

Fishery Data Series No. 10-87

**Contributions of Coded Wire Tagged Chinook
Salmon Stocks to the Early-Run Marine Sport
Fishery in Cook Inlet, 1996-2002**

by

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December 2010

Alaska Department of Fish and Game

Divisions of Sport Fish and Commercial Fisheries



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Weights and measures (metric)		General		Mathematics, statistics	
centimeter	cm	Alaska Administrative Code	AAC	<i>all standard mathematical signs, symbols and abbreviations</i>	
deciliter	dL	all commonly accepted abbreviations	e.g., Mr., Mrs., AM, PM, etc.	alternate hypothesis	H _A
gram	g	all commonly accepted professional titles	e.g., Dr., Ph.D., R.N., etc.	base of natural logarithm	e
hectare	ha	at	@	catch per unit effort	CPUE
kilogram	kg	compass directions:		coefficient of variation	CV
kilometer	km	east	E	common test statistics	(F, t, χ^2 , etc.)
liter	L	north	N	confidence interval	CI
meter	m	south	S	correlation coefficient (multiple)	R
milliliter	mL	west	W	correlation coefficient (simple)	r
millimeter	mm	copyright	©	covariance	cov
		corporate suffixes:		degree (angular)	°
Weights and measures (English)		Company	Co.	degrees of freedom	df
cubic feet per second	ft ³ /s	Corporation	Corp.	expected value	E
foot	ft	Incorporated	Inc.	greater than	>
gallon	gal	Limited	Ltd.	greater than or equal to	≥
inch	in	District of Columbia	D.C.	harvest per unit effort	HPUE
mile	mi	et alii (and others)	et al.	less than	<
nautical mile	nmi	et cetera (and so forth)	etc.	less than or equal to	≤
ounce	oz	exempli gratia	e.g.	logarithm (natural)	ln
pound	lb	(for example)		logarithm (base 10)	log
quart	qt	Federal Information Code	FIC	logarithm (specify base)	log ₂ , etc.
yard	yd	id est (that is)	i.e.	minute (angular)	'
		latitude or longitude	lat. or long.	not significant	NS
Time and temperature		monetary symbols		null hypothesis	H ₀
day	d	(U.S.)	\$, ¢	percent	%
degrees Celsius	°C	months (tables and figures): first three letters	Jan,...,Dec	probability	P
degrees Fahrenheit	°F	registered trademark	®	probability of a type I error (rejection of the null hypothesis when true)	α
degrees kelvin	K	trademark	™	probability of a type II error (acceptance of the null hypothesis when false)	β
hour	h	United States (adjective)	U.S.	second (angular)	"
minute	min	United States of America (noun)	USA	standard deviation	SD
second	s	U.S.C.	United States Code	standard error	SE
		U.S. state	use two-letter abbreviations (e.g., AK, WA)	variance	
Physics and chemistry				population sample	Var var
all atomic symbols					
alternating current	AC				
ampere	A				
calorie	cal				
direct current	DC				
hertz	Hz				
horsepower	hp				
hydrogen ion activity (negative log of)	pH				
parts per million	ppm				
parts per thousand	ppt, ‰				
volts	V				
watts	W				

FISHERY DATA SERIES NO. 10-87

**CONTRIBUTIONS OF CODED WIRE TAGGED CHINOOK SALMON TO
THE EARLY-RUN MARINE SPORT FISHERY IN CENTRAL COOK
INLET, 1996-2002**

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ABSTRACT

Coded wire tag recoveries from Chinook salmon *Oncorhynchus tshawytscha* were used to estimate the contribution of tagged stocks to the early-run mixed-stock recreational fishery in Cook Inlet from 1996 through 2002. The focus of the study was to address concern surrounding the origin of the Chinook salmon harvest and to evaluate harvests of several wild and hatchery Cook Inlet stocks. Maturity, ocean-age of fish, distance from shore when hooked, and location by statistical area of the harvest were also estimated. We used logistic regression models to examine the temporal and spatial harvest patterns of coded wire tagged Chinook salmon relative to origin as well as the harvest patterns of Chinook salmon relative to maturity.

From 1996 through 2002, we examined an average of approximately 40% of the estimated early-run harvest that averaged 4,693 fish. Estimated contribution of tagged stocks ranged from 11% to 22%. Origin of the coded wire tagged harvest was of a broad Pacific Northwest distribution. Coded wire tagged Cook Inlet stocks accounted for an average of 5.7% of the harvest, and tagged non-Alaska stocks made up on average 7.2%. Harvested female Chinook salmon that were spring spawners based on egg-size diameter ranged from 50% in 2002 to 79% in 1999. The majority of the Chinook salmon harvest consisted of ocean-age-3 and ocean-age-4 fish; these two age groups combined constituted approximately 77% to 88% of the harvest over all years. About 70% of Chinook salmon harvested were hooked within ¼ mile of shore and an average of 81% of the Chinook salmon harvest was in statistical area 244-70. Significant relationships were identified in the spatial and temporal patterns of harvest for Cook Inlet origin stocks and mature spring spawning Chinook salmon.

Key words: Chinook salmon, *Oncorhynchus tshawytscha*, Cook Inlet, early run, cohort, stock, origin, coded wire tag, adipose fin clip, maturity, logistic regression.

INTRODUCTION

The recovery of coded wire tagged (CWT) Chinook salmon *Oncorhynchus tshawytscha* in various marine fisheries indicate Alaska coastal waters support numerous North American Chinook salmon stocks during their extensive ocean migrations (Lafferty et al. 1998; Clark and Nelson 2001). Reasonably large concentrations of Chinook salmon occur in nearshore marine waters of Cook Inlet, Alaska, during the spring and summer. Within concentrations are groups of indigenous Chinook salmon stocks migrating to Cook Inlet drainages to spawn (Figure 1). The Cook Inlet area supports two run-time groups of Chinook salmon. Early-run fish enter fresh water from May through late June, and those returning from late June through August are known as late run. This report encapsulates the characteristics of Chinook salmon harvested from the marine waters of Cook Inlet during the early run (May through June).

Early-run stocks are more numerous and generally exhibit similar freshwater run and spawn timing. In fact, only the Kenai and Kasilof rivers support both early- and late-run stocks. In addition to Cook Inlet's indigenous stocks, several hatchery populations of early-run Chinook salmon are released each year. The seasonal occurrence of large concentrations of Chinook salmon in nearshore Cook Inlet waters makes them available to sport harvest.

The Cook Inlet marine recreational Chinook salmon fishery gained in popularity during the 1980s and early 1990s. The greatest growth in fishing effort and harvest occurred throughout spring (late April-June) in the nearshore marine waters along the east coast of Cook Inlet from Bluff Point to Cape Ninilchik (Figure 1). From 1987 to 1991, Chinook salmon harvest averaged 4,247 fish annually then increased to an average of 7,303 fish annually from 1992 to 1995 (Table 1). Growth in the marine fishery was primarily due to increased marketing by the sport fish guiding and tourism industries, availability of commercial services to accommodate the launching of larger vessels off the beach, improvements to public boat launch sites, and the

development of sport fishing businesses that conducted marine Chinook salmon fishing. As the marine fishery expanded, management concerns surrounding its reported characteristics (including increasing harvest and fishing effort, and origin of Chinook salmon in the harvest) also increased.

Monitoring of this fishery has gone through three phases. In the first phase, harvest and effort were estimated from data collected by an annual, on-site creel survey from 1972 to 1986 (Hammarstrom 1974-1981; Hammarstrom and Larson 1982-1984, 1986; Hammarstrom et al. 1985). Secondly, since 1987, estimates of harvest and effort from the Alaska Statewide Harvest Survey (SWHS; Mills 1979-1980, 1981a-b, 1982-1994; Howe et al. 1995, 1996, 2001 a-d; Walker et al. 2003; Jennings et al. 2004, 2006) have been used to monitor this fishery (Szarzi 1998). In the third phase a suite of projects were implemented to tag and recover hatchery releases (Table 2) and wild stocks (Table 3) in order to identify their contribution to the early-run Chinook salmon marine sport fishery in Cook Inlet.

This third phase addresses the primary management concern: the origin of the mixed stocks of Chinook salmon that are harvested during their migration along the east coast of Cook Inlet from May through June (Hammarstrom et al. 1987). These fish were believed to originate from the following drainages: Anchor River, Stariski Creek, Deep Creek, and the Ninilchik River on the lower Kenai Peninsula; from Kasilof and Kenai rivers on the upper Kenai Peninsula; and from the Susitna River in northern Cook Inlet (Figure 1). In addition, immature fish from stocks outside Cook Inlet were thought to comprise a small segment of the marine harvest. However, marine exploitation of the lower Kenai Peninsula and early-run Kenai River stocks was of principle management concern. Consequently, wild stock coded wire tag (CWT) marking programs were initiated at Kenai River in 1993 and at Deep Creek in 1994 (Table 3), followed by sampling of the Cook Inlet marine Chinook salmon harvest beginning in 1996 (Bendock 1995, 1996; King and Breakfield 1998, 1999, 2002; McKinley 1999; Begich *In prep*). These programs were to directly address management concerns regarding marine interception of local stocks by quantifying the exploitation of the Deep Creek and early-run Kenai River stocks in the Cook Inlet marine sport fishery.

Sampling of the early-run marine Chinook salmon harvests and estimation of the origin of contributing stocks were conducted from 1996 through 2002. Estimates of the origin of coded wire tagged stocks contributing to the 1996 early-run marine Chinook salmon fishery are documented in McKinley (1999), while those from the 1999 through 2001 fisheries are detailed in Begich (*In prep*). Findings for these years indicated the coded wire tagged stocks contributing to the harvest originated in Cook Inlet as well as from Southeast Alaska, British Columbia, Washington, and Oregon.

This report has two main sections. The first section covers the 1997, 1998, and 2002 central Cook Inlet marine Chinook salmon coded wire tag recovery project. The second section uses findings of this 7-year (1996-2002) project to review harvest of marked Cook Inlet Chinook salmon stocks and to further assess harvests of Cook Inlet Chinook salmon stocks in the early-run marine fishery. Specifically, we evaluate the temporal and spatial harvest patterns of marked Cook Inlet stock groups versus marked stocks from other locations and use maturity data to determine the magnitude of harvest for Cook Inlet origin Chinook salmon stocks in the early-run marine recreational fishery.

SECTION I: CONTRIBUTIONS OF CODED WIRE TAGGED CHINOOK SALMON STOCKS TO THE EARLY- RUN MARINE SPORT FISHERY IN COOK INLET 1997, 1998, AND 2002

OBJECTIVES

For 1997, 1998, and 2002, the objectives for the central Cook Inlet marine Chinook salmon CWT recovery project were to:

1. Estimate the harvest of coded wire tagged Chinook salmon stocks by the central Cook Inlet marine boat recreational fishery north of Bluff Point.
2. Estimate the composition of the Chinook salmon harvest from the central Cook Inlet marine boat fishery north of Bluff Point with respect to ocean-age, maturity, location of harvest, and distance from shore when hooked.

METHODS

The objectives were met by sampling the recreational Chinook salmon harvest at marine fishery access locations at Deep Creek, Anchor Point, and Homer Harbor (Figure 1) from May 1 through June 24 each year, in 1997, 1998 and 2002. Although there were slight differences in study design and logistics between the access areas, the procedures used for meeting objectives were similar. Sampling effort was allocated within and among the sampling locations to ensure that a consistent proportion of the total harvest of Chinook salmon taken by recreational boat anglers was examined among locations and throughout the survey period. Such a design led to self-weighting and allowed summation of data over strata. Additionally, sampling shifts were structured to maximize the number of Chinook salmon examined. The harvest sampling design was based on spatial and temporal boat exit patterns identified from a 1993 boat exit survey at Deep Creek (unpublished data), the 1994 and 1995 creel surveys at Deep Creek and Anchor Point (McKinley 1995), and a harvest sampling program conducted at Homer Harbor in 1996 (McKinley 1999).

Harvested Chinook salmon were sampled for the presence of an adipose fin (a missing adipose fin indicated the fish had a CWT embedded in its snout), age, and maturity. In addition, location of harvest by ADF&G statistical area, location of harvest relative to Bluff Point, and distance from shore when hooked were recorded for all fish examined. Biological and site-specific data collection procedures are detailed in the sections below.

The primary information needed to estimate the proportions of tagged stocks in the harvest north of Bluff Point was the number of decoded tags by cohort (release site/stock and brood year) obtained from the sample of salmon without an adipose fin. Estimates of the proportion of the harvest represented by each tag code were multiplied by estimates of total harvest of early-run Chinook salmon from the SWHS. The resulting product was the estimated harvest of each coded wire tagged stock. Chinook salmon examined and sampled that were harvested south of Bluff Point were omitted from the CWT contribution analysis. The proportions by tag code were created from data pooled over the three sampled access locations since the SWHS estimate is germane to the entire early-run marine fishery (reported as “Anchor River, Whiskey Gulch, Deep

Creek, and Ninilchik River Areas” prior to June 25 (Howe et al. 2001b) not to individual access locations. Composition by ocean-age, maturity, location of harvest by statistical area, and distance from shore when harvested of the early-run Chinook salmon harvest north and south of Bluff Point were also estimated.

DATA COLLECTION

At each location sampled, interviews of anglers were conducted for eight hours on each day sampled (see site specific procedures below). As many groups of anglers (boat-parties) were interviewed each day as possible as they secured their boats, unloaded their gear and harvest, and prepared to exit the fishery. Data collected from each boat-party included: (1) number of Chinook salmon harvested that were examined for adipose fins, (2) number of fish with an adipose fin, (3) distance from shore when hooked for each fish examined, (4) location of harvest of each fish examined relative to Bluff Point, and (5) location of harvest by statistical area (Figures 2 and 3) for each fish examined.

The categories for distance (d) from shore when hooked were:

Categories:	Distance from shore
1	$d < \frac{1}{4}$ mile
2	$\frac{1}{4} \leq d < \frac{1}{2}$ mile
3	$\frac{1}{2} \leq d < \frac{3}{4}$ mile
4	$\frac{3}{4} \leq d < 1$ mile
5	$d \geq 1$ mile

The categories for harvest location were based on the following list of statistical areas (Figures 2 and 3):

Harvest location categories by statistical area		
North of Bluff Point	South of Bluff Point	
244 - 70	241 - 08	241 - 18
241 - 11	241 - 09	241 - 19
241 - 60	241 - 10	241 - 20
	241 - 13	241 - 30
	241 - 14	241 - 50
	241 - 15	232 - 01
	241 - 16	232 - 02
	241 - 17	

With the angler's permission, maturity of inspected fish was determined by internal examination of the gonads for as many fish as possible. The number examined for an adipose fin but not sampled for maturity was also recorded.

Male Chinook salmon were recorded as either immature or a spring spawner (mature) based on the size of the gonads. Gonads from a spring spawner were evident because of their size, globular appearance, and large area of the body cavity the gonads occupied. Conversely, immature gonads were thin and cylindrical, similar in appearance to strands of spaghetti and occupied a small area of the body cavity.

For females, we measured the length of 10 contiguous eggs and recorded the measurement to the nearest millimeter. Females were categorized as immature, fall spawner, or spring spawner according to Kissner (1974) classification. This classification identified the relation between time of spawning and egg size for Chinook salmon harvested during the spring in marine waters of Southeast Alaska. We used Kissner's classification as a surrogate identifier of early-run fish originating in Cook Inlet for the following reasons: (1) the Chinook salmon harvested and sampled for this study also occurred in spring, (2) the Chinook salmon harvest occurred within close proximity to natal streams, (3) the Chinook salmon harvest occurred near the time of spawning for early-run Cook Inlet stocks (July through mid-August), and (4) the fact that time of spawning is generally the same for most Cook Inlet stocks (only Kenai and Kasilof rivers support both early- and late-run stocks). Overall, we assumed large diameter eggs would be characteristic of stocks originating in Cook Inlet, whereas small diameter eggs would be characteristic of those from stocks spawning later and originating elsewhere. The fall and spring spawner categories in this classification system identify run timing and time of spawning for two of the various Chinook salmon life histories. The immature category identifies those that contain undeveloped eggs and will not spawn for several months or perhaps years. The fall spawner category identifies those in an intermediate state of maturity in which spawning will occur in several months. The egg size encapsulates the size of eggs a female would have in spring of the year before summer freshwater entry and fall spawning (summer-Chinook salmon, fall spawners). Finally, the spring category identifies fish in a heightened state of maturity in which spawning is imminent. The egg size encapsulates the size of eggs a female would have in the spring prior to freshwater entry to spawn (spring-Chinook, summer spawners). The different categories associated with maturity composition were:

Males		Females	
Maturity	Criteria	Maturity	Egg Diameter
Immature	Thin, cylindrical	Immature	<2 mm
Spring spawner	Swollen, globular	Fall spawner	≥2 mm, <4 mm
		Spring spawner	≥4 mm

On designated days, as many fish as possible were sampled for age by removing three scales from the preferred area (Welanders 1940) and mounting them on gum cards. Scales were later pressed into acetate cards and ocean-age determined by methods described in Mosher (1969). Freshwater age was not incorporated in the estimates of age composition because precise estimates of freshwater age were not required for contribution estimates. Eliminating freshwater age reduced age error in age composition estimates. Furthermore, Cook Inlet Chinook salmon stocks typically smolt at freshwater-age-1 and hatchery reared Chinook salmon smolt released

into Cook Inlet as well as many Pacific Coast hatcheries are zero check, hence the scale samples from hatchery fish do not include a freshwater growth annulus.

With the angler's permission, heads of Chinook salmon without an adipose fin were collected along with the data described above. A numbered cinch strap was affixed to the head, heads were frozen, and later shipped to the ADF&G Mark, Tag, and Age Laboratory (Tag Lab) in Juneau where the CWTs were extracted and decoded. Decoding the tag number identified the time and location of tagging.

Deep Creek Marine

The Deep Creek marine access site is located at mile 137.3 of the Sterling Highway (Figure 3). Anglers exited the fishery at the following Deep Creek locations: the harbor, north of the tractor launch site, the tractor launch site, and beach south of the tractor launch site. During each sampling day, four technicians worked together, covering each of the four locations. A systematic sampling schedule was used to ensure that a consistent proportion of the harvest of Chinook salmon was sampled through the season. All locations were sampled during the 8-hour period classified as the "prime tide" on sampled days (see below). The days within each week to sample were selected to maximize the number of Chinook salmon sampled, while ensuring that the sampling crew had two contiguous days off each work-week. The sampled days were as follows:

1. every Friday, Saturday, and Sunday,
2. every other Monday and Tuesday, and
3. every other Wednesday and Thursday (during weeks with no samples on Monday and Tuesday).

Each sampling day was defined as 0800 to 2400 hours. Eight-hour sampling periods (prime tides) within the sampling day were defined as follows. The high tide for Ninilchik, Alaska, was determined from the Tides & Currents, Version 2.5b computer program, adjusted by adding 6 hours to the hour of the day of each high tide. The sampling period within the sampling day was identified as the 8 hours occurring between 0800 and 2400 hours that encompassed approximately 2 hours prior to high tide and the 6-hour period following high tide. For example, if the high tide occurred at 1400 hours the adjusted high tide was 2000 hours and the sampling period for that day was 1200 to 2000 hours. The 8-hour periods were sometimes split into two non-contiguous periods (morning and evening shifts) depending on the tide patterns for that day. Consequently, on these days sampling did not occur for the full 6-hour period following high tide.

Anchor Point Marine

The Anchor Point marine launch area is accessed at mile 156.9 of the Sterling Highway (Figure 3). Unlike the alternate Monday-Tuesday and Wednesday-Thursday couplets sampled at Deep Creek, sampling at Anchor Point covered every calendar day during the study and was conducted by one or two technicians. More boats exited the fishery at Anchor Point outside the 8-hour sampling period and also outside of the sampling day (0800-2400 hours) than at Deep Creek (McKinley 1999), so the 7-day sampling regimen was necessary to ensure equal proportions of the harvest landed at Deep Creek and Anchor Point were sampled. Data from the creel surveys in 1994 and 1995 indicated that angler effort during the Monday-Thursday time

period is low enough that one technician can adequately interview most exiting boat-parties. Therefore, during Monday-Thursday, only one technician at a time sampled harvest at Anchor Point, whereas during Friday-Sunday two technicians sampled. As with the Deep Creek area survey only the 8-hour prime-tide periods were sampled within the 0800 to 2400 hours sampling day. Scales were collected for aging from as many fish as possible on Mondays, Wednesdays, and Fridays.

Homer Harbor

The Homer Harbor is located on the Homer Spit within the city of Homer, Alaska (Figure 3). The sampling days were selected in a similar manner to that described above for the Deep Creek area survey. One technician was assigned to work the Homer Harbor. Data from the 1996 creel survey indicated that nearly all anglers targeting Chinook salmon exited the fishery between 1400 and 1900 hours. Consequently, the 8-hour sampling period was 1200 to 2000 hours.

DATA ANALYSIS

Contribution Estimates

Contribution of coded wire tagged Chinook salmon stocks to the Cook Inlet marine recreational harvest was estimated using procedures adapted from Bernard and Clark (1996). The first step was to estimate the contribution to the fishery for each particular tag code:

$$\hat{r}_j = \hat{N} \hat{p}_j \hat{\theta}_j^{-1}, \quad (1)$$

where:

\hat{r}_j = estimated number of Chinook salmon from cohort j (identified by CWT code), harvested during the early run;

\hat{N} = estimated total harvest of Chinook salmon during the early run (obtained from the SWHS);

$\hat{\theta}_j$ = proportion of cohort j possessing a CWT.

Note that θ_j was assumed known for hatchery stocks, and was estimated for wild stocks through the various wild stock marking/recovery programs.

Next, \hat{p}_j was calculated as:

$$\hat{p}_j = \frac{m_j}{\lambda n}, \quad (2)$$

where:

n = number of Chinook salmon inspected for adipose fins; and

m_j = the number of CWTs of code j found.

λ was defined as:

$$\lambda = \frac{a' t'}{a t}, \quad (3)$$

where:

a = number of Chinook salmon without an adipose fin which were counted from the sampled fish;

a' = number of Chinook salmon heads which arrived at the Tag Lab;

t = number of CWTs detected in the heads that arrived at the Tag Lab;

t' = number of CWTs removed from the heads and decoded.

Estimates across tag codes (e.g., all Cook Inlet hatchery tag codes) were obtained by summing the estimates across tag codes:

$$\hat{T} = \sum_{i=1}^C \hat{r}_i, \quad (4)$$

where:

C = the number of tag codes to combine.

An estimate of the variance for the contribution of cohort j to the early-run harvest was estimated following the approach outlined by Bernard and Clark (1996):

$$\hat{V}[\hat{r}_j] = \hat{r}_j^2 \left\{ G(\hat{p}_j) + G(\hat{N}) + G(\hat{\theta}_j^{-1}) - G(\hat{\theta}_j^{-1})G(\hat{N}) - G(\hat{\theta}_j^{-1})G(\hat{p}_j) - G(\hat{N})G(\hat{p}_j) + G(\hat{\theta}_j^{-1})G(\hat{N})G(\hat{p}_j) \right\} \quad (5)$$

where:

$G()$ equals the estimated squared coefficient of variation for the specified estimates, as follows:

$$G(\hat{p}_j) = \frac{\hat{V}[\hat{p}_j]}{\hat{p}_j^2} \quad (6)$$

$$G(\hat{N}) = \frac{\hat{V}[\hat{N}]}{\hat{N}^2} \quad (7)$$

$$G(\hat{\theta}_j^{-1}) = \frac{\hat{V}[\hat{\theta}_j^{-1}]}{(\hat{\theta}_j^{-1})^2} \quad (8)$$

where:

$\hat{V}[\hat{\theta}_j^{-1}]$ is the estimated variance for the estimated inverse tagging fraction, obtained from simulation;

$\hat{V}[\hat{N}]$ is the estimated variance of the overall harvest estimate for the early run, obtained from the SWHS; and

$\hat{V}[\hat{p}_j]$ is the estimated variance of \hat{p}_j , estimated using the large-sample approximation formula in Bernard and Clark (1996); their equation [12]):

$$\hat{V}[\hat{p}_j] \approx \frac{\hat{p}_j}{\lambda n} (1 - \lambda \hat{\phi} \hat{\theta}_j) \quad (9)$$

where:

$$\hat{\phi} = n/\hat{N}. \quad (10)$$

Estimates of the variance of combined tag code contributions were obtained by the following equation, from equation [3] in Bernard and Clark (1996):

$$\hat{V}[\hat{T}] = \sum_{i=1}^C \hat{V}[\hat{r}_i] + 2 \sum_{i=1}^{C-1} \sum_{k>j}^C \hat{Cov}[\hat{r}_i, \hat{r}_k], \quad (11)$$

where:

$\hat{Cov}[\hat{r}_i, \hat{r}_k]$ is the covariance between the estimated contribution of two different tag codes, and was calculated using equation 12, below. Equation 12 is from equation 14 of Bernard and Clark (1996), and is again the large-sample approximation:

$$\hat{Cov}[\hat{r}_j, \hat{r}_k] \approx \hat{r}_j \hat{r}_k G(\hat{N}). \quad (12)$$

Standard errors were calculated as the square root of the appropriate variance. We pooled cohorts to estimate harvest and contribution estimates for four main groups: lower Cook Inlet, other Cook Inlet, other Alaska, and non-Alaska. We also estimated harvest for pooled cohorts from single stocks such as Deep Creek and Ninilchik River as well as for Cook Inlet wild stocks not including Deep Creek and Cook Inlet hatchery stocks not including Ninilchik River.

Ocean-Age and Maturity

The proportion by ocean-age and/or maturity of the harvest of Chinook salmon during the early run was calculated as a binomial proportion.

The proportion of age z Chinook salmon, p_z , in the early-run harvest was estimated by:

$$\hat{p}_z = \frac{n_z}{n}, \quad (13)$$

where n_z is the number out of n fish sampled that were classified as age z . The proportion of maturity class z Chinook salmon in the early-run harvest was estimated in the same way.

The variance of \hat{p}_z was estimated by:

$$\hat{V}[\hat{p}_z] = \left(1 - \frac{n}{\hat{N}}\right) \left(\frac{\hat{p}_z(1 - \hat{p}_z)}{n - 1}\right). \quad (14)$$

Location of Harvest and Distance from Shore when Hooked

Proportions in the various categories of location of capture and distance from shore when hooked were estimated in the same manner as outlined above for age and maturity composition using equations 13 and 14.

The proportions and variances of Chinook salmon harvested south of Bluff Point were also estimated with equations 13 and 14 but without the finite population correction (fpc) because total harvest from the area sampled south of Bluff Point was unknown.

RESULTS

CONTRIBUTION ESTIMATES

1997

From May 1 through June 24, we examined 2,442 of the estimated 5,646 (SE=363) Chinook salmon harvested in the early-run Cook Inlet marine recreational fishery north of Bluff Point for an adipose fin (Table 4). A total of 53 fish that did not have their adipose fin were observed while sampling. Tags were detected in 49 of 52 heads sent in for decoding and 49 tags were successfully decoded (Table 4, Appendix A1). The number of harvested Chinook salmon examined weekly peaked during May 22 through May 28 (Figure 4), while the number of Chinook salmon missing the adipose fin observed in the harvest ($n=14$) was highest during the weeks of May 22 through May 28 and May 29 through June 4 (Figure 4).

The estimated contribution of coded wire tagged stocks to the 1997 fishery was 687 fish (SE=175) representing about 12% of the total harvest (Table 5, Figure 4). Twenty-seven of 49 decoded tag recoveries were of Lower Cook Inlet origin and accounted for an estimated 328 Chinook salmon (SE=106) or about 5.8% of the total estimated harvest (Table 6). An estimated 149 (SE=97) were ocean-age-3 fish of Deep Creek origin. The balance of contributory stocks of the Lower Cook Inlet group was comprised of hatchery fish from Ninilchik (167 fish, SE=40) and Seldovia Harbor (12 fish, SE=7). Other marked Cook Inlet hatchery stocks identified in the harvest included Deception, Ship and Crooked creeks as well as Eagle River. Marked Chinook salmon from the other Cook Inlet wild stock group at large during 1997 included one stock, those from the Kenai River. No marked Kenai River Chinook salmon were detected in the harvest.

Less than 3% (86 fish, SE=60) of the harvest was estimated to be comprised of marked wild and hatchery stocks of non-Cook Inlet origin of the 'Other Alaska' group (Table 6, Figure 5). The Province of British Columbia comprised all of the harvest estimated for the non-Alaska stock group and accounted for an estimated 147 fish (SE=117) or about 2.6% of the total harvest (Tables 5 and 6, Figure 5).

1998

During 1998 we examined 2,789 fish from an estimated harvest of 5,783 (SE=343) Chinook salmon north of Bluff Point (Table 4). We collected 72 heads from Chinook salmon missing an adipose fin from the harvest. Coded wire tags were subsequently detected and decoded from 60 heads (Table 4, Appendix A1). As in 1997, the number of Chinook salmon examined from the harvest peaked during the sampling week from May 22 to May 28 when 1,027 Chinook salmon

were examined (Figure 4). The peak number of Chinook salmon observed without an adipose fin ($n=28$) occurred during the same sampling week (Figure 4).

Coded wire tagged Chinook salmon accounted for approximately 22.0% (1,270 fish, SE=519) of the early-run marine harvest (Table 7). About 6% of the harvest (347 fish, SE=119) consisted of Chinook salmon originating from the Lower Cook Inlet stock group (Table 8). Within the Lower Cook Inlet group three different stocks were detected in the harvest: (1) wild stock Chinook salmon from Deep Creek accounted for 281 fish (SE=117), (2) followed by hatchery stock from Ninilchik River (54 fish, SE=13), and (3) hatchery stock from Homer Spit (12 fish, SE=12) (Tables 7 and 8). Less than 1% of the harvest (49 fish, SE=22) was comprised of Chinook salmon of other Cook Inlet stocks (Table 8). All in this group originated from hatchery stocking into Eagle River, Deception Creek, Ship Creek, or Crooked Creek (Table 7). The predominant stock group identified in the coded wire tag harvest was the non-Alaska stock group. This stock group accounted for about 15.1% of the total harvest (874 fish, SE=463). All from this group originated from the Province of British Columbia (Tables 7 and 8).

2002

From an estimated harvest of 3,368 (SE=363) Chinook salmon we examined 1,605 of them for an adipose fin of which 72 fish without adipose fins were observed (Table 4). Seventy heads were sent to the Tag Lab. Tags were detected in 33 heads and decoded from 32 heads (Table 4, Appendix A1). The number of fish examined peaked during the week of May 22 through May 28, while the number observed without an adipose fin peaked a week later and represented about 25% of the total number recovered during the survey (18, May 29-June 4, Figure 4).

An estimated 11.8% (396, SE=125) of the early-run marine Chinook salmon harvest was explained by coded wire tagged stocks (Table 9). Less than 2% of the harvest was comprised of coded wire tagged stocks originating from the Lower Cook Inlet stock group; 0.4% (13 fish, SE=6) and 1.1% (38 fish, SE=15) for other Cook Inlet stock groups, respectively (Table 10). Approximately 8.8% (296 fish, SE=122) of the total harvest was comprised of Chinook salmon from the non-Alaska stock group including fish from the Province of British Columbia as well as the States of Washington and Oregon (Tables 9 and 10, Figure 5).

ESTIMATES OF OCEAN-AGE AND MATURITY COMPOSITION

1997

Ocean-age of harvested Chinook salmon was estimated by determining age for 1,017 fish (Table 11). The majority of Chinook salmon were ocean-age-4 (51.4%, SE=1.4%) and ocean-age-3 (44.2%, SE=1.4%) followed by ocean-age-2 (3.4%, SE=0.5%) fish. The ocean-age-5 class comprised less than 1% of the harvest (Table 11). Coded wire tag recoveries accounted for an estimated 25.7% of the ocean-age-2, 18.1% of the ocean-age-3, and 1.4% of the ocean-age-4 harvest (Table 5). Finally, ocean-age-5 fish were not represented in the marked portion of the harvest.

The harvest of females consisted of 77.0% (SE=1.3%) spring spawners, 18.5% (SE=1.2%) fall spawners, and 4.5% (SE=0.6%) immature fish (Table 12). The estimated weekly percentage of spring spawners oscillated through the May 1 through June 24 sampling period. Beginning the week of May 8-14 the percentage of spring spawners increased from 66.4% (SE=4.3%) to 81.5%

(SE=2.8%) by the week of May 29–June 4. Thereafter, the percentage of spring spawners declined to 57.7% (SE=9.9%) during June 5-11 and then increased to 92.3% by June 19-24 (Table 12). Egg diameter oscillated in the same manner by increasing from 4.2 mm (SE=0.11 mm) during May 8-14 to 4.6 mm (SE=0.09 mm) the week of May 15–21. Thereafter, egg diameter declined to 3.9 mm (SE=0.32 mm) during June 5-11 then increased to 5.4 mm (SE=0.37) by June 19-24 (Table 12). Spring spawners dominated the female harvest <¼ mile of shore (80.9%, SE=1.4%), whereas harvest >1 mile offshore was approximately evenly distributed among the three maturity classes (Table 12).

