ABUNDANCE, AGE, SEX AND SIZE OF CHINOOK, SOCKEYE, COHO, AND CHUM SALMON RETURNING TO UPPER COOK INLET, ALASKA, IN 1999

by

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and

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ABSTRACT

The estimated total return of sockeye salmon *Oncorhynchus nerka* to Upper Cook Inlet (UCI) in 1999 was 4.5 million fish. Commercial harvests and escapements of sockeye salmon that were monitored totaled 4.1 million fish. The commercial harvest was 2.7 million fish while the escapement into five major river systems was 1.4 million fish. The difference between the estimated and monitored total return represents in part, sport, subsistence and personal use harvests and unmonitored escapements. Based on spawners to total return, the exploitation rate for sockeye salmon was 67%. Age classes 1.2, 1.3, 2.2, and 2.3 comprised 98% of the combined UCI commercial sockeye salmon harvests and monitored escapements. Age class 1.3 represented 2.1 million fish or 53% of the total monitored return, while age 1.2 represented 0.7 million fish or 18% of the total monitored return. Average length for the four major age classes ranged from 492 mm for age-1.2 fish to 578 mm for age-1.3 fish. Female composition of sockeye salmon in the combined commercial harvests and escapements equaled 50%.

A total of 14,128 chinook salmon *O. tshawytscha* were commercially harvested in UCI. The Upper Subdistrict eastside set gillnet harvest of 9,390 fish was the only harvest sampled and represented 66% of the total commercial harvest. Ages 1.2, 1.3, 1.4, and 1.5 comprised 97% of the harvest. Average length of the four major age classes ranged from 626 mm for age-1.2 fish to 1,055 mm for age-1.5 fish. Sex composition favored females at 56.3%.

The commercial harvest of coho salmon *O. kisutch* was 125,343 fish. Commercial gillnet harvests in the drift fleet and Upper and General Subdistricts represented 80% of the total commercial harvest. Age-1.1, -2.1, and -3.1 fish comprised the total harvest. Average lengths for these three respective age classes ranged from 518 mm to 561 mm. For the three commercial fisheries, the female composition of coho salmon averaged 38%.

The commercial harvest of chum salmon *O. keta* equaled 174,243 fish. The drift gillnet harvest which was the only harvest monitored was 166,329 fish or 95% of the total. Age classes 0.3 and 0.4 comprised 99% of the harvest. Average length for these two age classes ranged from 615 mm to 633 mm. Female chum salmon contributed 46% to the harvest.

The commercial harvest of pink salmon *O. gorbuscha* in UCI in 1999 totaled 16,129 fish.

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 average harvest of salmon in UCI was 4.4 million fish representing 2.9 million sockeye *O. nerka*, 1.0 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 1998). Locations of the commercial fishing districts, subdistricts and Upper Subdistrict beach fisheries are shown in Figures 2 and 3.

The pioneering work of Davis and Kissner (1969) in UCI provided a framework from which age, sex and length 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; Tobias and Waltemyer 1996; Waltemyer 1989, 1990, 1991, 1993, 1994a, 1994b, 1995a, 1995b; Waltemyer and Tobias 1997, Tobias and Tarbox 1998). The major emphasis has been on sampling sockeye salmon in the commercial harvests and escapements. However, since 1983 chinook, coho, and chum salmon sampling in key commercial harvests has been conducted.

Age, sex and length information in conjunction with abundance data provides a basis for assessing yearly variations in production and effects of management strategies. This report is part of a continuing series. Specific objectives were: 1) document number of salmon harvested in selected commercial gillnet fisheries; 2) report escapement numbers from the major river systems; and 3) estimate age, sex, and length composition of salmon in selected commercial harvests and escapements.

METHODS

Numerical Data

Commercial harvest statistics were compiled from ADF&G final fish ticket information.

Sockeye salmon escapement in Fish Creek was determined by observing fish migrating through a weir located three miles upstream from the confluence with Knik Arm of Cook Inlet (C. Whitmore, ADF&G, Palmer, personal communication).

ADF&G-CF personnel used Bendix Corporation[2] side-scanning single transducer sonar to enumerate the adult salmon escapement in the Kenai (1 July-18 August), Kasilof (15 June-8 August), Crescent (27 June-4 August), and Yentna Rivers (7 July-14 August; Davis and King 1996). Escapement in the Kenai and Yentna rivers was apportioned to salmon species based on fish wheel catches. A trap was used to apportion the salmon escapement in Crescent River. Kasilof River escapement was apportioned to sockeye salmon only.

Chinook salmon escapement in the Kenai River was estimated using Hydroacoustic Technology, Inc.[2] split-beam sonar (RM 8.5; B. King, ADF&G, Soldotna, personal communication).

Cook Inlet Aquaculture Association (CIAA) personnel monitored sockeye salmon escapements through weirs on Hidden, and Packers Lake (G. Fandrei, CIAA, Soldotna, personal communication).

Age, Sex, and Size Data

Fish scales were taken from the left side of the salmon 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). One scale was collected from each sockeye and chum salmon. Because of the higher number of regenerated scales on coho and chinook, three scales were collected from each of these species. 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) and Tobias et al. (1994). Ages were recorded in European notation (Koo 1962).

Sex and length information were recorded for all specimens sampled. Sex of the fish was determined by morphological characteristics. Chinook salmon were also checked for adipose fin clips. Length in millimeters was measured from mid-eye to fork-of-tail.

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 500 fish per strata for sockeye salmon harvested in the commercial fisheries sampling was set to account for unreadable scales. For escapements a single sample size of 500 fish was defined to provide the same level of precision. Escapement samples were weighted over time by sampling a fixed proportion of fish captured by fish wheel each day. The percent of

[2] *Vendor or product names are provided to document methods and do not constitute an endorsement by ADF&G.*

each day's escapement to be sampled was a ratio of the total sample size to the anticipated total escapement.

Commercial fishery harvests were stratified by date and area. Salmon were sampled from each of seven commercial fishing districts and subdistricts from one to twelve times during the season. Frequency and priority of sampling was based on the historical harvest contribution of a fishery to the total UCI commercial harvest and, in some cases, defined by the current management strategy. In order to detect changes in seasonal age composition, sampling dates were selected based on historic data such as run timing for each species throughout the season.

RESULTS AND DISCUSSION

A total of 2,138 chinook, 24,063 sockeye, 2,344 coho, and 1,000 chum salmon were sampled in selected UCI commercial gillnet harvests and escapements in 1999 (Table 1). Age, sex and length data along with harvest and escapement information are presented below.

The 1999 UCI salmon harvest of 3.0 million fish was 1.0 million more than in 1998 and approximately 1.4 million less than the long-term (1966-98) average.

Sockeye Salmon

Total Return

The monitored sockeye salmon total return was 4.1 million fish represented by a commercial harvest of 2.7 million fish, and an escapement of 1.4 fish (Table 2). There were sport, personal use, and subsistence harvests and "Other" unmonitored escapements (approximately 15% of the total monitored escapement) that occurred in UCI and totaled approximately 425,000 fish. These factors combined with the monitored commercial harvests and escapements yielded a total return of 4.5 million sockeye in 1999.

The following four major age classes made up 98% of the monitored sockeye salmon commercial harvests and escapements (Table 3):

Age Class	%	Escapement & Commercial Harvest	Mean Length
1.2	18.1	709,748	492 mm
1.3	52.6	2,065,730	578 mm
2.2	14.9	584,221	504 mm
2.3	12.3	481,645	571 mm

The predominant age class percentages, numbers and mean lengths of sockeye salmon in the UCI commercial harvest were:

Age Class	%	Harvested	Mean Length
1.2	16.7	437,915	498 mm
1.3	54.9	1,436,670	578 mm
2.2	13.4	349,182	509 mm
2.3	13.3	347,657	572 mm

The predominant age class percentages, numbers and mean lengths in the monitored UCI escapements were:

Age Class	%	Escapement	Mean Length
1.2	20.8	271,833	482 mm
1.3	48.1	629,060	577 mm
2.2	18.0	235,039	498 mm
2.3	10.2	133,988	568 mm

Female contributions among the major age classes ranged from 40% (Eastern and General Subdistricts) to 56% (Salamatof Beach) in the commercial harvests and from 44% (Yentna River) to 60% (Fish Creek) in the escapements (Table 3).

Commercial Harvest by Fishery

The 1999 Central District sockeye drift gillnet harvest (excluding Chinitna Bay) was 1,414,267 fish (Tables 3 and 4). This harvest represented 53% of the total UCI sockeye harvest. Historically, the drift harvest from 1966-98 has averaged 57%. The major age class percentages, number of fish and mean lengths were:

Age Class	%	Harvest	Mean Length
1.2	13.3	188,127	510 mm
1.3	59.7	844,787	583 mm
2.2	9.4	133,274	521 mm
2.3	15.1	213,813	577 mm

Female composition in the drift gillnet harvest ranged from 40% (4-9 Aug) to 59% (29 July –1 Aug; Table 4).

The Cohoe/Ninilchik Beach set gillnet harvest was 531,308 fish and represented 20% of the total UCI sockeye salmon harvest (Tables 3 and 5). Historically the Cohoe/Ninilchik fishery harvest averaged 13%. The major age class percentages, number of fish, and mean lengths were:

Age Class	%	Harvest	Mean Length
1.2	24.4	129,347	488 mm
1.3	46.4	246,377	563 mm
2.2	19.4	103,133	496 mm
2.3	9.4	50,163	554 mm

Female composition in the Cohoe/Ninilchik Beach sockeye harvest ranged from 47% (19-22 July) to 54% (24-28 July; Table 5).

The Kalifonsky Beach set gillnet harvest, which historically averaged 12% of the total UCI sockeye salmon harvest, represented 13% or 344,552 fish in 1999 (Tables 3 and 6). The four major age class percentages, number of fish, and mean lengths in the harvest were:

Age Class	%	Harvest	Mean Length
1.2	18.8	64,619	485 mm
1.3	53.0	182,713	576 mm
2.2	17.2	59,380	499 mm
2.3	10.2	35,262	563 mm

Female composition in the Kalifonsky Beach harvest ranged from 44% (9-15 July) to 63% (29 July- 2 August; Table 6).

The Salamatof Beach set gillnet harvest, which historically averaged 12% of the total UCI sockeye salmon harvest, represented 8% or 217,046 fish in 1999 (Tables 3 and 7). The four major age class percentages, number of fish, and mean lengths were:

Age Class	%	Harvest	Mean Length
1.2	14.0	30,379	494 mm
1.3	56.1	121,704	578 mm
2.2	18.2	39,582	517 mm
2.3	10.4	22,629	574 mm

Female composition in the Salamatof Beach harvest ranged from 48% (8-12 July) to 60% (27-30 July; Table 7).

Of the three Upper Subdistrict beach fisheries, sockeye harvested in the Cohoe/Ninilchik Beach harvest were smallest in total mean length (531 mm) while sockeye in the Salamatof Beach harvest were the largest (555 mm). Kalifonsky Beach sockeye salmon mean length was 544 mm.

In the Central District drift gillnet and Upper Subdistrict (Salamatof, Kalifonsky, and Cohoe/Ninilchik Beaches) set gillnet harvests, age-1.3 fish were the predominant age class (Table 3; Figures 4-7).

The Eastern Subdistrict sockeye salmon set gillnet harvest of 21,963 fish, which historically averaged 1.4% of the total UCI sockeye salmon harvest, represented 0.8% in 1999. (Tables 3 and 8). The major age class percentages, number of fish, and mean lengths were:

Age Class	%	Harvest	Mean Length
1.2	35.6	7,828	504 mm
1.3	26.6	5,834	564 mm
2.2	27.4	6,025	504 mm
2.3	5.8	1,281	560 mm

Female composition in the harvest was 40%.

The General Subdistrict set gillnet harvest of 37,117, which historically averaged 2.6% of the total UCI sockeye salmon harvest, represented 1.4% in 1999 (Tables 3 and 9). The major age class percentages, number of fish, and mean lengths were:

Age Class	%	Harvest	Mean Length
0.3	2.6	955	568 mm
1.2	20.1	7,453	479 mm
1.3	44.4	16,494	570 mm
2.2	4.7	1,730	480 mm
2.3	27.1	10,049	564 mm

Females represented 40% of the harvest.

The Kalgin Island commercial set gillnet harvest of 59,092 represented 2.2% of the total UCI sockeye harvest (Table 2). Historically the Kalgin Island harvest represents 1.7% of the total sockeye harvest. Since Kalgin Island sockeye were usually mixed with other stocks on the tender before being received at Cook Inlet processors, crews were unable to get scale samples from Kalgin Island sockeye in 1999.

The Western Subdistrict set gillnet harvest of 49,441 represented 1.8% of the total UCI sockeye harvest (Tables 3 and 10). Historically the Western Subdistrict harvests 6.2% of the total sockeye harvest. The major age class percentages, number of fish, and mean lengths were:

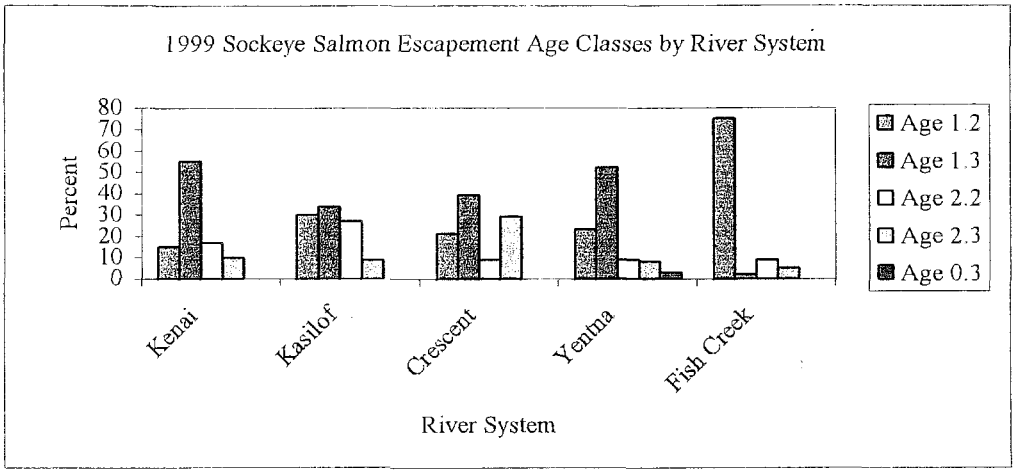
Age Class	%	Harvest	Mean Length
1.2	20.6	10,162	511 mm
1.3	38.0	18,761	564 mm
2.2	12.3	6,058	507 mm
2.3	29.3	14,460	571 mm

Females represented 49% of the Western Subdistrict harvest.

abundance were 803,379 fish in Kenai River, 312,587 fish in Kasilof River, 193,107 fish in Susitna River, 66,519 fish in Crescent River, 26,691 fish in Fish Creek. The estimate of total Susitna River escapement represents the combined escapement at Yentna River sonar site plus an estimate of the mainstem Susitna River based on the historical relation of Yentna River (x) to Sunshine Station (y) from 1981-85 (the only years of comparison) which yielded the following function:

$$y = 0.95 * x$$

The predominant age classes in the total UCI sockeye escapement were age 1.2 (20.8%), age 1.3 (48.1%), age 2.2 (18.0%) and age 2.3 (10.2%, Table 3). Individual age class composition by river is presented below:



Major age class percentages, number of fish, and mean lengths in the Kenai River sockeye escapement were:

Age Class	%	Escapement	Mean Length
1.2	15.1	121,658	490 mm
1.3	55.4	444,982	588 mm
2.2	16.8	134,810	513 mm
2.3	9.6	76,721	583 mm

The overall mean length of Kenai River sockeye was 556 mm. Females comprised 51% of the Kenai River escapement (Table 11).

Hidden Creek, a tributary of the Kenai River, had an escapement of 49,406 sockeye represented by age-1.2 (89.2%), age-1.3 (6.3%) and age-2.2 (4.5%) fish. Female composition in Hidden Creek was 56% (Table 12).

Kasilof River escapement age class percentages, number of fish and mean lengths were:

The overall mean length of Kenai River sockeye was 556 mm. Females comprised 51% of the Kenai River escapement (Table 11).

Hidden Creek, a tributary of the Kenai River, had an escapement of 49,406 sockeye represented by age-1.2 (89.2%), age-1.3 (6.3%) and age-2.2 (4.5%) fish. Female composition in Hidden Creek was 56% (Table 12).

Kasilof River escapement age class percentages, number of fish and mean lengths were:

Age Class	%	Escapement	Mean Length
1.2	29.7	92,738	476 mm
1.3	33.8	105,710	542 mm
2.2	26.7	83,335	477 mm
2.3	9.4	29,508	534 mm

The overall mean length of Kasilof River escapement sockeye was 504 mm. Females comprised 51% of the Kasilof River escapement (Tables 3 and 13).

Crescent River escapement was 66,519 sockeye salmon with the following major age class percentages, number of fish and mean lengths:

Age Class	%	Escapement	Mean Length
1.2	21.4	14,223	471 mm
1.3	39.4	26,185	558 mm
2.2	9.2	6,126	481 mm
2.3	29.3	19,474	561 mm

The overall mean length of Crescent River escapement sockeye was 533 mm. Females comprised 45% of the Crescent River escapement (Tables 3 and 14).

