ABUNDANCE, AGE, SEX AND SIZE OF CHINOOK, SOCKEYE, COHO, AND CHUM SALMON RETURNING TO UPPER COOK INLET, ALASKA, IN 1994

by
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TABLE OF CONTENTS

LIST OF TABLES

LIST OF TABLES (Continued)

LIST OF TABLES (Continued)

LIST OF FIGURES

ABSTRACT

The 1994 total return of sockeye salmon to Upper Cook Inlet (UCI) was 5,160,658 fish comprising a commercial harvest of 3,567,392 fish and an escapement into the six major river systems of 1,492,845 fish with the remainder representing subsistence and personal use harvests. Subsistence and personal use harvests totaled 100,421 sockeye salmon. Four major age groups contributed 98.2% to the total combined UCI commercial sockeye salmon harvests and escapements. Age-1.2 fish represented 9.9% (495,541 fish), age-1.3 fish represented 56.9% (2,830,063 fish), age-2.2 fish represented 14.2% (705,538 fish), and age-2.3 fish represented 17.1% (852,049 fish) of the total monitored return. Sockeye salmon mean lengths in the total return were: age-1.2, 467 mm; age-1.3, 559 mm; age-2.2, 483 mm; and age-2.3, 555 mm. Female composition for sockeye salmon was 53% in the commercial harvest and 55% in escapement. The exploitation rate for sockeye salmon was 70%.

A total of 20,260 chinook salmon were commercially harvested in UCI. The Upper Subdistrict commercial set gillnet harvest of 15,885 fish which represented 78.4% of the total commercial harvest was composed of age-1.2 (12.3%), -1.3 (14.6%) and -1.4 (61.3%) chinook salmon. Mean lengths for chinook salmon were: age-1.2, 661 mm; age-1.3, 867 mm; and age-1.4, 1,018 mm, and sex composition favored males (55.4%) in the Upper Subdistrict harvest.

A total of 580,567 coho salmon were commercially harvested in UCI. Selected commercial gillnet harvests which represented 84.1% of the total commercial harvest were represented by age-1.1 (10.5%), -2.1 (78.8%) and -3.1 (10.8%) coho salmon. Age-1.1, -2.1 and -3.1 coho salmon averaged 552 mm, 577 mm, and 596 mm, respectively and sex ratios for coho salmon were approximately equal.

A total of 299,300 chum salmon were commercially harvested in UCI. The drift gillnet harvest was 245,854 fish or 82.1% of the total, and mainly was comprised of age-0.3 (56.8%) and age-0.4 (38.2%) chum salmon. Female chum salmon composed 49.0% of the harvest.

KEY WORDS: Salmon, *Oncorhynchus*, age, size, commercial catch, escapement, exploitation rate, Upper Cook Inlet, Alaska

INTRODUCTION

Upper Cook Inlet (UCI) supports the production of all five species of Pacific salmon *Oncorhynchus* (Figure 1). Since 1966 the total harvest of salmon in UCI averaged 4.5 million fish representing 2.9 million sockeye *O. nerka*, 1.1 million even-year pink *O. gorbuscha*, 0.1 million odd-year pink, 0.6 million chum *O. keta*, 0.4 million coho *O. kisutch*, and 16,000 chinook *O. tshawytscha* salmon. Salmon harvests in UCI represent approximately five percent of the statewide commercial harvest (Ruesch and Fox 1993).

Age, sex and size composition in conjunction with abundance data provide a basis for assessing yearly variations in production and effects of management strategies. The need to improve and develop stock specific production information is an essential part of understanding the dynamics of salmon production and consequently managing salmon stocks to their full potential.

The pioneering work of Davis and Kissner (1969) in UCI provided a framework from which age, sex and size data collection began. Unfortunately in the early years (1964-78) the sample collection of commercial harvest and escapement data was sporadic and limited compared to the present. Information was published in annual technical reports from 1964 to 1978. Davis and Tarbox (1985) produced a compendium of information for the period 1964-1981 to summarize the yearly results. The series continued with the advent of stock separation studies in 1978 and has been in existence ever since (Bethe et al. 1980; Cross et al. 1981, 1982, 1983, 1985, 1987; Cross 1985; Waltemyer 1989, 1990, 1991, 1993, 1994). The major emphasis has been on sampling sockeye salmon in the commercial harvests and escapements. Chinook, coho, and chum salmon harvested in the commercial fisheries have been sampled since 1983.

This report is part of a continuing series. Specific objectives were: 1) document number of salmon harvested in selected commercial, subsistence, and personal use fisheries; 2) report the number of sockeye salmon spawners; and 3) estimate age, sex, and size composition of salmon in commercial harvests and escapements.

METHODS

Numerical Data

Harvest data were compiled in various ways. Commercial harvest statistics were compiled from ADF&G final fish ticket information. Commercial fishing district and subdistrict locations are shown in Figure 2. Tyonek subsistence fishery data were derived from the final number of permits returned (R. Stanek, ADF&G, Anchorage, personal communication). Various native groups harvesting salmon for personal use with an "educational" permit reported their catches to ADF&G at the end of the season. The Fish Creek personal use dip net fishery harvest was based on a cursory creel census survey (C. Whitmore, ADF&G, Palmer, personal communication). Locations of the subsistence and personal use fisheries are shown in Figure 3.

ADF&G personnel used Bendix Corporation[2] side-scanning sonar equipment to enumerate the adult salmon entering the Kenai, Kasilof, Crescent, and Yentna Rivers (Davis and King 1994). For purposes of this report, escapement means the number of fish entering each river, spawners means the number of fish that breed, and index means a minimum estimate of escapement. Sonar counts were apportioned to salmon species using species proportions from fish wheel catches except for the Kasilof River where all counts were assumed to be sockeye salmon (Davis and King 1994). Chinook salmon escapement into the Kenai River was estimated using BioSonics[2] sonar equipment in the lower river (RM 8.5; D. Burwen, ADF&G, Anchorage, personal communication). Sockeye salmon escapement into Fish Creek was determined by observing fish migrating through a weir (C. Whitmore, ADF&G, Palmer, personal communication). Cook Inlet Aquaculture Association (CIAA) personnel monitored sockeye salmon escapements through weirs on Hidden, Packers and Lake Creeks (Cheltna Lake; G. Fandrei, CIAA, Soldotna, personal communication).

Age, Sex, and Size Data

Fish scales were taken from the left side approximately two rows above the lateral line on the diagonal row that extends down from the posterior insertion of the dorsal fin to the anterior insertion of the anal fin (Koo 1955). Scales were mounted on gum cards and impressions made in cellulose acetate as described by Clutter and Whitesel (1956).

Ages of salmon were determined by visual examination of scale impressions under moderate magnification (40X) using a microfiche viewer. Age was determined based upon criteria established by Mosher (1969). Ages were recorded in European notation (Koo 1962).

Sex and size (length) information was recorded for all specimens sampled. Jaw formation was used to determine sex. Verification of sex was also made by observation of the gonad in cases where jaw formation was questionable. Length was measured from mid-eye to fork-of-tail in millimeters.

Age, sex and length compositions of the commercial catches were estimated using a stratified systematic random sampling design (Cochran 1977). A minimum sample size of 403 readable scales was defined for each species and strata to estimate simultaneously the proportion of each major age class in the harvest within five percent of the true proportion 90% of the time (Thompson 1987). A sample size of 600 fish per strata for sockeye salmon harvested in the commercial fisheries was set to account for unreadable scales. For escapements a single sample size of 600 fish was defined to provide the same level of precision. The sample was weighted over the duration of escapement enumeration by sampling a fixed proportion of fish captured by fish wheel. One scale was collected from each fish, except coho salmon from which three scales were collected. Age and size information were not obtained from subsistence or personal use harvests.

The number of temporal and spatial strata selected for sampling differed among commercial fisheries, escapements and species. The number of temporal strata was set to detect changes in

[2] *Use of a company's name does not constitute endorsement.*

seasonal age composition. Definitions of spatial strata for commercial harvests were based on UCI management district or subdistrict designations. Frequency and priority of sampling were based on the relative harvest contribution of a fishery to the total UCI commercial harvest from prior years. Because the escapements were weighted through time apriori, no stratification was necessary.

RESULTS

A total of 1,945 chinook, 25,929 sockeye, 4,079 coho, and 1,200 chum salmon was sampled in selected UCI commercial gillnet harvests and escapements in 1994 (Table 1). Age, sex and size data along with other harvest and escapement information are presented below.

Sockeye Salmon

Total Return

The minimum estimate of the 1994 total return of sockeye salmon to UCI was 5,160,658 fish (Table 2). Commercial harvests totaled 3,567,392 fish and escapements into the major river systems were 1,492,845 fish. The remainder (100,421 fish) were subsistence and personal use harvests.

Four major age groups contributed 98.2% to the total combined UCI commercial sockeye salmon harvests and escapements (Table 3). Age-1.2 fish represented 9.9% (495,541 fish), age-1.3 fish represented 56.9% (2,830,063 fish), age-2.2 fish represented 14.2% (705,538 fish), and age-2.3 fish represented 17.1% (852,049 fish) of the total monitored return. The total commercial harvest contributions were: age 1.2 - 8.3% (289,169 fish), age 1.3 - 59.6% (2,073,649 fish), age 2.2 - 12.0% (417,201 fish), and age 2.3 - 18.7% (651,198 fish). Total escapement contributions were: age 1.2 - 13.8% (206,372 fish), age 1.3 - 50.7% (756,414 fish), age 2.2 - 19.3% (288,337 fish), and age 2.3 - 13.5% (200,851 fish).

Average lengths of the major age groups in the commercial harvests were: 470 mm (age 1.2), 558 mm (age 1.3), 487 mm (age 2.2), and 554 mm (age 2.3; Table 3). The average lengths of the respective age groups in the escapements were: 463 mm (age 1.2), 562 mm (age 1.3), 479 mm (age 2.2), and 558 mm (age 2.3).

The female contributions among the major age groups ranged from 38% to 56% in the commercial harvests and ranged from 44% to 64% in the escapements (Table 3).

Exploitation rates among the major age groups ranged from 58.4% for age-1.2 fish to 76.4% for age-2.3 fish with an overall exploitation rate of 70.0% (Table 3).

Subsistence And Personal Use Harvest

Subsistence and personal use harvests totaled 122,585 salmon (Table 2). Sockeye salmon represented 100,421 fish or 81.9% of the subsistence and personal use harvests combined. The Kenai River subsistence dip net fishery harvest was 13,897 sockeye salmon. The largest personal use harvest of sockeye salmon occurred in the Fish Creek personal use dip net fishery (40,000 fish).

Commercial Harvest by Fishery

The Central District drift harvest historically averages 57.8% of the total UCI sockeye salmon harvest and in 1994 represented 52.7%. Age-1.3 and -2.3 fish were the predominant age groups contributing 65.0% (1,221,781 fish) and 21.1% (395,645 fish) to the total harvest (Table 4). Age-1.3 fish contributed more than age-2.3 fish in both number and percentage to each fishing period harvest for the entire season (Table 4; Figures 4 and 5). Age-1.2 and -2.2 fish represented 5.3% (99,917 fish) and 7.3% (137,559 fish) of the total harvest. Trends in number and percentage of age-1.2 and -2.2 fish showed corresponding increases and decreases in the by period harvests through the end of the season (Table 4; Figures 6 and 7).

Overall sockeye salmon mean length in the Central District drift gillnet harvest ranged from 499 mm (10-11 July) to 544 (22-23 July) mm. Age-1.3 sockeye salmon ranged from 531 mm (1-4 July) to 564 mm (16-21 July; Table 4). Mean length for age-2.3 fish ranged from 526 mm (1-4 July) to 561 mm (22-23 July). Mean length ranges for age-1.2 fish was 454 mm (24 July-15 August) to 481 mm (15 July) and for age-2.2 fish from 469 mm (10-11 July) to 486 mm (22-23 July).

Percentage females in the drift harvest ranged from 39.7% (1 July) to 57.0% (24 July; Table 4).

The Cohoe/Ninilchik Beach set gillnet harvest has averaged historically 13.0% of the total UCI sockeye salmon harvest and in 1994 represented 19.0%. Most of the harvest (85.1%) was comprised of age-1.3 fish (46.8% or 316,915 fish), age-2.2 fish (21.0% or 142,366 fish), and age-2.3 fish (17.3% or 117,182 fish; Table 5). The highest portion of the by period harvest was age-1.3 fish which contributed from 32.5% to 60.5% and peaked on 15 July (Table 5; Figure 4).

Overall sockeye salmon mean length in the Cohoe/Ninilchik Beach harvest ranged from 499 mm (10-11 July) to 544 mm (22-23 July; Table 5). Age-1.3 sockeye salmon ranged in mean length from 531 mm (1-4 July) to 564 mm (16-21 July). Age-2.3 fish mean length ranged from 526 mm (1-4 July) to 561 mm (22-23 July). Age-2.2 fish ranged in mean length from 469 mm (10-11 July) to 486 mm (22-23 July).

Percentage females in the Cohoe/Ninilchik Beach harvest ranged from 48.7% (1-4 July) to 57.3% (24 July-15 August; Table 5).

The Kalifonsky Beach set gillnet harvest averaged historically 6.7% of the total UCI sockeye salmon harvest and in 1994 represented 13.8%. The four major age groups in the harvest comprised 279,702 age-1.3 fish (56.7%) followed by 79,604 age-2.3 fish (16.2%), 76,289 age-2.2

fish (15.5%), and 49,900 age-1.2 fish (10.1%; Table 6). Peak percentages in age composition occurred during 23 July-15 August for age 1.3, 1 July for age 2.3, 10-22 July for age 2.2 and 1.2 (Table 6; Figures 4-7).

Overall mean length of sockeye salmon in the Kalifonsky Beach harvests varied from 520 mm (4-8 July) to 543 mm (23 July-15 August; Table 6). Age-1.3 sockeye salmon ranged in mean length from 529 mm (1 July) to 563 mm (23 July-15 August). Age-2.3 fish ranged from 530 mm (4-8 July) to 564 mm (23 July-15 August) in mean length. Age-1.2 fish ranged in mean length from 462 mm (10-22 July) to 480 mm (1 July). Age-2.2 fish ranged from 472 mm (4-8 July) to 484 mm (1 July) in mean length (Table 6).

Percentage females in the Kalifonsky Beach harvest ranged from 42.7% (1 July) to 56.8% (23 July-15 August; Table 6).

The Salamatof Beach set gillnet harvest averaged historically 9.6% of the total UCI sockeye salmon harvest and in 1994 represented 8.8%. Age-1.3 fish represented 63.7% (199,054 fish) of the total seasonal harvest followed by age-2.2 15.3% (47,719 fish), age-2.3 13.2% (41,157 fish), and age-1.2 6.2% (19,351 fish; Table 7). Peak percentages in age composition occurred during 15-18 July for ages1.3 and 2.3, 24 July-15 August for age 2.2, and 1-11 July for age 1.2 (Table 7; Figures 4-7).

Overall mean length of sockeye salmon in the Salamatof Beach harvests ranged from 517 mm to 545 mm (Table 7). Age-1.3 fish mean length ranged from 539 mm to 563 mm. Age-2.2 fish ranged in mean length from 473 mm to 498 mm. Age-2.3 fish mean length ranged from 530 mm to 563 mm. Age-1.2 fish mean length ranged from 462 mm (24 July-15 August) to 486 mm (15-18 July). Ages 1.3, 2.2, and 2.3 mean lengths gradually increased over time.

Percentage females in the Salamatof Beach harvest ranged from 49.8% (1-11 July) to 60.6% (24 July-15 August; Table 7).

Sockeye salmon sampled from the Cohoe/Ninilchik Beach harvest were, on average, the smallest (527 mm overall) of the three Upper Subdistrict beach fisheries (Tables 5-7). The largest (544 mm overall) fish, on average, were harvested in the Salamatof Beach fishery. Fish sampled in the Kalifonsky Beach harvest were intermediate in average length (536 mm overall). Trends in overall average length among the three beach harvests were similar among the four major age groups.

The Eastern Subdistrict set gillnet harvest averaged historically 1.6% of the total UCI sockeye salmon harvest and in 1994 represented 0.8%. Of the total commercial harvest for this subdistrict, 95.3% were: age-1.2 fish (36.1%), age-1.3 fish (31.7%), age-2.2 fish (15.7%), and age-2.3 fish (11.8%; Table 8). Overall mean length was 513 mm and the percentage females in the harvest was 50.0%.

The General Subdistrict set gillnet harvest averaged historically 4.0% of the total UCI sockeye salmon harvest and in 1994 represented 2.6%. The majority of the harvest was represented by age-1.3 (67.4%), age-2.3 (19.4%) and age-1.2 (6.3%) fish (Table 9). The overall mean length of sockeye salmon was 533 mm. Females represented 46.3% of the harvest.

Escapement

A minimum escapement of 1,492,845 sockeye salmon entered the major rivers and streams of UCI (Tables 2 and 10-17). Escapements into the major sockeye salmon producing systems were 1,003,446 late run fish (Kenai River), 205,117 fish (Kasilof River), 30,355 fish (Crescent River), 30,788 fish (Packers Creek), 128,032 fish (Yentna River), and 95,107 fish (Fish Creek).

The Yentna River sonar indexed 226 chinook, 25,173 coho, 79,178 pink and 18,971 chum salmon (Table 2).

Half of the total UCI escapement was represented by age-1.3 sockeye salmon. However, the percentage of age-1.3 fish ranged from 1.8% in Packers Creek to 61.1% in Kenai River (Table 3; Figure 8).

The major age groups of sockeye salmon contributing to the Kenai River escapement of 1,003,446 fish were age-1.2 (6.6%), age-1.3 (61.1%), age-2.2 (17.8%), and age-2.3 (12.1%) fish (Tables 3 and 10). Mean lengths were 457 mm (age 1.2), 564 mm (age 1.3), 486 mm (age 2.2), and 563 mm (age 2.3) with an overall mean length of 541 mm. Females contributed 57.3% to the Kenai River escapement.

The age composition for sockeye salmon in Hidden Creek, a tributary of the Kenai River, was 60.2% age 1.2 fish, 31.3% age 1.3 fish, and 6.4% age 2.2 fish, and 2.1% age 2.3 fish (Table 11). Females contributed only 32.0% to the total escapement of 6,086 fish.

Age-1.2 (26.4%), -1.3 (28.4%), -2.2 (28.2%), and -2.3 (17.0%) sockeye salmon contributed to the total Kasilof River escapement of 205,117 fish (Tables 3 and 12). Mean lengths were 465 mm (age 1.2), 535 mm (age 1.3), 470 mm (age 2.2), and 535 mm (age 2.3) with an overall mean length of 498 mm. Females contributed 52.6% to the Kasilof River escapement.