The estimated weekly percentage of spring spawning male Chinook salmon exhibited a similar pattern. The percentage of spring spawners was greatest during the week of May 29-June 4 (88.0%, SE=2.5%) then decreased and rose again to 82.4% (SE=9.5%) during June 19-24 (Table 13). Overall, 78.9% (SE=1.4%) of male Chinook salmon sampled for maturity were estimated as mature spring spawners and 21.1% (SE=1.4%) were immature. Within ¼ mile of shore, 85.3% (SE=1.5%) of males harvested were spring spawners, but only 30.2% (SE=7.1%) >1 mile offshore were spring spawners (Table 13).

Correlation between sexual maturity and location of origin was evident among fish with CWTs that were sampled for maturity. For example, 30 of 35 fish originating from Cook Inlet were estimated to be spring spawners (Table 14). Among fish of non-Alaska origin just 2 of 6 were estimated to be spring spawners (Table 14).

1998

The ocean-age composition of the harvest was 47.7% (SE=1.3%) ocean-age-3, 44.3% (SE=1.3%) ocean-age-4 and 7.4% (SE=0.7%) ocean-age-2 fish (Table 15). Combined, less than 1% of the harvest was comprised of ocean-age-5 and ocean-age-2 fish, 0.4% (SE=0.18%) and 0.2% (SE=0.11%), respectively. Of the harvest represented by tagged stocks, 4.4% were ocean-age-2, 23.9% were ocean-age-3, and 29.2% were ocean-age-4 (Table 7). Ocean-age-1 and ocean-age-5 fish were not detected.

Among females, 57.4% (SE=1.7%) were spring spawners, 31.0 % (SE=1.6%) were fall spawners, and 11.5% (SE=1.1%) were immature (Table 16). Egg diameter increased from 3.4 mm (SE=0.19 mm) during the week of May 1-7 through the week May 22-28 to 4.5 mm (SE=0.09 mm) (Table 16). Thereafter, the weekly egg diameter decreased to 2.5 mm (SE=0.22 mm) during the final week of the survey June 19-24. The mean egg diameter of females decreased with distance from shore (Table 16). For males 63.4% (SE=1.7%) were spring spawners and 36.6% (SE=1.7%) were immature. Trends through time and distance from shore were similar to females (Table 17).

When comparing fish origin to maturity, 28 of 32 Cook Inlet stocks were spring spawners, whereas 3 of 19 non-Alaska fish were determined to be spring spawners (Table 18).

2002

Ocean-age-3 Chinook salmon accounted for an estimated 55.9% (SE=2.0%) of the harvest followed by ocean-age-2 (28.5%, SE=1.8%), 14.2% (SE=1.4%) ocean-age-4 and 1.4% (SE=0.5%) were ocean-age-1 (Table 19). Contribution of coded wire tags to the ocean-age classes in the harvest was 1.7% ocean-age-2, 14.7% ocean-age-3, and 21.0% ocean-age-4 (Table 9). Ocean-age-1 and ocean-age-5 fish were not detected.

During 2002, the estimated maturity composition of the females harvested was 50.1% (SE=2.1%) spring spawners, 23.7% (SE=1.8%) fall spawners and 26.2% (SE=1.9%) were immature (Table 20). The egg diameter of females increased each week beginning May 1-7 through May 22-28 then declined in the weeks thereafter. Egg diameter was generally larger for fish harvested within ¼ mile of shore as well as for inshore statistical areas (Table 20). For males, the harvest was 48.1% (SE=1.8%) mature and 51.9% (SE=1.8%) were immature (Table 21). The trend in the percent of male spring spawners related to time, shore distance, and statistical area was similar to that exhibited by female spring spawners (Tables 20 and 21).

Relative to origin, all 8 Cook Inlet origin fish were spring spawners and 2 of 15 non-Alaska origin fish were spring spawners (Table 22).

DISTANCE FROM SHORE AND LOCATION COMPOSITION

For 1997, 1998, and 2002 more Chinook salmon were harvested close to shore than further out. The percentage of Chinook salmon hooked <¼ mile from shore was 81.7% (SE=0.6%) during 1997, 68.6% (SE=0.6%) in 1998 and 73.9% (SE=0.8%) for 2002 (Tables 23, 24, and 25). About 4.1% (SE=0.3%), 11.1% (SE=0.4%) and 10.5% (SE=0.6%) were hooked at a distance greater than 1 mile from shore for 1997, 1998, and 2002, respectively. The balance of the harvest, typically less than 20% was hooked at the intermediate distances between ¼ mile and 1 mile from shore (Tables 23, 24, and 25).

Chinook salmon were harvested predominantly in statistical area 244-70. The percentage of the harvest occurring in this area was 98.2% (SE=0.2%), 88.2% (SE=0.4%) and 84.3% (SE=0.7%) for 1997, 1998, and 2002, respectively (Tables 23, 24, and 25). Typically statistical area 241-11, the area bordered by Bluff Point, accounted for an average of approximately 7% of the annual sampled harvest, whereas an average of less than about 3% was from the offshore statistical area 241-60 (Tables 23, 24, and 25).

HARVEST CHARACTERISTICS SOUTH OF BLUFF POINT

1997

We sampled 115 Chinook salmon harvested south of Bluff Point, 4 of which were marked (Tables 26 and 27, Appendix A2). The number of fish examined peaked during the week of May 22 through May 28 when 25 Chinook salmon were observed or about 22% (SE=4%) of the harvest. Thirty-four percent (SE=4%, $n=32$) were hooked <¼ mile from shore, while 40% (SE=4%, $n=38$) were hooked ≥ 1 mile from shore (Table 26).

Among coded wire tag recoveries, 2 Cook Inlet origin fish were spring spawners, 1 non-Alaska origin fish was immature, and maturity was not determined for 1 non-Alaska origin fish (Table 27).

1998

Six of 149 Chinook salmon examined from south of Bluff Point did not have an adipose fin (Table 28, Appendix A2). About 50% of the harvest occurred by May 28 (Table 28). Twenty-nine percent (SE=4%, $n=41$) were hooked more than 1 mile from shore and 22% (SE=4%, $n=31$) were hooked <¼ mile from shore (Table 28). All coded wire tag recoveries were of non-Alaska origin of which 4 were immature and 2 were fall spawners (Table 29).

2002

From a sample of 258 Chinook salmon harvested south of Bluff Point, 23 were missing an adipose fin (Tables 30 and 31, Appendix A2). The majority of the harvest (57%) occurred by May 28 and about 54.2% (SE=4%, $n=137$) were hooked ≥ 1 mile from shore. For the 23 tag recoveries 13 were from stocks in the non-Alaska group, 2 were from the other Alaska group, and 8 had unreadable or missing tags (Table 31). Eleven non-Alaska origin fish were immature and 2 were fall spawners, whereas 1 of 2 other Alaska origin fish was immature and maturity was not determined for the other. Finally, maturity was determined for 6 of the 8 coded wire tagged Chinook salmon with unreadable or missing tags of which all 6 were immature (Table 31).

SECTION II: HARVESTS OF COOK INLET CHINOOK SALMON IN THE CENTRAL COOK INLET EARLY-RUN MARINE CHINOOK SALMON FISHERY, 1996-2002

Historically, the Central Cook Inlet marine recreational Chinook salmon fishery was prosecuted without knowledge of stock specific harvests. Concern for harvests of Cook Inlet stocks led to management restrictions and this research program. Research was structured to estimate contribution of marked Cook Inlet stocks to the harvests, while restrictions were designed to stabilize harvests of local Cook Inlet stocks.

Important research findings indicated: (1) Cook Inlet stocks are a basic part of the harvest, (2) non-local stocks originating elsewhere are to a substantial degree also involved in the harvest, and (3) CWT recoveries validated methods for estimating spring spawners and immature Chinook salmon. Restrictions administered by the 5 AAC 58.055 Upper Cook Inlet Salt Water Early-run King Salmon Management Plan provided conservation measures for Cook Inlet's early-run stocks through time and area restrictions as well as fishing effort reduction in the primary fishing corridor on the east coast of Cook Inlet from Bluff Point north to Cape Ninilchik. Restrictions stabilized the harvest; however, concerns not directly addressed by research findings remain.

The concerns include the timing and location of Cook Inlet stock harvest. Therefore, evaluation of the temporal and spatial harvest patterns as well as the magnitude of Cook Inlet stock harvest was needed to assess the efficacy of the Early-run Salt Water King Salmon Management Plan.

OBJECTIVES

For the data collected from 1996 through 2002 the objectives for the Central Cook Inlet marine Chinook salmon CWT recovery survey were to:

1. Examine the temporal and spatial variation of Cook Inlet CWT and non-Cook Inlet Chinook salmon harvested by the Central Cook Inlet marine boat recreational fishery north of Bluff Point from May 1 to June 24 (early run).
2. Examine the temporal and spatial variation of the harvest of mature and immature Chinook salmon by the Central Cook Inlet marine boat recreational fishery north of Bluff Point from May 1 to June 24 (early run).

TEMPORAL/SPATIAL PATTERNS OF HARVEST OF COOK INLET AND OTHER CODED WIRE TAGGED CHINOOK SALMON

Information from coded wire tags recovered from harvested Chinook salmon was used to assign tagged fish to local (Cook Inlet origin) and non-local (e.g., coded wire tagged fish from British Columbia) groups. Information collected from anglers was used to assign the tagged fish to nearshore ($d < 1/4$ mile from shore) or offshore ($d \geq 1/4$ mile from shore) harvest status. A logistic regression model was then used to analyze the temporal (year and stage of run) and spatial (nearshore/offshore) harvest pattern of the coded wire tagged fish.

The dependent variable in the logistic regression model was the logit of the proportion of coded wire tags that were harvested near shore ($d < 1/4$ mile) versus offshore ($d \geq 1/4$ mile). Independent variables were year (1997-2002), stage of run and locality (Cook Inlet origin of tag versus other) of tagged fish. Stage of run is defined as 'early,' 'middle,' and 'late'; data were originally collected by week but were pooled into terciles of the harvest by date in order to satisfy model assumptions regarding sparsity of counts in the cells of the contingency table. The main effects model is shown below:

$$\text{Log} \frac{p_{ijk}}{1 - p_{ijk}} = \mu + \beta_L L_i + \beta_Y Y_j + \beta_S S_k, \quad (15)$$

where:

L_i = i^{th} locality ($i=1-2$; Cook Inlet, non-Cook Inlet)

Y_j = j^{th} year of sampling ($j=1-6$)

S_k = k^{th} stage of run ($k=1-3$)

p_{ijk} = proportion of tagged Chinook salmon associated with i^{th} locality harvested offshore in j^{th} year and during k^{th} stage of the run.

SAS^R Proc Genmod with binomial error structure and logit link specified was used to fit the above model.

TEMPORAL/SPATIAL PATTERNS OF HARVEST OF MATURE AND IMMATURE CHINOOK SALMON

Morphometric data recovered from harvested female Chinook salmon were used to assign fish to mature and immature groups. Information collected from anglers was used to assign these fish further to nearshore ($d < 1/4$ mile from shore) or offshore ($d \geq 1/4$ mile from shore) harvest status. A logistic regression model was then used to analyze the temporal (year and stage of run) and

spatial (nearshore/offshore) harvest pattern of the female fish sampled for maturity. Male fish were not used in this analysis because their maturity status was often difficult to determine.

The dependent variable in the logistic regression model was the proportion of female fish harvested nearshore ($d < 1/4$ mile) versus offshore ($d \geq 1/4$ mile). Independent variables were year (1997-2002), stage of run (early, middle, late, defined as terciles of the harvest by date) and maturity (mature versus immature). Mature females were defined as "spring spawners" as described previously and immature females were defined as "immature" as described previously. We did not use the "fall spawner" maturity data in this analysis. The main effects model is shown below:

$$\text{Log} \frac{P_{ijk}}{1 - P_{ijk}} = \mu + \beta_M M_i + \beta_Y Y_j + \beta_S S_k, \quad (16)$$

where:

M_i = i^{th} Maturity ($i=1-2$; Mature, Immature)

Y_j = j^{th} year of sampling ($j=1-6$)

S_k = k^{th} stage of run ($k=1-3$)

p_{ijk} = proportion of tagged Chinook salmon associated with i^{th} maturity status harvested offshore in j^{th} year and during k^{th} stage of the run.

SAS^R Proc Genmod with binomial error structure and logit link specified was used to fit the above model.

RESULTS

TEMPORAL/SPATIAL PATTERNS OF HARVEST OF COOK INLET AND OTHER CODED WIRE TAGGED CHINOOK SALMON

The logistic regression analysis revealed that the proportion of tagged fish harvested offshore was dependent on tag origin (Cook Inlet versus Other) ($P < 0.0001$), year of sampling ($P = 0.011$), stage of run ($P < 0.0001$) and a year by tag origin interaction ($P = 0.012$). The main effect of stage meant that the odds of offshore harvest (probability of offshore harvest / probability of nearshore harvest) doubled (90% confidence interval of 1.5 to 2.7) for each increase in stage of the run (e.g., early to middle, or middle to late), and that this effect was the same for Cook Inlet and non-Cook Inlet fish and for each year. In other words, fish tended to be caught offshore more so as the season progressed.

The year by tag origin interaction means that the effect of the tag origin (Cook Inlet versus non-Cook Inlet) on nearshore or offshore harvest changes with year. Examination of the fitted model shows the interaction to be caused primarily by a decreasing tendency over years for fish of non-Cook Inlet origin to be caught offshore, whereas the tendency for Cook Inlet fish to be caught offshore remained relatively constant.

Although there is a significant year by tag origin interaction, there is a pronounced influence of tag origin alone for all years. For example, the smallest effect of tag origin occurs in 2002 with the odds of offshore harvest for Cook Inlet fish being 0.37 (90% confidence interval of 0.15,

0.89) of the odds of offshore harvest for non-Cook Inlet fish. For 1997, the odds of offshore harvest for Cook Inlet fish was 0.035 (90% confidence interval of 0.013, 0.093) of the odds of offshore harvest for non-Cook Inlet fish. Translating odds to proportions, we find, for example, that for 2002 at the early stage of the run the fitted proportion of offshore harvest for non-Cook Inlet fish is 0.16 versus 0.07 for Cook Inlet fish; in 1997 the fitted values are 0.68 and 0.07 for non-Cook Inlet and Cook Inlet fish, respectively. In other words, there is a greater tendency for non-Cook Inlet fish to be harvested offshore than for Cook Inlet fish.

TEMPORAL/SPATIAL PATTERNS OF HARVEST OF MATURE AND IMMATURE CHINOOK SALMON

The logistic regression analysis revealed that the proportion of fish harvested offshore was dependent on maturity (mature versus immature) ($P < 0.0001$), year of sampling ($P \leq 0.001$), stage of run ($P < 0.0001$), a year by maturity interaction ($P < 0.001$) and a stage by maturity interaction.

The year by maturity interaction means that the effect of maturity (immature versus mature) on nearshore or offshore harvest changes with year. The fitted model shows a decreasing tendency over years for fish of immature status to be caught offshore, whereas there is an increasing tendency for fish of mature status to be caught offshore, consistent with the year by maturity interaction.

Although there is a significant year by maturity interaction, there is an influence of maturity alone for all years but 2002. For example, there is no significant effect of maturity in 2002 for the early stage of the run with the odds of offshore harvest for immature fish being 1.03 (90% confidence interval of 0.72, 1.49) of the odds of offshore harvest for mature fish. The largest effect of maturity occurred in 1997 for the late stage of the run, for which the odds of offshore harvest for immature fish was 39.4 (90% confidence interval of 24.8, 62.5) of the odds of offshore harvest for mature fish. The smallest significant effect occurred for 2001 in the early stage of the run, for which the odds of offshore harvest for immature fish was 1.63 (90% confidence interval of 1.19, 2.22) of the odds of offshore harvest for mature fish. Translating odds to proportions, we find, for example, that for 2001 at the early stage of the run (smallest significant effect) the fitted proportion of offshore harvest for immature fish is 0.26 versus 0.17 for mature fish; in 1997 at the late stage of the run (largest effect) the fitted values are 0.92 and 0.32 for immature and mature fish, respectively. In other words, there is a greater tendency for immature fish to be harvested offshore than for mature fish.

The stage by maturity interaction means that the effect of maturity (immature versus mature) on nearshore or offshore harvest changes with stage. The fitted model shows an increasing tendency over stage for fish of both immature and mature status to be caught offshore, whereas the increase is smaller for the mature fish, consistent with the stage by maturity interaction.

DISCUSSION

Results of this study offer estimates of harvest for marked Cook Inlet stocks in the marine sport fishery and provide answers to uncertainties regarding the magnitude of marine exploitation rates of some Chinook salmon stocks originating in Cook Inlet. Furthermore, CWT recoveries and contribution estimates for tagged wild stocks and hatchery release groups help characterize the stock composition of marine harvests from 1996 through 2002 (Table 32, Figures 6 and 7).

Beginning with the marked wild stock at Deep Creek, our contribution estimates were relatively small and we conclude marine exploitation was likely low for all years. The largest estimate of harvest was 281 (SE=117) fish in 1998 a year when all age classes of the return to Deep Creek were marked (Tables 3 and 32). Similarly, contribution estimates for Ninilchik River hatchery fish were also low (<200 fish) for each year. Since the hatchery return to Ninilchik River occurs at the same time as the wild return, it is unlikely the harvest of wild fish bound for the Ninilchik River in the marine sport fishery is larger. Similarly, harvest of Stariski Creek and Anchor River Chinook salmon was probably low as well. These findings are important because these systems are near the marine sport fishery.

Contribution estimates for other Cook Inlet hatchery stocks such as Crooked and Deception creeks were also small (Table 32). We recovered few tags from these groups and those that were recovered were associated with high marking rates. Consequently, we conclude that the overall contribution to the marine sport harvest of upper and northern Cook Inlet is likely comprised of numerous stocks with very low levels of stock-specific exploitation.

By including non-Cook Inlet origin fish in our contribution estimates we were able to identify and estimate stock composition for a larger fraction of the total marine harvest each year. Generally, most stocks in this harvest were of non-Alaska origin and ranged from about 2.6% in 1997 to approximately 15.1% in 1998 (Table 32, Figures 6 and 7). A large amount of the harvest was of British Columbia hatchery release groups. Because the number of tagged Chinook salmon released throughout the Pacific Northwest varies annually by year and location, the number of non-Alaska fish harvested in the Cook Inlet marine fishery will also vary. Consequently, we are uncertain if the harvest contribution by non-Alaska stocks will continue to increase. Nonetheless the harvests estimates for non-Alaska stocks serve to characterize the mixed-stock nature of the marine sport fishery.

Maturity data collected from marine harvested Chinook salmon enhances our ability to identify the magnitude of Cook Inlet origin fish in the untagged portion of the mixed-stock harvest. Our data suggest that the vast majority of Chinook salmon classified as mature are of Cook Inlet origin and those classified as immature are from outside Cook Inlet. Maturity was determined for a total of 206 marked Cook Inlet Chinook salmon for both sexes combined (130 Lower Cook Inlet and 76 Other Cook Inlet stocks) of which 185 (89%, 119 Lower Cook Inlet and 66 Other Cook Inlet stocks) were classified as spring spawners over the 7-year study (Table 33). Maturity was unknown for 11 of the 90 marked Chinook salmon of non-Alaska origin, however, for the 79 sampled for maturity, only 11 (14%) were classified as spring or fall spawning fish (Table 33). Even though there is likely overlap in egg diameters of Cook Inlet spring spawners and those spawning elsewhere, changes in maturity composition were corroborated by changes in contribution estimates for Chinook salmon of non-Cook Inlet origin (Tables 32 and 34). Among female Chinook salmon we estimated the proportion of the total harvest that was comprised of spring spawning fish ranged from a high of 78% in 1996 to a low of 50% in 2002 and averaged about 66% for all years (Table 34). For male Chinook salmon, spring spawners averaged approximately 65% across all years (Table 35).

Based on results presented in Begich (*In prep*) it was recommended that trends in temporal/spatial variations in stock specific harvests be examined to assess efficacy of fishery management regulations relative to the protection of Cook Inlet Chinook Salmon stocks. Results of the logistic regression analysis indicate that fish of Cook Inlet origin generally have a higher

probability of being harvested near shore than do fish from other locations. Mature (spring spawners) fish also tend to be harvested near shore at a greater rate than immature fish; this pattern reflects the above described relationship between maturity and local origin of fish. In addition, the probability of harvest near shore declined as the season progressed, with the implication that the harvest of local spring spawners also declined through the season.

The 2002 early-run Chinook salmon harvest of 3,368 fish was the lowest estimated for this fishery since 1987 and is the smallest estimated since implementation of the 5 AAC 58.055 Upper Cook Inlet Salt Water Early-run King Salmon Management Plan in 1996 (Table 1). The plan focused on stabilization of the marine harvest north of Bluff Point and protection of local stocks through the creation of: (1) a special harvest zone within 1 mile of shore where angler effort is restricted and harvest reduced, and (2) expanded marine sanctuaries surrounding Lower Cook Inlet Chinook salmon producing stream mouths where fishing is prohibited. These regulations are in effect through June 24. Since implementation, harvest has declined from the 1992 through 1995 average of 7,303 Chinook salmon annually to an average of 4,693 Chinook salmon per year from 1996 through 2002. Given the smaller harvests since 1996 and detailed findings from this 7-year study, we conclude that the fishery management regulations have stabilized harvests and incorporate the specific time and area considerations necessary to protect local Cook Inlet stocks from high exploitation in the early-run marine Chinook salmon sport fishery in Cook Inlet.

Chinook salmon harvested in marine waters north of Bluff Point during the late run from June 24 through July 31, 1997, and 1998, were also sampled. The samples were omitted from the CWT contribution analysis because no corresponding SWHS estimate of Chinook salmon harvest is available for these years. The late-run Chinook salmon harvest sample data are reported in Appendix B.

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TABLES

Table 1.-Estimated Chinook salmon harvest in the early-run Cook Inlet marine recreational fishery north of Bluff Point, 1987-2002.

Year	Number of Chinook harvested
1987	3,613
1988	4,243
1989	3,863
1990	4,694
1991	4,824
1992	5,996
1993	8,136
1994	6,850
1995	8,230
1996 ^a	4,702
1997	5,646
1998	5,783
1999	4,907
2000	4,773
2001	3,671
2002	3,368
Average 1996-2002	4,693
Average 1992-1995	7,303
Average 1987-1991	4,247
Average 1987-2002	5,206

^a 5 AAC 58.055 Upper Cook Inlet Marine Early Run King Salmon Management Plan implemented in 1996.

Table 2.—Hatchery stock coded wire tagging summary for Lower, Upper, and Northern Cook Inlet Chinook salmon released as smolt and ocean-age by year at return to Cook Inlet.

Location	Year	Hatchery-reared Chinook salmon								
		Smolt ^a		Adult return by year and ocean-age						
		Coded wire tagged	Total released	1996	1997	1998	1999	2000	2001	2002
Lower Cook Inlet:										
Ninilchik	1992	41,335	132,387	4						
	1993	42,960	184,585	3	4					
	1994	45,546	201,513	2	3	4				
	1995	54,353	54,902		2	3	4			
	1996	50,866	51,688			2	3	4		
	1997	50,292	50,698				2	3	4	
	1998	47,480	48,798					2	3	4
	1999	48,906	49,853						2	3
	2000	51,298	51,298							2
	Homer Spit Early Run	1992	20,614	126,130	4					
1993				3	4					
1994		25,509	166,963	2	3	4				
1995		40,276	216,026		2	3	4			
1996		39,017	204,085			2	3	4		
1997		38,810	217,773				2	3	4	
1998		39,652	177,730					2	3	4
1999		40,423	163,170						2	3
2000		0	219,984							2
Seldovia		1994	45,071	107,246	2	3	4			
	1995	40,694	116,165		2	3	4			
	1996	39,610	118,274			2	3	4		
	1997	39,834	103,757				2	3	4	
	1998	40,125	69,461					2	3	4
	1999	0	74,057						2	3
	2000	0	68,114							2
	Halibut Cove	1994	21,035	98,872	2	3	4			
1995		36,685	37,577		2	3	4			
1996		39,345	97,729			2	3	4		
1997		39,487	78,133				2	3	4	
1998		38,041	65,893					2	3	4
1999		0	79,221						2	3
2000		0	83,277							2
Homer Spit Late Run		1994	91,679	156,873	2	3	4	5		
	1995	40,479	123,048		2	3	4	5		
	1996	38,787	108,204			2	3	4	5	
	1997	39,264	100,933				2	3	4	5
	1998	40,356	112,101					2	3	4
	1999	0	59,611						2	3

-continued-

Table 2.—Page 2 of 2.

		Hatchery-reared Chinook salmon								
		Smolt ^a		Adult return by year and ocean-age						
Location	Year	Coded wire tagged	Total released	1996	1997	1998	1999	2000	2001	2002
Lower Cook Inlet (continued)										
Twin Falls	1993	28,392	100,000	3	4	5				
Late Run										
Upper Cook Inlet:										
Crooked Creek	1994	43,042	224,784	2	3	4				
(Kasilof R.	1995	38,408	184,409		2	3	4			
tributary)	1996	40,215	193,180			2	3	4		
	1997	39,038	223,200				2	3	4	
	1998	42,610	137,338					2	3	4
	1999	42,844	193,257						2	3
	2000	108,507	108,507							2
Northern Cook Inlet:										
Ship Creek	1994	42,858	199,830	2	3	4				
(Anchorage)	1995	38,604	218,487		2	3	4			
	1996	40,108	231,444			2	3	4		
	1997	40,319	326,371				2	3	4	
	1998	41,565	204,741					2	3	4
	1999	42,262	197,168						2	3
	2000	0	265,582							2
Eagle River	1994	41,649	107,547	2	3	4				
Deception Creek	1992	33,464	179,724	4						
(Willow Ck.,	1993	39,420	160,194	3	4					
tributary of	1994	45,919	177,913	2	3	4				
Susitna R.)	1995	41,965	167,643		2	3	4			
	1996	42,595	169,444			2	3	4		
	1997	207,994	209,644				2	3	4	
	1998	195,615	197,392					2	3	4
	1999	199,722	201,586						2	3
	2000	205,051	206,496							2

^a Units = number of fish.

Table 3.—Wild stock coded wire tagging summary from Lower, Upper, and Northern Cook Inlet Chinook salmon released as smolt or fingerlings and ocean-age by year at return to Cook Inlet.

Location	Year	Life stage	Wild stock Chinook salmon								
			Coded wire tagged ^a	Adult return by year and ocean-age							
				1996	1997	1998	1999	2000	2001	2002	
Lower Cook Inlet:											
Deep Creek	1994	Smolt	9,611	2	3	4					
		Fingerling	3,644		2	3	4				
	1995	Smolt	8,394		2	3	4				
		Fingerling	5,174			2	3	4			
	1996	Smolt	4,608			2	3	4			
		Fingerling	4,359				2	3	4		
	1997	Smolt	4,935				2	3	4		
		Fingerling	2,484					2	3	4	
Upper Cook Inlet:											
Kenai River	1993	Fingerling	152,397	2	3	4	5				
	1994	Fingerling	88,279		2	3	4	5			
	1995	Smolt	1,479		2	3	4	5			
		Fingerling	58,741			2	3	4	5		
	1996	Smolt	6,532			2	3	4	5		
	1997	Smolt ^b	31,928				2	3	4	5	
	1998	Smolt ^b	16,598					2	3	4	
	1999	Smolt ^c	46,000						2	3	
Northern Cook Inlet:											
Deshka River (Susitna Valley)	1996	Smolt	61			2	3	4			
		Fingerling	1,429				2	3	4		
	1997	Fingerling	17,000				2	3	4		
Willow Creek (Susitna Valley)	1996	Fingerling	46,206				2	3	4		
	1997	Fingerling	123,000					2	3	4	
	1998	Fingerling	78,325						2	3	
Deception Crk. (Susitna Valley)	1998	Fingerling	22,881							2	3

^a Units = number of fish.

^b Includes smolt marked and released in the mainstem Kenai River as well as smolt marked and released in Killey River (a Kenai River tributary).

^c All smolt marked and released in Killey River.

Table 4.–Values for estimating the contribution of coded wire tagged Chinook salmon stocks to the early-run Cook Inlet marine recreational Chinook salmon harvest north of Bluff Point and summary of Chinook salmon sampled from the harvest south of Bluff Point, 1997, 1998, and 2002.

Location / Year	Chinook salmon ^a						SE	Proportion of estimated harvest examined	Proportion without adipose fin observed in total number examined
	Total number examined <i>n</i>	Observed without an adipose fin <i>a</i>	Heads sent to the Tag Lab ^b <i>a'</i>	CWTs detected <i>t</i>	CWTs decoded <i>t'</i>	Estimated harvest ^c <i>N̂</i>			
North of Bluff Point									
1997	2,442	53	52	49	49	5,646	363	0.433	0.022
1998	2,789	80	72	60	60	5,783	343	0.482	0.029
2002	1,605	72	70	33	32	3,368	363	0.477	0.045
Average	2,279	68	65	47	47	4,932		0.464	0.032
South of Bluff Point									
1997	115	4	4	4	4	^d	-	-	0.035
1998	149	6	6	6	6	^d	-	-	0.040
2002	252	24	24	17	17	^d	-	-	0.095
Average	172	11	11	9	9	-	-	-	0.057

Note: CWT = coded wire tag; "-" = value cannot be computed due to limitations of the data.

^a Units = (number of fish)

^b Tag Lab = ADF&G Mark, Tag, and Age Laboratory in Juneau.

^c Source: Statewide Harvest Survey - Anchor River, Deep Creek, Whiskey Gulch, and Ninilchik River Chinook salmon saltwater boat fishery.

^d The survey does not provide a Chinook salmon harvest estimate by location south of Bluff Point that is germane to the area in which harvest occurs.

Table 5.–Summary of contribution statistics from coded wire tagged Chinook salmon recovered in the early-run Cook Inlet marine recreational fishery, May 1 through June 24, 1997.

Age / coded wire tag code	State or Province ^a	Release/Origin location ^b	Number of coded wire tags recovered	Inverse Theta ^c	Contribution to total harvest represented by each tag code	SE	Percent of total harvest represented by each tag code	SE	Ocean-age composition for each ocean-age in total harvest ^d	SE	Percent contribution of tag code to corresponding ocean age class of the harvest	SE
Ocean-age = 2												
44135	AK	Bear Cove 113-41	1	15.29	36.04	35.54	0.64%	0.63%			5.22%	8.38%
181238	BC	R-Atanrko Sp. Channel	1	6.30	14.86	14.35	0.26%	0.25%			2.15%	8.38%
181459	BC	Robertson Cr.	1	48.75	114.87	114.37	2.03%	2.03%			16.62%	8.82%
312435	AK	Ninilchik R. 244-20	5	1.01	11.90	4.12	0.21%	0.07%			1.72%	8.38%
Subtotal			8		178		3.15%		12.24%	1.03%	25.71%	17.47%
Ocean-age = 3												
43923	AK	Kasnyku Bay 112-11	1	20.37	48.01	47.51	0.85%	0.84%			1.83%	1.81%
181028	BC	R-Rivers Inlet	1	1.77	4.17	3.63	0.07%	0.06%			0.16%	0.14%
181029	BC	R-Rivers Inlet	1	2.07	4.88	4.35	0.09%	0.08%			0.19%	0.17%
181031	BC	R-Rivers Inlet	1	2.18	5.14	4.61	0.09%	0.08%			0.20%	0.18%
181039	BC	Chuckwalla R.	1	1.31	3.09	2.55	0.05%	0.05%			0.12%	0.10%
312311	AK	Seldovia Hbr 241-11	2	2.38	11.21	7.21	0.20%	0.13%			0.43%	0.28%
312312	AK	Ship Cr. 247-50	2	4.66	21.98	14.85	0.39%	0.26%			0.84%	0.57%
312313	AK	Eagle R. 247-50	4	2.58	24.34	11.21	0.43%	0.20%			0.93%	0.43%
312314	AK	Crooked Cr. 244-30	5	5.22	61.53	26.62	1.09%	0.47%			2.34%	1.02%
312317	AK	Deception Cr. 247-41	2	3.87	18.26	12.21	0.32%	0.22%			0.69%	0.47%
312318	AK	Ninilchik R. 244-20	12	4.42	125.10	35.20	2.22%	0.61%			4.76%	1.38%
312360	AK	Deep Cr. 244-20	3	12.66	89.49	79.34	1.58%	0.91%			3.41%	3.02%
312361	AK	Deep Cr. 244-20	2	12.66	59.66	54.58	1.06%	0.74%			2.27%	2.08%
Subtotal			37		477		8.45%		46.54%	1.56%	18.15%	4.53%
Ocean-age = 4												
401020602	AK	Tahini R. 115-32	1	1.03	2.43	2.39	0.04%	0.04%			0.11%	0.10%
312159	AK	Ninilchik R. 244-20	3	4.30	30.38	17.37	0.54%	0.31%			1.33%	0.76%
Subtotal			4		33		0.58%		40.53%	1.54%	1.43%	0.77%
Total All Ages			49		687	175	12.17%	2.74%	99.31%			

^a AK = Alaska, BC = British Columbia (Canada).

