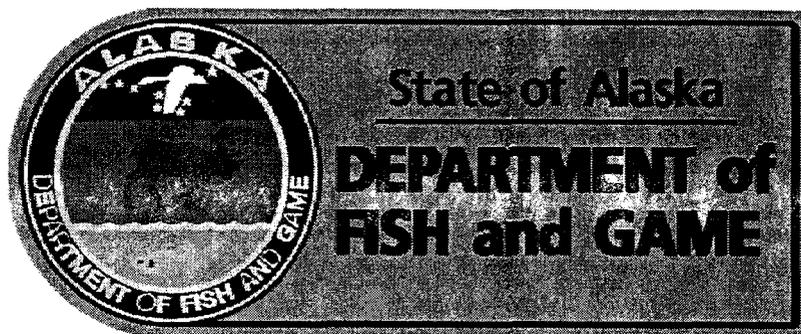


**ABUNDANCE, AGE, SEX, AND SIZE STATISTICS  
FOR SOCKEYE, CHUM AND PINK SALMON IN LOWER COOK INLET, 1997**



by  
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and  
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## Abstract

Aerial and foot surveys were used to estimate the 1997 sockeye *Oncorhynchus nerka*, chum *O. keta*, and pink *O. gorbusca* salmon escapements in the Lower Cook Inlet management area. Age, length and weight samples were obtained from nine sockeye salmon stocks. A total of 240,184 sockeye, 5,908 chum and 2,814,431 pink salmon were harvested in this management area. Another 100,948 sockeye, 111,732 chum, and 1,000,553 pink salmon were estimated in the spawning escapement. The dominant ages of sockeye salmon throughout Lower Cook Inlet were 1.2 and 1.3. The proportion of sockeye salmon males ranged from a low of 41% in the Resurrection Bay catch samples to a high of 56% in the Mikfik Lake sample. Sockeye salmon ranged in mean size from 489 mm in Neptune Bay to 566 mm in the mixed stock sockeye fishery at Silver Beach and from 1.90 kg in Neptune Bay to 2.98 kg at Silver Beach.

KEY WORDS: Age, chum salmon, escapement, length, Lower Cook Inlet, pink salmon, *Oncorhynchus*, sex, sockeye salmon, weight.

## INTRODUCTION

The Lower Cook Inlet (LCI) Management Area for commercial salmon fishing is composed of all waters west of Cape Fairfield in the Gulf of Alaska, north of Cape Douglas in Shelikof Straits, and south of Anchor Point in Cook Inlet. The area is divided into five management districts: Kamishak Bay, Barren Islands, Southern, Outer, and Eastern (Figure 1); fishing does not occur in the Barren Islands District. Purse seines and set gillnets are the only legal commercial gear types for salmon. Entry into the commercial fishery was limited in 1972.

In 1961, the Alaska Department of Fish and Game (ADF&G) began documenting LCI commercial catches of the five Pacific salmon species that occur in Alaska. Sockeye *Oncorhynchus nerka* and chum salmon *O. keta* catch sampling for age, weight, length (AWL) and sex began in 1970. AWL data between 1970 and 1986, and between 1988 and 1996, has been summarized by Schroeder (1984, 1985, 1986), Morrison (1987), Yuen et.al. (1989, 1990, 1991, 1992), Yuen and Bucher (1994a, 1994b, 1995) Otis Bechtol and Bucher (1998) and Otis and Dickson (1999). There was no catch-sampling program in 1987. Aerial and ground escapement surveys of pink salmon *O. gorbusca* began in 1960, chum salmon in 1974, and sockeye salmon *O. nerka* in 1969. Annual escapement data are summarized in annual management reports for the Lower Cook Inlet Area (e.g., Bucher and Hammarstrom, 1996, 1997, 1998).

Historically, fishing for a single species within a bay or drainage has lasted three to six weeks. Sockeye salmon fisheries begin as early as June while pink and chum salmon fisheries begin in July. Both fisheries end in August. Commercial fishing for chinook *O. tshawytscha* has begun as early as May and fishing for coho *O. kisutch* has extended into September. Current management strategy is structured around fishing districts and sub-districts to facilitate management of discrete stocks. Commercial harvests are managed to meet predetermined escapement goals and to obtain adequate escapement for all run segments of a stock.

The purpose of the Lower Cook Inlet salmon catch-sampling program is to collect sockeye and chum salmon AWL data from purse seine fisheries that target discrete stocks. These single-stock fisheries normally account for over 90% of the total sockeye and chum catch from Lower Cook Inlet. The purse seine fisheries in Halibut Cove, Tutka Bay and Douglas River subdistricts, and the three set gillnet fisheries in Lower Cook Inlet were not sampled because they did not target specific local stocks. Chinook salmon samples also were not collected because total chinook salmon harvest is typically <1% of the total salmon catch. The coho and pink salmon catches normally are not sampled because they exhibit little inter-annual age composition variation.

This report summarizes the 1997 estimates of age and size composition of samples obtained from six discrete sockeye salmon fisheries and three sockeye salmon spawning populations. Monitoring changes in age composition allows fishery managers to prepare preseason forecasts of abundance and evaluate spawning escapement goals. This report also summarizes methods used to estimate total escapement from aerial and ground surveys.

## METHODS

The Lower Cook Inlet salmon harvest has been managed as 16 independent purse seine fisheries, most of which target discrete stocks of sockeye, pink or chum salmon, each with their own escapement goal. Individual stocks occurred within distinct geographical sampling strata (Figure 2).

Most catch samples were obtained dockside when tenders were delivering catches from a single fishery. If tenders were expected to gather fish from several fisheries before returning to port, then samples were obtained aboard the tender before salmon from the targeted fishery were placed in the hold. The catch sampling crew interviewed the fishers delivering salmon to determine the origin of the catch before taking samples. If none of the above were possible then samples were obtained from a tender hold provided the skipper was interviewed to confirm that no salmon from an earlier sampling period were present.

There were several chum salmon runs which, due to expected low returns, were closed to commercial fishing this year. Consequently, there were no chum AWL samples collected. Sockeye salmon age composition estimates were based on a number of scales obtained from the commercial catch of unexpectedly high returns to China Poot and Neptune Bays and from escapement samples taken from Chenik Lake. This year, Exxon Valdez Oil Spill Trustee Council funded projects at Delight and Desire Lakes enabling us to collect AWL escapement data from picket weirs installed at the outlet of each lake.

Salmon were measured from mid-eye to fork of tail ( $\pm 1$  mm) using a *Limnoterra*<sup>2</sup> electronic fish measuring board (FMBIV). An *Ohaus*<sup>2</sup> (Model CT6000-S) electronic balance was used to weigh salmon to the nearest gram. Sex was generally determined from external secondary sexual characteristics (*e.g.* kipe, humped back, etc.). If necessary, a small incision near the vent was made to inspect the gonads and confirm the sex.

Scales were collected from commercial catch and escapement sampled fish to determine age. When possible, scales were collected from the *preferred area* of each salmon: an area 2-3 rows above the lateral line, posterior to the dorsal fin and anterior to the anal fin. Scales were cleaned and mounted ridged side up on a gummed card and then heat-pressed onto acetate cards for reading and archival. Images of scale impressions were magnified 35x and projected on a microfiche reader so the number of annuli per scale could be counted to determine age.

We used the European age designation system (Koo 1962). The first digit in this system refers to the number of freshwater annuli, the second digit refers to the number of marine annuli, and the total age is the sum of the two digits plus one. For example an age-1.2 salmon is a 4-year old salmon that spent 2 years in fresh water (first winter spent in the gravel as an alevin) and 2 years at sea.

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<sup>2</sup>Vendor or product names are provided to document methods and do not constitute endorsement by ADF&G.

Age composition sample sizes for scale collection were set for each sampling stratum to estimate age proportions  $p_i$  from a population of  $k$  age groups simultaneously within a specified distance  $d$  of their true population age proportion  $\pi_i$ , 90% of the time  $(1-\alpha)$ . That is,

$$Pr\left(\bigcap_{i=1}^k |p_i - \pi_i| \leq d\right) \geq 1 - \alpha, \quad 1$$

where  $d$  and  $\alpha$  were respectively chosen to be 0.05 and 0.10 for all scale samples;  $\alpha_i = 2(1 - \Phi(z_i))$ ,  $\sum \alpha_i < \alpha$ ,  $\Phi(z_i)$  = area under the standard normal distribution; and  $z_i = d \sqrt{n_i} / \sqrt{p_i(1-p_i)}$ . Thompson (1987) calculated a maximum sample size of 403 for a worse-case scenario when three age groups were present in equal numbers, where  $d = 0.05$  and  $\alpha = 0.01$ . Any deviation in the number of age groups or unequal contributions by age group would require a smaller sample size.

Sample sizes for mean weights ranged between 5 and 50 depending on  $\sigma$ . Most sample sizes were around 20 for a 200-salmon sample, or 1 in 10 salmon of each sex.

Estimates of standard errors by age group were derived according to procedures for stratified random sampling described by Snedecor and Cochran (1967):

$$SE = \sqrt{\sum C_h^2 \frac{s_h^2}{n_h}}, \quad 2$$

where  $C_h$  = the salmon catch in the  $h$ th stratum, and  $s_h^2$  = the sample variance in the  $h$ th stratum. Catch totals were obtained from harvest receipts (commonly referred to as fish tickets) which must be used to document each landing by a licensed fisher.

All pink and chum and most sockeye salmon escapement estimates in Lower Cook Inlet were based on periodic counts made by an observer either flying in a fixed-wing aircraft or walking along selected streams (Tables 1, 2 and 3). Sockeye salmon escapement estimates for English Bay, Delight, Desire and Chenik Lakes were based on counts made at weirs.

Pink and chum salmon generally accumulated in surveyed streams over time, however, many often died before the last survey was completed. Therefore, survey counts were usually adjusted for stream life: the average length of time a spawning pink or chum salmon was alive and available to surveyors. Our method of considering stream life in estimating total pink and chum salmon escapements was similar to that described by Johnson and Barrett (1988). First, daily surveys were converted to fish-days:

$$fish - days = \frac{(x_i + x_{i-1})}{2} (d_i - d_{i-1}), \quad 3$$

where  $d_i$  = Julian calendar date of survey  $i$  ( $1 < d < 365$ ) and  $x_i$  = number of live pink or chum salmon observed in the study stream during survey  $i$ . Then, the area under the fish-day curve is found by intergration:

$$area = \sum_{i=1}^{n+1} \frac{(x_i + x_{i-1})}{2} (d_i - d_{i-1}), \quad 4$$

where  $n$  = total number of surveys,  $x_0 = x_{n+1} = 0$ . Pink and chum salmon were not expected to enter streams before 1 July ( $d_0$  = Julian date 191) or after 15 September ( $d_{n+1}$  = Julian date 258) unless otherwise noted.

Finally, dividing fish-days by stream life, in this case 17.5 d, yielded total escapement in numbers of salmon:

$$escapement = \frac{\sum_{i=1}^{n+1} \frac{(x_i + x_{i-1})}{2} (d_i - d_{i-1})}{17.5} . \quad 5$$

If this estimate was less than the greatest number of salmon observed on any one survey, we used the peak survey count instead of the result from equation (5) as the total escapement estimate. If both aerial and ground surveys were available, we selected the survey we believed to be the most accurate estimate of total escapement. Sockeye salmon tended to accumulate in surveyed lakes and most were often still alive after the last spawning surveys were completed. Accordingly, peak counts were used as an escapement index for this species, unless otherwise noted.

## RESULTS

In 1997, Lower Cook Inlet salmon harvests included 240,184 sockeye, 5,908 chum, and 2,814,431 pink salmon; total escapements were estimated to be 100,948 sockeye, 111,732 chum, and 1,000,553 pink salmon (Tables 4, 5, and 6 respectively).

Sockeye salmon catch or escapement age, weight, and length (AWL) samples were collected in four commercial fishing districts: Southern, Outer, Eastern and Kamishak (salmon do not return to streams in the Barren Islands District). Samples from sockeye salmon fisheries were obtained between 13 June and 17 August. We were able to obtain AWL samples from the commercial catch or escapement from each sockeye stock in Lower Cook Inlet that was commercially fished in 1997. Three out of six catch samples met or exceeded the 90% confidence level where  $d = 0.05$ , and two out of three escapement samples (Chenik and Desire Lakes) also met this criterion. A total of 3,025 readable scales was collected (Table 7).

### ***Southern District Sockeye Salmon***

The only Southern District fisheries assumed to be harvesting discrete sockeye salmon stocks occur in China Poot and Neptune bays. The runs originating from Leisure Lake, which drains into China Poot Bay, and Hazel Lake, which drains into Neptune Bay, supported the 2 largest sockeye fisheries in Lower Cook Inlet in 1997. Both of these runs were enhanced by ongoing lake stocking programs that began in 1976 and 1988 respectively. The 1997 common property commercial fisheries in China Poot and Neptune bays harvested 42,272 and 73,822 sockeye salmon respectively. Cost recovery harvests were not conducted at either site this year because of the forecasted low return that resulted from egg/fry loss due to the outbreak of IHN in 1994. Biological data on sockeye salmon returning to China Poot and Neptune bays have been collected since 1980 and 1993 respectively (Appendix A). The mean sockeye weight in our catch samples was 2.0 kg ( $n = 50$ ) for China Poot and 1.9 kg ( $n = 44$ ) for Neptune. The mean sockeye length in our catch samples was 501 mm ( $n = 517$ ) for China Poot and 489 mm ( $n = 442$ ) for Neptune. China Poot catch samples consisted of 76.1% age-1.2 sockeye salmon and 47.2% females; whereas Neptune Bay samples consisted of 78.5% age-1.2 fish and 49.3% females (Tables 8 and 9 respectively). Since a barrier falls prevents upstream spawning migration into Leisure Lake, efforts were made to harvest all returning sockeye salmon in that terminal fishery.