Crescent River escapement of 30,355 sockeye salmon was comprised of age 1.2 (6.6%), age 1.3 (49.6%), age 2.2 (12.3%), and age 2.3 (30.5%) fish (Tables 3 and 13). Mean lengths were 464 mm (age 1.2), 554 mm (age 1.3), 469 mm (age 2.2), and 560 mm (age2.3) with an overall mean length of 538 mm. Females contributed 46.3% to the escapement.

Packers Creek sockeye salmon escapement of 30,788 fish was represented primarily by age 2.2 (51.9%), age 2.3 (24.6%), and age 1.2 (18.9%) fish (Tables 3 and 14). Mean lengths were 443 mm (age 2.2), 530 mm (age-2.3), 432 mm (age 1.2) Females represented 47.0% of the total escapement.

Nine age groups contributed to the Yentna River sockeye salmon escapement of 128,032 fish, but four major age groups composed 93.7% of the total escapement (Tables 3 and 15). Age group contributions were 23.2% (age 1.2), 43.2% (age 1.3), 9.7% (age 2.2), and 17.6% (age 2.3). Mean lengths were 473 mm (age 1.2), 578 mm (age 1.3), 488 mm (age 2.2), and 580 mm (age 2.3). Female contribution to the escapement was 45.0%.

The major age group of sockeye entering Chelatna Lake, a tributary of the Yentna River, was age 1.3 accounting for 82.2% of the 28,303 fish escapement (Table 16). Age composition between Chelatna Lake and Yentna River was statistically different (χ^2=263.2, P<0.05, df=3) for ages 1.2, 1.3, 2.2, and 2.3. Mean length-at-age of Yentna River sockeye salmon was generally smaller (mean overall length - 542 mm) than Chelatna Lake fish (549 mm). Females represented 54.6% of the Chelatna Lake escapement.

Fish Creek sockeye escapement (95,107 fish) age composition was predominantly age-1.2 (51.3%), age-1.3 (15.3%), and age-2.2 (21.3%; Tables 3 and 17). Average lengths were 468 mm (age-1.2), 524 mm (age-1.3) and 469 mm (age-2.2) with an overall average length of 472 mm. Females represented 50.7% of the escapement.

Chinook Salmon

A subsistence harvest of 2,341 chinook salmon was taken in the UCI fishery in 1994. The largest chinook salmon harvest (840 fish) occurred in the Tyonek fishery (Table 2). Only 66 fish were accounted for in the UCI personal use harvests in 1994.

The total commercial harvest of chinook salmon was 20,260 fish in 1994 (Table 2). This harvest was above the long-term (1966-93) average of 15,936 fish and the highest since 1989 (26,742 fish). Of the 20,260 chinook harvested, 15,885 fish or 78.4% were harvested in the Upper Subdistrict fishery. Chinook salmon harvested from the Upper Subdistrict set gillnet fishery were predominantly age-1.2 (12.3%), age-1.3 (14.6%), and age-1.4 (61.3%) fish (Table 18). The average length for age-1.2 fish was 687 mm, for age-1.3 fish was 871 mm, and for age-1.4 fish was 1,019 mm. Females accounted for 48.4% of the commercial harvest.

Late run chinook salmon entering the Kenai River numbered 71,899 fish (Table 2). There are other chinook populations (e.g. Susitna River) that are sampled by ADF&G personnel and accounted for in separate reports.

Coho Salmon

A total of 14,247 coho salmon was harvested in the subsistence (12,292 fish) and personal use (1,955 fish) fisheries in UCI (Table 2). The largest subsistence harvest (3,081 fish) was in the General Subdistrict set gillnet fishery. The largest personal use harvest (1,000 fish) was taken in the Fish Creek dip net fishery.

Three commercial harvests were sampled and comprised three major age groups (Table 19). Age-2.1 (78.8%) coho salmon accounted for the bulk of the harvests with age-1.1 (10.5%) and age-3.1 (10.8%) fish accounting for the remainder. Age-2.1 coho salmon contributed 79.4% (241,218 fish) to the Central District drift, 77.0% (53,328 fish) to the Upper Subdistrict, and 78.2% (89,790 fish) to the General Subdistrict harvests (Tables 20-22).

Mean lengths for all three age groups combined were, on average, larger in the Upper Subdistrict harvest (601 mm) than in the Central District drift (570 mm) or General Subdistrict (579 mm) harvests (Table 19).

Females represented from 46% in the Upper Subdistrict harvest to 52% in the General Subdistrict harvest (Table 19).

Chum Salmon

Chum salmon were sampled in the commercial drift gillnet harvest only and comprised primarily age-0.3 (56.8%) and age-0.4 (38.2%) fish (Table 23). Overall mean lengths for age-0.3 and age-0.4 chum salmon were 584 mm and 602 mm. For all periods combined, the percentage females was 49.0%.

DISCUSSION

This is the seventeenth consecutive year of collecting sockeye salmon age and length composition data in Upper Cook Inlet. Each year the age structure tends to vary depending on the run strength of a particular brood year, age class and salmon stock. This year was no exception, where age-1.3 fish represented 65% of the total commercial drift gillnet harvest (the major contributor), and a very strong age-1.3 return was observed in the Kenai River.

The total return of sockeye salmon to Upper Cook Inlet (5.2 million fish) exceeded the preseason forecast (3.3 million fish) by 56% or 1.9 million fish. Five-year-old fish (age 1.3) returning to the Kenai River were the major contributing factor (at three times the estimated forecast of 2.1 million fish). In past years when there is a large component of five-year-old fish in the return, a strong return to the Kenai River was indicated. A strong six-year-old component (age 2.3) of sockeye salmon was observed in the Kasilof and Crescent Rivers and Fish Creek returns. The combined systems contribution's of age-2.3 fish were above the preseason forecast by 47% or 277,127 fish.

Sockeye salmon male-to-female sex ratios in the commercial fisheries and escapements were similar to past years. Females contributed slightly more than males in both commercial harvests and escapements in the five- and six-year-old components but less in the four-year-old component.

Length composition of sockeye salmon in the commercial harvests and escapements was similar to previous years.

Chinook, coho, and chum salmon age, sex and length compositions were all comparable to previous years.

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Table 1. Number of salmon sampled from commercial harvests and escapements in Upper Cook Inlet, Alaska, in 1994.

Location[a]	Species			
	Chinook	Sockeye	Coho	Chum
Commercial Catch:				
Central District				
Drift		7,540	1,200	1,200
Upper Subdistrict	1,945[b]		1,521[b]	
Salamatof Beach		1,800		
Kalifonsky Beach		2,516		
Cohoe/Ninilchik Beach		4,328		
Western Subdistrict			58	
Northern District				
Eastern Subdistrict		1,069		
General Subdistrict		1,674	1,300	
Subtotal	1,945	18,927	4,079	1,200
Escapement:				
Central District				
Kenai River				
Mainstem late run		1,607		
Hidden Creek		803[c]		
Kasilof River				
Mainstem		849		
Crescent River		634		
Packers Creek		989[c]		
Northern District				
Susitna River				
Yentna River		812		
Chelatna Lake (Lake Creek)		865[c]		
Fish Creek		443[d]		
Subtotal		7,002		
Total	1,945	25,929	4,079	1,200

Table 1. (page 2 of 2)

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[a] Specific locations not footnoted were sampled by Commercial Fisheries Management and Development (CFM&D) Division personnel, Alaska Department of Fish and Game (ADF&G).
[b] Represents pooled samples from the Upper Subdistrict commercial set gillnet fisheries.
[c] Samples collected by Cook Inlet Aquaculture Association (CIAA) personnel.
[d] Samples collected by Sport Fish Division personnel, ADF&G.

Table 2. Subsistence, personal use and commercial salmon harvests by area and gear type and sockeye escapements, Upper Cook Inlet, Alaska, in 1994.

Fishery		Chinook	Sockeye	Coho	Pink	Chum	Total
Subsistence Harvest[a]:							
Northern district							
Set Net							
General		314	4,639	3,081	314	684	9,032
Tyonek		840	41	111	0	22	1,014
Eastern		61	1,191	521	51	24	1,848
Knik Arm		236	7,419	2,736	353	680	11,424
	Subtotal	1,451	13,290	6,449	718	1,410	23,318
Central District							
Set Net							
Upper							
Ninilchik		88	2,089	274	77	43	2,571
Cohoe		145	3,605	368	109	25	4,252
Kalifonsky		245	9,488	1,154	288	40	11,215
Salamatof		132	7,822	1,008	455	52	9,469
Kalgin Island		24	205	90	3	7	329
Western		3	228	241	0	13	485
Chinitna Bay		12	15	36	3	31	97
	Subtotal	649	23,452	3,171	935	211	28,418
Dip Net							
Kenai River		187	13,897	2,535	1,263	114	17,996
Kasilof River		54	2,735	137	59	14	2,999
	Subtotal	241	16,632	2,672	1,322	128	20,995
Subsistence Harvest Total		2,341	53,374	12,292	2,975	1,749	72,731
Personal Use Harvest:							
Northern District							
Dip Net							
Fish Creek[b]			40,000	1,000		500	41,500
Set Net							
Eklutna[c]		2	27	7	60	76	172
Central District							
Dip Net							
Kasilof River			5,000[d]				5,000
Set Net							
Kenaitze[e]		57	1,858	829	134		2,878
Ninilchik[f]		7	162	119	16		304
Personal Use Harvest Total		66	47,047	1,955	210	576	49,854

-Continued-

Table 2. (page 2 of 2)

Fishery		Chinook	Sockeye	Coho	Pink	Chum	Total
Commercial Harvest:							
A. Northern District Total		3,185	120,142	144,064	29,181	40,059	336,631
1. Northern District West		2,779	90,808	114,759	25,672	36,636	270,654
a. Trading Bay	247-10	248	6,720	13,563	645	1,295	22,471
b. Tyonek	247-20	349	24,092	31,625	4,301	6,272	66,639
c. Beluga	247-30	1,768	32,317	43,180	17,708	17,095	112,068
d. Susitna Flat	247-41	0	5,048	6,080	750	1,926	13,804
e. Pt. Mackenzie	247-42	262	9,477	9,148	1,056	4,763	24,706
f. Fire Island	247-43	152	5,626	10,354	1,071	4,928	22,131
g. Knik Arm	247-50	0	7,528	809	141	357	8,835
2. Northern District East		406	29,334	29,305	3,509	3,423	65,977
a. Pt. Possession	247-70	212	16,402	12,194	1,993	3,106	33,907
b. Birch Hill	247-80	163	7,221	9,048	852	249	17,533
c. Number 3 Bay	247-90	31	5,711	8,053	664	68	14,537
B. Central District Total		17,075	3,447,250	436,503	491,300	259,241	4,651,369
1. East Side Set Total		15,885	1,482,957	69,281	236,582	2,944	1,807,649
a. Salamatof	244-40	3,231	312,280	27,128	71,871	1,742	416,252
b. Kalifonsky Beach	244-30	4,748	492,917	14,977	78,294	287	591,223
d. Cohoe/Ninilchik		7,906	677,760	27,176	86,417	915	800,174
1. Cohoe	244-22	3,257	446,209	12,604	45,601	638	508,309
2. Ninilchik	244-21	4,649	231,551	14,572	40,816	277	291,865
2. West Side Set Total		203	13,124	20,153	362	2,930	36,772
a. Little Jack Slough	245-50	11	6,562	3,152	121	60	9,906
b. Polly Creek	245-40	7	1,386	2,161	14	297	3,865
c. Tuxedni Bay	245-30	173	3,644	4,589	151	1,946	10,503
d. Silver Salmon	245-20	12	1,532	10,251	76	627	12,498
3. Kustatan Total		449	7,576	9,442	595	215	18,277
a. Big River	245-55	440	4,006	3,409	20	8	7,883
b. West Foreland	245-60	9	3,570	6,033	575	207	10,394
4. Kalgin Island Total		72	64,101	26,977	2,054	836	94,040
a. West Side	246-10	59	38,473	19,190	1,614	562	59,898
b. East Side	246-20	13	25,628	7,787	440	274	34,142
5. Chinitna Bay Total		6	1,054	6,715	110	6,775	14,660
a. Set	245-10	6	1,029	4,433	105	6,462	12,035
b. Drift	245-10	0	25	2,282	5	313	2,625
6. Central District Set Total		16,615	1,558,787	130,286	239,698	13,387	1,968,773
7. Central District Drift Total		460	1,878,463	306,217	251,602	245,854	2,682,596
a. West Side	245-70,80,90	60	132,745	33,158	12,359	27,317	205,639
b. East Side	244-50,60,70	400	1,745,693	270,777	239,238	218,224	2,474,332
c. Chinitna Bay	245-10	0	25	2,282	5	313	2,625
Commercial Harvest Total		20,260	3,567,392	580,567	520,481	299,300	4,988,000
Escapement:							
Kenai River		71,899[g]	1,003,446				1,075,345
Kasilof River			205,117				205,117
Crescent River			30,355				30,355
Packers Creek			30,788				30,788
Yentna River[h]		226	128,032	25,173	79,178	18,971	251,580
Fish Creek			95,107				95,107
Escapement Total		72,125	1,492,845	25,173	79,178	18,971	1,688,292
Upper Cook Inlet Total		94,792	5,160,658	619,987	602,844	320,596	6,798,877

[a] Source: J. Fox, ADF&G, Soldotna, personal communication.
[b] Source: C. Whitmore, ADF&G, Palmer, personal communication (preliminary).
[c] Eklutna educational fishery
[d] Source: D. Nelson, ADF&G, Soldotna, personal communication (preliminary).
[e] Kenaitze Tribe issued a court ordered permit to operate a set gill net in the Kenai River downstream from a point one-quarter mile above the Warren Ames Bridge and including marine waters adjacent to the river mouth normally closed to commercial salmon fishing.
[f] Ninilchik educational fishery
[g] Source: S. Hammarstrom, ADF&G, Soldotna, personal communication.
[h] Chinook, coho, pink, and chum salmon escapements represent minimum indices of abundance only.

Table 3. Age, length and sex composition of sockeye salmon in selected commercial gillnet harvests and river escapements with overall exploitation rates by age, Upper Cook Inlet, Alaska, in 1994.

	Age Group														
Fishery	0.2	1.1	0.3	1.2	2.1	0.4	1.3	2.2	3.1	1.4	2.3	3.2	2.4	3.3	Total
COMMERCIAL CATCH															
Central District															
Central Drift[a]															
Number	639		12,721	99,917	109		1,221,781	137,559		3,114	395,645	148	6,805		1,878,438
Percent	.03		.68	5.32	.01		65.04	7.32		.17	21.06	.01	.36		100.00
Sample Size	1		38	399	1		4,086	517		13	1,536	3	17		6,611
Mean Length[b]	449		559	477	353		558	496		589	555	511	595		549
% Female			58	27			54	38		52	53	61	48		51
Sample Size	1		38	399	1		4,086	517		13	1,536	3	17		6,611
Cohoe/Ninilchik Beach															
Number	475		1,232	92,915	792		316,915	142,366		3,187	117,182	45	2,651		677,760
Percent	.07		.18	13.71	.12		46.76	21.01		.47	17.29	.01	.39		100.00
Sample Size	1		4	512	2		1,838	706		11	773	1	7		3,855
Mean Length	420		538	463	355		557	478		598	551	520	590		527
% Female	100		100	46	50		60	51		32	55		33		55
Sample Size	1		4	512	2		1,838	706		11	773	1	7		3,855
Kalifonsky Beach															
Number			1,668	49,900	870	364	279,702	76,289		2,759	79,604		1,304	457	492,917
Percent			.34	10.12	.18	.07	56.74	15.48		.56	16.15		.26	.09	100.00
Sample Size			4	210	2	1	1,203	280		7	515		3	2	2,227
Mean Length			560	462	394	565	560	479		581	553		611	530	536
% Female			48	46	50	100	57	49		71	59		67	95	55
Sample Size			4	210	2	1	1,203	280		7	515		3	2	2,227
Salamatof Beach															
Number			1,267	19,351	157		199,054	47,719	410	2,188	41,157	429	548		312,280
Percent			.41	6.20	.05		63.74	15.28	.13	.70	13.18	.14	.18		100.00
Sample Size			5	157	2		999	209	1	6	236	2	2		1,619
% Female			65	31			61	69		63	54	96			59
Mean Length			560	469	438		560	497	416	601	558	430	619		544
Sample Size			5	157	2		999	209	1	6	236	2	2		1,619

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Table 3. (page 2 of 5)

Fishery	Age Group 0.2	1.1	0.3	1.2	2.1	0.4	1.3	2.2	3.1	1.4	2.3	3.2	2.4	3.3	Total
COMMERCIAL CATCH (continued)															
Northern District															
Eastern Subdistrict															
Number	29	104	835	10,583	236		9,295	4,616		133	3,468	35			29,334
Percent	.10	.35	2.85	36.08	.80		31.69	15.74		.45	11.82	.12			100.00
Sample Size	1	3	25	335	7		291	148		4	108	1			923
Mean Length	439	352	556	486	360		545	486		600	545	441			513
% Female		66	48	47	71		56	45			50	100			50
Sample Size	1	3	25	335	7		291	148		4	108	1			923
General Subdistrict															
Number	307		4,264	16,503			46,902	8,652		38	14,142				90,808
Percent	.34		4.70	18.17			51.65	9.53		.04	15.57				100.00
Sample Size	3		73	183			827	87		2	237				1,412
Mean Length	464		550	485			552	488		606	552				533
% Female	21		45	36			51	44		50	45				46
Sample Size	3		73	183			827	87		2	237				1,412
Commercial Catch Total															
Number	1,450	104	21,987	289,169	2,164	364	2,073,649	417,201	410	11,419	651,198	657	11,308	457	3,481,537[c]
Percent	.04	.00	.63	8.31	.06	.01	59.56	11.98	.01	.33	18.70	.02	.32	.01	100.00
Sample Size	6	3	149	1,796	14	1	9,244	1,947	1	43	3,405	7	29	2	16,647
Mean Length	442	352	556	470	377	565	558	487	416	592	554	455	597	530	542
% Female	0	66	57	38	46	100	56	48		53	54	81	44	95	53
Sample Size	6	3	149	1,796	14	1	9,244	1,947	1	43	3,405	7	29	2	16,647

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Table 3. (page 3 of 5)

