



ORIGINS OF SOCKEYE SALMON IN THE UPPER COOK INLET  
FISHERY OF 1980 BASED ON SCALE PATTERN ANALYSIS

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February 1982

## ADF&G TECHNICAL DATA REPORTS

This series of reports is designed to facilitate prompt reporting of data from studies conducted by the Alaska Department of Fish and Game, especially studies which may be of direct and immediate interest to scientists of other agencies.

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Data presented in these reports is intended to be final, however, some revisions may occasionally be necessary. Minor revision will be made via errata sheets. Major revisions will be made in the form of revised reports.

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## ABSTRACT

Estimates of the stock composition of the commercial sockeye salmon (*Oncorhynchus nerka*) harvest made in Upper Cook Inlet Alaska were developed through linear discriminant function analysis of scale patterns. Scale samples were collected from the escapement and the commercial catch. The five major sockeye salmon stocks included in the analysis were: the Susitna River, Kenai River, Kasilof River, Crescent River, and Fish Creek. Growth zones were measured from scales from 4 and 5-year-old fish with one year freshwater residency. Commercial catch samples were classified to river of origin with stock identification models built from escapement samples. The total return of sockeye salmon to Upper Cook Inlet in 1980 was 2,575,846 fish of which 1,583,191 (61.5%) were commercially harvested and 992,655 escaped to spawn. The total returns and exploitation rates for the component stocks were: Susitna River 494,340 (0.614), Kenai River 987,102 (0.530), Kasilof River 805,443 (0.771), Crescent River 162,497 (0.441), and Fish Creek 126,464 (0.505).

## INTRODUCTION

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

In Upper Cook Inlet commercial harvests of sockeye salmon (*Oncorhynchus nerka*) averaged 1.2 million fish from 1970 through 1980 with a 1980 catch of 1,583,191 fish. Fishing effort totals 597 drift permits and 747 set net permits. The value to the fishermen of the 1980 sockeye salmon harvest was approximately 9.1 million dollars.

The major producers of sockeye salmon in Upper Cook Inlet are the Kenai, Kasilof, and Susitna Rivers, followed in magnitude by Crescent River and Fish Creek (outlet stream of Big Lake). Numerous other systems are known to produce smaller runs of sockeye salmon including: Lake Creek (outlet stream of Nancy Lake), Cottonwood Creek, and Packers Creek (Namtvedt et al. 1978).

The timing of migration through the fishery of the major sockeye salmon stocks substantially overlap. As a result the commercial harvest is comprised of varying proportions of fish from each river system. The ability to estimate the numbers of fish harvested by stock is necessary for sound fisheries management. Catch apportionment by stock coupled with escapement estimates provides estimates of total return by brood year. Subsequently, total return estimates can be used to model spawner-recruit relationships, estimate optimum escapement, and forecast future run size. Finally, the knowledge of the distribution and relative abundance by stock allows a fishery manager to protect and/or selectively harvest individual stocks.

Stock separation studies were initiated in Upper Cook Inlet in 1977 and have continued through the present. Investigations have documented the feasibility of using scale pattern recognition techniques as a method of identifying the various sockeye salmon stocks (Cross et al. 1981; Bethe, Krasnowski, and Marshall 1980; Bethe and Krasnowski 1979). The purpose of this study is to allocate the 1980 commercial sockeye salmon harvest to river of origin and to provide estimates of total return by stock to Upper Cook Inlet.

In the analysis which follows the commercial catch was apportioned into the five principal stocks. There are several other systems which produce smaller runs of sockeye salmon, however, at this time we have insufficient data to permit allocation. These minor systems probably contribute most significantly to fisheries operating in proximity to the river of origin. For example Packers Lake probably contributes significantly to the Kalgin Island set net catch and Cottonwood and Lake Creek contribute significantly to the Northern District sockeye salmon harvest.

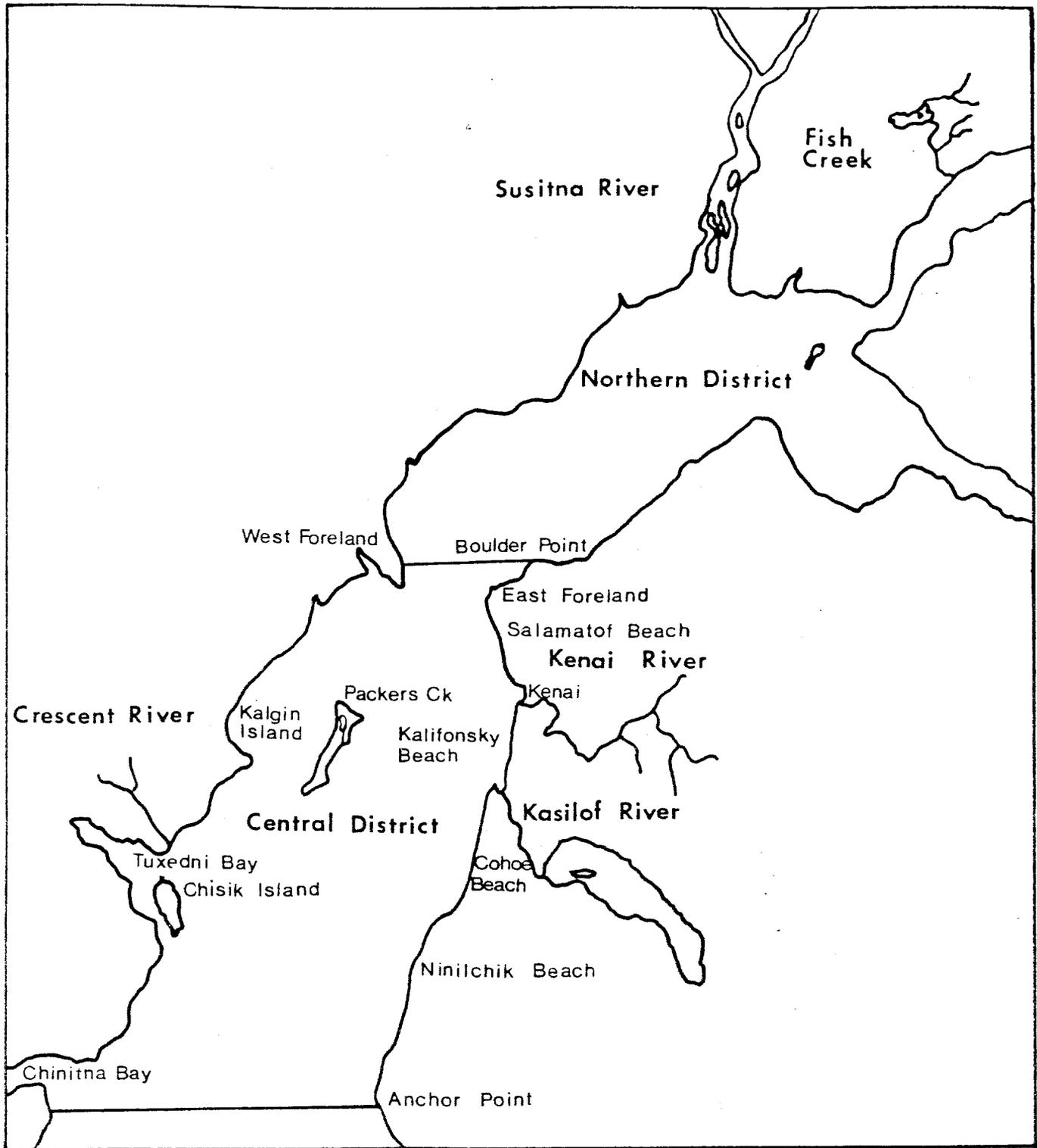


Figure 1. The Upper Cook Inlet area showing the locations of the Northern and Central Districts and the major sockeye salmon spawning drainages.

## METHODS

### Numbers of Fish

Estimation of the number of fish in the catch and escapement are prerequisites for the final calculation of total return by stock. Catch statistics are compiled by the State of Alaska's fish ticket program. In Upper Cook Inlet the major salmon producing systems are glacially occluded which makes escapement monitoring extremely difficult. In recent years hydroacoustic techniques have provided estimates of sockeye salmon escapement into the principal systems.

#### Catch:

Catch statistics reported in this paper represent preliminary figures summarized from fish ticket reports provided to the Alaska Department of Fish and Game (ADF&G) by salmon processors. Catch figures are reported in total numbers of sockeye salmon by fishery and date.

#### Escapement:

Sockeye salmon escapements into the Susitna, Kenai, Kasilof, and Crescent Rivers were enumerated by Bendix side scanning sonar. Two side scanning adult counters (one on each river bank) were employed at each river. Sonar units were operated on the Susitna River approximately 40 km upstream of the river mouth from 1 July through 29 August. Kenai River sonar operations were located 32 km upstream of the river mouth and enumerated the late run of sockeye salmon from 22 June through 4 September. Late run sockeye salmon escapement into the Kasilof River was monitored from 22 June through 13 August by sonar units located 27 km upstream. Crescent River sockeye salmon escapement was counted from 7 July through 14 August by sonar counters installed 32 km upstream the river mouth. Fishwheel catch data was used to apportion sonar counts for each fish species on the Susitna, Kenai, and Kasilof Rivers. Crescent River sonar counts were not apportioned by species, however, it is believed that counts during that time period represent mostly sockeye salmon (Bruce King, personal communication). Methods used in 1980 for the installation and operation of the sonar counters are described by Bendix Corporation (1980).

The escapement into Fish Creek was enumerated by means of an adult weir from 4 July through 1 September and was located 0.8 km upstream of the river mouth. The design and operation of the Fish Creek weir in 1980 was similar to that in 1979 which is detailed by Chlupach (1979). Sockeye salmon escapement into Packers Creek was monitored with a weir which was operated by the Cook Inlet Aquaculture Association from 23 June through 15 August. Weir operation at Packers Creek is documented by Cook Inlet Aquaculture Association (1980).

### Age Composition

Sockeye salmon eggs were determined through examination of scale samples. Scales were collected from the preferred area of the fish which is on the

left side of the body two rows above the lateral line in the diagonal scale row downward from the posterior edge of the dorsal fin (INPFC 1963). Scales were mounted on gum cards and impressions made in cellulose acetate (Clutter and Whitesel 1956). Ages were recorded in Gilbert-Rich<sup>1</sup> notation.

#### Commercial Catch Samples:

Scales were collected each fishing period from the commercial sockeye salmon harvest from 27 June through 25 July. We attempted to collect 200-300 scale samples per fishing period from each of the eight fisheries. Sex, length (mid-eye to fork of tail), and weight measurements were taken from a sub-sample of approximately 75 fish for each fishery and date. Catch samples were taken at approximately 12 different fish processors in the area.

Age composition estimates for each fishery were computed by fishing dates. For those dates in which scale samples were not taken from a particular fishery, the age composition estimates of the nearest date for the same fishery were applied to the catch in question.

#### Escapement Samples:

Sockeye salmon returning to six river systems were sampled for sex, length (mid-eye to fork of tail), and for scales. Fish were captured from the Susitna, Kenai, and Kasilof Rivers by fishwheels which operated adjacent to the sonar counters on each river. On the Kenai River, sockeye salmon were also collected from 30 June through 10 July by fishing two 10 fm and one 35 fm 5-1/4" (13.97 cm) mesh gill net approximately 21 km upstream of the river mouth.

Crescent River fish were collected by fishing one 35 fm 5-1/4" mesh gill net in the vicinity of the sonar site. Sockeye salmon returning to Fish Creek were collected in a live box at the weir site. Sockeye salmon returning to Packers Creek were captured by personnel from the Cook Inlet Aquaculture Association fishing dipnets immediately downstream of the weir.

The number and periodicity of scale samples collected from each river varied. On the Susitna, Kenai, and Kasilof Rivers we attempted to sample fish throughout the entire run and in proportion to the strength of the escapement. Crescent River's escapement was sampled on six dates: 13-14 July, 23 July, 29-30 July. Samples from Fish Creek and Packers Creek were collected at irregular intervals throughout each run.

Age composition estimates for the Susitna, Kenai, and Kasilof Rivers were calculated for three time periods. The dates included in each time period differed slightly between rivers, but basically represented the early, middle, and late segments of each river's escapement. The time periods used were: period 1 for the Kenai and Kasilof Rivers was from 22 June through 15 July

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<sup>1</sup> Gilbert-Rich Formula: Total years of life at maturity (superscript). Year of life at outmigration from freshwater (subscript).

and on the Susitna River was from 1 July through 18 July; period 2 for the Kenai and Kasilof Rivers was from 16 July through 24 July and for the Susitna River was from 19 July through 25 July; period 3 for the Kenai and Kasilof included the dates after 24 July and for the Susitna River dates after 25 July.

Age class proportions for Crescent River, Fish Creek, and Packers Creek were not weighted through time, rather a total seasons age composition estimate was computed.

### Stock Identification

The stock composition of each fisheries' sockeye salmon harvest was estimated through linear discriminant function analysis of scale patterns and age composition information. In this section we explain the techniques used and the methods applied to each fishery.

#### Scale Measurements:

Scale impressions were projected at 100x magnification using equipment similar to that described by Bilton (1970) and later modified by Ryan and Christie (1976).

Growth zones were measured from the scale image via a microcomputer digitizing system developed by H&A Computer Services and ADF&G. The digitizing system consists of the following components: Vector Graphic System B microcomputer, two Micropolis 5-1/4" (13.335 cm) floppy diskette drives, Talos digitizing tablet and cursor, Hazeltine 1510 CRT terminal, custom circuitry to interface digitizer tablet and the microcomputer and a FORTRAN program which controls data input. Measurements were taken along a standardized axis which is approximately 20° off the primary axis and perpendicular to the sculptured field.

Age 4<sub>2</sub> and 5<sub>2</sub> scales sampled from the Susitna, Kenai, and Kasilof River's escapements were measured. The age class measured for Fish Creek was age 4<sub>2</sub> and for Crescent River it was age 5<sub>2</sub>.

The age class analyzed from each commercial catch depended upon which age class was dominant. Both age 4<sub>2</sub> and age 5<sub>2</sub> scales were analyzed from the Central District drift catches each fishing period. In general only the prevailing age class, either 4<sub>2</sub> or 5<sub>2</sub>, for the date in question was measured from the Central District east-side set net catches. Age 5<sub>2</sub> scales were analyzed from the Central District west-side and Kalgin Island catches; similarly age 4<sub>2</sub> scales were measured from the Northern District set net catches.

The variables measured from the scale images included circuli counts and interval distances of summer, winter, and plus growth zones. An age 5<sub>2</sub> scale showing the measured variables is diagrammed in Figure 2. The variables entered into the discriminant analysis procedure only included the number of circuli and interval distances for zones one through five.

NC = Number of Circuli

ID = Incremental Distance

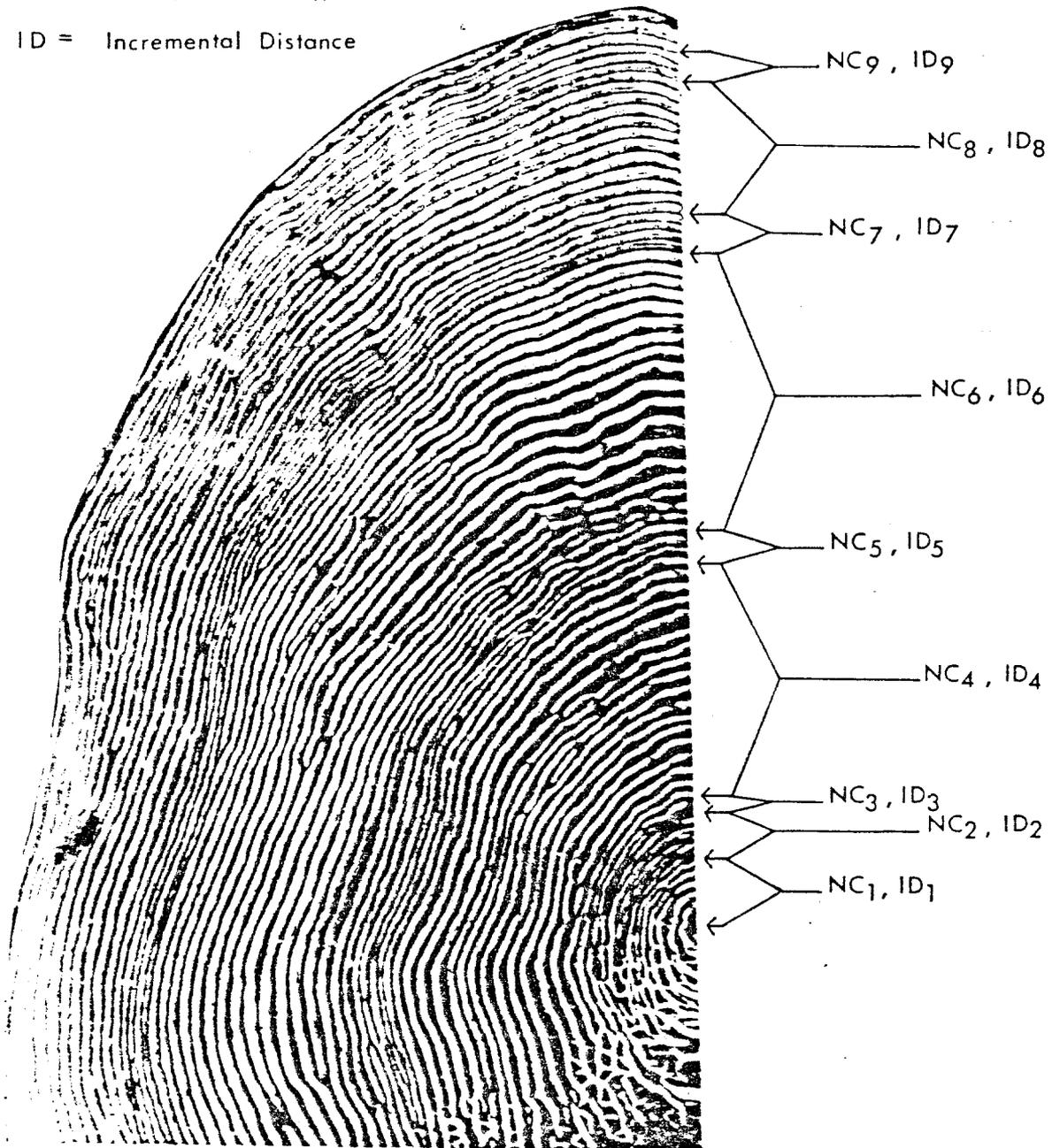


Figure 2. Age 5<sub>2</sub> sockeye salmon scale showing scale characteristics used in discriminant analysis.

### Discriminant Function Analysis:

Linear discriminant function analysis (Fisher 1936; Nie et al. 1975) of scale measurements was used to identify the origin of sockeye salmon sampled from the commercial fisheries. Stepwise discriminant function analysis was used with the F level for inclusion set at 1. Whichever variables were accepted by stepwise procedure were used in the analysis.

Scale measurements from fish of known origin sampled from the escapements were used as standards to build the classification models, i.e., the discriminant functions. A second (test) sample from each of the escapements was classified by the discriminant functions and used to estimate accuracy and to correct initial proportion estimates for misclassification.

Scale measurements from fish of unknown origin, i.e., commercial catch samples, were classified and stock composition estimates of each catch estimated. Stock estimates were then corrected for misclassification error rates using the procedures of Cook and Lord (1978). The variance and 90% confidence intervals were computed using the methods of Pella and Robertson (1979).

Age 5<sub>2</sub> Analyses. A four way stock identification model was constructed from age 5<sub>2</sub> scale measurements representing Susitna, Kenai, Kasilof, and Crescent Rivers. Fish Creek was not included in the age 5<sub>2</sub> analyses because of the small percentage (15.4%) of age 5<sub>2</sub> fish in its escapement. A catch sample was reclassified with a model representing fewer stocks than the primary four if the final proportion estimate was less than or equal to zero for the stock in question. We also made the assumption that Crescent River stocks did not contribute significantly to the Central District drift or east-side set net catches.

Commercial catch samples classified with the age 5<sub>2</sub> model included all samples taken from the Central District drift, Central District west-side, Kalgin Island, and specific samples from the Central District east-side set nets in which age 5<sub>2</sub> fish predominated.

Age 5<sub>2</sub> stock estimates for the Central District drift fishery were calculated for individual catch dates. For the remaining fisheries, stock estimates were developed for individual catch dates if harvests were relatively large (> 8,000). Samples from smaller catches were combined across succeeding fishing periods and one age 5<sub>2</sub> stock estimate for the inclusive time period was computed.

Age 4<sub>2</sub> Analyses. A four way stock identification model was constructed from age 4<sub>2</sub> scale measurements representing Susitna, Kenai, Kasilof, and Fish Creek stocks. Crescent River samples were omitted from the age 4<sub>2</sub> model because that age class comprised a small percentage (6.5%) of its escapement.

The four way model was used to classify samples from the Central District drift and east-side set net fisheries. We made the assumption that Kasilof River did not contribute substantially to the Northern District catches and subsequently classified samples from this area with a three way model (Susitna/

Kenai/Fish). Again catch samples were reclassified with a model representing fewer stocks than the initial model if the final proportion estimate was less than or equal to zero for the stock in question.

Age 4<sub>2</sub> stock estimates were calculated for the Central District drift catches on a period by period basis. For the Northern District and Central District east-side beaches catch samples, age 4<sub>2</sub> stock estimates were either computed for individual dates or for inclusive dates depending on the relative catch size.

#### Catch Apportionment:

The total Upper Cook Inlet commercial sockeye salmon catch was apportioned by age class and river system. Catch apportionment figures were calculated using a combination of scale pattern analysis and age composition techniques. The techniques used to apportion a catch varied according to which age class scale pattern analysis was conducted on and whether more than one age class was measured for a particular catch. In this section we present specific techniques used to apportion the catch on a fishery by fishery basis.

Central District West-side and Kalgin Island Fisheries. The proportions by river system of age 5<sub>2</sub> fish harvested by the Central District west-side and Kalgin Island set net fisheries were estimated through scale pattern analyses. Allocation by stock for the other age classes was based upon 5<sub>2</sub> stock estimates and the ratios of the proportion of each age class to the 5<sub>2</sub> age class from the respective escapements. An age 5<sub>2</sub> stock estimate for a given catch was expanded to estimate the stock proportion for another age class using the following formula:

$$\hat{S}_{ij} = \frac{\left( P_{i5_2} A_{ij} \right) / A_{i5_2}}{\sum_{i=1}^N \left( \left( P_{i5_2} A_{ij} \right) / A_{i5_2} \right)} \quad (1)$$

Where:

$\hat{S}_{ij}$  = Estimated proportion of stock  $i$  to the harvest of age  $j$ .

$P_{i5_2}$  = Estimated proportion of stock  $i$  in the harvest of age 5<sub>2</sub> fish.

$A_{ij}$  = Proportion of age  $j$  in stock  $i$ 's escapement.

$A_{i5_2}$  = Proportion of age 5<sub>2</sub> in stock  $i$ 's escapement.

$N$  = Number of stocks.

Migration times were added to catch dates when calculating age class ratios in the Susitna, Kenai, and Kasilof Rivers so that the escapement composition would best represent the population of fish being harvested earlier by the fishery. The age class ratios applied to a specific catch on date K equaled the proportion of age classes observed in the river on date K plus migration time. The estimated number of days from the mouth of each river to its counting site is: Susitna 6 days, Kenai 1-2 days, and Kasilof 1-2 days (Bruce King, Dave Waltemyer, personal communication). To calculate the additional migration time from the fishery to the river mouth we used a migration rate of 20 mi per day (Dahlberg 1968; French et al. 1976). The migration times used from the fisheries to each of the river's counting sites can be found by referring to Table 2. Migration times were not added to catch dates when calculating age class ratios in the Crescent River because the age composition data for this system was not weighted through time.

Northern District Set Net Fisheries. The proportions by river system of age 4<sub>2</sub> fish caught by the Northern District set net fisheries were calculated through scale pattern analysis. An age 4<sub>2</sub> stock estimate for a given catch was expanded to estimate the rivers of origin for another age class by using the same basic formula outlined above except age 4<sub>2</sub> proportions were substituted. The formula used was:

$$\hat{S}_{ij} = \frac{(P_{i4_2} A_{ij}) / A_{i4_2}}{\sum_{i=1}^N \left( (P_{i4_2} A_{ij}) / A_{i4_2} \right)} \quad (2)$$

Where:

$\hat{S}_{ij}$  = Estimated proportion of stock  $i$  to the harvest of age  $j$ .

$P_{i4_2}$  = Estimated proportion of stock  $i$  in the harvest of age 4<sub>2</sub> fish.

$A_{ij}$  = Proportion of age  $j$  in stock  $i$ 's escapement.

$A_{i4_2}$  = Proportion of age 4<sub>2</sub> in stock  $i$ 's escapement.

$N$  = Number of stocks.

The same migration times as outlined above were added to catch dates when calculating age class ratios in the Susitna and Kenai Rivers. Migration times were not used for Fish Creek because its age composition was not computed by date.

Central District Drift and East-side Set Net Fisheries. Stock composition estimates for Central District east-side set net catches in which only one age class was measured were expanded for the remaining age classes with either formula (1) or formula (2) depending on which age class was analyzed.

Scale pattern analysis was conducted on both age 4<sub>2</sub> and age 5<sub>2</sub> scales sampled from the Central District drift fishery and from selected harvests made on Kalifonsky and Cohoe/Ninilchik beaches. Age 5<sub>2</sub> stock proportions determined by scale analysis were expanded to estimate proportions by river for the remaining age classes (age 4<sub>2</sub>, 5<sub>2</sub>, 5<sub>3</sub>, 6<sub>3</sub>, other) using formula (1). Similarly age 4<sub>2</sub> stock proportions developed through scale pattern analysis were expanded to estimate the other age class stock proportions using formula (2). Consequently two stock proportions for each age class were developed, one as a result of the age 4<sub>2</sub> scale analysis and the other as a result of the age 5<sub>2</sub> analysis. The two stock proportions for the age class in question were averaged to calculate the final stock proportion.

