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Abundance, Age, Sex, and Size Statistics for Pacific Salmon in Bristol Bay, 1986

by

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and
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State of Alaska Steve Cowper, Governor

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ABSTRACT

The 1986 salmon escapement and commercial catch in Bristol Bay were sampled for age, sex, and size composition. Rivers of origin were estimated for mixed stock catches on the basis of escapement age composition. Catch of all species was 17,680,269. Sockeye catch was 15,776,056 and escapement was 7,959,061. Chinook catch was 93,716 and escapement was at least 41,000. Chum catch was 1,227,135 and escapement was at least 530,300. Pink catch was 401,287 and escapement was 587,039. Coho catch was 182,075 and escapement was at least 82,972. The sockeye salmon run was dominated by four major age groups: 1.2, 2.2, 1.3, and 1.4. The chinook salmon run was represented by three major age groups: 1.3, 1.4, and 1.5. The chum salmon run was predominantly age 0.3 and 0.4. Coho salmon were mostly age 2.1. The mean percentages of males in the sockeye, chinook, chum, and coho salmon samples were 45%, 57%, 61%, and 54%. The average sockeye salmon was 2.69 kg and 548 mm. The chinook salmon samples averaged 794 mm and 9.11 kg. The chum salmon samples averaged 567 mm and 2.89 kg. The coho salmon samples averaged 550 mm and 3.12 kg. Pink salmon were not sampled.

KEY WORDS: Age composition, Bristol Bay, catch, escapement, salmon, length and weight, *Oncorhynchus* sp., sex

INTRODUCTION

The Bristol Bay salmon management area includes all waters of Alaska in Bristol Bay east of a line from Cape Newenham to Cape Menshikof (Figure 1). Commercial salmon fishing has typically occurred between the months of May and September, with drift and set gill nets being the only two legal gear types allowed for salmon. Entry into the commercial fishery was limited in 1974. There were 1,834 drift and 950 set gill net permits issued in 1986. The recent harvest strategy has been based on five fishing districts that (1) enable management by discrete stocks, (2) control harvest so that escapement goals are met, and (3) ensure that the escapement was obtained from all segments of the run.

Catches of all five species of Pacific salmon have been documented for Bristol Bay since 1893. The Alaska Department of Fish and Game (ADF&G) maintains a resource monitoring program to collect data from the Bristol Bay catch and escapement (summarized annually in the Technical Data Report Series). Chinook salmon (*Oncorhynchus tshawytscha*) catch sampling for age, sex, weight and length (AWL) began in 1956. Sockeye salmon (*O. nerka*) and chum salmon (*O. keta*) were added in 1957, and coho salmon (*O. kitsutch)* and pink salmon (*O. gorbuscha*) were included in 1962. The objectives of this sampling program are to determine the age composition of the commercial catch from five fishing districts and the escapement in nine spawning rivers. Age composition is used inseason to assess run strength and timing. Estimates of abundance and age composition by river of origin are used postseason to prepare a forecast of next year's salmon abundance. This report covers the 1986 catch and escapement sampling results.

METHODS AND MATERIALS

ADF&G crews at escapement counting towers and catch samplers at selected canneries collected the AWL data. Each fish was measured to the nearest millimeter from mid-eye to the fork of the tail, round weight was recorded to the nearest 0.1 kg, and sex was determined from external secondary sexual characteristics. The accuracy of sex identification has not been tested. One scale was collected when possible from the preferred area of each salmon: i.e., the left side of the fish in an area approximately two rows above the lateral line transected by a diagonal from the posterior insertion of the dorsal fin to the anterior insertion of the anal fin (Clutter and Whitesel 1956). If scales were missing from the preferred area, then a scale was collected from the same area but on the right side of the fish. If those scales were also missing, then scales were collected as close as possible to the preferred area with the exception of the lateral line. The scales were cleaned and mounted on a gum card sculptured side up. An acetate impression was made from the mounted scales. Images of scales were magnified 35X. The number of annuli per scale were counted to determine age. We used the two-digit European notation for representing salmon ages: the first digit is the freshwater age, not including the year spent in the gravel, while the second digit is the ocean age; total age of the fish is the sum of both digits plus one.

Escapement samples were obtained with beach seines. On the Branch River where there was no counting tower, otolith samples from spawned out carcasses were

collected on the spawning grounds for age determination. The methods are described in Russell et al. 1988. The sample sex composition was assumed to be 50% males as neither sex, length, nor weight could be determined from the decomposed carcasses.

Commercial catch samples at canneries were collected whenever the districts were open to commercial fishing. Samplers spread their efforts as uniformly as possible among the tenders delivering to the processing facilities.

Sample periods were derived from sample size requirements. Sample sizes were set such that all of the estimated age class (i) proportions p_i from a multinomial population of k age groups were simultaneously within a specified distance d of their true population age proportions, π_i, 95% of the time (1 - α). That is:

$$\Pr \{ \bigcap_{i=1}^{k} | p_i - \pi_i | \leq d \} \geq 1 - \alpha$$

where d and α, the confidence level, was chosen to be 0.05. Thompson (1987) calculated a maximum sample size of 510 for a worse case scenario when three age classes were present in equal numbers and d = α = 0.05. Any deviation in the number of age classes or unequal contributions by age class required a smaller sample size of ageable scales. An allowance was made for unageable scales. Actual sample sizes will therefore not equal 510 as the a priori compensations for unageable scales are not precise.

Sockeye escapements into some of the lakes were counted from towers constructed on the banks of the Kvichak, Naknek, Egegik, Ugashik, Wood, Igushik, Nuyakuk, and Togiak Rivers. Salmon were counted for 10 min on each bank of the river every hour. These 10-min counts were then expanded to estimate hourly escapements, and these were accumulated to determine the daily escapement.

During 1986, escapement counting towers were closed early because of budget constraints. Unless stated otherwise, an average daily percentage of total escapement was calculated and used to estimate the missed data. There was no single source for the historical daily escapement counts. Instead, annual daily escapement counts were obtained either from the respective annual management reports (e.g., ADF&G 1986) or abundance, age, sex, and size statistics technical fishery reports (e.g., Yuen and Bill 1988).

The historical Egegik River escapement through 15 July was calculated to be 85.28% of the total escapement. Similarly, the Nuyakuk River escapement through 22 July was 96%, and the Ugashik and Wood Rivers escapements through 23 July were 92.33% and 99%, respectively.

Daily escapement estimates in the Kvichak River between 19-27 July was supplemented with an aerial survey made on 21 July and from counts made by the tower crew leader on 22, 23, and 24 July. Estimates of daily escapement in the Naknek River between 16 and 26 July were also supplemented with an escapement to Naknek River harvest ratio when the Naknek in-river fishery was active i.e., using the ratio of the 10-15 July escapement counts to the 9-19 July catches in the Naknek River Special Harvest Area (i.e., the in-river fishery).

For the Igushik River, daily escapement counts from late-run timing years only (i.e., 1960, 1972, 1976, and 1981) was used to calculated the average daily escapement percentage for the period between 16-23 July. The magnitude and trend of the escapement estimated accordingly was verified by aerial surveys. The escapement on 24 July was estimated separately from an average daily percentage of total escapement using data from 1958 through 1985.

Sockeye escapements in the Branch, Snake, Nushagak, and Mulchatna Rivers plus several Togiak District systems and escapements of other species, were estimated through aerial surveys (Russell et al. 1988).

Bristol Bay catch in numbers of fish were obtained from sales receipts known as fish tickets which document each sale by a licensed fishermen to a processor (IBM run dated 11/21/89). Sockeye salmon of Bristol Bay origin caught by the Japanese mothership fishery and by the South Peninsula June sockeye fishery are not presented in this document but can be found in Cross and Stratton (1988), Stratton and Cross (1990), and Stratton (in press).

A river of origin had to be estimated for the mixed river stock catches of sockeye salmon in the Naknek-Kvichak and Nushagak Districts to determine total return by river. The river of origin for each age class was estimated from the ratio of escapements of that age class in the contributing rivers by

$$C_{i,j,k} = C_{j,k} \frac{E_{i,j,k}}{\sum_{i=1}^{n} E_{i,j,k}},$$

where: $C_{i,j,k}$ = estimated catch of fish from river i of age j and sex k,
$C_{j,k}$ = mixed stock catch of fish of age j and sex k,
$E_{i,j,k}$ = escapement fish from river i of age j and sex k, and
n = number or rivers contributing to the mixed stock catch.

If an age class appeared in the catch but not the escapement, then it was assigned (1) entirely those rivers having returns from the same brood year and freshwater age in the preceding or following-year, or (2) all the rivers in that district (according to the ratio of total escapements). If there were any rounding errors in an age class, the adjustment was made in the largest age and sex group.

Additionally, the Igushik beach set net catch was assigned entirely to the Igushik River as the river of origin. There are few lake rearing areas on the Nushagak and Mulchatna Rivers. Most sockeye salmon from those two rivers migrate to sea earlier than other Bristol Bay salmon as age-0. smolt. Therefore, all age-0 (i.e., age 0.1, 0.2, 0.3, and 0.4) sockeye salmon in the Nushagak-Igushik District harvest were assigned to the Nushagak-Mulchatna system as a river of origin unless age-0 spawners were found in the escapement of the other rivers of this drainage system, i.e., Wood, Igushik, or Nuyakuk. For the same reasons, none of the age-1, -2, or -3 sockeye salmon in the Nushagak-Igushik District harvest were assigned to the Nushagak-Mulchatna River system. None of the Nushagak District drift net catch was assigned to the Snake River because the

snake river escapement was less than 2% of the total Nushagak-Igushik District escapement.

RESULTS

Catch of all species to Bristol Bay totaled 17,680,269. The total sockeye salmon catch was 15,776,056, while the escapement was 7,959,061 (Table 1). Catch and escapement samples were available from all fishing districts and all rivers except for the Snake, Nushagak and Mulchatna Rivers. The dominant age groups were 12.81% age 1.2, 42.56% age 1.3, 29.62% age 2.2, and 13.30% age 2.3. The average sockeye length was estimated to be 548 mm, and the average weight was estimated to be 2.69 kg. There were slightly more females (54.84 %) than males in the total run (Table 2).

Not included in these tables are the Japanese high seas mothership fishery harvest of Bristol Bay sockeye salmon. The renegotiation of the International North Pacific Fisheries Commission treaty, which first went into effect for the 1978 fishing season, continues to restrict, by area and time, the movements and fishing patterns of the Japanese land-based and mothership fleet. This curtailment has markedly reduced high seas interceptions of Bristol Bay sockeye salmon. The Japanese high seas mothership fleet caught only 34,000 maturing sockeye salmon of Bristol Bay origin during the spring of 1986 and 264,000 immature salmon during the spring of 1985. Both would have returned to Bristol Bay during the summer of 1986. The combined interception on the high seas was less than 1% of the total 1986 Bay sockeye run. This is well below earlier years when interceptions of several million salmon were common.

Sockeye salmon of Bristol Bay origin are also intercepted in the June South Alaska Peninsula sockeye fishery. This area, which has no local sockeye salmon stocks, is allocated a quota of 8.3% of the projected Bristol Bay sockeye harvest. In 1986 the actual South Alaska Peninsula catch was 470,000 or 2.9% of the total. None of the South Peninsula catch is incorporated in these tables.

Total chinook salmon catch was 93,716, and total escapement was at least 41,000 (Table 3). Most of the catch was from the Nushagak and Togiak Districts. Catch samples were obtained from both districts, while escapement samples were collected only in the Nushagak District. A small sample of six was also collected from Egegik but not reported below. The chinook samples were comprised of three major age groups: 1.3, 1.4, and 1.5. Males constituted 57% of the samples. The chinook salmon in the samples averaged 794 mm and 9.11 kg.

Total chum salmon catch was 1,227,135, and total escapement was at least 530,300 (Table 4). Almost half of the catch was from the Nushagak District. Most of the escapement was from the Nushagak and Togiak Districts. Catch samples were obtained in both districts, while escapement samples were collected in the Nushagak District only. Catch samples of 35 and 21 from Naknek and Egegik were also collected but not reported below. The chum salmon run were predominantly age 0.3 and 0.4. The samples were 61% males. The chum salmon sampled averaged 567 mm and 2.89 kg.

Total pink salmon catch was 401,287, and total escapement was at least 587,039 (Table 5). The bulk of the harvest was from the Nushagak District, while most of the escapement were from the Naknek and Branch Rivers. Neither catch nor escapement samples were collected this year due to budgetary constraints.

Total coho salmon catch was 182,075, and total escapement was at least 82,972 (Table 6). Most of the catch were from the Nushagak and Togiak Districts. Catch samples were collected in both districts. A small escapement sample of 73 was collected from the Nushagak escapement but not reported below. The coho salmon sample were mostly age 2.1. Males were 54% of the samples. The coho salmon sampled averaged 550 mm and 3.12 kg.

Naknek-Kvichak District

Most of the 3.3 million salmon in the Naknek-Kvichak District commercial catch were sockeye salmon (Table 7). This district includes the Special Harvest Area within the Naknek River. There are three rivers draining into the Naknek-Kvichak District: Kvichak, Naknek and Branch. This district's sockeye salmon catch plus escapement from the three rivers totaled 6,279,318 (Table 8). The catch comprised of 59.52% females. The dominant age groups were 8.77% age 1.2, 53.02% age 1.3, 18.14% age 2.2, and 19.6% age 2.3. Mean length was 559 mm (Table 9). Because there are three rivers draining into the Naknek-Kvichak District, rivers of origin were estimated for the district sockeye catch to derive a total run by river.

The estimated Kvichak River sockeye salmon catch was 786,659. Adding an escapement of 1,179,322 million to this estimated catch led to a Kvichak River total run of 1,965,981 sockeye salmon (Table 10). Daily escapement counts are presented in Table 11. The escapement was 56.18% female. The dominant age groups were 25.08% age 1.2, 8.83% age 1.3, 48.94% age 2.2, and 16.94% age 2.3. Mean length was 546 mm (Tables 12).

The Branch River total run of sockeye salmon was 396,916 from an estimated catch of 166,736 and an escapement of 230,180 (Table 13). The Naknek River total run of sockeye salmon was 3,916,419 based on an estimated catch of 1,938,774 and an escapement of 1,977,645 (Table 14). The Naknek River daily escapement counts are presented in Table 15. The Naknek escapement was 53.41% females. The dominant age groups were 6.22% age 1.2, 58.53% age 2.2, 14.99% age 1.3, and 19.92% age 2.3. Mean length was 558 mm (Table 16).

Egegik District

The Egegik District commercial salmon harvest was almost 5.0 million fish, of which 4.8 million were sockeye salmon (Table 17). Total run of sockeye catch plus escapement in this district was 6,004,256 (not including 430 escapement in King Salmon River, Table 18). The catch was 55.82% females. The dominant age groups were 15.55% age 1.2, 17.45% age 1.3, 53.34% age 2.2, and 13.34% age 22.3. Mean weight was 2.60 kg, and mean length was 547 mm (Table 19). The Egegik River daily escapement counts are presented in Table 20. The escapement was 50.44% females. The dominant age groups were 19.69% age 1.2, 6.06% age 1.3, 54.56% age 2.2, and 18.33% age 2.3 (Table 21).

Ugashik District

The total commercial salmon catch in the Ugashik District was over 5.1 million fish of which 5.0 million were sockeye salmon (Table 22). Total sockeye run of catch plus escapement was 6,004,442 (not including 9,780 and 4,310 escapements in the Dog Salmon River and Mother Goose System, Table 23). The catch was 50.93% males. The dominant age groups were 7.47% age 1.2, 42.56% age 1.3, 36.99% age 2.2, and 12.47% age 2.3. Mean weight was 2.80 kg, and mean length was 562 mm (Table 24). The Ugashik River daily escapement counts are presented in Table 25. The escapement was 66.53% females. The dominant age groups were 4.70% age 1.2, 42.04% age 1.3, 36.40% age 2.2, and 16.18% age 2.3 (Table 26).

Nushagak-Igushik District

Over 3.6 million salmon of all species were harvested in the Nushagak-Igushik District (Table 27). Table 28 presents a Nushagak-Igushik District inshore run of sockeye salmon of 4,667,591. This total includes a mixed stock catch of 2,565,300 from the Nushagak-Igushik District (Table 29), a catch of 154,013 of Igushik only fish from Igushik beach set nets (Table 30), plus escapements from the Wood, Igushik, and Nuyakuk Rivers. It does not include escapements of 168,340 in the Nushagak-Mulchatna system and 16,780 in the Snake River (Table 1). The Nushagak-Igushik District catch, which does not included the Igushik beach set net catch, was 58.78% females. The dominant age groups were 9.64% age 0.3, 14.81% age 1.2, 67.38% age 1.3, and 5.93% age 2.3. Mean weight was 3.17 kg, and mean length was 554 mm (Table 29). The Igushik beach set net catch was 50.24% males. The dominant age groups were 4.15% age 0.3, 8.78% age 1.2, 74.39% age 1.3, 3.66% age 2.2, and 8.29% age 2.3. Mean weight was 3.17 kg, and mean length was 564 mm (Table 30).

There are five river systems that drain into the Nushagak District: Wood, Igushik, Nuyakuk, Snake, and Nushagak Rivers. To determine the total run of sockeye salmon to each of the Wood, Igushik, and Nuyakuk-Nushagak-Mulchatna system, the rivers of origin were estimated for the catch in the Nushagak-Igushik District, less the Igushik beach set net catch.

The total sockeye salmon run to the Wood River was estimated to be 1,772,324 (Table 31) which includes an estimated catch of 953,672. The Wood River daily escapement counts are presented in Table 32. The sex composition was 52.20% males. The dominant age groups were 30.74% age 1.2, 59.40% age 1.3, 4.74% age 2.2, and 4.94% age 2.3. Mean length was 539 mm (Table 33).

The total run to the Igushik River was estimated to be 876,735 (Table 34), comprised of an estimated catch of 569,007 in the Nushagak-Igushik District (Table 29) and an escapement of 307,728. It does not include the 154,013 catch from the Igushik beach set net fishery (Table 30). The Igushik River daily escapement counts are presented in Table 35. The sex composition was 63.62% males. The dominant age groups were 6.78% age 1.2, 87.40% age 1.3, and 5.42% age 2.3. Mean length was 571 mm (Table 36).

The headwaters of the Nushagak river system include the Nuyakuk River (Tikchik and other connected lakes), the Mulchatna River, as well as the Nushagak River. A total run of sockeye salmon to the Nuyakuk-Nushagak-Mulchatna system of

2,186,872 is presented in Table 37. This total includes an estimated catch of 1,196,634 plus an escapement of 168,340 in the Nushagak and Mulchatna Rivers estimated from aerial surveys (Table 1). The Nuyakuk River daily escapement counts are presented in Table 38. Sex composition was 54.89% females. The dominant age groups were 2.01% age 0.2, 6.04% age 1.2, 82.53% age 1.3, and 8.42% age 2.3. Mean length was 549 mm (Table 39).

Sex composition of the chinook catch was 55.42% males. The dominant age groups were 3.17% age 1.2, 38.39% age 1.3, 47.14% age 1.4, and 9.98% age 1.5. Mean length was 803, mm and mean weight was 9.56 kg (Table 40). Sex composition of the chinook escapement was 51.06% females. Only three age groups were detected in the small escapement sample: 40.43% age 1.3, 57.45% age 1.4, and 2.13% age 1.5. Mean length was 823 mm (Table 41).

Sex composition of the chum catch was 71.82% males. The dominant age groups were 85.15% age 0.3, and 14.55% age 0.4. Mean length was 560 mm, and mean weight was 3.00 kg (Table 42). Sex composition of the chum escapement was 57.76% males. The dominant age groups in the escapement were 80.90% age 0.3 and 18.32% age 0.4. Mean length was 579 mm (Table 43).