Fishery	Age Group 0.2	1.1	0.3	1.2	2.1	0.4	1.3	2.2	3.1	1.4	2.3	3.2	2.4	3.3	Total
ESCAPEMENT															
Central District															
Kenai River															
Number	748	2,993	748	65,849	8,231		612,844	178,091	748	7,483	121,222	1,496	2,993		1,003,446
Percent	.07	.30	.07	6.56	.82		61.07	17.75	.07	.75	12.08	.15	.30		100.00
Sample Size	1	4	1	88	11		819	238	1	10	162	2	4		1,341
Mean Length	423	346	530	457	385		564	486	388	590	563	398	595		541
% Female		25	100	48	36		55	72	100	30	55	50	75		57
Sample Size	1	4	1	88	11		819	238	1	10	162	2	4		1,341
Kasilof River															
Number				54,187			58,160	57,875			34,895				205,117
Percent				26.42			28.35	28.22			17.01				100.00
Sample Size				191			205	204			123				723
Mean Length				465			535	470			535				498
% Female				50			50	53			60				53
Sample Size				191			205	204			123				723
Crescent River															
Number		55		1,997	110		15,043	3,718		110	9,267		55		30,355
Percent		.18		6.58	.36		49.56	12.25		.36	30.53		.18		100.00
Sample Size		1		36	2		271	67		2	167		1		547
Mean Length		351		464	350		554	469		573	560		510		538
% Female				25	50		54	19		50	49		100		46
Sample Size		1		36	2		271	67		2	167		1		547
Packers Creek															
Number				5,825	857		547	15,985			7,566		4	4	30,788
Percent				18.92	2.78		1.78	51.92			24.57		.01	.01	100.00
Sample Size				113	17		25	591			153		1	1	901
Mean Length				432	343		520	443			530		505	500	461
% Female				28	25		76	46			63				47
Sample Size				113	17		25	591			153		1	1	901

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Table 3. (page 4 of 5)

Fishery	Age Group 0.2	1.1	0.3	1.2	2.1	0.4	1.3	2.2	3.1	1.4	2.3	3.2	2.4	3.3	Total
ESCAPEMENT (continued)															
Northern District															
Yentna River															
Number	1,608	804	5,025	29,747		402	55,271	12,462		201	22,512				128,032
Percent	1.26	.63	3.92	23.23		.31	43.17	9.73		.16	17.58				100.00
Sample Size	8	4	25	148		2	275	62		1	112				637
Mean Length	452	365	577	473		603	578	488		600	580				542
% Female	25	50	44	28		50	52	52			50				45
Sample Size	8	4	25	148		2	275	62		1	112				637
Fish Creek															
Number		4,849		48,767	1,347		14,549	20,206			5,389				95,107
Percent		5.10		51.28	1.42		15.30	21.25			5.67				100.00
Sample Size		18		181	5		54	75			20				353
Mean Length		351		468	365		524	469			521				472
% Female		17		47	60		57	55			80				51
Sample Size		18		181	5		54	75			20				353
Escapement Total															
Number	2,356	8,701	5,773	206,372	10,545	402	756,414	288,337	748	7,794	200,851	1,496	3,052	4	1,492,845
Percent	.16	.58	.39	13.82	.71	.03	50.67	19.31	.05	.52	13.45	.10	.20	.00	100.00
Sample Size	9	27	26	757	35	2	1,649	1,237	1	13	737	2	6	1	4,502
Mean Length	443	350	571	463	379	603	562	479	388	590	558	398	593	500	529
% Female	0	23	51	44	39	50	55	64	100	30	56	50	75		55
Sample Size	9	27	26	757	35	2	1,649	1,237	1	13	737	2	6	1	4,502

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Table 3. (page 5 of 5)

	Age Group														
Fishery	0.2	1.1	0.3	1.2	2.1	0.4	1.3	2.2	3.1	1.4	2.3	3.2	2.4	3.3	Total
Upper Cook Inlet Total															
Number	3,806	8,805	27,760	495,541	12,709	766	2,830,063	705,538	1,158	19,213	852,049	2,153	14,360	461	4,974,382
Percent	.08	.18	.56	9.96	.26	.02	56.89	14.18	.02	.39	17.13	.04	.29	.01	100.00
Sample Size	15	30	175	2,553	49	3	10,893	3,184	2	56	4,142	9	35	3	21,149
Mean Length	443	350	559	467	378	585	559	483	398	591	555	415	596	530	538
% Female	25	23	56	41	40	74	56	55	65	43	54	60	51	94	54
Sample Size	15	30	175	2,553	49	3	10,893	3,184	2	56	4,142	9	35	3	21,149
Exploitation Rate															
Percent	38.10	1.18	79.20	58.35	17.03	47.52	73.27	59.13	35.41	59.43	76.43	30.52	78.75	99.13	69.99

[a] Total does not include Chinitna Bay Subdistrict harvest of 25 fish.
[b] Mean length in mm.
[c] Total does not include Chinitna Bay, Kustatan, Western, and Kalgin Island Subdistrict's harvests which equals 85,855 fish. No age composition information available for these harvests.

Table 4. Age, sex and length composition of sockeye salmon in the Central District commercial drift gillnet harvest, Upper Cook Inlet, Alaska, in 1994.

	Age Group									
	0.2	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	Total
Sample Period 1: 27 June											
Males		19	247		1,556	133	9	948			2,912
Percent		0.35	4.59		28.88	2.47	0.17	17.60			54.06
Sample Size		2	26		164	14	1	100			307
Mean Length[a]		568	493		545	496	624	545			539
Std. Error		1	5		2	3		3			1
Sample Size		2	26		164	14	1	100			307
Females		19	57		1,347	123		920	9		2,475
Percent		0.35	1.06		25.00	2.28		17.08	0.17		45.94
Sample Size		2	6		142	13		97	1		261
Mean Length		522	491		544	517		548	511		543
Std. Error		22	11		2	9		2			2
Sample Size		2	6		142	13		97	1		261
Both Sexes		38	304		2,903	256	9	1,868	9		5,387
Percent		0.71	5.64		53.89	4.75	0.17	34.68	0.17		100.00
Sample Size		4	32		306	27	1	197	1		568
Mean Length		545	493		545	506	624	547	511		541
Std. Error		11	5		2	4		2			1
Sample Size		4	32		306	27	1	197	1		568

-Continued-

Table 4. (page 2 of 16)

	Age Group										
	0.2	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	Total
Sample Period 2: 1 July											
Males		58	1,559		9,473	2,137		4,909	58		18,194
Percent		0.19	5.17		31.42	7.09		16.28	0.19		60.34
Sample Size		1	27		164	37		85	1		315
Mean Length		585	479		536	490		589	520		540
Std. Error			5		2	6		56			15
Sample Size		1	27		164	37		85	1		315
Females		231	289		7,219	578		3,639			11,956
Percent		0.77	0.96		23.94	1.92		12.07			39.66
Sample Size		4	5		125	10		63			207
Mean Length		526	481		531	487		535			529
Std. Error		9	11		2	9		3			2
Sample Size		4	5		125	10		63			207
Both Sexes		289	1,848		16,692	2,715		8,548	58		30,150
Percent		0.96	6.13		55.36	9.00		28.35	0.19		100.00
Sample Size		5	32		289	47		148	1		522
Mean Length		538	479		534	490		566	520		536
Std. Error		9	4		1	5		32			9
Sample Size		5	32		289	47		148	1		522

-Continued-

Table 4. (page 3 of 16)

	Age Group										
	0.2	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	Total
Sample Period 3: 4 July											
Males			2,417		12,247	2,417		5,318			22,399
Percent			5.74		29.06	5.74		12.62			53.16
Sample Size			30		152	30		66			278
Mean Length			477		537	479		537			524
Std. Error			5		2	4		4			2
Sample Size			30		152	30		66			278
Females			1,047		12,569	886		5,157	81		19,740
Percent			2.48		29.83	2.10		12.24	0.19		46.84
Sample Size			13		156	11		64	1		245
Mean Length			489		537	499		535	505		532
Std. Error			8		2	8		4			2
Sample Size			13		156	11		64	1		245
Both Sexes			3,464		24,816	3,303		10,475	81		42,139
Percent			8.22		58.89	7.84		24.86	0.19		100.00
Sample Size			43		308	41		130	1		523
Mean Length			481		537	484		536	505		528
Std. Error			4		2	3		3			1
Sample Size			43		308	41		130	1		523

-Continued-

Table 4. (page 4 of 16)

	Age Group									
	0.2	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	Total
Sample Period 4: 8 July											
Males			9,704		36,389	6,307		13,100			65,500
Percent			7.75		29.07	5.04		10.47			52.33
Sample Size			40		150	26		54			270
Mean Length			473		545	478		533			525
Std. Error			3		3	5		4			2
Sample Size			40		150	26		54			270
Females		728	5,094		39,543	3,396		10,917			59,678
Percent		0.58	4.07		31.59	2.71		8.72			47.67
Sample Size		3	21		163	14		45			246
Mean Length		548	481		541	507		538			534
Std. Error		3	6		2	11		4			2
Sample Size		3	21		163	14		45			246
Both Sexes		728	14,798		75,932	9,703		24,017			125,178
Percent		0.58	11.82		60.66	7.75		19.19			100.00
Sample Size		3	61		313	40		99			516
Mean Length		548	475		543	488		535			529
Std. Error		3	3		2	5		3			1
Sample Size		3	61		313	40		99			516

-Continued-

Table 4. (page 5 of 16)

	Age Group										
	0.2	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	Total
Sample Period 5: 10 July[b]											
Males			101		281	92		161			635
Percent			7.87		21.88	7.17		12.54			49.45
Sample Size			22		61	20		35			138
Mean Length			495		563	494		551			539
Std. Error			4		4	6		5			3
Sample Size			22		61	20		35			138
Females			37		405	32	5	170			649
Percent			2.88		31.54	2.49	0.39	13.24			50.55
Sample Size			8		88	7	1	37			141
Mean Length			491		549	489	590	548			543
Std. Error			5		3	12		5			2
Sample Size			8		88	7	1	37			141
Both Sexes			138		686	124	5	331			1,284
Percent			10.75		53.43	9.66	0.39	25.78			100.00
Sample Size			30		149	27	1	72			279
Mean Length			494		555	493	590	550			541
Std. Error			3		2	6		4			2
Sample Size			30		149	27	1	72			279

-Continued-

Table 4. (page 6 of 16)

	Age Group										
	0.2	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	Total
Sample Period 6: 11 July[c]											
Males			205		529	222		205			1,161
Percent			8.96		23.12	9.70		8.96			50.74
Sample Size			12		31	13		12			68
Mean Length			468		545	492		530			519
Std. Error			7		5	9		10			4
Sample Size			12		31	13		12			68
Females			34		683	137		273			1,127
Percent			1.49		29.85	5.99		11.93			49.26
Sample Size			2		40	8		16			66
Mean Length			445		539	488		542			531
Std. Error			10		4	6		8			3
Sample Size			2		40	8		16			66
Both Sexes			239		1,212	359		478			2,288
Percent			10.45		52.97	15.69		20.89			100.00
Sample Size			14		71	21		28			134
Mean Length			465		542	490		537			525
Std. Error			6		3	6		6			2
Sample Size			14		71	21		28			134

-Continued-

Table 4. (page 7 of 16)

	Age Group									
	0.2	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	Total
Sample Period 7: 15 July[d]											
Males	708	25,481		111,124	17,695		34,682		708		190,398
Percent	0.19	6.92		30.19	4.81		9.42		0.19		51.73
Sample Size	1	36		157	25		49		1		269
Mean Length	575	472		560	487		555		600		541
Std. Error		5		3	4		4				2
Sample Size	1	36		157	25		49		1		269
Females	2,123	4,955		125,988	4,955		38,929		708		177,658
Percent	0.58	1.35		34.23	1.35		10.58		0.19		48.27
Sample Size	3	7		178	7		55		1		251
Mean Length	563	492		551	495		542		595		546
Std. Error	9	11		2	12		3				1
Sample Size	3	7		178	7		55		1		251
Both Sexes	2,831	30,436		237,112	22,650		73,611		1,416		368,056
Percent	0.77	8.27		64.42	6.15		20.00		0.38		100.00
Sample Size	4	43		335	32		104		2		520
Mean Length	566	475		555	489		548		598		543
Std. Error	9	4		2	4		3				1
Sample Size	4	43		335	32		104		2		520

-Continued-

Table 4. (page 8 of 16)

	Age Group									
	0.2	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	Total
Sample Period 8: 18 July[e]											
Males	2,422	10,657			73,144	14,532		24,704		484	125,943
Percent	0.94	4.13			28.33	5.63		9.57		0.19	48.78
Sample Size	5	22			151	30		51		1	260
Mean Length	592	473			569	522		561		595	554
Std. Error	6	4			2	34		5			4
Sample Size	5	22			151	30		51		1	260
Females		1,453			102,208	4,360		24,220			132,241
Percent		0.56			39.59	1.69		9.38			51.22
Sample Size		3			211	9		50			273
Mean Length		458			555	508		557			553
Std. Error		17			2	8		3			1
Sample Size		3			211	9		50			273
Both Sexes	2,422	12,110			175,352	18,892		48,924		484	258,184
Percent	0.94	4.69			67.92	7.32		18.95		0.19	100.00
Sample Size	5	25			362	39		101		1	533
Mean Length	592	472			561	519		559		595	553
Std. Error	6	4			1	26		3			2
Sample Size	5	25			362	39		101		1	533

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Table 4. (page 9 of 16)

	Age Group										
	0.2	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	Total
Sample Period 9: 24 July[f]											
Males			1,420	109	15,511	2,294		4,041			23,375
Percent			2.61	0.20	28.51	4.22		7.43			42.97
Sample Size			13	1	142	21		37			214
Mean Length			480	353	577	506		578			563
Std. Error			8		3	6		5			2
Sample Size			13	1	142	21		37			214
Females		765	655		22,064	1,529		6,008			31,021
Percent		1.41	1.20		40.56	2.81		11.04			57.03
Sample Size		7	6		202	14		55			284
Mean Length		544	474		557	514		554			552
Std. Error		6	5		2	6		4			1
Sample Size		7	6		202	14		55			284
Both Sexes		765	2,075	109	37,575	3,823		10,049			54,396
Percent		1.41	3.81	0.20	69.08	7.03		18.47			100.00
Sample Size		7	19	1	344	35		92			498
Mean Length		544	478	353	565	509		564			557
Std. Error		6	5		1	4		3			1
Sample Size		7	19	1	344	35		92			498

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Table 4. (page 10 of 16)

	Age Group										
	0.2	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	Total
Sample Period 10: 25 July[9]											
Males			5,824		100,751	9,318		24,460			140,353
Percent			1.96		33.92	3.14		8.24			47.25
Sample Size			10		173	16		42			241
Mean Length			486		570	494		567			561
Std. Error			6		2	8		4			2
Sample Size			10		173	16		42			241
Females		2,912	2,912		110,069	6,989	582	32,613		582	156,659
Percent		0.98	0.98		37.06	2.35	0.20	10.98		0.20	52.75
Sample Size		5	5		189	12	1	56		1	269
Mean Length		554	475		554	503	591	551		551	550
Std. Error		12	11		2	10		3			1
Sample Size		5	5		189	12	1	56		1	269
Both Sexes		2,912	8,736		210,820	16,307	582	57,073		582	297,012
Percent		0.98	2.94		70.98	5.49	0.20	19.22		0.20	100.00
Sample Size		5	15		362	28	1	98		1	510
Mean Length		554	482		562	498	591	558		551	555
Std. Error		12	5		1	6		3			1
Sample Size		5	15		362	28	1	98		1	510

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Table 4. (page 11 of 16)

	Age Group										
	0.2	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	Total
Sample Period 11: 26 - 28 July[h]											
Males	639	1,916	5,749		97,093	13,414		37,049		1,278	157,138
Percent	0.19	0.56	1.69		28.57	3.95		10.90		0.38	46.24
Sample Size	1	3	9		152	21		58		2	246
Mean Length	449	527	487		570	488		570		603	559
Std. Error		27	8		2	6		3		3	2
Sample Size	1	3	9		152	21		58		2	246
Females		639	3,194		120,727	13,414	639	43,437		639	182,689
Percent		0.19	0.94		35.53	3.95	0.19	12.78		0.19	53.76
Sample Size		1	5		189	21	1	68		1	286
Mean Length		545	501		555	499	516	551		591	549
Std. Error			13		2	4		3			1
Sample Size		1	5		189	21	1	68		1	286
Both Sexes	639	2,555	8,943		217,820	26,828	639	80,486		1,917	339,827
Percent	0.19	0.75	2.63		64.10	7.89	0.19	23.68		0.56	100.00
Sample Size	1	4	14		341	42	1	126		3	532
Mean Length	449	532	492		561	493	516	560		599	554
Std. Error		27	7		1	4		2		3	1
Sample Size	1	4	14		341	42	1	126		3	532

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Table 4. (page 12 of 16)

	Age Group										
	0.2	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	Total
Sample Period 12: 29 July[1]											
Males			3,172		52,025	6,979	317	13,323		634	76,450
Percent			1.92		31.54	4.23	0.19	8.08		0.38	46.35
Sample Size			10		164	22	1	42		2	241
Mean Length			468		571	502	630	560		612	560
Std. Error			13		2	6		4		6	2
Sample Size			10		164	22	1	42		2	241
Females			2,221		60,907	4,441		20,619		317	88,505
Percent			1.35		36.92	2.69		12.50		0.19	53.65
Sample Size			7		192	14		65		1	279
Mean Length			495		553	510		555		565	550
Std. Error			15		1	8		3			1
Sample Size			7		192	14		65		1	279
Both Sexes			5,393		112,932	11,420	317	33,942		951	164,955
Percent			3.27		68.46	6.92	0.19	20.58		0.58	100.00
Sample Size			17		356	36	1	107		3	520
Mean Length			479		561	505	630	557		596	554
Std. Error			10		1	5		2		6	1
Sample Size			17		356	36	1	107		3	520

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Table 4. (page 13 of 16)

	Age Group										
	0.2	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	Total
Sample Period 13: 1 August[J]											
Males		181	1,268		27,720	3,261	725	12,863			46,018
Percent		0.19	1.35		29.48	3.47	0.77	13.68			48.94
Sample Size		1	7		153	18	4	71			254
Mean Length		589	480		579	509	623	578			571
Std. Error			12		2	8	5	3			2
Sample Size		1	7		153	18	4	71			254
Females			544		31,886	2,174	181	12,863		362	48,010
Percent			0.58		33.91	2.31	0.19	13.68		0.38	51.06
Sample Size			3		176	12	1	71		2	265
Mean Length			474		556	485	610	549		602	550
Std. Error			4		2	6		3		5	1
Sample Size			3		176	12	1	71		2	265
Both Sexes		181	1,812		59,606	5,435	906	25,726		362	94,028
Percent		0.19	1.93		63.39	5.78	0.96	27.36		0.38	100.00
Sample Size		1	10		329	30	5	142		2	519
Mean Length		589	478		566	499	620	563		602	561
Std. Error			9		1	5	5	2		5	1
Sample Size		1	10		329	30	5	142		2	519

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Table 4. (page 14 of 16)

	Age Group										
	0.2	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	Total
Sample Period 14: 2 - 29 August[k]											
Males			5,248		22,959	5,904	437	9,840		437	44,825
Percent			5.49		24.03	6.18	0.46	10.30		0.46	46.91
Sample Size			24		105	27	2	45		2	205
Mean Length			463		576	466	594	566		631	547
Std. Error			7		3	5	27	5		18	2
Sample Size			24		105	27	2	45		2	205
Females			4,373		25,364	9,840	219	10,277		656	50,729
Percent			4.58		26.54	10.30	0.23	10.76		0.69	53.09
Sample Size			20		116	45	1	47		3	232
Mean Length			466		549	487	593	541		587	529
Std. Error			4		2	4		4		8	2
Sample Size			20		116	45	1	47		3	232
Both Sexes			9,621		48,323	15,744	656	20,117		1,093	95,554
Percent			10.07		50.57	16.48	0.69	21.05		1.14	100.00
Sample Size			44		221	72	3	92		5	437
Mean Length			465		562	479	594	553		604	537
Std. Error			4		2	3	27	3		9	1
Sample Size			44		221	72	3	92		5	437