^b All release/origin location are hatchery in origin unless indicated by a (W) for wild stock and (M) for a mixed wild and hatchery stock.

^c Inverse theta is the number 1 divided by theta. Theta is the fraction or proportion of the stock marked by removal of the adipose fin and inserting a CWT into the nose of the fish.

^d Age composition for each ocean-age class of harvest does not sum to 100% for all ages because an estimated 0.69% of Chinook salmon in the harvest were ocean-age-1 fish and no tags recovered were from the ocean-age-1 age class.

Table 6.–Summary of contribution statistics from coded wire tagged Chinook salmon recovered in the early-run Cook Inlet marine recreational fishery, May 1 through June 24, 1997.

Stock group ^a	Number of coded wire tags recovered	Contribution to total harvest by combined tag codes from each stock group	SE	Percent of total harvest by combined tag codes from each stock group	SE
All stocks by area:					
Lower Cook Inlet	27	328	106	5.80%	1.36%
Other Cook Inlet	13	126	35	2.32%	0.61%
Other Alaska	3	86	60	1.53%	1.05%
Non-Alaska	6	147	117	2.60%	2.05%
Total	49	687	177	12.17%	2.74%
Cook Inlet:					
Wild stocks					
Deep Creek	5	149	97	2.64%	1.17%
Other Cook Inlet ^b	0	-	-	-	-
Subtotal	5	149	97	2.64%	1.17%
Hatchery stocks					
Ninilchik	20	167	40	2.96%	0.68%
Other Cook Inlet ^c	15	137	35	2.43%	0.62%
Subtotal	35	305	56	5.40%	0.93%
Total	40	454	113	8.04%	1.49%

Note: “-“ = value cannot be computed due to limitations of the data.

^a Stock group is combined tag codes by location of release for the coded wire tagged wild or hatchery fish sampled in the harvest: Lower Cook Inlet - Cook Inlet south of Kasilof River drainage, other Cook Inlet - Cook Inlet tributaries north of and including Kasilof River drainage, Other Alaska - all non-Cook Inlet drainages of Alaska, non-Alaska - includes British Columbia, Washington, and Oregon.

^b Harvest contribution for cohorts in this group was not estimated due to uncertainty regarding the estimate of theta, does not include Deep Creek stock.

^c Does not include Ninilchik River stock.

Table 7.—Summary of contribution statistics from coded wire tagged Chinook salmon recovered in the early-run Cook Inlet marine recreational fishery, May 1 through June 24, 1998.

Age / coded wire tag code	State or Province ^a	Release/Origin location ^b	Number recovered	Inverse Theta ^c	Contribution to harvest	SE	Percent of harvest	SE	Age composition of harvest ^d	SE	Percent of age class of the harvest	SE
Ocean-age = 2												
312507	AK	Homer Spit 241-13	1	5.224	12.04	11.53	0.21%	0.20%			1.29%	1.24%
312515	AK	Ninilchik R. 244-20	1	1.014	2.34	1.77	0.04%	0.03%			0.25%	0.19%
183148	BC	R-Atanrko Sp. Channel	1	11.343	26.13	25.63	0.45%	0.44%			2.81%	2.76%
Subtotal			3		41		0.70%		16.08%	1.60%	4.36%	0.09%
Ocean-age = 3												
312427	AK	Crooked Cr. 244-30	1	4.79	11.04	10.53	0.19%	0.18%			0.34%	0.32%
312235	AK	Deep Cr. 244-20	3	11.49	79.44	55.10	1.37%	0.80%			2.41%	1.68%
312402	AK	Deep Cr. 244-20	1	11.49	26.48	26.10	0.46%	0.45%			0.80%	0.79%
312435	AK	Ninilchik R. 244-20	18	1.01	41.88	7.85	0.72%	0.13%			1.27%	0.25%
181229	BC	R-Atanrko Sp. Channel	1	15.35	35.37	34.87	0.61%	0.60%			1.07%	1.06%
181954	BC	R-Conuma R	2	16.93	78.01	54.55	1.35%	0.94%			2.37%	1.66%
181318	BC	R-Kilbella Bay	3	1.07	7.37	3.30	0.13%	0.06%			0.22%	0.10%
181434	BC	R-Kitimat R Low	1	8.29	19.10	18.59	0.33%	0.32%			0.58%	0.57%
180642	BC	R-Kitsumkalum R	1	1.02	2.34	1.78	0.04%	0.03%			0.07%	0.05%
181858	BC	R-Nitinat Lk	1	10.10	23.27	22.77	0.40%	0.39%			0.71%	0.69%
181832	BC	R-Nitinat R	1	49.74	114.59	114.09	1.98%	1.97%			3.48%	3.47%
181841	BC	R-Nitinat R	1	9.36	21.56	21.05	0.37%	0.36%			0.65%	0.64%
181455	BC	Robertson Cr	2	41.48	191.11	134.67	3.30%	2.32%			5.81%	4.10%
181459	BC	Robertson Cr	1	48.75	112.30	111.80	1.94%	1.93%			3.41%	3.40%
182225	BC	Robertson Cr	1	1.01	2.33	1.77	0.04%	0.03%			0.07%	0.05%
181641	BC	R-Shuswap R Low	1	9.36	21.56	21.05	0.37%	0.36%			0.65%	0.64%
Subtotal			39		788		13.62%		56.91%	2.15%	23.94%	0.50%

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Table 7.–Page 2 of 2.

Age / coded wire tag code	State or Province ^a	Release/Origin location ^b	Number recovered	Inverse Theta ^c	Contribution to harvest	SE	Percent of harvest	SE	Age composition of harvest ^d	SE	Percent of age class of the harvest	SE
Ocean-age = 4												
312314	AK	Crooked Cr. 244-30	1	5.22	12.03	11.52	0.37%	0.21%			0.79%	0.76%
312317	AK	Deception Cr. 247-41	1	3.87	8.93	8.41	0.28%	0.15%			0.59%	0.56%
312216	AK	Deep Cr. 244-20	3	12.66	87.49	77.56	2.72%	1.51%			5.78%	5.13%
312360	AK	Deep Cr. 244-20	1	12.66	29.16	29.00	0.91%	0.50%			1.93%	1.92%
312362	AK	Deep Cr. 244-20	2	12.66	58.33	53.35	1.81%	1.01%			3.85%	3.53%
312313	AK	Eagle R. 247-50	1	2.58	5.95	5.43	0.18%	0.10%			0.39%	0.36%
312318	AK	Ninilchik R. 244-20	1	4.42	10.19	9.68	0.32%	0.18%			0.67%	0.64%
312312	AK	Ship Cr. 247-50	1	4.66	10.74	10.23	0.33%	0.19%			0.71%	0.68%
181558	BC	R-Conuma R	1	14.71	33.89	33.38	1.05%	0.59%			2.24%	2.20%
181532	BC	R-Kitimat R Low	1	8.97	20.66	20.15	0.64%	0.36%			1.36%	1.33%
181557	BC	R-Nitinat R	1	41.85	96.42	95.92	3.00%	1.67%			6.37%	6.33%
181545	BC	Robertson Cr	1	22.02	50.72	50.22	1.58%	0.88%			3.35%	3.32%
181028	BC	R-Rivers Inlet	1	1.77	4.07	3.54	0.13%	0.07%			0.27%	0.23%
181422	BC	R-Tahsis R	1	2.99	6.88	6.36	0.21%	0.12%			0.45%	0.42%
181030	BC	R-Wannock R	1	2.86	6.59	6.08	0.20%	0.11%			0.44%	0.40%
Subtotal			18		442		13.74%		26.19%	1.91%	29.19%	10.12%
Total All Ages			60		1,270	519	21.97%	4.64%	99.18%			

^a AK = Alaska, BC = British Columbia (Canada).

^b All release/origin location are hatchery in origin unless indicated by a (W) for wild stock and (M) for a mixed wild and hatchery stock.

^c Inverse theta is the number 1 divided by theta. Theta is the fraction or proportion of the stock marked by removal of the adipose fin and inserting a CWT into the nose of the fish.

^d Age composition for each ocean-age class of harvest does not sum to 100% for all ages because an estimated 0.69% of Chinook salmon in the harvest were ocean-age-1 fish and no tags recovered were from the ocean-age-1 age class.

Table 8.—Summary of contribution statistics from coded wire tagged Chinook salmon recovered in the Cook Inlet marine recreational fishery by stock group, May 1 through June 24, 1998.

Stock group ^a	Number of coded wire tags recovered	Contribution to total harvest by combined tag codes from each stock group	SE	Percent of total harvest by combined tag codes from each stock group	SE
All stocks by area:					
Lower Cook Inlet	31	347	119	6.01%	1.56%
Other Cook Inlet	5	49	22	0.84%	0.37%
Other Alaska	0	-	-	-	-
Non-Alaska	24	874	463	15.12%	4.36%
Total	60	1,270	288	21.97%	4.64%
Cook Inlet:					
Wild stocks					
Deep Creek	10	281	117	4.86%	1.53%
Other Cook Inlet ^b	0	-	-	-	-
Subtotal	10	281	117	4.86%	1.53%
Hatchery stocks					
Ninilchik	20	54	13	0.94%	0.98%
Other Cook Inlet ^c	6	61	24	1.05%	0.42%
Subtotal	26	115	28	1.99%	0.47%
Total	36	396	121	6.85%	1.60%

Note: “-“ = value cannot be computed due to limitations of the data.

^a Stock group is combined tag codes by location of release for the coded wire tagged wild or hatchery fish sampled in the harvest: Lower Cook Inlet - Cook Inlet south of Kasilof River drainage, other Cook Inlet - Cook Inlet tributaries north of and including Kasilof River drainage, Other Alaska - all non-Cook Inlet drainages of Alaska, non-Alaska - includes British Columbia, Washington, and Oregon.

^b Harvest contribution for cohorts in this group was not estimated due to uncertainty regarding the estimate of theta, does not include Deep Creek stock.

^c Does not include Ninilchik River stock.

Table 9.—Summary of contribution statistics from coded wire tagged Chinook salmon recovered in the early-run Cook Inlet marine recreational fishery, May 1 through June 24, 2002.

Age / coded wire tag code	State or Province ^a	Release/Origin location ^b	Number recovered	Inverse Theta ^c	Contribution to harvest	SE	Percent of harvest	SE	Age composition of harvest ^d	SE	Percent of age class of the harvest	SE
Ocean-age = 2												
312621	AK	Deception Cr 247-41	1	1.008	2.24	1.68	0.07%	0.05%			0.24%	0.19%
310135	AK	Crooked Cr 244-30	1	1.028	2.29	2.29	0.07%	0.07%			0.24%	0.25%
310231	AK	Crooked Cr 244-30	1	1.028	2.29	2.26	0.07%	0.07%			0.24%	0.25%
310248	AK	Ninilchik R 244-20	1	1.026	2.28	1.72	0.07%	0.05%			0.24%	0.20%
631033	WA	Methow R 48.0002	1	1.013	2.25	1.69	0.07%	0.05%			0.24%	0.19%
92861	OR	Clackamas R	1	1.097	2.44	1.88	0.08%	0.06%			0.26%	0.21%
92863	OR	Clackamas R	1	1.054	2.35	1.78	0.07%	0.06%			0.25%	0.20%
Subtotal			7		16		0.51%		28.19%	1.82%	1.70%	0.54%
Ocean-age = 3												
310131	AK	Deception Cr 247-41	1	1.01	2.25	1.68	0.07%	0.05%			0.12%	0.09%
312618	AK	Deception Cr 247-41	2	1.01	4.49	2.40	0.13%	0.07%			0.24%	0.13%
312620	AK	Deception Cr 247-41	1	1.01	2.25	1.68	0.07%	0.05%			0.12%	0.09%
310147	AK	Ninilchik R 244-20	1	1.02	2.27	1.70	0.07%	0.05%			0.12%	0.09%
312728	AK	Killey R 244-30	1	1.00	0.00							
183806	BC	R-Atmarko R UP	1	6.58	14.65	14.14	0.43%	0.42%			0.77%	0.75%
310141	AK	Crooked Cr 244-30	2	4.51	20.07	13.56	0.60%	0.40%			1.06%	0.72%
183432	BC	R-Robertson Cr	1	17.34	38.60	38.10	1.15%	1.13%			2.04%	2.01%
44818	AK	Kasnyku Bay 112-11	1	12.24	27.24	26.74	0.81%	0.79%			1.44%	1.41%
183831	BC	R-Robertson Cr	2	24.78	110.29	77.74	3.27%	2.29%			5.83%	4.14%
44859	AK	Bear Cove 113-41	1	9.85	21.92	21.42	0.65%	0.64%			1.16%	1.13%
184214	BC	R-Kitsukalum R low	1	1.00	2.23	2.19	0.07%	0.06%			0.12%	0.12%
183745	BC	R-Quinsam R	1	13.62	30.31	30.17	0.90%	0.90%			1.60%	1.59%
630610	WA	Similkameen R	1	1.06	2.35	1.79	0.07%	0.05%			0.12%	0.10%
Subtotal			17		279		8.28%		56.18%	2.01%	14.74%	5.30%

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Table 9.–Page 2 of 2.

Age / coded wire tag code	State or Province ^a	Release/Origin location ^b	Number recovered	Inverse Theta ^c	Contribution to harvest	SE	Percent of harvest	SE	Age composition of harvest ^d	SE	Percent of age class of the harvest	SE
Ocean-age = 4												
312532	AK	Deception Cr 247-41	1	1.01	2.25	1.68	0.07%	0.05%			0.49%	0.38%
312635	AK	Ninilchik R 244-20	2	1.03	4.58	3.19	0.14%	0.09%			1.00%	0.71%
312632	AK	Halibut CV Lag	1	1.73	3.86	3.78	0.11%	0.11%			0.85%	0.83%
183142	BC	R-Atnarko R Low	1	11.62	25.86	25.36	0.77%	0.75%			5.68%	5.58%
630517	WA	Columbia R at Priest	1	25.86	57.56	57.07	1.71%	1.69%			12.64%	12.54%
183910	BC	R-Tranquille Est	1	2.09	4.65	4.56	0.14%	0.14%			1.02%	1.00%
183307	BC	R-Kitsukalum R low	1	1.01	2.25	1.68	0.07%	0.05%			0.49%	0.38%
Subtotal			8		101		3.00%		14.29%	1.42%	20.99%	13.07%
Total All Ages			32		396	125	11.79%	3.50%	98.65%			

^a AK = Alaska, OR = Oregon, WA = Washington, BC = British Columbia (Canada).

^b All release/origin location are hatchery in origin unless indicated by a (W) for wild stock and (M) for a mixed wild and hatchery stock.

^c Inverse theta is the number 1 divided by theta. Theta is the fraction or proportion of the stock marked by removal of the adipose fin and inserting a CWT into the nose of the fish.

^d Age composition for each ocean-age class of harvest does not sum to 100% for all ages because an estimated 0.69% of Chinook salmon in the harvest were ocean-age-1 fish and no tags recovered were from the ocean-age-1 age class.

Table 10.—Summary of contribution statistics from coded wire tagged Chinook salmon recovered in the Cook Inlet marine recreational fishery by stock group, May 1 through June 24, 2002.

Stock group ^a	Number of coded wire tags recovered	Contribution to total harvest by combined tag codes from each stock group	SE	Percent of total harvest by combined tag codes from each stock group	SE
All stocks by area:					
Lower Cook Inlet	5	13	6	0.39%	0.16%
Other Cook Inlet	10	38	15	1.13%	0.43%
Other Alaska	2	49	36	1.46%	1.08%
Non-Alaska	14	296	122	8.78%	3.51%
Total	31	396	125	11.76%	3.50%
Cook Inlet:					
Wild stocks					
Deep Creek	0	-	-	-	-
Other Cook Inlet ^b	0	-	-	-	-
Subtotal	0	-	-	-	-
Hatchery stocks					
Ninilchik	4	9	4	0.27%	0.12%
Other Cook Inlet ^c	11	42	15	1.25%	0.44%
Subtotal	15	51	17	1.52%	0.47%
Total	15	51	17	1.52%	0.47%

Note: “-“ = value cannot be computed due to limitations of the data.

^a Stock group is combined tag codes by location of release for the coded wire tagged wild or hatchery fish sampled in the harvest: Lower Cook Inlet - Cook Inlet south of Kasilof River drainage, other Cook Inlet - Cook Inlet tributaries north of and including Kasilof River drainage, Other Alaska - all non-Cook Inlet drainages of Alaska, non-Alaska - includes British Columbia, Washington, and Oregon.

^b Harvest contribution for cohorts in this group was not estimated due to uncertainty regarding the estimate of theta, does not include Deep Creek stock.

^c Does not include Ninilchik River stock.

Table 11.-Ocean-age composition for Chinook salmon harvested north of Bluff Point in the Cook Inlet marine recreational fishery, May 1 through June 24, 1997.

	Ocean-Age				Total
	2	3	4	5	
Number sampled	35	450	523	9	1,017
Estimated proportion	0.034	0.442	0.514	0.009	1.000
SE proportion	0.005	0.014	0.014	0.003	
Percent composition	3.4%	44.2%	51.4%	0.9%	
SE percent	0.52%	1.41%	1.42%	0.27%	

Table 12.-Maturity index composition and mean egg diameter by week, distance from shore, statistical area, and ocean-age of female Chinook salmon sampled from the harvest north of Bluff Point in the Central Cook Inlet marine recreational fishery, May 1 through June 24, 1997.

	Female Chinook salmon												Egg diameter (mm)				
	Immature			Fall spawner			Spring spawner			All			Mean	SE	min	max	
	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE					
Week																	
5/01 - 5/07	8	0.082	0.028	19	0.196	0.041	70	0.722	0.046	97	0.094	0.009	4.3	0.14	1.0	6.5	
5/08 - 5/14	7	0.059	0.022	33	0.277	0.041	79	0.664	0.043	119	0.116	0.010	4.2	0.11	1.2	6.0	
5/15 - 5/21	8	0.025	0.009	61	0.191	0.022	250	0.784	0.023	319	0.311	0.014	4.6	0.06	1.0	7.0	
5/22 - 5/28	3	0.012	0.007	46	0.183	0.024	203	0.806	0.025	252	0.245	0.013	4.6	0.06	1.0	6.5	
5/29 - 6/04	10	0.053	0.016	25	0.132	0.025	154	0.815	0.028	189	0.184	0.012	4.6	0.09	1.0	6.7	
6/05 - 6/11	6	0.231	0.084	5	0.192	0.079	15	0.577	0.099	26	0.025	0.005	3.9	0.32	1.1	6.0	
6/12 - 6/18	3	0.250	0.131	1	0.083	0.083	8	0.667	0.142	12	0.012	0.003	3.9	0.60	0.8	5.8	
6/19 - 6/24	1	0.077	0.077	0	0.000	-	12	0.923	0.077	13	0.013	0.003	5.4	0.37	1.5	6.8	
Total ^a	46	0.045	0.006	190	0.185	0.012	791	0.770	0.013	1,027	1.000		4.5	0.04	0.8	7.0	
Shore distance (d)																	
d < 1/4 mile	18	0.022	0.005	138	0.169	0.013	660	0.809	0.014	816	0.797	0.013	4.6	0.04	1.0	7.0	
1/4 ≤ d < 1/2 mile	9	0.069	0.022	28	0.215	0.036	93	0.715	0.040	130	0.127	0.010	4.3	0.11	1.0	6.5	
1/2 ≤ d < 3/4 mile	4	0.174	0.081	3	0.130	0.072	16	0.696	0.098	23	0.022	0.005	3.9	0.03	1.2	5.6	
3/4 ≤ d < 1 mile	1	0.071	0.071	9	0.643	0.133	4	0.286	0.125	14	0.014	0.004	3.1	0.03	1.5	5.2	
d ≥ 1 mile	14	0.341	0.075	12	0.293	0.072	15	0.366	0.076	41	0.040	0.006	3.2	0.26	0.8	6.0	
Total ^a	46	0.045	0.006	190	0.186	0.012	788	0.770	0.013	1,024	1.000		4.5	0.04	0.8	7.0	
Statistical Area																	
244-70	28	0.029	0.005	174	0.178	0.012	777	0.794	0.013	979	0.985	0.004	4.7	0.03	1.0	7	
241-11	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	ND	ND	ND	ND	
241-60	6	0.400	0.131	6	0.400	0.131	3	0.200	0.107	15	0.015	0.004	2.6	0.38	0.8	5.2	
Total ^a	34	0.034	0.006	180	0.181	0.012	780	0.785	0.013	994	1.000		4.5	0.40	0.8	7.0	

Note: "-" = value cannot be computed due to limitations of the data. ND = no data collected.

^a Totals for week, shore distance, and statistical area not identical. Not all fish sampled for maturity were sampled for shore distance and statistical area.

Table 13.-Maturity index composition by week, distance from shore, statistical area and ocean-age of male Chinook salmon sampled from the harvest north of Bluff Point in the Central Cook Inlet marine recreational fishery, May 1 through June 24, 1997.

	Male Chinook salmon								
	Immature			Spring Spawner			Total		
	Sample size	Prop.	SE	Sample size	Prop.	SE	Total	Prop.	SE
Week									
5/01 - 5/07	26	0.464	0.067	30	0.536	0.067	56	0.075	0.010
5/08 - 5/14	28	0.311	0.049	62	0.689	0.049	90	0.121	0.012
5/15 - 5/21	31	0.176	0.029	145	0.824	0.029	176	0.236	0.016
5/22 - 5/28	33	0.163	0.026	170	0.837	0.026	203	0.272	0.016
5/29 - 6/04	20	0.120	0.025	147	0.880	0.025	167	0.224	0.015
6/05 - 6/11	6	0.273	0.097	16	0.727	0.097	22	0.030	0.006
6/12 - 6/18	10	0.714	0.125	4	0.286	0.125	14	0.019	0.005
6/19 - 6/24	3	0.176	0.095	14	0.824	0.095	17	0.023	0.005
Total ^a	157	0.211	0.014	588	0.789	0.014	745	1.000	
Shore distance (d)									
d < 1/4 mile	86	0.147	0.015	499	0.853	0.015	585	0.785	0.015
1/4 ≤ d < 1/2 mile	23	0.271	0.048	62	0.729	0.048	85	0.114	0.012
1/2 ≤ d < 3/4 mile	13	0.542	0.104	11	0.458	0.104	24	0.032	0.006
3/4 ≤ d < 1 mile	5	0.625	0.183	3	0.375	0.183	8	0.011	0.004
d ≥ 1 mile	30	0.698	0.071	13	0.302	0.071	43	0.058	0.009
Total ^a	157	0.211	0.014	588	0.789	0.014	745	1.000	
Statistical Area									
244-70	115	0.165	0.014	582	0.835	0.014	697	0.969	0.006
241-11	0	0.000	-	0	0.000	-	0	0.000	-
241-60	18	0.818	0.084	4	0.182	0.084	22	0.031	0.006
Total ^a	133	0.185	0.014	586	0.815	0.014	719	1.000	

Note: "-" = value cannot be computed due to limitations of the data.

^a Totals for week, shore distance, and statistical area not identical. Not all fish sampled for maturity were sampled for shore distance and statistical area.

Table 14.-Chinook salmon CWT recoveries summarized by week, distance from shore, maturity, statistical area from the sample of CWTs harvested north of Bluff Point in the Central Cook Inlet marine recreational fishery, May 1 through June 24, 1997.

	Stock Origin ^a																	
	Lower Cook Inlet			Other Cook Inlet			Other Alaska			Non - Alaska			Unknown			All		
	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE
Week																		
5/01 - 5/07	4	0.160	0.075	0	0.000		0	0.000	-	1	0.167	0.167	1	0.250	0.250	6	0.113	0.044
5/08 - 5/14	3	0.120	0.066	0	0.000		0	0.000	-	2	0.333	0.211	1	0.250	0.250	6	0.113	0.044
5/15 - 5/21	5	0.200	0.082	5	0.333	0.126	0	0.000	-	1	0.167	0.167	0	0.000	-	11	0.208	0.056
5/22 - 5/28	8	0.320	0.095	5	0.333	0.126	0	0.000	-	0	0.000	-	1	0.250	0.250	14	0.264	0.061
5/29 - 6/04	5	0.200	0.082	4	0.267	0.118	3	1.000		1	0.167	0.167	1	0.250	0.250	14	0.264	0.061
6/05 - 6/11	0	0.000	-	1	0.067	0.067	0	0.000	-	1	0.167	0.167	0	0.000	-	2	0.038	0.026
6/12 - 6/18	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
6/19 - 6/24	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
Total ^b	25	1.000		15	1.000		3	1.000		6	1.000		4	1.000		53	1.000	
Shore distance (d)																		
d < 1/4 mile	22	0.880	0.066	11	0.733	0.118	0	0.000	-	2	0.333	0.211	4	1.000		39	0.750	0.061
1/4 ≤ d < 1/2 mile	2	0.080	0.055	3	0.200	0.107	2	0.667	0.333	0	0.000	-	0	0.000	-	7	0.135	0.048
1/2 ≤ d < 3/4 mile	1	0.040	0.040	0	0.000	-	0	0.000	-	1	0.167	0.167	0	0.000	-	2	0.038	0.027
3/4 ≤ d < 1 mile	0	0.000	-	0	0.000	-	1	0.333	0.333	1	0.167	0.167	0	0.000	-	2	0.038	0.027
d ≥ 1 mile	0	0.000	-	0	0.000	-	0	0.000	-	2	0.333	0.211	0	0.000	-	2	0.038	0.027
Total ^b	25	1.000		14	0.933		3	1.000		6	1.000		4	1.000		52	1.000	
Maturity ^b																		
Female																		
Immature	0	0.000	-	0	0.000	-	0	0.000	-	3	0.750	0.250	0	0.000	-	3	0.107	0.060
Fall spawner	3	0.214	0.114	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	3	0.107	0.060
Spring spawner	11	0.786	0.114	8	1.000	0.000	1	1.000		1	0.250	0.250	1	1.000		22	0.786	0.079
Unknown	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0	-
Subtotal ^b	14	1.000		8	1.000		1	1.000		4	1.000		1	1.000		28	1.000	
Male																		
Immature	2	0.200	0.133	0	0.000	-	0	0.000	-	1	0.500	0.500	1	0.500	0.500	4	0.222	0.101
Spring spawner	8	0.800	0.133	3	1.000	0.000	1	1.000		1	0.500	0.500	1	0.500	0.500	14	0.778	0.101
Unknown		0.000	-		0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
Subtotal ^b	10	1.000		3	1.000		1	1.000		2	1.000		2	1.000		18	1.000	

-continued-

Table 14.–Page 2 of 2.

	Stock Origin ^a																	
	Lower Cook Inlet			Other Cook Inlet			Other Alaska			Non - Alaska			Unknown			All		
	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE
Week																		
5/01 - 5/07	4	0.160	0.075	0	0.000		0	0.000	-	1	0.167	0.167	1	0.250	0.250	6	0.113	0.044
5/08 - 5/14	3	0.120	0.066	0	0.000		0	0.000	-	2	0.333	0.211	1	0.250	0.250	6	0.113	0.044
5/15 - 5/21	5	0.200	0.082	5	0.333	0.126	0	0.000	-	1	0.167	0.167	0	0.000	-	11	0.208	0.056
5/22 - 5/28	8	0.320	0.095	5	0.333	0.126	0	0.000	-	0	0.000	-	1	0.250	0.250	14	0.264	0.061
5/29 - 6/04	5	0.200	0.082	4	0.267	0.118	3	1.000		1	0.167	0.167	1	0.250	0.250	14	0.264	0.061
6/05 - 6/11	0	0.000	-	1	0.067	0.067	0	0.000	-	1	0.167	0.167	0	0.000	-	2	0.038	0.026
6/12 - 6/18	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
6/19 - 6/24	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
Total ^b	25	1.000		15	1.000		3	1.000		6	1.000		4	1.000		53	1.000	
Shore distance (d)																		
d < 1/4 mile	22	0.880	0.066	11	0.733	0.118	0	0.000	-	2	0.333	0.211	4	1.000		39	0.750	0.061
1/4 ≤ d < 1/2 mile	2	0.080	0.055	3	0.200	0.107	2	0.667	0.333	0	0.000	-	0	0.000	-	7	0.135	0.048
1/2 ≤ d < 3/4 mile	1	0.040	0.040	0	0.000	-	0	0.000	-	1	0.167	0.167	0	0.000	-	2	0.038	0.027
3/4 ≤ d < 1 mile	0	0.000	-	0	0.000	-	1	0.333	0.333	1	0.167	0.167	0	0.000	-	2	0.038	0.027
d ≥ 1 mile	0	0.000	-	0	0.000	-	0	0.000	-	2	0.333	0.211	0	0.000	-	2	0.038	0.027
Total ^b	25	1.000		14	0.933		3	1.000		6	1.000		4	1.000		52	1.000	
Maturity ^b																		
Female																		
Immature	0	0.000	-	0	0.000	-	0	0.000	-	3	0.750	0.250	0	0.000	-	3	0.107	0.060
Fall spawner	3	0.214	0.114	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	3	0.107	0.060
Spring spawner	11	0.786	0.114	8	1.000	0.000	1	1.000		1	0.250	0.250	1	1.000		22	0.786	0.079
Unknown	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0	-
Subtotal ^b	14	1.000		8	1.000		1	1.000		4	1.000		1	1.000		28	1.000	
Male																		
Immature	2	0.200	0.133	0	0.000	-	0	0.000	-	1	0.500	0.500	1	0.500	0.500	4	0.222	0.101
Spring spawner	8	0.800	0.133	3	1.000	0.000	1	1.000		1	0.500	0.500	1	0.500	0.500	14	0.778	0.101
Unknown	0.000	-		0.000	-		0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
Subtotal ^b	10	1.000		3	1.000		1	1.000		2	1.000		2	1.000		18	1.000	

Note: "-" = value cannot be computed due to limitations of the data.

^a Stock group is combined tag codes by location of release for the coded wire tagged wild or hatchery fish sampled in the harvest: Lower Cook Inlet - Cook Inlet south of Kasilof River drainage, other Cook Inlet - Cook Inlet tributaries north of and including Kasilof River drainage, Other Alaska - all non-Cook Inlet drainages of Alaska, non-Alaska - includes British Columbia, Washington, and Oregon.

^b The number of maturity categories differs between the sexes, male Chinook salmon is 2 categories, immature or spring spawner, female is 3 categories, immature, fall spawner, spring spawner.

Table 15.-Ocean-age composition for Chinook salmon harvested north of Bluff Point in the Cook Inlet marine recreational fishery, May 1 through June 24, 1998.

	Ocean-Age					Total
	1	2	3	4	5	
Number sampled	2	84	545	506	5	1,142
Estimated proportion	0.002	0.074	0.477	0.443	0.004	1.000
SE proportion	0.001	0.007	0.013	0.013	0.002	
Percent composition	0.2%	7.4%	47.7%	44.3%	0.4%	
SE percent	0.11%	0.69%	1.32%	1.32%	0.18%	

Table 16.-Maturity index composition and mean egg diameter by week, distance from shore, and statistical area of female Chinook salmon sampled from the harvest north of Bluff Point in the Central Cook Inlet marine recreational fishery, May 1 through June 24, 1998.