Sex composition of the coho catch was 50.98% males. Age-2.1 fish comprised 96.73% of the sample. Mean length was 531 mm and mean weight was 6.47 kg (Table 44).

Togiak District

The Togiak District had a harvest of nearly 0.7 million fish. Almost half (45%) of the species harvested were sockeye salmon (Table 45). The sockeye catch includes 191,158 from the Togiak Section, 100,466 from the Kulukak Section, 13,509 from the Matogak Section, and 3,555 from the Osviak Section. The total sockeye salmon run of 477,072 (Table 46) does not include 35,000 spawners in the lower Togiak River and tributaries, 42,800 in the Kulukak River, and 25,000 from other systems (Table 1).

The Togiak District sockeye salmon catch was 54.68% females. The dominant age groups were 13.35% age 1.2, 80.86% age 1.3, 2.21% age 2.2, and 3.57% age 2.3. Mean weight was 3.13 kg, and mean length was 556 mm (Table 47). Daily sockeye escapement counts for Togiak Lake are presented in Table 48. The Togiak Lake escapement was 54.29% females. The dominant age groups were 33.71% age 1.2, 63.82% age 1.3, and 1.37% age 2.3 (Table 49). Catch and escapement in the Togiak District summarized by either Togiak or Kulukak Bay are presented in Appendix A.

The Togiak District chinook salmon catch was 73.55% males. The dominant age groups were 18.23% age 1.2, 48.90% age 1.3, 16.43% age 1.4, and 9.02% age 1.5. Mean weight was 7.62 kg, and mean length was 716 mm (Table 50).

The Togiak District chum salmon catch was 56.51% females. The dominant age groups were 68.07% age 0.3 and 29.83% age 0.4. Mean weight was 2.70 kg, and mean length was 569 mm (Table 51).

The Togiak District coho catch was 58.00% males. The dominant age group was 94.50% age 2.1. Mean weight was 3.38 kg, and mean length was 576 mm (Table 52).

DISCUSSION

The catch numbers in this report were obtained from the final compilation of sales receipts given to fishermen by buyers at the time of delivery (commonly referred to as fish tickets). The final compilation was dated 21 November 1989, 3 years after the fishery. This may be the last year that an annual report of abundance, age, sex, and size composition for Bristol Bay will be based on a final fish ticket summary. In an effort to provide a timely report, future editions of this report may be based on the final operations reports prepared by the fish processors; this data may differ slightly from the final catch numbers derived from fish tickets.

When this report was being prepared, all scales collected between 1980 and 1988 from the Nushagak-Igushik District catch and escapement (i.e., Portage Creek, Nuyakuk, Wood and Igushik Rivers) were being re-aged. This report incorporates the revised aging of the 1986 samples. It does not incorporate the re-aging of scales from any other year and consequently will not present the total return from brood year escapement by river tables in an appendix. Stratton (in press) will present that information his report. Likewise, this report will not summarize the interception catches reported by the Japanese mothership fishery and by the South Peninsula June sockeye fishery as some of it is based on the Bristol Bay age composition presently being reviewed. Preliminary summaries can be found in Cross and Stratton (1988) and Stratton and Cross (1990). The revised summaries based on the re-aged scales can be found in Stratton (in press).

There is a delay between the time that salmon are harvested in the commercial fishery (Tables 7, 17, 22, 27, and 45) and the time that they appear in the escapement and can be counted (Tables 11, 15, 20, 25, 32, 35, 38, and 48). A complete discussion on lag time, how it is calculated, and how it affects management, can be found in Yuen et al (1988). A complete discussion on the 1986 escapement and the related escapement goals can be found in ADF&G (1987). Although total return from brood year escapements statistics were not presented in this report, that information is used in preparing the annual forecast of run size. Detailed discussions on the 1986 forecast methods and performance can be found in Fried and Yuen (1986). A discussion of the chinook salmon return from escapement by brood year for the Nushagak River can be found in Nelson (1987). A complete discussion of the regulations and emergency orders in effect for the 1986 fishery can be found in ADF&G 1987.

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TABLES

Table 1. Sockeye salmon inshore run by river system, Bristol Bay, 1986.

System	Catch	Escapement	Run
Kvichak River		1,179,322	
Branch River		230,180	
Naknek River		1,977,645	
Naknek-Kvichak District	2,892,171	3,387,147	6,279,318
Egegik River		1,151,320	
King Salmon River		430	
Egegik District	4,852,935	1,151,750	6,004,685
Ugashik River		1,001,492	
Dog Salmon River		9,780	
Mother Goose System		4,310	
Ugashik District	5,002,949	1,015,582	6,018,531
Wood River		818,652	
Igushik River		307,728	
Nuyakuk River		821,898	
Nushagak-Mulchatna River		168,340	
Snake River		16,780	
Nushagak-Igushik District	2,719,313	2,133,398	4,852,711
Togiak Lake		168,384	
Togiak River and Tributaries		35,000	
Kulukak System		42,800	
Other[a]		25,000	
Togiak District	308,688	271,184	579,872
Bristol Bay Total	15,776,056	7,959,061	23,735,117

[a] Ungalikthluk, Osviak, Matogak, and Slug River Systems.

Table 2. Age, sex, fork length (mm), and weight (g) of sockeye salmon catch and escapement, Bristol Bay, 1986.

	Age Group													
	0.2	1.1	0.3	1.2	2.1	0.4	1.3	2.2	1.4	2.3	3.2	2.4	3.3	Total[a]
Males	20,287	4,520	109,497	1,548,676	12,228	3,058	4,265,118	3,270,626	22,818	1,319,345	4,863	2,298		10,583,334
Percent	.09	.02	.47	6.61	.05	.01	18.20	13.96	.10	5.63	.02	.01		45.16
Mean Length	444	319	568	503	361	620	580	540	583	586	533	591		556
Std. Error	10	3	5	1	5	23	0	1	15	1				0
Sample Size	26	16	103	1,963	50	3	6,089	2,903	29	1,556	3	2		12,743
Mean Weight	1.08		3.58	2.24			3.05	2.47	3.71	3.12				2.76
Std. Error			.28	.07			.09	.08		.08				.02
Sample Size	1		15	59			318	52	2	37				484
Females	5,541	1,029	183,504	1,453,950	719	8,638	5,707,569	3,669,043	10,987	1,797,883	4,466	3,752	2,264	12,849,345
Percent	.02	.00	.78	6.20	.00	.04	24.36	15.66	.05	7.67	.02	.02	.01	54.84
Mean Length	515	271	548	490	486	603	558	524	546	566	535	586	559	542
Std. Error	75		2	1		7	0	0	15	1	15		1	0
Sample Size	4	1	151	1,967	1	4	8,006	3,173	19	2,092	3	5	3	15,429
Mean Weight			2.90	2.22			2.87	2.27		3.02				2.64
Std. Error			.06	.06			.15	.06		.09				.03
Sample Size			18	67			388	59		44				576
Both Sexes	25,828	5,549	293,001	3,002,626	12,947	11,696	9,972,687	6,939,669	33,805	3,117,228	9,329	6,050	2,264	23,432,679
Percent	.11	.02	1.25	12.81	.06	.05	42.56	29.62	.14	13.30	.04	.03	.01	100.00
Mean Length	459	310	556	497	368	607	567	531	571	575	534	588	559	548
Std. Error	12	3	2	1	5	8	0	0	12	1	15		1	0
Sample Size	30	17	254	3,930	51	7	14,095	6,076	48	3,648	6	7	3	28,172
Mean Weight	1.08		3.02	2.23			2.95	2.36	3.71	3.07				2.69
Std. Error			.07	.05			.10	.05		.06				.02
Sample Size	1		33	126			706	111	2	81				1,060

[a] does not include escapements to Dog Salmon River, Mother Goose System, Nushagak-Mulchatna Rivers, Snake River, Lower Togiak River and tributaries, Kulukak and other systems in the Togiak District.

Table 3. Chinook salmon inshore run by river system, Bristol Bay, 1986.

System	Catch	Escapement Index	Escapement Total	Run
Branch River		7,200		
Naknek River[a]		7,769		
Naknek-Kvichak District	3,188	14,969		18,157
Egegik River[b]		215		
King Salmon River[c]		317		
Egegik District	1,883	532		2,415
Dog Salmon River		302		
Mother Goose[d]		3,817		
Upper Ugashik River		54		
Ugashik District	2,982	4,173		7,155
Nushagak-Igushik District	65,783		33,000	98,783
Togiak District	19,880		8,000	27,880
Bristol Bay Total	93,716	19,674	41,000	154,390

a Includes Paul's, King Salmon, and Big Creeks.
b Includes Shosky Creek.
c Includes Contact, Takayoto, and Gertrude Creeks.
d Includes King Salmon River and Pumice, Old and Painter Creeks.

Table 4. Chum salmon inshore run by river system, Bristol Bay, 1986.

System	Catch	Escapement Index	Escapement Total	Run
Naknek-Kvichak District[a]	262,925	107,000		369,925
Egegik District[b]	94,666	6,213		100,879
Dog Salmon River		120		
Mother Goose[c]		12,605		
Ugashik District	111,112	12,725		123,837
Nushagak-Igushik District	488,375		200,300	688,675
Togiak District	270,057		330,000	600,057
Bristol Bay Total	1,227,135	125,938	530,300	1,353,073

a Branch River.
b King Salmon River.
d Includes King Salmon River and Pumice, Old and Painter Creeks.

Table 5. Pink salmon inshore run by river system, Bristol Bay, 1986.

System	Catch	Escapement	Run
Branch River		146,000	
Naknek River[a]		286,000	
Naknek-Kvichak District	106,919	432,000	538,919
Egegik District[b]	2,749	2,500	5,249
Ugashik District[c]	98	350	448
Nushagak-Igushik District	267,117	72,189	339,306
Togiak District	24,404	80,000	104,404
Total	401,287	587,039	988,326

a Includes King Salmon, Pauls, and Big Creeks.
b Egegik River.
c Includes Pumice, Old and Painter Creeks and Mother Goose system.

Table 6. Coho salmon inshore run by river system, Bristol Bay, 1986.

		Escapement	
System	Catch	Index	Total
Naknek-Kvichak District[a]	5,824	600	
Egegik River[b]		12500	
King Salmon River[c]		75	
Egegik District	33,607	12,575	
Mother Goose[d]		8,140	
Upper Ugashik River		315	
Ugashik District	25,770	8,455	
Nushagak-Igushik District	68,568		52,772
Togiak River			21,400
Kulukak River[e]			8,500
Togiak District	48,306		30,200
Bristol Bay Total	182,075	21,630	82,972

a Branch River
b Includes Shosky Creek.
c Includes Contact, Takayoto, Gertrude Creeks and several small tributaries.
d Includes Pumice, Old, and Painter Creeks, and Mother Goose system.
e Inlcudes Kulukak lake and Tithe Creek ponds

Table 7. Commercial salmon catch by period and species, Naknek-Kvichak District, 1986.

		Catch (number of fish)					
Period	Duration (h)	Sockeye	Chinook	Chum	Pink	Coho	Total
2-7 June	120		1				1
9	24	101					101
10	24	504	9				513
11	24	60	17				77
12	24	34	20	7			61
13	24	508	22	2			532
14	24	46	4				50
15	15	4,041	359	740			5,140
17	24	9,551	605	2,453			12,609
18	24	8,900	313	506			9,719
19	24	2,691	54	202			2,947
20	24	6,583	36	504			7,123
21	9	3,638	84	351			4,073
24[a]		195		7			202
25[a]		38		29			67
26[a]		316		11			327
27[a]		917		34			951
30[a]		326		12			338
1 July[a]		2,956	7	107			3,070
3	14	251,201	131	2,805			254,137
4	24	356,769	60	4,447			361,276
5	24	416,965	65	4,914			421,944
6	20	149,079	52	1,498		8	150,637
7[a]		6,362	4	62			6,428
8[a]		3,132		67			3,199
9	11	203,025	24	1,320	9	7	204,385
10	24	388,946	51	3,287			392,284
11	24	425,716	60	4,147			429,923
12	24	204,233	73	1,724	33		206,063
13	24	115,307	44	1,861	4		117,216
14	24	62,536	20	481	9		63,046
15	8	26,062	12	309	37	5	26,425
16	4	16,647	14	308	3		16,972
17	24	69,923	43	1,316	23		71,305
18	24	38,248	34	856	87		39,225
19	9	17,015	10	416	54	66	17,561
21	15	48,727	129	142,889	3,737	121	195,603
22	24	19,522	126	14,756	2,548	44	36,996

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Table 7 (page 2 of 2)

Period	Duration (h)	Catch (number of fish)					
		Sockeye	Chinook	Chum	Pink	Coho	Total
23 July	24	5,157	41	4,223	1,084	15	10,520
24	24	7,197	51	4,354	4,998	59	16,659
25	24	5,801	72	5,797	6,630	72	18,372
26	9	1,519	18	658	1,739	8	3,942
28	24	2,306	31	19,512	22,052	279	44,180
29	24	3,851	66	17,054	20,467	595	42,033
30	24	2,100	85	11,611	20,330	844	34,970
31	24	1,483	209	5,585	15,970	768	24,015
1 August	24	552	59	949	5,709	392	7,661
2	24	239	10	67	1,034	37	1,387
4	24	92	15	89	1	155	352
5	24	177	10	147	3	229	566
6	24	272	5	112	104	105	598
7	24	150	9	60	1	283	503
8	24	71	1	88		140	300
9	24	43	4	59		123	229
11	24	2				7	9
12	24	88	2	45	72	180	387
13	24	41	6	23	61	471	602
14	24	11		1		14	26
15	8	95	3	21	43	219	381
16	4	35		11	52	36	134
18	24	15	2	1		148	166
19	9	31	4	19	22	187	263
20	24	18	1	9	3	93	124
21	15	3		2		90	95
22	24	2	1			24	27
							0
Total		2,892,171	3,188	262,925	106,919	5,824	3,271,027

[a] Test fish catches.

Table 8. Age and sex composition of sockeye salmon catch and escapement, Naknek-Kvichak District, 1986.

	Age Group										
	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	2.4	3.3	Total
Catch											
Males	257	257	127,725		614,540	216,321	3,411	208,367			1,170,878
Percent	.00	.00	2.03		9.79	3.44	.05	3.32			18.65
Females		4,593	125,874		918,802	308,348	1,891	361,528	257		1,721,293
Percent		.07	2.00		14.63	4.91	.03	5.76	.00		27.41
Both Sexes	257	4,850	253,599		1,533,342	524,669	5,302	569,895	257		2,892,171
Percent	.00	.08	4.04		24.42	8.36	.08	9.08	.00		46.06
Escapement											
Males	79		272,961	662	579,587	433,681	2,691	263,540			1,553,201
Percent	.00		4.35	.01	9.23	6.91	.04	4.20			24.74
Females	1,029		260,268		759,460	472,715	3,642	334,568		2,264	1,833,946
Percent	.02		4.14		12.09	7.53	.06	5.33		.04	29.21
Both Sexes	1,108		533,229	662	1,339,047	906,396	6,333	598,108		2,264	3,387,147
Percent	.02		8.49	.01	21.32	14.43	.10	9.53		.04	53.94
Catch and Escapement											
Males	336	257	400,686	662	1,194,127	650,002	6,102	471,907			2,724,079
Percent	.01	.00	6.38	.01	19.02	10.35	.10	7.52			43.38
Females	1,029	4,593	386,142		1,678,262	781,063	5,533	696,096	257	2,264	3,555,239
Percent	.02	.07	6.15		26.73	12.44	.09	11.09	.00	.04	56.62
Both Sexes	1,365	4,850	786,828	662	2,872,389	1,431,065	11,635	1,168,003	257	2,264	6,279,318
Percent	.02	.08	12.53	.01	45.74	22.79	.19	18.60	.00	.04	100.00

Table 9. Age, sex, fork length (mm), and weight (g) of sockeye salmon commercial catch by period, Naknek-Kvichak District, 1986.

	Age Group								
	1.1	0.3	1.2	1.3	2.2	1.4	2.3	2.4	Total
Sample Period 1: 16 June - 3 July									
Males	257	257	23,398	57,082	24,170	771	31,369		137,304
Percent	0.09	0.09	8.00	19.51	8.26	0.26	10.72		46.92
Mean Length	527	605	509	583	527	574	580		560
Std. Error			3	2	3	8	3		1
Sample Size	1	1	91	222	94	3	122		534
Females		257	11,056	73,794	24,170	257	45,511	257	155,302
Percent		0.09	3.78	25.22	8.26	0.09	15.55	0.09	53.08
Mean Length		548	510	561	522	607	564	598	552
Std. Error			5	1	3		2		1
Sample Size		1	43	287	94	1	177	1	604
Both Sexes	257	514	34,454	130,876	48,340	1,028	76,880	257	292,606
Percent	0.09	0.18	11.77	44.73	16.52	0.35	26.27	0.09	100.00
Mean Length	527	577	509	571	525	582	571	598	556
Std. Error			3	1	2	8	1		1
Sample Size	1	2	134	509	188	4	299	1	1,138

-Continued-

Table 9. (page 2 of 5)

	Age Group								
	1.1	0.3	1.2	1.3	2.2	1.4	2.3	2.4	Total
Sample Period 2: 4 - 6 July									
Males			38,286	122,777	80,532	2,640	76,571		320,806
Percent			4.15	13.30	8.73	0.29	8.30		34.76
Mean Length			526	579	541	576	582		564
Std. Error			6	3	4	48	4		2
Sample Size			29	93	61	2	58		243
Females			39,606	281,200	116,177		165,024		602,007
Percent			4.29	30.47	12.59		17.88		65.24
Mean Length			519	567	520		562		553
Std. Error			6	1	3		2		1
Sample Size			30	213	88		125		456
Both Sexes			77,892	403,977	196,709	2,640	241,595		922,813
Percent			8.44	43.78	21.32	0.29	26.18		100.00
Mean Length			523	571	529	576	568		557
Std. Error			4	1	2	48	2		1
Sample Size			59	306	149	2	183		699

-Continued-

Table 9. (page 3 of 5)

	Age Group								
	1.1	0.3	1.2	1.3	2.2	1.4	2.3	2.4	Total
Sample Period 3: 7 - 10 July									
Males			36,774	159,356	46,581		31,054		273,765
Percent			6.11	26.49	7.74		5.16		45.52
Mean Length			534	581	527		579		565
Std. Error			6	2	4		4		2
Sample Size			45	195	57		38		335
Females			28,602	185,506	49,850	1,634	62,108		327,700
Percent			4.76	30.84	8.29	0.27	10.33		54.48
Mean Length			513	564	525	576	562		553
Std. Error			5	1	3	21	3		1
Sample Size			35	227	61	2	76		401
Both Sexes			65,376	344,862	96,431	1,634	93,162		601,465
Percent			10.87	57.34	16.03	0.27	15.49		100.00
Mean Length			525	572	526	576	568		559
Std. Error			4	1	2	21	2		1
Sample Size			80	422	118	2	114		736

-Continued-

Table 9. (page 4 of 5)

	Age Group								
	1.1	0.3	1.2	1.3	2.2	1.4	2.3	2.4	Total
Sample Period 4: 11 - 15 July									
Males			29,267	275,325	65,038		69,373		439,003
Percent			2.72	25.60	6.05		6.45		40.83
Mean Length			531	585	542		581		575
Std. Error			6	2	4		4		1
Sample Size			27	254	60		64		405
Females		4,336	46,610	378,302	118,151		88,885		636,284
Percent		0.40	4.33	35.18	10.99		8.27		59.17
Mean Length		556	505	566	527		566		554
Std. Error		6	4	1	2		3		1
Sample Size		4	43	349	109		82		587
Both Sexes		4,336	75,877	653,627	183,189		158,258		1,075,287
Percent		0.40	7.06	60.79	17.04		14.72		100.00
Mean Length		556	515	574	532		573		563
Std. Error		6	4	1	2		2		1
Sample Size		4	70	603	169		146		992

-Continued-

Table 9. (page 5 of 5)

	Age Group								
	1.1	0.3	1.2	1.3	2.2	1.4	2.3	2.4	Total
All Periods Combined									
Males	257	257	127,725	614,540	216,321	3,411	208,367		1,170,878
Percent	0.01	0.01	4.42	21.25	7.48	0.12	7.20		40.48
Mean Length	527	605	526	583	537	576	581		568
Std. Error			3	1	2	37	2		1
Sample Size	1	1	192	764	272	5	282		1,517
Females		4,593	125,874	918,802	308,348	1,891	361,528	257	1,721,293
Percent		0.16	4.35	31.77	10.66	0.07	12.50	0.01	59.52
Mean Length		555	512	566	524	580	563	598	554
Std. Error		6	3	1	2	21	1		1
Sample Size		5	151	1,076	352	3	460	1	2,048
Both Sexes	257	4,850	253,599	1,533,342	524,669	5,302	569,895	257	2,892,171
Percent	0.01	0.17	8.77	53.02	18.14	0.18	19.70	0.01	100.00
Mean Length	527	558	519	573	529	577	570	598	559
Std. Error		6	2	1	1	26	1		0
Sample Size	1	6	343	1,840	624	8	742	1	3,565

Table 10. Age and sex composition of sockeye salmon estimated catch and escapement, Kvichak River, 1986.