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Table 4. (page 15 of 16)

	Age Group										
	0.2	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	Total
All Periods Combined:											
Males	639	5,304	73,052	109	560,802	84,705	1,488	185,603	58	3,541	915,301
Percent	0.03	0.28	3.89	0.01	29.85	4.51	0.08	9.88	0.00	0.19	48.73
Sample Size	1	13	288	1	1,919	320	8	747	1	8	3,306
Mean Length	449	566	474	353	566	494	616	562	520	606	551
Std. Error		12	2		1	6	11	2		4	1
Sample Size	1	13	288	1	1,919	320	8	747	1	8	3,306
Females		7,417	26,865		660,979	52,854	1,626	210,042	90	3,264	963,137
Percent		0.39	1.43		35.19	2.81	0.09	11.18	0.00	0.17	51.27
Sample Size		25	111		2,167	197	5	789	2	9	3,305
Mean Length		553	482		552	499	564	548	506	583	547
Std. Error		6	3		1	2		1		6	1
Sample Size		25	111		2,167	197	5	789	2	9	3,305
Both Sexes	639	12,721	99,917	109	1,221,781	137,559	3,114	395,645	148	6,805	1,878,438[1]
Percent	0.03	0.68	5.32	0.01	65.04	7.32	0.17	21.06	0.01	0.36	100.00
Sample Size	1	38	399	1	4,086	517	13	1,536	3	17	6,611
Mean Length	449	559	477	353	558	496	589	555	511	595	549
Std. Error		6	2		1	4	11	1		3	1
Sample Size	1	38	399	1	4,086	517	13	1,536	3	17	6,611

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Table 4. (page 16 of 16)

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[a] Mean length in mm.
[b] Upper Subdistrict south of Blanchard Line within 3 miles of shore.
[c] Upper Subdistrict south of Colliers Dock within 3 miles of shore.
[d] All areas except for Western Subdistrict south of Redoubt Pt.
[e] South of south Kalgin Island Light or south of Colliers Dock within 3 miles of shore (Western Subdistrict closed).
[f] Upper Subdistrict south of Colliers Dock within 3 miles of shore.
[g] All areas except for Western Subdistrict south of Redoubt Pt from 0700-1900h. Upper Subdistrict south of Colliers Dock within 3 miles of shore from 0500-0700h and 1900-2200h.
[h] South of northern tip of Kalgin Island or Upper Subdistrict south of Colliers Dock within 3 miles of shore. Combined harvests but only sampled on 27 July.
[i] Upper Subdistrict south of Colliers Dock within 3 miles of shore 0500-0700h. All areas except for Western Subdistrict south of Redoubt Pt 0700-1900h.
[j] All areas except for Western Subdistrict south of Redoubt Pt 0700-1900h. Upper Subdistrict south of Colliers Dock within 3 miles of shore 1900-2200h.
[k] Represents combined harvest with sample taken on 2 August from Upper Subdistrict south of Colliers Dock within 3 miles of shore.
[l] Total does not include Chinitna Bay harvest of 25 fish for a grand total of 1,878,463 fish.

Table 5. Age, sex and length composition of sockeye salmon in the Cohoe/Ninilchik Beach commercial set gillnet harvest, Upper Cook Inlet, Alaska, in 1994.

	Age Group										
	0.2	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	Total
Sample Period 1: 1 - 4 July											
Males			1,650		7,400	2,051	45	4,057	45		15,248
Percent			5.55		24.88	6.90	0.15	13.64	0.15		51.27
Sample Size			37		166	46	1	91	1		342
Mean Length[a]			464		535	475	541	525	520		517
Std. Error			3		2	3		3			1
Sample Size			37		166	46	1	91	1		342
Females			1,070		7,267	2,051		4,102			14,490
Percent			3.60		24.44	6.90		13.79			48.73
Sample Size			24		163	46		92			325
Mean Length			472		526	469		526			514
Std. Error			6		2	4		2			1
Sample Size			24		163	46		92			325
Both Sexes			2,720		14,667	4,102	45	8,159	45		29,738
Percent			9.15		49.32	13.79	0.15	27.44	0.15		100.00
Sample Size			61		329	92	1	183	1		667
Mean Length			468		531	472	541	526	520		516
Std. Error			3		1	2		2			1
Sample Size			61		329	92	1	183	1		667

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Table 5. (page 2 of 8)

	Age Group										
	0.2	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	Total
Sample Period 2: 8 July											
Males			1,491		4,047	1,747	43	2,684			10,012
Percent			6.57		17.82	7.69	0.19	11.82			44.09
Sample Size			35		95	41	1	63			235
Mean Length			475		545	477	623	534			520
Std. Error			4		3	3		4			2
Sample Size			35		95	41	1	63			235
Females		43	724		6,944	1,747		3,238			12,696
Percent		0.19	3.19		30.58	7.69		14.26			55.91
Sample Size		1	17		163	41		76			298
Mean Length		477	461		534	479		528			521
Std. Error			5		2	4		3			1
Sample Size		1	17		163	41		76			298
Both Sexes		43	2,215		10,991	3,494	43	5,922			22,708
Percent		0.19	9.75		48.40	15.39	0.19	26.08			100.00
Sample Size		1	52		258	82	1	139			533
Mean Length		477	471		538	478	623	531			520
Std. Error			3		2	2		2			1
Sample Size		1	52		258	82	1	139			533

-Continued-

Table 5. (page 3 of 8)

	Age Group										
	0.2	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	Total
Sample Period 3: 10 - 11 July											
Males			2,950		2,383	2,724		946		38	9,041
Percent			14.58		11.77	13.46		4.67		0.19	44.67
Sample Size			78		63	72		25		1	239
Mean Length			465		544	470		537		586	495
Std. Error			2		4	3		6			2
Sample Size			78		63	72		25		1	239
Females			1,967		4,199	2,875		2,156			11,197
Percent			9.72		20.75	14.21		10.65			55.33
Sample Size			52		111	76		57			296
Mean Length			466		525	469		537			502
Std. Error			2		3	3		4			1
Sample Size			52		111	76		57			296
Both Sexes			4,917		6,582	5,599		3,102		38	20,238
Percent			24.30		32.52	27.67		15.33		0.19	100.00
Sample Size			130		174	148		82		1	535
Mean Length			465		532	469		537		586	499
Std. Error			2		2	2		3			1
Sample Size			130		174	148		82		1	535

-Continued-

Table 5. (page 4 of 8)

	Age Group										
	0.2	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	Total
Sample Period 4: 15 July											
Males			3,397		12,631	4,458		4,564			25,050
Percent			6.14		22.84	8.06		8.25			45.30
Sample Size			32		119	42		43			236
Mean Length			480		567	485		562			540
Std. Error			3		3	5		5			2
Sample Size			32		119	42		43			236
Females			1,911		20,803	2,972		4,564			30,250
Percent			3.46		37.62	5.37		8.25			54.70
Sample Size			18		196	28		43			285
Mean Length			484		558	489		551			546
Std. Error			7		2	5		4			1
Sample Size			18		196	28		43			285
Both Sexes			5,308		33,434	7,430		9,128			55,300
Percent			9.60		60.46	13.44		16.51			100.00
Sample Size			50		315	70		86			521
Mean Length			481		562	487		556			543
Std. Error			3		2	4		3			1
Sample Size			50		315	70		86			521

-Continued-

Table 5. (page 5 of 8)

	Age Group									
	0.2	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	Total
Sample Period 5: 16 - 21 July											
Males			19,815	396	37,649	21,401	793	15,060		793	95,907
Percent			9.47	0.19	17.99	10.23	0.38	7.20		0.38	45.83
Sample Size			50	1	95	54	2	38		2	242
Mean Length			461	345	577	474	607	575		620	529
Std. Error			3		3	4	8	5		3	2
Sample Size			50	1	95	54	2	38		2	242
Females		1,189	16,249	396	54,691	21,797	396	18,230		396	113,344
Percent		0.57	7.77	0.19	26.14	10.42	0.19	8.71		0.19	54.17
Sample Size		3	41	1	138	55	1	46		1	286
Mean Length		540	471	365	556	481	611	545		544	527
Std. Error		7	3		2	4		4			2
Sample Size		3	41	1	138	55	1	46		1	286
Both Sexes		1,189	36,064	792	92,340	43,198	1,189	33,290		1,189	209,251
Percent		0.57	17.23	0.38	44.13	20.64	0.57	15.91		0.57	100.00
Sample Size		3	91	2	233	109	3	84		3	528
Mean Length		540	465	355	564	477	608	558		594	528
Std. Error		7	2		2	3	8	3		3	1
Sample Size		3	91	2	233	109	3	84		3	528

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Table 5. (page 6 of 8)

	Age Group									
	0.2	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	Total
Sample Period 6: 22 - 23 July											
Males			5,840		20,765	5,516	324	8,598			41,043
Percent			6.70		23.84	6.33	0.37	9.87			47.11
Sample Size			36		128	34	2	53			253
Mean Length			470		577	486	607	571			548
Std. Error			5		3	5	17	5			2
Sample Size			36		128	34	2	53			253
Females			4,056		27,091	4,218	162	10,545			46,072
Percent			4.66		31.10	4.84	0.19	12.10			52.89
Sample Size			25		167	26	1	65			284
Mean Length			471		553	486	564	553			540
Std. Error			5		2	6		4			2
Sample Size			25		167	26	1	65			284
Both Sexes			9,896		47,856	9,734	486	19,143			87,115
Percent			11.36		54.93	11.17	0.56	21.97			100.00
Sample Size			61		295	60	3	118			537
Mean Length			471		563	486	593	561			544
Std. Error			3		2	4	17	3			1
Sample Size			61		295	60	3	118			537

-Continued-

Table 5. (page 7 of 8)

	Age Group										
	0.2	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	Total
Sample Period 7: 24 July - 15 August											
Males			14,711		42,711	32,269	949	16,609		949	108,198
Percent			5.81		16.85	12.73	0.37	6.55		0.37	42.70
Sample Size			31		90	68	2	35		2	228
Mean Length			451		571	476	589	560		606	525
Std. Error			4		3	3	35	5		3	2
Sample Size			31		90	68	2	35		2	228
Females	475		17,084		68,334	36,540	475	21,829		475	145,212
Percent	0.19		6.74		26.97	14.42	0.19	8.61		0.19	57.30
Sample Size	1		36		144	77	1	46		1	306
Mean Length	420		457		545	480	597	537		548	517
Std. Error			4		2	3		4			2
Sample Size	1		36		144	77	1	46		1	306
Both Sexes	475		31,795		111,045	68,809	1,424	38,438		1,424	253,410
Percent	0.19		12.55		43.82	27.15	0.56	15.17		0.56	100.00
Sample Size	1		67		234	145	3	81		3	534
Mean Length	420		454		555	478	592	547		586	520
Std. Error			3		2	2	35	3		3	1
Sample Size	1		67		234	145	3	81		3	534

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Table 5. (page 8 of 8)

	Age Group										
	0.2	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	Total
All Periods Combined:											
Males			49,854	396	127,586	70,166	2,154	52,518	45	1,780	304,499
Percent			7.36	0.06	18.82	10.35	0.32	7.75	0.01	0.26	44.93
Sample Size			299	1	756	357	8	348	1	5	1,775
Mean Length			461	345	570	476	598	562	520	611	529
Std. Error			2		2	2	17	2		2	1
Sample Size			299	1	756	357	8	348	1	5	1,775
Females	475	1,232	43,061	396	189,329	72,200	1,033	64,664		871	373,261
Percent	0.07	0.18	6.35	0.06	27.93	10.65	0.15	9.54		0.13	55.07
Sample Size	1	4	213	1	1,082	349	3	425		2	2,080
Mean Length	420	538	466	365	549	480	597	542		546	525
Std. Error		7	2		1	2		2			1
Sample Size	1	4	213	1	1,082	349	3	425		2	2,080
Both Sexes	475	1,232	92,915	792	316,915	142,366	3,187	117,182	45	2,651	677,760
Percent	0.07	0.18	13.71	0.12	46.76	21.01	0.47	17.29	0.01	0.39	100.00
Sample Size	1	4	512	2	1,838	706	11	773	1	7	3,855
Mean Length	420	538	463	355	557	478	598	551	520	590	527
Std. Error		7	1		1	1	17	2		2	1
Sample Size	1	4	512	2	1,838	706	11	773	1	7	3,855

[a] Mean length in mm.

Table 6. Age, sex and length composition of sockeye salmon in the Kalifonsky Beach commercial set gillnet harvest, Upper Cook Inlet, Alaska, in 1994.

	Age Group										
	0.3	1.2	2.1	0.4	1.3	2.2	1.4	2.3	2.4	3.3	Total
Sample Period 1: 1 July											
Males		262			1,684	205		968			3,119
Percent		4.81			30.94	3.77		17.79			57.31
Sample Size		23			148	18		85			274
Mean Length[a]		482			531	483		534			525
Std. Error		5			2	6		3			2
Sample Size		23			148	18		85			274
Females		80			1,275	182		786			2,323
Percent		1.47			23.43	3.34		14.44			42.69
Sample Size		7			112	16		69			204
Mean Length		474			528	486		529			523
Std. Error		12			2	9		2			2
Sample Size		7			112	16		69			204
Both Sexes		342			2,959	387		1,754			5,442
Percent		6.28			54.37	7.11		32.23			100.00
Sample Size		30			260	34		154			478
Mean Length		480			529	484		532			524
Std. Error		5			1	5		2			1
Sample Size		30			260	34		154			478

-Continued-

Table 6. (page 2 of 5)

	Age Group										
	0.3	1.2	2.1	0.4	1.3	2.2	1.4	2.3	2.4	3.3	Total
Sample Period 2: 4 - 8 July											
Males		805			3,069	914		1,959		22	6,769
Percent		6.81			25.97	7.73		16.58		0.19	57.28
Sample Size		37			141	42		90		1	311
Mean Length		470			538	473		533		550	520
Std. Error		3			2	2		2			1
Sample Size		37			141	42		90		1	311
Females		392			2,611	283		1,763			5,049
Percent		3.32			22.09	2.39		14.92			42.72
Sample Size		18			120	13		81			232
Mean Length		473			530	469		528			521
Std. Error		5			2	7		2			1
Sample Size		18			120	13		81			232
Both Sexes		1,197			5,680	1,197		3,722		22	11,818
Percent		10.13			48.06	10.13		31.49		0.19	100.00
Sample Size		55			261	55		171		1	543
Mean Length		471			534	472		530		550	520
Std. Error		3			1	2		2			1
Sample Size		55			261	55		171		1	543

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Table 6. (page 3 of 5)

	Age Group										
	0.3	1.2	2.1	0.4	1.3	2.2	1.4	2.3	2.4	3.3	Total
Sample Period 3: 10 - 22 July											
Males		18,178			55,626	21,451	364	18,542			114,161
Percent		7.32			22.40	8.64	0.15	7.47			45.97
Sample Size		50			153	59	1	51			314
Mean Length		458			569	476	615	553			531
Std. Error		3			3	4		6			2
Sample Size		50			153	59	1	51			314
Females	364	12,361		364	74,167	21,087	1,091	24,723			134,157
Percent	0.15	4.98		0.15	29.87	8.49	0.44	9.96			54.03
Sample Size	1	34		1	204	58	3	68			369
Mean Length	546	467		565	551	480	573	545			531
Std. Error		5			2	4	13	3			1
Sample Size	1	34		1	204	58	3	68			369
Both Sexes	364	30,539		364	129,793	42,538	1,455	43,265			248,318
Percent	0.15	12.30		0.15	52.27	17.13	0.59	17.42			100.00
Sample Size	1	84		1	357	117	4	119			683
Mean Length	546	462		565	559	478	584	548			531
Std. Error		3			2	3	13	3			1
Sample Size	1	84		1	357	117	4	119			683

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Table 6. (page 4 of 5)

	Age Group									
	0.3	1.2	2.1	0.4	1.3	2.2	1.4	2.3	2.4	3.3	Total
Sample Period 4: 23 July - 15 August											
Males	869	7,824	435		60,420	16,518	435	11,302	435		98,238
Percent	0.38	3.44	0.19		26.58	7.27	0.19	4.97	0.19		43.21
Sample Size	2	18	1		139	38	1	26	1		226
Mean Length	579	454	391		577	479	586	573	627		550
Std. Error	15	5			2	6		5			2
Sample Size	2	18	1		139	38	1	26	1		226
Females	435	9,998	435		80,850	15,649	869	19,561	869	435	129,101
Percent	0.19	4.40	0.19		35.56	6.88	0.38	8.60	0.38	0.19	56.79
Sample Size	1	23	1		186	36	2	45	2	1	297
Mean Length	533	467	396		553	480	575	559	603	529	538
Std. Error		7			2	5	18	3	6		2
Sample Size	1	23	1		186	36	2	45	2	1	297
Both Sexes	1,304	17,822	870		141,270	32,167	1,304	30,863	1,304	435	227,339
Percent	0.57	7.84	0.38		62.14	14.15	0.57	13.58	0.57	0.19	100.00
Sample Size	3	41	2		325	74	3	71	3	1	523
Mean Length	563	461	394		563	480	578	564	611	529	543
Std. Error	15	5			1	4	18	3	6		1
Sample Size	3	41	2		325	74	3	71	3	1	523

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Table 6. (page 5 of 5)

	Age Group										
	0.3	1.2	2.1	0.4	1.3	2.2	1.4	2.3	2.4	3.3	Total
All Periods Combined:											
Males	869	27,069	435		120,799	39,088	799	32,771	435	22	222,287
Percent	0.18	5.49	0.09		24.51	7.93	0.16	6.65	0.09	0.00	45.10
Sample Size	2	128	1		581	157	2	252	1	1	1,125
Mean Length	579	458	391		572	477	599	558	627	550	539
Std. Error	15	2			2	3		4			1
Sample Size	2	128	1		581	157	2	252	1	1	1,125
Females	799	22,831	435	364	158,903	37,201	1,960	46,833	869	435	270,630
Percent	0.16	4.63	0.09	0.07	32.24	7.55	0.40	9.50	0.18	0.09	54.90
Sample Size	2	82	1	1	622	123	5	263	2	1	1,102
Mean Length	539	467	396	565	551	480	574	550	603	529	534
Std. Error		4			1	3	11	2	6		1
Sample Size	2	82	1	1	622	123	5	263	2	1	1,102
Both Sexes	1,668	49,900	870	364	279,702	76,289	2,759	79,604	1,304	457	492,917
Percent	0.34	10.12	0.18	0.07	56.74	15.48	0.56	16.15	0.26	0.09	100.00
Sample Size	4	210	2	1	1,203	280	7	515	3	2	2,227
Mean Length	560	462	394	565	560	479	581	553	611	530	536
Std. Error	15	2			1	2	11	2	6		1
Sample Size	4	210	2	1	1,203	280	7	515	3	2	2,227

[a] Mean length in mm.