	Female Chinook salmon												Egg diameter (mm)			
	Immature			Fall Spawner			Spring Spawner			All			Mean	SE	min	max
	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE				
Week																
5/01 - 5/07	11	0.234	0.062	13	0.277	0.066	23	0.489	0.074	47	0.058	0.008	3.4	0.19	1.4	6.0
5/08 - 5/14	11	0.107	0.031	50	0.485	0.049	42	0.408	0.049	103	0.126	0.012	3.6	0.13	1.2	6.5
5/15 - 5/21	10	0.065	0.020	47	0.305	0.037	97	0.630	0.039	154	0.189	0.014	4.3	0.11	1.2	6.8
5/22 - 5/28	12	0.053	0.015	53	0.232	0.028	163	0.715	0.030	228	0.280	0.016	4.5	0.09	1.0	7.4
5/29 - 6/04	19	0.113	0.025	49	0.292	0.035	100	0.595	0.038	168	0.206	0.014	3.9	0.11	1.0	6.5
6/05 - 6/11	12	0.185	0.048	19	0.292	0.057	34	0.523	0.062	65	0.080	0.009	3.6	0.19	0.9	6.2
6/12 - 6/18	13	0.371	0.083	14	0.400	0.084	8	0.229	0.072	35	0.043	0.007	2.7	0.22	0.9	6.2
6/19 - 6/24	6	0.400	0.131	8	0.533	0.133	1	0.067	0.067	15	0.018	0.005	2.5	0.22	1.3	4.0
Total ^a	94	0.115	0.011	253	0.310	0.016	468	0.574	0.017	815	1.000		3.9	0.05	0.9	7.4
Shore distance (d)																
d < 1/4 mile	29	0.059	0.011	126	0.255	0.020	339	0.686	0.021	494	0.606	0.017	4.3	0.06	1.10	6.8
1/4 ≤ d < 1/2 mile	20	0.133	0.028	54	0.360	0.039	76	0.507	0.041	150	0.184	0.014	3.9	0.13	1.00	7.4
1/2 ≤ d < 3/4 mile	4	0.100	0.048	15	0.375	0.078	21	0.525	0.080	40	0.049	0.008	3.8	0.24	0.9	6.5
3/4 ≤ d < 1 mile	8	0.348	0.102	9	0.391	0.104	6	0.261	0.094	23	0.028	0.006	2.9	0.33	0.9	6.0
d ≥ 1 mile	33	0.306	0.045	49	0.454	0.048	26	0.241	0.041	108	0.133	0.012	2.9	0.13	0.9	7.2
Total ^a	94	0.115	0.011	253	0.310	0.016	468	0.574	0.017	815	1.000		3.9	0.05	0.9	7.4
Statistical Area																
244-70	62	0.087	0.011	203	0.284	0.017	449	0.629	0.018	714	0.876	0.012	4.1	0.05	0.9	7.2
241-11	18	0.254	0.052	37	0.521	0.060	16	0.225	0.050	71	0.087	0.010	2.9	0.17	1.00	7.4
241-60	14	0.467	0.093	13	0.433	0.092	3	0.100	0.056	30	0.037	0.007	2.3	0.19	0.9	5.0
Total ^a	94	0.115	0.011	253	0.310	0.016	468	0.574	0.017	815	1.000		3.9	0.05	0.9	7.4

^a Totals for week, shore distance, and statistical area not identical. Not all fish sampled for maturity were sampled for shore distance and statistical area.

Table 17.-Maturity index composition by week, distance from shore, and statistical area for male Chinook salmon sampled from the harvest north of Bluff Point in the Central Cook Inlet marine recreational fishery, May 1 through June 24, 1998.

	Male Chinook salmon								
	Immature			Spring Spawner			Total		
	Sample size	Prop.	SE	Sample size	Prop.	SE	Total	Prop.	SE
Week									
5/01 - 5/07	33	0.471	0.060	37	0.529	0.060	70	0.089	0.010
5/08 - 5/14	53	0.582	0.052	38	0.418	0.052	91	0.115	0.011
5/15 - 5/21	31	0.304	0.046	71	0.696	0.046	102	0.129	0.012
5/22 - 5/28	52	0.218	0.027	186	0.782	0.027	238	0.302	0.016
5/29 - 6/04	77	0.412	0.036	110	0.588	0.036	187	0.237	0.015
6/05 - 6/11	18	0.273	0.055	48	0.727	0.055	66	0.084	0.010
6/12 - 6/18	20	0.690	0.087	9	0.310	0.087	29	0.037	0.007
6/19 - 6/24	5	0.833	0.167	1	0.167	0.167	6	0.008	0.003
Total	289	0.366	0.017	500	0.634	0.017	789	1.000	
Shore distance (d)									
d < 1/4 mile	133	0.263	0.020	373	0.737	0.020	506	0.641	0.017
1/4 ≤ d < 1/2 mile	42	0.359	0.045	75	0.641	0.045	117	0.148	0.013
1/2 ≤ d < 3/4 mile	26	0.591	0.075	18	0.409	0.075	44	0.056	0.008
3/4 ≤ d < 1 mile	10	0.714	0.125	4	0.286	0.125	14	0.018	0.005
d ≥ 1 mile	78	0.722	0.043	30	0.278	0.043	108	0.137	0.012
Total	289	0.366	0.017	500	0.634	0.017	789	1.000	
Statistical Area									
244-70	203	0.298	0.018	478	0.702	0.018	681	0.863	0.012
241-11	62	0.805	0.045	15	0.195	0.045	77	0.098	0.011
241-60	24	0.774	0.076	7	0.226	0.076	31	0.039	0.007
Total	289	0.366	0.017	500	0.634	0.017	789	1.000	

Table 18.-Chinook salmon CWT recoveries summarized by week, distance from shore, maturity, statistical area from the sample of CWTs harvested north of Bluff Point in the Central Cook Inlet marine recreational fishery, May 1 through June 24, 1998.

	Stock Origin ^a																	
	Lower Cook Inlet			Other Cook Inlet			Other Alaska			Non - Alaska			Unknown			All		
	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE
Week																		
5/01 - 5/07	1	0.032	0.032	1	0.200	0.200	0	0.000	-	3	0.125	0.069	0	0.000	-	5	0.063	0.027
5/08 - 5/14	2	0.065	0.045	0	0.000	-	0	0.000	-	4	0.167	0.078	2	0.100	0.069	8	0.100	0.034
5/15 - 5/21	4	0.129	0.061	1	0.200	0.200	0	0.000	-	5	0.208	0.085	7	0.350	0.109	17	0.213	0.046
5/22 - 5/28	14	0.452	0.091	1	0.200	0.200	0	0.000	-	7	0.292	0.095	6	0.300	0.105	28	0.350	0.054
5/29 - 6/04	7	0.226	0.076	2	0.400	0.245	0	0.000	-	3	0.125	0.069	2	0.100	0.069	14	0.175	0.043
6/05 - 6/11	3	0.097	0.054	0	0.000	-	0	0.000	-	1	0.042	0.042	3	0.150	0.082	7	0.088	0.032
6/12 - 6/18	0	0.000	-	0	0.000	-	0	0.000	-	1	0.042	0.042	0	0.000	-	1	0.013	0.013
6/19 - 6/24	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
Total ^b	31	1.000		5	1.000		0	0.000		24	1.000		20	1.000		80	1.000	
Shore distance (d)																		
d < 1/4 mile	28	0.903	0.054	4	0.800	0.200	0	0.000	-	10	0.417	0.103	14	0.700	0.105	56	0.700	0.052
1/4 ≤ d < 1/2 mile	1	0.032	0.032	1	0.200	0.200	0	0.000	-	6	0.250	0.090	6	0.300	0.105	14	0.175	0.043
1/2 ≤ d < 3/4 mile	0	0.000	-	0	0.000	-	0	0.000	-	1	0.042	0.042	0	0.000	-	1	0.013	0.013
3/4 ≤ d < 1 mile	2	0.065	0.045	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	2	0.025	0.018
d ≥ 1 mile	0	0.000	-	0	0.000	-	0	0.000	-	7	0.292	0.095	0	0.000	-	7	0.088	0.032
Total ^b	31	1.000		5	1.000		0	0.000		24	1.000		20	1.000		80	1.000	
Maturity ^b																		
Female																		
Immature	0	0.000	-	0	0.000	-	0	0.000	-	3	0.429	0.202	1	0.100	0.100	4	0.114	0.055
Fall spawner	3	0.200	0.107	0	0.000	-	0	0.000	-	5	0.714	0.184	2	0.200	0.133	10	0.286	0.077
Spring spawner	12	0.800	0.107	3	1.000		0	0.000	-	2	0.286	0.184	8	0.800	0.133	25	0.714	0.077
Unknown	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
Subtotal ^b	15	1.000		3	1.000		0	0.000		7	1.000		10	1.000		35	1.000	
Male																		
Immature	0	0.000	-	1	1.000		0	0.000	-	8	0.889	0.111	2	0.333	0.211	11	0.379	0.092
Spring spawner	13	1.000		0	0.000	-	0	0.000	-	1	0.111	0.111	4	0.667	0.211	18	0.621	0.092
Unknown	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
Subtotal ^b	13	1.000		1	1.000		0	0.000		9	1.000		6	1.000		29	1.000	

-continued-

Table 18.–Page 2 of 2.

	Stock Origin ^a																	
	Lower Cook Inlet			Other Cook Inlet			Other Alaska			Non - Alaska			Unknown			All		
	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE
Maturity ^b (continued)																		
Both sexes combined ^c																		
Immature	0	0.000	-	1	0.200	0.200	0	0.000	-	11	0.478	0.106	3	0.150	0.082	15	0.190	0.044
Fall spawner	3	0.097	0.054	0	0.000	-	0	0.000	-	5	0.217	0.088	2	0.100	0.069	10	0.127	0.038
Spring spawner	25	0.806	0.072	3	0.600	0.245	0	0.000	-	3	0.130	0.072	12	0.600	0.112	43	0.544	0.056
Unknown	3	0.097	0.054	1	0.200	0.200	0	0.000	-	4	0.174	0.081	3	0.150	0.082	11	0.139	0.039
Total ^b	31	1.000		5	1.000		0	0.000		23	1.000		20	1.000		79	1.000	
Statistical Area																		
244-70	31	1.000		5	1.000		0	0.000	-	16	0.667	0.098	18	0.900	0.069	70	0.875	0.037
241-11	0	0.000	-	0	0.000	-	0	0.000	-	6	0.250	0.090	2	0.100	0.069	8	0.1	0.034
241-60	0	0.000	-	0	0.000	-	0	0.000	-	2	0.083	0.058	0	0.000	-	2	0.025	0.018
Total ^b	31	1.000		5	1.000		0	0.000		24	1.000		20	1.000		80	1.000	

Note: "-" = value cannot be computed due to limitations of the data.

^a Stock group is combined tag codes by location of release for the coded wire tagged wild or hatchery fish sampled in the harvest: Lower Cook Inlet - Cook Inlet south of Kasilof River drainage, other Cook Inlet - Cook Inlet tributaries north of and including Kasilof River drainage, Other Alaska - all non-Cook Inlet drainages of Alaska, non-Alaska - includes British Columbia, Washington, and Oregon.

^b The number of maturity categories differs between the sexes, male Chinook salmon is 2 categories, immature or spring spawner, female is 3 categories, immature, fall spawner, spring spawner.

^c The number for both sexes does not sum by sex because maturity or location of release are unknown for 1 tag recovery.

Table 19.-Ocean-age composition by week, distance from shore, and statistical area for Chinook salmon harvested north of Bluff Point in the Central Cook Inlet marine recreational fishery, May 1 through June 24, 2002.

	Age																	
	Ocean-age-1			Ocean-age-2			Ocean-age-3			Ocean-age-4			Ocean-age-5			All		
	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE
Week																		
5/01 - 5/07	0	0.000	-	2	0.133	0.091	8	0.533	0.133	5	0.333	0.126	0	0.000	-	15	0.029	0.007
5/08 - 5/14	0	0.000	-	19	0.250	0.050	37	0.487	0.058	20	0.263	0.051	0	0.000	-	76	0.147	0.014
5/15 - 5/21	0	0.000	-	20	0.230	0.045	54	0.621	0.052	13	0.149	0.038	0	0.000	-	87	0.168	0.015
5/22 - 5/28	2	0.011	0.008	41	0.234	0.032	111	0.634	0.037	21	0.120	0.025	0	0.000	-	175	0.338	0.019
5/29 - 6/04	1	0.014	0.014	18	0.247	0.051	44	0.603	0.058	10	0.137	0.041	0	0.000	-	73	0.141	0.014
6/05 - 6/11	4	0.053	0.026	33	0.440	0.058	33	0.440	0.058	5	0.067	0.029	0	0.000	-	75	0.145	0.014
6/12 - 6/18	0	0.000	-	13	0.765	0.106	4	0.235	0.106	0	0.000	-	0	0.000	-	17	0.033	0.007
6/19 - 6/24	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
Total ^a	7	0.014	0.005	146	0.282	0.018	291	0.562	0.020	74	0.143	0.014	0	0.000	-	518	1.000	
Shore distance (d)																		
d < 1/4 mile	6	0.017	0.007	95	0.264	0.023	202	0.561	0.026	57	0.158	0.019	0	0.000	-	360	0.695	0.019
1/4 ≤ d < 1/2 mile	0	0.000	-	22	0.306	0.055	40	0.556	0.059	10	0.139	0.041	0	0.000	-	72	0.139	0.014
1/2 ≤ d < 3/4 mile	1	0.083	0.083	3	0.250	0.131	8	0.667	0.142	0	0.000	-	0	0.000	-	12	0.023	0.006
3/4 ≤ d < 1 mile	0	0.000	-	2	0.000	-	9	0.692	0.133	2	0.154	0.104	0	0.000	-	13	0.025	0.006
d ≥ 1 mile	0	0.000	-	24	0.393	0.063	32	0.525	0.064	5	0.082	0.035	0	0.000	-	61	0.118	0.013
Total ^a	7	0.014	0.005	146	0.282	0.018	291	0.562	0.020	74	0.143	0.014	0	0.000	-	518	1.000	
Statistical Area																		
244-70	6	0.014	0.006	119	0.281	0.022	232	0.547	0.024	67	0.158	0.018	0	0.000	-	424	0.827	0.015
241-11	1	0.013	0.013	25	0.316	0.053	48	0.608	0.055	5	0.063	0.028	0	0.000	-	79	0.154	0.015
241-60	0	0.000	-	2	0.200	0.133	7	0.700	0.153	1	0.100	0.100	0	0.000	-	10	0.019	0.006
Total ^a	7	0.014	0.005	146	0.285	0.018	287	0.559	0.020	73	0.142	0.014	0	0.000	-	513	1.000	

Note: "-" = value cannot be computed due to limitations of the data.

^a Total by statistical area differs because 5 fish sampled for age were not sampled for statistical area.

Table 20.-Maturity index composition and mean egg diameter by week, distance from shore, statistical area, and ocean-age of female Chinook salmon sampled from the harvest north of Bluff Point in the Central Cook Inlet marine recreational fishery, May 1 through June 24, 2002.

	Female Chinook salmon												Egg diameter (mm)			
	Immature			Fall Spawner			Spring Spawner			All			Mean	SE	min	max
	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE				
Week																
5/01 - 5/07	21	0.412		14	0.275	0.063	16	0.314	0.066	51	0.094	0.012	2.8	0.24	0.5	6.5
5/08 - 5/14	19	0.213	0.044	27	0.303	0.049	43	0.483	0.053	89	0.163	0.016	3.4	0.17	0.9	6.1
5/15 - 5/21	28	0.235	0.039	38	0.319	0.043	53	0.445	0.046	119	0.218	0.018	3.5	0.15	0.9	6.5
5/22 - 5/28	17	0.132	0.030	18	0.140	0.031	94	0.729	0.039	129	0.237	0.018	4.2	0.13	0.9	6.5
5/29 - 6/04	15	0.197	0.046	13	0.171	0.043	48	0.632	0.056	76	0.139	0.015	3.9	0.21	0.9	6.1
6/05 - 6/11	32	0.471	0.061	19	0.279	0.055	17	0.250	0.053	68	0.125	0.014	2.4	0.20	0.8	6.0
6/12 - 6/18	11	0.846	0.104	0	0.000	0.000	2	0.154	0.104	13	0.024	0.007	1.5	0.38	0.9	5.0
6/19 - 6/24	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	-	-	-	-
Total ^a	143	0.262	0.019	129	0.237	0.018	273	0.501	0.021	545	1.000		3.5	0.07	0.5	6.5
Shore distance (d)																
d < 1/4 mile	84	0.218	0.021	84	0.218	0.021	217	0.564	0.025	385	0.709	0.020	3.7	0.09	0.5	6.5
1/4 ≤ d < 1/2 mile	23	0.348	0.059	10	0.152	0.044	33	0.500	0.062	66	0.122	0.014	3.3	0.22	0.9	6.5
1/2 ≤ d < 3/4 mile	2	0.250	0.164	6	0.750	0.164	0	0.000	0.000	8	0.015	0.005	2.2	0.32	0.9	3.4
3/4 ≤ d < 1 mile	3	0.300	0.153	5	0.500	0.167	2	0.200	0.133	10	0.018	0.006	2.6	0.40	0.9	4.6
d ≥ 1 mile	29	0.392	0.057	24	0.324	0.055	21	0.284	0.053	74	0.136	0.015	2.8	0.21	0.9	6.2
Total ^a	141	0.260	0.019	129	0.238	0.018	273	0.503	0.021	543	1.000		3.5	0.07	0.5	6.5
Statistical Area																
244-70	105	0.234	0.020	94	0.210	0.019	249	0.556	0.024	448	0.822	0.016	3.7	0.08	0.5	6.5
241-11	26	0.400	0.061	24	0.369	0.060	15	0.231	0.053	65	0.119	0.014	2.7	0.21	0.8	6.2
241-60	12	0.375	0.087	11	0.344	0.085	9	0.281	0.081	32	0.059	0.010	2.5	0.29	0.9	6.0
Total ^a	143	0.262	0.019	129	0.237	0.018	273	0.501	0.021	545	1.000		3.5	0.07	0.5	6.5

Note: "-" = value cannot be computed due to limitations of the data.

^a Total is not the same for all variables because not all female fish sampled for maturity were sampled for shore distance.

Table 21.-Maturity index composition by week, distance from shore, statistical area and ocean-age of male Chinook salmon sampled from the harvest north of Bluff Point in the Central Cook Inlet marine recreational fishery, May 1 through June 24, 2002.

	Male Chinook salmon								
	Immature			Spring Spawner			Total		
	Sample size	Prop.	SE	Sample size	Prop.	SE	Total	Prop.	SE
Week									
5/01 - 5/07	30	0.667	0.071	15	0.333	0.071	45	0.068	0.010
5/08 - 5/14	61	0.622	0.049	37	0.378	0.049	98	0.149	0.014
5/15 - 5/21	66	0.485	0.043	70	0.515	0.043	136	0.206	0.016
5/22 - 5/28	70	0.361	0.035	124	0.639	0.035	194	0.294	0.018
5/29 - 6/04	60	0.577	0.049	44	0.423	0.049	104	0.158	0.014
6/05 - 6/11	44	0.667	0.058	22	0.333	0.058	66	0.100	0.012
6/12 - 6/18	11	0.688	0.120	5	0.313	0.120	16	0.024	0.006
6/19 - 6/24	0	0.000	-	0	0.000	-	0	0.000	-
Total	342	0.519	0.018	317	0.481	0.018	659	1.000	
Shore distance (d)									
d < 1/4 mile	230	0.477	0.023	252	0.523	0.023	482	0.731	0.017
1/4 ≤ d < 1/2 mile	42	0.519	0.056	39	0.481	0.056	81	0.123	0.013
1/2 ≤ d < 3/4 mile	7	0.538	0.144	6	0.462	0.144	13	0.020	0.005
3/4 ≤ d < 1 mile	9	0.692	0.133	4	0.308	0.133	13	0.020	0.005
d ≥ 1 mile	54	0.771	0.051	16	0.229	0.051	70	0.106	0.012
Total	342	0.519	0.018	317	0.481	0.018	659	1.000	
Statistical Area									
244-70	270	0.493	0.021	278	0.507	0.021	548	0.832	0.015
241-11	57	0.633	0.051	33	0.367	0.051	90	0.137	0.013
241-60	15	0.714	0.101	6	0.286	0.101	21	0.032	0.007
Total	342	0.519	0.019	317	0.481	0.019	659	1.000	

Note: "-" = value cannot be computed due to limitations of the data.

Table 22.-Chinook salmon CWT recoveries summarized by week, distance from shore, maturity, statistical area from the sample of CWTs harvested north of Bluff Point in the Central Cook Inlet marine recreational fishery, May 1 through June 24, 2002.

	Stock Origin ^a																	
	Lower Cook Inlet			Other Cook Inlet			Other Alaska			Non - Alaska			Unknown			All		
	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Sample Size	Prop.	SE
Week																		
5/01 - 5/07	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	5	0.106	0.045	5	0.069	0.030
5/08 - 5/14	0	0.000	-	0	0.000	-	1	0.500	0.500	3	0.200	0.107	7	0.149	0.052	11	0.153	0.043
5/15 - 5/21	0	0.000	-	0	0.000	-	0	0.000	-	5	0.333	0.126	4	0.085	0.041	9	0.125	0.039
5/22 - 5/28	0	0.000	-	2	0.286	0.184	1	0.500	0.500	3	0.200	0.107	9	0.191	0.058	15	0.208	0.048
5/29 - 6/04	1	1.000		4	0.571	0.202	0	0.000	-	3	0.200	0.107	10	0.213	0.060	18	0.250	0.051
6/05 - 6/11	0	0.000	-	1	0.143	0.143	0	0.000	-	0	0.000	-	7	0.149	0.052	8	0.111	0.037
6/12 - 6/18	0	0.000	-	0	0.000	-	0	0.000	-	1	0.067	0.067	5	0.106	0.045	6	0.083	0.033
6/19 - 6/24	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
Total ^b	1	1.000		7	1.000		2	1.000		15	1.000		47	1.000		72	1.000	
Shore distance (d)																		
d < 1/4 mile	1	1.000		6	0.857	0.143	1	0.500	0.500	12	0.800	0.107	33	0.702	0.067	53	0.736	0.052
1/4 ≤ d < 1/2 mile	0	0.000	-	1	0.143	0.143	1	0.500	0.500	1	0.067	0.067	6	0.128	0.049	9	0.125	0.039
1/2 ≤ d < 3/4 mile	0	0.000	-	0	0.000	-	0	0.000	-	1	0.067	0.067	0	0.000	-	1	0.014	0.014
3/4 ≤ d < 1 mile	0	0.000	-	0	0.000	-	0	0.000	-	1	0.067	0.067	1	0.021	0.021	2	0.028	0.020
d ≥ 1 mile	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	7	0.149	0.052	7	0.097	0.035
Total ^b	1	1.000		7	1.000		2	1.000		15	1.000		47	1.000		72	1.000	
Maturity ^b																		
Female																		
Immature	0	0.000	-	0	0.000	-	0	0.000	-	6	0.750	0.164	16	0.696	0.098	22	0.595	0.082
Fall spawner	0	0.000	-	0	0.000	-	0	0.000	-	1	0.125	0.125	2	0.087	0.060	3	0.081	0.045
Spring spawner	1	1.000		4	1.000		1	1.000		1	0.125	0.125	5	0.217	0.088	12	0.324	0.078
Unknown	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
Subtotal ^b	1	1.000		4	1.000		1	1.000		8	1.000		23	1.000		37	1.000	
Male																		
Immature	0	0.000	-	0	0.000	-	1	1.000		6	0.857	0.143	15	0.652	0.102	22	0.647	0.083
Spring spawner	0	0.000	-	3	1.000		0	0.000	-	1	0.143	0.143	8	0.348	0.102	12	0.353	0.083
Unknown	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
Subtotal ^b	0	0.000	-	3	1.000		1	1.000		7	1.000		23	1.000		34	1.000	

-continued-

Table 22.–Page 2 of 2.

	Stock Origin ^a																	
	Lower Cook Inlet			Other Cook Inlet			Other Alaska			Non - Alaska			Unknown			All		
	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Sample Size	Prop.	SE
Maturity ^b (continued)																		
Both sexes combined ^c																		
Immature	0	0.000	-	0	0.000	-	1	0.500	0.500	12	0.800	0.107	31	0.660	0.070	44	0.611	0.058
Fall spawner	0	0.000	-	0	0.000	-	0	0.000	-	1	0.067	0.067	2	0.043	0.030	3	0.042	0.024
Spring spawner	1	1.000		7	1.000		1	0.500	0.500	2	0.133	0.091	13	0.277	0.066	24	0.333	0.056
Unknown	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	1	0.021	0.021	1	0.014	0.014
Total ^b	1	1.000		7	1.000		2	1.000		15	1.000		47	1.000		72	1.000	
Statistical Area																		
244-70	1	1.000		7	1.000		1	0.500		11	0.733	0.118	39	0.830	0.055	59	0.819	0.046
241-11	0	0.000	-	0	0.000	-	0	0.000	-	4	0.267	0.118	6	0.128	0.049	10	0.139	0.041
241-60	0	0.000	-	0	0.000	-	1	0.500		0	0.000	-	2	0.043	0.030	3	0.042	0.024
Total ^b	1	1.000		7	1.000		2	1.000		15	1.000		47	1.000		72	1.000	
All	1	0.014	0.014	7	0.097	0.035	2	0.028	0.020	15	0.208	0.048	47	0.653	0.057	72	1.000	

Note: "-" = value cannot be computed due to limitations of the data.

^a Stock group is combined tag codes by location of release for the coded wire tagged wild or hatchery fish sampled in the harvest: Lower Cook Inlet - Cook Inlet south of Kasilof River drainage, other Cook Inlet - Cook Inlet tributaries north of and including Kasilof River drainage, Other Alaska - all non-Cook Inlet drainages of Alaska, non-Alaska - includes British Columbia, Washington, and Oregon.

^b The number of maturity categories differs between the sexes, male Chinook salmon is 2 categories, immature or spring spawner, female is 3 categories, immature, fall spawner, spring spawner.

^c The number for both sexes does not sum by sex because maturity or location of release are not known for all tag recoveries.

Table 23.-Summary of unmarked and CWT recovered Chinook salmon harvested north of Bluff Point by week, distance from shore, and statistical area, Central Cook Inlet marine recreational fishery, May 1 through June 24, 1997.

	Unmarked Chinook					CWT-Marked Chinook					Total Chinook		
	Sample size	Proportion	SE	Proportion	SE	Sample size	Proportion	SE	Proportion	SE	Sample size	Prop.	SE
Week		by week		within week		by week		within week					
5/01 - 5/07	185	0.077	0.005	0.969	0.013	6	0.113	0.044	0.031	0.013	191	0.078	0.004
5/08 - 5/14	244	0.102	0.006	0.976	0.010	6	0.113	0.044	0.024	0.010	250	0.102	0.005
5/15 - 5/21	646	0.270	0.009	0.983	0.005	11	0.208	0.056	0.017	0.005	657	0.269	0.007
5/22 - 5/28	726	0.304	0.009	0.981	0.005	14	0.264	0.061	0.019	0.005	740	0.303	0.007
5/29 - 6/04	453	0.190	0.008	0.970	0.008	14	0.264	0.061	0.030	0.008	467	0.191	0.006
6/05 - 6/11	61	0.026	0.003	0.968	0.022	2	0.038	0.026	0.032	0.022	63	0.026	0.002
6/12 - 6/18	37	0.015	0.003	1.000		0	0.000	-	0.000	-	37	0.015	0.002
6/19 - 6/24	37	0.015	0.003	1.000		0	0.000	-	0.000	-	37	0.015	0.002
Total ^a	2,389	1.000		0.978	0.003	53	1.000		0.022	0.003	2,442	1.000	
Shore distance (d)		by distance		within distance		by distance		within distance					
d < 1/4 mile	1,936	0.819	0.008	0.980	0.003	39	0.750	0.061	0.020	0.003	1,975	0.817	0.006
1/4 ≤ d < 1/2 mile	258	0.109	0.006	0.974	0.010	7	0.135	0.048	0.026	0.010	265	0.110	0.005
1/2 ≤ d < 3/4 mile	48	0.020	0.003	0.960	0.028	2	0.038	0.027	0.040	0.028	50	0.021	0.002
3/4 ≤ d < 1 mile	25	0.011	0.002	0.926	0.051	2	0.038	0.027	0.074	0.051	27	0.011	0.002
d ≥ 1 mile	97	0.041	0.004	0.980	0.014	2	0.038	0.027	0.020	0.014	99	0.041	0.003
Total ^a	2,364	1.000		0.978	0.003	52	1.000		0.022	0.003	2,416	1.000	
Statistical Area		by area		within area		by area		within area					
244-70	2,263	0.982	0.003	0.978	0.003	50	0.980	0.020	0.022	0.003	2,313	0.982	0.002
241-11	0	0.000	-	0.000	-	1	0.020	0.020	1.000		1	0.000	0.000
241-60	42	0.018	0.003	1.000	0.000	0	0.000	-	0.000	-	42	0.018	0.002
Total ^a	2,305	1.000		0.978	0.003	51	1.000		0.022	0.003	2,356	1.000	

Note: "-" = value cannot be computed due to limitations of the data.

^a Totals for week, shore distance, and statistical area are not identical because all Chinook salmon examined were not sampled for all variables.

Table 24.-Summary of unmarked and CWT recovered Chinook salmon harvested north of Bluff Point by week, distance from shore, and statistical area, Central Cook Inlet marine recreational fishery, May 1 through June 24, 1998.

	Unmarked Chinook					CWT-Marked Chinook					Total Chinook		
	Sample size	Proportion	SE	Proportion	SE	Sample size	Proportion	SE	Proportion	SE	Sample size	Prop.	SE
Week		by week		within week			by week		within week				
5/01 - 5/07	156	0.058	0.004	0.969	0.014	5	0.063	0.027	0.031	0.014	161	0.058	0.003
5/08 - 5/14	302	0.111	0.006	0.974	0.009	8	0.100	0.034	0.026	0.009	310	0.111	0.004
5/15 - 5/21	406	0.150	0.007	0.960	0.010	17	0.213	0.046	0.040	0.010	423	0.152	0.004
5/22 - 5/28	1027	0.379	0.009	0.973	0.005	28	0.350	0.053	0.027	0.005	1055	0.378	0.006
5/29 - 6/04	551	0.203	0.008	0.975	0.007	14	0.175	0.042	0.025	0.007	565	0.203	0.005
6/05 - 6/11	171	0.063	0.005	0.961	0.015	7	0.088	0.032	0.039	0.015	178	0.064	0.003
6/12 - 6/18	72	0.027	0.003	0.986	0.014	1	0.013	0.012	0.014	0.014	73	0.026	0.002
6/19 - 6/24	24	0.009	0.002	1.000		0	0.000	-	0.000	-	24	0.009	0.001
Total ^a	2,709	1.000		0.971	0.003	80	1.000		0.029	0.003	2,789	1.000	
Shore distance (d)		by distance		within distance			by distance		within distance				
d < 1/4 mile	1,852	0.685	0.009	0.971	0.004	56	0.700	0.052	0.029	0.004	1,908	0.686	0.006
1/4 ≤ d < 1/2 mile	401	0.148	0.007	0.966	0.009	14	0.175	0.043	0.034	0.009	415	0.149	0.004
1/2 ≤ d < 3/4 mile	106	0.039	0.004	0.991	0.009	1	0.013	0.013	0.009	0.009	107	0.038	0.002
3/4 ≤ d < 1 mile	41	0.015	0.002	0.953	0.032	2	0.025	0.018	0.047	0.032	43	0.015	0.002
d ≥ 1 mile	302	0.112	0.006	0.977	0.008	7	0.088	0.032	0.023	0.008	309	0.111	0.004
Total ^a	2,702	1.000		0.971	0.003	80	1.000		0.029	0.003	2,782	1.000	
Statistical Area		by area		within area			by area		within area				
244-70	2,389	0.882	0.006	0.972	0.003	70	0.875	0.037	0.028	0.003	2,459	0.882	0.004
241-11	248	0.092	0.006	0.969	0.011	8	0.100	0.034	0.031	0.011	256	0.092	0.004
241-60	71	0.026	0.003	0.973	0.019	2	0.025	0.018	0.027	0.019	73	0.026	0.002
Total ^a	2,708	1.000		0.971	0.003	80	1.000		0.029	0.003	2,788	1.000	

Note: "-" = value cannot be computed due to limitations of the data.

^a Totals for week, shore distance, and statistical area are not identical because all Chinook salmon examined were not sampled for all variables.

Table 25.-Summary of unmarked and CWT recovered Chinook salmon harvested north of Bluff Point by week, distance from shore, and statistical area, Central Cook Inlet marine recreational fishery, May 1 through June 24, 2002.

