

SOUTHEAST ALASKA ANADROMOUS SALMON RESEARCH

Pink and Chum Salmon Stock Evaluation Program
Southeast Alaska Coho Salmon Research
Troll Fishery Management Methods Research
Salmon Catch Sampling Project



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July 1, 2002 – March 31, 2003

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SALMON CATCH SAMPLING PROJECT

July 1, 2002 – March 31, 2003

Summary of Progress

A. Tasks Scheduled

This project allows biologists to sample commercial troll, gillnet, and purse seine salmon fisheries at major processors throughout Southeast Alaska and Yakutat for scales, otoliths, coded wire tags, parasites, and associated measurements and biological data. Trained samplers were deployed with appropriate gear and sampling forms to all major processors in Southeast Alaska and Yakutat. Samples and data were transmitted in a timely manner to the appropriate destination.

The Southeast Alaska summer chinook troll fishery traditionally begins July 1 and lasts from one to two weeks depending on the abundance of chinook salmon and the catch-ceiling, both of which are defined by an agreement under the Pacific Salmon Treaty. Sampling and data transmission from the troll fishery is the number one priority of port sampling crews in early July. Typically, supervisory personnel assist with sampling. Overtime for regular samplers is usually needed to ensure that samples sizes are adequate, and that the data are transmitted in a timely manner. At the time of landing, trollers are interviewed to obtain catch-per-unit-of-effort information. This information is combined with overflight observations of the fishery, so that managers can estimate the number of vessels fishing and the locations of fishing concentrations. With this information, managers predict the final, end-of-the-year catch, and manage the fishery so that the catch stays within the ceiling set by treaty agreement. Samplers attempt to examine a minimum of 20% of the landed catch for coded wire tags. This coded wire tag information produces estimates of the hatchery fraction of the catch, by specific release group, from among releases all along the west coast of the Pacific. The estimates of Alaskan hatchery harvest are used to generate an Alaskan hatchery "add-on," and modify the quota accordingly. To effectively influence the management of a fishery that usually lasts less than a two weeks, the sampling data, catch-per-effort observations, and tags must be processed immediately and a significant amount of time is spent organizing and shipping data and samples. After the ceiling is reached, the troll fishery switches to targeting coho, chum, and pink salmon and sampling continues on these species. By regulation, a second chinook troll fishery opening occurs later in the summer and this opening is also sampled intensively. Usually the abundance, and hence the number of fish landed and sampled, is lower in this second summer fishery.

The gillnet and purse seine fisheries begin in late June and early July, respectively, with catches peaking in late July and August along with the abundance of pink, chum, sockeye, and coho salmon. Landings from these fisheries are sampled for coded wire tags, scales, parasites, and associated biological data used to evaluate run strength,

spawner-per-recruit estimates, migratory timing, and hatchery contributions. While not as critical as the troll chinook data, the samples and data from the net fisheries must be forwarded in a timely manner so that it is available to answer any questions regarding these fisheries. Inseason evaluation of samples and data is usually important to find errors or shortcoming in sampling procedures or training.

The location where fish are landed and processed changes frequently due to a combination of factors, including local abundance and the price being offered by various processors. Catches may be segregated by species on the fishing grounds and shipped to different processors. Large catches may plug local processors and result in the excess catch being shipped hundreds of miles for processing. Supervisors must constantly evaluate fisheries and landings, to assure that sampling is effective and goals are being met. Management priorities often change depending on what is caught and where. Sampling goals and priorities are sometimes modified inseason to meet these changing needs.

Beginning in late summer and lasting into the fall, all the scales that were collected are processed and evaluated to determine the age of the fish the scale came from; sampling forms are edited and the data are entered into the regional database; and routine and custom age-sex-size summaries are produced in support of various stock analysis and abundance programs. During this period, the sampling program is evaluated and supervisors develop plans for addressing any continuing problems. Supervisors use this time to judge the success in meeting sampling goals, and, if needed, changes are initiated. Supplies are ordered and distributed. Processors are contacted to learn of any changes in the coming year and, if necessary, sampling plans are revised.