Packers Creek sockeye salmon escapement was 25,648 fish. The major age class percentages, number of fish, and mean lengths were:

Age Class	%	Escapement	Mean Length
1.2	5.7	1,463	452 mm
1.3	1.1	293	523 mm
2.1	4.6	1,171	327 mm
2.2	75.7	19,405	453 mm
2.3	12.6	3,218	534 mm

The overall mean length of Packers Creek sockeye was 458 mm. Females comprised 42% of the total escapement (Tables 3 and 15).

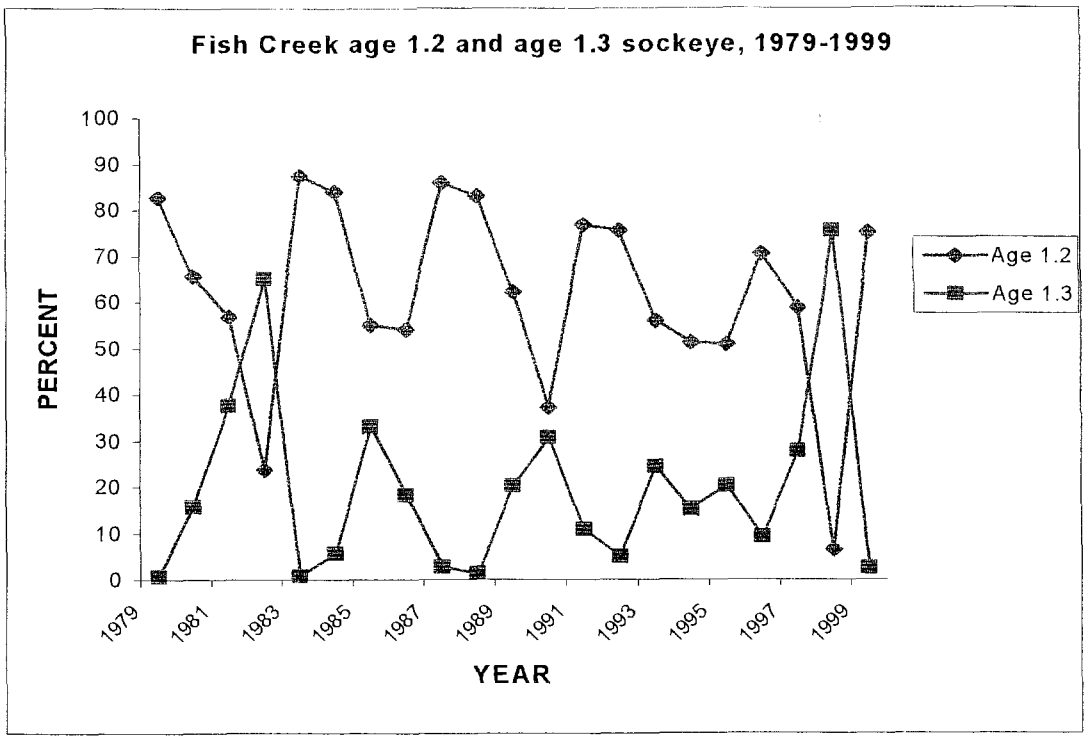
The overall mean length of Yentna River sockeye was 535 mm. Female composition in the escapement was 44% (Tables 3 and 16).

Fish Creek had an escapement of 26,691 sockeye salmon. Fish Creek sockeye age class percentages, number of fish, and mean lengths were:

Age Class	%	Escapement	Mean Length
1.1	11.6	3,107	330 mm
1.2	75.0	20,018	476 mm
1.3	2.5	662	532 mm
2.2	8.6	2,292	480 mm

The overall mean length of Fish Creek sockeye was 460 mm. Females comprised 60% of the escapement (Tables 3 and 17).

Age 1.2 was the predominant age class for sockeye at Fish Creek in 1999. Previous escapement age compositions showed age 1.2 as being the predominant age class, with the exception of 1982 and 1998.



Chinook Salmon

The total commercial harvest of chinook salmon in 1999 was 14,128 fish (Table 2) which was below the long-term average harvest of 15,949 fish. The Upper Subdistrict set gillnet fishery harvest was 9,390 or 66% of the UCI harvest (Table 18). The predominant age class percentages, number of fish

Chinook Salmon

The total commercial harvest of chinook salmon in 1999 was 14,128 fish (Table 2) which was below the long-term average harvest of 15,949 fish. The Upper Subdistrict set gillnet fishery harvest was 9,390 or 66% of the UCI harvest (Table 18). The predominant age class percentages, number of fish and mean lengths in the Upper Subdistrict were:

Age Class	%	Harvest	Mean Length
1.1	2.3	218	414 mm
1.2	26.3	2,470	626 mm
1.3	24.5	2,304	808 mm
1.4	43.4	4,078	968 mm
1.5	2.8	263	1,055 mm

The overall mean length was 827 mm, and females accounted for 56% of the commercial harvest. Late run chinook salmon escapement entering the Kenai River was estimated at 47,996 (Table 2).

Coho Salmon

Commercial Harvest

The coho salmon commercial harvest of 125,343 fish was significantly below the long-term average of 350,532 fish. Coho salmon were sampled from three gillnet fisheries which represented 80% of the total UCI harvest (Table 19). Age-2.1 coho accounted for the bulk of the harvest:

	Age 2.1	Harvest	Mean Length
Central District drift gillnet	73.9%	47,659	541 mm
Upper Subdistrict set gillnet	69.7%	8,145	542 mm
General Subdistrict set gillnet	80.1%	18,986	533 mm

Age-1.1 (13.6%) and age-3.1 (11.5%) accounted for the remainder of the total monitored coho harvests (Tables 20-22). Mean lengths for all three age groups combined were, on average, larger in the Upper Subdistrict (546 mm) than in the Drift (540 mm) or General Subdistrict harvests (530 mm; Table 19). Mean lengths of age 2.1 coho in the General Subdistrict (533mm) set gillnet harvest was the smallest since lengths were first recorded in 1983. The mean length of age 2.1 coho harvested in the Central District Drift (540) and Upper Subdistrict (546) setnet fisheries had mean lengths well below the historical averages (1983-1998) of 557 mm and 572 mm respectively.

Females represented from 36% in the Central District Drift harvest to 42% in the General Subdistrict set gillnet harvest.

Chum Salmon

The chum salmon commercial harvest was 174,243 fish. The historic average harvest of chum salmon is 565,017. Chum salmon were sampled from the commercial drift gillnet harvest of 166,329 fish, which made up 95% of the total commercial harvest (Table 23). The major age class percentages, number of fish, and mean lengths were:

Age Class	%	Harvest	Mean Length
0.3	79.2	131,708	615 mm
0.4	20.4	33,984	633 mm

Females represented 46% of the chum salmon harvest.

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Table 1. Number of salmon sampled from selected commercial gillnet harvests and escapements in Upper Cook Inlet, Alaska, in 1999.

Location[a]	Species			
	Chinook	Sockeye	Coho	Chum
Commercial Catch:				
Central District				
Drift		6,000	791	1,000
Upper Subdistrict[b]	2,138		577	
Cohoe/Ninilchik Beach		4,500		
Kalifonsky Beach		3,500		
Salamatof Beach		2,500		
Western Subdistrict		278		
Kalgin Island		0		
Northern District				
Eastern Subdistrict		520		
General Subdistrict		1,500	976	
Subtotal	2,138	18,798	2,344	1,000
Escapement:				
Central District				
Kenai River				
Mainstem late run		806		
Hidden Creek[c]		600		
Kasilof River				
Mainstem		1,067		
Crescent River		1,017		
Packers Creek[c]		326		
Northern District				
Susitna River				
Yentna River		553		
Fish Creek[d]		896		
Subtotal		5,265		
Total	2,138	24,063	2,344	1,000

[a] Specific locations not footnoted were sampled by Commercial Fisheries 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. Number of salmon commercially harvested and escapements into the major river systems of Upper Cook Inlet, Aaska, in 1999

Fishery		Chinook	Sockeye	Coho	Pink	Chum	Total
Commercial Harvest:							
A. Northern District Total		2,657	59,080	31,436	592	3,985	97,750
1. Northern District West		2,261	37,117	23,700	485	3,629	67,192
a. Trading Bay	247-10	307	1,406	1,156	26	17	2,912
b. Tyonek	247-20	994	10,221	9,073	96	190	20,574
c. Beluga	247-30	576	18,696	8,609	206	1,588	29,675
d. Susitna Flat	247-41	102	1,298	1,185	17	494	3,096
e. Pt. Mackenzie	247-42	205	1,564	1,074	7	518	3,368
f. Fire Island	247-43	77	3,932	2,603	133	822	7,567
2. Northern District East		396	21,963	7,736	107	356	30,558
a. Pt. Possession	247-70	229	9,111	3,047	51	276	12,714
b. Birch Hill	247-80	115	5,038	2,380	15	70	7,618
c. Number 3 Bay	247-90	52	7,814	2,309	41	10	10,226
B. Central District Total		11,471	2,621,627	93,907	15,537	170,258	2,912,800
1. East Side Set Total		9,390	1,092,906	11,679	9,313	373	1,123,661
a. Salamatof	244-40	1,829	217,046	4,230	872	157	224,134
b. Kalifonsky Beach	244-30	3,744	344,552	2,358	1,154	61	351,869
d. Cohoe/Ninilchik		3,817	531,308	5,091	7,287	155	547,658
1. Cohoe	244-22	1,944	251,486	2,942	2,326	98	258,796
2. Ninilchik	244-21	1,873	279,822	2,149	4,961	57	288,862
2. West Side Set Total		697	49,441	6,062	1,963	3,280	61,443
a. Little Jack Slough	245-50	0	13,288	972	36	112	14,408
b. Polly Creek	245-40	242	8,990	67	99	150	9,548
c. Tuxedni Bay	245-30	423	25,261	4,383	1,817	2,955	34,839
d. Silver Salmon	245-20	32	1,902	640	11	63	2,648
3. Kustatan Total		776	5,212	750	12	3	6,753
a. Big River	245-55	766	4,177	18	1	0	4,962
b. West Foreland	245-60	10	1,035	732	11	3	1,791
4. Kalgin Island Total		38	59,092	10,842	622	152	70,746
a. West Side	246-10	18	41,174	7,729	444	117	49,482
b. East Side	246-20	20	17,918	3,113	178	35	21,264
5. Chinitna Bay Total		9	709	45	75	121	959
a. Set	245-10	9	709	45	75	121	959
6. Central District Set Total		10,910	1,207,360	29,378	11,985	3,929	1,263,562
7. Central District Drift Total		561	1,414,267	64,529	3,552	166,329	1,649,238
a. West Side	245-70,80,90	99	312,939	11,553	443	46,045	371,079
b. East Side	244-50,60,70	462	1,101,328	52,976	3,109	120,284	1,278,159
Commercial Harvest Total		14,128	2,680,707	125,343	16,129	174,243	3,010,550
Escapement:							
Kenai River		47,996[a]	803,379				
Kasilof River			312,587				
Crescent river			66,519				
Susitna River[b]			193,107				
Fish Creek			26,691				
Other[c]			210,342				
Escapement Total:		47,996	1,612,625				
Upper Cook Inlet Total[d]		62,124	4,293,332	125,343	16,129	174,243	4,671,171

[a] Late run only.

[b] Susitna River escapement comprises the Yentna river escapement of 99,029 plus an estimate of Susitna mainstem escapement based on the relation: Sunshine equals 95% of the Yentna escapement developed using comparative data from 1981-85. Combining Yentna and Sunshine equals the total Susitna River escapement.

[c] Other represents other unmonitored systems in Upper Cook Inlet, estimated to be 15% of total monitored systems.

[d] Total does not account for sport, personal use and subsistence harvest that were estimated at 215,000 for an estimated total Upper Cook Inlet return of 4.5 million sockeye salmon.

Table 3. Age, sex and length composition of sockeye salmon in selected commercial gillnet harvests and river escapements, Upper Cook Inlet, Alaska, in 1999.

	Age Group													
LOCATION	0.2	1.1	0.3	1.2	2.1	1.3	2.2	3.1	1.4	2.3	3.2	2.4	3.3	Total
COMMERCIAL HARVEST														
Central District														
Central Drift														
Number	1,446		20,600	188,127		844,787	133,274		7,430	213,813	2,188	1,377	1,225	1,414,267
Percent	.10		1.46	13.30		59.73	9.42		.53	15.12	.15	.10	.09	100.00
Sample Size	4		45	686		3,234	518		28	769	7	5	4	5,300
Mean Length[a]	465		577	510		583	521		610	577	549	566	586	567
% Female			71	37		53	46		40	50	74	70	74	50
Cohoe/Ninilchik Beach														
Number	153		365	129,347		246,377	103,133		1,342	50,163		63	365	531,308
Percent	.03		.07	24.35		46.37	19.41		.25	9.44		.01	.07	100.00
Sample Size	2		2	973		2,037	732		11	403		1	2	4,163
Mean Length	470		548	488		563	496		582	554		592	580	531
% Female	44		76	38		55	47		56	55		100		49
Kalifonsky Beach														
Number			357	64,619		182,713	59,380		1,213	35,262	139	869		344,552
Percent			.10	18.75		53.03	17.23		.35	10.23	.04	.25		100.00
Sample Size			4	649		1,643	601		11	316	1	8		3,233
Mean Length			554	485		576	499		580	563	516	591		544
% Female			100	43		56	51		46	51	100	33		52
Salamatof Beach														
Number	18		386	30,379	256	121,704	39,582		1,137	22,629	298	487	170	217,046
Percent	.01		.18	14.00	.12	56.07	18.24		.52	10.43	.14	.22	.08	100.00
Sample Size	1		6	368	2	1,306	334		15	243	2	5	1	2,283
Mean Length	496		530	494	397	578	517		591	574	528	595	606	555
% Female			51	43	100	58	59		55	57	100	57		56

-Continued-

Table 3. (page 2 of 4)

LOCATION	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	3.3	Total
COMMERCIAL HARVEST (continued)														
Western Subdistrict														
Number				10,162		18,761	6,058			14,460				49,441
Percent				20.55		37.95	12.25			29.25				100.00
Sample Size				52		96	31			74				253
Mean Length				511		564	507			571				548
% Female				42		58	55			38				49
Northern District														
Eastern Subdistrict														
Number	142		664	7,828		5,834	6,025		47	1,281	142			21,963
Percent	.65		3.02	35.64		26.56	27.43		.21	5.83	.65			100.00
Sample Size	3		14	165		123	127		1	27	3			463
Mean Length	474		557	504		564	504		585	560	526			525
% Female	33		57	36		47	37			44	33			40
General Subdistrict														
Number	189		955	7,453		16,494	1,730		211	10,049			36	37,117
Percent	.51		2.57	20.08		44.44	4.66		.57	27.07			.10	100.00
Sample Size	4		21	189		356	43		5	237			1	856
Mean Length	485		568	479		570	480		568	564			535	545
% Female			40	42		37	41		100	41			100	40
COMMERCIAL HARVEST TOTAL														
Number	1,948		23,327	437,915	256	1,436,670	349,182		11,380	347,657	2,767	2,796	1,796	2,615,694[b]
Percent	.07		.89	16.74	.01	54.93	13.35		.44	13.29	.11	.11	.07	100.00
Sample Size	14		92	3,082	2	8,795	2,386		71	2,069	13	19	8	16,551
Mean Length	468		575	498	397	578	509		600	572	544	579	586	554
% Female	6		69	39	100	54	49		45	51	76	57	53	50

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Table 3. (page 3 of 4)

LOCATION	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	3.3	Total
ESCAPEMENT														
Central District														
Kenai River														
Number			2,192	121,658	9,864	444,982	134,810	1,096	3,288	76,721	7,672	1,096		803,379
Percent			.27	15.14	1.23	55.39	16.78	.14	.41	9.55	.95	.14		100.00
Sample Size			2	111	9	406	123	1	3	70	7	1		733
Mean Length			522	490	385	588	513	350	600	583	511	600		556
% Female			50	35	56	50	69		67	47	86	100		51
Kasilof River														
Number				92,738	324	105,710	83,335		648	29,508	324			312,587
Percent				29.67	.10	33.82	26.66		.21	9.44	.10			100.00
Sample Size				286	1	326	257		2	91	1			964
Mean Length				476	318	542	477		555	534	456			504
% Female				51		49	51		50	55	100			51
Crescent River														
Number				14,223	73	26,185	6,126		292	19,474		73	73	66,519
Percent				21.38	.11	39.36	9.21		.44	29.28		.11	.11	100.00
Sample Size				195	1	359	84		4	267		1	1	912
Mean Length				471	374	558	481		594	561		569	601	533
% Female				30		54	32			48				45
Northern District														
Yentna River[c]														
Number	3,569		3,345	23,196		51,521	8,476		892	8,030				99,029
Percent	3.60		3.38	23.42		52.03	8.56		.90	8.11				100.00
Sample Size	16		15	104		231	38		4	36				444
Mean Length	429		568	476		569	487		563	563				535
% Female	12		53	46		42	58		25	56				44

-continued-

Table 3. (page 4 of 4)

LOCATION	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	3.3	Total
ESCAPEMENT (continued)														
Northern District														
Fish Creek														
Number		3,107		20,018	255	662	2,292		51	255	51			26,691
Percent		11.64		75.00	.96	2.48	8.59		.19	.96	.19			100.00
Sample Size		61		393	5	13	45		1	5	1			524
Mean Length		330		476	318	532	480		510	523	480			460
% Female		2		67		61	78		100	60	100			60
ESCAPEMENT TOTAL														
Number	3,569	3,107	5,537	271,833	10,516	629,060	235,039	1,096	5,171	133,988	8,047	1,169	73	1,308,205[d]
Percent	.27	.24	.42	20.78	.80	48.09	17.97	.08	.40	10.24	.62	.09	.01	100.00
Sample Size	16	61	17	1,089	16	1,335	547	1	14	469	9	2	1	3,577
Mean Length	429	330	550	482	382	577	498	350	587	568	508	598	601	539
% Female	12	2	52	44	52	49	62		54	50	86	94		50
UPPER COOK INLET TOTAL														
Number	5,517	3,107	28,864	709,748	10,772	2,065,730	584,221	1,096	16,551	481,645	10,814	3,965	1,869	3,923,899[e]
Percent	.14	.08	.74	18.09	.27	52.64	14.89	.03	.42	12.27	.28	.10	.05	100.00
Sample Size	30	61	109	4,171	18	10,130	2,933	1	85	2,538	22	21	9	20,128
Mean Length	443	330	570	492	382	578	504	350	596	571	518	585	586	549
% Female	10	2	66	41	53	52	54		48	50	84	68	51	50

[a] Mean length in mm.
[b] Total does not include the Kalgin Island, Kustatan or Chinitna Bay commercial harvests of 65,013.
[c] Yentna River represents 51% of the Susitna River total escapement, which is estimated to be 193,107 in 1999.
[d] Escapement total excludes an additional 94,078 Susitna River sockeye and "other" unmonitored systems estimated to be 15% of the monitored systems or 210,342, for a total Upper Cook Inlet sockeye salmon escapement of 1.6 million sockeye salmon.
[e] Total does not account for sport, personal use and subsistence harvests that were estimated at 215,000 for an estimated total Upper Cook Inlet return of 4.5 million sockeye salmon.