Total Return. Daily total return was calculated by adding catches by river system to escapement estimate. Migration time was incorporated by adjusting catch dates to correspond with escapement dates.

## RESULTS

### Number of Fish

This section summarizes the commercial sockeye salmon catch by fishery and escapement to each river. Again the reader should be cognizant that in this report we only consider the contribution of the principal runs of sockeye salmon. Assessment of minor stock contribution is not possible at this time.

#### Catch:

The 1980 Upper Cook Inlet commercial sockeye harvest totaled 1,583,205 fish (Table 1). The Central District drift harvested 777,635 fish which represented 49.2% of the areas catch; while the Central District east-side beaches caught 557,623 sockeye salmon or 35.2% of total catch.

The Northern District fisheries harvested 7% (111,224) of the total catch and the remaining 8.6% (136,723) were taken by the Central District west-side and Kalgin Island fisheries. The largest catches were made during the week of 14 July through 21 July.

#### Escapement:

In excess of one million sockeye salmon escaped the Upper Cook Inlet fisheries and returned to the major river systems to spawn (Table 2). The largest escapement was enumerated in the Kenai River (464,038) followed by the Susitna (190,866), Kasilof (184,260), Crescent (90,863), Fish Creek (62,628), and Packers Creek (16,457). Escapements peaked earliest in the Kenai and Kasilof Rivers (16 July - 20 July) and latest in Crescent Rivers and Fish Creek

Table 1. Sockeye salmon commercial catch in numbers of fish by fishery and date, Upper Cook Inlet, 1980<sup>1</sup>.

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
6/16	Closed	Closed	Closed	1,705	Closed	Closed	Closed	Closed	1,705
6/20	Closed	Closed	Closed	460	Closed	Closed	Closed	Closed	460
6/23	Closed	Closed	Closed	4,335	Closed	Closed	Closed	Closed	4,335
6/27	169	121	10,719	4,781	10	1,114	7,912	12,789	37,615
6/30	394	294	1,125	7,615	3,596	712	6,225	12,000	31,961
7/04	691	294	14,172	13,447	10,620	1,186	4,138	28,592	73,140
7/05	Closed	Closed	Closed	Closed	Closed	Closed	Closed	3,437	3,437
7/07	212	72	96,730	5,711	10,381	851	651	10,719	125,327
7/11	1,199	81	Closed	6,693	Closed	Closed	Closed	44,487	52,460
7/14	156	901	378,987	5,307	7,493	405	13,196	51,737	458,182
7/16-17	Closed	Closed	Closed	Closed	Closed	Closed	Closed	76,556	76,556
7/18	14,765	20,699	Closed	9,806	Closed	Closed	Closed	Closed	45,270
7/19	Closed	Closed	173,322	Closed	9,977	62,592	46,496	27,798	320,185
7/21	12,204	24,126	49,238	2,968	4,309	17,505	15,143	9,081	134,574
7/22	Closed	Closed	Closed	Closed	Closed	7,006	5,392	6,056	18,454
7/23	4,269	10,679	30,174	8,257	1,476	9,162	9,680	5,833	79,530
7/24	Closed	Closed	Closed	Closed	Closed	4,753	5,989	2,325	13,067
7/25	3,344	3,542	11,511	3,708	1,521	9,631	6,385	4,954	44,596
7/28	2,355	3,504	3,186	1,314	1,706	5,174	2,231	2,645	22,115
7/30	878	1,506	3,579	1,124	959	2,015	1,058	1,540	12,659
8/01	868	720	2,388	738	800	1,109	1,084	964	8,671
8/04	604	914	2,275	795	1,235	1,080	897	1,340	9,140
8/06	640	408	Closed	Closed	Closed	Closed	Closed	Closed	1,048
8/08	468	23	Closed	574	1,158	809	418	1,069	4,519
8/11	108	3	Closed	210	807	100	95	306	1,629
8/13-14	Closed	Closed	86	Closed	Closed	413	179	360	1,038
8/15	13	Closed	26	117	254	68	67	114	659
8/18	Closed	Closed	0	159	40	Closed	Closed	Closed	199
8/22	Closed	Closed	43	43	163	Closed	Closed	Closed	249
8/25	Closed	Closed	36	27	80	Closed	Closed	Closed	143
8/29	Closed	Closed	20	26	2	Closed	Closed	Closed	48
9/01	Closed	Closed	17	83	4	Closed	Closed	Closed	104
9/05	Closed	Closed	Closed	2	6	Closed	Closed	Closed	8
9/08	Closed	Closed	1	Closed	Closed	Closed	Closed	Closed	1
9/12	Closed	Closed	Closed	Closed	121	Closed	Closed	Closed	121
Total	43,337	67,887	777,635	80,005	56,718	125,685	127,236	304,702	1,583,205

<sup>1</sup> Catch figures are preliminary data.

Table 2. Sockeye salmon escapement by date and system, Upper Cook Inlet 1980<sup>1</sup>.

Date	Susitna		Kenai		Kasilof	
	Daily	Cumulative	Daily	Cumulative	Daily	Cumulative
6/22			931	931	482	482
6/23			809	1,740	756	1,238
6/24			553	2,293	494	1,732
6/25			663	2,956	2,278	4,010
6/26			534	3,490	2,431	6,441
6/27			237	3,727	2,960	9,401
6/28			422	4,149	4,328	13,729
6/29			346	4,495	3,601	17,330
6/30			578	5,073	7,683	25,013
7/01	444	444	483	5,556	5,542	30,555
7/02	418	862	601	6,157	9,496	40,051
7/03	428	1,290	375	6,532	6,009	46,060
7/04	407	1,697	515	7,047	5,462	51,522
7/05	439	2,136	324	7,371	6,393	57,915
7/06	320	2,456	265	7,636	4,441	62,356
7/07	311	2,767	150	7,786	2,676	65,032
7/08	232	2,999	174	7,960	2,465	67,497
7/09	101	3,100	358	8,318	2,408	69,905
7/10	214	3,314	249	8,567	2,599	72,504
7/11	199	3,513	426	8,993	3,532	76,036
7/12	362	3,875	328	9,321	1,567	77,603
7/13	36	3,911	167	9,488	952	78,555
7/14	98	4,009	293	9,781	1,764	80,319
7/15	89	4,098	2,673	12,454	5,219	85,538
7/16	226	4,324	13,978	26,432	11,695	97,233
7/17	649	4,973	117,463	143,895	7,723	104,956
7/18	6,514	11,487	82,962	226,857	7,257	112,213
7/19	24,546	36,033	54,909	281,766	7,423	119,636
7/20	28,417	64,450	78,576	360,342	8,148	127,784
7/21	22,895	87,345	56,875	417,217	3,991	131,775
7/22	39,990	127,335	9,468	426,685	4,211	135,986
7/23	29,822	157,157	2,837	429,522	6,730	142,716
7/24	8,434	165,591	2,806	432,328	2,527	145,243
7/25	5,496	171,087	1,353	433,681	2,737	147,980
7/26	2,656	173,743	1,589	435,270	2,752	150,732
7/27	1,945	175,688	2,558	437,828	2,243	152,975
7/28	581	176,269	1,479	439,307	1,881	154,856
7/29	1,290	177,559	2,235	441,542	2,229	157,085
7/30	1,866	179,425	1,569	443,111	2,205	159,290
7/31	445	179,870	1,166	444,277	2,513	161,803
8/01	2,544	182,414	982	445,259	2,029	163,832
8/02	978	183,392	1,212	446,471	1,934	165,766
8/03	379	183,771	994	447,465	1,157	166,923
8/04	1,619	185,390	706	448,171	1,761	168,684
8/05	1,123	186,513	843	449,014	1,814	170,498
8/06	141	186,654	935	449,949	1,266	171,764
8/07	342	186,996	1,197	451,146	1,242	173,006
8/08	197	187,193	596	451,742	1,286	174,292
8/09	487	187,670	860	452,602	2,737	177,029
8/10	654	188,334	1,043	453,645	1,397	178,426
8/11	172	188,506	1,966	455,611	1,951	180,377
8/12	367	188,873	1,587	457,198	1,748	182,125
8/13	226	189,099	3,217	460,415	2,135	184,260
8/14	109	189,208	264	460,679		
8/15	174	189,382	322	461,001		
8/16	55	189,447	740	461,741		
8/17	436	189,883	527	462,268		
8/18	252	190,135	280	462,548		
8/19	116	190,251	210	462,758		
8/20	112	190,363	83	462,841		
8/21	174	190,537	147	462,988		
8/22	108	190,645	145	463,133		
8/23	23	190,668	311	463,444		
8/24	39	190,707	30	463,474		
8/25	43	190,750	25	463,499		
8/26	35	190,785	12	463,511		
8/27	27	190,812	185	463,696		
8/28	28	190,840	179	463,875		
8/29	26	190,866	120	463,995		
8/30			0	463,995		
8/31			0	463,995		
9/01			0	463,995		
9/02			18	464,013		
9/03			12	464,025		
9/04			13	464,038		

-Continued-

Table 2. Sockeye salmon escapement by date and system, Upper Cook Inlet 1980<sup>1</sup> (continued).

Date	Crescent <sup>2</sup>		Fish <sup>3</sup>		Packers <sup>4</sup>	
	Daily	Cumulative	Daily	Cumulative	Daily	Cumulative
6/22						
6/23					1	1
6/24					4	5
6/25					0	5
6/26					0	5
6/27					43	48
6/28					38	86
6/29					18	104
6/30					15	119
7/01					2	121
7/02					12	133
7/03					50	183
7/04			17	17	9	192
7/05			26	43	2	194
7/06			14	57	0	194
7/07	1	1	26	83	1	195
7/08	1	2	28	111	2	197
7/09	9	11	19	130	3	200
7/10	2,585	2,596	38	168	1	201
7/11	5,482	8,078	23	191	66	267
7/12	3,350	11,428	13	204	5	267
7/13	524	11,952	15	219	5	267
7/14	1,260	13,212	11	230		267
7/15	1,439	14,651	28	258	1,085	1,352
7/16	1,311	15,962	17	275	36	1,388
7/17	1,575	17,537	67	342	2	1,390
7/18	3,162	20,699	3,679	4,021	79	1,469
7/19	5,327	26,026	4,462	8,483	197	1,666
7/20	7,595	33,621	2,507	10,990	587	2,253
7/21	7,730	41,351	7,011	18,001	2,108	4,361
7/22	5,942	47,293	6,866	24,867	70	4,431
7/23	6,855	54,148	7,958	32,825	2,827	7,258
7/24	5,034	59,182	9,703	42,528	750	8,008
7/25	2,651	61,833	7,730	50,258	340	8,348
7/26	3,688	65,521	2,717	52,975	641	8,989
7/27	2,649	68,170	1,107	54,082	1,537	10,526
7/28	3,269	71,459	2,974	57,056	680	11,206
7/29	2,270	73,709	502	57,558	211	11,417
7/30	2,368	76,077	517	58,075	142	11,559
7/31	1,737	77,814	980	59,055	126	11,685
8/01	1,996	79,810	641	59,696	40	11,725
8/02	1,646	81,456	501	60,197	125	11,850
8/03	1,557	83,013	610	60,807	147	11,997
8/04	1,646	84,659	718	61,525	335	12,332
8/05	1,108	85,767	184	61,709	307	12,639
8/06	894	86,661	143	61,852	614	13,253
8/07	639	87,300	173	62,025	515	13,768
8/08	799	88,099	80	62,105	175	13,943
8/09	943	89,042	90	62,195	263	14,206
8/10	441	89,483	90	62,285	729	14,935
8/11	375	89,858	36	62,321	164	15,099
8/12	415	90,273	75	62,396	1,131	16,230
8/13	414	90,687	40	62,436	183	16,413
8/14	176	90,863	53	62,489	43	16,456
8/15			37	62,526	1	16,457
8/16			22	62,548		
8/17			14	62,562		
8/18			23	62,585		
8/19			21	62,606		
8/20			7	62,613		
8/21			5	62,618		
8/22			2	62,620		
8/23			1	62,621		
8/24			2	62,623		
8/25			2	62,625		
8/26			2	62,627		
8/27			1	62,628		

- <sup>1</sup> Escapement figures for Susitna, Kenai, and Kasilof Rivers represent final apportioned sonar counts.
- <sup>2</sup> Crescent River escapement figures represent unapportioned sonar counts.
- <sup>3</sup> Fish Creek escapement figures represent final weir counts
- <sup>4</sup> Packers Creek escapement figures represent weir counts provided by the Cook Inlet Aquaculture Association.
- <sup>5</sup> No counts available, observations were not possible because of high water.

(20 July - 26 July). Peak escapement counts on the Susitna River occurred from 19 July through 23 July.

### Age Composition

Age composition differed significantly between the river's escapements and between fisheries. Changes in age composition is also evident through time. Age data alone has often assisted in understanding the stock composition of the catch during the fishing season.

#### Escapement Samples:

The sex and age composition of samples collected from the Susitna, Kenai, and Kasilof Rivers are reported by date Tables 3-5. Numbers of fish by age class are presented by river system and time in Table 6.

Age 5<sub>2</sub> fish were most abundant in the Kenai River comprising 45.1% of the escapement; while age 4<sub>2</sub> fish represented 27.7% of the run. In the Susitna River the percentage of age 4<sub>2</sub> and age 5<sub>2</sub> fish were similar (50.0% and 36.2%, respectively). Age 4<sub>2</sub> fish dominated (58.7%) in the Kasilof River and age 5<sub>2</sub> fish (27.8%) were second in abundance. In the Crescent River there was a preponderance of age 5<sub>2</sub> fish (86.9%), conversely age 4<sub>2</sub> fish (68.9%) prevailed in Fish Creek. Packers Creek escapement was comprised mostly of age 5<sub>3</sub> fish (69.8%) followed by age 6<sub>3</sub> fish (24.3%).

Differences in age composition through time were exhibited in the Susitna, Kenai, and Kasilof Rivers. In all three rivers age 5<sub>2</sub> fish were most abundant early in the run; whereas age 4<sub>2</sub> fish dominated later.

#### Commercial Catch Samples:

The age composition of the commercial catch is shown by fishery and date in Tables 7-14. Age composition in the Northern District were similar for the east-side (age 4<sub>2</sub> 45.2% and age 5<sub>2</sub> 32.8%) and the west-side (age 4<sub>2</sub> 40.8% and age 5<sub>2</sub> 41.7%) set net catches. The Central District drift harvest was comprised mostly of age 5<sub>2</sub> fish (49.7%) followed by age 4<sub>2</sub> fish (31.6%). The percentages of age 4<sub>2</sub> fish decreased while the age 5<sub>2</sub> percentages increased in set net catches south to north along the Central District east-side beaches. Percentages of age 4<sub>2</sub> and age 5<sub>2</sub> fish harvested by beach were: Coho/Ninilchik (4<sub>2</sub>, 41.8% and 5<sub>2</sub>, 35.0%), Kalifonsky (4<sub>2</sub>, 26.9% and 5<sub>2</sub>, 47.8%), and Salamatof Beach (4<sub>2</sub>, 19.9% and 5<sub>2</sub>, 48.7%).

In summary, (Table 15) the majority of fish harvested in Upper Cook Inlet were age 5<sub>2</sub> fish (47.2%) followed in abundance by age 4<sub>2</sub> (31.5%), age 6<sub>3</sub> (10.6%), age 5<sub>2</sub> (10.5%), and all others (0.2%).

### Stock Identification

In this section we outline the pertinent data used to develop the final estimates of each river's contribution to the catch. Of particular importance are the estimates of test classification accuracy and the confidence coefficients associated with age specific stock estimates which are indicators of the power of the analyses.

Table 3. Age and sex composition of sockeye salmon sampled from the Susitna River, Upper Cook Inlet 1980<sup>1</sup>.

Date	4 <sub>2</sub>			5 <sub>2</sub>			5 <sub>3</sub>			6 <sub>3</sub>			Other			Total		
	Males	Females	Total	Males	Females	Total	Males	Females	Total									
7/03		1	1		1	1												2
7/04	1		1		1	1												2
7/05				1		1												1
7/07				1		1												1
7/09							1		1		1	1						2
7/14					1	1												1
7/16				1	2	3												1
7/17	5	9	14	11	11	22	1		1	4	4	8				1	2	3
7/18	79	55	134	67	108	175	4	8	12	7	6	13	3	5	8	21	24	45
7/03-7/18																		
Numbers	85	65	150	81	124	205	6	8	14	11	11	22	3	5	8	106	213	399
Percent	21.3	16.3	37.6	20.3	31.1	51.4	1.5	2.0	3.5	2.7	2.8	5.5	0.8	1.2	2.0	46.6	53.4	100.0
7/20	7	11	18	6	19	25	2	1	3	2	3	5				17	34	51
7/21	14	9	23	4	6	10		2	2	1	1	2				19	18	37
7/22	8	6	14	12	9	21		1	1		2	2	1	1		20	18	38
7/23	14	14	28	2	5	7	1	1	2		2	4				17	20	37
7/24	0	15	23		9	9	1	3	4	2	2	4				11	29	40
7/25	14	9	23	4	10	14					1	1				18	20	38
7/20-7/25																		
Numbers	65	64	129	20	50	86	4	8	12	5	8	13		1	1	102	139	241
Percent	27.0	26.5	53.5	11.6	24.1	35.7	1.7	3.3	5.0	2.1	3.3	5.4		0.4	0.4	42.4	57.6	100.0
7/26	7	12	19	1	1	2	1	2	3		1	1				9	16	25
7/27	9	7	16	1	8	9		1	1		1	1				11	16	27
7/28		5	5	1	5	6										1	11	12
7/29	4	2	6	1		1					1	1				5	2	7
7/30	2	2	4		1	1										3	3	6
7/31	4	1	5	1	3	4					1	1				5	5	10
8/01-8/30																		
Numbers	39	46	85	17	46	63	3	5	8	2	7	9	16	2	18	70	105	183
Percent	21.3	25.2	46.5	9.3	25.1	34.4	1.7	2.7	4.4	1.1	3.8	4.9	8.7	1.1	9.8	42.1	57.9	100.0

<sup>1</sup> Sockeye salmon sampled by fishwheel.

Table 4. Age and sex composition of sockeye salmon sampled from the Kenai River, Upper Cook Inlet 1980<sup>1</sup>.

Date	4 <sub>2</sub>			5 <sub>2</sub>			5 <sub>3</sub>			6 <sub>3</sub>			Other			Total		
	Males	Females	Total	Males	Females	Total	Males	Females	Total									
6/30	14	5	19	20	10	30		1	1	6	2	8				40	18	58
7/01	17	3	20	18	16	34		7	7	5	9	14				40	35	75
7/06	5		5	11	7	18		3	3	1		1				17	10	27
7/10	2	5	7	9	12	21		2	2	1	1	2				12	20	32
7/13	1	1	2	1		1	1		1				1		1	4	1	5
7/15	2	1	3					3	3							2	4	6
6/30-7/15	41	15	56	59	45	104	1	16	17	13	12	25	0.5		0.5	115	88	203
Numbers	20.2	7.4	27.6	29.0	22.2	51.2	0.5	7.9	8.4	6.4	5.9	12.3				56.6	43.4	100.0
Percent																		
7/16	6	6	12	1	2	3	1		1							8	8	16
7/17	7	6	13	6	12	18		2	2	2	3	5				15	23	38
7/18	1	6	7	7	16	23	1	3	4	1	2	3				10	27	37
7/19	3	1	4	6	12	18	2	4	6							11	18	29
7/20	3	1	4	2	8	10	1	3	4	1	1	2				7	13	20
7/21	1	5	6	13	7	20	6	7	13	5	4	9				25	23	48
7/23	4		4	1	2	3	2	2	4	1	1	2				8	5	13
7/24	5	1	6		1	1		1	1							5	3	8
7/16-7/24	30	26	56	36	60	96	13	22	35	10	12	22				89	120	209
Numbers	14.4	12.4	26.8	17.2	28.7	45.9	6.2	10.6	16.8	4.8	5.7	10.5				42.6	57.4	100.0
Percent																		
7/25	1	1	2	1		1					1	1				2	2	4
7/26	4	2	6	2		2										6	2	8
7/27	6	3	9	2	3	5	1	1	2							9	7	16
7/28	6	4	10	3	1	4	1		1							10	6	16
7/29	7	2	9	1	1	2		2	2							10	5	15
7/30	6	2	8	5	4	9		1	1		1	1	1			11	8	19
7/31	7	4	11	6	1	7	4	1	5		1	1				17	7	24
8/01-8/20	41	26	67	28	38	66	9	14	23	9		9	35	1	36	122	79	201
7/25-8/20	78	44	122	49	48	97	15	19	34	9	3	12	36	0.6	30	187	116	303
Numbers	25.8	14.5	40.3	16.2	15.8	32.0	4.9	6.3	11.2	3.0	1.0	4.0	11.9		12.5	61.8	38.2	100.0
Percent																		

<sup>1</sup> Sockeye salmon sampled by fishwheel with the exception of samples on 6/30, 7/01, 7/06, and 7/10 which were taken by 5-1/4" mesh gill nets.

Table 5. Age and sex composition of sockeye salmon sampled from the Kasilof River, Upper Cook Inlet 1980<sup>1</sup>.

Date	4 <sub>2</sub>			5 <sub>2</sub>			5 <sub>3</sub>			6 <sub>3</sub>			Other			Total		
	Males	Females	Total	Males	Females	Total	Males	Females	Total									
6/21				1		1										1		1
6/22				1		1										1		1
6/24	1		1		1	1												1
6/26	5	2	7	11	4	15				1	1	2				17	1	24
6/27	3	6	9	5	4	9			1		1	2				11	10	19
6/28	4	3	7	6	2	8				1	1	2				10	6	17
6/29	7	1	8	3	3	6			1							10	5	15
6/30	1	4	5	3	3	6	1		2							5	5	10
7/01	6	1	7	3	2	5	1	1	2							8	11	16
7/02	1	2	3	3	2	5				2		2				5	4	12
7/03	4	1	5	3	2	5			2		1	2				10	5	14
7/08	6	7	13	5	2	7			2			2				6	9	15
7/09	3	2	5													3	2	5
7/11	7	11	18	1	1	2	1	1	2							9	11	22
7/12	1	4	5				2		2							2	4	7
7/13	1		1				1		1		1	1				3	1	4
7/14	1	3	4	1		1					2	2				3	2	5
7/15	4	2	6	2		2	1	1	2		1	1				6	4	10
6/21-7/15																		
Numbers	55	49	104	40	32	72	9	7	16	6	6	12				110	94	204
Percent	27.0	24.0	51.0	19.6	15.7	35.3	4.4	3.4	7.8	3.0	2.9	5.9				54.0	46.0	100.0
7/16	2		2	1	3	4				1		1				4	3	7
7/17	5	2	7	3	3	6	2	2	4							8	8	16
7/18	5	10	15	4	6	10	1	1	2		3	3				10	20	30
7/19	6	6	12	3	2	5	1	1	2							10	9	19
7/20	15	17	32		11	11	3		3		2	2				18	30	48
7/21	6	10	16	1	3	4	2	3	5		1	1				9	17	26
7/22	1	5	6	2	3	5	2	2	4							5	10	15
7/23	7	19	26	1	3	4	2	6	8	1	2	2				10	30	40
7/24	3	3	6	1	1	2										3	4	7
7/16-7/24																		
Numbers	48	72	120	15	35	50	12	15	27	2	9	11				77	131	208
Percent	23.1	34.6	57.7	7.2	16.8	24.0	5.8	7.2	13.0	1.0	4.3	5.3				37.1	62.9	100.0
7/25	14	24	38		1	1										14	25	39
7/26	13	23	36	1		1				1		1				15	23	38
7/28	17	36	53	2	10	12			1			1				20	40	60
7/29	8	14	22	6	6	12	1	1	2							15	21	36
7/30	6	21	27	1	2	3										7	23	30
7/31	8	22	30	3	3	6										11	25	36
8/01-8/10																		
Numbers	36	133	169	5	47	52	1	1	2				2	2	4	57	182	239
Percent	20.9	56.1	77.0	3.1	14.2	17.3	0.4	0.4	0.8	0.2	0.2	0.4	4.3	0.2	4.5	28.9	71.1	100.0

<sup>1</sup> Sockeye salmon sampled by fishwheel.

Table 6. Age and sex composition by river of sockeye salmon escapement, Upper Cook Inlet, 1980.