B. Tasks Accomplished

All the tasks detailed above were accomplished in a timely manner. All sampling goals were met. Approximately 86,000 scales from sampled fish (approximately 72,000 from sockeye salmon) have been forwarded to the Age Laboratory for processing, and the aging is in progress. During the performance period, sampling staff examined approximately 830,000 commercially harvested Pacific salmon for adipose fin clips, which indicate the possible presence of a coded wire tag. Approximately 25,000 coded wire tags were eventually detected. The coded wire tag information has been processed and is available to salmon researchers and the general public at <http://tagotoweb.adfg.state.ak.us/>.

C. Special Problems

Large pink salmon catches in Southeast Alaska resulted in local processors being overwhelmed and resulted our samplers having some difficulty getting access to loads of fish that could be attributed to a specific area. Even so, samplers were able to mostly deal with the situation by communication with processors.

TROLL FISHERY MANAGEMENT METHODS

July 1, 2002 – March 31, 2003

Summary of Progress

A. Tasks Scheduled

Most importantly, this task provides personnel to plan and manage the 2002 and 2003 winter, spring, and summer troll fisheries. Additionally, this task supports personnel who enter and edit fish tickets from the late summer and winter troll fisheries, edit fishery performance data for the 2002 season, and archive data to go into a detailed management report, summarizing information related to the stock assessment and management of the Southeast Alaska troll fisheries.

B. Accomplished Tasks

All scheduled tasks were accomplished. All fish tickets from the 2002 summer troll fishery and all tickets received for the 2002/2003 winter troll fishery have been edited and entered. Fishery performance data for 2002 was edited and entered into the Regional Integrated Fisheries Database.

C. Special Problems

None.

SOUTHEAST ALASKA COHO SALMON RESEARCH

July 1, 2002 – March 31, 2003

Summary of Progress

A. Tasks Scheduled

Primary tasks scheduled for this period included: (1) capturing and tagging coho psmolts at Ford Arm Lake; (2) enumerating and sampling adult coho salmon at Ford Arm Lake and Berners River, and (3) working on reports related to project results and the status of coho salmon in Southeast Alaska.

B. Tasks Accomplished

A total of 8,858 juvenile coho salmon were captured and coded-wire-tagged at Ford Arm Lake during July 8–19. The Ford Arm Lake weir was operated during August 13–October 19. Returning adult fish were enumerated and sampled for coded wire tags, age-sex-length data, and fishery marks. The adult escapement (excluding jacks, or precocious males) was estimated at 7,109 fish, which was the largest escapement in 21 years of estimation and far above the goal of 1,300–2,900 (Tables 1 and 2; Figure 1). Mark-recapture estimation indicated that 706 adults (95% C.I. +/- 419) escaped uncounted before or while the weir was in operation. Some likely escaped during a flood in mid-August before the weir was completely installed. The total reconstructed run of 15,123 adults was the second largest on record. The estimated exploitation rate of 53% was below the long-term average of 60%, with commercial trollers accounting for 38%, seiners for 8%, and the marine sport fishery for 7%.

In 2002, an estimated 50,084 adult coho salmon returned to the Berners River, which was the second largest run on record (Tables 3 and 4). The escapement of 27,700 spawners was a record and triple the upper bound of the escapement goal range (4,000–9,200). Exploitation rates on the Berners River stock were low in both the troll and gillnet fisheries (17 and 26%, respectively) for a total exploitation rate of 45%, including small seine and sport catches.

Smolt migration estimates through 2001 and marine survival estimates through 2002 were finalized (Tables 5 and 6).

Coded wire tag release data from Spring 2002 was summarized and reported to the Pacific Marine Fisheries Commission.

Run reconstruction estimates for the four primary long-term indicator stocks in 2002 were generated (Figure 1).

A report was drafted on the status of coho salmon stocks in Southeast Alaska for the February 2003 Board of Fisheries Meeting in Ketchikan:

Shaul, L.D., S. McPherson, E. Jones and K. Crabtree. 2003. Stock status and escapement goals for coho salmon stocks in Southeast Alaska. Alaska Department of Fish and Game, Division of Sport Fish, Special Publication No. 03-02. 40 p.

C. Special Problems

No special problems were experienced during this period.

Table 1. Estimated harvest by gear type, escapement, and total run of coho salmon returning to Ford Arm Lake, 1982–2002.

