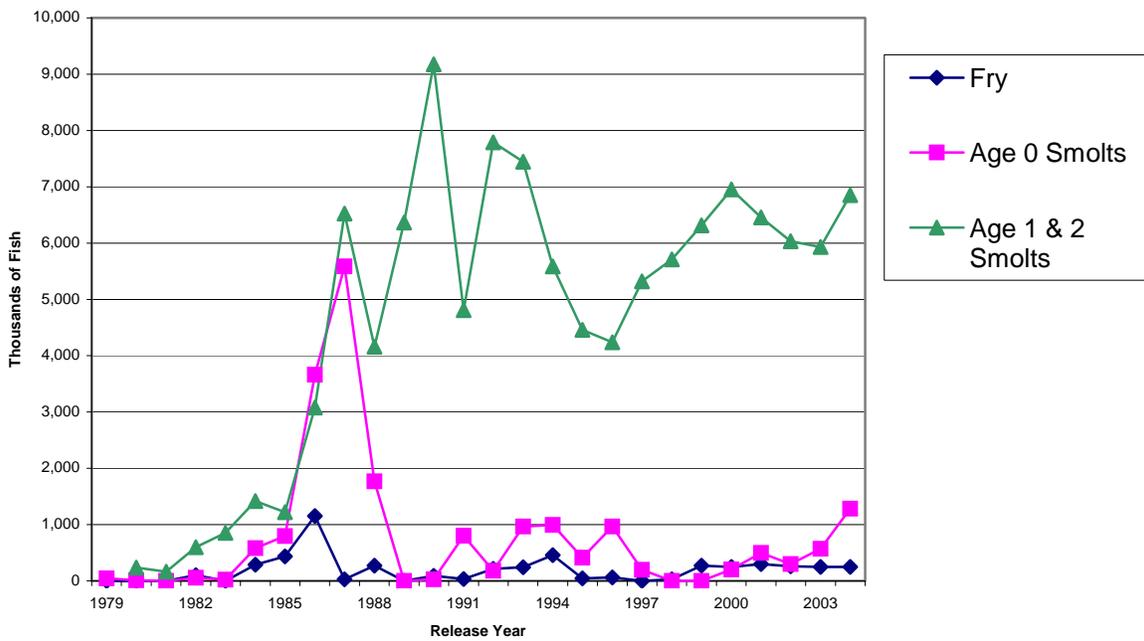


Figure 12.—Actual and projected releases of hatchery-produced Chinook salmon in Southeast Alaska by calendar year, from 1979 to 2004.

