

SOUTHEAST ALASKA PORT SAMPLING PROJECT

Final Report for the Period July 1, 1988 to June 30, 1989

By

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INTRODUCTION

This Federal Aid Project provided funding to the Alaska Department of Fish and Game, Division of Commercial Fisheries, for collection of biological and fleet performance data at major ports of landing in Southeast Alaska and Yakutat during the 1987-1988 winter troll and 1988 summer troll, gill net, and purse seine fisheries. This data is used by federal, state, and private agencies in a variety of management and research applications. All port sampling activities associated with coded microwire tag (CWT) recovery, troll fishery performance data (FPD), biological sampling for scale, age, sex, and size (AWL) data, and sex-ratio sampling were unified under this project. Federal U.S./Canada research funding supported sampling sockeye salmon for AWL data in southern Southeast catches and escapements.

This project supported three components: (1) CWT sampling; (2) FPD sampling and; (3) AWL sampling. This report includes summaries of CWT, FPD, and AWL sampling effort.

CODED MICROWIRE TAG RECOVERY

Methods and Procedures

Project goals were to sample a minimum of 20% of both the chinook and coho salmon harvested in the troll and net fisheries; 20% of the chum salmon harvested in each of the Districts 101-114 net fisheries; and 20% of the sockeye salmon harvested in the each of the Districts 101 through 108 seine and gill net fisheries. The fall run of chum salmon in the District 102 purse seine fishery is not specifically sampled since it is a wild stock fishery and none of the stocks targeted are represented by coded wire tags. The same is true for the District 115 gill net fishery. Pacific Salmon Commission funds supported increased sampling effort on chinook salmon throughout the year.

Alaska Department of Fish and Game employees representatively sampled chinook, coho, chum, and sockeye salmon for CWT data throughout the duration of the 1988 troll, purse seine, and gill net fisheries. Samplers were stationed at the principal ports of Sitka, Pelican, Juneau, Petersburg, Wrangell, Ketchikan, Craig, Hydaburg, Excursion Inlet, Hoonah, and Yakutat. Data and heads of all marked fish were sent to the Fisheries Research, Enhancement, and Development Division of the ADF&G tag lab in Juneau on a weekly basis. The sampling effort was monitored throughout the season and adjustments were made in manpower and sampling assignments among the ports to assure that the sampling level was uniform throughout the region.

Results and Discussion

Our CWT sampling goals were generally met or exceeded for all species and fisheries. Some undersampling occurred in purse seine and gill net fisheries in which few of the target species were caught.

Project personnel sampled 29,276 chinook salmon during the winter fishery, 4,656 during the June 'experimental troll' fishery, and 71,319 chinook salmon from the summer troll fishery (Table 1). Chinook sampling levels were 52% in the winter troll, 79% in the June experimental troll, and 43% in the summer troll fishery. A total of 199,524 coho salmon were sampled from the summer troll fishery for a sampling rate of 40% (Table 2).

In regional purse seine fisheries a total of 4,367 chinook (Table 3), 40,989 coho (Table 4), 377,116 chum (Table 5), and 159,167 sockeye salmon (Table 6) were sampled resulting in respective sampling rates of 36.3%, 26.4%, 26.7%, and 24.3%.

In regional drift gill net fisheries personnel sampled a total of 3,744 chinook (Table 7), 54,815 coho (Table 8), 341,480 chum (Table 9), and 124,891 sockeye salmon (Table 10) from the gill net fishery. This corresponded to 40% of the chinook, 34% of the coho, 28% of the chum, and 20% of the sockeye salmon harvested (Table 10). These totals include Annette Island Fishery Reserve catches which were sampled in Metlakatla by local residents.

FISHERY PERFORMANCE DATA

The project goal was to sample a minimum of 2,000 randomly selected troll deliveries for FPD.

Alaska Department of Fish and Game employees sampled summer troll deliveries to the ports listed above for fishery performance data. The FPD sampling was done in conjunction with CWT sampling. Troll fishermen were interviewed at the time of landing to obtain catch and effort data. This FPD data was used primarily to estimate chinook salmon harvest to date and to project catch rates. These estimates were essential for in-season regulation of the fishery to insure that chinook salmon catch quotas set by the Alaska Board of Fisheries, the North Pacific Fishery Management Council, and the Pacific Salmon Commission were not exceeded. Over 2,000 complete FPD interviews were obtained from the 1988 summer troll fishery.

SCALE, AGE, SEX, AND SIZE SAMPLING

Methods and Procedures

The annual goal of the project is to develop a comprehensive data base on the abundance, age, sex, and size composition of sockeye, chum, coho, and chinook salmon in Southeast Alaska catches and escapements. This data base should enable us to test models which estimate stock contributions and interceptions, to determine migratory timing patterns, to develop spawner/recruit relationships, and to make pre-season and in-season forecasts of returns.

Scale, age, sex, and size data (AWL) were collected by ADF&G employees from catches at all ports listed above and escapements of chinook, sockeye, chum, and coho salmon from throughout Southeast Alaska and Yakutat during the summer of 1988. Project personnel sampled chinook salmon from the winter troll fishery, chinook and coho salmon from the summer troll fishery, and chinook, coho, sockeye, and chum salmon from the purse seine and gill net fisheries. From the Yakutat area set net catches we sampled chinook, coho, sockeye, and chum salmon. Chinook, coho, sockeye, and chum salmon escapements were sampled by ADF&G and other agency personnel in many major and minor systems in the region.