Year	Fishery Sample Size	Number of Fish						Total Catch	Escapement	Total Run
		Alaska Troll	Seine	Drift Gillnet	Sport	Canadian Troll				
1982	38	1,948	106	0	0	0	2,054	2,662	4,716	
1983	93	3,344	912	0	0	0	4,256	1,938	6,194	
1984										
1985	49	2,438	0	0	0	0	2,438	2,324	4,762	
1986	87	2,500	62	0	0	0	2,562	1,546	4,108	
1987	71	1,456	79	0	0	0	1,535	1,694	3,229	
1988	151	2,857	46	0	0	30	2,933	3,028	5,961	
1989	221	3,777	185	0	0	0	3,962	2,177	6,139	
1990	174	2,979	108	0	0	0	3,087	2,190	5,277	
1991	193	3,208	44	10	0	0	3,262	2,761	6,023	
1992	199	5,252	208	0	0	0	5,460	3,847	9,307	
1993	349	7,847	443	0	201	0	8,491	4,202	12,693	
1994	236	6,918	1,234	0	112	0	8,264	3,228	11,492	
1995	91	3,577	1,468	0	0	0	5,045	2,445	7,490	
1996	64	3,148	0	0	332	0	3,480	2,500	5,980	
1997	241	4,883	0	0	373	0	5,256	4,965	10,221	
1998	315	7,835	435	20	679	0	8,969	7,049	16,018	
1999	145	5,872	66	0	441	0	6,379	3,598	9,977	
2000	193	4,603	926	13	221	0	5,763	2,287	8,050	
2001	131	6,023	97	0	479	0	6,599	2,178	8,777	
2002	246	5,756	1,260	0	998	0	8,014	7,109	15,123	
Average		4,311	384	2	192	2	4,890	3,186	8,077	

Table 2. Estimated percent harvest by gear type, escapement, and total run of coho salmon returning to Ford Arm Lake, 1982–2002.

Year	Fishery Sample Size	Percent of Total Run						Escapement	Total Run
		Alaska Troll	Seine	Drift Gillnet	Sport	Canadian Troll	Total Catch		
1982	38	41.3	2.2	0.0	0.0	0.0	43.6	56.4	100.0
1983	93	54.0	14.7	0.0	0.0	0.0	68.7	31.3	100.0
1984									
1985	49	51.2	0.0	0.0	0.0	0.0	51.2	48.8	100.0
1986	87	60.9	1.5	0.0	0.0	0.0	62.4	37.6	100.0
1987	71	45.1	2.4	0.0	0.0	0.0	47.5	52.5	100.0
1988	151	47.9	0.8	0.0	0.0	0.5	49.2	50.8	100.0
1989	221	61.5	3.0	0.0	0.0	0.0	64.5	35.5	100.0
1990	174	56.5	2.0	0.0	0.0	0.0	58.5	41.5	100.0
1991	193	53.3	0.7	0.2	0.0	0.0	54.2	45.8	100.0
1992	199	56.4	2.2	0.0	0.0	0.0	58.7	41.3	100.0
1993	349	61.8	3.5	0.0	1.6	0.0	66.9	33.1	100.0
1994	236	60.2	10.7	0.0	1.0	0.0	71.9	28.1	100.0
1995	91	47.8	19.6	0.0	0.0	0.0	67.4	32.6	100.0
1996	64	52.6	0.0	0.0	5.6	0.0	58.2	41.8	100.0
1997	241	47.8	0.0	0.0	3.6	0.0	51.4	48.6	100.0
1998	315	48.9	2.7	0.1	4.2	0.0	56.0	44.0	100.0
1999	145	58.9	0.7	0.0	4.4	0.0	63.9	36.1	100.0
2000	193	57.2	11.5	0.2	2.7	0.0	71.6	28.4	100.0
2001	131	68.6	1.1	0.0	5.5	0.0	75.2	24.8	100.0
2002	246	38.1	8.3	0.0	6.6	0.0	53.0	47.0	100.0
Average		53.5	4.4	0.0	1.8	0.0	59.7	40.3	100.0

Table 3. Estimated harvest by gear type, escapement, and total run of coho salmon returning to the Berners River, 1982–2002.