Table 7. Age, sex and length composition of sockeye salmon in the Salamatof Beach commercial set gillnet harvest, Upper Cook Inlet, Alaska, in 1994.

	Age Group										
	0.3	1.2	2.1	1.3	2.2	3.1	1.4	2.3	3.2	2.4	Total
Sample Period 1: 1 - 11 July											
Males	37	1,077	19	2,301	743			780	19		4,976
Percent	0.37	10.86	0.19	23.21	7.49			7.87	0.19		50.19
Sample Size	2	58	1	124	40			42	1		268
Mean Length[a]	520	472	420	543	471			529	430		514
Std. Error	50	4		3	3			4			2
Sample Size	2	58	1	124	40			42	1		268
Females		594		2,990	594			761			4,939
Percent		5.99		30.16	5.99			7.68			49.81
Sample Size		32		161	32			41			266
Mean Length		470		536	476			530			520
Std. Error		5		2	5			4			2
Sample Size		32		161	32			41			266
Both Sexes	37	1,671	19	5,291	1,337			1,541	19		9,915
Percent	0.37	16.85	0.19	53.36	13.48			15.54	0.19		100.00
Sample Size	2	90	1	285	72			83	1		534
Mean Length	520	471	420	539	473			530	430		517
Std. Error	50	3		2	3			3			1
Sample Size	2	90	1	285	72			83	1		534

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Table 7. (page 2 of 4)

	Age Group									
	0.3	1.2	2.1	1.3	2.2	3.1	1.4	2.3	3.2	2.4	Total
Sample Period 2: 15 - 18 July											
Males		4,004	138	18,501	3,176			5,523		138	31,480
Percent		5.53	0.19	25.57	4.39			7.63		0.19	43.51
Sample Size		29	1	134	23			40		1	228
Mean Length		489	440	562	491			552		570	543
Std. Error		4		3	6			5			2
Sample Size		29	1	134	23			40		1	228
Females		966		31,756	1,795		138	6,213			40,868
Percent		1.34		43.89	2.48		0.19	8.59			56.49
Sample Size		7		230	13		1	45			296
Mean Length		471		549	490		580	549			545
Std. Error		6		2	7			3			1
Sample Size		7		230	13		1	45			296
Both Sexes		4,970	138	50,257	4,971		138	11,736		138	72,348
Percent		6.87	0.19	69.47	6.87		0.19	16.22		0.19	100.00
Sample Size		36	1	364	36		1	85		1	524
Mean Length		486	440	554	491		580	550		570	544
Std. Error		3		1	5			3			1
Sample Size		36	1	364	36		1	85		1	524

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Table 7. (page 3 of 4)

	Age Group									
	0.3	1.2	2.1	1.3	2.2	3.1	1.4	2.3	3.2	2.4	Total
Sample Period 3: 24 July - 15 August											
Males	410	8,200		56,583	11,070	410	820	12,710		410	90,613
Percent	0.18	3.56		24.60	4.81	0.18	0.36	5.53		0.18	39.39
Sample Size	1	20		138	27	1	2	31		1	221
Mean Length	595	449		580	492	416	601	580		635	557
Std. Error		6		2	5		27	6			2
Sample Size	1	20		138	27	1	2	31		1	221
Females	820	4,510		86,923	30,341		1,230	15,170	410		139,404
Percent	0.36	1.96		37.79	13.19		0.53	6.60	0.18		60.61
Sample Size	2	11		212	74		3	37	1		340
Mean Length	544	485		551	500		604	548	430		538
Std. Error	30	6		2	3		14	6			2
Sample Size	2	11		212	74		3	37	1		340
Both Sexes	1,230	12,710		143,506	41,411	410	2,050	27,880	410	410	230,017
Percent	0.53	5.53		62.39	18.00	0.18	0.89	12.12	0.18	0.18	100.00
Sample Size	3	31		350	101	1	5	68	1	1	561
Mean Length	561	462		563	498	416	603	563	430	635	545
Std. Error	30	5		2	3		14	4			1
Sample Size	3	31		350	101	1	5	68	1	1	561

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Table 7. (page 4 of 4)

	Age Group										
	0.3	1.2	2.1	1.3	2.2	3.1	1.4	2.3	3.2	2.4	Total
All Periods Combined:											
Males	447	13,281	157	77,385	14,989	410	820	19,013	19	548	127,069
Percent	0.14	4.25	0.05	24.78	4.80	0.13	0.26	6.09	0.01	0.18	40.69
Sample Size	3	107	2	396	90	1	2	113	1	2	717
Mean Length	589	463	438	574	491	416	601	570	430	619	552
Std. Error	50	4		2	4		27	4			1
Sample Size	3	107	2	396	90	1	2	113	1	2	717
Females	820	6,070		121,669	32,730		1,368	22,144	410		185,211
Percent	0.26	1.94		38.96	10.48		0.44	7.09	0.13		59.31
Sample Size	2	50		603	119		4	123	1		902
Mean Length	544	481		551	499		601	548	430		539
Std. Error	30	5		2	3		14	4			1
Sample Size	2	50		603	119		4	123	1		902
Both Sexes	1,267	19,351	157	199,054	47,719	410	2,188	41,157	429	548	312,280
Percent	0.41	6.20	0.05	63.74	15.28	0.13	0.70	13.18	0.14	0.18	100.00
Sample Size	5	157	2	999	209	1	6	236	2	2	1,619
Mean Length	560	469	438	560	497	416	601	558	430	619	544
Std. Error	29	3		1	2		14	3			1
Sample Size	5	157	2	999	209	1	6	236	2	2	1,619

[a]Mean length in mm.

Table 8. Age, sex and length composition of sockeye salmon in the Eastern Subdistrict commercial set gillnet harvest, Upper Cook Inlet, Alaska, in 1994.

	Age Group										
	0.2	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	Total
Sample Period 1: 6 June - 18 July											
Males	29		86	2,563		1,653	1,340	29	627		6,327
Percent	0.24		0.71	21.06		13.58	11.01	0.24	5.15		51.99
Sample Size	1		3	90		58	47	1	22		222
Mean Length[a]	439		504	486		550	489	600	545		510
Std. Error			19	3		4	3		5		2
Sample Size	1		3	90		58	47	1	22		222
Females			57	2,137	29	1,967	1,026		627		5,843
Percent			0.47	17.56	0.24	16.16	8.43		5.15		48.01
Sample Size			2	75	1	69	36		22		205
Mean Length			561	474	396	532	475		537		501
Std. Error			28	3		3	4		7		2
Sample Size			2	75	1	69	36		22		205
Both Sexes	29		143	4,700	29	3,620	2,366	29	1,254		12,170
Percent	0.24		1.18	38.62	0.24	29.75	19.44	0.24	10.30		100.00
Sample Size	1		5	165	1	127	83	1	44		427
Mean Length	439		527	481	396	540	483	600	541		505
Std. Error			16	2		2	3		4		1
Sample Size	1		5	165	1	127	83	1	44		427

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Table 8. (page 2 of 3)

	Age Group										
	0.2	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	Total
Sample Period 2: 25 July - 30 September											
Males	35	346	3,080	69	2,422	1,177	104	1,107			8,340
Percent	0.20	2.02	17.94	0.40	14.11	6.86	0.61	6.45			48.59
Sample Size	1	10	89	2	70	34	3	32			241
Mean Length	382	570	489	350	564	491	600	555			523
Std. Error		8	3	19	4	5	14	4			2
Sample Size	1	10	89	2	70	34	3	32			241
Females	69	346	2,803	138	3,253	1,073		1,107	35		8,824
Percent	0.40	2.02	16.33	0.80	18.95	6.25		6.45	0.20		51.41
Sample Size	2	10	81	4	94	31		32	1		255
Mean Length	337	554	491	358	537	488		540	441		513
Std. Error	6	6	3	0	2	5		5			1
Sample Size	2	10	81	4	94	31		32	1		255
Both Sexes	104	692	5,883	207	5,675	2,250	104	2,214	35		17,164
Percent	0.61	4.03	34.28	1.21	33.06	13.11	0.61	12.90	0.20		100.00
Sample Size	3	20	170	6	164	65	3	64	1		496
Mean Length	352	562	490	355	549	489	600	547	441		518
Std. Error	6	5	2	6	2	4	14	3			1
Sample Size	3	20	170	6	164	65	3	64	1		496

-Continued-

Table 8. (page 3 of 3)

	Age Group										
	0.2	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	Total
All Periods Combined:											
Males	29	35	432	5,643	69	4,075	2,517	133	1,734		14,667
Percent	0.10	0.12	1.47	19.24	0.24	13.89	8.58	0.45	5.91		50.00
Sample Size	1	1	13	179	2	128	81	4	54		463
Mean Length	439	382	557	488	350	558	490	600	551		517
Std. Error			7	2	19	3	3	14	3		1
Sample Size	1	1	13	179	2	128	81	4	54		463
Females		69	403	4,940	167	5,220	2,099		1,734	35	14,667
Percent		0.24	1.37	16.84	0.57	17.80	7.16		5.91	0.12	50.00
Sample Size		2	12	156	5	163	67		54	1	460
Mean Length		337	555	483	364	535	482		539	441	508
Std. Error		6	6	2	0	2	3		4		1
Sample Size		2	12	156	5	163	67		54	1	460
Both Sexes	29	104	835	10,583	236	9,295	4,616	133	3,468	35	29,334
Percent	0.10	0.35	2.85	36.08	0.80	31.69	15.74	0.45	11.82	0.12	100.00
Sample Size	1	3	25	335	7	291	148	4	108	1	923
Mean Length	439	352	556	486	360	545	486	600	545	441	513
Std. Error		6	5	1	6	2	2	14	3		1
Sample Size	1	3	25	335	7	291	148	4	108	1	923

[a]Mean length in mm.

Table 9. Age, sex and length composition of sockeye salmon in the General Subdistrict commercial set gillnet harvest, Upper Cook Inlet, Alaska, in 1994.

	Age Group							
	0.2	0.3	1.2	1.3	2.2	1.4	2.3	Total
Sample Period 1: 6 June - 17 July								
Males		213	407	2,696	97	19	950	4,382
Percent		2.17	4.15	27.48	0.99	0.19	9.68	44.66
Sample Size		11	21	139	5	1	49	226
Mean Length[a]		572	511	573	519	609	570	565
Std. Error		8	4	2	10		4	2
Sample Size		11	21	139	5	1	49	226
Females		291	213	3,917	39	19	950	5,429
Percent		2.97	2.17	39.92	0.40	0.19	9.68	55.34
Sample Size		15	11	202	2	1	49	280
Mean Length		555	510	554	506	602	550	551
Std. Error		5	8	1	6		3	1
Sample Size		15	11	202	2	1	49	280
Both Sexes		504	620	6,613	136	38	1,900	9,811
Percent		5.14	6.32	67.40	1.39	0.39	19.37	100.00
Sample Size		26	32	341	7	2	98	506
Mean Length		562	511	562	515	606	560	558
Std. Error		5	4	1	8		2	1
Sample Size		26	32	341	7	2	98	506

-Continued-

Table 9. (page 2 of 4)

	Age Group							
	0.2	0.3	1.2	1.3	2.2	1.4	2.3	Total
Sample Period 2: 18 - 28 July								
Males		1,154	1,924	9,170	769		2,436	15,453
Percent		3.55	5.92	28.21	2.37		7.49	47.54
Sample Size		18	30	143	12		38	241
Mean Length		543	474	558	495		555	543
Std. Error		8	6	2	13		5	2
Sample Size		18	30	143	12		38	241
Females	64	1,026	834	11,797	577		2,757	17,055
Percent	0.20	3.16	2.57	36.29	1.77		8.48	52.46
Sample Size	1	16	13	184	9		43	266
Mean Length	455	550	485	545	483		539	539
Std. Error		4	7	2	11		4	1
Sample Size	1	16	13	184	9		43	266
Both Sexes	64	2,180	2,758	20,967	1,346		5,193	32,508
Percent	0.20	6.71	8.48	64.50	4.14		15.97	100.00
Sample Size	1	34	43	327	21		81	507
Mean Length	455	547	477	551	490		547	541
Std. Error		5	4	1	9		3	1
Sample Size	1	34	43	327	21		81	507

-Continued-

Table 9. (page 3 of 4)

	Age Group							
	0.2	0.3	1.2	1.3	2.2	1.4	2.3	Total
Sample Period 3: 29 July - 2 September								
Males	243	972	8,264	11,059	4,010		4,375	28,923
Percent	0.50	2.00	17.04	22.81	8.27		9.02	59.65
Sample Size	2	8	68	91	33		36	238
Mean Length	466	553	490	561	489		562	530
Std. Error	44	13	4	3	5		4	2
Sample Size	2	8	68	91	33		36	238
Females		608	4,861	8,263	3,160		2,674	19,566
Percent		1.25	10.02	17.04	6.52		5.51	40.35
Sample Size		5	40	68	26		22	161
Mean Length		550	477	537	484		537	514
Std. Error		17	3	3	6		6	2
Sample Size		5	40	68	26		22	161
Both Sexes	243	1,580	13,125	19,322	7,170		7,049	48,489
Percent	0.50	3.26	27.07	39.85	14.79		14.54	100.00
Sample Size	2	13	108	159	59		58	399
Mean Length	466	552	485	550	487		553	523
Std. Error	44	10	3	2	4		3	1
Sample Size	2	13	108	159	59		58	399

-Continued-

Table 9. (page 4 of 4)

	Age Group							
	0.2	0.3	1.2	1.3	2.2	1.4	2.3	Total
All Periods Combined:								
Males	243	2,339	10,595	22,925	4,876	19	7,761	48,758
Percent	0.27	2.58	11.67	25.25	5.37	0.02	8.55	53.69
Sample Size	2	37	119	373	50	1	123	705
Mean Length	466	550	488	561	491	609	561	537
Std. Error	44	7	3	2	4		3	1
Sample Size	2	37	119	373	50	1	123	705
Females	64	1,925	5,908	23,977	3,776	19	6,381	42,050
Percent	0.07	2.12	6.51	26.40	4.16	0.02	7.03	46.31
Sample Size	1	36	64	454	37	1	114	707
Mean Length	455	551	479	544	484	602	540	529
Std. Error		6	3	1	5		3	1
Sample Size	1	36	64	454	37	1	114	707
Both Sexes	307	4,264	16,503	46,902	8,652	38	14,142	90,808
Percent	0.34	4.70	18.17	51.65	9.53	0.04	15.57	100.00
Sample Size	3	73	183	827	87	2	237	1,412
Mean Length	464	550	485	552	488	606	552	533
Std. Error	44	5	2	1	3		2	1
Sample Size	3	73	183	827	87	2	237	1,412

[a]Mean length in mm.

Table 10. Age, sex and length composition of sockeye salmon escapement in Kenai River, Upper Cook Inlet, Alaska, in 1994.

	Age Group												
	0.2	1.1	0.3	1.2	2.1	1.3	2.2	3.1	1.4	2.3	3.2	2.4	Total
Sample period:	2 July - 24 August												
Males	748	2,245		34,421	5,238	274,620	50,135		5,238	54,625	748	748	428,766
Percent	0.07	0.22		3.43	0.52	27.37	5.00		0.52	5.44	0.07	0.07	42.73
Sample Size	1	3		46	7	367	67		7	73	1	1	573
Mean Length[a]	423	353		452	390	579	481		596	578	396	600	553
Std. Error		6		5	8	2	4		13	4			1
Sample Size	1	3		46	7	367	67		7	73	1	1	573
Females		748	748	31,428	2,993	338,224	127,956	748	2,245	66,597	748	2,245	574,680
Percent		0.07	0.07	3.13	0.30	33.71	12.75	0.07	0.22	6.64	0.07	0.22	57.27
Sample Size		1	1	42	4	452	171	1	3	89	1	3	768
Mean Length		326	530	462	376	552	488	388	576	551	400	593	532
Std. Error				6	9	1	2		16	3		32	1
Sample Size		1	1	42	4	452	171	1	3	89	1	3	768
Both Sexes	748	2,993	748	65,849	8,231	612,844	178,091	748	7,483	121,222	1,496	2,993	1,003,446
Percent	0.07	0.30	0.07	6.56	0.82	61.07	17.75	0.07	0.75	12.08	0.15	0.30	100.00
Sample Size	1	4	1	88	11	819	238	1	10	162	2	4	1,341
Mean Length	423	346	530	457	385	564	486	388	590	563	398	595	541
Std. Error		6		4	6	1	2		10	2		32	1
Sample Size	1	4	1	88	11	819	238	1	10	162	2	4	1,341

[a]Mean length in mm.

Table 11. Age, sex, and length composition of sockeye salmon escapement in Hidden Creek, Kenai River drainage, Upper Cook Inlet, Alaska, in 1994.

	Age Group				
	1.2	1.3	2.2	2.3	Total
Sample period:	15 July - 14 September				
Males	2,199	1,622	224	93	4,138
Percent	36.13	26.65	3.68	1.53	67.99
Sample Size	236	174	24	10	444
Mean Length[a]	501	564	516	554	527
Std. Error	2	2	7	9	1
Sample Size	236	174	24	10	444
Females	1,463	280	168	37	1,948
Percent	24.04	4.60	2.76	0.61	32.01
Sample Size	157	30	18	4	209
Mean Length	481	520	494	546	489
Std. Error	2	6	7	19	2
Sample Size	157	30	18	4	209
Both Sexes	3,662	1,902	392	130	6,086[b]
Percent	60.17	31.25	6.44	2.14	100.00
Sample Size	393	204	42	14	653
Mean Length	493	557	507	552	515
Std. Error	1	2	5	9	1
Sample Size	393	204	42	14	653

[a] Mean length in mm.
[b] Total escapement was 6,086 fish of which 2,058 fish were used in egg-take operations, realizing 4,028 spawning fish.

Table 12. Age, sex and length composition of sockeye salmon escapement in Kasilof River, Upper Cook Inlet, Alaska, in 1994.

	Age Group				
	1.2	1.3	2.2	2.3	Total
Sample period:	12 June - 11 August				
Males	27,235	28,939	27,235	13,901	97,310
Percent	13.28	14.11	13.28	6.78	47.44
Sample Size	96	102	96	49	343
Mean Length[a]	465	539	469	545	500
Std. Error	2	3	2	4	1
Sample Size	96	102	96	49	343
Females	26,952	29,221	30,640	20,994	107,807
Percent	13.14	14.25	14.94	10.24	52.56
Sample Size	95	103	108	74	380
Mean Length	466	530	470	528	497
Std. Error	2	2	2	3	1
Sample Size	95	103	108	74	380
Both Sexes	54,187	58,160	57,875	34,895	205,117
Percent	26.42	28.35	28.22	17.01	100.00
Sample Size	191	205	204	123	723
Mean Length	465	535	470	535	498
Std. Error	1	2	1	2	1
Sample Size	191	205	204	123	723

[a]Mean length in mm.