	Age Group									
	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	2.4	Total
Catch										
Males		663	55,747		50,248	123,470		80,724	35	310,887
Percent		.03	2.84		2.56	6.28		4.11	.00	15.81
Females		663	85,415		68,640	214,979	494	105,546	35	475,772
Percent		.03	4.34		3.49	10.93	.03	5.37	.00	24.20
Both Sexes		1,326	141,162		118,888	338,449	494	186,270	70	786,659
Percent		.07	7.18		6.05	17.22	.03	9.47	.00	40.01
Escapement										
Males			119,136	662	47,390	247,533		102,099		516,820
Percent			6.06	.03	2.41	12.59		5.19		26.29
Females	951		176,614		56,736	329,575	951	97,675		662,502
Percent	.05		8.98		2.89	16.76	.05	4.97		33.70
Both Sexes	951		295,750	662	104,126	577,108	951	199,774		1,179,322
Percent	.05		15.04	.03	5.30	29.35	.05	10.16		59.99
Catch and Escapement										
Males		663	174,883	662	97,638	371,003		182,823	35	827,707
Percent		.03	8.90	.03	4.97	18.87		9.30	.00	42.10
Females	951	663	262,029		125,376	544,554	1,445	203,221	35	1,138,274
Percent	.05	.03	13.33		6.38	27.70	.07	10.34	.00	57.90
Both Sexes	951	1,326	436,912	662	223,014	915,557	1,445	386,044	70	1,965,981
Percent	.05	.07	22.22	.03	11.34	46.57	.07	19.64	.00	100.00

Table 11. Daily sockeye salmon escapement counts, Kvichak River, 1986.

Date	Daily Count	Accumulative Count	Daily Percent of Total	Accumulative Percent
June 26	0	0	.00	.00
27	0	0	.00	.00
28	0	0	.00	.00
29	0	0	.00	.00
30	0	0	.00	.00
July 1	48	48	.00	.00
2	480	528	.04	.04
3	7,272	7,800	.62	.66
4	66,756	74,556	5.66	6.32
5	137,814	212,370	11.69	18.01
6	56,106	268,476	4.76	22.77
7	9,210	277,686	.78	23.55
8	2,244	279,930	.19	23.74
9	30,462	310,392	2.58	26.32
10	131,418	441,810	11.14	37.46
11	97,446	539,256	8.26	45.73
12	140,814	680,070	11.94	57.67
13	174,306	854,376	14.78	72.45
14	132,540	986,916	11.24	83.69
15	92,598	1,079,514	7.85	91.54
16	22,728	1,102,242	1.93	93.46
17	7,428	1,109,670	.63	94.09
18	5,652	1,115,322	.48	94.57
19	4,000	1,119,322	.34	94.91
20	3,000	1,122,322	.25	95.17
21	8,000	1,130,322	.68	95.85
22	24,000	1,154,322	2.04	97.88
23	15,000	1,169,322	1.27	99.15
24	5,000	1,174,322	.42	99.58
25	3,000	1,177,322	.25	99.83
26	1,000	1,178,322	.08	99.92
27	1,000	1,179,322	.08	100.00

Table 12. Age, sex, fork length (mm), and weight (g) of sockeye salmon escapement by period, Kvichak River, 1986.

	Age Group							
	1.1	1.2	2.1	1.3	2.2	1.4	2.3	Total
Sample Period 1: 4 - 11 July								
Males		51,610	662	26,467	112,482		53,595	244,816
Percent		9.57	0.12	4.91	20.86		9.94	45.40
Mean Length		531	395	596	547		602	560
Std. Error		4		4	2		3	2
Sample Size		78	1	40	170		81	370
Females		61,535		37,715	133,655		61,535	294,440
Percent		11.41		6.99	24.79		11.41	54.60
Mean Length		524		576	532		571	544
Std. Error		3		3	2		3	1
Sample Size		93		57	202		93	445
Both Sexes		113,145	662	64,182	246,137		115,130	539,256
Percent		20.98	0.12	11.90	45.64		21.35	100.00
Mean Length		527	395	584	539		586	552
Std. Error		2		3	1		2	1
Sample Size		171	1	97	372		174	815

-Continued-

Table 12. (page 2 of 3)

	Age Group							
	1.1	1.2	2.1	1.3	2.2	1.4	2.3	Total
Sample Period 2: 12 - 16 July								
Males		67,526		20,923	135,051		48,504	272,004
Percent		10.55		3.27	21.10		7.58	42.50
Mean Length		535		605	541		598	555
Std. Error		3		6	2		4	2
Sample Size		71		22	142		51	286
Females	951	115,079		19,021	195,920	951	36,140	368,062
Percent	0.15	17.98		2.97	30.61	0.15	5.65	57.50
Mean Length	293	522		569	525	580	570	530
Std. Error		2		6	2		4	1
Sample Size	1	121		20	206	1	38	387
Both Sexes	951	182,605		39,944	330,971	951	84,644	640,066
Percent	0.15	28.53		6.24	51.71	0.15	13.22	100.00
Mean Length	293	527		587	532	580	586	541
Std. Error		2		4	1		3	1
Sample Size	1	192		42	348	1	89	673

-Continued-

Table 12. (page 3 of 3)

	Age Group							
	1.1	1.2	2.1	1.3	2.2	1.4	2.3	Total
All Periods Combined								
Males		119,136	662	47,390	247,533		102,099	516,820
Percent		10.10	0.06	4.02	20.99		8.66	43.82
Mean Length		533	395	600	544		600	558
Std. Error		3		4	2		2	1
Sample Size		149	1	62	312		132	656
Females	951	176,614		56,736	329,575	951	97,675	662,502
Percent	0.08	14.98		4.81	27.95	0.08	8.28	56.18
Mean Length	293	523		573	528	580	571	537
Std. Error		2		3	1		2	1
Sample Size	1	214		77	408	1	131	832
Both Sexes	951	295,750	662	104,126	577,108	951	199,774	1,179,322
Percent	0.08	25.08	0.06	8.83	48.94	0.08	16.94	100.00
Mean Length	293	527	395	586	535	580	586	546
Std. Error		1		2	1		2	1
Sample Size	1	363	1	139	720	1	263	1,488

Table 13. Age and sex composition of sockeye salmon estimated catch and escapement, Branch River, 1986.

	Age Group								
	1.1	0.3	1.2	1.3	2.2	1.4	2.3	2.4	Total
Catch									
Males	257	139	26,786	41,066	8,169	541	1,766	7	78,731
Percent	.06	.04	6.75	10.35	2.06	.14	.44	.00	19.84
Females		139	27,686	46,856	10,683	222	2,412	7	88,005
Percent		.04	6.98	11.81	2.69	.06	.61	.00	22.17
Both Sexes	257	278	54,472	87,922	18,852	763	4,178	14	166,736
Percent	.06	.07	13.72	22.15	4.75	.19	1.05	.00	42.01
Escapement									
Males	79		57,244	38,730	16,377	427	2,233		115,090
Percent	.02		14.42	9.76	4.13	.11	.56		29.00
Females	78		57,245	38,730	16,378	427	2,232		115,090
Percent	.02		14.42	9.76	4.13	.11	.56		29.00
Both Sexes	157		114,489	77,460	32,755	854	4,465		230,180
Percent	.04		28.84	19.52	8.25	.22	1.12		57.99
Catch and Escapement									
Males	336	139	84,030	79,796	24,546	968	3,999	7	193,821
Percent	.08	.04	21.17	20.10	6.18	.24	1.01	.00	48.83
Females	78	139	84,931	85,586	27,061	649	4,644	7	203,095
Percent	.02	.04	21.40	21.56	6.82	.16	1.17	.00	51.17
Both Sexes	414	278	168,961	165,382	51,607	1,617	8,643	14	396,916
Percent	.10	.07	42.57	41.67	13.00	.41	2.18	.00	100.00

Table 14. Age and sex composition of sockeye salmon estimated catch and escapement, Naknek River, 1986.

	Age Group								
	0.3	1.2	1.3	2.2	1.4	2.3	2.4	3.3	Total
Catch									
Males	1,622	45,193	523,226	84,682	2,869	125,877	87		783,556
Percent	.04	1.15	13.36	2.16	.07	3.21	.00		20.01
Females	1,622	12,772	803,306	82,686	1,176	253,570	86		1,155,218
Percent	.04	.33	20.51	2.11	.03	6.47	.00		29.50
Both Sexes	3,244	57,965	1,326,532	167,368	4,045	379,447	173		1,938,774
Percent	.08	1.48	33.87	4.27	.10	9.69	.00		49.50
Escapement									
Males		96,581	493,467	169,771	2,264	159,208			921,291
Percent		2.47	12.60	4.33	.06	4.07			23.52
Females		26,409	663,994	126,762	2,264	234,661		2,264	1,056,354
Percent		.67	16.95	3.24	.06	5.99		.06	26.97
Both Sexes		122,990	1,157,461	296,533	4,528	393,869		2,264	1,977,645
Percent		3.14	29.55	7.57	.12	10.06		.06	50.50
Catch and Escapement									
Males	1,622	141,774	1,016,693	254,453	5,133	285,085	87		1,704,847
Percent	.04	3.62	25.96	6.50	.13	7.28	.00		43.53
Females	1,622	39,181	1,467,300	209,448	3,440	488,231	86	2,264	2,211,572
Percent	.04	1.00	37.47	5.35	.09	12.47	.00	.06	56.47
Both Sexes	3,244	180,955	2,483,993	463,901	8,573	773,316	173	2,264	3,916,419
Percent	.08	4.62	63.43	11.85	.22	19.75	.00	.06	100.00

Table 15. Daily sockeye salmon escapement counts, Naknek River, 1986.

Date	Daily Count	Accumulative Count	Daily Percent of Total	Accumulative Percent
June 21	0	0	.00	.00
22	0	0	.00	.00
23	24	24	.00	.00
24	480	504	.02	.03
25	630	1,134	.03	.06
26	30	1,164	.00	.06
27	6	1,170	.00	.06
28	906	2,076	.05	.10
29	14,172	16,248	.72	.82
30	1,566	17,814	.08	.90
July 1	414	18,228	.02	.92
2	379,374	397,602	19.18	20.10
3	382,494	780,096	19.34	39.45
4	72,048	852,144	3.64	43.09
5	40,686	892,830	2.06	45.15
6	16,110	908,940	.81	45.96
7	38,184	947,124	1.93	47.89
8	134,964	1,082,088	6.82	54.72
9	299,262	1,381,350	15.13	69.85
10	332,088	1,713,438	16.79	86.64
11	56,034	1,769,472	2.83	89.47
12	47,430	1,816,902	2.40	91.87
13	15,348	1,832,250	.78	92.65
14	13,800	1,846,050	.70	93.35
15	8,508	1,854,558	.43	93.78
16	57,415	1,911,973	2.90	96.68
17	48,564	1,960,537	2.46	99.13
18	4,971	1,965,508	.25	99.39
19	1,839	1,967,347	.09	99.48
20	2,543	1,969,890	.13	99.61
21	2,970	1,972,860	.15	99.76
22	1,650	1,974,510	.08	99.84
23	825	1,975,335	.04	99.88
24	1,188	1,976,523	.06	99.94
25	858	1,977,381	.04	99.99
26	264	1,977,645	.01	100.00

Table 16. Age, sex, fork length (mm), and weight (g) of sockeye salmon escapement by period, Naknek River, 1986.

	Age Group						
	1.2	1.3	2.2	1.4	2.3	3.3	Total
Sample period:	22 June - 4 July						
Males	96,581	493,467	169,771	2,264	159,208		921,291
Percent	4.88	24.95	8.58	0.11	8.05		46.59
Mean Length	468	589	497	635	588		559
Std. Error	3	1	3	27	2		1
Sample Size	128	654	225	3	211		1,221
Females	26,409	663,994	126,762	2,264	234,661	2,264	1,056,354
Percent	1.34	33.57	6.41	0.11	11.87	0.11	53.41
Mean Length	485	565	508	575	567	559	557
Std. Error	5	1	2	23	1	1	1
Sample Size	35	880	168	3	311	3	1,400
Both Sexes	122,990	1,157,461	296,533	4,528	393,869	2,264	1,977,645
Percent	6.22	58.53	14.99	0.23	19.92	0.11	100.00
Mean Length	471	575	502	605	575	559	558
Std. Error	3	1	2	18	1	1	1
Sample Size	163	1,534	393	6	522	3	2,621

Table 17. Commercial salmon catch by period and species, Egegik District, 1986.

		Catch (number of fish)					
Period	Duration (h)	Sockeye	Chinook	Chum	Pink	Coho	Total
9 June	15	72	25	23			120
10	24	246	31	29			306
11	24	372	88	69			529
12	24	726	169	139			1034
13	9	218	48	45			311
16	15	14,630	275	1105			16010
17	24	32,598	203	2,444			35,245
18	24	24,544	209	1,851			26,604
19	24	22,949	88	1,503			24,540
20	9	15,060	41	879			15,980
24[a]		181		4			185
27	8	35,245	95	1,396			36,736
28	3	135,288	41	5,143			140,472
1 July[a]		691	29	19			739
2	12	793,228	109	13,037			806,374
3	12	469,412	83	5,841			475,336
4[a]		22,794		264			23,058
5	12	539,617	63	7,245	3	1	546,929
6	12	103,949	10	1,246			105,205
7	12	294,945	34	3,138			298,117
8[a]		2,596		26		2	2,624
9	13	585,730	33	5,870			591,633
10[a]		2,799		25			2,824
11	12	469,477	18	6,240			475,735
12	8	119,956	9	2,005			121,970
13	24	544,789	25	9,160		4	553,978
14	24	193,653	13	3,644			197,310
15	24	135,634	10	3,670			139,314
16	24	125,237	8	3,826			129,071
17	24	63,112	4	2,500		3	65,619
18	24	44,119	6	2,114		12	46,251
19	9	15,082	9	1,260	7	16	16,374
21	15	12,423	7	1,186	14	45	13,675
22	24	7,209	9	934	27	65	8,244
23	24	4,162	13	722	12	129	5,038
24	24	4,220	6	1,000	218	304	5,748
25	24	3,648	11	1,076	203	357	5,295

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Table 17. (page 2 of 2)

Period	Duration (h)	Catch (number of fish)					
		Sockeye	Chinook	Chum	Pink	Coho	Total
26	9	2,811	5	342	183	380	3,721
28	15	2,014	1	292	101	833	3,241
29 July	24	2,380	3	423	313	979	4,098
30	24	857	2	281	174	661	1,975
31	24	844	3	244	172	748	2,011
1 August	24	524	3	145	112	500	1,284
2	9	207	1	150	69	323	750
4	15	626	7	533	147	2,104	3,417
5	24	439	4	502	163	1,894	3,002
6	24	433	3	349	190	1,962	2,937
7	24	245	3	172	177	1,305	1,902
8	24	130	1	157	127	989	1,404
9	9	46		32	33	294	405
11	15	226	4	114	85	2,893	3,322
12	24	145		67	53	1,781	2,046
13	24	43	3	38	31	1,217	1,332
14	24	57	2	17	14	790	880
15	9	27		13	8	705	753
18	15	83	5	34	25	2,570	2,717
19	24	61	1	32	27	1,648	1,769
20	24	36	2	24	19	1,234	1,315
21	24	19	5	14	29	1,330	1,397
22	9	5		5	2	218	230
25	15	18	1	4	2	1,242	1,267
26	24	16		2	2	564	584
27	24	9		2	2	589	602
28	24	2	1			361	364
29	9	4				93	97
1 Sept.	15	3				689	692
2	24	3	1			807	811
3	24	7				470	477
4	24	4			5	496	505
Total		4,852,935	1,883	94,666	2,749	33,607	4,985,840

[a] ADF&G test fish catches.

Table 18. Age and sex composition of sockeye salmon catch and escapement, Egegik District, 1986.

	Age Group										
	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	Total
Catch											
Males			403,920		317,472	1,147,503	4,712	268,192	2,135		2,143,934
Percent			6.73		5.29	19.11	.08	4.47	.04		35.71
Females		4,064	350,687		529,270	1,440,885	442	379,384	4,270		2,709,002
Percent		.07	5.84		8.81	24.00	.01	6.32	.07		45.12
Both Sexes		4,064	754,607		846,742	2,588,388	5,154	647,576	6,405		4,852,936
Percent		.07	12.57		14.10	43.11	.09	10.79	.11		80.82
Escapement											
Males	2,820		120,062	11,566	32,188	314,380	478	88,913	196		570,603
Percent	.05		2.00	.19	.54	5.24	.01	1.48	.00		9.50
Females			106,587		37,535	313,829		122,092	196	478	580,717
Percent			1.78		.63	5.23		2.03	.00	.01	9.67
Both Sexes	2,820		226,649	11,566	69,723	628,209	478	211,005	392	478	1,151,320
Percent	.05		3.77	.19	1.16	10.46	.01	3.51	.01	.01	19.18
Catch and Escapement											
Males	2,820		523,982	11,566	349,660	1,461,883	5,190	357,105	2,331		2,714,537
Percent	.05		8.73	.19	5.82	24.35	.09	5.95	.04		45.21
Females		4,064	457,274		566,805	1,754,714	442	501,476	4,466	478	3,289,719
Percent		.07	7.62		9.44	29.22	.01	8.35	.07	.01	54.79
Both Sexes	2,820	4,064	981,256	11,566	916,465	3,216,597	5,632	858,581	6,797	478	6,004,256
Percent	.05	.07	16.34	.19	15.26	53.57	.09	14.30	.11	.01	100.00

[a] Does not include 430 King Salmon River escapement.

Table 19. Age, sex, fork length (mm), and weight (g) of sockeye salmon commercial catch by period, Egegik District, 1986.

