

ABUNDANCE, AGE, SEX, AND SIZE STATISTICS
FOR SOCKEYE, CHUM, AND PINK SALMON IN LOWER COOK INLET, 1994.



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ABSTRACT

Aerial and foot surveys were used to estimate the 1994 sockeye *Oncorhynchus nerka*, chum *O. keta*, and pink *O. gorbuscha* salmon escapements in Lower Cook Inlet. Age, length, and weight samples were obtained from six sockeye and one chum and six sockeye salmon escapements. A total of 115,418 sockeye, 5,469 chum, and 1,647,929 pink salmon were harvested in this management area. Another 63,669 sockeye, 124,143 chum, and 358,590 pink salmon were estimated in the spawning escapement. The dominant ages of sockeye salmon throughout Lower Cook Inlet were 1.2, 1.3, 2.2, and 2.3, except for Bear Lake in Resurrection Bay which had a high proportion of age-0.2 sockeye salmon. The proportion of sockeye salmon males ranged from a low of 34% in Neptune Bay catch samples to a high of 79% in Desire Lake escapement samples. Sockeye salmon ranged in size from 469 mm in Ecstasy Lake to 550 mm in English Bay and from 1.30 kg in China Poot Bay to 2.45 kg in English Bay River. McNeil River chum salmon age groups included 0.3, 0.4, and 0.5.

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

INTRODUCTION

The Lower Cook Inlet Management Area for salmon 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 four management districts: Kamishak Bay, Southern, Outer, and Eastern (Figure 1). Purse seines and set gillnets are the only legal commercial gear types for salmon. Entry into the commercial fishery was limited in 1972.

Since 1961, catches of all five species of Pacific salmon have been documented in this area, and in 1970 the Alaska Department of Fish and Game (ADF&G) began sampling the sockeye *Oncorhynchus nerka* and chum salmon *O. keta* catches for age, sex, weight and length (AWL). AWL data between 1970 and 1986, and between 1988 and 1993, has been summarized by Schroeder (1984, 1985, 1986), Morrison (1987), Yuen et al. (1989, 1990, 1991, 1992), and Yuen and Bucher (1994a, 1994b). There was no catch-sampling program in 1987. Aerial and ground escapement surveys of pink salmon *O. gorbuscha* began in 1960, chum salmon in 1964, and sockeye salmon in 1969. Annual escapement data are summarized in annual management reports for the Lower Cook Inlet Area (e.g., Bucher and Hammarstrom 1994).

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 salmon *O. tshawytscha* has begun as early as May, and fishing for coho salmon *O. kisutch* has extended into September. Current management strategy has established fishing districts to facilitate management of discrete stocks. Commercial harvests are managed to meet predetermined escapement goals and to obtain the escapement from 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 which target discrete stocks. These single-stock fisheries normally account for about 97% of the total sockeye and chum catch from Lower Cook Inlet. The purse seine fisheries in the Halibut Cove, Halibut Cove Lagoon, Tutka Bay, Douglas River, 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 was expected to be <1% of the total salmon catch. The coho and pink salmon catches normally are not sampled because they exhibit little variation in their annual age compositions.

This report summarizes the 1994 estimates of age and size composition of samples obtained from five discrete stock sockeye salmon fisheries and from six sockeye and one chum salmon spawning population. 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 a discrete stock of sockeye or chum salmon having its own escapement goal. One chum and 11 sockeye salmon stocks were sampled in 1994. One mixed stock sockeye salmon fishery, Nuka Bay, was also sampled. Each stock was considered to be a geographical sampling stratum (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 a tender before salmon were placed in the hold. The catch sampling crew interviewed the fishers delivering salmon to determine the origin of the catch before taking any 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 sockeye and chum salmon runs which, due to expected low returns, were closed to commercial fishing this year. Thus, age composition estimates were based on only a small number of scales obtained from escapement samples of McNeil River chum and Chenik and English Bay Lakes sockeye salmon. Otolith samples were collected from sockeye salmon carcasses in Aialik, Desire, and Delight lakes, as well as a lake recently formed by glacial recession in the East Arm of Nuka Bay (locally known as Delectable, Delusion, or Ecstasy lake).

Salmon were measured from mid-eye to fork of tail to an accuracy of ± 1.0 mm using a digital measuring board. Salmon were weighed with a hand-held spring scale to the nearest 0.1 kg. Sex was determined from external secondary sexual characteristics. If necessary, a small incision near the vent was made to inspect the gonads and confirm the sex.

Scales were collected from catches and otoliths from escapements to determine age. Scales were collected, when possible, from the *preferred area* of each salmon: an area approximately 3 rows above the lateral line and posterior of the dorsal fin. Scales were cleaned and mounted on a gum card sculptured side up. Acetate impressions of each original card were used to age scales. Images of scale impressions were magnified 35x, and the number of annuli per scale were counted to determine age. Otoliths were dampened with either an alcohol or a 50% glycerine solution, placed against a black background, and magnified 30x. The number of dark (translucent) bands were counted to determine age.

The European age designation system was used. 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.

Age composition sample sizes for scale collections 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 proportions π_i , 90% of the time $(1 - \alpha)$. That is,

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

where d and α were chosen to be 0.05 and 0.10 for all scale samples; d was set to 0.10 for some otolith samples in which sample size was small; $\alpha_i = 2(1 - \Phi(z_i))$, $\sum \alpha_i < \alpha$, $\Phi(z_i)$ = area under the standard normal distribution; and $z_i = d \sqrt{n_i} / (p_i(1 - p_i))$. Thompson (1987) calculated a maximum sample size of 403 for a worst-case scenario when three age groups were present in equal numbers, where $d = 0.05$, and $\alpha = 0.10$. 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 σ . 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^2 = 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 sale 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. Sockeye salmon escapement estimates for English Bay, Bear Creek and Chenik Lake were based on counts made at weirs.

Pink and chum salmon generally accumulated in surveyed streams for a period of time, but many had 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 integration:

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

where n = total number of surveys, $x_0 = x_{n+1} = 0$. 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 seen 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 felt was 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. For this species, peak counts were used as an escapement index unless otherwise noted.

RESULTS

A total of 115,418 sockeye, 5,469 chum, and 1,647,929 pink salmon were harvested in Lower Cook Inlet in 1994 (Tables 1, 2, and 3). Total escapements were estimated to be 63,669 sockeye, 385,590 pink and 124,143 chum salmon (Tables 4, 5 and 6).

Sockeye salmon catch and escapement AWL samples were collected in all four commercial fishing districts: Southern, Outer, Eastern and Kamishak. Samples from sockeye salmon fisheries were obtained between 41 June and 31 August (Table 7). The harvests sampled represented about 80% of the total Lower Cook Inlet sockeye salmon catch.

Chum salmon AWL samples were only obtained from the McNeil River escapement, which represented 14% of the total Lower Cook Inlet chum salmon run.

All but one of the catch samples met or exceeded the 90% confidence level where $d = 0.05$. None of the escapement samples, scales or otoliths, met this criteria. A total of 2,796 readable scales and 521 readable otoliths were collected (Table 8).

Southern District Sockeye Salmon

China Poot Bay was the only fishery harvesting a discrete sockeye salmon run in the Southern District. The run to Leisure Lake in China Poot Bay supported the second largest sockeye fishery in Lower Cook Inlet in 1994 and was the result of an ongoing lake stocking program that began in 1976. Biological data on sockeye salmon returning to China Poot have been collected since 1980 (Appendix A). The 1994 commercial fishery within China Poot Bay harvested 26,697 sockeye salmon, while the hatchery cost recovery fishery accounted for an additional 2,486. Mean weight reported on fish tickets was 1.78 kg, while mean weight in our catch samples was 1.30 kg. Catch samples consisted of 69.19% age-1.2 sockeye salmon and 41.39% females (Table 9). The total sport catch was estimated to be 500 sockeye salmon while the personal use dip net fishery catch was estimated to be 8,500 (McNair and Holland *in press*). Since a barrier falls prevents upstream spawning migration, efforts are made to harvest all sockeye salmon in this terminal fishery. An estimated 385 sockeye salmon were not harvested during 1994.

Adjacent to China Poot Bay, purse seine fisheries working on mixed stocks harvested 3,935 sockeye salmon (mean weight = 1.94 kg) in the Halibut Cove commercial fishery; 3,676 (mean weight = 1.92 kg) in the Halibut Cove Lagoon commercial fishery; 9,007 (1.85 kg) in the Neptune Bay commercial fishery; 539 in Neptune Bay hatchery cost recovery fishery; 4,179 (2.07 kg) in the Tutka/Kasitsna Bay commercial fishery; and 8 in the Tutka/Kasitsna Bay hatchery cost recovery fishery. Sockeye salmon caught in Neptune Bay include returns from a hatchery fry

release in Hazel Lake. Sockeye salmon in Neptune Bay commercial catch samples had a mean length of 496 mm and a mean weight of 1.72 kg (Table 10). These samples consisted of 44.13% age-1.2 sockeye salmon and 66.21% females.

Mixed stocks were also harvested in various set gillnet fisheries. Reported harvests were 4,566 sockeye salmon (mean weight = 2.35 kg) in Halibut Cover; 1,823 (2.57 kg) near Barabara Creek, 4,950 (2.49 kg) in Kasitsna Bay, and 2,665 (2.40 kg) in Seldovia Bay.

The only large spawning escapement of sockeye salmon in the Southern District occurred in the English Bay River drainage where 12,909 sockeye salmon passed through a weir (Tom Kohler, North Pacific Rim, personal communications). Escapement samples were obtained between 21 June and 16 July and were comprised of 63.04% males. Age-1.3 sockeye salmon represented 47.83% of the total sample. Sockeye salmon sampled had a mean length of 550 mm and a mean weight of 2.45 kg (Table 11). No commercial fishing was allowed on the English Bay stock during 1994.

Outer District Sockeye Salmon

Wild runs in Nuka Bay supported a 1994 commercial harvest of 5,928 sockeye salmon. Biological data on sockeye salmon returning to Nuka Bay Poot have been collected since 1984 (Appendix B). Sockeye salmon in catch samples had a mean length of 526 mm, a mean weight of 2.08 kg (Table 12). The total sample consisted of 30.57% age-1.2, 35.53% age-1.3, and 26.24% age-2.2 sockeye salmon, and was comprised of 56.61% females. Otolith samples were obtained from a few spawning salmon in Ecstasy Lake (also referred to as Delectable and Delusion Lake) on 12 September, Desire Lake on 13 September and Delight Lake on 22 September. These specimens were collected as part of a genetics sampling project. Unfortunately, none of the escapement age compositions matched those of catch samples, and all escapement sample mean lengths were less than those of catch sample mean lengths. Desire Lake had an escapement index of 10,450 sockeye salmon. The sample from this lake consisted of 11.46% age-1.2, 30.21% age-1.3, and 41.67% age-2.2 sockeye salmon with an overall mean length of 518 mm (Tables 13). Delight Lake had an escapement of 5,600 sockeye salmon. The sample from this lake consisted of 21.73% age-1.2, 26.09% age-1.3, and 41.30% age-2.2 sockeye salmon with an overall mean length of 504 mm (Tables 14). Ecstasy Lake had an escapement index of 1,300 sockeye salmon. The sample from this lake consisted of 17.46% age-1.2, 8.00% age-1.3, and 60.23% age-2.2 sockeye salmon with an overall mean length of 469 mm (Table 15).

Eastern District Sockeye Salmon

Few wild sockeye salmon returned to Aialik Lake in Aialik Bay this year. The commercial fishery harvested only 623 sockeye salmon and the escapement index was 7,300. The small sample of otoliths collected from carcasses indicated that the predominant ages were 1.2, 1.3, and 2.2 (Table 16). Biological data on sockeye salmon returning to Aialik Lake have been collected since 1983 (Appendix C).

The enhanced run in Resurrection Bay supported a commercial harvest of 987, a hatchery cost recovery harvest of 7,656, and an escapement of 8,513 sockeye salmon. The commercial harvest sample consisted of 42.22% age-0.2, 29.21% age-1.2, and 18.25% age-1.3 sockeye salmon (Table 17).

Kamishak Bay District Sockeye Salmon

Three sockeye salmon stocks in the Kamishak Bay District were sampled in 1994. The enhanced Kirschner Lake run produced a catch of 31,252 sockeye salmon with no escapement. Chenik Lake Subdistrict was closed due to the small run and had an escapement of 808 sockeye salmon. Douglas River Subdistrict produced a catch of 3,429 sockeye salmon. The stream of origin for the catches made in the Douglas River Subdistrict is unknown.

A catch sample from Kirschner Lake were obtained on 28 July. Females comprised 56.45% of the sample. Sockeye salmon in the sample had a mean length of 558 mm and mean weight of 1.46 kg (Table 18). Age-2.3 sockeye salmon returning in 1994 were produced from age-0 fry stocked in 1989. Age-1.3 and -2.2 sockeye salmon returning in 1994 were produced by the fourth stocking of age-0 fry in 1990. Age-1.2 and -2.1 sockeye salmon were produced from fry stocked in 1991, while age-1.1 and -0.2 sockeye salmon were produced from fry stocked in 1992. Age-1.2 and -2.2 sockeye salmon comprised 89.07% of the sample.

Chenik Lake's natural run has been supplemented with hatchery-reared sockeye juveniles as early as 1978. The run was extremely weak this year and escapement samples were obtained from the Chenik Lake weir between 6 and 26 July. Age-1.2 and -1.3 sockeye salmon comprised 98.51% (Table 19). Males represented 67.08% of the sample. Sockeye salmon in the sample had a mean length of 283 mm and a mean weight of 1.65 kg. Biological data on sockeye salmon returning to Chenik Lake have been collected since 1985 (Appendix D).

A catch sample were obtained from the Douglas River harvest between 28 and 29 June. Age-1.3, -0.3 and -1.2 sockeye salmon comprised 97.28% of the sample (Table 20). Females represented 55.15% of the sample. Sockeye salmon in the sample had a mean length of 540 mm (Table 20). No weight data were obtained.

Mikfik Lake sockeye salmon were not sampled this year. No commercial fishery was directed at this stock and no escapement samples were collected. Biological data on sockeye salmon returning to Chenik Lake have been collected almost every year since 1986 (Appendix E).

Kamishak Bay District Chum Salmon

The McNeil River chum salmon run in the Kamishak Bay District was small this year and failed to attract any commercial fishing effort. Although the entire run entered the river to spawn, escapement was estimated at only 14,955 chum salmon. Scale samples were obtained from chum salmon captured within the lagoon on 15 July as part of a genetic sampling project. Age-0.4 comprised 74.07% of the sample, while age-0.3 comprised 24.08% (Table 21). Biological data on chum salmon returning to China Poot have been collected since 1986 (Appendix F).

DISCUSSION

This year we were able to obtain both scale and otolith samples from sockeye salmon entering Delight, Desire, and Ecstasy Lakes. The outer portions of most of these scales, representing marine growth, had been reabsorbed because samples could not be obtained until late in the summer. Therefore, freshwater ages could be estimated from both scales and otoliths, but marine ages could only be estimated from otoliths. Freshwater annuli tend to be more difficult to see and interpret than marine annuli, and marine ages tend to be well correlated with salmon size. Since we obtained comparable freshwater ages from both structures, we felt more confident in our interpretation of both structures as well as our age estimates in general. Unfortunately, neither age composition estimates nor mean lengths of these escapement samples matched those of samples obtained from the harvest. This discrepancy makes us wonder whether the catch sampled in Seward was actually a mixture of sockeye salmon from Nuka Bay subdistrict and other areas. Unless this discrepancy can be resolved, we will not be able to use the age composition of this catch sample to estimate the contribution of the Delight, Desire and Ecstasy Lake runs to the Nuka Bay harvest.