Sampling goals by stratum were to collect sufficient numbers to estimate the proportion of each age class to within ± 5 percentage points 90% of the time in each stratum based on the standard binomial formulae (Cochran 1977). For major net fisheries the desired strata was for weekly catch by district and gear type. Troll fishery strata combined districts into quadrants. Those species with more possible age classes required greater sample sizes. Generally between 400 to 600 samples per strata are sufficient to achieve the above goals.

Pink salmon sex-ratio sampling is conducted to accumulate the data base required to determine if run timing can be monitored based on the sex ratio of the weekly harvests. The sampling goal is to sample a minimum of 300 pink salmon for sex each week from locations within the purse seine fisheries. Particular sampling locations were chosen because they: 1) are usually open to fishing weekly; and 2) we can usually obtain mixed samples from these locations.

Results and Discussion

In general, all AWL sampling goals were achieved in 1988. The 1988 AWL sample collection by species, gear, and week are presented in Tables 11-20. Compilation of AWL data for sockeye salmon are currently under review and will be presented in McPherson (in press). Compilation of data for other

species are currently being prepared by senior authors Pahlke (in prep) for chinook salmon, Dangel (in prep) for chum salmon, and Wood (in prep) for coho salmon. AWL data for salmon sampled in Yakutat area fisheries are presented in Rowse (in prep).

A summary of numbers of pink salmon sex-ratio sampled in 1988 is presented in Table 21.

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Table 1. Chinook salmon coded wire tag sampling effort summary for the Southeast Alaska commercial troll fishery, 1988-1989.

Dates		Northern Inside	Northern Outside	Southern Inside	Southern Outside	Total
10/1/87 -	Catch	18,831	16,864	5,126	255	41,076
12/31/87 ^a	Sample	10,429	7,776	3,561	277	22,043
	%	55.38	46.11	69.47	108.63	53.66
1/1-6/4/88	Catch	4,363	6,542	3,415	1,090	15,410
	Sample	3,381	1,998	1,560	294	7,233
	%	77.49	30.54	45.68	26.97	46.94
6/5-6/25 ^b	Catch	3,489	189	2,204	0	5,882
	Sample	3,063	67	1,526	0	4,656
	%	87.79	35.45	69.24	0.00	79.16
6/26-7/30	Catch	21,924	103,645	10,661	28,453	164,683
	Sample	14,074	39,687	6,936	10,622	71,319
	%	64.19	38.29	65.06	37.33	43.31
7/31-9/3 ^c	Catch	0		36		36
	Sample	1		36		37
	%			100.00		102.78
9/4-9/26	Catch	0		20		20
	Sample	2		0		2
	%			0.00		10.00
Total	Catch	48,607	127,240	21,462	29,798	227,107
	Sample	30,950	49,528	13,619	11,193	105,290
	%	63.67	38.92	63.46	37.56	46.36

^a The winter troll fishery opened October 1, 1987 and closed April 14, 1988.

^b Experimental and hatchery access troll fisheries were open portions of June.

^c Summer troll fishery opened July 1 and closed to retention of chinook salmon on July 12.

Table 2. Coho salmon coded wire tag sampling effort for the Southeast Alaska commercial summer troll fishery, 1988.

Dates		Northern Inside	Northern Outside	Southern Inside	Southern Outside	Total
6/5-6/25	Catch	0	87	0	0	87
	Sample	8	87	5	0	100
	%		100.00		0.00	114.94
6/26-7/30	Catch	14,455	53,459	17,214	62,684	147,812
	Sample	7,052	18,337	13,369	22,262	61,020
	%	48.79	34.30	77.66	35.51	41.28
7/31-9/3 ^a	Catch	26,695	180,393	30,220	53,331	290,639
	Sample	10,394	72,739	14,942	18,629	116,704
	%	38.94	40.32	49.44	34.93	40.15
9/4-9/20 ^b	Catch	5,863	49,914	76	440	56,293
	Sample	2,522	19,168	10	0	21,700
	%	43.02	38.40	13.16	0.00	38.55
Total	Catch	47,013	283,853	47,510	116,455	494,831
	Sample	19,976	110,331	28,326	40,891	199,524
	%	42.49	38.87	59.62	35.11	40.32

a The 1988 summer troll fishery was closed from July 26 through August 4, from August 15 through August 24, from September 1 through Sept. 3, and September 21 through September 30.

b Only the northern portion of the fishery was open from September 4 through September 20.

Table 3. Chinook salmon coded wire tag sampling effort summary for the Southeast Alaska commercial purse seine fisheries, 1988.