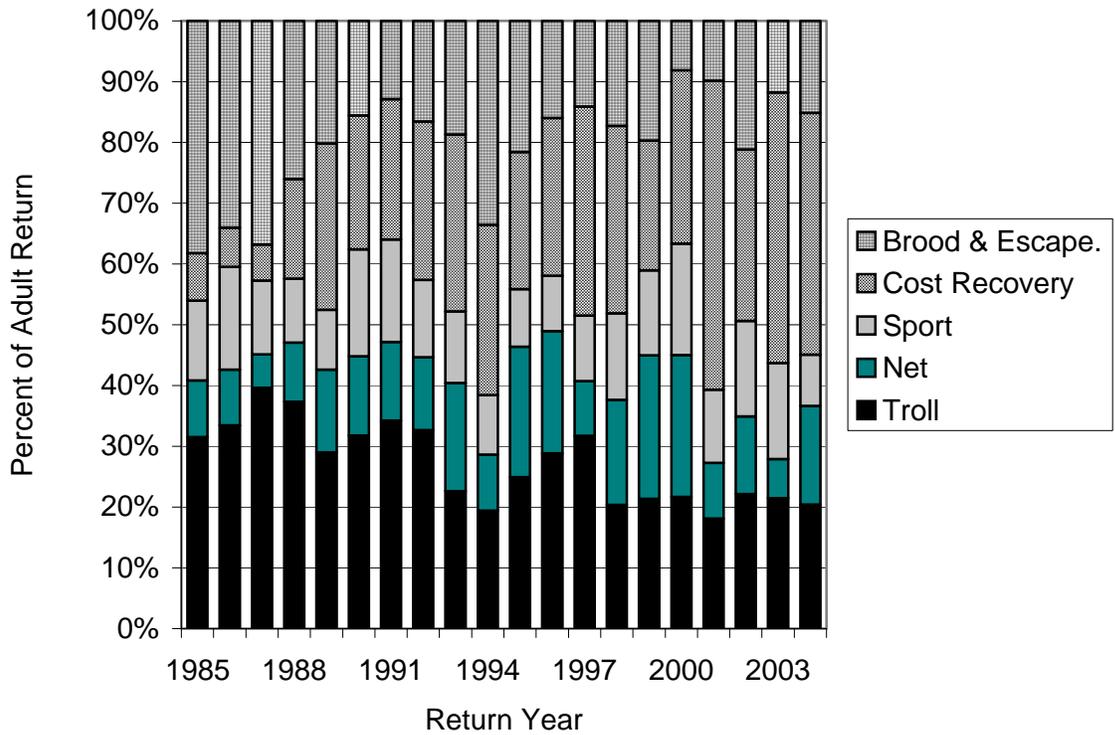


Figure 13.—Percentages of Alaska hatchery-produced Chinook salmon harvested in common property fisheries and utilized by hatchery operators for cost recovery or broodstock and escapement, from 1985 to 2004.