Sockeye and chum 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 356 mm to 516 mm to 570 mm, while those from the 1981 brood year had mean lengths progressing from 401 to 501 to 567 mm (Appendix C). Whenever this trend was not noted, data were examined for key punch errors, and scales were reexamined for ageing errors. Unfortunately, we were not able to find data sheets,

scale card or acetate impressions in a few instances for which mean length or weight did not increase with age. For example, age-1.3 and -1.4 Aialik Lake female sockeye salmon from the 1978 brood year decreased in length from 558 to 547 mm (Appendix C). This was most likely due to age-1.3 females from the 1984 catch sample being incorrectly aged as age-1.4 females. However, without access to either original data forms, scale cards, or acetate impressions, we have not been able to reexamine this data.

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Table 1. Numbers of sockeye salmon in commercial catches and spawning escapements in Lower Cook Inlet districts, 1994.

| Fishery | Catch | Escapement ^a | Total Run |
|--------------------------|---------------|-------------------------|---------------|
| <i>Southern District</i> | | | |
| Humpy Creek | | | |
| Humpy Creek | | 4 | |
| Total Run | | | 6 |
| Halibut Cove Subdist. | 8,501 | | |
| Total Run | | | 8,501 |
| Halibut Cove Lagoon | 3,676 | | |
| Total Run | | | 3,676 |
| China Poot Bay | 29,183 | | |
| China Poot Bay | | 385 | |
| Total Run | | | 29,568 |
| Neptune Bay | 9,546 | | |
| Total Run | | | 9,546 |
| Tutka Bay | 9,137 | | |
| Total Run | | | 9,137 |
| Seldovia Bay | 2,665 | | |
| Total Run | | | 2,665 |
| Barabara | 1,823 | | |
| Barabara Creek | | 4 | |
| Total Run | | | 1,827 |
| Port Graham | | | |
| Port Graham River | | 2 | |
| Total Run | | | 2 |
| English Bay | | | |
| English Bay | | 13,800 | |
| Total Run | | | 13,800 |
| District Total | <u>64,531</u> | <u>14,195</u> | <u>78,726</u> |
| <i>Outer District</i> | | | |
| Port Chatham | | | |
| Port Chatham | | 1 | |
| Total Run | | | 1 |
| Windy Bay | | | |
| Windy River Left | | 1 | |
| Windy River Right | | 2 | |
| Total Run | | | 3 |
| Port Dick South Sect. | 2 | | |
| Total Run | | | 2 |
| Port Dick North Sect. | | | |
| Port Dick-Head End Creek | | 10 | |
| Port Dick-Island Creek | | 2 | |
| Total Run | | | 12 |
| East Arm Nuka | 5,928 | | |
| Desire Lake | | 10,450 | |
| Delight Lake | | 5,600 | |
| Ecstasy Lake | | 1,300 | |
| Total Run | | | 23,278 |
| District Total | <u>5,930</u> | <u>17,366</u> | <u>23,296</u> |

-continued-

Table 1. (page 2 of 2)

| Fishery | Catch | Escapement ^a | Total Run |
|--------------------------|----------------|-------------------------|----------------|
| <i>Eastern District</i> | | | |
| Aialik Bay | 623 | | |
| Aialik Lake | | 7,300 | |
| Total Run | | | 7,923 |
| Resurrection Bay North | 9,038 | | |
| Salmon Creek | | 10 | |
| Bear Creek | | 8,592 | |
| Clear Creek | | 6 | |
| Total Run | | | 17,646 |
| District Total | <u>9,661</u> | <u>15,908</u> | <u>25,569</u> |
| <i>Kamishak District</i> | | | |
| Ursus Cove | | | |
| Ursus Lagoon | | 25 | |
| Total Run | | | 25 |
| Kirschner Lake | 31,252 | | |
| Total Run | | | 31,252 |
| Bruin Bay | 615 | | |
| Bruin Lake Creek | | 4,000 | |
| Bruin Bay | | 200 | |
| Total Run | | | 4,815 |
| Chenik Lake | | | |
| Amakdedori Creek | | 800 | |
| Chenik Creek | | 808 | |
| Total Run | | | 1,608 |
| Paint River | | | |
| Paint River | | 550 | |
| Total Run | | | 550 |
| McNeil River | | | |
| Mikfik Creek | | 9,490 | |
| Total Run | | | 9,490 |
| Kamishak River | | | |
| Little Kamishak River | | 300 | |
| Douglas Reef | | 25 | |
| Total Run | | | 325 |
| Douglas River | 3,429 | | |
| Total Run | | | 3,429 |
| District Total | <u>35,296</u> | <u>16,198</u> | <u>51,494</u> |
| Lower Cook Inlet Total | <u>115,418</u> | <u>63,669</u> | <u>179,087</u> |

^a See Table 4 for summary of methods.

^b Salmon cannot reach lake due to barrier falls; run was created and is maintained by stocking juveniles.

^c Salmon did not spawn because ladder was not open during 1994; run was created and is maintained by stocking juveniles.

Table 2. Numbers of chum salmon in commercial catches and spawning escapements in Lower Cook Inlet districts, 1994.

| Fishery | Catch | Escapement ^a | Total Run |
|--------------------------|--------------|-------------------------|--------------|
| <i>Southern District</i> | | | |
| Humpy Creek | | | |
| Humpy Creek | | 86 | |
| Total Run | | | 86 |
| Halibut Cove Subdist. | 77 | | |
| Total Run | | | 77 |
| Halibut Cove Lagoon | 1 | | |
| Total Run | | | 1 |
| China Poot Bay | 29 | | |
| China Poot Bay | | 1 | |
| Total Run | | | 30 |
| Neptune Bay | 7 | | |
| Total Run | | | 7 |
| Tutka Bay | 846 | | |
| Tutka Creek | | 349 | |
| Total Run | | | 1,195 |
| Seldovia Bay | 1,220 | | |
| Seldovia River | | 1,381 | |
| Total Run | | | 2,601 |
| Barabara | 451 | | |
| Total Run | | | 451 |
| Port Graham | | | |
| Port Graham Left | | 66 | |
| Port Graham River | | 5,205 | |
| Total Run | | | 5,271 |
| District Total | <u>2,631</u> | <u>7,088</u> | <u>9,719</u> |
| <i>Outer District</i> | | | |
| Dogfish Bay | | | |
| Dogfish Bay | | 11,347 | |
| Total Run | | | 11,347 |
| Port Chatham | | | |
| Port Chatham | | 279 | |
| Total Run | | | 279 |
| Windy Bay | | | |
| Windy River Left | | 129 | |
| Windy River Right | | 196 | |
| Total Run | | | 325 |
| Rocky Bay | | | |
| Rocky River | | 1,941 | |
| Total Run | | | 1,941 |
| Port Dick South Sect. | 30 | | |
| Total Run | | | 30 |
| Port Dick North Sect. | | | |
| Port Dick-Head End Creek | | 3,481 | |
| Port Dick-Slide Creek | | 565 | |
| Port Dick-Middle Creek | | 3,800 | |
| Port Dick-Island Creek | | 8,800 | |
| Total Run | | | 16,676 |
| Petrof | | | |
| Petrof River | | 686 | |
| Total Run | | | 686 |
| Nuka Island | | | |
| Nuka Island South Creek | | 6 | |
| Total Run | | | 6 |

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| Fishery | Catch | Escapement ^a | Total Run |
|-----------------------------------|--------------|-------------------------|---------------|
| <i>Outer District (continued)</i> | | | |
| East Arm Nuka | 2 | | |
| James Lagoon | | 434 | |
| Total Run | | | 436 |
| District Total | <u>32</u> | <u>31,644</u> | <u>31,696</u> |
| <i>Eastern District</i> | | | |
| Aialik Bay | 297 | | |
| Total Run | | | 297 |
| Resurrection Bay North | 2,495 | | |
| Tonsina Creek | | 6,853 | |
| Tonsina Left Creek | | 135 | |
| Salmon Creek | | 1 | |
| Clear Creek | | 83 | |
| Sawmill Creek | | 254 | |
| Spring Creek | | 351 | |
| Total Run | | | 10,172 |
| District Total | <u>2,792</u> | <u>7,677</u> | <u>10,469</u> |
| <i>Kamishak District</i> | | | |
| Iniskin Bay | | | |
| Iniskin River | | 18,880 | |
| Sugarloaf Creek | | 2,201 | |
| North Head Creek | | 361 | |
| Total Run | | | 21,442 |
| Cottonwood Bay | | | |
| Cottonwood Creek | | 10,238 | |
| Total Run | | | 10,238 |
| Ursus Cove | | | |
| Brown Peak Creek | | 1,362 | |
| Ursus Lagoon Righthand | | 4,355 | |
| Ursus Lagoon | | 1,844 | |
| Total Run | | | 7,561 |
| Rocky Cove | | | |
| Sunday Creek | | 2,169 | |
| Total Run | | | 2,169 |
| Kirschner Lake | 6 | | |
| Total Run | | | 6 |
| Bruin Bay | | | |
| Bruin Bay | | 6,094 | |
| Total Run | | | 6,094 |
| McNeil River | | | |
| McNeil River | | 14,955 | |
| Total Run | | | 14,955 |
| Kamishak River | | | |
| Little Kamishak River | | 8,995 | |
| Strike Creek | | 1,959 | |
| Big Kamishak River | | | |
| Douglas Reef | | 1,222 | |
| Total Run | | | 12,176 |

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Table 2. (page 3 of 3)

| Fishery | Catch | Escapement ^a | Total Run |
|--------------------------------------|--------------|-------------------------|----------------|
| <i>Kamishak District (continued)</i> | | | |
| Douglas River | 8 | | |
| Douglas Beach | | 4,301 | |
| Total Run | | | 4,309 |
| District Total | <u>14</u> | <u>78,936</u> | <u>78,950</u> |
| Lower Cook Inlet Total | <u>5,469</u> | <u>125,365</u> | <u>130,834</u> |

^a See Table 5 for summary of methods.

^b Insufficient survey data to generate escapement estimate.

ie 3. Numbers of pink salmon in commercial catches and spawning escapements in Lower Cook Inlet districts, 1994.

| Fishery | Catch | Escapement* | Total Run |
|--------------------------|------------------|----------------|------------------|
| <i>Southern District</i> | | | |
| Humpy Creek | | | |
| Humpy Creek | | 14,104 | |
| Total Run | | | 14,104 |
| Halibut Cove Subdist. | 29,665 | | 29,665 |
| Total Run | | | 29,665 |
| Halibut Cove Lagoon | 75,936 | | 75,936 |
| Total Run | | | 75,936 |
| China Poot Bay | 20,265 | | |
| China Poot Bay | | 5,732 | |
| Total Run | | | 25,997 |
| Neptune Bay | 3,928 | | |
| Total Run | | | 3,928 |
| Tutka Bay | 1,451,667 | | |
| Tutka Creek | | 14,546 | |
| Hatchery brood stock | | 154,000 | |
| Total Run | | | 1,620,213 |
| Seldovia Bay | 5,380 | | |
| Seldovia River | | 24,436 | |
| Total Run | | | 29,816 |
| Barabara | 2,868 | | |
| Barabara Creek | | 4,515 | |
| Total Run | | | 7,383 |
| Port Graham | | | |
| Port Graham Left | | 856 | |
| Port Graham River | | 7,613 | |
| Hatchery brood stock | | 733 | |
| Total Run | | | 9,202 |
| District Total | <u>1,589,709</u> | <u>226,535</u> | <u>1,816,244</u> |
| <i>Outer District</i> | | | |
| Dogfish Bay | | | |
| Dogfish Bay | | 1,272 | |
| Total Run | | | 1,272 |
| Port Chatham | | | |
| Port Chatham | | 3,298 | |
| Total Run | | | 3,298 |
| Chugach Bay | | | |
| Chugach Bay | | 2,534 | |
| Total Run | | | 2,534 |
| Windy Bay | | | |
| Windy River Left | | 2,964 | |
| Windy River Right | | 2,162 | |
| Total Run | | | 5,126 |
| Rocky Bay | | | |
| Scurvy Creek | | 940 | |
| Rocky River | | 17,974 | |
| Total Run | | | 18,914 |
| Port Dick South Sect. | 1,553 | | |
| Total Run | | | 1,553 |
| Port Dick North Sect. | | | |
| Port Dick-Head End Creek | | 18,118 | |
| Port Dick-Slide Creek | | 2,542 | |
| Port Dick-Middle Creek | | 2,431 | |
| Port Dick-Island Creek | | 28,347 | |
| Total Run | | | 51,438 |

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Table 3 (page 2 of 2)

| Fishery | Catch | Escapement ^a | Total Run |
|-----------------------------------|------------------|-------------------------|------------------|
| <i>Outer District (continued)</i> | | | |
| Nuka Island | | | |
| Nuka Island South Creek | | 1,363 | |
| Berger Bay | | 14 | |
| Total Run | | | 1,377 |
| East Arm Nuka | 11,647 | | |
| James Lagoon | | 760 | |
| Total Run | | | 12,407 |
| District Total | <u>13,200</u> | <u>84,719</u> | <u>97,919</u> |
| <i>Eastern District</i> | | | |
| Aialik Bay | 44,957 | | |
| Total Run | | | 44,957 |
| Renard Island | | | |
| Humpy Cove | | 2,248 | |
| Total Run | | | 2,248 |
| Resurrection Bay North | 30 | | |
| Tonsina Creek | | 7,013 | |
| Tonsina Left Creek | | 1,115 | |
| Salmon Creek | | 34,831 | |
| Grouse Creek | | 935 | |
| Lost Creek | | 90 | |
| Clear Creek | | 2,796 | |
| Sawmill Creek | | 1,452 | |
| Spring Creek | | 987 | |
| Thumb Cove | | 10,846 | |
| Total Run | | | 60,095 |
| District Total | <u>44,987</u> | <u>62,313</u> | <u>107,300</u> |
| <i>Kamishak District</i> | | | |
| Iniskin Bay | | | |
| Sugarloaf Creek | | 100 | |
| North Head Creek | | 960 | |
| Total Run | | | 1,060 |
| Ursus Cove | | | |
| Brown Peak Creek | | 1,316 | |
| Ursus Lagoon Righthand | | 100 | |
| Ursus Lagoon Creek | | 600 | |
| Total Run | | | 2,016 |
| Rocky Cove | | | |
| Sunday Creek | | 3,102 | |
| Total Run | | | 3,102 |
| Kirschner Lake | 9 | | |
| Total Run | | | 9 |
| Bruin Bay | 20 | | |
| Bruin Bay | | 5,860 | |
| Total Run | | | 5,880 |
| Chenik Lake | | | |
| Amakdedori Creek | | 666 | |
| Total Run | | | 666 |
| Douglas River | 4 | | |
| Total Run | | | 4 |
| District Total | <u>33</u> | <u>12,704</u> | <u>12,737</u> |
| Total Lower Cook Inlet | <u>1,647,929</u> | <u>386,271</u> | <u>2,034,209</u> |

^a See Table 6 for summary of methods.