River	Date	Sample Size	4			5			5			6			Other			Total				
			Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total		
Susitna River	Period 1 7/01-7/18	399	Numbers	2,447	1,872	4,319	2,332	3,572	5,904	172	230	402	310	322	632	92	138	230	5,353	6,134	11,487	
			Percent	21.3	16.3	37.6	20.3	31.1	51.4	1.5	2.0	3.5	2.7	2.0	5.5	0.8	1.2	2.0	46.6	53.4	100.0	
	Period 2 7/19-7/25	241	Numbers	29,592	29,044	58,636	12,714	26,413	39,127	1,063	3,617	5,480	2,301	3,617	5,918	0	439	439	46,470	63,130	109,600	
			Percent	27.0	26.5	53.5	11.6	24.1	35.7	1.7	3.3	5.0	2.1	3.3	5.4	0	0.4	0.4	42.4	57.6	100.0	
	Period 3 7/26-8/30	183	Numbers	14,063	17,584	32,447	6,489	17,515	24,004	1,186	1,804	3,070	768	2,651	3,419	6,071	768	6,839	29,377	40,402	69,779	
			Percent	21.3	25.2	46.5	9.3	25.1	34.4	1.7	2.7	4.4	1.1	3.8	4.9	8.7	1.1	9.8	42.1	57.9	100.0	
	Total	823	Numbers	46,902	48,500	95,402	21,535	47,500	69,035	3,221	5,731	8,952	3,379	6,590	9,969	6,163	1,345	7,508	81,200	109,666	190,866	
			Percent	24.6	25.4	50.0	11.3	24.9	36.2	1.7	3.0	4.7	1.8	3.4	5.2	3.2	0.7	3.9	42.5	57.5	100.0	
	Kenai River	Period 1 6/22-7/15	203	Numbers	2,516	921	3,437	3,612	2,765	6,377	62	904	1,046	797	735	1,532	62	0	62	7,049	5,405	12,454
				Percent	20.2	7.4	27.6	29.0	22.2	51.2	0.5	7.9	8.4	6.4	5.9	12.3	0.5	0	0.5	56.6	43.4	100.0
Period 2 7/16-7/24		209	Numbers	60,462	52,064	11,526	72,218	120,504	192,722	26,032	44,507	70,539	20,154	23,933	44,087	0	0	0	178,066	241,008	419,874	
			Percent	14.4	12.4	26.8	17.2	28.7	45.9	6.2	10.6	16.8	4.8	5.7	10.5	0	0	0	42.6	57.4	100.0	
Period 3 7/25-9/04		303	Numbers	8,181	4,598	12,779	5,137	5,010	10,147	1,554	1,998	3,552	951	317	1,268	3,774	190	3,964	19,597	12,113	31,710	
	Percent		25.8	14.5	40.3	16.2	15.8	32.0	4.9	6.3	11.2	3.0	1.0	4.0	11.9	0.6	12.5	61.8	38.2	100.0		
Total	715	Numbers	71,159	57,583	128,742	80,967	128,279	209,246	27,648	47,489	75,137	21,902	24,985	46,887	3,836	190	4,026	205,512	250,526	464,038		
		Percent	15.3	12.4	27.7	17.5	27.6	45.1	6.0	10.2	16.2	4.7	5.4	10.1	0.8	0.1	0.9	44.3	55.7	100.0		

-Continued-

Table 6. Age and sex composition by river of sockeye salmon escapement, Upper Cook Inlet, 1980 (continued).

River	Date	Sample Size	4			5			5			6			Other			Total			
			Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	
Kasilof River	Period 1 6/22-7/15	204	Numbers	23,095	20,529	43,624	16,765	13,430	30,195	3,764	2,908	6,672	2,566	2,481	5,047	0	0	0	46,191	39,347	85,538
			Percent	27.0	24.0	51.0	19.6	15.7	35.3	4.4	3.4	7.8	3.0	2.9	5.9	0	0	0	54.0	46.0	100.0
	Period 2 7/16-7/24	208	Numbers	13,792	20,658	34,450	4,299	10,030	14,329	3,463	4,299	7,762	597	2,567	3,164	0	0	0	22,151	37,554	59,705
			Percent	23.1	34.6	57.7	7.2	16.8	24.0	5.8	7.2	13.0	1.0	4.3	5.3	0	0	0	37.1	62.9	100.0
	Period 3 7/25-8/13	487	Numbers	8,155	21,888	30,043	1,210	5,540	6,750	156	156	312	78	78	156	1,678	78	1,756	11,277	27,740	39,017
			Percent	20.9	56.1	77.0	3.1	14.2	17.3	0.4	0.4	0.8	0.2	0.2	0.4	4.3	0.2	4.5	28.9	71.1	100.0
Total	899	Numbers	45,042	63,075	108,117	22,274	29,000	51,274	7,383	7,363	14,746	3,241	5,126	8,367	1,678	78	1,756	79,619	104,641	184,260	
		Percent	24.5	34.2	58.7	12.1	15.7	27.8	4.0	4.0	8.0	1.7	2.8	4.5	0.9	0.1	1.0	43.2	56.8	100.0	
Crescent River	Total 7/07-8/14	511	Numbers	3,544	2,362	5,906	34,165	44,795	78,960	1,363	1,272	2,635	545	909	1,454	909	999	1,908	40,525	50,338	90,863
			Percent	3.9	2.6	6.5	37.6	49.3	86.9	1.5	1.4	2.9	0.6	1.0	1.6	1.0	1.1	2.1	44.6	55.4	100.0
Fish Creek	Total 7/04-8/27	351	Numbers	19,791	23,360	43,151	4,822	4,823	9,645	188	3,569	3,757	188	188	376	4,447	1,252	5,699	29,436	33,192	62,628
			Percent	31.6	37.3	68.9	7.7	7.7	15.4	0.3	5.7	6.0	0.3	0.3	0.6	7.1	2.0	9.1	47.0	53.0	100.0
Packers Lake	Total 6/24-8/14	374	Numbers	313	132	445	165	313	478	4,190	7,325	11,515	2,293	1,716	4,009	50	0	50	7,011	9,486	16,497
			Percent	1.9	0.8	2.7	1.0	1.9	2.9	25.4	44.4	69.8	13.9	10.4	24.3	0.3	0	0.3	42.5	57.5	100.0

Table 7. Age composition by date of the Northern District east-side set net sockeye salmon harvest, Upper Cook Inlet, 1980.

Date	Sample Size		4 2	5 2	5 3	6 3	Other	Total
Prior <sup>1</sup>								
7/04	0	Numbers	307	133	92	24	7	563
		Percent	54.6	23.6	16.4	4.2	1.2	
7/04	165	Numbers	378	163	113	29	8	691
		Percent	54.6	23.6	16.4	4.2	1.2	
7/07	60	Numbers	120	28	53	7	4	212
		Percent	56.7	13.3	25.0	3.3	1.7	
7/11	160	Numbers	780	180	225	14	0	1,199
		Percent	65.0	15.0	18.8	1.2	0	
7/14	30	Numbers	99	21	16	10	10	156
		Percent	63.4	13.3	10.0	6.7	6.6	
7/18	160	Numbers	7,737	5,374	1,654	0	0	14,765
		Percent	52.4	36.4	11.2	0	0	
7/21	266	Numbers	5,004	4,308	2,343	549	0	12,204
		Percent	41.0	35.3	19.2	4.5	0	
7/23	229	Numbers	1,883	820	1,417	149	0	4,269
		Percent	44.1	19.2	33.2	3.5	0	
7/25	227	Numbers	1,177	1,151	869	117	30	3,344
		Percent	35.2	34.4	26.0	3.5	0.9	
After <sup>1</sup>								
7/25	0	Numbers	2,089	2,041	1,543	208	53	5,934
		Percent	35.2	34.4	26.0	3.5	0.9	
Total	1,297	Numbers	19,574	14,219	8,325	1,107	112	43,337
		Percent	45.2	32.8	19.2	2.6	0.2	

<sup>1</sup> Scales were not collected prior to 7/04 or after 7/25. Age composition estimates from 7/04 were applied to the total catch made prior to that date, similarly age composition estimates from 7/25 were applied to the total catch made after 7/25.

Table 8. Age composition by date of the Northern District west-side set net sockeye salmon harvest, Upper Cook Inlet, 1980.

Date	Sample Size		4 2	5 2	5 3	6 3	Other	Total
Prior <sup>1</sup> 7/04	0	Numbers	177	174	39	22	3	415
		Percent	42.6	42.0	9.5	5.3	0.6	
7/04	169	Numbers	125	123	28	16	2	294
		Percent	42.6	42.0	9.5	5.3	0.6	
7/07 <sup>2</sup>	0	Numbers	34	27	8	3	0	72
		Percent	47.0	37.9	10.6	4.5	0	
7/11	96	Numbers	42	25	10	4	0	81
		Percent	52.1	31.2	12.5	4.2	0	
7/14	64	Numbers	423	352	57	69	0	901
		Percent	46.9	39.1	6.3	7.7	0	
7/18	157	Numbers	11,467	5,009	1,842	2,381	0	20,699
		Percent	55.4	24.2	8.9	11.5	0	
7/21	261	Numbers	8,323	12,208	1,930	1,665	0	24,126
		Percent	34.5	50.6	8.0	6.9	0	
7/23	156	Numbers	4,517	4,453	684	961	64	10,679
		Percent	42.3	41.7	6.4	9.0	0.6	
7/25	231	Numbers	857	1,980	429	262	14	3,542
		Percent	24.2	55.9	12.1	7.4	0.4	
After <sup>1</sup> 7/25	0	Numbers	1,713	3,957	856	524	28	7,078
		Percent	24.2	55.9	12.1	7.4	0.4	
Total	1,134	Numbers	27,678	28,308	5,883	5,907	111	67,887
		Percent	40.8	41.7	8.7	8.7	0.1	

<sup>1</sup> Scales were not collected prior to 7/04 or after 7/25. Age composition estimates from 7/04 were applied to the total catch made prior to that date, similarly age composition estimates from 7/25 were applied to the total catch made after 7/25.

<sup>2</sup> Scales were not collected on 7/07. Age composition estimates from 7/04 and 7/11 were average and the average age composition estimate was applied to the 7/07 catch.

Table 9. Age composition by date of the Central District drift net sockeye salmon harvest, Upper Cook Inlet, 1980.

Date	Sample Size		4 2	5 2	5 3	6 3	Other	Total
6/27	154	Numbers	3,763	5,220	1,318	418	0	10,719
		Percent	35.1	48.7	12.3	3.9	0	
6/30 <sup>1</sup>	0	Numbers	401	511	130	83	0	1,125
		Percent	35.6	45.4	11.6	7.4	0	
7/04	172	Numbers	5,107	6,009	1,573	1,403	0	14,172
		Percent	36.6	42.4	11.1	9.9	0	
7/07	163	Numbers	38,015	43,335	5,900	9,480	0	96,730
		Percent	39.3	44.8	6.1	9.8	0	
7/14	172	Numbers	132,266	185,325	30,698	30,698	0	378,987
		Percent	34.9	48.9	8.1	8.1	0	
7/19	163	Numbers	48,877	87,181	12,826	22,358	2,080	173,322
		Percent	28.2	50.3	7.4	12.9	1.2	
7/21	203	Numbers	5,564	32,989	2,905	7,780	0	49,238
		Percent	11.3	67.0	5.9	15.8	0	
7/23	269	Numbers	4,918	17,501	2,474	5,281	0	30,174
		Percent	16.3	58.0	8.2	17.5	0	
7/25	249	Numbers	3,327	4,351	1,611	2,222	0	11,511
		Percent	28.9	37.8	14.0	19.3	0	
After <sup>2</sup> 7/25	0	Numbers	3,369	4,406	1,632	2,250	0	11,657
		Percent	28.9	37.8	14.0	19.3	0	
Total	1,545	Numbers	245,687	386,828	61,067	81,973	2,080	777,635
		Percent	31.6	49.7	7.9	10.5	0.3	

<sup>1</sup> Scales were not collected on 6/30, age composition estimates from 6/27 and 7/04 were averaged and the average age composition estimate was applied to the 6/30 catch.

<sup>2</sup> Scales were not collected after 7/25, age composition estimates from 7/25 were applied to the total catch made after that date.

Table 10. Age composition by date of the Central District west-side set net sockeye salmon harvest, Upper Cook Inlet, 1980.

Date	Sample Size		4 2	5 2	5 3	6 3	Other	Total
prior								
7/04	0	Numbers	1,436	15,551	1,191	718	0	18,896
		Percent	7.6	82.3	6.3	3.8	0	
7/04	158	Numbers	1,022	11,067	847	511	0	13,447
		Percent	7.6	82.3	6.3	3.8	0	
7/07	167	Numbers	925	4,169	240	377	0	5,711
		Percent	16.2	73.0	4.2	6.6	0	
7/11	165	Numbers	690	5,595	408	0	0	6,693
		Percent	10.3	83.6	6.1	0	0	
7/14	108	Numbers	297	4,617	244	149	0	5,307
		Percent	5.6	87.0	4.6	2.8	0	
7/18	0	Numbers	716	8,649	333	108	0	9,806
		Percent	7.3	88.2	3.4	1.1	0	
7/21	248	Numbers	228	2,621	95	24	0	2,968
		Percent	7.7	88.3	3.2	0.8	0	
7/23	100	Numbers	1,982	4,129	1,651	495	0	8,257
		Percent	24.0	50.0	20.0	6.0	0	
7/25	204	Numbers	419	2,837	233	219	0	3,708
		Percent	11.3	76.5	6.3	5.9	0	
After								
7/25	0	Numbers	589	3,987	328	308	0	5,212
		Percent	11.3	76.5	6.3	5.9	0	
Total	1,150	Numbers	8,304	63,222	5,570	2,909	0	80,005
		Percent	10.4	79.0	7.0	3.6	0	

<sup>1</sup> Scales were not collected prior to 7/04 or after 7/25. Age composition estimates from 7/04 were applied to the total catch made prior to that date, similarly age composition estimates from 7/25 were applied to the total catch made after 7/25.

<sup>2</sup> Scales were not collected on 7/18. Age composition estimates from 7/14 and 7/21 were averaged and the average age estimates were applied to the 7/18 catch.

Table 11. Age composition by date of the Kalgin Island set net sockeye salmon harvest, Upper Cook Inlet, 1980.

Date	Sample Size		4 2	5 2	5 3	6 3	Other	Total
Prior <sup>1</sup>								
7/04	0	Numbers	775	2,117	335	379	0	3,606
		Percent	21.5	58.7	9.3	10.5	0	
7/04	172	Numbers	2,283	6,234	988	1,115	0	10,620
		Percent	21.5	58.7	9.3	10.5	0	
7/07	174	Numbers	3,343	5,014	1,432	592	0	10,381
		Percent	32.2	48.3	13.8	5.7	0	
7/14	173	Numbers	2,166	3,072	1,948	217	90	7,493
		Percent	28.9	41.0	26.0	2.9	1.2	
7/19	103	Numbers	1,357	5,138	1,157	2,325	0	9,977
		Percent	13.6	51.5	11.6	23.3	0	
7/21	256	Numbers	452	1,633	1,280	944	0	4,309
		Percent	10.5	37.9	29.7	21.9	0	
7/23	241	Numbers	55	490	515	416	0	1,476
		Percent	3.7	33.2	34.9	28.2	0	
7/25	161	Numbers	94	294	736	397	0	1,521
		Percent	6.2	19.3	48.4	26.1	0	
After <sup>2</sup>								
7/25	0	Numbers	455	1,416	3,550	1,914	0	7,335
		Percent	6.2	19.3	48.4	26.1	0	
Total	1,280	Numbers	10,980	25,408	11,941	8,299	90	56,718
		Percent	19.4	44.8	21.0	14.6	0.2	

<sup>1</sup> Scales were not collected prior to 7/04 or after 7/25. Age composition estimates from 7/04 were applied to the total catch made prior to that date, similarly age composition estimates from 7/25 were applied to the total catch made after 7/25.

<sup>2</sup> Scales were not collected on 7/18. Age composition estimates from 7/14 and 7/21 were averaged and the average age estimates were applied to the 7/18 catch.

Table 12. Age composition by date of the Salamatof Beach set net sockeye salmon harvest, Upper Cook Inlet, 1980.

Date	Sample Size		4 2	5 2	5 3	6 3	Other	Total
Prior <sup>1</sup>								
7/04	0	Numbers	789	730	269	38	0	1,826
		Percent	43.2	40.0	14.7	2.1	0	
7/04	95	Numbers	512	475	174	25	0	1,186
		Percent	43.2	40.0	14.7	2.1	0	
7/07	120	Numbers	468	192	163	28	0	851
		Percent	55.0	22.5	19.2	3.3	0	
7/14	161	Numbers	211	111	68	13	2	405
		Percent	52.2	27.3	16.8	3.1	0.6	
7/19	167	Numbers	8,262	28,104	11,642	14,584	0	62,592
		Percent	13.2	44.9	18.6	23.3	0	
7/21	211	Numbers	4,901	8,630	2,241	1,733	0	17,505
		Percent	28.0	49.3	12.8	9.9	0	
7/22 <sup>2</sup>	0	Numbers	2,221	3,391	792	602	0	7,006
		Percent	31.7	48.4	11.3	8.6	0	
7/23	231	Numbers	3,216	4,361	870	678	37	9,162
		Percent	35.1	47.6	9.5	7.4	0.4	
7/24 <sup>3</sup>	0	Numbers	1,231	2,591	380	551	0	4,753
		Percent	25.9	54.5	8.0	11.6	0	
7/25	218	Numbers	1,502	5,923	665	1,541	0	9,631
		Percent	15.6	61.5	6.9	16.0	0	
After <sup>1</sup>								
7/25	0	Numbers	1,680	6,622	743	1,723	0	10,768
		Percent	15.6	61.5	6.9	16.0	0	
Total	1,203	Numbers	24,993	61,130	18,007	21,516	39	125,685
		Percent	19.9	48.7	14.3	17.1	0	

<sup>1</sup> Scales were not collected prior to 7/04 or after 7/25. Age composition estimates from 7/04 were applied to the total catch made prior to that date, similarly age composition estimates from 7/25 were applied to the total catch made after 7/25.

<sup>2</sup> Scales were not collected on 7/22. Age composition estimates from 7/21 and 7/23 were averaged and the average age estimates were applied to the 7/22 catch.

<sup>3</sup> Scales were not collected on 7/24. Age composition estimates from 7/23 and 7/24 were averaged and the average age estimates were applied to the 7/24 catch.

Table 13. Age composition by date of the Kalifonsky Beach set net sockeye salmon harvest, Upper Cook Inlet, 1980.

Date	Sample Size		4 2	5 2	5 3	6 3	Other	Total
6/27	177	Numbers Percent	2,951 37.3	4,154 52.5	47 0.6	760 9.6	0 0	7,912
6/30 <sup>1</sup>	0	Numbers Percent	2,609 43.2	2,026 45.4	212 3.4	461 7.4	37 0.6	6,225
7/04	174	Numbers Percent	2,019 40.8	1,593 38.5	261 6.3	240 5.8	25 0.6	4,138
7/07	140	Numbers Percent	321 49.3	105 20.4	114 17.6	31 4.7	0 0	651
7/14	171	Numbers Percent	5,173 39.2	5,622 42.6	1,544 11.7	699 5.3	150 1.2	13,196
7/19	171	Numbers Percent	11,438 24.6	19,017 40.9	6,700 14.6	8,974 19.3	279 0.6	46,496
7/21	250	Numbers Percent	2,120 14.0	9,260 61.2	1,272 0.4	2,403 16.4	0 0	15,143
7/22 <sup>2</sup>	0	Numbers Percent	1,062 19.7	3,041 56.4	550 10.2	739 13.7	0 0	5,392
7/23	219	Numbers Percent	2,478 25.6	4,946 51.1	1,191 12.3	1,065 11.0	0 0	9,680
7/24 <sup>3</sup>	0	Numbers Percent	1,303 23.1	3,216 53.7	695 11.6	695 11.6	0 0	5,909
7/25	212	Numbers Percent	1,296 20.3	3,502 56.1	690 10.0	817 12.8	0	6,305
After 7/25 <sup>4</sup>	0	Numbers Percent	1,224 20.3	3,302 56.1	651 10.8	772 12.0	0 0	6,029
<b>Total</b>	<b>1,522</b>	<b>Numbers Percent</b>	<b>34,154 26.9</b>	<b>60,832 47.0</b>	<b>14,015 11.0</b>	<b>17,736 13.9</b>	<b>499 0.4</b>	<b>127,236</b>

<sup>1</sup> Scales were not collected on 6/30, age composition estimates from 6/27 and 7/04 were averaged and applied to the 6/30 catch.

<sup>2</sup> Scales were not collected on 7/22, age composition estimates from 7/21 and 7/23 were averaged and applied to the 7/22 catch.

<sup>3</sup> Scales were not collected on 7/24, age composition estimates from 7/23 and 7/25 were averaged and applied to the 7/24 catch.

<sup>4</sup> Scales were not collected after 7/25, age composition estimates from 7/25 were applied to the total catch made after that date.

Table 14. Age composition by date of the Cohoe/Niniłchik Beach set net sockeye salmon harvest, Upper Cook Inlet, 1980.

Date	Sample Size		4 2	5 2	5 3	6 3	Other	Total
6/27 <sup>1</sup>	0	Numbers	5,346	5,346	1,330	767	0	12,789
		Percent	41.8	41.8	10.4	6.0	0	
6/30	182	Numbers	5,016	5,016	1,248	720	0	12,000
		Percent	41.8	41.8	10.4	6.0	0	
7/04	168	Numbers	14,125	9,864	2,716	1,887	0	28,592
		Percent	49.4	34.5	9.5	6.6	0	
7/05	164	Numbers	1,677	1,406	230	124	0	3,437
		Percent	48.8	40.9	6.7	3.6	0	
7/07	203	Numbers	5,863	2,798	1,533	525	0	10,719
		Percent	54.7	26.1	14.3	4.9	0	
7/11	173	Numbers	21,354	12,101	8,986	2,046	0	44,487
		Percent	48.0	27.2	20.2	4.6	0	
7/14	166	Numbers	19,660	20,591	6,519	4,967	0	51,737
		Percent	38.0	39.8	12.6	9.6	0	
7/16-17	458	Numbers	33,455	24,728	7,885	10,335	153	76,556
		Percent	43.7	32.3	10.3	13.5	0.2	
7/19	173	Numbers	8,200	9,646	5,448	4,337	167	27,798
		Percent	29.5	34.7	19.6	15.6	0.6	
7/21	294	Numbers	3,305	2,870	1,698	1,208	0	9,081
		Percent	36.4	31.6	18.7	13.3	0	
7/22 <sup>2</sup>	0	Numbers	2,114	2,628	775	515	24	6,056
		Percent	34.9	43.4	12.8	8.5	0.4	
7/23	222	Numbers	1,919	3,412	286	134	82	5,833
		Percent	32.9	58.5	4.9	2.3	1.4	
7/24 <sup>3</sup>	0	Numbers	789	1,151	221	144	23	2,325
		Percent	33.8	49.5	9.5	6.2	1.0	
7/25	198	Numbers	1,699	1,952	728	525	50	4,954
		Percent	34.3	39.4	14.7	10.6	1.0	
After 7/25 <sup>1</sup>	0	Numbers	2,860	3,285	1,226	884	83	8,338
		Percent	34.3	39.4	14.7	10.6	1.0	
Total	2,401	Numbers	127,379	106,794	40,829	29,118	582	304,702
		Percent	41.8	35.0	13.4	9.6	0.2	

<sup>1</sup> Scales were not collected on 6/27 or after 7/25. Age composition estimates from 6/30 were applied to the 6/27 catch and age composition estimates from 7/25 were applied to the total catch made after 7/25.

<sup>2</sup> Scales were not collected on 7/22, age composition estimates from 7/21 and 7/23 were averaged and applied to the 7/22 catch

<sup>3</sup> Scales were not collected on 7/24, age composition estimates from 7/23 and 7/25 were averaged and applied to the 7/24 catch.

Table 15. Age composition by date of the Upper Cook Inlet commercial sockeye salmon harvest, 1980<sup>1</sup>.

Date	Sample Size		4 2	5 2	5 3	6 3	Other	Total
Prior 7/04	331	Numbers Percent	23,650 31.1	41,778 54.9	6,211 8.1	4,390 5.8	47 0.1	76,076
7/04	1,273	Numbers Percent	25,651 35.1	35,528 48.6	6,700 9.2	5,226 7.1	35 0.0	73,140
7/05	164	Numbers Percent	1,677 48.8	1,406 40.9	230 6.7	124 3.6	0 0	3,437
7/07	1,035	Numbers Percent	49,089 39.2	55,748 44.5	9,443 7.5	11,043 8.8	4 0	125,327
7/11	594	Numbers Percent	22,866 43.6	17,901 34.1	9,629 18.4	2,064 3.9	0 0	52,460
7/14	1,045	Numbers Percent	160,295 35.0	219,711 47.9	41,094 9.0	36,822 8.0	260 0.1	458,182
7/16-7/17	458	Numbers Percent	33,455 43.7	24,728 32.3	7,885 10.3	10,335 13.5	153 0.2	76,556
7/18	317	Numbers Percent	19,920 44.0	19,032 42.0	3,829 8.5	2,409 5.5	0 0	45,270
7/19	777	Numbers Percent	78,134 24.4	149,086 46.6	37,861 11.8	52,578 16.4	2,526 0.8	320,185
7/21	1,989	Numbers Percent	29,897 22.2	74,527 55.4	13,764 10.2	16,386 12.2	0 0	134,574
7/22	0	Numbers Percent	5,397 29.2	9,060 49.1	2,117 11.5	1,856 10.1	24 0.1	18,454
7/23	1,667	Numbers Percent	20,968 26.4	40,112 50.4	9,088 11.4	9,179 11.6	183 0.2	79,530
7/24	0	Numbers Percent	3,400 26.0	6,958 53.3	1,296 9.9	1,390 10.6	23 0.2	13,067
7/25	1,700	Numbers Percent	10,371 23.2	22,070 49.5	5,961 13.4	6,100 13.7	94 0.2	44,596
After 7/25	0	Numbers Percent	13,979 22.4	29,096 46.7	10,529 16.9	8,583 13.8	164 0.2	62,351
<b>Total</b>	<b>11,350</b>	<b>Numbers Percent</b>	<b>498,749 31.5</b>	<b>746,741 47.2</b>	<b>165,637 10.5</b>	<b>168,565 10.6</b>	<b>3,513 0.2</b>	<b>1,583,205</b>

<sup>1</sup> Catch figures are preliminary.

### Summary Statistics for Scale Measurements:

Summary statistics for variables measured from age 5<sub>2</sub> and age 4<sub>2</sub> scales are presented in Table 16 and 17, respectively. Statistics for all the measured variables are shown even though only variables NC1 through ID5 were used in the analyses. The variables which provided the greatest discriminatory power between stocks included the first summer in freshwater (NC1, ID1) and plus growth (NC3, ID3).

### Classification Accuracy:

Classification matrices for all 5<sub>2</sub> and 4<sub>2</sub> stock identification models constructed are presented in Tables 18 and 19, respectively.

The average overall classification accuracies for the age 5<sub>2</sub> 4-way, 3-way, and 2-way models were 55.5%, 63.1%, and 75.4%, respectively. In the age 5<sub>2</sub> analysis Crescent River was classified most accurately and Susitna River the least. Classification of Kasilof River was slightly better than that of Kenai River. In general samples from the Susitna River were most often misclassified as Kasilof River and vice versa.