Year	Fishery Sample Size	Number of Fish								Total Run
		Troll	Seine	Drift Gillnet	Sport	B.C. Net	Cost Recovery	Total Catch	Escapement	
1982	48	12,887	0	10,568	0	0	0	23,455	7,505	30,960
1983	125	17,153	0	6,978	65	0	0	24,196	9,840	34,036
1984									2,825	
1985	93	10,865	198	7,015	0	0	0	18,078	6,169	24,247
1986	157	13,560	0	8,928	395	0	0	22,883	1,752	24,635
1987	53	7,448	0	3,301	48	0	0	10,797	3,260	14,057
1988	102	5,926	181	6,141	0	0	0	12,248	2,724	14,972
1989	58	10,515	0	1,664	0	0	0	12,179	7,509	19,688
1990	470	14,751	149	7,339	525	0	0	22,764	11,050	33,814
1991	1,025	6,417	579	16,519	117	0	0	23,632	11,530	35,162
1992	701	15,337	344	14,677	192	0	0	30,550	15,300	45,850
1993	1,496	19,353	192	14,239	140	0	0	33,924	15,670	49,594
1994	2,647	27,319	1,686	27,907	891	5	0	57,808	15,920	73,728
1995	1,384	8,847	22	14,869	117	0	0	23,855	4,945	28,800
1996	601	10,524	380	6,434	412	0	0	17,750	6,050	23,800
1997	312	2,454	282	2,477	179	0	0	5,392	10,050	15,442
1998	613	10,427	435	5,716	380	0	0	16,958	6,802	23,760
1999	948	12,877	208	9,317	261	0	0	22,663	9,920	32,583
2000	693	5,362	145	5,296	196	0	6	11,005	10,650	21,655
2001	748	8,854	195	3,499	123	0	0	12,671	19,290	31,961
2002	788	8,671	228	13,014	471	0	0	22,384	27,700	50,084
Average		11,477	261	9,295	226	0	0	21,260	9,831	31,441

Table 4. Estimated percent harvest by gear type, escapement and total run of coho salmon returning to the Berners River, 1982–2002.

Year	Fishery Sample Size	Percent of Total Run								Total Run
		Troll	Seine	Drift Gillnet	Sport	B.C. Net	Cost Recovery	Total Catch	Escapement	
1982	48	41.6	0.0	34.1	0.0	0.0	0.0	75.8	24.2	100.0
1983	125	50.4	0.0	20.5	0.2	0.0	0.0	71.1	28.9	100.0
1984										
1985	93	44.8	0.8	28.9	0.0	0.0	0.0	74.6	25.4	100.0
1986	157	55.0	0.0	36.2	1.6	0.0	0.0	92.9	7.1	100.0
1987	53	53.0	0.0	23.5	0.3	0.0	0.0	76.8	23.2	100.0
1988	102	39.6	1.2	41.0	0.0	0.0	0.0	81.8	18.2	100.0
1989	58	53.4	0.0	8.5	0.0	0.0	0.0	61.9	38.1	100.0
1990	470	43.6	0.4	21.7	1.6	0.0	0.0	67.3	32.7	100.0
1991	1,025	18.2	1.6	47.0	0.3	0.0	0.0	67.2	32.8	100.0
1992	701	33.5	0.8	32.0	0.4	0.0	0.0	66.6	33.4	100.0
1993	1,496	39.0	0.4	28.7	0.3	0.0	0.0	68.4	31.6	100.0
1994	2,647	37.1	2.3	37.9	1.2	0.0	0.0	78.4	21.6	100.0
1995	1,384	30.7	0.1	51.6	0.4	0.0	0.0	82.8	17.2	100.0
1996	601	44.2	1.6	27.0	1.7	0.0	0.0	74.6	25.4	100.0
1997	312	15.9	1.8	16.0	1.2	0.0	0.0	34.9	65.1	100.0
1998	613	43.9	1.8	24.1	1.6	0.0	0.0	71.4	28.6	100.0
1999	948	39.5	0.6	28.6	0.8	0.0	0.0	69.6	30.4	100.0
2000	693	24.8	0.7	24.5	0.9	0.0	0.0	50.8	49.2	100.0
2001	745	27.7	0.6	10.9	0.4	0.0	0.0	39.6	60.4	100.0
2002	787	17.3	0.5	26.0	0.9	0.0	0.0	44.7	55.3	100.0
Average		37.7	0.8	28.4	0.7	0.0	0.0	67.6	32.4	100.0

Table 5. Total coho smolt and pre-smolt production estimates for four wild coho salmon producing system in Southeast Alaska by age .1 return year, 1980–2002.