Table 4. Survey methods and total escapement algorithms used for sockeye salmon streams in Lower Cook Inlet, 1994.

| Stream | Survey Method | Total Escapement Algorithm |
|------------------------------|---------------|----------------------------|
| <i>Southern District</i> | | |
| Clearwater Slough | ground | peak live count |
| Humpy Creek | ground | peak live count |
| China Poot Bay | ground | peak live count |
| Barabara Creek | ground | peak live count |
| Port Graham River | ground | peak live count |
| English Bay | weir | sum of daily weir counts |
| <i>Outer District</i> | | |
| Port Chatham | ground | peak live count |
| Windy Creek Left | ground | peak live count |
| Windy Creek Right | ground | peak live count |
| Port Dick Head End Creek | ground | peak live count |
| Port Dick Island Creek | ground | peak live count |
| Desire Lake | aerial | peak live count |
| Delight Lake | aerial | peak live count |
| Ecstasy Lake | aerial | peak live count |
| <i>Eastern District</i> | | |
| 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 |
| <i>Kamishak Bay District</i> | | |
| 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 | weir | sum of daily weir counts |
| Paint River | aerial | peak live count |
| Mikfik Creek | aerial | peak live count |
| Little Kamishak River | aerial | peak live count |
| Douglas Reef | aerial | peak live count |

Table 5. Survey methods and total escapement algorithms used for chum salmon streams in Lower Cook Inlet, 1994.

| Stream | Survey Method | Total Escapement Algorithm | Start and Stop Dates For Area-Under-Curve |
|------------------------------|---------------|-----------------------------|---|
| <i>Southern District</i> | | | |
| Humpy Creek | ground | 17.5 d stream life | 7/1 - 9/15 |
| China Poot Bay | ground | peak carcass count | |
| Tutka Creek | ground | 17.5 d stream life | 7/1 - 9/15 |
| Seldovia River | ground | 17.5 d stream life | 7/1 - 9/20 |
| Port Graham Left | ground | peak live and carcass count | |
| Port Graham River | ground | 17.5 d stream life | 7/1 - 9/15 |
| <i>Outer District</i> | | | |
| Dogfish Bay* | ground | 17.5 d stream life | 7/1 - 9/15 |
| Port Chatham | ground | 17.5 d stream life | 7/1 - 9/15 |
| Windy River Left | ground | 17.5 d stream life | 7/1 - 9/15 |
| Windy River Right | ground | 17.5 d stream life | 7/1 - 9/15 |
| Rocky River | aerial | 17.5 d stream life | 7/1 - 9/15 |
| Port Dick-Head End Creek | ground | 17.5 d stream life | 7/1 - 9/15 |
| Port Dick-Slide Creek | ground | 17.5 d stream life | 7/1 - 9/15 |
| Port Dick-Middle Creek | aerial | 17.5 d stream life | 7/1 - 9/15 |
| Port Dick-Island Creek | ground | 17.5 d stream life | 7/1 - 9/30 |
| Petrof River | aerial | 17.5 d stream life | 7/1 - 9/15 |
| Nuka Island South Creek | aerial | 17.5 d stream life | 7/1 - 9/15 |
| James Lagoon | aerial | 17.5 d stream life | 7/1 - 9/15 |
| <i>Eastern District</i> | | | |
| Tonsina Creek | ground | 17.5 d stream life | 7/1 - 9/30 |
| Tonsina Left Creek | ground | 17.5 d stream life | 7/1 - 9/30 |
| Salmon Creek | ground | peak carcass count | |
| Clear Creek | ground | 17.5 d stream life | 7/1 - 9/15 |
| Sawmill Creek | ground | 17.5 d stream life | 7/1 - 9/15 |
| Spring Creek | ground | 17.5 d stream life | 7/1 - 9/15 |
| <i>Kamishak Bay District</i> | | | |
| Iniskin River | aerial | 17.5 d stream life | 7/1 - 9/30 |
| Sugarloaf Creek | aerial | 17.5 d stream life | 8/1 - 9/30 |
| North Head Creek | aerial | 17.5 d stream life | 8/1 - 9/30 |
| Cottonwood Creek | aerial | 17.5 d stream life | 8/1 - 9/30 |
| Brown Peak Creek | aerial | 17.5 d stream life | 7/1 - 9/15 |
| Ursus Lagoon Righthand | aerial | 17.5 d stream life | 7/26 - 9/30 |
| Ursus Lagoon | aerial | 17.5 d stream life | 7/26 - 9/30 |
| Sunday Creek | aerial | 17.5 d stream life | 7/1 - 9/15 |
| Bruin Bay | aerial | 17.5 d stream life | 7/1 - 9/15 |
| McNeil River ^b | aerial | 17.5 d stream life | 6/13 - 9/15 |
| Little Kamishak River | aerial | 17.5 d stream life | 6/29 - 9/15 |
| Strike Creek | aerial | 17.5 d stream life | 7/1 - 9/15 |
| Big Kamishak River | aerial | 17.5 d stream life | 7/1 - 9/15 |
| Douglas Reef | aerial | 17.5 d stream life | 7/1 - 9/15 |
| Douglas Beach | aerial | 17.5 d stream life | 6/29 - 9/15 |

*An additional 1,500 salmon were in the bay at end of the season.

^bMcNeil 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.

le 6. Survey methods and total escapement algorithms used for pink salmon streams in Lower Cook Inlet, 1994.

| Stream | Survey Method | Total Escapement Algorithm | Start and Stop Dates For Area Under Curve |
|------------------------------|---------------|----------------------------|---|
| <i>Southern District</i> | | | |
| Humpy Creek | ground | 17.5-d stream life | 7/15 - 9/15 |
| Halibut Cove Lagoon | aerial | 17.5-d stream life | 7/1 - 9/15 |
| China Poot Bay | ground | 17.5-d stream life | 8/1 - 9/15 |
| Tutka Creek | ground | 17.5-d stream life | 7/1 - 9/15 |
| Seldovia River | ground | 17.5-d stream life | 7/1 - 9/20 |
| Barabara Creek | ground | 17.5-d stream life | 7/1 - 9/30 |
| Port Graham Left | ground | 17.5-d stream life | 8/1 - 8/30 |
| Port Graham River | ground | 17.5-d stream life | 7/1 - 9/15 |
| <i>Outer District</i> | | | |
| Dogfish Bay | ground | 17.5-d stream life | 7/1 - 9/15 |
| Port Chatham | ground | 17.5-d stream life | 7/1 - 9/15 |
| Chugach Bay | aerial | 17.5-d stream life | 7/1 - 9/15 |
| Windy River Left | ground | 17.5-d stream life | 7/27 - 9/15 |
| Windy River Right | ground | peak live = carcass count | |
| Scurvy Creek | ground | 17.5-d stream life | 7/1 - 9/15 |
| Rocky River | aerial | 17.5-d stream life | 7/1 - 9/15 |
| Port Dick-Head End Creek | ground | 17.5-d stream life | 7/1 - 9/30 |
| Port Dick-Slide Creek | ground | 17.5-d stream life | 7/1 - 9/15 |
| Port Dick-Middle Creek | ground | 17.5-d stream life | 7/1 - 9/15 |
| Port Dick-Island Creek | ground | 17.5-d stream life | 7/1 - 9/30 |
| Nuka Island South Creek | ground | 17.5-d stream life | 7/1 - 9/15 |
| Berger Bay | aerial | 17.5-d stream life | 7/1 - 9/15 |
| James Lagoon | aerial | 17.5-d stream life | 7/1 - 9/15 |
| <i>Eastern District</i> | | | |
| Humpy Cove | ground | 17.5-d stream life | 8/1 - 9/30 |
| Tonsina Creek | ground | 17.5-d stream life | 7/1 - 9/30 |
| Tonsina Left Creek | ground | 17.5-d stream life | 8/1 - 9/30 |
| Salmon Creek | ground | 17.5-d stream life | 8/1 - 9/30 |
| Grouse Creek | ground | peak live + carcass count | |
| Lost Creek | ground | peak live + carcass count | |
| Clear Creek | ground | 17.5-d stream life | 8/1 - 9/20 |
| Sawmill Creek | ground | 17.5-d stream life | 8/1 - 9/30 |
| Spring Creek | ground | 17.5-d stream life | 8/1 - 9/30 |
| Thumb Cove | ground | 17.5-d stream life | 7/15 - 9/30 |
| <i>Kamishak Bay District</i> | | | |
| Sugarloaf Creek | aerial | peak live count | |
| North Head Creek | aerial | 17.5-d stream life | 8/1 - 9/15 |
| Brown Peak Creek | aerial | 17.5-d stream life | 7/1 - 9/15 |
| Ursus Lagoon Righthand | aerial | peak live count | |
| Ursus Lagoon | aerial | 17.5-d stream life | 7/1 - 9/15 |
| Sunday Creek | aerial | 17.5-d stream life | 7/1 - 9/15 |
| Bruin Bay | aerial | 17.5-d stream life | 7/1 - 9/15 |
| Amakdedori Creek | aerial | 17.5-d stream life | 7/1 - 9/15 |

Table 7. Daily catches of sockeye salmon in seven Cook Inlet fisheries, 1994.

| Date | China Poot | Neptune | Nuka | Aialik | Resurrection | Kirschner | Douglas |
|--------------|---------------|--------------|--------------|------------|--------------|---------------|--------------|
| June 14 | | | | | 671 | | |
| June 21 | | | | | 206 | | |
| June 23 | | | | | 110 | | |
| June 28 | | | | | | | 1,365 |
| June 30 | | | | | | | 688 |
| July 1 | 50 | | | | | | 1,376 |
| July 4 | 245 | | | | | | |
| July 5 | 452 | 38 | | | | | |
| July 6 | 990 | 45 | | | | | |
| July 7 | 663 | 252 | | | | | |
| July 8 | 10 | 626 | | | | | |
| July 9 | 1,825 | 133 | | | | | |
| July 11 | 1,128 | 15 | | | 0 | | |
| July 12 | 1,467 | | | | 0 | | |
| July 13 | 1,123 | 777 | | | | | |
| July 14 | 1,931 | 297 | | | | | |
| July 15 | 957 | | | 30 | | | |
| July 18 | 3,726 | 748 | | | | | |
| July 19 | 1,102 | 1,811 | | | | | |
| July 20 | 2,032 | | | | | | |
| July 21 | 1,152 | | | | | | |
| July 22 | 497 | | | | | | |
| July 23 | 2,450 | | | | | | |
| July 25 | 1,686 | 1,292 | | 177 | | | |
| July 26 | 710 | 1,424 | | | | | |
| July 27 | 637 | 471 | | | | | |
| July 28 | 487 | 109 | | | | | |
| July 29 | 642 | 104 | | | | 16,787 | |
| July 30 | 1,795 | | 495 | | | | |
| August 1 | 498 | 690 | | | | 7,868 | |
| August 2 | 455 | | 780 | 0 | | | |
| August 3 | 144 | | 789 | | | 5,564 | |
| August 4 | 282 | 391 | | | | | |
| August 5 | 36 | 227 | | 2 | | | |
| August 6 | | | 697 | | | | |
| August 8 | | | | | | 1,033 | |
| August 9 | 11 | 96 | | | | | |
| August 10 | | | 754 | 31 | | | |
| August 11 | | | 560 | 9 | | | |
| August 12 | | | 277 | 70 | | | |
| August 13 | | | | 10 | | | |
| August 15 | | | 200 | 137 | | | |
| August 16 | | | 200 | 69 | | | |
| August 17 | | | | 27 | | | |
| August 18 | | | 236 | 21 | | | |
| August 19 | | | | 28 | | | |
| August 20 | | | | 12 | | | |
| August 25 | | | 670 | 0 | | | |
| August 26 | | | 180 | | | | |
| August 31 | | | 90 | | | | |
| September 2 | | | | | | | 0 |
| Total | 29,183 | 9,546 | 5,928 | 623 | 987 | 31,252 | 3,429 |

Table 8. Number of readable salmon scales or otoliths, and corresponding confidence levels, for age composition estimates of Lower Cook Inlet Pacific salmon samples, 1994.

| Fishery | Sample | | | Confidence Interval ($d = 0.05$) ^a |
|---------------------------|-------------------|------|---------|---|
| | Dates | Size | Type | |
| <i>Sockeye Salmon</i> | | | | |
| China Poot Bay | 5 July - 21 July | 331 | scale | 0.935 |
| Neptune Bay | 1 August | 145 | scale | 0.448 |
| English Bay | 21 June - 16 July | 184 | scale | 0.629 |
| Nuka Bay | 3 August | 484 | scale | 0.947 |
| Delight Lake | 22 September | 92 | otolith | 0.027 (0.898 if $d = 0.10$) |
| Desire Lake | 13 September | 96 | otolith | 0.081 (0.910 if $d = 0.10$) |
| Ecstasy Lake | 12 September | 63 | otolith | 0.000 (0.854 if $d = 0.10$) |
| Aialik | 7 September | 270 | otolith | 0.890 (0.999 if $d = 0.10$) |
| Resurrection Bay | 13 June - 14 June | 387 | scale | 0.912 |
| Kirschner Lake | 28 July | 558 | scale | 0.981 |
| Chenik Lake | 6 July - 27 July | 283 | scale | 0.867 |
| Douglas River Subdistrict | 28 June - 29 June | 370 | scale | 0.915 |
| <i>Chum Salmon</i> | | | | |
| McNeil River | 15 July | 54 | scale | 0.200 |

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

Table 9. Age, sex, and size composition of sockeye salmon sampled from the commercial catch taken in China Poot Subdistrict, 1994.

| Age Composition | | | | | | |
|---|--------|------|-------|-------|------|--------|
| | 1.2 | 2.1 | 1.3 | 2.2 | 2.3 | Total |
| <i>Sample Period : 5 July - 21 July</i> | | | | | | |
| Males | 13,225 | | 2,821 | 970 | 88 | 17,104 |
| Percent | 45.32 | | 9.67 | 3.32 | 0.30 | 58.61 |
| Sample Size | 150 | | 32 | 11 | 1 | 194 |
| Mean Length | 465 | | 523 | 483 | 503 | 476 |
| Std. Error | 1 | | 3 | 6 | | 1 |
| Sample Size | 150 | | 32 | 11 | 1 | 194 |
| Mean Weight | 1.23 | | 1.63 | 1.16 | | 1.29 |
| Std. Error | 0.06 | | 0.21 | | | 0.06 |
| Sample Size | 17 | | 5 | 1 | | 23 |
| Females | 6,966 | 176 | 3,527 | 1,322 | 88 | 12,079 |
| Percent | 23.87 | 0.60 | 12.09 | 4.53 | 0.30 | 41.39 |
| Sample Size | 79 | 2 | 40 | 15 | 1 | 137 |
| Mean Length | 464 | 384 | 521 | 472 | 513 | 481 |
| Std. Error | 2 | 2 | 2 | 4 | | 1 |
| Sample Size | 79 | 2 | 40 | 15 | 1 | 137 |
| Mean Weight | 1.15 | | 1.66 | 1.25 | | 1.31 |
| Std. Error | 0.07 | | 0.16 | 0.11 | | 0.06 |
| Sample Size | 11 | | 7 | 2 | | 20 |
| Both Sexes | 20,191 | 176 | 6,348 | 2,292 | 176 | 29,183 |
| Percent | 69.19 | 0.60 | 21.75 | 7.85 | 0.60 | 100.00 |
| Sample Size | 229 | 2 | 72 | 26 | 2 | 331 |
| Mean Length | 465 | 384 | 522 | 477 | 508 | 478 |
| Std. Error | 1 | 2 | 2 | 3 | | 0 |
| Sample Size | 229 | 2 | 72 | 26 | 2 | 331 |
| Mean Weight | 1.20 | | 1.65 | 1.21 | | 1.30 |
| Std. Error | 0.05 | | 0.13 | 0.11 | | 0.04 |
| Sample Size | 28 | | 12 | 3 | | 43 |

Table 10. Age, sex, and size composition of sockeye salmon sampled from the escapement into Neptune Bay, 1994.