	Age Group							
	0.3	1.2	1.3	2.2	1.4	2.3	3.2	Total
Sample Period 1: 19 - 29 June								
Males		18,131	41,568	61,909	442	42,452		164,502
Percent		6.43	14.73	21.94	0.16	15.05		58.31
Mean Length		523	582	540	615	586		561
Std. Error		4.99	2.54	2.44		2.58		1.42
Sample Size		41	94	140	1	96		372
Mean Weight		2.40		2.69		3.40		2.89
Std. Error				0.01				0.00
Sample Size		1		2		1		4
Females		5,749	39,357	25,648	442	46,431		117,627
Percent		2.04	13.95	9.09	0.16	16.46		41.69
Mean Length		523	565	535	576	563		556
Std. Error		8.81	2.71	4.18		2.44		1.66
Sample Size		13	89	58	1	105		266
Mean Weight			2.70	2.20				2.50
Std. Error								
Sample Size			1	1				2
Both Sexes		23,880	80,925	87,557	884	88,883		282,129
Percent		8.46	28.68	31.03	0.31	31.50		100.00
Mean Length		523	574	539	596	574		559
Std. Error		4.34	1.85	2.12		1.77		1.08
Sample Size		54	183	198	2	201		638
Mean Weight		2.40	2.70	2.55		3.40		2.76
Std. Error				0.01				0.00
Sample Size		1	1	3		1		6

Table 19. (page 2 of 5)

	Age Group							
	0.3	1.2	1.3	2.2	1.4	2.3	3.2	Total
Sample Period 2: 30 June - 4 July								
Males		144,216	78,019	316,803		104,025		643,063
Percent		11.21	6.07	24.63		8.09		50.00
Mean Length		533	572	545		582		551
Std. Error		2.93	5.61	2.05		4.21		1.54
Sample Size		61	33	134		44		272
Mean Weight		2.36	3.44	2.61		3.05		2.73
Std. Error		0.16	0.14	0.16		0.12		0.09
Sample Size		6	4	13		4		27
Females		70,926	158,401	262,427		151,309		643,063
Percent		5.51	12.32	20.40		11.76		50.00
Mean Length		522	576	530		578		551
Std. Error		3.88	2.25	1.68		2.75		1.17
Sample Size		30	67	111		64		272
Mean Weight		3.45	3.06	2.22		3.01		2.75
Std. Error			0.18	0.09		0.07		0.06
Sample Size		1	5	14		7		27
Both Sexes		215,142	236,420	579,230		255,334		1,286,126
Percent		16.73	18.38	45.04		19.85		100.00
Mean Length		529	574	538		579		551
Std. Error		2.35	2.39	1.35		2.36		0.97
Sample Size		91	100	245		108		544
Mean Weight		2.72	3.19	2.43		3.03		2.74
Std. Error		0.16	0.13	0.10		0.06		0.05
Sample Size		7	9	27		11		54

-Continued-

Table 19. (page 3 of 5)

	Age Group							
	0.3	1.2	1.3	2.2	1.4	2.3	3.2	Total
Sample Period 3: 5 - 10 July								
Males		136,954	46,294	378,068		59,797		621,113
Percent		8.95	3.03	24.72		3.91		40.61
Mean Length		529	580	548		591		550
Std. Error		2.96	7.10	1.67		4.51		1.39
Sample Size		71	24	196		31		322
Mean Weight		2.27		2.58		3.22		2.57
Std. Error		0.16		0.10		0.21		0.08
Sample Size		5		16		4		25
Females	1,929	133,096	94,517	580,606		98,375		908,523
Percent	0.13	8.70	6.18	37.96		6.43		59.39
Mean Length	552	514	572	529		571		536
Std. Error		3.34	2.93	1.13		2.92		0.98
Sample Size	1	69	49	301		51		471
Mean Weight	2.54	2.21	2.71	2.28		3.10		2.40
Std. Error		0.13	0.11	0.07				0.05
Sample Size	1	6	3	27		1		38
Both Sexes	1,929	270,050	140,811	958,674		158,172		1,529,636
Percent	0.13	17.65	9.21	62.67		10.34		100.00
Mean Length	552	522	575	536		579		542
Std. Error		2.23	3.05	0.95		2.49		0.81
Sample Size	1	140	73	497		82		793
Mean Weight	2.54	2.24	2.71	2.40		3.15		2.47
Std. Error		0.11	0.11	0.06		0.21		0.04
Sample Size	1	11	3	43		5		63

-Continued-

Table 19. (page 4 of 5)

	Age Group							
	0.3	1.2	1.3	2.2	1.4	2.3	3.2	Total
Sample Period 4: 11 - 16 July								
Males		104,619	151,591	390,723	4,270	61,918	2,135	715,256
Percent		5.96	8.64	22.26	0.24	3.53	0.12	40.75
Mean Length		531	586	551	588	587	502	559
Std. Error		3.78	3.07	1.81	36.50	5.18		1.40
Sample Size		49	71	183	2	29	1	335
Females	2,135	140,916	236,995	572,204		83,269	4,270	1,039,789
Percent	0.12	8.03	13.50	32.60		4.74	0.24	59.25
Mean Length	589	521	564	532		562	535	540
Std. Error		3.46	2.27	1.36		4.61	14.50	1.09
Sample Size	1	66	111	268		39	2	487
Both Sexes	2,135	245,535	388,586	962,927	4,270	145,187	6,405	1,755,045
Percent	0.12	13.99	22.14	54.87	0.24	8.27	0.36	100.00
Mean Length	589	525	572	539	588	573	524	548
Std. Error		2.55	1.83	1.09	36.50	3.44	14.50	0.86
Sample Size	1	115	182	451	2	68	3	822

-Continued-

Table 19. (page 5 of 5)

	Age Group							
	0.3	1.2	1.3	2.2	1.4	2.3	3.2	Total
All Periods Combined:								
Males		403,920	317,472	1,147,503	4,712	268,192	2,135	2,143,934
Percent		8.32	6.54	23.65	0.10	5.53	0.04	44.18
Mean Length		531	581	548	590	586	502	554
Std. Error		1.76	2.29	1.01	36.50	2.30		0.78
Sample Size		222	222	653	3	200	1	1,301
Mean Weight		2.32	3.44	2.60		3.17		2.68
Std. Error		0.11	0.14	0.08		0.11		0.05
Sample Size		12	4	31		9		56
Females	4,064	350,687	529,270	1,440,885	442	379,384	4,270	2,709,002
Percent	0.08	7.23	10.91	29.69	0.01	7.82	0.09	55.82
Mean Length	571	518	569	530	576	571	535	542
Std. Error		2.04	1.34	0.77		1.70	14.50	0.60
Sample Size	2	178	316	738	1	259	2	1,496
Mean Weight	2.54	2.64	2.90	2.26		3.05		2.54
Std. Error		0.13	0.12	0.06		0.07		0.04
Sample Size	1	7	9	42		8		67
Both Sexes	4,064	754,607	846,742	2,588,388	5,154	647,576	6,405	4,852,936
Percent	0.08	15.55	17.45	53.34	0.11	13.34	0.13	100.00
Mean Length	571	525	573	538	589	577	524	547
Std. Error		1.34	1.20	0.62	36.50	1.38	14.50	0.48
Sample Size	2	400	538	1,391	4	459	3	2,797
Mean Weight	2.54	2.45	3.01	2.42		3.10		2.60
Std. Error		0.09	0.10	0.05		0.06		0.03
Sample Size	1	19	13	73		17		123

Table 20. Daily sockeye salmon escapement counts, Egegik River, 1986.

Date	Daily Count	Accumulative Count	Daily Percent of Total	Accumulative Percent
June 23	348	348	.03	.03
24	1,494	1,842	.13	.16
25	4,860	6,702	.42	.58
26	642	7,344	.06	.64
27	9,774	17,118	.85	1.49
28	9,426	26,544	.82	2.31
29	9,708	36,252	.84	3.15
30	6,252	42,504	.54	3.69
July 1	24,186	66,690	2.10	5.79
2	27,378	94,068	2.38	8.17
3	117,360	211,428	10.19	18.36
4	56,982	268,410	4.95	23.31
5	138,948	407,358	12.07	35.38
6	156,888	564,246	13.63	49.01
7	74,052	638,298	6.43	55.44
8	31,812	670,110	2.76	58.20
9	26,586	696,696	2.31	60.51
10	29,496	726,192	2.56	63.07
11	46,860	773,052	4.07	67.14
12	56,814	829,866	4.93	72.08
13	68,490	898,356	5.95	78.03
14	73,428	971,784	6.38	84.41
15	10,062	981,846	.87	85.28
16	169,474	1,151,320	14.72	100.00

Table 21. Age, sex, fork length (mm), and weight (g) of sockeye salmon escapement by period, Egegik River, 1986.

	Age Group									
	1.1	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	Total
Sample Period 1: 25 June - 1 July										
Males	590	9,443	3,895	2,951	13,811		7,672			38,362
Percent	0.88	14.16	5.84	4.42	20.71		11.50			57.52
Mean Length	297	501	354	572	522		585			513
Std. Error	4	4	4	5	3		4			2
Sample Size	5	80	33	25	117		65			325
Females		6,256		3,423	9,914		8,735			28,328
Percent		9.38		5.13	14.87		13.10			42.48
Mean Length		493		557	510		563			528
Std. Error		3		4	3		3			2
Sample Size		53		29	84		74			240
Both Sexes	590	15,699	3,895	6,374	23,725		16,407			66,690
Percent	0.88	23.54	5.84	9.56	35.58		24.60			100.00
Mean Length	297	498	354	564	517		573			519
Std. Error	4	2	4	3	2		2			1
Sample Size	5	133	33	54	201		139			565

-Continued-

Table 21. (page 2 of 6)

	Age Group									
	1.1	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	Total
Sample Period 2: 2 - 5 July										
Males		41,568	2,389	10,034	88,870	478	30,101			173,440
Percent		12.20	0.70	2.95	26.09	0.14	8.84			50.91
Mean Length		513	364	584	528	595	588			536
Std. Error		4	9	8	2		3			2
Sample Size		87	5	21	186	1	63			363
Females		25,801		9,556	74,535		56,858		478	167,228
Percent		7.57		2.81	21.88		16.69		0.14	49.09
Mean Length		501		565	520		562		575	534
Std. Error		2		4	2		2			1
Sample Size		54		20	156		119		1	350
Both Sexes		67,369	2,389	19,590	163,405	478	86,959		478	340,668
Percent		19.78	0.70	5.75	47.97	0.14	25.53		0.14	100.00
Mean Length		509	364	574	524	595	571		575	535
Std. Error		2	9	4	2		2			1
Sample Size		141	5	41	342	1	182		1	713

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Table 21. (page 3 of 6)

	Age Group									
	1.1	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	Total
Sample Period 3: 6 - 8 July										
Males		22,634	3,444	6,397	66,426		25,094			123,995
Percent		8.61	1.31	2.43	25.28		9.55			47.19
Mean Length		525	363	581	535		582			540
Std. Error		5	12	6	2		4			2
Sample Size		46	7	13	135		51			252
Females		28,539		8,857	69,870		31,491			138,757
Percent		10.86		3.37	26.59		11.99			52.81
Mean Length		501		569	515		565			527
Std. Error		3		4	2		3			1
Sample Size		58		18	142		64			282
Both Sexes		51,173	3,444	15,254	136,296		56,585			262,752
Percent		19.48	1.31	5.81	51.87		21.54			100.00
Mean Length		511	363	574	524		573			533
Std. Error		3	12	3	1		2			1
Sample Size		104	7	31	277		115			534

-Continued-

Table 21. (page 4 of 6)

	Age Group									
	1.1	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	Total
Sample Period 4: 9 - 11 July										
Males	783	8,807	391	1,957	29,552		7,241	196		48,927
Percent	0.76	8.56	0.38	1.90	28.71		7.03	0.19		47.53
Mean Length	329	521	364	591	541		584	529		541
Std. Error	11	4	13	8	2		5			2
Sample Size	4	45	2	10	151		37	1		250
Females		12,721		1,957	33,661		5,480	196		54,015
Percent		12.36		1.90	32.70		5.32	0.19		52.47
Mean Length		500		552	515		579	551		519
Std. Error		3		12	2		3			1
Sample Size		65		10	172		28	1		276
Both Sexes	783	21,528	391	3,914	63,213		12,721	392		102,942
Percent	0.76	20.91	0.38	3.80	61.41		12.36	0.38		100.00
Mean Length	329	509	364	572	527		582	540		530
Std. Error	11	2	13	7	1		3			1
Sample Size	4	110	2	20	323		65	2		526

-Continued-

Table 21. (page 5 of 6)

	Age Group									
	1.1	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	Total
Sample Period 5: 12 - 15 July										
Males	1,447	37,610	1,447	10,849	115,721		18,805			185,879
Percent	0.38	9.94	0.38	2.87	30.59		4.97			49.14
Mean Length	287	529	351	580	547		591			546
Std. Error	1	4	22	9	2		5			2
Sample Size	2	52	2	15	160		26			257
Females		33,270		13,742	125,849		19,528			192,389
Percent		8.80		3.63	33.27		5.16			50.86
Mean Length		505		560	522		575			527
Std. Error		3		8	2		3			1
Sample Size		46		19	174		27			266
Both Sexes	1,447	70,880	1,447	24,591	241,570		38,333			378,268
Percent	0.38	18.74	0.38	6.50	63.86		10.13			100.00
Mean Length	287	518	351	569	534		583			536
Std. Error	1	2	22	6	1		3			1
Sample Size	2	98	2	34	334		53			523

-Continued-

Table 21. (page 6 of 6)

	Age Group									
	1.1	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	Total
All Periods Combined										
Males	2,820	120,062	11,566	32,188	314,380	478	88,913	196		570,603
Percent	0.24	10.43	1.00	2.80	27.31	0.04	7.72	0.02		49.56
Mean Length	300	520	359	581	537	595	586	529		539
Std. Error	3	2	5	4	1		2			1
Sample Size	11	310	49	84	749	1	242	1		1,447
Females		106,587		37,535	313,829		122,092	196	478	580,717
Percent		9.26		3.26	27.26		10.60	0.02	0.04	50.44
Mean Length		501		563	518		566	551	575	528
Std. Error		1		3	1		1			1
Sample Size		276		96	728		312	1	1	1,414
Both Sexes	2,820	226,649	11,566	69,723	628,209	478	211,005	392	478	1,151,320
Percent	0.24	19.69	1.00	6.06	54.56	0.04	18.33	0.03	0.04	100.00
Mean Length	300	511	359	571	528	595	574	540	575	533
Std. Error	3	1	5	3	1		1			1
Sample Size	11	586	49	180	1,477	1	554	2	1	2,861

Table 22. Commercial salmon catch by period and species, Ugashik District, 1986.

		Catch (number of fish)					
Period	Duration (h)	Sockeye	Chinook	Chum	Pink	Coho	Total
30 May	24		6				6
2 June	15		34				34
3	24		59				59
4	24		64				64
5	24		97				97
6	24		27				27
7	9	2	120				122
9	15		74				74
10	24	39	208	2			249
11	24	173	218	8			399
12	24	46	90	2			138
13	24	332	141	11			484
14	9	276	167	11			454
16	15	3,883	171	97			4,151
17	24	14,827	531	395			15,753
18	24	11,419	210	282			11,911
19	24	10,169	251	271			10,691
20	24	18,299	113	551			18,963
21	9	24,346	106	534			24,986
26[a]		10					10
1 July[a]		693		29			722
3	12	793,002	21	7,339			800,362
4	11	65,140		614			65,754
5	12	502,054	37	8,643			510,734
6	7	25,535	1	267			25,803
7	7	565,752	28	6,261			572,041
8	7	10,291		99			10,390
9	7	708,159	12	7,596			715,767
11	13	697,684	7	7,959			705,650
12	8	33,136	2	606			33,744
13	24	667,968	21	10,013			678,002
14	24	149,658	32	3,398			153,088
15	24	232,911	18	6,874			239,803
16	24	205,594	10	7,942			213,546
17	24	89,738	36	5,171			94,945
18	24	61,566	19	5,811			67,396
19	9	16,546	1	1,760			18,307
21	15	22,089	10	4,944	1	9	27,053

-Continued-

Table 22. (page 2 of 2)

Period	Duration (h)	Catch (number of fish)					
		Sockeye	Chinook	Chum	Pink	Coho	Total
22 July	24	21,426	6	6,223			27,655
23	24	14,648	5	3,783	1	9	18,446
24	24	5,451	2	1,442		8	6,903
25	24	5,263	6	1,410		8	6,687
26	9	3,409	3	918		8	4,338
28	15	4,457	3	795		40	5,295
29	24	3,817	2	733	6	165	4,723
30	24	2,943	4	876		74	3,897
31	24	2,642	1	707		39	3,389
1 August	24	61		5		4	70
2	9	47		4		4	55
4	15	88		39		24	151
5	24	1,348	1	759	12	522	2,642
6	24	112	1	20		63	196
7	24	1,765	2	1,054	9	766	3,596
8	24	1,129	1	1,218	35	1,173	3,556
9	9	388		431		395	1,214
11	15	726		902		1,626	3,254
12	24	577		803	13	1,308	2,701
13	24	252		608		1,361	2,221
14	24	78		123		248	449
15	9	91		157		418	666
18	15	237	2	208	5	1,747	2,199
19	24	150	1	188	8	2,156	2,503
20	24	120		111		1,931	2,162
21	24	134		64	4	2,509	2,711
22	9	17		12	2	523	554
25	15	34		25		1,901	1,960
26	24	110		3	2	2,130	2,245
27	24	70		1		2,351	2,422
28	24	22				1,887	1,909
29	9					363	363
Total		5,002,949	2,982	111,112	98	25,770	5,142,911

[a] ADF&G test fish catches.

Table 23. Age and sex composition of sockeye salmon catch and escapement, Ugashik District, 1986.

	Age Group									
	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	Total[a]
Catch										
Males	7,104	201,416		1,032,750	990,576	4,484	306,706	2,532	2,242	2,547,810
Percent	.12	3.35		17.20	16.50	.07	5.11	.04	.04	42.43
Females	6,902	172,285		1,096,368	860,045		317,297		2,242	2,455,139
Percent	.11	2.87		18.26	14.32		5.28		.04	40.89
Both Sexes	14,006	373,701		2,129,118	1,850,621	4,484	624,003	2,532	4,484	5,002,949
Percent	.23	6.22		35.46	30.82	.07	10.39	.04	.07	83.32
Escapement										
Males		17,158		129,864	129,188	3,829	55,138			335,177
Percent		.29		2.16	2.15	.06	.92			5.58
Females		29,952	719	291,181	235,362	1,437	106,946		719	666,316
Percent		.50	.01	4.85	3.92	.02	1.78		.01	11.10
Both Sexes		47,110	719	421,045	364,550	5,266	162,084		719	1,001,493
Percent		.78	.01	7.01	6.07	.09	2.70		.01	16.68
Catch and Escapement										
Males	7,104	218,574		1,162,614	1,119,764	8,313	361,844	2,532	2,242	2,882,987
Percent	.12	3.64		19.36	18.65	.14	6.03	.04	.04	48.01
Females	6,902	202,237	719	1,387,549	1,095,407	1,437	424,243		2,961	3,121,455
Percent	.11	3.37	.01	23.11	18.24	.02	7.07		.05	51.99
Both Sexes	14,006	420,811	719	2,550,163	2,215,171	9,750	786,087	2,532	5,203	6,004,442
Percent	.23	7.01	.01	42.47	36.89	.16	13.09	.04	.09	100.00

[a] Does not include 9,780 Dog Salmon River and 4,310 Mother Goose System escapements.

Table 24. Age, sex, fork length (mm), and weight (g) of sockeye salmon commercial catch by period, Ugashik District, 1986.

