

TECHNICAL FISHERY REPORT 87-01



Alaska Department of Fish and Game
Division of Commercial Fisheries
PO Box 3-2000
Juneau, Alaska 99802

October 1987

Origins of Sockeye Salmon in the Fisheries of Upper Cook Inlet in 1984 Based on Analysis of Scale Patterns

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ACKNOWLEDGMENTS

The authors are grateful to the Commercial Fisheries Division, Upper Cook Inlet area staff for providing most of the catch and escapement figures included in this report and for assisting with the scale collection. In particular, we would like to thank Paul Ruesch, Ken Tarbox, Bruce King, Dave Waltemyer, and Jim Browning for their support and assistance. We are also grateful to Robert Chlupach of the FRED Division who provided escapement data and scale samples from Fish Creek. Dave Nelson and Dave Athons of the Sport Fisheries Division provided estimates of sport harvest, escapement and age composition for the Russian River. Loren Flagg and Dave Litchfield of the FRED Division estimated escapement and age composition for Quartz Creek and Hidden Lake. Patrick Marcusson of the Cook Inlet Aquaculture Association provided escapement data and scale samples from Packers Creek. We are also very grateful to Linda Soquet for aging a significant portion of the scales used in the analysis.

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ABSTRACT

Estimates of run composition for the 1984 commercial sockeye salmon harvest (*Oncorhynchus nerka* Walbaum) in Upper Cook Inlet were calculated using analysis of scale patterns and age composition. Scale measurements of age-1.2, age-1.3, and age-2.3 fish from the escapements were used to build discriminant functions. Commercial catches of age groups 1.2, 1.3 and 2.3 were classified to river of origin with the discriminant functions. Catches of fish from the minor age groups were classified to their river of origin by combining results from analysis of scale patterns with escapement age composition.

The return of sockeye salmon to Upper Cook Inlet in 1984 was 3.4 million fish of which 2.1 million (62%) were commercially harvested. Origins of fish harvested by the commercial fishery were: 33% from Susitna River, 28% from Kenai River, 25% from Kasilof River, 6% from Crescent River, 4% from Fish Creek, 2% from Big River, 1% from McArthur River, and 0.4% from the Chilligan River. The rate of exploitation by the commercial fishery was highest for fish from Susitna River (71%) and lowest for fish from Fish Creek (33%). Kenai River fish were exploited at a rate of 63%, which was similar to the rate applied to the Kasilof River (67%) run. The rate of commercial exploitation for fish returning to Crescent River equaled 53%.

Ratios of returns per spawner for the 1979 brood year were estimated for the Susitna, Kenai, Kasilof, and Crescent Rivers. The ratios are preliminary because the 6-year-old fish returning in 1985 were not included in the analysis. Returns per spawner from the 1979 brood year equaled: 6.6 for Susitna River, 2.9 for Kenai River, 4.5 for Kasilof River, and 1.5 for Crescent River.

KEY WORDS: Sockeye salmon (*Oncorhynchus nerka*), scale analysis, linear discriminant analysis, catch apportionment, exploitation rates, returns per spawner

INTRODUCTION

Commercial fisheries in Upper Cook Inlet harvest mixtures of sockeye salmon (*Oncorhynchus nerka* Walbaum) returning to numerous rivers. Scale pattern analysis has been used since 1978 to apportion commercial catches of sockeye salmon to component river systems (Bethe et al. 1980, Cross et al. 1981, 1982, 1983a, 1983b, 1985, 1986). Similarly, fish harvested in 1984 were identified to stream of origin with scale pattern analysis.

Fishery managers need estimates of catch by river system to effect stock-specific harvest regulations. Determination of stock components in the catch is essential for analyses of: migratory timing by stock, spawner-return relationships, and escapement goals. In addition, the ability to forecast future run sizes requires estimates of catch by river.

Systems which contribute to the returns of sockeye salmon to Upper Cook Inlet are the Kenai, Kasilof, and Susitna Rivers, followed in magnitude by Crescent River and Fish Creek. Other rivers known to support sockeye salmon but for which data are limited include: McArthur River, Chakachatna River (major spawning tributary is the Chilligan River), Big River, Packers Creek, Beluga River, and Cottonwood Creek.

The Upper Cook Inlet management area is divided into two fishing districts, the Northern and Central, which include all waters north of Anchor Point (Figure 1). In the Central District, there are five set net fisheries (Central District west-side, Kalgin Island, Salamatof Beach, Kalifonsky Beach, and Cohoe/Ninilchik Beach) and a drift net fishery (Central District drift). Two set net fisheries operate within the Northern District: the Northern District east-side and the Northern District west-side.

The objective of this report is to apportion the 1984 commercial harvest of sockeye salmon in Upper Cook Inlet to run of origin. Estimates of run composition for the catch are combined with estimates of escapement to provide estimates of return by river system. The results of this analysis add to the spawner-return data base for Upper Cook Inlet reported by Cross et al. (1983b, 1985, 1986).

METHODS

Catches And Escapements

Commercial catch statistics are compiled by the Alaska Department of Fish and Game (ADF&G), Division of Commercial Fisheries from sales receipts (fish tickets). Catch figures presented in this report were those available from computer summaries on 24 October 1984 provided by Waltemyer (ADF&G, personal communication). Sport harvests and dip net harvests from the personal use fishery were estimated from an annual mail survey conducted by the Division of Sport Fisheries (ADF&G) and documented by Mills (1985). Browning (ADF&G,

personal communication) estimated from returned permit forms the numbers of fish harvested with gill nets by the personal use fishery in the Kasilof River.

Escapements of sockeye salmon to rivers in Upper Cook Inlet are estimated with various methods. Side-scanning sonar was used to count returns of sockeye salmon to Susitna Station (east bank, mile-26 on the Susitna River) and to the mainstem of the Kenai, Kasilof, and Crescent Rivers (King and Tarbox, 1987). Results from aerial surveys of Nancy Lake, Chickaloon River, Mystery Creek, Big River, McArthur-Chakachatna Rivers, and Coal Creek are also reported by King and Tarbox (1987).

The Susitna Hydroelectric Project of ADF&G counted escapement past several additional stations located on the Susitna River (Barrett et al. 1985). Escapement into the Yentna River (river mile 28, tributary mile 4) is counted with side-scanning sonar. Estimates of escapements past Sunshine Station (river mile 80), Talkeetna Station (river mile 103), and Curry Station (river mile 120) are made with mark-recapture programs.

Escapements into Fish Creek (Chlupach, ADF&G, personal communication), Hidden Creek and Quartz Creek (Flagg, ADF&G, personal communication), Russian River (Athons, ADF&G, personal communication) and Packers Creek (Marcusson, Cook Inlet Aquaculture Association, personal communication) were enumerated with weirs.

Age, Sex, Size Data

Ages were determined by examining scales or otoliths. Sex was determined from morphometric characteristics or examination of gonads. Fish were measured in millimeters from the middle of the eye to the fork of the tail.

Scales were collected from the left side of the fish approximately two rows above the lateral line and on the diagonal row downward from the posterior insertion of the dorsal fin to the anterior insertion of the anal fin (INPFC 1963). Scales were mounted on gummed cards and impressions made in cellulose acetate (Clutter and Whitesel 1956). In addition to scales, otoliths were collected from carcasses and used for age verification of sockeye salmon from the McArthur and Chilligan Rivers. Scale impressions were viewed on a microfiche reader at approximately 50 power and ages were recorded in European notation¹.

¹European formula: Numerals preceding the decimal refer to the number of freshwater annuli, numerals following the decimal are the number of marine annuli. Total age from the brood year is the sum of these two numbers plus one.

Commercial Catch

All age, sex, and size data for commercial catches were collected and computed by the authors. Age compositions of catch by fishery were estimated with stratified systematic sampling programs according to Cochran (1977). Sampling was designed so that sufficient numbers of fish were sampled to simultaneously estimate the true proportion of each major age group in the catch within 5 percentage points 90% of the time.

Sockeye salmon were sampled from each of the eight major fisheries: Northern District east-side set net, Northern District west-side set net, Central District drift net, Central District west-side set net, Kalgin Island set net, Salamatof Beach set net, Kalifonsky Beach set net, and Cohoe/Ninilchik Beach set net. The number of sampled time strata differed among fisheries. The frequency of sampling was based on temporal trends in the age composition from previous years (1978-1983) and the contribution of the fishery to the total catch.

Sport And Personal Use Catch

Scales were not collected from dip net catches of sockeye salmon. The age compositions of the respective escapements were applied to the dip net catches to estimate the harvest by age. Scales were sampled by the authors from gill net catches by the personal use fishery in the Kasilof River.

Escapement

King and Tarbox (1987) reported the age compositions for escapements into the Susitna River (Susitna Station), Kenai River, Kasilof River, and Crescent River in 1984. Fish were captured with fish wheels at Susitna Station, the Kenai River, and the Kasilof River. A beach seine was used to sample fish from Crescent Lake.

Barrett et al. (1985) documented age compositions for escapements at Yentna, Sunshine, Talkeetna, and Curry stations on the Susitna River where fish were captured with fish wheels at each site.

Athons (ADF&G, personal communication) provided estimates of age composition for the late run of sockeye salmon into Russian River. Fish were sampled at the weir.

The authors compiled age information from original age-weight-length (AWL) data forms for the following systems : Quartz Creek, Hidden Creek, Fish Creek, Packers Creek, Big River, McArthur River, and Chilligan River. Samples from Big River, McArthur River, and Chilligan River were collected by the authors from carcasses of spawned-out sockeye salmon. Samples from the other systems were taken at weirs by the same personnel as reported for the respective abundance estimates.

Catch Apportionment

Linear discriminant analysis (Fisher 1936) of scale patterns combined with age composition data were used to determine the streams of origin of sockeye salmon harvested in Upper Cook in 1984.

Scale Pattern Measurements

Scale impressions were projected at 100X magnification using equipment similar to that described by Ryan and Christie (1976). Scale images were measured on a Talos digitizing tablet and recorded by a Vector Graphics microcomputer. Measurements were taken along the anterior-posterior axis of each scale. Distances between circuli were measured from the following scale growth zones: (1) scale focus to the outside edge of the first freshwater annulus (first freshwater annular zone), (2) outside edge of the last freshwater annulus to the end of freshwater growth (freshwater plus growth zone), and (3) the last circulus of the freshwater plus growth zone to the outer edge of the first ocean annulus (first marine annular zone). For age-2.3 fish, distances between circuli were also measured from the outside edge of the first freshwater annulus to the outside edge of the second freshwater annulus (second freshwater annular zone). In addition, the total width from the outside edge of the first ocean annulus to the outside edge of the second ocean annulus (second marine annular zone) was recorded for age-1.3 and -2.3 fish (Figure 2). From the basic incremental distances and circuli counts, 75 scale variables were computed for age-1.2 and age-1.3 samples and 109 scale variables were computed for age-2.3 fish (Table 1). Because fish aged 1.3, 1.2, and 2.3 dominated the commercial catch, we limited our measurements of scale patterns to these age groups.

Discriminant Analysis

Escapement samples provided scales of known origin that were used to build the linear discriminant functions (LDF). Commercial catch scales (samples of mixed stock proportions) were classified with the discriminant functions to estimate the contribution of each river to the age-1.3, -1.2, and -2.3 harvests.

We plotted major scale variables to review the distributions of the variables. Selection of scale variables for each discriminant model was by a forward stepping procedure using partial F statistics as the criteria for entry/removal of variables (Enslein et al. 1977). Variables were added until model accuracy ceased to improve. A nearly unbiased estimate of classification accuracy for each LDF was determined using a "leaving-one-out procedure" (Lachenbruch 1967).

Model Construction From Scales Aged 1.3. A six-way linear discriminant model was constructed from scale measurements of age-1.3 fish entering the Susitna (Susitna Station), Kenai, Kasilof, Crescent, Big, and McArthur Rivers. Fish Creek, Packers Creek, and Chilligan River were not included in this analysis because age-1.3 fish represented small percentages of their

escapements. Models for the Susitna, Kenai, and Kasilof Rivers were constructed from 200 scales weighted through time based on sonar counts. Because of limited sample sizes, all available age-1.3 scales were used to construct models representing the other rivers.

Because the accuracy of classifying minor systems (Big and McArthur Rivers) was low in the six-way model, we included the minor systems only when classifying catches from fisheries which were comprised of large percentages of these fish in 1983 (Cross et al. 1986, the only previous study from which we have data). Consequently, Big and McArthur Rivers were included in models used classify set net catches on the west side and on Kalgin Island. Catches made in the Central District drift fishery were classified with a four-way model representing fish from Susitna, Kenai, Kasilof, and Crescent Rivers.

We made other assumptions based on results from previous studies which reduced the number of systems included in classification models. Bethe et al. (1980) and Cross et al. (1981) found that few, if any, Crescent River fish were harvested by east-side set net fisheries in 1978 and 1979. We assumed that Crescent River did not contribute significantly to the Central District east- side set net harvests in 1984 and classified those catches with a three-way model of Susitna, Kenai, and Kasilof Rivers.

We also assumed that Kenai and Kasilof Rivers did not contribute significantly to the Central District and Northern District west- side set net harvests in 1984 based on analyses of scale patterns conducted in 1979 through 1981 (Cross et al. 1981, 1982, 1983). A four-way model of Susitna, Crescent, Big, and McArthur Rivers was used to classify west-side beach harvests. Kalgin Island set net harvests were classified with the six-way model which included all rivers.

Classification Of Age Group 1.3. Linear discriminant models were used to assign unknown samples (age-1.3 scales from the commercial catches) to stream of origin. Estimates of proportions by run in the catch were adjusted for misclassification errors by the model using the procedure of Cook and Lord (1978). The variance and 90% confidence intervals for the adjusted estimates were computed using the procedures of Pella and Robertson (1979). A catch sample was reclassified with a model representing fewer runs if the adjusted proportion was less than or equal to zero for the run in question.

Run composition estimates for age-1.3 fish harvested in the Central District drift and Cohoe/Ninilchik Beach set net fisheries were calculated for individual fishing periods. For the remaining fisheries samples were generally combined across contiguous fishing periods and one run estimate for the pooled period was computed. The number of individual run estimates developed for each fishery depended on the number of sampled time strata. In general, fisheries harvesting the largest numbers of fish were sampled and analyzed the most intensely. The number of time strata by fishery are: 10 for both the Central District drift and Cohoe/Ninilchik Beach , six for Kalifonsky Beach, three for both Salamatof Beach and the Central District west-side, four for the Northern District east-side, and two for both the Northern District west-side and Kalgin Island.

We calculated the numbers of fish aged 1.3 by run in a specific catch strata from the product of the estimate of the run proportion by scale pattern analysis, the estimate of the proportion of the catch of that age, and the catch:

$$\hat{C}_{i1.3} = C \hat{P}_{1.3} \hat{S}_{i1.3}$$

Where:

C = Catch of sockeye salmon in a fishery at a given time.

$\hat{C}_{i1.3}$ = Estimated catch of fish aged 1.3 returning to run i.

$\hat{P}_{1.3}$ = Estimated proportion of fish aged 1.3 in the catch.

$\hat{S}_{i1.3}$ = Estimated proportion of run i aged 1.3 in the catch.

The variance of the estimated catch of sockeye salmon aged 1.3 ($V[\hat{C}_{i1.3}]$) from each run in a specific fishery at a given time was calculated as an exact variance of a product according to Goodman (1960) :

$$V[\hat{C}_{i1.3}] = C^2 V[\hat{P}_{1.3} \hat{S}_{i1.3}]$$

$$V[\hat{P}_{1.3} \hat{S}_{i1.3}] = V[\hat{P}_{1.3}] \hat{S}_{i1.3}^2 + V[\hat{S}_{i1.3}] \hat{P}_{1.3}^2 - V[\hat{S}_{i1.3}] V[\hat{P}_{1.3}]$$

The contributions by run through time for a specific fishery were added to estimate the contribution to that fishery for the entire year; the variance of the yearly contribution was calculated as the sum of the variances for each period. Finally, the contributions by run to each fishery were added to produce the total contribution by run to the Upper Cook Inlet age-1.3 sockeye harvest, and the variance of the total contribution by run was calculated as the sum of the variances for each fishery. Variances calculated for run contributions which were estimated from samples pooled over time are a minimum estimate as changes in age or run composition through the pooled period are unknown.

Model Construction From Scales Aged 1.2. Before we constructed models for the 1.2-age group, we plotted the major scale variables to determine if they were normally distributed (an underlying assumption of linear discriminant analysis). Plots of scale measurements representing Kenai River showed that the number of circuli (NC1FW) and width (S1FW) of the freshwater annulus were bimodally distributed (Figures 3 and 4). We knew from past scale examination that age-1.2 fish returning to Hidden Creek (a tributary

of Kenai River) have very large freshwater growth which could explain the second mode in the distribution of Kenai River freshwater scale measurements. We measured growth zones from scales representing the 1984 sockeye escapement to Hidden Creek and plotted scale variables NClFW and SlFW (Figures 3 and 4). Comparisons of the plots showed that samples from Hidden Creek were distributed similarly to the samples comprising the second or larger mode of Kenai River measurements. The mean values of NClFW and SlFW for Hidden Creek samples in 1984 equaled 20 and 222, respectively. The escapement of age-1.2 fish to Hidden Creek in 1984 was 26,357 fish which represented approximately 33% of the total escapement of fish aged 1.2 into the Kenai River. Similarly, scales in the Kenai River sample with NClFW \geq 16 and SlFW \geq 170 made up approximately 26% of the total sample. Based on these comparisons, we made the assumption that scales in the Kenai River sample with measurements for NClFW \geq 16 and SlFW \geq 170 represented Hidden Creek fish, and subsequently removed those scales from the Kenai River model. A separate model was constructed from scale measurements representing fish returning to Hidden Creek. Subsequently, catch samples were classified separately to Kenai River (minus Hidden Creek measurements) and Hidden Creek. A total Kenai River contribution to a specific harvest of fish aged 1.2 was estimated by combining run proportions for the two categories, Kenai River (minus Hidden Creek) and Hidden Creek.

A six-way linear discriminant model was constructed from measurements of scales aged 1.2 representing fish entering the Susitna River, Kenai River (minus Hidden Creek), Hidden Creek, Kasilof River, Fish Creek, and McArthur River. Crescent River, Packers Creek, and Chilligan River were not included in the analysis because fish aged 1.2 represented small percentages of their escapements, 3.5%, 4.3%, and 1.2%, respectively. Big River was not included in the analysis because the number of fish aged 1.2 in its escapement was small relative to the other systems, and the number of available scales was inadequate. Models of scale measurements for the Susitna, Kenai, and Kasilof Rivers were constructed by weighting 200 samples through time based on sonar counts. Because of limited sample sizes, all available scales aged 1.2 were used to construct models representing the other rivers.

Similar to the 1.3-age group, the accuracy of the six-way model for the 1.2-age group was low. Misclassification was greatest between Susitna and McArthur Rivers. McArthur River was not included in the model used to classify drift or east-side set net catches because of its high misclassification with Susitna River coupled with its low rate of contribution documented in 1983 (Cross et al., 1986). Central District drift and east-side set net harvests were classified with a five-way model which included samples from Susitna River, Kenai River, Hidden Creek, Kasilof River and Fish Creek.

Other linear discriminant models were built as needed to classify catch samples. We assumed that fish returning to Kasilof and McArthur Rivers were not harvested in the Northern District east-side set net fishery and classified those catches with a four-way model (Susitna, Kenai, Hidden, and Fish). A three-way model representing Susitna River, Fish Creek, and McArthur River was used to classify catches from the Northern District west-side fishery.

Classification Of Age Group 1.2. Linear discriminant models were used to classify fish aged 1.2 from the following: catches from 2 July to 18 July from the Central District drift; catches from 2, 10, 13, and 16 July from Cohoe/Ninilchik Beach; catches from 9, 16, and 18 July from Kalifonsky Beach; and catches made on 16 and 18 July from Salamatof Beach, and the Northern District east-side and west-side. All other fish aged 1.2 were identified to river based on the estimate for fish aged 1.3 (developed from scale pattern analysis) and the ratio of fish aged 1.3 to fish aged 1.2 in respective escapements as detailed in the section which follows entitled "Run Composition For Catches Of Minor Age Groups".

Procedures used to adjust for misclassification by models for the 1.2-age group, and to compute variances and 90% confidence intervals for run estimates were the same as those used in the analysis of fish aged 1.3. We did not compute a variance for the contribution by run to the season's catch of fish aged 1.2 because not all fish aged 1.2 were apportioned by scale patterns, instead some were based on results from the age-1.3 analysis.

Model Construction From Scales Aged 2.3. Classification models for fish aged 2.3 were constructed from escapements to Susitna, Kenai, Kasilof, Crescent, Big and Chilligan Rivers. Age-2.3 fish comprised small percentages of the escapements into Fish Creek (0.8%), Packers Creek (7.4%), and McArthur River (1.8%), therefore they were not included in the analysis.

As in analyses of ages 1.3 and 1.2, fish aged 2.3 from minor systems (Big River and Chilligan River) were only included in models used to classify west-side set net catches. The streams of origin for fish caught in set nets on the west-side of the Northern and Central Districts were determined with a four-way model representing Susitna, Crescent, Big, and Chilligan Rivers. Based on historical analyses (Cross et al. 1981, 1982, 1983), Kenai and Kasilof Rivers do not contribute very large portions to the west-side catches. Drift catches of fish aged 2.3 were classified with a four-way model representing Susitna, Kenai, Kasilof, and Crescent Rivers. We assumed that Crescent River did not contribute to set net harvests on the east-side beaches (based on results from Bethe et al. 1980 and Cross et al. 1981) and classified those catches with a three-way model (Susitna, Kenai, and Kasilof Rivers). Fish aged 2.3 caught in the Northern District east-side were classified with a two-way model which included samples from the Sustina and Kenai Rivers.

Classification Of Age Group 2.3. Linear discriminant models were used to classify fish from the following: catches for 6 to 18 July from the Central District drift; catches for 10, 13, and 17 July from Cohoe/Ninilchik Beach; catches for 16 and 18 July from Kalifonsky and Salamatof Beaches; catches for 2, 11, and 20 July from the Central district west-side, and catches for 18 July from the Northern District east-side and west-side. All other catches of fish aged 2.3 were apportioned to river based on either the age-1.3 estimate or an average of the age-1.3 and -1.2 estimates (developed from scale pattern analysis) and the ratio of age groups in the respective escapements as detailed in the section which follows entitled "Run Composition For Catches Of Minor Age Groups".

Procedures used to adjust for misclassification by models for fish aged 2.3, and to compute variances and 90% confidence intervals for run estimates were the same as those used in the analysis of the 1.3-age group. We did not compute a variance for the contribution by run to the season's catch of fish aged 2.3 because age-2.3 scale patterns were not analyzed for all catch strata.

Run Composition For Catches Of Minor Age Groups

Catches in which only fish aged 1.3 were apportioned to river with scale pattern analysis, all other fish were apportioned to stream of origin based on the estimate for fish aged 1.3 and the ratio of fish aged 1.3 to fish of other age groups in respective escapements:

$$\hat{S}_{ij} = \frac{\hat{S}_{i1.3}(\hat{E}_{ij}/\hat{E}_{i1.3})}{\sum_{i=1}^n \hat{S}_{i1.3}(\hat{E}_{ij}/\hat{E}_{i1.3})}$$

Where:

\hat{S}_{ij} = Estimated proportion of run i in the catches of fish aged j.

$\hat{S}_{i1.3}$ = Estimated proportion of run i in the catches of fish aged 1.3.

\hat{E}_{ij} = Estimated proportion of age j fish in the escapement of run i.

$\hat{E}_{i1.3}$ = Estimated proportion of fish aged 1.3 in the escapement of run i.

n = Number of runs.

The numbers of sockeye salmon of age j contributing to a catch were then calculated as:

$$\hat{C}_{ij} = C\hat{P}_j\hat{S}_{ij}$$

Where:

\hat{C}_{ij} = Estimated numbers of fish aged j in run i caught in a fishery.

\hat{P}_j = Estimated proportion of fish aged j in a catch.

C = Numbers of fish caught.

Catches in which the streams of origin for fish aged 1.2 and 1.3 were determined with scale pattern analysis, fish of other ages were apportioned

to stream of origin based on the combined estimates for fish aged 1.2 and 1.3, and the combined ratio of fish aged 1.2 and 1.3 to fish of other age groups in respective escapements:

$$\hat{S}_{ij} = \frac{\hat{S}_{i(1.2,1.3)}(\hat{E}_{ij}/\hat{E}_{i(1.2,1.3)})}{\sum_{i=1}^n \hat{S}_{i(1.2,1.3)}(\hat{E}_{ij}/\hat{E}_{i(1.2,1.3)})}$$

$$\hat{S}_{i(1.2,1.3)} = \frac{\hat{C}_{i1.2} + \hat{C}_{i1.3}}{\hat{C}_{1.2} + \hat{C}_{1.3}}$$

$$\hat{E}_{i(1.2,1.3)} = \frac{\hat{E}_{i1.2} + \hat{E}_{i1.3}}{E_i}$$

Where:

- \hat{S}_{ij} = Estimated proportion of run i in the catches of fish aged j.
- $\hat{S}_{i(1.2,1.3)}$ = Estimated proportion of run i in the combined catches of fish aged 1.2 and 1.3.
- \hat{E}_{ij} = Estimated proportion of age j fish in the escapement of run i.
- $\hat{E}_{i(1.2,1.3)}$ = Estimated combined proportion of fish aged 1.2 and 1.3 in the escapement of run i.
- $\hat{C}_{i1.2}$ = Estimated numbers of age 1.2 fish in run i caught in a fishery.
- $\hat{C}_{i1.3}$ = Estimated numbers of age 1.3 fish in run i caught in a fishery.
- $\hat{C}_{1.2}$ = Estimated numbers of age 1.2 fish caught in a fishery.
- $\hat{C}_{1.3}$ = Estimated numbers of age 1.3 fish caught in a fishery.
- $\hat{E}_{i1.2}$ = Estimated numbers of age 1.2 fish in the escapement of run i.
- $\hat{E}_{i1.3}$ = Estimated numbers of age 1.3 fish in the escapement of run i.

- E_i - Numbers of fish escaping in run i .
 n - number of runs.

Catches in which the streams of origin for fish aged 1.2 , 1.3 and 2.3 fish were determined with scale pattern analysis, fish of other ages were apportioned to river based on the combined estimates for fish aged 1.2 ,1.3 and 2.3, and the combined ratio of fish aged 1.2 ,1.3, and 2.3 to fish of other age groups in respective escapements. Formulas used to apportion the other age groups based on the 1.2-, 1.3-, and 2.3-catch apportionments were the same as outlined above except age 2.3 was added to the subscripts.

Misclassification Of Minor Systems

We classified samples taken from the minor systems (Chilligan, McArthur, Big, Packers) with models representing runs from the major rivers (Susitna, Kenai, Kasilof, Crescent, Fish). We did this to get a better idea which rivers the minor runs were misclassified as in the catch apportionment.

Returns

Numbers of fish returning by age to each river were estimated by adding the commercial catch by run, the escapement, and the sport and personal use harvests not counted in the escapements. Ratios of returns to spawners were calculated for the Susitna, Kenai, Kasilof, and Crescent Rivers. Return estimates and ratios of returns to spawners for years prior to 1984 were taken from Cross et al. (1983b, 1985, 1986).

RESULTS AND DISCUSSION

Catches And Escapements

Commercial fishermen harvested 2,102,767 million sockeye salmon in Upper Cook Inlet in 1984 (Table 2); compared to an average catch from 1954 to 1983 of 1.3 million. The number of permits issued in 1984 equaled 588 drift and 744 set gill net permits and the ex-vessel value of the commercial sockeye salmon harvest was approximately 13.5 million dollars. The majority (58%) of the fish were harvested by the drift fishery which caught 1,228,772 sockeye salmon. Set nets along the east-side beaches harvested 495,616 sockeye salmon which equaled 24% of the inlet-wide catch. Northern District fisheries took 10% (210,947) of the catch and the remaining 8% were caught in set nets along the Central District west-side (132,321) and Kalgin Island (35,111). Peak catches occurred during the two weeks from 6 July to 18 July.

Sport fishing for sockeye salmon in Upper Cook Inlet is concentrated on the Kenai River (Appendix A.1). In 1984, an estimated 37,672 sockeye salmon were harvested by sport fishermen on the Kenai River. Combined sport and personal use harvests of Kasilof River sockeye salmon equaled 28,909 fish. Sport catches of sockeye salmon from the Susitna River and Fish Creek were 3,865 and 499, respectively.

An estimated 1.3 million sockeye salmon escaped Upper Cook Inlet commercial fisheries in 1984 (Table 3). Estimates of total escapement are not available for many systems in Upper Cook Inlet (e.g., Big River, McArthur-Chakachatna Rivers, Beluga River); therefore the above figure is a minimum estimate. The largest escapement of sockeye salmon occurred in the Kenai River (344,571), followed by the Susitna River (279,446), Kasilof River (231,685), Fish Creek (196,062), Crescent River (118,345) and McArthur-Chakachatna Rivers (87,083). Other rivers which had substantial sockeye escapements included Packers Creek (30,864) and Big River (25,099).

Age Composition

Sockeye salmon aged 1.3 dominated the commercial catch, comprising 48% of the total; while fish aged 1.2, 2.3, and 2.2 comprised 20%, 18%, and 11%, respectively (Table 4). Catch proportions by age differed among the fisheries (Appendices A.2- A.9). Age-1.3 fish predominated (55%) in the drift fishery and fish aged 1.2 (16%) and 2.3 (18%) represented similar proportions. Fish harvested on Cohoe/Ninilchik Beach were mostly (34% each) ages 1.2 and 1.3. Age-1.2 and age-1.3 sockeye salmon comprised large percentages of the harvests from Kalifonsky Beach (29% and 38%, respectively), and the Northern District east-side (33% and 40%, respectively). Catches made on Salamatof Beach were predominately (44%) age-1.3 fish, followed by similar proportions of age-1.2 (18%), age-2.3 (17%), and age-2.2 (14%) fish. Higher proportions of fish aged 2.3 (50%) were harvested on the Central District west-side and larger percentages of age 2.2 (24%) fish were taken on Kalgin Island than elsewhere.

Age compositions of sockeye escapements to rivers in Upper Cook Inlet varied considerably among runs (Table 5). Escapement into the Susitna River was primarily composed of fish aged 1.3 (46%) and fish aged 1.2 (40%). Age groups comprising significant percentages of the escapement in the Kenai River included: 1.3 (38%), 1.2 (23%), 2.3 (20%), and 2.2 (13%). Fish aged 1.2 (50%) predominated in the Kasilof River, followed by fish aged 1.3 (25%) and 2.2 (18%). Escapement into Crescent River was mostly (59%) fish aged 2.3 and returns to Fish Creek were primarily (84%) fish aged 1.2. Age-1.3 fish made up the largest percentages in escapements into Big (41%) and McArthur (68%) Rivers. Escapement into Chilligan River was dominated (82%) by fish aged 2.3 and returns to Packers Creek were comprised principally (66%) of fish aged 2.2.

Classification Models

Age Group 1.3

Variables which provided the greatest discrimination among runs of age-1.3 fish were : variable 5 (distance from the focus to circulus 6), variable 67 (size of the first freshwater annular zone divided by the sum of the first freshwater annular zone and the plus growth zone), and variable 109 (size of the second marine annular zone) (Table 1). Freshwater growth was greatest for fish from Big River, followed by fish from Susitna, McArthur, and Kasilof Rivers (Table 6). Fish from Kenai River and Crescent River exhibited a similar size freshwater growth zone which was smaller than the other runs.

Catches of age-1.3 fish made by the drift net fishery were classified with a four-way model which included samples from Susitna, Kenai, Kasilof, and Crescent Rivers. Overall classification accuracy of the four-way model was 67% (Table 7). Percentages correctly classified were reasonably high and similar for Kenai River (70%), Kasilof River (73%), and Crescent River (71%). Correct classification for Susitna River (53%) was substantially lower.

Age-1.3 fish harvested by the Central District east-side set nets were classified with a three-way model representing Susitna, Kenai, and Kasilof Rivers. Overall classification accuracy of this model was 71% (Table 7). Samples from Kenai River, Kasilof River, and Susitna River were correctly classified 79%, 73%, and 60% of the time, respectively.

Set net catches of fish aged 1.3 from the west-side of the Central and Northern Districts were classified with a four-way model representing Susitna, Crescent, Big, and McArthur Rivers. Overall classification accuracy of this model was 64% (Table 7). Classification accuracies were highest for Crescent River (85%), followed by Big River (68%), McArthur River (61%) and Susitna River (41%).

Catches from Kalgin Island were classified with the six-way model which included samples from Susitna, Kenai, Kasilof, Crescent, Big, and McArthur Rivers. Mean classification accuracy of the this model was low (53%) (Table 7). Systems with the highest (66%) classification accuracies were Kenai River and Crescent River. Systems with the lowest (38%) classification accuracies were Susitna River and McArthur River.