| | Age Group | | | | | | Total |
|---------------------------------|-----------|-------|------|-------|-------|------|--------|
| | 1.1 | 1.2 | 2.1 | 1.3 | 2.2 | 2.3 | |
| <i>Sample Period : 1 August</i> | | | | | | | |
| Males | 132 | 922 | 263 | 922 | 987 | | 3,226 |
| Percent | 1.38 | 9.66 | 2.76 | 9.66 | 10.34 | | 33.79 |
| Sample Size | 2 | 14 | 4 | 14 | 15 | | 49 |
| Mean Length | 370 | 484 | 404 | 556 | 487 | | 494 |
| Std. Error | 16 | 4 | 5 | 8 | 3 | | 2 |
| Sample Size | 2 | 14 | 4 | 14 | 15 | | 49 |
| Mean Weight | | 1.52 | | 2.44 | 1.63 | | 1.86 |
| Std. Error | | 0.16 | | 0.28 | 0.09 | | 0.11 |
| Sample Size | | 2 | | 4 | 2 | | 8 |
| Females | | 3,291 | | 1,514 | 1,317 | 198 | 6,320 |
| Percent | | 34.48 | | 15.86 | 13.80 | 2.07 | 66.21 |
| Sample Size | | 50 | | 23 | 20 | 3 | 96 |
| Mean Length | | 477 | | 553 | 478 | 543 | 498 |
| Std. Error | | 2 | | 4 | 4 | 18 | 1 |
| Sample Size | | 50 | | 23 | 20 | 3 | 96 |
| Mean Weight | | 1.48 | | 2.24 | 1.35 | 2.05 | 1.65 |
| Std. Error | | 0.04 | | 0.13 | 0.22 | 0.37 | 0.06 |
| Sample Size | | 11 | | 7 | 4 | 2 | 24 |
| Both Sexes | 132 | 4,213 | 263 | 2,436 | 2,304 | 198 | 9,546 |
| Percent | 1.38 | 44.13 | 2.76 | 25.52 | 24.14 | 2.07 | 100.00 |
| Sample Size | 2 | 64 | 4 | 37 | 35 | 3 | 145 |
| Mean Length | 370 | 479 | 404 | 554 | 482 | 543 | 496 |
| Std. Error | 16 | 2 | 5 | 3 | 3 | 18 | 1 |
| Sample Size | 2 | 64 | 4 | 37 | 35 | 3 | 145 |
| Mean Weight | | 1.49 | | 2.32 | 1.47 | 2.05 | 1.72 |
| Std. Error | | 0.05 | | 0.13 | 0.13 | 0.37 | 0.05 |
| Sample Size | | 13 | | 11 | 6 | 2 | 32 |

Table 11. Age, sex, and size composition of sockeye salmon sampled from the escapement at English Bay River weir, 1994.

| | Age Group | | | | Total |
|--|-----------|-------|------|-------|--------|
| | 1.2 | 1.3 | 2.2 | 2.3 | |
| <i>Sample Period : 21 June - 16 July</i> | | | | | |
| Males | 631 | 3,649 | 561 | 3,297 | 8,138 |
| Percent | 4.89 | 28.27 | 4.35 | 25.54 | 63.04 |
| Sample Size | 9 | 52 | 8 | 47 | 116 |
| Mean Length | 507 | 569 | 510 | 570 | 561 |
| Std. Error | 5 | 3 | 6 | 4 | 2 |
| Sample Size | 9 | 52 | 8 | 47 | 116 |
| Mean Weight | 2.07 | 2.72 | 1.98 | 2.76 | 2.63 |
| Std. Error | 0.14 | 0.06 | 0.06 | 0.06 | 0.04 |
| Sample Size | 9 | 52 | 8 | 47 | 116 |
| Females | 982 | 2,526 | 281 | 982 | 4,771 |
| Percent | 7.61 | 19.57 | 2.18 | 7.61 | 36.96 |
| Sample Size | 14 | 36 | 4 | 14 | 68 |
| Mean Length | 487 | 548 | 487 | 547 | 532 |
| Std. Error | 6 | 3 | 21 | 7 | 3 |
| Sample Size | 14 | 36 | 4 | 14 | 68 |
| Mean Weight | 1.69 | 2.29 | 1.68 | 2.33 | 2.14 |
| Std. Error | 0.09 | 0.05 | 0.27 | 0.10 | 0.04 |
| Sample Size | 13 | 36 | 4 | 14 | 67 |
| Both Sexes | 1,613 | 6,175 | 842 | 4,279 | 12,909 |
| Percent | 12.50 | 47.83 | 6.52 | 33.15 | 100.00 |
| Sample Size | 23 | 88 | 12 | 61 | 184 |
| Mean Length | 495 | 560 | 502 | 565 | 550 |
| Std. Error | 4 | 2 | 8 | 3 | 1 |
| Sample Size | 23 | 88 | 12 | 61 | 184 |
| Mean Weight | 1.84 | 2.54 | 1.88 | 2.66 | 2.45 |
| Std. Error | 0.08 | 0.04 | 0.10 | 0.05 | 0.03 |
| Sample Size | 22 | 88 | 12 | 61 | 183 |

Table 12. Age, sex, and size composition of sockeye salmon sampled from the commercial catch taken in East Arm Nuka Bay, 1994.

| | Age Group | | | | | | Total |
|---------------------------------|-----------|------|-------|-------|------|------|--------|
| | 1.2 | 2.1 | 1.3 | 2.2 | 2.3 | 3.2 | |
| <i>Sample Period : 3 August</i> | | | | | | | |
| Males | 710 | 24 | 1,054 | 588 | 196 | | 2,572 |
| Percent | 11.98 | 0.40 | 17.78 | 9.92 | 3.31 | | 43.39 |
| Sample Size | 58 | 2 | 86 | 48 | 16 | | 210 |
| Mean Length | 500 | 350 | 582 | 505 | 568 | | 538 |
| Std. Error | 2 | 7 | 2 | 2 | 7 | | 1 |
| Sample Size | 58 | 2 | 86 | 48 | 16 | | 210 |
| Mean Weight | 1.78 | 0.63 | 3.07 | 1.80 | 2.84 | | 2.38 |
| Std. Error | 0.10 | 0.01 | 0.19 | 0.05 | | | 0.08 |
| Sample Size | 7 | 2 | 8 | 10 | 1 | | 28 |
| Females | 1,103 | | 1,053 | 968 | 220 | 12 | 3,356 |
| Percent | 18.61 | | 17.76 | 16.33 | 3.71 | 0.20 | 56.61 |
| Sample Size | 90 | | 86 | 79 | 18 | 1 | 274 |
| Mean Length | 492 | | 556 | 493 | 560 | 473 | 517 |
| Std. Error | 1 | | 1 | 2 | 6 | | 1 |
| Sample Size | 90 | | 86 | 79 | 18 | 1 | 274 |
| Mean Weight | 1.57 | | 2.33 | 1.57 | | | 1.83 |
| Std. Error | 0.11 | | 0.11 | 0.07 | | | 0.06 |
| Sample Size | 4 | | 6 | 11 | | | 21 |
| Both Sexes | 1,813 | 24 | 2,107 | 1,556 | 416 | 12 | 5,928 |
| Percent | 30.58 | 0.40 | 35.54 | 26.25 | 7.02 | 0.20 | 100.00 |
| Sample Size | 148 | 2 | 172 | 127 | 34 | 1 | 484 |
| Mean Length | 495 | 350 | 569 | 497 | 564 | 473 | 526 |
| Std. Error | 1 | 7 | 1 | 1 | 4 | | 0 |
| Sample Size | 148 | 2 | 172 | 127 | 34 | 1 | 484 |
| Mean Weight | 1.65 | 0.63 | 2.70 | 1.66 | 2.84 | | 2.08 |
| Std. Error | 0.08 | 0.01 | 0.11 | 0.05 | | | 0.05 |
| Sample Size | 11 | 2 | 14 | 21 | 1 | | 49 |

Table 13. Age, sex, and size composition of sockeye salmon sampled from the escapement into Desire Lake, 1994.

| | Age Group | | | | Total |
|-------------------------------------|-----------|-------|-------|-------|--------|
| | 1.2 | 1.3 | 2.2 | 2.3 | |
| <i>Sample Period : 13 September</i> | | | | | |
| Males | 871 | 2,613 | 3,483 | 1,306 | 8,273 |
| Percent | 8.33 | 25.00 | 33.33 | 12.50 | 79.17 |
| Sample Size | 8 | 24 | 32 | 12 | 76 |
| Mean Length | 492 | 561 | 494 | 537 | 522 |
| Std. Error | 11 | 4 | 4 | 7 | 3 |
| Sample Size | 8 | 24 | 32 | 12 | 76 |
| Females | 327 | 544 | 871 | 435 | 2,177 |
| Percent | 3.13 | 5.21 | 8.33 | 4.16 | 20.83 |
| Sample Size | 3 | 5 | 8 | 4 | 20 |
| Mean Length | 479 | 537 | 468 | 544 | 502 |
| Std. Error | 19 | 7 | 7 | 9 | 5 |
| Sample Size | 3 | 5 | 8 | 4 | 20 |
| Both Sexes | 1,198 | 3,157 | 4,354 | 1,741 | 10,450 |
| Percent | 11.46 | 30.21 | 41.67 | 16.66 | 100.00 |
| Sample Size | 11 | 29 | 40 | 16 | 96 |
| Mean Length | 488 | 557 | 489 | 539 | 518 |
| Std. Error | 9 | 3 | 4 | 6 | 2 |
| Sample Size | 11 | 29 | 40 | 16 | 96 |

Table 14. Age, sex, and size composition of sockeye salmon sampled from the escapement into Delight Lake, 1994.

| | Age Group | | | | Total |
|-------------------------------------|-----------|-------|-------|-------|--------|
| | 1.2 | 1.3 | 2.2 | 2.3 | |
| <i>Sample Period : 22 September</i> | | | | | |
| Males | 974 | 974 | 1,582 | 487 | 4,017 |
| Percent | 17.39 | 17.39 | 28.25 | 8.70 | 71.73 |
| Sample Size | 16 | 16 | 26 | 8 | 66 |
| Mean Length | 492 | 553 | 490 | 528 | 511 |
| Std. Error | 7 | 6 | 3 | 14 | 3 |
| Sample Size | 16 | 16 | 26 | 8 | 66 |
| Females | 243 | 487 | 731 | 122 | 1,583 |
| Percent | 4.34 | 8.70 | 13.05 | 2.18 | 28.27 |
| Sample Size | 4 | 8 | 12 | 2 | 26 |
| Mean Length | 458 | 530 | 464 | 520 | 488 |
| Std. Error | 7 | 9 | 3 | 15 | 3 |
| Sample Size | 4 | 8 | 12 | 2 | 26 |
| Both Sexes | 1,217 | 1,461 | 2,313 | 609 | 5,600 |
| Percent | 21.73 | 26.09 | 41.30 | 10.88 | 100.00 |
| Sample Size | 20 | 24 | 38 | 10 | 92 |
| Mean Length | 486 | 545 | 482 | 527 | 504 |
| Std. Error | 6 | 5 | 2 | 12 | 2 |
| Sample Size | 20 | 24 | 38 | 10 | 92 |

Table 15. Age, sex, and size composition salmon sampled from the escapement into Ecstasy Lake*, 1994.

| | Age Group | | | | | | Total |
|-------------------------------------|-----------|------|------|-------|------|------|--------|
| | 1.2 | 2.1 | 1.3 | 2.2 | 2.3 | 3.2 | |
| <i>Sample Period : 12 September</i> | | | | | | | |
| Males | 83 | 62 | 21 | 329 | 41 | 21 | 557 |
| Percent | 6.38 | 4.77 | 1.62 | 25.31 | 3.15 | 1.62 | 42.85 |
| Sample Size | 4 | 3 | 1 | 16 | 2 | 1 | 27 |
| Mean Length | 472 | 352 | 545 | 472 | 550 | 499 | 468 |
| Std. Error | 14 | 18 | | 6 | 21 | | 5 |
| Sample Size | 4 | 3 | 1 | 16 | 2 | 1 | 27 |
| Females | 144 | | 83 | 454 | 41 | 21 | 743 |
| Percent | 11.08 | | 6.38 | 34.92 | 3.15 | 1.62 | 57.15 |
| Sample Size | 7 | | 4 | 22 | 2 | 1 | 36 |
| Mean Length | 473 | | 514 | 456 | 530 | 452 | 470 |
| Std. Error | 7 | | 9 | 4 | 14 | | 3 |
| Sample Size | 7 | | 4 | 22 | 2 | 1 | 36 |
| Both Sexes | 227 | 62 | 104 | 783 | 82 | 42 | 1,300 |
| Percent | 17.46 | 4.77 | 8.00 | 60.23 | 6.31 | 3.23 | 100.00 |
| Sample Size | 11 | 3 | 5 | 38 | 4 | 2 | 63 |
| Mean Length | 473 | 352 | 520 | 462 | 540 | 475 | 469 |
| Std. Error | 7 | 18 | 9 | 3 | 12 | | 2 |
| Sample Size | 11 | 3 | 5 | 38 | 4 | 2 | 63 |

*Unofficial name, also called Delectable and Delusion Lake.

Table 16. Age of sockeye salmon escapement in Aialik Lake, 1994.

| | Age Group | | | | total |
|------------------------------------|-----------|-------|------|------|--------|
| | 1.2 | 1.3 | 2.2 | 2.3 | |
| <i>Sample Period : 7 September</i> | | | | | |
| Both Sexes | 5,137 | 1,379 | 568 | 216 | 7,300 |
| Percent | 70.37 | 18.89 | 7.78 | 2.96 | 100.00 |
| Sample Size | 190 | 51 | 21 | 8 | 270 |

Table 17. Age, sex, and size composition of sockeye salmon sampled from the commercial catch taken in Resurrection Bay, 1994.

| | Age Group | | | | | | | total |
|--|-----------|------|------|-------|-------|------|------|--------|
| | 0.2 | 1.1 | 0.3 | 1.2 | 1.3 | 2.2 | 2.3 | |
| <i>Sample Period : 13 June - 14 June</i> | | | | | | | | |
| Males | 202 | 36 | 5 | 117 | 82 | 20 | 5 | 467 |
| Percent | 20.47 | 3.65 | 0.51 | 11.85 | 8.31 | 2.03 | 0.51 | 47.32 |
| Sample Size | 79 | 14 | 2 | 46 | 32 | 8 | 2 | 183 |
| Mean Length | 458 | 349 | 537 | 469 | 523 | 500 | 524 | 467 |
| Std. Error | 3 | 3 | 14 | 6 | 4 | 7 | 2 | 2 |
| Sample Size | 79 | 14 | 2 | 46 | 32 | 8 | 2 | 183 |
| Mean Weight | 1.36 | 0.62 | | 1.37 | 2.18 | | 2.06 | 1.46 |
| Std. Error | 0.05 | 0.02 | | 0.12 | 0.07 | | 0.10 | 0.04 |
| Sample Size | 18 | 7 | | 13 | 12 | | 2 | 52 |
| Females | 214 | | 5 | 171 | 99 | 28 | 3 | 520 |
| Percent | 21.68 | | 0.51 | 17.33 | 10.03 | 2.84 | 0.30 | 52.68 |
| Sample Size | 84 | | 2 | 67 | 39 | 11 | 1 | 204 |
| Mean Length | 458 | | 513 | 473 | 520 | 481 | 526 | 477 |
| Std. Error | 2 | | 18 | 3 | 4 | 5 | | 1 |
| Sample Size | 83 | | 2 | 66 | 39 | 11 | 1 | 202 |
| Mean Weight | 1.28 | | 1.84 | 1.55 | 2.06 | 1.53 | | 1.54 |
| Std. Error | 0.03 | | | 0.08 | 0.09 | 0.10 | | 0.04 |
| Sample Size | 28 | | 1 | 18 | 7 | 7 | | 61 |
| Both Sexes | 416 | 36 | 10 | 288 | 181 | 48 | 8 | 987 |
| Percent | 42.15 | 3.65 | 1.01 | 29.18 | 18.34 | 4.86 | 0.81 | 100.00 |
| Sample Size | 163 | 14 | 4 | 113 | 71 | 19 | 3 | 387 |
| Mean Length | 458 | 349 | 525 | 471 | 521 | 488 | 524 | 472 |
| Std. Error | 2 | 3 | 12 | 3 | 3 | 4 | 2 | 1 |
| Sample Size | 162 | 14 | 4 | 112 | 71 | 19 | 3 | 385 |
| Mean Weight | 1.32 | 0.62 | 1.84 | 1.48 | 2.11 | 1.53 | 2.06 | 1.50 |
| Std. Error | 0.03 | 0.02 | | 0.07 | 0.06 | 0.10 | 0.10 | 0.03 |
| Sample Size | 46 | 7 | 1 | 31 | 19 | 7 | 2 | 113 |