The Halibut Cove purse seine and set gill net fishery exploits mixed stocks and harvested 12,268 sockeye salmon in 1997. Mixed stocks were also harvested in various set gillnet fisheries. The reported harvest of sockeye salmon near Barabara Creek was 4,737; 9,686 sockeyes were harvested in Kasitsna/Tutka bays, and 12,557 in Seldovia Bay. The common property fishery at English Bay reported a catch of 16,657 while the only large spawning escapement of sockeye salmon in the Southern District occurred in the English Bay River drainage where 15,430 sockeye salmon passed through the weir and an additional 7,817 sockeyes were harvested for the cost recovery program (Paul McCollum, Port Graham Hatchery Manager, personal communication).

### ***Outer District Sockeye Salmon***

Wild runs in Nuka Bay supported a commercial harvest of 6,245 sockeye salmon in 1997. Biological data on sockeye salmon returning to Nuka Bay have been collected since 1984 (Appendix B). An EVOS Trustee Council funded project at Delight and Desire Lakes allowed us to collect AWL escapement data at counting weirs set up at each lake outlet. Escapement scale samples were obtained from 323 sockeye salmon in Delight Lake from 17 July to 17 August. Delight Lake had a escapement estimate of 27,820 sockeye salmon. The sample from this lake consisted of 26.3% age-1.2 and 54.3 % age-1.3 sockeye salmon with an overall mean length of 540 mm (n=322) and a weight of 2.25 kg (n = 152; Table 10). The escapement sample at Desire Lake collected from 20 June to 6 August consisted of 72.3% age-1.3 fish and 25.3% age-1.2 fish which averaged 559 mm (n= 340) and 2.78 kg (n= 272; Table 11). Desire Lake had a escapement estimate of 14,665 sockeyes; 1,400 sockeye salmon were estimated to have escaped into Delusion (a.k.a. Ecstasy Lake).

### ***Eastern District Sockeye Salmon***

The sockeye return to Aialik Lake supported a commercial harvest of 2,111 fish while the escapement index was estimated to be 11,400 fish. Biological data on sockeye salmon returning to Aialik Lake have been collected since 1983. Scale samples collected from the commercial catch consisted of 68.6% age-1.3 fish and 57.9% females with an overall mean length of 542 mm (n=140; Table 12) (Appendix C).

The enhanced run in Resurrection Bay supported a commercial harvest of 8,933 sockeyes and a hatchery cost recovery harvest of 16,617 fish; 7,945 sockeye salmon were counted through the weir into Bear Lake (Jeff Hetrick, CIAA, personal communication). The commercial catch sample (n = 254) consisted of 36.2% age-1.2 fish at 484 mm and 44.9% fish age- 1.3 at 543 mm (Table 13).

### ***Kamishak Bay District Sockeye Salmon***

Two sockeye salmon stocks were sampled in the Kamishak Bay District in 1997. A commercial fishery at the Douglas River Subdistrict produced a harvest of 2,556 fish. Samples taken from this fishery consisted of 81.4% age-1.3 fish at 576 mm (n= 422) and a mean weight of 3.15 kg (n= 55; Table 14).

The Chenik Lake Subdistrict remained closed due to the small run of 2,338 sockeye salmon counted past the Chenik Creek weir. Chenik Lake's natural run was supplemented with hatchery-reared sockeye juveniles as early as 1978, however, the run has been extremely weak in recent years due to an IHN epizootic. Between 4-20 July 1997 we live sampled 312 fish at the Chenik Creek weir. Age-1.3 and 1.2 sockeye salmon comprised 80.2 % and 19.2% of the samples respectively (Table 15). Males represented 48.4 % of the sample. Sampled fish averaged 533 mm in length and 2.02 kg in weight (n = 312; Table 15). Biological data on sockeye salmon returning to Chenik Lake have been collected since 1985 (Appendix D).

A commercial fishery within the McNeil River Subdistrict directed at sockeyes returning to Mikfik Lake harvested 210 fish. A 179 fish sample from that fishery consisted of 65.9% age-1.3 fish at 523 mm and 22.9% age-1.2 fish at 477 mm (Table 16; Appendix E).

Escapement indices to other Kamishak District streams included 40 sockeyes in Ursus Cove Lagoon Creek, 600 in Bruin River, and 1,540 in Amakdedori Creek.

### ***Lower Cook Inlet Chum Salmon***

A combination of poor market conditions and reduced returns to most drainages continued to precluded many fishers from targeting chum salmon in 1997. The only chum salmon harvested in the Outer District was incidental to other fisheries. A catch of 1,566 fish occurred at Windy Bay incidental to a commercial pink salmon fishery. Consequently no chum salmon AWL samples were collected. The LCI commercial chum salmon harvest of 5,908 fish (Table 5) represented less than 6% of the 20-year average and marked the eighth successive below-average season in Lower Cook Inlet. The McNeil River chum escapement (estimated at 27,495 fish) fell just below the mid point of its escapement goal range of 20,000 to 40,000 fish and was the first time since 1989 that the lower end of the range had been achieved.

### ***Lower Cook inlet pink salmon***

Virtually all pink salmon exhibit a two-year life cycle so catch samples typically are not collected to determine age composition of returning stocks. However, catch and escapement data are compiled to facilitate in-season management of the commercial fishery and to forecast the following years return (Otis 1997). In contrast with last year's 451,500 pink salmon harvest, the 1997 harvest increased to 2,814,431 (Table 6). Over 95% of the total harvest occurred in the Southern District largely as a result of Tutka Hatchery production (Table 6). Over 96% of the Southern District catch went to Tutka Hatchery cost recovery and brood stock collection; the common property harvest totaled just 130,406 fish. Only 14 of 23 pink salmon streams that were monitored for escapement achieved their desired escapement levels; 3 of 6 index streams in the Southern District attained the minimum escapement goal in contrast to 1996 when no streams attained the desired escapement goal.

## Discussion

Sockeye salmon mean lengths and weights within a brood year are expected to increase with increasing ocean age. For example, age-1.1, 1.2, and 1.3 Aialik Lake male sockeye salmon from the 1980 brood year had mean lengths progressing from 355 mm to 515 mm to 569 mm (Appendix C). Whenever this trend was not observed, data were examined for keypunch errors, and scales were re-examined for aging errors. Some apparent size trend discrepancies resulted from sampling inadequacies. For instance, the mean length of age-2.1 sockeye salmon from China Poot Bay was 514 mm, while age-2.2 sockeyes measured only 505 mm (Table 8). This apparent discrepancy was probably not due to aging or keypunch errors. It was more likely related to the age-2.1 sample consisting of just one large fish, which, by itself did not provide a representative sample.

Occasional anomalies occurred in the freshwater residency period for some stocks. For example, age-1. fish has dominated Aialik Bay returns since catch sampling began there in 1983. However, 52.9% and 65.5% of juvenile sockeye remained in Aialik Lake a second year and smolted as age-2. fish in 1990 and 1991, respectively. East Nuka Bay returns experienced similar occurrences in 1988 and 1994. Inter-annual variation in age compositions is relatively common within sockeye salmon stocks (Burgner 1991), however, casual mechanisms are not fully understood. While size may not be the sole determinant for smoltification, Weatherly and Gill (1995) reported that growth is an important component influencing the duration of freshwater residence of sockeye salmon. Burgner (1991) lists several factors which may influence the freshwater growth of sockeye salmon, including: abundance and availability of food, temperature conditions, length of growing season, intensity of available light, competition, disease, feeding behavior in relation to predators, and movements to favorable habitats for feeding and survival.

While the overall sex ratio of returning adult salmon is typically even, males generally dominate the early portion of a run and females the latter, particularly for chum and pink salmon. Thus, the date samples are collected relative to the timing of the spawning run can influence the observed sex ratio of the sample. This temporal bias probably caused the skewed sex ratio observed in our 1997 sample from Resurrection Bay (59.1% females; Table 13). These samples were collected from 10-16 June, about a week after the peak of the 1997 Bear Lake return. Because temporal biases occur and size-at-age differences exist between male and female sockeye salmon (Burgner 1991), sampling dates are reported and age-weight-length data are stratified by sex in the appendices.

Escapement indices reported herein are primarily based on area-under-the-curve estimates that incorporate a 17.5 day streamlife. This streamlife estimate has been used for Lower Cook Inlet pink and chum salmon for almost 30 years (Davis and Valentine 1970). While streamlife is recognized as a dynamic parameter, often varying by sex, segment of the run, and year, recent pink salmon streamlife work conducted in Prince William Sound suggests 17.5 days may be outside the commonly observed range of values (Bue et al. 1998). Until streamlife studies are conducted to confirm these data for Lower Cook Inlet streams, we are reluctant to modify our escapement indices. Nonetheless, readers should be aware that the historical escapement indices presented in this document could change in the future when a more appropriate streamlife estimated is adopted for Lower Cook Inlet pink and chum salmon.

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Table 1. Survey methods and total escapement algorithms used for sockeye salmon streams in Lower Cook Inlet, 1997.

<b>Stream</b>	<b>Survey Method</b>	<b>Total Escapement Algorithm</b>
<b>Southern District</b>		
English Bay	Weir	Sum of daily weir counts
<b>Outer District</b>		
Desire Lake	Aerial	Peak live count
Delight Lake	Aerial	Peak live count
Ecstasy Lake	Aerial	Peak live count
<b>Eastern District</b>		
Aialik Lake	Aerial	Peak live count
Salmon Creek	Ground	Peak live count
Grouse Creek	Ground	Peak live count
Bear Creek	Weir	Sum of daily weir counts
<b>Kamishak District</b>		
Ursus Lagoon	Aerial	Peak live count
Bruin Lake Creek	Aerial	Peak live count
Bruin Bay	Aerial	Peak live count
Amakdedori Creek	Aerial	Peak live count
Chenik Lake	Aerial	Sum of daily weir counts
Paint River	Aerial	Peak live count
Mikfik Lake	Aerial	Peak live count
Little Kamishak River	Aerial	Peak live count
Douglas Reef	Aerial	Peak live count

Table 2. Survey methods and total escapement algorithms used for chum salmon streams in Lower Cook Inlet, 1997.

<b>Stream</b>	<b>Survey Method</b>	<b>Total Escapement Algorithm</b>	<b>Start/stop dates Area-under-the-curve</b>
<b>Southern District</b>			
Humpy Creek	Ground	17.5 day streamlife	7/1-9/15
Seldovia Creek	Ground	17.5 day streamlife	7/1-9/15
Port Graham Left	Ground	Peak live & carcass count	
Port Graham River	Ground	17.5 day streamlife	7/1-9/15
<b>Outer District</b>			
Dogfish Bay	Ground	17.5 day streamlife	7/1-9/15
Port Chatham	Ground	17.5 day streamlife	7/1-9/15
Windy River Left	Ground	17.5 day streamlife	7/1-9/15
Windy River Right	Ground	17.5 day streamlife	7/1-9/15
Rocky River	Aerial	17.5 day streamlife	7/1-9/15
Port Dick:			
Head End Creek	Ground	17.5 day streamlife	7/1-9/15
Slide Creek	Ground	17.5 day streamlife	7/1-9/15
Middle Creek	Aerial	17.5 day streamlife	7/1-9/15
Island Creek	Ground	17.5 day streamlife	7/1-9/15
Petrof River	Aerial	17.5 day streamlife	7/1-9/15
Nuka Island, South Cr.	Ground	17.5 day streamlife	7/1-9/15
James Lagoon	Aerial	17.5 day streamlife	7/1-9/15
<b>Eastern District</b>			
Tonsina Creek	Ground	17.5 day streamlife	7/1-9/30
Tonsina Left Creek	Ground	17.5 day streamlife	7/1-9/30
Salmon Creek	Ground	Peak carcass count	
Clear Creek	Ground	17.5 day streamlife	7/1-9/30
Sawmill Creek	Ground	17.5 day streamlife	7/1-9/30
Spring Creek	Ground	17.5 day streamlife	7/1-9/30
<b>Kamishak Bay District</b>			
Ininskin River	Aerial	17.5 day streamlife	7/1-9/30
Sugarloaf Creek	Aerial	17.5 day streamlife	8/1-9/30
North Head Creek	Aerial	17.5 day streamlife	8/1-9/30
Cottonwood Creek	Aerial	17.5 day streamlife	8/1-9/30
Browns Peak Creek	Aerial	17.5 day streamlife	7/1-9/15

Table 2. cont'd page 2 of 2

<b>Stream</b>	<b>Survey Method</b>	<b>Total Escapement Algorithm</b>	<b>Start/stop Dates Area-Under-Curve</b>
<b>Kamishak Bay District</b>			
Ursus Lagoon, Rt. hand	Aerial	17.5 day streamlife	7/26-9/30
Ursus Lagoon	Aerial	17.5 day streamlife	7/26-9/30
Sunday Creek	Aerial	17.5 day streamlife	7/1-9/15
Bruin Bay	Aerial	17.5 day streamlife	7/1-9/15
McNeil River <sup>a</sup>	Aerial	17.5 day streamlife	6/13-9/15
Little Kamishak River	Aerial	17.5 day streamlife	6/29-9/15
Strike Creek	Aerial	17.5 day streamlife	7/1-9/15
Big Kamishak River	Aerial	17.5 day streamlife	7/1-9/15
Douglas Reef	Aerial	17.5 day streamlife	7/1-9/15
Douglas Beach	Aerial	17.5 day streamlife	6/29-9/15

<sup>a</sup> McNeil River Chum salmon aerial survey counts are only considered to be an index of abundance. In some years, the estimated number of salmon consumed by bears in McNeil River Wildlife Sanctuary has exceeded the peak aerial survey count.