	Unmarked Chinook					CWT-Marked Chinook					Total Chinook		
	Sample size	Proportion	SE	Proportion	SE	Sample size	Proportion	SE	Proportion	SE	Sample size	Prop.	SE
Week		by week		within week			by week		within week				
5/01 - 5/07	119	0.078	0.007	0.960	0.018	5	0.069	0.030	0.040	0.018	124	0.077	0.005
5/08 - 5/14	265	0.173	0.010	0.960	0.012	11	0.153	0.043	0.040	0.012	276	0.172	0.007
5/15 - 5/21	356	0.232	0.011	0.975	0.008	9	0.125	0.039	0.025	0.008	365	0.227	0.008
5/22 - 5/28	419	0.273	0.011	0.965	0.009	15	0.208	0.048	0.035	0.009	434	0.270	0.008
5/29 - 6/04	200	0.130	0.009	0.917	0.019	18	0.250	0.051	0.083	0.019	218	0.136	0.006
6/05 - 6/11	146	0.095	0.007	0.948	0.018	8	0.111	0.037	0.052	0.018	154	0.096	0.005
6/12 - 6/18	28	0.018	0.003	0.824	0.066	6	0.083	0.033	0.176	0.066	34	0.021	0.003
6/19 - 6/24	0	0.000	-	0.000	-	0	0.000	-	0.000	-	0	0.000	-
Total ^a	1,533	1.000		0.955	0.005	72	1.000		0.045	0.005	1,605	1.000	
Shore distance (d)		by distance		within distance			by distance		within distance				
d < 1/4 mile	1,131	0.739	0.011	0.955	0.006	53	0.736	0.052	0.045	0.006	1,184	0.739	0.008
1/4 ≤ d < 1/2 mile	184	0.120	0.008	0.953	0.015	9	0.125	0.039	0.047	0.015	193	0.120	0.006
1/2 ≤ d < 3/4 mile	28	0.018	0.003	0.966	0.034	1	0.014	0.014	0.034	0.034	29	0.018	0.002
3/4 ≤ d < 1 mile	27	0.018	0.003	0.964	0.036	1	0.014	0.014	0.036	0.036	28	0.017	0.002
d ≥ 1 mile	160	0.105	0.008	0.952	0.016	8	0.111	0.037	0.048	0.016	168	0.105	0.006
Total ^a	1,530	1.000		0.955	0.005	72	1.000		0.045	0.005	1,602	1.000	
Statistical Area		by area		within area			by area		within area				
244-70	1,294	0.844	0.009	0.956	0.006	59	0.819	0.046	0.044	0.006	1,353	0.843	0.007
241-11	189	0.123	0.008	0.950	0.016	10	0.139	0.041	0.050	0.016	199	0.124	0.006
241-60	50	0.033	0.005	0.943	0.032	3	0.042	0.024	0.057	0.032	53	0.033	0.003
Total ^a	1,533	1.000		0.955	0.005	72	1.000		0.045	0.005	1,605	1.000	

Note: "-" = value cannot be computed due to limitations of the data.

^a Totals for week, shore distance, and statistical area are not identical because all Chinook salmon examined were not sampled for all variables.

Table 26.-Summary of unmarked and CWT recovered Chinook salmon harvested south of Bluff Point by week, distance from shore, and statistical area, Central Cook Inlet marine recreational fishery, May 1 through June 24, 1997.

	Unmarked Chinook					CWT-Marked Chinook			Total Chinook		
	Sample size	Proportion	SE	Proportion	SE	Sample size	Proportion	Proportion	Sample size	Prop.	SE
Week		by week		within week		by week	within week				
5/01 - 5/07	4	0.036	0.018	1.000		0	0.000	0.000	4	0.035	0.017
5/08 - 5/14	2	0.018	0.013	1.000		0	0.000	0.000	2	0.017	0.012
5/15 - 5/21	11	0.099	0.028	1.000		0	0.000	0.000	11	0.096	0.028
5/22 - 5/28	24	0.216	0.039	0.960	0.040	1	0.250	0.040	25	0.217	0.039
5/29 - 6/04	21	0.189	0.037	0.955	0.045	1	0.250	0.045	22	0.191	0.037
6/05 - 6/11	17	0.153	0.034	0.944	0.056	1	0.250	0.056	18	0.157	0.034
6/12 - 6/18	26	0.234	0.040	0.963	0.037	1	0.250	0.037	27	0.235	0.040
6/19 - 6/24	6	0.054	0.022	1.000		0	0.000	0.000	6	0.052	0.021
Total ^a	111	1.000		0.965		4	1.000	0.035	115	1.000	
Shore distance (d)		by distance		within distance		by distance	within distance				
d < 1/4 mile	29	0.319	0.049	0.906	0.052	3	0.750	0.094	32	0.337	0.041
1/4 ≤ d < 1/2 mile	13	0.143	0.037	0.929	0.071	1	0.250	0.071	14	0.147	0.031
1/2 ≤ d < 3/4 mile	4	0.044	0.022	1.000		0	0.000	0.000	4	0.042	0.017
3/4 ≤ d < 1 mile	7	0.077	0.028	1.000		0	0.000	0.000	7	0.074	0.022
d ≥ 1 mile	38	0.418	0.052	1.000		0	0.000	0.000	38	0.400	0.042
Total ^a	91	1.000		0.958	0.021	4	1.000	0.042	95	1.000	
Statistical Area		by area		within area		by area	within area				
241-10	1	0.025	0.025	0.500	0.500	1	0.500	0.500	2	0.048	0.033
241-13	2	0.050	0.035	1.000		0	0.000	0.000	2	0.048	0.033
241-15	5	0.125	0.053	1.000		0	0.000	0.000	5	0.119	0.051
241-17	4	0.100	0.048	1.000		0	0.000	0.000	4	0.095	0.046
241-18	1	0.025	0.025	1.000		0	0.000	0.000	1	0.024	0.024
241-20	19	0.475	0.080	0.950	0.050	1	0.500	0.050	20	0.476	0.078
241-50	2	0.050	0.035	1.000		0	0.000	0.000	2	0.048	0.033
232-01	5	0.125	0.053	1.000		0	0.000	0.000	5	0.119	0.051
232-02	1	0.025	0.025	1.000		0	0.000	0.000	1	0.024	0.024
Total ^a	40	1.000		0.952	0.033	2	1.000	0.048	42	1.000	

^a Totals for week, shore distance, and statistical area are not identical. A total of 115 Chinook salmon were examined; all variables not sampled on each.

Table 27.-Chinook salmon CWT recoveries summarized by week, distance from shore, maturity, and statistical area from the sample of CWTs harvested south of Bluff Point in the Central Cook Inlet marine recreational fishery, May 1 through June 24, 1997.

	Stock Origin ^a																	
	Lower Cook Inlet			Other Cook Inlet			Other Alaska			Non - Alaska			Unknown			All		
	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE
Week																		
5/01 - 5/07	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
5/08 - 5/14	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
5/15 - 5/21	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
5/22 - 5/28	0	0.000	-	0	0.000	-	0	0.000	-	1	0.500	0.500	0	0.000	-	1	0.250	0.250
5/29 - 6/04	0	0.000	-	0	0.000	-	0	0.000	-	1	0.500	0.500	0	0.000	-	1	0.250	0.250
6/05 - 6/11	1	0.500	0.500	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	1	0.250	0.250
6/12 - 6/18	1	0.500	0.500	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	1	0.250	0.250
6/19 - 6/24	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
Total ^b	2	1.000		0	0.000		0	0.000		2	1.000		0	0.000		4	1.000	
Shore distance (d)																		
d < 1/4 mile	2	1.000		0	0.000	-	0	0.000	-	1	0.500	0.500	0	0.000	-	3	0.750	0.250
1/4 ≤ d < 1/2 mile	0	0.000	-	0	0.000	-	0	0.000	-	1	0.500	0.500	0	0.000	-	1	0.25	0.250
1/2 ≤ d < 3/4 mile	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	0.000
3/4 ≤ d < 1 mile	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	0.000
d ≥ 1 mile	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	0.000
Total ^b	2	1.000		0	0.000		0	0.000		2	1.000		0	0.000		4	1.000	
Maturity ^b																		
Female																		
Immature	0	0.000	-	0	0.000	-	0	0.000	-	1	0.500	0.500	0	0.000	-	1	0.500	0.500
Fall spawner	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
Spring spawner	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
Unknown	0	0.000	-	0	0.000	-	0	0.000	-	1	0.500	0.500	0	0.000	-	1	0.500	0.500
Subtotal ^b	0	0.000	-	0	0.000	-	0	0.000	-	2	1.000		0	0.000	-	2	1.000	
Male																		
Immature	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
Spring spawner	2	1.000		0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	2	1.000	
Unknown	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
Subtotal ^b	2	1.000		0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	2	1.000	

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Table 27.–Page 2 of 2.

	Stock Group ^a																	
	Lower Cook Inlet			Other Cook Inlet			Other Alaska			Non - Alaska			Unknown			All		
	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE
Maturity ^b (continued)																		
Both sexes combined ^c																		
Immature	0	0.000	-	0	0.000	-	0	0.000	-	1	0.500	0.500	0	0.000	-	1	0.250	0.250
Fall spawner	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
Spring spawner	2	1.000		0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	2	0.500	0.289
Unknown	0	0.000	-	0	0.000	-	0	0.000	-	1	0.500	0.500	0	0.000	-	1	0.250	0.250
Total ^b	2	1.000		0	0.000	-	0	0.000	-	2	1.000		0	0.000	-	4	1.000	
Statistical Area																		
244-70	1	0.500		0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	1	0.500	0.500
241-11	1	0.500		0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	1	0.500	0.500
241-60	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
Total ^b	2	1.000		0	0.000	-	0	0.000		0	0.000	-	0	0.000	-	2	1.000	

^a Stock origin is location of release for the coded wire tagged wild or hatchery fish sampled in the harvest: Lower Cook Inlet - Cook Inlet tributaries south of Kasilof River drainage, Other Cook Inlet - Cook Inlet tributaries north of and including Kasilof River drainage, Other Alaska - all non-Cook Inlet drainages of Alaska, non-Alaska - includes British Columbia, Unknown – adipose finclipped fish with no or unreadable tag.

^b Statistical area was not recorded for the 2 non-Alaska coded wire tag recoveries.

^c The number for both sexes does not sum by sex because maturity or location of release are not known for all tag recoveries.

Table 28.—Summary of unmarked and CWT recovered Chinook salmon harvested south of Bluff Point by week, distance from shore, and statistical area, Central Cook Inlet marine recreational fishery, May 1 through June 24, 1998.

	Unmarked Chinook					CWT-Marked Chinook			Total Chinook		
	Sample size	Proportion	SE	Proportion	SE	Sample size	Proportion	Proportion	Sample size	Prop.	SE
Week		by week		within week			by week	within week			
5/01 - 5/07	27	0.189	0.033	0.931	0.048	2	0.333	0.069	29	0.195	0.033
5/08 - 5/14	11	0.077	0.022	1.000		0	0.000	0.000	11	0.074	0.021
5/15 - 5/21	18	0.126	0.028	0.947	0.053	1	0.167	0.053	19	0.128	0.027
5/22 - 5/28	16	0.112	0.026	1.000		0	0.000	0.000	16	0.107	0.025
5/29 - 6/04	30	0.210	0.034	0.938	0.043	2	0.333	0.063	32	0.215	0.034
6/05 - 6/11	26	0.182	0.032	0.963	0.037	1	0.167	0.037	27	0.181	0.032
6/12 - 6/18	12	0.084	0.023	1.000		0	0.000	0.000	12	0.081	0.022
6/19 - 6/24	3	0.021	0.012	1.000		0	0.000	0.000	3	0.020	0.012
Total ^a	143	1.000		0.960		6	1.000	0.040	149	1.000	
Shore distance (d)		by distance		within distance			by distance	within distance			
d < 1/4 mile	30	0.219	0.035	0.968	0.032	1	0.167	0.032	31	0.217	0.035
1/4 ≤ d < 1/2 mile	30	0.219	0.035	0.938	0.043	2	0.333	0.063	32	0.224	0.036
1/2 ≤ d < 3/4 mile	22	0.161	0.031	0.957	0.043	1	0.167	0.043	23	0.161	0.032
3/4 ≤ d < 1 mile	16	0.117	0.028	1.000		0	0.000	0.000	16	0.112	0.027
d ≥ 1 mile	39	0.285	0.039	0.951	0.034	2	0.333	0.049	41	0.287	0.039
Total ^a	137	1.000		0.958	0.017	6	1.000	0.042	143	1.000	

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Table 28.–Page 2 of 2.

	Unmarked Chinook					CWT-Marked Chinook			Total Chinook		
	Sample size	Proportion	SE	Proportion	SE	Sample size	Proportion	Proportion	Sample size	Prop.	SE
Statistical Area		by area		within area			by area	within area			
241-11	49	0.348	0.040	0.980	0.020	1	0.167	0.020	50	0.340	0.039
241-12	17	0.121	0.028	0.895	0.072	2	0.333	0.105	19	0.129	0.028
241-15	21	0.149	0.030	1.000		0	0.000	0.000	21	0.143	0.029
241-16	2	0.014	0.010	1.000		0	0.000	0.000	2	0.014	0.010
241-17	14	0.099	0.025	1.000		0	0.000	0.000	14	0.095	0.024
241-20	10	0.071	0.022	0.909	0.091	1	0.167	0.091	11	0.075	0.022
241-50	2	0.014	0.010	1.000		0	0.000	0.000	2	0.014	0.010
241-60	16	0.113	0.027	0.941	0.059	1	0.167	0.059	17	0.116	0.026
232-01	3	0.021	0.012	1.000		0	0.000	0.000	3	0.020	0.012
232-02	7	0.050	0.018	0.875	0.125	1	0.167	0.125	8	0.054	0.019
Total ^a	141	1.000		0.959	0.016	6	1.000	0.041	147	1.000	

^a Totals for week, shore distance, and statistical area are not identical. A total of 149 Chinook salmon were examined; all variables not sampled on each.

Table 29.-Chinook salmon CWT recoveries summarized by week, distance from shore, maturity, and statistical area from the sample of CWTs harvested south of Bluff Point in the Central Cook Inlet marine recreational fishery, May 1 through June 24, 1998.

	Stock Origin ^a																	
	Lower Cook Inlet			Other Cook Inlet			Other Alaska			Non - Alaska			Unknown			All		
	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE
Week																		
5/01 - 5/07	0	0.000	-	0	0.000	-	0	0.000	-	2	0.333	0.211	0	0.000	-	2	0.333	0.211
5/08 - 5/14	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000		0	0.000	-	0	0.000	-
5/15 - 5/21	0	0.000	-	0	0.000	-	0	0.000	-	1	0.167	0.167	0	0.000	-	1	0.167	0.167
5/22 - 5/28	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000		0	0.000	-	0	0.000	-
5/29 - 6/04	0	0.000	-	0	0.000	-	0	0.000	-	2	0.333	0.211	0	0.000	-	2	0.333	0.211
6/05 - 6/11	0	0.000	-	0	0.000	-	0	0.000	-	1	0.167	0.167	0	0.000	-	1	0.167	0.167
6/12 - 6/18	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
6/19 - 6/24	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
Total ^b	0	0.000	-	0	0.000	-	0	0.000	-	6	1.000		0	0.000	-	6	1.000	
Shore distance (d)																		
d < 1/4 mile	0	0.000	-	0	0.000	-	0	0.000	-	1	0.167	0.167	0	0.000	-	1	0.167	0.167
1/4 ≤ d < 1/2 mile	0	0.000	-	0	0.000	-	0	0.000	-	2	0.333	0.211	0	0.000	-	2	0.333	0.211
1/2 ≤ d < 3/4 mile	0	0.000	-	0	0.000	-	0	0.000	-	1	0.167	0.167	0	0.000	-	1	0.167	0.167
3/4 ≤ d < 1 mile	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0	-
d ≥ 1 mile	0	0.000	-	0	0.000	-	0	0.000	-	2	0.333	0.211	0	0.000	-	2	0.333	0.211
Total ^b	0	0.000	-	0	0.000	-	0	0.000	-	6	1.000		0	0.000	-	6	1.000	
Maturity ^b																		
Female																		
Immature	0	0.000	-	0	0.000	-	0	0.000	-	2	0.500	0.289	0	0.000	-	2	0.500	0.289
Fall spawner	0	0.000	-	0	0.000	-	0	0.000	-	2	0.500	0.289	0	0.000	-	2	0.500	0.289
Spring spawner	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
Unknown	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
Subtotal ^b	0	0.000	-	0	0.000	-	0	0.000	-	4	1.000		0	0.000	-	4	1.000	
Male																		
Immature	0	0.000	-	0	0.000	-	0	0.000	-	2	1.000		0	0.000	-	2	1.000	
Spring spawner	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
Unknown	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
Subtotal ^b	0	0.000	-	0	0.000	-	0	0.000	-	2	1.000		0	0.000	-	2	1.000	

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Table 29.–Page 2 of 2.

	Stock Origin ^a																	
	Lower Cook Inlet			Other Cook Inlet			Other Alaska			Non - Alaska			Unknown			All		
	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE
Maturity ^b (continued)																		
Both sexes combined ^c																		
Immature	0	0.000	-	0	0.000	-	0	0.000	-	4	0.667	0.211	0	0.000	-	4	0.667	0.211
Fall spawner	0	0.000	-	0	0.000	-	0	0.000	-	2	0.333	0.211	0	0.000	-	2	0.333	0.211
Spring spawner	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
Unknown	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
Total ^b	0	0.000	-	0	0.000	-	0	0.000	-	6	1.000		0	0.000	-	6	1.000	
Statistical Area																		
244-70	0	0.000	-	0	0.000	-	0	0.000	-	1	0.250	0.250	0	0.000	-	1	0.250	0.250
241-11	0	0.000	-	0	0.000	-	0	0.000	-	2	0.500	0.289	0	0.000	-	2	0.500	0.289
241-60	0	0.000	-	0	0.000	-	0	0.000	-	1	0.250	0.250	0	0.000	-	1	0.250	0.250
Total ^b	0	0.000	-	0	0.000	-	0	0.000	-	4	1.000		0	0.000	-	4	1.000	
All	0	0.000		0	0.000	0.000	0	0.000	0.000	4	1.000	0.000	0	0.000	0.000	4	1.000	

^a Stock origin is location of release for the coded wire tagged wild or hatchery fish sampled in the harvest: Lower Cook Inlet - Cook Inlet tributaries south of Kasilof River drainage, Other Cook Inlet - Cook Inlet tributaries north of and including Kasilof River drainage, Other Alaska - all non-Cook Inlet drainages of Alaska, non-Alaska - includes British Columbia, Unknown – adipose finclipped fish with no or unreadable tag.

^b Statistical area was not recorded for the 2 non-Alaska coded wire tag recoveries.

Table 30.-Summary of unmarked and CWT recovered Chinook salmon harvested south of Bluff Point by week, distance from shore, and statistical area, Central Cook Inlet marine recreational fishery, May 1 through June 24, 2002.

	Unmarked Chinook					CWT-Marked Chinook			Total Chinook		
	Sample size	Proportion	SE	Proportion	SE	Sample size	Proportion	Proportion	Sample size	Prop.	SE
Week		by week		within week			by week	within week			
5/01 - 5/07	16	0.068	0.016	0.842	0.086	3	0.130	0.158	19	0.074	0.016
5/08 - 5/14	27	0.115	0.021	0.900	0.056	3	0.130	0.100	30	0.116	0.020
5/15 - 5/21	22	0.094	0.019	0.917	0.058	2	0.087	0.083	24	0.093	0.018
5/22 - 5/28	69	0.294	0.030	0.932	0.029	5	0.217	0.068	74	0.287	0.028
5/29 - 6/04	31	0.132	0.022	1.000	0.000	0	0.000	0.000	31	0.120	0.020
6/05 - 6/11	33	0.140	0.023	0.943	0.040	2	0.087	0.057	35	0.136	0.021
6/12 - 6/18	37	0.157	0.024	0.822	0.058	8	0.348	0.178	45	0.174	0.024
6/19 - 6/24	0	0.000	-	0.000	-	0	0.000	0.000	0	0.000	-
Total ^a	235	1.000		0.911	0.018	23	1.000	0.089	258	1.000	
Shore distance (d)		by distance		within distance			by distance	within distance			
d < 1/4 mile	80	0.348	0.031	0.930	0.028	6	0.261	0.070	86	0.340	0.041
1/4 ≤ d < 1/2 mile	10	0.043	0.013	0.909	0.091	1	0.043	0.091	11	0.043	0.018
1/2 ≤ d < 3/4 mile	10	0.043	0.013	1.000	0.000	0	0.000	0.000	10	0.040	0.017
3/4 ≤ d < 1 mile	7	0.030	0.011	0.778	0.147	2	0.087	0.222	9	0.036	0.016
d ≥ 1 mile	123	0.535	0.033	0.898	0.026	14	0.609	0.102	137	0.542	0.043
Total ^a	230	1.000		0.909	0.018	23	1.000	0.091	253	1.000	
Statistical Area		by area		within area			by area	within area			
241-11	119	0.506	0.033	0.902	0.026	13	0.565	0.098	132	0.512	0.031
241-12	5	0.021	0.009	0.833	0.167	1	0.043	0.167	6	0.023	0.009
241-14	16	0.068	0.016	1.000	0.000	0	0.000	0.000	16	0.062	0.015
241-15	64	0.272	0.029	0.914	0.034	6	0.261	0.086	70	0.271	0.028
241-17	23	0.098	0.019	0.920	0.055	2	0.087	0.080	25	0.097	0.018
241-20	3	0.013	0.007	0.750	0.250	1	0.043	0.250	4	0.016	0.008
241-30	3	0.013	0.007	1.000		0	0.000	0.000	3	0.012	0.007
241-50	1	0.004	0.004	1.000		0	0.000	0.000	1	0.004	0.004
241-60	1	0.004	0.004	1.000		0	0.000	0.000	1	0.004	0.004
Total ^a	235	1.000		0.911	0.018	23	1.000	0.089	258	1.000	

Note: "-" = value cannot be computed due to limitations of the data.

^a Totals for week, shore distance, and statistical area are not identical. A total of 258 Chinook salmon were examined; all variables not sampled on each.

Table 31.-Chinook salmon CWT recoveries summarized by week, distance from shore, maturity, and statistical area from the sample of CWTs harvested south of Bluff Point in the Central Cook Inlet marine recreational fishery, May 1 through June 24, 2002.

	Stock Origin ^a																	
	Lower Cook Inlet			Other Cook Inlet			Other Alaska			Non - Alaska			Unknown			All		
	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE
Week																		
5/01 - 5/07	0	0.000	-	0	0.000	-	0	0.000	-	1	0.077	0.077	2	0.250	0.164	3	0.130	0.072
5/08 - 5/14	0	0.000	-	0	0.000	-	2	1.000	-	0	0.000	-	1	0.125	0.125	3	0.130	0.072
5/15 - 5/21	0	0.000	-	0	0.000	-	0	0.000	-	1	0.077	0.077	1	0.125	0.125	2	0.087	0.060
5/22 - 5/28	0	0.000	-	0	0.000	-	0	0.000	-	3	0.231	0.122	2	0.250	0.164	5	0.217	0.088
5/29 - 6/04	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
6/05 - 6/11	0	0.000	-	0	0.000	-	0	0.000	-	1	0.077	0.077	1	0.125	0.125	2	0.087	0.060
6/12 - 6/18	0	0.000	-	0	0.000	-	0	0.000	-	7	0.538	0.144	1	0.125	0.125	8	0.348	0.102
6/19 - 6/24	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
Total ^b	0	0.000	-	0	0.000	-	2	1.000	-	13	1.000	-	8	1.000	-	23	1.000	-
Shore distance (d)																		
d < 1/4 mile	0	0.000	-	0	0.000	-	0	0.000	-	4	0.308	0.133	2	0.250	0.164	6	0.261	0.094
1/4 ≤ d < 1/2 mile	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	1	0.125	0.125	1	0.043	0.043
1/2 ≤ d < 3/4 mile	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
3/4 ≤ d < 1 mile	0	0.000	-	0	0.000	-	0	0.000	-	1	0.077	0.077	1	0.125	0.125	2	0.087	0.060
d ≥ 1 mile	0	0.000	-	0	0.000	-	2	1.000	-	8	0.615	0.140	4	0.500	0.189	14	0.609	0.104
Total ^b	0	0.000	-	0	0.000	-	2	1.000	-	13	1.000	-	8	1.000	-	23	1.000	-
Maturity ^b																		
Female																		
Immature	0	0.000	-	0	0.000	-	1	1.000	-	3	0.600	0.245	2	1.000	-	6	0.750	0.164
Fall spawner	0	0.000	-	0	0.000	-	0	0.000	-	2	0.400	0.245	0	0.000	-	2	0.250	0.164
Spring spawner	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
Unknown	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
Subtotal ^b	0	0.000	-	0	0.000	-	1	1.000	-	5	1.000	-	2	1.000	-	8	1.000	-
Male																		
Immature	0	0.000	-	0	0.000	-	0	0.000	-	6	1.000	-	4	1.000	-	10	1.000	-
Spring spawner	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
Unknown	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
Subtotal ^b	0	0.000	-	0	0.000	-	0	0.000	-	6	1.000	-	4	1.000	-	10	1.000	-

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Table 31.–Page 2 of 2.

	Stock Group ^a																	
	Lower Cook Inlet			Other Cook Inlet			Other Alaska			Non - Alaska			Unknown			All		
	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE
Maturity ^b (continued)																		
Both sexes combined ^c																		
Immature	0	0.000	-	0	0.000	-	1	0.500	0.500	11	0.846	0.104	6	0.750	0.164	18	0.783	0.088
Fall spawner	0	0.000	-	0	0.000	-	0	0.000	-	2	0.154	0.104	0	0.000	-	2	0.087	0.060
Spring spawner	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
Unknown	0	0.000	-	0	0.000	-	1	0.500	0.500	0	0.000	-	2	0.250	0.164	3	0.130	0.072
Total ^b	0	0.000	-	0	0.000	-	2	1.000		13	1.000		8	1.000		23	1.000	
Statistical Area																		
241-11	0	0.000	-	0	0.000	-	1	0.500	0.500	8	0.615	0.140	4	0.500	0.189	13	0.565	0.106
241-12	0	0.000	-	0	0.000	-	0	0.000	-	1	0.077	0.077	0	0.000	-	1	0.043	0.043
241-15	0	0.000	-	0	0.000	-	1	0.500	0.500	3	0.231	0.122	2	0.250	0.164	6	0.261	0.094
241-17	0	0.000	-	0	0.000	-	0	0.000	-	1	0.077	0.077	1	0.125	0.125	2	0.087	0.060
241-20	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	1	0.125	0.125	1	0.043	0.043
Total ^b	0	0.000		0	0.000		2	1.000		13	1.000		8	1.000		23	1.000	

Note: "-" = value cannot be computed due to limitations of the data.

^a Stock origin is location of release for the coded wire tagged wild or hatchery fish sampled in the harvest: Lower Cook Inlet - Cook Inlet tributaries south of Kasilof River drainage, Other Cook Inlet - Cook Inlet tributaries north of and including Kasilof River drainage, Other Alaska - all non-Cook Inlet drainages of Alaska, non-Alaska - includes British Columbia, Unknown – adipose finclipped fish with no or unreadable tag.

^b The number of maturity categories differs between the sexes, male Chinook salmon is 2 categories, immature or spring spawner, female is 3 categories, immature, fall spawner, spring spawner.

^c The number for both sexes may not sum by sex because maturity or location of release are not known for all tag recoveries.

Table 32.-Summary of contribution statistics from coded wire tagged Chinook salmon recovered in the Cook Inlet marine recreational fishery by stock group, May 1 through June 24, 1996-2002.

Stock Group ^a	1996					1997					1998				
	Estimated		Percent of			Estimated		Percent of			Estimated		Percent of		
	Tags	Harvest	SE	Harvest	SE	Tags	Harvest	SE	Harvest	SE	Tags	Harvest	SE	Harvest	SE
All stocks by area:															
Lower Cook Inlet	14	183	49	3.89%	1.00%	27	328	106	5.80%	1.36%	31	347	119	6.01%	1.56%
Other Cook Inlet	1	13	4	0.28%	0.27%	13	126	35	2.32%	0.61%	5	49	22	0.84%	0.37%
Other Alaska	1	46	45	0.97%	0.96%	3	86	60	1.53%	1.05%	0	-	-	-	-
Non-Alaska	8	302	137	6.42%	2.88%	6	147	117	2.60%	2.05%	24	874	463	15.12%	4.36%
Total	24	544	155	11.56%	9.18%	49	687	177	12.17%	2.74%	60	1,270	288	21.97%	4.64%
Cook Inlet:															
Wild stocks															
Deep Creek	0	-	-	-	-	5	149	97	2.64%	1.17%	10	281	117	4.86%	1.53%
Other Cook Inlet ^b	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-
Subtotal	0	-	-	-	-	5	149	97	2.64%	1.17%	10	281	117	4.86%	1.53%
Hatchery stocks															
Ninilchik	14	183	49	3.89%	1.00%	20	167	40	2.96%	0.68%	20	54	13	0.94%	0.98%
Other Cook Inlet ^c	1	13	4	0.28%	0.27%	15	137	35	2.43%	0.62%	6	61	24	1.05%	0.42%
Subtotal	15	196	51	4.16%	1.04%	35	305	56	5.40%	0.93%	26	115	28	1.99%	0.47%
Total	15	196	51	4.16%	1.04%	40	454	113	8.04%	1.49%	36	396	121	6.85%	1.60%

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Stock Group ^a	1999					2000					2001				
	Estimated		Percent of			Estimated		Percent of			Estimated		Percent of		
	Tags	Harvest	SE	Harvest	SE	Tags	Harvest	SE	Harvest	SE	Tags	Harvest	SE	Harvest	SE
All stocks by area:															
Lower Cook Inlet	34	243	84	4.95%	1.45%	26	146	70	3.05%	1.16%	21	79	22	2.16%	0.56%
Other Cook Inlet	15	123	87	2.50%	1.75%	25	175	47	3.68%	0.99%	18	125	37	3.40%	0.96%
Other Alaska	2	36	33	0.74%	0.67%	3	78	45	1.63%	0.92%	13	289	95	7.86%	2.54%
Non-Alaska	8	205	104	4.17%	2.09%	12	204	89	4.27%	1.83%	26	322	157	8.76%	4.23%
Total	59	607	148	12.36%	3.17%	66	603	137	12.64%	2.56%	78	815	198	22.19%	5.06%
Cook Inlet:															
Wild stocks															
Deep Creek	5	156	81	3.19%	1.41%	2	77	69	1.62%	1.14%	0	0	-	0.00%	-
Other Cook Inlet ^b	2	0	-	0.00%	-	0	0	-	0.00%	-	0	0	-	0.00%	-
Subtotal	7	156	81	3.19%	1.41%	2	77	69	1.62%	1.14%	0	0.00	-	0.00%	-
Hatchery stocks															
Ninilchik	28	73	12	1.49%	0.22%	23	63	11	1.33%	0.22%	18	45	9	1.24%	0.23%
Other Cook Inlet ^c	14	137	41	2.79%	0.82%	26	181	49	3.79%	0.99%	21	159	43	4.32%	1.09%
Subtotal	42	210	45	4.27%	0.85%	49	244	52	5.12%	1.02%	39	204	44	5.56%	1.11%
Total	49	366	94	7.45%	1.64%	51	321	87	6.74%	1.52%	39	204	44	5.56%	1.11%

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Stock Group ^a	2002					Average 1996 through 2002		
	Estimated		Percent of			Estimated		Percent of
	Tags	Harvest	SE	Harvest	SE	Tags	Harvest	Harvest
All stocks by area:								
Lower Cook Inlet	5	13	6	0.39%	0.16%	23	191	3.75%
Other Cook Inlet	10	38	15	1.13%	0.43%	12	93	2.02%
Other Alaska	2	49	36	1.46%	1.08%	3	97	2.37%
Non-Alaska	14	296	122	8.78%	3.51%	14	336	7.16%
Total	31	396	125	11.76%	3.50%	52	717	15.30%
Cook Inlet:								
Wild stocks								
Deep Creek	0	-	-	-	-	3	133	2.46%
Other Cook Inlet ^b	0	-	-	-	-	0	0	0.00%
Subtotal	0	-	-	-	-	3	133	2.46%
Hatchery stocks								
Ninilchik	4	9	4	0.27%	0.12%	18	85	1.73%
Other Cook Inlet ^c	11	42	15	1.25%	0.44%	11	104	2.27%
Subtotal	15	51	17	1.52%	0.47%	29	189	4.00%
Total	15	51	17	1.52%	0.47%	33	284	5.76%

Note: "-" = value cannot be computed due to limitations of the data.

^a Stock group is combined tag codes by location of release for the coded wire tagged wild or hatchery fish sampled in the harvest: Lower Cook Inlet - Cook Inlet south of Kasilof River drainage, other Cook Inlet - Cook Inlet tributaries north of and including Kasilof River drainage, Other Alaska - all non-Cook Inlet drainages of Alaska, non-Alaska - includes British Columbia, Washington, and Oregon.

^b Harvest contribution for cohorts in this group was not estimated due to uncertainty regarding the estimate of theta, does not include Deep Creek stock.

^c Does not include Ninilchik River stock.

Table 33.-Chinook salmon CWT recoveries summarized for stock origin by week, distance from shore, maturity, and statistical area from the sample of CWTs harvested north of Bluff Point in the Cook Inlet marine recreational fishery, May 1 through June 24, 1996-2002.