Table 18. Age, sex, and size composition of sockeye salmon sampled from the commercial catch of Kirschner Lake stock taken in Bruin Bay Subdistrict, 1994.

| | Age Group | | | | | | total |
|--------------------------------|-----------|--------|------|-------|-------|------|--------|
| | 1.1 | 1.2 | 2.1 | 1.3 | 2.2 | 2.3 | |
| <i>Sample Period : 28 July</i> | | | | | | | |
| Males | 56 | 8,962 | 112 | 1,288 | 3,024 | 168 | 13,610 |
| Percent | 0.18 | 28.68 | 0.36 | 4.12 | 9.68 | 0.54 | 43.55 |
| Sample Size | 1 | 160 | 2 | 23 | 54 | 3 | 243 |
| Mean Length | 430 | 463 | 406 | 529 | 475 | 528 | 472 |
| Std. Error | | 1 | 0 | 3 | 2 | 6 | 1 |
| Sample Size | 1 | 160 | 2 | 23 | 54 | 3 | 243 |
| Mean Weight | 1.27 | 1.42 | 0.51 | 2.14 | 1.58 | 2.14 | 1.52 |
| Std. Error | | 0.04 | | 0.05 | 0.07 | | 0.03 |
| Sample Size | 1 | 69 | 1 | 7 | 24 | 1 | 103 |
| Females | | 11,369 | | 1,400 | 4,481 | 392 | 17,642 |
| Percent | | 36.38 | | 4.48 | 14.34 | 1.25 | 56.45 |
| Sample Size | | 203 | | 25 | 80 | 7 | 315 |
| Mean Length | | 464 | | 526 | 474 | 521 | 473 |
| Std. Error | | 1 | | 2 | 1 | 1 | 0 |
| Sample Size | | 203 | | 25 | 80 | 7 | 315 |
| Mean Weight | | 1.35 | | 1.66 | 1.46 | 1.94 | 1.42 |
| Std. Error | | 0.03 | | 0.11 | 0.04 | 0.03 | 0.02 |
| Sample Size | | 90 | | 13 | 37 | 3 | 143 |
| Both Sexes | 56 | 20,331 | 112 | 2,688 | 7,505 | 560 | 31,252 |
| Percent | 0.18 | 65.06 | 0.36 | 8.60 | 24.01 | 1.79 | 100.00 |
| Sample Size | 1 | 363 | 2 | 48 | 134 | 10 | 558 |
| Mean Length | 430 | 463 | 406 | 528 | 474 | 523 | 472 |
| Std. Error | | 0 | 0 | 2 | 1 | 2 | 0 |
| Sample Size | 1 | 363 | 2 | 48 | 134 | 10 | 558 |
| Mean Weight | 1.27 | 1.38 | 0.51 | 1.89 | 1.51 | 2.00 | 1.46 |
| Std. Error | | 0.02 | | 0.06 | 0.04 | 0.03 | 0.02 |
| Sample Size | 1 | 159 | 1 | 20 | 61 | 4 | 246 |

Table 19. Age, sex, and size composition of sockeye salmon sampled from the escapement at Chenik Lake weir, 1994.

| | Age Group | | | | |
|---|-----------|-------|------|------|--------|
| | 1.2 | 1.3 | 2.2 | 1.4 | total |
| <i>Sample Period : 6 July - 27 July</i> | | | | | |
| Males | 410 | 126 | 3 | 3 | 542 |
| Percent | 50.74 | 15.59 | 0.37 | 0.37 | 67.08 |
| Sample Size | 144 | 44 | 1 | 1 | 190 |
| Mean Length | 491 | 548 | 509 | 550 | 504 |
| Std. Error | 1 | 3 | | | 1 |
| Sample Size | 144 | 44 | 1 | 1 | 190 |
| Mean Weight | 1.56 | 2.19 | 1.70 | 2.20 | 1.71 |
| Std. Error | 0.02 | 0.05 | | | 0.02 |
| Sample Size | 144 | 44 | 1 | 1 | 190 |
| Females | 149 | 111 | 6 | | 266 |
| Percent | 18.44 | 13.74 | 0.74 | | 32.92 |
| Sample Size | 52 | 39 | 2 | | 93 |
| Mean Length | 476 | 530 | 482 | | 499 |
| Std. Error | 3 | 3 | 25 | | 2 |
| Sample Size | 52 | 39 | 2 | | 93 |
| Mean Weight | 1.31 | 1.81 | 1.35 | | 1.52 |
| Std. Error | 0.03 | 0.05 | 0.15 | | 0.03 |
| Sample Size | 52 | 39 | 2 | | 93 |
| Both Sexes | 559 | 237 | 9 | 3 | 808 |
| Percent | 69.18 | 29.33 | 1.11 | 0.37 | 100.00 |
| Sample Size | 196 | 83 | 3 | 1 | 283 |
| Mean Length | 487 | 540 | 491 | 550 | 503 |
| Std. Error | 1 | 2 | 25 | | 1 |
| Sample Size | 196 | 83 | 3 | 1 | 283 |
| Mean Weight | 1.49 | 2.01 | 1.47 | 2.20 | 1.65 |
| Std. Error | 0.01 | 0.04 | 0.15 | | 0.01 |
| Sample Size | 196 | 83 | 3 | 1 | 283 |

Table 20. Age, sex, and size composition of sockeye salmon sampled from the commercial catch taken in Douglas River Subdistrict (Silver Beach), 1994.

| | Age Group | | | | | | | total |
|--|-----------|-------|-------|------|-------|------|------|--------|
| | 0.2 | 0.3 | 1.2 | 2.1 | 1.3 | 2.2 | 2.3 | |
| <i>Sample Period : 28 June - 29 June</i> | | | | | | | | |
| Males | 19 | 361 | 426 | | 713 | 19 | | 1,538 |
| Percent | 0.55 | 10.53 | 12.42 | | 20.79 | 0.55 | | 44.85 |
| Sample Size | 2 | 39 | 46 | | 77 | 2 | | 166 |
| Mean Length | 437 | 568 | 465 | | 559 | 482 | | 532 |
| Std. Error | 16 | 4 | 5 | | 4 | 47 | | 2 |
| Sample Size | 2 | 39 | 46 | | 77 | 2 | | 166 |
| Females | 9 | 436 | 158 | 9 | 1,242 | 28 | 9 | 1,891 |
| Percent | 0.26 | 12.72 | 4.61 | 0.26 | 36.22 | 0.82 | 0.26 | 55.15 |
| Sample Size | 1 | 47 | 17 | 1 | 134 | 3 | 1 | 204 |
| Mean Length | 532 | 547 | 470 | 412 | 547 | 480 | 512 | 539 |
| Std. Error | | 2 | 8 | | 1 | 13 | | 1 |
| Sample Size | 1 | 47 | 17 | 1 | 134 | 3 | 1 | 204 |
| Both Sexes | 28 | 797 | 584 | 9 | 1,955 | 47 | 9 | 3,429 |
| Percent | 0.82 | 23.24 | 17.03 | 0.26 | 57.01 | 1.37 | 0.26 | 100.00 |
| Sample Size | 3 | 86 | 63 | 1 | 211 | 5 | 1 | 370 |
| Mean Length | 467 | 556 | 466 | 412 | 552 | 480 | 512 | 536 |
| Std. Error | 16 | 2 | 4 | | 1 | 20 | | 1 |
| Sample Size | 3 | 86 | 63 | 1 | 211 | 5 | 1 | 370 |

Table 21. Age, sex, and size composition of chum salmon sampled from the escapement into McNeil River, 1994.

| | Age Group | | | |
|--------------------------------|-----------|--------|------|--------|
| | 0.3 | 0.4 | 0.5 | total |
| <i>Sample Period : 15 July</i> | | | | |
| Males | 1,385 | 5,539 | 277 | 7,201 |
| Percent | 9.26 | 37.04 | 1.85 | 48.15 |
| Sample Size | 5 | 20 | 1 | 26 |
| Mean Length | 578 | 639 | 624 | 627 |
| Std. Error | 10 | 8 | | 6 |
| Sample Size | 5 | 20 | 1 | 26 |
| Mean Weight | | | 3.90 | 3.90 |
| Std. Error | | | | |
| Sample Size | | | 1 | 1 |
| Females | 2,216 | 5,538 | | 7,754 |
| Percent | 14.82 | 37.03 | | 51.85 |
| Sample Size | 8 | 20 | | 28 |
| Mean Length | 604 | 637 | | 628 |
| Std. Error | 7 | 4 | | 4 |
| Sample Size | 8 | 20 | | 28 |
| Mean Weight | | 4.27 | | 4.27 |
| Std. Error | | 0.03 | | 0.03 |
| Sample Size | | 3 | | 3 |
| Both Sexes | 3,601 | 11,077 | 277 | 14,955 |
| Percent | 24.08 | 74.07 | 1.85 | 100.00 |
| Sample Size | 13 | 40 | 1 | 54 |
| Mean Length | 594 | 638 | 624 | 627 |
| Std. Error | 6 | 4 | | 3 |
| Sample Size | 13 | 40 | 1 | 54 |
| Mean Weight | | 4.27 | 3.90 | 4.25 |
| Std. Error | | 0.03 | | 0.03 |
| Sample Size | | 3 | 1 | 4 |

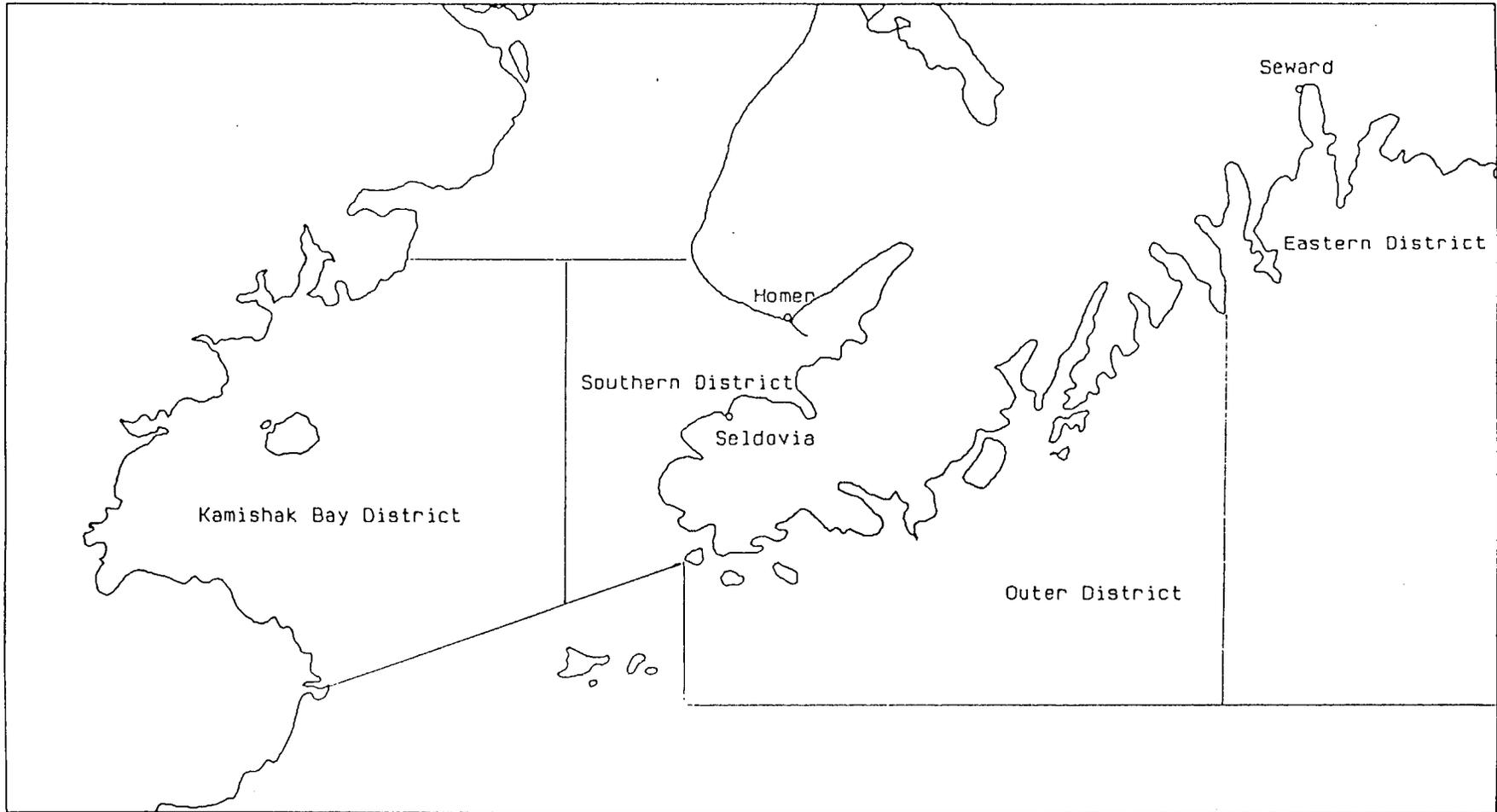


Figure 1. Kamishak Bay, Southern, Outer, and Eastern Districts of Lower Cook Inlet Management Area.

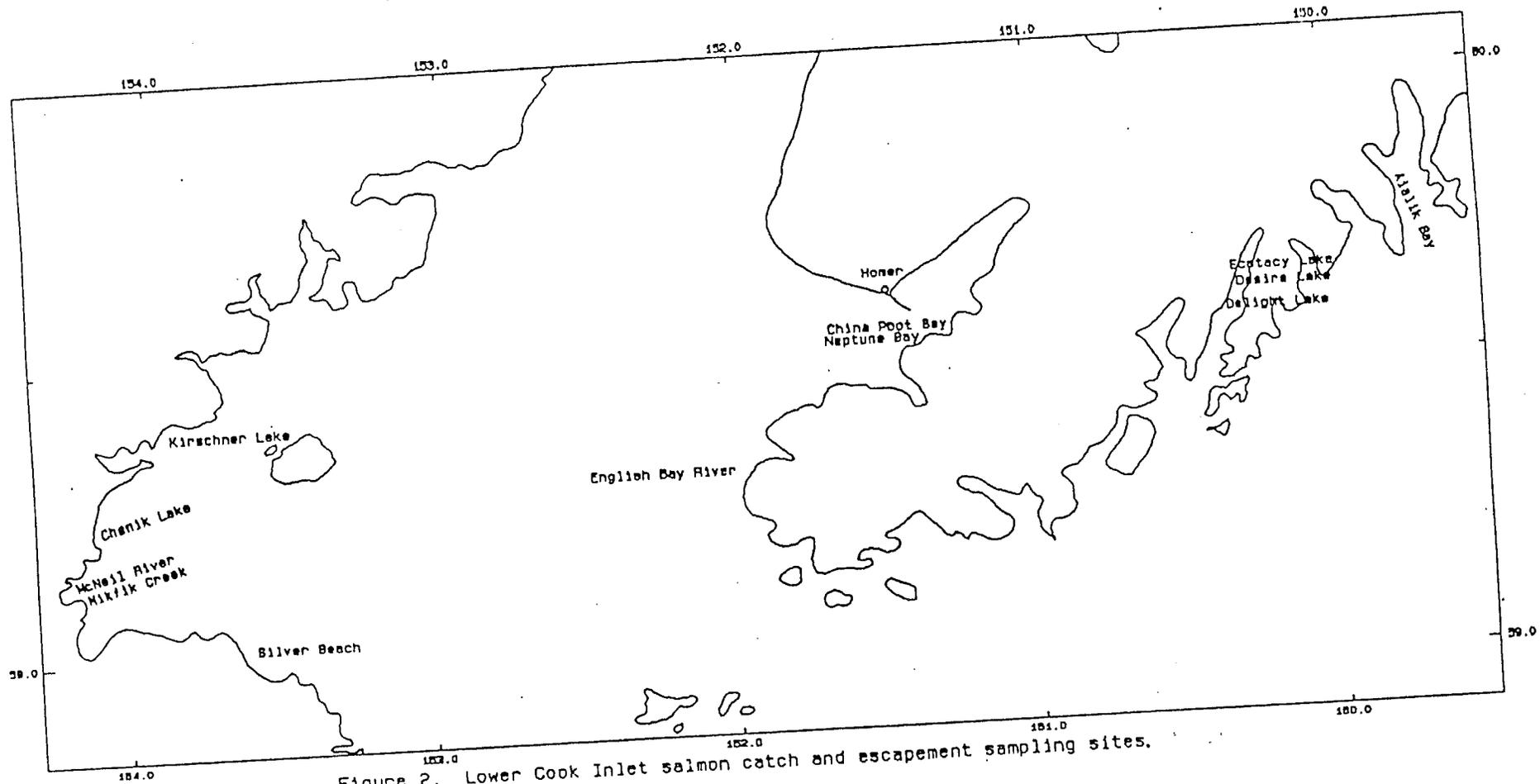


Figure 2. Lower Cook Inlet salmon catch and escapement sampling sites.