Return Year	Number of Fish				
	Auke Creek Smolts	Berners River Pre-smolts	Berners River Smolts	Ford Arm Lake Pre-smolts	Hugh Smith Lake Smolts
1980	8,789				
1981	10,714				
1982	6,967	1,074,301		78,682	
1983	6,849	509,065		65,186	
1984	6,901				51,789
1985	6,838	410,231		38,509	32,104
1986	5,852	485,022		46,422	23,499
1987	5,617	403,694		73,272	21,878
1988	7,014	290,095		88,649	36,218
1989	7,685	458,358		43,354	23,336
1990	7,011	375,228	164,356	55,803	26,620
1991	5,137		141,154	56,284	32,925
1992	5,690		187,715	61,724	23,326
1993	6,596		326,126	57,401	32,853
1994	8,647		255,431	83,686	48,433
1995	7,495		181,503	134,640	49,288
1996	4,884		194,019	91,843	22,413
1997	3,934		133,629	66,528	32,294
1998	6,111		139,959	80,567	37,898
1999	7,420		252,199	132,607	29,830
2000	5,233		183,023	62,444	19,902
2001	4,969		268,468	106,531	23,343
2002	5,980		264,772	102,010	36,531
Average	6,623	500,749	207,104	76,307	31,815

Table 6. Estimated survival rate (percent) of coho salmon smolts and pre-smolts from four wild Southeast Alaska indicator stocks from the time of tagging until return to the fisheries.

Return Year	Auke Creek Smolts	Berners River Pre-smolts	Berners River Smolts	Ford Arm Lake Pre-smolts	Hugh Smith Lake Smolts
1980	9.9				
1981	9.1				
1982	10.6	2.9		6.0	
1983	18.1	6.7		9.5	
1984	15.9				7.7
1985	24.6	5.9		12.3	7.5
1986	16.6	5.1		8.8	19.0
1987	21.0	3.5		4.4	10.7
1988	17.1	5.2		6.7	4.2
1989	14.4	4.3		13.3	10.4
1990	21.1	9.0	20.6	9.4	17.3
1991	23.0		24.9	10.8	17.4
1992	33.0		24.4	15.0	21.0
1993	24.1		15.1	22.0	13.0
1994	35.3		28.9	13.8	19.4
1995	10.9		15.9	5.5	13.7
1996	23.4		12.4	6.5	17.9
1997	19.2		11.6	15.3	8.2
1998	23.1		17.0	19.9	11.4
1999	19.3		12.9	7.4	14.0
2000	18.5		11.8	12.8	6.6
2001	28.3		11.7	8.2	13.5
2002	26.8		18.9	14.7	14.5
Average	20.1	5.3	17.4	11.1	13.0