	Stock Origin ^a																	
	Lower Cook Inlet			Other Cook Inlet			Other Alaska			Non - Alaska			Unknown			All		
	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE
Week																		
5/01 - 5/07	8	0.056	0.019	1	0.012	0.012	1	0.043	0.043	6	0.066	0.026	6	0.056	0.022	22	0.049	0.010
5/08 - 5/14	12	0.085	0.023	10	0.120	0.036	5	0.217	0.088	22	0.242	0.045	12	0.112	0.031	61	0.137	0.016
5/15 - 5/21	32	0.225	0.035	20	0.241	0.047	1	0.043	0.043	15	0.165	0.039	19	0.178	0.037	87	0.195	0.019
5/22 - 5/28	48	0.338	0.040	27	0.325	0.052	10	0.435	0.106	17	0.187	0.041	26	0.243	0.042	128	0.287	0.021
5/29 - 6/04	28	0.197	0.034	13	0.157	0.040	4	0.174	0.081	13	0.143	0.037	20	0.187	0.038	78	0.175	0.018
6/05 - 6/11	13	0.092	0.024	12	0.145	0.039	2	0.087	0.060	10	0.110	0.033	14	0.131	0.033	51	0.114	0.015
6/12 - 6/18	1	0.007	0.007	0	0.000	-	0	0.000	-	6	0.066	0.026	8	0.075	0.026	15	0.034	0.009
6/19 - 6/24	0	0.000	-	0	0.000	-	0	0.000	-	2	0.022	0.015	2	0.019	0.013	4	0.009	0.004
Total ^b	142	1.000		83	1.000		23	1.000		91	1.000		107	1.000		446	1.000	
Shore distance (d)																		
d < 1/4 mile	124	0.892	0.026	65	0.783	0.046	10	0.435	0.106	45	0.495	0.053	73	0.682	0.045	317	0.716	0.021
1/4 ≤ d < 1/2 mile	8	0.058	0.020	14	0.169	0.041	5	0.217	0.088	12	0.132	0.036	17	0.159	0.036	56	0.126	0.016
1/2 ≤ d < 3/4 mile	1	0.007	0.007	1	0.012	0.012	0	0.000	-	4	0.044	0.022	2	0.019	0.013	8	0.018	0.006
3/4 ≤ d < 1 mile	2	0.014	0.010	0	0.000	-	3	0.130	0.072	4	0.044	0.022	1	0.009	0.009	10	0.023	0.007
d ≥ 1 mile	4	0.029	0.014	3	0.036	0.021	5	0.217	0.088	26	0.286	0.048	14	0.131	0.033	52	0.117	0.015
Total ^b	139	1.000		83	1.000		23	1.000		91	1.000		107	1.000		443	1.000	
Maturity ^b																		
Female																		
Immature	1	0.014	0.014	0	0.000	0.000	1	0.063	0.063	29	0.527	0.068	18	0.383	0.072	49	0.219	0.028
Fall spawner	6	0.086	0.034	3	0.083	0.047	6	0.375	0.125	17	0.309	0.063	4	0.085	0.041	36	0.161	0.025
Spring spawner	63	0.900	0.036	33	0.917	0.047	9	0.563	0.128	7	0.127	0.045	24	0.511	0.074	136	0.607	0.033
Unknown	0	0.000	-	0	0.000	-	0	0.000	-	2	0.036	0.025	1	0.021	0.021	3	0.013	0.008
Subtotal ^b	70	1.000		36	1.000		16	1.000		55	1.000		47	1.000		224	1.000	
Male																		
Immature	4	0.063	0.030	7	0.171	0.059	2	0.333	0.211	28	0.848	0.063	20	0.435	0.074	61	0.321	0.034
Spring spawner	56	0.875	0.042	33	0.805	0.063	3	0.500	0.224	4	0.121	0.058	23	0.500	0.075	119	0.626	0.035
Unknown	4	0.063	0.030	1	0.024	0.024	1	0.167	0.167	1	0.030	0.030	3	0.065	0.037	10	0.053	0.016
Subtotal ^b	64	1.000		41	1.000		6	1.000		33	1.000		46	1.000		190	1.000	

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Table 33.–Page 2 of 2.

	Stock Origin ^a																	
	Lower Cook Inlet			Other Cook Inlet			Other Alaska			Non - Alaska			Unknown			All		
	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE
Maturity ^b (continued)																		
Both sexes combined ^c																		
Immature	5	0.036	0.016	7	0.083	0.030	3	0.130	0.072	51	0.567	0.053	38	0.345	0.046	104	0.233	0.020
Fall spawner	6	0.043	0.017	3	0.036	0.020	7	0.304	0.098	17	0.189	0.041	4	0.036	0.018	37	0.083	0.013
Spring spawner	119	0.856	0.030	66	0.786	0.045	11	0.478	0.106	11	0.122	0.035	49	0.445	0.048	256	0.574	0.023
Unknown	9	0.065	0.021	8	0.095	0.032	2	0.087	0.060	11	0.122	0.035	19	0.173	0.036	49	0.110	0.015
Total ^b	139	1.000		84	1.000		23	1.000		90	1.000		110	1.000		446	1.000	
Statistical Area																		
244-70	135	0.971	0.014	79	0.940	0.026	16	0.696	0.098	20	0.385	0.068	88	0.822	0.037	338	0.835	0.018
241-11	4	0.029	0.014	4	0.048	0.023	5	0.217	0.088	27	0.519	0.070	16	0.150	0.035	56	0.138	0.017
241-60	0	0.000	-	1	0.012	0.012	2	0.087	0.060	5	0.096	0.041	3	0.028	0.016	11	0.027	0.008
Total ^b	139	1.000		84	1.000		23	1.000		52	1.000		107	1.000		405	1.000	

Note: "-" = value cannot be computed due to limitations of the data.

^a Stock group is combined tag codes by location of release for the coded wire tagged wild or hatchery fish sampled in the harvest: Lower Cook Inlet - Cook Inlet south of Kasilof River drainage, other Cook Inlet - Cook Inlet tributaries north of and including Kasilof River drainage, Other Alaska - all non-Cook Inlet drainages of Alaska, non-Alaska - includes British Columbia, Washington, and Oregon.

^b The number of maturity categories differs between the sexes, male Chinook salmon is 2 categories, immature or spring spawner, female is 3 categories, immature, fall spawner, spring spawner.

^c The number for both sexes does not sum by sex because maturity or location of release are not known for all tag recoveries.

Table 34.-Maturity composition and mean egg diameter by week, distance from shore, and statistical area for female Chinook salmon harvested north of Bluff Point in the Cook Inlet marine recreational fishery, May 1 through June 24, 1996-2002.

	Female Chinook salmon												Egg diameter (mm)			
	Immature			Fall Spawner			Spring Spawner			Total			Mean	SE	min	max
	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE				
Year																
1996	11	0.029	0.009	72	0.189	0.020	297	0.782	0.021	380	1.000	4.3	0.05	0.4	6.6	
1997	46	0.045	0.006	190	0.185	0.012	791	0.770	0.013	1,027	1.000	4.5	0.04	0.8	7.0	
1998	94	0.115	0.011	253	0.310	0.016	468	0.574	0.017	815	1.000	4.0	0.05	0.9	7.4	
1999	69	0.086	0.010	97	0.121	0.012	637	0.793	0.014	803	1.000	4.3	0.04	0.7	6.8	
2000	121	0.166	0.014	165	0.226	0.0155	444	0.608	0.018	730	1.000	3.8	0.05	0.5	6.6	
2001	119	0.215	0.017	144	0.260	0.0187	291	0.525	0.021	554	1.000	3.6	0.06	0.5	6.9	
2002	143	0.262	0.019	129	0.237	0.0182	273	0.501	0.021	545	1.000	3.5	0.07	0.5	6.5	
Total ^a	603	0.124	0.005	1,050	0.216	0.006	3,201	0.659	0.007	4,854	1.000	4.0	0.02	0.4	7.4	
Week																
5/01 - 5/07	43	0.164	0.023	60	0.229	0.026	159	0.607	0.030	262	1.000	3.8	0.09	3.0	5.5	
5/08 - 5/14	95	0.121	0.012	208	0.264	0.016	485	0.615	0.017	788	1.000	3.9	0.05	1.5	6.1	
5/15 - 5/21	88	0.080	0.008	228	0.207	0.012	787	0.714	0.014	1,103	1.000	4.2	0.04	0.7	6.5	
5/22 - 5/28	79	0.064	0.007	226	0.183	0.011	930	0.753	0.012	1,235	1.000	4.4	0.03	1.2	6.5	
5/29 - 6/04	88	0.112	0.011	154	0.196	0.014	544	0.692	0.016	786	1.000	4.1	0.05	0.8	6.4	
6/05 - 6/11	105	0.250	0.021	91	0.217	0.020	224	0.533	0.024	420	1.000	3.6	0.08	1.0	6.5	
6/12 - 6/18	87	0.468	0.037	50	0.269	0.033	49	0.263	0.032	186	1.000	2.7	0.12	0.9	6.8	
6/19 - 6/24	18	0.243	0.050	33	0.446	0.058	23	0.311	0.054	74	1.000	3.2	0.19	1.2	6.0	
Total ^a	603	0.124	0.005	1,050	0.216	0.006	3,201	0.659	0.007	4,854	1.000	4.0	0.02	0.4	7.4	

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Table 34.–Page 2 of 2.

	Female Chinook salmon											Egg diameter (mm)				
	Immature			Fall Spawner			Spring Spawner			Total			Mean	SE	min	max
	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.	SE				
Shore distance (d)																
d < 1/4 mile	256	0.082	0.005	581	0.185	0.007	2,302	0.733	0.008	3,139	1.000		4.3	0.02	0.5	7.0
1/4 ≤ d < 1/2 mile	102	0.173	0.016	128	0.217	0.017	361	0.611	0.020	591	1.000		3.9	0.06	0.7	7.4
1/2 ≤ d < 3/4 mile	15	0.143	0.034	32	0.305	0.045	58	0.552	0.049	105	1.000		3.7	0.14	0.9	6.5
3/4 ≤ d < 1 mile	17	0.250	0.053	32	0.471	0.061	19	0.279	0.055	68	1.000		3.1	0.19	0.9	6.5
d ≥ 1 mile	200	0.353	0.020	205	0.362	0.020	161	0.284	0.019	566	1.000		2.9	0.07	0.5	7.2
Total ^a	590	0.132	0.005	978	0.219	0.006	2,901	0.649	0.007	4,469	1.000		4.0	0.02	0.5	7.4
Statistical Area																
244-70	403	0.103	0.005	751	0.192	0.006	2,755	0.705	0.007	3,909	1.000		4.2	0.02	4.0	7.2
241-11	131	0.318	0.023	164	0.398	0.024	117	0.284	0.022	412	1.000		2.9	0.08	5.0	7.4
241-60	48	0.372	0.043	54	0.419	0.044	27	0.209	0.036	129	1.000		2.7	0.13	5.0	6.5
Total ^a	582	0.131	0.005	969	0.218	0.006	2,899	0.651	0.007	4,450	1.000		4.0	0.02	4.0	7.4

^a Totals are not identical because not all fish sampled for maturity were sampled for shore distance and statistical area. During 1996 shore distance and statistical area were collected only from female Chinook salmon without an adipose fin.

Table 35.-Maturity composition by week, distance from shore, and statistical area for male Chinook salmon harvested north of Bluff Point in the Cook Inlet marine recreational fishery, May 1 through June 24, 1996-2002.

	Male Chinook salmon							
	Immature			Spring Spawner			Total	
	Sample size	Prop.	SE	Sample size	Prop.	SE	Sample size	Prop.
Year								
1996	58	0.151	0.018	326	0.849	0.018	384	1.000
1997	157	0.211	0.015	588	0.789	0.015	745	1.000
1998	289	0.366	0.017	500	0.634	0.017	789	1.000
1999	288	0.360	0.017	512	0.640	0.017	800	1.000
2000	262	0.409	0.019	379	0.591	0.019	641	1.000
2001	237	0.370	0.019	404	0.630	0.019	641	1.000
2002	342	0.519	0.019	317	0.481	0.019	659	1.000
Total ^a	1,633	0.351	0.007	3,026	0.649	0.007	4,659	1.000
Week								
5/01 - 5/07	110	0.505	0.034	108	0.495	0.034	218	1.000
5/08 - 5/14	325	0.467	0.019	371	0.533	0.019	696	1.000
5/15 - 5/21	252	0.293	0.016	609	0.707	0.016	861	1.000
5/22 - 5/28	314	0.224	0.011	1,085	0.776	0.011	1,399	1.000
5/29 - 6/04	269	0.323	0.016	563	0.677	0.016	832	1.000
6/05 - 6/11	187	0.459	0.025	220	0.541	0.025	407	1.000
6/12 - 6/18	131	0.753	0.033	43	0.247	0.033	174	1.000
6/19 - 6/24	45	0.625	0.057	27	0.375	0.057	72	1.000
Total ^a	1,633	0.351	0.007	3,026	0.649	0.007	4,659	1.000
Shore distance (d)								
d < 1/4 mile	884	0.290	0.008	2,163	0.710	0.008	3,047	1.000
1/4 ≤ d < 1/2 mile	188	0.370	0.021	320	0.630	0.021	508	1.000
1/2 ≤ d < 3/4 mile	65	0.524	0.045	59	0.476	0.045	124	1.000
3/4 ≤ d < 1 mile	44	0.688	0.058	20	0.313	0.058	64	1.000
d ≥ 1 mile	394	0.741	0.019	138	0.259	0.019	532	1.000
Total ^a	1,575	0.368	0.017	2,700	0.632	0.017	4,275	1.000
Statistical Area								
244-70	1,130	0.307	0.008	2,549	0.693	0.008	3,679	1.000
241-11	349	0.743	0.020	121	0.257	0.020	470	1.000
241-60	72	0.720	0.045	28	0.280	0.045	100	1.000
Total ^a	1,551	0.365	0.007	2,698	0.635	0.007	4,249	1.000

^a Totals are not identical because not all fish sampled for maturity were sampled for shore distance and statistical area. During 1996 shore distance and statistical area was collected only from male Chinook salmon without an adipose fin.

FIGURES

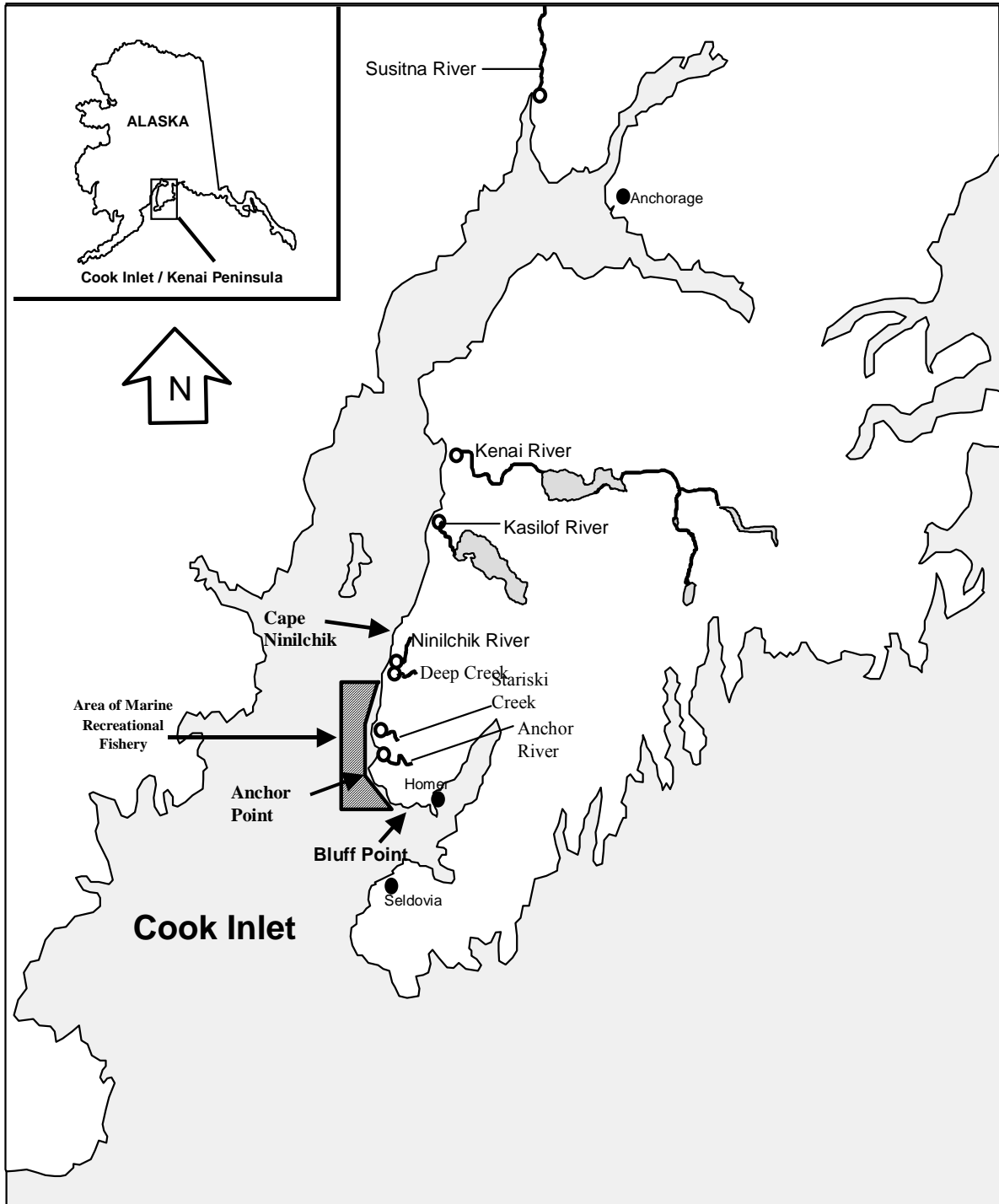


Figure 1.—Primary location of the early-run Chinook salmon marine recreational fishery and its proximity to major Chinook salmon producing tributaries of Cook Inlet, Alaska.

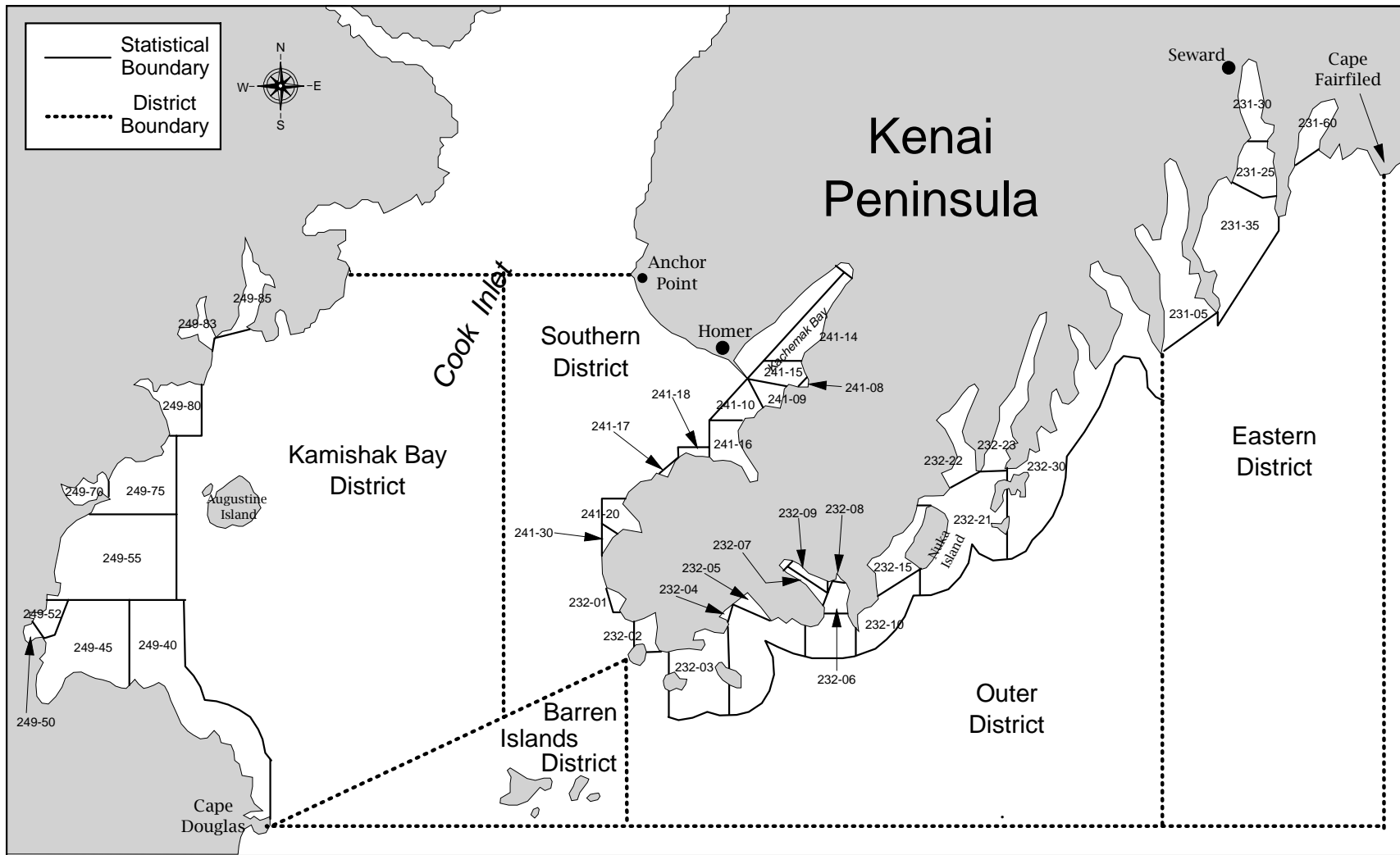


Figure 2.—Lower Cook Inlet commercial fishery statistical areas.

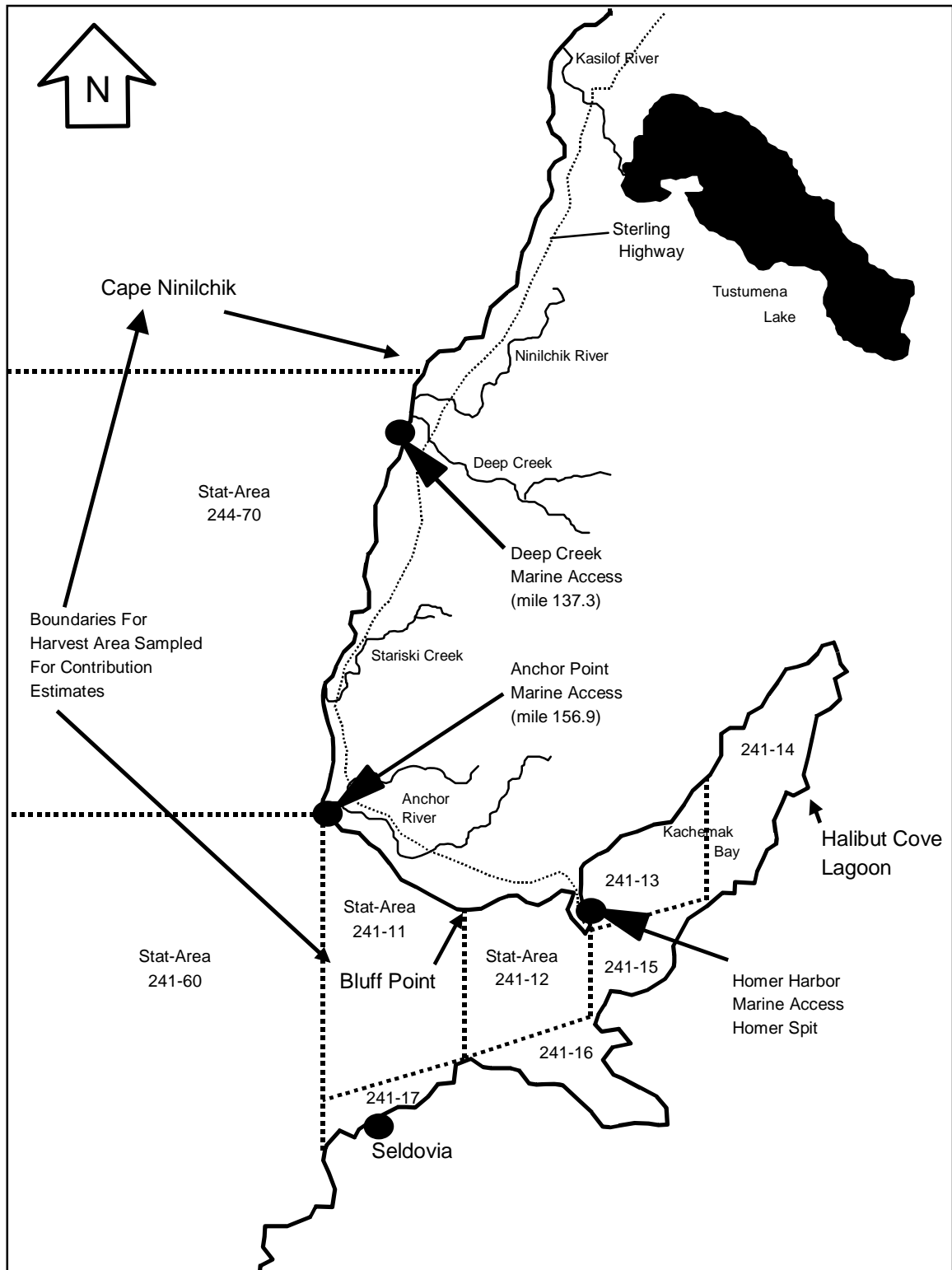
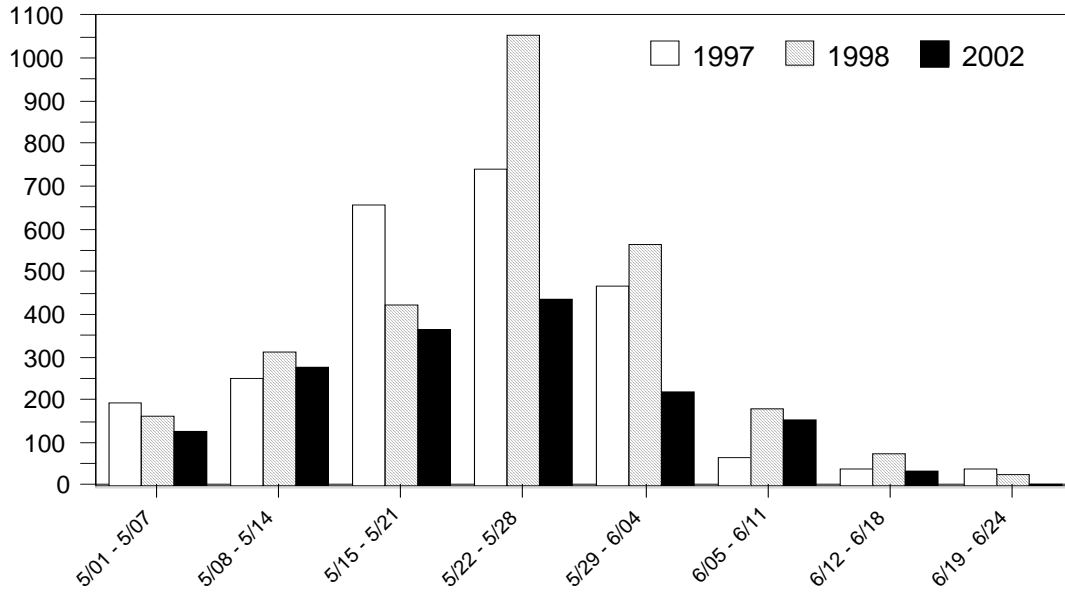


Figure 3.—Cook Inlet commercial fishery statistical areas.

Number of Chinook Sampled



Number of Adipose Fin Clip Recoveries

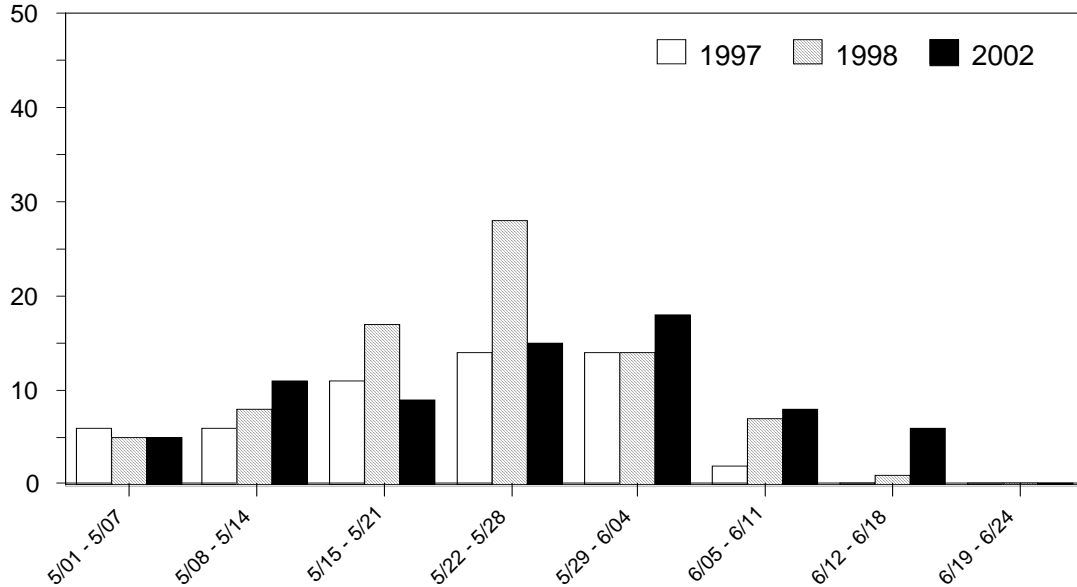


Figure 4.—Number of Chinook salmon sampled (top) and number of adipose finclip recoveries (bottom) by week from the Cook Inlet marine recreational fishery, May 1 through June 24, 1997, 1998, and 2002.

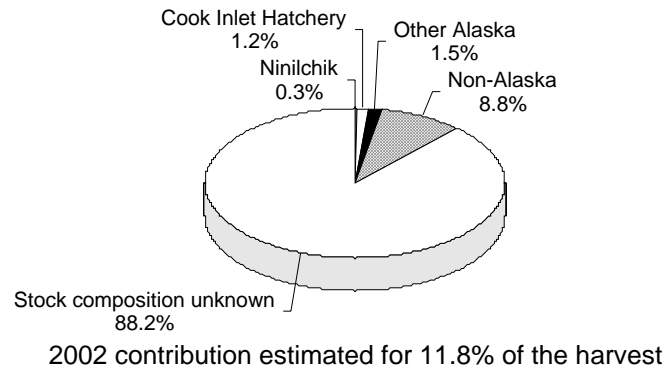
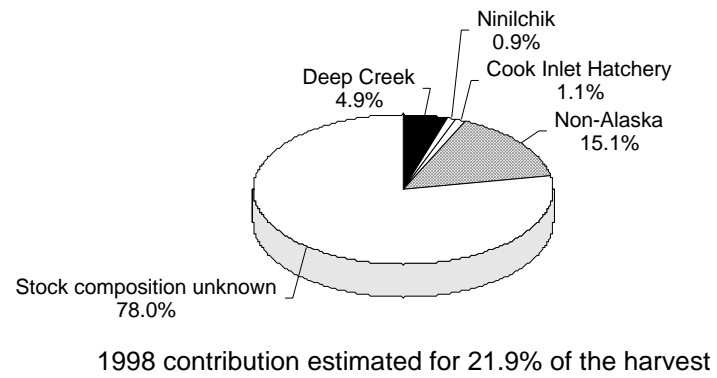
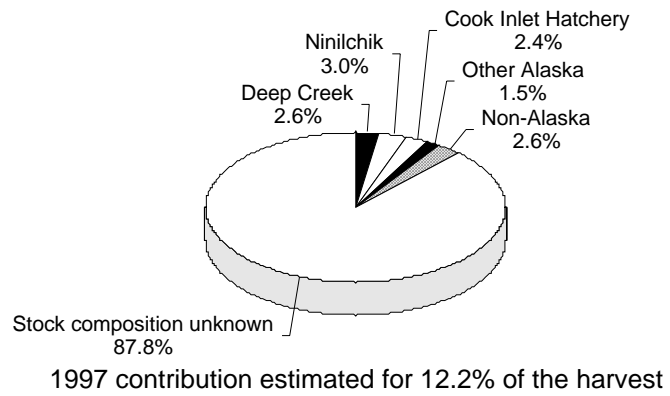
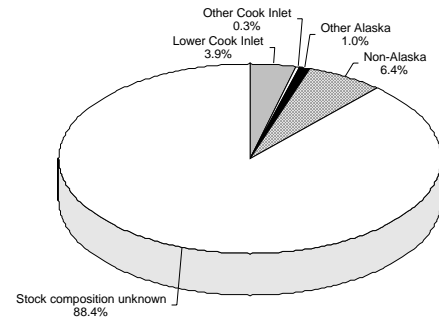
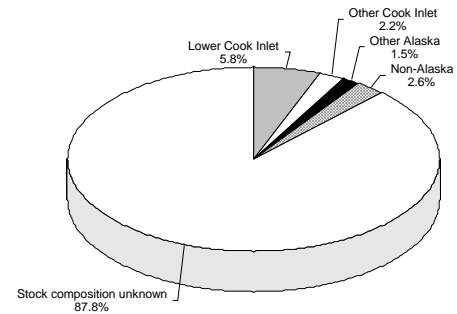


Figure 5.—Coded wire tagged Chinook salmon contribution estimate results 1997, 1998, and 2002.