APPENDIX

Appendix A. China Poot sockeye salmon mean length, weight, and age by brood year and age group. Dashes indicate missing data. Calculated means reflect corrections made to previously reported data.

| 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 | 3.4 |
| <i>Male Mean Length by Brood Year</i> | | | | | | | | | | | | | | | |
| 1975 | | | | | | 512 | | | | | | | | | |
| 1976 | | | | | 515 | 540 | | | | | | | | | |
| 1977 | | | | | 489 | | | 436 | | 580 | | | | | |
| 1978 | | | | | | 542 | | | 507 | 565 | | | | | |
| 1979 | | | | | 514 | 526 | 568 | | 513 | | | | | | |
| 1980 | | | | 422 | 494 | 539 | | | 497 | | | | | | |
| 1981 | | | | | 481 | 504 | | | | | | | | | |
| 1982 | | | | | 498 | | | | | 546 | | | | | |
| 1983 | | | | | | 534 | | | 510 | 558 | | | | | |
| 1984 | | | | | 498 | 560 | | 379 | 513 | 530 | | | | 437 | |
| 1985 | | | | 351 | 489 | 554 | | 407 | 479 | 554 | | | | | |
| 1986 | | | | 366 | 474 | 524 | | 352 | 485 | 541 | | | | | |
| 1987 | | | | 361 | 478 | 546 | | 359 | 493 | | | | | | |
| 1988 | | | | | 484 | 541 | | 398 | 518 | | | | | | |
| 1989 | | | | 383 | 495 | | | 394 | | | | | | | |
| 1990 | | | | 761 | | | | | | | | | | | |
| <i>Female Mean Length by Brood Year</i> | | | | | | | | | | | | | | | |
| 1975 | | | | | | 523 | | | 508 | | | | | | |
| 1976 | | | | | 511 | | | | | | | | | | |
| 1977 | | | | | 490 | | | 512 | | 569 | | | | | |
| 1978 | | | | | | 538 | 511 | | 525 | | | | | | |
| 1979 | | | | | 513 | 549 | | | 501 | 547 | | | | | |
| 1980 | | | | | 494 | 539 | | | 493 | | | | | | |
| 1981 | | | | | 482 | | | | 496 | | | | | | |
| 1982 | | | | | 493 | | 632 | | | 525 | | | | | |
| 1983 | | | | | | 551 | | | 507 | 562 | | | | | |
| 1984 | | | | | 494 | 565 | | 441 | 517 | 574 | | | | 486 | |
| 1985 | | | | 340 | 488 | 546 | | | 473 | 550 | | | | | |
| 1986 | | | | | 472 | 533 | | | 478 | 538 | | | | | |
| 1987 | | | | | 477 | 524 | | | 491 | | | | | | |
| 1988 | | | | | 485 | 539 | | | 521 | | | | | | |
| 1989 | | | | | 495 | | | | | | | | | | |
| 1990 | | | | | | | | | | | | | | | |
| <i>Male Mean Weight by Brood Year</i> | | | | | | | | | | | | | | | |
| 1975 | | | | | | 2.20 | | | | | | | | | |
| 1976 | | | | | 2.17 | 2.61 | | | | | | | | | |
| 1977 | | | | | 2.17 | | | 1.14 | | 2.95 | | | | | |
| 1978 | | | | | | 2.65 | | | 2.03 | 2.90 | | | | | |
| 1979 | | | | | 2.14 | 2.66 | 3.85 | | 2.26 | | | | | | |
| 1980 | | | | 0.94 | 2.02 | 2.91 | | | 2.43 | | | | | | |
| 1981 | | | | | 2.26 | 2.14 | | | | | | | | | |
| 1982 | | | | | 1.96 | | | | | 2.83 | | | | | |
| 1983 | | | | | | 2.70 | | | 2.45 | | | | | | |
| 1984 | | | | | 2.38 | 3.63 | | 1.80 | 2.00 | | | | | | |
| 1985 | | | | 0.70 | 1.83 | 2.83 | | | 1.70 | 2.10 | | | | | |
| 1986 | | | | 0.50 | 1.54 | 2.46 | | | 1.80 | | | | | | |
| 1987 | | | | 0.70 | 1.69 | 2.40 | | 0.50 | 1.81 | | | | | | |
| 1988 | | | | | 1.79 | | | | 2.17 | | | | | | |
| 1989 | | | | 0.82 | 1.57 | | | | | | | | | | |
| 1990 | | | | | | | | | | | | | | | |

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| 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 | 3.4 |
| <i>Female Mean Weight by Brood Year</i> | | | | | | | | | | | | | | | |
| 1975 | | | | | | 2.40 | | | 1.95 | | | | | | |
| 1976 | | | | | 2.00 | | | | | | | | | | |
| 1977 | | | | | 1.98 | | | | | | 2.70 | | | | |
| 1978 | | | | | | 2.85 | 2.50 | | 2.03 | | | | | | |
| 1979 | | | | | 1.98 | 2.80 | | | 1.97 | 2.88 | | | | | |
| 1980 | | | | | 1.90 | 2.91 | | | 2.26 | | | | | | |
| 1981 | | | | | 2.11 | | | | 1.70 | | | | | | |
| 1982 | | | | | 1.80 | | | | | 2.20 | | | | | |
| 1983 | | | | | | | | | 2.07 | | | | | | |
| 1984 | | | | | 1.77 | | | | 2.75 | 2.60 | | | | | |
| 1985 | | | | | 1.76 | | | | 1.51 | | | | | | |
| 1986 | | | | | 1.49 | 2.10 | | | 1.63 | | | | | | |
| 1987 | | | | | 1.57 | 2.10 | | | 1.72 | | | | | | |
| 1988 | | | | | 1.67 | 2.51 | | | | | | | | | |
| 1989 | | | | | 1.54 | | | | | | | | | | |
| 1990 | | | | | | | | | | | | | | | |
| <i>Male Harvest by Brood Year</i> | | | | | | | | | | | | | | | |
| 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 | | | | | | |
| 1989 | | | | 1,543 | 19,789 | | | 287 | | | | | | | |
| 1990 | | | | | 287 | | | | | | | | | | |
| <i>Female Harvest by Brood Year</i> | | | | | | | | | | | | | | | |
| 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 | | | | | | |
| 1989 | | | | | 38,146 | | | | | | | | | | |
| 1990 | | | | | | | | | | | | | | | |

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Appendix A. (page 3 of 3)

| 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 | 3.4 |
| <i>Male Age Composition by Harvest Year</i> | | | | | | | | | | | | | | | |
| 1980 | | | | | 46.83 | 1.27 | | | | | | | | | |
| 1981 | | | | | 30.85 | 1.24 | | 2.47 | | | | | | | |
| 1982 | ----- | | | | | | | | | | | | | | |
| 1983 | | | 0.88 | | 44.27 | 0.18 | | | 0.36 | 0.36 | | | | | |
| 1984 | | | | | 53.31 | 1.86 | | | 1.45 | 0.21 | | | | | |
| 1985 | | | | | 26.40 | 11.22 | 0.33 | | 14.85 | | | | | | |
| 1986 | | | | | 43.75 | 31.25 | | | | | | | | | |
| 1987 | ----- | | | | | | | | | | | | | | |
| 1988 | | | | 1.77 | 20.25 | 2.09 | | 1.85 | 27.15 | 2.21 | | | | | |
| 1989 | | | | 0.43 | 46.36 | 3.70 | | 0.10 | 7.24 | 0.86 | | | | | |
| 1990 | | | | 1.81 | 24.94 | 6.12 | | 0.68 | 9.75 | 0.23 | | | | | |
| 1991 | | | | | 28.82 | 2.41 | | 0.51 | 18.18 | 0.36 | | | 0.43 | | |
| 1992 | | | | 2.42 | 25.25 | 1.82 | | 1.01 | 23.64 | 0.61 | | | | | |
| 1994 | | | | 0.42 | 29.24 | 3.39 | | 0.42 | 4.24 | | | | | | |
| <i>Female Age Composition by Harvest Year</i> | | | | | | | | | | | | | | | |
| 1980 | | | | | 45.57 | 3.80 | | | 2.53 | | | | | | |
| 1981 | | | | | 62.96 | | | 2.47 | | | | | | | |
| 1982 | ----- | | | | | | | | | | | | | | |
| 1983 | | | | | 53.05 | 0.36 | | | 0.36 | 0.18 | | | | | |
| 1984 | | | | | 38.43 | 0.62 | 0.21 | | 3.93 | | | | | | |
| 1985 | | | | | 25.74 | 8.91 | | | 11.55 | 0.99 | | | | | |
| 1986 | | | | | 18.75 | | | | 6.25 | | | | | | |
| 1987 | ----- | | | | | | | | | | | | | | |
| 1988 | | | 0.09 | | 18.69 | 2.47 | 0.09 | 0.18 | 22.36 | 0.81 | | | | | |
| 1989 | | | | | 33.74 | 2.56 | | | 4.38 | 0.64 | | | | | |
| 1990 | | | | | 36.96 | 4.31 | | | 14.96 | 0.23 | | | | | |
| 1991 | | | | | 25.44 | 3.39 | | | 19.55 | 0.70 | | | 0.22 | | |
| 1992 | | | | | 20.81 | 1.62 | | | 22.62 | 0.20 | | | | | |
| 1994 | | | | | 56.36 | 2.97 | | | 2.97 | | | | | | |

Appendix B. Nuka Bay sockeye salmon mean length, weight, and age by brood year and age group. Dashes indicate missing data. Calculated means reflect corrections made to previously reported data.

| 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 | 3.4 |
| <i>Male Mean Length by Brood Year</i> | | | | | | | | | | | | | | | |
| 1977 | | | | | | | | | | | | | | | 534 |
| 1978 | | | | | | | | | | | | | | | |
| 1979 | | | | | | | | | | 573 | | | | | |
| 1980 | | | | | | 571 | | | 508 | | | | | | 570 |
| 1981 | | | | | 500 | | | | | | | | | | |
| 1982 | | | | | | | | | | 582 | | | | | |
| 1983 | | | | | | 573 | | | 537 | 594 | | | | | 581 |
| 1984 | | | | | 507 | 579 | | | 543 | 572 | | | 538 | | |
| 1985 | | 617 | | | 518 | 576 | | | 503 | 574 | | | | | |
| 1986 | 530 | 585 | | | 497 | 579 | | | 516 | | | | | | |
| 1987 | | | | | 504 | | | | | 568 | | | | | |
| 1988 | | | | | | 567 | | | 520 | | | | | | |
| 1989 | | 579 | | | 515 | | | | | | | | | | |
| 1990 | | | | | | | | | | | | | | | |
| <i>Female Mean Length by Brood Year</i> | | | | | | | | | | | | | | | |
| 1977 | | | | | | | | | | | | | | | 547 |
| 1978 | | | | | | | | | | | | | | | |
| 1979 | | | | | | | | | | 539 | | | | | |
| 1980 | | | | | | 549 | | | 498 | | | | | | 565 |
| 1981 | | 547 | | | 487 | | | | | | 506 | | 503 | | |
| 1982 | | | | | | | | | | 559 | | | | | |
| 1983 | | | | | | 558 | | | 508 | 565 | | | | | 551 |
| 1984 | | | | | 500 | 557 | 549 | 325 | 511 | 550 | | | 517 | | |
| 1985 | | 502 | | | 504 | 549 | 585 | | 481 | 553 | | | | | |
| 1986 | 512 | 553 | | | 482 | 555 | | | 495 | | | | | | |
| 1987 | | | | | 491 | | | | | 551 | | | | | |
| 1988 | | | | | | 556 | | | 504 | | | | | | |
| 1989 | | | | | 491 | | | | | | | | | | |
| 1990 | 488 | | | | | | | | | | | | | | |
| <i>Male Mean Weight by Brood Year</i> | | | | | | | | | | | | | | | |
| 1977 | | | | | | | | | | | | | | | |
| 1978 | | | | | | | | | | | | | | | |
| 1979 | | | | | | | | | | 3.13 | | | | | |
| 1980 | | | | | | 3.12 | | | 2.27 | | | | | | |
| 1981 | | | | | 2.16 | | | | | | | | | | |
| 1982 | | | | | | | | | | 3.55 | | | | | |
| 1983 | | | | | | 3.53 | | | 2.33 | | | | | | 2.48 |
| 1984 | | | | | 2.20 | 2.58 | | | | 3.70 | | | 2.11 | | |
| 1985 | | | | | 2.25 | 3.57 | | | 2.68 | 2.33 | | | | | |
| 1986 | 2.10 | | | | 2.34 | 2.35 | | | 1.76 | | | | | | |
| 1987 | | | | | 1.61 | | | | | 2.72 | | | | | |
| 1988 | | | | | | 2.76 | | | 1.85 | | | | | | |
| 1989 | | | | | 2.07 | | | | | | | | | | |
| 1990 | | | | | | | | | | | | | | | |

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| 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 |

Female Mean Weight by Brood Year

| | | | | | | | | | | | | | | | |
|------|--|--|--|--|------|------|--|--|------|------|------|--|--|------|--|
| 1977 | | | | | | | | | | | | | | | |
| 1978 | | | | | | | | | | | | | | | |
| 1979 | | | | | | | | | | 2.66 | | | | | |
| 1980 | | | | | | 2.65 | | | 1.94 | | | | | | |
| 1981 | | | | | 1.88 | | | | | | 1.95 | | | | |
| 1982 | | | | | | | | | | | 2.89 | | | | |
| 1983 | | | | | | 2.69 | | | 1.83 | | 2.65 | | | 2.24 | |
| 1984 | | | | | 2.45 | 2.48 | | | | | 3.07 | | | | |
| 1985 | | | | | 1.80 | 2.87 | | | 1.89 | | 1.99 | | | | |
| 1986 | | | | | 1.91 | 1.99 | | | 1.37 | | | | | | |
| 1987 | | | | | 1.43 | | | | | | 2.38 | | | | |
| 1988 | | | | | | 2.32 | | | 2.19 | | | | | | |
| 1989 | | | | | 1.83 | | | | | | | | | | |
| 1990 | | | | | | | | | | | | | | | |

Male Harvest 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 | | | | | | |
| 1989 | | 28 | | | 353 | | | | | | | | | | |
| 1990 | | | | | | | | | | | | | | | |

Female Harvest 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 | | | | | | |
| 1989 | | | | | 367 | | | | | | | | | | |
| 1990 | 7 | | | | | | | | | | | | | | |