Table 4. Age, sex and length composition of sockeye salmon in the Central District commercial drift gillnet harvest, Upper Cook Inlet, Alaska, in 1999.

	Age Group										
	0.2	0.3	1.2	1.3	2.2	1.4	2.3	3.2	2.4	3.3	Total
Sample Period 1: 28 June											
Males			594	6,539	640		1,509				9,282
Percent			2.86	31.43	3.08		7.25				44.61
Sample Size			13	143	14		33				203
Mean Length[a]			511	562	528		551				555
Std. Error			6	2	5		5				2
Sample Size			13	143	14		33				203
Females		46	549	7,956	1,189		1,783				11,523
Percent		0.22	2.64	38.24	5.71		8.57				55.39
Sample Size		1	12	174	26		39				252
Mean Length		528	517	556	515		554				550
Std. Error			7	2	6		4				1
Sample Size		1	12	174	26		39				252
Both Sexes		46	1,143	14,495	1,829		3,292				20,805
Percent		0.22	5.49	69.67	8.79		15.82				100.00
Sample Size		1	25	317	40		72				455
Mean Length		528	514	559	520		552				552
Std. Error			5	1	5		3				1
Sample Size		1	25	317	40		72				455

-Continued-

Table 4. (page 2 of 13)

	Age Group										
	0.2	0.3	1.2	1.3	2.2	1.4	2.3	3.2	2.4	3.3	Total
Sample Period 2: 1 July											
Males			2,807	11,076	1,745		2,503				18,131
Percent			8.37	33.03	5.20		7.46				54.07
Sample Size			37	146	23		33				239
Mean Length			517	573	508		572				558
Std. Error			5	3	5		6				2
Sample Size			37	146	23		33				239
Females			1,821	10,014	1,517		2,048				15,400
Percent			5.43	29.86	4.52		6.11				45.93
Sample Size			24	132	20		27				203
Mean Length			518	568	522		564				557
Std. Error			5	2	5		5				2
Sample Size			24	132	20		27				203
Both Sexes			4,628	21,090	3,262		4,551				33,531
Percent			13.80	62.90	9.73		13.57				100.00
Sample Size			61	278	43		60				442
Mean Length			518	571	515		568				558
Std. Error			3	2	4		4				1
Sample Size			61	278	43		60				442

-Continued-

Table 4. (page 3 of 13)

	Age Group										
	0.2	0.3	1.2	1.3	2.2	1.4	2.3	3.2	2.4	3.3	Total
Sample Period 3: 3 - 5 July											
Males	255	764	12,232	31,597	6,116		6,371		255	255	57,845
Percent	0.23	0.70	11.16	28.84	5.58		5.81		0.23	0.23	52.79
Sample Size	1	3	48	124	24		25		1	1	227
Mean Length	451	571	522	577	517		578		566	628	559
Std. Error		14	4	3	5		6				2
Sample Size	1	3	48	124	24		25		1	1	227
Females			8,919	33,382	2,548		6,625	255			51,729
Percent			8.14	30.47	2.33		6.05	0.23			47.21
Sample Size			35	131	10		26	1			203
Mean Length			516	571	526		570	496			559
Std. Error			4	2	6		5				2
Sample Size			35	131	10		26	1			203
Both Sexes	255	764	21,151	64,979	8,664		12,996	255	255	255	109,574
Percent	0.23	0.70	19.30	59.30	7.91		11.86	0.23	0.23	0.23	100.00
Sample Size	1	3	83	255	34		51	1	1	1	430
Mean Length	451	571	519	574	520		574	496	566	628	559
Std. Error		14	3	2	4		4				1
Sample Size	1	3	83	255	34		51	1	1	1	430

-Continued-

Table 4. (page 4 of 13)

	Age Group										
	0.2	0.3	1.2	1.3	2.2	1.4	2.3	3.2	2.4	3.3	Total
Sample Period 4: 8 July[b]											
Males	287	862	11,205	34,189	6,895	287	9,481				63,206
Percent	0.23	0.69	9.03	27.55	5.56	0.23	7.64				50.93
Sample Size	1	3	39	119	24	1	33				220
Mean Length	468	579	502	573	496	625	565				551
Std. Error		8	4	3	6		6				2
Sample Size	1	3	39	119	24	1	33				220
Females		1,149	7,757	39,072	3,448	287	9,194				60,907
Percent		0.93	6.25	31.48	2.78	0.23	7.41				49.07
Sample Size		4	27	136	12	1	32				212
Mean Length		575	494	566	525	547	553				552
Std. Error		5	5	2	9		4				2
Sample Size		4	27	136	12	1	32				212
Both Sexes	287	2,011	18,962	73,261	10,343	574	18,675				124,113
Percent	0.23	1.62	15.28	59.03	8.33	0.46	15.05				100.00
Sample Size	1	7	66	255	36	2	65				432
Mean Length	468	577	499	569	506	586	559				551
Std. Error		5	3	2	5		4				1
Sample Size	1	7	66	255	36	2	65				432

-Continued-

Table 4. (page 5 of 13)

	Age Group										
	0.2	0.3	1.2	1.3	2.2	1.4	2.3	3.2	2.4	3.3	Total
Sample Period 5: 9 - 12 July[c]											
Males			5,996	8,494	2,831		2,748				20,069
Percent			15.83	22.42	7.47		7.25				52.97
Sample Size			72	102	34		33				241
Mean Length			510	577	511		584				549
Std. Error			3	4	4		7				2
Sample Size			72	102	34		33				241
Females		167	3,414	10,576	1,915	83	1,665				17,820
Percent		0.44	9.01	27.91	5.05	0.22	4.39				47.03
Sample Size		2	41	127	23	1	20				214
Mean Length		566	507	572	516	605	569				554
Std. Error		25	4	2	7		6				2
Sample Size		2	41	127	23	1	20				214
Both Sexes		167	9,410	19,070	4,746	83	4,413				37,889
Percent		0.44	24.84	50.33	12.53	0.22	11.65				100.00
Sample Size		2	113	229	57	1	53				455
Mean Length		566	509	574	513	605	579				551
Std. Error		25	2	2	4		5				1
Sample Size		2	113	229	57	1	53				455

-Continued-

Table 4. (page 6 of 13)

	Age Group										
	0.2	0.3	1.2	1.3	2.2	1.4	2.3	3.2	2.4	3.3	Total
Sample Period 6: 15 July											
Males		1,426	34,232	85,580	15,689		24,247				161,174
Percent		0.46	10.96	27.40	5.02		7.76				51.60
Sample Size		2	48	120	22		34				226
Mean Length		586	497	584	500		572				556
Std. Error			4	3	6		7				2
Sample Size		2	48	120	22		34				226
Females		2,139	19,968	91,284	17,116		20,682				151,189
Percent		0.68	6.39	29.22	5.48		6.62				48.40
Sample Size		3	28	128	24		29				212
Mean Length		539	502	567	518		572				553
Std. Error		16	6	2	5		5				2
Sample Size		3	28	128	24		29				212
Both Sexes		3,565	54,200	176,864	32,805		44,929				312,363
Percent		1.14	17.35	56.62	10.50		14.38				100.00
Sample Size		5	76	248	46		63				438
Mean Length		558	499	575	510		572				554
Std. Error		16	3	2	4		4				1
Sample Size		5	76	248	46		63				438

-Continued-

Table 4. (page 7 of 13)

	Age Group										
	0.2	0.3	1.2	1.3	2.2	1.4	2.3	3.2	2.4	3.3	Total
Sample Period 7: 19 July											
Males		2,551	29,762	113,097	17,007	2,551	35,715				200,683
Percent		0.67	7.78	29.56	4.44	0.67	9.33				52.44
Sample Size		3	35	133	20	3	42				236
Mean Length		589	522	601	522	632	596				582
Std. Error		17	5	3	6	8	5				2
Sample Size		3	35	133	20	3	42				236
Females		8,504	10,204	113,947	14,456		33,164	850		850	181,975
Percent		2.22	2.67	29.78	3.78		8.67	0.22		0.22	47.56
Sample Size		10	12	134	17		39	1		1	214
Mean Length		585	516	588	536		577	576		579	578
Std. Error		4	8	2	4		4				2
Sample Size		10	12	134	17		39	1		1	214
Both Sexes		11,055	39,966	227,044	31,463	2,551	68,879	850		850	382,658
Percent		2.89	10.44	59.33	8.22	0.67	18.00	0.22		0.22	100.00
Sample Size		13	47	267	37	3	81	1		1	450
Mean Length		586	520	594	528	632	587	576		579	580
Std. Error		5	4	2	4	8	3				1
Sample Size		13	47	267	37	3	81	1		1	450

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Table 4. (page 8 of 13)

	Age Group										
	0.2	0.3	1.2	1.3	2.2	1.4	2.3	3.2	2.4	3.3	Total
Sample Period 8: 22 July[d]											
Males		302	5,429	21,866	2,262		3,469				33,328
Percent		0.47	8.37	33.72	3.49		5.35				51.39
Sample Size		2	36	145	15		23				221
Mean Length		563	512	594	515		582				574
Std. Error		11	5	2	9		7				2
Sample Size		2	36	145	15		23				221
Females		302	1,810	23,224	1,357		4,826				31,519
Percent		0.47	2.79	35.81	2.09		7.44				48.61
Sample Size		2	12	154	9		32				209
Mean Length		569	508	571	532		559				564
Std. Error		23	6	2	4		4				2
Sample Size		2	12	154	9		32				209
Both Sexes		604	7,239	45,090	3,619		8,295				64,847
Percent		0.93	11.16	69.53	5.58		12.79				100.00
Sample Size		4	48	299	24		55				430
Mean Length		566	511	582	521		569				569
Std. Error		13	4	1	6		4				1
Sample Size		4	48	299	24		55				430

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Table 4. (page 9 of 13)

	Age Group										
	0.2	0.3	1.2	1.3	2.2	1.4	2.3	3.2	2.4	3.3	Total
Sample Period 9: 27 - 28 July[e]											
Males			2,886	9,669	2,886	144	1,371				16,956
Percent			9.22	30.88	9.22	0.46	4.38				54.15
Sample Size			40	134	40	2	19				235
Mean Length			494	585	511	584	564				555
Std. Error			5	2	6	22	6				2
Sample Size			40	134	40	2	19				235
Females		144	1,443	9,886	1,659	216	1,010				14,358
Percent		0.46	4.61	31.57	5.30	0.69	3.23				45.85
Sample Size		2	20	137	23	3	14				199
Mean Length		563	495	566	524	581	556				553
Std. Error		6	6	2	6	13	7				2
Sample Size		2	20	137	23	3	14				199
Both Sexes		144	4,329	19,555	4,545	360	2,381				31,314
Percent		0.46	13.82	62.45	14.51	1.15	7.60				100.00
Sample Size		2	60	271	63	5	33				434
Mean Length		563	495	575	516	582	560				555
Std. Error		6	4	2	4	12	5				1
Sample Size		2	60	271	63	5	33				434

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Table 4. (page 10 of 13)

	Age Group										
	0.2	0.3	1.2	1.3	2.2	1.4	2.3	3.2	2.4	3.3	Total
Sample Period 10: 29 July - 1 August[f]											
Males	904		9,943	49,261	9,943	904	10,847	452			82,254
Percent	0.45		5.00	24.77	5.00	0.45	5.45	0.23			41.36
Sample Size	2		22	109	22	2	24	1			182
Mean Length	468		527	609	536	629	594	542			587
Std. Error	2		6	3	4	1	5				2
Sample Size	2		22	109	22	2	24	1			182
Females		1,808	9,491	73,214	11,299	1,808	17,626	452	904		116,602
Percent		0.91	4.77	36.82	5.68	0.91	8.86	0.23	0.45		58.64
Sample Size		4	21	162	25	4	39	1	2		258
Mean Length		568	518	585	534	590	576	550	568		573
Std. Error		13	5	2	4	5	3		4		1
Sample Size		4	21	162	25	4	39	1	2		258
Both Sexes	904	1,808	19,434	122,475	21,242	2,712	28,473	904	904		198,856
Percent	0.45	0.91	9.77	61.59	10.68	1.36	14.32	0.45	0.45		100.00
Sample Size	2	4	43	271	47	6	63	2	2		440
Mean Length	468	568	523	595	535	603	583	546	568		579
Std. Error	2	13	4	1	3	3	3		4		1
Sample Size	2	4	43	271	47	6	63	2	2		440

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Table 4. (page 11 of 13)

	Age Group										
	0.2	0.3	1.2	1.3	2.2	1.4	2.3	3.2	2.4	3.3	Total
Sample Period 11: 2 - 3 August[9]											
Males			2,849	20,421	5,066	317	4,116		158		32,927
Percent			3.95	28.29	7.02	0.44	5.70		0.22		45.61
Sample Size			18	129	32	2	26		1		208
Mean Length			504	609	534	633	606		546		588
Std. Error			7	2	5	5	5				2
Sample Size			18	129	32	2	26		1		208
Females		317	3,324	25,171	3,483	475	6,490				39,260
Percent		0.44	4.60	34.87	4.82	0.66	8.99				54.39
Sample Size		2	21	159	22	3	41				248
Mean Length		593	522	584	532	593	576				573
Std. Error		9	5	2	5	12	4				2
Sample Size		2	21	159	22	3	41				248
Both Sexes		317	6,173	45,592	8,549	792	10,606		158		72,187
Percent		0.44	8.55	63.16	11.84	1.10	14.69		0.22		100.00
Sample Size		2	39	288	54	5	67		1		456
Mean Length		593	514	595	534	609	587		546		580
Std. Error		9	4	1	4	7	3				1
Sample Size		2	39	288	54	5	67		1		456

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Table 4. (page 12 of 13)

	Age Group										
	0.2	0.3	1.2	1.3	2.2	1.4	2.3	3.2	2.4	3.3	Total
Sample Period 12: 4 - 9 August[h]											
Males		119	776	8,830	1,133	239	4,295	119		60	15,571
Percent		0.46	2.97	33.79	4.34	0.91	16.44	0.46		0.23	59.59
Sample Size		2	13	148	19	4	72	2		1	261
Mean Length		584	493	575	502	585	566	514		542	562
Std. Error		6	9	2	6	9	3	11			2
Sample Size		2	13	148	19	4	72	2		1	261
Females			716	6,442	1,074	119	2,028	60	60	60	10,559
Percent			2.74	24.65	4.11	0.46	7.76	0.23	0.23	0.23	40.41
Sample Size			12	108	18	2	34	1	1	1	177
Mean Length			479	554	510	544	554	511	598	559	544
Std. Error			10	3	9	11	5				2
Sample Size			12	108	18	2	34	1	1	1	177
Both Sexes		119	1,492	15,272	2,207	358	6,323	179	60	120	26,130
Percent		0.46	5.71	58.45	8.45	1.37	24.20	0.69	0.23	0.46	100.00
Sample Size		2	25	256	37	6	106	3	1	2	438
Mean Length		584	486	566	506	571	562	513	598	551	555
Std. Error		6	7	2	5	7	2	11			1
Sample Size		2	25	256	37	6	106	3	1	2	438