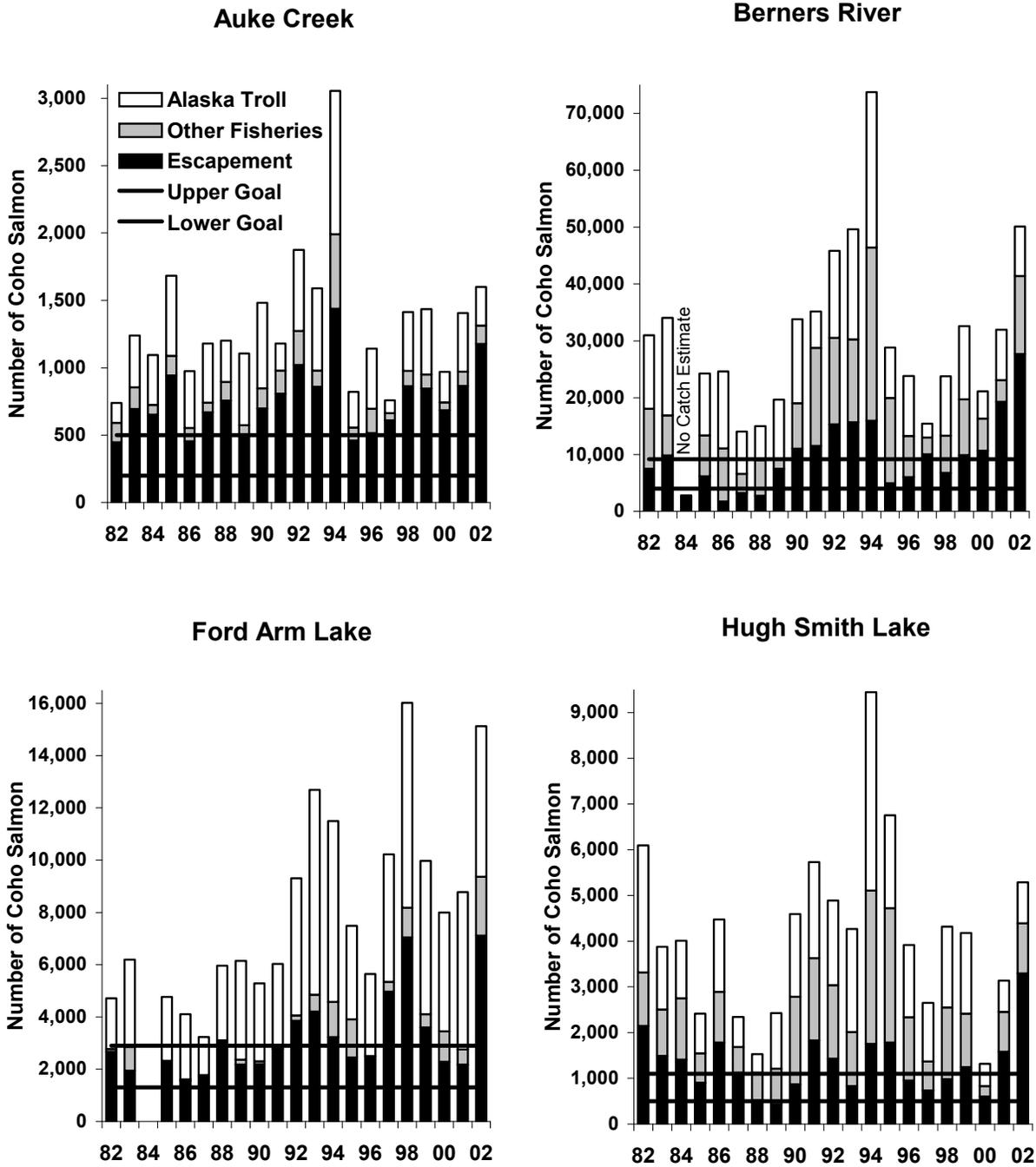


Figure 1. Total run size, catch, escapement and biological escapement goal range for four wild Southeast Alaska coho salmon indicator stocks, 1982–2002.

PINK AND CHUM SALMON STOCK EVALUATION PROGRAM

July 1, 2002 – March 31, 2003

Summary of Progress

A. Tasks Scheduled

Work scheduled this reporting period included: (1) calculation of the traditional pink salmon escapement indices for 1960 to 2002; (2) forecasting the 2003 return of pink salmon to Southeast Alaska; (3) conduct an observer calibration study for surveys of pink and chum salmon at Traitors Creek; (4) and analyze data needed to quantitatively index the escapement of pink salmon to management stock groups in Southeast Alaska.

B. Tasks Accomplished

An escapement index was calculated for each management stock group in Southeast Alaska. In 2002, 25 of 45 stock groups had escapement indices below the 1990s average (Table 7). Overall, the escapement in the Juneau management area was below average. Escapement indices were stronger in other management areas (particularly Sitka and Ketchikan), and the overall 2002 pink salmon escapement index of 17.3 million was 10% above the 1990s average, and the 5th highest since 1960.

A preseason run prediction was completed and released to the public in December, and appeared in the official Alaska Department of Fish and Game run forecast documents. The 2003 pink salmon forecast for Southeast Alaska is for a harvest in the Strong category (30 to 52 million; see Attachment A).

Eleven management staff (representing all area offices) flew aerial surveys of Traitors Creek during the peak of the pink salmon run there, on August 30, 2002. Survey flights were accomplished in conjunction with an ongoing mark-recapture project there to compare peak aerial escapement surveys to the total escapement for the year.

Project staff continued to monitor recording thermographs that were placed in southern Southeast Alaska at the White River, Harris River, Staney Creek, and Marten River. At each site, thermographs were placed at both the gravel surface and at approximately 0.3m gravel depth to further evaluate the relationship of air temperature data currently used with actual impacts to the incubation area for pink salmon eggs.