	Age Group								
	0.3	1.2	1.3	2.2	1.4	2.3	3.2	2.4	Total
Sample Period 1: 19 June - 7 July									
Males	2,532	91,164	455,821	334,268		134,214	2,532		1,020,531
Percent	0.12	4.48	22.39	16.42		6.59	0.12		50.12
Mean Length	587	531	591	544		585	559		569
Std. Error		4.07	2.06	2.03		3.53			1.28
Sample Size	1	36	180	132		53	1		403
Mean Weight	3.45	2.00	3.70	2.90		3.17			3.21
Std. Error			0.17	0.18		0.16			0.10
Sample Size	1	1	11	4		4			21
Females		50,647	544,452	253,233		167,134			1,015,466
Percent		2.49	26.74	12.44		8.21			49.88
Mean Length		519	572	528		574			559
Std. Error		5.43	1.26	2.75		2.49			1.08
Sample Size		20	215	100		66			401
Mean Weight		1.88	2.85	1.98		2.80			2.58
Std. Error			0.10	0.03		0.20			0.07
Sample Size		1	10	2		2			15
Both Sexes	2,532	141,811	1,000,273	587,501		301,348	2,532		2,035,997
Percent	0.12	6.97	49.13	28.86		14.80	0.12		100.00
Mean Length	587	527	581	537		579	559		564
Std. Error		3.26	1.16	1.66		2.09			0.84
Sample Size	1	56	395	232		119	1		804
Mean Weight	3.45	1.96	3.24	2.50		2.96			2.90
Std. Error			0.09	0.10		0.13			0.06
Sample Size	1	2	21	6		6			36

-Continued-

Table 24. (page 2 of 4)

	Age Group								
	0.3	1.2	1.3	2.2	1.4	2.3	3.2	2.4	Total
Sample Period 2: 8 - 12 July									
Males	2,330	69,900	316,883	281,932		55,920			726,965
Percent	0.16	4.82	21.87	19.45		3.86			50.16
Mean Length	551	548	595	551		597			573
Std. Error		5.85	2.44	2.35		6.52			1.59
Sample Size	1	30	136	121		24			312
Females	4,660	74,561	307,562	277,272		58,250			722,305
Percent	0.32	5.14	21.22	19.13		4.02			49.84
Mean Length	557	523	574	530		583			553
Std. Error	2.50	5.29	2.14	2.06		3.56			1.36
Sample Size	2	32	132	119		25			310
Both Sexes	6,990	144,461	624,445	559,204		114,170			1,449,270
Percent	0.48	9.97	43.09	38.59		7.88			100.00
Mean Length	555	535	584	541		590			563
Std. Error	2.50	3.93	1.62	1.57		3.68			1.05
Sample Size	3	62	268	240		49			622

-Continued-

Table 24. (page 3 of 4)

	Age Group								
	0.3	1.2	1.3	2.2	1.4	2.3	3.2	2.4	Total
Sample Period 3: 13 - 17 July									
Males	2,242	40,352	260,046	374,376	4,484	116,572		2,242	800,314
Percent	0.15	2.66	17.13	24.67	0.30	7.68		0.15	52.73
Mean Length	590	541	597	549	568	582		591	569
Std. Error		4.75	2.75	1.93	32.50	4.10			1.43
Sample Size	1	18	116	167	2	52		1	357
Mean Weight		2.28	3.08	2.86		2.90			2.91
Std. Error		0.42	0.32	0.24					0.15
Sample Size		2	5	10		1			18
Females	2,242	47,077	244,354	329,540		91,913		2,242	717,368
Percent	0.15	3.10	16.10	21.71		6.06		0.15	47.27
Mean Length	545	512	566	531		565		593	546
Std. Error		6.81	2.37	1.98		5.00			1.45
Sample Size	1	21	109	147		41		1	320
Mean Weight		1.85	2.23	2.54					2.37
Std. Error			0.13	0.23					0.13
Sample Size		1	2	9					12
Both Sexes	4,484	87,429	504,400	703,916	4,484	208,485		4,484	1,517,682
Percent	0.30	5.76	33.23	46.38	0.30	13.74		0.30	100.00
Mean Length	568	526	582	541	568	574		592	558
Std. Error		4.27	1.82	1.38	32.50	3.18			1.02
Sample Size	2	39	225	314	2	93		2	677
Mean Weight		2.05	2.67	2.71		2.90			2.67
Std. Error		0.42	0.17	0.17					0.10
Sample Size		3	7	19		1			30

-Continued-

Table 24. (page 4 of 4)

	Age Group								
	0.3	1.2	1.3	2.2	1.4	2.3	3.2	2.4	Total
All Periods Combined:									
Males	7,104	201,416	1,032,750	990,576	4,484	306,706	2,532	2,242	2,547,810
Percent	0.14	4.03	20.64	19.80	0.09	6.13	0.05	0.04	50.93
Mean Length	576	539	594	548	568	586	559	591	571
Std. Error		2.90	1.37	1.20	32.50	2.50			0.82
Sample Size	3	84	432	420	2	129	1	1	1,072
Mean Weight	3.45	2.09	3.47	2.88		3.04			3.08
Std. Error		0.42	0.16	0.15		0.16			0.09
Sample Size	1	3	16	14		5			39
Females	6,902	172,285	1,096,368	860,045		317,297		2,242	2,455,139
Percent	0.14	3.44	21.91	17.19		6.34		0.04	49.07
Mean Length	553	519	572	530		573		593	553
Std. Error	2.50	3.35	1.01	1.30		2.06			0.73
Sample Size	3	73	456	366		132		1	1,031
Mean Weight		1.87	2.66	2.30		2.80			2.50
Std. Error			0.08	0.13		0.20			0.06
Sample Size		2	12	11		2			27
Both Sexes	14,006	373,701	2,129,118	1,850,621	4,484	624,003	2,532	4,484	5,002,949
Percent	0.28	7.47	42.56	36.99	0.09	12.47	0.05	0.09	100.00
Mean Length	565	530	582	540	568	579	559	592	562
Std. Error	2.50	2.20	0.84	0.88	32.50	1.61			0.55
Sample Size	6	157	888	786	2	261	1	2	2,103
Mean Weight	3.45	1.99	3.05	2.62		2.95			2.80
Std. Error		0.42	0.09	0.10		0.13			0.05
Sample Size	1	5	28	25		7			66

Table 25. Daily sockeye salmon escapement counts, Ugashik River, 1986.

Date	Daily Count	Accumulative Count	Daily Percent of Total	Accumulative Percent
2	0	0	.00	.00
3	0	0	.00	.00
4	0	0	.00	.00
5	0	0	.00	.00
6	0	0	.00	.00
7	36	36	.00	.00
8	264	300	.03	.03
9	192	492	.02	.05
10	84	576	.01	.06
11	174	750	.02	.07
12	144	894	.01	.09
13	60	954	.01	.10
14	358,878	359,832	35.83	35.93
15	287,286	647,118	28.69	64.62
16	40,518	687,636	4.05	68.66
17	46,542	734,178	4.65	73.31
18	58,950	793,128	5.89	79.19
19	43,158	836,286	4.31	83.50
20	14,796	851,082	1.48	84.98
21	9,396	860,478	.94	85.92
22	29,520	889,998	2.95	88.87
23	34,680	924,678	3.46	92.33
24	76,814	1,001,492	7.67	100.00

Table 26. Age, sex, fork length (mm), and weight (g) of sockeye salmon escapement by period, Ugashik River, 1986.

	Age Group							
	1.2	2.1	1.3	2.2	1.4	2.3	2.4	Total
Sample Period 1: 11 - 14 July								
Males	8,263		44,322	59,346	751	19,532		132,214
Percent	2.30		12.32	16.49	0.21	5.43		36.74
Mean Length	556		603	539	609	603		572
Std. Error	10		3	3		3		2
Sample Size	11		59	79	1	26		176
Females	7,512		91,648	81,131		47,327		227,618
Percent	2.09		25.47	22.55		13.15		63.26
Mean Length	523		579	521		573		555
Std. Error	13		2	2		3		1
Sample Size	10		122	108		63		303
Both Sexes	15,775		135,970	140,477	751	66,859		359,832
Percent	4.38		37.79	39.04	0.21	18.58		100.00
Mean Length	540		587	529	609	582		561
Std. Error	8		2	2		2		1
Sample Size	21		181	187	1	89		479

-Continued-

Table 26. (page 2 of 4)

	Age Group							
	1.2	2.1	1.3	2.2	1.4	2.3	2.4	Total
Sample Period 2: 15 - 17 July								
Males	3,146		50,333	43,254	2,359	21,234		120,326
Percent	0.84		13.45	11.55	0.63	5.67		32.14
Mean Length	517		601	533	583	594		573
Std. Error	5		3	4	20	4		2
Sample Size	4		64	55	3	27		153
Females	10,224		130,548	80,217		33,031		254,020
Percent	2.73		34.87	21.43		8.82		67.86
Mean Length	486		573	510		568		549
Std. Error	8		1	2		4		1
Sample Size	13		166	102		42		323
Both Sexes	13,370		180,881	123,471	2,359	54,265		374,346
Percent	3.57		48.32	32.98	0.63	14.50		100.00
Mean Length	493		581	518	583	579		557
Std. Error	6		1	2	20	3		1
Sample Size	17		230	157	3	69		476

-Continued-

Table 26. (page 3 of 4)

	Age Group							
	1.2	2.1	1.3	2.2	1.4	2.3	2.4	Total
Sample Period 3: 18 - 23 July								
Males	5,749		35,209	26,588	719	14,372		82,637
Percent	2.15		13.17	9.95	0.27	5.38		30.91
Mean Length	486		604	530	626	602		572
Std. Error	13		3	4		4		2
Sample Size	8		49	37	1	20		115
Females	12,216	719	68,984	74,014	1,437	26,588	719	184,677
Percent	4.57	0.27	25.81	27.69	0.54	9.95	0.27	69.09
Mean Length	502	486	575	509	542	569	568	542
Std. Error	5		2	2	49	5		1
Sample Size	17	1	96	103	2	37	1	257
Both Sexes	17,965	719	104,193	100,602	2,156	40,960	719	267,314
Percent	6.72	0.27	38.98	37.63	0.81	15.32	0.27	100.00
Mean Length	497	486	585	515	570	581	568	551
Std. Error	5		2	2	49	4		1
Sample Size	25	1	145	140	3	57	1	372

-Continued-

Table 26. (page 4 of 4)

	Age Group							
	1.2	2.1	1.3	2.2	1.4	2.3	2.4	Total
All Periods Combined								
Males	17,158		129,864	129,188	3,829	55,138		335,177
Percent	1.71		12.97	12.90	0.38	5.51		33.47
Mean Length	525		603	535	596	600		572
Std. Error	7		2	2	20	2		1
Sample Size	23		172	171	5	73		444
Females	29,952	719	291,180	235,362	1,437	106,946	719	666,315
Percent	2.99	0.07	29.07	23.50	0.14	10.68	0.07	66.53
Mean Length	502	486	575	514	542	571	568	549
Std. Error	5		1	1	49	2		1
Sample Size	40	1	384	313	2	142	1	883
Both Sexes	47,110	719	421,044	364,550	5,266	162,084	719	1,001,492
Percent	4.70	0.07	42.04	36.40	0.53	16.18	0.07	100.00
Mean Length	510	486	584	521	581	580	568	557
Std. Error	4		1	1	23	2		1
Sample Size	63	1	556	484	7	215	1	1,327

Table 27. Commercial salmon catch by period and species, Nushagak District, 1986.

		Number of Fish					
Period	Time	Sockeye	Chinook	Chum	Pink	Coho	Total
26 May	24		1				1
27	24		5				5
28	24		8				8
29	24		37				37
30	24		230				230
31	9		63				63
2 June	15		723				723
3	24		2,209	1			2,210
4	24		1,089				1,089
5	24		334				334
6	24		724	32			756
7	12	2	3,271				3,273
12	9	980	21,479	89			22,548
19	12	3,731	6,320	11,682			21,733
30[a]	12	14,707	276	3,720			18,703
1 July[a]	12	245,188	14,636	185,631			445,455
3[a]	12	450,135	7,777	90,031			547,943
4	8	209,603	1,759	49,465			260,827
9[b]	20	122,717	289	7,001	1		130,008
10[b]	24	125,585	214	11,073			136,872
11[c]	24	465,862	1,506	37,297	10		504,675
12	24	300,471	302	19,919	26	1	320,719
13	24	178,627	143	11,603	99	3	190,475
14	24	152,551	162	9,626	417	21	162,777
15	24	102,011	146	6,062	369	31	108,619
16	24	64,778	128	4,557	1,382	14	70,859
17	24	75,430	85	7,075	4,161	23	86,774
18	24	62,778	209	7,862	5,617	140	76,606
19	24	49,718	72	5,521	6,470	325	62,106
20	24	35,125	472	4,449	11,429	1,465	52,940
21	24	18,788	150	2,459	11,275	1,054	33,726
22	24	9,264	123	1,822	8,110	2,364	21,683
23	24	5,308	106	876	7,323	1,461	15,074
24	24	5,541	51	795	14,969	1,509	22,865
25	24	7,356	49	1,347	21,025	993	30,770
26	9	1,720	28	388	6,547	162	8,845
28	15	4,668	240	5,101	46,658	8,339	65,006
29	24	2696	98	1014	42,241	7,060	53,109
30	24	1734	105	730	36,790	14,341	53,700
31	24	961	115	652	20,766	13,599	36,093
1 August	9	455	32	115	5,702	3,987	10,291
4	15	463	6	88	10,346	2,877	13,780
5	9	360	11	292	5,384	8,799	14,846
Total		2,719,313	65,783	488,375	267,117	68,568	3,609,156

[a] Large mesh chinook gill net gear prohibited.
[b] Igushik section open; Nushagak section closed.
[c] Nushagak section open 4:00 a.m. through 12:00 midnight, Igushik section open the entire 24 hour period.

Table 28. Age and sex composition of sockeye salmon catch and escapement, Nushagak-Igushik District, 1986.

	Age Group									
	0.2	1.1	0.3	1.2	0.4	1.3	2.2	1.4	2.3	Total
Catch[a]										
Males	15,543		97,996	213,765	2,778	719,006	15,898	2,910	66,867	1,134,763
Percent	.33		2.10	4.58	.06	15.40	.34	.06	1.43	24.31
Females	4,937		155,566	179,770	8,638	1,124,032	11,355	2,203	98,049	1,584,550
Percent	.11		3.33	3.85	.19	24.08	.24	.05	2.10	33.95
Both Sexes	20,480		253,562	393,535	11,416	1,843,038	27,253	5,113	164,916	2,719,313
Percent	.44		5.43	8.43	.24	39.49	.58	.11	3.53	58.26
Escapement[b]										
Males	4,744	1,225	4,140	148,704	280	677,801	18,525		54,666	910,085
Percent	.10	.03	.09	3.19	.01	14.52	.40		1.17	19.50
Females	604		12,379	173,506		755,778	23,188	1,110	71,628	1,038,193
Percent	.01		.27	3.72		16.19	.50	.02	1.53	22.24
Both Sexes	5,348	1,225	16,519	322,210	280	1,433,579	41,713	1,110	126,294	1,948,278
Percent	.11	.03	.35	6.90	.01	30.71	.89	.02	2.71	41.74
Catch and Escapement[a,b]										
Males	20,287	1,225	102,136	362,469	3,058	1,396,807	34,423	2,910	121,533	2,044,848
Percent	.43	.03	2.19	7.77	.07	29.93	.74	.06	2.60	43.81
Females	5,541		167,945	353,276	8,638	1,879,810	34,543	3,313	169,677	2,622,743
Percent	.12		3.60	7.57	.19	40.27	.74	.07	3.64	56.19
Both Sexes	25,828	1,225	270,081	715,745	11,696	3,276,617	68,966	6,223	291,210	4,667,591
Percent	.55	.03	5.79	15.33	.25	70.20	1.48	.13	6.24	100.00

[a] Includes 154,013 Igushik beach setnet catch.
[b] Does not include 168,340 Nushagak-Mulchatna escapement, 16,780 Snake River escapement.

Table 29. Age, sex, fork length (mm), and weight (g) of sockeye salmon commercial catch by period, Nushagak-Igushik District, 1986.

	Age Group								
	0.2	0.3	1.2	0.4	1.3	2.2	1.4	2.3	Total[a]
Sample Period 1: 30 June									
Males	221	1,413	1,192		6,624	88	132	662	10,332
Percent	1.04	6.67	5.62		31.25	0.42	0.62	3.12	48.75
Mean Length	434	557	517		583	525	617	589	569
Std. Error	22	6	5		2	15	18	6	2
Sample Size	5	32	27		150	2	3	15	234
Mean Weight	1.08	2.53	2.12		3.27		3.53	3.41	3.00
Std. Error		0.13	0.11		0.07			0.18	0.05
Sample Size	1	10	7		60		1	6	85
Females		927	883		8,169	88	44	751	10,862
Percent		4.37	4.17		38.54	0.42	0.21	3.54	51.25
Mean Length		554	517		556	515	580	558	553
Std. Error		3	6		1	5		4	1
Sample Size		21	20		185	2	1	17	246
Mean Weight		2.69	2.12		2.93	2.08		2.64	2.82
Std. Error		0.07	0.12		0.29			0.10	0.22
Sample Size		6	9		47	1		6	69
Both Sexes	221	2,340	2,075		14,793	176	176	1,413	21,194
Percent	1.04	11.04	9.79		69.80	0.83	0.83	6.67	100.00
Mean Length	434	555	517		568	520	608	573	561
Std. Error	22	4	4		1	8	18	3	1
Sample Size	5	53	47		335	4	4	32	480
Mean Weight	1.08	2.59	2.12		3.08	2.08	3.53	3.00	2.91
Std. Error		0.08	0.08		0.16			0.10	0.11
Sample Size	1	16	16		107	1	1	12	154

[a] Does not include 154,013 from Igushik Beach setnet catch (Table 30).

-Continued-

Table 29. (page 2 of 4)

	Age Group								
	0.2	0.3	1.2	0.4	1.3	2.2	1.4	2.3	Total[a]
Sample Period 2: 1 - 3 July									
Males	5,557	29,172	33,340	2,778	187,537	4,167	2,778	19,448	284,777
Percent	0.81	4.26	4.87	0.41	27.38	0.61	0.41	2.84	41.58
Mean Length	431	557	510	617	577	555	632	596	566
Std. Error	8	11	9	23	2	26		7	2
Sample Size	4	21	24	2	135	3	2	14	205
Mean Weight		3.64	2.18		3.63	1.99		3.71	3.44
Std. Error		0.29	0.10		0.33				0.23
Sample Size		3	5		32	1		1	42
Females	2,778	47,231	25,005		293,111			31,951	400,076
Percent	0.41	6.90	3.65		42.80			4.67	58.42
Mean Length	476	548	484		555			566	550
Std. Error	75	4	8		1			3	1
Sample Size	2	34	18		211			23	288
Mean Weight		2.68	1.90		2.66			2.62	2.61
Std. Error		0.11	0.08		0.04			0.13	0.03
Sample Size		7	3		58			6	74
Both Sexes	8,335	76,403	58,345	2,778	480,648	4,167	2,778	51,399	684,853
Percent	1.22	11.16	8.52	0.41	70.18	0.61	0.41	7.51	100.00
Mean Length	446	552	499	617	563	555	632	577	557
Std. Error	26	5	6	23	1	26		3	1
Sample Size	6	55	42	2	346	3	2	37	493
Mean Weight		3.05	2.06		3.04	1.99		3.03	2.95
Std. Error		0.13	0.07		0.13			0.13	0.10
Sample Size		10	8		90	1		7	116

[a] Does not include 154,013 from Igushik Beach setnet catch (Table 30).