Harvests from the Northern District east-side were classified with a two-way model which included samples from Susitna River and Kenai River. Overall classification accuracy of the Susitna/Kenai model equaled 84% (Table 7).

When a catch sample was classified and the estimated contribution of a run was less than or equal to zero, a new model excluding that run was constructed and the catch sample reclassified. The mean classification accuracy of the only five-way model used equaled 61% (Table 7). The range of classification accuracies was 62% to 67% for the four-way models; 66% to 74% for the three- way models; and 62% to 84% for the two-way models.

Age Group 1.2

Scale characters which were the most discriminatory among the runs of age-1.2 fish in order of importance were: variable 65 (number of circuli in the first freshwater annular zone and plus growth zone), variable 15 (distance from circulus 4 to the end of the first freshwater annular zone), and variable 87 (distance from circulus 3 to the end of the first marine annular zone). The mean values of variable 65 were greatest for samples from Fish Creek and Hidden Creek, approximately 1.5 times as large as the mean values for the other systems (Table 8), while Kenai River samples were the third largest. Samples from McArthur River had the smallest mean value for variable 65. Values for variable 65 were similar for samples from Kasilof River and Susitna River. Variable 15 provided discrimination between Fish Creek and Hidden Creek and between Kenai River and the other systems.

Catches of age-1.2 fish by the drift fishery and the east-side set net fisheries were classified with a five-way model which included samples from Susitna River, Kenai River, Hidden Creek, Kasilof River, and Fish Creek. Overall classification accuracy of this model was 62% (Table 9). Percentages of correct classifications were highest for Fish Creek (78%), Kasilof River (62%), and Kenai River (60%). The classification accuracies for Hidden Creek and Susitna River were substantially lower, 55% and 53%, respectively.

Harvests of age-1.2 fish by Northern District east-side set nets were classified with a four-way model (Susitna River, Kenai River, Hidden Creek, and Fish Creek) which produced an overall classification accuracy of 72% (Table 9). Percentages of correct classifications equaled : 83% for Fish Creek, 75% for Kenai River, 67% for Hidden Creek, and 65% for Susitna River.

Northern District west-side harvests were classified with a model representing fish from the Susitna River, Fish Creek, and McArthur River. Mean classification accuracy equaled 90% (Table 9). Fish Creek samples were the most unique with 98% being correctly classified, followed by Susitna River (92%), and McArthur River (79%).

Additional models were constructed whenever the estimated contribution of a river to a catch was zero. Overall classification accuracies ranged from 70% to 74% for four-way models, from 80% to 90% for three-way models, and from 99% to 100% for two-way models (Table 9).

Age Group 2.3

Variables which provided the greatest discrimination among runs of age-2.3 fish were : variable 64 (sum of the widths of the first and second freshwater annular zones), variable 4 (distance from the focus to the fourth circulus in the first freshwater annular zone), variable 61 (number of circuli in the plus growth), and variable 66 (sum of the widths of the first and second freshwater annular zones and plus growth) (Table 1). Freshwater growth was greatest for fish from Big River, followed by fish from Kasilof River (Table 10). Scales from Crescent River fish exhibited the smallest freshwater growth. Freshwater growth was similar for fish from Susitna,

Chilligan, and Kenai Rivers and was intermediate to Big River and Crescent River.

Catches of age-2.3 fish by drift nets were classified with a four-way model (Susitna, Kenai, Kasilof, and Crescent Rivers) which had an overall classification accuracy of 68% (Table 11). Percentages correctly classified were high for Kasilof River (84%), and Crescent River (73%). Correct classifications for Kenai River (63%) and Susitna River (50%) were substantially lower.

Age-2.3 fish harvested by Central District east-side set nets were classified with a three-way model representing Susitna, Kenai, and Kasilof Rivers. Overall classification accuracy of this model was 72% (Table 11). Samples from Kasilof River were classified correctly 81% of the time, those from Kenai River 75% of the time; and samples from Susitna River 62% of the time.

Set net catches of fish aged 2.3 from the west-side of the Central and Northern Districts were classified with a four-way model representing Susitna, Crescent, Big, and Chilligan Rivers. Overall classification accuracy of this model was 77% (Table 11). Classification accuracies were highest (86%) for Crescent River and Big River, followed by Chilligan River (83%) and Susitna River (52%).

Harvests from the Northern District east-side were classified with a two-way model which included samples from Susitna River and Kenai River. Overall classification accuracy of the Susitna/Kenai model equaled 82% (Table 11).

Catch Apportionment

Age Group 1.3

Point estimates and confidence intervals of fish aged 1.3 estimated by analysis of scale patterns show temporal and spatial trends in run composition (Tables 12 and 13). Catches of age-1.3 fish made by the drift and east-side set net fisheries were comprised of increasing proportions of Kenai River fish, and conversely decreasing proportions of Kasilof River fish, through time. Temporal trends are not evident in the contributions of Susitna River and Crescent River. The percentages of Susitna River fish in the drift catch of age-1.3 fish remained high throughout the season. Crescent River sporadically contributed small percentages to the drift catch. The proportions of Susitna River fish in catches from Coho/Ninilchik Beach were low early in the season, increased rapidly from 11-13 July, and gradually decreased late in the season.

Susitna River fish accounted for most of the age-1.3 sockeye salmon harvested by the drift (50%), Northern District east-side (99%), and Northern District west-side (60%) fisheries (Table 13). Fish aged 1.3 caught on the east-side beaches were predominately of Kenai River origin. Kenai River contributed 80% to the Salamatof Beach harvest, 48% to the Kalifonsky Beach harvest, and 49% to the Coho/Ninilchik Beach harvest. Age-1.3 fish taken by the Central District west-side fishery were predominantly (78%)

Crescent River fish. Catches sampled from Kalgin Island classified mostly (49%) as Big River fish. The estimates of run composition for Kalgin Island may not be representative because the fishery was only sampled twice and the estimates of run contribution differed significantly between the two sampled dates. Obtaining representative samples from Kalgin Island is difficult because catches are divided among several tenders and usually mixed with fish from other areas.

Coefficients of variation for estimated proportions of the age- 1.3 catch were lowest for the major contributors : .08 for Susitna River, .07 for Kenai River, and .12 for Kasilof River (Table 13). The estimated proportions of Big, and McArthur Rivers fish exhibited large coefficients of variation, .20, .23, and .48, respectively.

Age Group 1.2

Temporal trends are not evident in the estimates of run composition and confidence intervals calculated from scale pattern analysis of age-1.2 sockeye salmon (Table 14). Kasilof River comprised the largest (39%) percentage of the drift catch of fish aged 1.2, followed by Fish Creek (33%), Susitna River (19%), and Kenai River (9%). Age-1.2 harvests made on the east-side beaches were comprised primarily of fish from the Kasilof River. Kasilof River contributed 68% of the Coho/Ninilchik Beach catch, 79% of the Kalifonsky Beach catch, and 30% of the Salamatof Beach catch. Catches of fish aged 1.2 made by the Northern District east-side and west-side fisheries were comprised mostly of fish from Susitna River and Fish Creek.

Coefficients of variation were not calculated for the estimated catch of age-1.2 fish because scale patterns were not analyzed for all catch strata.

Age Group 2.3

Temporal trends are not evident in the estimates of run composition and confidence intervals calculated from scale pattern analysis of age-2.3 sockeye salmon (Table 15). Kenai River fish accounted for most of the age-2.3 sockeye salmon harvested by the drift (42%), Salamatof Beach (89%), Kalifonsky Beach (62%), and Coho/Ninilchik Beach (54%) fisheries (Table 16). The majority of fish aged 2.3 harvested by Northern District east-side (94%) and Northern District west-side (52%) set nets were of Susitna River origin. Crescent River contributed a large percentage (82%) of the age-2.3 harvest from the Central District west-side; while Big River was the largest (48%) contributor to the Kalgin Island age-2.3 harvest.

Coefficients of variation were not calculated for the estimated catch of age-2.3 fish because scale patterns were not analyzed for all catch dates.

All Ages

Estimated contributions by river to the 1984 Upper Cook Inlet sockeye salmon harvest equaled: 33% Susitna River, 28% Kenai River, 25% Kasilof River, 6%

Crescent River, 4% Fish Creek, 2% Big River, 1% McArthur River, and 0.4% Chilligan River (Table 16).

Fish returning to Susitna River accounted for most of the harvested fish aged 0.2 (78%), 1.1 (98%), 0.3 (68%), 0.4 (47%), and 1.3 (44%) (Table 16). The majority of sockeye salmon harvested from the age groups 2.1 (48%), 1.4 (95%), and 2.3 (35%) were of Kenai River origin. Kasilof River contributed the largest percentages to the age-1.2 (43%) and age-2.2 (38%) catches. Run composition estimates through time for the individual fisheries are reported in Appendices B.1 - B.8.

The drift fishery accounted for the majority of the harvest of four of the five major runs: 70% of the Susitna River fish, 60% of the Kenai River fish, 57% of the Kasilof River fish, and 75% of the Fish Creek fish (Table 17). Set nets along the west-side of the Central District caught most (80%) of the harvested Crescent River fish. In addition to the drift fishery, set nets in the Northern District harvested a significant percentage (21%) of the total Susitna River catch. Of the Kenai River fish harvested, the drift catch was followed in magnitude by catches made by set nets on Cohoe/Ninilchik Beach (17%), Salamatof Beach (11%) and Kalifonsky Beach (10%). Fisheries which accounted for large portions of the Kasilof River catch were: Cohoe/Ninilchik Beach (26%) and Kalifonsky Beach (16%). The Northern District set nets were important harvesters of Fish Creek fish (22%). Big, McArthur, and Chilligan Rivers were only included in the determination of stock composition for catches by set nets along the west-side of the Northern and Central Districts and Kalgin Island. Of those fisheries, the Northern District took most of fish caught from the McArthur River (98%) and Chilligan River (53%), and Kalgin Island harvested most (56%) of the Big River fish.

Misclassification Of Minor Systems

The reader should remain cognizant of the fact that the minor systems (Big River, McArthur River, Chilligan River, and Packers Creek) were not included in the determination of stock structure of the drift harvest. Consequently, estimates of contribution to the catch by the five major producers are inflated (conversely, estimates of contribution by minor systems are under estimated) because fish from the minor systems caught by the drift fishery were misclassified to one of the larger systems. We classified samples from the minor systems with models representing the major rivers. Five of the eight samples from the minor systems classified predominately to the Susitna River (Table 18). Age-1.3 samples from Chilligan River, Big River, and Packers Creek classified mostly to Susitna River, as did the age-1.2 samples from McArthur River and the age-2.3 samples from Chilligan River. Two of the eight samples from the minor systems (age 2.3 samples from Big River and Packers Creek) classified predominately to Kasilof River. Fish aged 1.3 from McArthur River classified as Susitna and Kasilof Rivers.

Based on these results it appears that fish harvested in 1984 from the minor systems were primarily misclassified to Susitna River and secondarily to Kasilof River. Consequently, the estimates of contribution to the catch in

1984 for Susitna River and Kasilof River are probably too high. Estimates of contribution for Kenai River, Crescent River, and Fish Creek were probably affected very little by the misclassification of the minor systems. The only samples which misclassified to Kenai River were 3% of the age-1.3 McArthur River samples. Packers Creek age-1.3 scales (3%) were the only samples misclassified to Crescent River. None of the samples from the minor systems classified to Fish Creek.

Returns By River System

An estimated 3.4 million sockeye salmon returned to Upper Cook Inlet in 1984 (Table 18). Returns of sockeye salmon by river were estimated as follows: 968,920 to Susitna River, 942,124 to Kenai River, 781,758 to Kasilof River, 251,104 to Crescent River, 286,051 to Fish Creek, 61,593 to Big River, 51,994 to McArthur River, and 68,420 to Chilligan River. The reader should be aware that only minimum return estimates for Big, McArthur, and Chilligan Rivers are presented because they were not included in the apportionment of the drift harvest and the entire escapements were not enumerated.

Exploitation Rates

The rate of exploitation by the commercial fishery in 1984 was highest for fish returning to Susitna River (71%) and lowest for fish returning to Fish Creek (33%). The exploitation rate for Kasilof River fish (67%) was similar to the rate for Kenai River fish (63%). Crescent River fish were exploited by the commercial fishery at a rate of 53%. We did not compute exploitation rates for the minor systems because total catches and escapements were not estimated.

Summary Of Catch Contributions, 1978-1984

The origins of fish commercially harvested in Upper Cook Inlet have been estimated since 1978 (Table 19). The Kenai River has consistently been the largest contributor of sockeye salmon to the commercial harvest. From 1978 to 1984, percentages of Kenai River fish in the catch have ranged from a low of 28% in 1984 to a high of 71% in 1978. Contributions by Susitna River (from 8% in 1982 to 33% in 1984) and Kasilof River (from 9% in 1983 to 39% in 1980) have exhibited similar ranges from 1978 to 1984. Fish returning to Crescent River (1% - 6%) and Fish Creek (0.2% - 5%) accounted for significantly smaller portions of the commercial catch from 1978 to 1984.

Returns Per Spawner

Estimates of returns per spawner for brood years 1968 through 1977 for the Susitna, Kenai, Kasilof, and Crescent Rivers were estimated by Cross et al. (1983b, 1985, and 1986). Return estimates for age groups 1.3 and 2.2 from

the 1978 brood year, and age group 1.2 from the 1979 brood year are documented by Cross et al. (1986). Apportionment of the 1984 catch of sockeye salmon to age group and river provides return estimates for age group 2.3 from the 1978 brood year, age groups 1.3 and 2.2 from the 1979 brood year, and age group 1.2 from the 1980 brood year. Results from the 1984 catch apportionment were used to finalize the ratios of returns per spawner for the 1978 brood year and provide minimum estimates for the ratios of returns per spawner for the 1979 brood year (Tables 20-24). Ratios for the 1979 brood year are incomplete because the six-year-old fish returning in 1985 are not included in the estimates of return.

The preliminary estimate of returns per spawner from the 1979 brood year for Susitna River is 6.6 which is greater than the 1968-78 average of 5.0. Ratios of returns per spawner for Susitna River have ranged from a low of 1.9 in 1977 to a high of 8.5 in 1976 and 1978 (Table 20). The preliminary 1979 estimate for Kenai River is 2.9 returns per spawner which is substantially lower than 1968-78 average of 6.4. Kenai River ratios of returns per spawner have ranged from a low of 3.3 in 1976 to a high of 11.1 in 1968 (Table 21). The preliminary ratio of returns per spawner for Kasilof River for the 1979 brood year is 4.5 which is also lower than the 1968-78 average of 6.3. Kasilof River ratios of returns per spawner were lowest in 1968 at 2.0 and highest in 1975 at 12.3 (Table 22). The preliminary 1979 estimate for Crescent River is 1.5 returns per spawner which is less than the 1968-78 average of 2.8. Ratios of returns per spawner for Crescent River are generally lower than the other systems, and have ranged from 0.8 in 1969 to 6.1 in 1978 (Table 23).

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Table 1. Scale variables screened for linear discriminant function analysis of ages-1.2, -1.3 and -2.3 sockeye salmon, Upper Cook Inlet 1984.

Variable Number	Variable Name	Zone

First Freshwater Annular Zone		

1	NC1FW	Number of circuli first freshwater
2	S1FW	Size (width) of first freshwater
3 (16)	C0-C2	Distance, scale focus (C0) to circulus 2 (C2)
4 (17)	C0-C4	Distance, scale focus to circulus 4
5 (18)	C0-C6	Distance, scale focus to circulus 6
6 (19)	C0-C8	Distance, scale focus to circulus 8
7 (20)	C2-C4	Distance, circulus 2 to circulus 4
8 (21)	C2-C6	Distance, circulus 2 to circulus 6
9 (22)	C2-C8	Distance, circulus 2 to circulus 8
10 (23)	C4-C6	Distance, circulus 4 to circulus 6
11 (24)	C4-C8	Distance, circulus 4 to circulus 8
12 (25)	C(NC-4)-E1FW	Distance, circulus (number circuli first freshwater minus 2) to end first freshwater
13 (26)	C(NC-2)-E1FW	Distance, circulus (number circuli first freshwater minus 4) to end first freshwater
14	C2-E1FW	Distance, circulus 2 to end first freshwater
15	C4-E1FW	Distance, circulus 4 to end first freshwater
16 thru	C0-C2/S1FW ...	Relative widths, (variables 3-13)/S1FW
26	C(NC-2)-E1FW/S1FW	
27	S1FW/NC1FW	Average interval between circuli in first freshwater
28	NC 1ST 3/4	Number of circuli in first 3/4 of first freshwater
29	MAX DIST	Maximum distance between 2 consecutive circuli in first freshwater
30	MAX DIST/S1FW	Relative width, (variable 29)/S1FW

-continued-

Table 1. (p 2 of 3).

Variable Number	Variable Name	Zone
----- Second Freshwater Annular Zone -----		
31	NC2FW	Number of circuli second freshwater
32	S2FW	Size (width) of second freshwater
33 (46)	E1FW-C2	Distance, end of first freshwater to circulus 2 (C2) in second freshwater
34 (47)	E1FW-C4	Distance, end of first freshwater to circulus 4
35 (48)	E1FW-C6	Distance, end of first freshwater to circulus 6
36 (49)	E1FW-C8	Distance, end of first freshwater to circulus 8
37 (50)	C2-C4	Distance, circulus 2 to circulus 4
38 (51)	C2-C6	Distance, circulus 2 to circulus 6
39 (52)	C2-C8	Distance, circulus 2 to circulus 8
40 (53)	C4-C6	Distance, circulus 4 to circulus 6
41 (54)	C4-C8	Distance, circulus 4 to circulus 8
42 (55)	C(NC-4)-E2FW	Distance, circulus (number circuli second freshwater minus 4) to end second freshwater
43 (56)	C(NC-2)-E2FW	Distance, circulus (number circuli second freshwater minus 2) to end second freshwater
44	C2-E2FW	Distance, circulus 2 to end second freshwater
45	C4-E2FW	Distance, circulus 4 to end second freshwater
46 thru	E1FW-C2/S2FW ...	Relative widths, (variables 33-43)/S2FW
56	C(NC-2)-E2FW/S2FW	
57	S2FW/NC2FW	Average interval between circuli in second freshwater
58	NC 1ST 3/4	Number of circuli in first 3/4 of second freshwater
59	MAX DIST	Maximum distance between 2 consecutive circuli in second freshwater
60	MAX DIST/S2FW	Relative width, (variable 59)/S2FW
----- Plus Growth Zone -----		
61	NCPG	Number of circuli in plus growth
62	SPGZ	Size (width) plus growth zone
----- Freshwater and Plus Growth Zones -----		
63	NC1 + NC2	Total number of circuli first and second freshwater
64	S1FW + S2FW	Total size (width) of first and second freshwater
65	NC1FW+NC2FW+NCPG	Total number of circuli first and second freshwaters and plus growth
66	S1FW+S2FW+SPGZ	Total size (width) first and second freshwaters and plus growth
67	S1FW/S1FW+S2FW+SPGZ	Relative width, (variable 2)/S1FW+S2FW+SPGZ
68	SPGZ/S1FW+S2FW+SPGZ	Relative width, (variable 62)/S1FW+S2FW+SPGZ
69	S2FW/S1FW+S2FW+SPGZ	Relative width, (variable 32)/S1FW+S2FW+SPGZ

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Table 1. (p 3 of 3).

Variable Number	Variable Name	Zone
----- First Marine Annular Zone -----		
70	NC10Z	Number of circuli in first ocean zone
71	S10Z	Size (width) first ocean zone
72 (90)	EFW-C3	Distance, end of freshwater growth to circulus 3
73 (91)	EFW-C6	Distance, end of freshwater growth to circulus 6
74 (92)	EFW-C9	Distance, end of freshwater growth to circulus 9
75 (93)	EFW-C12	Distance, end of freshwater growth to circulus 12
76 (94)	EFW-C15	Distance, end of freshwater growth to circulus 15
77 (95)	C3-C6	Distance, circulus 3 to circulus 6
78 (96)	C3-C9	Distance, circulus 3 to circulus 9
79 (97)	C3-C12	Distance, circulus 3 to circulus 12
80 (98)	C3-C15	Distance, circulus 3 to circulus 15
81 (99)	C6-C9	Distance, circulus 6 to circulus 9
82 (100)	C6-C12	Distance, circulus 6 to circulus 12
83 (101)	C6-C15	Distance, circulus 6 to circulus 15
84 (102)	C9-C15	Distance, circulus 9 to circulus 15
85 (103)	C(NC-6)-E10Z	Distance, circulus (number circuli first ocean minus 6) to end first ocean
86 (104)	C(NC-3)-E130Z	Distance, circulus (number circuli first ocean minus 3) to end first ocean
87	C3-E10Z	Distance, circulus 3 to end of first ocean
88	C9-E10Z	Distance, circulus 9 to end of first ocean
89	C15-E10Z	Distance, circulus 15 to end of first ocean
90 thru	EFW-C3/S10Z ...	Relative widths, (variables 72-86)/S10Z
104	C(NC-3)-E130Z/S10Z	
105	S10Z/NC10Z	Average interval between circuli in first ocean
106	NC 1ST 1/2	Number of circuli in first 1/2 of first ocean
107	MAX DIST	Maximum distance between 2 consecutive circuli in first ocean
108	MAX DIST/S10Z	Relative width, (variable 107)/S10Z
----- Second Marine Annular Zone -----		
109	S20Z	Size (width) of second ocean zone

Table 2. Sockeye salmon commercial catch in numbers of fish by fishery and date, Upper Cook Inlet 1984. Blanks indicate a fishery was closed.

Date	Northern Dist. East-side Set	Northern Dist. West-side Set	Central Dist. Drift	Central Dist. West-side Set	Kalgin Island Set	Salamatof Beach Set	Kalifonsky Beach Set	Cohoe/Ninilchik Beach Set	Total
6/18				1,043					1,043
6/22				2,200					2,200
6/25	279	123	16,176	2,713	1,901				21,192
6/29	1,533	340	23,734	3,242	1,462				30,311
7/02	1,125	468	52,317	4,584	1,741		2,935	10,365	73,535
7/06	1,922	712	212,869	7,035	1,449		2,690	12,540	239,217
7/09	2,098	3,606	206,215	7,518	3,037	5,645	20,612	31,326	280,057
7/10			62,917				18,872	13,968	95,757
7/11				4,039			4,826	7,289	16,154
7/12				5,992			3,522	11,590	21,104
7/13	915	1,736	253,226	8,379	3,820	472	1,161	8,855	278,564
7/14				1,985					1,985
7/15				5,537					5,537
7/16	5,760	38,812	251,748	9,464	4,583	33,934	31,130	31,595	407,026
7/17				6,563			25,099	45,458	77,120
7/18	36,240	50,575	114,083	12,808	2,661	29,681	36,378	69,244	351,670
7/19	8,702	16,721		4,955					30,378
7/20	797	865		8,301					9,963
7/21				2,630					2,630
7/22				6,722	379				7,101
7/23				4,422					4,422
7/24				4,942					4,942

-continued-

Table 2. (p 2 of 2).

Date	Northern Dist. East-side Set	Northern Dist. West-side Set	Central Dist. Drift	Central Dist. West-side Set	Kalgin Island Set	Salamatof Beach Set	Kalifonsky Beach Set	Cohoe/Ninilchik Beach Set	Total
7/25				2,470					2,470
7/26				3,091					3,091
7/27	6,017	13,186	14,796	4,740	4,014			4,773	47,526
7/30	1,679	4,951	12,062	1,966	2,339	6,703	3,547	6,158	39,405
7/31	2,365								2,365
8/03	2,252	3,209	4,608	2,030	1,973	3,740	2,282	2,425	22,519
8/06	1,262	884	2,906	1,221	1,853	1,898	1,064	1,250	12,338
8/10	712	350	607	667	1,685	753	349	765	5,888
8/13	204	26	284	520	702	294	155	273	2,458
8/17	161	27	48	310	406				952
8/20	236	1	116	55	456				864
8/24	70	2	17	20	248				357
8/27	4	1	1	60	105				171
8/31	3	0	10	94	150				257
9/03	11	1	4	3	47				66
9/07	2		8	0	50				60
9/10	2		14	0	37				53
9/14	0		0	0					0
9/17	0		1	0	13				14
9/21	0		5	0	0				5
9/24			0						0
Total	74,351	136,596	1,228,772	132,321	35,111	83,120	154,622	257,874	2,102,767

Table 3. Escapement of sockeye salmon in Upper Cook Inlet, 1984.

System	Numbers	Method
Susitna River		
Susitna Station (East Bank) ^a	45,105	Sonar
Yentna Station ^b	149,375	Sonar
Sunshine Station ^b	130,071	Mark-Recapture
Talkeetna Station ^b	13,050	Mark-Recapture
Curry Station ^b	3,593	Mark-Recapture
Total ^c	279,446	
Kenai River		
Total Mainstem ^a	344,571	Sonar
Russian River ^{a d}	95,660	Weir
Quartz Creek ^e	37,671	Weir
Hidden Creek ^e	27,832	Weir
Kasilof River ^a	231,685	Sonar
Crescent River ^a	118,345	Sonar
Fish Creek ^f	196,062	Weir
Nancy Lake ^a	8,900	Aerial Survey
Chickaloon River ^a	473	Aerial Survey
Mystery Creek ^a	784	Aerial Survey
Bishop Creek ^g	11,433	Aerial Survey

-continued-

Table 3. (p 2 of 2).

System	Numbers	Method
Packers Creek ^g	30,864	Weir
Big River ^a	25,099	Aerial Survey
McArthur-Chakachatna Rivers ^a	87,083	Aerial Survey
Beluga River		
Coal Creek ^a	9,455	Aerial Survey

^a Source: King, B. and K. Tarbox (In press).

^b Source: Barrett, B., F. Thompson, and S. Wick (1985).

^c Estimate of total Susitna River escapement equals the summation of the Yentna River and Sunshine Station escapement estimates.

^d Weir counts represent late run only (after 17 July).
Source: Athons, David (ADF&G, personal communication).

^e Source: Flagg, Loran (ADF&G, personal communication).

^f Source: Chlupach, Robert (ADF&G, personal communication).

^g Source: Marcusson, Patrick (Cook Inlet Aquaculture Association, personal communication).

Table 4. Age composition by brood year of the commercial sockeye salmon harvest, Upper Cook Inlet 1984.

		1981		1980				1979		1978			1977		Total
Fishery		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	
Northern	Percent	0.0 ^a	0.0 ^a	1.1	33.2	0.0	0.0	40.5	13.7	0.3	10.8	0.4	0.0 ^a	0.0	100.0
East-side	Numbers	13	27	835	24,705	0	0	30,058	10,187	196	7,992	311	27	0	74,351
Set Net	SE	12	26	178	910	0	0	961	584	107	6,266	106	26	0	
Northern	Percent	0.1	0.0	5.4	21.7	0.0	0.0 ^a	51.0	6.4	0.7	14.3	0.0	0.4	0.0	100.0
West-side	Numbers	137	0	7,469	29,631	0	46	69,627	8,743	865	19,532	0	546	0	136,596
Set Net	SE	96	0	921	1,695	0	56	2,038	992	331	1,431	0	271	0	
Central	Percent	0.1	0.0 ^a	2.0	16.3	0.0	0.0	55.0	7.6	1.2	17.7	0.0 ^a	0.1	0.0 ^a	100.0
District	Numbers	641	105	24,618	200,482	0	0	676,125	92,853	14,676	217,701	298	1,213	60	1,228,772
Drift Net	SE	475	105	2,818	7,218	0	0	9,936	5,227	2,169	7,680	132	546	59	
Central	Percent	0.0	0.0 ^a	0.1	5.2	0.1	0.0	25.8	18.1	0.2	50.2	0.1	0.2	0.0 ^a	100.0
West-side	Numbers	0	25	122	6,943	99	0	33,968	23,982	316	66,377	137	291	61	132,321
Set Net	SE	0	25	100	632	74	0	1,256	1,131	144	1,424	96	167	42	
Kalgin	Percent	0.1	0.0	0.9	16.7	0.1	0.0	39.5	23.9	0.4	17.5	0.9	0.0	0.0	100.0
Island	Numbers	44	0	311	5,867	44	0	13,877	8,380	133	6,143	312	0	0	35,111
Set Net	SE	44	0	115	492	44	0	630	541	76	471	126	0	0	

-continued-

Table 4. (p 2 of 2).

		1981		1980				1979		1978			1977		Total
Fishery		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	
Salamatof	Percent	0.1	0.0	1.7	17.8	0.1	0.0	43.9	14.3	3.5	17.1	1.2	0.3	0.0	100.0
Beach	Numbers	51	0	1,423	14,797	71	0	36,476	11,934	2,943	14,189	1,016	220	0	83,120
Set Net	SE	50	0	259	760	49	0	1,001	697	371	771	221	109	0	
Kalifonsky	Percent	0.1	0.0	0.7	29.4	0.0 ^a	0.0 ^a	38.2	16.3	1.0	14.2	0.1	0.0 ^a	0.0	100.0
Beach	Numbers	91	0	944	45,429	85	24	59,058	25,071	1,533	22,072	243	72	0	154,622
Set Net	SE	91	0	248	1,321	85	23	1,503	1,108	304	1,118	120	40	0	
Cohoe/ Ninilchik	Percent	0.0 ^a	0.0 ^a	0.6	34.4	0.0 ^a	0.0	33.8	17.6	1.1	12.5	0.0 ^a	0.0 ^a	0.0	100.0
Beach	Numbers	18	100	1,649	88,411	68	0	86,991	45,471	2,873	32,175	29	89	0	257,874
Set Net	SE	17	59	473	2,534	55	0	2,546	1,888	609	1,760	20	57	0	
Total	Numbers	995	257	37,371	416,265	367	70	1,006,180	226,621	23,535	386,181	2,346	2,458	121	2,102,767
	Percent	0.0 ^a	0.0 ^a	1.8	19.8	0.0 ^a	0.0 ^a	47.9	10.8	1.1	18.4	0.1	0.1	0.0 ^a	100.0
	SE	498	126	3,033	8,074	141	61	10,748	5,958	2,335	10,367	343	646	72	

^a Fish present, but represent less than 0.1%.

Table 5. Age composition by brood year of sockeye salmon escapement, Upper Cook Inlet 1984.

System	Sample Size	1981		1980			1979			1978			1977		Total
		0.2	1.1	0.3	1.2	2.1	0.4	1.3	2.2	1.4	2.3	3.2	3.3	2.4	
Susitna River															
Susitna ^a	397	Numbers	135	451	1,624	18,809	226	15,200	5,232		3,293			135	45,105
Station		Percent	0.3	1.0	3.6	41.7	0.5	33.7	11.6		7.3			0.3	100.0
Yentna ^b	2,253	Numbers	299	1,942	2,390	35,402	448	89,028	9,709	149	10,008				149,375
Station		Percent	0.2	1.3	1.6	23.7	0.3	59.6	6.5	0.1	6.7				100.0
Sunshine ^b	970	Numbers	1,041	4,422	2,862	77,132	1,301	38,111	4,292		910				130,071
Station		Percent	0.8	3.4	2.2	59.3	1.0	29.3	3.3		0.7				100.0
Talkeetna ^b	453	Numbers	91	52	574	10,323	52	52	1,658	196		52			13,050
Station		Percent	0.7	0.4	4.4	79.1	0.4	0.4	12.7	1.5		0.4			100.0
Curry ^b	212	Numbers	68	68	137	2,335	137	18	589	205	18	18			3,593
Station		Percent	1.9	1.9	3.8	65.0	3.8	0.5	16.4	5.7	0.5	0.5			100.0
Total ^c	3,223	Numbers	1,340	6,364	5,252	112,534	1,749	127,139	14,001	149	10,918				279,446
		Percent	0.5	2.3	1.9	40.3	0.6	45.5	5.0	Trace	3.9				
Kenai River															
Total ^a	2,067	Numbers	345		3,790	79,596	1,723	130,248	45,483	12,404	67,191	3,446	345		344,571
		Percent	0.1		1.1	23.1	0.5	37.8	13.2	3.6	19.5	1.0	0.1		100.0
Quartz ^d	438	Numbers			75	2,825		21,171	264	942	12,406			188	37,671
Creek		Percent			0.2	7.5		56.2	0.7	2.5	32.4			0.5	100.0

-continued-

Table 5. (p 2 of 3).