Project staff completed two stock status reports on pink salmon and chum salmon in Southeast Alaska:

Heinl, Steven C., Timothy P. Zadina, Andrew J. McGregor, and Harold J. Geiger. 2003. Chum salmon stock status and escapement goals in Southeast Alaska. Regional Information Report 1J03-08. Alaska Department of Fish and Game, Division of Commercial Fisheries. Juneau, Alaska.

Zadina, Timothy P., Steven C. Heinl, Andrew J. McGregor, and Harold J. Geiger. 2003. Pink salmon stock status and escapement goals in Southeast Alaska. Regional Information Report 1J03-06. Alaska Department of Fish and Game, Division of Commercial Fisheries. Juneau, Alaska.

Project staff also presented summaries of the reports to the Board of Fish in Ketchikan on February 20, 2003, and at the Pink & Chum Salmon Workshop in Victoria, on February 27, 2003.

C. Special Problems

No special problems were experienced during this period.

Table 7. Southeast Alaska pink salmon escapement indices by stock group and management area, 2002.

Stock Group	Management Area	Sub-Region	2002 Bias Adjusted Index	Minimum 1960-2001	Maximum 1960-2001	Average 1990-1999	2002 % above 1990s Average.	2002 % below 1990s Average
Freshwater Bay	Juneau	NSE Inside	155,887	11,425	286,958	180,599		-13.7%
Homeshore	Juneau	NSE Inside	13,112	1,641	198,700	59,867		-78.1%
Lynn Canal	Juneau	NSE Inside	88,108	10,697	434,809	121,643		-27.6%
N Chichagof	Juneau	NSE Inside	180,504	22,117	943,212	293,691		-38.5%
Seymour Canal	Juneau	NSE Inside	216,859	22,577	436,109	218,645		-0.8%
Stephens	Juneau	NSE Inside	258,555	13,385	747,349	305,854		-15.5%
SW Admiralty	Juneau	NSE Inside	207,205	13,945	517,969	245,130		-15.5%
Tenakee	Juneau	NSE Inside	602,388	23,404	977,621	569,408	5.8%	
W Admiralty	Juneau	NSE Inside	22,498	7,455	214,929	92,848		-75.8%
Total Juneau Area			1,745,117	158,958	4,153,872	2,087,686		-16.4%
E Behm	Ketchikan	SSE	2,014,774	58,490	4,647,575	1,847,100	9.1%	
E Dall	Ketchikan	SSE	442,577	9,401	935,879	362,691	22.0%	
Hetta	Ketchikan	SSE	1,001,849	10,078	1,857,934	808,507	23.9%	
Kasaan	Ketchikan	SSE	1,574,728	22,073	2,885,635	1,038,471	51.6%	
Klawock	Ketchikan	SSE	1,427,089	34,124	3,016,390	1,409,580	1.2%	
Moira	Ketchikan	SSE	107,937	2,181	220,943	123,787		-12.8%
Portland	Ketchikan	SSE	568,299	13,262	679,689	339,306	67.5%	
Sea Otter Sound	Ketchikan	SSE	271,355	7,513	827,305	290,473		-6.6%
W Behm	Ketchikan	SSE	662,657	22,221	1,136,482	625,905	5.9%	
Total Ketchikan			8,071,265	211,436	15,750,765	6,845,819	17.9%	
Affleck Canal	Petersburg	SSE	549,105	16,509	960,756	359,718	52.6%	
Anan	Petersburg	SSE	420,406	13,489	759,337	474,607		-11.4%
Burnett	Petersburg	SSE	210,637	271	777,935	189,587	11.1%	
Eliza Harbor	Petersburg	NSE Inside	178,211	2,232	736,736	309,341		-42.4%
Farragut Bay	Petersburg	NSE Inside	24,100	250	66,660	24,547		-1.8%
Houghton	Petersburg	NSE Inside	743,538	14,249	1,104,046	575,930	29.1%	
Portage Bay	Petersburg	NSE Inside	28,560	886	122,100	39,242		-27.2%
Pybus/Gambier	Petersburg	NSE Inside	368,353	7,519	562,300	301,769	22.1%	
Ratz Harbor	Petersburg	SSE	159,000	1,839	806,472	181,280		-12.3%
Saginaw Bay	Petersburg	NSE Inside	536,221	1,780	520,618	228,391	134.8%	
Shipley Bay	Petersburg	SSE	135,068	2,966	1,869,197	374,749		-64.0%
Stikine	Petersburg	SSE	8,476	1,044	123,269	42,817		-80.2%
Tebenkof	Petersburg	NSE Inside	592,215	5,597	657,582	351,322	68.6%	
Totem Bay	Petersburg	SSE	138,159	360	980,251	198,172		-30.3%
Union Bay	Petersburg	SSE	136,561	2,525	299,600	139,934		-2.4%
Whale Pass	Petersburg	SSE	89,244	488	628,094	238,999		-62.7%
Total Petersburg			4,317,854	153,888	10,644,578	4,030,403	7.1%	
E Baranof	Sitka	NSE Inside	186,208	2,200	557,361	215,414		-13.6%
Hoonah Sound	Sitka	NSE Inside	529,871	23,611	840,707	406,245	30.4%	
Kelp Bay	Sitka	NSE Inside	72,630	5,829	319,094	104,588		-30.6%
Lisianski	Sitka	NSE Outside	147,432	2,467	946,000	187,829		-21.5%
Portlock	Sitka	NSE Outside	120,356	1,085	290,000	90,437	33.1%	
Salisbury Sound	Sitka	NSE Outside	439,114	1,527	1,480,500	325,461	34.9%	
SE Baranof	Sitka	NSE Inside	70,795	3,718	280,000	148,292		-52.3%
Sitka Sound	Sitka	NSE Outside	972,882	3,102	1,615,142	533,759	82.3%	
Slocum Arm	Sitka	NSE Outside	272,686	3,404	1,190,500	348,365		-21.7%
W Crawfish	Sitka	NSE Outside	81,000	200	74,000	24,730	227.5%	
Whale Bay	Sitka	NSE Outside	323,366	1,000	377,000	131,790	145.4%	
Total Sitka Area			3,216,341	127,821	7,697,804	2,516,910	27.8%	
SSE Total			9,917,922	379,039	17,946,416	9,045,681	9.6%	
NSE Inside Total			5,075,818	294,197	9,892,076	4,792,765	5.9%	
NSE Outside Total			2,356,837	20,692	5,729,642	1,642,372	43.5%	
NSE Total			7,432,654	314,890	15,621,718	6,435,137	15.5%	
All SE Total			17,350,577	904,213	30,456,335	15,480,818	12.1%	