Table 3. Survey methods and total escapement algorithms used for pink salmon streams in Lower Cook Inlet, 1997.

Stream	Survey Method	Total Escapement Algorithm	Start/stop Dates Area-Under-Curve
<b>Southern District</b>			
Humpy Creek	Ground	17.5 day streamlife	7/15-9/15
China Poot Creek	Ground	17.5 day streamlife	8/1-9/15
Tutka Creek	Ground	17.5 day streamlife	7/1-9/15
Seldovia River	Ground	17.5 day streamlife	7/1-9/20
Barabara Creek	Ground	17.5 day streamlife	7/1-9/30
Port Graham left	Ground	17.5 day streamlife	8/1-8/30
Port Graham River	Ground	17.5 day streamlife	7/1-9/15
<b>Outer District</b>			
Dogfish Bay	Ground	17.5 day streamlife	7/1-9/15
Port Chatham	Ground	17.5 day streamlife	7/1-9/15
Chugach Bay	Aerial	17.5 day streamlife	7/1-9/15
Windy River Left	Ground	17.5 day streamlife	7/27-9/15
Windy River Right	Ground	Peak live=carcass count	
Scurvy Creek	Ground	17.5 day streamlife	7/1-9/15
Rocky River	Ground	17.5 day streamlife	7/1-9/15
Port Dick:			
Head End Creek	Ground	17.5 day streamlife	7/15-9/30
Slide Creek	Ground	17.5 day streamlife	7/1-9/15
Middle Creek	Aerial	17.5 day streamlife	7/1-9/15
Island Creek	Ground	17.5 day streamlife	7/1-9/30
Nuka Island, South Creek	Ground	17.5 day streamlife	7/1-9/15
Berger Bay	Ground	17.5 day streamlife	7/1-9/15
James Lagoon	Ground	17.5 day streamlife	7/1-9/15
<b>Eastern District</b>			
Humpy Cove	Ground	17.5 day streamlife	8/1-9/30
Tonsina Creek	Ground	17.5 day streamlife	7/1-9/30
Tonsina Left Creek	Ground	17.5 day streamlife	8/1-9/30
Salmon Creek	Ground	17.5 day streamlife	8/1-9/30
Grouse Creek	Ground	Peak live & carcass count	
Lost Creek	Ground	Peak live & carcass count	
Sawmill Creek	Ground	17.5 day streamlife	8/1-9/20
Spring Creek	Ground	17.5 day streamlife	8/1-9/30
Thumb Cove	Ground	17.5 day streamlife	7/15-9/30

Table 3 cont'd (page 2 of 2).

<b>Stream</b>	<b>Survey</b>	<b>Total Escapement Algorithm</b>	<b>Start/stop Dates Area-Under-Curve</b>
<b>Kamishak Bay District</b>			
Sugarloaf Creek	Aerial	Peak live count	
North Head Creek	Aerial	17.5 day streamlife	8/1-9/15
Browns Peak Creek	Aerial	17.5 day streamlife	7/1-9/15
Ursus Lagoon Right-hand	Aerial	Peak live count	
Ursus Lagoon	Aerial	17.5 day streamlife	7/1-9/15
Sunday Creek	Aerial	17.5 day streamlife	7/1-9/15
Bruin Bay River	Aerial	17.5 day streamlife	7/1-9/15
Amakdedori Creek	Aerial	17.5 day streamlife	7/1-9/15

Table 4. Commercial sockeye salmon catches (including hatchery cost recovery) and escapements in numbers of fish by subdistrict, Lower Cook Inlet, 1997.

Subdistrict/System	Catch	Escapement <sup>a</sup>	Total Run
<b>SOUTHERN DISTRICT</b>			
Humpy Creek		142	142
Halibut Cove	12,268		12,268
China Poot Bay			
Common Property Fishery	42,272		
China Poot Creek		1,130 <sup>b</sup>	
Total Run			43,402
Neptune Bay			
Common Property Fishery	73,822		
Waterfall Creek		900	
Oxbow Creek		100	
Total Run			74,822
Tutka/Kasitsna Bays	9,686		9,686
Barabara Creek	4,737		4,737
Seldovia Bay	12,557	35	12,592
Port Graham Bay/River	8,597	5	8,602
English Bay			
Common Property Fishery	16,657		
Hatchery Cost Recovery	7,817		
English Bay Lakes		15,430 <sup>c</sup>	
Total Run			39,904
<b>SOUTHERN DISTRICT TOTAL</b>	<b>188,413</b>	<b>17,742</b>	<b>206,155</b>
<b>OUTER DISTRICT</b>			
Dogfish Bay		69	69
Port Chatham		38	38
Windy Bay/Windy Left Creek	10	9	19
Port Dick			
Port Dick Head End Creek		10	
Island Creek		4	
Slide Creek		1	
Total Run			15
East Arm Nuka Bay (McCarty Fiord)	6,245		
Delight Lake		27,820	
Desire Lake		14,665	
Delusion Lake		1,400	
Total Run			50,130
<b>OUTER DISTRICT TOTAL</b>	<b>6,255</b>	<b>44,016</b>	<b>50,271</b>

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Table 4. (page 2 of 2)

Subdistrict/System	Catch	Escapement <sup>a</sup>	Total Run
<b>EASTERN DISTRICT</b>			
Aialik Bay/Aialik Lake	2,111	11,400	13,511
Resurrection Bay North			
Common Property Fishery	8,933		
Hatchery Cost Recovery	16,617		
Hatchery Carcasses	6,122		
Bear Lake		7,945 <sup>c</sup>	
Salmon Creek		2,201	
Grouse Creek		3,837	
Clear Creek		209	
Total Run			45,864
<b>EASTERN DISTRICT TOTAL</b>	<b>33,783</b>	<b>25,592</b>	<b>59,375</b>
<b>KAMISHAK BAY DISTRICT</b>			
Iniskin Bay/North Head Creek		50	50
Ursus Cove			
Brown's Peak Creek		10	
Ursus Cove Lagoon Creek		40	
Total Run			50
Kirschner Lake			
Common Property Fishery	2,842		
Hatchery Cost Recovery	6,125		
Total Run			8,967
Bruin Bay			
Bruin Lake Creek		120 <sup>b</sup>	
Bruin River		600	
Total Run			720
Chenik Lake			
Amakdedori Creek		1,540	
Chenik Creek/Lake		2,338 <sup>c</sup>	
Total Run			3,878
Paint River		400 <sup>d</sup>	400
McNeil Cove (Mikfik Creek/Lake)	210	8,500	8,710
Douglas River/Silver Beach	2,556		2,556
<b>KAMISHAK BAY DISTRICT TOTAL</b>	<b>11,733</b>	<b>13,598</b>	<b>25,331</b>
<b>TOTAL LOWER COOK INLET</b>	<b>240,184</b>	<b>100,948</b>	<b>341,132</b>

<sup>a</sup> Escapement estimates derived from limited aerial surveys. Numbers represent unexpanded aerial live counts.

<sup>b</sup> No freshwater escapement, prevented by barrier falls.

<sup>c</sup> Weir counts.

<sup>d</sup> No freshwater escapement, ladder not opened during 1997.

Table 5. Commercial chum salmon catches and escapements in numbers of fish by subdistrict, Lower Cook Inlet, 1997.

Subdistrict/System	Catch	Escapement <sup>a</sup>	Total Run
<b>SOUTHERN DISTRICT</b>			
Humpy Creek		605	605
Halibut Cove	66		66
China Poot Bay	45		45
Neptune Bay	30		30
Tutka Bay/Tutka Lagoon Creek	1,076		1,076
Barabara Creek	336		336
Seldovia Bay & River	658	2,332	2,990
Port Graham & River	756 <sup>b</sup>	4,092	4,848
English Bay	1,293		1,293
<b>SOUTHERN DISTRICT TOTAL</b>	<b>4,260</b>	<b>7,029</b>	<b>11,289</b>
<b>OUTER DISTRICT</b>			
Dogfish Bay		12,669	12,669
Port Chatham		691	691
Windy Bay	1,566		
Windy Right Creek		157	
Windy Left Creek		192	
Total Run			1,915
Rocky Bay & River		1,050	1,050
Port Dick			
Port Dick (head end) Creek		1,861	
Slide Creek		1,450	
Middle Creek		304	
Island Creek		5,213	
Total Run			8,828
East Arm Nuka Bay	9		9
<b>OUTER DISTRICT TOTAL</b>	<b>1,575</b>	<b>23,587</b>	<b>25,162</b>
<b>EASTERN DISTRICT</b>			
Resurrection Bay North	66		
Grouse Creek		2	
Sawmill Creek		198	
Spring Creek		191	
Tonsina Creek		2,174	
Thumb Cove		56	
Clear Creek		10	
Total Run			2,697
<b>EASTERN DISTRICT TOTAL</b>	<b>66</b>	<b>2,631</b>	<b>2,697</b>

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Table 5. (page 2 of 2)

Subdistrict/System	Catch	Escapement <sup>a</sup>	Total Run
<b>KAMISHAK BAY DISTRICT</b>			
Inisksin Bay			
Iniskin River		15,388	
Sugarloaf Creek		2,234	
North Head Creek		1,973	
Total Run			19,595
Cottonwood Bay & Creek		5,647	5,647
Ursus Cove			
Brown's Peak Creek		1,680	
Ursus Lagoon Right Creek		2,579	
Ursus Cove Lagoon Creek		3,643	
Total Run			7,902
Rocky Cove/Sunday Creek		9,095	9,095
Kirschner Lake	4 <sup>c</sup>		4
Bruin Bay & River		8,751	8,751
McNeil River	3	27,495	27,498
<b>KAMISHAK BAY DISTRICT TOTAL</b>	<b>7</b>	<b>78,485</b>	<b>78,492</b>
<b>TOTAL LOWER COOK INLET</b>	<b>5,908</b>	<b>111,732</b>	<b>117,640</b>

<sup>a</sup> Escapement estimates are derived from periodic ground or aerial surveys with stream life factors applied.

<sup>b</sup> Port Graham catch includes 2 chums taken during hatchery pink salmon cost recovery.

<sup>c</sup> Kirschner Lake catch of chums was taken during hatchery sockeye salmon cost recovery.

Table 6. Commercial pink salmon catches (including hatchery cost recovery) and escapements in numbers of fish by subdistrict, Lower Cook Inlet, 1997.

Subdistrict/System	Catch	Escapement <sup>a</sup>	Total Run
<b>SOUTHERN DISTRICT</b>			
Humpy Creek		78,309	78,309
Halibut Cove	2,596		2,596
China Poot Bay/Creek	3,986	2,796	6,782
Neptune Bay	10,394		10,394
Tutka/Kasitsna Bays			
Common Property Fishery	130,406		
Hatchery Cost Recovery	2,371,272		
Hatchery Carcasses	4,381		
Hatchery Brood Stock		216,786	
Tutka Lagoon Creek		45,000 <sup>b</sup>	
Total Run			2,766,845
Barabara Creek	5,108	12,523	17,631
Seldovia Bay & River	12,336	39,105	51,441
Port Graham			
Common Property Fishery	46,854		
Hatchery Cost Recovery	85,354		
Hatchery Brood Stock		12,093	
Port Graham River		12,543	
Port Graham Left		2,381	
Total Run			159,225
English Bay	12,940		12,940
<b>SOUTHERN DISTRICT TOTAL</b>	<b>2,685,764</b>	<b>421,536</b>	<b>3,107,220</b>
<b>OUTER DISTRICT</b>			
Dogfish Bay		19,962	19,962
Port Chatham		42,732	42,732
Chugach Bay		3,726	3,726
Windy Bay	93,192		
Windy Right Creek		13,872	
Windy Left Creek		64,600	
Total Run			171,664
Rocky Bay/River		48,129	48,129
Port Dick	568		
Port Dick (head end) Creek		36,926	
Slide Creek		5,535	
Island Creek		71,120	
Total Run			114,149
Nuka Island/South Nuka Isl. Creek	1,331	9,265	10,596
East Arm Nuka Bay (McCarty Fiord)	33,282	<sup>c</sup>	33,282
<b>OUTER DISTRICT TOTAL</b>	<b>128,373</b>	<b>315,867</b>	<b>444,240</b>

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Table 6. (page 2 of 2)

Subdistrict/System	Catch	Escapement <sup>a</sup>	Total Run
<b>EASTERN DISTRICT</b>			
Resurrection Bay North	1		
Bear/Salmon Creeks		6,287	
Clear Creek		1,444	
Sawmill Creek		21	
Spring Creek		538	
Tonsina Creek		360	
Thumb Cove		4,698	
Total Run			13,349
Renard Island/Humpy Cove		2,160	2,160
<b>EASTERN DISTRICT TOTAL</b>	<b>1</b>	<b>15,508</b>	<b>15,509</b>
<b>KAMISHAK BAY DISTRICT</b>			
Inisksin Bay			
North Head Creek		1,540	
Sugarloaf Creek		200	
Total Run			1,740
Ursus Cove			
Brown's Peak Creek		30,640	
Ursus Lagoon Creek		100	
Total Run			30,740
Rocky Cove/Sunday Creek		52,450	52,450
Kirschner Lake	293 <sup>d</sup>		293
Bruin Bay & River		162,712	162,712
<b>KAMISHAK BAY DISTRICT TOTAL</b>	<b>293</b>	<b>247,642</b>	<b>247,935</b>
<b>TOTAL LOWER COOK INLET</b>	<b>2,814,431</b>	<b>1,000,553</b>	<b>3,814,984</b>

a Escapement estimates are derived from periodic ground or aerial surveys with streamlife factors applied.

b Due to inadequate number of escapement surveys, estimated escapement is the peak survey count (44,000) plus nearly 1,000 pinks counted during last survey of the season on 9/15.

c Insufficient survey data to generate escapement estimate.

d All Kirschner Lake pinks were caught during hatchery sockeye salmon cost recovery operations.