System	Sample Size	1981		1980			1979			1978		1977		Total
		0.2	1.1	0.3	1.2	2.1	0.4	1.3	2.2	1.4	2.3	3.2	3.3	

Kenai River														
Russian ^e	225	Numbers			21,715			14,923	45,055		13,584	383		95,660
River		Percent			22.7			15.6	47.1		14.2	0.4		100.0
Hidden ^d	715	Numbers	28		26,357	139		390	891		27			27,832
Creek		Percent	0.1		94.7	0.5		1.4	3.2		0.1			100.0
Kasilof ^a	2,269	Numbers			117,001	463		57,458	41,472		15,291			231,685
River		Percent			50.5	0.2		24.8	17.9		6.6			100.0
Crescent ^a	780	Numbers			4,142			20,000	23,669		70,297	237		118,345
River		Percent			3.5			16.9	20.0		59.4	0.2		100.0
Fish ^d	1,338	Numbers	1,346		161,961	1,346		10,964	14,811		1,539	385		192,352
Creek		Percent	0.7		84.2	0.7		5.7	7.7		0.8	0.2		100.0
Packers ^d	1,400	Numbers		31	1,327	1,697		5,247	20,247	31	2,284			30,864
Creek		Percent		0.1	4.3	5.5		17.0	65.6	0.1	7.4			100.0
Big River ^d	138	Numbers	1,280		7,103			10,190	904	176	5,446			25,099
South Fork		Percent	5.1		28.3			40.6	3.6	0.7	21.7			100.0
Wolverine														
Creek	352	Percent			4.5	0.9		10.8	72.7		11.1			100.0

-continued-

Table 5. (p 3 of 3).

System	Sample Size	1981		1980			1979			1978			1977		Total
		0.2	1.1	0.3	1.2	2.1	0.4	1.3	2.2	1.4	2.3	3.2	3.3	2.4	
McArthur ^d River	592	Numbers	185		979	6,560		17,855	397		476				26,452
		Percent	0.7		3.7	24.8		67.5	1.5		1.8				100.0
Chilligan ^d River	598	Numbers			728		5,578	4,850		49,475					60,631
		Percent			1.2		9.2	8.0		81.6					100.0

^a Source: King, B. and K. Tarbox (In press).

^b Source: Barrett, B., F. Thompson, and S. Wick (1985).

^c Age composition of total represents the summation of the Yentna Station and Sunshine Station numbers of fish by age.

^d Age composition taken from original age-weight-length (AWL) data forms.

^f Source: Athons, Dave (ADF&G, personal communication).

Table 6. Mean(\bar{x}) and standard error (SE) of age-1.3 scale variables used to construct linear discriminant functions in 1984.

	Susitna		Kenai		Kasilof		Crescent		Big		McArthur	
	\bar{x}	SE										
First Freshwater Annulus												
NC1FW	10.08	0.176	8.20	0.186	9.99	0.097	8.33	0.160	11.18	0.295	10.01	0.124
S1FW	119.38	1.885	90.26	2.164	128.11	1.057	87.85	1.378	133.95	3.322	120.59	1.566
C0-C4	65.58	0.635	55.64	0.580	70.98	0.449	55.80	0.752	65.26	0.871	65.13	0.654
C0-C6	85.03	0.802	72.87	0.692	92.95	0.529	71.06	0.847	86.35	1.047	85.62	0.793
C2-C6	42.39	0.568	35.12	0.451	47.64	0.420	32.95	0.560	43.95	0.698	43.07	0.554
C4-C6	19.44	0.294	16.72	0.248	22.00	0.266	15.15	0.344	21.10	0.490	20.49	0.337
C(NC-4)-E1FW	34.33	0.515	31.65	0.317	35.61	0.394	29.60	0.398	34.99	0.709	34.28	0.427
C4-E1FW	53.80	1.689	34.63	1.844	57.14	0.980	32.05	1.167	68.69	3.070	55.45	1.387
C0-C2/S1FW	0.37	0.006	0.44	0.007	0.36	0.004	0.44	0.008	0.33	0.008	0.36	0.005
C0-C4/S1FW	0.57	0.008	0.65	0.008	0.56	0.005	0.64	0.009	0.51	0.012	0.55	0.007
C4-C6/S1FW	0.17	0.003	0.19	0.004	0.17	0.002	0.17	0.004	0.16	0.004	0.17	0.002
C(NC-4)-E1FW/S1FW	0.30	0.006	0.38	0.008	0.28	0.004	0.35	0.007	0.27	0.009	0.29	0.004
C(NC-2)-E1FW/S1FW	0.14	0.003	0.19	0.004	0.13	0.002	0.17	0.004	0.13	0.005	0.14	0.003
S1FW/NC1FW	12.06	0.130	11.04	0.079	12.92	0.081	10.67	0.118	12.09	0.144	12.10	0.103
NC 1ST 3/4	6.03	0.129	4.84	0.133	5.81	0.070	4.80	0.118	6.82	0.208	5.97	0.100
MAX DIST/S1FW	0.13	0.002	0.15	0.002	0.13	0.001	0.14	0.002	0.12	0.003	0.12	0.002
Plus Growth												
NCPG	3.48	0.116	5.33	0.114	3.25	0.097	3.72	0.133	3.96	0.207	3.71	0.121
SPGZ	37.19	1.339	55.75	1.261	34.80	1.088	38.26	1.382	46.01	2.776	39.79	1.291

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Table 6. (p 2 of 2).

	Susitna		Kenai		Kasilof		Crescent		Big		McArthur	
	\bar{x}	SE										
Freshwater and Plus Growth												
NC1FW + NCPG	13.56	0.158	13.53	0.175	13.23	0.105	12.05	0.155	15.14	0.218	13.72	0.122
S1FW + SPGZ	156.56	1.660	146.01	2.115	162.91	1.118	126.11	1.546	179.96	3.028	160.37	1.409
S1FW/S1FW + SPGZ	0.76	0.008	0.61	0.008	0.79	0.006	0.70	0.009	0.75	0.014	0.75	0.008
First Marine Annulus												
NC10Z	24.73	0.172	26.65	0.184	25.87	0.167	25.79	0.260	24.68	0.324	24.85	0.211
S10Z	395.73	3.144	424.78	2.723	414.82	2.835	407.79	4.369	385.23	4.505	404.54	3.489
EFW-C9	152.21	1.212	146.80	0.932	152.15	1.022	142.75	1.452	149.85	1.961	157.30	1.187
EFW-C15	256.45	1.763	253.05	1.334	257.85	1.472	246.90	2.229	252.24	2.701	262.55	1.746
C3-C6	51.68	0.619	49.20	0.518	51.95	0.525	47.76	0.841	52.49	0.961	53.74	0.592
C9-E10Z	243.52	2.916	277.98	2.855	262.68	2.715	265.04	4.124	235.38	4.657	247.24	3.262
C15-E10Z	139.29	2.735	171.73	2.847	156.98	2.631	160.89	4.121	132.99	4.620	142.95	3.128
EFW-C12/S10Z	0.52	0.004	0.47	0.004	0.50	0.004	0.48	0.006	0.53	0.008	0.52	0.005
EFW-C15/S10Z	0.65	0.005	0.60	0.005	0.63	0.004	0.61	0.007	0.66	0.009	0.66	0.006
C(NC-3)-E130Z/S10Z	0.10	0.001	0.10	0.001	0.10	0.001	0.10	0.002	0.10	0.002	0.10	0.001
S10Z/NC10Z	16.03	0.091	15.98	0.070	16.07	0.080	15.85	0.119	15.69	0.149	16.32	0.097
NC 1ST 1/2	11.18	0.097	12.28	0.100	11.72	0.091	12.15	0.142	11.12	0.168	11.15	0.106
Second Marine Annulus												
S20Z	304.99	2.896	345.17	2.957	317.48	2.772	338.74	4.470	294.11	4.911	316.43	3.536

Table 7. Classification matrices from discriminant analyses of age-1.3 sockeye salmon scales from the Susitna, Kenai, Kasilof, Crescent, Big, and McArthur Rivers, Upper Cook Inlet 1984. Proportion of samples correctly classified are underlined.

Actual Group Of Origin	Sample Size	Classified Group of Origin					
		Susitna	Kenai	Kasilof	Crescent	Big	McArthur
Susitna	200	<u>0.385</u>	0.080	0.160	0.115	0.105	0.155
Kenai	211	0.066	<u>0.659</u>	0.038	0.076	0.038	0.123
Kasilof	200	0.100	0.015	<u>0.605</u>	0.015	0.110	0.155
Crescent	100	0.040	0.210	0.010	<u>0.660</u>	0.000	0.080
Big	74	0.135	0.068	0.108	0.054	<u>0.514</u>	0.122
McArthur	150	0.160	0.060	0.233	0.053	0.113	<u>0.380</u>

Overall correctly classified = .534

Actual Group Of Origin	Sample Size	Classified Group of Origin				
		Susitna	Kenai	Kasilof	Crescent	Big
Susitna	200	<u>0.425</u>	0.085	0.210	0.140	0.140
Kenai	211	0.090	<u>0.668</u>	0.085	0.109	0.047
Kasilof	200	0.150	0.020	<u>0.665</u>	0.030	0.135
Crescent	100	0.050	0.160	0.040	<u>0.750</u>	0.000
Big	74	0.189	0.108	0.135	0.041	<u>0.527</u>

Overall correctly classified = .607

Actual Group Of Origin	Sample Size	Classified Group of Origin			
		Susitna	Kenai	Kasilof	Crescent
Susitna	200	<u>0.530</u>	0.096	0.242	0.131
Kenai	211	0.092	<u>0.704</u>	0.102	0.102
Kasilof	200	0.221	0.020	<u>0.734</u>	0.025
Crescent	100	0.071	0.163	0.051	<u>0.714</u>

Overall correctly classified = .671

-continued-

Table 7. (p 2 of 4).

Actual Group Of Origin	Sample Size	Classified Group of Origin			
		Susitna	Kenai	Kasilof	Big
Susitna	200	<u>0.490</u>	0.140	0.230	0.140
Kenai	211	0.076	<u>0.758</u>	0.095	0.071
Kasilof	200	0.160	0.035	<u>0.640</u>	0.165
Big	74	0.162	0.122	0.122	<u>0.595</u>

Overall correctly classified = .621

Actual Group Of Origin	Sample Size	Classified Group of Origin			
		Susitna	Crescent	Big	McArthur
Susitna	200	<u>0.409</u>	0.136	0.197	0.258
Crescent	100	0.061	<u>0.847</u>	0.010	0.082
Big	74	0.122	0.081	<u>0.676</u>	0.122
McArthur	150	0.200	0.067	0.127	<u>0.607</u>

Overall correctly classified = .635

Actual Group Of Origin	Sample Size	Classified Group of Origin		
		Susitna	Kenai	Kasilof
Susitna	200	<u>0.601</u>	0.146	0.253
Kenai	211	0.102	<u>0.791</u>	0.107
Kasilof	200	0.236	0.030	<u>0.734</u>

Overall correctly classified = .708

-continued-

Table 7. (p 3 of 4).

Actual Group Of Origin	Sample Size	Classified Group of Origin		
		Susitna	Kenai	Crescent
Susitna	200	<u>0.727</u>	0.136	0.136
Kenai	211	0.148	<u>0.709</u>	0.143
Crescent	100	0.082	0.184	<u>0.735</u>
Overall correctly classified = .724				

Actual Group Of Origin	Sample Size	Classified Group of Origin		
		Susitna	Crescent	Big
Susitna	200	<u>0.641</u>	0.152	0.207
Crescent	100	0.112	<u>0.878</u>	0.010
Big	74	0.216	0.081	<u>0.703</u>
Overall correctly classified = .741				

Actual Group Of Origin	Sample Size	Classified Group of Origin		
		Susitna	Crescent	McArthur
Susitna	200	<u>0.520</u>	0.141	0.338
Crescent	100	0.061	<u>0.888</u>	0.051
McArthur	150	0.340	0.073	<u>0.587</u>
Overall correctly classified = .665				

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Table 7. (p 4 of 4).

Actual Group Of Origin	Sample Size	Classified Group of Origin	
		Susitna	Kenai
Susitna	200	<u>0.855</u>	0.145
Kenai	211	0.185	<u>0.815</u>
Overall correctly classified = .835			

Actual Group Of Origin	Sample Size	Classified Group of Origin	
		Susitna	Big
Susitna	200	<u>0.758</u>	0.242
Big	74	0.243	<u>0.757</u>
Overall correctly classified = .757			

Actual Group Of Origin	Sample Size	Classified Group of Origin	
		Susitna	McArthur
Susitna	200	<u>0.616</u>	0.384
McArthur	150	0.387	<u>0.613</u>
Overall correctly classified = .615			

Actual Group Of Origin	Sample Size	Classified Group of Origin	
		Kenai	Kasilof
Kenai	211	<u>0.872</u>	0.128
Kasilof	200	0.060	<u>0.940</u>
Overall correctly classified = .906			

Table 8. Mean(\bar{x}) and standard error (SE) of age-1.2 scale variables used to construct linear discriminant functions in 1984.

	Susitna		Kenai		Kasilof		Fish		McArthur		Hidden	
	\bar{x}	SE										
First Freshwater Annulus												
NC1FW	9.88	0.221	12.04	0.362	9.64	0.090	21.96	0.230	9.87	0.181	19.87	0.304
S1FW	115.20	2.523	139.56	4.082	115.38	0.938	250.79	2.483	115.71	2.028	222.12	3.833
C0-C6	82.34	0.884	82.82	0.541	86.14	0.517	91.06	0.794	82.95	0.803	87.67	0.813
C2-C4	21.52	0.386	21.99	0.278	23.74	0.257	23.70	0.350	21.12	0.372	23.59	0.393
C2-C6	40.44	0.639	40.29	0.429	42.30	0.387	46.79	0.560	40.85	0.583	45.14	0.557
C4-C8	37.37	0.602	36.47	0.458	34.73	0.357	44.83	0.561	38.06	0.643	41.98	0.478
C2-E1FW	73.34	2.425	97.05	4.100	71.53	0.880	206.52	2.440	73.58	1.917	179.59	3.670
C4-E1FW	52.08	2.247	75.06	3.982	47.79	0.828	182.82	2.418	52.45	1.781	156.00	3.560
C0-C2/S1FW	0.39	0.007	0.36	0.008	0.38	0.003	0.18	0.003	0.38	0.007	0.20	0.004
C0-C4/S1FW	0.59	0.009	0.54	0.011	0.59	0.004	0.27	0.004	0.56	0.009	0.31	0.005
C0-C6/S1FW	0.74	0.010	0.68	0.013	0.75	0.005	0.37	0.005	0.73	0.010	0.40	0.007
C2-C6/S1FW	0.36	0.005	0.32	0.006	0.37	0.003	0.19	0.003	0.36	0.005	0.21	0.004
C4-C6/S1FW	0.17	0.003	0.15	0.003	0.16	0.002	0.09	0.002	0.17	0.003	0.10	0.002
C4-C8/S1FW	0.31	0.004	0.27	0.005	0.30	0.003	0.18	0.003	0.32	0.004	0.19	0.003
C(NC-2)-E1FW/S1FW	0.15	0.004	0.14	0.003	0.14	0.002	0.07	0.001	0.15	0.004	0.08	0.002
S1FW/NC1FW	11.76	0.107	11.73	0.071	12.04	0.075	11.46	0.089	11.82	0.114	11.16	0.082
NC 1ST 3/4	5.82	0.162	7.48	0.274	5.54	0.068	14.77	0.171	5.86	0.125	13.40	0.238
Plus Growth												
NCPG	4.37	0.136	5.57	0.101	4.71	0.092	3.96	0.151	3.92	0.133	5.31	0.177
SPGZ	47.31	1.564	61.57	1.148	48.16	1.020	42.58	1.682	41.77	1.500	63.17	1.972

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Table 8. (p 2 of 2).

	Susitna		Kenai		Kasilof		Fish		McArthur		Hidden	
	\bar{x}	SE										
Freshwater and Plus Growth												
NC1FW + NCPG	14.25	0.201	17.60	0.334	14.35	0.113	25.92	0.197	13.79	0.173	25.18	0.266
S1FW + SPGZ	162.50	2.236	201.13	4.057	163.54	1.212	293.37	1.937	157.48	1.866	285.29	3.452
S1FW/S1FW + SPGZ	0.70	0.009	0.67	0.007	0.71	0.005	0.85	0.006	0.73	0.009	0.78	0.008
First Marine Annulus												
S10Z	380.44	3.378	390.06	2.610	414.29	2.568	390.50	3.185	380.05	3.451	376.38	4.472
EFW-C6	104.84	1.009	106.16	0.901	104.27	0.945	118.73	1.139	105.66	1.224	112.53	1.392
C3-C9	111.27	1.006	112.62	0.880	116.37	0.968	119.72	1.314	112.56	1.233	115.19	1.317
C3-C12	166.76	1.282	168.84	1.050	175.42	1.196	175.17	1.663	168.55	1.692	170.02	1.671
C3-C15	218.60	1.546	220.54	1.231	228.64	1.365	225.95	2.000	219.53	2.014	220.08	2.037
C6-C9	56.89	0.578	57.13	0.553	60.84	0.627	59.99	0.898	55.88	0.689	57.34	0.813
C6-C12	112.37	0.907	113.34	0.777	119.89	0.875	115.44	1.304	111.86	1.176	112.17	1.262
C(NC-6)-E10Z	81.62	2.006	78.44	0.708	81.37	0.735	70.79	0.943	85.28	1.092	73.65	1.040
C3-E10Z	330.24	3.451	339.39	2.633	365.54	2.552	331.50	3.067	331.08	3.466	321.70	4.520
EFW-C3/S10Z	0.14	0.002	0.13	0.002	0.12	0.001	0.15	0.002	0.13	0.002	0.15	0.003
EFW-C6/S10Z	0.28	0.004	0.28	0.003	0.25	0.003	0.30	0.003	0.28	0.004	0.30	0.005
NC 1ST 1/2	10.01	0.099	10.11	0.084	10.61	0.082	9.50	0.084	10.02	0.121	9.52	0.141
Second Marine Annulus												
S20Z	240.55	2.614	248.68	2.712	247.52	2.618	206.31	3.506	-----	-----	217.81	3.118

Table 9. Classification matrices from discriminant analyses of age-1.2 sockeye salmon scales from the Susitna, Kenai, Hidden, Kasilof, Fish, and McArthur Rivers, Upper Cook Inlet 1984. Proportion of samples correctly classified are underlined.

Actual Group Of Origin	Sample Size	Classified Group of Origin					
		Susitna	Kenai	Hidden	Kasilof	Fish	McArthur
Susitna	193	<u>0.228</u>	0.275	0.005	0.140	0.026	0.326
Kenai	183	0.109	<u>0.525</u>	0.000	0.279	0.000	0.087
Hidden	100	0.030	0.030	<u>0.640</u>	0.010	0.270	0.020
Kasilof	200	0.100	0.180	0.000	<u>0.605</u>	0.000	0.115
Fish	95	0.000	0.000	0.189	0.000	<u>0.811</u>	0.000
McArthur	129	0.194	0.147	0.000	0.132	0.000	<u>0.527</u>

Overall correctly classified = .556

Actual Group Of Origin	Sample Size	Classified Group of Origin				
		Susitna	Kenai	Hidden	Kasilof	Fish
Susitna	193	<u>0.534</u>	0.233	0.031	0.192	0.010
Kenai	183	0.186	<u>0.601</u>	0.000	0.213	0.000
Hidden	100	0.020	0.030	<u>0.550</u>	0.020	0.380
Kasilof	200	0.185	0.200	0.000	<u>0.615</u>	0.000
Fish	95	0.000	0.000	0.221	0.000	<u>0.779</u>

Overall correctly classified = .616

Actual Group Of Origin	Sample Size	Classified Group of Origin			
		Susitna	Kenai	Hidden	Fish
Susitna	193	<u>0.646</u>	0.323	0.005	0.026
Kenai	183	0.246	<u>0.754</u>	0.000	0.000
Hidden	100	0.050	0.030	<u>0.670</u>	0.250
Fish	95	0.000	0.000	0.168	<u>0.832</u>

Overall correctly classified = .725

-continued-

Table 9. (p 2 of 4).

Actual Group Of Origin	Sample Size	Classified Group of Origin			
		Susitna	Kenai	Kasilof	Fish
Susitna	193	<u>0.565</u>	0.207	0.202	0.026
Kenai	183	0.169	<u>0.607</u>	0.224	0.000
Kasilof	200	0.170	0.200	<u>0.630</u>	0.000
Fish	95	0.000	0.021	0.000	<u>0.979</u>

Overall correctly classified = .695

Actual Group Of Origin	Sample Size	Classified Group of Origin			
		Susitna	Hidden	Kasilof	Fish
Susitna	193	<u>0.685</u>	0.005	0.285	0.025
Hidden	100	0.030	<u>0.700</u>	0.030	0.240
Kasilof	200	0.225	0.000	<u>0.775</u>	0.000
Fish	95	0.000	0.179	0.000	<u>0.821</u>

Overall correctly classified = .745

Actual Group Of Origin	Sample Size	Classified Group of Origin			
		Kenai	Hidden	Kasilof	Fish
Kenai	183	<u>0.678</u>	0.005	0.317	0.000
Hidden	100	0.020	<u>0.700</u>	0.030	0.250
Kasilof	200	0.250	0.000	<u>0.750</u>	0.000
Fish	95	0.000	0.168	0.000	<u>0.832</u>

Overall correctly classified = .740

-continued-

Table 9. (p 3 of 4).

Actual Group Of Origin	Sample Size	Classified Group of Origin		
		Susitna	Kenai	Fish
Susitna	193	<u>0.679</u>	0.295	0.026
Kenai	183	0.273	<u>0.727</u>	0.000
Fish	95	0.000	0.021	<u>0.979</u>
Overall correctly classified = .795				

Actual Group Of Origin	Sample Size	Classified Group of Origin		
		Susitna	Kasilof	Fish
Susitna	193	<u>0.690</u>	0.285	0.025
Kasilof	200	0.195	<u>0.805</u>	0.000
Fish	95	0.000	0.021	<u>0.979</u>
Overall correctly classified = .825				

Actual Group Of Origin	Sample Size	Classified Group of Origin		
		Susitna	Fish	McArthur
Susitna	193	<u>0.922</u>	0.026	0.052
Fish	95	0.021	<u>0.979</u>	0.000
McArthur	129	0.209	0.000	<u>0.791</u>
Overall correctly classified = .897				

-continued-

Table 9. (p 4 of 4).

Actual Group Of Origin	Sample Size	Classified Group of Origin		
		Kenai	Hidden	Kasilof
Kenai	183	<u>0.696</u>	0.005	0.299
Hidden	100	0.020	<u>0.950</u>	0.030
Kasilof	200	0.235	0.000	<u>0.765</u>

Overall correctly classified = .804

Actual Group Of Origin	Sample Size	Classified Group of Origin		
		Hidden	Kasilof	Fish
Hidden	100	<u>0.750</u>	0.020	0.230
Kasilof	200	0.000	<u>1.000</u>	0.000
Fish	95	0.179	0.000	<u>0.821</u>

Overall correctly classified = .857

Actual Group Of Origin	Sample Size	Classified Group of Origin	
		Susitna	Fish
Susitna	193	<u>0.974</u>	0.026
Fish	95	0.000	<u>1.000</u>

Overall correctly classified = .987

Actual Group Of Origin	Sample Size	Classified Group of Origin	
		Kasilof	Fish
Kasilof	200	<u>1.000</u>	0.000
Fish	95	0.000	<u>1.000</u>

Overall correctly classified = 1.000

Table 10. Mean (\bar{x}) and standard error (SE) of age-2.3 scale variables used to construct linear discriminant functions in 1984.

	Susitna		Kenai		Kasilof		Crescent		Big River		Chilligan	
	\bar{x}	SE										
First Freshwater Annulus												
NC1FW	7.01	0.159	6.41	0.124	8.16	0.103	6.15	0.079	8.89	0.354	5.54	0.066
S1FW	81.26	2.070	68.74	1.155	99.99	1.174	64.15	0.805	102.67	3.036	71.32	0.810
C0-C4	56.59	0.914	51.40	0.524	66.22	0.536	48.91	0.472	61.77	1.029	58.82	0.432
C2-C4	18.96	0.455	15.79	0.284	22.99	0.341	15.31	0.257	20.68	0.585	17.57	0.254
C(NC-4)-E1FW	33.63	0.679	29.89	0.398	32.32	0.433	29.65	0.439	34.00	1.029	36.99	0.606
C2-E1FW	43.63	1.724	33.12	1.040	56.76	1.082	30.55	0.698	61.58	3.125	30.07	0.695
C4-E1FW	26.21	1.421	17.69	0.921	33.78	0.937	15.54	0.567	41.52	3.063	13.92	0.547
C0-C2/S1FW	0.49	0.009	0.53	0.007	0.44	0.005	0.53	0.006	0.42	0.014	0.59	0.006
S1FW/NC1FW	11.61	0.157	10.85	0.100	12.33	0.092	10.51	0.098	11.95	0.247	12.97	0.097
NC 1ST 3/4	3.93	0.107	3.51	0.092	4.37	0.072	3.43	0.064	5.21	0.262	2.82	0.056
Second Freshwater Annulus												
NC2FW	6.79	0.207	7.26	0.151	7.53	0.110	6.26	0.105	8.29	0.254	6.89	0.088
E1FW-C4	35.73	0.543	34.69	0.424	39.66	0.389	32.97	0.382	41.26	0.847	39.66	0.348
C2-C4	16.68	0.514	16.56	0.268	19.03	0.287	14.57	0.388	20.35	0.505	19.16	0.233
C2-E2FW	40.47	2.133	41.82	1.348	48.31	1.128	31.13	0.814	56.36	2.434	42.38	0.772
E1FW-C2/S2FW	0.35	0.010	0.32	0.008	0.31	0.006	0.38	0.007	0.29	0.010	0.33	0.005
C(NC-2)-E2FW/S2FW	0.31	0.010	0.27	0.008	0.23	0.005	0.31	0.007	0.21	0.009	0.26	0.005
S2FW/NC2FW	8.63	0.112	8.25	0.081	9.17	0.076	7.87	0.077	9.39	0.159	9.18	0.070
NC 1ST 3/4	4.39	0.146	4.80	0.112	4.78	0.083	4.09	0.079	5.32	0.183	4.37	0.065

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Table 10. (p 2 of 2).

	Susitna		Kenai		Kasilof		Crescent		Big River		Chilligan	
	\bar{x}	SE										
Plus Growth												
NCPGZ	2.21	0.090	3.08	0.109	1.59	0.061	2.37	0.067	2.12	0.161	1.74	0.057
Freshwater and Plus Growth												
S1F+S2F	140.26	2.804	128.69	1.461	168.93	1.539	113.23	1.238	179.94	2.737	134.20	0.990
S1F+S2F+SPGZ	162.85	2.612	158.70	1.363	187.90	1.977	136.31	1.287	202.80	2.933	153.30	1.002
SPGZ/S1F+S2F+SPGZ	0.14	0.006	0.19	0.006	0.10	0.005	0.17	0.005	0.11	0.008	0.12	0.004
First Marine Annulus												
NC10Z	24.37	0.207	26.33	0.199	25.62	0.185	26.40	0.166	24.61	0.365	23.85	0.167
S10Z	394.63	3.699	426.89	3.496	410.85	3.719	416.07	3.310	392.62	6.088	385.36	2.779
EFW-C6	102.65	1.141	101.40	0.965	106.58	0.998	96.98	0.893	105.58	1.579	102.72	0.862
C9-C15	107.29	1.005	105.55	0.820	105.49	0.937	101.05	0.928	102.09	1.443	105.17	0.916
EFW-C15/S10Z	0.66	0.006	0.61	0.005	0.65	0.005	0.60	0.005	0.67	0.010	0.68	0.005
C3-C15/S10Z	0.54	0.004	0.49	0.004	0.52	0.004	0.49	0.004	0.54	0.008	0.55	0.004
C9-C15/S10Z	0.27	0.003	0.25	0.003	0.26	0.003	0.24	0.002	0.26	0.004	0.27	0.002
Second Marine Annulus												
S20Z	301.90	3.665	334.65	4.113	298.47	3.338	334.27	3.683	247.09	5.640	309.57	3.115

Table 11. Classification matrices from discriminant analyses of age-2.3 sockeye salmon scales from the Susitna, Kenai, Kasilof, Crescent, Big, and Chilligan Rivers, Upper Cook Inlet 1984. Proportion of samples correctly classified are underlined.

Actual Group Of Origin	Sample Size	Classified Group of Origin			
		Susitna	Kenai	Kasilof	Crescent
Susitna	136	<u>0.500</u>	0.132	0.213	0.154
Kenai	150	0.100	<u>0.633</u>	0.047	0.220
Kasilof	148	0.128	0.020	<u>0.845</u>	0.007
Crescent	150	0.093	0.167	0.007	<u>0.733</u>

Overall correctly classified = .678

Actual Group Of Origin	Sample Size	Classified Group of Origin			
		Susitna	Crescent	Big	Chilligan
Susitna	136	<u>0.522</u>	0.231	0.134	0.112
Crescent	150	0.088	<u>0.858</u>	0.000	0.054
Big	66	0.045	0.000	<u>0.864</u>	0.091
Chilligan	196	0.112	0.051	0.005	<u>0.832</u>

Overall correctly classified = .769

Actual Group Of Origin	Sample Size	Classified Group of Origin		
		Susitna	Kenai	Kasilof
Susitna	136	<u>0.618</u>	0.184	0.199
Kenai	150	0.200	<u>0.747</u>	0.053
Kasilof	148	0.149	0.041	<u>0.811</u>

Overall correctly classified = .725

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Table 11. (p 2 of 2).

Actual Group Of Origin	Sample Size	Classified Group of Origin		
		Susitna	Crescent	Big
Susitna	136	<u>0.632</u>	0.213	0.154
Crescent	150	0.140	<u>0.860</u>	0.000
Big	66	0.167	0.000	<u>0.833</u>

Overall correctly classified = .775

Actual Group Of Origin	Sample Size	Classified Group of Origin		
		Susitna	Crescent	Chilligan
Susitna	136	<u>0.590</u>	0.224	0.187
Crescent	150	0.088	<u>0.865</u>	0.047
Chilligan	196	0.087	0.056	<u>0.857</u>

Overall correctly classified = .771

Actual Group Of Origin	Sample Size	Classified Group of Origin	
		Susitna	Kenai
Susitna	136	<u>0.831</u>	0.169
Kenai	150	0.193	<u>0.807</u>

Overall correctly classified = .819

Actual Group Of Origin	Sample Size	Classified Group of Origin	
		Kenai	Kasilof
Kenai	150	<u>0.927</u>	0.073
Kasilof	148	0.034	<u>0.966</u>

Overall correctly classified = .946

Table 12. Run composition estimates and 90% confidence intervals (C.I.) calculated from scale pattern analyses of age-1.3 sockeye salmon by fishery and date for Upper Cook Inlet 1984. Dash line (--) indicates the river was not included in the analyses. ^a

Fishery	Date	Susitna		Kenai		Kasilof		Crescent		Big		McArthur	
		Pt. Est.	90% C.I.	Pt. Est.	90% C.I.	Pt. Est.	90% C.I.	Pt. Est.	90% C.I.	Pt. Est.	90% C.I.	Pt. Est.	90% C.I.
Central District	6/25	0.401	(.121,.682)	0.030	(0,.118)	0.539	(.321,.757)	0.030	(0,.131)	----	----	----	----
Drift Net	6/29	0.526	(.249,.803)	0.209	(.060,.358)	0.265	(.039,.492)	Trace ^b	----	----	----	----	
	7/02	0.347	(.075,.620)	0.170	(.037,.303)	0.483	(.247,.717)	Trace	----	----	----	----	
	7/06	0.624	(.333,.914)	0.102	(0,.240)	0.274	(.037,.512)	Trace	----	----	----	----	
	7/09	0.308	(0,.629)	0.290	(.107,.473)	0.344	(.093,.599)	0.058	(0,.203)	----	----	----	----
	7/10	0.479	(.213,.746)	0.287	(.132,.442)	0.234	(.017,.450)	----	----	----	----	----	
	7/13	0.710	(.563,.858)	0.290	(.142,.437)	Trace	Trace	Trace	----	----	----	----	
	7/16	0.415	(.154,.676)	0.404	(.236,.571)	0.181	(0,.390)	Trace	----	----	----	----	
	7/18	0.409	(.086,.734)	0.360	(.156,.564)	0.146	(0,.378)	0.085	(0,.251)	----	----	----	----
	7/27	0.430	(.236,.624)	0.519	(.308,.731)	Trace	Trace	0.051	(0,.204)	----	----	----	----

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Table 12. (p 2 of 4).