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Table 4. (page 13 of 13)

	Age Group										
	0.2	0.3	1.2	1.3	2.2	1.4	2.3	3.2	2.4	3.3	Total
All Periods Combined:											
Males	1,446	6,024	118,711	400,619	72,213	4,442	106,672	571	413	315	711,426
Percent	0.10	0.43	8.39	28.33	5.11	0.31	7.54	0.04	0.03	0.02	50.30
Sample Size	4	15	421	1,552	289	14	397	3	2	2	2,699
Mean Length	465	583	511	591	515	627	583	536	558	612	569
Std. Error	2	10	2	1	2	5	2	11			1
Sample Size	4	15	421	1,552	289	14	397	3	2	2	2,699
Females		14,576	69,416	444,168	61,061	2,988	107,141	1,617	964	910	702,841
Percent		1.03	4.91	31.41	4.32	0.21	7.58	0.11	0.07	0.06	49.70
Sample Size		30	265	1,682	229	14	372	4	3	2	2,601
Mean Length		575	509	576	527	584	571	554	569	578	565
Std. Error		4	2	1	2	4	2		4		1
Sample Size		30	265	1,682	229	14	372	4	3	2	2,601
Both Sexes	1,446	20,600	188,127	844,787	133,274	7,430	213,813	2,188	1,377	1,225	1,414,267
Percent	0.10	1.46	13.30	59.73	9.42	0.53	15.12	0.15	0.10	0.09	100.00
Sample Size	4	45	686	3,234	518	28	769	7	5	4	5,300
Mean Length	465	577	510	583	521	610	577	549	566	586	567
Std. Error	2	4	1	1	2	3	1	11	4		1
Sample Size	4	45	686	3,234	518	28	769	7	5	4	5,300

[a] Mean length in mm.
[b] All of Central District open 7/8 0700-1900, Kasilof Section open 1900-2300.
[c] Kasilof Section open 0500-1500 on 7/9, and 0500-1800 on 7/11. Kenai & Kasilof Sections open 0700-1900 on 7/12.
[d] Kenai & Kasilof Sections open 0700-1900 on 7/22.
[e] On 7/27 Kenai & Kasilof Sections open 0500-1900, Kasilof Section open 1900-2200. Kasilof Section open 7/28 600-1200.
[f] On 7/29 Kenai & Kasilof Sections and south of North Kalgin Island open 0700-1900, Kenai & Kasilof Sections Open 1900-2200. On 7/30 Kenai & Kasilof Sections open 0600-1300, and Kasilof Section open 1300-2200. On 7/31, Kasilof Section open 0600-2300. Kenai & Kasilof Sections open 8/01 from 0500-2300.
[g] On 8/02 Kenai & Kasilof Sections open 0500-0700, all of Central District open 0700-1900, Kenai & Kasilof Sections open 1900-2200. On 8/03 Kasilof & Kenai Sections open 0500-2200.
[h] Kenai & Kasilof Sections open 8/04 0500-2200, on 8/05 Kenai & Kasilof Sections open 0500-0700, all of Central District open 0700-1900. 8/09 all of Central District open 0700-1900.

Table 5. Age, sex and length composition of sockeye salmon in the Cohoe/Ninilchik Beach commercial set gillnet harvest, Upper Cook Inlet, Alaska, in 1999.

	Age Group									
	0.2	0.3	1.2	1.3	2.2	1.4	2.3	2.4	3.3	Total
Sample Period 1: 1 - 3 July										
Males			2,271	9,885	1,737	134	1,670			15,697
Percent			7.30	31.76	5.58	0.43	5.37			50.43
Sample Size			34	148	26	2	25			235
Mean Length[a]			499	553	504	583	544			539
Std. Error			5	2	5	51	6			2
Sample Size			34	148	26	2	25			235
Females	67		1,336	10,888	1,536		1,603			15,430
Percent	0.22		4.29	34.98	4.93		5.15			49.57
Sample Size	1		20	163	23		24			231
Mean Length	450		510	548	508		536			539
Std. Error			7	2	4		5			2
Sample Size	1		20	163	23		24			231
Both Sexes	67		3,607	20,773	3,273	134	3,273			31,127
Percent	0.22		11.59	66.74	10.51	0.43	10.51			100.00
Sample Size	1		54	311	49	2	49			466
Mean Length	450		503	550	506	583	540			539
Std. Error			4	1	3	51	4			1
Sample Size	1		54	311	49	2	49			466

-Continued-

Table 5. (page 2 of 10)

	Age Group									
	0.2	0.3	1.2	1.3	2.2	1.4	2.3	2.4	3.3	Total
Sample Period 2: 5 July										
Males			2,538	5,203	1,311		1,227			10,279
Percent			12.96	26.56	6.69		6.26			52.48
Sample Size			60	123	31		29			243
Mean Length			497	563	486		538			534
Std. Error			4	3	4		5			2
Sample Size			60	123	31		29			243
Females			931	6,430	804	42	1,100			9,307
Percent			4.75	32.83	4.10	0.21	5.62			47.52
Sample Size			22	152	19	1	26			220
Mean Length			505	552	505	589	561			545
Std. Error			5	2	6		5			2
Sample Size			22	152	19	1	26			220
Both Sexes			3,469	11,633	2,115	42	2,327			19,586
Percent			17.71	59.39	10.80	0.21	11.88			100.00
Sample Size			82	275	50	1	55			463
Mean Length			499	557	493	589	549			539
Std. Error			3	2	3		4			1
Sample Size			82	275	50	1	55			463

-Continued-

Table 5. (page 3 of 10)

	Age Group									
	0.2	0.3	1.2	1.3	2.2	1.4	2.3	2.4	3.3	Total
Sample Period 3: 8 - 9 July										
Males	86		6,425	8,479	3,598	86	1,542			20,216
Percent	0.22		16.23	21.42	9.09	0.22	3.90			51.08
Sample Size	1		75	99	42	1	18			236
Mean Length	485		497	566	505	604	556			532
Std. Error			3	3	3		7			2
Sample Size	1		75	99	42	1	18			236
Females			4,369	10,879	1,970		2,142			19,360
Percent			11.04	27.49	4.98		5.41			48.92
Sample Size			51	127	23		25			226
Mean Length			503	554	503		552			537
Std. Error			4	2	5		6			2
Sample Size			51	127	23		25			226
Both Sexes	86		10,794	19,358	5,568	86	3,684			39,576
Percent	0.22		27.27	48.91	14.07	0.22	9.31			100.00
Sample Size	1		126	226	65	1	43			462
Mean Length	485		500	559	504	604	554			535
Std. Error			2	2	3		5			1
Sample Size	1		126	226	65	1	43			462

-Continued-

Table 5. (page 4 of 10)

	Age Group									
	0.2	0.3	1.2	1.3	2.2	1.4	2.3	2.4	3.3	Total
Sample Period 4: 11 - 12 July										
Males		88	8,695	7,379	3,602		1,054		88	20,906
Percent		0.21	20.84	17.68	8.63		2.53		0.21	50.10
Sample Size		1	99	84	41		12		1	238
Mean Length		583	490	555	493		563		636	518
Std. Error			2	3	4		12			2
Sample Size		1	99	84	41		12		1	238
Females			5,358	10,102	2,899	176	2,284			20,819
Percent			12.84	24.21	6.95	0.42	5.47			49.90
Sample Size			61	115	33	2	26			237
Mean Length			490	548	499	582	557			527
Std. Error			3	3	5	22	7			2
Sample Size			61	115	33	2	26			237
Both Sexes		88	14,053	17,481	6,501	176	3,338		88	41,725
Percent		0.21	33.68	41.90	15.58	0.42	8.00		0.21	100.00
Sample Size		1	160	199	74	2	38		1	475
Mean Length		583	490	551	496	582	559		636	523
Std. Error			2	2	3	22	6			1
Sample Size		1	160	199	74	2	38		1	475

-Continued-

Table 5. (page 5 of 10)

	Age Group									
	0.2	0.3	1.2	1.3	2.2	1.4	2.3	2.4	3.3	Total
Sample Period 5: 14 - 15 July[b]										
Males			4,108	6,130	3,602		1,138			14,978
Percent			14.25	21.27	12.50		3.95			51.97
Sample Size			65	97	57		18			237
Mean Length			500	580	505		565			539
Std. Error			4	4	4		10			2
Sample Size			65	97	57		18			237
Females			2,465	7,395	2,275		1,643	63		13,841
Percent			8.55	25.66	7.89		5.70	0.22		48.03
Sample Size			39	117	36		26	1		219
Mean Length			495	566	512		561	592		544
Std. Error			4	3	5		6			2
Sample Size			39	117	36		26	1		219
Both Sexes			6,573	13,525	5,877		2,781	63		28,819
Percent			22.81	46.93	20.39		9.65	0.22		100.00
Sample Size			104	214	93		44	1		456
Mean Length			498	573	508		563	592		542
Std. Error			3	2	3		5			2
Sample Size			104	214	93		44	1		456

-Continued-

Table 5. (page 6 of 10)

	Age Group									
	0.2	0.3	1.2	1.3	2.2	1.4	2.3	2.4	3.3	Total
Sample Period 6: 17 - 18 July[b]										
Males			23,820	24,650	13,018		4,986		277	66,751
Percent			18.57	19.22	10.15		3.89		0.22	52.05
Sample Size			86	89	47		18		1	241
Mean Length			482	568	489		561		562	521
Std. Error			2	4	3		9			2
Sample Size			86	89	47		18		1	241
Females		277	9,694	32,961	12,187		6,370			61,489
Percent		0.22	7.56	25.70	9.50		4.97			47.95
Sample Size		1	35	119	44		23			222
Mean Length		537	484	559	503		558			536
Std. Error			3	2	4		6			2
Sample Size		1	35	119	44		23			222
Both Sexes		277	33,514	57,611	25,205		11,356		277	128,240
Percent		0.22	26.13	44.92	19.65		8.86		0.22	100.00
Sample Size		1	121	208	91		41		1	463
Mean Length		537	483	563	495		559		562	528
Std. Error			2	2	3		5			1
Sample Size		1	121	208	91		41		1	463

-Continued-

Table 5. (page 7 of 10)

	Age Group									
	0.2	0.3	1.2	1.3	2.2	1.4	2.3	2.4	3.3	Total
Sample Period 7: 19 - 22 July										
Males			12,572	18,858	9,699	180	3,772			45,081
Percent			14.71	22.06	11.34	0.21	4.41			52.73
Sample Size			70	105	54	1	21			251
Mean Length			485	568	489	602	550			526
Std. Error			3	4	4		10			2
Sample Size			70	105	54	1	21			251
Females			8,980	17,781	9,160	539	3,951			40,411
Percent			10.50	20.80	10.71	0.63	4.62			47.27
Sample Size			50	99	51	3	22			225
Mean Length			488	559	498	563	548			529
Std. Error			4	3	4	26	7			2
Sample Size			50	99	51	3	22			225
Both Sexes			21,552	36,639	18,859	719	7,723			85,492
Percent			25.21	42.86	22.06	0.84	9.03			100.00
Sample Size			120	204	105	4	43			476
Mean Length			486	564	494	573	549			528
Std. Error			3	2	3	26	6			1
Sample Size			120	204	105	4	43			476

-Continued-

Table 5. (page 8 of 10)

	Age Group									
	0.2	0.3	1.2	1.3	2.2	1.4	2.3	2.4	3.3	Total
Sample Period 8: 24 - 28 July[c]										
Males			8,935	13,645	6,986		3,087			32,653
Percent			12.50	19.09	9.77		4.32			45.68
Sample Size			55	84	43		19			201
Mean Length			475	571	483		556			525
Std. Error			4	4	5		8			2
Sample Size			55	84	43		19			201
Females			7,473	19,170	8,448		3,736			38,827
Percent			10.45	26.82	11.82		5.23			54.32
Sample Size			46	118	52		23			239
Mean Length			481	559	496		544			529
Std. Error			3	3	4		6			2
Sample Size			46	118	52		23			239
Both Sexes			16,408	32,815	15,434		6,823			71,480
Percent			22.95	45.91	21.59		9.55			100.00
Sample Size			101	202	95		42			440
Mean Length			478	564	490		550			527
Std. Error			3	2	3		5			1
Sample Size			101	202	95		42			440

-Continued-

Table 5. (page 9 of 10)

	Age Group									
	0.2	0.3	1.2	1.3	2.2	1.4	2.3	2.4	3.3	Total
Sample Period 9: 29 July - 12 August										
Males			10,519	16,610	10,704	185	4,060			42,078
Percent			12.34	19.48	12.55	0.22	4.76			49.35
Sample Size			57	90	58	1	22			228
Mean Length			491	591	488	604	556			537
Std. Error			5	4	4		7			2
Sample Size			57	90	58	1	22			228
Females			8,858	19,932	9,597		4,798			43,185
Percent			10.39	23.38	11.26		5.63			50.65
Sample Size			48	108	52		26			234
Mean Length			488	568	504		557			536
Std. Error			4	3	4		5			2
Sample Size			48	108	52		26			234
Both Sexes			19,377	36,542	20,301	185	8,858			85,263
Percent			22.73	42.86	23.81	0.22	10.39			100.00
Sample Size			105	198	110	1	48			462
Mean Length			490	578	496	604	557			536
Std. Error			3	2	3		4			1
Sample Size			105	198	110	1	48			462

-Continued-

Table 5. (page 10 of 10)

	Age Group									
	0.2	0.3	1.2	1.3	2.2	1.4	2.3	2.4	3.3	Total
All Periods Combined:										
Males	86	88	79,883	110,839	54,257	585	22,536		365	268,639
Percent	0.02	0.02	15.04	20.86	10.21	0.11	4.24		0.07	50.56
Sample Size	1	1	601	919	399	5	182		2	2,110
Mean Length	485	583	487	570	491	598	555		580	528
Std. Error			1	1	2	51	3			1
Sample Size	1	1	601	919	399	5	182		2	2,110
Females	67	277	49,464	135,538	48,876	757	27,627	63		262,669
Percent	0.01	0.05	9.31	25.51	9.20	0.14	5.20	0.01		49.44
Sample Size	1	1	372	1,118	333	6	221	1		2,053
Mean Length	450	537	489	558	502	569	553	592		534
Std. Error			1	1	2	20	2			1
Sample Size	1	1	372	1,118	333	6	221	1		2,053
Both Sexes	153	365	129,347	246,377	103,133	1,342	50,163	63	365	531,308
Percent	0.03	0.07	24.35	46.37	19.41	0.25	9.44	0.01	0.07	100.00
Sample Size	2	2	973	2,037	732	11	403	1	2	4,163
Mean Length	470	548	488	563	496	582	554	592	580	531
Std. Error			1	1	1	19	2			1
Sample Size	2	2	973	2,037	732	11	403	1	2	4,163

[a] Mean length in mm.
[B] Fishery open within ½ mile from shore.
[C] 7/24 and 7/25 fishery within ½ mile from shore.

Table 6. Age, sex and length composition of sockeye salmon in the Kalifonsky Beach commercial set gillnet harvest, Upper Cook Inlet, Alaska,1999.