Table 7. Number of readable scales and corresponding confidence levels, for age composition estimates of Lower Cook Inlet sockeye and chum salmon samples, 1997.

<b>Fishery</b>	<b>Dates</b>	<b>Sample Size</b>	<b>Type</b>	<b>Confidence interval (d=0.05)<sup>a</sup></b>
<b>Sockeye Salmon</b>				
Aialik Bay	25 June	140	Scale	.607
Chenik Lake	4 July-20 July	312	Scale	.948
China Poot Bay	8 July-11 July	517	Scale	.988
Delight Lake	17 July- 17 August	322	Scale	.882
Desire Lake	20 June-6 August	340	Scale	.927
Mikfik Lake	13 June	179	Scale	.705
Neptune Bay	17 July	442	Scale	.989
Resurrection Bay	10 June- 16 June	254	Scale	.791
Silver Beach	24 June	519	Scale	.996
	Total	3,025		

a Simultaneous confidence interval for multiple age classes (Thompson 1987)

Table 8. Age, sex, and size composition of sockeye salmon commercial catch from China Poot Bay, 1997.

	1.1	1.2	2.1	1.3	2.2	total
Sample Period: 8 July to 11 July.						
<b>Males</b>						
Percent	1.50	40.70		8.90	1.70	52.80
Sample Size	8	210		46	9	273
Mean Length	407	492		540	509	499
Std. Error	19	1		3	6	1
Sample Size	8	210		46	9	273
Mean Weight		1.94		2.36	2.37	2.03
Std. Error		0.06		0.15	0.06	0.05
Sample Size		15		6	2	23
<b>Females</b>						
Percent	0.20	35.40	0.20	10.60	0.80	47.20
Sample Size	1	183	1	55	4	244
Mean Length	386	492	514	547	495	504
Std. Error		1		2	7	1
Sample Size	1	183	1	55	4	244
Mean Weight	1.02	1.85	1.92	2.41	2.14	1.98
Std. Error		0.04		0.14		0.04
Sample Size	1	20	1	4	1	27
<b>Both Sexes</b>						
Percent	1.70	76.10	0.20	19.50	2.50	100.00
Sample Size	9	393	1	101	13	517
Mean Length	405	492	514	544	505	501
Std. Error	19	1		2	5	0
Sample Size	9	393	1	101	13	517
Mean Weight	1.02	1.90	1.92	2.39	2.30	2.00
Std. Error		0.04		0.10	0.06	0.03
Sample Size	1	35	1	10	3	50

Table 9. Age, sex, and size composition of sockeye salmon commercial catch from Neptune Bay, 1997.

	Age Composition by Brood Year							total	
	0.2	1.1	0.3	1.2	2.1	1.3	2.2		2.3
Sample Period: 17 July									
<b>Males</b>									
Percent	0.20	1.40	0.20	40.30	0.20	4.10	4.10	0.20	50.70
Sample Size	1	6	1	178	1	18	18	1	224
Mean Length	488	371	561	483	395	564	497	567	488
Std. Error		8		1		9	8		1
Sample Size	1	6	1	178	1	18	18	1	224
Mean Weight	1.91			1.95		3.69	1.71	2.97	2.08
Std. Error				0.05		1	0.05		0.04
Sample Size	1			20			3	1	26
<b>Females</b>									
Percent		0.20		38.20		5.00	5.20	0.70	49.30
Sample Size		1		169		22	23	3	218
Mean Length		485		480		550	497	514	490
Std. Error				1		9	6	15	1
Sample Size		1		169		22	23	3	218
Mean Weight		1.50		1.59		2.64	1.85		1.73
Std. Error				0.05			0.13		0.04
Sample Size		1		14		1	2		18
<b>Both Sexes</b>									
Percent	0.20	1.60	0.20	78.50	0.20	9.10	9.30	0.90	100.00
Sample Size	1	7	1	347	1	40	41	4	442
Mean Length	488	385	561	482	395	557	497	525	489
Std. Error		8		1		6	5	15	1
Sample Size	1	7	1	347	1	40	41	4	442
Mean Weight	1.91	1.50		1.77		3.11	1.79	2.97	1.90
Std. Error				0.03			0.08		0.03
Sample Size	1	1		34		2	5	1	44

Table 10. Age, sex, and size composition of sockeye salmon escapement from Delight Lake, 1997.

	Age Composition by Brood Year						total
	1.1	1.2	1.3	2.2	1.4	2.3	
Sample Period: 17 July to 17 August							
<b>Males</b>							
Percent		9.00	28.10	3.40		5.90	46.40
Sample Size		29	91	11		19	150
Mean Length		515	571	504		588	557
Std. Error		8	3	11		6	2
Sample Size		29	91	11		19	150
Mean Weight		2.16	2.73	2.00		2.68	2.56
Std. Error		0.14	0.06	0.18		0.14	0.05
Sample Size		16	34	5		9	64
<b>Females</b>							
Percent	0.30	17.30	26.20	4.60	0.60	4.60	53.60
Sample Size	1	56	84	15	2	15	173
Mean Length	485	506	540	488	560	544	525
Std. Error		5	2	5	30	6	2
Sample Size	1	56	83	15	2	15	172
Mean Weight	1.40	1.85	2.17	1.53		1.94	1.99
Std. Error		0.05	0.05	0.06		0.04	0.03
Sample Size	1	37	36	9		5	88
<b>Both Sexes</b>							
Percent	0.30	26.30	54.30	8.00	0.60	10.50	100.00
Sample Size	1	85	175	26	2	34	323
Mean Length	485	509	556	495	560	568	540
Std. Error		4	2	5	30	4	1
Sample Size	1	85	174	26	2	34	322
Mean Weight	1.40	1.96	2.46	1.73		2.36	2.25
Std. Error		0.06	0.04	0.09		0.08	0.03
Sample Size	1	53	70	14		14	152

Table 11. Age, sex, and size composition of sockeye salmon escapement from Desire Lake, 1997.

Age Composition by Brood Year					
	1.2	1.3	2.2	2.3	total
Sample Period : 20 June to 6 August.					
Males					
Percent	10.90	35.00	0.60		46.50
Sample Size	37	119	2		158
Mean Length	535	588	545		575
Std. Error	7	2	14		2
Sample Size	37	119	2		158
Mean Weight	2.50	3.27	2.65		3.08
Std. Error	0.12	0.05	0.25		0.05
Sample Size	27	97	2		126
Females					
Percent	14.40	37.30	0.30	1.50	53.50
Sample Size	49	127	1	5	182
Mean Length	513	557	490	552	545
Std. Error	4	2		6	2
Sample Size	49	127	1	5	182
Mean Weight	2.11	2.69	1.80	2.55	2.52
Std. Error	0.07	0.04		0.22	0.03
Sample Size	38	103	1	4	146
Both Sexes					
Percent	25.30	72.30	0.90	1.50	100.00
Sample Size	86	246	3	5	340
Mean Length	523	572	526	552	559
Std. Error	4	1	14	6	1
Sample Size	86	246	3	5	340
Mean Weight	2.28	2.97	2.37	2.55	2.78
Std. Error	0.06	0.03	0.25	0.22	0.03
Sample Size	65	200	3	4	272

Table 12. Age, sex, and size composition of sockeye salmon commercial catch from Aialik Bay, 1997.

Age Composition by Brood Year					
	1.2	2.1	1.3	2.2	total
Sample Period : 25 June					
Males					
Percent	15.00		25.70	1.40	42.10
Sample Size	21		36	2	59
Mean Length	501		570	508	544
Std. Error	4		7	2	4
Sample Size	21		36	2	59
Females					
Percent	13.60	0.70	42.90	0.70	57.90
Sample Size	19	1	60	1	81
Mean Length	487	416	561	460	540
Std. Error	6		2		2
Sample Size	19	1	60	1	81
Both Sexes					
Percent	28.60	0.70	68.60	2.10	100.00
Sample Size	40	1	96	3	140
Mean Length	494	416	564	492	542
Std. Error	3		3	2	2
Sample Size	40	1	96	3	140

Table 13. Age, sex, and size composition of sockeye salmon commercial catch from Resurrection Bay, 1997.

Age Composition by Brood Year

	0.2	1.1	0.3	1.2	0.4	1.3	2.2	2.3	total
Sample Period : 10 June and 16 June									
Males									
Percent		3.10	0.40	12.60	0.40	17.30	2.40	4.70	40.90
Sample Size		8	1	32	1	44	6	12	104
Mean Length		337	574	487	561	552	531	597	520
Std. Error		7		4		3	6	10	2
Sample Size		8	1	32	1	44	6	12	104
Mean Weight		0.64		2.03		2.77	2.18	2.90	2.35
Std. Error		0.02		0.10		0.10		0.11	0.05
Sample Size		3		11		16	1	5	36
Females									
Percent	0.40	0.40	1.20	23.60		27.60	3.10	2.80	59.10
Sample Size	1	1	3	60		70	8	7	150
Mean Length	577	395	537	482		537	508	596	516
Std. Error			25	3		2	17	15	2
Sample Size	1	1	3	60		70	8	7	150
Mean Weight				1.85		2.44	2.08	2.53	2.18
Std. Error				0.05		0.06	0.03		0.04
Sample Size				26		26	2	1	55
Both Sexes									
Percent	0.40	3.50	1.60	36.20	0.40	44.90	5.50	7.50	100.00
Sample Size	1	9	4	92	1	114	14	19	254
Mean Length	577	344	546	484	561	543	518	597	517
Std. Error		7	25	2		2	10	8	1
Sample Size	1	9	4	92	1	114	14	19	254
Mean Weight		0.64		1.91		2.57	2.12	2.76	2.25
Std. Error		0.02		0.05		0.05	0.03	0.11	0.03
Sample Size		3		37		42	3	6	91

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Table 14. Age, sex, and size composition of sockeye salmon commercial catch from Silver Beach, 1997.

	Age Composition by Brood Year							total	
	0.2	0.3	1.2	0.4	1.3	2.2	1.4		2.3
Sample Period : 24 June									
Males									
Percent	2.10	6.70	0.20	34.30	0.20	0.20	0.20	0.60	44.30
Sample Size	11	35	1	178	1	1	1	3	230
Mean Length	585	481	620	591	593	599	573	573	574
Std. Error	8	8		2			16		2
Sample Size	11	35	1	178	1	1	3		230
Mean Weight	3.69	1.88		3.53					3.28
Std. Error	0.08	0.26		0.11					0.09
Sample Size	2	4		28					34
Females									
Percent	1.70	1.50	4.20	47.10	0.20			1.00	55.70
Sample Size	9	8	22	244	1			5	289
Mean Length	535	559	507	564	519			569	559
Std. Error	17	12	13	1				7	1
Sample Size	9	8	22	244	1			5	289
Mean Weight	1.45		1.73	2.87					2.73
Std. Error			0.22	0.08					0.07
Sample Size	1	4		27					32
Both Sexes									
Percent	1.70	3.60	10.90	81.40	0.40	0.20	0.20	1.60	100.00
Sample Size	9	19	57	422	2	1	1	8	519
Mean Length	535	575	491	576	555	599	570	570	566
Std. Error	17	7	7	1				7	1
Sample Size	9	19	57	422	2	1	1	8	519
Mean Weight	1.45	3.69	1.82	3.15					2.98
Std. Error		0.08	0.18	0.06					0.06
Sample Size	1	2	8	55					66

Table 15. Age, sex, and size composition of sockeye salmon escapement from Chenik Lake, 1997.

	Age Composition by Brood Year			
	1.2	1.3	2.3	total
Sample Period: 4 July to 20 July.				
Males				
Percent	8.30	39.80	0.30	48.40
Sample Size	26	124	1	151
Mean Length	491	559	535	547
Std. Error	4	2		2
Sample Size	26	124	1	151
Mean Weight	1.59	2.40	2.30	2.26
Std. Error	0.05	0.03		0.03
Sample Size	26	124	1	151
Females				
Percent	10.90	40.40	0.30	51.60
Sample Size	34	126	1	161
Mean Length	476	531	572	519
Std. Error	3	2		1
Sample Size	34	126	1	161
Mean Weight	1.32	1.93	2.25	1.80
Std. Error	0.04	0.03		0.02
Sample Size	34	126	1	161
Both Sexes				
Percent	19.20	80.20	0.60	100.00
Sample Size	60	250	2	312
Mean Length	482	545	553	533
Std. Error	2	1		1
Sample Size	60	250	2	312
Mean Weight	1.44	2.16	2.27	2.02
Std. Error	0.03	0.02		0.02
Sample Size	60	250	2	312

Table 16. Age, sex, and size composition of sockeye salmon commercial catch from Mikfik Creek, 1997.