Fishery	Date	Susitna		Kenai		Kasilof		Crescent		Big		McArthur	
		Pt. Est.	90% C.I.	Pt. Est.	90% C.I.	Pt. Est.	90% C.I.	Pt. Est.	90% C.I.	Pt. Est.	90% C.I.	Pt. Est.	90% C.I.
Cohoe/Ninilchik Beach Set Net	7/02	0.029	(0, .292)	0.182	(.061, .303)	0.789	(.548, 1.000)	-----	-----	-----	-----	-----	-----
	7/06	0.022	(0, .284)	0.181	(.060, .301)	0.797	(.557, 1.000)	-----	-----	-----	-----	-----	-----
	7/09	0.098	(0, .361)	0.200	(.073, .328)	0.702	(.462, .941)	-----	-----	-----	-----	-----	-----
	7/10	0.152	(0, .408)	0.273	(.132, .413)	0.575	(.342, .808)	-----	-----	-----	-----	-----	-----
	7/11	0.632	(.343, .921)	0.176	(.023, .328)	0.192	(0, .422)	-----	-----	-----	-----	-----	-----
	7/12	0.399	(.130, .668)	0.283	(.129, .437)	0.318	(.092, .544)	-----	-----	-----	-----	-----	-----
	7/13	0.613	(.332, .894)	0.222	(.066, .378)	0.165	(0, .387)	-----	-----	-----	-----	-----	-----
	7/16	0.178	(0, .410)	0.536	(.370, .701)	0.286	(.081, .492)	-----	-----	-----	-----	-----	-----
	7/17	0.042	(0, .252)	0.645	(.481, .809)	0.313	(.112, .513)	-----	-----	-----	-----	-----	-----
7/27	0.374	(.131, .616)	0.594	(.419, .768)	0.032	(0, .211)	-----	-----	-----	-----	-----	-----	
Kalifonsky Beach Set Net	7/09	0.123	(0, .375)	0.287	(.147, .427)	0.590	(.359, .821)	-----	-----	-----	-----	-----	-----
	7/11	0.105	(0, .369)	0.181	(.058, .304)	0.714	(.475, .953)	-----	-----	-----	-----	-----	-----
	7/12	0.046	(0, .324)	0.057	(0, .150)	0.897	(.652, 1.000)	-----	-----	-----	-----	-----	-----
	7/16	0.171	(0, .403)	0.492	(.331, .653)	0.337	(.129, .546)	-----	-----	-----	-----	-----	-----

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Table 12. (p 3 of 4).

Fishery	Date	Susitna		Kenai		Kasilof		Crescent		Big		McArthur	
		Pt. Est.	90% C.I.	Pt. Est.	90% C.I.	Pt. Est.	90% C.I.	Pt. Est.	90% C.I.	Pt. Est.	90% C.I.	Pt. Est.	90% C.I.
Kalifonsky Beach Set Net	7/18	0.167	(0,.386)	0.724	(.552,.895)	0.109	(0,.289)	-----		-----		-----	
	7/30	Trace		0.454	(.317,.591)	0.546	(.409,.683)	-----		-----		-----	
Salamatof Beach Set Net	7/16	0.257	(.027,.487)	0.675	(.500,.848)	0.068	(0,.247)	-----		-----		-----	
	7/18	0.154	(.002,.305)	0.846	(.695,.998)	Trace		-----		-----		-----	
	7/30	Trace		1.000	(.935,1.000)	Trace		-----		-----		-----	
Central District West-side Set	7/02	0.118	(0,.474)	-----		-----		0.723	(.571,.875)	Trace		0.159	(0,.482)
	7/11	0.145	(0,.353)	-----		-----		0.823	(.669,.978)	0.032	(0,.140)	Trace	
	7/20	0.103	(0,.306)	-----		-----		0.768	(.613,.922)	0.129	(0,.263)	Trace	
Kalgin Island Set	7/16	0.473	(.123,.824)	0.231	(.046,.417)	0.118	(0,.374)	Trace		0.178	(0,.412)	-----	
	7/18	0.019	(0,.232)	Trace		Trace		Trace		0.981	(.768,1.000)	-----	

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Table 12. (p 4 of 4).

Fishery	Date	Susitna		Kenai		Kasilof		Crescent		Big		McArthur	
		Pt. Est.	90% C.I.	Pt. Est.	90% C.I.	Pt. Est.	90% C.I.	Pt. Est.	90% C.I.	Pt. Est.	90% C.I.	Pt. Est.	90% C.I.
Northern District East-side Set Net	7/13	0.970	(.837,1.000)	0.030	(0,.163)	-----		-----		-----		-----	
	7/16	0.966	(.833,1.000)	0.034	(0,.167)	-----		-----		-----		-----	
	7/18	1.000	(.873,1.000)	Trace		-----		-----		-----		-----	
	7/27	1.000	(.997,1.000)	Trace		-----		-----		-----		-----	
Northern District West-side Set Net	7/16	0.721	(.184,1.000)	-----		-----		0.018	(0,.158)	0.145	(0,.405)	0.116	(0,.116)
	7/18	0.537	(.132,.942)	-----		-----		Trace		Trace		0.463	(.058,.868)

^a The Central district drift net catches were classified with a model which included Susitna, Kenai, Kasilof and Crescent Rivers. The east-side beach set net catches were classified with a three-way model which included Susitna, Kenai, and Kasilof Rivers. The Central District west-side set were classified with a four-way model which included Susitna, Crescent, Big, and McArthur Rivers. Kalgin Island set net catches were classified with a five-way model which included Susitna, Kenai, Kasilof, Crescent, and Big Rivers. The Northern District east-side set net catches classified with a two-way model which included Susitna and Kenai Rivers. The Northern District west-side set net catches were classified with a model which included Susitna, Crescent, Big, and McArthur Rivers.

^b Trace was recorded for systems that were originally included in the model used to classify the catch and their point estimates were less than zero, but the upper bounds of the 90% confidence interval was positive.

Table 13. Estimated numbers of sockeye salmon aged 1.3 by river harvested in Upper Cook Inlet, 1984. A dash line (--) indicates the river was not included in the analyses.

Fishery	System	Estimated Proportion	Estimated Numbers	Standard Error of Estimate	Coefficient of Variation
North District	Susitna	0.996	29,938	1,951	0.07
East-side Set	Kenai	0.004	120	190	1.58
	Total	1.000	30,058		
North District	Susitna	0.601	41,864	12,369	0.30
West-side Set	Crescent	0.006	438	1,367	3.12
	Big	0.051	3,526	2,524	0.72
	McArthur	0.342	23,799	11,756	0.49
	Total	1.000	69,627		
Central District	Susitna	0.496	335,761	32,236	0.10
Drift	Kenai	0.289	195,425	21,641	0.11
	Kasilof	0.194	131,043	22,060	0.17
	Crescent	0.021	13,896	8,101	0.58
	Total	1.000	676,125		
Central District	Susitna	0.120	4,080	1,741	0.43
West-side Set	Crescent	0.784	26,642	1,614	0.06
	Big	0.081	2,736	1,016	0.37
	McArthur	0.015	510	482	0.95
	Total	1.000	33,968		
Kalgin	Susitna	0.297	4,116	1,393	0.34
Island Set	Kenai	0.141	1,960	636	0.32
	Kasilof	0.072	1,001	869	0.87
	Crescent	Trace ^a	Trace	----	----
	Big	0.490	6,800	1,148	0.17
	Total	1.000	13,877		

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Table 13. (p 2 of 2).

Fishery	System	Estimated Proportion	Estimated Numbers	Standard Error of Estimate	Coefficient of Variation
Salamatof	Susitna	0.172	6,256	2,023	0.32
Beach Set	Kenai	0.799	29,144	1,992	0.07
	Kasilof	0.029	1,076	1,184	1.10
	Total	1.000	36,476		
Kalifonsky	Susitna	0.149	8,799	3,490	0.40
Beach Set	Kenai	0.476	28,110	2,522	0.09
	Kasilof	0.375	22,149	3,143	0.14
	Total	1.000	59,058		
Cohoe/Ninilchik	Susitna	0.136	11,804	4,580	0.39
Beach Set	Kenai	0.493	42,866	3,779	0.09
	Kasilof	0.372	32,321	4,390	0.14
	Total	1.001	86,991		
Total	Susitna	0.440	442,618	35,188	0.08
	Kenai	0.296	297,625	22,212	0.07
	Kasilof	0.186	187,590	22,759	0.12
	Crescent	0.041	40,976	8,373	0.20
	Big	0.013	13,062	2,953	0.23
	McArthur	0.024	24,309	11,766	0.48
	Total	1.000	1,006,180		

^a Trace was recorded for systems that were originally included in the model used to classify the catch and their point estimates were less than zero, but the upper bounds of the 90% confidence interval was positive.

Table 14. Run composition estimates and 90% confidence intervals (C.I.) calculated from scale pattern analyses of age-1.2 sockeye salmon by fishery and date for Upper Cook Inlet, 1984. Dash line (--) indicates the river was not included in the analyses. ^a

Fishery	Date	Susitna		Kenai		Hidden		Kasilof		Fish		McArthur	
		Pt. Est.	90% C.I.	Pt. Est.	90% C.I.	Pt. Est.	90% C.I.	Pt. Est.	90% C.I.	Pt. Est.	90% C.I.	Pt. Est.	90% C.I.
Central District Drift Net	7/02	0.178	(0,.403)	Trace ^b		0.033	(0,.164)	0.475	(.243,.707)	0.314	(.149,.479)	----	
	7/06	0.141	(0,.303)	Trace		Trace		0.423	(.245,.602)	0.436	(.325,.546)	----	
	7/09	0.121	(0,.400)	0.010	(0,.296)	0.037	(0,.274)	0.352	(.054,.649)	0.480	(.218,.743)	----	
	7/10	0.190	(0,.385)	Trace		Trace		0.611	(.409,.812)	0.199	(.111,.288)	----	
	7/13	0.279	(.016,.542)	Trace		0.054	(0,.207)	0.371	(.110,.631)	0.296	(.110,.483)	----	
	7/16	0.170	(0,.449)	0.291	(0,.602)	Trace		0.244	(0,.541)	0.295	(.159,.431)	----	
	7/18	0.190	(0,.530)	0.203	(0,.560)	Trace		0.366	(0,.738)	0.241	(.091,.391)	----	
Cohoe/Ninilchik Beach Set Net	7/02	0.110	(0,.368)	Trace		0.035	(0,.117)	0.771	(.511,1.00)	0.084	(0,.179)	----	
	7/10	Trace		Trace		Trace		0.870	(.815,.925)	0.130	(.075,.185)	----	
	7/13	Trace		Trace		0.042	(0,.107)	0.908	(.844,.971)	0.050	(0,.116)	----	
	7/16	0.043	(0,.359)	0.261	(0,.652)	0.044	(0,.147)	0.594	(.241,.947)	0.058	(0,.157)	----	

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Table 14. (p 2 of 2)

Fishery	Date	Susitna		Kenai		Hidden		Kasilof		Fish		McArthur	
		Pt. Est.	90% C.I.	Pt. Est.	90% C.I.								
Kalifonsky Beach Set Net	7/09	Trace		0.242	(0, .486)	0.030	(0, .069)	0.728	(.484, .972)	Trace		-----	
	7/16	0.044	(0, .377)	0.021	(0, .413)	0.008	(0, .060)	0.906	(.524, 1.00)	0.021	(0, .077)	-----	
	7/18	Trace		0.325	(.023, .627)	0.065	(0, .152)	0.594	(.291, .896)	0.016	(0, .079)	-----	
Salamatof Beach Set Net	7/16	Trace		0.364	(.069, .660)	0.158	(.019, .296)	0.434	(.138, .729)	0.044	(0, .150)	-----	
	7/18	Trace		0.586	(.305, .869)	0.244	(.123, .365)	0.170	(0, .437)	Trace		-----	
Northern District East-side Set Net	7/16	0.223	(.061, .386)	0.068	(0, .219)	Trace		-----		0.709	(.604, .814)	-----	
	7/18	0.179	(.016, .341)	0.142	(0, .305)	Trace		-----		0.679	(.573, .786)	-----	
Northern District West-side Set Net	7/16	0.788	(.715, .861)	-----		-----		-----		0.212	(.139, .285)	Trace	
	7/18	0.811	(.741, .882)	-----		-----		-----		0.189	(.118, .259)	Trace	

^a The Central district drift net and east-side beach set net catches were classified with a model which included Susitna and Kenai Rivers, Hidden Creek, Kasilof River, and Fish Creek. The Northern District eastside set net catches were classified with a four-way model which included Susitna and Kenai Rivers, Hidden and Fish Creeks. The Northern District west-side set net catches were classified with a three-way model which included Susitna and McArthur Rivers and Fish Creek.

^b Trace was recorded for systems that were originally included in the model used to classify the catch and their point estimates were less than zero, but the upper bounds of the 90% confidence interval was positive.

Table 15. Run composition estimates and 90% confidence intervals (C.I.) calculated from scale pattern analyses of age-2.3 sockeye salmon by fishery and date for Upper Cook Inlet, 1984. Dash line (--) indicates the river was not included in the analyses. ^a

Fishery	Date	Susitna		Kenai		Kasilof		Crescent		Big		Chilligan	
		Pt. Est.	90% C.I.	Pt. Est.	90% C.I.	Pt. Est.	90% C.I.						
Central District Drift Net	7/06	0.179	(0, .453)	0.413	(.194, .632)	0.408	(.205, .610)		Trace ^b		-----		-----
	7/09	0.568	(.292, .842)	0.240	(.047, .434)	0.192	(.016, .368)		Trace		-----		-----
	7/10	0.172	(0, .418)	0.506	(.303, .707)	0.322	(.154, .490)		Trace		-----		-----
	7/13	0.360	(.109, .611)	0.433	(.238, .628)	0.207	(.051, .363)		Trace		-----		-----
	7/16	0.394	(.084, .703)	0.474	(.206, .743)	0.099	(0, .267)	0.033	(0, .243)		-----		-----
	7/18	0.258	(0, .515)	0.528	(.319, .737)	0.214	(.055, .372)		Trace		-----		-----
Cohoe/Ninilchik Beach Set Net	7/10		Trace	0.455	(.360, .549)	0.545	(.451, .640)		-----		-----		-----
	7/13	0.232	(0, .471)	0.434	(.244, .622)	0.334	(.169, .499)		-----		-----		-----
	7/17	0.063	(0, .288)	0.575	(.381, .768)	0.362	(.203, .521)		-----		-----		-----
Kalifonsky Beach Set Net	7/16	0.013	(0, .239)	0.633	(.432, .833)	0.354	(.194, .513)		-----		-----		-----
	7/18		Trace	0.748	(.652, .845)	0.252	(.155, .348)		-----		-----		-----

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Table 15. (p 2 of 2)

Fishery	Date	Susitna		Kenai		Kasilof		Crescent		Big		Chilligan	
		Pt. Est.	90% C.I.	Pt. Est.	90% C.I.	Pt. Est.	90% C.I.	Pt. Est.	90% C.I.	Pt. Est.	90% C.I.	Pt. Est.	90% C.I.
Salamatof Beach Set Net	7/16	Trace		0.835	(.752, .919)	0.165	(.081, .248)	-----		-----		-----	
	7/18	Trace		0.922	(.843, 1.000)	0.078	(0, .157)	-----		-----		-----	
Central District West-side Set	7/02	0.263	(.066, .460)	-----		-----		0.729	(.559, .900)	Trace		0.008	(0, .106)
	7/11	0.064	(0, .226)	-----		-----		0.832	(.676, .989)	Trace		0.104	(0, .211)
	7/20	0.013	(0, .205)	-----		-----		0.845	(.681, 1.000)	0.142	(.044, .240)	Trace	
Northern District East-side Set Net	7/18	0.984	(.838, 1.000)	0.016	(0, .162)	-----		-----		-----		-----	
Northern District West-side Set Net	7/18	0.613	(.266, .960)	-----		-----		0.119	(0, .337)	0.022	(0, .158)	0.246	(.059, .434)

^a The Central district drift net catches were classified with a model which included Susitna, Kenai, Kasilof and Crescent Rivers. The east-side beach set net catches were classified with a three-way model which included Susitna, Kenai, and Kasilof Rivers. The Central District west-side set were classified with a four-way model which included Susitna, Crescent, Big, and Chilligan Rivers. The Northern District east-side set net catches classified with a two-way model which included Susitna and Kenai Rivers. The Northern District west-side set net catches were classified with a model which included Susitna, Crescent, Big, and Chilligan Rivers.

^b Trace was recorded for systems that were originally included in the model used to classify the catch and their point estimates were less than zero, but the upper bounds of the 90% confidence interval was positive.

Table 16. Run composition estimates of the 1984 Upper Cook Inlet sockeye salmon harvest by age group and fishery.^a

Fishery	System	0.3		1.2		1.3		2.2		1.4		2.3		Other		Total	
		%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number
Northern	Susitna	97.4	813	41.4	10,226	99.6	29,938	78.4	7,991	27.0	53	94.2	7,528	80.3	307	76.5	56,856
East-side	Kenai	2.6	21	9.7	2,403	0.4	120	7.5	769	73.0	143	5.1	411	10.9	40	5.3	3,907
Set Net	Fish	0.0	0	48.9	12,075	0.0	0	14.0	1,428	0.0	0	0.7	54	8.8	32	18.3	13,589
	Total	100.0	834	100.0	24,704	100.0	30,058	100.0	10,187	100.0	196	100.0	7,993	100.0	379	100.0	74,351
Northern	Susitna	85.8	6,411	80.4	23,827	60.1	41,864	65.8	5,751	0.0	0	51.5	10,058	72.1	546	64.8	88,457
West-side	Crescent	1.2	87	0.0	0	0.6	438	13.0	1,133	0.0	0	19.7	3,839	1.9	11	4.0	5,508
Set Net	Fish	0.0	0	19.6	5,804	0.0	0	5.2	680	0.0	0	0.0	30	0.0	0	4.8	6,514
	Big	0.0	0	0.0	0	5.1	3,526	3.1	271	100.0	865	11.6	2,269	14.5	86	5.1	7,017
	McArthur	6.1	457	0.0	0	34.2	23,799	6.0	521	0.0	0	0.0	98	11.5	86	18.3	24,961
	Chilligan	6.9	513	0.0	0	0.0	0	4.4	387	0.0	0	16.6	3,239	0.0	0	3.0	4,139
	Total	100.0	7,469	100.0	29,631	100.0	69,627	100.0	8,743	100.0	865	100.0	19,532	100.0	729	100.0	136,596
Central	Susitna	68.9	16,960	19.2	38,527	49.7	335,761	17.7	16,423	0.1	19	34.2	74,399	36.0	1,124	39.3	483,213
District	Kenai	31.1	7,658	9.0	17,952	28.9	195,425	33.1	30,692	99.9	14,656	41.6	90,602	46.5	900	29.1	357,885
Drift Net	Kasilof	0.0	0	38.8	77,850	19.4	131,043	42.2	39,214	0.0	0	22.0	47,826	13.7	230	24.1	296,163
	Crescent	0.0	0	0.0	68	2.1	13,896	2.6	2,450	0.0	0	2.2	4,786	3.5	58	1.7	21,258
	Fish	0.0	0	33.0	66,085	0.0	0	4.4	4,075	0.0	0	0.0	87	0.3	5	5.7	70,252
	Total	100.0	24,618	100.0	200,483	100.0	676,124	100.0	92,854	100.0	14,675	100.0	217,701	100.0	2,317	100.0	1,228,772
Central	Susitna	95.6	117	46.0	3,191	12.0	4,081	3.3	789	0.9	3	6.9	4,576	14.2	171	9.8	12,928
West-side	Crescent	0.0	0	27.4	1,903	78.4	26,643	93.6	22,438	5.7	18	82.4	54,705	55.8	286	80.1	105,993
Set Net	Big	0.0	0	25.5	1,772	8.1	2,736	2.1	492	92.1	291	5.6	3,725	30.0	154	6.9	9,170
	McArthur	4.4	5	0.8	56	1.5	510	0.0	6	1.3	4	0.0	0	0.0	0	0.4	581
	Chilligan	0.0	0	0.3	20	0.0	0	1.1	258	0.0	0	5.1	3,372	0.0	0	2.8	3,650
	Total	100.0	122	100.0	6,942	100.0	33,969	100.0	23,983	100.0	316	100.0	66,377	100.0	611	100.0	132,320
Kalgin Is.	Susitna	74.4	231	19.3	1,132	29.7	4,116	6.7	560	2.2	3	11.1	679	1.4	70	19.3	6,791
Set Net	Kenai	25.6	80	6.0	353	14.1	1,960	7.5	629	85.8	114	32.2	1,979	28.6	107	14.9	5,222
	Kasilof	0.0	0	10.2	601	7.2	1,001	7.9	664	0.0	0	8.5	521	0.0	4	7.9	2,791
	Crescent	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0

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Table 16. (p 2 of 2).

Fishery	System	0.3		1.2		1.3		2.2		1.4		2.3		Other		Total	
		%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number
Kalgin Is.	Big	0.0	0	64.5	3,782	49.0	6,799	77.9	6,528	11.9	16	48.3	2,964	70.0	218	57.8	20,307
Set Net	Total	100.0	311	100.0	5,867	100.0	13,877	100.0	8,381	100.0	133	100.0	6,143	100.0	399	100.0	35,111
Salamatof	Susitna	14.4	204	0.0	0	17.2	6,257	3.4	402	0.0	0	0.0	0	3.7	64	8.3	6,927
Beach	Kenai	85.6	1,219	67.6	9,996	79.9	29,145	79.0	9,424	100.0	2,943	88.6	12,567	95.6	1,286	80.1	66,580
Set Net	Kasilof	0.0	0	29.8	4,412	2.9	1,076	17.2	2,058	0.0	0	11.4	1,622	0.6	8	11.0	9,176
	Fish	0.0	0	2.6	389	0.0	0	0.4	49	0.0	0	0.0	0	0.0	0	0.5	438
	Total	100.0	1,423	100.0	14,797	100.0	36,477	100.0	11,933	100.0	2,943	100.0	14,189	100.0	1,358	100.0	83,120
Kalifonsky	Susitna	25.3	238	2.4	1,102	14.9	8,799	2.3	587	0.0	1	1.2	271	0.0	56	7.1	11,054
Beach	Kenai	74.7	704	17.7	8,058	47.6	28,110	32.7	8,206	100.0	1,530	61.5	13,573	84.7	387	39.2	60,568
Set Net	Kasilof	0.0	0	79.0	35,882	37.5	22,149	64.8	16,247	0.0	0	37.3	8,229	15.3	71	53.4	82,578
	Fish	0.0	0	0.9	390	0.0	0	0.1	31	0.0	0	0.0	0	0.0	1	0.3	422
	Total	100.0	942	100.0	45,432	100.0	59,058	100.0	25,071	100.0	1,531	100.0	22,073	100.0	515	100.0	154,622
Cohoe/	Susitna	22.6	373	7.9	6,941	13.6	11,803	4.4	2,022	0.2	7	6.1	1,961	45.9	141	9.0	23,248
Ninilchik	Kenai	77.4	1,276	22.6	19,988	49.3	42,868	31.5	14,340	99.8	2,866	54.3	17,478	53.7	156	38.4	98,972
Beach	Kasilof	0.0	0	67.5	59,701	37.2	32,323	63.6	28,917	0.0	0	39.5	12,723	0.0	5	51.8	133,669
Set Net	Fish	0.0	0	2.0	1,780	0.0	0	0.4	192	0.0	0	0.0	12	0.4	2	0.8	1,986
	Total	100.0	1,649	100.0	88,410	100.0	86,993	100.0	45,471	100.0	2,873	100.0	32,174	100.0	304	100.0	257,874
Total	Susitna	67.8	25,347	20.4	84,946	44.0	442,619	15.2	34,525	0.4	86	25.8	99,472	29.5	2,479	32.8	689,474
	Kenai	29.3	10,958	14.1	58,750	29.6	297,628	28.3	64,060	94.6	22,252	35.4	136,610	47.5	2,876	28.2	593,134
	Kasilof	0.0	0	42.9	178,446	18.6	187,592	38.4	87,100	0.0	0	18.4	70,921	5.5	318	24.9	524,377
	Crescent	0.2	87	0.5	1,971	4.1	40,977	11.5	26,021	0.1	18	16.4	63,330	6.8	355	6.3	132,759
	Fish	0.0	0	20.8	86,523	0.0	0	2.8	6,455	0.0	0	0.0	183	0.7	40	4.4	93,201
	Big	0.0	0	1.3	5,554	1.3	13,061	3.2	7,291	5.0	1,172	2.3	8,958	8.7	458	1.7	36,494
	McArthur	1.2	462	0.0	56	2.4	24,309	0.2	527	0.0	4	0.0	98	1.3	86	1.2	25,542
	Chilligan	1.4	513	0.0	20	0.0	0	0.3	645	0.0	0	1.7	6,611	0.0	0	0.4	7,789
	Total	100.0	37,368	100.0	416,266	100.0	1,006,183	100.0	226,623	100.0	23,532	100.0	386,182	100.0	6,612	100.0	2,102,766

^a Totals may differ slightly (6 fish) from other catch tables due to rounding.

Table 17. Catch of sockeye salmon by run and by fishery, Upper Cook Inlet 1984.^a

		FISHERY								
Run		Northern East-side	Northern West-side	Central District	Central West-side	Kalgin Island	Salamatof Beach	Kalifonsky Beach	Cohoe/Ninilchik Beach	Total
		Set Net	Set Net	Drift Net	Set Net	Set Net	Set Net	Set Net	Set Net	
Susitna	Numbers	56,855	88,457	483,213	12,927	6,792	6,927	11,054	23,249	689,474
	Percent	8.2	12.8	70.1	1.9	1.0	1.0	1.6	3.4	100.0
Kenai	Numbers	3,907	0	357,885	0	5,221	66,579	60,568	98,972	593,132
	Percent	0.7	0.0	60.3	0.0	0.9	11.2	10.2	16.7	100.0
Kasilof	Numbers	0	0	296,163	0	2,791	9,175	82,577	133,670	524,376
	Percent	0.0	0.0	56.6	0.0	0.5	1.7	15.7	25.5	100.0
Crescent	Numbers	0	5,507	21,258	105,993	0	0	0	0	132,758
	Percent	0.0	4.1	16.0	79.9	0.0	0.0	0.0	0.0	100.0
Fish	Numbers	13,589	6,514	70,252	0	0	438	422	1,985	93,200
	Percent	14.6	7.0	75.3	0.0	0.0	0.5	0.5	2.1	100.0
Big	Numbers	0	7,017	0	9,170	20,307	0	0	0	36,494
	Percent	0.0	19.2	0.0	25.1	55.7	0.0	0.0	0.0	100.0
McArthur	Numbers	0	24,962	0	581	0	0	0	0	25,543
	Percent	0.0	97.7	0.0	2.3	0.0	0.0	0.0	0.0	100.0
Chilligan	Numbers	0	4,139	0	3,650	0	0	0	0	7,789
	Percent	0.0	53.1	0.0	46.9	0.0	0.0	0.0	0.0	100.0

^a Catch figures may differ slightly (2 fish) from other catch tables due to rounding.

Table 18. Classification of samples from minor systems with discriminant functions of scale patterns representing Susitna River, Kenai River, Kasilof River, Crescent River, and Fish Creek, Upper Cook Inlet 1984. Dash line (--) indicates the river was not included in the analyses.

Age Group	Actual		Proportion of Classified Group of Origin					
	Group of Origin	Sample Size	Susitna	Kenai	Kasilof	Crescent	Fish	Hidden
1.3	Chilligan	48	1.00	0.00	0.00	0.00	-----	-----
	McArthur	150	0.60	0.03	0.37	0.00	-----	-----
	Big	75	1.00	0.00	0.00	0.00	-----	-----
	Packers	198	0.79	0.00	0.18	0.03	-----	-----
1.2	McArthur	130	1.00	0.00	0.00	-----	0.00	0.00
2.3	Chilligan	197	1.00	0.00	0.00	0.00	-----	-----
	Big	67	0.33	0.00	0.67	0.00	-----	-----
	Packers	89	0.00	0.00	1.00	0.00	-----	-----

Table 19. Catch, escapement, and return of sockeye salmon by age group and run, Upper Cook Inlet 1984.

River		Commercial Catch					Total
		1.2	1.3	2.2	2.3	Other	
Susitna	Numbers	84,946	442,619	34,525	99,472	27,912	689,474
	Percent	20.4	44.0	15.2	25.8	41.3	32.8
Kenai	Numbers	58,750	297,628	64,060	136,610	36,086	593,134
	Percent	14.1	29.6	28.3	35.4	53.5	28.2
Kasilof	Numbers	178,446	187,592	87,100	70,921	318	524,377
	Percent	42.9	18.6	38.4	18.4	0.5	24.9
Crescent	Numbers	1,971	40,977	26,021	63,330	460	132,759
	Percent	0.5	4.1	11.5	16.4	0.7	6.3
Fish	Numbers	86,523	0	6,455	183	40	93,201
	Percent	20.8	0.0	2.8	0.1	0.1	4.4
Big	Numbers	5,554	13,061	7,291	8,958	1,630	36,494
	Percent	1.3	1.3	3.2	2.3	2.4	1.7
McArthur	Numbers	56	24,309	527	98	552	25,542
	Percent	0.1	2.4	0.2	0.1	0.8	1.2
Chilligan	Numbers	20	0	645	6,611	513	7,789
	Percent	0.1	0.0	0.3	1.7	0.8	0.4
Total	Numbers	416,266	1,006,186	226,624	386,183	67,511	2,102,770
	Percent	100.0	100.0	100.0	100.0	100.0	100.0

River		Escapement					Total
		1.2	1.3	2.2	2.3	Other	
Susitna	Numbers	112,534	127,139	14,001	10,918	14,854	279,446
	Percent	23.0	33.5	9.6	4.9	34.3	21.9
Kenai	Numbers	79,596	130,248	45,483	67,191	22,053	344,571
	Percent	16.3	34.3	31.2	30.5	50.9	26.9
Kasilof	Numbers	117,001	57,458	41,472	15,291	463	231,685
	Percent	23.9	15.1	28.5	6.9	1.1	18.1

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Table 19. (p 2 of 3).

River		Escapement					Total
		1.2	1.3	2.2	2.3	Other	
Crescent	Numbers	4,142	20,000	23,669	70,297	237	118,345
	Percent	0.8	5.3	16.3	31.9	0.5	9.3
Fish	Numbers	161,961	10,964	14,811	1,539	3,077	192,352
	Percent	33.1	2.9	10.2	0.7	7.1	15.0
Big (South Fork)	Numbers	7,103	10,190	904	5,446	1,456	25,099
	Percent	1.5	2.7	0.6	2.5	3.4	2.0
McArthur	Numbers	6,560	17,855	397	476	1,164	26,452
	Percent	1.3	4.7	0.3	0.2	2.7	2.1
Chilligan	Numbers	728	5,578	4,850	49,475	0	60,631
	Percent	0.1	1.5	3.3	22.4	0.0	4.7
Total ^a	Numbers	489,625	379,432	145,587	220,633	43,304	1,278,581
	Percent	100.0	100.0	100.0	100.0	100.0	100.0

River		Sport and Personal Use Catch (not counted in escapement)					Total
		1.2	1.3	2.2	2.3	Other	
Kenai Sport							
Harvest	Numbers	1,021	1,670	583	862	283	4,419
	Percent	9.5	14.2	13.2	25.5	89.3	14.4
Kasilof							
Personal-Use Dipnet	Numbers	6,449	3,167	2,286	843	26	12,771
	Percent	60.1	26.9	51.9	25.0	8.2	41.7
Kasilof							
Personal-Use Gillnet	Numbers	2,844	6,915	1,499	1,667	0	12,925
	Percent	26.5	58.7	34.0	49.4	0.0	42.2
Fish (saltwater)	Numbers	420	28	38	4	8	498
	Percent	3.9	0.2	0.9	0.1	2.5	1.6
Total	Numbers	10,734	11,780	4,406	3,376	317	30,613
	Percent	100.0	100.0	100.0	100.0	100.0	100.0

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Table 19. (p 3 of 3).

River		Return					Total
		1.2	1.3	2.2	2.3	Other	
Susitna	Numbers	197,480	569,758	48,526	110,390	42,766	968,920
	Percent	21.5	40.8	12.9	18.1	38.5	28.4
Kenai	Numbers	139,367	429,546	110,126	204,663	58,422	942,124
	Percent	15.2	30.7	29.2	33.5	52.6	27.6
Kasilof	Numbers	304,740	255,132	132,357	88,722	807	781,758
	Percent	33.2	18.3	35.1	14.5	0.7	22.9
Crescent	Numbers	6,113	60,977	49,690	133,627	697	251,104
	Percent	0.7	4.4	13.2	21.9	0.6	7.4
Fish	Numbers	248,904	10,992	21,304	1,726	3,125	286,051
	Percent	27.2	0.8	5.7	0.3	2.8	8.4
Big	Numbers	12,657	23,251	8,195	14,404	3,086	61,593
	Percent	1.4	1.7	2.2	2.4	2.8	1.8
McArthur	Numbers	6,616	42,164	924	574	1,716	51,994
	Percent	0.7	3.0	0.2	0.1	1.5	1.5
Chilligan	Numbers	748	5,578	5,495	56,086	513	68,420
	Percent	0.1	0.4	1.5	9.2	0.5	2.0
Total ^b	Numbers	916,625	1,397,398	376,617	610,192	111,132	3,411,964
	Percent	100.0	100.0	100.0	100.0	100.0	100.0

^a Total estimate of escapement is a combination of estimates for the above rivers and should not be considered a total estimate for Upper Cook Inlet.

^b Total estimate of return is a combination of the above estimates. This estimate of total return should not be considered an estimate of total for Upper Cook Inlet because it includes escapement estimates from surveys and there are additional systems which produce sockeye salmon which are not included in the estimate.