Table 13. Age, sex and length composition of sockeye salmon escapement in Crescent River, Upper Cook Inlet, Alaska, in 1994.

	Age Group								
	1.1	1.2	2.1	1.3	2.2	1.4	2.3	2.4	Total
Sample period:	28 June -	8 August							
Males	55	1,498	55	6,883	2,997	55	4,772		16,315
Percent	0.18	4.93	0.18	22.68	9.87	0.18	15.72		53.75
Sample Size	1	27	1	124	54	1	86		294
Mean Length[a]	351	458	350	563	466	612	570		536
Std. Error		4		2	4		2		1
Sample Size	1	27	1	124	54	1	86		294
Females		499	55	8,160	721	55	4,495	55	14,040
Percent		1.64	0.18	26.88	2.38	0.18	14.81	0.18	46.25
Sample Size		9	1	147	13	1	81	1	253
Mean Length		482	350	547	481	533	549	510	541
Std. Error		7		2	6		3		1
Sample Size		9	1	147	13	1	81	1	253
Both Sexes	55	1,997	110	15,043	3,718	110	9,267	55	30,355
Percent	0.18	6.58	0.36	49.56	12.25	0.36	30.53	0.18	100.00
Sample Size	1	36	2	271	67	2	167	1	547
Mean Length	351	464	350	554	469	573	560	510	538
Std. Error		4		2	3		2		1
Sample Size	1	36	2	271	67	2	167	1	547

[a]Mean length in mm.

Table 14. Age, sex, and length composition of sockeye salmon escapement in Packers Creek, Kalgin Island, Upper Cook Inlet, Alaska, in 1994.

	Age Group							
	1.2	2.1	1.3	2.2	2.3	2.4	3.3	Total
Sample Period 1: 27 May - 30 June								
Males	8	4	25	702	21	4	4	768
Percent	0.54	0.27	1.70	47.66	1.43	0.27	0.27	52.14
Sample Size	2	1	6	167	5	1	1	183
Mean Length[a]	461	415	533	458	520	505	500	463
Std. Error	9		5	2	8			2
Sample Size	2	1	6	167	5	1	1	183
Females	8		42	626	29			705
Percent	0.54		2.85	42.50	1.97			47.86
Sample Size	2		10	149	7			168
Mean Length	461		509	455	498			460
Std. Error	10		6	2	13			2
Sample Size	2		10	149	7			168
Both Sexes	16	4	67	1,328	50	4	4	1,473
Percent	1.09	0.27	4.55	90.16	3.39	0.27	0.27	100.00
Sample Size	4	1	16	316	12	1	1	351
Mean Length	461	415	518	457	507	505	500	462
Std. Error	7		4	1	8			1
Sample Size	4	1	16	316	12	1	1	351

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Table 14. (page 2 of 3)

	Age Group							
	1.2	2.1	1.3	2.2	2.3	2.4	3.3	Total
Sample Period 2: 1 July - 27 September								
Males	4,157	640	107	7,888	2,772			15,564
Percent	14.18	2.18	0.37	26.91	9.46			53.09
Sample Size	78	12	2	148	52			292
Mean Length	430	341	538	435	540			449
Std. Error	2	4	13	2	3			1
Sample Size	78	12	2	148	52			292
Females	1,652	213	373	6,769	4,744			13,751
Percent	5.64	0.73	1.27	23.09	16.18			46.91
Sample Size	31	4	7	127	89			258
Mean Length	436	345	516	450	524			474
Std. Error	4	9	21	2	2			1
Sample Size	31	4	7	127	89			258
Both Sexes	5,809	853	480	14,657	7,516			29,315
Percent	19.82	2.91	1.64	50.00	25.64			100.00
Sample Size	109	16	9	275	141			550
Mean Length	432	342	521	442	530			461
Std. Error	2	4	17	2	2			1
Sample Size	109	16	9	275	141			550

-Continued-

Table 14. (page 3 of 3)

	Age Group							
	1.2	2.1	1.3	2.2	2.3	2.4	3.3	Total
All Periods Combined:								
Males	4,165	644	132	8,590	2,793	4	4	16,332
Percent	13.53	2.09	0.43	27.90	9.07	0.01	0.01	53.05
Sample Size	80	13	8	315	57	1	1	475
Mean Length	430	342	537	437	540	505	500	450
Std. Error	2	4	10	2	3			1
Sample Size	80	13	8	315	57	1	1	475
Females	1,660	213	415	7,395	4,773			14,456
Percent	5.39	0.69	1.35	24.02	15.50			46.95
Sample Size	33	4	17	276	96			426
Mean Length	436	345	515	451	524			474
Std. Error	4	9	19	2	2			1
Sample Size	33	4	17	276	96			426
Both Sexes	5,825	857	547	15,985	7,566	4	4	30,788[b]
Percent	18.92	2.78	1.78	51.92	24.57	0.01	0.01	100.00
Sample Size	113	17	25	591	153	1	1	901
Mean Length	432	343	520	443	530	505	500	461
Std. Error	2	4	15	1	2			1
Sample Size	113	17	25	591	153	1	1	901

[a] Mean length in mm.
[b] Total escapement was 30,788 fish of which 2,922 fish were taken for egg-take realizing 27,866 spawning fish.
A commerical harvest of 22,972 fish was conducted prior to fish arriving at the weir as part of CIAA recover efforts.

Table 15. Age, sex and length composition of sockeye salmon escapement in Yentna River (RM 4.0), Susitna River drainage, Upper Cook Inlet, Alaska, in 1994.

	Age Group									
	0.2	1.1	0.3	1.2	0.4	1.3	2.2	1.4	2.3	Total
Sample period:	7 July - 12 August									
Males	1,206	402	2,814	21,506	201	26,731	6,030	201	11,256	70,347
Percent	0.94	0.31	2.20	16.80	0.16	20.88	4.71	0.16	8.79	54.94
Sample Size	6	2	14	107	1	133	30	1	56	350
Mean Length[a]	458	356	596	468	615	596	487	600	600	545
Std. Error	9	20	13	3		3	9		5	2
Sample Size	6	2	14	107	1	133	30	1	56	350
Females	402	402	2,211	8,241	201	28,540	6,432		11,256	57,685
Percent	0.31	0.31	1.73	6.44	0.16	22.29	5.02		8.79	45.06
Sample Size	2	2	11	41	1	142	32		56	287
Mean Length	435	375	553	484	590	561	490		561	540
Std. Error	25	5	11	5		2	9		3	2
Sample Size	2	2	11	41	1	142	32		56	287
Both Sexes	1,608	804	5,025	29,747	402	55,271	12,462	201	22,512	128,032
Percent	1.26	0.63	3.92	23.23	0.31	43.17	9.73	0.16	17.58	100.00
Sample Size	8	4	25	148	2	275	62	1	112	637
Mean Length	452	365	577	473	603	578	488	600	580	542
Std. Error	9	10	9	3		2	6		3	1
Sample Size	8	4	25	148	2	275	62	1	112	637

[a]Mean length in mm.

Table 16. Age, sex, and length composition of sockeye salmon escapement in Chelatna Lake (Lake Creek), Yentna River drainage, Upper Cook Inlet, Alaska, in 1994.

	Age Group								
	1.1	0.3	1.2	0.4	1.3	2.2	1.4	2.3	Total
Sample period:	13 July - 25 August								
Males	193	270	964		11,027	39	77	270	12,840
Percent	0.68	0.95	3.41		38.96	0.14	0.27	0.95	45.37
Sample Size	5	7	25		286	1	2	7	333
Mean Length[a]	339	569	499		572	510	585	569	562
Std. Error	10	5	6		1		15	8	1
Sample Size	5	7	25		286	1	2	7	333
Females	39	887	1,542	39	12,224	77	77	578	15,463
Percent	0.14	3.13	5.45	0.14	43.19	0.27	0.27	2.04	54.63
Sample Size	1	23	40	1	317	2	2	15	401
Mean Length	360	541	485	610	546	480	538	546	539
Std. Error		3	3		1	5	13	4	1
Sample Size	1	23	40	1	317	2	2	15	401
Both Sexes	232	1,157	2,506	39	23,251	116	154	848	28,303[b]
Percent	0.82	4.09	8.85	0.14	82.15	0.41	0.54	3.00	100.00
Sample Size	6	30	65	1	603	3	4	22	734
Mean Length	343	548	490	610	558	490	561	553	549
Std. Error	10	3	3		1	5	10	4	1
Sample Size	6	30	65	1	603	3	4	22	734

[a] Mean length in mm.
[b] Total escapement was 28,303 fish of which 1,030 fish were used in egg-take operations, realizing 27,273 spawning fish.

Table 17. Age, sex and length composition of sockeye salmon escapement in Fish Creek, Upper Cook Inlet, Alaska, in 1994.

	Age Group						
	1.1	1.2	2.1	1.3	2.2	2.3	Total
Sample period:	8 July - 14 August						
Males	4,041	25,865	539	6,197	9,160	1,078	46,880
Percent	4.25	27.20	0.57	6.52	9.63	1.13	49.29
Sample Size	15	96	2	23	34	4	174
Mean Length[a]	355	466	348	539	470	546	467
Std. Error	3	4	3	5	6	17	2
Sample Size	15	96	2	23	34	4	174
Females	808	22,902	808	8,352	11,046	4,311	48,227
Percent	0.85	24.08	0.85	8.78	11.61	4.53	50.71
Sample Size	3	85	3	31	41	16	179
Mean Length	327	470	377	513	469	514	477
Std. Error	9	3	7	4	4	5	2
Sample Size	3	85	3	31	41	16	179
Both Sexes	4,849	48,767	1,347	14,549	20,206	5,389	95,107
Percent	5.10	51.28	1.42	15.30	21.25	5.67	100.00
Sample Size	18	181	5	54	75	20	353
Mean Length	351	468	365	524	469	521	472
Std. Error	3	2	4	3	4	5	1
Sample Size	18	181	5	54	75	20	353

[a]Mean length in mm.

Table 18. Age, sex and length composition of chinook salmon in the Upper Subdistrict commercial set gillnet harvest, Upper Cook Inlet, Alaska, in 1994.

	Age Group										
	1.1	1.2	2.1	1.3	2.2	1.4	2.3	1.5	2.4	1.6	Total
Sample Period 1: 1 - 11 July											
Males	222	239		239	17	1,084		137	51	9	1,998
Percent	6.60	7.10		7.10	0.51	32.22		4.07	1.52	0.27	59.39
Sample Size	26	28		28	2	127		16	6	1	234
Mean Length[a]	412	632		886	740	1,051		1,133	1,067	1,230	915
Std. Error	5	14		15	60	6		17	12		4
Sample Size	26	28		28	2	127		16	6	1	234
Females	9	376		111		776	9	51	34		1,366
Percent	0.27	11.18		3.30		23.07	0.27	1.52	1.01		40.61
Sample Size	1	44		13		91	1	6	4		160
Mean Length	430	637		859		995	850	1,085	1,025		885
Std. Error		11		27		6		20	19		5
Sample Size	1	44		13		91	1	6	4		160
Both Sexes	231	615		350	17	1,860	9	188	85	9	3,364
Percent	6.87	18.28		10.40	0.51	55.29	0.27	5.59	2.53	0.27	100.00
Sample Size	27	72		41	2	218	1	22	10	1	394
Mean Length	413	635		877	740	1,028	850	1,120	1,050	1,230	903
Std. Error	5	8		13	60	4		14	11		3
Sample Size	27	72		41	2	218	1	22	10	1	394

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Table 18. (page 2 of 4)

	Age Group										
	1.1	1.2	2.1	1.3	2.2	1.4	2.3	1.5	2.4	1.6	Total
Sample Period 2: 15 - 24 July											
Males	325	542		542	9	1,285	18	190	54		2,965
Percent	6.39	10.65		10.65	0.18	25.25	0.35	3.73	1.06		58.26
Sample Size	36	60		60	1	142	2	21	6		328
Mean Length	425	652		856	660	1,037	770	1,107	1,072		869
Std. Error	4	10		9		6	40	13	39		4
Sample Size	36	60		60	1	142	2	21	6		328
Females	9	190		298		1,483	18	81	45		2,124
Percent	0.18	3.73		5.86		29.14	0.35	1.59	0.88		41.74
Sample Size	1	21		33		164	2	9	5		235
Mean Length	420	687		858		990	930	1,059	990		944
Std. Error		16		11		5	10	15	15		4
Sample Size	1	21		33		164	2	9	5		235
Both Sexes	334	732		840	9	2,768	36	271	99		5,089
Percent	6.56	14.38		16.51	0.18	54.39	0.71	5.33	1.95		100.00
Sample Size	37	81		93	1	306	4	30	11		563
Mean Length	425	661		857	660	1,012	850	1,093	1,035		900
Std. Error	4	8		7		4	21	10	22		3
Sample Size	37	81		93	1	306	4	30	11		563

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Table 18. (page 3 of 4)

	Age Group										
	1.1	1.2	2.1	1.3	2.2	1.4	2.3	1.5	2.4	1.6	Total
Sample Period 3: 25 July - 15 August											
Males		545	14	545		2,428	14	245	41		3,832
Percent		7.33	0.19	7.33		32.67	0.19	3.30	0.55		51.56
Sample Size		40	1	40		178	1	18	3		281
Mean Length		691	560	853		1,052	770	1,084	960		971
Std. Error		10		10		4		15	32		3
Sample Size		40	1	40		178	1	18	3		281
Females		68		586	14	2,673	14	218	27		3,600
Percent		0.91		7.88	0.19	35.97	0.19	2.93	0.36		48.44
Sample Size		5		43	1	196	1	16	2		264
Mean Length		660		887	770	988	900	1,061	1,030		969
Std. Error		27		11		4		10	50		4
Sample Size		5		43	1	196	1	16	2		264
Both Sexes		613	14	1,131	14	5,101	28	463	68		7,432
Percent		8.25	0.19	15.22	0.19	68.64	0.38	6.23	0.91		100.00
Sample Size		45	1	83	1	374	2	34	5		545
Mean Length		687	560	871	770	1,019	835	1,074	988		970
Std. Error		9		7		3		9	28		2
Sample Size		45	1	83	1	374	2	34	5		545

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Table 18. (page 4 of 4)

	Age Group										
	1.1	1.2	2.1	1.3	2.2	1.4	2.3	1.5	2.4	1.6	Total
All Periods Combined:											
Males	547	1,326	14	1,326	26	4,797	32	572	146	9	8,795
Percent	3.44	8.35	0.09	8.35	0.16	30.20	0.20	3.60	0.92	0.06	55.37
Sample Size	62	128	1	128	3	447	3	55	15	1	843
Mean Length	420	664	560	860	712	1,048	770	1,103	1,039	1,230	924
Std. Error	3	6		6	60	3	40	9	17		2
Sample Size	62	128	1	128	3	447	3	55	15	1	843
Females	18	634		995	14	4,932	41	350	106		7,090
Percent	0.11	3.99		6.26	0.09	31.05	0.26	2.20	0.67		44.63
Sample Size	2	70		89	1	451	4	31	11		659
Mean Length	425	655		875	770	990	902	1,064	1,011		945
Std. Error		8		8		3	10	8	15		2
Sample Size	2	70		89	1	451	4	31	11		659
Both Sexes	565	1,960	14	2,321	40	9,729	73	922	252	9	15,885
Percent	3.56	12.34	0.09	14.61	0.25	61.25	0.46	5.80	1.59	0.06	100.00
Sample Size	64	198	1	217	4	898	7	86	26	1	1,502
Mean Length	420	661	560	867	733	1,018	844	1,089	1,027	1,230	933
Std. Error	3	5		5	60	2	21	6	12		2
Sample Size	64	198	1	217	4	898	7	86	26	1	1,502

[a] Mean length in mm.

Table 19. Age, length and percent female composition of coho salmon in selected commercial gillnet harvests, Upper Cook Inlet, Alaska, in 1994.

Fishery	Age Group 1.1	2.1	3.1	Total
COMMERCIAL CATCH				
Central District				
Central Drift				
Number	29,268	241,218	33,449	303,935
Percent	9.63	79.36	11.01	100.00
Mean Length[a]	547	570	585	570
% Female	49	51	46	51
Sample Size	91	750	104	945
Upper Subdistrict				
Number	6,552	53,328	9,401	69,281
Percent	9.46	76.97	13.57	100.00
Mean Length	565	601	629	601
% Female	39	47	43	46
Sample Size	115	936	165	1,216
Northern District				
General Subdistrict				
Number	15,267	89,790	9,702	114,759
Percent	13.30	78.24	8.45	100.00
Mean Length	554	581	601	579
% Female	47	52	56	52
Sample Size	146	804	75	1,025
Commercial Harvest Total				
Number	51,087	384,336	52,552	487,975
Percent	10.47	78.76	10.77	100.00
Mean Length	552	577	596	576
% Female	47	51	47	50
Sample Size	352	2,490	344	3,186

[a]Mean length in mm.

Table 20. Age, sex and length composition of coho salmon in the Central District commercial drift gillnet harvest, Upper Cook Inlet, Alaska, in 1994.

	Age Group			
	1.1	2.1	3.1	Total
Sample period:	27 June -	9 September		
Males	14,795	117,071	18,011	149,877
Percent	4.87	38.52	5.93	49.31
Sample Size	46	364	56	466
Mean Length[a]	546	570	586	569
Std. Error	6	2	7	2
Sample Size	46	364	56	466
Females	14,473	124,147	15,438	154,058
Percent	4.76	40.85	5.08	50.69
Sample Size	45	386	48	479
Mean Length	548	571	584	570
Std. Error	7	2	6	2
Sample Size	45	386	48	479
Both Sexes	29,268	241,218	33,449	303,935[b]
Percent	9.63	79.36	11.01	100.00
Sample Size	91	750	104	945
Mean Length	547	570	585	570
Std. Error	5	1	4	1
Sample Size	91	750	104	945

[a]Mean length in mm.
[b]Total does not include Chinitna Bay harvest of 2,282 fish.

Table 21. Age, sex and length composition of coho salmon in the Upper Subdistrict commercial set gillnet harvest, Upper Cook Inlet, Alaska, in 1994.

	Age Group			
	1.1	2.1	3.1	Total
Sample period:	1 July - 15 August			
Males	3,988	28,373	5,356	37,717
Percent	5.76	40.95	7.73	54.44
Sample Size	70	498	94	662
Mean Length[a]	562	603	630	602
Std. Error	6	2	6	2
Sample Size	70	498	94	662
Females	2,564	24,955	4,045	31,564
Percent	3.70	36.02	5.84	45.56
Sample Size	45	438	71	554
Mean Length	571	598	629	600
Std. Error	5	2	3	2
Sample Size	45	438	71	554
Both Sexes	6,552	53,328	9,401	69,281
Percent	9.46	76.97	13.57	100.00
Sample Size	115	936	165	1,216
Mean Length	565	601	629	601
Std. Error	4	2	3	1
Sample Size	115	936	165	1,216

[a]Mean length in mm.