		Age Composition by Brood Year					
		0.3	1.2	1.3	2.2	2.3	total
Sample Period: 13 June.							
Males							
Percent		0.60	10.60	40.20	5.00		56.40
Sample Size		1	19	72	9		101
Mean Length		553	486	523	474		512
Std. Error			8	2	7		2
Sample Size		1	19	72	9		101
Females							
Percent			12.30	25.70	5.00	0.60	43.60
Sample Size			22	46	9	1	78
Mean Length			469	522	457	501	499
Std. Error			8	3	10		3
Sample Size			22	46	9	1	78
Both Sexes							
Percent		0.60	22.90	65.90	10.00	0.60	100.00
Sample Size		1	41	118	18	1	179
Mean Length		553	477	523	465	501	506
Std. Error			5	2	6		2
Sample Size		1	41	118	18	1	179

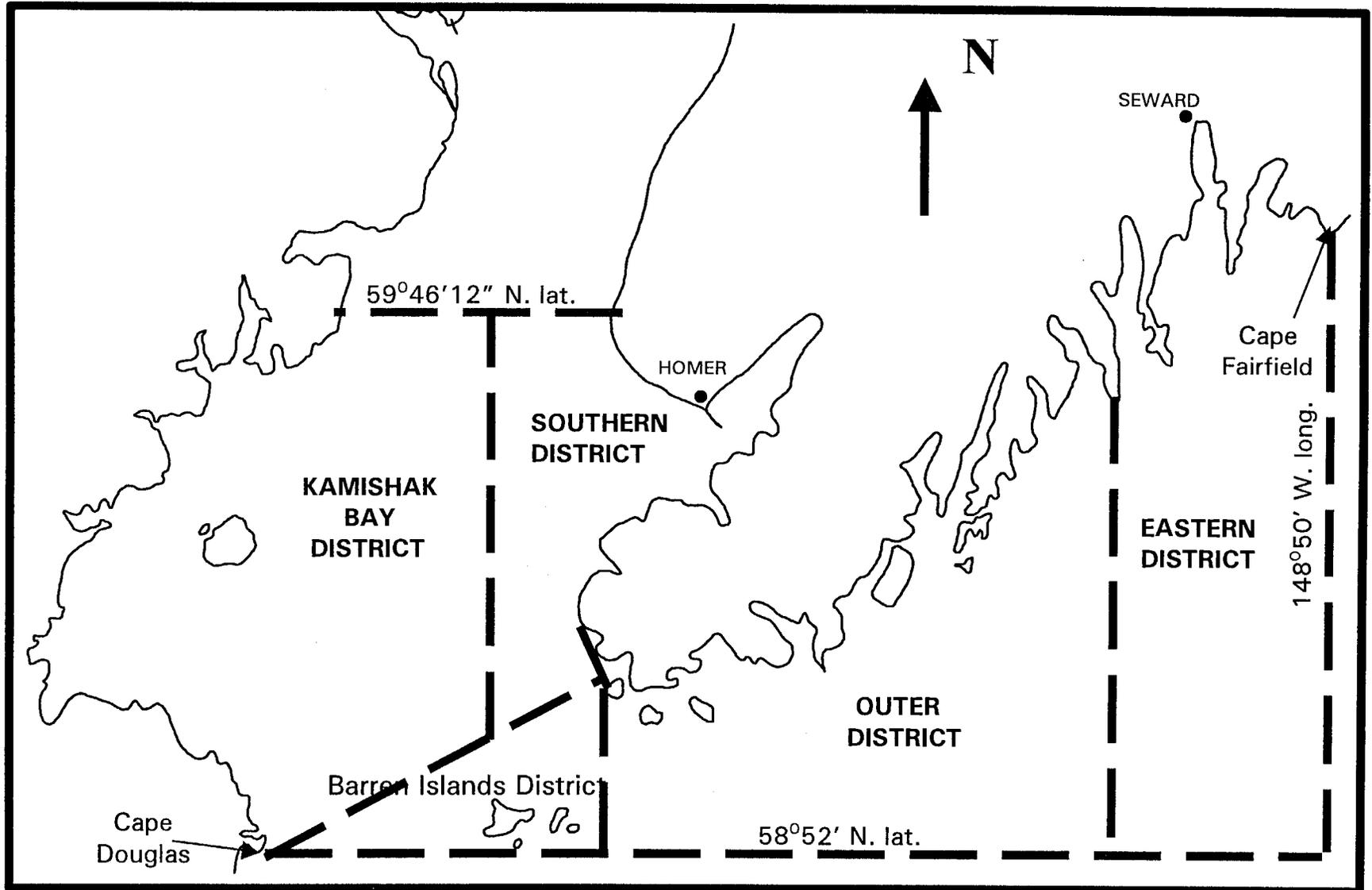


Figure 1. Lower Cook Inlet salmon management districts (not drawn to scale).

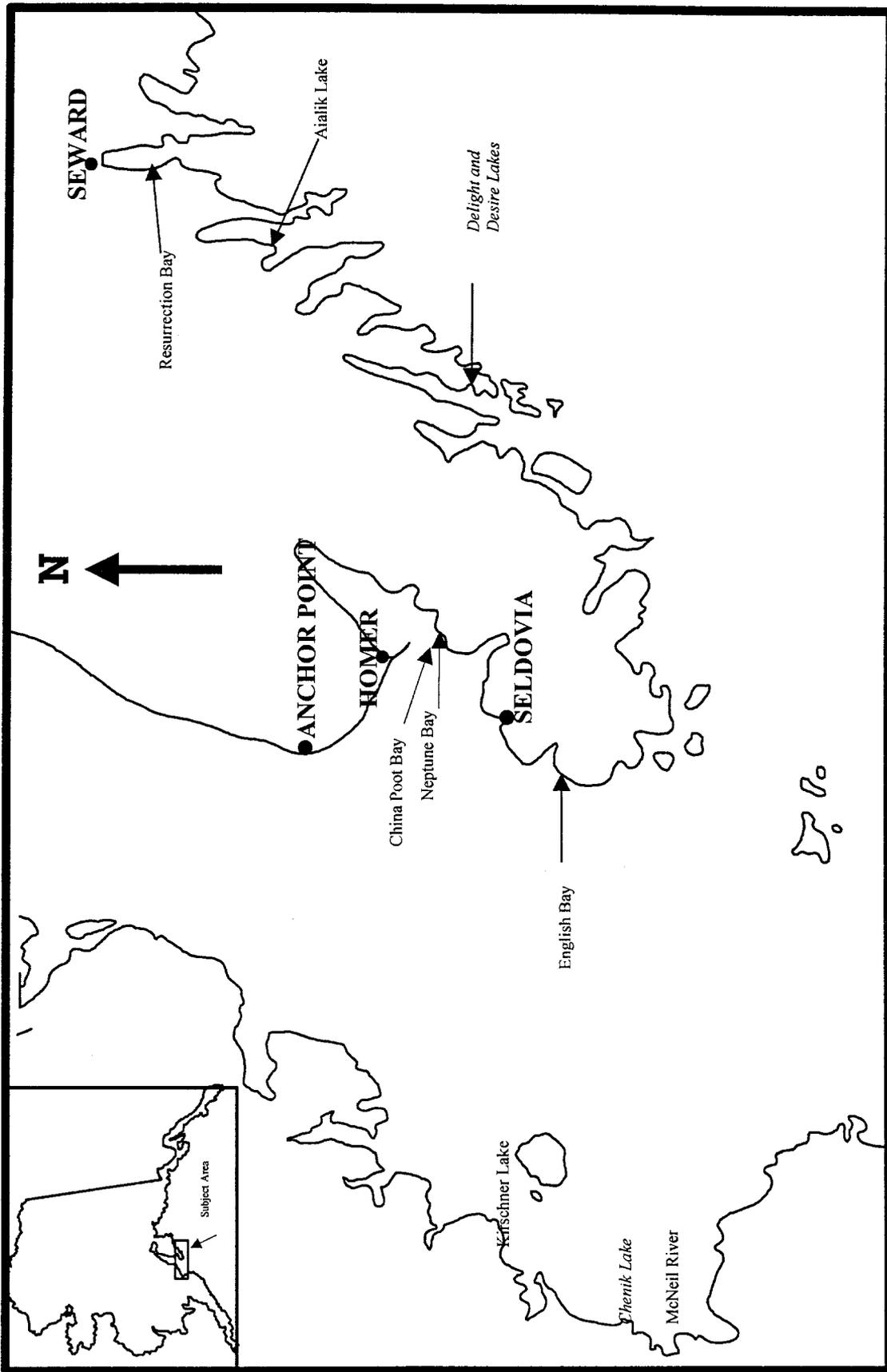


Figure 2. Location of 9 Lower Cook Inlet salmon catch and *escapement* areas sampled in 1997.

## APPENDICES

Appendix A. China Pool: age, and mean length and weight ( $\pm$  Standard Error; SE) of the commercial sockeye salmon catch by brood year and age group. Dashed line indicates missing data; italics indicate escapement data. Calculated means reflect corrections made to previously reported data.

Brood Year	Age Group																													
	1.1	SE	n	1.2	SE	n	1.3	SE	n	1.4	SE	n	2.1	SE	n	2.2	SE	n	2.3	SE	n	2.4	SE	n	3.1	SE	n	3.2	SE	n
Male mean length (mm) by brood year																														
1975						512	NA	1																						
1976				515	4.11	37	540	NA	1																					
1977				489	12.22	25							436	11.00	2						580	35.00	2							
1978							542	NA	1							507	20.00	2			565	NA	1							
1979				514	1.24	247	526	13.63	9	568	NA	1				513														
1980	422	29.61	5	494	1.36	258	539	3.15	34						497	3.38	45													
1981				481	2.24	80	504	15.26	5																					
1982				498	10.48	7																								
1983							534	7.00	19							510	1.00	256			558	9.00	8							
1984				498	2.00	204	560	5.00	35				379	12.00	20	513	2.00	70	530	NA	1							437	22.00	2
1985	351	4.00	20	489	1.00	439	554	5.00	27				407	NA	1	479	4.00	43	554	15.00	4									
1986	366	7.00	4	474	2.00	110	524	12.00	22				352	5.00	3	485	2.00	171	541	9.00	3									
1987	361	4.00	8	478	2.00	259	546	5.00	9				359	7.00	7	493	2.00	117												
1988				484	2.00	125	541						398	11.00	5	518			503	NA	1									
1989	383	3.00	12	495			523	3.00	32				394			483	6.00	11												
1990				465	1.00	150	520	4.00	19							497	9.00	4												
1991				478	1.00	128							403	4.00	3															
1992	391	3.00	21				540	3.00	46							509	6.00	9												
1993	394	6.00	25	492	1.00	210																								
1994	407	19	8																											
Female mean length (mm) by brood year																														
1975																														
1976							523	24.51	3							508	14.00	2												
1977				511	4.16	36																								
1978				490	6.72	51							512	22.00	2					569	NA	1								
1979							573	28.50	2	511	NA	1				525	10.00	2												
1980				513	1.09	296	549	9.41	3							501	6.00	19	547	13.32	3									
1981				494	1.62	186	539	4.53	27							493	3.46	35												
1982				482	1.68	78										496	NA	1												
1983				493	32.46	3				632	NA	1								525	15.00	8								
1984							551	4.00	23							507	1.00	217	562	10.00	6									
1985				494	1.00	197	565	5.00	23				441	56.00	2	517	4.00	41	574	NA	1							486	NA	1
1986	340	NA	1	488	1.00	319	546	6.00	19							473	2.00	66	550	23.00	4									
1987				472	2.00	163	533	7.00	25							478	2.00	151	538	NA	1									
1988				477	2.00	193	524	9.00	8							491	2.00	112												
1989				485	2.00	103	539									521			513	NA	1									
1990				495			521	2.00	40	492	NA	1				472	4.00	15												
1991				464	2.00	79	528	4.00	46				384	2.00	2	466	8.00	4												
1992				490	1.00	277	547	2.00	55				387	NA	1	495	7.00	4												
1993				492	1.00	183							514	NA	1															
1994	386	NA	1																											

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Brood Year	Age Group												
	0.3	0.4	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4	3.1	3.2	3.3
Male harvest (number of fish) by brood year													
1975					152								
1976				5,620	136								
1977				3,394			272		266				
1978					133			266	216				
1979				32,845	1,941	190		1,509					
1980			655	55,632	6,444			8,528					
1981				15,161	4,781								
1982				6,694					1,406				
1983					1,326			17,249	307				
1984				12,862	1,324		1,174	2,592	68			384	
1985			1,126	16,595	1,823		35	2,904	322				
1986			153	7,429	2,141		203	16,172	386				
1987			540	25,628	1,157		452	15,044					
1988				16,073	2,295		643	2,868	88				
1989			1,543	19,789	2,821		287	970					
1990			287	13,225	3,147			662					
1991				21,200	3,638		497	404					
1992			3,478	48,441	3,762			719					
1993			5,452	17,205	1,609			1,126					
1994			634										
Female harvest (number of fish) by brood year													
1975					456			304					
1976				5,468									
1977				6,926			272		133				
1978					266	216		266					
1979				39,360	647			4,097	569				
1980				40,106	5,117			6,633					
1981				14,783				956					
1982				2,869		56			514				
1983					1,567			14,203	229				
1984				11,876	915		113	1,567	68			192	
1985			56	12,078	1,283			4,457	619				
1986				11,008	3,015			17,386	129				
1987				22,622	1,029			14,400					
1988				13,244	2,008			2,008	88				
1989				38,146	3,527	166		1,322					
1990				6,966	7,619		176	662					
1991				54,656	3,834		166	196					
1992				60,544	4,881			338					
1993				14,964	885		85	1,931					
1994			84										