Table 20. Catch of sockeye salmon by age group and run, Upper Cook Inlet, 1978 through 1984.

		1984					
River		1.2	1.3	2.2	2.3	Other	Total
Susitna	Numbers	84,946	442,619	34,525	99,472	27,912	689,474
	Percent	20.4	44.0	15.2	25.8	41.3	32.8
Kenai	Numbers	58,750	297,628	64,060	136,610	36,086	593,134
	Percent	14.1	29.6	28.3	35.4	53.5	28.2
Kasilof	Numbers	178,446	187,592	87,100	70,921	318	524,377
	Percent	42.9	18.6	38.4	18.4	0.5	24.9
Crescent	Numbers	1,971	40,977	26,021	63,330	460	132,759
	Percent	0.5	4.1	11.5	16.4	0.7	6.3
Fish	Numbers	86,523	0	6,455	183	40	93,201
	Percent	20.8	0.0	2.8	0.1	0.1	4.4
Big	Numbers	5,554	13,061	7,291	8,958	1,630	36,494
	Percent	1.3	1.3	3.2	2.3	2.4	1.7
McArthur	Numbers	56	24,309	527	98	552	25,542
	Percent	0.1	2.4	0.2	0.1	0.8	1.2
Chilligan	Numbers	20	0	645	6,611	513	7,789
	Percent	0.1	0.0	0.3	1.7	0.8	0.4
Total	Numbers	416,266	1,006,186	226,624	386,183	67,511	2,102,770
	Percent	100.0	100.0	100.0	100.0	100.0	100.0

		1983					
River		1.2	1.3	2.2	2.3	Other	Total
Susitna	Numbers	293,362	480,233	45,371	26,706	61,347	907,019
	Percent	32.2	13.7	26.6	7.1	61.9	18.0
Kenai	Numbers	109,673	2,528,112	35,254	236,182	30,351	2,939,572
	Percent	12.0	72.4	20.8	62.8	30.6	58.2
Kasilof	Numbers	181,914	216,655	37,752	29,858	0	466,179
	Percent	20.0	6.2	22.3	7.9	0.0	9.2

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Table 20. (p 2 of 4).

River		1983					
		1.2	1.3	2.2	2.3	Other	Total
Crescent	Numbers	6,148	203,726	30,804	60,556	911	302,145
	Percent	0.7	5.8	18.2	16.1	0.9	6.0
Fish	Numbers	201,657	14	1,362	218	601	203,852
	Percent	22.1	0.1	0.8	0.1	0.6	4.0
Big	Numbers	96,021	44,126	16,381	8,544	960	166,032
	Percent	10.5	1.3	9.7	2.3	1.0	3.3
McArthur	Numbers	22,775	7,042	209	1,011	4,915	35,952
	Percent	2.5	0.2	0.1	0.3	5.0	0.7
Chilligan	Numbers	123	13,403	2,481	12,936	39	28,982
	Percent	0.1	0.4	1.5	3.4	0.1	0.6
Total	Numbers	911,673	3,493,311	169,614	376,011	99,124	5,049,733
	Percent	100.0	100.0	100.0	100.0	100.0	100.0

River		1982					
		1.2	1.3	2.2	2.3	Other	Total
Susitna	Numbers	40,758	187,226	8,152	40,227	1,398	277,761
	Percent	13.9	7.2	8.1	16.7	18.9	8.5
Kenai	Numbers	55,417	1,534,046	30,271	95,392	3,411	1,718,537
	Percent	18.8	58.6	30.2	39.6	46.2	52.7
Kasilof	Numbers	183,235	732,720	60,633	89,430	798	1,066,816
	Percent	62.3	28.0	60.6	37.2	10.8	32.7
Crescent	Numbers	7,946	123,385	548	13,225	837	145,941
	Percent	2.7	4.7	0.6	5.5	11.3	4.5
Fish	Numbers	6,691	40,312	512	2,346	948	50,809
	Percent	2.3	1.5	0.5	1.0	12.8	1.6
Total	Numbers	294,047	2,617,689	100,116	240,620	7,392	3,259,864
	Percent	100.0	100.0	100.0	100.0	100.0	100.0

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Table 20. (p 3 of 4).

		1981					
River		1.2	1.3	2.2	2.3	Other	Total
Susitna	Numbers	27,266	358,303	13,147	24,452	697	423,865
	Percent	11.4	34.7	13.8	35.0	58.3	29.4
Kenai	Numbers	65,799	444,350	45,133	30,437	0	585,719
	Percent	27.4	43.0	47.3	43.6	0.0	40.7
Kasilof	Numbers	104,169	187,693	32,637	7,359	0	331,858
	Percent	43.3	18.2	34.3	10.5	0.0	23.1
Crescent	Numbers	1,690	8,641	1,773	7,615	0	19,719
	Percent	0.7	0.8	1.9	10.9	0.0	1.4
Fish	Numbers	41,265	33,716	2,580	0	498	78,059
	Percent	17.2	3.3	2.7	0.0	41.7	5.4
Total	Numbers	240,189	1,032,703	95,270	69,863	1,195	1,439,220
	Percent	100.0	100.0	100.0	100.0	100.0	100.0

		1980					
River		1.2	1.3	2.2	2.3	Other	Total
Susitna	Numbers	118,573	137,327	18,350	24,581	1,008	299,839
	Percent	24.0	18.5	11.1	14.7	27.1	19.1
Kenai	Numbers	95,152	270,374	72,737	80,893	238	519,394
	Percent	19.2	36.4	43.9	48.3	6.4	33.0
Kasilof	Numbers	242,165	252,284	65,178	59,213	391	619,231
	Percent	49.0	34.0	39.4	35.3	10.5	39.3
Crescent	Numbers	3,129	62,817	4,232	1,677	115	71,970
	Percent	0.6	8.5	2.6	1.0	3.1	4.6
Fish	Numbers	35,674	19,294	5,059	1,199	1,968	63,194
	Percent	7.2	2.6	3.0	0.7	52.9	4.0
Total	Numbers	494,693	742,096	165,556	167,563	3,720	1,573,628
	Percent	100.0	100.0	100.0	100.0	100.0	100.0

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Table 20. (p 4 of 4).

River		1979					Total
		1.2	1.3	2.2	2.3	Other	
Susitna	Numbers	100,407	85,900	18,077	5,233	10,187	219,804
	Percent	29.7	20.3	16.8	13.0	71.7	23.8
Kenai	Numbers	66,662	183,420	41,217	21,722	1,403	314,424
	Percent	19.7	43.2	38.4	54.0	9.9	34.0
Kasilof	Numbers	114,821	124,057	47,031	13,179	417	299,505
	Percent	34.0	29.2	43.8	32.7	3.0	32.4
Crescent	Numbers	10,927	29,778	528	129	118	41,480
	Percent	3.2	7.0	0.5	0.3	0.8	4.5
Fish	Numbers	45,387	1,205	523	0	2,078	49,193
	Percent	13.4	0.3	0.5	0.0	14.6	5.3
Total	Numbers	338,204	424,360	107,376	40,263	14,203	924,406
	Percent	100.0	100.0	100.0	100.0	100.0	100.0

River		1978					Total
		1.2	1.3	2.2	2.3	Other	
Susitna	Numbers	88,487	151,566	9,472	15,941	86	265,552
	Percent	34.6	7.1	8.8	13.2	9.1	10.2
Kenai	Numbers	27,053	1,697,037	61,668	77,705	736	1,864,199
	Percent	10.6	79.4	57.0	64.1	78.3	71.1
Kasilof	Numbers	135,824	253,259	36,858	25,524	0	451,465
	Percent	53.0	11.9	34.1	21.1	0.0	17.2
Crescent	Numbers	1,505	31,581	0	1,828	0	34,914
	Percent	0.6	1.5	0.0	1.5	0.0	1.3
Fish	Numbers	3,101	2,094	105	119	118	5,537
	Percent	1.2	0.1	0.1	0.1	12.6	0.2
Total	Numbers	255,970	2,135,537	108,103	121,117	940	2,621,667
	Percent	100.0	100.0	100.0	100.0	100.0	100.0

Table 21. Returns per spawner for sockeye salmon from the Susitna River, Upper Cook Inlet.^a

Brood		Returns by Age Group					Returns
Year	Spawners	1.2	1.3	2.2	2.3	Total ^b	Spawner
1966					43,207		
1967			206,250	6,656	12,717		
1968	61,010	21,005	147,208	10,043	4,997	183,253	3.0
1969	41,346	64,808	92,160	6,678	3,363	167,009	4.0
1970	44,371	75,213	170,546	9,537	2,488	257,784	5.8
1971	114,707	135,948	314,288	6,891	5,594	462,721	4.0
1972	91,927	128,451	502,234	25,950	17,350	673,985	7.3
1973	116,093	128,475	185,407	11,822	6,806	332,510	2.9
1974	71,849	133,795	118,312	26,451	34,547	313,105	4.4
1975	108,000	197,737	206,863	27,441	39,755	471,796	4.4
1976	111,000	214,715	640,532	23,349	68,883	947,479	8.5
1977	232,724	57,533	345,364	16,908	28,767	448,572	1.9
1978	93,029	103,111	527,932	48,362	110,390	789,795	8.5
1979	154,848	408,559	569,758	48,526		1,026,843 ^d	6.6
1980	189,231	197,480					
1981	338,353						
1982	262,687						
1983	171,564						
1984	275,581						
AVG ^c	98,732	114,617	295,531	19,403	29,358	458,910	5.0

^a Allocation of 1984 commercial catches based on scale pattern analyses as documented in this report. Allocation of 1983 commercial catches based on scale pattern analyses reported in Cross et al. 1986. Allocation of the 1982 commercial harvest based on scale pattern analyses and migratory timing. Source of 1982 catch allocations is Cross et al. 1985a. Allocation of 1978-1981 commercial catches based on scale pattern analyses, and the allocation of 1972-1977 commercial catches based on escapement age composition. Source of 1972-1981 data is Cross et al. 1983.

^b Total returns only include age groups 1.2, 1.3, 2.2, 2.3.

^c Average (AVG) calculated for brood years 1968 through 1978.

^d Preliminary return per spawner estimate. Estimate represents a minimum value because return of six-year fish in 1985 are not included.

Table 22. Returns per spawner for sockeye salmon from the Kenai River, Upper Cook Inlet.^a

Brood		Returns by Age Group					Returns
Year	Spawners	1.2	1.3	2.2	2.3	Total ^b	Spawner
1966						163,441	
1967			318,338	148,526	114,176		
1968	82,180	159,584	628,356	58,057	68,402	914,399	11.1
1969	51,850	26,064	223,052	76,559	74,662	400,337	7.7
1970	72,400	55,509	202,006	132,228	130,287	520,030	7.2
1971	289,270	32,518	455,242	237,802	250,926	976,488	3.4
1972	301,950	443,153	1,496,332	147,373	99,741	2,186,599	7.2
1973	358,070	103,999	2,050,840	81,664	39,706	2,276,209	6.4
1974	144,470	37,255	361,109	75,709	128,564	602,637	4.2
1975	128,500	126,899	484,014	149,819	50,283	811,015	6.3
1976	353,160	226,646	737,456	78,617	118,783	1,161,502	3.3
1977	663,627	132,782	2,086,361	48,529	295,045	2,562,717	3.9
1978	349,928	91,983	3,050,186	49,875	204,663	3,396,707	9.7
1979	245,842	165,312	429,546	110,126		704,984 ^d	2.9
1980	411,918	139,367					
1981	369,829						
1982	535,862						
1983	565,941						
1984	311,318						
AVG ^c	254,128	130,581	1,070,450	103,294	132,824	1,437,149	6.4

^a Allocation of 1984 commercial catches based on scale pattern analyses as documented in this report. Allocation of 1983 commercial catches based on scale pattern analyses reported in Cross et al. 1986. Allocation of the 1982 commercial harvest based on scale pattern analyses and migratory timing. Source of 1982 catch allocations is Cross et al. 1985a. Allocation of 1978-1981 commercial catches based on scale pattern analyses, and the allocation of 1972-1977 commercial catches based on escapement age composition. Source of 1972-1981 data is Cross et al. 1983.

^b Total returns only include age groups 1.2, 1.3, 2.2, 2.3.

^c Average (AVG) calculated for brood years 1968 through 1978.

^d Preliminary return per spawner estimate. Estimate represents a minimum value because return of six-year fish in 1985 are not included.

Table 23. Returns per spawner for sockeye salmon from the Kasilof River, Upper Cook Inlet.^a

Brood		Returns by Age Group					Returns
Year	Spawners	1.2	1.3	2.2	2.3	Total ^b	Spawner
1966						47,724	
1967			107,418	7,327	3,446		
1968	89,000	104,619	54,201	14,693	3,572	177,085	2.0
1969	46,000	10,677	115,328	7,492	7,709	141,206	3.1
1970	38,000	40,883	11,891	80,516	66,341	199,631	5.3
1971	90,000	28,182	191,159	107,736	58,593	385,670	4.3
1972	113,000	121,115	122,578	122,678	35,036	401,407	3.6
1973	40,000	108,465	299,775	48,922	15,763	472,925	11.8
1974	69,795	183,732	180,601	59,799	67,629	491,761	7.0
1975	47,832	194,165	304,276	80,138	11,643	590,222	12.3
1976	133,537	351,938	354,229	48,702	99,774	854,643	6.4
1977	153,493	185,027	837,384	77,653	40,604	1,140,668	7.4
1978	112,550	239,614	297,041	66,376	88,722	691,753	6.1
1979	151,758	292,399	255,132	132,357		679,888 ^d	4.5
1980	185,672	304,740					
1981	256,137						
1982	178,955						
1983	207,319						
1984	227,101						
AVG ^c	84,837	142,583	251,678	64,973	45,035	504,270	6.3

^a Allocation of 1984 commercial catches based on scale pattern analyses documented in this report. Allocation of 1983 commercial catches based on scale pattern analyses reported in Cross et al. 1986. Allocation of the 1982 commercial harvest based on scale pattern analyses and migratory timing. Source of 1982 catch allocations is Cross et al. 1985a. Allocation of 1978-1981 commercial catches based on scale pattern analyses, and the allocation of 1972-1977 commercial catches based on escapement age composition. Source of 1972-1981 data is Cross et al. 1983.

^b Total returns only include age groups 1.2, 1.3, 2.2, 2.3.

^c Average (AVG) calculated for brood years 1968 through 1978.

^d Preliminary return per spawner estimate. Estimate represents a minimum value because return of six-year fish in 1985 are not included.

Table 24. Returns per spawner for sockeye salmon from the Crescent River, Upper Cook Inlet.^a

Brood		Returns by Age Group					Returns
Year	Spawners	1.2	1.3	2.2	2.3	Total ^b	Spawner
1966						9,825	
1967			67,120	4,203	4,605		
1968	55,000	17,330	31,840	1,961	1,184	52,315	1.0
1969	51,000	7,948	27,816	1,810	2,906	40,480	0.8
1970	38,000	14,864	49,846	2,729	7,944	75,383	2.0
1971	44,000	10,394	55,063	3,429	12,895	81,781	1.9
1972	62,000	14,048	97,878	5,315	10,782	128,023	2.1
1973	29,000	19,281	93,223	0	216	112,720	3.9
1974	28,000	4,909	90,765	1,137	3,131	99,942	3.6
1975	41,000	35,113	141,777	6,867	28,164	211,921	5.2
1976	51,000	9,035	21,884	5,733	17,352	54,004	1.1
1977	87,000	5,060	170,079	1,020	77,732	253,891	2.9
1978	74,000	15,551	242,787	56,106	133,627	448,071	6.1
1979	87,000	16,213	60,977	49,690		126,880 ^d	1.5
1980	91,000	6,113					
1981	41,000						
1982	58,957						
1983	92,343						
1984	118,345						
AVG ^c	50,909	13,958	92,996	7,828	26,903	141,685	2.8

^a Allocation of 1984 commercial catches based on scale pattern analyses documented in this report. Allocation of 1983 commercial catches based on scale pattern analyses reported in Cross et al. 1986. Allocation of the 1982 commercial harvest based on scale pattern analyses and migratory timing. Source of 1982 catch allocations is Cross et al. 1985a. Allocation of 1978-1981 commercial catches based on scale pattern analyses, and the allocation of 1972-1977 commercial catches based on escapement age composition. Source of 1972-1981 data is Cross et al. 1983.

^b Total returns only include age groups 1.2, 1.3, 2.2, 2.3.

^c Average (AVG) calculated for brood years 1968 through 1978.

^d Preliminary return per spawner estimate. Estimate represents a minimum value because return of six-year fish in 1985 are not included.

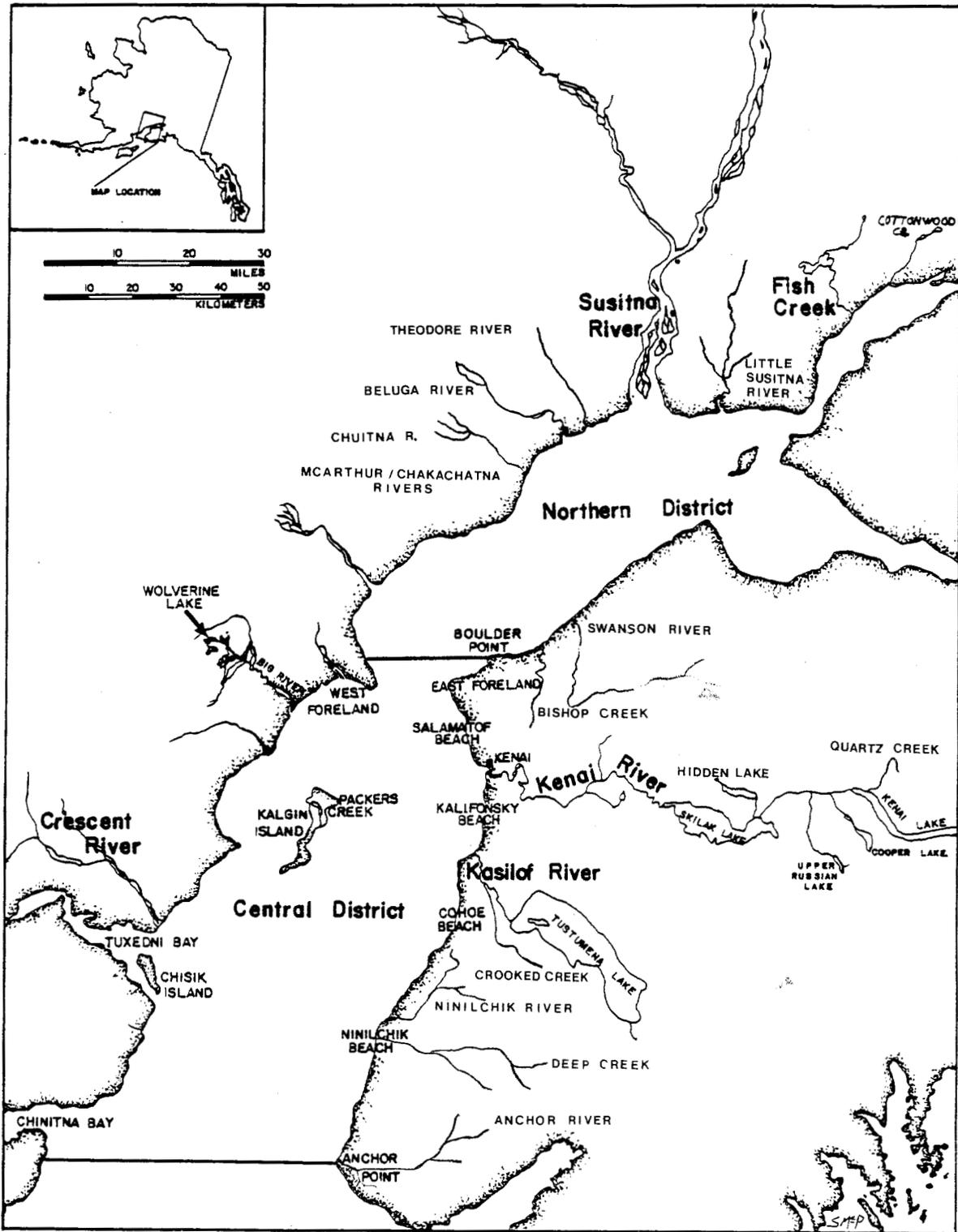


Figure 1. The Upper Cook Inlet Area showing the location of the Northern and Central Districts and the major sockeye salmon spawning drainages.

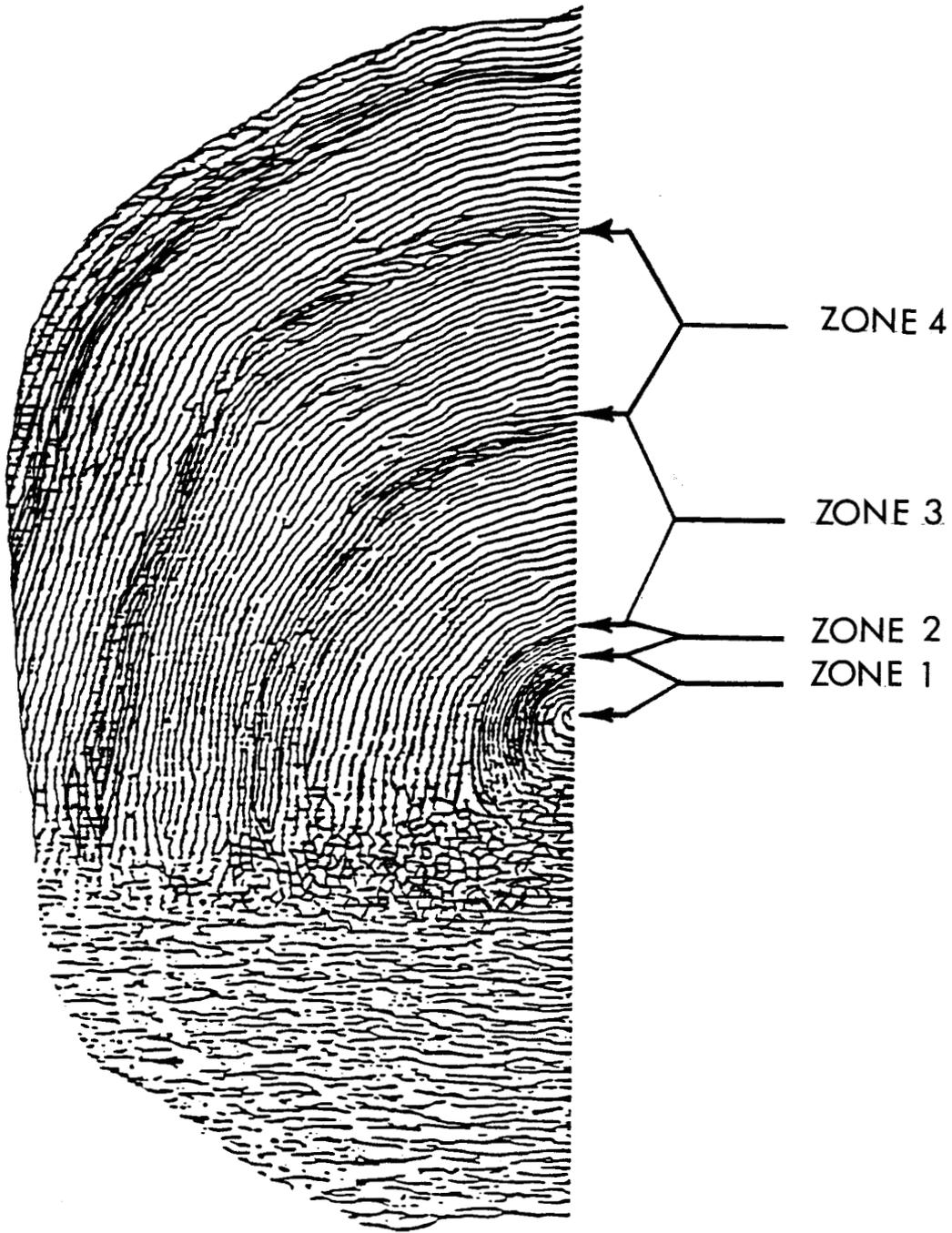
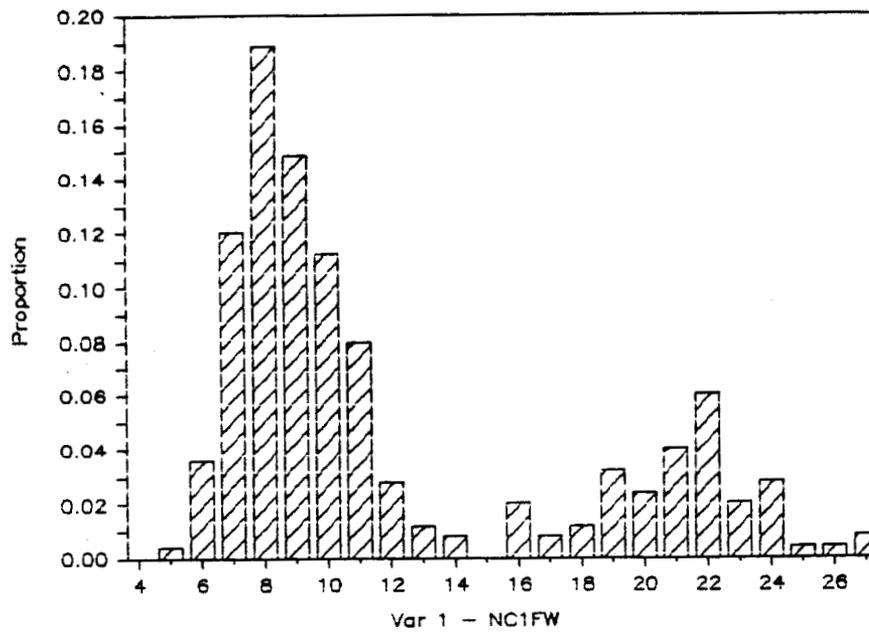


Figure 2. Age 1.3 sockeye salmon scale showing the zones measured to generate the variables to build linear discriminant functions.

Kenai River



Hidden Creek

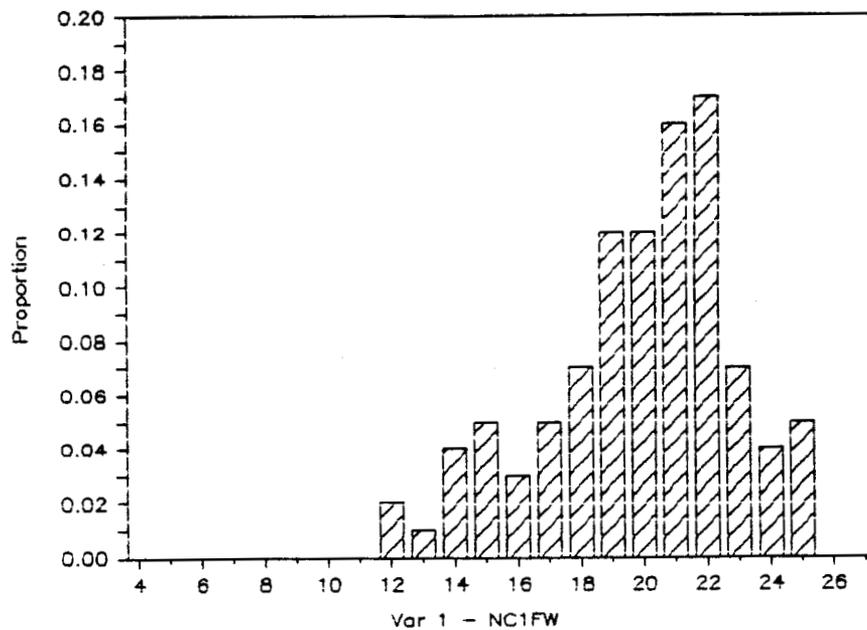
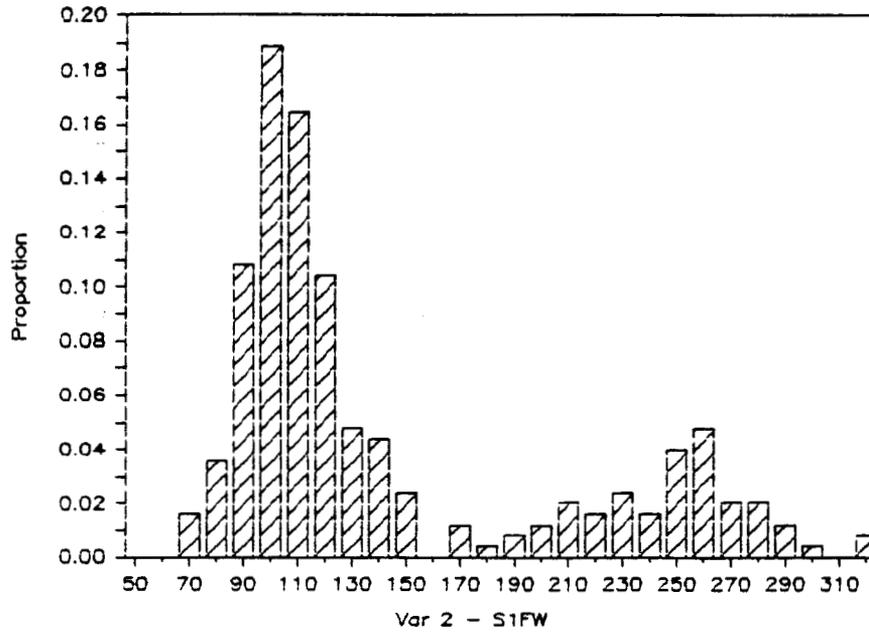


Figure 3. Number of circuli in the first zone of freshwater growth measured from scales taken from escapements of age-1.2 sockeye salmon in the Kenai River and Hidden Creek.

Kenai River



Hidden Creek

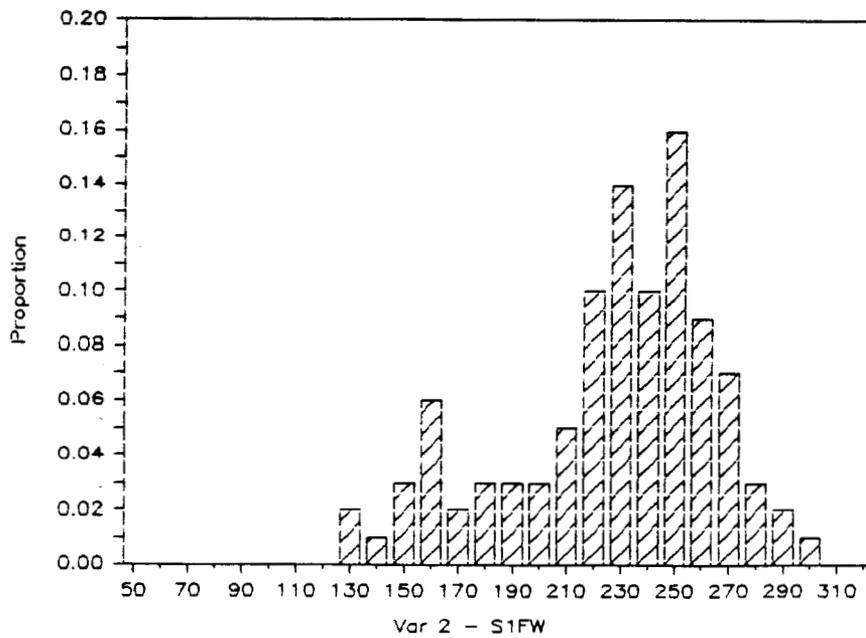


Figure 4. Size of the first zone of freshwater growth measured from scales taken from escapements of age-1.2 sockeye salmon in the Kenai River and Hidden Creek.

APPENDIX A: AGE, SEX, SIZE COMPOSITION

Appendix A1. Age composition by river of sockeye salmon escapement, sport harvest, and spawners, Upper Cook Inlet 1984.