ATTACHMENT A (TO REPORT ON PINK AND CHUM SALMON RESEARCH)

Preliminary Harvest Predictions for
Southeast Alaska Pink Salmon in 2003

This year's preliminary prediction of the 2003 harvest of pink salmon in Southeast Alaska is based on selecting one of five different return magnitude categories. These categories were obtained by calculating the 20th, 40th, 60th, and 80th percentile of Southeast Alaska's pink salmon harvest during the 1962 through 2001 period. These categories are:

Category	Range	Percentile
Disaster	Less than 10 million	Less than 20 th
Weak	10 to 17 million	21 st to 40 th
Average	17 to 30 million	41 st to 60 th
Strong	30 to 52 million	61 st to 80 th
Excellent	More than 52 million	Greater than 80 th

The pink salmon harvest in 2003 is predicted to be very **STRONG to EXCELLENT** with a potential total Southeast harvest of 32–55 million fish.

Southeast Alaska is divided into three sub-regions:

- Southern (SSE) Districts 1–8
- Northern Inside (NSEI) Districts 9–15 except the majority of District 13
- Northern Outside (NSEO) Only District 13 except Hoonah Sound and Peril Strait.

Estimated distributions of the total SE harvest by the three areas in 2003 are:

Southern SE	61%
Northern SE Inside	28%
Northern SE Outside	11%

Past results have shown that it is nearly impossible to predict harvest rates, especially on strong return years. We as researchers cannot predict future management actions, fishing conditions, harvest and processing capacity, or product demand that drives the harvest each year or what any of these factors have on the subsequent escapement influencing future run strengths. In 2002, there could have been more pink salmon harvested had there been more demand for the product. Therefore, managers, processors, and demand for the product will control the final harvest levels in 2003.

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