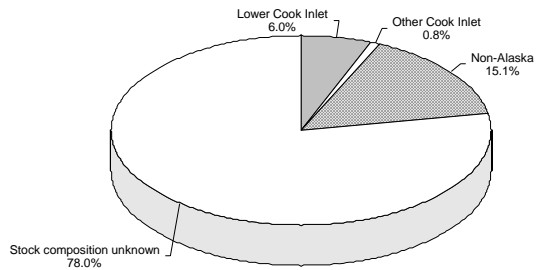
CWT Chinook Salmon Contribution Estimates



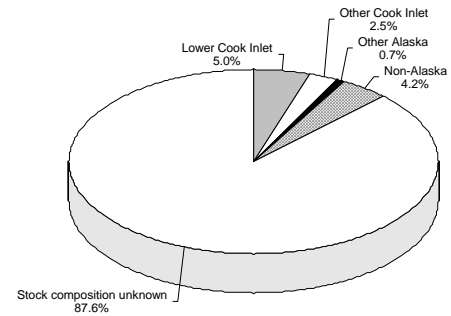
1996 contribution estimated for 11.6% of the harvest



1997 contribution estimated for 11.6% of the harvest



1998 contribution estimated for 21.9% of the harvest



1999 contribution estimated for 12.4% of the harvest

Figure 6.—Coded wire tagged Chinook salmon contribution estimate results 1996-1999.

CWT Chinook Salmon Contribution Estimates

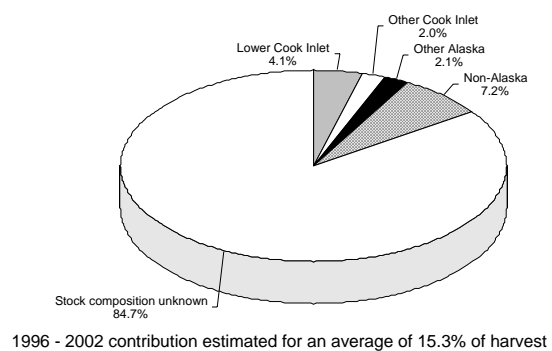
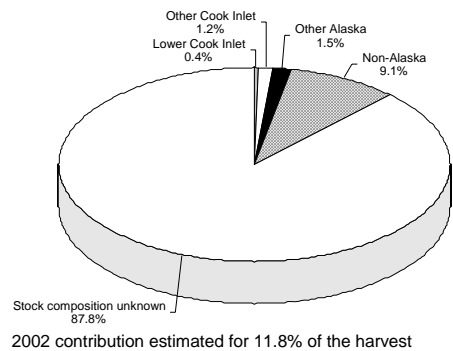
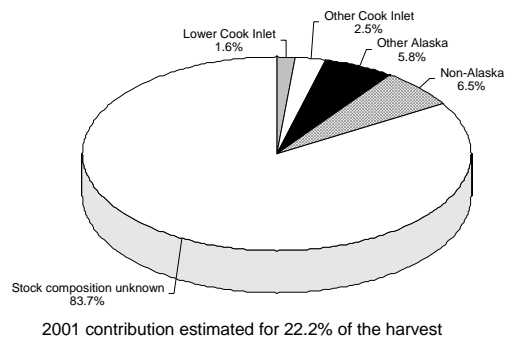
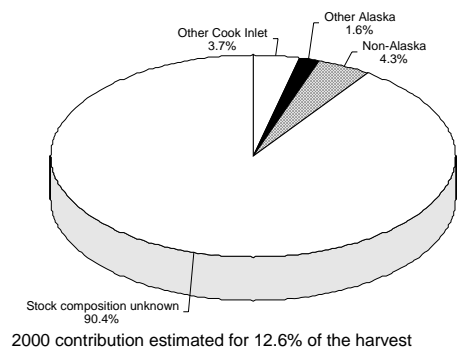


Figure 7.—Coded wire tagged Chinook salmon contribution estimate results 2000-2002 and 1996-2002 combined.

**APPENDIX A. CODED WIRE TAG DATA FOR EARLY-
RUN CHINOOK SALMON FROM COOK INLET MARINE
RECREATIONAL FISHERY**

Appendix A1.–Summary of information collected from coded wire tagged Chinook salmon recovered during random sampling north of Bluff Point in the Cook Inlet marine recreational fishery, May 1 through June 24, 1997, 1998, and 2002.

Sample #	Recovery location	Recovery date	Tag Code	Brood Year	State or Province ^a	Rearing code and location ^b	Release date	Release location	Sex	Egg diameter or maturity	Stat. Area	Shore distance ^c
Recovery summary for 1997												
97DU5999	Anchor Pt	5/27/1997	312314	1993	AK	(H) (H) Elmendorf	6/8/1994	Crooked Cr 244-30	F	5.4	244-70	2
97DU5533	Anchor Pt	5/25/1997	312313	1993	AK	(H) (H) Elmendorf	6/6/1994	Eagle R 247-50	U	Unkn	244-70	1
97DU5547	Anchor Pt	6/08/1997	312314	1993	AK	(H) (H) Elmendorf	6/8/1994	Crooked Cr 244-30	U	Unkn	244-70	1
97DT5504	Deep Cr	5/03/1997	312318	1993	AK	(H) Ft. Richardson	5/31/1994	Ninilchik R. 244-20	F	4.5	244-70	1
97DU5535	Anchor Pt	5/27/1997	312311	1993	AK	(H) (H) Elmendorf	6/13/1994	Seldovia Hbr 241-11	F	4.8	244-70	1
97DT5503	Deep Cr	5/02/1997	181039	1993	BC	(H) Shotbolt Bay	5/20/1994	Chuckwalla R.	F	0.4	244-70	1
97185538	Homer	5/29/1997	43923	1992	AK	(H) Hidden Falls	5/29/1994	Kasnyku Bay 112-11	M	Mature	244-70	2
97185553	Homer	6/02/1997	44135	1993	AK	(H) Medvejie	5/19/1995	Bear Cove 113-41	U	Unkn	244-70	4
97185565	Homer	6/08/1997	181459	1994	BC	(H)-Robertson Cr	6/14/1995	Robertson Cr	M	Immature	Unkn	5
97185521	Deep Cr	5/18/1997	312318	1993	AK	(H) Ft. Richardson	5/31/1994	Ninilchik R. 244-20	F	5.3	244-70	1
97185524	Homer	5/19/1997	181028	1993	BC	(H) Oweekeno	6/27/1994	R-Rivers Inlet	F	1.8	Unkn	5
97185523	Homer	5/19/1997	312311	1993	AK	(H) (H) Elmendorf	6/13/1994	Seldovia HBR 241-11	U	Unkn	241-20	1
97185528	Homer	5/23/1997	312313	1993	AK	(H) (H) Elmendorf	6/6/1994	Eagle R 247-50	U	Unkn	244-70	2
97DT5510	Deep Cr	5/11/1997	312360	1992	AK	(W) Deep Creek	7/5/1994	Deep Cr. 244-20	M	Mature	244-70	1
97DT5506	Deep Cr	5/05/1997	312159	1992	AK	(H) Ft. Richardson	6/8/1993	Ninilchik R. 244-20	F	3.5	244-70	1
97DT5507	Deep Cr	5/06/1997	312159	1992	AK	(H) Ft. Richardson	6/8/1993	Ninilchik R. 244-20	F	4.5	244-70	1
97DT5998	Deep Cr	5/11/1997	312361	1992	AK	(W) Deep Creek	7/11/1994	Deep Cr. 244-20	F	3.5	244-70	1
97DT5988	Deep Cr	5/24/1997	312318	1993	AK	(H) Ft. Richardson	5/31/1994	Ninilchik R. 244-20	M	Mature	244-70	1
97DT5995	Deep Cr	5/20/1997	312314	1993	AK	(H) (H) Elmendorf	6/8/1994	Crooked Cr 244-30	F	4.8	244-70	1
97DT5991	Deep Cr	5/23/1997	NO TAG						F	4.0	244-70	1
97DT5990	Deep Cr	5/23/1997	312318	1993	AK	(H) Ft. Richardson	5/31/1994	Ninilchik R. 244-20	U	Unkn	244-70	1
97DT5992	Deep Cr	5/23/1997	312318	1993	AK	(H) Ft. Richardson	5/31/1994	Ninilchik R. 244-20	F	3.5	244-70	1
97DT5522	Deep Cr	5/29/1997	312313	1993	AK	(H) (H) Elmendorf	6/6/1994	Eagle R 247-50	F	4.6	244-70	Unkn
97DT5993	Deep Cr	5/23/1997	312318	1993	AK	(H) Ft. Richardson	5/31/1994	Ninilchik R. 244-20	F	4.4	244-70	1
97DT5519	Deep Cr	5/24/1997	312360	1992	AK	(W) Deep Creek	7/5/1994	Deep Cr. 244-20	F	4.8	244-70	1
97DT5989	Deep Cr	5/24/1997	312318	1993	AK	(H) Ft. Richardson	5/31/1994	Ninilchik R. 244-20	M	Mature	244-70	1
97DT5525	Deep Cr	6/01/1997	NO TAG						M	Mature	244-70	1
97DT5987	Deep Cr	5/29/1997	312312	1993	AK	(H) (H) Elmendorf	6/6/1994	Ship Cr 247-50	F	4.6	244-70	1
97DT5521	Deep Cr	5/28/1997	312318	1993	AK	(H) Ft. Richardson	5/31/1994	Ninilchik R. 244-20	F	4.2	244-70	1
97DT5986	Deep Cr	5/29/1997	312435	1994	AK	(H) Ft. Richardson	5/31/1995	Ninilchik R. 244-20	M	Mature	244-70	1

-continued-

Appendix A1.–Page 2 of 7.

Sample #	Recovery location	Recovery date	Tag Code	Brood Year	State or Province ^a	Rearing code and location ^b	Release date	Release location	Sex	Egg diameter or maturity	Stat. Area	Shore distance ^c
Recovery summary for 1997 (continued)												
97DT5527	Deep Cr	6/3/1997	312360	1992	AK	(W) Deep Creek	7/5/1994	Deep Cr. 244-20	F	4.5	244-70	1
97DT5983	Deep Cr	6/3/1997	312314	1993	AK	(H) (H) Elmendorf	6/8/1994	Crooked Cr 244-30	M	Mature	244-70	2
97DT5984	Deep Cr	6/3/1997	312318	1993	AK	(H) Ft. Richardson	5/31/1994	Ninilchik R. 244-20	F	5.0	244-70	2
97DT5503	Deep Cr	5/2/1997	HEAD LOST						U	Unkn	244-70	1
97DT5994	Deep Cr	5/20/1997	312312	1993	AK	(H) (H) Elmendorf	6/6/1994	Ship Cr 247-50	M	Mature	244-70	1
97DT5515	Deep Cr	5/18/1997	312318	1993	AK	(H) Ft. Richardson	5/31/1994	Ninilchik R. 244-20	M	Mature	244-70	1
97DT5982	Deep Cr	6/3/1997	312317	1993	AK	(H) Ft. Richardson	5/24/1994	Deception Cr 247-41	M	Mature	244-70	1
97DT5524	Deep Cr	5/31/1997	312435	1994	AK	(H) Ft. Richardson	5/31/1995	Ninilchik R. 244-20	M	Immature	244-70	1
97DT5518	Deep Cr	5/23/1997	312318	1993	AK	(H) Ft. Richardson	5/31/1994	Ninilchik R. 244-20	M	Mature	244-70	1
97DT5516	Deep Cr	5/19/1997	312159	1992	AK	(H) Ft. Richardson	6/8/1993	Ninilchik R. 244-20	F	5.2	244-70	1
97DT5996	Deep Cr	5/20/1997	312435	1994	AK	(H) Ft. Richardson	5/31/1995	Ninilchik R. 244-20	M	Immature	244-70	1
97DT5999	Deep Cr	5/11/1997	312435	1994	AK	(H) Ft. Richardson	5/31/1995	Ninilchik R. 244-20	M	Mature	244-70	3
97DT5997	Deep Cr	5/11/1997	NO TAG						M	Mature	244-70	1
97DT5517	Deep Cr	5/20/1997	312317	1993	AK	(H) Ft. Richardson	5/24/1994	Deception Cr. 247-41	F	5.4	244-70	1
97DU5504	Anchor Pt	5/3/1997	312361	1992	AK	(W) Deep Creek	7/11/1994	Deep Cr. 244-20	F	4.0	244-70	1
97DU5513	Anchor Pt	5/8/1997	181238	1993	BC	(H) Snootli Cr	5/12/1995	R-Atanrko Sp. Channel	F	1.4	244-70	1
97DU5514	Anchor Pt	5/8/1997	181029	1993	BC	(H) Oweekeno	7/4/1994	R-Rivers Inlet	F	1.5	244-70	4
97DU5528	Anchor Pt	5/21/1997	312318	1993	AK	(H) Ft. Richardson	5/31/1994	Ninilchik R. 244-20	F	5.2	244-70	1
97DU5542	Anchor Pt	6/3/1997	312435	1994	AK	(H) Ft. Richardson	5/31/1995	Ninilchik R. 244-20	M	Mature	244-70	2
97DU5527	Deep Cr	5/20/1997	312314	1993	AK	(H) (H) Elmendorf	6/8/1994	Crooked Cr 244-30	F	4.5	244-70	1
97DU5541	Anchor Pt	6/2/1997	181031	1993	BC	(H) Oweekeno	6/17/1994	R-Rivers Inlet	M	Mature	244-70	3
97DU5531	Anchor Pt	5/23/1997	312313	1993	AK	(H) (H) Elmendorf	6/6/1994	Eagle R 247-50	F	5.6	244-70	1
97DU5540	Anchor Pt	6/1/1997	401020602	1991	AK	(H) Gastineau	N/A	Tahini R. 115-32	F	5.5	244-70	2
Recovery summary for 1998												
98185639	Homer	5/17/1998	HEAD LOST						U	Unkn	241-11	1
98185514	Homer	5/10/1998	181558	1993	BC	(H) Conuma R	5/17/1994	R-Conuma R	F	4.9	241-11	5
98185520	Homer	5/17/1998	181030	1993	BC	(H)-Oweekeno	5/11/1994	R-Wannock R	M	Immature	244-70	2
98185517	Homer	5/17/1998	181455	1994	BC	(H)-Robertson Cr	6/8/1995	Robertson Cr	F	2.2	241-11	2
98185527	Homer	5/22/1998	181858	1994	BC	(H)-Nitinat R	6/2/1995	R-Nitinat Lk	U	Unkn	241-11	5
98DT5583	Deep Cr	5/23/1998	181641	1994	BC	(H) Shuswap R	5/21/1995	R-Shuswap R Low	M	Immature	241-60	2

-continued-

Appendix A1.–Page 3 of 7.

Sample #	Recovery location	Recovery date	Tag Code	Brood Year	State or Province ^a	Rearing code and location ^b	Release date	Release location	Sex	Egg diameter or maturity	Stat. Area	Shore distance ^c
Recovery summary for 1998 (continued)												
98185530	Homer	5/24/1998	NO TAG						M	Immature	241-11	2
98185550	Homer	6/5/1998	312507	1995	AK	(H) (H) Elmendorf	6/5/1996	Homer Spit 241-13	M	Mature	244-70	4
98185554	Homer	6/6/1998	183148	1995	BC	(H)-Snootli Cr	6/7/1996	R-Atanrko Sp. Channel	F	1.2	241-11	5
98DT5572	Deep Cr	5/20/1998	HEAD LOST						U	Unkn	244-70	1
98DU5511	Anchor Pt	5/11/1998	181455	1994	BC	(H)-Robertson Cr	6/8/1995	Robertson Cr	F	1.6	241-11	5
98DU5510	Anchor Pt	5/11/1998	181954	1994	BC	(H) Conuma R	5/24/1995	R-Conuma R	M	Immature	244-70	1
98DU5542	Anchor Pt	6/1/1998	181841	1994	BC	(H) Nitinat R	6/10/1995	R-Nitinat R	M	Immature	241-11	1
98DU5517	Anchor Pt	5/17/1998	312435	1994	AK	(H) Ft. Richardson	5/31/1995	Ninilchik R. 244-20	F	4.7	244-70	2
98DU5519	Anchor Pt	5/18/1998	NO TAG						M	Immature	244-70	1
98DU5512	Anchor Pt	5/12/1998	181557	1993	BC	(H) Nitinat R	5/13/1994	R-Nitinat R	F	2.6	244-70	2
98DU5503	Anchor Pt	5/3/1998	181545	1993	BC	(H)-Robertson Cr	5/20/1994	Robertson Cr	F	3.0	244-70	2
98DU5519	Anchor Pt	5/18/1998	181954	1994	BC	(H) Conuma R	5/24/1995	R-Conuma R	F	1.9	244-70	5
98DU5540	Anchor Pt	5/29/1998	312435	1994	AK	(H) Ft. Richardson	5/31/1995	Ninilchik R. 244-20	F	4.5	244-70	4
98DT5508	Deep Cr	5/11/1998	NO TAG						F	3.5	244-70	2
98DT5512	Deep Cr	5/17/1998	HEAD LOST						F	4.2	244-70	2
98DT5513	Deep Cr	5/20/1998	312435	1994	AK	(H) Ft. Richardson	5/31/1995	Ninilchik R. 244-20	F	6.2	244-70	1
98DT5571	Deep Cr	5/20/1998	312312	1993	AK	(H) (H) Elmendorf	6/6/1994	Ship CR 247-50	M	Immature	244-70	1
98DT5519	Deep Cr	5/26/1998	312313	1993	AK	(H) (H) Elmendorf	6/6/1994	Eagle R 247-50	F	5.8	244-70	1
98DT5568	Deep Cr	5/11/1998	312216	1992	AK	(W) Deep Creek	6/29/1994	Deep Cr. 244-20	M	Mature	244-70	1
98DT5570	Deep Cr	5/17/1998	HEAD LOST						F	1.2	244-70	2
98DT5573	Deep Cr	5/21/1998	312235	1993	AK	(W) Deep Creek	7/21/1995	Deep Cr. 244-20	F	4.8	244-70	1
98DT5503	Deep Cr	5/6/1998	312317	1993	AK	(H) Ft. Richardson	5/24/1994	Deception CR 247-41	F	4.2	244-70	1
98DT5565	Deep Cr	5/7/1998	181532	1993	BC	(H) Kitimat R	5/19/1994	R-Kitimat R Low	F	4.8	244-70	1
98DT5504	Deep Cr	5/7/1998	181318	1994	BC	(H) Shotbolt Bay	6/16/1995	R-Kilbella Bay	F	0.0	244-70	1
98DT5505	Deep Cr	5/8/1998	NO TAG						F	4.8	244-70	2
98DT5506	Deep Cr	5/9/1998	312435	1994	AK	(H) Ft. Richardson	5/31/1995	Ninilchik R. 244-20	U	Unkn	244-70	1
98DT5590	Deep Cr	5/25/1998	312435	1994	AK	(H) Ft. Richardson	5/31/1995	Ninilchik R. 244-20	F	4.8	244-70	1
98DT5523	Deep Cr	5/30/1998	312435	1994	AK	(H) Ft. Richardson	5/31/1995	Ninilchik R. 244-20	F	4.8	244-70	1
98DT5524	Deep Cr	5/31/1998	312435	1994	AK	(H) Ft. Richardson	5/31/1995	Ninilchik R. 244-20	F	5.5	244-70	1
98DT5575	Deep Cr	5/21/1998	181434	1994	BC	(H) Kitimat R	5/11/1995	R-Kitimat R Low	U	Unkn	244-70	1
98DT5514	Deep Cr	5/21/1998	NO TAG						U	Unkn	244-70	1

-continued-

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Sample #	Recovery location	Recovery date	Tag Code	Brood Year	State or Province ^a	Rearing code and location ^b	Release date	Release location	Sex	Egg diameter or maturity	Stat. Area	Shore distance ^c
Recovery summary for 1998 (continued)												
98DT5567	Deep Cr	5/8/1998	182225	1994	BC	(H)-Robertson Cr	6/11/1995	Robertson Cr	M	Immature	244-70	1
98DT5569	Deep Cr	5/17/1998	HEAD LOST						F	3.8	244-70	1
98DT5574	Deep Cr	5/21/1998	312435	1994	AK	(H) Ft. Richardson	5/31/1995	Ninilchik R. 244-20	M	Mature	244-70	1
98DT5578	Deep Cr	5/22/1998	312435	1994	AK	(H) Ft. Richardson	5/31/1995	Ninilchik R. 244-20	F	3.9	244-70	1
98DT5576	Deep Cr	5/22/1998	312362	1992	AK	(W) Deep Creek	8/4/1994	Deep Cr. 244-20	M	Mature	244-70	1
98DT5581	Deep Cr	5/23/1998	312360	1992	AK	(W) Deep Creek	7/5/1994	Deep Cr. 244-20	M	Mature	244-70	1
98DT5516	Deep Cr	5/23/1998	181459	1994	BC	(H)-Robertson Cr	6/14/1995	Robertson Cr	M	Immature	244-70	1
98DT5566	Deep Cr	5/7/1998	312435	1994	AK	(H) Ft. Richardson	5/31/1995	Ninilchik R. 244-20	F	4.0	244-70	1
98DU5528	Anchor Pt	5/23/1998	180642	1994	BC	(H)-Terrace	6/21/1995	R-Kitsumkalum R	F	3.0	244-70	1
98DU5543	Anchor Pt	6/1/1998	312435	1994	AK	(H) Ft. Richardson	5/31/1995	Ninilchik R. 244-20	U	Unkn	244-70	1
98DU5559	Anchor Pt	6/13/1998	181832	1994	BC	(H) Nitinat R	5/26/1995	R-Nitinat R	F	2.8	244-70	5
98DU5546	Anchor Pt	6/2/1998	181318	1994	BC	(H) Shotbolt Bay	6/16/1995	R-Kilbella Bay	M	Immature	244-70	3
98DU5541	Anchor Pt	5/30/1998	TAG LOST						M	Mature	244-70	2
98DU5548	Anchor Pt	6/3/1998	312314	1993	AK	(H) (H) Elmendorf	6/8/1994	Crooked CR 244-30	F	5.5	244-70	2
98DU5609	Anchor Pt	5/23/1998	181318	1994	BC	(H) Shotbolt Bay	6/16/1995	R-Kilbella Bay	U	Unkn	244-70	2
98DU5547	Anchor Pt	6/3/1998	181229	1994	BC	(H) Snootli Cr	6/7/1995	R-Atanrko Sp. Channel	M	Immature	241-60	5
98DT5587	Deep Cr	5/25/1998	181422	1993	BC	(H) Tahsis R	7/2/1994	R-Tahsis R	U	Unkn	244-70	1
98DT5588	Deep Cr	5/25/1998	NO TAG						M	Mature	244-70	1
98DT5580	Deep Cr	5/22/1998	312435	1994	AK	(H) Ft. Richardson	5/31/1995	Ninilchik R. 244-20	M	Mature	244-70	1
98DT5579	Deep Cr	5/22/1998	312216	1992	AK	(W) Deep Creek	6/29/1994	Deep Cr. 244-20	F	5.5	244-70	1
98DT5577	Deep Cr	5/22/1998	NO TAG						F	6.2	244-70	1
98DT5586	Deep Cr	5/24/1998	312435	1994	AK	(H) Ft. Richardson	5/31/1995	Ninilchik R. 244-20	F	3.0	244-70	1
98DT5594	Deep Cr	5/26/1998	NO TAG						F	5.3	244-70	1
98DT5591	Deep Cr	5/25/1998	312515	1995	AK	(H) Ft. Richardson	6/13/1996	Ninilchik R. 244-20	M	Mature	244-70	1
98DT5592	Deep Cr	5/26/1998	312235	1993	AK	(W) Deep Creek	7/21/1995	Deep Cr. 244-20	F	3.5	244-70	1
98DT5593	Deep Cr	5/26/1998	312402	1993	AK	(W) Deep Creek	6/26/1995	Deep Cr. 244-20	M	Mature	244-70	1
98DT5529	Deep Cr	6/6/1998	HEAD LOST						F	5.2	244-70	1
98DT5530	Deep Cr	6/7/1998	312435	1994	AK	(H) Ft. Richardson	5/31/1995	Ninilchik R. 244-20	U	Unkn	244-70	1
98DT5582	Deep Cr	5/23/1998	181028	1993	BC	(H) Oweekeno	6/27/1994	R-Rivers Inlet	M	Mature	244-70	1
98DT5584	Deep Cr	5/24/1998	HEAD LOST						M	Mature	244-70	1
98DT5517	Deep Cr	5/24/1998	312216	1992	AK	(W) Deep Creek	6/29/1994	Deep Cr. 244-20	F	6.5	244-70	1

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Sample #	Recovery location	Recovery date	Tag Code	Brood Year	State or Province ^a	Rearing code and location ^b	Release date	Release location	Sex	Egg diameter or maturity	Stat. Area	Shore distance ^c
Recovery summary for 1998 (continued)												
98DT5585	Deep Cr	5/24/1998	312435	1994	AK	(H) Ft. Richardson	5/31/1995	Ninilchik R. 244-20	M	Mature	244-70	1
98DT5589	Deep Cr	5/25/1998	312235	1993	AK	(W) Deep Creek	7/21/1995	Deep Cr. 244-20	M	Mature	244-70	1
98DT5518	Deep Cr	5/25/1998	NO TAG						F	5.8	244-70	1
98DT5527	Deep Cr	6/4/1998	312362	1992	AK	(W) Deep Creek	8/4/1994	Deep Cr. 244-20	F	4.0	244-70	1
98DT5599	Deep Cr	6/5/1998	312435	1994	AK	(H) Ft. Richardson	5/31/1995	Ninilchik R. 244-20	M	Mature	244-70	1
98DT5521	Deep Cr	5/29/1998	312435	1994	AK	(H) Ft. Richardson	5/31/1995	Ninilchik R. 244-20	M	Mature	244-70	1
98DT5596	Deep Cr	5/29/1998	312435	1994	AK	(H) Ft. Richardson	5/31/1995	Ninilchik R. 244-20	M	Mature	244-70	1
98DT5528	Deep Cr	6/5/1998	NO TAG						F	4.0	244-70	1
98DT5534	Deep Cr	6/9/1998	HEAD LOST						F	6.2	244-70	1
98DT5598	Deep Cr	6/4/1998	312427	1994	AK	(H) Elmendorf	6/6/1995	Crooked Cr. 244-30	U	Unkn	244-70	1
98DT5597	Deep Cr	6/4/1998	HEAD LOST						M	Mature	244-70	1
98DT5515	Deep Cr	5/22/1998	312318	1993	AK	(H) Ft. Richardson	5/31/1994	Ninilchik R. 244-20	F	5.0	244-70	1
Recovery summary for 2002												
02DU5524	Anchor Pt	5/19/2002	183307	1997	BC	(H) Terrace	5/21/1998	R-Kitsumkalum R Low	F	3.5	241-11	1
02DU5559	Anchor Pt	6/3/2002	No Tag						M	Immature	241-11	5
02DU5562	Anchor Pt	6/4/2002	631033	1998	WA	(H) Carlton Pond	5/2/2000	Methow R 48.0002	F	0.9	241-11	1
02DU5582	Anchor Pt	6/14/2002	No Tag						M	Immature	241-11	5
02DU5583	Anchor Pt	6/14/2002	310248	1999	AK	(H) Ft. Richardson	6/2/2000	Ninilchik R 244-20	M	Mature	241-11	5
02DU5584	Anchor Pt	6/16/2002	No Tag						F	0.9	241-11	1
02DU5576	Anchor Pt	6/12/2002	71261	1998	OR	(H) Marion Frks	7/5/2000	Santiam R & N FK-1	M	Immature	241-12	5
02DU5509	Anchor Pt	5/11/2002	44818	1997	AK	(H) Hidden Falls	6/1/1999	Kasnyku Bay 112-11	M	Immature	241-60	2
02DU5565	Anchor Pt	6/6/2002	310135	1999	AK	(H) Elmendorf	6/5/2000	Crooked Cr 244-30	M	Mature	241-60	5
02DU5503	Anchor Pt	5/5/2002	No Tag						F	0.9	244-70	2
02DU5523	Anchor Pt	5/18/2002	No Tag						F	0.5	244-70	1
02DU5510	Anchor Pt	5/12/2002	183745	1998	BC	(H)-Quinsam R	5/7/1999	R-Quinsam R	F	0.9	244-70	1
02DU5519	Anchor Pt	5/17/2002	183432	1998	BC	(H)-Robertson CR	6/2/1999	R-Robertson Cr	M	Immature	244-70	1
02DU5522	Anchor Pt	5/17/2002	183831	1998	BC	(H)-Robertson CR	5/28/1999	R-Robertson Cr	F	0.9	244-70	1
02DU5512	Anchor Pt	5/14/2002	630517	1997	WA	(H) Priest Rapids.	6/1/1998	Columbia River	M	Immature	244-70	5
02DU5525	Anchor Pt	5/19/2002	92863	1998	OR	(H) McKenzie	3/7/2000	Clackamas R	F	0.9	244-70	2
02DU5544	Anchor Pt	5/29/2002	No Tag						M	Immature	244-70	1

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Sample #	Recovery location	Recovery date	Tag Code	Brood Year	State or Province ^a	Rearing code and location ^b	Release date	Release location	Sex	Egg diameter or maturity	Stat. Area	Shore distance ^c
Recovery summary for 2002 (continued)												
02DU5553	Anchor Pt	6/1/2002	No Tag						M	Immature	244-70	1
02DU5555	Anchor Pt	6/1/2002	No Tag						F	0.9	244-70	1
02DU5552	Anchor Pt	6/1/2002	312728	1997	AK	(W) Killey R	6/14/1999	Killey R 244-30	M	Mature	244-70	1
02DU5542	Anchor Pt	5/28/2002	310231	1999	AK	(H) Elmendorf	6/5/2000	Crooked Cr 244-30	M	Mature	244-70	1
02DU5547	Anchor Pt	5/30/2002	310131	1998	AK	(H) Ft. Richardson	6/17/1999	Deception Cr. 247-41	F	5.1	244-70	1
02DU5554	Anchor Pt	6/1/2002	312618	1998	AK	(H) Ft. Richardson	6/17/1999	Deception Cr. 247-41	F	4.2	244-70	1
02DU5549	Anchor Pt	5/31/2002	312635	1997	AK	(H) Ft. Richardson	6/15/1998	Ninilchik R 244-20	F	4.6	244-70	1
02DU5550	Anchor Pt	5/31/2002	312635	1997	AK	(H) Ft. Richardson	6/15/1998	Ninilchik R 244-20	F	5.9	244-70	1
02DU5548	Anchor Pt	5/30/2002	183831	1998	BC	(H)-Robertson CR	5/28/1999	R-Robertson Cr	F	0.9	244-70	1
02DU5556	Anchor Pt	6/1/2002	184214	1998	BC	(H) Terrace	5/14/1999	R-Kitsumkalum R LOW	M	Immature	244-70	1
02DU5566	Anchor Pt	6/6/2002	No Tag						F	0.9	17	5
02DU5567	Anchor Pt	6/7/2002	No Tag						F	0.9	244-70	2
02DU5568	Anchor Pt	6/7/2002	No Tag						F	0.9	244-70	5
02DU5558	Anchor Pt	6/2/2002	310141	1998	AK	(H) Elmendorf	6/8/1999	Crooked Cr 244-30	F	5.5	244-70	1
02DU5561	Anchor Pt	6/4/2002	312532	1997	AK	(H) Ft. Richardson	6/26/1998	Deception Cr. 247-41	F	6.0	244-70	1
02DU5570	Anchor Pt	6/8/2002	312621	1999	AK	(H) Ft. Richardson	6/14/2000	Deception Cr. 247-41	M	Mature	244-70	1
02DU5574	Anchor Pt	6/10/2002	No Tag						M	Immature	244-70	1
02DU5579	Anchor Pt	6/13/2002	No Tag						M	Immature	244-70	2
02DU5584	Anchor Pt	6/14/2002	No Tag						F	0.9	244-70	1
02DU5577	Anchor Pt	6/12/2002	183409			Nonesense			F	0.9	244-70	1
02DT5501	Deep Cr	5/3/2002	No Tag						F	1.0	244-70	2
02DT5502	Deep Cr	5/4/2002	No Tag						F	1.5	244-70	1
02DT5503	Deep Cr	5/5/2002	No Tag						M	Immature	244-70	1
02DT5504	Deep Cr	5/5/2002	No Tag						F	0.8	244-70	1
02DT5505	Deep Cr	5/8/2002	No Tag						M	Mature	244-70	1
02DT5508	Deep Cr	5/11/2002	No Tag						F	1.8	244-70	1
02DT5509	Deep Cr	5/11/2002	No Tag						M	Mature	244-70	1
02DT5510	Deep Cr	5/11/2002	183910	1997	BC	(H) Tofino	5/29/1998	R-Tranquille Est.	F	5.5	244-70	1
02DT5511	Deep Cr	5/12/2002	Headlost						M	Immature	244-70	1
02DT5512	Deep Cr	5/13/2002	No Tag						F	0.5	244-70	1
02DT5513	Deep Cr	5/13/2002	No Tag						M	Immature	244-70	1

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Sample #	Recovery location	Recovery date	Tag Code	Brood Year	State or Province ^a	Rearing code and location ^b	Release date	Release location	Sex	Egg diameter or maturity	Stat. Area	Shore distance ^c
Recovery summary for 2002 (continued)												
02DT5514	Deep Cr	5/14/2002	No Tag						F	1.7	244-70	2
02DT5515	Deep Cr	5/17/2002	No Tag						F	1.0	244-70	2
02DT5516	Deep Cr	5/17/2002	No Tag						F	1.8	244-70	1
02DT5517	Deep Cr	5/18/2002	No Tag						F	2.8	244-70	1
02DT5521	Deep Cr	5/22/2002	No Tag						M	Mature	244-70	1
02DT5523	Deep Cr	5/23/2002	No Tag						F	1.4	244-70	1
02DT5524	Deep Cr	5/23/2002	No Tag						M	Immature	244-70	1
02DT5529	Deep Cr	5/25/2002	No Tag						U	Unkn	244-70	1
02DT5528	Deep Cr	5/24/2002	310141	1998	AK	(H) Elmendorf	6/8/1999	Crooked Cr 244-30	F	4.9	244-70	1
02DT5526	Deep Cr	5/24/2002	310147	1998	AK	(H) Ft. Richardson	6/15/1999	Ninilchik R 244-20	F	3.8	244-70	1
02DT5527	Deep Cr	5/24/2002	312618	1998	AK	(H) Ft. Richardson	6/17/1999	Deception Cr. 247-41	F	5.5	244-70	2
02DT5522	Deep Cr	5/22/2002	312620	1998	AK	(H) Ft. Richardson	6/17/1999	Deception Cr. 247-41	M	Mature	244-70	1
02DT5520	Deep Cr	5/22/2002	44859	1997	AK	(H) Medveja	5/19/1999	Bear Cove 113-41	F	4.2	244-70	1
02DT5519	Deep Cr	5/22/2002	183142	1997	BC	(H) Snootli CR	6/10/1998	R-Atnarko R LOW	M	Immature	244-70	1
02DT5525	Deep Cr	5/23/2002	92861	1998	OR	(H) McKenzie	3/7/2000	Clackamas R	M	Mature	244-70	1
02DT5531	Deep Cr	5/26/2002	Headlost						M	Immature	244-70	1
02DT5530	Deep Cr	5/27/2002	No Tag						M	Immature	244-70	1
02DT5538	Deep Cr	6/2/2002	No Tag						F	1.4	244-70	1
02DT5542	Deep Cr	6/8/2002	No Tag						M	Immature	244-70	1
02DT5536	Deep Cr	6/1/2002	No Tag						M	Immature	244-70	1
02DT5537	Deep Cr	6/1/2002	No Tag						M	Immature	244-70	1
2185031	Homer	5/19/2002	630610	1997	WA	(H) Similkameen	4/1/1999	Similkameen R 490325	M	Immature	241-11	3
2185058	Homer	6/1/2002	312632	1997	AK	(H) Elmendorf	6/12/1998	Halibut Cv Lag 241-15	M	Mature	241-11	5
2185047	Homer	5/26/2002	183806	1998	BC	(H) Snootli CR	6/9/1999	R-Atnarko R UP	M	Immature	241-11	5
2185064	Homer	6/6/2002	No Tag						M	Immature	241-11	4

^a AK = Alaska, BC = British Columbia (Canada), OR = Oregon, WA = Washington

^b Name of hatchery facility fish were raised or stream name of wild stock origin. H=hatchery stock, W=wild stock.