Stat. Week	Dates		District						Total	
			101	102	103	104	109	112		114
28	7/3-7/9	Catch	148			10		255	0	413
		Sample	35			56		186	1	278
		%	23.6			560.0		72.9	0.0	67.3
29	7/10-7/16	Catch	35	4		68	10	238	8	363
		Sample	90	0		130	0	180	29	429
		%	257.1	0.0		191.2	0.0	75.6	362.5	118.2
30	7/17-7/23	Catch	1			64	54	71	0	190
		Sample	4			77	273	68	2	424
		%	400.0			120.3	505.6	95.8	0.0	223.2
31	7/24-7/30	Catch	0			1	34	1	5	41
		Sample	5			7	25	9	17	63
		%				700.0	73.5	900.0	340.0	153.7
32	7/31-8/6	Catch	3	11		24	3			41
		Sample	16	22		67	18			123
		%	533.3	200.0		279.2	600.0			300.0
33	8/7-8/13	Catch	112	145		5,046	82	32		5,417
		Sample	31	40		1,421	71	29		1,592
		%	27.7	27.6		28.2	86.6	90.6		29.4
34	8/14-8/20	Catch	10	23	3	2,088	26	132	0	2,282
		Sample	1	2	0	235	9	138	1	386
		%	10.0	8.7	0.0	11.3	34.6	104.5	0.0	16.9
35	8/21-8/27	Catch	0	63	103	2,795	63	11	78	3,113
		Sample	2	30	113	761	74	10	25	1,015
		%		47.6	109.7	27.2	117.5	90.9	32.1	32.6
36	8/28-9/3	Catch	0	0	9	15	14	0		38
		Sample	1	1	26	0	18	4		50
		%			288.9	0.0	128.6	0.0		131.6
37	9/4-9/10	Catch		80	13		5			98
		Sample		1	0		5			6
		%		1.3	0.0		100.0			6.1
38- 40	9/11-10/1	Catch		45					3	48
		Sample		1					0	1
		%		2.2					0.0	2.1
Total		Catch	309	371	128	10,111	291	740	94	12,044
		Sample	185	97	139	2,754	493	624	75	4,367
		%	59.9	26.1	108.6	27.2	169.4	84.3	79.8	36.3

^a Retention and sale of chinook salmon over 28" in length was legal in Districts other than 112 only from week 33 through week 35. At other times only chinook salmon under 28" could be retained and sold. However, chinook under 28" are not always recorded on fish tickets which results in more fish sampled than recorded in some weeks.

Table 4. Coho salmon coded wire tag sampling effort summary for the Southeast Alaska commercial purse seine fisheries, 1988.

Stat. Week	Dates		District								Total		
			101	102	103	104	105	109	112	113		114	
28	7/3-7/9	Catch	132			2,581				240		0	2,953
		Sample	45			1,344				77		6	1,472
		%	34.1			52.1				32.1			49.8
29	7/10-7/16	Catch	374	609		8,826		28	1,298	174		142	11,451
		Sample	416	80		2,155		4	152	50		48	2,905
		%	111.2	13.1		24.4		14.3	11.7	28.7		33.8	25.4
30	7/17-7/23	Catch	103	199		8,819		89	247			27	9,484
		Sample	127	0		1,596		103	40			6	1,872
		%	123.3	0.0		18.1		115.7	16.2			22.2	19.7
31	7/24-7/30	Catch	254			1,302	40	196	238	5		95	2,130
		Sample	96			300	4	81	116	0		241	838
		%	37.8			23.0	10.0	41.3	48.7	0.0		253.7	39.3
32	7/31-8/6	Catch	3,016	1,803		16,843		74					21,736
		Sample	109	348		4,237		56					4,750
		%	3.6	19.3		25.2		75.7					21.9
33	8/7-8/13	Catch	1,292	3,347		21,957		1,584	1,346	129			29,655
		Sample	324	547		4,661		542	459	8			6,541
		%	25.1	16.3		21.2		34.2	34.1	6.2			22.1
34	8/14-8/20	Catch	568	947	768	10,829		231	5,835	30		0	19,208
		Sample	209	63	199	2,116		242	1,634	6		160	4,629
		%	36.8	6.7	25.9	19.5		104.8	28.0	20.0			24.1
35	8/21-8/27	Catch	221	3,445	6,664	17,134		2,845	695	13		1,448	32,465
		Sample	201	562	2,445	4,975		1,452	364	4		470	10,473
		%	91.0	16.3	36.7	29.0		51.0	52.4	30.8		32.5	32.3
36	8/28-9/3	Catch	222	393	3,659	6,167	292	3,045	3,094	67			16,939
		Sample	70	173	1,412	553	110	1,888	993	50			5,249
		%	31.5	44.0	38.6	9.0	37.7	62.0	32.1	74.6			31.0
37	9/4-9/10	Catch		3,102	720			562		25			4,409
		Sample		259	159			373		18			809
		%		8.3	22.1			66.4		72.0			18.3
38	9/11-9/17	Catch	753	1,212	553							438	2,956
		Sample	337	387	369							183	1,276
		%	44.8	31.9	66.7							41.8	43.2
39-40	9/18-10/1	Catch	27	1,091	90			663					1,871
		Sample	0	143	32			0					175
		%	0.0	13.1	35.6			0.0					9.4
Total		Catch	6,962	16,148	12,454	94,458	332	9,317	12,993	443		2,150	155,257
		Sample	1,934	2,562	4,616	21,937	114	4,741	3,835	136		1,114	40,989
		%	27.8	15.9	37.1	23.2	34.3	50.9	29.5	30.7		51.8	26.4

Table 5. Chum salmon coded wire tag sampling effort summary for the Southeast Alaska commercial purse seine fisheries, 1988.