Male Age Composition by Harvest Year

| | | | | | | | | | | | | | | | |
|------|------|------|--|-------|-------|--|--|------|-------|--|--|--|------|------|------|
| 1985 | | | | 4.10 | 32.80 | | | 3.19 | 2.96 | | | | | | 0.23 |
| 1986 | | | | | | | | | | | | | | | |
| 1987 | | | | | | | | | | | | | | | |
| 1988 | | | | 3.06 | 12.23 | | | 6.12 | 21.71 | | | | | | 0.30 |
| 1989 | 0.30 | 0.30 | | 13.59 | 25.08 | | | 0.90 | 4.53 | | | | | | |
| 1990 | | 0.24 | | 7.12 | 24.46 | | | 7.91 | 4.22 | | | | | | |
| 1991 | | | | 3.16 | 20.19 | | | 4.62 | 12.18 | | | | 0.23 | 0.39 | |
| 1992 | | | | | | | | | | | | | | | |
| 1994 | | 0.80 | | 10.03 | 13.58 | | | 4.72 | 20.69 | | | | | | |

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Appendix B. (page 3 of 3)

| 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 | 3.4 |
| <i>Female Age Composition by Harvest Year</i> | | | | | | | | | | | | | | | |
| 1985 | | 0.23 | | | 8.20 | 36.45 | | | 6.61 | 5.01 | | | | | 0.23 |
| 1986 | ----- | | | | | | | | | | | | | | |
| 1987 | ----- | | | | | | | | | | | | | | |
| 1988 | | | | | 7.34 | 16.82 | | 0.30 | 11.01 | 20.19 | 0.30 | | 0.30 | 0.30 | |
| 1989 | 0.30 | 0.30 | | | 16.92 | 26.58 | | | 2.72 | 8.46 | | | | | |
| 1990 | | 0.49 | | | 9.90 | 31.23 | 0.09 | | 8.75 | 5.59 | | | | | |
| 1991 | | | | | 6.32 | 27.86 | 0.23 | | 8.01 | 15.74 | | | 0.23 | 0.85 | |
| 1992 | ----- | | | | | | | | | | | | | | |
| 1994 | 0.20 | | | | 10.43 | 13.38 | | | 5.91 | 20.26 | | | | | |

Appendix C. Aialik Lake sockeye salmon mean length, weight, and age by brood year and age group. Dashes indicate missing data. Calculated means reflect corrections made to previously reported data.

| 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 | 3.4 |
| <i>Male Mean Length by Brood Year</i> | | | | | | | | | | | | | | | |
| 1978 | | | | | | 581 | | | 534 | 586 | | | | | |
| 1979 | | | | | 502 | 581 | 648 | | 529 | 582 | | | | | |
| 1980 | | | | 355 | 515 | 569 | | | 510 | 571 | | | | | |
| 1981 | | | | 400 | 500 | 566 | | 380 | 498 | | | | | | |
| 1982 | | | | | 496 | | | | | | | | | 581 | |
| 1983 | | | | | | 581 | | | 512 | 607 | | | | | |
| 1984 | | | 561 | | 517 | 590 | 610 | | 539 | 610 | | | | | |
| 1985 | | | | | 521 | 613 | | | 545 | 571 | | | | | |
| 1986 | | 659 | | | 541 | 566 | | | 498 | | | | | | |
| 1987 | 478 | | | 367 | 496 | | | | | | | | | | |
| 1988 | | | | | | | | | | | | | | | |
| 1989 | | | | | | | | | | | | | | | |
| 1990 | | | | | | | | | | | | | | | |
| <i>Female Mean Length by Brood Year</i> | | | | | | | | | | | | | | | |
| 1978 | | | | | | 557 | 546 | | 530 | 565 | | | | | |
| 1979 | | | | | 499 | 557 | | | 512 | 548 | | | | | |
| 1980 | | | | | 493 | 551 | | | 493 | 547 | | | | | |
| 1981 | | 539 | | | 497 | 544 | | | 501 | | | | | | |
| 1982 | | | | | 496 | | | | | | | | | 564 | |
| 1983 | | | | | | 555 | | | 506 | 579 | | | | | |
| 1984 | | 516 | | | 502 | 563 | 632 | | 526 | 594 | | | | | |
| 1985 | | | | | 506 | 579 | | | 520 | 547 | | | | | |
| 1986 | | | | | 529 | 544 | | | 501 | | | | | | |
| 1987 | | | | | 496 | | | | | | | | | | |
| 1988 | | | | | | | | | | | | | | | |
| 1989 | | | | | | | | | | | | | | | |
| 1990 | | | | | | | | | | | | | | | |
| <i>Male Mean Weight by Brood Year</i> | | | | | | | | | | | | | | | |
| 1978 | | | | | | 3.16 | | | 2.67 | 2.90 | | | | | |
| 1979 | | | | | 2.31 | 3.34 | 4.80 | | 2.37 | 3.76 | | | | | |
| 1980 | | | | | 2.42 | 3.50 | | | 2.56 | 2.86 | | | | | |
| 1981 | | | | | 2.63 | 2.96 | | 1.30 | 2.11 | | | | | | |
| 1982 | | | | | 2.10 | | | | | | | | | 3.76 | |
| 1983 | | | | | | 3.37 | | | 1.55 | 3.45 | | | | | |
| 1984 | | | | | 2.44 | 3.80 | | | 2.45 | 3.10 | | | | | |
| 1985 | | | | | 1.59 | 3.69 | | | 2.61 | 2.86 | | | | | |
| 1986 | | | 0.80 | | 2.48 | 2.96 | | | 2.11 | | | | | | |
| 1987 | | | | | 2.10 | | | | | | | | | | |
| 1988 | | | | | | | | | | | | | | | |
| 1989 | | | | | | | | | | | | | | | |
| 1990 | | | | | | | | | | | | | | | |

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| 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 | 3.4 |
| <i>Female Mean Weight by Brood Year</i> | | | | | | | | | | | | | | | |
| 1978 | | | | | | 2.94 | 2.58 | | 2.55 | 3.00 | | | | | |
| 1979 | | | | | 2.03 | 2.93 | | | 2.33 | 3.20 | | | | | ----- |
| 1980 | | | | | 2.01 | 3.04 | | | 2.66 | | | | | | ----- |
| 1981 | | 2.95 | | | 2.28 | | | | | | | | | | ----- |
| 1982 | | | | | | | | | | | | | | | 3.40 |
| 1983 | | | | | | 2.91 | | | 2.20 | | | | | | 2.95 |
| 1984 | | | | | 1.88 | 2.99 | | | 1.80 | 3.10 | | | | | |
| 1985 | | | | | 1.97 | 3.10 | | | 2.02 | 2.37 | | | | | |
| 1986 | | | | | 1.85 | 2.42 | | | 1.96 | | | | | | |
| 1987 | | | | | 1.76 | | | | | | | | | | |
| 1988 | | | | | | | | | | | | | | | |
| 1989 | | | | | | | | | | | | | | | |
| 1990 | | | | | | | | | | | | | | | |
| <i>Male Harvest by Brood Year</i> | | | | | | | | | | | | | | | |
| 1978 | | | | | | | | | | | | | | | |
| 1979 | | | | | | | | | | | | | | | ----- |
| 1980 | | | | | | | | | | | | | | | ----- |
| 1981 | | | | | | | | | | | | | | | ----- |
| 1982 | | | | | | | | | | | | | | | 1,440 |
| 1983 | | | | | | 3,184 | | | 393 | 170 | | | | | |
| 1984 | | | | 4 | 2,531 | 3,084 | 29 | | 83 | 174 | | | | | |
| 1985 | | | | | 347 | 723 | | | 1,824 | 1,020 | | | | | |
| 1986 | | 14 | | 9 | 1,056 | 376 | | | 218 | 68 | | | | | |
| 1987 | 14 | | | | 287 | 1,115 | | | | 159 | | | | | |
| 1988 | | | | | 67 | 256 | | | 287 | | | | | | |
| 1989 | | | | | 798 | | | | | | | | | | |
| 1990 | | | | | | | | | | | | | | | |
| <i>Female Harvest by Brood Year</i> | | | | | | | | | | | | | | | |
| 1978 | | | | | | | | | | | | | | | |
| 1979 | | | | | | | | | | | | | | | ----- |
| 1980 | | | | | | | | | | | | | | | ----- |
| 1981 | | | | | | | | | | | | | | | ----- |
| 1982 | | | | | | | | | | | | | | | 2,312 |
| 1983 | | | | | | 4,799 | | | 742 | 92 | | | | | |
| 1984 | | 44 | | | 4,800 | 4,262 | 14 | | 118 | 87 | | | | | |
| 1985 | | | | | 369 | 810 | | | 1,982 | 1,476 | | | | | |
| 1986 | | | | | 955 | 673 | | | 366 | 67 | | | | | |
| 1987 | | | | | 287 | 1,115 | | | | 160 | | | | | |
| 1988 | | | | | 68 | 255 | | | 287 | | | | | | |
| 1989 | | | | | 798 | | | | | | | | | | |
| 1990 | | | | | | | | | | | | | | | |

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Appendix C. (page 3 of 3)

| 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 | 3.4 |
| <i>Male Age Composition by Harvest Year</i> | | | | | | | | | | | | | | | |
| 1983 | | | | 0.70 | 31.80 | 7.90 | | | 1.40 | | | | | | |
| 1984 | | | | 0.20 | 25.60 | 20.50 | | | 1.80 | 1.30 | | | | | |
| 1985 | | | | | 5.40 | 26.70 | 0.30 | 0.20 | 9.40 | 6.30 | | | | | |
| 1986 | | | | | 15.10 | 19.80 | | | 11.40 | 53.70 | | | | | |
| 1987 | ----- | | | | | | | | | | | | | | |
| 1988 | | | | | 12.50 | 15.73 | | | 1.94 | 7.11 | | | | | |
| 1989 | | | 0.05 | 0.11 | 4.06 | 36.12 | | | 0.97 | 1.99 | | | | | |
| 1990 | 0.18 | 0.18 | | | 13.75 | 9.41 | 0.38 | | 23.74 | 2.27 | | | | | |
| 1991 | | | | | 6.10 | 7.99 | | | 4.64 | 21.69 | | | | | |
| 1992 | | | | | 2.68 | 44.60 | | | | 2.72 | | | | | |
| 1994 | | | | | 26.60 | 8.53 | | | 9.57 | 5.30 | | | | | |
| <i>Female Age Composition by Harvest Year</i> | | | | | | | | | | | | | | | |
| 1983 | | | | | 42.50 | 15.40 | | | 0.40 | | | | | | |
| 1984 | | | | | 25.80 | 22.10 | 0.10 | | 0.90 | 0.70 | | | | | |
| 1985 | | 0.30 | | | 5.40 | 32.40 | | | 6.00 | 7.60 | | | | | |
| 1986 | | | | | 10.20 | 24.00 | | | 13.10 | 52.60 | | | | | |
| 1987 | ----- | | | | | | | | | | | | | | |
| 1988 | | 0.22 | | | 23.71 | 23.70 | | | 3.67 | 11.42 | | | | | |
| 1989 | | | | | 4.32 | 49.92 | | | 1.38 | 1.08 | | | | | |
| 1990 | | | | | 12.43 | 10.54 | 0.18 | | 25.80 | 1.13 | | | | | |
| 1991 | | | | | 6.10 | 14.31 | | | 7.78 | 31.38 | | | | | |
| 1992 | | | | | 2.72 | 44.60 | | | | 2.68 | | | | | |
| 1994 | | | | | 26.60 | 8.50 | | | 9.57 | 5.33 | | | | | |

Appendix D. Chenik Lake sockeye salmon mean length, weight, and age by brood year and age group. Dashes indicate missing data. Calculated means reflect corrections made to previously reported data.

| 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 | 3.4 |
| <i>Male Mean Length by Brood Year</i> | | | | | | | | | | | | | | | |
| 1979 | | | | | | | | | | | | | | | |
| 1980 | | | | | | 568 | | | | | | | | | |
| 1981 | | | | | 498 | 569 | | | 509 | | | | | | |
| 1982 | | | | | 508 | | 602 | | | 585 | | | | | |
| 1983 | | | | | | 565 | | | 508 | 571 | | | | | |
| 1984 | | | | | 498 | 568 | | 370 | 535 | 555 | | | | | |
| 1985 | | | | | 518 | 554 | | | 502 | 562 | | | | | |
| 1986 | | 552 | | | 493 | 550 | | | 517 | | | | | | |
| 1987 | 417 | | | | 505 | 547 | | | | | | | | | |
| 1988 | | | | | 501 | 553 | | | 549 | | | | | | |
| 1989 | | | | | 516 | | | 329 | | | | | | | |
| 1990 | | | | | | | | | | | | | | | |
| <i>Female Mean Length by Brood Year</i> | | | | | | | | | | | | | | | |
| 1979 | | | | | | | 515 | | | 537 | | | | | |
| 1980 | | | | | | 542 | | | 467 | | | | | | |
| 1981 | | 547 | | | 485 | 530 | | | 489 | | | | | | |
| 1982 | | | | | 486 | | | | | 561 | | | | | |
| 1983 | | | | | | 536 | | | 490 | 543 | | | | | |
| 1984 | | | | | 484 | 542 | | | 505 | 523 | | | | | |
| 1985 | | | | | 494 | 534 | | 324 | 485 | 512 | | | | | |
| 1986 | | 537 | | | 469 | 530 | | | 492 | 537 | | | | | |
| 1987 | | | | | 481 | 512 | | | | | | | | | |
| 1988 | | | | | 487 | 532 | | | 496 | | | | | | |
| 1989 | | | | | 492 | | | | | | | | | | |
| 1990 | | | | | | | | | | | | | | | |
| <i>Male Mean Weight by Brood Year</i> | | | | | | | | | | | | | | | |
| 1979 | | | | | | | | | | | | | | | |
| 1980 | | | | | | 2.81 | | | | | | | | | |
| 1981 | | | | | 2.08 | 2.20 | | | 1.75 | | | | | | |
| 1982 | | | | | 1.64 | | | | | | | | | | |
| 1983 | | | | | | 2.60 | | | 1.98 | 2.30 | | | | | |
| 1984 | | | | | 1.71 | 2.50 | | 0.90 | 2.18 | | | | | | |
| 1985 | | | | | 2.05 | 2.37 | | | | 1.99 | | | | | |
| 1986 | | | | | 1.82 | 1.71 | | | 1.59 | | | | | | |
| 1987 | | | | | 1.40 | 2.10 | | | | | | | | | |
| 1988 | | | | | 1.60 | 2.11 | | | | | | | | | |
| 1989 | | | | | 1.37 | | | | | | | | | | |
| 1990 | | | | | | | | | | | | | | | |