-Continued-

Table 29. (page 3 of 4)

	Age Group								
	0.2	0.3	1.2	0.4	1.3	2.2	1.4	2.3	Total[a]
Sample Period 3: 4 July - 21 August									
Males	8,638	64,782	170,593		470,752	8,638		38,869	762,272
Percent	0.46	3.48	9.18		25.32	0.46		2.09	41.00
Mean Length	460	573	515		578	528		581	562
Std. Error	21	6	3		2	15		6	1
Sample Size	4	30	79		218	4		18	353
Mean Weight			2.42		3.39			3.68	3.16
Std. Error			0.06		0.15			0.11	0.11
Sample Size			8		17			5	30
Females	2,159	103,652	148,999	8,638	762,272	8,638	2,159	60,464	1,096,981
Percent	0.12	5.57	8.01	0.46	41.00	0.46	0.12	3.25	59.00
Mean Length	562	548	505	603	553	495	575	552	546
Std. Error		3	3	7	1	10		4	1
Sample Size	1	48	69	4	353	4	1	28	508
Mean Weight		2.93	2.12		3.66			2.77	3.33
Std. Error		0.06	0.02		0.45			0.17	0.32
Sample Size		3	5		41			5	54
Both Sexes	10,797	168,434	319,592	8,638	1,233,024	17,276	2,159	99,333	1,859,253
Percent	0.58	9.06	17.19	0.46	66.32	0.93	0.12	5.34	100.00
Mean Length	481	558	510	603	563	512	575	563	552
Std. Error	21	3	2	7	1	9		4	1
Sample Size	5	78	148	4	571	8	1	46	861
Mean Weight		2.93	2.28		3.56			3.13	3.26
Std. Error		0.06	0.03		0.28			0.11	0.20
Sample Size		3	13		58			10	84

[a] Does not include 154,013 from Igushik Beach setnet catch (Table 30).

-Continued-

Table 29. (page 4 of 4)

	Age Group								
	0.2	0.3	1.2	0.4	1.3	2.2	1.4	2.3	Total[a]
All Periods Combined									
Males	14,416	95,367	205,125	2,778	664,913	12,893	2,910	58,979	1,057,381
Percent	0.56	3.72	8.00	0.11	25.92	0.50	0.11	2.30	41.22
Mean Length	449	568	514	617	578	537	631	586	563
Std. Error	13	5	3	23	1	13	18	5	1
Sample Size	13	83	130	2	503	9	5	47	792
Mean Weight	1.08	3.59	2.38		3.46	1.99	3.53	3.69	3.24
Std. Error		0.28	0.05		0.14			0.11	0.10
Sample Size	1	13	20		109	1	1	12	157
Females	4,937	151,810	174,887	8,638	1,063,552	8,726	2,203	93,166	1,507,919
Percent	0.19	5.92	6.82	0.34	41.46	0.34	0.09	3.63	58.78
Mean Length	513	548	502	603	553	495	575	556	547
Std. Error	75	2	3	7	1	10		3	1
Sample Size	3	103	107	4	749	6	2	68	1,042
Mean Weight		2.85	2.09		3.38	2.08		2.72	3.13
Std. Error		0.06	0.02		0.32			0.12	0.23
Sample Size		16	17		146	1		17	197
Both Sexes	19,353	247,177	380,012	11,416	1,728,465	21,619	5,113	152,145	2,565,300
Percent	0.75	9.64	14.81	0.45	67.38	0.84	0.20	5.93	100.00
Mean Length	465	556	509	606	563	520	607	568	554
Std. Error	16	2	2	8	1	9	18	3	1
Sample Size	16	186	237	6	1,252	15	7	115	1,834
Mean Weight	1.08	2.97	2.25		3.41	1.99	3.53	3.09	3.17
Std. Error		0.07	0.03		0.20			0.09	0.14
Sample Size	1	29	37		255	2	1	29	354

[a] Does not include 154,013 from Igushik Beach setnet catch (Table 30).

Table 30. Age, sex, fork length (mm), and weight (g) of sockeye salmon commercial catch by period, Igushik-beach set net fishery, 1986.

	Age Group						
	0.2	0.3	1.2	1.3	2.2	2.3	Total
Sample period:	9 - 10 July						
Males	1,127	2,629	8,640	54,093	3,005	7,888	77,382
Percent	0.73	1.71	5.61	35.12	1.95	5.12	50.24
Mean Length	406	593	512	585	536	598	574
Std. Error	10	8	6	2	7	6	2
Sample Size	3	7	23	144	8	21	206
Mean Weight		3.71	1.90	3.53		4.17	3.41
Std. Error				0.09		0.18	0.07
Sample Size		1	1	24		3	29
Females		3,756	4,883	60,480	2,629	4,883	76,631
Percent		2.44	3.17	39.27	1.71	3.17	49.76
Mean Length		567	510	559	500	563	554
Std. Error		9	6	2	16	6	2
Sample Size		10	13	161	7	13	204
Mean Weight		3.53	2.26	3.00	1.63	3.10	2.94
Std. Error				0.06		0.16	0.05
Sample Size		1	1	29	1	2	34
Both Sexes	1,127	6,385	13,523	114,573	5,634	12,771	154,013
Percent	0.73	4.15	8.78	74.39	3.66	8.29	100.00
Mean Length	406	577	511	571	519	585	564
Std. Error	10	6	4	1	8	4	1
Sample Size	3	17	36	305	15	34	410
Mean Weight		3.60	2.03	3.25	1.63	3.76	3.17
Std. Error				0.05		0.13	0.04
Sample Size		2	2	53	1	5	63

Table 31. Age and sex composition of sockeye salmon estimated catch and escapement, Wood River, 1986.

	Age Group						
	1.1	1.2	1.3	2.2	1.4	2.3	Total
Catch							
Males		120,569	283,934	11,576		23,865	439,944
Percent		6.80	16.02	.65		1.35	24.82
Females		145,810	328,387	8,477	643	30,411	513,728
Percent		8.23	18.53	.48	.04	1.72	28.99
Both Sexes		266,379	612,321	20,053	643	54,276	953,672
Percent		15.03	34.55	1.13	.04	3.06	53.81
Escapement							
Males	1,225	113,828	274,998	16,466		20,825	427,342
Percent	.07	6.42	15.52	.93		1.18	24.11
Females		137,866	211,286	22,304	270	19,584	391,310
Percent		7.78	11.92	1.26	.02	1.10	22.08
Both Sexes	1,225	251,694	486,284	38,770	270	40,409	818,652
Percent	.07	14.20	27.44	2.19	.02	2.28	46.19
Catch and Escapement							
Males	1,225	234,397	558,932	28,042		44,690	867,286
Percent	.07	13.23	31.54	1.58		2.52	48.93
Females		283,676	539,673	30,781	913	49,995	905,038
Percent		16.01	30.45	1.74	.05	2.82	51.07
Both Sexes	1,225	518,073	1,098,605	58,823	913	94,685	1,772,324
Percent	.07	29.23	61.99	3.32	.05	5.34	100.00

Table 32. Daily sockeye salmon escapement counts, Wood River, 1986.

Date	Daily Count	Accumulative Count	Daily Percent of Total	Accumulative Percent
June 17	0	0	.00	.00
18	0	0	.00	.00
19	0	0	.00	.00
20	0	0	.00	.00
21	0	0	.00	.00
22	0	0	.00	.00
23	0	0	.00	.00
24	174	174	.02	.02
25	1,014	1,188	.12	.15
26	444	1,632	.05	.20
27	648	2,280	.08	.28
28	414	2,694	.05	.33
29	330	3,024	.04	.37
30	756	3,780	.09	.46
July 1	4,860	8,640	.59	1.06
2	11,664	20,304	1.42	2.48
3	6,984	27,288	.85	3.33
4	28,062	55,350	3.43	6.76
5	36,246	91,596	4.43	11.19
6	37,104	128,700	4.53	15.72
7	46,620	175,320	5.69	21.42
8	34,050	209,370	4.16	25.57
9	51,084	260,454	6.24	31.81
10	112,446	372,900	13.74	45.55
11	135,834	508,734	16.59	62.14
12	126,936	635,670	15.51	77.65
13	70,194	705,864	8.57	86.22
14	29,622	735,486	3.62	89.84
15	19,524	755,010	2.38	92.23
16	19,650	774,660	2.40	94.63
17	9,030	783,690	1.10	95.73
18	7,134	790,824	.87	96.60
19	3,240	794,064	.40	97.00
20	3,930	797,994	.48	97.48
21	3,138	801,132	.38	97.86
22	4,602	805,734	.56	98.42
23	4,734	810,468	.58	99.00
24	8,184	818,652	1.00	100.00

Table 33. Age, sex, fork length (mm), and weight (g) of sockeye salmon escapement by period, Wood River, 1986.

	Age Group						
	1.1	1.2	1.3	2.2	1.4	2.3	Total
Sample Period 1: 1 - 9 July							
Males	541	35,160	69,778	7,573		9,196	122,248
Percent	0.21	13.50	26.79	2.91		3.53	46.94
Mean Length	321	517	568	509		576	549
Std. Error	4	3	2	7		5	1
Sample Size	2	130	258	28		34	452
Females		50,306	66,264	11,359	270	10,007	138,206
Percent		19.31	25.44	4.36	0.10	3.84	53.06
Mean Length		490	545	491	532	548	521
Std. Error		2	2	4		3	1
Sample Size		186	245	42	1	37	511
Both Sexes	541	85,466	136,042	18,932	270	19,203	260,454
Percent	0.21	32.81	52.23	7.27	0.10	7.37	100.00
Mean Length	321	501	557	498	532	562	534
Std. Error	4	2	1	3		3	1
Sample Size	2	316	503	70	1	71	963

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Table 33. (page 2 of 3)

	Age Group						
	1.1	1.2	1.3	2.2	1.4	2.3	Total
Sample Period 2: 10 - 15 July							
Males	684	78,668	205,220	8,893		11,629	305,094
Percent	0.12	14.09	36.76	1.59		2.08	54.66
Mean Length	347	509	574	522		567	555
Std. Error		4	1	9		8	1
Sample Size	1	115	300	13		17	446
Females		87,560	145,022	10,945		9,577	253,104
Percent		15.69	25.98	1.96		1.72	45.34
Mean Length		491	544	495		555	524
Std. Error		3	2	6		4	1
Sample Size		128	212	16		14	370
Both Sexes	684	166,228	350,242	19,838		21,206	558,198
Percent	0.12	29.78	62.75	3.55		3.80	100.00
Mean Length	347	499	562	507		561	541
Std. Error		2	1	5		5	1
Sample Size	1	243	512	29		31	816

-Continued-

Table 33. (page 3 of 3)

	Age Group						
	1.1	1.2	1.3	2.2	1.4	2.3	Total
All Periods Combined							
Males	1,225	113,828	274,998	16,466		20,825	427,342
Percent	0.15	13.90	33.59	2.01		2.54	52.20
Mean Length	336	511	573	516		571	553
Std. Error	4	3	1	6		5	1
Sample Size	3	245	558	41		51	898
Females		137,866	211,286	22,304	270	19,584	391,310
Percent		16.84	25.81	2.72	0.03	2.39	47.80
Mean Length		491	544	493	532	552	523
Std. Error		2	1	3		3	1
Sample Size		314	457	58	1	51	881
Both Sexes	1,225	251,694	486,284	38,770	270	40,409	818,652
Percent	0.15	30.74	59.40	4.74	0.03	4.94	100.00
Mean Length	336	500	560	503	532	562	539
Std. Error	4	2	1	3		3	1
Sample Size	3	559	1,015	99	1	102	1,779

Table 34. Age and sex composition of sockeye salmon estimated catch and escapement, Igushik River, 1986.

	Age Group						
	0.2	0.3	1.2	1.3	2.2	2.3	Total
Catch							
Males	1,127	2,629	18,970	151,068	3,862	15,982	193,638
Percent	.13	.30	2.16	17.23	.44	1.82	22.09
Females		3,756	16,644	332,501	2,629	19,839	375,369
Percent		.43	1.90	37.92	.30	2.26	42.81
Both Sexes	1,127	6,385	35,614	483,569	6,491	35,821	569,007
Percent	.13	.73	4.06	55.16	.74	4.09	64.90
Escapement							
Males			9,752	93,923	1,219	7,063	111,957
Percent			1.11	10.71	.14	.81	12.77
Females			11,120	175,020		9,631	195,771
Percent			1.27	19.96		1.10	22.33
Both Sexes			20,872	268,943	1,219	16,694	307,728
Percent			2.38	30.68	.14	1.90	35.10
Catch and Escapement							
Males	1,127	2,629	28,722	244,991	5,081	23,045	305,595
Percent	.13	.30	3.28	27.94	.58	2.63	34.86
Females		3,756	27,764	507,521	2,629	29,470	571,140
Percent		.43	3.17	57.89	.30	3.36	65.14
Both Sexes	1,127	6,385	56,486	752,512	7,710	52,515	876,735
Percent	.13	.73	6.44	85.83	.88	5.99	100.00

[a] Does not include Igsuhik beach setnet catch of 154,013.

Table 35. Daily sockeye salmon escapement counts, Igushik River, 1986.

Date	Daily Count	Accumulative Count	Daily Percent of Total	Accumulative Percent
June 30	78	78	.03	.03
July 1	2,166	2,244	.70	.73
2	1,968	4,212	.64	1.37
3	612	4,824	.20	1.57
4	1,854	6,678	.60	2.17
5	7,134	13,812	2.32	4.49
6	23,484	37,296	7.63	12.12
7	24,432	61,728	7.94	20.06
8	8,856	70,584	2.88	22.94
9	19,896	90,480	6.47	29.40
10	44,622	135,102	14.50	43.90
11	29,634	164,736	9.63	53.53
12	18,036	182,772	5.86	59.39
13	13,800	196,572	4.48	63.88
14	8,802	205,374	2.86	66.74
15	9,888	215,262	3.21	69.95
16	18,870	234,132	6.13	76.08
17	14,382	248,514	4.67	80.76
18	13,590	262,104	4.42	85.17
19	11,562	273,666	3.76	88.93
20	8,556	282,222	2.78	91.71
21	8,088	290,310	2.63	94.34
22	6,618	296,928	2.15	96.49
23	4,644	301,572	1.51	98.00
24	6,156	307,728	2.00	100.00

Table 36. Age, sex, fork length (mm), and weight (g) of sockeye salmon escapement by period, Igushik River, 1986.

	Age Group				
	1.2	1.3	2.2	2.3	Total
Sample Period 1: 4 - 9 July					
Males	1,935	25,524	242	2,177	29,878
Percent	2.14	28.21	0.27	2.41	33.02
Mean Length	545	599	572	593	595
Std. Error	10	2	22	5	2
Sample Size	16	211	2	18	247
Females	3,629	55,159		1,814	60,602
Percent	4.01	60.96		2.00	66.98
Mean Length	507	560		556	557
Std. Error	6	1		9	1
Sample Size	30	456		15	501
Both Sexes	5,564	80,683	242	3,991	90,480
Percent	6.15	89.17	0.27	4.41	100.00
Mean Length	520	572	572	576	569
Std. Error	5	1	22	5	1
Sample Size	46	667	2	33	748
Sample Period 2: 10 - 15 July					
Males	7,817	68,399	977	4,886	82,079
Percent	3.60	31.48	0.45	2.25	37.78
Mean Length	574	597	580	591	594
Std. Error	9	2	17	8	2
Sample Size	24	210	3	15	252
Females	7,491	119,861		7,817	135,169
Percent	3.45	55.17		3.60	62.22
Mean Length	539	559		565	559
Std. Error	9	1		5	1
Sample Size	23	368		24	415
Both Sexes	15,308	188,260	977	12,703	217,248
Percent	7.05	86.66	0.45	5.85	100.00
Mean Length	557	573	580	575	572
Std. Error	6	1	17	4	1
Sample Size	47	578	3	39	667

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Table 36. (page 2 of 2)

	Age Group				
	1.2	1.3	2.2	2.3	Total
All Periods Combined					
Males	9,752	93,923	1,219	7,063	111,957
Percent	3.17	30.52	0.40	2.30	36.38
Mean Length	568	597	579	591	594
Std. Error	7	2	15	5	2
Sample Size	40	421	5	33	499
Females	11,120	175,020		9,631	195,771
Percent	3.61	56.87		3.13	63.62
Mean Length	529	560		564	558
Std. Error	6	1		5	1
Sample Size	53	824		39	916
Both Sexes	20,872	268,943	1,219	16,694	307,728
Percent	6.78	87.40	0.40	5.42	100.00
Mean Length	547	573	579	575	571
Std. Error	5	1	15	4	1
Sample Size	93	1,245	5	72	1,415

Table 37. Age and sex composition of sockeye salmon estimated catch and escapement, Nuyakuk-Nushagak-Mulchatna system, 1986.

	Age Group									
	0.2	1.1	0.3	1.2	0.4	1.3	2.2	1.4	2.3	Total
Catch										
Males	14,416		95,367	74,226	2,778	284,004	460	2,910	27,019	501,180
Percent	.66		4.36	3.39	.13	12.99	.02	.13	1.24	22.92
Females	4,937		151,810	17,316	8,638	463,144	249	1,560	47,800	695,454
Percent	.23		6.94	.79	.39	21.18	.01	.07	2.19	31.80
Both Sexes	19,353		247,177	91,542	11,416	747,148	709	4,470	74,819	1,196,634
Percent	.88		11.30	4.19	.52	34.17	.03	.20	3.42	54.72
Escapement[a]										
Males	126,399	655	57,633	70,076	2,620	275,066	655	655	23,577	557,336
Percent	5.78	.03	2.64	3.20	.12	12.58	.03	.03	1.08	25.49
Females	5,894		79,245	16,373	1,310	297,989	655	655	30,781	432,902
Percent	.27		3.62	.75	.06	13.63	.03	.03	1.41	19.80
Both Sexes	132,293	655	136,878	86,449	3,930	573,055	1,310	1,310	54,358	990,238
Percent	6.05	.03	6.26	3.95	.18	26.20	.06	.06	2.49	45.28
Catch and Escapement[a]										
Males	140,815	655	153,000	144,302	5,398	559,070	1,115	3,565	50,596	1,058,516
Percent	6.44	.03	7.00	6.60	.25	25.56	.05	.16	2.31	48.40
Females	10,831		231,055	33,689	9,948	761,133	904	2,215	78,581	1,128,356
Percent	.50		10.57	1.54	.45	34.80	.04	.10	3.59	51.60
Both Sexes	151,646	655	384,055	177,991	15,346	1,320,203	2,019	5,780	129,177	2,186,872
Percent	6.93	.03	17.56	8.14	.70	60.37	.09	.26	5.91	100.00

[a] escapement includes 821,898 in the Nuyakuk River and 168,340 in the Nushagak-Mulchatna Rivers.

Table 38. Daily sockeye salmon escapement counts, Nuyakuk River, 1986.