Stat. Week	Dates		101	102	103	104	105	109	110	112	113	114	Total	
28	7/3-7/9	Catch	23,962			23,743				163,786		6,924	218,415	
		Sample	5,687			6,535				49,942		0	62,164	
		%	23.7			27.5				30.5		0.0	28.5	
29	7/10-7/16	Catch	40,848	414		33,980		10,094	2,947	134,151	20,788	20,599	263,821	
		Sample	10,183	71		11,547		1,068	1,759	29,952	98	1,718	56,396	
		%	24.9	17.1		34.0		10.6	59.7	22.3	0.5	8.3	21.4	
30	7/17-7/23	Catch	20,805	175		7,517		35,406		28,014		2,630	94,547	
		Sample	2,977	0		2,033		15,532		9,124		0	29,666	
		%	14.3	0.0		27.0		43.9		32.6		0.0	31.4	
31	7/24-7/30	Catch	24,502			9,133	3,826	39,956		1,984	1,641	3,282	84,324	
		Sample	7,710			4,440	1,886	12,670		1,318	0	0	28,024	
		%	31.5			48.6	49.3	31.7		66.4	0.0	0.0	33.2	
32	7/31-8/6	Catch	30,796	3,835		29,331		1,020					64,982	
		Sample	4,156	414		9,486		852						14,908
		%	13.5	10.8		32.3		83.5						22.9
33	8/7-8/13	Catch	43,349	13,712		56,776		28,453		3,514	67		145,871	
		Sample	6,309	2,110		15,857		12,866		1,227	0			38,369
		%	14.6	15.4		27.9		45.2		34.9	0.0			26.3
34	8/14-8/20	Catch	7,796	5,592	2,727	31,505		1,847		5,981	9,858	0	65,306	
		Sample	2,519	434	594	4,128		734		1,816	1,906	11		12,142
		%	32.3	7.8	21.8	13.1		39.7		30.4	19.3			18.6
35	8/21-8/27	Catch	3,682	14,424	24,209	60,436		28,709		1,155	2,689	13,099	148,403	
		Sample	10,949	3,058	8,609	15,415		19,767		712	519	5,501		64,530
		%	297.4	21.2	35.6	25.5		68.9		61.6	19.3	42.0		43.5
36	8/28-9/3	Catch	3,613	6,626	18,856	20,684	4,056	14,919		953	4,641			74,348
		Sample	4,190	1,808	4,417	3,005	613	6,720		78	3,812			24,643
		%	116.0	27.3	23.4	14.5	15.1	45.0		8.2	82.1			33.1
37	9/4-9/10	Catch		58,520	17,446			21,446			475		97,887	
		Sample		3,291	3,746			10,346			445			17,828
		%		5.6	21.5			48.2			93.7			18.2
38	9/11-9/17	Catch	1,491	28,576	25,701							24,313	80,081	
		Sample	634	5,467	9,273							5,892	21,266	
		%	42.5	19.1	36.1							24.2	26.6	
39-40	9/18-10/1	Catch	47	55,817	7,250			9,564					72,678	
		Sample	0	3,655	4,554			0					8,209	
		%	0.0	6.5	62.8			0.0						11.3
Total		Catch	200,891	187,691	96,189	273,105	7,882	191,414	2,947	339,538	40,159	70,847	1,410,663	
		Sample	55,314	20,308	31,193	72,446	2,499	80,555	1,759	94,169	6,780	13,122	378,145	
		%	27.5	10.8	32.4	26.5	31.7	42.1	59.7	27.7	16.9	18.5	26.8	

Table 6. Sockeye salmon coded wire tag sampling effort summary for the Southeast Alaska commercial purse seine fisheries, 1988.

Stat. Week	Dates		District ^a										Total
			101	102	103	104	105	109	110	112	113	114	
28	7/3-7/9	Catch	984			16,280				876		15	18,155
		Sample	252			7,440				98		0	7,790
		%	25.6			45.7				11.2		0.0	42.9
29	7/10-7/16	Catch	3,762	2,025		130,926		378	33	1,141	233	39	138,537
		Sample	860	133		35,946		72	29	961	0	0	38,001
		%	22.9	6.6		27.5		19.0	87.9	84.2	0.0	0.0	27.4
30	7/17-7/23	Catch	2,845	592		101,583		4,064		267		27	109,378
		Sample	807	0		11,147		942		83		0	12,979
		%	28.4	0.0		11.0		23.2		31.1		0.0	11.9
31	7/24-7/30	Catch	5,893			30,244	248	620		132	6	52	37,195
		Sample	933			13,344	12	232		88	0	0	14,609
		%	15.8			44.1	4.8	37.4		66.7	0.0	0.0	39.3
32	7/31-8/6	Catch	13,851	5,941		211,083		344					231,219
		Sample	1,070	1,268		54,363		226					56,927
		%	7.7	21.3		25.8		65.7					24.6
33	8/7-8/13	Catch	5,121	3,556		68,003		1,138		398	887		79,103
		Sample	866	703		17,018		346		100	584		19,617
		%	16.9	19.8		25.0		30.4		25.1	65.8		24.8
34	8/14-8/20	Catch	887	673	407	14,731		256		929	3		17,886
		Sample	298	54	191	1,695		65		264	1		2,568
		%	33.6	8.0	46.9	11.5		25.4		28.4	33.3		14.4
35	8/21-8/27	Catch	225	1,376	1,474	15,060		164		69	2	1,095	19,465
		Sample	135	209	649	3,260		65		34	0	381	4,733
		%	60.0	15.2	44.0	21.6		39.6		49.3	0.0	34.8	24.3
36	8/28-9/3	Catch	17	176	482	3,444	7	84		49			4,259
		Sample	6	79	250	379	3	72		8			797
		%	35.3	44.9	51.9	11.0	42.9	85.7		16.3			18.7
37	9/4-9/10	Catch		320	26			1					347
		Sample		37	12			1					50
		%		11.6	46.2			100.0					14.4
38	9/11-9/17	Catch	8	87	6							15	116
		Sample	8	45	3							3	59
		%	100.0	51.7	50.0							20.0	50.9
39-40	9/18-10/1	Catch		49									49
		Sample		8									8
		%		16.3									16.3
Total		Catch	33,593	14,795	2,395	591,354	255	7,049	33	3,861	1,131	1,243	655,709
		Sample	5,235	2,536	1,105	144,592	15	2,021	29	1,636	585	384	158,138
		%	15.6	17.1	46.1	24.5	5.9	28.7	87.9	42.4	51.7	30.9	24.1