Classification accuracies of age 4<sub>2</sub> stock identification models were better than the accuracies of age 5<sub>2</sub> models. The average overall classification accuracy for age 4<sub>2</sub> 4-way, 3-way, and 2-way models were 61.6%, 70.6%, and 83.2%. Fish Creek scale patterns were very distant and were correctly classified 98.0% of the time. Susitna River had the poorest classification accuracy and Kenai and Kasilof Rivers were intermediate.

### Age Specific Stock Composition Estimates:

Stock composition estimates and their 90% confidence intervals developed from scale pattern analysis of age 5<sub>2</sub> and age 4<sub>2</sub> fish are presented in Table 20 and Table 21, respectively. Confidence coefficients varied considerably, primarily because of differences in classification accuracy.

### Migration Rates:

Estimates of migration times from individual fisheries to the river's enumeration sites are reported in Table 22. Migration times to Fish Creek, Susitna, and Crescent Rivers were long and ranged from 7 to 14 days; whereas migration times to the Kenai and Kasilof Rivers were substantially shorter ranging from 1-4 days.

### Catch Apportionment

In this section we present estimates of each river's contribution to the 1980 Upper Cook Inlet commercial harvest. Stock estimates are reported by age class and date for each fishery.

Table 16. Mean ( $\bar{x}$ ) and standard deviation (s) for each variable measured from age 5<sub>2</sub> sockeye salmon scales from spawning locations in Cook Inlet, 1980.

Variable		Male	Susitna Female	Total	Male	Kenai Female	Total	Male	Kasilof Female	Total	Male	Crescent Female	Total
Length	$\bar{x}$ s	578.23 32.45	561.50 24.18	567.94 28.76	581.07 34.42	563.83 28.80	571.76 31.65	543.71 41.70	525.22 27.03	531.69 33.98	563.13 32.87	545.67 23.34	551.86 28.29
NC1	$\bar{x}$ s	8.25 2.72	8.85 2.63	8.62 2.67	6.55 1.89	6.75 1.88	6.66 1.88	8.27 1.21	8.48 1.68	8.41 1.53	7.39 1.88	7.09 1.70	7.19 1.77
ID1	$\bar{x}$ s	108.17 31.19	113.20 30.95	111.26 31.06	88.77 21.24	88.95 21.44	88.87 21.30	113.36 18.05	114.55 19.74	114.14 19.13	84.51 15.72	81.02 15.24	82.26 15.46
NC2	$\bar{x}$ s	2.79 0.80	2.92 0.70	2.87 0.74	3.14 0.76	3.00 0.72	3.06 0.74	3.01 0.69	2.92 0.68	2.96 0.68	2.65 0.63	2.82 0.57	2.76 0.60
ID2	$\bar{x}$ s	21.73 6.40	22.72 5.72	22.34 5.99	23.54 6.82	22.48 6.44	22.97 6.62	24.03 6.49	22.42 5.59	22.98 5.96	19.14 5.05	20.79 4.70	20.20 4.08
NC3	$\bar{x}$ s	2.34 1.36	2.46 1.63	2.41 1.53	3.90 1.94	3.87 1.78	3.88 1.85	1.70 0.94	1.75 1.08	1.74 1.03	2.61 1.16	2.79 1.37	2.72 1.30
ID3	$\bar{x}$ s	25.48 15.65	25.93 18.05	25.76 17.12	42.48 20.73	39.62 19.41	40.93 20.03	16.49 10.27	17.85 11.62	17.38 11.16	27.69 12.68	27.32 13.09	27.52 12.92
NC4	$\bar{x}$ s	17.48 3.14	17.70 3.38	17.62 3.29	18.21 2.15	18.08 2.33	18.14 2.24	18.56 2.18	18.58 2.14	18.57 2.15	18.49 2.47	18.05 2.32	18.72 2.37
ID4	$\bar{x}$ s	291.51 46.38	282.72 50.36	282.26 48.75	294.80 36.96	289.03 36.14	291.69 36.54	301.00 30.42	297.89 32.16	298.98 31.52	303.75 37.25	307.91 35.15	306.44 35.87
NC5	$\bar{x}$ s	6.01 1.14	5.81 1.15	5.89 1.15	5.95 1.39	5.73 1.29	5.83 1.33	5.49 1.10	5.31 1.21	5.37 1.17	5.51 1.38	5.48 1.22	5.49 1.28
ID5	$\bar{x}$ s	80.79 16.85	78.25 18.46	79.23 17.86	76.32 20.20	73.56 20.01	74.82 20.09	72.50 16.70	68.68 17.38	70.02 17.20	73.45 18.60	72.74 18.07	72.99 18.22
NC6	$\bar{x}$ s	17.10 3.49	17.11 3.13	17.13 3.26	19.82 3.04	19.87 3.25	19.85 3.15	18.29 3.04	17.78 3.00	17.96 3.02	19.55 2.70	19.14 2.74	19.29 2.73
ID6	$\bar{x}$ s	283.42 60.55	280.24 47.96	281.47 53.03	326.76 49.27	321.04 49.27	323.67 49.23	307.67 46.18	296.02 47.47	300.10 47.24	329.63 47.20	315.60 45.74	320.58 46.63
NC7	$\bar{x}$ s	4.75 0.85	4.81 0.90	4.79 0.88	4.91 1.15	4.71 1.04	4.81 1.09	4.77 1.08	4.31 0.96	4.47 1.03	4.70 1.06	4.77 1.10	4.75 1.08
ID7	$\bar{x}$ s	56.55 11.27	56.35 11.03	56.43 11.10	55.91 12.18	53.93 15.10	54.84 13.84	52.57 12.88	47.61 11.22	49.34 12.03	54.03 12.87	53.91 13.46	53.95 13.22
NC8	$\bar{x}$ s	11.69 2.26	10.72 1.78	11.10 2.03	12.54 2.33	11.94 2.04	12.22 2.19	9.74 1.69	10.03 1.96	9.93 1.87	11.93 2.07	11.33 1.95	11.54 2.01
ID8	$\bar{x}$ s	184.60 33.85	168.94 29.73	174.97 32.22	193.85 38.99	185.54 32.86	189.36 35.96	151.10 27.37	153.18 27.94	152.45 27.69	189.85 35.29	176.68 29.70	181.35 32.33

Table 17. Mean ( $\bar{x}$ ) and standard deviation (s) for each variable measured from age 4<sub>2</sub> sockeye salmon scales from spawning locations in Cook Inlet, 1980.

Variable		Male	Susitna Female	Total	Male	Kenai Female	Total	Male	Kasilof Female	Total	Fish Total
Length	$\bar{x}$ s	497.11 43.57	507.66 24.82	502.77 35.12	474.65 48.98	492.03 35.23	480.99 45.15	493.91 28.73	479.40 31.07	485.84 30.85	1 1
NC1	$\bar{x}$ s	9.29 3.01	10.21 2.86	9.78 2.96	8.41 3.68	9.16 4.16	8.68 3.87	8.77 1.38	8.78 1.45	8.78 1.42	19.34 2.47
ID1	$\bar{x}$ s	115.02 32.89	126.52 31.69	121.18 32.70	105.36 37.83	115.67 41.27	109.13 39.34	112.24 16.14	112.20 16.12	112.22 16.10	217.93 28.38
NC2	$\bar{x}$ s	2.99 0.72	3.20 0.68	3.10 0.70	3.07 0.73	3.11 0.79	3.09 0.75	3.49 0.85	3.47 0.77	3.48 0.81	3.47 0.69
ID2	$\bar{x}$ s	22.81 6.11	23.72 5.95	23.30 6.03	22.76 6.49	23.90 6.71	23.17 6.57	26.85 7.21	26.06 6.82	26.41 6.99	24.67 5.54
NC3	$\bar{x}$ s	2.57 1.69	2.26 1.39	2.40 1.54	3.15 1.60	3.19 1.75	3.16 1.65	1.78 1.12	2.13 1.06	1.98 1.10	1.67 0.78
ID3	$\bar{x}$ s	25.92 18.52	21.05 13.72	23.31 16.27	31.87 18.92	30.67 18.04	31.43 18.57	16.80 10.77	18.99 9.88	18.02 10.32	15.18 6.79
NC4	$\bar{x}$ s	18.74 2.22	18.72 2.17	18.73 2.19	19.88 2.71	20.26 2.17	20.02 2.53	19.14 2.11	18.94 2.07	19.03 2.09	17.97 2.27
ID4	$\bar{x}$ s	318.37 35.76	323.57 37.92	321.16 36.96	327.82 45.07	341.34 36.45	332.76 42.54	332.50 37.77	328.91 34.51	330.50 35.97	300.54 39.46
NC5	$\bar{x}$ s	5.31 1.02	5.49 1.10	5.41 1.06	4.97 1.16	4.78 0.92	4.90 1.08	5.43 1.25	5.35 1.17	5.39 1.20	4.96 0.91
ID5	$\bar{x}$ s	70.78 17.07	74.37 16.77	72.70 16.97	66.28 16.97	65.19 13.50	65.88 15.77	74.16 17.16	73.61 17.96	73.86 17.57	62.19 13.41
NC6	$\bar{x}$ s	18.22 2.69	18.01 3.08	18.11 2.90	18.96 3.20	18.78 3.63	18.89 3.35	17.82 2.69	18.50 3.13	18.20 2.86	15.35 3.13
ID6	$\bar{x}$ s	287.41 46.31	279.60 42.06	283.22 44.17	292.41 53.34	297.60 49.33	294.31 51.85	284.90 43.56	293.24 47.70	289.54 46.01	224.40 49.32

<sup>1</sup> Breakdown by sex and length measurements are not available from Fish Creek.

Table 18. Test classification matrices from discriminant analyses of Susitna, Kenai, Kasilof, and Crescent River age 5<sub>2</sub> sockeye salmon, 1980.

Actual Group of Origin	Sample Size	Classified Group of Origin			
		Susitna	Kenai	Kasilof	Crescent
Susitna	100	<u>.410</u>	.160	.260	.170
Kenai	100	.140	<u>.550</u>	.200	.110
Kasilof	100	.280	.080	<u>.590</u>	.005
Crescent	100	.004	.220	.070	<u>.670</u>

Overall correctly classified = .555

Actual Group of Origin	Sample Size	Classified Group of Origin		
		Susitna	Kenai	Kasilof
Susitna	100	<u>.500</u>	.240	.260
Kenai	100	.210	<u>.560</u>	.230
Kasilof	100	.340	.008	<u>.580</u>

Overall correctly classified = .547

Actual Group of Origin	Sample Size	Classified Group of Origin		
		Susitna	Kenai	Crescent
Susitna	100	<u>.580</u>	.250	.170
Kenai	100	.280	<u>.620</u>	.100
Crescent	100	.006	.240	<u>.700</u>

Overall correctly classified = .633

-Continued-

Note: Underlined proportions represent proportion correctly classified, all other proportions are misclassified.

Table 18. Test classification matrices from discriminant analyses of Susitna, Kenai, Kasilof, and Crescent River age 5<sub>2</sub> sockeye salmon, 1980 (continued).

Actual Group of Origin	Sample Size	Classified Group of Origin		
		Susitna	Kasilof	Crescent
Susitna	100	<u>.510</u>	.290	.200
Kasilof	100	.320	<u>.620</u>	.060
Crescent	100	.060	.100	<u>.840</u>

Overall correctly classified = .657

Actual Group of Origin	Sample Size	Classified Group of Origin		
		Kenai	Kasilof	Crescent
Kenai	100	<u>.560</u>	.270	.170
Kasilof	100	.120	<u>.790</u>	.090
Crescent	100	.220	.070	<u>.710</u>

Overall correctly classified = .687

Actual Group of Origin	Sample Size	Classified Group of Origin	
		Susitna	Kenai
Susitna	100	<u>.680</u>	.320
Kenai	100	.320	<u>.680</u>

Overall correctly classified = .680

-Continued-

Table 18. Test classification matrices from discriminant analyses of Susitna, Kenai, Kasilof, and Crescent River age 5<sub>2</sub> sockeye salmon, 1980 (continued).

Actual Group of Origin	Sample Size	Classified Group of Origin	
		Susitna	Kasilof
Susitna	100	<u>.700</u>	.300
Kasilof	100	.370	<u>.630</u>

Overall correctly classified = .665

Actual Group of Origin	Sample Size	Classified Group of Origin	
		Susitna	Crescent
Susitna	100	<u>.670</u>	.330
Crescent	100	.200	<u>.800</u>

Overall correctly classified = .735

Actual Group of Origin	Sample Size	Classified Group of Origin	
		Kenai	Kasilof
Kenai	100	<u>.710</u>	.290
Kasilof	100	.170	<u>.830</u>

Overall correctly classified = .770

-Continued-

Table 18. Test classification matrices from discriminant analyses of Susitna, Kenai, Kasilof, and Crescent River age 5<sub>2</sub> sockeye salmon, 1980 (continued).

Actual Group of Origin	Sample Size	Classified Group of Origin	
		Kenai	Crescent
Kenai	100	<u>.850</u>	.150
Crescent	100	.300	<u>.700</u>

Overall correctly classified = .775

Actual Group of Origin	Sample Size	Classified Group of Origin	
		Kasilof	Crescent
Kasilof	100	<u>.860</u>	.140
Crescent	100	.080	<u>.920</u>

Overall correctly classified = .890

Table 19. Test classification matrices from discriminant analyses of Susitna River, Kenai River, Kasilof River, and Fish Creek age 4<sub>2</sub> sockeye salmon, 1980.

Actual Group of Origin	Sample Size	Classified Group of Origin			
		Susitna	Kenai	Kasilof	Fish
Susitna	125	<u>.424</u>	.256	.296	.024
Kenai	100	.170	<u>.510</u>	.240	.080
Kasilof	125	.256	.192	<u>.552</u>	.000
Fish	100	.020	.000	.000	<u>.980</u>

Overall correctly classified = .616

Actual Group of Origin	Sample Size	Classified Group of Origin		
		Susitna	Kenai	Kasilof
Susitna	125	<u>.464</u>	.264	.272
Kenai	100	.210	<u>.580</u>	.210
Kasilof	125	.224	.208	<u>.568</u>

Overall correctly classified = .537

Actual Group of Origin	Sample Size	Classified Group of Origin		
		Susitna	Kasilof	Fish
Susitna	125	<u>.648</u>	.304	.048
Kasilof	125	.328	<u>.672</u>	.000
Fish	100	.020	.000	<u>.980</u>

Overall correctly classified = .767

-Continued-

Note: Underlined proportions represent proportions correctly classified, all other proportions are misclassified.

Table 19. Test classification matrices from discriminant analyses of Susitna River, Kenai River, Kasilof River, and Fish Creek age 4<sub>2</sub> sockeye salmon, 1980 (continued).

Actual Group of Origin	Sample Size	Classified Group of Origin		
		Susitna	Kenai	Fish
Susitna	125	<u>.688</u>	.280	.032
Kenai	100	.340	<u>.580</u>	.080
Fish	100	.030	.010	<u>.960</u>

Overall correctly classified = .743

Actual Group of Origin	Sample Size	Classified Group of Origin		
		Kenai	Kasilof	Fish
Kenai	100	<u>.610</u>	.310	.080
Kasilof	125	.264	<u>.736</u>	.000
Fish	100	.000	.020	<u>.980</u>

Overall correctly classified = .775

Actual Group of Origin	Sample Size	Classified Group of Origin	
		Susitna	Kenai
Susitna	125	<u>.704</u>	.296
Kenai	100	.330	<u>.670</u>

Overall correctly classified = .687

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Table 19. Test classification matrices from discriminant analyses of Susitna River, Kenai River, Kasilof River, and Fish Creek age 4<sub>2</sub> sockeye salmon, 1980 (continued).

Actual Group of Origin	Sample Size	Classified Group of Origin	
		Susitna	Kasilof
Susitna	125	<u>.672</u>	.328
Kasilof	125	.320	<u>.680</u>
Overall correctly classified = .676			

Actual Group of Origin	Sample Size	Classified Group of Origin	
		Susitna	Fish
Susitna	125	<u>.968</u>	.032
Fish	100	.030	<u>.970</u>
Overall correctly classified = .969			

Actual Group of Origin	Sample Size	Classified Group of Origin	
		Kenai	Kasilof
Kenai	100	<u>.670</u>	.330
Kasilof	125	.256	<u>.744</u>
Overall correctly classified = .707			

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Table 19. Test classification matrices from discriminant analyses of Susitna River, Kenai River, Kasilof River, and Fish Creek age 4<sub>2</sub> sockeye salmon, 1980 (continued).

Actual Group of Origin	Sample Size	Classified Group of Origin	
		Kenai	Fish
Kenai	100	<u>.940</u>	.060
Fish	100	.030	<u>.970</u>

Overall correctly classified = .955

Actual Group of Origin	Sample Size	Classified Group of Origin	
		Kasilof	Fish
Kasilof	125	<u>1.000</u>	0.000
Fish	100	.010	<u>.990</u>

Overall correctly classified = .995

Table 20. Stock composition estimates and 90% confidence intervals calculated from scale pattern analyses of age 5<sub>2</sub> sockeye salmon by fishery and date for Upper Cook Inlet, 1980.

Fishery	Date	Susitna		Kenai		Kasilof		Crescent	
		Proportion	90% C.I.						
Northern District West-side Set Net	7/21-7/25	.598	(.243,.953)	.303	( 0,.632)			.099	( 0,.279)
Central District Drift Net	6/27	.372	( 0,1.00)	.347	( 0,.742)	.281	( 0,.724)		
	7/04	.247	( 0,.979)	.146	( 0,.525)	.607	(.089,1.00)		
	7/07	.208	( 0,.846)	.640	(.189,1.00)	.152	( 0,.615)		
	7/14	.760	(.428,1.00)	.240	( 0,.572)				
	7/19	.404	(.063,.745)	.596	(.255,.937)				
	7/21			.975	(.780,1.00)	.025	( 0,.220)		
	7/23			.853	(.664,1.00)	.147	( 0,.336)		
	7/25			.679	(.480,.879)	.321	(.121,.520)		
Central District West-side Set Net	7/04	.043	( 0,.271)	.120	( 0,.450)			.837	(.620,1.00)
	7/07-7/14					.083	( 0,.173)	.917	(.827,1.00)
	7/21-7/25	.095	( 0,.281)					.905	(.719,1.00)

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Table 20. Stock composition estimates and 90% confidence intervals calculated from scale pattern analyses of age 5<sub>2</sub> sockeye salmon by fishery and date for Upper Cook Inlet, 1980 (continued).

Fishery	Date	Susitna		Kenai		Kasilof		Crescent	
		Proportion	90% C.I.	Proportion	90% C.I.	Proportion	90% C.I.	Proportion	90% C.I.
Kalgin Island Set Net	7/04	.036	( 0, .643)	.473	(.114, .832)	.396	( 0, .876)	.095	( 0, .313)
	7/07			.030	( 0, .282)	.800	(.573, 1.00)	.170	( 0, .358)
	7/14			.297	( 0, .626)	.470	(.212, .727)	.233	(.005, .462)
	7/19-7/25	.260	( 0, .834)	.071	( 0, .339)	.404	( 0, .830)	.265	(.034, .496)
Salamatof Beach Set Net	7/19			.637	(.423, .851)	.363	(.149, .577)		
	7/21-7/23			.777	(.593, .962)	.223	(.038, .407)		
	7/25			.566	(.392, .740)	.434	(.260, .608)		
Kalifonsky Beach Set Net	6/27	.078	( 0, .708)	.285	( 0, .624)	.637	(.179, 1.00)		
	7/14	.398	( 0, 1.00)	.316	( 0, .773)	.286	( 0, .801)		
	7/19			.217	(.019, .414)	.783	(.586, .981)		
	7/21-7/23			.881	(.696, 1.00)	.119	( 0, .304)		
	7/25			.375	(.151, .600)	.625	(.400, .849)		
Cohoe/Ninilchik Beach Set Net	6/30	.216	( 0, .913)	.132	( 0, .485)	.652	(.158, 1.00)		
	7/14	.330	( 0, 1.00)	.192	( 0, .600)	.478	( 0, .995)		
	7/19			.676	(.446, .906)	.324	(.094, .554)		
	7/21-7/25			.574	(.399, .749)	.426	(.251, .601)		

Table 21. Stock composition estimates and 90% confidence intervals calculated from scale pattern analyses of age 4<sub>2</sub> sockeye salmon by fishery and date for Upper Cook Inlet, 1980.

Fishery	Date	Susitna		Kenai		Kasilof		Fish	
		Proportion	90% C.I.						
Northern District East-side Set Net	7/04-7/14	.514	(.108,.920)	.162	( 0,.571)			.324	(.163,.484)
	7/18	.232	( 0,.549)	.361	(.024,.698)			.407	(.266,.547)
	7/21-7/25	.247	( 0,.565)	.502	(.162,.843)			.251	(.137,.364)
Northern District West-side Set Net	7/04-7/14	.215	( 0,.821)	.750	(.102,1.00)			.035	( 0,.180)
	7/18	.960	(.901,1.00)					.040	( 0,.099)
Central District Drift Net	6/27					.977	(.938,1.00)	.023	( 0,.062)
	7/04					.901	(.832,.970)	.099	(.030,.168)
	7/07					.918	(.853,.983)	.082	(.017,.147)
	7/14			.114	( 0,.483)	.710	(.356,1.00)	.176	(.057,.295)
	7/19			.427	( 0,.888)	.561	(.137,.985)	.012	( 0,.097)
	7/21					.961	(.898,1.00)	.039	( 0,.102)
	7/23					.948	(.890,1.00)	.052	( 0,.110)
	7/25			.117	( 0,.492)	.831	(.481,1.00)	.052	( 0,.125)

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Table 21. Stock composition estimates and 90% confidence intervals calculated from scale pattern analyses of age 4<sub>2</sub> sockeye salmon by fishery and date for Upper Cook Inlet, 1980 (continued).

Fishery	Date	Susitna		Kenai		Kasilof		Fish	
		Proportion	90% C.I.	Proportion	90% C.I.	Proportion	90% C.I.	Proportion	90% C.I.
Salamatof Beach Set Net	7/04-7/14					.838	(.752,.925)	.162	(.075,.248)
Kalifonsky Beach Set Net	7/04	.391	( 0,.1.00)	.071	( 0,.568)	.521	( 0,1.00)	.017	( 0,.084)
	7/07	.424	( 0,.851)			.478	(.071,.883)	.098	(.001,.196)
	7/19					1.00	(.766,1.00)		
Cohoe/Minilchik Beach Set Net	7/04	.335	( 0,.789)			.664	(.233,1.00)	.001	( 0,.046)
	7/05-7/11					.960	(.927,.992)	.040	(.008,.073)
	7/17			.306	( 0,.689)	.689	(.336,1.00)	.005	( 0,.064)
	7/19			.325	( 0,.807)	.648	(.203,1.00)	.027	( 0,.120)
	7/21-7/25					.930	(.888,.972)	.070	(.028,.112)

Table 22. Estimated migration times from the commercial fisheries of Upper Cook Inlet to the contributory river's counting locations in number of days.

Fishery	Susitna	Kenai	Kasilof	Crescent	Fish
Northern District East-side	8	3	4	14	8
Northern District West-side	7	3	4	14	7
Central District Drift	11	3	3	11	11
Central District West-side	11	4	4	10	11
Kalgin Island	10	3	3	11	10
Salamatof Beach	9	2	2	13	9
Kalifonsky Beach	9	2	1	12	9
Cohoe/Ninilchik Beach	10	3	2	12	10

#### Catch Summary by Fishery:

Estimates of the numbers of fish harvested by river of origin, age class, and date are outlined for each fishery in Tables 23-31.

The Northern District east-side set net fishery (Table 23) harvested 43,339 sockeye salmon of which: 58.7% were Kenai River, 22.0% Susitna River, and 19.3% Fish Creek.

The Northern District west-side set net fishery (Table 24) harvested 67,889 sockeye salmon of which: 72.5% were Susitna River, 23.0% Kenai River, 3.6% Crescent River, and 0.9% Fish Creek.

The Central District drift net fishery (Table 25) harvested 777,631 sockeye salmon of which: 35.0% were Kenai River, 34.1% Kasilof River, 24.6% Susitna River, and 6.3% Fish Creek.

The Central District west-side set net fishery (Table 26) harvested 80,000 sockeye salmon of which: 79.1% were Crescent River, 9.8% Susitna River, 7.1% Kenai River, and 4.0% Kasilof River.

The Kalgin Island set net fishery (Table 27) harvested 56,718 sockeye salmon of which: 55.0% were Kasilof River, 20.4% Kenai River, 14.1% Susitna River, and 10.5% Crescent River. This allocation does not take into account the contribution of Packers Creek. Presently we do not have sufficient data to make precise estimates of Packers Creek contribution, however, we feel that this run may contribute significantly. If you assume an average historical exploitation rate of 0.50 then approximately 16,000 sockeye salmon harvested by the Kalgin Island fishery were of Packers Creek origin. Based on age composition the majority of these fish would be from the 5<sub>3</sub> and 6<sub>3</sub> age classes.

The Salamatof Beach set net fishery (Table 28) harvested 125,679 sockeye salmon of which: 59.7% were Kenai River, 39.9% Kasilof River, and 0.4% Fish Creek.

The Kalifonsky Beach set net fishery (Table 29) harvested 127,237 sockeye salmon of which: 56.3% were Kasilof River, 37.2% Kenai River, 6.4% Susitna River, and 0.1% Fish Creek.

The Cohoe/Ninilchik Beach set net fishery (Table 30) harvested 304,698 sockeye salmon of which: 65.6% were Kasilof River, 22.9% Kenai River, 9.7% Susitna River, and 1.8% Fish Creek.

#### Stock Summary

The total return of sockeye salmon to Upper Cook Inlet in 1980 was 2,575,846 fish of which 1,583,191 (61.5%) were commercially harvested and 992,655 escaped to spawn (Table 32).