	Age Group								
	0.3	1.2	1.3	2.2	1.4	2.3	3.2	2.4	Total
Sample Period 1: 1 - 8 July									
Males		3,925	6,279	1,510		1,268		60	13,042
Percent		13.69	21.89	5.26		4.42		0.21	45.47
Sample Size		65	104	25		21		1	216
Mean Length[a]		495	558	507		548		558	532
Std. Error		3	3	5		7			2
Sample Size		65	104	25		21		1	216
Females		1,630	10,265	2,053		1,691			15,639
Percent		5.68	35.79	7.16		5.90			54.53
Sample Size		27	170	34		28			259
Mean Length		503	556	504		553			544
Std. Error		4	2	5		4			2
Sample Size		27	170	34		28			259
Both Sexes		5,555	16,544	3,563		2,959		60	28,681
Percent		19.37	57.68	12.42		10.32		0.21	100.00
Sample Size		92	274	59		49		1	475
Mean Length		497	557	505		551		558	538
Std. Error		3	2	3		4			1
Sample Size		92	274	59		49		1	475

-Continued-

Table 6. (page 2 of 8)

	Age Group								
	0.3	1.2	1.3	2.2	1.4	2.3	3.2	2.4	Total
Sample Period 2: 9 - 15 July									
Males		4,438	5,050	2,449		1,020			12,957
Percent		19.08	21.71	10.53		4.38			55.70
Sample Size		87	99	48		20			254
Mean Length		483	559	487		545			518
Std. Error		2	4	4		9			2
Sample Size		87	99	48		20			254
Females	51	2,857	4,439	1,836		1,122			10,305
Percent	0.22	12.28	19.08	7.89		4.82			44.30
Sample Size	1	56	87	36		22			202
Mean Length	589	491	555	490		548			525
Std. Error		3	3	4		7			2
Sample Size	1	56	87	36		22			202
Both Sexes	51	7,295	9,489	4,285		2,142			23,262
Percent	0.22	31.36	40.79	18.42		9.21			100.00
Sample Size	1	143	186	84		42			456
Mean Length	589	486	557	488		546			521
Std. Error		2	3	3		6			1
Sample Size	1	143	186	84		42			456

-Continued-

Table 6. (page 3 of 8)

	Age Group								
	0.3	1.2	1.3	2.2	1.4	2.3	3.2	2.4	Total
Sample Period 3: 17 - 22 July									
Males		13,679	35,173	10,329		7,816		279	67,276
Percent		11.09	28.51	8.37		6.33		0.23	54.52
Sample Size		49	126	37		28		1	241
Mean Length		492	598	511		577		614	561
Std. Error		5	3	5		6			2
Sample Size		49	126	37		28		1	241
Females		5,862	39,640	4,187		6,421			56,110
Percent		4.75	32.13	3.39		5.20			45.48
Sample Size		21	142	15		23			201
Mean Length		501	579	502		572			565
Std. Error		7	2	6		6			2
Sample Size		21	142	15		23			201
Both Sexes		19,541	74,813	14,516		14,237		279	123,386
Percent		15.84	60.63	11.76		11.54		0.23	100.00
Sample Size		70	268	52		51		1	442
Mean Length		495	588	508		575		614	563
Std. Error		4	2	4		5			1
Sample Size		70	268	52		51		1	442

-Continued-

Table 6. (page 4 of 8)

	Age Group								
	0.3	1.2	1.3	2.2	1.4	2.3	3.2	2.4	Total
Sample Period 4: 24 - 25 July									
Males		7,319	9,962	5,998	203	1,321		102	24,905
Percent		15.32	20.85	12.55	0.42	2.76		0.21	52.13
Sample Size		72	98	59	2	13		1	245
Mean Length		479	576	482	576	548		580	524
Std. Error		3	4	3	13	10			2
Sample Size		72	98	59	2	13		1	245
Females	102	6,506	9,860	4,371		1,931		102	22,872
Percent	0.21	13.62	20.64	9.15		4.04		0.21	47.87
Sample Size	1	64	97	43		19		1	225
Mean Length	561	482	553	504		545		558	523
Std. Error		3	3	5		7			2
Sample Size	1	64	97	43		19		1	225
Both Sexes	102	13,825	19,822	10,369	203	3,252		204	47,777
Percent	0.21	28.94	41.49	21.70	0.42	6.81		0.43	100.00
Sample Size	1	136	195	102	2	32		2	470
Mean Length	561	480	565	492	576	546		569	523
Std. Error		2	2	3	13	6			1
Sample Size	1	136	195	102	2	32		2	470

-Continued-

Table 6. (page 5 of 8)

	Age Group								
	0.3	1.2	1.3	2.2	1.4	2.3	3.2	2.4	Total
Sample Period 5: 27 - 28 July									
Males		1,903	6,215	1,399	112	1,455			11,084
Percent		7.57	24.73	5.57	0.45	5.79			44.10
Sample Size		34	111	25	2	26			198
Mean Length		505	595	496	605	581			565
Std. Error		6	3	7	4	8			2
Sample Size		34	111	25	2	26			198
Females		1,455	8,454	2,519		1,567		56	14,051
Percent		5.79	33.63	10.02		6.23		0.22	55.90
Sample Size		26	151	45		28		1	251
Mean Length		500	574	518		557		620	555
Std. Error		6	2	4		6			2
Sample Size		26	151	45		28		1	251
Both Sexes		3,358	14,669	3,918	112	3,022		56	25,135
Percent		13.36	58.36	15.59	0.45	12.02		0.22	100.00
Sample Size		60	262	70	2	54		1	449
Mean Length		503	583	510	605	568		620	559
Std. Error		4	2	3	4	5			1
Sample Size		60	262	70	2	54		1	449

-Continued-

Table 6. (page 6 of 8)

	Age Group								
	0.3	1.2	1.3	2.2	1.4	2.3	3.2	2.4	Total
Sample Period 6: 29 July - 2 August									
Males		4,027	11,526	5,277	278	3,055		139	24,302
Percent		6.13	17.55	8.03	0.42	4.65		0.21	37.00
Sample Size		29	83	38	2	22		1	175
Mean Length		460	582	491	591	568		602	541
Std. Error		7	4	6	22	8			3
Sample Size		29	83	38	2	22		1	175
Females	139	6,110	21,387	8,749	555	4,305	139		41,384
Percent	0.21	9.30	32.56	13.32	0.84	6.55	0.21		63.00
Sample Size	1	44	154	63	4	31	1		298
Mean Length	525	471	560	500	568	545	516		533
Std. Error		5	2	4	15	5			2
Sample Size	1	44	154	63	4	31	1		298
Both Sexes	139	10,137	32,913	14,026	833	7,360	139	139	65,686
Percent	0.21	15.43	50.11	21.35	1.27	11.20	0.21	0.21	100.00
Sample Size	1	73	237	101	6	53	1	1	473
Mean Length	525	466	568	497	576	555	516	602	536
Std. Error		4	2	3	13	4			1
Sample Size	1	73	237	101	6	53	1	1	473

-Continued-

Table 6. (page 7 of 8)

	Age Group								
	0.3	1.2	1.3	2.2	1.4	2.3	3.2	2.4	Total
Sample Period 7: 3 - 12 August									
Males		1,571	6,348	2,094	65	1,374			11,452
Percent		5.13	20.73	6.84	0.21	4.49			37.39
Sample Size		24	97	32	1	21			175
Mean Length		471	586	487	613	583			552
Std. Error		7	3	5		5			2
Sample Size		24	97	32	1	21			175
Females	65	3,337	8,115	6,609		916		131	19,173
Percent	0.21	10.90	26.50	21.58		2.99		0.43	62.61
Sample Size	1	51	124	101		14		2	293
Mean Length	576	472	553	496		542		568	519
Std. Error		4	2	3		6		10	2
Sample Size	1	51	124	101		14		2	293
Both Sexes	65	4,908	14,463	8,703	65	2,290		131	30,625
Percent	0.21	16.03	47.23	28.42	0.21	7.48		0.43	100.00
Sample Size	1	75	221	133	1	35		2	468
Mean Length	576	472	568	494	613	566		568	531
Std. Error		3	2	2		4		10	1
Sample Size	1	75	221	133	1	35		2	468

-Continued-

Table 6. (page 8 of 8)

	Age Group								
	0.3	1.2	1.3	2.2	1.4	2.3	3.2	2.4	Total
All Periods Combined:									
Males		36,862	80,553	29,056	658	17,309		580	165,018
Percent		10.70	23.38	8.43	0.19	5.02		0.17	47.89
Sample Size		360	718	264	7	151		4	1,504
Mean Length		485	586	497	591	570		599	546
Std. Error		2	2	2	11	3			1
Sample Size		360	718	264	7	151		4	1,504
Females	357	27,757	102,160	30,324	555	17,953	139	289	179,534
Percent	0.10	8.06	29.65	8.80	0.16	5.21	0.04	0.08	52.11
Sample Size	4	289	925	337	4	165	1	4	1,729
Mean Length	554	485	567	501	568	557	516	575	542
Std. Error		2	1	2	15	3		10	1
Sample Size	4	289	925	337	4	165	1	4	1,729
Both Sexes	357	64,619	182,713	59,380	1,213	35,262	139	869	344,552
Percent	0.10	18.75	53.03	17.23	0.35	10.23	0.04	0.25	100.00
Sample Size	4	649	1,643	601	11	316	1	8	3,233
Mean Length	554	485	576	499	580	563	516	591	544
Std. Error		1	1	1	9	2		10	1
Sample Size	4	649	1,643	601	11	316	1	8	3,233

[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, 1999.

	Age Group											
	0.2	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	3.3	Total
Sample Period 1: 8 - 12 July												
Males	18	18	1,318		2,014	458	55	385		37		4,303
Percent	0.22	0.22	15.89		24.28	5.52	0.66	4.64		0.45		51.87
Sample Size	1	1	72		110	25	3	21		2		235
Mean Length[a]	496	585	507		587	505	627	578		596		553
Std. Error			4		4	5	30	9		37		2
Sample Size	1	1	72		110	25	3	21		2		235
Females		37	586		2,546	311	18	494				3,992
Percent		0.45	7.06		30.69	3.75	0.22	5.96				48.13
Sample Size		2	32		139	17	1	27				218
Mean Length		575	506		576	528	595	572				562
Std. Error		6	5		2	8		5				2
Sample Size		2	32		139	17	1	27				218
Both Sexes	18	55	1,904		4,560	769	73	879		37		8,295
Percent	0.22	0.66	22.95		54.97	9.27	0.88	10.60		0.45		100.00
Sample Size	1	3	104		249	42	4	48		2		453
Mean Length	496	578	506		581	515	619	575		596		557
Std. Error		6	3		2	4	30	5		37		1
Sample Size	1	3	104		249	42	4	48		2		453

-Continued-

Table 7. (page 2 of 6)

	Age Group											
	0.2	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	3.3	Total
Sample Period 2: 15 July												
Males			519		1,076	146	9	155				1,905
Percent			12.12		25.12	3.41	0.21	3.62				44.48
Sample Size			57		118	16	1	17				209
Mean Length			494		596	503	629	595				561
Std. Error			5		3	10		5				2
Sample Size			57		118	16	1	17				209
Females		9	173		1,677	137	27	355				2,378
Percent		0.21	4.04		39.15	3.20	0.63	8.29				55.52
Sample Size		1	19		184	15	3	39				261
Mean Length		592	502		577	510	586	579				568
Std. Error			6		2	9	13	3				1
Sample Size		1	19		184	15	3	39				261
Both Sexes		9	692		2,753	283	36	510				4,283
Percent		0.21	16.16		64.28	6.61	0.84	11.91				100.00
Sample Size		1	76		302	31	4	56				470
Mean Length		592	496		584	507	597	584				565
Std. Error			4		1	7	13	3				1
Sample Size		1	76		302	31	4	56				470

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Table 7. (page 3 of 6)

	Age Group											
	0.2	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	3.3	Total
Sample Period 3: 19 - 22 July												
Males			3,187		19,729	3,035	152	4,704				30,807
Percent			4.64		28.70	4.41	0.22	6.84				44.81
Sample Size			21		130	20	1	31				203
Mean Length			513		602	529	663	587				584
Std. Error			7		2	5		4				2
Sample Size			21		130	20	1	31				203
Females		152	4,401		23,218	5,160	152	4,704		152		37,939
Percent		0.22	6.40		33.77	7.51	0.22	6.84		0.22		55.19
Sample Size		1	29		153	34	1	31		1		250
Mean Length		551	503		577	529	554	577		529		562
Std. Error			7		2	5		5				2
Sample Size		1	29		153	34	1	31		1		250
Both Sexes		152	7,588		42,947	8,195	304	9,408		152		68,746
Percent		0.22	11.04		62.47	11.92	0.44	13.69		0.22		100.00
Sample Size		1	50		283	54	2	62		1		453
Mean Length		551	507		589	529	609	582		529		572
Std. Error			5		1	4		3				1
Sample Size		1	50		283	54	2	62		1		453

-Continued-

Table 7. (page 4 of 6)

	Age Group											
	0.2	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	3.3	Total
Sample Period 4: 27 - 30 July												
Males		170	6,457		15,802	6,457	170	2,379		170	170	31,775
Percent		0.21	8.15		19.96	8.15	0.21	3.00		0.21	0.21	40.13
Sample Size		1	38		93	38	1	14		1	1	187
Mean Length		492	496		596	527	626	590		651	606	561
Std. Error			5		3	4		8				2
Sample Size		1	38		93	38	1	14		1	1	187
Females			3,738		28,716	9,006	170	5,607	170			47,407
Percent			4.72		36.27	11.37	0.21	7.08	0.21			59.87
Sample Size			22		169	53	1	33	1			279
Mean Length			499		568	525	572	567	524			554
Std. Error			6		2	3		4				1
Sample Size			22		169	53	1	33	1			279
Both Sexes		170	10,195		44,518	15,463	340	7,986	170	170	170	79,182
Percent		0.21	12.88		56.22	19.53	0.43	10.09	0.21	0.21	0.21	100.00
Sample Size		1	60		262	91	2	47	1	1	1	466
Mean Length		492	497		578	526	599	574	524	651	606	557
Std. Error			4		1	3		4				1
Sample Size		1	60		262	91	2	47	1	1	1	466

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Table 7. (page 5 of 6)

	Age Group											
	0.2	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	3.3	Total
Sample Period 5: 1 - 12 August												
Males			5,769		12,950	6,026	128	2,051				26,924
Percent			10.20		22.90	10.66	0.23	3.63				47.62
Sample Size			45		101	47	1	16				210
Mean Length			478		571	495	587	559				533
Std. Error			5		2	4		7				2
Sample Size			45		101	47	1	16				210
Females			4,231	256	13,976	8,846	256	1,795	128	128		29,616
Percent			7.48	0.45	24.72	15.65	0.45	3.17	0.23	0.23		52.38
Sample Size			33	2	109	69	2	14	1	1		231
Mean Length			479	397	551	505	554	552	533	598		526
Std. Error			6	1	2	3	3	8				2
Sample Size			33	2	109	69	2	14	1	1		231
Both Sexes			10,000	256	26,926	14,872	384	3,846	128	128		56,540
Percent			17.69	0.45	47.62	26.30	0.68	6.80	0.23	0.23		100.00
Sample Size			78	2	210	116	3	30	1	1		441
Mean Length			478	397	561	501	565	556	533	598		529
Std. Error			4	1	2	2	3	5				1
Sample Size			78	2	210	116	3	30	1	1		441

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Table 7. (page 6 of 6)

	Age Group											
	0.2	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	2.4	3.3	Total
All Periods Combined:												
Males	18	188	17,250		51,571	16,122	514	9,674		207	170	95,714
Percent	0.01	0.09	7.95		23.76	7.43	0.24	4.46		0.10	0.08	44.10
Sample Size	1	2	233		552	146	7	99		3	1	1,044
Mean Length	496	501	494		592	514	627	582		641	606	560
Std. Error			3		1	2	30	3		37		1
Sample Size	1	2	233		552	146	7	99		3	1	1,044
Females		198	13,129	256	70,133	23,460	623	12,955	298	280		121,332
Percent		0.09	6.05	0.12	32.31	10.81	0.29	5.97	0.14	0.13		55.90
Sample Size		4	135	2	754	188	8	144	2	2		1,239
Mean Length		557	494	397	568	518	561	569	528	561		550
Std. Error		6	3	1	1	2	3	3				1
Sample Size		4	135	2	754	188	8	144	2	2		1,239
Both Sexes	18	386	30,379	256	121,704	39,582	1,137	22,629	298	487	170	217,046
Percent	0.01	0.18	14.00	0.12	56.07	18.24	0.52	10.43	0.14	0.22	0.08	100.00
Sample Size	1	6	368	2	1,306	334	15	243	2	5	1	2,283
Mean Length	496	530	494	397	578	517	591	574	528	595	606	555
Std. Error		6	2	1	1	2	5	2		37		1
Sample Size	1	6	368	2	1,306	334	15	243	2	5	1	2,283

[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 1999.

	Age Group								
	0.2	0.3	1.2	1.3	2.2	1.4	2.3	3.2	Total
Sample period:	7 June - 13 September								
Males	95	285	4,980	3,083	3,795	47	712	95	13,092
Percent	0.43	1.30	22.67	14.04	17.28	0.21	3.24	0.43	59.61
Sample Size	2	6	105	65	80	1	15	2	276
Mean Length[a]	451	576	502	574	507	585	577	523	526
Std. Error	10	8	2	3	3		7	18	2
Sample Size	2	6	105	65	80	1	15	2	276
Females	47	379	2,848	2,751	2,230		569	47	8,871
Percent	0.21	1.73	12.97	12.53	10.15		2.59	0.21	40.39
Sample Size	1	8	60	58	47		12	1	187
Mean Length	520	543	507	552	499		539	532	523
Std. Error		9	3	3	3		8		2
Sample Size	1	8	60	58	47		12	1	187
Both Sexes	142	664	7,828	5,834	6,025	47	1,281	142	21,963
Percent	0.65	3.02	35.64	26.56	27.43	0.21	5.83	0.65	100.00
Sample Size	3	14	165	123	127	1	27	3	463
Mean Length	474	557	504	564	504	585	560	526	525
Std. Error	10	6	2	2	2		5	18	1
Sample Size	3	14	165	123	127	1	27	3	463

[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 1999.