Date	Daily Count	Accumulative Count	Daily Percent of Total	Accumulative Percent
June 30	0	0	.00	.00
July 1	0	0	.00	.00
2	0	0	.00	.00
3	96	96	.01	.01
4	270	366	.03	.04
5	342	708	.04	.09
6	198	906	.02	.11
7	174	1,080	.02	.13
8	1,656	2,736	.20	.33
9	13,518	16,254	1.64	1.98
10	35,532	51,786	4.32	6.30
11	41,766	93,552	5.08	11.38
12	40,938	134,490	4.98	16.36
13	50,688	185,178	6.17	22.53
14	76,164	261,342	9.27	31.80
15	78,960	340,302	9.61	41.40
16	67,938	408,240	8.27	49.67
17	97,860	506,100	11.91	61.58
18	101,052	607,152	12.29	73.87
19	79,194	686,346	9.64	83.51
20	46,146	732,492	5.61	89.12
21	35,922	768,414	4.37	93.49
22	20,604	789,018	2.51	96.00
23	32,880	821,898	4.00	100.00

Table 39. Age, sex, fork length (mm), and weight (g) of sockeye salmon escapement by period, Nuyakuk River, 1986.

	Age Group								
	0.2	0.3	1.2	0.4	1.3	2.2	1.4	2.3	Total
Sample Period 1: 8 - 14 July									
Males	1,120	1,120	7,003	280	93,838	840		12,885	117,086
Percent	0.43	0.43	2.68	0.11	35.91	0.32		4.93	44.80
Mean Length	461	519	487	645	566	468		569	559
Std. Error	14	27	8		1	27		3	1
Sample Size	4	4	25	1	335	3		46	418
Females		3,922	7,003		114,564	280	840	17,647	144,256
Percent		1.50	2.68		43.84	0.11	0.32	6.75	55.20
Mean Length		533	482		536	465	543	545	534
Std. Error		5	5		1		13	2	1
Sample Size		14	25		409	1	3	63	515
Both Sexes	1,120	5,042	14,006	280	208,402	1,120	840	30,532	261,342
Percent	0.43	1.93	5.36	0.11	79.74	0.43	0.32	11.68	100.00
Mean Length	461	530	484	645	550	467	543	555	546
Std. Error	14	7	5		1	27	13	2	1
Sample Size	4	18	50	1	744	4	3	109	933

-Continued-

Table 39. (page 2 of 3)

	Age Group								
	0.2	0.3	1.2	0.4	1.3	2.2	1.4	2.3	Total
Sample Period 2: 15 - 22 July									
Males	3,624	3,020	18,121		215,042			13,893	253,700
Percent	0.65	0.54	3.23		38.36			2.48	45.26
Mean Length	433	570	529		574			588	570
Std. Error	15	7	7		1			4	1
Sample Size	6	5	30		356			23	420
Females	604	8,457	17,517		254,908	604		24,766	306,856
Percent	0.11	1.51	3.12		45.47	0.11		4.42	54.74
Mean Length	525	525	488		537	540		541	535
Std. Error		5	6		1			3	1
Sample Size	1	14	29		422	1		41	508
Both Sexes	4,228	11,477	35,638		469,950	604		38,659	560,556
Percent	0.75	2.05	6.36		83.84	0.11		6.90	100.00
Mean Length	446	537	509		554	540		558	550
Std. Error	15	4	4		1			2	1
Sample Size	7	19	59		778	1		64	928

-Continued-

Table 39. (page 3 of 3)

	Age Group								
	0.2	0.3	1.2	0.4	1.3	2.2	1.4	2.3	Total
All Periods Combined									
Males	4,744	4,140	25,124	280	308,880	840		26,778	370,786
Percent	0.58	0.50	3.06	0.03	37.58	0.10		3.26	45.11
Mean Length	439	556	517	645	572	468		579	567
Std. Error	12	9	5		1	27		3	1
Sample Size	10	9	55	1	691	3		69	838
Females	604	12,379	24,520		369,472	884	840	42,413	451,112
Percent	0.07	1.51	2.98		44.95	0.11	0.10	5.16	54.89
Mean Length	525	528	486		537	516	543	543	534
Std. Error		4	4		1		13	2	1
Sample Size	1	28	54		831	2	3	104	1,023
Both Sexes	5,348	16,519	49,644	280	678,352	1,724	840	69,191	821,898
Percent	0.65	2.01	6.04	0.03	82.53	0.21	0.10	8.42	100.00
Mean Length	449	535	502	645	553	493	543	557	549
Std. Error	12	4	3		1	27	13	2	1
Sample Size	11	37	109	1	1,522	5	3	173	1,861

Table 40. Age, sex, fork length (mm), and weight (g) of chinook salmon commercial catch by period, Nushagak-Igushik District, 1986.

	Age Group									
	1.1	1.2	1.3	2.2	1.4	2.3	1.5	2.4	2.5	Total
Sample Period 1: 3 - 19 June										
Males	65	259	11,603		7,130		1,102	194		20,353
Percent	0.18	0.71	31.80		19.54		3.02	0.53		55.77
Mean Length	495	549	734		818		901	873		771
Std. Error		24	4		6		14	28		3
Sample Size	1	4	179		110		17	3		314
Mean Weight	1.99	6.62	7.24		9.84		13.81	9.52		8.50
Std. Error		2.45	0.22		0.34		0.80			0.18
Sample Size	1	2	45		30		8	1		87
Females		65	2,528		10,695		2,787	65		16,140
Percent		0.18	6.93		29.31		7.64	0.18		44.23
Mean Length		692	786		853		905	900		851
Std. Error			7		3		6			3
Sample Size		1	39		165		43	1		249
Mean Weight			9.07		10.62		13.80			10.93
Std. Error			0.51		0.28		0.71			0.24
Sample Size			11		45		9			65
Both Sexes	65	324	14,131		17,825		3,889	259		36,493
Percent	0.18	0.89	38.72		48.84		10.66	0.71		100.00
Mean Length	495	578	743		839		904	880		806
Std. Error		24	4		3		6	28		2
Sample Size	1	5	218		275		60	4		563
Mean Weight	1.99	6.62	7.57		10.31		13.80	9.52		9.57
Std. Error		2.45	0.20		0.22		0.55			0.15
Sample Size	1	2	56		75		17	1		152

-Continued-

Table 40. (page 2 of 3)

	Age Group									
	1.1	1.2	1.3	2.2	1.4	2.3	1.5	2.4	2.5	Total
Sample Period 2: 20 June - 13 July										
Males		1,701	7,595	122	5,469	61	1,094	61		16,103
Percent		5.81	25.93	0.42	18.67	0.21	3.74	0.21		54.98
Mean Length		522	737	527	834	654	896	915		757
Std. Error		10	9	55	9		19			5
Sample Size		28	125	2	90	1	18	1		265
Mean Weight		5.08	7.19		9.36		14.00	14.28		8.21
Std. Error		1.47	0.51		0.62		1.70			0.38
Sample Size		7	29		18		5	1		60
Females		61	3,525		7,717	182	1,580	61	61	13,187
Percent		0.21	12.03		26.35	0.62	5.39	0.21	0.21	45.02
Mean Length		832	827		853	797	900	864	892	851
Std. Error			5		4	24	10			3
Sample Size		1	58		127	3	26	1	1	217
Mean Weight			10.46		11.10		13.41			11.21
Std. Error			0.42		0.38		0.92			0.28
Sample Size			15		29		4			48
Both Sexes		1,762	11,120	122	13,186	243	2,674	122	61	29,290
Percent		6.02	37.97	0.42	45.02	0.83	9.13	0.42	0.21	100.00
Mean Length		533	765	527	845	761	898	890	892	799
Std. Error		10	6	55	4	24	10			3
Sample Size		29	183	2	217	4	44	2	1	482
Mean Weight		5.08	8.23		10.38		13.65	14.28		9.55
Std. Error		1.47	0.37		0.34		0.88			0.24
Sample Size		7	44		47		9	1		108

-Continued-

Table 40. (page 3 of 3)

	Age Group									
	1.1	1.2	1.3	2.2	1.4	2.3	1.5	2.4	2.5	Total
All Periods Combined										
Males	65	1,960	19,198	122	12,599	61	2,196	255		36,456
Percent	0.10	2.98	29.18	0.19	19.15	0.09	3.34	0.39		55.42
Mean Length	495	526	735	527	825	654	898	883		765
Std. Error		9	4	55	5		12	28		3
Sample Size	1	32	304	2	200	1	35	4		579
Mean Weight	1.99	5.28	7.22		9.63		13.90	10.66		8.37
Std. Error		1.32	0.24		0.33		0.94			0.19
Sample Size	1	9	74		48		13	2		147
Females		126	6,053		18,412	182	4,367	126	61	29,327
Percent		0.19	9.20		27.99	0.28	6.64	0.19	0.09	44.58
Mean Length		760	810		853	797	903	883	892	851
Std. Error			4		3	24	5			2
Sample Size		2	97		292	3	69	2	1	466
Mean Weight			9.88		10.82		13.66			11.05
Std. Error			0.32		0.23		0.56			0.18
Sample Size			26		74		13			113
Both Sexes	65	2,086	25,251	122	31,011	243	6,563	381	61	65,783
Percent	0.10	3.17	38.39	0.19	47.14	0.37	9.98	0.58	0.09	100.00
Mean Length	495	540	753	527	842	761	902	883	892	803
Std. Error		9	3	55	3	24	5	28		2
Sample Size	1	34	401	2	492	4	104	6	1	1,045
Mean Weight	1.99	5.28	7.86		10.34		13.74	10.66		9.56
Std. Error		1.32	0.20		0.19		0.49			0.14
Sample Size	1	9	100		122		26	2		260

Table 41. Age, sex, fork length (mm), and weight (g) of chinook salmon escapement by period in Nushagak-Igushik District, 1986.

	Age Group			
	1.3	1.4	1.5	Total
Sample period:	5 - 15 August			
Males	9,128	7,021		16,149
Percent	27.66	21.28		48.94
Mean Length	707	873		779
Std. Error	17	18		12
Sample Size	13	10		23
Females	4,213	11,936	702	16,851
Percent	12.77	36.17	2.13	51.06
Mean Length	818	879	894	865
Std. Error	23	6		7
Sample Size	6	17	1	24
Both Sexes	13,341	18,957	702	33,000
Percent	40.43	57.45	2.13	100.00
Mean Length	742	877	894	823
Std. Error	14	8		7
Sample Size	19	27	1	47

Table 42. Age, sex, fork length (mm), and weight (g) of chum salmon commercial catch by period catch in Nushagak-Igushik District, 1986.

	Age Group			
	0.2	0.3	0.4	Total
Sample period:	3 - 14 July			
Males		116,914	20,719	137,633
Percent		23.94	4.24	28.18
Mean Length		582	601	585
Std. Error		3	8	3
Sample Size		79	14	93
Mean Weight		3.39	3.90	3.47
Std. Error		0.10	1.00	0.17
Sample Size		20	2	22
Females	1,480	298,945	50,317	350,742
Percent	0.30	61.21	10.30	71.82
Mean Length	558	549	563	551
Std. Error		2	3	1
Sample Size	1	202	34	237
Mean Weight		2.75	3.18	2.81
Std. Error		0.05	0.12	0.05
Sample Size		31	5	36
Both Sexes	1,480	415,859	71,036	488,375
Percent	0.30	85.15	14.55	100.00
Mean Length	558	558	574	560
Std. Error		1	3	1
Sample Size	1	281	48	330
Mean Weight		2.93	3.39	3.00
Std. Error		0.05	0.30	0.06
Sample Size		51	7	58

Table 43. Age, sex, fork length (mm), and weight (g) of chum salmon escapement by period in Nushagak River, 1986.

	Age Group				
	0.3	0.4	1.3	0.5	Total
Sample period:	25 June - 12 July				
Males	90,508	24,882		311	115,701
Percent	45.19	12.42		.16	57.76
Mean Length	591	611		560	595
Std. Error	2	4			2
Sample Size	291	80		1	372
Females	71,536	11,819	622	622	84,599
Percent	35.71	5.90	.31	.31	42.24
Mean Length	554	574	542	601	557
Std. Error	2	6	30	1	2
Sample Size	230	38	2	2	272
Both Sexes	162,044	36,701	622	933	200,300
Percent	80.90	18.32	.31	.47	100.00
Mean Length	575	599	542	587	579
Std. Error	1	3	30	1	1
Sample Size	521	118	2	3	644

Table 44. Age, sex, fork length (mm), and weight (g) of coho salmon commercial catch by period, Nushagak River, 1986.

	Age Group				
	1.1	2.1	3.1	2.2	Total
Sample period:	4 August				
Males	448	34,508			34,956
Percent	0.65	50.33			50.98
Mean Length	397	517			516
Std. Error		7			6
Sample Size	1	77			78
Mean Weight	1.13	2.76			2.74
Std. Error		0.11			0.11
Sample Size	1	76			77
Females	896	31,820	448	448	33,612
Percent	1.31	46.41	0.65	0.65	49.02
Mean Length	562	548	584	505	548
Std. Error	49	5			5
Sample Size	2	71	1	1	75
Mean Weight	3.18	3.15	3.41	2.73	3.15
Std. Error	0.68	0.08			0.08
Sample Size	2	70	1	1	74
Both Sexes	1,344	66,328	448	448	68,568
Percent	1.96	96.73	0.65	0.65	100.00
Mean Length	507	532	584	505	531
Std. Error	49	4			4
Sample Size	3	148	1	1	153
Mean Weight	2.50	2.95	3.41	2.73	2.94
Std. Error	0.68	0.07			0.07
Sample Size	3	146	1	1	151

Table 45. Commercial salmon catch by period and species, Togiak District, 1986.

Period	Number of Fish					
	Sockeye	Chinook	Chum	Pink	Coho	Total
10 June	5	127	65			197
11	56	120	89			265
12	16	29	9			54
13	3	7	1			11
16	304	395	399			1,098
17	321	961	944	1		2,227
18	538	778	1,059	2		2,377
19	1,172	1,135	2,070	2		4,379
20	376	219	819			1,414
21	112	72	204			388
23	2,872	1,101	3,085			7,058
24	4,844	1,444	6,788	1		13,077
25	6,160	1,117	8,851	80		16,208
26	6,200	979	8,204	3		15,386
27	3,462	311	3,147	1		6,921
28	561	36	493			1,090
30	8,615	1,731	7,656	3		18,005
1 July	13,946	2,793	19,285	20		36,044
2	13,643	1,722	19,236	31		34,632
3	13,024	589	10,515	17		24,145
4	3,601	88	5,675	6		9,370
5	1,635	40	3,496	13		5,184
7	19,966	792	8,174	69		29,001
8	31,873	1,055	22,540	291		55,759
9	39,311	969	25,719	321		66,320
10	3,695	69	6,733	55		10,552
11	7,012	102	9,586	248		16,948
12	815	9	633	11		1,468
14	21,893	234	9,217	368		31,712
15	25,014	245	21,900	768		47,927
16	21,448	174	22,620	941		45,183
17	7,755	63	5,973	620		14,411
18	1,418	10	4,722	258		6,408
19	976	2	1,124	221		2,323
21	10,493	77	8,831	2,076	1	21,478
22	13,437	69	9,344	3,393	1	26,244
23	6,351	45	3,000	2,147	2	11,545
24	1,161	5	648	461	1	2,276

Table 45. (page 2 of 2)

Period		Number of Fish					
		Sockeye	Chinook	Chum	Pink	Coho	Total
25	July	958	7	1,643	628	6	3,242
26		180	2	97	25		304
28		957	15	1,044	1,181	158	3,355
29		531	4	500	556	85	1,676
30		634	10	568	835	176	2,223
31		363	3	191	339	65	961
1	August	15	1	79	19	14	128
2		14		13	40	14	81
4		460	2	149	475	86	1,172
5		1,805	7	442	1,894	219	4,367
6		3,391	10	939	3,003	712	8,055
7		1,336	15	290	1,168	378	3,187
8		337	5	181	305	652	1,480
9		38		49	65	173	325
11		855	7	199	413	1,720	3,194
12		1,058	19	380	481	3,385	5,323
13		432	10	132	226	2,615	3,415
14		120	3	26	40	603	792
15		48	3	23	24	601	699
16		19		11	2	170	202
18		136	2	41	32	2,176	2,387
19		340	8	88	81	6,007	6,524
20		262	11	67	77	7,868	8,285
21		82	4	19	14	3,478	3,597
25		52	5	14	15	2,891	2,977
26		44	4	2	9	2,771	2,830
27		63	5	5	15	3132	3,220
28		6	2	2	2	1459	1,471
1	September	14		2	1	622	639
2		24		3	8	2576	2,611
3		18	2	2	2	1449	1,473
4		12		2	1	1421	1,436
9						224	224
10						395	395
Total		308,688	19,880	270,057	24,404	48,306	671,335

Table 46. Age and sex composition of sockeye salmon catch and escapement, Togiak District, 1986.

	Age Group							
	1.1	1.2	1.3	2.2	1.4	2.3	2.4	Total[a]
Catch								
Males		18,857	111,032	3,940	169	5,858	56	139,912
Percent		3.95	23.27	.83	.04	1.23	.01	29.33
Females		22,362	138,558	2,569	56	5,175	56	168,776
Percent		4.69	29.04	.54	.01	1.08	.01	35.38
Both Sexes		41,219	249,590	6,509	225	11,033	112	308,688
Percent		8.64	52.32	1.36	.05	2.31	.02	64.70
Escapement								
Males	139	24,108	50,878	614	134	1,098		76,971
Percent	.03	5.05	10.66	.13	.03	.23		16.13
Females		32,659	56,585	747	206	1,216		91,413
Percent		6.85	11.86	.16	.04	.25		19.16
Both Sexes	139	56,767	107,463	1,361	340	2,314		168,384
Percent	.03	11.90	22.53	.29	.07	.49		35.30
Catch and Escapement								
Males	139	42,965	161,910	4,554	303	6,956	56	216,883
Percent	.03	9.01	33.94	.95	.06	1.46	.01	45.46
Females		55,021	195,143	3,316	262	6,391	56	260,189
Percent		11.53	40.90	.70	.05	1.34	.01	54.54
Both Sexes	139	97,986	357,053	7,870	565	13,347	112	477,072
Percent	.03	20.54	74.84	1.65	.12	2.80	.02	100.00

[a] Does not include escapements to lower Togiak River and tributaries, Kulukak and other systems (Table 1).

Table 47. Age, sex, fork length (mm), and weight (g) of sockeye salmon commercial catch by period, Togiak District, 1986.