^a Sockeye salmon caught in Districts 112, 113, and 114 are not sampled under contract.

Table 7. Chinook salmon coded wire tag sampling effort summary for the Southeast Alaska commercial gill net fisheries, 1988.

Stat. Week	Dates		District					Total	
			101	102	106	108	111		115
24	6/5-6/11	Catch	0		68	0	0	0	68
		Sample			0			2	2
		%			0.0			0.0	2.9
25	6/12-6/18	Catch	0		122	90	0	0	212
		Sample			0	0			0
		%			0.0	0.0			0.0
26	6/19-6/25	Catch	599		287	96	255	7	1,244
		Sample	310		56	13	77	1	457
		%	51.8		19.5	13.5	30.2	14.3	36.7
27	6/26-7/2	Catch	707		923	89	336	48	2,103
		Sample	504		40	22	56	194	816
		%	71.3		4.3	24.7	16.7	404.2	38.8
28	7/3-7/9	Catch	521		851	249	239	100	1,960
		Sample	94		212	13	108	55	482
		%	18.0		24.9	5.2	45.2	55.0	24.6
29	7/10-7/16	Catch	369		322	225	273	145	1,334
		Sample	92		56	2	475	71	696
		%	24.9		17.4	0.9	174.0	49.0	52.2
30	7/17-7/23	Catch	137		152	27	273	59	648
		Sample	79		71	0	145	28	323
		%	57.7		46.7	0.0	53.1	47.5	49.8
31	7/24-7/30	Catch	83		36	0	41	318	478
		Sample	52		28	1	24	133	238
		%	62.7		77.8	0.0	58.5	41.8	49.8
32	7/31-8/6	Catch	98		86		30	246	460
		Sample	64		62		13	98	237
		%	65.3		72.1		43.3	39.8	51.5
33	8/7-8/13	Catch	61		7		53	87	208
		Sample	60		3		73	55	191
		%	98.4		42.9		137.7	63.2	91.8
34	8/14-8/20	Catch	20		100		72	51	243
		Sample	7		30		17	20	74
		%	35.0		30.0		23.6	39.2	30.5
35	8/21-8/27	Catch	3	6	5		118	24	156
		Sample	4	2	3		102	18	129
		%	133.3	33.3	60.0		86.4	75.0	82.7
36	8/28-9/3	Catch	5		2		33	33	73
		Sample	1		3		13	21	38
		%	20.0		150.0		39.4	63.6	52.1
37	9/4-9/10	Catch	1				48	34	83
		Sample	5				27	12	44
		%	500.0				56.3	35.3	53.0
38	9/11-9/17	Catch	2				2	27	31
		Sample	1				0	3	4
		%	50.0				0.0	11.1	12.9
39	9/18-9/24	Catch	2				1	15	18
		Sample	0				0	5	5
		%	0.0				0.0	33.3	27.8
40	9/25-10/1	Catch						53	53
		Sample						8	8
		%						15.1	15.1
Total		Catch	2,608	6	2,961	776	1,774	1,247	9,372
		Sample	1,273	2	564	51	1,130	724	3,744
		%	48.8	33.3	19.0	6.6	63.7	58.1	39.9

Table 8. Coho salmon coded wire tag sampling effort summary for the Southeast Alaska commercial gill net fisheries, 1988.