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| 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 | 3.4 |
| <i>Female Mean Weight by Brood Year</i> | | | | | | | | | | | | | | | |
| 1979 | | | | | | | | | | 3.60 | | | | | |
| 1980 | | | | | | 2.44 | | | | | | | | | |
| 1981 | | 3.00 | | | 1.88 | 1.83 | | | 1.46 | | | | | | |
| 1982 | | | | | 1.39 | | | | | | | | | | |
| 1983 | | | | | | 2.01 | | | 1.55 | 1.90 | | | | | |
| 1984 | | | | | 1.54 | 2.03 | | | 1.75 | | | | | | |
| 1985 | | | | | 1.53 | 2.10 | | | 1.30 | | | | | | |
| 1986 | | | | | 1.52 | 1.50 | | | 1.38 | 1.89 | | | | | |
| 1987 | | | | | 1.10 | 1.55 | | | | | | | | | |
| 1988 | | | | | 1.48 | 1.78 | | | | | | | | | |
| 1989 | | | | | 1.40 | | | | | | | | | | |
| 1990 | | | | | | | | | | | | | | | |
| <i>Male Harvest by Brood Year</i> | | | | | | | | | | | | | | | |
| 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 | | | 000 | | | | | | |
| 1987 | 90 | | | | 14,192 | 3,953 | | | | | | | | | |
| 1988 | | | | | 4,199 | 11,986 | | | 274 | | | | | | |
| 1989 | | | | | 1,464 | | | 46 | | | | | | | |
| 1990 | | | | | | | | | | | | | | | |
| <i>Female Harvest by Brood Year</i> | | | | | | | | | | | | | | | |
| 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 | | | | | | | | | | | | | | | |
| <i>Male Age Composition by Harvest Year</i> | | | | | | | | | | | | | | | |
| 1985 | | | | | 7.06 | 36.47 | | | | | | | | | |
| 1986 | | | | | 53.23 | 2.98 | | | 5.47 | | | | | | |
| 1987 | | | | | | | | | | | | | | | |
| 1988 | | | | | 5.100 | 38.47 | 0.11 | 0.66 | 1.80 | 0.25 | | | | | |
| 1989 | | | | | 11.39 | 22.77 | | | 11.14 | 6.44 | | | | | |
| 1990 | 0.13 | 0.64 | | | 35.39 | 13.61 | | | 1.59 | 0.84 | | | | | |
| 1991 | | | | | 27.41 | 20.08 | | | 1.93 | 1.74 | | | | | |
| 1992 | | | | | 29.20 | 27.49 | | | | | | | | | |
| 1994 | | | | | 5.96 | 48.79 | | 0.19 | 1.12 | | | | | | |

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Appendix D. (page 3 of 3)

| 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 | 3.4 |
| <i>Female Age Composition by Harvest Year</i> | | | | | | | | | | | | | | | |
| 1985 | | 0.78 | | | 6.66 | 46.27 | 0.40 | | 1.18 | 1.18 | | | | | |
| 1986 | | | | | 32.84 | 1.49 | | | 3.98 | | | | | | |
| 1987 | ----- | | | | | | | | | | | | | | |
| 1988 | | | | | 8.46 | 40.01 | | | 3.69 | 0.55 | | | | | |
| 1989 | | | | | 15.35 | 17.08 | | 0.25 | 11.63 | 3.96 | | | | | |
| 1990 | | 0.90 | | | 29.29 | 15.45 | | | 1.65 | 0.51 | | | | | |
| 1991 | | | | | 18.15 | 28.57 | | | 1.55 | 0.58 | | | | | |
| 1992 | | | | | 24.06 | 18.90 | | | | 0.34 | | | | | |
| 1994 | | | | | 5.96 | 37.80 | | | 0.19 | | | | | | |

Appendix E. Mikfik Lake sockeye salmon mean length, weight, and age by brood year and age group. Dashes indicate missing data. Calculated means reflect corrections made to previously reported data.

| 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 | 3.4 |
| <i>Male Mean Length by Brood Year</i> | | | | | | | | | | | | | | | |
| 1978 | | | | | | | | | | | | | | | 528 |
| 1979 | | | | | | | | | | | | | | | |
| 1980 | | | | | | | 505 | | | 520 | | | | | |
| 1981 | | | | | | 520 | | | 448 | | | | | | |
| 1982 | | | | | 457 | | | | | | 515 | | | | |
| 1983 | | | | | | 512 | | | 479 | 535 | | | | | |
| 1984 | | | | | 462 | 533 | | | 493 | 510 | | | | | |
| 1985 | | | | | 475 | 504 | | | 471 | 501 | | | | | |
| 1986 | | | | | 441 | 500 | | | 456 | 491 | | | | | |
| 1987 | | | | | 464 | 506 | | | 446 | 516 | | | | | |
| 1988 | | | | | 443 | 516 | | | 471 | | | | | | |
| 1989 | | | | | 457 | | | | | | | | | | |
| 1990 | | | 316 | | | | | | | | | | | | |
| <i>Female Mean Length by Brood Year</i> | | | | | | | | | | | | | | | |
| 1978 | | | | | | | | | | | | | | | |
| 1979 | | | | | | | | | | | | | | | 460 |
| 1980 | | | | | | | | | | 508 | | | | | |
| 1981 | | | | | | 512 | | | 462 | | | | | | |
| 1982 | | 545 | | | 458 | | | | | | 517 | | | | |
| 1983 | | | | | | 511 | | | 469 | 525 | | | | | |
| 1984 | | | | | 458 | 531 | | | 480 | 510 | | | | | |
| 1985 | | | | | 471 | 511 | | | 456 | 494 | | | | | |
| 1986 | | | | | 438 | 499 | | | 457 | 508 | | | | | |
| 1987 | | | | | 461 | 509 | | | 451 | 520 | | | | | |
| 1988 | | | | | 446 | 517 | | | 467 | | | | | | |
| 1989 | | | | | 463 | | | | | | | | | | |
| 1990 | | | 310 | | | | | | | | | | | | |
| <i>Male Mean Weight by Brood Year</i> | | | | | | | | | | | | | | | |
| 1978 | | | | | | | | | | | | | | | |
| 1979 | | | | | | | | | | | | | | | |
| 1980 | | | | | | | 1.55 | | | 1.75 | | | | | |
| 1981 | | | | | | 1.76 | | | 1.20 | | | | | | |
| 1982 | | | | | 1.27 | | | | | 2.50 | | | | | |
| 1983 | | | | | | 2.21 | | | 1.53 | 1.87 | | | | | |
| 1984 | | | | | 1.66 | 2.06 | | | 1.37 | 1.80 | | | | | |
| 1985 | | | | | 0.90 | 1.91 | | | 1.25 | 1.64 | | | | | |
| 1986 | | | | | 1.45 | 1.73 | | | 1.21 | 1.65 | | | | | |
| 1987 | | | | | 1.51 | 1.72 | | | | 1.99 | | | | | |
| 1988 | | | | | 1.19 | 1.70 | | | | | | | | | |
| 1989 | | | | | 1.24 | | | | | | | | | | |
| 1990 | | | | | | | | | | | | | | | |
| <i>Female Mean Weight by Brood Year</i> | | | | | | | | | | | | | | | |
| 1978 | | | | | | | | | | | | | | | |
| 1979 | | | | | | | | | | | | | | | |
| 1980 | | | | | | | | | | 1.53 | | | | | |
| 1981 | | | | | | 1.62 | | | 1.13 | | | | | | |
| 1982 | | 2.00 | | | 1.06 | | | | | | | | | | |
| 1983 | | | | | | 2.16 | | | 1.56 | | | | | | |
| 1984 | | | | | 1.51 | 1.78 | | | 1.58 | 1.95 | | | | | |
| 1985 | | | | | 1.33 | 1.96 | | | 1.70 | 1.60 | | | | | |
| 1986 | | | | | 1.34 | 1.62 | | | 1.31 | 1.52 | | | | | |
| 1987 | | | | | 1.45 | 1.70 | | | | 1.97 | | | | | |
| 1988 | | | | | 0.99 | 1.59 | | | 1.02 | | | | | | |
| 1989 | | | | | 1.21 | | | | | | | | | | |
| 1990 | | | 0.40 | | | | | | | | | | | | |

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| 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 | 3.4 |
| <i>Male Harvest by Brood Year</i> | | | | | | | | | | | | | | | |
| 1978 | | | | | | | | | | | | | | | 93 |
| 1979 | | | | | | | | | | | | | | | |
| 1980 | | | | | | | 186 | | | 279 | | | | | |
| 1981 | | | | | | 10,869 | | | 1,208 | | | | | | |
| 1982 | | | | | 3,995 | | | | | | | | | | |
| 1983 | | | | | | 3,892 | | | 352 | | | | | | |
| 1984 | | | | | 2,676 | 2,939 | | | 383 | 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 | | | | | | | | | | |
| 1990 | | | | 4 | | | | | | | | | | | |
| <i>Female Harvest by Brood Year</i> | | | | | | | | | | | | | | | |
| 1978 | | | | | | | | | | | | | | | 93 |
| 1979 | | | | | | | | | | | | | | | |
| 1980 | | | | | | | | | | 372 | | | | | |
| 1981 | | | | | | 5,852 | | | 1,394 | | | | | | |
| 1982 | | 93 | | | 3,066 | | | | | | | | | | |
| 1983 | | | | | | 3,746 | | | 381 | 164 | | | | | |
| 1984 | | | | | 3,420 | 2,132 | | | 355 | 447 | | | | | |
| 1985 | | | | | 369 | 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 | | | | | | | | | | |
| 1990 | | | | 15 | | | | | | | | | | | |
| <i>Male Age Composition by Harvest Year</i> | | | | | | | | | | | | | | | |
| 1986 | | | | | 14.53 | 39.52 | 0.68 | | 4.39 | 1.01 | | | | | 0.34 |
| 1987 | | | | | | | | | | | | | | | |
| 1988 | | | | | 18.28 | 26.58 | | | 2.40 | 0.89 | | | | | |
| 1989 | | | | | 5.06 | 41.92 | | | 5.46 | 4.48 | | | | | |
| 1990 | | | | | 24.13 | 21.67 | | | 3.45 | 8.63 | | | | | |
| 1991 | | | | | 6.62 | 30.24 | | | 7.37 | 0.95 | | | | | |
| 1992 | | | | | 3.56 | 43.65 | | | 0.93 | 6.36 | | | | | |
| 1994 | | | | 0.43 | 19.66 | 20.94 | | | 2.66 | 3.93 | | | | | |
| <i>Female Age Composition by Harvest Year</i> | | | | | | | | | | | | | | | |
| 1986 | 0.34 | | | | 11.15 | 21.28 | | | 5.07 | 1.35 | | | | | 0.34 |
| 1987 | | | | | | | | | | | | | | | |
| 1988 | | | | | 23.36 | 25.59 | | | 2.60 | 0.29 | | | | | |
| 1989 | | | | | 5.26 | 30.41 | | | 5.06 | 2.34 | | | | | |
| 1990 | | | | | 17.97 | 16.100 | | | 2.22 | 4.93 | | | | | |
| 1991 | | | | | 10.97 | 29.30 | | | 12.28 | 2.27 | | | | | |
| 1992 | | | | | 4.11 | 37.07 | | | 0.93 | 3.38 | | | | | |
| 1994 | | | | 1.59 | 22.64 | 22.21 | | | 2.87 | 3.08 | | | | | |

Appendix F. McNeil River chum salmon mean length, weight, and age by brood year and age group. Dashes indicate missing data. Calculated means reflect corrections made to previously reported data.

| Year | Age Group | | | | | | |
|---|-----------|------|------|------|-----|-----|-----|
| | 0.2 | 0.3 | 0.4 | 0.5 | 1.2 | 1.3 | 1.4 |
| <i>Male Mean Length by Brood Year</i> | | | | | | | |
| 1980 | | | | | | | |
| 1981 | | | 673 | | | | |
| 1982 | | 627 | | 706 | | | |
| 1983 | | | 674 | | | | |
| 1984 | | 620 | | | | | |
| 1985 | | | | | | | |
| 1986 | | | | 711 | | | |
| 1987 | | | 689 | | | | |
| 1988 | | 629 | | | | | |
| 1989 | | | | | | | |
| 1990 | | | | | | | |
| 1991 | | | | | | | |
| 1992 | | | | | | | |
| <i>Female Mean Length by Brood Year</i> | | | | | | | |
| 1980 | | | | | | | |
| 1981 | | | 628 | | | | |
| 1982 | | 630 | | 677 | | | |
| 1983 | | | 649 | | | | |
| 1984 | | 610 | | | | | |
| 1985 | | | | | | | |
| 1986 | | | | 703 | | | |
| 1987 | | | 659 | | | | |
| 1988 | | 635 | | | | | |
| 1989 | | | | | | | |
| 1990 | | | | | | | |
| 1991 | | | | | | | |
| 1992 | | | | | | | |
| <i>Male Mean Weight by Brood Year</i> | | | | | | | |
| 1980 | | | | | | | |
| 1981 | | | 4.55 | | | | |
| 1982 | | 3.99 | | 5.78 | | | |
| 1983 | | | 4.92 | | | | |
| 1984 | | 3.34 | | | | | |
| 1985 | | | | | | | |
| 1986 | | | | | | | |
| 1987 | | | 5.11 | | | | |
| 1988 | | | | | | | |
| 1989 | | | | | | | |
| 1990 | | | | | | | |
| 1991 | | | | | | | |
| 1992 | | | | | | | |

-Continued-

| Year | Age Group | | | | | |
|------|-----------|-----|-----|-----|-----|-----|
| | 0.2 | 0.3 | 0.4 | 0.5 | 1.2 | 1.3 |

Female Mean Weight by Brood Year

| | | | | | | | |
|------|--|------|------|------|--|--|--|
| 1980 | | | | | | | |
| 1981 | | | 4.00 | | | | |
| 1982 | | 3.71 | | 4.74 | | | |
| 1983 | | | 4.12 | | | | |
| 1984 | | 3.09 | | | | | |
| 1985 | | | | | | | |
| 1986 | | | | 4.24 | | | |
| 1987 | | | 4.63 | | | | |
| 1988 | | 3.34 | | | | | |
| 1989 | | | | | | | |
| 1990 | | | | | | | |
| 1991 | | | | | | | |
| 1992 | | | | | | | |

Male Harvest by Brood Year

| | | | | | | | |
|------|--|-------|--------|-------|--|--|--|
| 1980 | | | | | | | |
| 1981 | | | 2,149 | | | | |
| 1982 | | 6,447 | | 4,945 | | | |
| 1983 | | | 48,974 | | | | |
| 1984 | | 4,656 | | | | | |
| 1985 | | | | | | | |
| 1986 | | | | 8 | | | |
| 1987 | | | 1,283 | | | | |
| 1988 | | 48 | 1,040 | | | | |
| 1989 | | 7,675 | | | | | |
| 1990 | | | | | | | |
| 1991 | | | | | | | |
| 1992 | | | | | | | |

Female Harvest by Brood Year

| | | | | | | | |
|------|--|-------|--------|-------|--|--|--|
| 1980 | | | | | | | |
| 1981 | | | 2,418 | | | | |
| 1982 | | 2,686 | | 2,189 | | | |
| 1983 | | | 38,037 | | | | |
| 1984 | | 5,151 | | | | | |
| 1985 | | | | | | | |
| 1986 | | | | 40 | | | |
| 1987 | | | 618 | | | | |
| 1988 | | 44 | 1,040 | | | | |
| 1989 | | 7,675 | | | | | |
| 1990 | | | | | | | |
| 1991 | | | | | | | |
| 1992 | | | | | | | |

Male Age Composition by Harvest Year

| | | | | | | | |
|------|-------|-------|------|--|--|--|--|
| 1986 | 47.06 | 15.69 | | | | | |
| 1987 | | | | | | | |
| 1988 | 4.48 | 47.11 | 4.76 | | | | |
| 1989 | | | | | | | |
| 1990 | | | | | | | |
| 1991 | | | | | | | |
| 1992 | 2.35 | 62.86 | 0.39 | | | | |
| 1994 | 44.03 | 5.97 | | | | | |

-Continued-

Appendix F. (page 3 of 3)

| Year | Age Group | | | | | | |
|---|-----------|-------|------|-----|-----|-----|-----|
| | 0.2 | 0.3 | 0.4 | 0.5 | 1.2 | 1.3 | 1.4 |
| <i>Female Age Composition by Harvest Year</i> | | | | | | | |
| 1986 | 19.61 | 17.65 | | | | | |
| 1987 | | | | | | | |
| 1988 | 4.96 | 36.59 | 2.11 | | | | |
| 1989 | | | | | | | |
| 1990 | | | | | | | |
| 1991 | | | | | | | |
| 1992 | 2.16 | 30.28 | 1.96 | | | | |
| 1994 | 44.03 | 5.97 | | | | | |

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