River		1.2	1.3	2.2	2.3	Other	Total
Susitna River ^a							
Escapement	Numbers	112,534	127,139	14,001	10,918	14,854	279,446
	Percent	40.3	45.5	5.0	3.9	5.3	100.0
Sport Harvest	Numbers	1,558	1,758	193	151	205	3,865
	Percent	40.3	45.5	5.0	3.9	5.3	100.0
Spawners	Numbers	110,976	125,381	13,808	10,767	14,649	275,581
	Percent	40.3	45.5	5.0	3.9	5.3	100.0
Kenai River ^b							
Escapement	Numbers	79,596	130,248	45,483	67,191	22,053	344,571
	Percent	23.1	37.8	13.2	19.5	6.4	100.0
Russian River Sport Harvest	Numbers	4,987	3,427	10,348	3,120	88	21,970
	Percent	22.7	15.6	47.1	14.2	0.4	100.0
Kenai R. Sport Harvest Below Soldotna Bridge	Numbers	1,021	1,670	583	862	283	4,419
	Percent	23.1	37.8	13.2	19.5	6.4	100.0
Kenai R. Sport Harvest Above Soldotna Bridge	Numbers	2,606	4,266	1,489	2,200	722	11,283
	Percent	23.1	37.8	13.2	19.5	6.4	100.0
Spawners	Numbers	72,002	122,555	33,646	61,871	21,243	311,318
	Percent	23.1	39.4	10.8	19.9	6.8	100.0
Kasilof River ^c							
Escapement	Numbers	117,001	57,458	41,472	15,291	463	231,685
	Percent	50.5	24.8	17.9	6.6	0.2	100.0
Sport Harvest	Numbers	1,622	797	575	212	6	3,212
	Percent	50.5	24.8	17.9	6.6	0.2	100.0
Kasilof R. Personal-Use Dip Net Harvest	Numbers	6,449	3,167	2,286	843	26	12,771
	Percent	50.5	24.8	17.9	6.6	0.2	100.0

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River		1.2	1.3	2.2	2.3	Other	Total
Kasilof R.							
Personal-Use	Numbers	2,844	6,916	1,499	1,667	0	12,926
Gill Net Harvest	Percent	22.0	53.5	11.6	12.9	0.0	100.0
Fish Taken for Eggs and Offspring Not Returned to Kasilof							
	Numbers	692	340	246	91	3	1,372
	Percent	50.5	24.8	17.9	6.6	0.2	100.0
Spawners							
	Numbers	114,687	56,321	40,651	14,988	454	227,101
	Percent	50.5	24.8	17.9	6.6	0.2	100.0
Crescent River ^d							
Spawners	Numbers	4,142	20,000	23,669	70,297	237	118,345
	Percent	3.5	16.9	20.0	59.4	0.2	100.0
Fish Creek ^e							
Escapement	Numbers	161,961	10,964	14,811	1,539	3,077	192,352
	Percent	84.2	5.7	7.7	0.8	1.6	100.0
Saltwater Sport Harvest	Numbers	421	28	38	4	8	499
	Percent	84.2	5.7	7.7	0.8	1.6	100.0

^a Susitna River sport harvest includes those fish harvested above the escapement counting site. Scales were not sampled from the sport harvest, the age composition of the escapement was used to expand these estimates. Sport harvest was then subtracted from the escapement to calculate spawners.

^b Scales were not sampled from the sport harvest, the age composition from the escapement through Russian River weir was used to expand the Russian River sport harvest estimates and the age composition from the total mainstem escapement was used to expand other sport harvests. Sport harvests above the Soldotna Bridge were subtracted from the escapement to calculate numbers of spawners.

^c Scales were not taken from fish caught in the sport fishery, dip net fishery, or from those fish taken for eggs. The age composition of the escapement was applied to those catches. The sport harvest and egg-take fish whose progeny were not returned to the Kasilof River were subtracted from the escapement to calculate numbers of spawners.

^d An estimate of Crescent River sport harvest of sockeye salmon is not available, we assumed escapement equaled numbers of spawners.

^e Scales were not taken from the Fish Creek sport harvest. The age composition of the escapement was applied to the sport harvest. Sport catches occurred in saltwater and were not included in the escapement counts. Estimates of escapement equals numbers of spawners.

Appendix A2. Estimated age and sex composition by brood year of sockeye salmon in the Northern District east-side set net fishery in Upper Cook Inlet 1984.

Date	Sex		1981		1980		1979		1978		1977		Total	
			0.2	1.1	0.3	1.2	1.3	2.2	1.4	2.3	3.2	2.4		
25 Jun-06 Jul n=376	Males	Percent	0.3	0.0	1.1	26.4	10.6	10.6	0.0	0.5	0.0	0.0	49.5	
		Numbers	13	0	52	1,279	517	517	0	26	0	0	2,404	
	Females	Percent	0.0	0.0	0.8	21.5	11.7	13.3	0.0	3.2	0.0	0.0	50.5	
		Numbers	0	0	38	1,047	569	646	0	155	0	0	2,455	
	Combined	Percent	0.3	0.0	1.9	47.9	22.3	23.9	0.0	3.7	0.0	0.0	100.0	
		Numbers	13	0	90	2,326	1,086	1,163	0	181	0	0	4,859	
		SE	12	0	33	120	100	103	0	46	0	0		
	09 Jul-13 Jul n=322	Males	Percent	0.0	0.0	0.0	13.4	13.7	12.7	0.0	3.1	0.0	0.0	42.9
			Numbers	0	0	0	402	412	384	0	94	0	0	1,292
Females		Percent	0.0	0.0	0.3	24.8	9.9	18.7	0.0	3.4	0.0	0.0	57.1	
		Numbers	0	0	9	749	299	561	0	103	0	0	1,721	
Combined		Percent	0.0	0.0	0.3	38.2	23.6	31.4	0.0	6.5	0.0	0.0	100.0	
		Numbers	0	0	9	1,151	711	945	0	197	0	0	3,013	
		SE	0	0	9	77	67	74	0	39	0	0		
16 Jul n=384		Males	Percent	0.0	0.0	0.8	20.6	17.2	4.4	0.0	4.9	0.0	0.0	47.9
			Numbers	0	0	45	1,185	990	255	0	285	0	0	2,760
	Females	Percent	0.0	0.0	0.5	21.6	16.7	6.0	0.0	7.3	0.0	0.0	52.1	
		Numbers	0	0	30	1,245	960	345	0	420	0	0	3,000	
	Combined	Percent	0.0	0.0	1.3	42.2	33.9	10.4	0.0	12.2	0.0	0.0	100.0	
		Numbers	0	0	75	2,430	1,950	600	0	705	0	0	5,760	
		SE	0	0	32	140	135	87	0	93	0	0		

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Date	Sex		1981		1980		1979		1978		1977		Total	
			0.2	1.1	0.3	1.2	1.3	2.2	1.4	2.3	3.2	2.4		
18 Jul-20 Jul n=639	Males	Percent	0.0	0.0	0.3	13.0	22.1	3.4	0.0	6.1	0.0	0.0	44.9	
		Numbers	0	0	143	5,941	10,092	1,575	0	2,792	0	0	20,543	
	Females	Percent	0.0	0.0	0.3	20.3	22.8	4.9	0.3	6.3	0.2	0.0	55.1	
		Numbers	0	0	143	9,305	10,451	2,219	143	2,863	72	0	25,196	
	Combined	Percent	0.0	0.0	0.6	33.3	44.9	8.3	0.3	12.4	0.2	0.0	100.0	
		Numbers	0	0	286	15,246	20,543	3,794	143	5,655	72	0	45,739	
		SE	0	0	142	848	894	496	100	592	71	0		
	27 Jul-10 Sep n=561	Males	Percent	0.0	0.0	1.2	9.6	20.5	10.3	0.4	3.9	0.4	0.2	46.5
			Numbers	0	0	187	1,442	3,071	1,549	53	587	53	27	6,969
Females		Percent	0.0	0.2	1.2	14.1	18.0	14.3	0.0	4.5	1.2	0.0	53.5	
		Numbers	0	27	187	2,109	2,697	2,136	0	668	187	0	8,011	
Combined		Percent	0.0	0.2	2.4	23.7	38.5	24.6	0.4	8.4	1.6	0.2	100.0	
		Numbers	0	27	374	3,551	5,768	3,685	53	1,255	240	27	14,980	
		SE	0	26	97	264	302	267	37	172	78	26		
Total n=2,282		Males	Percent	0.0 ^a	0.0	0.6	13.8	20.3	5.8	0.1	5.1	0.1	0.0 ^a	45.8
			Numbers	13	0	427	10,250	15,082	4,279	53	3,783	53	27	33,967
	Females	Percent	0.0	0.0 ^a	0.5	19.4	20.2	7.9	0.2	5.7	0.3	0.0	54.2	
		Numbers	0	27	408	14,455	14,976	5,908	143	4,209	258	0	40,384	
	Combined	Percent	0.0 ^a	0.0 ^a	1.1	33.2	40.5	13.7	0.3	10.8	0.4	0.0 ^a	100.0	
		Numbers	13	27	835	24,705	30,058	10,187	196	7,992	311	27	74,351	
		SE	12	26	178	910	961	584	107	626	106	26		

^a Fish present, but represent less than 0.5% of catch.

Appendix A3. Estimated age and sex composition by brood year of sockeye salmon in the Northern District west-side set net fishery in Upper Cook Inlet 1984.

Date	Sex		1981		1980		1979			1978		1977	Total
			0.2	0.3	1.2	0.4	1.3	2.2	1.4	2.3	2.4		
25 Jun - 16 Jul n=669	Males	Percent	0.3	3.3	13.8	0.1	21.5	4.6	0.2	6.4	0.0	50.2	
		Numbers	137	1,511	6,320	46	9,846	2,107	92	2,931	0	22,990	
		SE	96	411	694	56	878	443	124	609	79		
	Females	Percent	0.0	2.5	5.5	0.0	31.6	2.2	0.3	7.5	0.2	49.8	
		Numbers	0	1,145	2,519	0	14,472	1,007	137	3,435	92	22,807	
		SE	0	824	1,546	0	1,840	887	307	1,295	260		
	Combined	Percent	0.3	5.8	19.3	0.1	53.1	6.8	0.5	13.9	0.2	100.0	
		Numbers	137	2,656	8,839	46	24,318	3,114	229	6,366	92	45,797	
		SE	96	411	694	56	878	443	124	609	79		
17 Jul - 09 Sep n=606	Males	Percent	0.0	2.3	10.7	0.0	19.1	3.1	0.0	5.1	0.2	40.5	
		Numbers	0	2,088	9,715	0	17,343	2,815	0	4,631	182	36,774	
		SE	0	824	1,546	0	1,840	887	307	1,295	260		
	Females	Percent	0.0	3.0	12.2	0.0	30.8	3.1	0.7	9.4	0.3	59.5	
		Numbers	0	2,724	11,077	0	27,966	2,815	636	8,535	272	54,025	
		SE	0	824	1,546	0	1,840	887	307	1,295	260		
	Combined	Percent	0.0	5.3	22.9	0.0	49.9	6.2	0.7	14.5	0.5	100.0	
		Numbers	0	4,812	20,792	0	45,309	5,630	636	13,166	454	90,799	
		SE	0	824	1,546	0	1,840	887	307	1,295	260		
Total n=1,275	Males	Percent	0.1	2.6	11.7	0.0 ^a	19.9	3.6	0.1	5.5	0.1	43.6	
		Numbers	137	3,600	16,035	46	27,189	4,921	92	7,562	182	59,764	
		SE	96	411	694	56	878	443	124	609	79		
	Females	Percent	0.0	2.8	10.0	0.0	31.1	2.8	0.6	8.8	0.3	56.4	
		Numbers	0	3,869	13,596	0	42,438	3,822	773	11,970	364	76,832	
		SE	0	824	1,546	0	1,840	887	307	1,295	260		
	Combined	Percent	0.1	5.4	21.7	0.0 ^a	51.0	6.4	0.7	14.3	0.4	100.0	
		Numbers	137	7,469	29,631	46	69,627	8,743	865	19,532	546	136,596	
		SE	96	411	694	56	878	443	124	609	79		

^a Fish present, but represent less than 0.5% of catch.

Appendix A4. Estimated age and sex composition by brood year of sockeye salmon in the Central District drift net fishery in Upper Cook Inlet 1984.

Date	Sex		1981		1980		1979		1978			1977		Total	
			0.2	1.1	0.3	1.2	1.3	2.2	1.4	2.3	3.2	2.4	3.3		
25 Jun n=668	Males	Percent	0.0	0.0	0.3	12.3	22.0	4.2	0.0	6.7	0.0	0.2	0.0	45.7	
		Numbers	0	0	48	1,986	3,560	678	0	1,090	0	24	0	7,386	
	Females	Percent	0.0	0.0	0.7	8.4	31.6	4.8	0.1	8.6	0.0	0.1	0.0	54.3	
		Numbers	0	0	122	1,356	5,109	775	24	1,380	0	24	0	8,790	
	Combined	Percent	0.0	0.0	1.0	20.7	53.6	9.0	0.1	15.3	0.0	0.3	0.0	100.0	
		Numbers	0	0	170	3,342	8,669	1,453	24	2,470	0	48	0	16,176	
		SE	0	0	62	248	306	175	24	221	0	34	0		
	29 Jun n=456	Males	Percent	0.0	0.0	1.4	16.0	23.9	5.0	0.0	9.4	0.0	0.0	0.0	55.7
			Numbers	0	0	312	3,800	5,673	1,197	0	2,238	0	0	0	13,220
Females		Percent	0.0	0.0	0.4	8.6	21.9	4.2	0.2	9.0	0.0	0.0	0.0	44.3	
		Numbers	0	0	104	2,030	5,205	989	52	2,134	0	0	0	10,514	
Combined		Percent	0.0	0.0	1.8	24.6	45.8	9.2	0.2	18.4	0.0	0.0	0.0	100.0	
		Numbers	0	0	416	5,830	10,878	2,186	52	4,372	0	0	0	23,734	
		SE	0	0	145	474	549	319	52	427	0	0	0		

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Date	Sex		1981		1980		1979		1978			1977		Total	
			0.2	1.1	0.3	1.2	1.3	2.2	1.4	2.3	3.2	2.4	3.3		
02 Jul n=643	Males	Percent	0.0	0.0	0.5	15.9	21.0	6.2	0.1	7.2	0.0	0.2	0.0	51.1	
		Numbers	0	0	244	8,299	10,984	3,255	81	3,743	0	81	0	26,687	
	Females	Percent	0.0	0.0	1.2	8.1	25.3	4.5	0.2	9.6	0.0	0.0	0.0	48.9	
		Numbers	0	0	651	4,231	13,262	2,360	81	5,045	0	0	0	25,630	
	Combined	Percent	0.0	0.0	1.7	24.0	46.3	10.7	0.3	16.8	0.0	0.2	0.0	100.0	
		Numbers	0	0	895	12,530	24,246	5,615	162	8,788	0	81	0	52,317	
		SE	0	0	266	876	1,023	635	114	767	0	81	0		
	06 Jul n=597	Males	Percent	0.0	0.0	0.2	13.1	21.2	5.7	0.2	6.7	0.0	0.0	0.0	47.1
			Numbers	0	0	357	27,812	45,284	12,123	357	14,263	0	0	0	100,196
Females		Percent	0.0	0.0	1.0	11.4	29.3	4.5	0.3	6.4	0.0	0.0	0.0	52.9	
		Numbers	0	0	2,139	24,246	62,399	9,627	713	13,549	0	0	0	112,673	
Combined		Percent	0.0	0.0	1.2	24.5	50.5	10.2	0.5	13.1	0.0	0.0	0.0	100.0	
		Numbers	0	0	2,496	52,058	107,683	21,750	1,070	27,812	0	0	0	212,869	
		SE	0	0	937	3,743	4,353	2,637	616	2,935	0	0	0		
09 Jul n=610		Males	Percent	0.0	0.0	1.1	8.6	23.4	5.2	0.7	9.5	0.0	0.0	0.0	48.5
			Numbers	0	0	2,366	17,579	48,342	10,818	1,352	19,608	0	0	0	100,065
	Females	Percent	0.0	0.0	1.9	5.2	32.0	2.3	0.3	9.8	0.0	0.0	0.0	51.5	
		Numbers	0	0	3,719	10,818	65,921	4,733	676	20,283	0	0	0	106,150	
	Combined	Percent	0.0	0.0	3.0	13.8	55.4	7.5	1.0	19.3	0.0	0.0	0.0	100.0	
		Numbers	0	0	6,085	28,397	114,263	15,551	2,028	39,891	0	0	0	206,215	
		SE	0	0	1,412	2,875	4,147	2,203	823	3,296	0	0	0		

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Date	Sex		1981		1980		1979		1978			1977		Total
			0.2	1.1	0.3	1.2	1.3	2.2	1.4	2.3	3.2	2.4	3.3	
10 Jul n=597	Males	Percent	0.0	0.0	0.7	16.2	21.1	4.9	0.3	6.4	0.0	0.0	0.0	49.6
		Numbers	0	0	422	10,223	13,279	3,056	211	4,005	0	0	0	31,196
	Females	Percent	0.0	0.2	1.0	8.5	27.4	3.9	0.0	9.2	0.0	0.2	0.0	50.4
		Numbers	0	105	632	5,375	17,284	2,424	0	5,796	0	105	0	31,721
	Combined	Percent	0.0	0.2	1.7	24.7	48.5	8.8	0.3	15.6	0.0	0.2	0.0	100.0
		Numbers	0	105	1,054	15,598	30,563	5,480	211	9,801	0	105	0	62,917
		SE	0	105	329	1,108	1,282	723	148	930	0	105	0	
13 Jul n=579	Males	Percent	0.0	0.0	0.9	8.6	29.2	3.5	0.5	8.1	0.0	0.0	0.0	50.8
		Numbers	0	0	2,187	21,868	73,912	8,747	1,312	20,555	0	0	0	128,581
	Females	Percent	0.0	0.0	1.4	4.8	29.2	1.9	1.4	10.5	0.0	0.0	0.0	49.2
		Numbers	0	0	3,499	12,246	73,912	4,811	3,499	26,678	0	0	0	124,645
	Combined	Percent	0.0	0.0	2.3	13.4	58.4	5.4	1.9	18.6	0.0	0.0	0.0	100.0
		Numbers	0	0	5,686	34,114	147,824	13,558	4,811	47,233	0	0	0	253,226
		SE	0	0	1,559	3,592	5,186	2,368	1,436	4,098	0	0	0	
16 Jul n=595	Males	Percent	0.2	0.0	0.8	8.9	24.0	4.4	0.2	9.1	0.0	0.0	0.0	47.6
		Numbers	423	0	2,116	22,424	60,504	11,001	423	22,848	0	0	0	119,739
	Females	Percent	0.0	0.0	0.8	4.2	32.1	3.5	0.7	10.9	0.0	0.2	0.0	52.4
		Numbers	0	0	2,116	10,578	80,813	8,885	1,692	27,502	0	423	0	132,009
	Combined	Percent	0.2	0.0	1.6	13.1	56.1	7.9	0.9	20.0	0.0	0.2	0.0	100.0
		Numbers	423	0	4,232	33,002	141,317	19,886	2,115	50,350	0	423	0	251,748
		SE	423	0	1,326	3,482	5,120	2,783	974	4,127	0	423	0	

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Date	Sex		1981		1980		1979		1978			1977		Total	
			0.2	1.1	0.3	1.2	1.3	2.2	1.4	2.3	3.2	2.4	3.3		
18 Jul n=524	Males	Percent	0.2	0.0	1.7	6.5	28.9	2.1	1.1	9.5	0.0	0.2	0.0	50.2	
		Numbers	218	0	1,959	7,402	32,875	2,395	1,306	10,886	0	218	0	57,259	
	Females	Percent	0.0	0.0	1.0	4.0	32.6	1.9	1.3	8.8	0.0	0.2	0.0	49.8	
		Numbers	0	0	1,089	4,572	37,229	2,177	1,524	10,015	0	218	0	56,824	
	Combined	Percent	0.2	0.0	2.7	10.5	61.5	4.0	2.4	18.3	0.0	0.4	0.0	100.0	
		Numbers	218	0	3,048	11,974	70,104	4,572	2,830	20,901	0	436	0	114,083	
		SE	217	0	803	1,525	2,422	976	762	1,925	0	307	0		
	27 Jul-21 Sep n=595	Males	Percent	0.0	0.0	1.2	7.6	33.9	4.4	2.0	11.1	0.5	0.2	0.0	60.9
			Numbers	0	0	417	2,684	12,048	1,551	716	3,936	179	60	0	21,591
Females		Percent	0.0	0.0	0.3	2.7	24.0	3.5	1.8	6.1	0.3	0.2	0.2	39.1	
		Numbers	0	0	119	954	8,529	1,252	656	2,147	119	60	60	13,896	
Combined		Percent	0.0	0.0	1.5	10.3	57.9	7.9	3.8	17.2	0.8	0.4	0.2	100.0	
		Numbers	0	0	536	3,638	20,577	2,803	1,372	6,083	298	120	60	35,487	
		SE	0	0	176	438	713	389	278	544	132	84	59		
Total n=5,872		Males	Percent	0.1	0.0	0.8	10.1	24.9	4.5	0.5	8.4	0.0 ^a	0.0 ^a	0.0	49.3
			Numbers	641	0	10,429	124,076	306,461	54,820	5,758	103,171	179	383	0	605,918
	Females	Percent	0.0	0.0 ^a	1.2	6.2	30.1	3.1	0.7	9.3	0.0 ^a	0.1	0.0 ^a	50.7	
		Numbers	0	105	14,189	76,406	369,664	38,033	8,918	114,530	119	830	60	622,854	
	Combined	Percent	0.1	0.0 ^a	2.0	16.3	55.0	7.6	1.2	17.7	0.0 ^a	0.1	0.0 ^a	100.0	
		Numbers	641	105	24,618	200,482	676,125	92,853	14,676	217,701	298	1,213	60	1,228,772	
		SE	475	105	2,818	7,218	9,936	5,227	2,169	7,680	132	546	59		

^a Fish present, but represent less than 0.5% of catch.

Appendix A5. Estimated age and sex composition by brood year of sockeye salmon in the Central District west-side set net fishery in Upper Cook Inlet 1984.

Date	Sex		1981		1980		1979		1978			1977		Total	
			1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	3.3		
18 Jun-02 Jul n=550	Males	Percent	0.0	0.0	3.8	0.0	9.7	5.8	0.2	23.8	0.0	0.0	0.0	43.3	
		Numbers	0	0	526	0	1,328	802	25	3,283	0	0	0	5,964	
	Females	Percent	0.2	0.2	2.2	0.0	13.6	3.6	0.0	36.9	0.0	0.0	0.0	56.7	
		Numbers	25	25	301	0	1,879	501	0	5,087	0	0	0	7,818	
	Combined	Percent	0.2	0.2	6.0	0.0	23.3	9.4	0.2	60.7	0.0	0.0	0.0	100.0	
		Numbers	25	25	827	0	3,207	1,303	25	8,370	0	0	0	13,782	
		SE	25	25	137	0	244	168	25	281	0	0	0		
	06 Jul-09 Jul n=544	Males	Percent	0.0	0.0	2.9	0.0	8.3	7.7	0.2	33.7	0.0	0.0	0.0	52.8
			Numbers	0	0	427	0	1,204	1,124	27	4,896	0	0	0	7,678
Females		Percent	0.0	0.0	0.9	0.0	10.3	3.5	0.0	32.5	0.0	0.0	0.0	47.2	
		Numbers	0	0	134	0	1,498	508	0	4,735	0	0	0	6,875	
Combined		Percent	0.0	0.0	3.8	0.0	18.6	11.2	0.2	66.2	0.0	0.0	0.0	100.0	
		Numbers	0	0	561	0	2,702	1,632	27	9,631	0	0	0	14,553	
		SE	0	0	118	0	238	193	26	290	0	0	0		
11 Jul-17 Jul n=432		Males	Percent	0.0	0.2	3.0	0.0	11.1	11.1	0.0	21.9	0.0	0.2	0.0	47.5
			Numbers	0	97	1,263	0	4,662	4,662	0	9,130	0	97	0	19,911
	Females	Percent	0.0	0.0	1.2	0.0	12.7	6.9	0.2	31.0	0.0	0.5	0.0	52.5	
		Numbers	0	0	486	0	5,342	2,914	97	13,015	0	194	0	22,048	
	Combined	Percent	0.0	0.2	4.2	0.0	23.8	18.0	0.2	52.9	0.0	0.7	0.0	100.0	
		Numbers	0	97	1,749	0	10,004	7,576	97	22,145	0	291	0	41,959	
		SE	0	97	402	0	857	772	97	1,004	0	167	0		

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Date	Sex		1981		1980		1979		1978			1977		Total	
			1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	3.3		
18 Jul-24 Jul n=654	Males	Percent	0.0	0.0	3.2	0.2	13.1	11.5	0.2	19.1	0.3	0.0	0.0	47.6	
		Numbers	0	0	1,438	68	5,889	5,135	68	8,559	137	0	0	21,294	
	Females	Percent	0.0	0.0	3.1	0.0	15.7	11.9	0.2	21.5	0.0	0.0	0.0	52.4	
		Numbers	0	0	1,369	0	7,053	5,341	69	9,654	0	0	0	23,486	
	Combined	Percent	0.0	0.0	6.3	0.2	28.8	23.4	0.4	40.6	0.3	0.0	0.0	100.0	
		Numbers	0	0	2,807	68	12,942	10,476	137	18,213	137	0	0	44,780	
		SE	0	0	422	68	789	736	96	854	96	0	0		
	25 Jul-03 Sep n=570	Males	Percent	0.0	0.0	4.2	0.2	11.6	9.8	0.0	19.1	0.0	0.0	0.0	44.9
			Numbers	0	0	726	30	1,997	1,695	0	3,298	0	0	0	7,746
Females		Percent	0.0	0.0	1.6	0.0	18.0	7.5	0.2	27.4	0.0	0.0	0.4	55.1	
		Numbers	0	0	272	0	3,117	1,301	30	4,720	0	0	61	9,501	
Combined		Percent	0.0	0.0	5.8	0.2	29.6	17.3	0.2	46.5	0.0	0.0	0.4	100.0	
		Numbers	0	0	998	30	5,114	2,996	30	8,018	0	0	61	17,247	
		SE	0	0	166	30	325	269	30	355	0	0	42		
Total n=2,750		Males	Percent	0.0	0.1	3.3	0.1	11.4	10.1	0.1	22.0	0.1	0.1	0.0	47.3
			Numbers	0	97	4,381	99	15,080	13,417	120	29,165	137	97	0	62,593
	Females	Percent	0.0 ^a	0.0 ^a	1.9	0.0	14.4	8.0	0.1	28.2	0.0	0.1	0.0 ^a	52.7	
		Numbers	25	25	2,562	0	18,888	10,565	196	37,212	0	194	61	69,728	
	Combined	Percent	0.0 ^a	0.1	5.2	0.1	25.8	18.1	0.2	50.2	0.1	0.2	0.0 ^a	100.0	
		Numbers	25	122	6,943	99	33,968	23,982	316	66,377	137	291	61	132,321	
		SE	25	100	632	74	1,256	1,131	144	1,424	96	167	42		

^a Fish present, but represent less than 0.5% of catch.

Appendix A6. Estimated age and sex composition by brood year of sockeye salmon in the Kalgin Island set net fishery in Upper Cook Inlet 1984.

Date	Sex		1981		1980		1979		1978		Total		
			0.2	0.3	1.2	2.1	1.3	2.2	1.4	2.3		3.2	
25 Jun-16 Jul n=405	Males	Percent	0.2	0.5	9.9	0.2	28.6	7.4	0.5	16.6	0.3	64.2	
		Numbers	44	89	1,777	44	5,154	1,333	89	2,977	45	11,552	
	Females	Percent	0.0	1.2	3.0	0.0	18.6	2.7	0.2	9.9	0.2	35.8	
		Numbers	0	222	533	0	3,332	489	44	1,777	44	6,441	
	Combined	Percent	0.2	1.7	12.9	0.2	47.2	10.1	0.7	26.5	0.5	100.0	
		Numbers	44	311	2,310	44	8,486	1,822	133	4,754	89	17,993	
		SE	44	115	296	44	442	267	76	390	62		
	18 Jul-17 Sep n=308	Males	Percent	0.0	0.0	10.7	0.0	16.2	25.0	0.0	3.6	0.7	56.2
			Numbers	0	0	1,834	0	2,779	4,280	0	611	111	9,615
Females		Percent	0.0	0.0	10.1	0.0	15.3	13.3	0.0	4.5	0.6	43.8	
		Numbers	0	0	1,723	0	2,612	2,279	0	778	111	7,503	
Combined		Percent	0.0	0.0	20.8	0.0	31.5	38.3	0.0	8.1	1.3	100.0	
		Numbers	0	0	3,557	0	5,391	6,559	0	1,389	222	17,118	
		SE	0	0	393	0	450	471	0	264	110		
Total n=713		Males	Percent	0.1	0.3	10.3	0.1	22.6	16.0	0.3	10.2	0.4	60.3
			Numbers	44	89	3,611	44	7,933	5,612	89	3,588	156	21,166
	Females	Percent	0.0	0.6	6.4	0.0	16.9	7.9	0.1	7.3	0.5	39.7	
		Numbers	0	222	2,256	0	5,944	2,768	44	2,555	156	13,945	
	Combined	Percent	0.1	0.9	16.7	0.1	39.5	23.9	0.4	17.5	0.9	100.0	
		Numbers	44	311	5,867	44	13,877	8,380	133	6,143	312	35,111	
		SE	44	115	492	44	630	541	76	471	126		

Appendix A7. Estimated age and sex composition by brood year of sockeye salmon in the Salamatof Beach set net fishery in Upper Cook Inlet 1984.

Date	Sex		1981		1980		1979		1978		1977		Total	
			0.2	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4		
09 Jul-13 Jul n=196	Males	Percent	0.0	0.0	28.1	0.0	14.8	17.9	0.5	5.1	0.0	0.0	66.4	
		Numbers	0	0	1,717	0	905	1,092	31	312	0	0	4,057	
	Females	Percent	0.0	0.0	6.6	0.0	12.2	12.2	0.0	2.6	0.0	0.0	33.6	
		Numbers	0	0	406	0	749	749	0	156	0	0	2,060	
	Combined	Percent	0.0	0.0	34.7	0.0	27.0	30.1	0.5	7.7	0.0	0.0	100.0	
		Numbers	0	0	2,123	0	1,654	1,841	31	468	0	0	6,117	
		SE	0	0	205	0	191	198	31	115	0	0		
	16 Jul n=575	Males	Percent	0.0	0.5	15.7	0.0	30.1	11.3	0.7	15.5	0.0	0.3	74.1
			Numbers	0	177	5,312	0	10,210	3,836	236	5,253	0	118	25,141
Females		Percent	0.0	0.3	4.2	0.0	11.7	3.3	1.0	5.4	0.0	0.0	25.9	
		Numbers	0	118	1,416	0	3,954	1,121	354	1,829	0	0	8,793	
Combined		Percent	0.0	0.8	19.9	0.0	41.8	14.6	1.7	20.9	0.0	0.3	100.0	
		Numbers	0	295	6,728	0	14,164	4,957	590	7,082	0	118	33,934	
		SE	0	130	560	0	693	496	184	571	0	83		
18 Jul n=584		Males	Percent	0.0	1.2	7.9	0.0	27.0	6.5	3.4	9.6	1.9	0.2	57.7
			Numbers	0	356	2,338	0	8,030	1,932	1,016	2,846	559	51	17,128
	Females	Percent	0.2	1.9	3.4	0.0	20.9	4.5	3.1	6.7	1.5	0.1	42.1	
		Numbers	51	559	1,016	0	6,201	1,321	915	1,982	457	51	12,553	
	Combined	Percent	0.2	3.1	11.3	0.0	47.9	11.0	6.5	16.3	3.4	0.3	100.0	
		Numbers	51	915	3,354	0	14,231	3,253	1,931	4,828	1,016	102	29,681	
		SE	50	210	385	0	608	380	300	449	221	71		

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Date	Sex		1981	1980		1979		1978		1977		Total		
			0.2	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2		2.4	
30 Jul-13 Aug n=377	Males	Percent	0.0	1.3	10.9	0.0	25.7	4.8	1.3	5.8	0.0	0.0	49.8	
		Numbers	0	177	1,456	0	3,445	639	178	781	0	0	6,676	
	Females	Percent	0.0	0.3	8.5	0.5	22.3	9.3	1.6	7.7	0.0	0.0	50.2	
		Numbers	0	36	1,136	71	2,983	1,243	213	1,030	0	0	6,712	
	Combined	Percent	0.0	1.6	19.4	0.5	48.0	14.1	2.9	13.5	0.0	0.0	100.0	
		Numbers	0	213	2,592	71	6,428	1,882	391	1,811	0	0	13,388	
		SE	0	85	269	49	340	237	115	233	0	0		
	Total n=1,732	Males	Percent	0.0	0.8	13.0	0.0	27.2	9.0	1.7	11.1	0.6	0.2	63.6
			Numbers	0	710	10,822	0	22,590	7,499	1,461	9,192	559	169	53,002
Females		Percent	0.1	0.9	4.8	0.1	16.7	5.3	1.8	6.0	0.6	0.1	36.4	
		Numbers	51	713	3,975	71	13,886	4,435	1,482	4,997	457	51	30,118	
Combined		Percent	0.1	1.7	17.8	0.1	43.9	14.3	3.5	17.1	1.2	0.3	100.0	
		Numbers	51	1,423	14,797	71	36,476	11,934	2,943	14,189	1,016	220	83,120	
		SE	50	259	760	49	1,001	697	371	771	221	109		

Appendix A8. Estimated age and sex composition by brood year of sockeye salmon in the Kalifonsky Beach set net fishery in Upper Cook Inlet 1984.