Stat. Week	Dates		District					Total	
			101	102	106	108	111		115
26	6/19-6/25	Catch	315		115	2	0	5	437
		Sample	55		24	0		0	79
		%	17.5		20.9	0.0		0.0	18.1
27	6/26-7/2	Catch	1,290		584	8	28	97	2,007
		Sample	793		85	1	2	26	907
		%	61.5		14.6	12.5	7.1	26.8	45.2
28	7/3-7/9	Catch	676		753	1	67	343	1,840
		Sample	338		247	0	36	122	743
		%	50.0		32.8	0.0	53.7	35.6	40.4
29	7/10-7/16	Catch	1,911		1,314	1	663	395	4,284
		Sample	358		455	0	238	103	1,154
		%	18.7		34.6	0.0	35.9	26.1	26.9
30	7/17-7/23	Catch	833		1,271	0	767	93	2,964
		Sample	292		585		348	20	1,245
		%	35.1		46.0		45.4	21.5	42.0
31	7/24-7/30	Catch	371		1,294	0	549	126	2,340
		Sample	195		563	1	542	19	1,320
		%	52.6		43.5	0.0	98.7	15.1	56.4
32	7/31-8/6	Catch	854		1,851		571	330	3,606
		Sample	411		909		183	203	1,706
		%	48.1		49.1		32.0	61.5	47.3
33	8/7-8/13	Catch	1,589	39	852		1,371	1,102	4,953
		Sample	682	5	290		732	365	2,074
		%	42.9	12.8	34.0		53.4	33.1	41.9
34	8/14-8/20	Catch	1,488	6	1,884		4,001	1,017	8,396
		Sample	453	3	490		869	290	2,105
		%	30.4	50.0	26.0		21.7	28.5	25.1
35	8/21-8/27	Catch	710	109	2,279		5,936	5,305	14,339
		Sample	429	20	1,138		3,564	2,412	7,563
		%	60.4	18.3	49.9		60.0	45.5	52.7
36	8/28-9/3	Catch	3,305		1,506		13,038	17,654	35,503
		Sample	1,072		1,023		6,400	5,689	14,184
		%	32.4		67.9		49.1	32.2	40.0
37	9/4-9/10	Catch	3,673	0	716		14,365	17,600	36,354
		Sample	1,698	16	716		3,215	4,847	10,492
		%	46.2	0.0	100.0		22.4	27.5	28.9
38	9/11-9/17	Catch	4,207		0		2,504	19,317	26,028
		Sample	2,648		31		391	4,088	7,158
		%	62.9		0.0		15.6	21.2	27.5
39	9/18-9/24	Catch	1,710	0			299	12,648	14,657
		Sample	774	6			99	1,993	2,872
		%	45.3	0.0			33.1	15.8	19.6
40-41	9/25-10/8	Catch	0					4,520	4,520
		Sample						1,213	1,213
		%						26.8	26.8
Total		Catch	22,932	154	14,419	12	44,159	80,552	162,228
		Sample	10,198	50	6,556	2	16,619	21,390	54,815
		%	44.5	32.5	45.5	16.7	37.6	26.6	33.8

Table 9. Chum salmon coded wire tag sampling effort summary for the Southeast Alaska commercial gill net fisheries, 1988.

Stat. Week	Dates		District					Total	
			101	102	106	108	111		115
24	6/5-6/11	Catch						0	0
		Sample						121	121
		%						0.0	0.0
25	6/12-6/18	Catch							0
		Sample							0
		%							0.0
26	6/19-6/25	Catch	33,001		1,812	107	343	632	35,895
		Sample	8,006		578	34	215	154	8,987
		%	24.3		31.9	31.8	62.7	24.4	25.0
27	6/26-7/2	Catch	56,979		4,182	553	4,008	21,321	87,043
		Sample	30,769		562	387	559	3,489	35,766
		%	54.0		13.4	70.0	13.9	16.4	41.1
28	7/3-7/9	Catch	71,524		10,995	1,684	8,633	17,458	110,294
		Sample	17,774		5,826	403	871	3,911	28,785
		%	24.9		53.0	23.9	10.1	22.4	26.1
29	7/10-7/16	Catch	63,535		15,478	774	28,339	12,102	120,228
		Sample	20,235		7,140	508	6,210	2,005	36,098
		%	31.8		46.1	65.6	21.9	16.6	30.0
30	7/17-7/23	Catch	25,832		10,605	11	23,459	2,693	62,600
		Sample	13,134		4,803	0	4,708	733	23,378
		%	50.8		45.3	0.0	20.1	27.2	37.3
31	7/24-7/30	Catch	41,244		10,662	0	4,539	5,990	62,435
		Sample	21,761		5,399	13	2,393	1,355	30,921
		%	52.8		50.6	0.0	52.7	22.6	49.5
32	7/31-8/6	Catch	48,418		8,041		3,644	11,634	71,737
		Sample	26,357		3,868		553	1,627	32,405
		%	54.4		48.1		15.2	14.0	45.2
33	8/7-8/13	Catch	65,135	881	2,006		7,104	11,234	86,360
		Sample	21,583	76	633		2,165	1,973	26,430
		%	33.1	8.6	31.6		30.5	17.6	30.6
34	8/14-8/20	Catch	30,654	244	2,999		16,110	8,188	58,195
		Sample	10,483	86	790		3,377	876	15,612
		%	34.2	35.2	26.3		21.0	10.7	26.8
35	8/21-8/27	Catch	7,412	646	2,105		17,111	23,074	50,348
		Sample	3,000	113	1,836		7,424	3,078	15,451
		%	40.5	17.5	87.2		43.4	13.3	30.7
36	8/28-9/3	Catch	53,804	64	789		13,945	52,371	120,973
		Sample	14,093	0	392		3,898	14,707	33,090
		%	26.2	0.0	49.7		28.0	28.1	27.4
37	9/4-9/10	Catch	51,284				9,354	60,237	120,875
		Sample	14,553				2,869	5,743	23,165
		%	28.4				30.7	9.5	19.2
38	9/11-9/17	Catch	42,587				1,614	54,402	98,603
		Sample	14,478				189	6,003	20,670
		%	34.0				11.7	11.0	21.0
39	9/18-9/24	Catch	25,356	0			176	66,134	91,666
		Sample	4,645	248			0	5,708	10,601
		%	18.3	0.0			0.0	8.6	11.6
40-41	9/25-10/8	Catch						23,112	23,112
		Sample						0	0
		%						0.0	0.0
Total		Catch	616,765	1,835	69,674	3,129	138,379	370,582	1,200,364
		Sample	220,871	523	31,827	1,345	35,431	51,483	341,480
		%	35.8	28.5	45.7	43.0	25.6	13.9	28.4

Table 10. Sockeye salmon coded wire tag sampling effort summary for the Southeast Alaska commercial gill net fisheries, 1988.