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Year	Age Group																						
	i.1	n	1.2	n	1.3	n	1.4	n	2.1	n	2.2	n	2.3	n	2.4	n	3.1	n	3.2	n	3.3	n	
Male age composition by harvest year																							
1980			46.83	37	1.27	1																	
1981			30.85	25	1.24	1			2.47	2													
1982																							
1983	0.90	5	44.27	247	0.18	1						0.36	2	0.36	2								
1984			53.31	258	1.86	9						1.45	7	0.21	1								
1985			26.40	80	11.22	34	0.33	1				14.85	45										
1986			43.75	7	31.25	5																	
1987																							
1988	1.77	20	20.25	204	2.09	19			1.85	20	27.15	256	2.21	21									
1989	0.43	4	46.36	439	3.70	35			0.10	1	7.24	70	0.86	8									
1990	1.81	8	24.94	110	6.12	27			0.68	3	9.75	43	0.23	1									
1991			28.82	259	2.41	22			0.51	7	18.18	171	0.36	4					0.43	2			
1992	2.42	12	25.25	125	1.82	9			1.01	5	23.64	117	0.61	3									
1993																							
1994			45.32	150	9.67	32					3.32	11	0.30	1									
1995	3.77	21	22.98	128	3.41	19			0.54	3	0.72	4											
1996	4.45	25	39.54	222	2.97	17					0.33	2											
1997	1.50	8	40.70	210	8.90	46					1.70	9											
Female age composition by harvest year																							
1980			45.57	36	3.80	3					2.53	2											
1981			62.96	51					2.47	2													
1982																							
1983			53.05	296	0.36	2					0.36	2	0.18	1									
1984			38.43	186	0.62	3	0.21	1			3.93	19											
1985			25.74	78	8.91	27					11.55	35	0.99	3									
1986			18.75	3							6.25	1											
1987																							
1988	0.09	1	18.69	197	2.47	23	0.09	1	0.18	2	22.36	217	0.81	8									
1989			33.74	319	2.56	23					4.38	41	0.64	6									
1990			36.96	163	4.31	19					14.96	66	0.23	1									
1991			25.44	193	3.39	25					19.55	151	0.70	4					0.22	1			
1992			20.81	103	1.62	8					22.62	112	0.2	1									
1993																							
1994			23.87	79	12.09	40			0.6	2	4.53	15	0.3	1									
1995			59.25	330	8.26	46	0.18	1	0.18	1	0.72	4											
1996			49.42	277	3.13	18					0.16	1											
1997	0.20	1	35.40	183	10.6	55			0.20	1	0.80	4											
Both Sexes																							
1980			92.40	73	5.07	4					2.53	2											
1981			93.81	76	1.24	1			4.94	4													
1982																							
1983																							
1984			91.74	444	2.48	12	0.21	1			5.38	26	0.21	1									
1985			52.14	158	20.13	61	0.33	1			26.40	80	0.99	3									
1986			62.50	10	31.25	5					6.25	1											
1987																							
1988	1.86	21	38.94	401	4.56	42	0.09	1	2.03	22	49.51	473	3.02	29									
1989	0.43	4	80.10	758	6.26	58			0.10	1	11.62	111	1.50	14									
1990	1.81	8	61.90	273	10.43	46			0.68	3	24.71	109	0.46	2									
1991			54.26	452	5.80	47			0.51	7	37.73	322	1.06	8					0.65	3			
1992	2.42	12	46.06	228	3.44	17			1.01	5	46.26	229	0.81	4									
1993																							
1994			69.19	229	21.76	72			0.60	2	7.85	26	0.60	2									
1995	3.77	21	82.23	458	11.67	65	0.18	1	0.72	4	1.44	8											
1996	4.45	25	88.98	499	6.10	35					0.49	3											
1997	1.70	9	76.10	393	19.50	101			0.20	1	2.50	13											



Year	Age Group																
	0.2	0.3	0.4	0.5	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4	3.1	3.2	3.3	SE	n
1977																	
1978						3.14	0.06	51	3.10	0.05	2						
1979		2.87	0.49	3		2.18	0.05	35	3.23	0.10	29						
1980	2.55	NA	1		2.18	0.05	54	3.12	0.04	94							
1981					2.16	0.08	9										
1982																	
1983																	
1984						2.20	0.45	2	2.58	0.33	10						
1985						2.25	0.27	4	3.57	0.12	15						
1986	2.10	NA	1		2.34	0.12	8	2.35	0.16	14							
1987					1.61	0.27	2										
1988						2.76											
1989						2.07			3.07	0.19	8						
1990						1.78	0.10	7	3.21	0.08	22						
1991						2.35	0.07	15	3.24	0.27	7						
1992						2.23	0.06	12	3.12	0.04	131						
1993						2.37	0.09	43									
1994																	

Female mean weight (kg) by brood year

1977																	
1978						2.74	0.06	70									
1979		2.65	0.34	3		1.91	0.04	48	2.63	0.04	45						
1980						1.84	0.03	54	2.65	0.03	95						
1981						1.88	0.06	21									
1982																	
1983																	
1984						2.45	0.20	2	2.48	0.11	8						
1985						1.80	0.17	8	2.87	0.05	38						
1986						1.91	0.09	10	1.99	0.05	27						
1987						1.43	0.08	7									
1988						2.32											
1989						1.83											
1990						1.57	0.11	4	2.57	0.05	26						
1991						2.14	0.07	18	2.71	0.10	17						
1992						2.02	0.06	18	2.55	0.04	139						
1993						1.98	0.05	75									
1994																	

-continued-

Appendix B. cont'd (Nuka Bay: page 3 of 4).

Year	Age Group													
	0.2	0.3	0.4	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4	3.1	3.2	3.3
Male harvest (number of fish) by brood year														
1977														209
1978														----
1979										2,713	----	----	----	----
1980					30,057	----	----	2,922	----	----	----	----	----	28
1981			----		3,757	----	----	----	----	----	----	----	----	----
1982		----	----		----	----	----	----	----	1,993				
1983	----	----		----	----	1,123	----	562	466					7
1984	----			----	281	2,579		93	242				4	----
1985		31			1,398	1,401		453	216	----			----	----
1986	31	14			408	358	----	82	----	----		----	----	----
1987			----		56	----		----	728					
1988		----			----	478	----	166	196					
1989	----	28		----	353	1,054		588	22					
1990					710	4,508	24	22						
1991					2,588	2,851			181					
1992					3,748	1,973		125						
1993					624									
1994														
Female harvest (number of fish) by brood year														
1977														209
1978														----
1979										4,592	----	----	----	----
1980					33,395	----	----	6,053	----	----	----	----	----	28
1981		209	----		7,514	----	----	----	----	28	----	28	----	----
1982		----	----		----	----	----	----	1,854					
1983	----	----		----	----	1,544	----	1,011	870					15
1984	----			----	674	2,734	5	28	280	320			4	----
1985		31			1,740	1,789	4	501	279	----			----	----
1986	31	28			567	494	----	142	----	----		----	----	----
1987			----		112	----		----	713					
1988		----			----	471	----	208	220				12	
1989	----			----	367	1,053	22	968	67					
1990	7				1,103	6,403		67						
1991					3,917	3,148			187					
1992					5,259	1,986		150						
1993					987									
1994				12										

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Year	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4	n	3.1	3.2	n	3.3	n	
1977	0.65	2	2.58	8	29.67	92	0.32	579	1.29	4	22.90	71	0.32	1	0.32	1	0.32	1	0.32	1	0.32	1	0.32	1	0.32	1	0.32	1	0.32	1
1983	1.13	3	18.12	48	26.41	70	0.38	1	8.68	23	1.13	3	3.30	17	1.94	10	0.39	2	6.61	29	5.01	22	6.61	29	5.01	22	6.61	29	5.01	22
1984	0.19	1	30.88	159	15.92	82	0.39	2	8.68	23	1.13	3	3.30	17	1.94	10	0.39	2	6.61	29	5.01	22	6.61	29	5.01	22	6.61	29	5.01	22
1985	0.23	1	8.20	36	36.45	160	0.39	2	6.61	29	5.01	22	6.61	29	5.01	22	6.61	29	5.01	22	6.61	29	5.01	22	6.61	29	5.01	22	6.61	29
1986	0.23	1	8.20	36	36.45	160	0.39	2	6.61	29	5.01	22	6.61	29	5.01	22	6.61	29	5.01	22	6.61	29	5.01	22	6.61	29	5.01	22	6.61	29
1987	0.30	1	7.34	24	16.82	55	0.30	1	11.01	36	20.19	66	0.30	1	0.30	1	0.30	1	0.30	1	0.30	1	0.30	1	0.30	1	0.30	1	0.30	1
1988	0.30	1	16.91	56	26.60	88	0.30	1	2.71	9	8.46	28	2.71	9	8.46	28	2.71	9	8.46	28	2.71	9	8.46	28	2.71	9	8.46	28	2.71	9
1989	0.49	6	9.90	93	31.23	296	0.09	1	8.75	87	5.59	56	8.75	87	5.59	56	8.75	87	5.59	56	8.75	87	5.59	56	8.75	87	5.59	56	8.75	87
1990	0.49	6	6.32	30	27.86	133	0.23	1	8.01	38	15.74	75	8.01	38	15.74	75	8.01	38	15.74	75	8.01	38	15.74	75	8.01	38	15.74	75	8.01	38
1991	0.23	1	6.32	30	27.86	133	0.23	1	8.01	38	15.74	75	8.01	38	15.74	75	8.01	38	15.74	75	8.01	38	15.74	75	8.01	38	15.74	75	8.01	38
1992	0.23	1	6.32	30	27.86	133	0.23	1	8.01	38	15.74	75	8.01	38	15.74	75	8.01	38	15.74	75	8.01	38	15.74	75	8.01	38	15.74	75	8.01	38
1993	0.23	1	6.32	30	27.86	133	0.23	1	8.01	38	15.74	75	8.01	38	15.74	75	8.01	38	15.74	75	8.01	38	15.74	75	8.01	38	15.74	75	8.01	38
1994	0.20	1	18.61	90	17.76	86	0.12	1	16.33	79	3.71	18	16.33	79	3.71	18	16.33	79	3.71	18	16.33	79	3.71	18	16.33	79	3.71	18	16.33	79
1995	0.20	1	22.28	176	36.33	287	0.12	1	0.38	3	0.38	3	0.38	3	0.38	3	0.38	3	0.38	3	0.38	3	0.38	3	0.38	3	0.38	3	0.38	3
1996	0.20	1	33.06	131	20.99	79	0.30	2	0.30	2	2.40	16	0.30	2	2.40	16	0.30	2	2.40	16	0.30	2	2.40	16	0.30	2	2.40	16	0.30	2
1997	0.20	1	15.80	105	31.80	211	0.30	2	0.30	2	2.40	16	0.30	2	2.40	16	0.30	2	2.40	16	0.30	2	2.40	16	0.30	2	2.40	16	0.30	2
Both Sexes																														
1977	1.30	4	3.87	12	47.73	148	0.32	579	2.90	9	41.93	130	0.64	2	0.64	2	0.64	2	0.64	2	0.64	2	0.64	2	0.64	2	0.64	2	0.64	2
1983	0.38	1	31.33	83	45.66	121	0.38	1	17.36	46	2.26	6	17.36	46	2.26	6	17.36	46	2.26	6	17.36	46	2.26	6	17.36	46	2.26	6	17.36	46
1984	0.19	1	60.78	313	27.38	141	0.78	4	4.85	25	5.63	29	0.39	2	0.39	2	0.39	2	0.39	2	0.39	2	0.39	2	0.39	2	0.39	2	0.39	2
1985	0.23	1	12.30	54	69.25	304	0.23	1	9.80	43	7.97	35	9.80	43	7.97	35	9.80	43	7.97	35	9.80	43	7.97	35	9.80	43	7.97	35	9.80	43
1986	0.23	1	12.30	54	69.25	304	0.23	1	9.80	43	7.97	35	9.80	43	7.97	35	9.80	43	7.97	35	9.80	43	7.97	35	9.80	43	7.97	35	9.80	43
1987	0.30	1	10.40	34	29.05	95	0.30	1	17.13	56	41.90	137	0.30	1	0.30	1	0.30	1	0.30	1	0.30	1	0.30	1	0.30	1	0.30	1	0.30	1
1988	0.60	2	30.51	101	51.69	171	0.60	2	3.61	12	12.99	43	0.60	2	0.60	2	0.60	2	0.60	2	0.60	2	0.60	2	0.60	2	0.60	2	0.60	2
1989	0.60	2	30.51	101	51.69	171	0.60	2	3.61	12	12.99	43	0.60	2	0.60	2	0.60	2	0.60	2	0.60	2	0.60	2	0.60	2	0.60	2	0.60	2
1990	0.73	9	17.02	158	35.69	525	0.09	1	16.66	163	9.81	99	16.66	163	9.81	99	16.66	163	9.81	99	16.66	163	9.81	99	16.66	163	9.81	99	16.66	163
1991	0.73	9	17.02	158	35.69	525	0.09	1	16.66	163	9.81	99	16.66	163	9.81	99	16.66	163	9.81	99	16.66	163	9.81	99	16.66	163	9.81	99	16.66	163
1992	0.46	2	9.48	45	48.05	229	0.23	1	12.63	60	27.92	133	0.46	2	0.46	2	0.46	2	0.46	2	0.46	2	0.46	2	0.46	2	0.46	2	0.46	2
1993	0.46	2	9.48	45	48.05	229	0.23	1	12.63	60	27.92	133	0.46	2	0.46	2	0.46	2	0.46	2	0.46	2	0.46	2	0.46	2	0.46	2	0.46	2
1994	0.20	1	30.59	148	35.54	172	0.40	2	26.25	127	7.02	54	0.20	1	0.20	1	0.20	1	0.20	1	0.20	1	0.20	1	0.20	1	0.20	1	0.20	1
1995	0.20	1	36.96	292	61.91	489	0.12	1	0.50	4	0.50	4	0.20	1	0.20	1	0.20	1	0.20	1	0.20	1	0.20	1	0.20	1	0.20	1	0.20	1
1996	0.20	1	60.00	225	40.00	150	0.20	1	0.50	4	0.50	4	0.20	1	0.20	1	0.20	1	0.20	1	0.20	1	0.20	1	0.20	1	0.20	1	0.20	1
1997	0.20	1	25.80	171	63.40	421	0.30	2	4.40	29	5.90	39	0.20	1	0.20	1	0.20	1	0.20	1	0.20	1	0.20	1	0.20	1	0.20	1	0.20	1

Appendix C. Aialik Bay: age, mean length and weight ( $\pm$  Standard Error, SE) of the commercial sockeye salmon catch by brood year and age group. Dashed line indicates missing data; italics indicate escapement data. Calculated means reflect corrections made to previously reported data.