The number of sockeye salmon estimated to have returned to the Kenai River in 1980 equaled 987,102 fish which accounted for 38.3% of the total return

Table 23. Stock composition estimates of sockeye salmon catches by age class and date for Northern District east-side set net fishery, Upper Cook Inlet, 1980<sup>1</sup>.

Date	System	%	<sup>4</sup> <sub>2</sub> Numbers	%	<sup>5</sup> <sub>2</sub> Numbers	%	<sup>5</sup> <sub>3</sub> Numbers	%	<sup>6</sup> <sub>3</sub> Numbers	%	Other Numbers	%	Total Numbers
6/27	Susitna	51.1	47	65.0	26	39.3	11	57.1	4	50.0	1	52.7	89
	Kenai	16.3	15	27.5	11	39.3	11	42.9	3	0	0	23.7	40
	Fish	32.6	30	7.5	3	21.4	6	0	0	50.0	1	23.7	40
	Total	100.0	92	100.0	40	100.0	28	100.0	7	100.0	2	100.0	169
6/30	Susitna	51.2	110	65.6	61	39.1	25	50.0	8	40.0	2	52.4	206
	Kenai	16.3	35	28.0	26	39.1	25	50.0	8	0	0	23.9	94
	Fish	32.6	70	6.5	6	21.9	14	0	0	60.0	3	23.7	93
	Total	100.0	215	100.0	93	100.0	64	100.0	16	100.0	5	100.0	393
7/04	Susitna	51.5	194	65.2	107	38.4	43	50.0	15	37.5	3	52.4	362
	Kenai	16.2	61	28.0	46	39.3	44	46.7	14	0	0	23.9	165
	Fish	32.4	122	6.7	11	22.3	25	3.3	1	62.5	5	23.7	164
	Total	100.0	377	100.0	164	100.0	112	100.0	30	100.0	8	100.0	691
7/07	Susitna	51.7	62	64.3	18	37.7	20	57.1	4	33.3	1	49.8	105
	Kenai	15.8	19	28.6	8	39.6	21	42.9	3	0	0	24.2	51
	Fish	32.5	39	7.1	2	22.6	12	0	0	66.7	2	26.1	55
	Total	100.0	120	100.0	28	100.0	53	100.0	7	100.0	3	100.0	211
7/11	Susitna	51.4	401	49.4	89	27.1	61	46.7	7	0	0	46.5	558
	Kenai	16.2	126	40.0	72	56.9	128	53.3	8	0	0	27.8	334
	Fish	32.4	253	10.6	19	16.0	36	0	0	0	0	25.7	308
	Total	100.0	780	100.0	180	100.0	225	100.0	15	0	0	100.0	1,200
7/14	Susitna	51.5	51	50.0	8	26.7	4	0	0	7.7	2	41.7	65
	Kenai	16.2	16	37.5	6	60.0	9	0	0	0	0	19.9	31
	Fish	32.3	32	12.5	2	13.3	2	0	0	92.3	24	38.5	60
	Total	100.0	99	100.0	16	100.0	15	0	0	100.0	26	100.0	156
7/18	Susitna	23.2	1,798	17.9	958	7.6	127	0	0	0	0	19.5	2,883
	Kenai	36.1	2,798	71.6	3,832	79.8	1,327	0	0	0	0	53.9	7,957
	Fish	40.7	3,155	10.5	562	12.5	208	0	0	0	0	26.6	3,925
	Total	100.0	7,751	100.0	5,352	100.0	1,662	0	0	0	0	100.0	14,765

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Table 23. Stock composition estimates of sockeye salmon catches by age class and date for Northern District east-side set net fishery, Upper Cook Inlet, 1980<sup>1</sup> (continued).

Date	System	%	4 <sub>2</sub> Numbers	%	5 <sub>2</sub> Numbers	%	5 <sub>3</sub> Numbers	%	6 <sub>3</sub> Numbers	%	Other Numbers	%	Total Numbers
7/21	Susitna	24.7	1,235	16.6	718	6.5	152	11.6	64	0	0	17.8	2,169
	Kenai	50.2	2,510	70.3	3,375	87.4	2,046	87.5	482	0	0	68.9	8,413
	Fish	25.1	1,255	5.1	220	6.1	142	0.9	5	0	0	13.3	1,622
	Total	100.0	5,000	100.0	4,313	100.0	2,340	100.0	551	0	0	100.0	12,204
7/23	Susitna	24.7	465	28.7	235	12.6	178	33.6	50	0	0	21.7	928
	Kenai	50.2	945	62.6	513	75.7	1,072	63.8	95	0	0	61.5	2,625
	Fish	25.1	473	8.8	72	11.8	167	2.7	4	0	0	16.8	716
	Total	100.0	1,883	100.0	820	100.0	1,417	100.0	149	0	0	100.0	4,269
7/25	Susitna	24.7	291	28.7	330	12.5	109	33.9	40	20.7	6	23.2	776
	Kenai	50.2	592	62.5	719	75.7	658	63.6	75	65.5	19	61.7	2,063
	Fish	25.1	296	8.8	101	11.7	102	2.5	3	13.8	4	15.1	506
	Total	100.0	1,179	100.0	1,150	100.0	869	100.0	118	100.0	29	100.0	3,345
7/28	Susitna	24.7	205	28.7	232	12.6	77	33.7	28	20.0	4	23.2	546
	Kenai	50.2	417	62.5	506	75.7	463	63.9	53	65.0	13	61.7	1,452
	Fish	25.1	208	8.8	71	11.8	72	2.4	2	15.0	3	15.1	356
	Total	100.0	830	100.0	809	100.0	612	100.0	83	100.0	20	100.0	2,354
7/30	Susitna	24.6	76	20.8	87	12.7	29	32.3	10	25.0	2	23.2	204
	Kenai	50.2	155	62.6	189	75.5	173	64.5	20	62.5	5	61.7	542
	Fish	25.2	78	8.6	26	11.8	27	3.2	1	12.5	1	15.1	133
	Total	100.0	309	100.0	302	100.0	229	100.0	31	100.0	8	100.0	879
8/1- 8/15	Susitna	24.8	236	28.8	267	12.5	88	34.0	32	20.0	5	23.2	628
	Kenai	50.2	478	62.6	582	75.8	532	62.8	59	64.0	16	61.7	1,667
	Fish	25.0	239	8.6	80	11.7	82	3.2	3	16.0	4	15.1	408
	Total	100.0	953	100.0	929	100.0	702	100.0	94	100.0	25	100.0	2,703
Total	Susitna	26.4	5,171	22.1	3,136	11.1	924	23.8	262	20.6	26	22.0	9,519
	Kenai	41.7	8,167	69.6	9,885	78.2	6,509	74.5	820	42.1	53	50.7	25,434
	Fish	31.9	6,250	8.3	1,175	10.7	895	1.7	19	37.3	47	19.3	8,386
	Total	100.0	19,588	100.0	14,196	100.0	8,328	100.0	1,101	100.0	126	100.0	43,339

<sup>1</sup> Catch total may differ slightly from figures presented in Table 1 due to rounding.

Table 24. Stock composition estimates of sockeye salmon catches by age class and date for Northern District west-side set net fishery, Upper Cook Inlet, 1980<sup>1</sup>.

Date	System	4 <sub>2</sub>		5 <sub>2</sub>		5 <sub>3</sub>		6 <sub>3</sub>		Other		Total	
		%	Numbers	%	Numbers	%	Numbers	%	Numbers	%	Numbers	%	Numbers
6/27	Susitna	21.2	11	17.6	9	9.1	1	14.3	1	0	0	18.1	22
	Kenai	75.0	39	82.4	42	90.9	10	85.7	6	0	0	80.2	97
	Fish	3.8	2	0	0	0	0	0	0	0	0	1.7	2
	Total	100.0	52	100.0	51	100.0	11	100.0	7	0	0	100.0	121
6/30	Susitna	21.6	27	16.9	21	7.4	2	6.7	1	50.0	1	17.7	52
	Kenai	75.2	94	82.3	102	92.6	25	93.3	14	50.0	1	80.6	236
	Fish	3.2	4	0.8	1	0	0	0	0	0	0	1.7	5
	Total	100.0	125	100.0	124	100.0	27	100.0	15	100.0	2	100.0	293
7/04	Susitna	0	0	17.5	22	8.1	10	7.4	2	40.0	6	13.7	40
	Kenai	100.0	1	81.7	103	91.1	112	92.6	25	46.7	7	84.9	248
	Fish	0	0	0.8	1	0.8	1	0	0	13.3	2	1.4	4
	Total	100.0	1	100.0	126	100.0	123	100.0	27	100.0	15	100.0	292
7/07	Susitna	21.2	7	18.5	5	12.5	1	0	0	0	0	18.3	13
	Kenai	75.8	25	81.5	22	87.5	7	100.0	3	0	0	80.3	57
	Fish	3.0	1	0	0	0	0	0	0	0	0	1.4	1
	Total	100.0	33	100.0	27	100.0	8	100.0	3	0	0	100.0	71
7/11	Susitna	22.2	10	8.3	2	0	0	0	0	0	0	15.0	12
	Kenai	73.3	33	91.7	22	100.0	9	100.0	2	0	0	82.5	66
	Fish	4.4	2	0	0	0	0	0	0	0	0	2.5	2
	Total	100.0	45	100.0	24	100.0	9	100.0	2	0	0	100.0	80
7/14	Susitna	21.5	91	9.9	35	3.6	2	7.0	5	0	0	14.7	133
	Kenai	74.9	317	89.5	315	96.4	54	93.0	66	0	0	83.4	752
	Fish	3.5	15	0.6	2	0	0	0	0	0	0	1.9	17
	Total	100.0	423	100.0	352	100.0	56	100.0	71	0	0	100.0	902
7/18	Susitna	96.0	11,011	98.6	4,941	96.3	1,777	99.7	2,365	0	0	97.1	20,094
	Kenai	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Fish	4.0	459	1.4	69	3.7	69	0.3	8	0	0	2.9	605
	Total	100.0	11,470	100.0	5,010	100.0	1,846	100.0	2,373	0	0	100.0	20,699

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Table 24. Stock composition estimates of sockeye salmon catches by age class and date for Northern District west-side set net fishery, Upper Cook Inlet, 1980<sup>1</sup> (continued).

Date	System	%	<sup>4</sup> <sub>2</sub> Numbers	%	<sup>5</sup> <sub>2</sub> Numbers	%	<sup>5</sup> <sub>3</sub> Numbers	%	<sup>6</sup> <sub>3</sub> Numbers	%	Other Numbers	%	Total Numbers
7/21	Susitna	81.5	6,774	59.8	7,297	40.0	777	54.5	907	0	0	65.3	15,755
	Kenai	17.8	1,484	30.3	3,697	50.2	1,130	44.4	730	0	0	29.2	7,049
	Crescent	0.7	62	9.9	1,200	1.8	34	1.1	19	0	0	5.5	1,323
	Fish	0	0	0	0	0	0	0	0	0	0	0	0
	Total	100.0	8,320	100.0	12,202	100.0	1,941	100.0	1,664	0	0	100.0	24,127
7/23	Susitna	67.5	3,050	59.8	2,661	40.9	280	68.5	657	58.0	40	62.7	6,688
	Kenai	31.9	1,440	30.3	1,349	57.3	392	30.0	288	40.6	28	32.7	3,496
	Crescent	0.6	28	9.9	441	1.8	12	1.5	14	1.4	1	4.6	496
	Total	100.0	4,518	100.0	4,450	100.0	684	100.0	959	100.0	69	100.0	10,680
7/25	Susitna	67.5	580	59.8	1,183	40.9	176	68.6	179	60.0	9	60.0	2,127
	Kenai	31.9	274	30.3	599	57.2	246	29.9	78	40.0	6	34.0	1,203
	Crescent	0.6	5	9.9	196	1.9	8	1.5	4	0	0	6.0	213
	Total	100.0	859	100.0	1,978	100.0	430	100.0	261	100.0	15	100.0	3,543
7/28	Susitna	67.5	573	59.8	1,170	40.9	174	68.4	177	60.0	9	60.0	2,103
	Kenai	31.9	271	30.3	593	57.2	243	30.1	78	40.0	6	34.0	1,191
	Crescent	0.6	5	9.9	194	1.9	8	1.5	4	0	0	6.0	211
	Total	100.0	849	100.0	1,957	100.0	425	100.0	259	100.0	15	100.0	3,505
7/30	Susitna	67.6	246	59.8	503	41.0	75	68.5	76	57.1	4	60.0	904
	Kenai	31.9	116	30.3	255	57.4	105	29.7	33	42.9	3	34.0	512
	Crescent	0.5	2	9.9	83	1.6	3	1.8	2	0	0	6.0	90
	Total	100.0	364	100.0	841	100.0	183	100.0	111	100.0	7	100.0	1,506
8/1- 8/11	Susitna	67.4	339	59.7	690	40.8	102	68.4	104	55.6	5	59.9	1,240
	Kenai	32.0	161	30.4	351	57.2	143	30.3	46	44.4	4	34.1	705
	Crescent	0.6	3	9.9	115	2.0	5	1.3	2	0	0	6.0	125
	Total	100.0	503	100.0	1,156	100.0	250	100.0	152	100.0	9	100.0	2,070
Total	Susitna	82.4	22,719	65.5	18,539	56.3	3,377	75.8	4,474	56.1	74	72.5	49,183
	Kenai	15.4	4,255	26.3	7,449	41.3	2,476	23.3	1,377	41.6	55	23.0	15,612
	Crescent	0.4	105	7.9	2,237	1.2	70	0.8	45	0.8	1	3.6	2,458
	Fish	1.8	483	0.3	73	1.2	70	0.1	8	1.5	2	0.9	636
	Total	100.0	27,562	100.0	28,298	100.0	5,993	100.0	5,904	100.0	132	100.0	67,889

<sup>1</sup> Catch total may differ slightly from figures presented in Table 1 due to rounding.

Table 25. Stock composition estimates of sockeye salmon catches by age class and date for Central District drift net fishery, Upper Cook Inlet, 1980<sup>1</sup>.

Date	System	4 <sub>2</sub>		5 <sub>2</sub>		5 <sub>3</sub>		6 <sub>3</sub>		Other		Total	
		%	Numbers	%	Numbers	%	Numbers	%	Numbers	%	Numbers	%	Numbers
6/27	Susitna	15.6	585	10.5	967	8.7	115	11.7	49	0	0	16.0	1,716
	Kenai	10.7	401	17.3	902	19.5	258	24.4	102	0	0	15.5	1,663
	Kasilof	71.4	2,687	63.5	3,311	70.5	932	63.7	266	0	0	67.2	7,196
	Fish	2.3	85	0.7	39	1.3	17	0.2	1	0	0	1.3	142
Total	100.0	3,750	100.0	5,219	100.0	1,322	100.0	418	0	0	100.0	10,717	
6/30	Susitna	15.5	62	10.6	95	8.4	11	12.0	10	0	0	15.8	178
	Kenai	10.7	43	17.2	88	19.9	26	24.1	20	0	0	15.7	177
	Kasilof	71.5	286	63.4	324	70.2	92	63.9	53	0	0	67.2	755
	Fish	2.3	9	0.8	4	1.5	2	0	0	0	0	1.3	15
Total	100.0	400	100.0	511	100.0	131	100.0	83	0	0	100.0	1,125	
7/04	Susitna	7.6	377	12.1	838	4.7	82	8.2	45	0	0	9.5	1,342
	Kenai	3.3	164	7.2	495	6.6	115	10.7	59	0	0	5.8	833
	Kasilof	79.7	3,960	77.3	5,336	83.0	1,452	80.4	444	0	0	79.0	11,192
	Fish	9.4	469	3.4	232	5.7	99	0.7	4	0	0	5.7	804
Total	100.0	4,970	100.0	6,901	100.0	1,748	100.0	552	0	0	100.0	14,171	
7/07	Susitna	10.2	3,076	10.3	4,443	4.5	270	5.5	524	0	0	9.4	9,113
	Kenai	23.1	8,776	31.6	13,671	33.5	1,987	38.1	3,613	0	0	29.0	28,047
	Kasilof	58.8	22,337	55.3	24,011	57.3	3,400	55.8	5,297	0	0	56.9	55,045
	Fish	7.9	2,992	2.8	1,196	4.7	278	0.6	60	0	0	4.7	4,526
Total	100.0	37,981	100.0	43,321	100.0	5,935	100.0	9,494	0	0	100.0	96,731	
7/14	Susitna	40.9	54,111	36.7	67,823	26.6	8,197	33.6	10,363	0	0	37.1	140,494
	Kenai	10.3	13,571	29.3	54,290	36.0	11,891	36.1	11,126	0	0	23.8	90,078
	Kasilof	32.6	43,137	26.9	49,762	31.4	9,704	28.0	8,959	0	0	29.4	111,562
	Fish	16.2	21,386	7.1	13,212	6.0	1,856	1.3	400	0	0	9.7	36,854
Total	100.0	132,205	100.0	185,007	100.0	30,848	100.0	30,848	0	0	100.0	378,988	
7/19	Susitna	31.6	15,440	20.2	17,589	10.3	1,312	15.4	3,449	33.3	709	22.2	38,507
	Kenai	39.3	19,243	67.4	58,855	73.4	9,373	72.9	16,253	0	0	59.9	103,724
	Kasilof	27.9	13,638	12.1	10,500	16.0	2,041	11.7	2,618	0	0	16.6	28,805
	Fish	1.2	583	0.3	241	0.3	34	0	10	66.7	1,418	1.3	2,296
Total	100.0	48,912	100.0	87,193	100.0	12,760	100.0	22,330	100.0	2,127	100.0	173,322	
7/21	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kenai	44.4	2,475	48.2	15,912	47.8	1,391	48.7	3,781	0	0	47.8	23,559
	Kasilof	51.8	2,890	49.7	16,381	50.7	1,475	50.9	3,953	0	0	50.2	24,689
	Fish	3.8	213	2.1	694	1.5	45	0.4	28	0	0	2.0	900
Total	100.0	5,578	100.0	32,987	100.0	2,911	100.0	7,762	0	0	100.0	49,230	

-Continued-

Table 25. Stock composition estimates of sockeye salmon catches by age class and date for Central District drift net fishery, Upper Cook Inlet, 1980<sup>1</sup> (continued).

Date	System	%	<sup>4</sup> <sub>2</sub> Numbers	%	<sup>5</sup> <sub>2</sub> Numbers	%	<sup>5</sup> <sub>3</sub> Numbers	%	<sup>6</sup> <sub>3</sub> Numbers	%	Other Numbers	Total %	Total Numbers
7/23	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kenai	30.2	1,492	41.6	7,275	42.3	1,045	46.6	2,455	0	0	40.7	12,267
	Kasilof	64.7	3,193	53.3	9,340	30.9	764	45.9	2,419	0	0	52.0	15,716
	Fish	5.1	250	5.1	884	26.8	660	7.5	397	0	0	7.3	2,191
Total	100.0	4,935	100.0	17,499	100.0	2,469	100.0	5,271	0	0	100.0	30,174	
7/25	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kenai	23.9	795	49.0	2,128	78.6	1,271	79.9	1,774	0	0	51.8	5,968
	Kasilof	71.0	2,364	47.1	2,048	12.1	195	17.5	388	0	0	43.4	4,995
	Fish	5.1	169	3.9	170	9.3	151	2.6	57	0	0	4.8	547
Total	100.0	3,328	100.0	4,346	100.0	1,617	100.0	2,219	0	0	100.0	11,570	
7/28	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kenai	23.9	220	49.0	589	78.5	352	80.0	491	0	0	51.8	1,652
	Kasilof	71.0	654	47.1	567	12.1	54	17.4	107	0	0	43.4	1,382
	Fish	5.1	47	3.9	47	9.4	42	2.6	16	0	0	4.8	152
Total	100.0	921	100.0	1,203	100.0	448	100.0	614	0	0	100.0	3,186	
7/30	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kenai	23.9	247	49.0	662	78.6	395	79.9	551	0	0	51.9	1,855
	Kasilof	71.1	735	47.1	637	12.1	61	17.5	121	0	0	43.4	1,554
	Fish	5.0	52	3.9	53	9.3	47	2.6	18	0	0	4.7	170
Total	100.0	1,034	100.0	1,352	100.0	503	100.0	690	0	0	100.0	3,579	
8/1- 8/18	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kenai	23.9	338	49.1	905	78.7	540	80.9	754	0	0	51.9	2,537
	Kasilof	71.1	1,004	47.1	871	12.1	82	17.6	165	0	0	43.4	2,122
	Fish	5.0	71	3.8	72	9.2	64	2.5	24	0	0	4.7	231
Total	100.0	1,413	100.0	1,848	100.0	686	100.0	943	0	0	100.0	4,890	
Total	Susitna	30.4	74,459	23.7	91,755	16.3	9,907	17.8	14,440	33.3	709	24.6	191,350
	Kenai	19.5	47,765	40.2	155,772	45.4	27,844	50.5	40,979	0	0	35.0	272,360
	Kasilof	39.4	96,885	31.0	123,096	33.0	20,252	30.5	24,790	0	0	34.1	265,023
	Fish	10.7	26,326	4.3	16,844	5.3	3,295	1.2	1,015	66.7	1,418	6.3	48,898
Total	100.0	245,435	100.0	387,467	100.0	61,378	100.0	81,224	100.0	2,127	100.0	777,631	

<sup>1</sup> Catch total may differ slightly from figures presented in Table 1 due to rounding.

Table 26. Stock composition estimates of sockeye salmon catches by age class and date for Central District west-side set net fishery, Upper Cook Inlet, 1980<sup>1</sup>.

Date	System	%	<sup>4</sup> Numbers	%	<sup>5</sup> Numbers	%	<sup>5</sup> Numbers	%	<sup>6</sup> Numbers	%	Other Numbers	%	Total Numbers
6/16	Susitna	20.0	26	4.3	60	5.6	6	9.4	6	0	0	5.8	98
	Kenai	40.8	53	12.0	168	38.9	42	59.3	38	0	0	17.7	301
	Crescent	39.2	51	83.7	1,174	55.5	60	31.3	20	0	0	76.5	1,305
	Total	100.0	130	100.0	1,402	100.0	108	100.0	64	0	0	100.0	1,704
6/20	Susitna	20.0	7	4.2	16	6.9	2	11.8	2	0	0	5.9	27
	Kenai	40.0	14	11.9	45	37.9	11	58.0	10	0	0	17.4	80
	Crescent	40.0	14	83.9	317	55.2	16	29.4	5	0	0	76.7	352
	Total	100.0	35	100.0	378	100.0	29	100.0	17	0	0	100.0	459
6/23	Susitna	19.8	65	4.3	153	5.8	16	9.7	16	0	0	5.8	250
	Kenai	40.9	134	12.0	428	38.5	106	59.4	98	0	0	17.7	766
	Crescent	39.3	129	83.7	2,985	55.7	153	30.9	51	0	0	76.5	3,318
	Total	100.0	328	100.0	3,566	100.0	275	100.0	165	0	0	100.0	4,334
6/27	Susitna	19.8	72	4.3	169	5.7	17	9.4	17	0	0	5.8	275
	Kenai	40.8	148	12.0	472	38.7	117	59.7	100	0	0	17.7	845
	Crescent	39.4	143	83.7	3,293	55.6	168	30.9	56	0	0	76.5	3,660
	Total	100.0	363	100.0	3,934	100.0	302	100.0	181	0	0	100.0	4,780
6/30	Susitna	19.9	115	4.3	269	5.8	28	9.3	27	0	0	5.8	439
	Kenai	40.8	236	12.0	752	38.6	186	59.5	172	0	0	17.7	1,346
	Crescent	39.3	227	83.7	5,244	55.6	268	31.1	90	0	0	76.5	5,829
	Total	100.0	578	100.0	6,265	100.0	482	100.0	289	0	0	100.0	7,614
7/04	Susitna	19.9	203	4.3	476	5.8	49	9.6	49	0	0	5.8	777
	Kenai	40.8	417	12.0	1,328	38.6	328	59.3	303	0	0	17.7	2,376
	Crescent	39.3	401	83.7	9,261	55.6	473	31.1	159	0	0	76.5	10,294
	Total	100.0	1,021	100.0	11,065	100.0	850	100.0	511	0	0	100.0	13,447

-Continued-

Table 26. Stock composition estimates of sockeye salmon catches by age class and date for Central District west-side set net fishery, Upper Cook Inlet, 1980<sup>1</sup> (continued).

Date	System	4 <sub>2</sub>		5 <sub>2</sub>		5 <sub>3</sub>		6 <sub>3</sub>		Other		Total	
		%	Numbers	%	Numbers	%	Numbers	%	Numbers	%	Numbers	%	Numbers
7/07	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	0	0
	Kenai	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	0	0
	Kasilof	63.7	589	8.3	346	37.2	89	45.5	171	0	0	20.9	1,195
	Crescent	36.3	335	91.7	3,826	62.8	150	54.5	205	0	0	79.1	4,516
Total	100.0	924	100.0	4,172	100.0	239	100.0	376	0	0	100.0	5,711	
7/11	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	0	0	0	0	Trace	Trace
	Kenai	Trace	Trace	Trace	Trace	Trace	Trace	0	0	0	0	Trace	Trace
	Kasilof	74.5	514	8.3	465	59.1	240	0	0	0	0	18.2	1,219
	Crescent	25.5	176	91.7	5,133	40.9	166	0	0	0	0	81.8	5,475
Total	100.0	690	100.0	5,598	100.0	406	0	0	0	0	100.0	6,694	
7/14	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kenai	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kasilof	74.6	220	8.3	383	59.2	145	52.4	77	0	0	15.5	825
	Crescent	25.4	75	91.7	4,236	40.8	100	47.6	70	0	0	84.5	4,481
Total	100.0	295	100.0	4,619	100.0	245	100.0	147	0	0	100.0	5,306	
7/18	Susitna	67.9	487	9.5	822	30.2	100	46.8	52	0	0	14.9	1,461
	Kenai	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kasilof	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Crescent	32.1	230	90.5	7,827	69.8	231	53.2	59	0	0	85.1	8,347
Total	100.0	717	100.0	8,649	100.0	331	100.0	111	0	0	100.0	9,808	
7/21	Susitna	65.6	149	9.5	249	28.1	27	45.8	11	0	0	14.7	1,436
	Kenai	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kasilof	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Crescent	34.4	78	90.5	2,372	71.9	69	54.2	13	0	0	85.3	2,532
Total	100.0	227	100.0	2,621	100.0	96	100.0	24	0	0	100.0	2,968	
7/23	Susitna	65.6	1,300	9.5	392	28.3	467	45.5	225	0	0	28.9	2,384
	Kenai	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kasilof	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Crescent	34.4	682	90.5	3,736	71.7	1,184	54.5	270	0	0	71.1	5,872
Total	100.0	1,982	100.0	4,128	100.0	1,651	100.0	495	0	0	100.0	8,256	

-Continued-

Table 26. Stock composition estimates of sockeye salmon catches by age class and date for Central District west-side set net fishery, Upper Cook Inlet, 1980<sup>1</sup> (continued).