Stat. Week	Dates		District					Total	
			101	102	106	108	111*		115*
25	6/12-6/18	Catch	0		0	0	0	0	
		Sample						0	
		%						0.0	
26	6/19-6/25	Catch	16,009		2,254	151	2,749	7,938	29,101
		Sample	3,057		788	47	1,260	610	5,762
		%	19.1		35.0	31.1	45.8	7.7	19.8
27	6/26-7/2	Catch	31,865		8,516	397	4,808	16,054	61,640
		Sample	13,458		1,337	186	303	450	15,734
		%	42.2		15.7	46.9	6.3	2.8	25.5
28	7/3-7/9	Catch	26,946		8,788	313	3,943	24,471	64,461
		Sample	7,297		3,354	71	68	359	11,149
		%	27.1		38.2	22.7	1.7	1.5	17.3
29	7/10-7/16	Catch	20,459		24,718	385	6,097	37,854	89,513
		Sample	5,201		9,701	298	530	2,351	18,081
		%	25.4		39.2	77.4	8.7	6.2	20.2
30	7/17-7/23	Catch	12,781		18,215	0	9,322	27,123	67,441
		Sample	4,629		7,226		559	2,960	15,374
		%	36.2		39.7		6.0	10.9	22.8
31	7/24-7/30	Catch	8,747		12,042	0	4,256	58,737	83,782
		Sample	2,826		5,600	9	480	7,325	16,240
		%	32.3		46.5	0.0	11.3	12.5	19.4
32	7/31-8/6	Catch	17,193		12,408		2,806	47,598	80,005
		Sample	7,741		7,953		70	5,630	21,394
		%	45.0		64.1		2.5	11.8	26.7
33	8/7-8/13	Catch	6,135	100	2,570		2,085	57,712	68,602
		Sample	2,471	15	803		384	7,514	11,187
		%	40.3	15.0	31.2		18.4	13.0	16.3
34	8/14-8/20	Catch	1,610	19	2,365		2,067	21,053	27,114
		Sample	641	11	709		371	773	2,505
		%	39.8	57.9	30.0		17.9	3.7	9.2
35	8/21-8/27	Catch	610	56	551		390	28,553	30,160
		Sample	270	8	308		14	4,034	4,634
		%	44.3	14.3	55.9		3.6	14.1	15.4
36	8/28-9/3	Catch	226		105		243	15,710	16,284
		Sample	71		65		22	1,682	1,840
		%	31.4		61.9		9.1	10.7	11.3
37	9/4-9/10	Catch	67				187	5,459	5,713
		Sample	24				35	874	933
		%	35.8				18.7	16.0	16.3
38	9/11-9/17	Catch	24				11	1,709	1,744
		Sample	16				0	26	42
		%	66.7				0.0	1.5	2.4
39-41	9/18-10/8	Catch	9					1,392	1,401
		Sample	0					16	16
		%	0.0					1.1	1.1
Total		Catch	142,681	175	92,532	1,246	38,964	351,363	626,961
		Sample	47,702	34	37,844	611	4,096	34,604	124,891
		%	33.4	19.4	40.9	49.0	10.5	9.8	19.9

* CWT sampling is not directed at sockeye in these districts.

Table 11. Chinook salmon scale, age, sex, and size sampling summary for the Southeast Alaska summer troll fisheries, 1988.

District	Week										
	23	24	25	26	27	28	29	30	31	32	33
101		33	20	50	95	30					
102					17	127					
103	60		120		81						
104					150	295					
105						51					
106	5										
109	188		267	100	80	73					
110	160	8	120								
112	42		15								
113	321	8	291		280	200					
114	248	12	95		50	60					
116					30	20					
154					110						
157					140	230					
171					170	224					
172					16	49					
174	23				42	65					
181					11	40					
184					12	40					
Total	1,047	61	928	150	1,284	1,504					

Table 12. Coho salmon scale, age, sex, and size sampling summary for the Southeast Alaska troll fisheries, 1988.

District	Week												
	25	26	27	28	29	30	31	32	33	34	35	36	37
101				10	110	10		130	130				124
102				180									
103					80								
104									80				
105						50							
109			80	80		80	80	80	40	50			
112						30				20	30	30	
113			20	270	210	150	204	230	143	80	80	150	120
114		40			20	30	30	70		20	30		100
116					20	20			190				137
157				20									
171					30								
172				80	150			240					80
174			40	20	20								
181					40	40	60	40	40				
183								40	40				
189									40				
Total		40	140	660	680	410	374	830	703	170	140	384	357

Table 13. Chinook salmon scale, age, sex, and size sampling summary for the Southeast Alaska purse seine fisheries, 1988.