	Age Group						
	1.2	1.3	2.2	1.4	2.3	2.4	Total
Sample Period 1: 17 - 30 June							
Males	564	14,056	226	169	1,355	56	16,426
Percent	1.58	39.46	0.63	0.47	3.80	0.16	46.12
Mean Length	514	574	526	591	586	575	573
Std. Error	9	2	9	2	5		1
Sample Size	10	249	4	3	24	1	291
Mean Weight	2.34	3.51	2.85	3.85	3.75		3.48
Std. Error	0.22	0.08			0.35		0.07
Sample Size	3	52	1	1	5		62
Females	508	16,935	56	56	1,580	56	19,191
Percent	1.43	47.55	0.16	0.16	4.44	0.16	53.88
Mean Length	507	546	489	554	547	550	545
Std. Error	8	1			3		1
Sample Size	9	300	1	1	28	1	340
Mean Weight	2.17	2.73			2.78		2.72
Std. Error		0.04			0.10		0.04
Sample Size	1	56			10		67
Both Sexes	1,072	30,991	282	225	2,935	112	35,617
Percent	3.01	87.01	0.79	0.63	8.24	0.31	100.00
Mean Length	511	559	519	582	565	563	558
Std. Error	6	1	9	2	3		1
Sample Size	19	549	5	4	52	2	631
Mean Weight	2.26	3.08	2.85	3.85	3.23		3.07
Std. Error	0.22	0.04			0.17		0.04
Sample Size	4	108	1	1	15		129

-Continued-

Table 47. (page 2 of 5)

	Age Group						
	1.2	1.3	2.2	1.4	2.3	2.4	Total
Sample Period 2: 1 - 7 July							
Males	3,119	26,132			753		30,004
Percent	4.74	39.71			1.14		45.59
Mean Length	516	581			576		574
Std. Error	5	1			8		1
Sample Size	29	243			7		279
Mean Weight	3.94	3.47					3.52
Std. Error		0.11					0.10
Sample Size	1	8					9
Females	1,613	33,122	108		968		35,811
Percent	2.45	50.33	0.16		1.47		54.41
Mean Length	510	549	565		558		547
Std. Error	5	1			7		1
Sample Size	15	308	1		9		333
Mean Weight	2.13	2.93					2.89
Std. Error		0.08					0.07
Sample Size	1	5					6
Both Sexes	4,732	59,254	108		1,721		65,815
Percent	7.19	90.03	0.16		2.61		100.00
Mean Length	514	563	565		566		560
Std. Error	4	1			5		1
Sample Size	44	551	1		16		612
Mean Weight	3.32	3.17					3.18
Std. Error		0.07					0.06
Sample Size	2	13					15

-Continued-

Table 47. (page 4 of 5)

	Age Group						
	1.2	1.3	2.2	1.4	2.3	2.4	Total
Sample Period 4: 15 - 23 July							
Males	10,521	28,408	3,156		3,006		45,091
Percent	10.25	27.67	3.07		2.93		43.92
Mean Length	532	578	546		587		565
Std. Error	3	2	3		7		1
Sample Size	70	189	21		20		300
Mean Weight	2.75	3.63	2.91		4.05		3.40
Std. Error	0.13	0.07	0.08		0.32		0.06
Sample Size	17	46	4		3		70
Females	15,030	37,876	2,405		2,255		57,566
Percent	14.64	36.90	2.34		2.20		56.08
Mean Length	507	549	520		561		538
Std. Error	2	1	5		4		1
Sample Size	100	252	16		15		383
Mean Weight	2.24	2.90	2.30		3.14		2.71
Std. Error	0.06	0.05	0.17		0.18		0.04
Sample Size	32	59	4		5		100
Both Sexes	25,551	66,284	5,561		5,261		102,657
Percent	24.89	64.57	5.42		5.12		100.00
Mean Length	517	561	535		576		550
Std. Error	2	1	3		4		1
Sample Size	170	441	37		35		683
Mean Weight	2.45	3.21	2.65		3.66		3.02
Std. Error	0.07	0.04	0.08		0.20		0.03
Sample Size	49	105	8		8		170

-Continued-

Table 47. (page 5 of 5)

	Age Group						
	1.2	1.3	2.2	1.4	2.3	2.4	Total
All Periods Combined							
Males	18,857	111,032	3,940	169	5,858	56	139,912
Percent	6.11	35.97	1.28	0.05	1.90	0.02	45.32
Mean Length	530	579	543	591	589	575	572
Std. Error	2	1	4	2	4		1
Sample Size	134	909	28	3	55	1	1,130
Mean Weight	2.99	3.64	2.83	3.85	3.96		3.54
Std. Error	0.09	0.04	0.08		0.25		0.04
Sample Size	23	165	6	1	8		203
Females	22,362	138,558	2,569	56	5,175	56	168,776
Percent	7.24	44.89	0.83	0.02	1.68	0.02	54.68
Mean Length	507	549	521	554	556	550	543
Std. Error	2	1	5		3		1
Sample Size	152	1,132	18	1	54	1	1,358
Mean Weight	2.22	2.89	2.30		2.99		2.79
Std. Error	0.06	0.03	0.17		0.11		0.02
Sample Size	40	192	4		15		251
Both Sexes	41,219	249,590	6,509	225	11,033	112	308,688
Percent	13.35	80.86	2.11	0.07	3.57	0.04	100.00
Mean Length	517	562	534	582	573	563	556
Std. Error	1	1	3	2	3		0
Sample Size	286	2,041	46	4	109	2	2,488
Mean Weight	2.57	3.22	2.63	3.85	3.51		3.13
Std. Error	0.05	0.02	0.08		0.14		0.02
Sample Size	63	357	10	1	23		454

Table 48. Daily sockeye salmon escapement counts, Togiak Lake, 1986.

Date	Daily Count	Accumulative Count	Daily Percent of Total	Accumulative Percent
July 1	0	0	.00	.00
2	0	0	.00	.00
3	0	0	.00	.00
4	72	72	.04	.04
5	348	420	.21	.25
6	72	492	.04	.29
7	198	690	.12	.41
8	378	1,068	.22	.63
9	714	1,782	.42	1.06
10	858	2,640	.51	1.57
11	2,028	4,668	1.20	2.77
12	678	5,346	.40	3.17
13	1,458	6,804	.87	4.04
14	1,902	8,706	1.13	5.17
15	4,488	13,194	2.67	7.84
16	5,778	18,972	3.43	11.27
17	8,946	27,918	5.31	16.58
18	10,374	38,292	6.16	22.74
19	5,130	43,422	3.05	25.79
20	4,512	47,934	2.68	28.47
21	5,520	53,454	3.28	31.75
22	7,074	60,528	4.20	35.95
23	6,558	67,086	3.89	39.84
24	10,428	77,514	6.19	46.03
25	6,036	83,550	3.58	49.62
26	8,700	92,250	5.17	54.79
27	6,264	98,514	3.72	58.51
28	5,226	103,740	3.10	61.61
29	5,280	109,020	3.14	64.74
30	7,836	116,856	4.65	69.40
31	8,406	125,262	4.99	74.39
August 1	9,456	134,718	5.62	80.01
2	8,394	143,112	4.99	84.99
3	7,050	150,162	4.19	89.18
4	5,376	155,538	3.19	92.37
5	5,430	160,968	3.22	95.60
6	4,206	165,174	2.50	98.09
7	1,524	166,698	.91	99.00
8	1,686	168,384	1.00	100.00

Table 49. Age, sex, fork length (mm), and weight (g) of sockeye salmon escapement by period, Togiak Lake, 1986.

	Age Group						
	1.1	1.2	1.3	2.2	1.4	2.3	Total
Sample Period 1: 10 - 21 July							
Males		7,092	13,915	335	134	401	21,877
Percent		13.27	26.03	0.63	0.25	0.75	40.93
Mean Length		531	582	533	618	575	565
Std. Error		3	2	19	3	12	2
Sample Size		106	208	5	2	6	327
Females		9,366	20,739	468	67	937	31,577
Percent		17.52	38.80	0.88	0.13	1.75	59.07
Mean Length		499	547	503	590	549	532
Std. Error		3	1	13		8	1
Sample Size		140	310	7	1	14	472
Both Sexes		16,458	34,654	803	201	1,338	53,454
Percent		30.79	64.83	1.50	0.38	2.50	100.00
Mean Length		513	561	515	608	557	545
Std. Error		2	1	11	3	7	1
Sample Size		246	518	12	3	20	799
Sample Period 2: 22 - 29 July							
Males	139	17,016	36,963	279		697	55,094
Percent	0.12	14.81	32.16	0.24		0.61	47.94
Mean Length	340	523	588	525		585	567
Std. Error		3	2	15		7	2
Sample Size	1	122	265	2		5	395
Females		23,293	35,846	279	139	279	59,836
Percent		20.27	31.19	0.24	0.12	0.24	52.06
Mean Length		501	554	465	550	563	533
Std. Error		2	2	30		13	1
Sample Size		167	257	2	1	2	429
Both Sexes	139	40,309	72,809	558	139	976	114,930
Percent	0.12	35.07	63.35	0.49	0.12	0.85	100.00
Mean Length	340	510	571	495	550	579	549
Std. Error		2	1	17		6	1
Sample Size	1	289	522	4	1	7	824

-Continued-

Table 49. (page 2 of 2)

	Age Group						
	1.1	1.2	1.3	2.2	1.4	2.3	Total
All Periods Combined							
Males	139	24,108	50,878	614	134	1,098	76,971
Percent	0.08	14.32	30.22	0.36	0.08	0.65	45.71
Mean Length	340	526	586	529	618	581	566
Std. Error		2	1	13	3	6	1
Sample Size	1	228	473	7	2	11	722
Females		32,659	56,585	747	206	1,216	91,413
Percent		19.40	33.60	0.44	0.12	0.72	54.29
Mean Length		500	551	489	563	552	532
Std. Error		2	1	14		7	1
Sample Size		307	567	9	2	16	901
Both Sexes	139	56,767	107,463	1,361	340	2,314	168,384
Percent	0.08	33.71	63.82	0.81	0.20	1.37	100.00
Mean Length	340	511	568	507	584	566	548
Std. Error		1	1	9	3	5	1
Sample Size	1	535	1,040	16	4	27	1,623

Table 50. Age, sex, fork length (mm), and weight (g) of chinook salmon commercial catch by period, Togiak District, 1986.

	Age Group									
	1.2	1.3	2.2	1.4	2.3	1.5	2.4	1.6	2.5	Total
Sample period:	16 June - 9 July									
Males	3,625	7,569	199	1,833	518	717	40	40	80	14,621
Percent	18.23	38.07	1.00	9.22	2.61	3.61	0.20	0.20	0.40	73.55
Mean Length	535	697	514	770	655	884	814	805	945	673
Std. Error	5	5	9	13	14	15			54	4
Sample Size	91	190	5	46	13	18	1	1	2	367
Mean Weight	2.95	7.08	2.04	7.87	6.07	12.20				6.29
Std. Error	0.11	0.28		0.76	0.93	1.57				0.20
Sample Size	30	51	1	19	3	4				108
Females		2,152		1,434	199	1,076	199		199	5,259
Percent		10.82		7.21	1.00	5.41	1.00		1.00	26.45
Mean Length		803		823	834	902	899		876	836
Std. Error		5		8	14	9	27		18	4
Sample Size		54		36	5	27	5		5	132
Mean Weight		9.84		10.99	10.06	13.27	16.64		13.74	11.27
Std. Error		0.23		0.99		0.80	1.54		0.09	0.33
Sample Size		20		7	1	9	2		2	41
Both Sexes	3,625	9,721	199	3,267	717	1,793	239	40	279	19,880
Percent	18.23	48.90	1.00	16.43	3.61	9.02	1.20	0.20	1.40	100.00
Mean Length	535	720	514	793	705	895	885	805	896	716
Std. Error	5	4	9	8	11	8	27		20	3
Sample Size	91	244	5	82	18	45	6	1	7	499
Mean Weight	2.95	7.69	2.04	9.24	7.18	12.84	16.64		13.74	7.62
Std. Error	0.11	0.22		0.61	0.93	0.79	1.54		0.09	0.17
Sample Size	30	71	1	26	4	13	2		2	149

Table 51. Age, sex, fork length (mm), and weight (g) of chum salmon commercial catch by period, Togiak District, 1986.

	Age Group				
	0.2	0.3	0.4	0.5	Total
Sample period:	18 June - 23 July				
Males	1,965	78,593	35,804	1,092	117,454
Percent	0.73	29.10	13.26	0.40	43.49
Mean Length	521	576	603	627	584
Std. Error	7	1	3	23	1
Sample Size	9	360	164	5	538
Mean Weight	1.90	2.83	2.37	3.31	2.68
Std. Error	1.45	0.12	0.27		0.12
Sample Size	2	73	38	1	114
Females	1,528	105,228	44,755	1,092	152,603
Percent	0.57	38.97	16.57	0.40	56.51
Mean Length	506	553	570	548	558
Std. Error	8	1	2	10	1
Sample Size	7	482	205	5	699
Mean Weight	1.99	2.62	2.95	2.96	2.71
Std. Error	0.09	0.07	0.10	0.25	0.06
Sample Size	2	118	45	3	168
Both Sexes	3,493	183,821	80,559	2,184	270,057
Percent	1.29	68.07	29.83	0.81	100.00
Mean Length	515	563	585	587	569
Std. Error	5	1	2	12	1
Sample Size	16	842	369	10	1,237
Mean Weight	1.94	2.71	2.69	3.14	2.70
Std. Error	0.82	0.07	0.13	0.25	0.06
Sample Size	4	191	83	4	282

Table 52. Age, sex, fork length (mm), and weight (g) of coho salmon commercial catch by period, Togiak River, 1986.

	Age Group			
	1.1	2.1	3.1	Total
Sample period:	19 August			
Males	1,208	26,326	483	28,017
Percent	2.50	54.50	1.00	58.00
Mean Length	554	578	597	577
Std. Error	13	4	42	4
Sample Size	5	109	2	116
Mean Weight	2.74	3.51	3.35	3.47
Std. Error	0.17	0.08	0.35	0.08
Sample Size	5	107	2	114
Females	725	19,322	242	20,289
Percent	1.50	40.00	0.50	42.00
Mean Length	565	573	617	573
Std. Error	8	4		4
Sample Size	3	80	1	84
Mean Weight	2.87	3.26	4.30	3.26
Std. Error	0.23	0.07		0.07
Sample Size	3	79	1	83
Both Sexes	1,933	45,648	725	48,306
Percent	4.00	94.50	1.50	100.00
Mean Length	558	576	604	576
Std. Error	9	3	42	3
Sample Size	8	189	3	200
Mean Weight	2.79	3.40	3.67	3.38
Std. Error	0.13	0.06	0.35	0.05
Sample Size	8	186	3	197

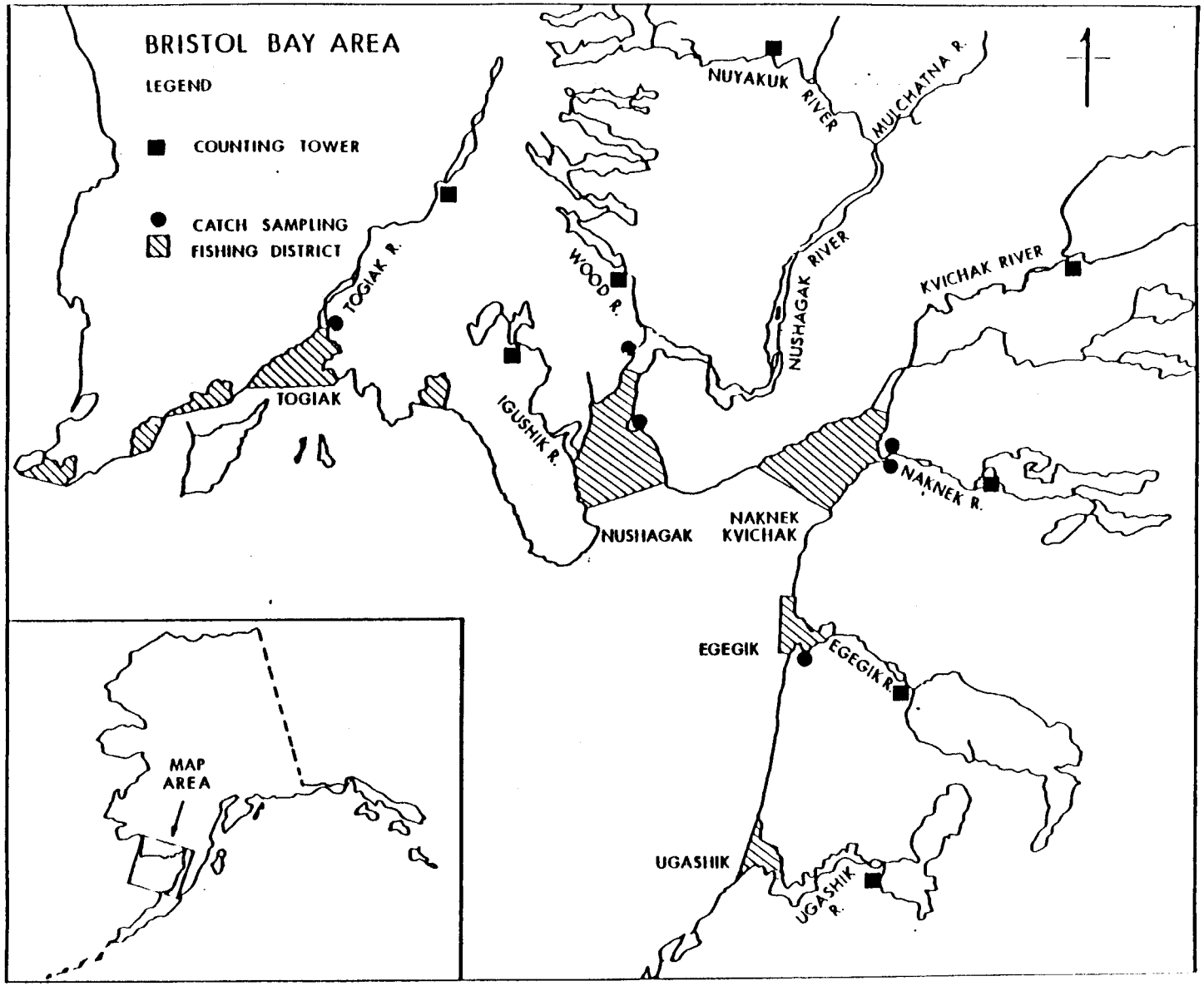

Figure 1. Bristol Bay major river systems and commercial fishing districts

APPENDIX

Appendix A. Catch and escapement of sockeye salmon in Togiak and Kulukak sections of Togiak District.

	TOGIAK					KULUKAK & OTHERS			
	CATCH	ESCAPEMENT				CATCH			ESCAPEMENT
Year	Togiak	Lake	River	Other[a]	Total	Kulukak	Other[b]	total	Kulukak
60	139,648								
61	188,788					3,373		3,373	
62	92,273					672		672	
63	185,506					707		707	
64	242,489					8,286		8,286	
65	213,835	88,386		8,100	96,486	1,382	1,883	3,265	16,300
66	190,479	91,098		13,100	104,198	7,263	2,057	9,320	18,800
67	71,512	69,330		12,000	81,330	24,379	5,216	29,595	10,000
68	65,475	42,918		7,000	49,918	2,618	4,606	7,224	6,500
69	129,615	109,266		7,400	116,666	3,411	1,226	4,637	8,400
70	152,748	192,096		10,800	202,896		629	629	10,000
71	200,507	190,842		9,400	200,242	7,927	626	8,553	13,000
72	51,354	74,070		4,500	78,570	17,244	6,663	23,907	3,400
73	75,694	95,730		11,200	106,930	15,551	4,478	20,029	8,000
74	110,932	82,992	12,000	8,600	103,592	13,615	14,840	28,455	4,900
75	184,856	160,962	12,200	7,400	180,562	3,821	237	4,058	8,600
76	293,016	158,190	15,000	16,200	189,390	4,822	4,045	8,867	11,200
77	201,004	133,734	4,400	24,400	162,534	16,252	1,195	17,447	40,100
78	422,100	273,576	15,000	17,600	306,176	29,668	248	29,916	33,900
79	393,337	171,138	14,200	12,900	198,238	66,629	1,018	67,647	26,600
80	591,470	461,850	27,900	37,000	526,750	42,811	280	43,091	45,700
81	620,288	208,080	21,150	77,900	307,130	19,246	173	19,419	58,780
82	581,718	244,824	3,450	40,400	288,674	13,952	26	13,978	52,750
83	529,775	191,520	7,200	13,920	212,640	55,906	2,527	58,433	26,970
84	213,213	95,448	15,830	39,700	150,978	96,709	12,204	108,913	49,800
85	133,263	136,542	3,600	13,340	153,482	44,120	32,383	76,503	36,600
86	191,158	168,384	20,000	15,000	203,384	100,466	17,064	117,530	42,800

[a] Other escapement from Gechiak, Pungokepuk, Ongivinuck, Ungalikthluk/Kukayachagak, and other minor river systems.

[b] Other catch from Osviak, Matogak, Cape Peirce, and Ungalikthluk sections.

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