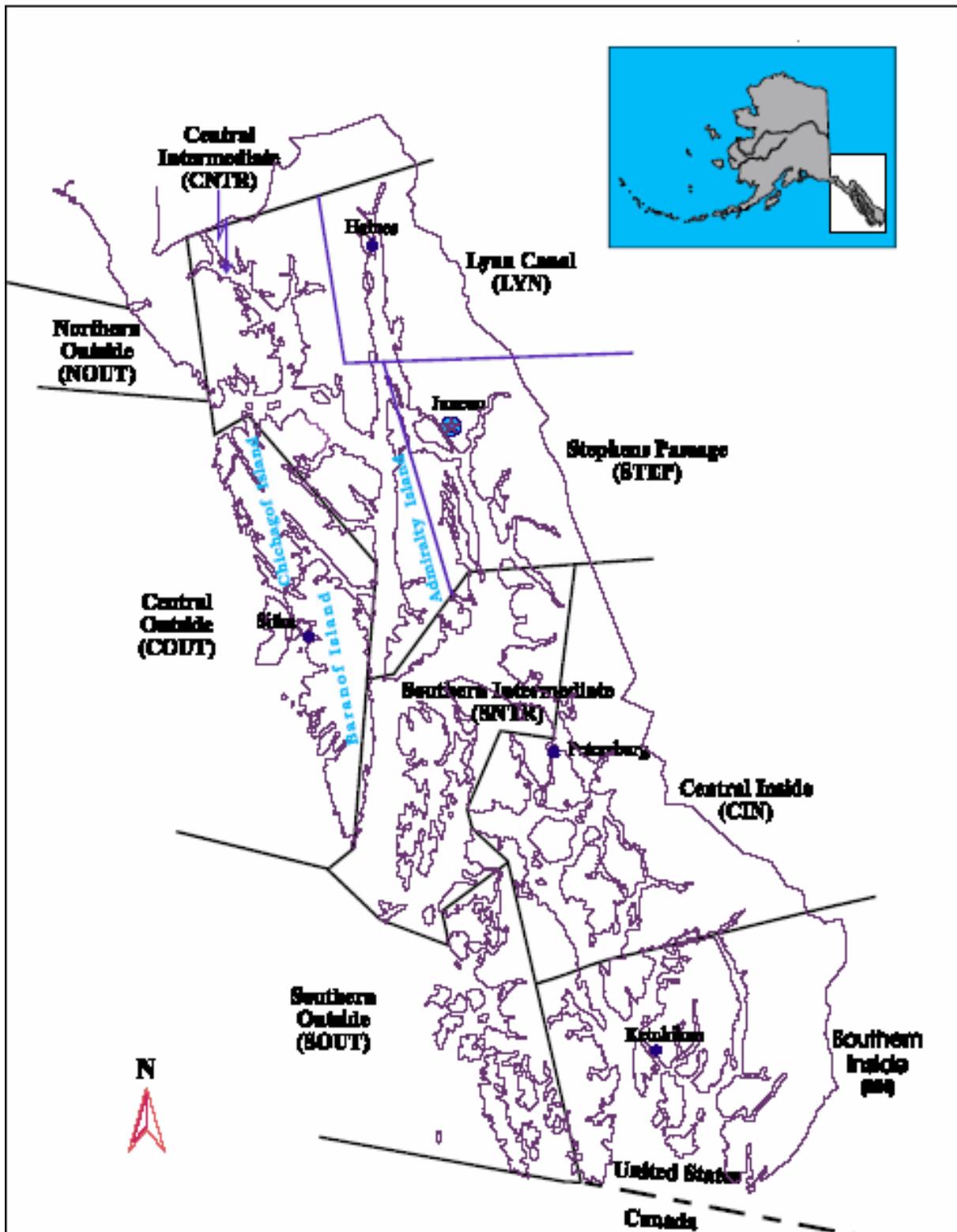


Figure 14.—Pacific States Marine Fisheries Commission areas in Southeast Alaska.

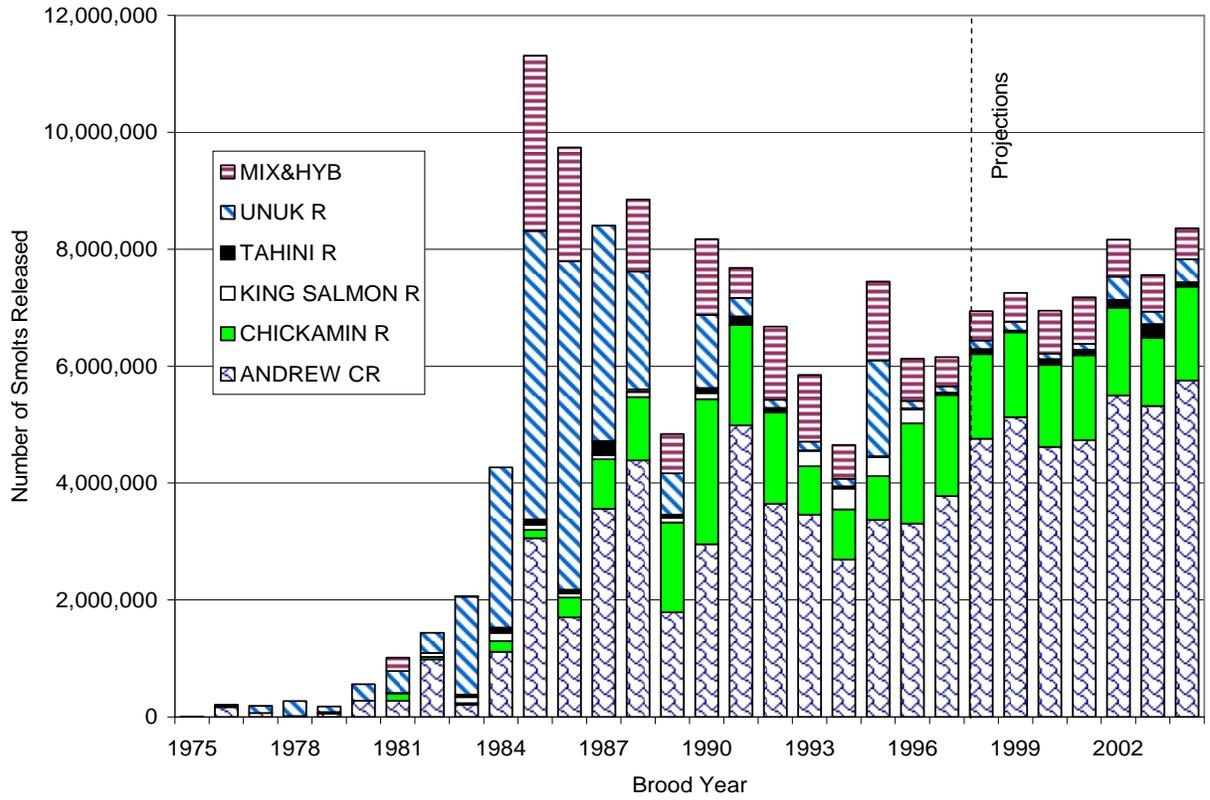


Figure 15.—Number of Chinook salmon released by Southeast Alaska hatcheries, by ancestral stock, brood years 1976 to 2004.