Table 22. Age, sex and length composition of coho salmon in the General Subdistrict commercial set gillnet harvest, Upper Cook Inlet, Alaska, in 1994.

	Age Group			
	1.1	2.1	3.1	Total
Sample Period 1: 27 June - 26 July				
Males	4,239	17,879	1,002	23,120
Percent	8.57	36.14	2.03	46.73
Sample Size	55	232	13	300
Mean Length[a]	557	575	587	572
Std. Error	7	3	14	3
Sample Size	55	232	13	300
Females	3,699	21,117	1,541	26,357
Percent	7.48	42.68	3.11	53.27
Sample Size	48	274	20	342
Mean Length	549	572	578	569
Std. Error	5	2	7	2
Sample Size	48	274	20	342
Both Sexes	7,938	38,996	2,543	49,477
Percent	16.04	78.82	5.14	100.00
Sample Size	103	506	33	642
Mean Length	553	573	582	570
Std. Error	4	2	7	2
Sample Size	103	506	33	642

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Table 22. (page 2 of 3)

	Age Group			
	1.1	2.1	3.1	Total
Sample Period 2: 27 July - 2 September				
Males	3,920	25,056	3,239	32,215
Percent	6.00	38.38	4.96	49.35
Sample Size	23	147	19	189
Mean Length	557	595	613	592
Std. Error	10	4	9	3
Sample Size	23	147	19	189
Females	3,409	25,738	3,920	33,067
Percent	5.22	39.43	6.00	50.65
Sample Size	20	151	23	194
Mean Length	553	579	604	580
Std. Error	10	3	5	3
Sample Size	20	151	23	194
Both Sexes	7,329	50,794	7,159	65,282
Percent	11.23	77.81	10.97	100.00
Sample Size	43	298	42	383
Mean Length	555	587	608	586
Std. Error	7	2	5	2
Sample Size	43	298	42	383

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Table 22. (page 3 of 3)

	Age Group			
	1.1	2.1	3.1	Total
All Periods Combined:				
Males	8,159	42,935	4,241	55,335
Percent	7.11	37.41	3.70	48.22
Sample Size	78	379	32	489
Mean Length	557	587	607	584
Std. Error	6	3	8	2
Sample Size	78	379	32	489
Females	7,108	46,855	5,461	59,424
Percent	6.19	40.83	4.76	51.78
Sample Size	68	425	43	536
Mean Length	551	576	597	575
Std. Error	6	2	4	2
Sample Size	68	425	43	536
Both Sexes	15,267	89,790	9,702	114,759
Percent	13.30	78.24	8.45	100.00
Sample Size	146	804	75	1,025
Mean Length	554	581	601	579
Std. Error	4	2	4	1
Sample Size	146	804	75	1,025

[a]Mean length in mm.

Table 23. Age, sex and length composition of chum salmon in the Central District commercial drift gillnet harvest, Upper Cook Inlet, Alaska, in 1994.

	Age Group				
	0.2	0.3	0.4	0.5	Total
Sample Period 1: 27 June - 23 July					
Males	1,527	34,676	27,697		63,900
Percent	1.41	31.93	25.50		58.83
Sample Size	7	159	127		293
Mean Length[a]	562	579	599		587
Std. Error	17	2	2		2
Sample Size	7	159	127		293
Females	872	24,645	19,192		44,709
Percent	0.80	22.69	17.67		41.17
Sample Size	4	113	88		205
Mean Length	507	571	588		577
Std. Error	4	2	2		2
Sample Size	4	113	88		205
Both Sexes	2,399	59,321	46,889		108,609
Percent	2.21	54.62	43.17		100.00
Sample Size	11	272	215		498
Mean Length	542	576	595		583
Std. Error	11	2	2		1
Sample Size	11	272	215		498

-Continued-

Table 23. (page 2 of 3)

	Age Group				
	0.2	0.3	0.4	0.5	Total
Sample Period 2: 24 July - 31 August					
Males	5,672	32,410	22,957	270	61,309
Percent	4.14	23.67	16.77	0.20	44.77
Sample Size	21	120	85	1	227
Mean Length	549	590	613	621	595
Std. Error	4	2	3		2
Sample Size	21	120	85	1	227
Females	3,511	47,805	24,037	270	75,623
Percent	2.56	34.91	17.55	0.20	55.23
Sample Size	13	177	89	1	280
Mean Length	551	589	604	637	592
Std. Error	4	2	3		1
Sample Size	13	177	89	1	280
Both Sexes	9,183	80,215	46,994	540	136,932
Percent	6.71	58.58	34.32	0.39	100.00
Sample Size	34	297	174	2	507
Mean Length	550	589	609	629	593
Std. Error	3	1	2		1
Sample Size	34	297	174	2	507

-Continued-

Table 23. (page 3 of 3)

	Age Group				
	0.2	0.3	0.4	0.5	Total
All Periods Combined:					
Males	7,199	67,086	50,654	270	125,209
Percent	2.93	27.32	20.63	0.11	50.99
Sample Size	28	279	212	1	520
Mean Length	552	584	605	621	591
Std. Error	5	2	2		1
Sample Size	28	279	212	1	520
Females	4,383	72,450	43,229	270	120,332
Percent	1.79	29.51	17.61	0.11	49.01
Sample Size	17	290	177	1	485
Mean Length	542	583	597	637	586
Std. Error	3	1	2		1
Sample Size	17	290	177	1	485
Both Sexes	11,582	139,536	93,883	540	245,541[b]
Percent	4.72	56.83	38.24	0.22	100.00
Sample Size	45	569	389	2	1,005
Mean Length	548	584	602	629	589
Std. Error	3	1	1		1
Sample Size	45	569	389	2	1,005

[a]Mean length in mm.
[b]Total does not include Chinitna Bay Subdistrict harvest of 313 fish.

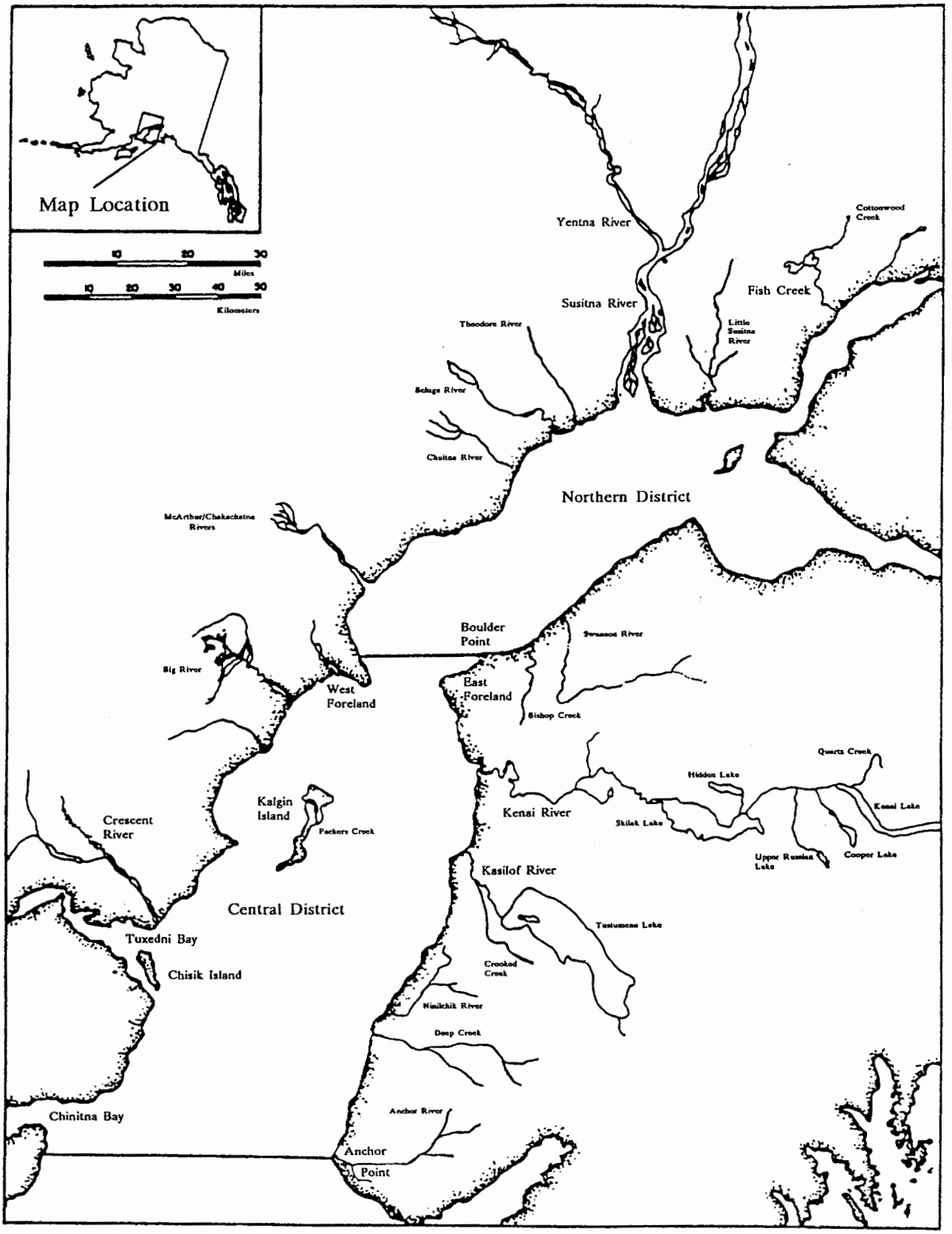

Figure 1. Map of Upper Cook Inlet showing locations of the Northern and Central Districts and the primary salmon spawning drainages.

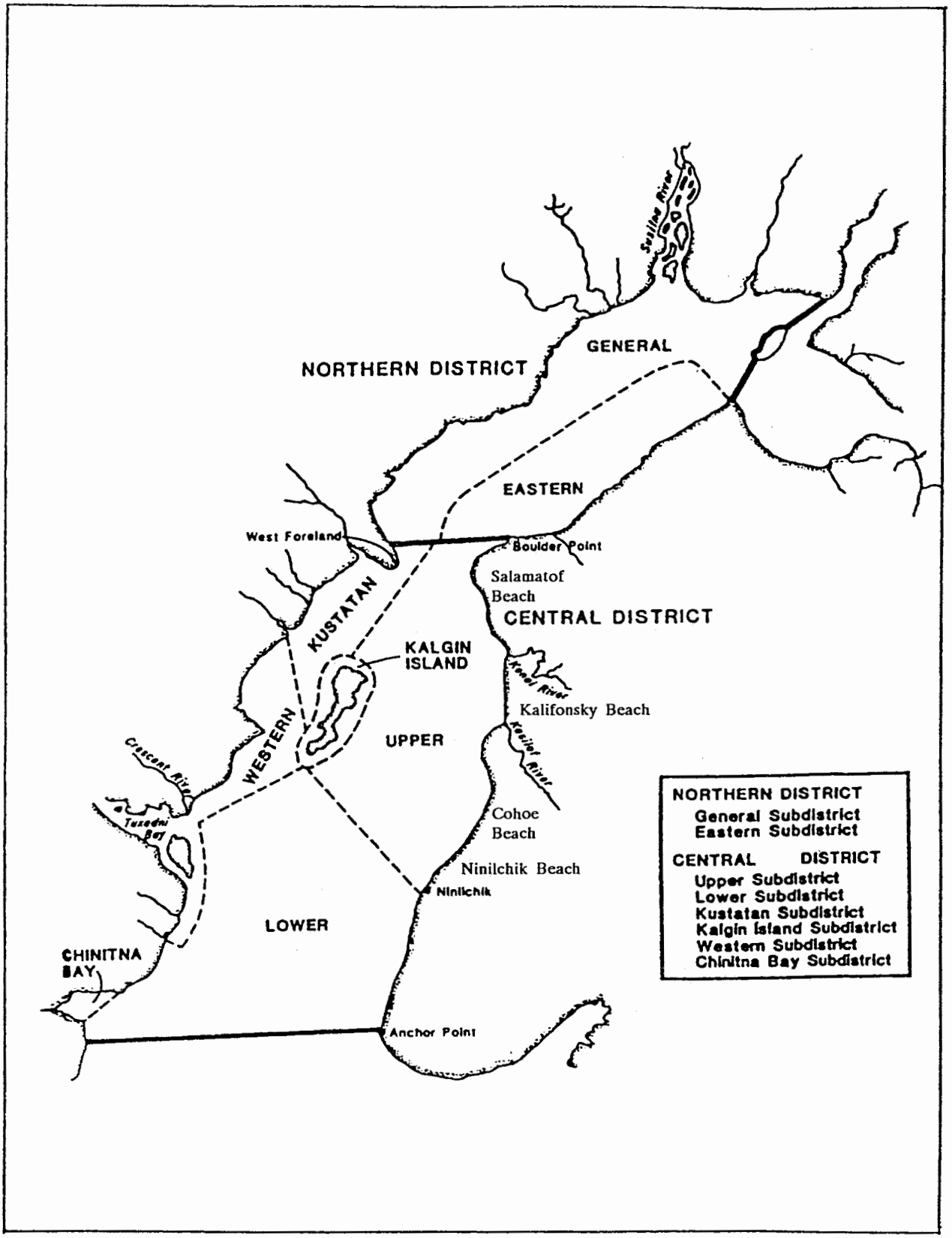

Figure 2. Map of Upper Cook Inlet showing the commercial fishing districts, subdistricts and Upper Subdistrict beach fisheries.

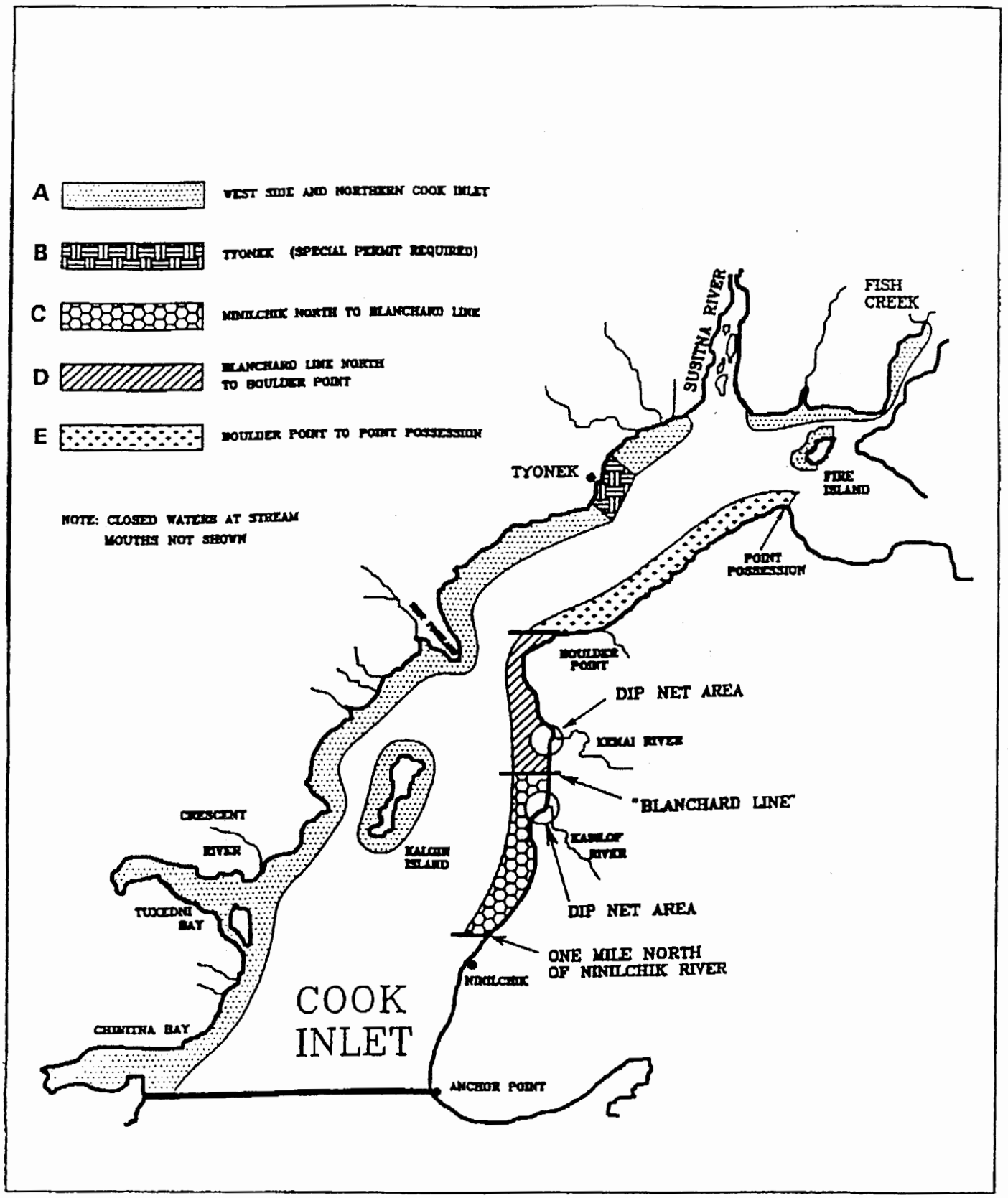

Figure 3. Map of Upper Cook Inlet showing locations of the subsistence and personal use fisheries in 1994.