Date	Sex		1981		1980		1979			1978		1977		Total	
			0.2	0.3	1.2	2.1	0.4	1.3	2.2	1.4	2.3	3.2	2.4		
02 Jul-09 Jul n=609	Males	Percent	0.0	0.0	24.5	0.0	0.0	20.0	11.3	0.0	5.4	0.0	0.0	61.2	
		Numbers	0	0	6,419	0	0	5,256	2,973	0	1,422	0	0	16,070	
	Females	Percent	0.0	0.5	7.4	0.0	0.0	17.6	7.3	0.3	5.7	0.0	0.0	38.8	
		Numbers	0	129	1,939	0	0	4,610	1,895	86	1,508	0	0	10,167	
	Combined	Percent	0.0	0.5	31.9	0.0	0.0	37.6	18.6	0.3	11.1	0.0	0.0	100.0	
		Numbers	0	129	8,358	0	0	9,866	4,868	86	2,930	0	0	26,237	
		SE	0	74	490	0	0	509	409	60	331	0	0		
	10 Jul-11 Jul n=590	Males	Percent	0.0	0.3	30.2	0.0	0.0	13.4	12.5	0.2	6.3	0.0	0.0	62.9
			Numbers	0	80	7,150	0	0	3,173	2,973	40	1,486	0	0	14,902
Females		Percent	0.0	0.2	14.0	0.0	0.0	11.5	7.5	0.2	3.7	0.0	0.0	37.1	
		Numbers	0	40	3,334	0	0	2,731	1,767	40	884	0	0	8,796	
Combined		Percent	0.0	0.5	44.2	0.0	0.0	24.9	20.0	0.4	10.0	0.0	0.0	100.0	
		Numbers	0	120	10,484	0	0	5,904	4,740	80	2,370	0	0	23,698	
		SE	0	69	479	0	0	417	386	56	289	0	0		

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Date	Sex		1981		1980		1979			1978		1977		Total	
			0.2	0.3	1.2	2.1	0.4	1.3	2.2	1.4	2.3	3.2	2.4		
12 Jul-13 Jul n=598	Males	Percent	0.0	0.0	29.9	0.0	0.0	14.4	15.6	0.0	4.0	0.0	0.0	63.9	
		Numbers	0	0	1,402	0	0	673	728	0	188	0	0	2,991	
	Females	Percent	0.0	0.0	17.9	0.0	0.0	6.9	9.0	0.0	2.3	0.0	0.0	36.1	
		Numbers	0	0	838	0	0	321	423	0	110	0	0	1,692	
	Combined	Percent	0.0	0.0	47.8	0.0	0.0	21.3	24.6	0.0	6.3	0.0	0.0	100.0	
		Numbers	0	0	2,240	0	0	994	1,151	0	298	0	0	4,683	
		SE	0	0	89	0	0	73	77	0	44	0	0		
	16 Jul-17 Jul n=615	Males	Percent	0.2	0.2	13.2	0.0	0.0	20.2	10.0	0.2	8.5	0.0	0.0	52.5
			Numbers	91	91	7,406	0	0	11,429	5,669	91	4,755	0	0	29,532
Females		Percent	0.0	0.5	5.7	0.0	0.0	26.2	4.6	0.6	9.9	0.0	0.0	47.5	
		Numbers	0	274	3,200	0	0	14,720	2,560	366	5,577	0	0	26,697	
Combined		Percent	0.2	0.7	18.9	0.0	0.0	46.4	14.6	0.8	18.4	0.0	0.0	100.0	
		Numbers	91	365	10,606	0	0	26,149	8,229	457	10,332	0	0	56,229	
		SE	91	181	883	0	0	1,126	798	203	874	0	0		
18 Jul n=598		Males	Percent	0.0	0.2	14.7	0.0	0.0	15.6	6.0	0.5	6.0	0.2	0.0	43.2
			Numbers	0	61	5,354	0	0	5,657	2,190	182	2,190	61	0	15,695
	Females	Percent	0.0	0.7	14.0	0.2	0.0	24.7	6.7	1.3	8.7	0.5	0.0	56.8	
		Numbers	0	243	5,110	61	0	9,004	2,433	487	3,163	182	0	20,683	
	Combined	Percent	0.0	0.9	28.7	0.2	0.0	40.3	12.7	1.8	14.7	0.7	0.0	100.0	
		Numbers	0	304	10,464	61	0	14,661	4,623	669	5,353	243	0	36,378	
		SE	0	134	668	60	0	724	492	198	523	120	0		

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Date	Sex		1981		1980		1979			1978		1977		Total	
			0.2	0.3	1.2	2.1	0.4	1.3	2.2	1.4	2.3	3.2	2.4		
30 Jul-13 Aug n=309	Males	Percent	0.0	0.0	23.0	0.3	0.0	13.6	11.7	2.3	7.1	0.0	0.6	58.6	
		Numbers	0	0	1,700	24	0	1,005	862	167	527	0	48	4,333	
	Females	Percent	0.0	0.3	21.3	0.0	0.3	6.5	8.1	1.0	3.6	0.0	0.3	41.4	
		Numbers	0	24	1,580	0	24	479	598	72	263	0	24	3,064	
	Combined	Percent	0.0	0.3	44.3	0.3	0.3	20.1	19.8	3.3	10.7	0.0	0.9	100.0	
		Numbers	0	24	3,280	24	24	1,484	1,460	239	790	0	72	7,397	
		SE	0	23	205	23	23	165	164	74	127	0	39		
	Total n=3,319	Males	Percent	0.1	0.2	19.0	0.0 ^a	0.0	17.6	10.0	0.3	6.8	0.0 ^a	0.0 ^a	54.0
			Numbers	91	233	29,429	24	0	27,194	15,393	482	10,567	61	48	83,522
Females		Percent	0.0	0.5	10.4	0.0 ^a	0.0 ^a	20.6	6.3	0.7	7.4	0.1	0.0 ^a	46.0	
		Numbers	0	711	16,000	61	24	31,864	9,678	1,051	11,505	182	24	71,100	
Combined		Percent	0.1	0.7	29.4	0.0 ^a	0.0 ^a	38.2	16.3	1.0	14.2	0.1	0.0 ^a	100.0	
		Numbers	91	944	45,429	85	24	59,058	25,071	1,533	22,072	243	72	154,622	
		SE	91	248	1,321	65	23	1,503	1,108	304	1,118	120	40		

^a Fish present, but represent less than 0.5% of catch.

Appendix A9. Estimated age and sex composition by brood year of sockeye salmon in the Coho/Ninilchik set net fishery in Upper Cook Inlet 1984.

Date	Sex		1981		1980			1979		1978		1977		Total	
			0.2	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4		
02 Jul n=588	Males	Percent	0.2	0.0	0.0	18.4	0.0	20.1	10.2	0.2	7.0	0.0	0.0	56.1	
		Numbers	18	0	0	1,904	0	2,097	1,057	18	723	0	0	5,817	
	Females	Percent	0.0	0.0	0.2	9.3	0.0	16.2	9.3	0.0	8.8	0.0	0.0	43.9	
		Numbers	0	0	18	969	0	1,675	969	0	916	0	0	4,548	
	Combined	Percent	0.2	0.0	0.2	27.7	0.0	36.3	19.6	0.2	15.8	0.0	0.0	100.0	
		Numbers	18	0	18	2,873	0	3,772	2,027	18	1,639	0	0	10,365	
		SE	17	0	17	186	0	200	165	17	152	0	0		
	06 Jul n=628	Males	Percent	0.0	0.2	0.2	22.9	0.0	11.6	15.2	0.0	5.3	0.0	0.0	55.4
			Numbers	0	20	20	2,875	0	1,458	1,917	0	659	0	0	6,949
Females		Percent	0.0	0.0	0.0	10.8	0.0	15.8	9.7	0.3	8.0	0.0	0.0	44.6	
		Numbers	0	0	0	1,358	0	1,977	1,218	40	998	0	0	5,591	
Combined		Percent	0.0	0.2	0.2	33.7	0.0	27.4	24.9	0.3	13.3	0.0	0.0	100.0	
		Numbers	0	20	20	4,233	0	3,435	3,135	40	1,657	0	0	12,540	
		SE	0	19	19	231	0	218	211	28	165	0	0		
09 Jul n=602		Males	Percent	0.0	0.0	0.2	24.1	0.0	13.5	11.1	0.2	5.1	0.0	0.2	54.4
			Numbers	0	0	52	7,546	0	4,215	3,486	52	1,613	0	52	17,016
	Females	Percent	0.0	0.0	0.3	15.4	0.0	13.8	10.6	0.0	5.5	0.0	0.0	45.6	
		Numbers	0	0	104	4,839	0	4,319	3,331	0	1,717	0	0	14,310	
	Combined	Percent	0.0	0.0	0.5	39.5	0.0	27.3	21.7	0.2	10.6	0.0	0.2	100.0	
		Numbers	0	0	156	12,385	0	8,534	6,817	52	3,330	0	52	31,326	
		SE	0	0	89	619	0	563	522	52	390	0	52		

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Date	Sex		1981		1980			1979		1978			1977	Total	
			0.2	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4		
10 Jul n=599	Males	Percent	0.0	0.0	0.2	16.9	0.0	12.5	11.0	0.0	7.2	0.0	0.0	47.8	
		Numbers	0	0	23	2,355	0	1,749	1,539	0	1,003	0	0	6,669	
	Females	Percent	0.0	0.0	0.3	11.7	0.0	20.7	10.7	0.3	8.5	0.0	0.0	52.2	
		Numbers	0	0	47	1,632	0	2,892	1,492	47	1,189	0	0	7,299	
	Combined	Percent	0.0	0.0	0.5	28.6	0.0	33.2	21.7	0.3	15.7	0.0	0.0	100.0	
		Numbers	0	0	70	3,987	0	4,641	3,031	47	2,192	0	0	13,968	
		SE	0	0	40	253	0	264	231	32	204	0	0		
	11 Jul n=603	Males	Percent	0.0	0.2	0.2	17.3	0.0	9.9	11.8	0.5	7.5	0.0	0.0	47.4
			Numbers	0	12	12	1,270	0	725	858	36	544	0	0	3,457
Females		Percent	0.0	0.0	0.3	15.8	0.0	13.8	14.6	0.3	7.8	0.0	0.0	52.6	
		Numbers	0	0	24	1,148	0	1,004	1,064	24	568	0	0	3,832	
Combined		Percent	0.0	0.2	0.5	33.1	0.0	23.7	26.4	0.8	15.3	0.0	0.0	100.0	
		Numbers	0	12	36	2,418	0	1,729	1,922	60	1,112	0	0	7,289	
		SE	0	12	20	134	0	121	125	26	102	0	0		
12 Jul n=627		Males	Percent	0.0	0.0	0.0	20.4	0.0	8.0	8.7	0.0	4.6	0.0	0.2	41.9
			Numbers	0	0	0	2,366	0	924	1,017	0	536	0	19	4,862
	Females	Percent	0.0	0.0	0.0	20.4	0.0	14.3	15.5	0.0	7.7	0.0	0.2	58.1	
		Numbers	0	0	0	2,366	0	1,664	1,793	0	887	0	18	6,728	
	Combined	Percent	0.0	0.0	0.0	40.8	0.0	22.3	24.2	0.0	12.3	0.0	0.4	100.0	
		Numbers	0	0	0	4,732	0	2,588	2,810	0	1,423	0	37	11,590	
		SE	0	0	0	221	0	188	193	0	148	0	25		

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Date	Sex		1981		1980			1979		1978		1977		Total
			0.2	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	
13 Jul n=607	Males	Percent	0.0	0.0	0.0	15.7	0.0	11.5	12.5	0.2	3.8	0.3	0.0	44.0
		Numbers	0	0	0	1,386	0	1,021	1,108	15	336	29	0	3,895
	Females	Percent	0.0	0.2	0.0	14.3	0.2	19.3	15.0	0.6	6.4	0.0	0.0	56.0
		Numbers	0	15	0	1,269	15	1,707	1,328	58	568	0	0	4,960
	Combined	Percent	0.0	0.2	0.0	30.0	0.2	30.8	27.5	0.8	10.2	0.3	0.0	100.0
		Numbers	0	15	0	2,655	15	2,728	2,436	73	904	29	0	8,855
SE		0	14	0	159	14	160	155	31	105	20	0		
16 Jul n=329	Males	Percent	0.0	0.0	0.6	21.0	0.0	14.6	8.8	1.2	9.1	0.0	0.0	55.3
		Numbers	0	0	192	6,626	0	4,610	2,785	384	2,881	0	0	17,478
	Females	Percent	0.0	0.0	0.3	10.3	0.0	17.7	9.7	0.6	6.1	0.0	0.0	44.7
		Numbers	0	0	96	3,265	0	5,570	3,073	192	1,921	0	0	14,117
	Combined	Percent	0.0	0.0	0.9	31.3	0.0	32.3	18.5	1.8	15.2	0.0	0.0	100.0
		Numbers	0	0	288	9,891	0	10,180	5,858	576	4,802	0	0	31,595
SE		0	0	165	805	0	811	674	232	623	0	0		
17 Jul-18 Jul n=601	Males	Percent	0.0	0.0	0.2	19.1	0.0	16.3	6.7	0.3	5.8	0.0	0.0	48.4
		Numbers	0	0	191	21,948	0	18,703	7,634	382	6,680	0	0	55,538
	Females	Percent	0.0	0.0	0.6	16.0	0.0	20.5	6.8	1.0	6.7	0.0	0.0	51.6
		Numbers	0	0	763	18,322	0	23,475	7,825	1,145	7,634	0	0	59,164
	Combined	Percent	0.0	0.0	0.8	35.1	0.0	36.8	13.5	1.3	12.5	0.0	0.0	100.0
		Numbers	0	0	954	40,270	0	42,178	15,459	1,527	14,314	0	0	114,702
SE		0	0	424	2,229	0	2,252	1,595	535	1,543	0	0		

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Date	Sex		1981		1980			1979		1978		1977		Total	
			0.2	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4		
27 Jul-13 Aug n=293	Males	Percent	0.0	0.3	0.3	15.4	0.0	31.1	5.1	2.1	2.4	0.0	0.0	56.7	
		Numbers	0	53	53	2,403	0	4,859	801	320	374	0	0	8,863	
	Females	Percent	0.0	0.0	0.4	16.4	0.3	15.0	7.5	1.0	2.7	0.0	0.0	43.3	
		Numbers	0	0	54	2,563	53	2,349	1,175	160	427	0	0	6,781	
	Combined	Percent	0.0	0.3	0.7	31.8	0.3	46.1	12.6	3.1	5.1	0.0	0.0	100.0	
		Numbers	0	53	107	4,966	53	7,208	1,976	480	801	0	0	15,644	
		SE	0	53	75	422	53	452	301	156	200	0	0		
	Total n=5,483	Males	Percent	0.0 ^a	0.0 ^a	0.2	19.7	0.0	15.7	8.6	0.5	6.0	0.0 ^a	0.0 ^a	50.7
			Numbers	18	85	544	50,678	0	40,361	22,204	1,207	15,247	29	71	130,544
Females		Percent	0.0	0.0 ^a	0.4	14.7	0.0 ^a	18.1	9.0	0.6	6.5	0.0	0.0 ^a	49.3	
		Numbers	0	15	1,105	37,733	68	46,630	23,267	1,666	16,828	0	18	127,330	
Combined		Percent	0.0 ^a	0.0 ^a	0.6	34.4	0.0 ^a	33.8	17.6	1.1	12.5	0.0 ^a	0.0 ^a	100.0	
		Numbers	18	100	1,649	88,411	68	86,991	45,471	2,873	32,175	29	89	257,874	
		SE	17	59	473	2,534	55	2,546	1,888	609	1,760	20	57		

^a Fish present, but represent less than 0.5% of catch.

Appendix A10. Estimated mean length^a by sex, age, and brood year for sockeye salmon harvested by commercial fisheries in Upper Cook Inlet 1984.

Location	Sex		1980			1979		1978			1977
			0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4
Northern District East-side Set	Males	Mean Length	575.3	482.3		560.7	490.1		574.6		
		SE	19.0	4.4		3.5	4.2		9.7		
		Range	520-635	415-585		470-622	430-571		454-620		
		Sample size	6	74		89	60		16		
	Females	Mean Length	552.7	492.8		537.1	491.7		554.5		
		SE	12.2	2.8		3.3	3.5		8.4		
		Range	510-584	406-556		465-590	440-568		507-609		
		Sample Size	6	87		68	63		14		
	Combined	Mean Length	564.0	488.0		550.5	490.9		565.2		
		SE	11.3	2.5		2.6	2.7		6.7		
		Range	510-635	406-585		465-622	430-571		454-620		
		Sample Size	12	161		157	123		30		
Northern District West-side Set	Males	Mean Length		501.1	339.0	570.0			565.3		
		SE		13.3	0.0	4.9			12.7		
		Range		445-590	339-339	530-624			531-587		
		Sample Size		9	1	20			4		
	Females	Mean Length		500.4		555.0	469.3		566.0		
		SE		24.6		7.6	3.5		4.0		
		Range		431-584		522-583	464-476		562-570		
		Sample Size		5		8	3		2		
	Combined	Mean Length		500.9	339.0	565.7	469.3		565.5		
		SE		11.7	0.0	4.3	3.5		8.1		
		Range		431-590	339-339	522-624	464-476		531-587		
		Sample Size		14	1	28	3		6		

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		1980			1979		1978		1977		
Location	Sex	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	
Central District Drift	Males	Mean Length	566.0	502.4		564.4	514.9	601.5	570.5		540.0
		SE	11.9	1.9		1.6	2.9	22.4	2.5		0.0
		Range	525-620	445-609		468-662	451-576	545-643	496-640		540-540
		Sample Size	9	228		406	85	4	141		1
	Females	Mean Length	556.6	507.8		554.2	512.8	595.4	557.5		563.0
		SE	6.2	2.0		1.0	3.1	17.4	1.8		0.0
		Range	492-610	455-565		457-614	462-560	500-636	488-630		563-563
		Sample Size	19	119		546	61	7	167		2
	Combined	Mean Length	559.6	504.3		558.6	514.0	597.6	563.4		555.3
		SE	5.6	1.4		0.9	2.2	13.1	1.6		7.7
		Range	492-620	445-609		457-662	451-576	500-643	488-640		540-563
		Sample Size	28	347		952	146	11	308		3
Central District West-side Set	Males	Mean Length	549.0	501.2		565.4	498.9		566.7	584.0	
		SE	0.0	8.2		2.2	3.9		1.5	0.0	
		Range	545-549	435-620		510-632	414-602		468-651	584-584	
		Sample Size	1	33		119	78		296	1	
	Females	Mean Length	545.0	487.6		546.4	499.4		546.6		
		SE	0.0	6.3		1.4	4.1		1.1		
		Range	545-545	435-546		488-586	440-587		476-599		
		Sample Size	1	19		149	53		313		
	Combined	Mean Length	547.0	496.2		554.9	499.1		556.4	584.0	
		SE	2.0	5.7		1.4	2.8		1.0	0.0	
		Range	545-549	435-620		488-632	414-602		468-651	584-584	
		Sample Size	2	52		268	131		609	1	

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Location	Sex		1980			1979		1978			1977
			0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4
Kalgin Island Set	Males	Mean Length	594.0	492.3	395.0	570.5	473.5	530.0	571.9	538.0	
		SE	0.0	12.3	0.0	9.4	2.5	0.0	4.3	0.0	
		Range	594-594	435-570	395-395	519-592	471-476	530-530	538-588	538-538	
		Sample Size	1	11	1	8	2	1	11	1	
	Females	Mean Length		487.0		548.6		533.0		523.0	
		SE		19.0		2.5		0.0		0.0	
		Range		468-506		530-566		533-533		523-523	
		Sample Size		2		14		1		1	
	Combined	Mean Length	594.0	491.5	395.0	556.6	473.5	531.5	571.9	530.5	
		SE	0.0	10.5	0.0	4.3	2.5	1.5	4.3	7.5	
		Range	594-594	435-570	395-395	519-592	471-476	530-533	538-588	523-538	
		Sample Size	1	13	1	22	2	2	11	2	
Salamatof Beach Set	Males	Mean Length	569.5	487.8		567.8	495.5	608.5	574.5		
		SE	19.5	5.6		3.9	7.4	38.5	7.3		
		Range	550-589	410-587		400-660	400-580	570-647	529-616		
		Sample Size	2	58		83	25	2	15		
	Females	Mean Length	538.5	495.1		549.9	508.1	587.3	546.7		558.0
		SE	16.5	7.5		3.8	4.6	4.3	5.0		0.0
		Range	522-555	450-530		474-600	462-544	575-595	506-571		558-558
		Sample Size	2	9		57	27	4	18		1
	Combined	Mean Length	554.0	488.8		560.5	502.0	594.3	559.3		558.0
		SE	13.7	4.9		2.9	4.3	11.2	4.9		0.0
		Range	522-589	410-587		400-660	400-580	570-647	506-616		558-558
		Sample Size	4	67		140	52	6	33		1

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Location	Sex		1980			1979		1978		1977	
			0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4
Kalifonsky Beach Set	Males	Mean Length	476.5			556.6	485.7	623.0	558.6		
		SE	3.0			3.6	4.3	0.0	6.3		
		Range	412-619			438-643	426-579	623-623	504-626		
		Sample Size	113			83	55	1	34		
	Females	Mean Length	573.0	476.7		540.6	489.5	583.7	535.9		537.0
		SE	0.0	3.9		3.8	4.0	5.2	6.2		0.0
		Range	573-573	413-586		414-610	435-560	574-592	437-583		537-537
		Sample Size	1	87		78	42	3	26		1
	Combined	Mean Length	573.0	476.6		548.9	487.3	593.5	548.7		537.0
		SE	0.0	2.4		2.7	3.0	10.5	4.7		0.0
		Range	573-573	412-619		414-643	426-579	574-623	437-626		537-537
		Sample Size	1	200		161	97	4	60		1
Cohoe/Ninilchik Beach Set	Males	Mean Length	615.0	477.5		557.7	491.1	600.0	553.0		
		SE	0.0	2.2		3.5	3.5	15.0	5.4		
		Range	615-615	425-592		478-633	436-569	585-615	486-639		
		Sample Size	1	144		83	81	2	40		
	Females	Mean Length	539.0	487.9	393.0	548.3	497.4	560.3	543.2		
		SE	0.0	3.3	0.0	2.2	3.5	13.9	3.7		
		Range	539-539	433-596	393-393	482-603	412-583	534-581	459-621		
		Sample Size	1	91	1	129	70	3	57		
	Combined	Mean Length	577.0	481.5	393.0	552.0	494.0	576.2	547.5		
		SE	38.0	1.9	0.0	1.9	2.5	13.2	3.1		
		Range	539-615	425-596	393-393	478-633	412-583	534-615	459-639		
		Sample Size	2	235	1	212	151	5	97		

^a Mid-eye to fork of tail length in millimeters.

APPENDIX B: RUN COMPOSITION

Appendix B1. Run composition estimates of sockeye salmon catches by age group and date for the Northern District east-side set net fishery, Upper Cook Inlet 1984^a.

Date	System	0.3 % Number	0.3 Number	1.2 % Number	1.2 Number	1.3 % Number	1.3 Number	2.2 % Number	2.2 Number	1.4 % Number	1.4 Number	2.3 % Number	2.3 Number	3.2 % Number	3.2 Number	Other % Number	Other Number	Total %	Total Number
6/25	Susitna	97.9	88	97.9	2,277	97.0	1,053	91.1	1,059	0.0	0	84.3	153	0.0	0	99.2	13	95.6	4,644
thru	Kenai	2.1	2	2.1	49	3.0	33	8.9	104	0.0	0	15.7	28	0.0	0	0.8	0	4.4	215
7/06	Fish	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
	Total	100.0	90	100.0	2,326	100.0	1,086	100.0	1,163	0.0	0	100.0	181	0.0	0	100.0	13	100.0	4,859
7/09	Susitna	97.9	9	97.9	1,127	97.0	690	91.1	861	0.0	0	84.3	166	0.0	0	0.0	0	94.7	2,852
thru	Kenai	2.1	0	2.1	24	3.0	21	8.9	84	0.0	0	15.7	31	0.0	0	0.0	0	5.3	161
7/13	Fish	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
	Total	100.0	9	100.0	1,151	100.0	711	100.0	945	0.0	0	100.0	197	0.0	0	0.0	0	100.0	3,013
7/16	Susitna	92.8	70	22.3	542	96.6	1,884	41.7	250	0.0	0	55.2	389	0.0	0	0.0	0	54.4	3,135
	Kenai	7.2	5	6.8	165	3.4	66	14.8	89	0.0	0	37.1	262	0.0	0	0.0	0	10.2	587
	Fish	0.0	0	70.9	1,723	0.0	0	43.5	261	0.0	0	7.7	54	0.0	0	0.0	0	35.4	2,038
	Total	100.0	75	100.0	2,430	100.0	1,950	100.0	600	0.0	0	100.0	705	0.0	0	0.0	0	100.0	5,760

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Appendix B1. (p 2 of 2).

Date	System	0.3 % Number	Number	1.2 % Number	Number	1.3 % Number	Number	2.2 % Number	Number	1.4 % Number	Number	2.3 % Number	Number	3.2 % Number	Number	Other % Number	Number	Total % Number	Number
7/18	Susitna	95.2	272	17.9	2,729	100.0	20,543	56.3	2,136	0.0	0	98.4	5,565	0.0	0	0.0	0	68.3	31,245
thru	Kenai	4.8	14	14.2	2,165	0.0	0	13.0	492	100.0	143	1.6	90	55.1	40	0.0	0	6.4	2,943
7/20	Fish	0.0	0	67.9	10,352	0.0	0	30.7	1,167	0.0	0	0.0	0	44.9	32	0.0	0	25.3	11,551
	Total	100.0	286	100.0	15,246	100.0	20,543	100.0	3,794	100.0	143	100.0	5,655	100.0	72	0.0	0	100.0	45,739
7/27	Susitna	100.0	374	100.0	3,551	100.0	5,768	100.0	3,685	100.0	53	100.0	1,255	100.0	240	100.0	54	100.0	14,980
thru	Kenai	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
9/10	Fish	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
	Total	100.0	374	100.0	3,551	100.0	5,768	100.0	3,685	100.0	53	100.0	1,255	100.0	240	100.0	54	100.0	14,980
Total	Susitna	97.4	813	41.4	10,226	99.6	29,938	78.4	7,991	27.0	53	94.2	7,528	76.9	240	100.0	67	76.5	56,855
	Kenai	2.6	21	9.7	2,403	0.4	120	7.5	769	73.0	143	5.1	411	12.7	40	0.0	0	5.3	3,907
	Fish	0.0	0	48.9	12,075	0.0	0	14.0	1,428	0.0	0	0.7	54	10.4	32	0.0	0	18.3	13,589
	Total	100.0	834	100.0	24,704	100.0	30,058	100.0	10,187	100.0	196	100.0	7,993	100.0	312	100.0	67	100.0	74,351

^a Totals may differ +1 fish or +.1% from other catch tables due to rounding.

Appendix B2. Run composition estimates of sockeye salmon catches by age group and date for the Northern District west-side set net fishery, Upper Cook Inlet 1984.^a

Date	System	0.3 % Number	1.2 % Number	1.3 % Number	2.2 % Number	1.4 % Number	2.3 % Number	2.4 % Number	Other % Number	Total % Number									
6/25	Susitna	82.8	2,199	78.8	6,965	72.1	17,533	63.5	1,978	0.0	0	31.2	1,987	72.1	66	83.1	152	52.2	30,881
thru	Crescent	0.0	0	0.0	0	1.8	438	19.1	594	0.0	0	35.7	2,272	1.8	2	0.5	1	7.2	3,307
7/16	Fish	0.0	0	21.2	1,874	0.0	0	7.1	222	0.0	0	0.5	30	0.0	0	0.0	0	0.0	2,126
	Big	0.0	0	0.0	0	14.5	3,526	8.2	255	100.0	229	31.1	1,979	14.5	13	3.8	7	13.1	6,009
	McArthur	17.2	457	0.0	0	11.60	2,821	2.0	64	0.0	0	1.5	98	11.60	11	12.6	23	7.6	3,474
	Chilligan	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
	Total	100.0	2,656	100.0	8,839	100.0	24,318	100.0	3,114	100.0	229	100.0	6,366	100.0	92	100.0	183	100.0	45,797
7/17	Susitna	87.5	4,212	81.1	16,862	53.7	24,331	67.0	3,773	0.0	0	61.3	8,071	72.1	327	0.0	0	63.4	57,576
thru	Crescent	1.8	87	0.0	0	0.0	0	9.6	539	0.0	0	11.9	1,567	1.8	8	0.0	0	2.4	2,200
9/09	Fish	0.0	0	18.9	3,930	0.0	0	8.1	458	0.0	0	0.0	0	0.0	0	0.0	0	4.8	4,388
	Big	0.0	0	0.0	0	0.0	0	0.3	16	100.0	636	2.2	290	14.5	66	0.0	0	1.1	1,007
	McArthur	0.0	0	0.0	0	46.3	20,978	8.1	458	0.0	0	0.0	0	11.60	53	0.0	0	23.7	21,489
	Chilligan	10.7	513	0.0	0	0.0	0	6.9	387	0.0	0	24.6	3,239	0.0	0	0.0	0	4.6	4,139
	Total	100.0	4,812	100.0	20,792	100.0	45,309	100.0	5,630	100.0	636	100.0	13,166	100.0	454	0.0	0	100.0	90,799
Total	Susitna	85.8	6,411	80.4	23,827	60.1	41,864	65.8	5,751	0.0	0	51.5	10,058	72.1	394	83.1	152	64.8	88,457
	Crescent	1.2	87	0.0	0	0.6	438	13.0	1,133	0.0	0	19.7	3,839	1.8	10	0.5	1	4.0	5,507
	Fish	0.0	0	19.6	5,804	0.0	0	5.2	680	0.0	0	0.0	30	0.0	0	0.0	0	4.8	6,514
	Big	0.0	0	0.0	0	5.1	3,526	3.1	271	100.0	865	11.6	2,269	14.5	79	3.8	7	5.1	7,017
	McArthur	6.1	457	0.0	0	34.2	23,799	6.0	521	0.0	0	0.0	98	11.6	63	12.6	23	18.3	24,962
	Chilligan	6.9	513	0.0	0	0.0	0	4.4	387	0.0	0	16.6	3,239	0.0	0	0.0	0	3.0	4,139
	Total	100.0	7,469	100.0	29,631	100.0	69,627	100.0	8,743	100.0	865	100.0	19,532	100.0	546	100.0	183	100.0	136,596

^a Totals may differ +1 fish or +.1% from other catch tables due to rounding.

Appendix B3. Run composition estimates of sockeye salmon catches by age group and date for the Central District drift net fishery, Upper Cook Inlet, 1984^a.