	Age Group								
	0.2	0.3	1.2	1.3	2.2	1.4	2.3	3.3	Total
Sample Period 1: 7 June - 19 July									
Males	153	460	1,481	8,531	358		3,218		14,201
Percent	0.74	2.23	7.19	41.44	1.74		15.63		68.98
Sample Size	3	9	29	167	7		63		278
Mean Length[a]	483	593	498	584	485		583		571
Std. Error	6	6	8	2	11		4		2
Sample Size	3	9	29	167	7		63		278
Females		204	460	3,730	204	102	1,686		6,386
Percent		0.99	2.23	18.12	0.99	0.50	8.19		31.02
Sample Size		4	9	73	4	2	33		125
Mean Length		552	509	563	465	576	559		555
Std. Error		8	9	2	18	1	3		2
Sample Size		4	9	73	4	2	33		125
Both Sexes	153	664	1,941	12,261	562	102	4,904		20,587
Percent	0.74	3.23	9.43	59.56	2.73	0.50	23.82		100.00
Sample Size	3	13	38	240	11	2	96		403
Mean Length	483	580	501	577	478	576	575		566
Std. Error	6	5	6	2	10	1	3		1
Sample Size	3	13	38	240	11	2	96		403

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Table 9. (page 2 of 3)

	Age Group								
	0.2	0.3	1.2	1.3	2.2	1.4	2.3	3.3	Total
Sample Period 2: 26 July - 30 August									
Males	36	109	2,846	1,825	657		2,664		8,137
Percent	0.22	0.66	17.22	11.04	3.97		16.12		49.23
Sample Size	1	3	78	50	18		73		223
Mean Length	497	547	473	561	487		560		524
Std. Error		14	4	4	7		3		2
Sample Size	1	3	78	50	18		73		223
Females		182	2,666	2,408	511	109	2,481	36	8,393
Percent		1.10	16.13	14.57	3.09	0.66	15.01	0.22	50.77
Sample Size		5	73	66	14	3	68	1	230
Mean Length		537	470	538	474	561	548	535	516
Std. Error		16	3	3	8	15	2		2
Sample Size		5	73	66	14	3	68	1	230
Both Sexes	36	291	5,512	4,233	1,168	109	5,145	36	16,530
Percent	0.22	1.76	33.35	25.61	7.07	0.66	31.13	0.22	100.00
Sample Size	1	8	151	116	32	3	141	1	453
Mean Length	497	541	471	548	481	561	554	535	520
Std. Error		12	2	2	5	15	2		1
Sample Size	1	8	151	116	32	3	141	1	453

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Table 9. (page 3 of 3)

	Age Group								
	0.2	0.3	1.2	1.3	2.2	1.4	2.3	3.3	Total
All Periods Combined:									
Males	189	569	4,327	10,356	1,015		5,882		22,338
Percent	0.51	1.53	11.66	27.90	2.73		15.85		60.18
Sample Size	4	12	107	217	25		136		501
Mean Length	485	584	481	580	486		573		554
Std. Error	6	6	4	2	6		2		1
Sample Size	4	12	107	217	25		136		501
Females		386	3,126	6,138	715	211	4,167	36	14,779
Percent		1.04	8.42	16.54	1.93	0.57	11.23	0.10	39.82
Sample Size		9	82	139	18	5	101	1	355
Mean Length		545	476	553	471	568	552	535	533
Std. Error		9	3	2	8	8	2		1
Sample Size		9	82	139	18	5	101	1	355
Both Sexes	189	955	7,453	16,494	1,730	211	10,049	36	37,117
Percent	0.51	2.57	20.08	44.44	4.66	0.57	27.07	0.10	100.00
Sample Size	4	21	189	356	43	5	237	1	856
Mean Length	485	568	479	570	480	568	564	535	545
Std. Error	6	5	2	1	5	8	2		1
Sample Size	4	21	189	356	43	5	237	1	856

[a] Mean length in mm.

Table 10. Age, sex and length composition of sockeye salmon in the Western Subdistrict commercial set gillnet harvest, Upper Cook Inlet, Alaska, in 1999.

	Age Group				
	1.2	1.3	2.2	2.3	Total
Sample period:	21 June - 30 August				
Males	5,863	7,817	2,736	8,988	25,404
Percent	11.86	15.81	5.53	18.18	51.38
Sample Size	30	40	14	46	130
Mean Length[a]	515	574	526	578	557
Std. Error	7	5	12	4	3
Sample Size	30	40	14	46	130
Females	4,299	10,944	3,322	5,472	24,037
Percent	8.70	22.14	6.72	11.07	48.62
Sample Size	22	56	17	28	123
Mean Length	504	558	492	560	539
Std. Error	7	3	5	4	2
Sample Size	22	56	17	28	123
Both Sexes	10,162	18,761	6,058	14,460	49,441
Percent	20.55	37.95	12.25	29.25	100.00
Sample Size	52	96	31	74	253
Mean Length	511	564	507	571	548
Std. Error	5	2	6	3	2
Sample Size	52	96	31	74	253

[a] Mean length in mm.

Table 11. Age, sex and length composition of sockeye salmon escapement in Kenai River, Upper Cook Inlet, Alaska, in 1999.

	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 July - 18 August										
Males	1,096	78,913	4,384	221,394	41,649	1,096	1,096	40,553	1,096		391,277
Percent	0.14	9.82	0.55	27.56	5.18	0.14	0.14	5.05	0.14		48.70
Sample Size	1	72	4	202	38	1	1	37	1		357
Mean Length[a]	478	490	391	600	517	350	609	592	492		564
Std. Error		5	10	2	6			5			2
Sample Size	1	72	4	202	38	1	1	37	1		357
Females	1,096	42,745	5,480	223,588	93,161		2,192	36,168	6,576	1,096	412,102
Percent	0.14	5.32	0.68	27.83	11.60		0.27	4.50	0.82	0.14	51.30
Sample Size	1	39	5	204	85		2	33	6	1	376
Mean Length	565	488	381	576	512		596	574	514	600	549
Std. Error		7	4	2	3		11	5	5		1
Sample Size	1	39	5	204	85		2	33	6	1	376
Both Sexes	2,192	121,658	9,864	444,982	134,810	1,096	3,288	76,721	7,672	1,096	803,379
Percent	0.27	15.14	1.23	55.39	16.78	0.14	0.41	9.55	0.95	0.14	100.00
Sample Size	2	111	9	406	123	1	3	70	7	1	733
Mean Length	522	490	385	588	513	350	600	583	511	600	556
Std. Error		4	5	1	3		11	3	5		1
Sample Size	2	111	9	406	123	1	3	70	7	1	733

[a] Mean length in mm.

Table 12. Age, sex and length composition of sockeye salmon escapement in Hidden Creek, Kenai River drainage, Upper Cook Inlet, Alaska in 1999.

	Age Group			
	1.2	1.3	2.2	Total
Sample period: 2 August - 3 September				
Males	18,697	2,228	678	21,603
Percent	37.84	4.51	1.37	43.73
Sample Size	193	23	7	223
Mean Length[a]	509	556	522	514
Std. Error	2	5	11	2
Sample Size	193	23	7	223
Females	25,381	872	1,550	27,803
Percent	51.37	1.76	3.14	56.27
Sample Size	262	9	16	287
Mean Length	492	530	493	493
Std. Error	1	11	6	1
Sample Size	262	9	16	287
Both Sexes	44,078	3,100	2,228	49,406
Percent	89.22	6.27	4.51	100.00
Sample Size	455	32	23	510
Mean Length	499	549	502	502
Std. Error	1	5	5	1
Sample Size	455	32	23	510

[a] Mean length in mm.

Table 13. Age, sex and length composition of sockeye salmon escapement in Kasilof River, Upper Cook Inlet, Alaska, in 1999.

	Age Group							
	1.2	2.1	1.3	2.2	1.4	2.3	3.2	Total
Sample period:	15 June - 8 August							
Males	45,396	324	54,152	40,533	324	13,295		154,024
Percent	14.52	0.10	17.32	12.97	0.10	4.25		49.27
Sample Size	140	1	167	125	1	41		475
Mean Length[a]	479	318	543	480	565	538		507
Std. Error	2		2	2		4		1
Sample Size	140	1	167	125	1	41		475
Females	47,342		51,558	42,802	324	16,213	324	158,563
Percent	15.15		16.49	13.69	0.10	5.19	0.10	50.73
Sample Size	146		159	132	1	50	1	489
Mean Length	474		542	475	545	530	456	502
Std. Error	2		2	2		4		1
Sample Size	146		159	132	1	50	1	489
Both Sexes	92,738	324	105,710	83,335	648	29,508	324	312,587
Percent	29.67	0.10	33.82	26.66	0.21	9.44	0.10	100.00
Sample Size	286	1	326	257	2	91	1	964
Mean Length	476	318	542	477	555	534	456	504
Std. Error	2		2	2		3		1
Sample Size	286	1	326	257	2	91	1	964

[a] Mean length in mm.

Table 14. Age, sex and length composition of sockeye salmon escapement in Crescent River, Upper Cook Inlet, Alaska, in 1999.

	Age Group								
	1.2	2.1	1.3	2.2	1.4	2.3	2.4	3.3	Total
Sample period:	27 June - 4 August								
Males	9,920	73	11,962	4,157	292	10,065	73	73	36,615
Percent	14.91	0.11	17.98	6.25	0.44	15.13	0.11	0.11	55.04
Sample Size	136	1	164	57	4	138	1	1	502
Mean Length[a]	468	374	575	474	594	575	569	601	534
Std. Error	4		3	5	13	3			2
Sample Size	136	1	164	57	4	138	1	1	502
Females	4,303		14,223	1,969		9,409			29,904
Percent	6.47		21.38	2.96		14.14			44.96
Sample Size	59		195	27		129			410
Mean Length	478		545	497		545			532
Std. Error	8		2	6		2			2
Sample Size	59		195	27		129			410
Both Sexes	14,223	73	26,185	6,126	292	19,474	73	73	66,519
Percent	21.38	0.11	39.36	9.21	0.44	29.28	0.11	0.11	100.00
Sample Size	195	1	359	84	4	267	1	1	912
Mean Length	471	374	558	481	594	561	569	601	533
Std. Error	3		2	4	13	2			1
Sample Size	195	1	359	84	4	267	1	1	912

[a] Mean length in mm.

Table 15. Age, sex and length composition of sockeye salmon escapement in Packers Creek, Kalgin Island, Upper Cook Inlet, Alaska, in 1999.

	Age Group						
	1.2	2.1	1.3	2.2	2.3	3.2	Total
Sample period:	4 July - 5 September						
Males	780	683		12,093	1,365		14,921
Percent	3.04	2.66		47.15	5.32		58.18
Sample Size	8	7		124	14		153
Mean Length[a]	443	327		444	534		447
Std. Error	4	6		3	8		2
Sample Size	8	7		124	14		153
Females	683	488	293	7,312	1,853	98	10,727
Percent	2.66	1.90	1.14	28.51	7.22	0.38	41.82
Sample Size	7	5	3	75	19	1	110
Mean Length	463	326	523	469	533	460	475
Std. Error	9	4	18	3	4		2
Sample Size	7	5	3	75	19	1	110
Both Sexes	1,463	1,171	293	19,405	3,218	98	25,648[b]
Percent	5.70	4.57	1.14	75.66	12.55	0.38	100.00
Sample Size	15	12	3	199	33	1	263
Mean Length	452	327	523	453	534	460	458
Std. Error	5	4	18	2	4		2
Sample Size	15	12	3	199	33	1	263

[a] Mean length in mm.

[b] Escapement of 25,648 combined with a cost recovery harvest below the weir of 16,947 and 182 mortalities at the weir results in a total return of 42,777 sockeye to Packers Lake.

Table 16. Age, sex and length composition of sockeye salmon escapement in Yentna River, (RM 4.0), Susitna River drainage, Upper Cook Inlet, Alaska, in 1999.

	Age Group							
	0.2	0.3	1.2	1.3	2.2	1.4	2.3	Total
Sample period:	7 July - 14 August							
Males	3,123	1,561	12,490	30,109	3,569	669	3,569	55,090
Percent	3.15	1.58	12.61	30.40	3.60	0.68	3.60	55.63
Sample Size	14	7	56	135	16	3	16	247
Mean Length[a]	428	583	469	581	483	562	585	541
Std. Error	7	7	5	3	12	14	7	2
Sample Size	14	7	56	135	16	3	16	247
Females	446	1,784	10,706	21,412	4,907	223	4,461	43,939
Percent	0.45	1.80	10.81	21.62	4.96	0.23	4.50	44.37
Sample Size	2	8	48	96	22	1	20	197
Mean Length	436	555	484	553	491	564	546	527
Std. Error	3	10	4	2	6		5	2
Sample Size	2	8	48	96	22	1	20	197
Both Sexes	3,569	3,345	23,196	51,521	8,476	892	8,030	99,029
Percent	3.60	3.38	23.42	52.03	8.56	0.90	8.11	100.00
Sample Size	16	15	104	231	38	4	36	444
Mean Length	429	568	476	569	487	563	563	535
Std. Error	6	6	4	2	6	14	4	1
Sample Size	16	15	104	231	38	4	36	444

[a] Mean length in mm.

Table 17. Age, sex and length composition of sockeye salmon escapement in Fish Creek, Upper Cook Inlet, Alaska, in 1999.

	Age Group								
	1.1	1.2	2.1	1.3	2.2	1.4	2.3	3.2	Total
Sample period:	27 July - 24 August								
Males	3,056	6,520	255	255	509		102		10,697
Percent	11.45	24.43	0.96	0.96	1.91		0.38		40.08
Sample Size	60	128	5	5	10		2		210
Mean Length[a]	331	485	318	558	472		515		438
Std. Error	2	3	6	17	8		5		2
Sample Size	60	128	5	5	10		2		210
Females	51	13,498		407	1,783	51	153	51	15,994
Percent	0.19	50.57		1.52	6.68	0.19	0.57	0.19	59.92
Sample Size	1	265		8	35	1	3	1	314
Mean Length	295	472		516	483	510	528	480	475
Std. Error		2		10	5		14		1
Sample Size	1	265		8	35	1	3	1	314
Both Sexes	3,107	20,018	255	662	2,292	51	255	51	26,691
Percent	11.64	75.00	0.96	2.48	8.59	0.19	0.96	0.19	100.00
Sample Size	61	393	5	13	45	1	5	1	524
Mean Length	330	476	318	532	480	510	523	480	460
Std. Error	2	1	6	9	4		8		1
Sample Size	61	393	5	13	45	1	5	1	524

[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 1999.

	Age Group								
	0.2	1.1	1.2	2.1	1.3	1.4	2.3	1.5	Total
Sample Period 1: 1 - 19 July									
Males		104	371	5	491	817	16	55	1,859
Percent		2.31	8.25	0.11	10.92	18.17	0.36	1.22	41.34
Sample Size		19	68	1	90	150	3	10	341
Mean Length[a]		411	635	398	802	982	800	1,096	834
Std. Error		7	11		8	5	35	14	4
Sample Size		19	68	1	90	150	3	10	341
Females		65	1,123		605	774	11	60	2,638
Percent		1.45	24.97		13.45	17.21	0.24	1.33	58.66
Sample Size		12	206		111	142	2	11	484
Mean Length		420	613		807	955	735	1,021	763
Std. Error		9	5		7	4	25	9	3
Sample Size		12	206		111	142	2	11	484
Both Sexes		169	1,494	5	1,096	1,591	27	115	4,497
Percent		3.76	33.22	0.11	24.37	35.38	0.60	2.56	100.00
Sample Size		31	274	1	201	292	5	21	825
Mean Length		414	618	398	805	969	774	1,057	792
Std. Error		5	4		5	3	23	8	2
Sample Size		31	274	1	201	292	5	21	825

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Table 18. (page 2 of 3)

	Age Group								
	0.2	1.1	1.2	2.1	1.3	1.4	2.3	1.5	Total
Sample Period 2: 22 July - 12 August									
Males	5	34	399	5	636	1,084	5	74	2,242
Percent	0.10	0.69	8.15	0.10	13.00	22.15	0.10	1.51	45.82
Sample Size	1	7	81	1	129	220	1	15	455
Mean Length	695	414	653	455	807	979	830	1,103	866
Std. Error		14	7		5	5		13	3
Sample Size	1	7	81	1	129	220	1	15	455
Females		15	577	5	572	1,403	5	74	2,651
Percent		0.31	11.79	0.10	11.69	28.67	0.10	1.51	54.18
Sample Size		3	117	1	116	285	1	15	538
Mean Length		410	627	440	817	957	785	1,005	852
Std. Error		8	6		6	3		9	3
Sample Size		3	117	1	116	285	1	15	538
Both Sexes	5	49	976	10	1,208	2,487	10	148	4,893
Percent	0.10	1.00	19.95	0.20	24.69	50.83	0.20	3.02	100.00
Sample Size	1	10	198	2	245	505	2	30	993
Mean Length	695	413	637	448	812	967	808	1,054	858
Std. Error		10	4		4	3		8	2
Sample Size	1	10	198	2	245	505	2	30	993

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Table 18. (page 3 of 3)

	Age Group								
	0.2	1.1	1.2	2.1	1.3	1.4	2.3	1.5	Total
All Periods Combined:									
Males	5	138	770	10	1,127	1,901	21	129	4,101
Percent	0.05	1.47	8.20	0.11	12.00	20.24	0.22	1.37	43.67
Sample Size	1	26	149	2	219	370	4	25	796
Mean Length	695	412	644	427	805	981	807	1,100	851
Std. Error		6	6		4	4	35	9	2
Sample Size	1	26	149	2	219	370	4	25	796
Females		80	1,700	5	1,177	2,177	16	134	5,289
Percent		0.85	18.10	0.05	12.53	23.18	0.17	1.43	56.33
Sample Size		15	323	1	227	427	3	26	1,022
Mean Length		418	618	440	812	957	751	1,012	808
Std. Error		8	4		5	3	25	6	2
Sample Size		15	323	1	227	427	3	26	1,022
Both Sexes	5	218	2,470	15	2,304	4,078	37	263	9,390
Percent	0.05	2.32	26.30	0.16	24.54	43.43	0.39	2.80	100.00
Sample Size	1	41	472	3	446	797	7	51	1,818
Mean Length	695	414	626	431	808	968	783	1,055	827
Std. Error		5	3		3	2	23	6	2
Sample Size	1	41	472	3	446	797	7	51	1,818

[a] Mean length in mm.