Date	System	4 <sup>2</sup>		5 <sup>2</sup>		5 <sup>3</sup>		6 <sup>3</sup>		Other		Total	
		%	Numbers	%	Numbers	%	Numbers	%	Numbers	%	Numbers	%	Numbers
7/25	Susitna	65.6	274	9.5	269	28.4	67	45.4	99	0	0	19.1	709
	Kenai	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kasilof	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Crescent	34.4	144	90.5	2,566	71.6	169	54.6	119	0	0	80.9	2,990
Total	100.0	418	100.0	2,835	100.0	236	100.0	218	0	0	100.0	3,707	
7/28	Susitna	65.5	97	9.5	95	28.6	24	45.5	35	0	0	19.1	251
	Kenai	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kasilof	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Crescent	34.5	51	90.5	909	71.4	60	54.5	42	0	0	80.9	1,062
Total	100.0	148	100.0	1,004	100.0	84	100.0	77	0	0	100.0	1,313	
7/30	Susitna	65.4	83	9.5	82	28.2	20	45.5	30	0	0	19.9	215
	Kenai	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kasilof	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Crescent	34.6	44	90.5	770	71.8	51	54.5	36	0	0	80.9	909
Total	100.0	127	100.0	860	100.0	71	100.0	66	0	0	100.0	1,124	
8/1- 8/18	Susitna	65.7	206	9.5	202	46.9	49	45.1	74	0	0	19.1	531
	Kenai	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kasilof	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Crescent	34.3	108	90.5	1,919	53.1	127	54.9	90	0	0	80.9	2,244
Total	100.0	314	100.0	2,121	100.0	176	100.0	164	0	0	100.0	2,775	
Total	Susitna	37.2	3,084	5.1	3,254	15.6	872	22.1	643	0	0	9.8	7,853
	Kenai	12.1	1,002	5.1	3,193	14.2	790	25.2	729	0	0	7.1	5,714
	Kasilof	15.9	1,323	1.9	1,194	8.5	474	8.5	248	0	0	4.0	3,239
	Crescent	34.8	2,888	87.9	55,576	61.7	3,445	44.2	1,285	0	0	79.1	63,194
Total	100.0	8,297	100.0	63,217	100.0	5,581	100.0	2,905	0	0	100.0	80,000	

<sup>1</sup> Catch total may differ slightly from figures presented in Table 1 due to rounding.

Table 27. Stock composition estimates of sockeye salmon catches by age class and date for Kalgin Island set net fishery, Upper Cook Inlet, 1980<sup>1</sup>.

Date	System	%	<sup>4</sup> <sub>2</sub> Numbers	%	<sup>5</sup> <sub>2</sub> Numbers	%	<sup>5</sup> <sub>3</sub> Numbers	%	<sup>6</sup> <sub>3</sub> Numbers	%	Other Numbers	%	Total Numbers
6/27	Susitna	Trace	Trace	Trace	Trace	0	0	0	0	0	0	Trace	Trace
	Kenai	50.0	1	50.3	3	0	0	100.0	1	0	0	55.6	5
	Kasilof	50.0	1	33.0	2	0	0	0	0	0	0	33.3	3
	Crescent	0	0	16.7	1	0	0	0	0	0	0	11.1	1
	Total	100.0	2	100.0	6	0	0	100.0	1	0	0	100.0	9
6/30	Susitna	3.1	24	3.6	76	1.5	5	2.1	8	0	0	3.1	113
	Kenai	26.6	229	47.3	999	45.2	151	61.5	231	0	0	44.8	1,610
	Kasilof	66.5	514	39.6	836	51.5	172	35.6	134	0	0	46.1	1,656
	Crescent	0.8	6	9.5	201	1.8	6	0.8	3	0	0	6.0	216
	Total	100.0	773	100.0	2,112	100.0	334	100.0	376	0	0	100.0	3,595
7/04	Susitna	3.1	70	3.6	225	1.4	14	2.1	23	0	0	3.1	332
	Kenai	29.6	676	47.3	2,950	45.2	447	61.4	682	0	0	44.8	4,755
	Kasilof	66.5	1,519	39.6	2,470	51.5	508	35.6	396	0	0	46.1	4,893
	Crescent	0.8	19	9.5	592	1.9	19	0.9	10	0	0	6.0	640
	Total	100.0	2,284	100.0	6,237	100.0	988	100.0	1,111	0	0	100.0	10,620
7/07	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kenai	1.4	46	3.0	150	2.6	37	5.0	30	0	0	2.5	263
	Kasilof	97.5	3,260	80.0	4,009	94.3	1,351	92.8	554	0	0	88.4	9,174
	Crescent	1.1	36	17.0	852	3.1	44	2.2	13	0	0	9.1	945
	Total	100.0	3,342	100.0	5,011	100.0	1,432	100.0	597	0	0	100.0	10,382
7/14	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kenai	13.2	285	29.7	913	29.3	570	38.9	84	0	0	24.7	1,852
	Kasilof	85.5	1,853	47.0	1,445	68.6	1,337	58.8	127	0	0	63.6	4,762
	Crescent	1.3	28	23.3	717	2.1	41	2.3	5	100.0	87	11.7	878
	Total	100.0	2,166	100.0	3,075	100.0	1,948	100.0	216	100.0	87	100.0	7,492
7/19	Susitna	27.4	372	26.0	1,335	12.6	146	26.3	612	0	0	24.7	2,465
	Kenai	2.9	40	7.1	364	8.9	104	10.9	253	0	0	7.6	761
	Kasilof	68.3	926	40.4	2,074	75.4	877	59.6	1,385	0	0	52.8	5,262
	Crescent	1.4	19	26.5	1,360	3.1	36	3.2	74	0	0	14.9	1,489
	Total	100.0	1,357	100.0	5,133	100.0	1,163	100.0	2,324	0	0	100.0	9,977
7/21	Susitna	25.3	115	26.0	425	11.6	148	25.2	238	0	0	21.5	926
	Kenai	3.1	14	7.1	116	9.1	116	11.0	104	0	0	8.1	350
	Kasilof	70.3	319	40.4	660	76.2	976	60.5	570	0	0	58.6	2,525
	Crescent	1.3	6	26.5	433	3.1	40	3.3	31	0	0	1.8	510
	Total	100.0	454	100.0	1,634	100.0	1,280	100.0	943	0	0	100.0	4,311

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Table 27. Stock composition estimates of sockeye salmon catches by age class and date for Kalgin Island set net fishery, Upper Cook Inlet, 1980<sup>1</sup> (continued).

Date	System	4 <sub>2</sub>		5 <sub>2</sub>		5 <sub>3</sub>		6 <sub>3</sub>		Other		Total	
		%	Numbers	%	Numbers	%	Numbers	%	Numbers	%	Numbers	%	Numbers
7/23	Susitna	16.4	9	26.0	127	38.3	197	61.5	256	0	0	39.9	509
	Kenai	3.6	2	7.1	35	29.0	149	14.7	61	0	0	16.7	247
	Kasilof	80.0	44	40.4	198	22.4	115	15.9	66	0	0	28.8	423
	Crescent	0	0	26.5	130	10.3	53	7.9	33	0	0	14.6	216
	Total	100.0	55	100.0	490	100.0	514	100.0	416	0	0	100.0	1,475
7/25	Susitna	15.8	15	25.9	76	30.3	283	61.7	244	0	0	40.6	618
	Kenai	4.2	4	7.2	21	28.9	213	14.6	58	0	0	19.4	296
	Kasilof	78.9	75	40.3	118	22.4	165	15.9	63	0	0	27.7	421
	Crescent	1.1	1	26.6	78	10.4	77	7.8	31	0	0	12.3	187
	Total	100.0	95	100.0	293	100.0	730	100.0	396	0	0	100.0	1,522
7/28	Susitna	15.2	16	25.9	85	38.3	317	61.5	274	0	0	40.6	692
	Kenai	3.8	4	7.0	23	28.9	239	14.6	65	0	0	19.4	331
	Kasilof	80.0	84	40.6	133	22.4	185	16.0	71	0	0	27.7	473
	Crescent	1.0	1	26.5	87	10.4	86	7.9	35	0	0	12.3	209
	Total	100.0	105	100.0	328	100.0	827	100.0	445	0	0	100.0	1,705
7/30	Susitna	15.3	9	25.9	48	38.4	178	61.6	154	0	0	40.6	389
	Kenai	3.4	2	7.0	13	28.9	134	14.4	36	0	0	19.3	185
	Kasilof	79.6	47	40.5	75	22.4	104	16.0	40	0	0	27.8	266
	Crescent	1.7	1	26.6	49	10.3	48	8.0	20	0	0	12.3	118
	Total	100.0	59	100.0	185	100.0	464	100.0	250	0	0	100.0	958
8/1- 9/12	Susitna	15.5	45	26.0	234	38.3	867	61.5	751	0	0	40.6	1,897
	Kenai	0.3	12	7.1	64	28.9	654	14.6	178	0	0	19.4	908
	Kasilof	79.7	232	40.4	363	22.3	505	15.9	194	0	0	27.7	1,294
	Crescent	0.5	2	26.5	238	10.5	235	8.0	98	0	0	12.3	573
	Total	100.0	291	100.0	899	100.0	2,261	100.0	1,221	0	0	100.0	4,672
Total	Susitna	6.2	675	10.4	2,631	18.3	2,155	30.9	2,560	0	0	14.1	8,021
	Kenai	12.0	1,315	22.2	5,651	23.6	2,814	21.5	1,783	0	0	20.4	11,563
	Kasilof	80.8	8,074	48.7	12,383	57.4	6,295	43.4	3,600	0	0	55.0	31,152
	Crescent	1.0	119	17.7	4,738	5.7	685	4.2	351	100.0	87	10.5	5,982
	Total	100.0	10,983	100.0	25,403	100.0	11,949	100.0	8,296	100.0	87	100.0	56,718

<sup>1</sup> Catch total may differ slightly from figures presented in Table 1 due to rounding.

Table 28. Stock composition estimates of sockeye salmon catches by age class and date for Salamatof Beach set net fishery, Upper Cook Inlet, 1980<sup>1</sup>.

Date	System	%	<sup>4</sup> <sub>2</sub> Numbers	%	<sup>5</sup> <sub>2</sub> Numbers	%	<sup>5</sup> <sub>3</sub> Numbers	%	<sup>6</sup> <sub>3</sub> Numbers	%	Other Numbers	%	Total Numbers
6/27	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kenai	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kasilof	83.8	403	94.2	419	90.2	148	100.0	23	0	0	89.2	993
	Fish	16.2	78	5.8	26	9.8	16	0	0	0	0	10.8	120
	Total	100.0	481	100.0	445	100.0	164	100.0	23	0	0	100.0	1,113
6/30	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kenai	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kasilof	83.8	258	94.0	268	90.5	95	100.0	15	0	0	89.2	636
	Fish	16.2	50	6.0	17	9.5	10	0	0	0	0	10.8	77
	Total	100.0	308	100.0	285	100.0	105	100.0	15	0	0	100.0	713
7/04	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kenai	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kasilof	83.8	429	94.1	447	90.3	158	100.0	25	0	0	89.2	1,059
	Fish	16.2	83	5.9	28	9.7	17	0	0	0	0	10.8	128
	Total	100.0	512	100.0	475	100.0	175	100.0	25	0	0	100.0	1,187
7/07	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kenai	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kasilof	83.8	392	94.2	180	90.2	147	100.0	28	0	0	87.9	747
	Fish	16.2	76	5.8	11	9.8	16	0	0	0	0	12.1	103
	Total	100.0	468	100.0	191	100.0	163	100.0	28	0	0	100.0	850
7/14	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace
	Kenai	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace
	Kasilof	83.9	177	90.9	100	92.6	63	100.0	12	0	0	87.1	352
	Fish	16.1	34	9.1	10	7.4	5	0	0	100.0	3	12.9	52
	Total	100.0	211	100.0	110	100.0	68	100.0	12	100.0	3	100.0	404

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Table 28. Stock composition estimates of sockeye salmon catches by age class and date for Salamatof Beach set net fishery, Upper Cook Inlet, 1980<sup>1</sup> (continued).

Date	System	4 <sub>2</sub>		5 <sub>2</sub>		5 <sub>3</sub>		6 <sub>3</sub>		Other		Total	
		%	Numbers	%	Numbers	%	Numbers	%	Numbers	%	Numbers	%	Numbers
7/19	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kenai	29.9	2,465	63.7	17,906	54.2	6,301	64.6	9,448	0	0	57.7	36,120
	Kasilof	70.1	5,780	36.3	10,204	45.8	5,318	35.4	5,169	0	0	42.3	26,471
	Total	100.0	8,245	100.0	28,110	100.0	11,619	100.0	14,617	0	0	100.0	62,591
7/21	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kenai	45.9	2,244	77.7	6,704	70.2	1,572	78.4	1,366	0	0	67.9	11,886
	Kasilof	54.1	2,650	22.3	1,924	29.8	668	21.6	376	0	0	32.1	5,618
	Total	100.0	4,894	100.0	8,628	100.0	2,240	100.0	1,742	0	0	100.0	17,504
7/22	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kenai	64.6	1,414	77.7	2,636	69.4	550	66.2	399	0	0	71.6	5,019
	Kasilof	35.4	785	22.3	756	30.6	243	33.8	204	0	0	28.4	1,908
	Total	100.0	2,219	100.0	3,392	100.0	793	100.0	603	0	0	100.0	7,007
7/23	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace
	Kenai	49.5	1,591	77.7	3,390	96.2	840	94.8	639	84.6	33	70.9	6,493
	Kasilof	50.5	1,621	22.3	973	3.8	31	5.2	35	15.4	6	29.1	2,668
	Total	100.0	3,212	100.0	4,363	100.0	873	100.0	674	100.0	39	100.0	9,161
7/24	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kenai	49.6	610	77.7	2,011	96.3	368	94.7	523	0	0	73.9	3,517
	Kasilof	50.4	621	22.3	577	3.7	14	5.3	29	0	0	26.1	1,241
	Total	100.0	1,231	100.0	2,588	100.0	382	100.0	552	0	0	100.0	4,753

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Table 28. Stock composition estimates of sockeye salmon catches by age class and date for Salamatof Beach set net fishery, Upper Cook Inlet, 1980<sup>1</sup>.

Date	System	%	<sup>4</sup> <sub>2</sub> Numbers	%	<sup>5</sup> <sub>2</sub> Numbers	%	<sup>5</sup> <sub>3</sub> Numbers	%	<sup>6</sup> <sub>3</sub> Numbers	%	Other Numbers	%	Total Numbers
7/25	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kenai	26.9	404	56.6	3,351	90.5	600	87.1	1,347	0	0	59.2	5,702
	Kasilof	73.1	1,098	43.4	2,569	9.5	63	12.9	199	0	0	40.8	3,929
	Total	100.0	1,502	100.0	5,920	100.0	663	100.0	1,546	0	0	100.0	9,631
7/28	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kenai	26.5	214	56.2	1,786	90.4	322	87.0	722	0	0	58.8	3,044
	Kasilof	73.5	593	43.8	1,394	9.6	34	13.0	108	0	0	41.2	2,129
	Total	100.0	807	100.0	3,180	100.0	356	100.0	830	0	0	100.0	5,173
7/30	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kenai	26.4	83	56.2	696	90.6	125	87.0	281	0	0	58.8	1,185
	Kasilof	73.6	231	43.8	543	9.4	13	13.0	42	0	0	41.2	829
	Total	100.0	314	100.0	1,239	100.0	138	100.0	323	0	0	100.0	2,014
8/1- 8/15	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kenai	26.5	148	56.2	1,236	90.6	222	87.0	500	0	0	58.8	2,106
	Kasilof	73.5	410	43.8	964	9.4	23	13.0	75	0	0	41.2	1,472
	Total	100.0	558	100.0	2,200	100.0	245	100.0	575	0	0	100.0	3,578
Total	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace
	Kenai	36.8	9,193	65.0	39,716	60.6	10,900	70.6	15,225	78.6	33	59.7	75,067
	Kasilof	61.9	15,448	34.9	21,318	39.0	7,020	29.4	6,340	14.3	6	39.9	50,132
	Fish	1.3	321	0.1	92	0.4	64	0	0	7.1	3	0.4	480
	Total	100.0	24,962	100.0	61,126	100.0	17,984	100.0	21,565	100.0	42	100.0	125,679

<sup>1</sup> Catch total may differ slightly from figures presented in Table 1 due to rounding.

Table 29. Stock composition estimates of sockeye salmon catches by age class and date for Kalifonsky Beach set net fishery, Upper Cook Inlet, 1980<sup>1</sup>.

Date	System	%	2 Numbers	%	5 2 Numbers	%	5 3 Numbers	%	6 3 Numbers	%	Other Numbers	%	Total Numbers
6/27	Susitna	5.1	149	7.8	324	2.2	1	4.6	35	0	0	6.4	509
	Kenai	13.6	400	28.5	1,185	24.5	11	37.4	204	0	0	23.8	1,880
	Kasilof	81.3	2,401	63.7	2,648	73.3	33	58.0	441	0	0	69.8	5,523
	Total	100.0	2,950	100.0	4,157	100.0	45	100.0	760	0	0	100.0	7,912
6/30	Susitna	5.1	136	7.8	221	2.8	6	4.6	21	52.8	19	6.5	403
	Kenai	13.6	365	28.5	806	24.1	51	37.4	172	47.2	17	22.7	1,411
	Kasilof	81.3	2,188	63.7	1,002	73.1	155	58.0	267	0	0	70.8	4,412
	Total	100.0	2,689	100.0	2,829	100.0	212	100.0	460	100.0	36	100.0	6,226
7/04	Susitna	39.1	603	58.8	1,127	26.1	6	38.5	153	0	0	45.7	1,889
	Kenai	7.1	110	12.8	278	17.4	4	21.2	84	0	0	11.5	476
	Kasilof	52.1	804	35.0	761	56.5	13	40.3	160	0	0	42.0	1,738
	Flsh	1.7	26	0.4	8	0	0	0	0	0	0	0.8	34
	Total	100.0	1,543	100.0	2,174	100.0	23	100.0	397	0	0	100.0	4,137
7/07	Susitna	42.5	136	62.2	115	32.5	37	53.3	16	0	0	46.8	304
	Kenai	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kasilof	47.8	153	35.6	66	60.5	69	46.7	14	0	0	46.5	302
	Flsh	9.7	31	2.2	4	7.0	8	0	0	0	0	6.6	43
	Total	100.0	320	100.0	185	100.0	114	100.0	30	0	0	100.0	649
7/14	Susitna	40.7	2,103	39.8	2,242	17.1	264	30.8	214	100.0	154	37.7	4,977
	Kenai	12.6	649	31.6	1,780	35.4	547	37.0	257	0	0	24.5	3,233
	Kasilof	46.7	2,410	28.6	1,611	47.5	733	32.2	224	0	0	37.8	4,986
	Total	100.0	5,170	100.0	5,633	100.0	1,544	100.0	695	100.0	154	100.0	13,196

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Table 29. Stock composition estimates of sockeye salmon catches by age class and date for Kalifonsky Beach set net fishery, Upper Cook Inlet, 1980<sup>1</sup> (continued).

Date	System	%	<sup>4</sup> <sub>2</sub> Numbers	%	<sup>5</sup> <sub>2</sub> Numbers	%	<sup>5</sup> <sub>3</sub> Numbers	%	<sup>6</sup> <sub>3</sub> Numbers	%	Other Numbers	%	Total Numbers
7/19	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace
	Kenai	3.2	360	10.8	2,065	7.9	536	11.2	1,005	29.3	40	8.6	4,006
	Kasilof	96.8	11,060	89.2	16,968	92.1	6,262	88.8	7,968	70.7	232	91.4	42,490
	Fish	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace
	Total	100.0	11,420	100.0	19,033	100.0	6,798	100.0	8,973	100.0	272	100.0	46,496
7/21	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kenai	64.3	1,363	88.1	8,165	83.3	1,060	88.5	2,198	0	0	84.4	12,786
	Kasilof	35.7	757	11.9	1,103	16.7	212	11.5	285	0	0	15.6	2,357
	Total	100.0	2,120	100.0	9,268	100.0	1,272	100.0	2,483	0	0	100.0	15,143
7/22	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kenai	79.5	843	88.1	2,680	82.8	458	80.6	595	0	0	84.9	4,576
	Kasilof	20.5	217	11.9	362	17.2	95	19.4	143	0	0	15.1	817
	Total	100.0	1,060	100.0	3,042	100.0	553	100.0	738	0	0	100.0	5,393
7/23	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kenai	67.6	1,673	88.1	1,051	98.2	4,861	97.5	1,034	0	0	89.0	8,619
	Kasilof	32.4	802	11.9	142	1.8	89	2.5	27	0	0	11.0	1,060
	Total	100.0	2,475	100.0	1,193	100.0	4,950	100.0	1,061	0	0	100.0	9,679
7/24	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kenai	67.6	937	88.1	2,834	98.3	681	97.4	676	0	0	85.6	5,128
	Kasilof	32.4	449	11.9	383	1.7	12	2.6	18	0	0	14.4	862
	Total	100.0	1,386	100.0	3,217	100.0	693	100.0	694	0	0	100.0	5,990

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Table 29. Stock composition estimates of sockeye salmon catches by age class and date for Kalifonsky Beach set net fishery, Upper Cook Inlet, 1980<sup>1</sup> (continued).

Date	System	4 <sub>2</sub>		5 <sub>2</sub>		5 <sub>3</sub>		6 <sub>3</sub>		Other		Total	
		%	Numbers	%	Numbers	%	Numbers	%	Numbers	%	Numbers	%	Numbers
7/25	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kenai	14.4	187	37.5	1,344	81.5	565	75.8	616	0	0	42.5	2,712
	Kasilof	85.6	1,100	62.5	2,240	18.5	128	24.2	197	0	0	57.5	3,673
	Total	100.0	1,295	100.0	3,584	100.0	693	100.0	813	0	0	100.0	6,385
7/28	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kenai	14.4	65	37.5	470	81.4	197	75.7	215	0	0	42.4	947
	Kasilof	85.6	387	62.5	783	18.6	45	24.3	69	0	0	57.6	1,284
	Total	100.0	452	100.0	1,253	100.0	242	100.0	254	0	0	100.0	2,231
7/30	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kenai	14.4	31	37.5	223	81.7	94	75.6	102	0	0	42.5	450
	Kasilof	85.6	184	62.5	371	18.3	21	24.4	33	0	0	57.5	609
	Total	100.0	215	100.0	594	100.0	115	100.0	135	0	0	100.0	1,059
8/1- 8/15	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kenai	14.4	80	37.5	577	81.5	242	75.4	263	0	0	42.4	1,162
	Kasilof	85.6	476	62.5	962	18.5	55	24.6	86	0	0	57.6	1,579
	Total	100.0	556	100.0	1,539	100.0	297	100.0	349	0	0	100.0	2,741
Total	Susitna	9.3	3,127	7.0	4,029	1.8	314	2.5	439	37.4	173	6.4	8,082
	Kenai	21.0	7,063	40.7	23,458	53.0	9,307	42.0	7,501	12.3	57	37.2	47,386
	Kasilof	69.5	23,404	52.3	30,202	45.1	7,922	55.5	9,932	50.2	232	56.3	71,692
	Fish	0.2	57	0.0	12	0.1	8	0	0	0.1	0	0.1	77
	Total	100.0	33,651	100.0	57,701	100.0	17,551	100.0	17,872	100.0	462	100.0	127,237

<sup>1</sup> Catch total may differ slightly from figures presented in Table 1 due to rounding.

Table 30. Stock composition estimates of sockeye salmon catches by age class and date for Cohoe/Ninilchik Beach set net fishery, Upper Cook Inlet, 1980<sup>1</sup>.