Year	Age Group																										
	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	SE	n			
Male mean length (mm) by brood year																											
1978											581	490	22									534	7.28	4	586	12.59	6
1979											502	3.56	89	581	2.43	93	648	NA	1			529	7.06	8	582	6.34	20
1980										355	25.00	2	515	2.78	116	569	2.71	85				510	7.14	30	571		
1981										400	NA	1	500	9.98	17	566				380	NA	1	498				
1982											496																
1983																											
1984											517	3.00	58	590	2.00	214	610	4.00	2			512	10.0	9	607	5.00	39
1985											521	3.00	65	613	4.00	50						539	5.00	19	610	9.00	12
1986											541	5.00	73	566	4.00	38						545	2.00	126	571	3.00	103
1987	478	NA	1								496	8.00	29								498	7.00	22				
1988																											
1989																											
1990											568	2.00	110									534	NA	1			
1991											513	3.00	64														
1992										337	NA	1										508	2.00	2			
1993											501	4.00	21														
1994																											
Female mean length (mm) by brood year																											
1978											557	2.85	43	546	10.82	5						530	na	1	565	6.25	3
1979											499	2.27	119	557	2.22	100						512	7.75	4	548	5.25	24
1980											493	2.23	117	551	1.76	103						493	4.11	19	547		
1981											539	NA	1								501						
1982											496																
1983																											
1984											555	2.00	110									506	9.00	17	579	6.00	21
1985											502	2.00	110	563	1.00	274	632	NA	1			526	4.00	27	594	6.00	6
1986											506	3.00	70	579	4.00	56						520	2.00	137	547	2.00	149
1987											529	3.00	66	544	3.00	68						501	4.00	37			
1988											496	5.00	29														
1989																											
1990											548	1.00	191									496	15.0	5			
1991											497	1.00	154														
1992										515	NA	1										460	NA	1			
1993											487	6.00	19									416	NA	1			
1994																											

-continued-

Age Group

Year	0.2	SE	n	0.3	SE	n	0.4	SE	n	1.1	SE	n	1.2	SE	n	1.3	SE	n	1.4	SE	n	2.1	SE	n	2.2	SE	n	2.3	SE	n
------	-----	----	---	-----	----	---	-----	----	---	-----	----	---	-----	----	---	-----	----	---	-----	----	---	-----	----	---	-----	----	---	-----	----	---

Male mean weight (kg) by brood year

1978																3.16	0.10	8								2.67	0.21	3	2.90	NA	1
1979													0.06	38.00		3.34	0.07	38	4.80	NA	1					2.37	0.28	2	3.76	0.14	14
1980													2.42	0.06	54	3.50	0.07	51								2.56	0.12	17	2.86		
1981													2.63	0.16	5	2.96							1.30	NA	1	2.11					
1982													2.10																		
1983																3.37	0.35	9								1.55	NA	1	3.45	0.50	2
1984													2.44	0.19	6	3.80	0.16	20								2.45	NA	1	3.10	NA	1
1985													1.59	0.22	4	3.69	0.19	7								2.61	0.10	15	2.86	0.08	17
1986													2.48	0.52	4	2.96	0.13	5								2.11	0.18	3			
1987										0.80			2.10	0.22	6																
1988																															
1989																															
1990																3.28	0.10	16													
1991													2.47	0.14	4																
1992																															
1993																															
1994																															

Female mean weight (kg) by brood year

1978																2.94	0.09	14	2.85	NA	1					2.55	0.00	1	3.00	0.05	2
1979													2.03	0.05	43	2.93	0.05	59								2.33	0.08	2	3.20	0.10	12
1980													2.01	0.04	56	3.04	0.04	54								2.66	0.21	7			
1981				2.95	NA	1							2.28	0.08	9																
1982																															
1983																2.91	0.31	7								2.20	0.50	2	2.95	NA	1
1984													1.88	0.13	13	2.99	0.07	31								1.80	0.05	2	3.10	NA	1
1985													1.97	0.14	9	3.10	0.21	3								2.02	0.08	18	2.37	0.05	25
1986													1.85	0.04	6	2.42	0.09	11								1.96	0.14	5			
1987													1.76	0.08	5																
1988																															
1989																															
1990																2.52	0.07	22								1.81	NA	1			
1991													2.02	0.05	13																
1992																															
1993																															
1994																															

-Continued-

Year	Age Group													
	0.2	0.3	0.4	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4	3.1	3.2	3.3
Male harvest (number of fish) by brood year														
1978														
1979														----
1980														-----
1981														-----
1982														1,440
1983														3,184
1984														29
1985														83
1986														174
1987														1,824
1988														1,020
1989														218
1990														68
1991														159
1992														287
1993														4
1994														-----
Female harvest (number of fish) by brood year														
1978														
1979														----
1980														-----
1981														-----
1982														2,312
1983														4,799
1984														742
1985														92
1986														118
1987														87
1988														1,982
1989														1,476
1990														366
1991														67
1992														160
1993														287
1994														255

Continued

Appendix C cont'd (Aialik Bay: page 4 of 4)

Year	Age Group																			
	0.2	n	0.3	n	0.4	n	1.1	n	1.2	n	1.3	n	1.4	n	2.1	n	2.2	n	2.3	n
Male age composition by harvest year																				
1983							0.71	2	31.79	89	7.86	22					1.43	4		
1984							0.22	1	25.61	116	20.53	93					1.77	8	1.32	6
1985									5.35	17	26.73	85	0.32	1	0.32	1	9.43	30	6.29	20
1986									7.55		9.90						5.70		26.85	
1987																				
1988									12.50	58	15.73	73					1.94	9	7.11	33
1989					0.05	1	0.11	2	4.06	65	36.12	214					0.97	19	1.99	39
1990	0.18	1	0.18	1					13.75	73	9.41	50	0.38	2			23.74	126	2.27	17
1991									6.10	29	7.99	38					6.64	22	21.69	103
1992																			2.72	
1993																				
1994																				
1995							0.20	1	12.08	64	20.70	110					0.20	1	0.20	1
1996																				
1997									15.00	21	25.70	36					1.40	2		
Female age composition by harvest year																				
1983									42.50	119	15.36	43					0.36	1		
1984									25.83	117	22.07	100	1.10	5			0.88	4	0.66	3
1985			0.32	1					5.35	17	32.39	103					5.97	19	7.55	24
1986									5		12						7		26	
1987																				
1988			0.22	1					23.71	110	23.70	110					3.67	17	11.42	53
1989									4.32	70	49.92	274					1.38	27	1.08	21
1990									12.43	66	10.54	56	0.18	1			25.80	137	1.13	6
1991									6.10	29	14.31	68					7.78	37	31.38	149
1992											NA								3	
1993																				
1994																				
1995							0.20	1	29.07	154	35.97	191	0.20	1			0.96	5	0.20	1
1996																				
1997									13.60	19	42.90	60			0.70	1	0.7	1		
Both sexes																				
1983							0.71	2	74.29	208	23.22	65					1.79	5		
1984							0.22	1	51.44	233	42.60	193	1.10	5			2.65	12	1.98	9
1985			0.32	1					10.70	34	59.12	188	0.32	1	0.32	1	15.40	49	13.84	44
1986																				
1987																				
1988			0.22	1					36.21	168	39.43	183					5.61	26	18.53	86
1989																				
1990	0.18	1	0.18	1					26.18	139	19.95	106	0.56	3			49.54	263	3.40	18
1991									12.20	58	22.30	106					12.42	59	53.07	252
1992									5.40	2	89.20	33							5.40	2
1993																				
1994									70.37	190	18.89	51					7.78	21	2.96	8
1995							0.40	2	41.15	218	56.67	301	0.20	1			1.16	6	0.40	2
1996																				
1997									28.60	40	68.60	96			0.70	1	2.10	3		

Appendix D. Chenik: age, mean length and weight (+\_ Standard Error; SE) of the commercial sockeye salmon catch by brood year and age group. Dashed line indicates missing data; italics indicate escapement data. Calculated means reflect corrections made to previously reported data.

Year	Age Group																															
	0.2	SE	n	0.3	SE	n	0.4	SE	n	1.1	SE	n	1.2	SE	n	1.3	SE	n	1.4	SE	n	2.1	SE	n	2.2	SE	n	2.3	SE	n		
Male mean length (mm) by brood year																																
1978														581	4	36																
1979													533	5	20	574	14	4														
1980													508	2	122	568	2	93														
1981													498	5	18	569	9	12	----					509	6	22	----					
1982													508	2	214	----			602	NA	1			----			585	NA	3			
1983													----			565	1	441					----		508	3	21	571	4	26		
1984	----												498	3	83	568	3	92					370	5	8	535	3	45	555	11	7	
1985													518	2	46	554	3	114							502	6	16	562	5	9		
1986				552	26	5							493	1	327	550	2	104							517	9	10					
1987	417	NA	1										505	2	142	547	3	80														
1988													501	2	85	553	1	262	550	NA	1				549	5	6					
1989													516	5	32	548	3	44					329	NA	1	509	NA	1	541	9	2	
1990													497	1	44	558	1	203														
1991													504	3	80												535	NA	1			
1992																559	2	124														
1993										436	NA	1	491	4	26																	
1994																																
Female mean length (mm) by brood year																																
1978																548	2.56	46														
1979													497	3	57	538	11	4	515	NA	1						537	24	3			
1980													486	2	91	542	2	118							467	20	3					
1981				547	1	2							485	5	17	530	3	6	----						489	3	16	----				
1982													486	2	132	----									----			561	16	5		
1983													----			536	1	520					----		490	3	48	543	5	16		
1984	----												484	2	111	542	2	69							505	3	47	523	14	4		
1985													494	3	62	534	2	125						324	NA	1	485	6	15	512	7	3
1986				537	7	7							469	2	272	530	2	148							492	10	8	537	NA	1		
1987													481	2	94	512	3	55														
1988													487	3	70	532	1	203							496	NA	1					
1989													492	4	32	530	3	39							482	25	2	544	NA	1		
1990													476	3	52	531	1	181							470	NA	1					
1991													478	3	57													572	NA	1		
1992																531	2	126														
1993													476	3	34																	
1994																																

Appendix D. cont'd (Chenik: page 2 of 4).

Year	Age Group																														
	0.2	SE	n	0.3	SE	n	0.4	SE	n	1.1	SE	n	1.2	SE	n	1.3	SE	n	1.4	SE	n	2.1	SE	n	2.2	SE	n	2.3	SE	n	
Male mean weight (kg) by brood year																															
1978																2.64	0.05	36													
1979													2.05	0.06	20	2.58	0.03	2													
1980													1.76	0.03	56	2.81	0.07	27													
1981													2.08	0.06	8	2.20	0.28	4	----						1.75	0.09	12.00	----			
1982													1.64	0.03	81	----															
1983													----			2.60	0.06	49						----	1.98	NA	2.00	2.30	NA	1.00	
1984	----												1.71	0.12	13	2.50	0.13	9					0.90	NA	1.00	2.18	0.09	4.00			
1985													2.05	NA	1	2.37	0.14	3										1.99	0.06	3.00	
1986													1.82	0.06	25	1.71	0.05	21						1.59	0.03	3.00					
1987													1.40	0.04	26	2.10	0.10	16													
1988													1.60	0.07	17	2.11	0.06	24										2.20	NA	1.00	
1989													1.37	0.20	3	2.19	0.05	44						1.70	NA	1.00	2.05	0.25	2.00		
1990													1.56	0.02	144	2.25	0.02	203													
1991													1.65	0.03	80													2.30	NA	1	
1992																2.40	0.03	124													
1993													2.0	NA	1	1.59	0.05	26													
1994																															
Female mean weight (kg) by brood year																															
1978																2.05	0.04	46													
1979													1.52	0.03	57	2.02	0.06	3										3.60	NA	1.00	
1980													1.39	0.03	55	2.44	0.06	27													
1981				3.00	NA	1.00							1.88	0.09	3	1.83	0.09	3	----					1.46	0.07	9.00	----				
1982													1.39	0.03	37	----															
1983													----			2.01	0.05	44					----	1.55	NA	2.00	1.90	NA	1.00		
1984	----												1.54	0.06	15	2.03	0.12	6								1.75	0.11	4.00			
1985													1.53	0.09	4	2.10	NA	1							1.30	NA	1.00				
1986													1.52	0.04	16	1.50	0.03	24						1.38	NA	1.00	1.89	NA	1.00		
1987													1.10	0.04	14	1.55	0.11	9													
1988													1.48	0.09	12	1.78	0.05	25													
1989													1.40	NA	1	1.81	0.05	39						1.35	0.05	2.00	1.80	NA	1.00		
1990													1.37	0.03	52	1.77	0.02	181						1.10	NA	1.00					
1991													1.29	0.03	57													2.25	NA	1	
1992																1.93	0.03	126													
1993													1.32	0.04	34																
1994																															

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Appendix D. cont'd (Chenik: page 3 of 4).