District	Week										
	25	26	27	28	29	30	31	32	33	34	35
101								9			6
102								4			65
103							47	65			52
104			12								
112						30	8		26		
113							49	20			6
172								19			
174											
Total			12			30	104	117	26		129

Table 14. Coho salmon scale, age, sex, and size sampling summary for the Southeast Alaska purse seine fisheries, 1988.

District	Week											
	25	26	27	28	29	30	31	32	33	34	35	
101						155	109					40
102						79						
104							65	30				
110							102					
112					40			100	60	100		20
113				135	227	85	40					
114						30						
Total				135	267	349	316	130	60	100		60

Table 15. Chum salmon scale, age, sex, and size sampling summary for the Southeast Alaska purse seine fisheries, 1988.

District	Week										
	25	26	27	28	29	30	31	32	33	34	35
101			371	173	301	93	297	302	300	300	380
102						263	40	114		60	120
103										114	
104			280	420	300	262	200	260	300	280	340
105									47		
106								240			
107								200			
109								200			
110				100	120	138	71				
112			600	246	720	120	279	103	60	120	120
113			300	300	337	300	40				
114			227	263	160	265			223		
Total			1,778	1,502	1,938	1,441	927	1,419	930	874	960

Table 16. Sockeye salmon scale, age, sex, and size sampling summary for the Southeast Alaska purse seine fisheries, 1988.

District	Week										
	25	26	27	28	29	30	31	32	33	34	35
101			354	540	619	650	778	357	319	484	40
102				120	0	407	109	141	97		
103								50		176	
104			592	561	657	600	772	452	350	350	349
107								250			
109						100					
110			40	100	100	120	73				
112			250	453	223	120	351	160	200	200	61
113				286	343	236	100	40			
114			40	50	120	40					
Total			1,276	2,110	2,062	2,273	2,183	1,450	966	1,210	450

Table 17. Chinook salmon scale, age, sex, and size sampling summary for the Southeast Alaska drift gill net fisheries, 1988.

District	Week											
	25	26	27	28	29	30	31	32	33	34	35	36
101	165	48	67	36	29	3	7	4	1	6		4
106		23										
111	41	102										
Total	206	173	67	36	29	3	7	4	1	6		4

Table 18. Coho salmon scale, age, sex, and size sampling summary for the Southeast Alaska drift gill net fisheries, 1988.

District	Week													
	25	26	27	28	29	30	31	32	33	34	35	36	37	38
101		40	33	73	40	19	268							
106		40						40		80	120	120		
111						42	33	70	110	130	60	37		
115		40							60	50		120	170	60
Total		120	33	73	40	61	301	110	170	260	180	277	170	60

Table 19. Chum salmon scale, age, sex, and size sampling summary for the Southeast Alaska drift gill net fisheries, 1988.

District	Week													
	25	26	27	28	29	30	31	32	33	34	35	36	37	38
101	326	274	200	200	320	160	408	320	80	280	200	200		
106	160	300	299	300	300	380	300	300	295					
108					90									
111		62	73	461	334	262	156	177	203	323	156	139	79	
115	118	277	300	309	300	272		240	240	240	240	240	240	240
Total	604	913	872	1,270	1,344	1,074	864	1,037	818	843	596	579	319	240

Table 20. Sockeye salmon scale, age, sex, and size sampling summary for the Southeast Alaska drift gill net fisheries, 1988.

District	Week													
	25	26	27	28	29	30	31	32	33	34	35	36	37	38
101	600	630	563	301	300	331	608	689	523	308	244			
106	738	710	700	690	840	750	710	693	680	165				
108	189	200	137	409	353	352	21							
111	807	564	692	626	680	781	660	470	398	93				
115	452	600	560	621	640	532	400	640	560	680	560	560	265	131
Total	2,786	2,704	2,652	2,647	2,813	2,746	2,399	2,492	2,161	1,246	804	560	265	131

Table 21. Pink salmon sex composition in proportion males, 1988. Sample size is in parentheses.

Statistic Week	District								
	101	102	103	104	109	110	112	113	114
28	0.746 (331)			0.685 (200)			0.643 (400)		
29	0.604 (1187)			0.638 (956)	0.655 (246)		0.613 (1881)	0.650 (157)	
30	0.563 (476)			0.686 (1028)	0.678 (400)		0.628 (618)		0.613 (831)
31	0.574 (1339)			0.643 (803)	0.598 (400)		0.575 (400)	0.545 (101)	0.559 (800)
32	0.519 (749)	0.625 (128)		0.619 (3400)	0.611 (1200)	0.551 (401)	0.527 (315)		
33	0.471 (2211)	0.484 (504)		0.528 (7838)	0.564 (3820)		0.561 (1600)		
34	0.433 (1200)	0.438 (803)	0.458 (2000)	0.457 (3494)	0.487 (1706)	0.430 (400)	0.488 (3735)	0.530 (200)	
35		0.379 (997)	0.424 (1278)	0.420 (3672)	0.452 (1506)		0.428 (800)		0.421 (1010)
36		0.398 (801)	0.369 (3093)	0.398 (1093)	0.383 (800)		0.333 (1600)		