Date	System	%	<sup>4</sup> <sub>2</sub> Numbers	%	<sup>5</sup> <sub>2</sub> Numbers	%	<sup>5</sup> <sub>3</sub> Numbers	%	<sup>6</sup> <sub>3</sub> Numbers	%	Other Numbers	%	Total Numbers
6/27	Susitna	13.5	721	21.6	1,154	8.2	109	14.2	110	0	0	16.4	2,094
	Kenai	6.1	324	13.2	705	11.9	159	19.4	150	0	0	10.5	1,338
	Kasilof	80.4	4,295	65.2	3,482	79.9	1,067	66.4	513	0	0	73.1	9,357
	Total	100.0	5,340	100.0	5,341	100.0	1,335	100.0	773	0	0	100.0	12,789
6/30	Susitna	13.5	676	21.6	1,082	8.1	102	14.2	103	0	0	16.4	1,963
	Kenai	6.1	304	13.2	661	11.9	149	19.4	141	0	0	10.5	1,255
	Kasilof	80.4	4,030	65.2	3,267	80.0	1,002	66.4	482	0	0	73.1	8,781
	Total	100.0	5,010	100.0	5,010	100.0	1,253	100.0	726	0	0	100.0	11,999
7/04	Susitna	33.5	4,732	49.9	4,924	23.4	638	39.0	731	0	0	38.6	11,025
	Kenai	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kasilof	66.4	9,380	50.1	4,944	76.5	2,084	61.0	1,141	0	0	61.3	17,549
	Fish	0.1	14	0.0	2	0.1	2	0	0	0	0	0.1	18
Total	100.0	14,126	100.0	9,870	100.0	2,724	100.0	1,872	0	0	100.0	28,592	
7/05	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kenai	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kasilof	96.0	1,610	98.6	1,386	97.8	225	100.0	125	0	0	97.4	3,346
	Fish	4.0	67	1.4	19	2.2	5	0	0	0	0	2.6	91
Total	100.0	1,677	100.0	1,405	100.0	230	100.0	125	0	0	100.0	3,437	
7/07	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kenai	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kasilof	96.0	5,627	98.7	2,761	97.7	1,496	99.6	526	0	0	97.1	10,410
	Fish	4.0	234	1.3	37	2.3	35	0.4	2	0	0	2.9	388
Total	100.0	5,861	100.0	2,798	100.0	1,531	100.0	528	0	0	100.0	10,718	
7/11	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kenai	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace
	Kasilof	96.0	20,490	97.8	11,822	98.4	8,858	99.6	2,050	0	0	97.1	43,220
	Fish	4.0	854	2.2	264	1.6	142	0.4	8	0	0	2.9	1,268
Total	100.0	21,344	100.0	12,086	100.0	9,000	100.0	2,058	0	0	100.0	44,488	

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Table 30. Stock composition estimates of sockeye salmon catches by age class and date for Cohoe/Ninilchik Beach set net fishery, Upper Cook Inlet, 1980<sup>1</sup> (continued).

Date	System	%	4 <sub>2</sub>		5 <sub>2</sub>		5 <sub>3</sub>		6 <sub>3</sub>		Other		Total	
			%	Numbers	%	Numbers	%	Numbers	%	Numbers	%	Numbers	%	Numbers
7/14	Susitna	28.2	5,541	33.0	6,708	12.3	805	25.1	1,250	0	0	27.8	14,304	
	Kenai	6.4	1,254	19.2	3,949	18.7	1,224	22.1	1,102	0	0	14.6	7,529	
	Kasilof	65.4	12,041	47.8	9,833	69.0	4,515	52.8	2,635	0	0	57.6	29,824	
	Total	100.0	19,636	100.0	20,570	100.0	6,544	100.0	4,987	0	0	100.0	51,737	
7/17	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace	
	Kenai	30.6	10,230	64.6	5,070	55.2	13,646	65.6	6,792	0	0	46.7	35,738	
	Kasilof	68.9	23,034	35.3	2,775	44.7	11,061	34.4	3,569	0	0	52.8	40,439	
	Fish	0.5	167	0.1	11	0.1	31	0.0	2	100.0	167	0.5	378	
	Total	100.0	33,431	100.0	7,856	100.0	24,738	100.0	10,363	100.0	167	100.0	76,555	
7/19	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace	
	Kenai	32.6	2,674	67.0	6,459	58.0	3,167	60.3	2,963	0	0	54.9	15,263	
	Kasilof	64.7	5,302	32.3	3,113	41.3	2,260	31.6	1,371	0	0	43.4	12,046	
	Total	100.0	8,194	100.0	9,641	100.0	5,463	100.0	4,339	100.0	161	100.0	27,798	
7/21	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	0	0	Trace	Trace	
	Kenai	11.9	394	20.2	809	21.5	399	20.1	351	0	0	21.5	1,953	
	Kasilof	81.3	2,608	68.0	1,955	73.7	1,253	70.2	846	0	0	74.2	6,742	
	Total	100.0	3,306	100.0	2,873	100.0	1,699	100.0	1,205	0	0	100.0	9,083	
7/22	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	
	Kenai	20.0	422	20.2	740	23.0	178	21.5	111	33.3	8	24.1	1,459	
	Kasilof	73.2	1,547	68.0	1,789	74.2	575	77.9	402	0	0	71.2	4,313	
	Total	100.0	2,112	100.0	2,629	100.0	775	100.0	516	100.0	24	100.0	6,056	
7/23	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	
	Kenai	13.3	255	27.7	947	30.2	110	41.7	55	31.2	25	23.8	1,392	
	Kasilof	79.9	1,533	65.6	2,238	29.9	86	48.5	64	55.0	44	68.0	3,965	
	Total	100.0	1,918	100.0	3,415	100.0	288	100.0	132	100.0	80	100.0	5,833	

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Table 30. Stock composition estimates of sockeye salmon catches by age class and date for Coho/Ninilchik Beach set net fishery, Upper Cook Inlet, 1980<sup>1</sup> (continued).

Date	System	%	<sup>4</sup> <sub>2</sub> Numbers	%	<sup>5</sup> <sub>2</sub> Numbers	%	<sup>5</sup> <sub>3</sub> Numbers	%	<sup>6</sup> <sub>3</sub> Numbers	%	Other Numbers	%	Total Numbers
7/24	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace
	Kenai	13.2	104	27.7	319	38.3	85	41.7	60	31.8	7	24.8	575
	Kasilof	80.0	628	65.5	754	29.7	66	48.6	70	54.6	12	65.8	1,530
	Fish	6.8	53	6.8	70	32.0	71	9.7	14	13.6	3	9.4	210
Total	100.0	785	100.0	1,151	100.0	222	100.0	144	100.0	22	100.0	2,324	
7/25	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace
	Kenai	13.3	226	27.7	541	38.1	277	41.5	218	31.4	16	25.8	1,278
	Kasilof	79.9	1,360	65.5	1,279	29.9	217	48.6	255	54.9	28	63.3	3,139
	Fish	6.8	115	6.8	132	32.0	232	9.9	52	13.7	7	10.9	530
Total	100.0	1,701	100.0	1,952	100.0	726	100.0	525	100.0	51	100.0	4,955	
7/28	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace
	Kenai	13.3	121	27.7	289	38.1	148	41.6	117	29.6	8	25.8	683
	Kasilof	80.0	726	65.6	683	29.9	116	48.4	136	55.6	15	63.4	1,676
	Fish	6.7	61	6.7	70	32.0	124	10.0	28	14.8	4	10.8	287
Total	100.0	908	100.0	1,042	100.0	368	100.0	281	100.0	27	100.0	2,646	
7/30	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace
	Kenai	13.2	70	27.7	168	38.2	86	41.7	68	31.3	5	25.8	397
	Kasilof	80.0	423	65.5	398	29.8	67	48.5	79	56.3	9	63.4	976
	Fish	6.8	36	6.8	41	32.0	72	9.8	16	12.5	2	10.8	167
Total	100.0	529	100.0	607	100.0	225	100.0	163	100.0	16	100.0	1,540	
8/1- 8/15	Susitna	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace
	Kenai	13.2	189	27.7	452	38.2	232	41.5	183	30.8	12	25.7	1,068
	Kasilof	80.0	1,140	65.5	1,072	29.9	182	48.7	215	59.0	23	63.5	2,632
	Fish	6.8	96	6.8	111	31.9	194	9.8	43	10.2	4	10.8	448
Total	100.0	1,425	100.0	1,635	100.0	608	100.0	441	100.0	39	100.0	4,148	
Total	Susitna	9.2	11,670	15.5	13,948	2.9	1,654	7.5	2,194	0	0	9.7	29,466
	Kenai	13.0	16,567	23.5	21,109	34.4	19,060	42.2	12,311	13.8	81	22.9	69,928
	Kasilof	75.9	96,654	59.6	53,551	60.8	35,130	45.6	14,479	22.3	131	65.6	199,945
	Fish	1.9	2,412	1.4	1,273	1.9	1,105	0.7	194	63.9	375	1.8	5,359
Total	100.0	127,303	100.0	89,881	100.0	57,749	100.0	29,178	100.0	587	100.0	304,698	

<sup>1</sup> Catch total may differ slightly from figures presented in Table 1 due to rounding.

Table 31. Stock composition estimates of the Upper Cook Inlet sockeye salmon harvest by age class and date, 1980<sup>1</sup>.

Date	System	%	4 <sup>2</sup>		5 <sup>2</sup>		5 <sup>3</sup>		6 <sup>3</sup>		Other		Total	
			Numbers	%	Numbers	%	Numbers	%	Numbers	%	Numbers	%	Numbers	%
6/16	Susitna	20.0	26	4.3	60	5.6	6	9.4	6	0	0	0	5.8	98
	Kenai	40.8	53	12.0	168	38.9	42	59.3	38	0	0	0	17.7	301
	Kasilof	0	0	0	0	0	0	0	0	0	0	0	0	0
	Crescent	39.2	51	83.7	1,174	55.5	60	31.3	20	0	0	0	76.5	1,305
	Fish	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	100.0	130	100.0	1,402	100.0	180	100.0	64	0	0	0	100.0	1,704	
6/20	Susitna	20.0	7	4.2	16	6.9	2	11.8	2	0	0	0	5.9	27
	Kenai	40.0	14	11.9	45	37.9	11	50.8	10	0	0	0	17.4	80
	Kasilof	0	0	0	0	0	0	0	0	0	0	0	0	0
	Crescent	40.0	14	83.9	317	55.2	16	29.4	5	0	0	0	76.7	352
	Fish	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	100.0	35	100.0	378	100.0	29	100.0	17	0	0	0	100.0	459	
6/23	Susitna	19.8	65	4.3	153	5.8	16	9.7	16	0	0	0	5.8	250
	Kenai	40.9	134	12.0	428	38.5	106	59.4	98	0	0	0	17.7	766
	Kasilof	0	0	0	0	0	0	0	0	0	0	0	0	0
	Crescent	39.3	129	83.7	2,985	55.7	153	30.9	51	0	0	0	76.5	3,318
	Fish	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	100.0	328	100.0	3,566	100.0	275	100.0	165	0	0	0	100.0	4,334	
6/27	Susitna	12.2	1,585	13.8	2,649	7.9	254	10.0	216	50.0	1	1	12.5	4,705
	Kenai	10.2	1,328	17.3	3,320	17.6	566	30.1	654	0	0	0	15.6	5,068
	Kasilof	75.0	9,707	51.3	9,862	60.1	2,180	57.3	1,243	0	0	0	61.4	23,072
	Crescent	1.1	143	17.2	3,294	5.2	168	2.6	56	0	0	0	9.7	3,661
	Fish	1.5	195	0.4	68	1.2	39	0	1	50.0	1	1	0.8	304
Total	100.0	13,030	100.0	19,193	100.0	3,207	100.0	2,170	100.0	2	2	100.0	37,610	
6/30	Susitna	11.4	1,150	10.6	1,825	6.9	179	9.0	178	51.2	22	10.5	3,354	
	Kenai	12.9	1,306	19.9	3,434	23.5	613	38.3	758	41.8	18	19.2	6,129	
	Kasilof	72.1	7,276	37.7	6,497	50.4	1,516	48.0	951	0	0	50.8	16,240	
	Crescent	2.3	233	31.6	5,445	10.5	274	4.7	93	0	0	18.9	6,045	
	Fish	1.3	133	0.2	20	1.0	26	0	0	7.0	3	0.6	190	
Total	100.0	10,098	100.0	17,229	100.0	2,600	100.0	1,980	100.0	43	100.0	31,658		
7/04	Susitna	24.9	6,179	20.9	7,719	12.5	842	22.5	1,018	39.2	9	21.6	15,767	
	Kenai	5.8	1,429	14.0	5,200	15.6	1,050	25.8	1,167	30.4	7	12.1	8,853	
	Kasilof	64.7	16,092	37.7	13,958	62.5	4,215	47.9	2,166	0	0	49.7	36,431	
	Crescent	1.7	420	26.6	9,853	7.3	492	3.7	169	0	0	15.0	10,934	
	Fish	2.9	714	0.8	202	2.1	144	0.1	5	38.4	7	1.6	1,157	
Total	100.0	24,834	100.0	37,012	100.0	6,743	100.0	4,525	188.0	23	100.0	73,137		

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Table 31. Stock composition estimates of the Upper Cook Inlet sockeye salmon harvest by age class and date, 1980<sup>1</sup> (continued).

Date	System	%	<sup>4</sup> <sub>2</sub> Numbers	%	<sup>5</sup> <sub>2</sub> Numbers	%	<sup>5</sup> <sub>3</sub> Numbers	%	<sup>6</sup> <sub>3</sub> Numbers	%	Other Numbers	%	Total Numbers
7/05	Susitna	0	0	0	0	0	0	0	0	0	0	0	0
	Kenai	0	0	0	0	0	0	0	0	0	0	0	0
	Kasilof	96.0	1,610	98.6	1,386	97.8	225	100.0	125	0	0	97.4	3,346
	Crescent	0	0	0	0	0	0	0	0	0	0	0	0
	Fish	4.0	67	1.4	19	2.2	5	0	0	0	0	2.6	91
Total	100.0	1,677	100.0	1,405	100.0	230	100.0	125	0	0	100.0	3,437	
7/07	Susitna	8.3	4,081	8.2	4,581	3.5	328	4.9	544	33.3	1	7.6	9,535
	Kenai	18.1	8,866	24.9	13,851	21.7	2,052	33.0	3,649	0	0	22.7	28,418
	Kasilof	65.9	32,358	56.3	31,373	69.1	6,552	59.5	6,590	0	0	61.3	76,873
	Crescent	0.8	371	0.4	4,678	2.0	194	2.0	218	0	0	4.4	5,461
	Fish	6.9	3,373	2.2	1,250	3.7	349	0.6	62	66.7	2	4.0	5,036
Total	100.0	49,049	100.0	55,733	100.0	9,475	100.0	11,063	100.0	3	100.0	125,323	
7/11	Susitna	1.8	411	0.5	91	0.6	61	0.3	7	0	0	1.1	570
	Kenai	0.7	159	0.5	94	1.4	137	0.5	10	0	0	0.8	400
	Kasilof	91.8	21,004	68.7	12,287	94.5	9,098	98.8	2,050	0	0	84.7	44,439
	Crescent	0.8	176	28.7	5,133	1.7	166	0	0	0	0	10.4	5,475
	Fish	4.9	1,109	1.6	283	1.8	178	0.4	8	0	0	3.0	1,578
Total	100.0	22,859	100.0	17,888	100.0	9,640	100.0	2,075	0	0	100.0	52,462	
7/14	Susitna	38.6	61,897	35.0	76,896	22.5	9,272	32.0	11,832	57.8	156	34.9	160,053
	Kenai	10.0	16,092	27.9	61,253	32.7	13,495	34.2	12,635	0	0	22.6	103,475
	Kasilof	37.9	60,646	28.8	63,134	40.0	16,497	32.5	12,034	0	0	33.2	152,311
	Crescent	0.1	103	2.3	4,953	0.3	141	0.2	75	32.2	87	1.2	5,359
	Fish	13.4	21,467	6.0	13,226	4.5	1,863	1.1	400	10.0	27	8.1	36,983
Total	100.0	160,205	100.0	219,462	100.0	41,268	100.0	36,976	100.0	270	100.0	458,181	
7/16- 7/17	Susitna	0	0	0	0	0	0	0	0	0	0	0	0
	Kenai	30.6	10,230	64.6	5,070	55.2	13,646	65.5	6,792	0	0	46.7	35,738
	Kasilof	68.9	23,034	35.3	2,775	44.7	11,061	34.4	3,569	0	0	52.8	40,439
	Crescent	0	0	0	0	0	0	0	0	0	0	0	0
	Fish	0.5	167	0.1	11	0.1	31	0.1	2	100.0	167	0.5	378
Total	100.0	33,431	100.0	7,856	100.0	24,738	100.0	10,363	100.0	167	100.0	76,555	
7/18	Susitna	66.7	13,296	35.4	6,721	52.2	2,004	97.3	2,417	0	0	54.0	24,438
	Kenai	14.0	2,798	20.2	3,832	34.6	1,327	0	0	0	0	17.6	7,957
	Kasilof	0	0	0	0	0	0	0	0	0	0	0	0
	Crescent	1.2	230	41.1	7,827	6.0	231	2.4	59	0	0	18.4	8,347
	Fish	18.1	3,614	3.3	631	7.2	277	0.3	8	0	0	10.0	4,530
Total	100.0	19,938	100.0	19,011	100.0	3,839	100.0	2,484	0	0	100.0	45,272	

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Table 31. Stock composition estimates of the Upper Cook Inlet sockeye salmon harvest by age class and date, 1980<sup>1</sup> (continued).

Date	System	4 <sub>2</sub>		5 <sub>2</sub>		5 <sub>3</sub>		6 <sub>3</sub>		Other		Total	
		%	Numbers	%	Numbers	%	Numbers	%	Numbers	%	Numbers	%	Numbers
7/19	Susitna	20.2	15,020	12.7	10,924	3.9	1,450	7.7	4,061	27.7	709	12.8	40,972
	Kenai	31.7	24,782	57.5	85,649	51.5	19,481	56.9	29,922	1.5	40	49.9	159,074
	Kasilof	47.0	36,706	28.7	42,867	44.3	16,750	35.2	18,511	9.1	232	35.9	115,074
	Crescent	0.1	19	0.9	1,360	0.1	36	0.1	74	0	0	0.5	1,489
	Fish	1.0	801	0.2	310	0.2	70	0.1	15	61.7	1,579	0.9	2,775
Total	100.0	78,128	100.0	149,110	100.0	37,803	100.0	52,583	100.0	2,560	100.0	320,184	
7/21	Susitna	27.7	8,273	11.7	8,689	8.0	1,104	7.5	1,220	0	0	14.3	19,286
	Kenai	35.0	10,484	52.0	38,778	56.0	7,714	55.0	9,020	0	0	49.1	65,996
	Kasilof	31.1	9,304	29.5	22,023	33.3	4,584	36.8	6,030	0	0	31.2	41,941
	Crescent	0.5	146	5.4	4,013	1.0	143	0.4	63	0	0	3.2	4,365
	Fish	5.7	1,692	1.4	1,023	1.7	234	0.3	41	0	0	2.2	2,890
Total	100.0	29,899	100.0	74,526	100.0	13,779	100.0	16,374	0	0	100.0	134,578	
7/22	Susitna	0	0	0	0	0	0	0	0	0	0	59.0	0
	Kenai	50.0	2,699	66.8	6,056	56.0	1,186	59.5	1,105	33.3	8	59.9	11,054
	Kasilof	47.3	2,549	32.1	2,907	43.0	913	40.3	749	0	0	38.6	7,118
	Crescent	0	0	0	0	0	0	0	0	0	0	0	0
	Fish	2.7	143	1.1	100	1.0	22	0.2	3	66.7	16	1.5	284
Total	100.0	5,391	100.0	9,063	100.0	2,121	100.0	1,857	100.0	24	100.0	18,456	
7/23	Susitna	23.0	4,824	9.4	3,415	8.7	1,122	13.0	1,188	21.3	40	13.3	10,589
	Kenai	35.2	7,398	40.0	14,559	65.9	8,469	50.5	4,627	45.7	86	44.1	35,139
	Kasilof	34.3	7,193	35.5	12,891	8.5	1,087	28.5	2,611	26.6	50	30.0	23,832
	Crescent	3.4	710	11.8	4,307	9.7	1,249	3.5	317	0.5	1	8.3	6,584
	Fish	4.1	853	3.3	1,186	7.2	919	4.5	414	5.9	11	4.3	3,383
Total	100.0	20,978	100.0	36,358	100.0	12,846	100.0	9,157	100.0	188	100.0	79,527	
7/24	Susitna	0	0	0	0	0	0	0	0	0	0	0	0
	Kenai	48.5	1,651	74.3	5,164	87.4	1,134	90.6	1,259	31.8	7	70.5	9,215
	Kasilof	49.9	1,698	24.6	1,714	7.1	92	8.4	117	54.6	12	27.8	3,633
	Crescent	0	0	0	0	0	0	0	0	0	0	0	0
	Fish	1.6	53	1.1	78	5.5	71	1.0	14	13.6	3	1.7	219
Total	100.0	3,402	100.0	6,956	100.0	1,297	100.0	1,390	100.0	22	100.0	13,067	
7/25	Susitna	11.2	1,160	8.4	1,858	10.6	635	9.2	562	15.8	15	9.5	4,230
	Kenai	23.9	2,482	39.5	8,703	64.1	3,830	68.4	4,166	43.1	41	43.1	19,222
	Kasilof	57.9	6,005	37.4	8,254	12.9	768	18.1	1,102	29.5	20	36.2	16,157
	Crescent	1.4	150	12.9	2,840	4.3	254	2.5	154	0	0	1.6	3,398
	Fish	5.6	580	1.8	403	8.1	485	1.9	112	11.6	11	3.6	1,591
Total	100.0	10,377	100.0	22,058	100.0	5,972	100.0	6,096	100.0	95	100.0	44,598	

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Table 31. Stock composition estimates of the Upper Cook Inlet sockeye salmon harvest by age class and date, 1980<sup>1</sup> (continued).

Date	System	%	<sup>4</sup> <sub>2</sub> Numbers	%	<sup>5</sup> <sub>2</sub> Numbers	%	<sup>5</sup> <sub>3</sub> Numbers	%	<sup>6</sup> <sub>3</sub> Numbers	%	Other Numbers	%	Total Numbers
7/28	Susitna	17.7	891	14.7	1,582	17.5	592	17.9	514	21.0	13	16.2	3,592
	Kenai	26.1	1,312	39.6	4,256	50.1	1,964	60.6	1,741	43.5	27	42.1	9,300
	Kasilof	40.8	2,444	33.0	3,560	12.8	434	17.1	491	24.2	15	31.4	6,944
	Crescent	1.1	57	11.0	1,190	4.6	154	2.8	81	0	0	6.7	1,482
	Fish	6.3	316	1.7	188	7.0	238	1.6	46	11.3	7	3.6	795
	Total	100.0	5,020	100.0	10,776	100.0	3,382	100.0	2,873	100.0	62	100.0	22,113
7/30	Susitna	14.0	414	12.0	720	15.7	302	15.3	270	19.4	6	13.5	1,712
	Kenai	23.9	704	37.0	2,206	57.6	1,112	61.6	1,091	41.9	13	40.5	5,126
	Kasilof	54.9	1,620	33.8	2,024	13.8	266	17.8	315	29.0	9	33.4	4,234
	Crescent	1.6	47	15.2	910	5.3	102	3.3	58	0	0	8.8	1,117
	Fish	5.6	166	2.0	120	7.6	146	2.0	35	9.7	3	3.7	470
	Total	100.0	2,951	100.0	5,980	100.0	1,928	100.0	1,769	100.0	31	100.0	12,659
After 7/30	Susitna	13.7	826	11.3	1,393	21.2	1,106	24.4	961	13.7	10	15.6	4,296
	Kenai	23.4	1,406	33.8	4,167	49.1	2,565	50.3	1,983	43.8	32	36.8	10,153
	Kasilof	54.2	3,262	34.4	4,232	16.2	847	18.7	735	31.5	23	33.0	9,099
	Crescent	1.9	113	18.4	2,272	7.0	367	4.8	190	0	0	10.7	2,942
	Fish	6.8	406	2.1	263	6.5	340	1.8	70	11.0	8	3.9	1,087
	Total	100.0	6,013	100.0	12,327	100.0	5,225	100.0	3,939	100.0	73	100.0	27,577
Total	Susitna	24.3	120,905	18.9	137,292	10.3	19,283	14.9	25,012	27.6	982	19.2	303,474
	Kenai	19.2	95,327	36.6	266,233	43.2	80,500	48.1	80,725	7.8	279	33.0	523,064
	Kasilof	48.7	242,588	33.2	241,744	41.3	77,093	35.3	59,389	10.3	369	39.2	621,183
	Crescent	0.6	3,112	8.6	62,551	2.2	4,200	1.0	1,683	2.5	88	4.5	71,634
	Fish	7.2	35,849	2.7	19,469	3.0	5,437	0.7	1,236	51.0	1,845	4.1	63,836
	Total	100.0	497,781	100.0	727,289	100.0	186,513	100.0	168,045	100.0	3,563	100.0	1,583,191

<sup>1</sup> Catch totals may differ slightly from figures presented in Table 1 due to rounding.

Table 32. Catch, escapement, and total return of sockeye salmon by age class and stock, Upper Cook Inlet, 1980.