Year	Age Group													
	0.2	0.3	0.4	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4	3.1	3.2	3.3
Male harvest (number of fish) by brood year														
1979														
1980						3,875								
1981					750	3,322			6,091					
1982					59,250		187			414				
1983						63,150			2,951	2,504				
1984					9,843	8,860		1,079	4,333	588				
1985					4,430	9,577			1,120	900				
1986		451			24,897	10,395								
1987	90				14,192	3,953								
1988					4,199	11,986			274					
1989					1,464			46						
1990											0			0
1991							0			0			0	
1992			0			0			0				0	
1993		0		1	0			0						
1994	0			0										
Female harvest (number of fish) by brood year														
1979							42			125				
1980						4,916			125					
1981		83			708	1,661			4,430					
1982					36,546					904				
1983						65,687			6,063	1,541				
1984					13,882	6,644			4,526	361				
1985					5,971	10,870		96	1,159	300				
1986		632			20,602	14,792			800	49				
1987					9,395	2,717								
1988					3,460	9,287			46					
1989					1,464									
1990											0			0
1991							0			0			0	
1992			0			0			0				0	
1993		0			0			0						
1994	0			0										

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Year	Age Group																			
	0.2	n	0.3	n	0.4	n	1.1	n	1.2	n	1.3	n	1.4	n	2.1	n	2.2	n	2.3	n
Male age composition by harvest year																				
1983								12.57	20	22.64	36									
1984								55.20	122	1.81	4									
1985								7.06	18	36.47	93									
1986								53.23	214	2.98	12						5.47	22		
1987																				
1988								6.00	83	38.47	441	0.11	1	0.66	8	1.80	21	0.25	3	
1989								11.39	46	22.77	92					11.14	45	6.44	26	
1990	0.13	1	0.64	5				35.39	327	13.61	114					1.59	16	0.84	7	
1991								27.41	142	20.08	104					1.93	10	1.74	9	
1992								29.20	85	27.49	80									
1993								5.96	32	48.79	262			0.19	1	1.12	6			
1994								50.74	144	15.59	44	0.37	1			0.37	1			
1995								15.19	80	38.77	203								0.37	2
1996						0.16	1	31.80	179	16.61	94					0.16	1			
1997								8.30	26	39.80	124								0.30	1
Female age composition by harvest year																				
1983								35.86	57	28.93	46									
1984								41.18	91	1.81	4									
1985			0.78	2				6.66	17	46.27	118	0.40	1			1.18	3	1.18	3	
1986								32.84	132	1.49	6					3.98	16			
1987																				
1988								8.46	111	40.01	520					3.69	48	0.55	5	
1989								15.35	62	17.08	69			0.25	1	11.63	47	3.96	16	
1990			0.90	7				29.29	272	15.45	125					1.65	15	0.51	4	
1991								18.15	94	28.57	148					1.55	8	0.58	3	
1992								24.06	70	18.90	55							0.34	1	
1993								5.96	32	37.80	203					0.19	1			
1994								18.44	52	13.74	39					0.74	2			
1995								10.87	57	34.44	181					0.18	1	0.18	1	
1996								33.70	190	17.41	98					0.16	1			
1997								10.90	34	40.40	126								0.30	1
Both Sexes																				
1983								48.43	77	51.57	82									
1984								96.38	213	3.62	8									
1985			0.78	2				13.72	35	82.74	211	0.40	1			1.18	3	1.18	3	
1986								86.07	346	4.47	18					9.45	38			
1987																				
1988								14.46	194	78.48	961	0.11	1	0.66	8	5.49	69	0.80	8	
1989								26.74	108	39.85	161			0.25	1	22.77	92	10.40	42	
1990	0.13	1	1.54	12				64.68	599	29.06	239					3.24	31	1.35	11	
1991								45.56	236	48.65	252					3.48	18	2.32	12	
1992								53.26	155	46.39	135							0.34	1	
1993								11.92	64	86.59	465			0.19	1	1.31	7			
1994								69.18	196	29.33	83	0.37	1			1.11	3			
1995								26.06	137	73.21	384					0.18	1	0.55	3	
1996						0.16	1	65.51	369	34.02	192					0.32	2			
1997								19.20	60	80.20	250					0.60	2			

Appendix E. Mikfik: age, and mean length and weight ( $\pm$  Standard Error; SE) of the commercial sockeye salmon catch by brood year and age group. Dashed line indicates missing data; italics indicate escapement data. Calculated means reflect corrections made to previously reported data. \*Indicates samples were collected by snagging.

Year	Age Group																																					
	0.3	SE	n	0.4	SE	n	1.1	SE	n	1.2	SE	n	1.3	SE	n	1.4	SE	n	2.1	SE	n	2.2	SE	n	2.3	SE	n	2.4	SE	n	3.1	SE	n	3.2	SE	n	3.3	SE
Male mean length (mm) by brood year																																						
1969																																						
1970													545*	NA	1																							
1971												503*	15.5	5	416	NA	1																					
1972												454	23.9	3																								
1973																																						
1974																																						
1975																																						
1976																																						
1977																																						
1978																																						
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1988																																						
1989																																						
1990																																						
1991																																						
1992																																						
1993																																						
1994																																						
Female mean length (mm) by brood year																																						
1969																																						
1970																																						
1971																																						
1972																																						
1973																																						
1974																																						
1975																																						
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1987																																						
1988																																						
1989																																						
1990																																						
1991																																						
1992																																						
1993																																						
1994																																						

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Year	Age Group									
	0.3 SE	0.4 SE	1.1 SE	1.2 SE	1.3 SE	1.4 SE	2.1 SE	2.2 SE	2.3 SE	2.4 SE
	n	n	n	n	n	n	n	n	n	n
1969										
1970										
1971										
1972										
1973										
1974										
1975										
1976										
1977										
1978										
1979										
1980										
1981										
1982										
1983										
1984										
1985										
1986										
1987										
1988										
1989										
1990										
1991										
1992										
1993										
1994										

Female mean weight (kg) by brood year										
Year	0.3 SE	0.4 SE	1.1 SE	1.2 SE	1.3 SE	1.4 SE	2.1 SE	2.2 SE	2.3 SE	2.4 SE
	n	n	n	n	n	n	n	n	n	n
1969										
1970										
1971										
1972										
1973										
1974										
1975										
1976										
1977										
1978										
1979										
1980										
1981										
1982										
1983										
1984										
1985										
1986										
1987										
1988										
1989										
1990										
1991										
1992										
1993										
1994										

Year	Age Group													
	0.2	0.3	0.4	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4	3.1	3.2	3.3
Male harvest (number of fish) by brood year														
1976										1,386				
1977					4,552									
1978					990									
1979													93	
1980							186			279	0		0	
1981						10,869	0		1,208	0		0		
1982			0		3,995	0	0		0	131				
1983		0			0	3,892		0	352	314				
1984	0			0	2,676	2,933			382	782				
1985					355	1,965			313	122				
1986					2,188	3,897			950	252				
1987					853	1,730			37	37				
1988					141	197			25					
1989					185					5	0			0
1990				4		36	0		2	0			0	
1991			0		21	0			0			0		
1992		0		1	0	84		0	10					
1993	0	1		0	22									
1994					1,224				288					
Female harvest (number of fish) by brood year														
1976										1,782				
1977					7,324									
1978					1,979									
1979														0
1980										372	0		93	
1981						5,852	0		1,394	0		0		
1982		93	0		3,066	0			0	42				
1983		0			0	3,746		0	381	164				
1984	0			0	3,420	2,129			355	447				
1985					368	1,541			201	292				
1986					1,629	3,776			1,583	134				
1987					1,413	1,469			37	29				
1988					163	209			27					
1989					213					1	0			0
1990				15		35	0		3	0			0	
1991		1	0		31	0			0	1		0		
1992		0			0	54		0	10					
1993	0			0	26	1,296			792					
1994														

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Year	Age Group																										
	0.3	n	0.4	n	1.1	n	1.2	n	1.3	n	1.4	n	2.1	n	2.2	n	2.3	n	2.4	n	3.1	n	3.2	n	3.3	n	
Male age composition by harvest year																											
1975						55.56	5	11.11	1				11.11	1													
1976						13.63	3	4.55	1				4.55	1													
1977																											
1978																											
1979																											
1980						22.10	15	17.60	12				1.50	1													
1981																											
1982						5.50	5	25.27	23							7.69	7										
1983																											
1984																											
1985																											
1986						14.53	43	39.52	117	0.68	2		4.39	13	1.01	3								0.34	1		
1987																											
1988						18.28	130	26.58	190				2.40	17	0.89	6											
1989						5.07	26	41.90	215				5.46	28	4.49	23											
1990						24.13	98	21.67	88				3.45	14	8.63	35											
1991						6.62	35	30.24	160				7.37	39	0.95	5											
1992						3.56	19	43.65	233				0.93	5	6.36	34											
1993			0.43	2		19.66	96	20.94	102				2.66	13	3.93	19											
1994																											
1995																											
1996																											
1997	0.06	1				10.6	19	40.20	72				5.00	9													
Female age composition by harvest year																											
1975						11.11	1	11.11	1																		
1976						45.45	10	18.18	4				13.64	3													
1977																											
1978																											
1979																											
1980						22.10	15	33.80	23				2.90	2													
1981																											
1982						10.99	10	40.66	37						9.89	9											
1983																											
1984																											
1985																											
1986	0.34	1				11.15	33	21.28	63				5.07	15	1.35	4							0.34	1			
1987																											
1988						23.36	161	25.59	181				2.60	18	0.29	2											
1989						5.26	27	30.41	156				5.07	26	2.34	12											
1990						17.97	73	17.00	69				2.22	9	4.93	20											
1991						10.97	58	29.30	155				12.28	65	2.27	12											
1992						4.11	22	37.07	198				0.93	5	3.38	18											
1993			1.59	8		22.64	110	22.21	108				2.87	14	3.08	15											
1994																											
1995																											
1996																											
1997						12.3	22	25.7	46				5.0	9	0.60	1											
Both Sexes																											
1975						66.67	6	22.22	2				11.11	1													
1976						59.08	13	22.73	5				18.19	4													
1977																											
1978																											
1979																											
1980						44.20	30	51.40	35				4.40	3													
1981																											
1982						16.49	15	65.93	60						17.58	16											
1983																											
1984																											
1985																											
1986						25.68	76	60.80	180	0.68	2		9.46	28	2.36	7							0.34	1	0.34	1	
1987																											
1988						41.64	291	52.17	371				5.00	35	1.18	8											
1989						10.33	53	72.31	371				10.53	54	6.83	35											
1990						42.10	171	38.67	157				5.67	23	13.56	55											
1991						17.59	93	59.54	315				19.63	104	3.22	17											
1992						7.67	41	80.72	431				1.86	10	9.74	52											
1993			2.02	10		42.30	206	43.15	210				5.53	27	7.01	34											
1994																											
1995																											
1996																											
1997	0.60	1				22.9	41	65.9	118				10.0	18	0.60	1											

Appendix F. Inventory of Lower Cook Inlet Sockeye and Chum salmon AWL data, 1983 through 1999<sup>a</sup>.

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
<b>SOCKEYE</b>															
China Poot	C	C	C	C		C	C	C	C	C	C	C	C	C	C
Neptune Bay											C	C,E	C	C	C
English Bay	C									E	E	E		E	
Chenik Lk	C	C	E	C		E	E	E	E	E	E	E	E	E	
E. Nuka Bay		C	C			C	C	C	C		C	C	C		
Delight Lake										C		E	E	E	E
Desire Lk	E		C									E			E
Kirschner Lk									C	C	C	C	C	C	
Aialik	C	C	C			C	C	C	C				C		C
Grouse Lake															
Resurrection Bay		C										C	C	C	C
Resurrection Bay (Bear Lk)															
Douglas River									C						
Silver Beach	C									C	C	C			C
Mikfik Lake	C		C	C		C	C	C	C	C	C		C		C
<b>CHUM</b>															
McNeil River	C	C		C		C				C		C	C	E	
Cottonwood Cr						C				C					
Silver Beach						C				C					
Iniskin River	C	C				C									
Tonsina Cr.	C		C			C									
Aialik Bay		C													
Kamishak River	C	C							C						
Resurrection Bay		C													
Port Dick Bay						C			C						
Bruin Bay								C		C					
Rocky Bay		C													
Ursus Bay		C													

<sup>a</sup>Limited AWL data is available 1968 through 1982 from the following systems: English Bay River, Resurrection Bay, McDonald Spit, Mikfik Lake, Port Dick Bay (chum), Island Cr (chum), Kasitsna Bay, Cottonwood Cr (chum), Ursus Bay (chum), Delight and Desire Lakes, McNeil River and Silver Beach (chum)

C = Commercial catch sample E= Escapement sample

Appendix G. Names and locations of files used to generate this report. All files are stored on the hard drive of the Dell Dimension XPS H233 research computer (property number 10074778), and backed up on 3.5" floppy diskettes and/or zip disks.

File name	Subdirectory	Format	Description
97salmawl.rir.doc	D:\REPORTS\SALMON\AWL	Word 97	Text, tables and figures (minus appendices) for the 1997 LCI salmon AWL Regional Information Report.
97Appendix-A.doc	D:\REPORTS\SALMON\AWL	Word 97	China Poot age, mean weight and length by brood year and age group.
97Appendix-B.doc	D:\REPORTS\SALMON\AWL	Word 97	East Nuka Bay, mean weight and length by brood year and age group.
97Appendix-C.doc	D:\REPORTS\SALMON\AWL	Word 97	Aialik Lake age, mean weight and length by brood year and age group.
97Appendix-D.doc	D:\REPORTS\SALMON\AWL	Word 97	Chenik Lake age, mean weight and length by brood year and age group.
97Appendix-E.doc	D:\REPORTS\SALMON\AWL	Word 97	Mikfik Lake age, mean weight and length by brood year and age group.
97Appendix_F.doc	D:\REPORTS\SALMON\AWL	Word 97	Adult salmon scale archive
97Appendix-G.doc	D:\REPORTS\SALMON\AWL	Word 97	Report location(s)

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