Date	System	0.3 % Number	1.2 % Number	1.3 % Number	2.2 % Number	1.4 % Number	2.3 % Number	3.2 % Number	2.4 % Number	Other % Number	Total % Number										
6/25	Susitna	95.0	161	24.0	803	40.1	3,476	9.2	134	14.4	3	11.5	285	0.0	0	40.1	19	0.0	0	30.2	4,882
	Kenai	5.0	9	1.2	41	3.0	260	2.2	32	85.6	21	5.2	128	0.0	0	3.0	1	0.0	0	3.0	492
	Kasilof	0.0	0	74.3	2,483	53.9	4,673	81.2	1,180	0.0	0	48.0	1,186	0.0	0	53.9	26	0.0	0	59.0	9,547
	Crescent	0.0	0	0.4	14	3.0	260	7.4	108	0.0	0	35.3	872	0.0	0	3.0	1	0.0	0	7.8	1,255
	Fish	0.0	0	0.0	0	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
	Total	100.0	170	100.0	3,342	100.0	8,669	100.0	1,453	100.0	24	100.0	2,470	0.0	0	100.0	48	0.0	0	100.0	16,176
6/29	Susitna	78.1	325	41.1	2,396	52.6	5,722	18.0	393	3.1	2	20.2	884	0.0	0	0.0	0	0.0	0	41.0	9,721
	Kenai	21.9	91	11.3	657	20.9	2,274	22.7	495	96.9	50	48.2	2,109	0.0	0	0.0	0	0.0	0	23.9	5,676
	Kasilof	0.0	0	47.6	2,777	26.5	2,883	59.4	1,298	0.0	0	31.5	1,379	0.0	0	0.0	0	0.0	0	35.1	8,337
	Crescent	0.0	0	0.0	0	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
	Fish	0.0	0	0.0	0	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
	Total	100.0	416	100.0	5,830	100.0	10,878	100.0	2,186	100.0	52	100.0	4,372	0.0	0	0.0	0	0.0	0	100.0	23,734
7/02	Susitna	74.2	664	17.8	2,230	34.7	8,413	10.1	568	0.0	0	13.8	1,209	0.0	0	34.7	28	0.0	0	25.1	13,113
	Kenai	25.8	231	3.3	413	17.0	4,122	16.0	899	100.0	162	41.3	3,627	0.0	0	17.0	14	0.0	0	18.1	9,468
	Kasilof	0.0	0	47.5	5,952	48.3	11,711	68.4	3,840	0.0	0	44.0	3,864	0.0	0	48.3	39	0.0	0	48.6	25,406
	Crescent	0.0	0	0.0	0	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
	Fish	0.0	0	31.4	3,934	0.0	0.0	5.5	308	0.0	0	1.0	87	0.0	0	0.0	0	0.0	0	8.3	4,330
	Total	100.0	895	100.0	12,530	100.0	24,246	100.0	5,615	100.0	162	100.0	8,788	0.0	0	100.0	81	0.0	0	100.0	52,317
7/06	Susitna	84.6	2,111	14.1	7,340	62.4	67,194	18.6	4,055	0.0	0	17.9	4,978	0.0	0	0.0	0	0.0	0	40.2	85,678
	Kenai	15.4	385	0.0	0	10.2	10,984	15.5	3,372	100.0	1,070	41.3	11,486	0.0	0	0.0	0	0.0	0	12.8	27,298
	Kasilof	0.0	0	42.3	22,021	27.4	29,505	57.8	12,562	0.0	0	40.8	11,347	0.0	0	0.0	0	0.0	0	35.4	75,435
	Crescent	0.0	0	0.0	0	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
	Fish	0.0	0	43.6	22,697	0.0	0.0	8.1	1,761	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	11.5	24,458
	Total	100.0	2,496	100.0	52,058	100.0	107,683	100.0	21,750	100.0	1,070	100.0	27,812	0.0	0	0.0	0	0.0	0	100.0	212,869

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Date	System	0.3 % Number	1.2 % Number	1.3 % Number	2.2 % Number	1.4 % Number	2.3 % Number	3.2 % Number	2.4 % Number	Other % Number	Total % Number	Number									
7/09	Susitna	68.3	4,155	12.1	3,436	30.8	35,193	13.2	2,052	0.0	0	56.8	22,658	0.0	0	0.0	0	0.0	0	32.7	67,494
	Kenai	31.7	1,930	4.7	1,335	29.0	33,136	27.9	4,339	100.0	2,028	24.0	9,574	0.0	0	0.0	0	0.0	0	25.4	52,341
	Kasilof	0.0	0	35.2	9,996	34.4	39,306	48.0	7,470	0.0	0	19.2	7,659	0.0	0	0.0	0	0.0	0	31.2	64,431
	Crescent	0.0	0	0.0	0	5.8	6,627	6.4	996	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	3.7	7,624
	Fish	0.0	0	48.0	13,631	0.0	0.0	4.5	694	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	6.9	14,325
	Total	100.0	6,085	100.0	28,397	100.0	114,263	100.0	15,551	100.0	2,028	100.0	39,891	0.0	0	0.0	0	0.0	0	100.0	206,215
7/10	Susitna	68.5	722	19.0	2,964	47.9	14,640	13.6	744	0.0	0	17.2	1,686	0.0	0	47.9	50	95.4	100	33.2	20,905
	Kenai	31.5	332	0.0	0	28.7	8,772	28.4	1,558	100.0	211	50.6	4,959	0.0	0	28.7	30	0.0	0	25.2	15,862
	Kasilof	0.0	0	61.1	9,530	23.4	7,152	54.7	2,996	0.0	0	32.2	3,156	0.0	0	23.4	25	0.0	0	36.3	22,859
	Crescent	0.0	0	0.0	0	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
	Fish	0.0	0	19.9	3,104	0.0	0.0	3.3	182	0.0	0	0.0	0	0.0	0	0.0	0	4.6	5	5.2	3,291
	Total	100.0	1,054	100.0	15,598	100.0	30,563	100.0	5,480	100.0	211	100.0	9,801	0.0	0	100.0	105	100.0	105	100.0	62,917
7/13	Susitna	75.7	4,307	27.9	9,518	71.0	104,955	30.8	4,180	0.0	0	36.0	17,004	0.0	0	0.0	0	0.0	0	55.3	139,963
	Kenai	24.3	1,379	5.4	1,842	29.0	42,869	45.0	6,096	100.0	4,811	43.3	20,452	0.0	0	0.0	0	0.0	0	30.6	77,449
	Kasilof	0.0	0	37.1	12,656	0.0	0.0	20.6	2,794	0.0	0	20.7	9,777	0.0	0	0.0	0	0.0	0	10.0	25,227
	Crescent	0.0	0	0.0	0	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
	Fish	0.0	0	29.6	10,098	0.0	0.0	3.6	488	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	4.2	10,586
	Total	100.0	5,686	100.0	34,114	100.0	147,824	100.0	13,558	100.0	4,811	100.0	47,233	0.0	0	0.0	0	0.0	0	100.0	253,226
7/16	Susitna	59.0	2,495	17.0	5,610	41.5	58,647	16.0	3,191	0.0	0	39.4	19,838	0.0	0	41.5	176	81.3	344	35.9	90,300
	Kenai	41.0	1,737	29.1	9,604	40.4	57,092	50.8	10,111	100.0	2,115	47.4	23,866	0.0	0	40.4	171	18.7	79	41.6	104,774
	Kasilof	0.0	0	24.4	8,052	18.1	25,578	28.9	5,740	0.0	0	9.9	4,985	0.0	0	18.1	77	0.0	0	17.6	44,432
	Crescent	0.0	0	0.0	0	0.0	0.0	1.4	283	0.0	0.0	3.3	1,662	0.0	0	0.0	0	0.0	0	0.8	1,945
	Fish	0.0	0	29.5	9,736	0.0	0.0	2.8	562	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0	4.1	10,298
	Total	100.0	4,232	100.0	33,002	100.0	141,317	100.0	19,886	100.0	2,115	100.0	50,350	0.0	0	100.0	423	100.0	423	100.0	251,748

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Appendix B4. Run composition estimates of sockeye salmon catches by age group and date for the Central District west-side set net fishery, Upper Cook Inlet 1984^a.

Date	System	0.3		1.2		1.3		2.2		1.4		2.3		3.2		2.4		Other		Total	
		%	Number	%	Number	%	Number	%	Number	%	Number										
6/18	Susitna	78.5	20	78.7	651	11.8	378	10.5	137	11.8	3	26.3	2,201	0.0	0	0.0	0	100.0	25	24.8	3,415
thru	Crescent	0.0	0	14.5	120	72.3	2,319	88.8	1,157	72.3	18	72.9	6,102	0.0	0	0.0	0	0.0	0	70.5	9,715
7/02	Big	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
	McArthur	21.5	5	6.8	56	15.9	510	0.4	6	15.9	4	0.0	0	0.0	0	0.0	0	0.0	0	4.2	581
	Chilligan	0.0	0	0.0	0	0.0	0	0.2	3	0.0	0	0.8	67	0.0	0	0.0	0	0.0	0	0.5	70
	Total	100.0	25	100.0	827	100.0	3,207	100.0	1,303	100.0	25	100.0	8,370	0.0	0	0.0	0	100.0	25	100.0	13,782
7/06	Susitna	0.0	0	61.2	343	14.5	392	3.5	58	0.0	0	6.4	616	0.0	0	0.0	0	0.0	0	9.7	1,409
thru	Crescent	0.0	0	34.9	196	82.3	2,224	93.2	1,521	0.0	0	83.2	8,013	0.0	0	0.0	0	0.0	0	82.1	11,954
7/09	Big	0.0	0	2.9	16	3.2	86	0.2	3	100.0	27	0.0	0	0.0	0	0.0	0	0.0	0	0.9	133
	McArthur	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
	Chilligan	0.0	0	1.0	6	0.0	0	3.1	50	0.0	0	10.4	1,002	0.0	0	0.0	0	0.0	0	7.3	1,057
	Total	0.0	0	100.0	561	100.0	2,702	100.0	1,632	100.0	27	100.0	9,631	0.0	0	0.0	0	0.0	0	100.0	14,553
7/11	Susitna	100.0	97	62.6	1,094	14.5	1,451	3.9	293	0.0	0	6.4	1,417	0.0	0	14.5	42	0.0	0	10.5	4,395
thru	Crescent	0.0	0	32.7	572	82.3	8,233	93.2	7,059	0.0	0	83.2	18,425	0.0	0	82.3	239	0.0	0	82.3	34,529
7/17	Big	0.0	0	3.9	68	3.2	320	0.2	19	100.0	97	0.0	0	0.0	0	3.2	9	0.0	0	1.2	513
	McArthur	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
	Chilligan	0.0	0	0.8	14	0.0	0	2.7	205	0.0	0	10.4	2,303	0.0	0	0.0	0	0.0	0	6.0	2,522
	Total	100.0	97	100.0	1,749	100.0	10,004	100.0	7,576	100.0	97	100.0	22,145	0.0	0	100.0	291	0.0	0	100.0	41,959

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Appendix B4. (p 2 of 2).

Date	System	0.3 % Number	0.3 Number	1.2 % Number	1.2 Number	1.3 % Number	1.3 Number	2.2 % Number	2.2 Number	1.4 % Number	1.4 Number	2.3 % Number	2.3 Number	3.2 % Number	3.2 Number	2.4 % Number	2.4 Number	Other % Number	Other Number	Total % Number	Total Number
7/18	Susitna	0.0	0	29.3	821	10.3	1,333	2.3	236	0.0	0	1.3	237	0.0	0	0.0	0	100.0	68	6.0	2,695
thru	Crescent	0.0	0	26.6	746	76.8	9,939	94.3	9,874	0.0	0	84.5	15,390	0.0	0	0.0	0	0.0	0	80.3	35,949
7/24	Big	0.0	0	44.2	1,240	12.9	1,670	3.5	366	100.0	137	14.2	2,586	100.0	137	0.0	0	0.0	0	13.7	6,136
	McArthur	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
	Chilligan	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
	Total	0.0	0	100.0	2,807	100.0	12,942	100.0	10,476	100.0	137	100.0	18,213	100.0	137	0.0	0	100.0	68	100.0	44,780
7/25	Susitna	0.0	0	28.2	282	10.3	527	2.1	64	0.0	0	1.3	104	0.0	0	0.0	0	39.6	36	5.9	1,013
thru	Crescent	0.0	0	26.9	269	76.8	3,928	94.4	2,827	0.0	0	84.5	6,775	0.0	0	0.0	0	51.6	47	80.3	13,845
9/03	Big	0.0	0	44.8	447	12.9	660	3.5	105	100.0	30	14.2	1,139	0.0	0	0.0	0	8.8	8	13.8	2,388
	McArthur	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
	Chilligan	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
	Total	0.0	0	100.0	998	100.0	5,114	100.0	2,996	100.0	30	100.0	8,018	0.0	0	0.0	0	100.0	91	100.0	17,247
Total	Susitna	95.6	117	46.0	3,191	12.0	4,081	3.3	789	0.9	3	6.9	4,576	0.0	0	14.5	42	70.1	129	9.8	12,927
	Crescent	0.0	0	27.4	1,903	78.4	26,643	93.6	22,438	5.7	18	82.4	54,705	0.0	0	82.3	239	25.5	47	80.1	105,993
	Big	0.0	0	25.5	1,772	8.1	2,736	2.1	492	92.1	291	5.6	3,725	100.0	137	3.2	9	4.3	8	6.9	9,170
	McArthur	4.4	5	0.8	56	1.5	510	0.0	6	1.3	4	0.0	0	0.0	0	0.0	0	0.0	0	0.4	581
	Chilligan	0.0	0	0.3	20	0.0	0	1.1	258	0.0	0	5.1	3,372	0.0	0	0.0	0	0.0	0	2.8	3,650
	Total	100.0	122	100.0	6,942	100.0	33,969	100.0	23,983	100.0	316	100.0	66,377	100.0	137	100.0	291	100.0	184	100.0	132,321

^a Totals may differ +1 fish or +.1% from other catch tables due to rounding.

Appendix B5. Run composition estimates of sockeye salmon catches by age group and date for the Kalgin Island set net fishery, Upper Cook Inlet, 1984^a.

Date	System	0.3		1.2		1.3		2.2		1.4		2.3		3.2		Other		Total	
		%	Number																
6/25	Susitna	74.4	231	45.3	1,046	47.3	4,014	22.3	406	2.2	3	14.2	675	0.0	0	75.0	66	35.8	6,442
thru	Kenai	25.6	80	15.3	353	23.1	1,960	34.5	629	85.8	114	41.6	1,979	100.0	89	20.5	18	29.0	5,221
7/16	Kasilof	0.0	0	26.0	601	11.8	1,001	36.4	664	0.0	0	11.0	521	0.0	0	4.5	4	15.5	2,791
	Crescent	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
	Big	0.0	0	13.4	310	17.8	1,511	6.8	123	11.9	16	33.2	1,580	0.0	0	0.0	0	19.7	3,539
	Total	100.0	311	100.0	2,310	100.0	8,486	100.0	1,822	100.0	133	100.0	4,754	100.0	89	100.0	88	100.0	17,993
7/18	Susitna	0.0	0	2.4	85	1.9	102	2.3	154	0.0	0	0.3	4	1.9	4	0.0	0	2.0	350
thru	Kenai	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
9/17	Kasilof	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
	Crescent	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
	Big	0.0	0	97.6	3,472	98.1	5,289	97.7	6,405	0.0	0	99.7	1,385	98.1	218	0.0	0	98.0	16,768
	Total	0.0	0	100.0	3,557	100.0	5,391	100.0	6,559	0.0	0	100.0	1,389	100.0	222	0.0	0	100.0	17,118
Total	Susitna	74.4	231	19.3	1,132	29.7	4,116	6.7	560	2.2	3	11.1	679	1.4	4	75.0	66	19.3	6,792
	Kenai	25.6	80	6.0	353	14.1	1,960	7.5	629	85.8	114	32.2	1,979	28.6	89	20.5	18	14.9	5,221
	Kasilof	0.0	0	10.2	601	7.2	1,001	7.9	664	0.0	0	8.5	521	0.0	0	4.5	4	7.9	2,791
	Crescent	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
	Big	0.0	0	64.5	3,782	49.0	6,799	77.9	6,528	11.9	16	48.3	2,964	70.0	218	0.0	0	57.8	20,307
	Total	100.0	311	100.0	5,867	100.0	13,877	100.0	8,381	100.0	133	100.0	6,143	100.0	311	100.0	88	100.0	35,111

^a Totals may differ +1 fish or +.1% from other catch tables due to rounding.

Appendix B6. Run composition estimates of sockeye salmon catches by age group and date for the Salamatof Beach set net fishery, Upper Cook Inlet, 1984^a.

Date	System	0.3 % Number	0.3 Number	1.2 % Number	1.2 Number	1.3 % Number	1.3 Number	2.2 % Number	2.2 Number	1.4 % Number	1.4 Number	2.3 % Number	2.3 Number	3.2 % Number	3.2 Number	Other % Number	Other Number	Total %	Total Number
7/09	Susitna	0.0	0	Trace	Trace	25.7	425	3.4	62	0.0	0	Trace	Trace	0.0	0	0.0	0	8.0	487
thru	Kenai	0.0	0	52.2	1,108	67.5	1,116	61.0	1,123	100.0	31	83.5	391	0.0	0	0.0	0	61.6	3,770
7/13	Kasilof	0.0	0	43.4	921	6.8	112	34.5	635	0.0	0	16.5	77	0.0	0	0.0	0	28.5	1,746
	Fish	0.0	0	4.4	93	0.0	0	1.1	21	0.0	0	0.0	0	0.0	0	0.0	0	1.9	114
	Total	0.0	0	100.0	2,123	100.0	1,654	100.0	1,841	100.0	31	100.0	468	0.0	0	0.0	0	100.0	6,117
7/16	Susitna	22.9	67	Trace	Trace	25.7	3,640	4.6	226	0.0	0	Trace	Trace	0.0	0	25.7	30	11.7	3,964
	Kenai	77.1	228	52.2	3,512	67.5	9,561	70.1	3,473	100.0	590	83.5	5,913	0.0	0	67.5	80	68.8	23,356
	Kasilof	0.0	0	43.4	2,920	6.8	963	24.8	1,230	0.0	0	16.5	1,169	0.0	0	6.8	8	18.5	6,290
	Fish	0.0	0	4.4	296	0.0	0	0.6	28	0.0	0	0.0	0	0.0	0	0.0	0	1.0	324
	Total	100.0	295	100.0	6,728	100.0	14,164	100.0	4,957	100.0	590	100.0	7,082	0.0	0	100.0	118	100.0	33,934
7/18	Susitna	15.0	137	Trace	Trace	15.4	2,192	3.5	114	0.0	0	Trace	Trace	0.0	0	22.2	34	8.3	2,476
	Kenai	85.0	778	83.0	2,784	84.6	12,039	90.6	2,946	100.0	1,931	92.2	4,451	100.0	1,016	77.8	119	87.8	26,066
	Kasilof	0.0	0	17.0	570	Trace	Trace	5.9	193	0.0	0	7.8	377	0.0	0	0.0	0	3.8	1,139
	Fish	0.0	0	Trace	Trace	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
	Total	100.0	915	100.0	3,354	100.0	14,231	100.0	3,253	100.0	1,931	100.0	4,828	100.0	1,016	100.0	153	100.0	29,681
7/30	Susitna	0.0	0	Trace	Trace	Trace	Trace	0.0	0	0.0	0	Trace	Trace	0.0	0	0.0	0	0.0	0
thru	Kenai	100.0	213	100.0	2,592	100.0	6,428	100.0	1,882	100.0	391	100.0	1,811	0.0	0	100.0	71	100.0	13,388
8/13	Kasilof	0.0	0	Trace	Trace	Trace	Trace	0.0	0	0.0	0	Trace	Trace	0.0	0	0.0	0	0.0	0
	Fish	0.0	0	Trace	Trace	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
	Total	100.0	213	100.0	2,592	100.0	6,428	100.0	1,882	100.0	391	100.0	1,811	0.0	0	100.0	71	100.0	13,388
Total	Susitna	14.4	204	Trace	Trace	17.2	6,257	3.4	402	0.0	0	Trace	Trace	0.0	0	18.7	64	8.3	6,927
	Kenai	85.6	1,219	67.6	9,996	79.9	29,145	79.0	9,424	100.0	2,943	88.6	12,567	100.0	1,016	78.9	270	80.1	66,579
	Kasilof	0.0	0	29.8	4,412	2.9	1,076	17.2	2,058	0.0	0	11.4	1,622	0.0	0	2.3	8	11.0	9,175
	Fish	0.0	0	2.6	389	0.0	0	0.4	49	0.0	0	0.0	0	0.0	0	0.0	0	0.5	438
	Total	100.0	1,423	100.0	14,797	100.0	36,477	100.0	11,933	100.0	2,943	100.0	14,189	100.0	1,016	100.0	342	100.0	83,120

^a Totals may differ +1 fish or +.1% from other catch tables due to rounding.

Appendix B7. Run composition estimates of sockeye salmon catches by age group and date for the Kalifonsky Beach set net fishery, Upper Cook Inlet, 1984^a.

Date	System	0.3 % Number	0.3 Number	1.2 % Number	1.2 Number	1.3 % Number	1.3 Number	2.2 % Number	2.2 Number	1.4 % Number	1.4 Number	2.3 % Number	2.3 Number	3.2 % Number	3.2 Number	Other % Number	Other Number	Total %	Total Number
7/02	Susitna	22.6	29	0.0	0	12.3	1,214	1.8	86	0.0	0	2.0	59	0.0	0	0.0	0	5.3	1,388
thru	Kenai	77.4	100	27.2	2,273	28.7	2,832	27.6	1,344	100.0	86	59.8	1,753	0.0	0	0.0	0	32.0	8,387
7/09	Kasilof	0.0	0	72.8	6,085	59.0	5,821	70.6	3,438	0.0	0	38.2	1,118	0.0	0	0.0	0	62.7	16,462
	Fish	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
	Total	100.0	129	100.0	8,358	100.0	9,866	100.0	4,868	100.0	86	100.0	2,930	0.0	0	0.0	0	100.0	26,237
7/10	Susitna	45.2	54	5.6	588	10.5	620	2.0	93	0.7	1	3.1	73	0.0	0	0.0	0	6.0	1,428
thru	Kenai	54.8	66	6.7	700	18.1	1,069	10.7	508	99.3	79	31.9	757	0.0	0	0.0	0	13.4	3,178
7/11	Kasilof	0.0	0	87.7	9,197	71.4	4,215	87.3	4,139	0.0	0	65.0	1,540	0.0	0	0.0	0	80.6	19,091
	Fish	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
	Total	100.0	120	100.0	10,484	100.0	5,904	100.0	4,740	100.0	80	100.0	2,370	0.0	0	0.0	0	100.0	23,698
7/12	Susitna	0.0	0	2.1	48	4.6	46	0.8	9	0.0	0	1.5	4	0.0	0	0.0	0	2.3	107
thru	Kenai	0.0	0	1.8	41	5.7	57	3.0	34	0.0	0	10.8	32	0.0	0	0.0	0	3.5	164
7/13	Kasilof	0.0	0	96.0	2,151	89.7	892	96.3	1,108	0.0	0	87.7	261	0.0	0	0.0	0	94.2	4,412
	Fish	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
	Total	0.0	0	100.0	2,240	100.0	994	100.0	1,151	0.0	0	100.0	298	0.0	0	0.0	0	100.0	4,683
7/16	Susitna	28.5	104	4.4	467	17.1	4,471	3.4	278	0.0	0	1.3	134	0.0	0	54.6	50	9.8	5,504
thru	Kenai	71.5	261	2.9	308	49.2	12,865	38.7	3,184	100.0	457	63.3	6,540	0.0	0	45.4	41	42.1	23,657
7/17	Kasilof	0.0	0	90.6	9,609	33.7	8,812	57.7	4,748	0.0	0	35.4	3,658	0.0	0	0.0	0	47.7	26,827
	Fish	0.0	0	2.1	223	0.0	0	0.2	19	0.0	0	0.0	0	0.0	0	0.0	0	0.4	241
	Total	100.0	365	100.0	10,606	100.0	26,149	100.0	8,229	100.0	457	100.0	10,332	0.0	0	100.0	91	100.0	56,229

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Date	System	0.3 % Number	1.2 % Number	1.3 % Number	2.2 % Number	1.4 % Number	2.3 % Number	3.2 % Number	Other % Number	Total % Number	Number								
7/18	Susitna	16.8	51	0.0	0	16.7	2,448	2.6	121	0.0	0	0.0	0	0.0	0	10.5	6	7.2	2,627
	Kenai	83.2	253	39.0	4,081	72.4	10,615	58.8	2,717	100.0	669	74.8	4,004	99.8	243	74.5	45	62.2	22,627
	Kasilof	0.0	0	59.4	6,216	10.9	1,598	38.3	1,772	0.0	0	25.2	1,349	0.0	0	14.1	9	30.1	10,944
	Fish	0.0	0	1.6	167	0.0	0	0.3	13	0.0	0	0.0	0	0.2	0	0.8	1	0.5	181
	Total	100.0	304	100.0	10,464	100.0	14,661	100.0	4,623	100.0	669	100.0	5,353	100.0	243	100.0	61	100.0	36,378
7/30	Susitna	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
thru	Kenai	100.0	24	20.0	655	45.4	674	28.7	419	100.0	239	61.7	488	0.0	0	48.3	58	34.5	2,556
8/13	Kasilof	0.0	0	80.0	2,625	54.6	810	71.3	1,041	0.0	0	38.3	302	0.0	0	51.7	62	65.5	4,841
	Fish	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
	Total	100.0	24	100.0	3,280	100.0	1,484	100.0	1,460	100.0	239	100.0	790	0.0	0	100.0	120	100.0	7,397
Total	Susitna	25.3	238	2.4	1,102	14.9	8,799	2.3	587	0.0	1	1.2	271	0.0	0	20.6	56	7.1	11,054
	Kenai	74.7	704	17.7	8,058	47.6	28,110	32.7	8,206	100.0	1,530	61.5	13,573	99.8	243	52.9	144	39.2	60,568
	Kasilof	0.0	0	79.0	35,882	37.5	22,149	64.8	16,247	0.0	0	37.3	8,229	0.0	0	26.1	71	53.4	82,577
	Fish	0.0	0	0.9	390	0.0	0	0.1	31	0.0	0	0.0	0	0.2	0	0.4	1	0.3	422
	Total	100.0	942	100.0	45,432	100.0	59,058	100.0	25,071	100.0	1,531	100.0	22,073	100.0	243	100.0	272	100.0	154,622

^a Totals may differ +1 fish or +.1% from other catch tables due to rounding.

Appendix B8. Run composition estimates of sockeye salmon catches by age group and date for the Cohoe/Ninilchik Beach set net fishery, Upper Cook Inlet, 1984^a.

Date	System	1.1 % Number	0.3 % Number	1.2 % Number	1.3 % Number	2.2 % Number	1.4 % Number	2.3 % Number	Other % Number	Total % Number									
7/02	Susitna	0.0	0	39.9	7	11.0	316	2.9	109	1.7	35	0.0	0	2.7	44	66.2	12	5.0	523
	Kenai	0.0	0	60.1	11	3.5	101	18.2	687	11.8	238	100.0	18	34.6	567	33.8	6	15.7	1,628
	Kasilof	0.0	0	0.0	0	77.1	2,215	78.9	2,976	85.1	1,725	0.0	0	62.4	1,023	0.0	0	76.6	7,940
	Fish	0.0	0	0.0	0	8.4	241	0.0	0	1.4	29	0.0	0	0.3	5	0.0	0	2.7	275
	Total	0.0	0	100.0	18	100.0	2,873	100.0	3,772	100.0	2,027	100.0	18	100.0	1,639	100.0	18	100.0	10,365
7/06	Susitna	100.0	20	14.7	3	1.1	47	2.2	76	0.4	12	0.2	0	0.6	10	0.0	0	1.3	168
	Kenai	0.0	0	85.3	17	6.3	267	18.1	622	9.9	309	99.8	40	30.4	503	0.0	0	14.0	1,759
	Kasilof	0.0	0	0.0	0	92.6	3,919	79.7	2,738	89.8	2,814	0.0	0	69.0	1,143	0.0	0	84.6	10,614
	Fish	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
	Total	100.0	20	100.0	20	100.0	4,233	100.0	3,435	100.0	3,135	100.0	40	100.0	1,657	0.0	0	100.0	12,540
7/09	Susitna	0.0	0	41.0	64	5.3	656	9.8	836	1.8	125	0.6	0	2.8	94	0.0	0	5.7	1,775
	Kenai	0.0	0	59.0	92	7.5	924	20.0	1,707	11.9	811	99.4	52	34.6	1,151	100.0	52	15.3	4,789
	Kasilof	0.0	0	0.0	0	87.2	10,805	70.2	5,991	86.3	5,881	0.0	0	62.6	2,085	0.0	0	79.0	24,762
	Fish	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
	Total	0.0	0	100.0	156	100.0	12,385	100.0	8,534	100.0	6,817	100.0	52	100.0	3,330	100.0	52	100.0	31,326
7/10	Susitna	0.0	0	32.5	23	0.0	0	15.2	705	1.9	58	0.0	0	0.0	0	0.0	0	5.6	786
	Kenai	0.0	0	67.5	47	0.0	0	27.3	1,267	18.1	548	100.0	47	45.5	997	0.0	0	20.8	2,906
	Kasilof	0.0	0	0.0	0	87.0	3,469	57.5	2,669	77.9	2,361	0.0	0	54.5	1,195	0.0	0	69.4	9,693
	Fish	0.0	0	0.0	0	13.0	518	0.0	0	2.1	65	0.0	0	0.0	0	0.0	0	4.2	583
	Total	0.0	0	100.0	70	100.0	3,987	100.0	4,641	100.0	3,031	100.0	47	100.0	2,192	0.0	0	100.0	13,968

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Date	System	1.1		0.3		1.2		1.3		2.2		1.4		2.3		Other		Total	
		%	Number																
7/11	Susitna	100.0	12	83.6	30	0.0	0	63.2	1,093	25.8	496	4.3	3	27.7	308	0.0	0	26.6	1,941
	Kenai	0.0	0	16.4	6	0.0	0	17.6	304	22.8	438	95.7	57	46.3	515	0.0	0	18.1	1,320
	Kasilof	0.0	0	0.0	0	87.0	2,104	19.2	332	51.4	988	0.0	0	26.0	290	0.0	0	50.9	3,713
	Fish	0.0	0	0.0	0	13.0	314	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	4.3	314
	Total	100.0	12	100.0	36	100.0	2,418	100.0	1,729	100.0	1,922	100.0	60	100.0	1,112	0.0	0	100.0	7,289
7/12	Susitna	0.0	0	0.0	0	30.1	1,424	39.9	1,033	11.8	332	0.0	0	12.9	184	0.0	0	25.6	2,973
	Kenai	0.0	0	0.0	0	14.7	697	28.3	732	26.5	746	0.0	0	55.1	784	100.0	37	25.9	2,997
	Kasilof	0.0	0	0.0	0	55.2	2,611	31.8	823	61.7	1,733	0.0	0	31.9	455	0.0	0	48.5	5,621
	Fish	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
	Total	0.0	0	0.0	0	100.0	4,732	100.0	2,588	100.0	2,810	0.0	0	100.0	1,423	100.0	37	100.0	11,590
7/13	Susitna	97.9	15	0.0	0	0.0	0	61.3	1,672	10.6	258	0.0	0	23.2	210	15.6	7	24.4	2,162
	Kenai	0.0	0	0.0	0	4.2	112	22.2	606	18.4	448	100.0	73	43.4	392	71.1	32	18.8	1,663
	Kasilof	0.0	0	0.0	0	90.8	2,411	16.5	450	69.8	1,701	0.0	0	33.4	302	8.9	4	55.0	4,868
	Fish	2.1	0	0.0	0	5.0	133	0.0	0	1.1	28	0.0	0	0.0	0	4.4	2	1.8	162
	Total	100.0	15	0.0	0	100.0	2,655	100.0	2,728	100.0	2,436	100.0	73	100.0	904	100.0	45	100.0	8,855
7/16	Susitna	0.0	0	24.5	70	4.3	425	17.8	1,812	3.2	186	0.0	0	2.8	136	0.0	0	8.3	2,630
	Kenai	0.0	0	75.5	218	30.5	3,017	53.6	5,456	44.7	2,621	100.0	576	75.6	3,629	0.0	0	49.1	15,516
	Kasilof	0.0	0	0.0	0	59.4	5,875	28.6	2,911	50.9	2,981	0.0	0	21.4	1,030	0.0	0	40.5	12,797
	Fish	0.0	0	0.0	0	5.8	574	0.0	0	1.2	70	0.0	0	0.1	7	0.0	0	2.1	651
	Total	0.0	0	100.0	288	100.0	9,891	100.0	10,180	100.0	5,858	100.0	576	100.0	4,802	0.0	0	100.0	31,595

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Date	System	1.1		0.3		1.2		1.3		2.2		1.4		2.3		Other		Total	
		%	Number																
7/17	Susitna	0.0	0	13.1	125	4.7	1,907	4.2	1,771	1.4	221	0.0	0	6.3	902	0.0	0	4.3	4,927
thru	Kenai	0.0	0	86.9	829	31.0	12,496	64.5	27,205	43.2	6,672	100.0	1,527	57.5	8,231	0.0	0	49.7	56,960
7/18	Kasilof	0.0	0	0.0	0	64.2	25,866	31.3	13,202	55.4	8,565	0.0	0	36.2	5,182	0.0	0	46.0	52,815
	Fish	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
	Total	0.0	0	100.0	954	100.0	40,270	100.0	42,178	100.0	15,459	100.0	1,527	100.0	14,314	0.0	0	100.0	114,702
7/27	Susitna	100.0	53	47.2	50	43.6	2,165	37.4	2,696	15.2	299	0.8	4	9.3	74	42.5	23	34.3	5,365
thru	Kenai	0.0	0	52.8	57	47.8	2,374	59.4	4,282	76.3	1,509	99.2	476	88.3	707	55.4	29	60.3	9,434
8/13	Kasilof	0.0	0	0.0	0	8.6	426	3.2	231	8.5	168	0.0	0	2.5	20	2.1	1	5.4	846
	Fish	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
	Total	100.0	53	100.0	107	100.0	4,966	100.0	7,208	100.0	1,976	100.0	480	100.0	801	100.0	53	100.0	15,644
Total	Susitna	99.7	100	22.6	373	7.9	6,941	13.6	11,803	4.4	2,022	0.2	7	6.1	1,961	20.1	41	9.0	23,249
	Kenai	0.0	0	77.4	1,276	22.6	19,988	49.3	42,868	31.5	14,340	99.8	2,866	54.3	17,478	76.5	156	38.4	98,972
	Kasilof	0.0	0	0.0	0	67.5	59,701	37.2	32,323	63.6	28,917	0.0	0	39.5	12,723	2.5	5	51.8	133,670
	Fish	0.3	0	0.0	0	2.0	1,780	0.0	0	0.4	192	0.0	0	0.0	12	1.0	2	0.8	1,985
	Total	100.0	100	100.0	1,649	100.0	88,410	100.0	86,993	100.0	45,471	100.0	2,873	100.0	32,174	100.0	204	100.0	257,874

^a Totals may differ +1 fish or +.1% from other catch tables due to rounding.

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