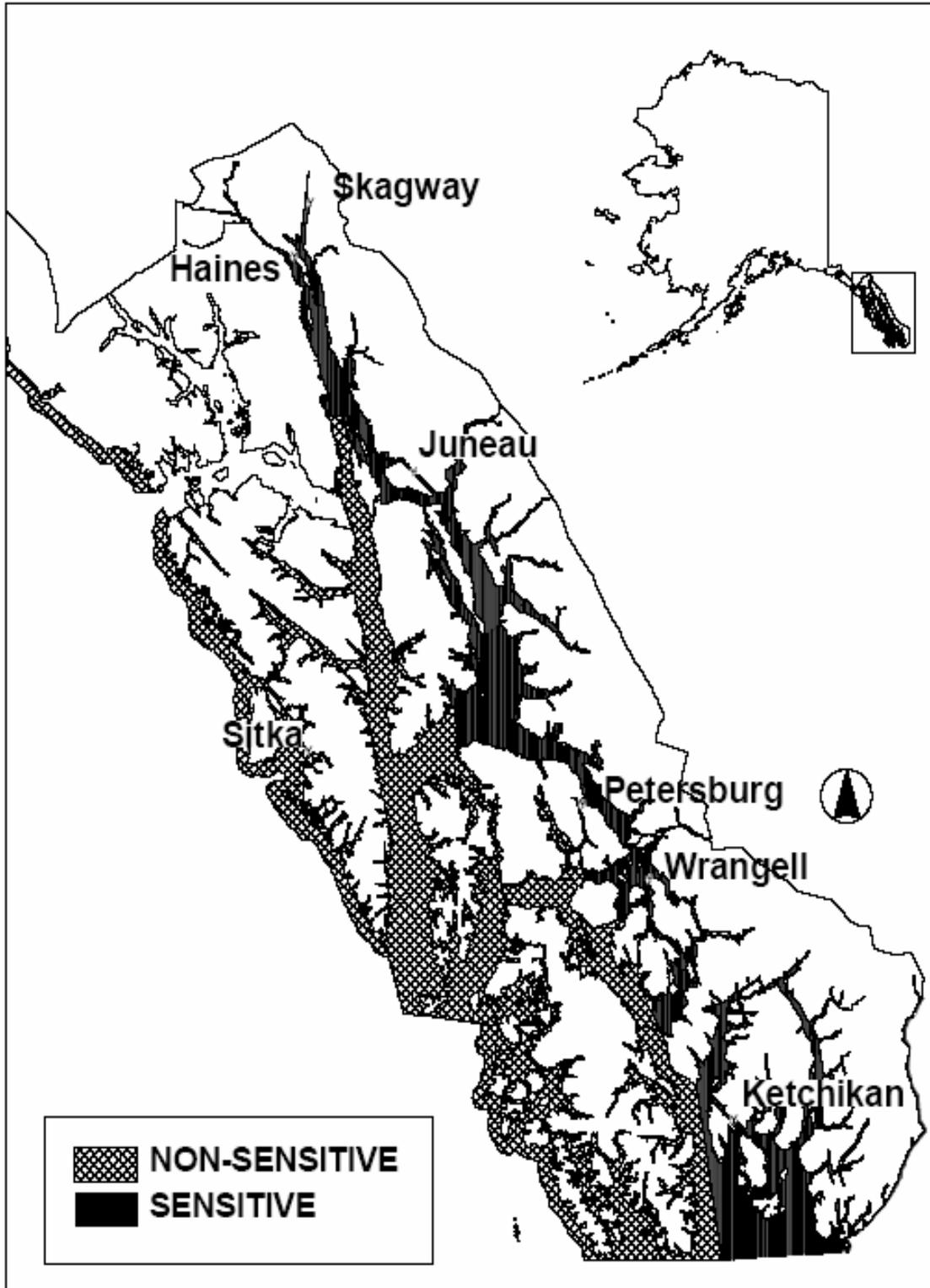


Figure 16.—Chinook salmon sensitive and non-sensitive areas in Southeast Alaska.