Stock		Catch					Total
		4 <sub>2</sub>	5 <sub>2</sub>	5 <sub>3</sub>	6 <sub>3</sub>	Other	
Susitna	Numbers	120,905	137,292	19,283	25,012	962	303,474
	Percent	39.9	45.2	6.4	8.2	0.3	100.0
Kerai	Numbers	95,327	266,233	80,500	80,725	279	523,064
	Percent	18.2	50.9	15.4	15.4	0.1	100.0
Kasilof	Numbers	242,588	241,744	77,093	59,389	369	621,183
	Percent	39.0	38.9	12.4	9.6	0.1	100.0
Crescent	Numbers	3,112	62,551	4,200	1,683	66	71,634
	Percent	4.3	87.3	5.9	2.4	0.1	100.0
Fish	Numbers	35,849	19,469	5,437	1,236	1,845	63,836
	Percent	56.2	30.5	8.5	1.9	2.9	100.0
Total	Numbers	497,781	727,289	186,513	168,045	3,563	1,583,191
	Percent	31.5	45.9	11.8	10.6	0.2	100.0

Stock		Escapement					Total
		4 <sub>2</sub>	5 <sub>2</sub>	5 <sub>3</sub>	6 <sub>3</sub>	Other	
Susitna	Numbers	95,402	69,035	8,952	9,969	7,508	190,866
	Percent	50.0	36.2	4.7	5.2	3.9	100.0
Kerai	Numbers	128,742	209,246	75,137	46,887	4,026	464,038
	Percent	27.7	45.1	16.2	10.1	0.9	100.0
Kasilof	Numbers	108,117	51,274	14,746	8,367	1,756	184,260
	Percent	58.7	27.8	8.0	4.5	1.0	100.0
Crescent	Numbers	5,906	78,960	2,635	1,454	1,908	90,863
	Percent	6.5	86.9	2.9	1.6	2.1	100.0
Fish	Numbers	43,151	9,645	3,757	376	5,699	62,628
	Percent	68.9	15.4	6.0	0.6	9.1	100.0
Total	Numbers	381,318	418,160	105,227	67,053	20,897	992,655
	Percent	38.4	42.1	10.6	6.8	2.1	100.0

Stock		Total Return					Total
		4 <sub>2</sub>	5 <sub>2</sub>	5 <sub>3</sub>	6 <sub>3</sub>	Other	
Susitna	Numbers	216,307	206,327	28,235	34,981	8,490	494,340
	Percent	43.8	41.7	5.7	7.1	1.7	100.0
Kerai	Numbers	224,069	475,479	155,637	127,612	4,305	987,102
	Percent	22.7	48.2	15.8	12.9	0.4	100.0
Kasilof	Numbers	350,705	293,018	91,839	67,756	2,125	805,443
	Percent	43.5	36.4	11.4	8.4	0.3	100.0
Crescent	Numbers	9,018	141,511	6,835	3,137	1,996	162,497
	Percent	5.6	87.1	4.2	1.9	1.2	100.0
Fish	Numbers	79,000	29,114	9,194	1,612	7,544	126,464
	Percent	62.5	23.0	7.3	1.3	5.9	100.0
Total	Numbers	879,099	1,145,449	291,740	235,098	24,460	2,575,846
	Percent	34.1	44.5	11.3	9.1	1.0	100.0

to Upper Cook Inlet (Table 32). The majority (48.2%) of Kenai River's return were age 5<sub>2</sub> fish. Age 4<sub>2</sub> fish accounted for 22.7% of the return, age 5<sub>3</sub> comprised 15.8%, age 6<sub>3</sub> comprised 12.9%, and other ages comprised 0.4%. The exploitation rate for Kenai River stocks was 0.530. The Central District drift fishery harvested the largest portion (52.1%) of the Kenai River catch (Table 33). Other fisheries which took significant amounts of Kenai River fish included: Salamatof Beach (14.3%), Coho/Ninilchik Beach (13.4%), and Kalifonsky Beach (9.0%).

An estimated 805,443 sockeye salmon returning to Upper Cook Inlet in 1980 were of Kasilof River origin (Table 32). The Kasilof River run accounted for 31.3% of the total return. Age 4<sub>2</sub> fish dominated (43.5%) the return followed by ages 5<sub>2</sub> (36.4%), 5<sub>3</sub> (11.4%), 6<sub>3</sub> (8.4%), and other ages (0.3%). Kasilof River stocks were most heavily harvested by the Central District drift fishery which took 42.7% of the catch and Coho/Ninilchik Beach fishery which accounted for 32.2% (Table 33). The remainder of the Kasilof catch was taken on Kalifonsky Beach (11.5%), Salamatof Beach (8.1%), Kalgin Island (5.0%), and the Central District west-side (0.5%). The exploitation rate for the Kasilof River was 0.771.

In 1980 a total of 494,340 Susitna River sockeye salmon returned which represented 19.2% of the Upper Cook Inlet total return (Table 32). The Susitna River return was composed almost equally of age 4<sub>2</sub> (43.8%) and age 5<sub>2</sub> (41.7%) fish. Age 5<sub>3</sub> (5.7%), age 6<sub>3</sub> (7.1%), and other ages (1.7%) made up the remainder of the run. The exploitation rate on Susitna River stocks equaled 0.614. Susitna River fish were harvested primarily by the Central District drift (63.1%), the Northern District west-side (16.2%), and Coho/Ninilchik Beach (9.7%). The remainder of the Susitna River catch was evenly distributed among the other fisheries except for Salamatof Beach which did not harvest appreciable numbers (Table 33).

An estimated 162,497 sockeye salmon returned to the Crescent River which accounted for 6.3% of the total return to Upper Cook Inlet (Table 32). Age 5<sub>2</sub> fish predominated (87.1%) in the Crescent River return with the other age classes comprising much smaller percentages: age 4<sub>2</sub> (5.6%), age 5<sub>3</sub> (4.2%), age 6<sub>3</sub> (1.9%), and other (1.2%). The Central District west-side set net fishery harvested essentially all (88.2%) of the Crescent River return (Table 33). Small percentages were taken on Kalgin Island (8.4%), and the Northern District west-side (3.4%). The exploitation rate on Crescent River stocks was 0.441.

The return to Fish Creek in 1980 was estimated to equal 126,464 sockeye salmon which represented 4.9% of the total return to Upper Cook Inlet (Table 32). The Fish Creek return was composed mostly of age 4<sub>2</sub> fish (62.5%) followed by age 5<sub>2</sub> (23.0%), age 5<sub>3</sub> (7.3%), age 6<sub>3</sub> (1.3%), and other ages (5.9%). Fish Creek's exploitation rate was 0.505. The largest portion (76.6%) of Fish Creek's catch was taken by the Central District drift fishery (Table 33). Smaller percentages of Fish Creek fish were taken by: Northern District east-side (13.1%), Coho/Ninilchik Beach (8.4%), Northern District west-side (1.0%), Salamatof Beach (0.8%), and Kalifonsky Beach (0.1%).

Table 33. Summary of the catch by fishery and stock for sockeye salmon returning to Upper Cook Inlet in 1980.

Stock	FISHERY								Total
	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	Cohoe/Ninilchik Beach Set Net	
Susitna R.									
Numbers	9,519	49,183	191,350	7,853	8,021	Trace	8,082	29,466	303,474
Percent	3.1	16.2	63.1	2.6	2.6		2.7	9.7	100.0
Kenai R.									
Numbers	25,434	15,612	272,360	5,714	11,563	75,067	47,386	69,928	523,064
Percent	4.9	3.0	52.1	1.1	2.2	14.3	9.0	13.4	100.0
Kasilof R.									
Numbers	0	0	265,023	3,239	31,152	50,132	71,692	199,945	621,183
Percent	0	0	42.7	0.5	5.0	8.1	11.5	32.2	100.0
Crescent R.									
Numbers	0	2,458	0	63,194	5,982	0	0	0	71,634
Percent	0	3.4	0	88.2	8.4	0	0	0	100.0
Fish Creek									
Numbers	8,386	636	48,898	0	0	480	77	5,359	63,836
Percent	13.1	1.0	76.6	0	0	0.8	0.1	8.4	100.0

### Run Timing

Tables 34-38 outline the daily and cumulative return of sockeye salmon to each of the five major river systems. Escapement and catch by stock were combined to calculate total return by date by incorporating migration times from the various fisheries to the escapement enumeration sites. Table 39 summarizes the mean Julian date and variance of Upper Cook Inlet's sockeye salmon runs. The return of sockeye salmon to the Kasilof River was the earliest (mean = 198.2) and fairly protracted (variance = 80.1). Mean timing of the Kenai River return (mean = 202.1) was similar to the Kasilof River, however, it was much shorter in duration (variance = 36.0). Mean dates for the Susitna River (mean 206.2) and the Crescent River (mean = 204.6) were similar. The return to Crescent River was the longest in duration (variance = 89.6), while Susitna River was significantly shorter (variance = 31.1).

### ACKNOWLEDGMENTS

The Upper Cook Inlet management and research staffs assisted with the scale collection in 1980 and provided much of the catch and escapement data presented in this report. In particular we would like to acknowledge the help provided by Jim Browning who was responsible for the supervision of the scale collection from the field. We would also like to acknowledge the assistance provided by Al Kingsbury, Ken Tarbox, Gary Sanders, Dave Waltemyer, and Bruce King. Bob Chlupach of the F.R.E.D. Division provided escapement data and scale samples from Fish Creek. Tom Mears of the Cook Inlet Aquaculture Association provided escapement data and scale samples from Packers Creek.

Table 34. Summary of daily and cumulative return of sockeye salmon to the Susitna River, Upper Cook Inlet, 1980<sup>1</sup>.

Date	Numbers of Fish				Proportion	
	Escapement	Catch	Daily Return	Cumulative Return	Daily Proportion	Cumulative Proportion
Prior 7/01		98	98	98	.000	.000
7/01	444	27	471	569	.001	.001
7/02	418	0	418	987	.001	.002
7/03	428	0	428	1,415	.001	.003
7/04	407	272	679	2,094	.001	.004
7/05	439	89	528	2,622	.001	.005
7/06	320	561	881	3,503	.002	.007
7/07	311	2,300	2,611	6,114	.005	.012
7/08	232	1,991	2,223	8,337	.004	.016
7/09	101	403	504	8,841	.001	.017
7/10	214	2,116	2,330	11,171	.005	.022
7/11	199	617	816	11,987	.002	.024
7/12	362	362	724	12,711	.001	.025
7/13	36	1,889	1,925	14,636	.004	.029
7/14	98	11,370	11,468	26,104	.023	.052
7/15	89	2,224	2,313	28,417	.005	.057
7/16	226	304	530	28,947	.001	.058
7/17	649		649	29,596	.001	.059
7/18	6,514	9,125	15,639	45,235	.032	.091
7/19	24,546	558	25,104	70,339	.051	.142
7/20	28,417		28,417	98,756	.057	.199
7/21	22,895	133	23,028	121,784	.047	.246
7/22	39,990	65	40,055	161,839	.081	.327
7/23	29,822	4,977	34,799	196,638	.070	.397
7/24	8,434	14,384	22,818	219,456	.046	.443
7/25	5,496	160,588	166,084	385,540	.336	.779
7/26	2,656	2,883	5,539	391,079	.011	.790
7/27	1,945		1,945	393,024	.004	.794
7/28	581	15,755	16,336	409,360	.033	.827
7/29	1,290	6,095	7,385	416,745	.015	.842
7/30	1,866	45,195	47,061	463,806	.095	.937
7/31	445	1,854	2,299	466,105	.005	.942
8/01	2,544	2,563	5,107	471,212	.010	.952
8/02	978	1,365	2,343	473,555	.005	.957
8/03	379	2,384	2,763	476,318	.006	.963
8/04	1,619	2,721	4,340	480,658	.009	.972
8/05	1,123	1,255	2,378	483,036	.005	.977
8/06	141	904	1,045	484,081	.002	.979
8/07	342	896	1,238	485,319	.002	.981
8/08	197	683	880	486,199	.002	.983
8/09	487	591	1,078	487,277	.002	.985
8/10	654	215	869	488,146	.002	.987
8/11	172	874	1,046	489,192	.002	.989
8/12	367	283	650	489,842	.001	.990
8/13	226	245	471	490,313	.001	.991
8/14	109	650	759	491,072	.002	.993
8/15	174	166	340	491,412	.001	.994
After 8/15	1,484	1,444	2,928	494,340	.006	1.000
Total	190,866	303,474	494,340	494,340	1.000	1.000

<sup>1</sup> Dates represent escapement dates, i.e., the return of fish to the river counting site. Catch dates were adjusted to account for migration time to the river. Lag times used for each fishery to the Susitna River were: 11 days for Central District West-side and Central District drift; 10 days for Kalgin Island East-side, Kalgin Island West-side, and Coho/Ninilchik Beach; 9 days for Salamatof and Kalifonsky Beach; 8 days for Northern District East-side; and 7 days for Northern District West-side.

Table 35. Summary of daily and cumulative return of sockeye salmon to the Kenai River, Upper Cook Inlet, 1980<sup>1</sup>.

Date	Numbers of Fish				Proportion	
	Escapement	Catch	Daily Return	Cumulative Return	Daily Proportion	Cumulative Proportion
Prior 6/22		301	301	301	.000	.000
6/22	931	0	931	1,232	.001	.001
6/23	809	0	809	2,041	.001	.002
6/24	553	80	633	2,674	.001	.003
6/25	663	0	663	3,337	.001	.004
6/26	534	0	534	3,871	.000	.004
6/27	237	766	1,033	4,874	.001	.005
6/28	422	0	422	5,296	.000	.005
6/29	346	1,880	2,226	7,522	.002	.007
6/30	578	3,143	3,721	11,243	.004	.011
7/01	483	845	1,328	12,571	.001	.012
7/02	601	1,411	2,012	14,583	.002	.014
7/03	375	3,372	3,747	18,330	.004	.018
7/04	515	1,346	1,861	20,191	.002	.020
7/05	324	0	324	20,515	.000	.020
7/06	265	476	741	21,256	.001	.021
7/07	150	6,001	6,151	27,407	.006	.027
7/08	174	2,376	2,550	29,957	.003	.030
7/09	358	0	358	30,315	.000	.030
7/10	249	28,418	28,667	58,982	.029	.059
7/11	426	0	426	59,408	.000	.059
7/12	328	0	328	59,736	.000	.059
7/13	167	400	567	60,303	.001	.060
7/14	293	0	293	60,596	.000	.060
7/15	2,673	0	2,673	63,269	.003	.063
7/16	13,978	3,233	17,211	80,480	.017	.080
7/17	117,463	100,242	217,705	298,185	.220	.300
7/18	82,962	0	82,962	381,147	.084	.384
7/19	54,909	35,738	90,647	471,794	.092	.476
7/20	78,576	0	78,576	550,370	.080	.556
7/21	56,875	48,083	104,958	655,328	.106	.662
7/22	9,468	119,748	129,216	784,544	.131	.793
7/23	2,837	24,672	27,509	812,053	.028	.821
7/24	2,806	50,919	53,725	865,778	.054	.875
7/25	1,353	16,571	17,924	883,702	.018	.893
7/26	1,589	28,667	30,256	913,958	.031	.924
7/27	2,558	8,989	11,547	925,505	.012	.936
7/28	1,479	10,808	12,287	937,792	.012	.948
7/29	2,235	0	2,235	940,027	.002	.950
7/30	1,569	3,991	5,560	945,587	.006	.956
7/31	1,166	5,309	6,475	952,062	.007	.963
8/01	982	1,635	2,617	954,679	.003	.966
8/02	1,212	3,491	4,703	959,382	.005	.971
8/03	994	1,114	2,108	961,490	.002	.973
8/04	706	2,423	3,129	964,619	.003	.976
8/05	843	0	843	965,462	.001	.977
8/06	935	1,016	1,951	967,413	.002	.979
8/07	1,197	2,449	3,646	971,059	.004	.983
8/08	596	0	596	971,655	.001	.984
8/09	860	534	1,394	973,049	.001	.985
8/10	1,043	652	1,695	974,744	.002	.987
8/11	1,966	799	2,765	977,509	.003	.990
8/12	1,587	0	1,587	979,096	.002	.992
8/13	3,217	99	3,316	982,412	.003	.995
8/14	264	302	566	982,978	.001	.996
8/15	322	0	322	983,300	.000	.996
After 8/15	3,037	765	3,802	987,102	.004	1.000
Total	464,038	523,064	987,102	987,102	1.000	1.000

<sup>1</sup> Dates represent escapement dates, i.e., the return of fish to the river counting site. Catch dates were adjusted to account for migration time to the river. Lag times between each fishery and the Kenai River are: 3 days for the Northern District East-side, Northern District West-side, Central District drift, Kalgin Island East-side, Kalgin Island West-side, and Cohoe/Ninilchik Beach; 4 days for the Central District West-side; and 2 days for Salamatof and Kalifonsky Beach.

Table 36. Summary of daily and cumulative return of sockeye salmon to the Kasilof River, Upper Cook Inlet, 1980<sup>1</sup>.

Date	Numbers of Fish				Proportion	
	Escapement	Catch	Daily Return	Cumulative Return	Daily Proportion	Cumulative Proportion
6/22	482		482	482	.001	.001
6/23	756		756	1238	.001	.002
6/24	494		494	1732	.001	.003
6/25	2,278		2,278	4,010	.003	.006
6/26	2,431		2,431	6,441	.003	.009
6/27	2,960		2,960	9,401	.004	.013
6/28	4,328	5,523	9,851	19,252	.012	.025
6/29	3,601	10,350	13,951	33,203	.017	.042
6/30	7,683	7,199	14,882	48,085	.018	.060
7/01	5,542	4,412	9,954	58,039	.012	.072
7/02	9,496	9,417	18,913	76,952	.023	.095
7/03	6,009	2,411	8,420	85,372	.010	.105
7/04	5,462	0	5,462	90,834	.007	.112
7/05	6,393	1,738	8,131	98,965	.010	.122
7/06	4,441	18,608	23,049	122,014	.029	.151
7/07	2,676	19,733	22,409	144,423	.028	.179
7/08	2,465	0	2,465	146,888	.003	.182
7/09	2,408	11,157	13,565	160,453	.017	.199
7/10	2,599	64,219	66,818	227,271	.083	.282
7/11	3,532	1,195	4,727	231,998	.006	.288
7/12	1,567	0	1,567	233,565	.002	.290
7/13	952	43,220	44,172	277,737	.055	.345
7/14	1,764	352	2,116	279,853	.003	.348
7/15	5,219	6,205	11,424	291,277	.014	.362
7/16	11,695	29,824	41,519	332,796	.052	.414
7/17	7,723	116,324	124,047	456,843	.154	.568
7/18	7,257	41,264	48,521	505,364	.060	.628
7/19	7,423	0	7,423	512,787	.009	.637
7/20	8,148	42,490	50,638	563,425	.063	.700
7/21	3,991	38,517	42,508	605,933	.053	.753
7/22	4,211	36,424	40,635	646,568	.050	.803
7/23	6,730	13,177	19,907	666,475	.025	.828
7/24	2,527	34,585	37,112	703,587	.046	.874
7/25	2,737	7,495	10,232	713,819	.013	.887
7/26	2,752	22,583	25,335	739,154	.031	.918
7/27	2,243	7,068	9,311	748,465	.012	.930
7/28	1,881	5,416	7,297	755,762	.009	.939
7/29	2,229	1,284	3,513	759,275	.004	.943
7/30	2,205	3,805	6,010	765,285	.007	.950
7/31	2,513	2,464	4,977	770,262	.006	.956
8/01	2,029	1,805	3,834	774,096	.005	.961
8/02	1,934	2,444	4,378	778,474	.005	.966
8/03	1,157	1,067	2,224	780,698	.003	.969
8/04	1,761	1,257	3,018	783,716	.004	.973
8/05	1,814	517	2,331	786,047	.003	.976
8/06	1,266	1,294	2,560	788,607	.003	.979
8/07	1,242	1,330	2,572	791,179	.003	.982
8/08	1,286	0	1,286	792,465	.002	.984
8/09	2,737	241	2,978	795,443	.004	.988
8/10	1,397	1,010	2,407	797,850	.003	.991
8/11	1,951	320	2,271	800,121	.003	.994
8/12	1,748	54	1,802	801,923	.002	.996
8/13	2,135	235	2,370	804,293	.003	.999
8/14		224	224	804,517	.000	.999
8/15		104	104	804,621	.000	.999
After 8/15		822	822	805,443	.001	1.000
Total	184,260	621,183	805,443	805,443	1.000	1.000

<sup>1</sup> Dates represent escapement dates, i.e., the return of fish to the river counting site. Catch dates were adjusted to account for migration time to the river. Lag times used for each fishery to the Kasilof River were: 4 days for the Northern District East-side, the Northern District West-side, the Central District East-side; 3 days for the Central District drift, Kalgin Island East-side, Kalgin Island West-side; 2 days for Salamatof and Cohoe/Ninilchik Beach; and 1 day for Kalifonsky Beach.

Table 37. Summary of daily and cumulative return of sockeye salmon to the Crescent River, Upper Cook Inlet, 1980<sup>1</sup>.

Date	Numbers of Fish				Proportion	
	Escapement	Catch	Daily Return	Cumulative Return	Daily Proportion	Cumulative Proportion
Prior 7/01		1,657	1,657	1,657	.010	.010
7/01		0	0	1,657	.000	.010
7/02		0	0	1,657	.000	.010
7/03		3,318	3,318	4,975	.020	.030
7/04		0	0	4,975	.000	.030
7/05		0	0	4,975	.000	.030
7/06		3,660	3,660	8,635	.023	.053
7/07	1	0	1	8,636	.000	.053
7/08	1	1	2	8,638	.000	.053
7/09	9	0	9	8,647	.000	.053
7/10	2,585	5,829	8,414	17,061	.052	.105
7/11	5,482	216	5,698	22,759	.035	.140
7/12	3,350	0	3,350	26,109	.021	.161
7/13	524	0	524	26,633	.003	.164
7/14	1,260	10,294	11,554	38,187	.071	.235
7/15	1,439	640	2,079	40,266	.013	.248
7/16	1,311	0	1,311	41,577	.008	.256
7/17	1,575	4,516	6,091	47,668	.037	.293
7/18	3,162	945	4,107	51,775	.025	.318
7/19	5,327	0	5,327	57,102	.033	.351
7/20	7,595	0	7,595	64,697	.047	.398
7/21	7,730	5,475	13,205	77,902	.081	.479
7/22	5,942	0	5,942	83,844	.037	.516
7/23	6,855	0	6,855	90,699	.042	.558
7/24	5,034	4,481	9,515	100,214	.059	.617
7/25	2,651	878	3,529	103,743	.022	.639
7/26	3,688	0	3,688	107,431	.023	.662
7/27	2,649	0	2,649	110,080	.016	.678
7/28	3,269	8,347	11,616	121,696	.072	.750
7/29	2,270	0	2,270	123,966	.014	.764
7/30	2,368	1,489	3,857	127,823	.024	.788
7/31	1,737	2,532	4,269	132,092	.026	.814
8/01	1,996	510	2,506	134,598	.015	.829
8/02	1,646	5,872	7,518	142,116	.046	.875
8/03	1,557	216	1,773	143,889	.011	.886
8/04	1,646	4,321	5,967	149,856	.037	.923
8/05	1,108	187	1,295	151,151	.008	.931
8/06	894	496	1,390	152,541	.009	.940
8/07	639	1,062	1,701	154,242	.010	.950
8/08	799	422	1,221	155,463	.008	.958
8/09	943	909	1,852	157,315	.011	.969
8/10	441	118	559	157,874	.003	.972
8/11	375	809	1,184	159,058	.007	.979
8/12	415	98	513	159,571	.003	.982
8/13	414	90	504	160,075	.003	.985
8/14	176	643	819	160,894	.005	.990
8/15	0	196	196	161,090	.001	.991
After 8/15	0	1,407	1,407	162,497	.009	1.000
Total	90,863	71,634	162,497	162,497	1.000	1.000

<sup>1</sup> Dates represent escapement dates, i.e., the return of fish to the river counting site. Catch dates were adjusted to account for migration time to the river. Lag times used were: 10 days for Central District West-side, 11 days for Kalgin Island, and 14 days for the Northern District West-side.

Table 38. Summary of daily and cumulative return of sockeye salmon to Fish Creek, Upper Cook Inlet, 1980<sup>1</sup>.

Date	Numbers of Fish				Proportion	
	Escapement	Catch	Daily Return	Cumulative Return	Daily Proportion	Cumulative Proportion
7/04	17	2	19	19	.000	.000
7/05	26	40	66	85	.001	.001
7/06	14	120	134	219	.001	.002
7/07	26	5	31	250	.000	.002
7/08	28	235	263	513	.002	.004
7/09	19	77	96	609	.001	.005
7/10	38	0	38	647	.000	.005
7/11	23	19	42	689	.000	.005
7/12	13	164	177	866	.001	.006
7/13	15	162	177	1,043	.001	.007
7/14	11	19	30	1,073	.000	.007
7/15	28	950	978	2,051	.008	.015
7/16	17	146	163	2,214	.001	.016
7/17	67	308	375	2,589	.003	.019
7/18	3,679	4,528	8,207	10,796	.065	.084
7/19	4,462	308	4,770	15,566	.038	.122
7/20	2,507	0	2,507	18,073	.020	.142
7/21	7,011	1,285	8,296	26,369	.066	.208
7/22	6,866	60	6,926	33,295	.055	.263
7/23	7,958	52	8,010	41,305	.063	.326
7/24	9,703	0	9,703	51,008	.077	.403
7/25	7,730	37,459	45,189	96,197	.357	.760
7/26	2,717	4,303	7,020	103,217	.056	.816
7/27	1,107	0	1,107	104,324	.009	.825
7/28	2,974	0	2,974	107,298	.024	.849
7/29	502	2,111	2,613	109,911	.021	.870
7/30	517	2,286	2,803	112,714	.022	.892
7/31	980	1,104	2,084	114,798	.016	.908
8/01	641	1,264	1,905	116,703	.015	.923
8/02	501	982	1,483	118,186	.012	.935
8/03	610	2,410	3,020	121,206	.024	.959
8/04	718	894	1,612	122,818	.013	.972
8/05	184	547	731	123,549	.006	.978
8/06	143	0	143	123,692	.001	.979
8/07	173	420	593	124,285	.005	.984
8/08	80	152	232	124,517	.002	.986
8/09	90	299	389	124,906	.003	.989
8/10	90	170	260	125,166	.002	.991
8/11	36	104	140	125,306	.001	.992
8/12	75	204	279	125,585	.002	.994
8/13	40	0	40	125,625	.000	.994
8/14	53	244	297	125,922	.002	.996
8/15	37	108	145	126,067	.001	.997
After 8/15	102	295	397	126,464	.003	1.000
<b>Total</b>	<b>62,628</b>	<b>63,836</b>	<b>126,464</b>	<b>126,464</b>	<b>1.000</b>	<b>1.000</b>

<sup>1</sup> Dates represent escapement dates, i.e., the return of fish to the river counting site. Catch dates were adjusted to account for migration time to the river. Lag times used were: 11 days for the Central District drift, 8 days for the Northern District East-side, and 7 days for the Northern District West-side.

Table 39. The mean date (Julian) and variance of the runs of sockeye salmon to Upper Cook Inlet, by stock, 1980.

Stock	Mean	Variance
Susitna River	206.2	31.1
Kenai River	202.1	36.0
Kasilof River	198.2	80.1
Crescent River	204.6	89.6
Fish Creek	206.8	23.3

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