Table 19. Age, length and percent female composition of coho salmon in selected commercial gillnet harvests and river escapements, Upper Cook Inlet, Alaska, in 1999.

	Age Group			
LOCATION	1.1	2.1	3.1	Total
COMMERCIAL HARVEST				
Central District				
Central Drift				
Number	10,017	47,659	6,853	64,529
Percent	15.52	73.86	10.62	100.00
Sample Size	95	452	65	612
Mean Length[a]	521	541	563	540
% Female	41	34	40	36
Upper Subdistrict				
Number	1,103	8,145	2,431	11,679
Percent	9.44	69.74	20.82	100.00
Sample Size	44	325	97	466
Mean Length	523	542	568	546
% Female	57	39	29	38
Northern District				
General Subdistrict				
Number	2,483	18,986	2,231	23,700
Percent	10.48	80.11	9.41	100.00
Sample Size	79	604	71	754
Mean Length	500	533	545	530
% Female	48	42	37	42
COMMERCIAL HARVEST TOTAL				
Number	13,603	74,790	11,515	99,908
Percent	13.62	74.86	11.53	100.00
Sample Size	218	1,381	233	1,832
Mean Length	518	539	561	539
% Female	44	37	37	38

[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 1999.

	Age Group			
	1.1	2.1	3.1	Total
Sample period:	28 June -	9 August		
Males	5,905	31,421	4,112	41,438
Percent	9.15	48.69	6.37	64.22
Sample Size	56	298	39	393
Mean Length[a]	525	542	564	542
Std. Error	4	2	5	2
Sample Size	56	298	39	393
Females	4,112	16,238	2,741	23,091
Percent	6.37	25.16	4.25	35.78
Sample Size	39	154	26	219
Mean Length	516	539	562	538
Std. Error	5	2	6	2
Sample Size	39	154	26	219
Both Sexes	10,017	47,659	6,853	64,529
Percent	15.52	73.86	10.62	100.00
Sample Size	95	452	65	612
Mean Length	521	541	563	540
Std. Error	3	2	4	1
Sample Size	95	452	65	612

[a] Mean length in mm.

Table 21. Age, sex and length composition of coho salmon in the Upper Subdistrict commercial set gillnet harvest, Upper Cook Inlet, Alaska, in 1999.

	Age Group			
	1.1	2.1	3.1	Total
Sample period:	1 July - 12 August			
Males	476	4,988	1,729	7,193
Percent	4.08	42.71	14.80	61.59
Sample Size	19	199	69	287
Mean Length[a]	534	551	569	554
Std. Error	10	3	5	2
Sample Size	19	199	69	287
Females	627	3,157	702	4,486
Percent	5.37	27.03	6.01	38.41
Sample Size	25	126	28	179
Mean Length	515	529	564	532
Std. Error	8	3	7	3
Sample Size	25	126	28	179
Both Sexes	1,103	8,145	2,431	11,679
Percent	9.44	69.74	20.82	100.00
Sample Size	44	325	97	466
Mean Length	523	542	568	546
Std. Error	6	2	4	2
Sample Size	44	325	97	466

[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 1999.

	Age Group			
	1.1	2.1	3.1	Total
Sample period:	1 July - 30 August			
Males	1,289	11,033	1,414	13,736
Percent	5.44	46.55	5.97	57.96
Sample Size	41	351	45	437
Mean Length[a]	502	535	547	533
Std. Error	6	2	5	2
Sample Size	41	351	45	437
Females	1,194	7,953	817	9,964
Percent	5.04	33.56	3.45	42.04
Sample Size	38	253	26	317
Mean Length	498	529	541	526
Std. Error	6	2	6	2
Sample Size	38	253	26	317
Both Sexes	2,483	18,986	2,231	23,700
Percent	10.48	80.11	9.41	100.00
Sample Size	79	604	71	754
Mean Length	500	533	545	530
Std. Error	4	1	4	1
Sample Size	79	604	71	754

[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 1999.

	Age Group			
	0.2	0.3	0.4	Total
Sample Period 1: 28 June - 14 July				
Males		9,151	3,972	13,123
Percent		34.41	14.94	49.35
Sample Size		159	69	228
Mean Length[a]		621	638	626
Std. Error		2	2	1
Sample Size		159	69	228
Females	58	9,727	3,684	13,469
Percent	0.22	36.58	13.85	50.65
Sample Size	1	169	64	234
Mean Length	531	611	630	616
Std. Error		2	2	1
Sample Size	1	169	64	234
Both Sexes	58	18,878	7,656	26,592
Percent	0.22	70.99	28.79	100.00
Sample Size	1	328	133	462
Mean Length	531	616	634	621
Std. Error		1	2	1
Sample Size	1	328	133	462

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Table 23. (page 2 of 3)

	Age Group			
	0.2	0.3	0.4	Total
Sample Period 2: 15 July - 9 August				
Males	579	61,622	14,466	76,667
Percent	0.41	44.10	10.35	54.87
Sample Size	2	213	50	265
Mean Length	561	617	636	620
Std. Error	42	2	3	1
Sample Size	2	213	50	265
Females		51,208	11,862	63,070
Percent		36.65	8.49	45.13
Sample Size		177	41	218
Mean Length		611	628	615
Std. Error		2	4	2
Sample Size		177	41	218
Both Sexes	579	112,830	26,328	139,737
Percent	0.41	80.74	18.84	100.00
Sample Size	2	390	91	483
Mean Length	561	614	633	618
Std. Error	42	1	3	1
Sample Size	2	390	91	483

-Continued-

Table 23. (page 3 of 3)

	Age Group			
	0.2	0.3	0.4	Total
All Periods Combined:				
Males	579	70,773	18,438	89,790
Percent	0.35	42.55	11.09	53.98
Sample Size	2	372	119	493
Mean Length	561	617	637	621
Std. Error	42	1	3	1
Sample Size	2	372	119	493
Females	58	60,935	15,546	76,539
Percent	0.03	36.64	9.35	46.02
Sample Size	1	346	105	452
Mean Length	531	611	629	615
Std. Error		1	3	1
Sample Size	1	346	105	452
Both Sexes	637	131,708	33,984	166,329
Percent	0.38	79.19	20.43	100.00
Sample Size	3	718	224	945
Mean Length	558	615	633	618
Std. Error	42	1	2	1
Sample Size	3	718	224	945

[a] Mean length in mm.

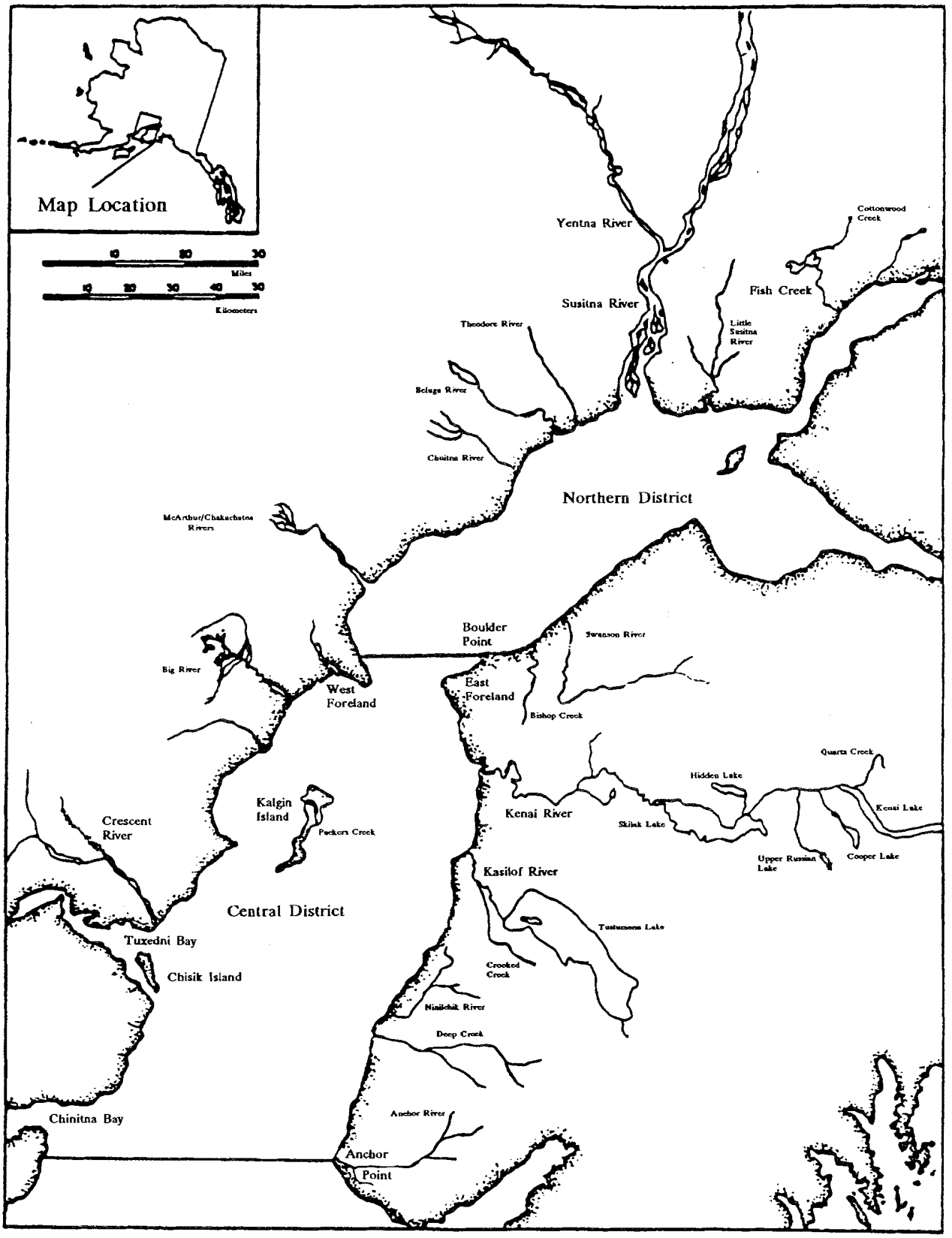

Figure 1. Map of Upper Cook Inlet showing locations of the Northern and Central Districts and the primary salmon spawning drainages.

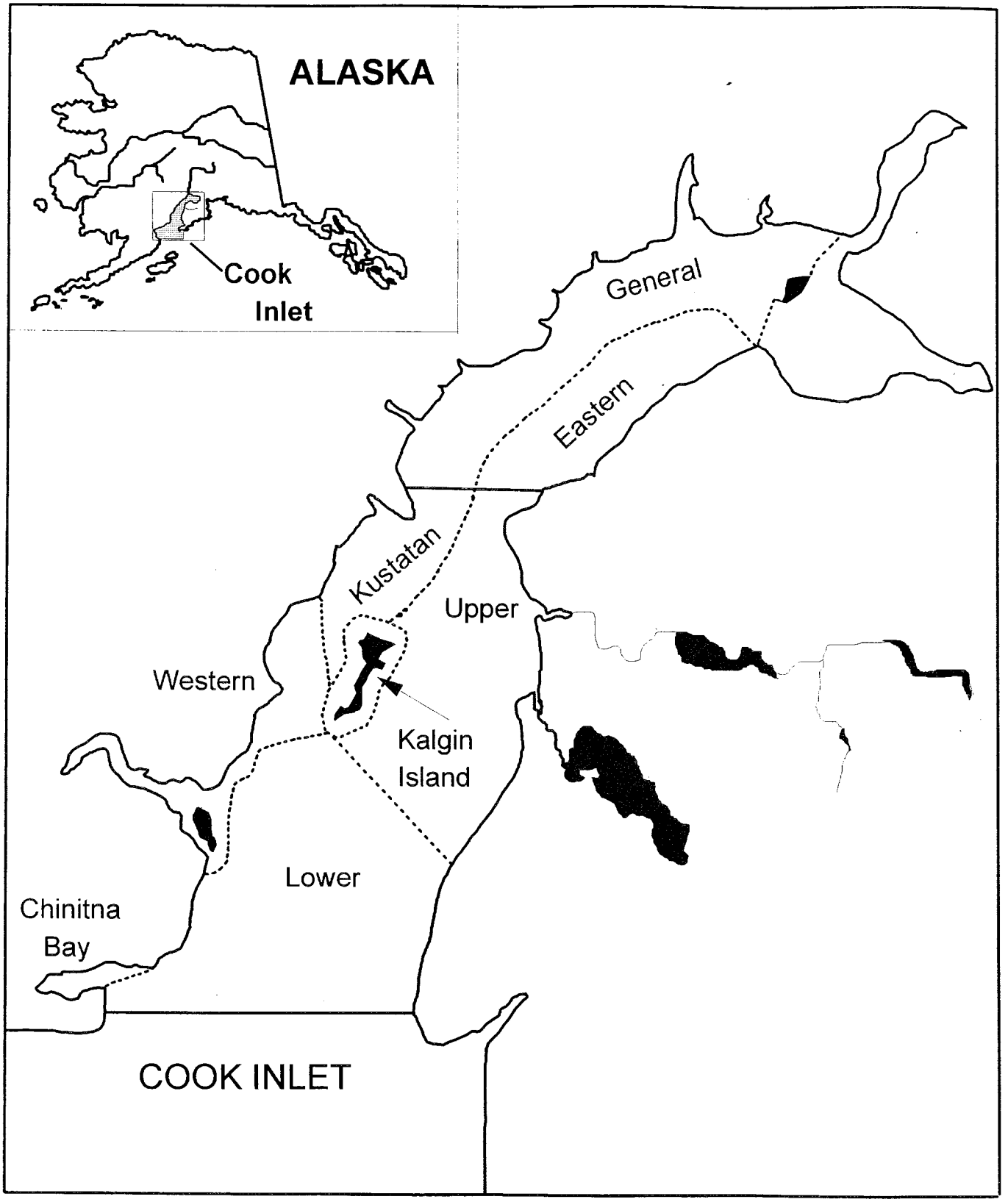

Figure 2. Upper Cook Inlet commercial fisheries subdistrict fishing boundaries.

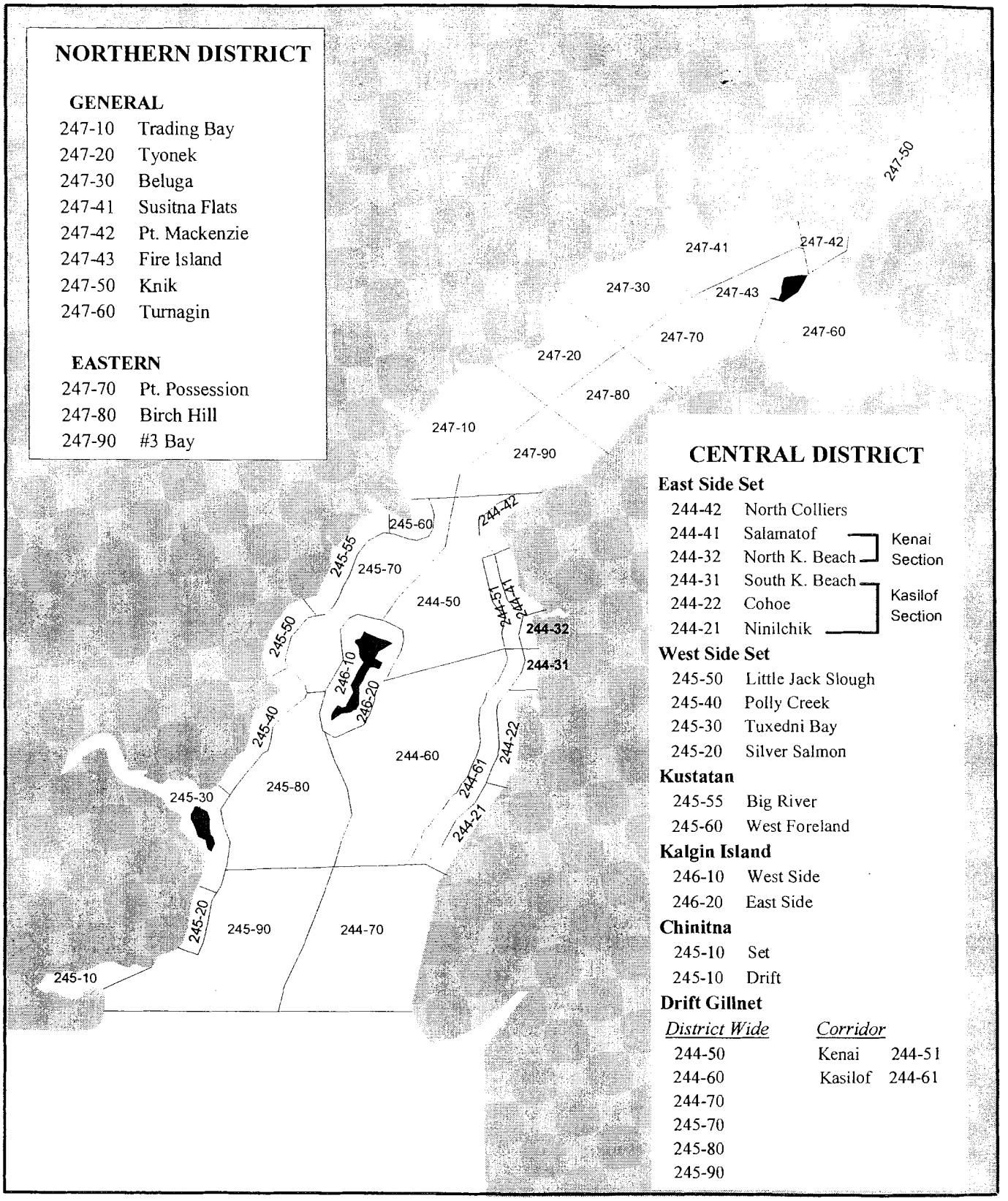

Figure 3. Map of Upper Cook Inlet showing the commercial fishing statistical areas.