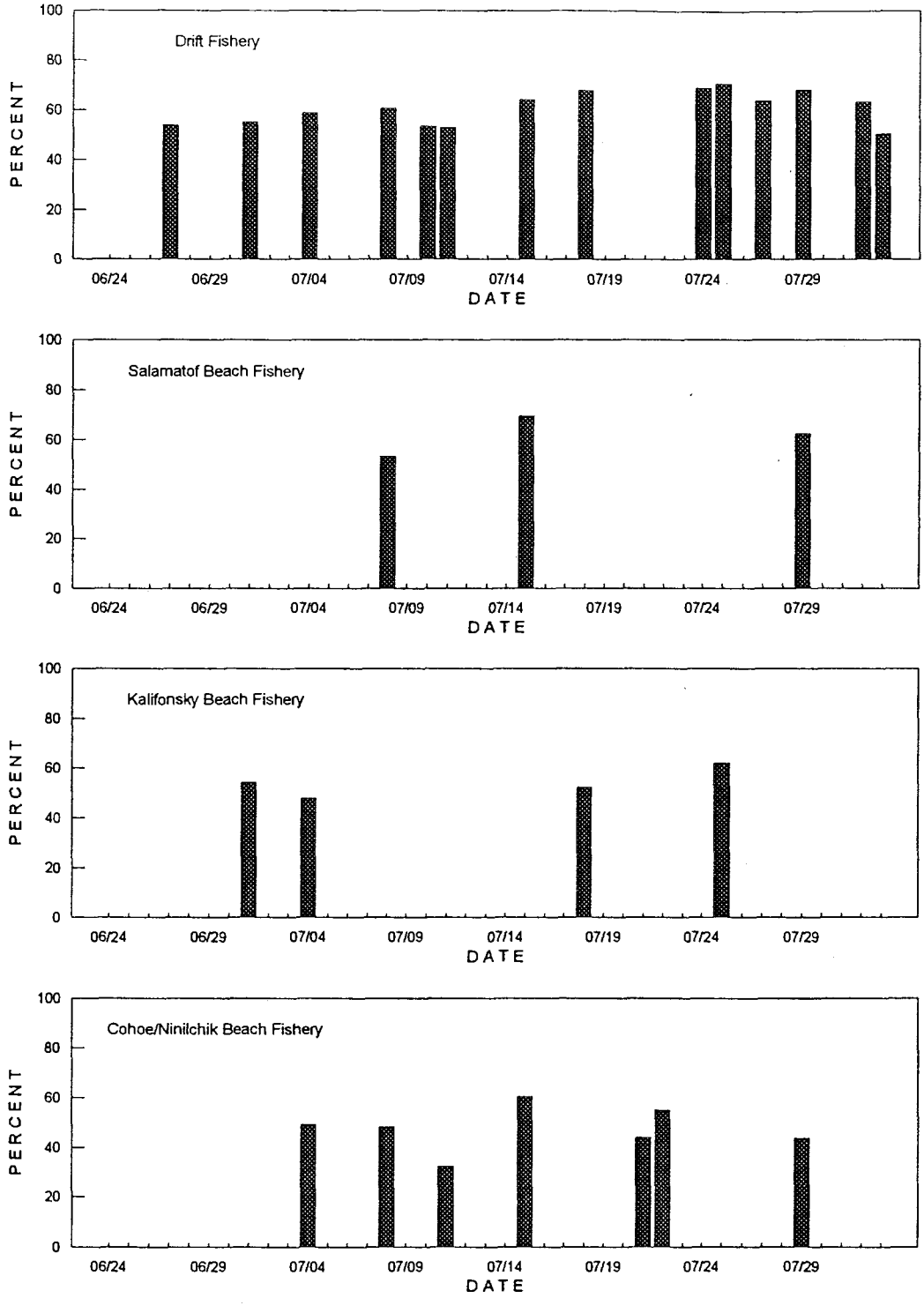

Figure 4. Trends in age-1.3 sockeye salmon composition in the Central District drift gillnet and Upper Subdistrict (Salamatof, Kalifonsky, and Cohoe/Ninilchik Beaches) set gillnet harvests, Upper Cook Inlet, Alaska, in 1994.

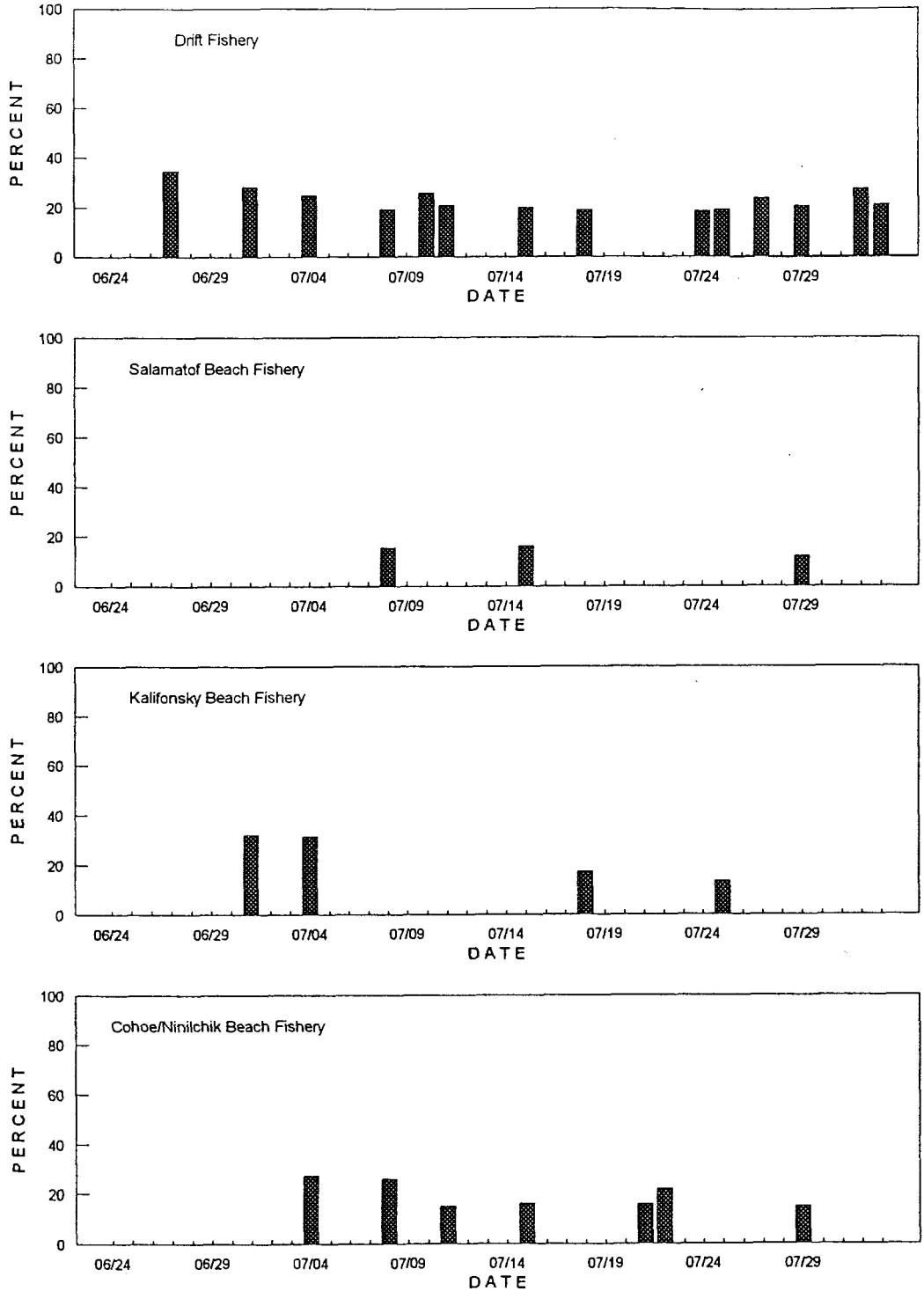

Figure 5. Trends in age-2.3 sockeye salmon composition in the Central District drift gillnet and Upper Subdistrict (Salamatof, Kalifonsky, and Cohoe/Ninilchik Beaches) set gillnet harvests, Upper Cook Inlet, Alaska, in 1994.

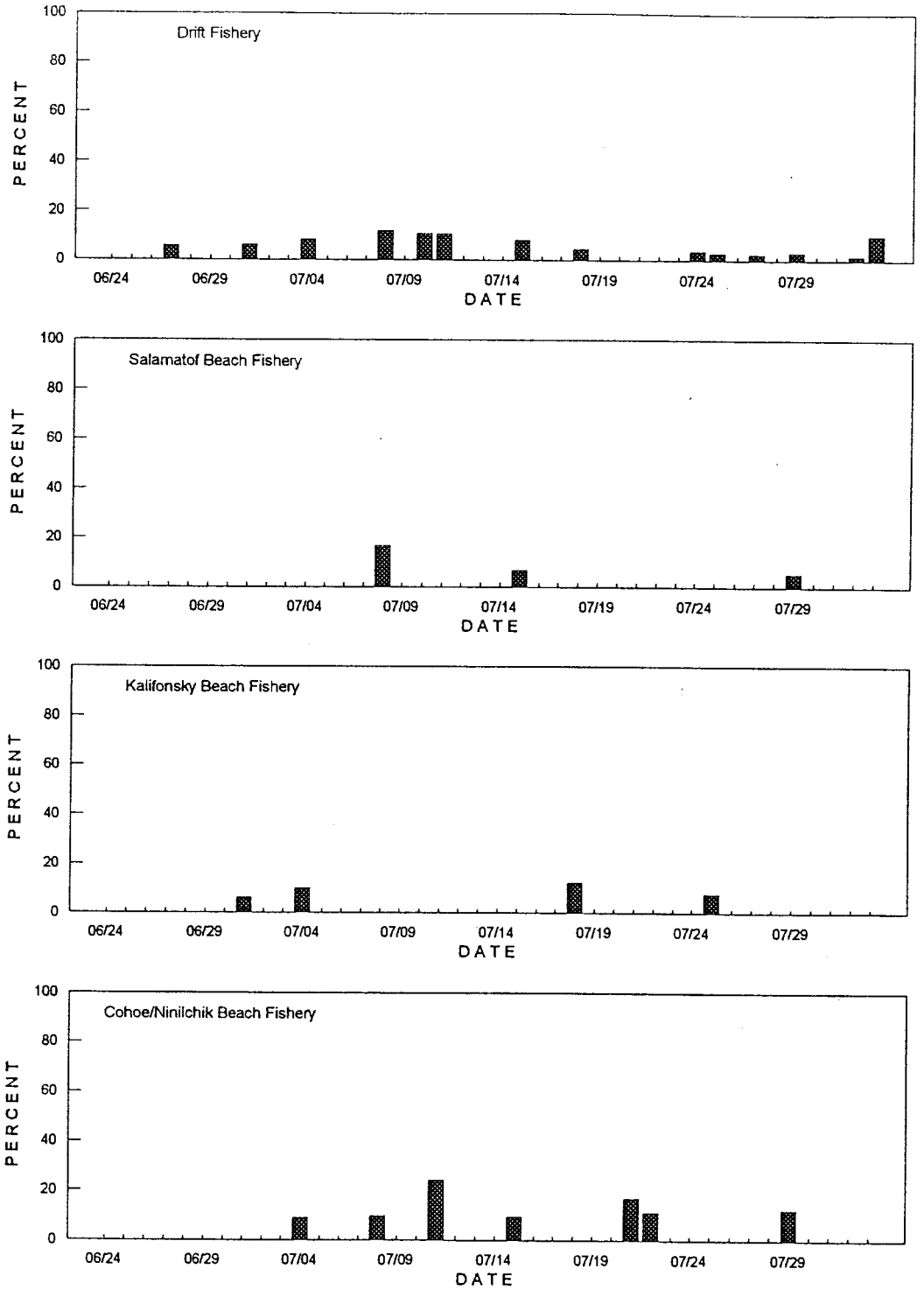

Figure 6. Trends in age-1.2 sockeye salmon composition in the Central District drift gillnet and Upper Subdistrict (Salamatof, Kalifonsky, and Cohoe/Ninilchik Beaches) set gillnet harvests, Upper Cook Inlet, Alaska, in 1994.

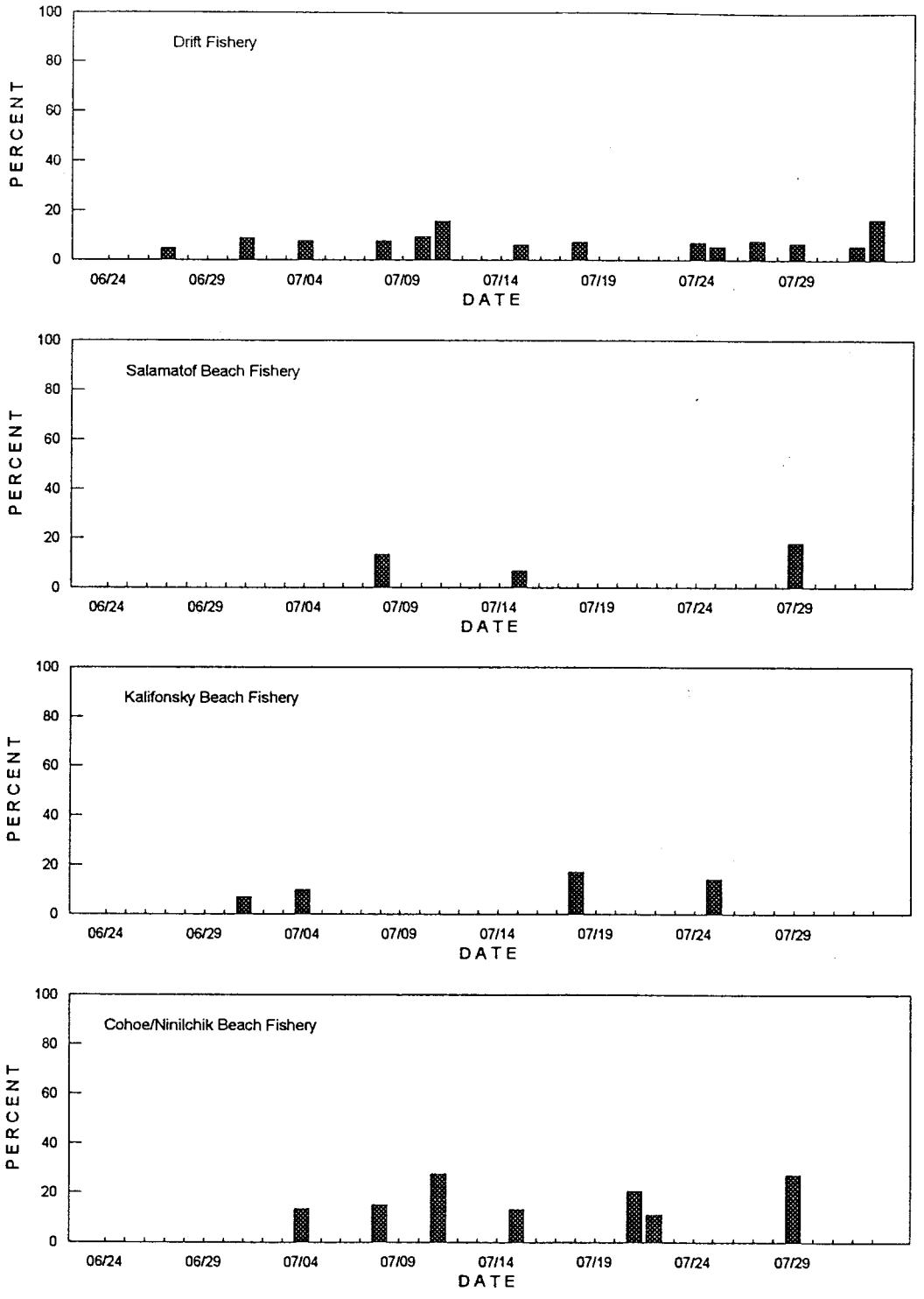

Figure 7. Trends in age-2.2 sockeye salmon composition in the Central District drift gillnet and Upper Subdistrict (Salamatof, Kalifonsky, and Cohoe/Ninilchik Beaches) set gillnet harvests, Upper Cook Inlet, Alaska, in 1994.

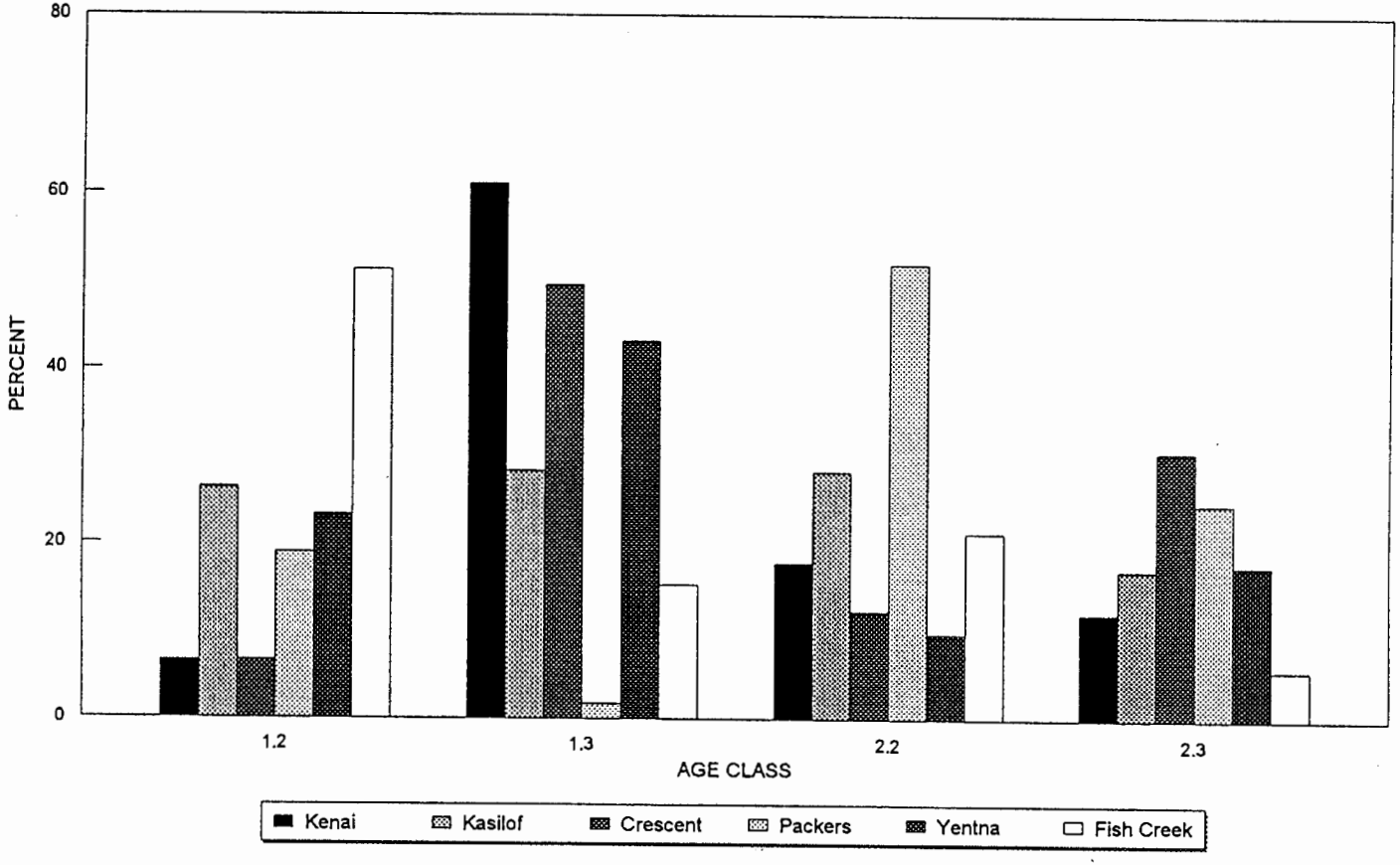

Figure 8. Age composition of sockeye salmon escapements into the Kenai, Kasilof, Crescent, and Yentna Rivers and Packers and Fish Creeks, Upper Cook Inlet, Alaska, in 1994.