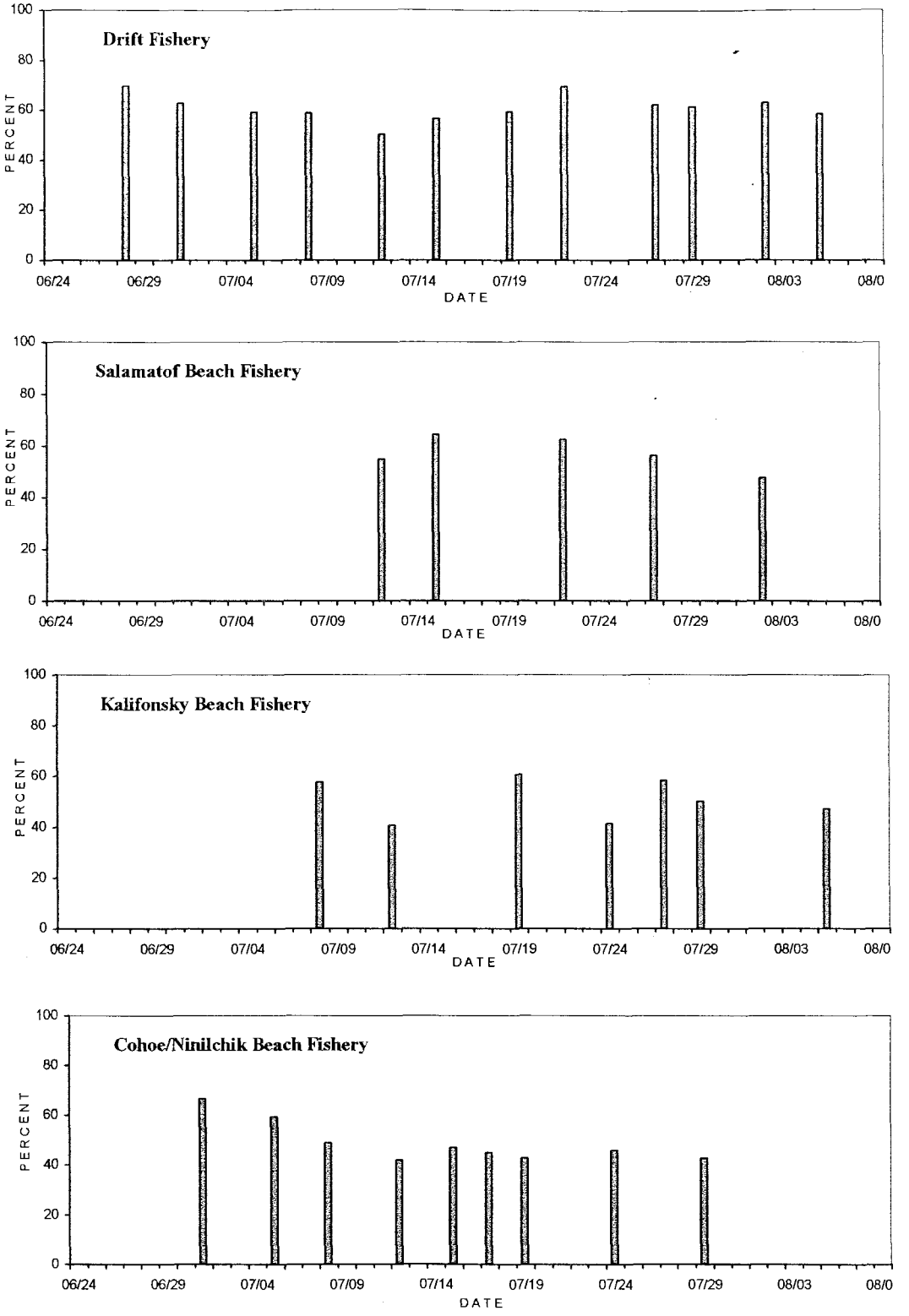

Figure 4. Trends in age-1.3 sockeye salmon composition in the Central District drift gillnet and Upper Subdistrict (Salamatof, Kalifonsky, and Cohoe/Ninilchik Beaches) set gillnet harvests, Upper Cook Inlet, Alaska, in 1999.

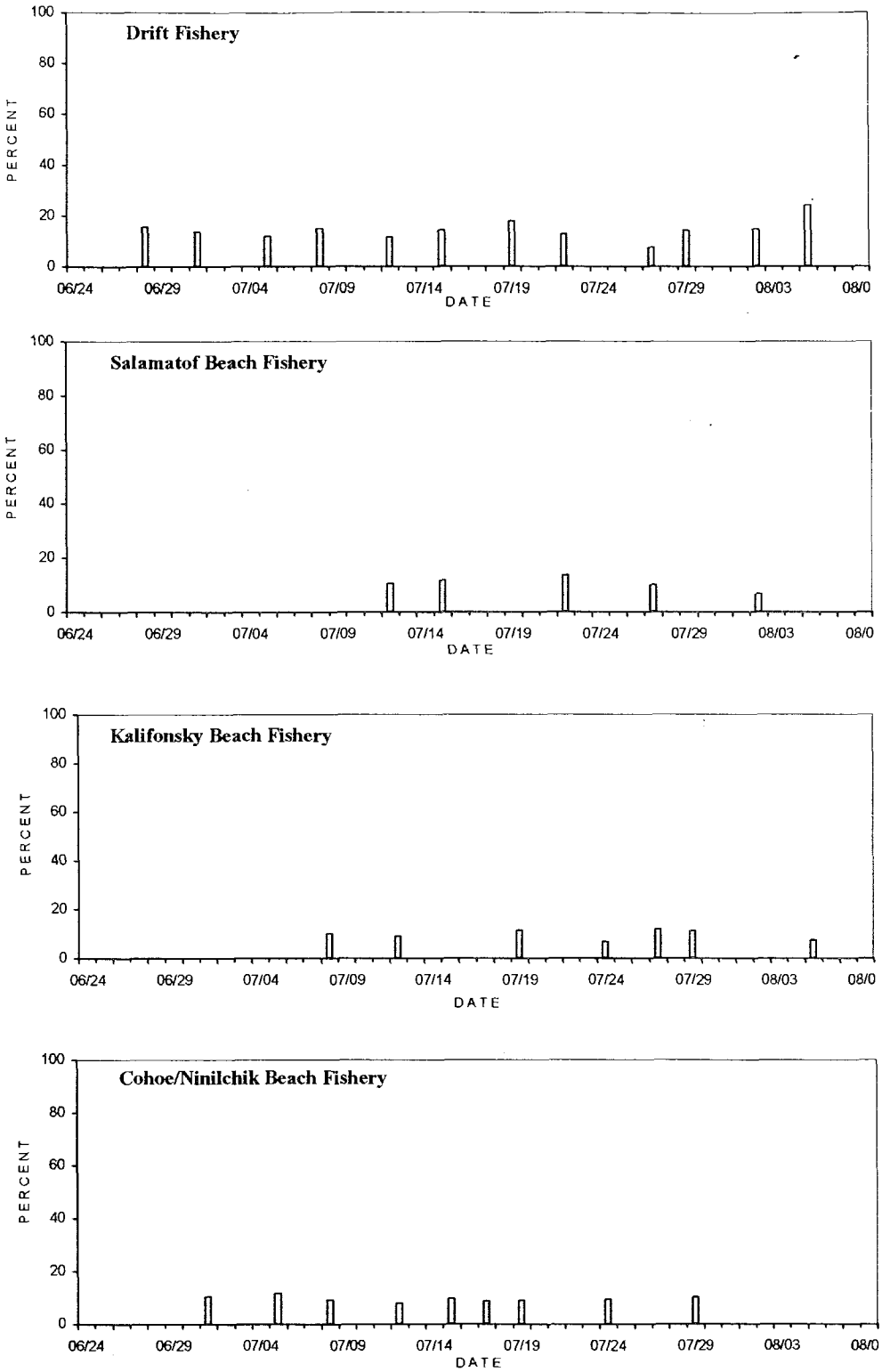

Figure 5. Trends in age-2.3 sockeye salmon composition in the Central District drift gillnet and Upper Subdistrict (Salamatof, Kalifonsky, and Cohoe/Ninilchik Beaches) set gillnet harvests, Upper Cook Inlet, Alaska, in 1999.

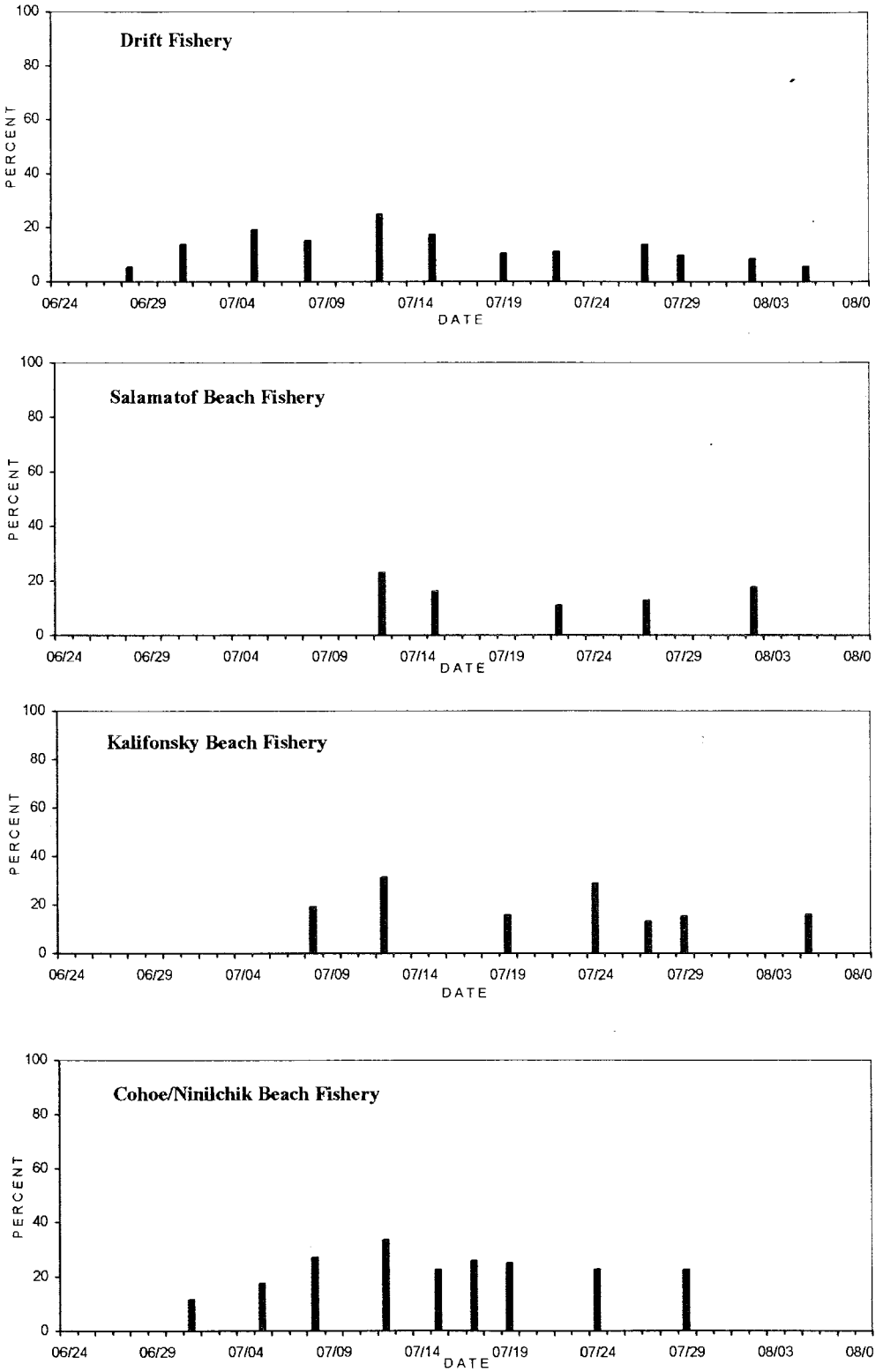

Figure 6. Trends in age-1.2 sockeye salmon composition in the Central District drift gillnet and Upper Subdistrict (Salamatof, Kalifonsky, and Cohoe/Ninilchik Beaches) set gillnet harvests, Upper Cook Inlet, Alaska, in 1999.

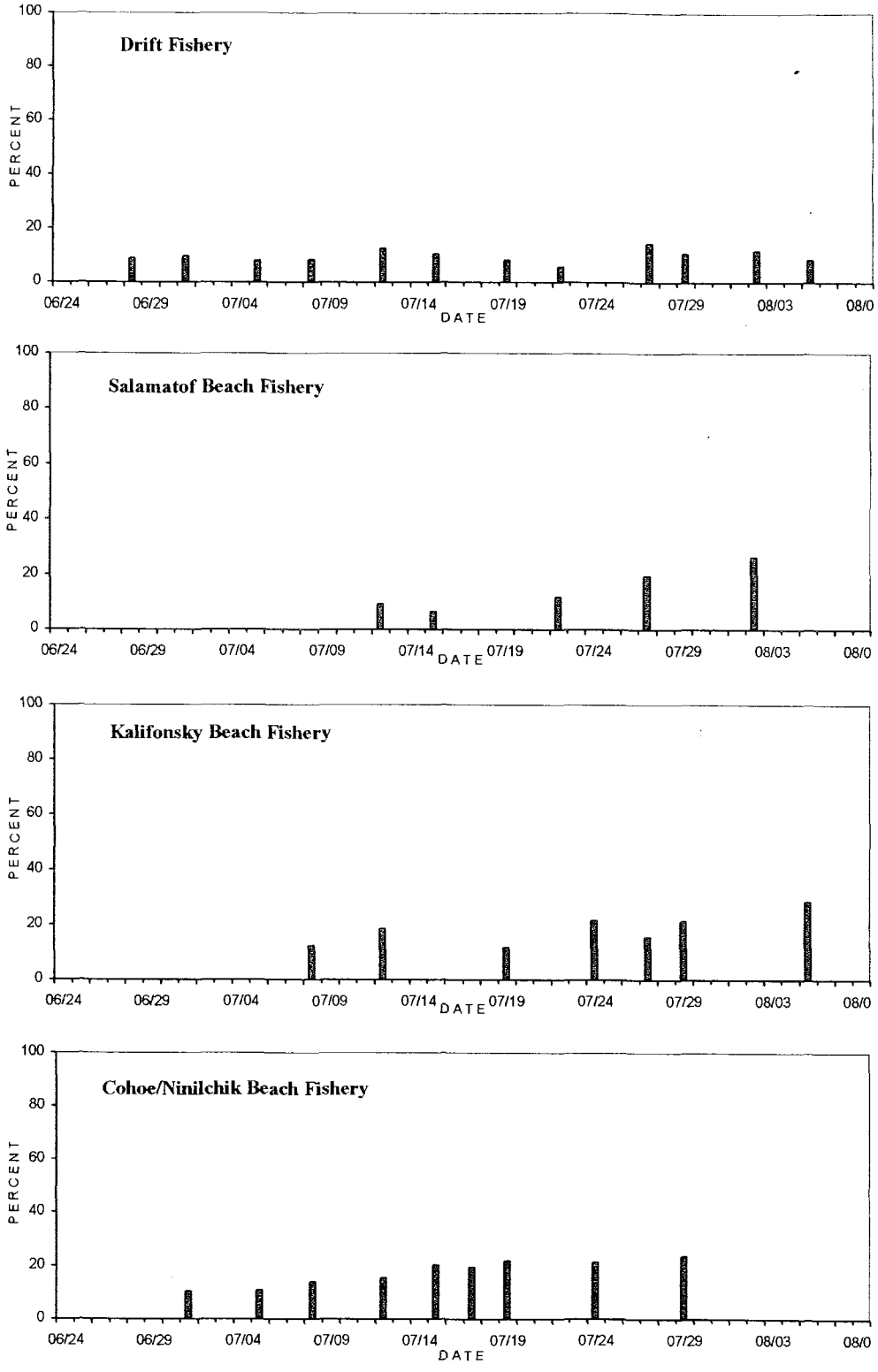

Figure 7. Trends in age-2.2 sockeye salmon composition in the Central District drift gillnet and Upper Subdistrict (Salamatof, Kalifonsky, and Cohoe/Ninilchik Beaches) set gillnet harvests, Upper Cook Inlet, Alaska, in 1999.

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