^c Shore distance (d) codes: (1) $d < 1/4$ mile, (2) $1/4 \leq d < 1/2$ mile, (3) $1/2 \leq d < 3/4$ mile, (4) $3/4 \leq d < 1$ mile, and (5) $d \geq 1$ mile

Appendix A2.-Summary of information collected from coded wire tagged Chinook salmon recovered during random sampling south of Bluff Point in the Cook Inlet marine recreational fishery, May 1 through June 24, 1997, 1998, and 2002.

Sample #	Recovery location	Recovery date	Tag Code	Brood Year	State or Province ^a	Rearing code and location ^b	Release date	Release location	Sex	Egg diameter or maturity	Stat. Area	Shore distance ^c
Recovery summary for 1997												
97185541	Homer	5/30/1997	182224	1994	BC	(H)-Robertson Cr	6/14/1995	Robertson Cr	F	Unkn	Unkn	1
97185560	Homer	6/7/1997	312430	1994	AK	(H) Elmendorf	6/13/1995	Halibut CV Lag 241-15	M	Mature	241-10	1
97185529	Homer	5/23/1997	180640	1994	BC	(H) Terrace	6/21/1995	R-Kitsumkalum R	F	0.5	Unkn	2
97185575	Homer	6/14/1997	312429	1994	AK	(H) Elmendorf	6/2/1995	Seldovia Hbr 241-11	M	Mature	241-20	1
Recovery summary for 1998												
98185507	Homer	5/6/1998	181433	1994	BC	(H) Kitimat R	5/2/1995	R-Kitimat R UP	F	1.1	241-12	5
98185638	Homer	5/6/1998	181040	1993	BC	(H)-Shotbolt Bay	6/21/1995	R-Chuckwalla R	F	3.2	241-12	2
98185537	Homer	5/29/1998	181954	1994	BC	(H)-Conuma R	5/24/1995	R-Conuma R	F	1.0	241-11	3
98185545	Homer	6/3/1998	181841	1994	BC	(H)-Nitinat R	6/10/1995	R-Nitinat R	M	Immature	232-02	1
98185551	Homer	6/5/1998	181547	1993	BC	(H)-Robertson Cr	4/19/1994	R-Nahmint R	M	Immature	241-20	5
98DU5518	Anchor P.	5/17/1998	181546	1993	BC	(H)-Robertson Cr	6/5/1994	Robertson Cr	F	2.6	241-60	2
Recovery summary for 2002												
2185010	Homer	5/4/2002	No Tag						F	1.1	241-11	4
2185009	Homer	5/2/2002	183910	1997	BC	(H) Tofino	5/29/1998	R-Tranquille Est.	M	Immature	241-11	5
2185014	Homer	5/5/2002	Headlost						Unkn	Unkn	241-11	5
2185018	Homer	5/11/2002							M	Immature	241-11	5
2185018	Homer	5/11/2002	40238	1997	AK	Whitman Lake	5/17/1999	Herring Cove 101-45	F	1.8	241-11	5
2185021	Homer	5/14/2002	40140	1997	AK	(W) Unuk R 101-75	10/24/1998	Unuk R 101-75	Unkn	Unkn	241-15	5
2185027	Homer	5/17/2002	183745	1998	BC	(H) Quinsam R	5/7/1999	R-Quinsam R	F	1.9	241-11	4
2185076	Homer	6/15/2002	No Tag						F	0.6	241-11	5
2185074	Homer	6/14/2002	182214	1999	BC	(H)-Conuma R	5/15/2000	R-Moutcha Bay	M	Immature	241-11	5
2185076	Homer	6/15/2002	92654	1998	OR	(H) McKenzie	3/8/2000	McKenzie R-1	M	Immature	241-11	5
2185075	Homer	6/14/2002	92814	1998	OR	(H) South Santiam	3/21/2000	Santiam R, S FK	M	Immature	241-11	5
2185074	Homer	6/14/2002	93021	1999	OR	(H) South Santiam	10/27/2000	Santiam R, S FK	F	1.2	241-11	5
2185080	Homer	6/17/2002	183161	1998	BC	(H)-Conuma R	4/19/1999	R-Moutcha Bay	F	2.2	241-11	5
2185081	Homer	6/17/2002	183410	1999	BC	(H) Snootli Cr	5/17/2000	R-Kilbella R.	Unkn	Unkn	241-11	5
2185080	Homer	6/17/2002	92812	1998	OR	(H) Dexter Ponds	3/6/2000	Willamette R. MD FK.	M	Immature	241-11	5
2185041	Homer	5/24/2002	No Tag						M	Immature	241-15	1

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Sample #	Recovery location	Recovery date	Tag Code	Brood Year	State or Province ^a	Rearing code and location ^b	Release date	Release location	Sex	Egg diameter or maturity	Stat. Area	Shore distance ^c
Recovery summary for 2002 (continued)												
2185040	Homer	5/24/2002	92902	1998	OR	(H) McKenzie	3/8/2000	Clackamas R	F	1.8	241-15	1
2185050	Homer	5/28/2002	631061	1998	WA	(H) Wells Hatchery	5/12/2000	Columbia R (Wells)	F	0.9	241-15	1
2185068	Homer	6/7/2002	181063	1998	BC	(H)-Robertson Cr	5/20/1999	R-Nahmint R	M	Immature	241-15	1
2185072	Homer	6/11/2002	No Tag						M	Immature	241-15	1
2185037	Homer	5/23/2002	No Tag						M	Immature	241-17	5
2185032	Homer	5/22/2002	183163	1998	BC	(H) Conuma R	5/25/1999	R-Moutcha Bay	Unkn	Unkn	241-17	1
2185026	Homer	5/17/2002	Headlost						Unkn	Unkn	241-20	2

^a AK = Alaska, BC = British Columbia (Canada), OR = Oregon, WA = Washington

^b Name of hatchery facility fish were raised or stream name of wild stock origin. H=hatchery stock, W=wild stock.

^c Shore distance (d) codes: (1) $d < 1/4$ mile, (2) $1/4 \leq d < 1/2$ mile, (3) $1/2 \leq d < 3/4$ mile, (4) $3/4 \leq d < 1$ mile, and (5) $d \geq 1$ mile.

**APPENDIX B. CODED WIRE TAG DATA FOR LATE-RUN
CHINOOK SALMON FROM COOK INLET MARINE
RECREATIONAL FISHERY**

Appendix B1.-Summary of unmarked and CWT recovered Chinook salmon harvested north of Bluff Point by week, statistical area, distance from shore, maturity and ocean-age, Central Cook Inlet marine recreational fishery, June 25 through July 31, 1997.

	Unmarked Chinook					CWT-Marked Chinook					Total Chinook		
	Number Sampled	Proportion	SE	Proportion	SE	Number Sampled	Proportion	SE	Proportion	SE	Number Sampled	Prop.	SE
Week		By Week		Within Week			By Week		Within Week				
6/25 - 7/01	187	0.181	0.012	0.989	0.007	2	0.063	0.043	0.011	0.007	189	0.177	0.010
7/02 - 7/08	279	0.269	0.014	0.986	0.007	4	0.125	0.059	0.014	0.007	283	0.265	0.012
7/09 - 7/15	250	0.241	0.013	0.977	0.009	6	0.188	0.070	0.023	0.009	256	0.240	0.011
7/16 - 7/22	190	0.183	0.012	0.927	0.018	15	0.469	0.090	0.073	0.018	205	0.192	0.010
7/23 - 7/31	130	0.125	0.010	0.963	0.016	5	0.156	0.065	0.037	0.016	135	0.126	0.009
Total ^a	1,036	1.000		0.970	0.005	32	1.000		0.030	0.005	1,068	1.000	
Shore distance (d)		By Distance		Within Distance			By Distance		Within Distance				
d < 1/4 mile	814	0.799	0.013	0.975	0.005	21	0.656	0.085	0.025	0.005	835	0.794	0.011
1/4 ≤ d < 1/2 mile	67	0.066	0.008	0.957	0.024	3	0.094	0.052	0.043	0.024	70	0.067	0.007
1/2 ≤ d < 3/4 mile	11	0.011	0.003	1.000	0.000	0	0.000	0.000	0.000	0.000	11	0.010	0.003
3/4 ≤ d < 1 mile	14	0.014	0.004	1.000	0.000	0	0.000	0.000	0.000	0.000	14	0.013	0.003
d ≥ 1 mile	113	0.111	0.010	0.934	0.023	8	0.250	0.078	0.066	0.023	121	0.115	0.008
Total ^a	1,019	1.000		0.970	0.005	32	1.000		0.030	0.005	1,051	1.000	
Statistical Area		By Area		Within Area			By Area		Within Area				
244-70	929	0.960	0.006	0.974	0.005	25	0.781	0.074	0.026	0.005	954	0.954	0.006
241-11	0	0.000		0.000		0	0.000		0.000		0	0.000	
241-60	39	0.040	0.006	0.848	0.054	7	0.219	0.074	0.152	0.054	46	0.046	0.006
Total ^a	968	1.000		0.968	0.006	32	1.000		0.032	0.006	1,000	1.000	

^a Total is not the same because not all female fish sampled for maturity were sampled for each variable.

Appendix B2.-Maturity composition and mean egg diameter by week, distance from shore, statistical area and ocean-age of female Chinook salmon sampled that were harvested north of Bluff Point in the Cook Inlet marine recreational fishery June 25 through July 31, 1997.

Females	Maturity												Egg diameter (mm)				
	Immature			Fall Spawner			Spring Spawner			All			Mean	SE	min	max	
	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Sample Size	Prop.	SE					
Week																	
6/25 - 7/01	1	0.014	0.014	4	0.055	0.027	68	0.932	0.030	73	0.194	0.020	5.2	0.11	1.0	7.6	
7/02 - 7/08	5	0.051	0.022	1	0.010	0.010	92	0.939	0.024	98	0.261	0.023	5.1	0.11	0.6	7.0	
7/09 - 7/15	5	0.057	0.025	4	0.046	0.023	78	0.897	0.033	87	0.231	0.022	5.0	0.13	0.9	6.5	
7/16 - 7/22	5	0.071	0.031	2	0.029	0.020	63	0.900	0.036	70	0.186	0.020	5.2	0.16	0.8	6.7	
7/23 - 7/31	11	0.229	0.061	3	0.063	0.035	34	0.708	0.066	48	0.128	0.017	4.5	0.30	0.8	6.4	
Total ^a	27	0.072	0.013	14		0.000	335	0.891	0.016	376	1.000		5.1	0.07	0.6	7.6	
Shore distance (d)																	
d < 1/4 mile	1	0.003	0.003	6	0.020	0.008	288	0.976	0.009	295	0.785	0.021	5.4	0.04	1.0	7.6	
1/4 ≤ d < 1/2 mile	0	0.000		0	0.000		24	1.000	0.000	24	0.064	0.013	5.4	0.15	4.2	6.6	
1/2 ≤ d < 3/4 mile	0	0.000		0	0.000		3	1.000	0.000	3	0.008	0.005	5.3	0.60	4.7	6.5	
3/4 ≤ d < 1 mile	0	0.000		2	0.400	0.245	3	0.600	0.245	5	0.013	0.006	4.1	0.64	2.3	5.5	
d ≥ 1 mile	26	0.531	0.072	6	0.122	0.047	17	0.347	0.069	49	0.130	0.017	2.8	0.28	0.6	6.7	
Total ^a	27	0.072	0.013	14	0.037	0.010	335	0.891	0.016	376	1.000		5.1	0.07	0.6	7.6	
Statistical Area																	
244-70	1	0.003	0.003	7	0.021	0.008	318	0.975	0.009	326	0.953	0.011	5.4	0.04	1.0	7.6	
241-11	0	0.000		0	0.000			0.000		0	0.000						
241-60	10	0.625	0.125	1	0.063	0.063	5	0.313	0.120	16	0.047	0.011	2.7	0.55	0.8	6.7	
Total ^a	11	0.032	0.010	8	0.023	0.008	323	0.944	0.012	342	1.000		5.3	0.06	0.8	7.6	

^a Total is not the same because not all female fish sampled for maturity were sampled for each variable.

Appendix B3.-Maturity composition by week, distance from shore, and statistical area of harvested male Chinook salmon sampled that were harvested north of Bluff Point in the Cook Inlet marine recreational fishery, June 25 through July 31, 1997.

Males	Immature			Maturity			Total		
				Spring Spawner					
	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Total	Prop.	SE
Week									
6/25 - 7/01	5	0.114	0.048	39	0.886	0.048	44	0.148	0.021
7/02 - 7/08	6	0.083	0.033	66	0.917	0.033	72	0.242	0.025
7/09 - 7/15	8	0.105	0.035	68	0.895	0.035	76	0.255	0.025
7/16 - 7/22	20	0.313	0.058	44	0.688	0.058	64	0.215	0.024
7/23 - 7/31	10	0.238	0.067	32	0.762	0.067	42	0.141	0.020
Total	49	0.164	0.013	249	0.836	0.013	298	1.000	
Shore distance (d)									
d < 1/4 mile	2	0.009	0.007	211	0.991	0.007	213	0.715	0.026
1/4 ≤ d < 1/2 mile	0	0.000	0.000	23	1.000	0.000	23	0.077	0.015
1/2 ≤ d < 3/4 mile	0	0.000	0.000	2	1.000	0.000	2	0.007	0.005
3/4 ≤ d < 1 mile	5	1.000	0.000	0	0.000	0.000	5	0.017	0.007
d ≥ 1 mile	42	0.764	0.058	13	0.236	0.058	55	0.185	0.023
Total	49	0.164	0.013	249	0.836	0.013	298	1.000	
Statistical Area									
244-70	3	0.012	0.007	241	0.988	0.007	244	0.931	0.016
241-11	0	0.000		0	0.000		0	0.000	
241-60	15	0.833	0.090	3	0.167	0.090	18	0.069	0.016
Total	18	0.069	0.016	244	0.931	0.016	262	1.000	

Appendix B4.-Chinook salmon CWT recoveries summarized for stock origin by week, distance from shore, maturity and statistical area from the sample of CWTs harvested north of Bluff Point in the Central Cook Inlet marine recreational fishery, June 25 through July 31, 1997.

Week	Stock Origin ^a																	
	Lower Cook Inlet			Other Cook Inlet			Other Alaska			Non - Alaska			Unknown			All		
	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Sample Size	Prop.	SE
6/25 - 7/01	0	0.000		0	0.000		0	0.000		0	0.000		2	0.200	0.133	2	0.063	0.043
7/02 - 7/08	0	0.000		1	0.500	0.500	0	0.000		0	0.000		3	0.300	0.153	4	0.125	0.059
7/09 - 7/15	4	0.235	0.106	0	0.000		0	0.000		0	0.000		2	0.200	0.133	6	0.188	0.070
7/16 - 7/22	12	0.706	0.114	0	0.000		0	0.000		1	0.333	0.333	2	0.200	0.133	15	0.469	0.090
7/23 - 7/31	1	0.059	0.059	1	0.500	0.500	0	0.000		2	0.667	0.333	1	0.100	0.100	5	0.156	0.065
Total	17			2			0			3			10			32		
Shore distance (d)																		
d < 1/4 mile	11	0.647	0.119	1	0.500	0.500	0	0.000		0	0.000		9	0.900	0.100	21	0.656	0.085
1/4 ≤ d < 1/2 mile	2	0.118	0.081	0	0.000		0	0.000		0	0.000		1	0.100	0.100	3	0.09375	0.052
1/2 ≤ d < 3/4 mile	0	0.000		0	0.000		0	0.000		0	0.000		0	0.000		0	0	0.000
3/4 ≤ d < 1 mile	0	0.000		0	0.000		0	0.000		0	0.000		0	0.000		0	0	0.000
d ≥ 1 mile	4	0.235	0.106	1	0.500	0.500	0	0.000		3	1.000		0	0.000		8	0.25	0.078
Total	17	1.000		2	1.000		0	0.000		3	1.000		10	1.000		32	1.000	
Maturity ^b																		
Female																		
Immature	0	0.000		0	0.000		0	0.000		1	0.500	0.500	0	0.000	0.000	1	0.063	0.063
Fall Spawner	0	0.000		0	0.000		0	0.000		0	0.000		0	0.000	0.000	0	0.000	0.000
Spring Spawner	8	1.000		0	0.000		0	0.000		1	0.500	0.500	6	1.000	0.000	15	0.938	0.063
Unknown	0	0.000		0	0.000		0	0.000		0	0.000		0	0.000		0	0.000	
Total ^b	8	1.000		0	0.000		0	0.000		2	1.000		6	1.000		16	1.000	
Male																		
Immature	0	0.000		0	0.000		0	0.000		1	1.000		0	0.000	0.000	1	0.067	0.067
Spring Spawner	8	0.000		2	1.000		0	0.000		0	0.000		4	1.000	0.000	14	0.933	0.067
Unknown	0	0.000		0	0.000		0	0.000		0	0.000		0	0.000		0	0.000	
Total ^b	8	0.000		2	1.000		0	0.000		1	1.000		4	1.000		15	1.000	

-continued-

	Stock Origin ^a																	
	Lower Cook Inlet			Other Cook Inlet			Other Alaska			Non - Alaska			Unknown			All		
	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Sample Size	Prop.	SE
Both^c																		
Immature	0	0.000		0	0.000		0	0.000		2	0.667		0	0.000	0.000	2	0.0625	0.043
Fall Spawner	0	0.000		0	0.000		0	0.000		0	0.000		0	0.000	0.000	0	0.000	
Spring Spawner	16	0.941		2	1.000		0	0.000		1	0.333		10	1.000	0.000	29	0.90625	0.052
Unknown	1	0.059		0	0.000		0	0.000		0	0.000		0	0.000	0.000	1	0.03125	0.031
Total ^b	17	1.000		2	1.000		0	0.000		3	1.000		10	1.000		32	1.000	
Statistical Area																		
244-70	13	0.765	0.106	2	1.000		0	0.000		0	0.000		10	1.000		25	0.78125	0.074
241-11	0	0.000		0	0.000		0	0.000		0	0.000		0	0.000		0	0.000	
241-60	4	0.235	0.106	0	0.000		0	0.000		3	1.000		0	0.000		7	0.21875	0.074
Total	17	1.000		2	1.000		0	0.000		3	1.000		10	1.000		32	1.000	
All	17	0.531	0.090	2	0.063	0.043	0	0.000	0.000	3	0.094	0.052	10	0.313	0.083	32	1.000	

^a Stock group is combined tag codes by location of release for the coded wire tagged wild or hatchery fish sampled in the harvest: Lower Cook Inlet - Cook Inlet tributaries south of the Kasilof River drainage, Other Cook Inlet - Cook Inlet tributaries north of and including the Kasilof drainage, Other Alaska - All non-Cook Inlet drainages of Alaska, non-Alaska - Includes British Columbia, Washington and Oregon.

^b The number of maturity categories differs between the sexes, male Chinook salmon is 2 categories, immature or spring spawner, female is 3 categories, immature, fall spawner, spring spawner.

^c The number for both sexes does not sum by sex because maturity or location of release are not known for all tag recoveries.

Appendix B5.–Summary of unmarked and CWT recovered Chinook salmon harvested north of Bluff Point by week, statistical area, distance from shore, maturity and ocean-age, Central Cook Inlet marine recreational fishery, June 25 through July 31, 1998.

	Unmarked Chinook					CWT-Marked Chinook					Total Chinook		
	Number Sampled	Proportion	SE	Proportion	SE	Number Sampled	Proportion	SE	Proportion	SE	Number Sampled	Prop.	SE
Week		By Week		Within Week			By Week		Within Week				
6/25 - 7/01	67	0.150	0.017	0.985	0.015	1	0.200	0.200	0.015	0.015	68	0.150	0.016
7/02 - 7/08	118	0.263	0.021	0.983	0.012	2	0.400	0.245	0.017	0.012	120	0.265	0.019
7/09 - 7/15	125	0.279	0.021	0.992	0.008	1	0.200	0.200	0.008	0.008	126	0.278	0.020
7/16 - 7/22	87	0.194	0.019	0.989	0.011	1	0.200	0.200	0.011	0.011	88	0.194	0.017
7/23 - 7/31	51	0.114	0.015	1.000		0	0.000		0.000		51	0.113	0.014
Total ^a	448	1.000		0.989	0.005	5	1.000		0.011	0.005	453	1.000	
Shore distance (d)		By Distance		Within Distance			By Distance		Within Distance				
d < 1/4 mile	305	0.681	0.022	0.990	0.006	3	0.600	0.245	0.010	0.006	308	0.680	0.020
1/4 ≤ d < 1/2 mile	8	0.018	0.006	1.000		0	0.000		0.000		8	0.018	0.006
1/2 ≤ d < 3/4 mile	1	0.002	0.002	1.000		0	0.000		0.000		1	0.002	0.002
3/4 ≤ d < 1 mile	2	0.004	0.003	1.000		0	0.000		0.000		2	0.004	0.003
d ≥ 1 mile	132	0.295	0.022	0.985	0.011	2	0.400	0.245	0.015	0.011	134	0.296	0.020
Total ^a	448	1.000		0.989	0.005	5	1.000		0.011	0.005	453	1.000	
Statistical Area		By Area		Within Area			By Area		Within Area				
244-70	358	0.799	0.019	0.992	0.005	3	0.600	0.245	0.008	0.005	361	0.797	0.018
241-11	67	0.150		0.000		2	0.400		0.000		69	0.152	
241-60	23	0.051	0.010	1.000		0	0.000		0.000		23	0.051	0.010
Total ^a	448	1.000		0.989	0.005	5	1.000		0.011	0.005	453	1.000	

^a Totals for week, shore distance, and statistical area are not identical because all Chinook salmon examined were not sampled for all variables.

Appendix B6.-Maturity composition and mean egg diameter by week, distance from shore, statistical area and ocean-age of female Chinook salmon sampled that were harvested north of Bluff Point in the Cook Inlet marine recreational fishery, June 25 through July 31, 1998.

Females	Maturity												Egg diameter (mm)				
	Immature			Fall Spawner			Spring Spawner			All			Mean	SE	min	max	
	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Sample Size	Prop.	SE					
Week																	
6/25 - 7/01	12	0.364	0.085	12	0.364	0.085	9	0.273	0.079	33	0.190	0.030	3.1	0.29	1.1	7.5	
7/02 - 7/08	11	0.224	0.060	4	0.082	0.040	34	0.694	0.067	49	0.282	0.034	4.3	0.26	1.0	7.5	
7/09 - 7/15	9	0.205	0.062	2	0.045	0.032	33	0.750	0.066	44	0.253	0.033	4.5	0.28	0.9	6.5	
7/16 - 7/22	2	0.069	0.048	1	0.034	0.034	26	0.897	0.058	29	0.167	0.028	5.2	0.25	1.8	7.0	
7/23 - 7/31	2	0.105	0.072	1	0.053	0.053	16	0.842	0.086	19	0.109	0.024	5.4	0.36	1.5	7.0	
Total ^a	36	0.207	0.031	20		0.000	118	0.678	0.036	174	0.463	0.038	4.4	0.14	0.9	7.5	
Shore distance (d)																	
d < 1/4 mile	2	0.019	0.013	2	0.019	0.013	104	0.963	0.018	108	0.621	0.037	5.6	0.04	1.0	7.6	
1/4 ≤ d < 1/2 mile	1	0.250	0.250	1	0.250	0.250	2	0.500	0.289	4	0.023	0.011	3.9	0.15	4.2	6.6	
1/2 ≤ d < 3/4 mile	0	0.000		0	0.000		0	0.000		0	0.000						
3/4 ≤ d < 1 mile	0	0.000		0	0.000		0	0.000		0	0.000						
d ≥ 1 mile	33	0.532	0.064	17	0.274	0.057	12	0.194	0.051	62	0.356	0.036	2.4	0.28	0.6	6.7	
Total ^a	36	0.207	0.031	20	0.115	0.024	118	0.678	0.036	174	0.463	0.038	4.4	0.14	0.9	7.5	
Statistical Area																	
244-70	12	0.090	0.025	13	0.097	0.026	109	0.813	0.034	134	0.770	0.032	5.0	0.13	1.2	7.5	
241-11	16	0.615	0.097	5	0.192	0.079	5	0.192	0.079	26	0.149	0.027	2.3	0.25	0.9	5.2	
241-60	8	0.571	0.137	2	0.143	0.097	4	0.286	0.125	14	0.080	0.021	2.5	0.41	1.0	5.2	
Total ^a	36	0.207	0.031	20	0.115	0.024	118	0.678	0.036	174	0.509	0.038	4.4	0.14	0.9	7.5	

^a Total is not the same because not all female fish sampled for maturity were sampled for each variable.

Appendix B7.-Maturity composition by week, distance from shore, and statistical area of harvested male Chinook salmon sampled that were harvested north of Bluff Point in the Cook Inlet marine recreational fishery, June 25 through July 31, 1998.

Males	Immature			Maturity			Total		
				Spring Spawner					
	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Total	Prop.	SE
Week									
6/25 - 7/01	11	0.423	0.099	15	0.577	0.099	26	0.173	0.031
7/02 - 7/08	9	0.243	0.072	28	0.757	0.072	37	0.247	0.035
7/09 - 7/15	12	0.240	0.061	38	0.760	0.061	50	0.333	0.039
7/16 - 7/22	2	0.083	0.058	22	0.917	0.058	24	0.160	0.030
7/23 - 7/31	2	0.154	0.104	11	0.846	0.104	13	0.087	0.023
Total	36	0.240	0.015	114	0.760	0.015	150	1.000	
Shore distance (d)									
d < 1/4 mile	2	0.019	0.013	104	0.981	0.013	106	0.707	0.037
1/4 ≤ d < 1/2 mile	0	0.000		1	1.000		1	0.007	0.007
1/2 ≤ d < 3/4 mile	0	0.000		0	0.000		0	0.000	
3/4 ≤ d < 1 mile	0	0.000		0	0.000		0	0.000	
d ≥ 1 mile	34	0.791	0.063	9	0.209	0.063	43	0.287	0.037
Total	36	0.240	0.015	114	0.760	0.015	150	1.000	
Statistical Area									
244-70	14	0.110	0.028	113	0.890	0.028	127	0.847	0.030
241-11	19	0.000		1	0.050	0.050	20	0.133	0.028
241-60	3	1.000		0	0.000		3	0.020	0.011
Total	36	0.240	0.035	114	0.760	0.035	150	1.000	

Appendix B8.—Chinook salmon CWT recoveries summarized for stock origin by week, distance from shore, maturity and statistical area from the sample of CWTs harvested north of Bluff Point in the Central Cook Inlet marine recreational fishery, June 25 through July 31, 1998.

Week	Stock Origin ^a																	
	Lower Cook Inlet			Other Cook Inlet			Other Alaska			Non - Alaska			Unknown			All		
	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Sample Size	Prop.	SE
6/25 - 7/01	0	0.000		0	0.000		0	0.000		1	0.333		0	0.000		1	0.200	0.200
7/02 - 7/08	0	0.000		0	0.000		0	0.000		1	0.333		1	1.000		2	0.400	0.245
7/09 - 7/15	0	0.000		0	0.000		0	0.000		1	0.333		0	0.000		1	0.200	0.200
7/16 - 7/22	1	1.000		0	0.000		0	0.000		0	0.000	0.000	0	0.000		1	0.200	0.200
7/23 - 7/31	0	0.000		0	0.000		0	0.000		0	0.000	0.000	0	0.000		0	0.000	0.000
Total	1	1.000		0	0.000		0			3			1			5		
Shore distance (d)																		
d < 1/4 mile	1	1.000		0	0.000		0	0.000		1	0.333	0.333	1	1.000		3	0.600	0.245
1/4 ≤ d < 1/2 mile	0	0.000		0	0.000		0	0.000		0	0.000		0	0.000		0	0	0.000
1/2 ≤ d < 3/4 mile	0	0.000		0	0.000		0	0.000		0	0.000		0	0.000		0	0	0.000
3/4 ≤ d < 1 mile	0	0.000		0	0.000		0	0.000		0	0.000		0	0.000		0	0	0.000
d ≥ 1 mile	0	0.000		0	0.000		0	0.000		2	0.667	0.333	0	0.000		2	0.4	0.245
Total	1	1.000		0	0.000		0	0.000		3	1.000		1	1.000		5	1.000	
Maturity^b																		
Female																		
Immature	0	0.000		0	0.000		0	0.000		1	0.500	0.500	0	0.000		1	0.250	0.250
Fall Spawner	0	0.000		0	0.000		0	0.000		0	0.000		0	0.000		0	0.000	0.000
Spring Spawner	1	1.000		0	0.000		0	0.000		1	0.500	0.500	0	0.000		2	0.500	0.289
Unknown	0	0.000		0	0.000		0	0.000		0	0.000		1	1.000		1	0.250	
Total ^b	1	1.000		0	0.000		0	0.000		2	1.000		1	1.000		4	1.000	
Male																		
Immature	0	0.000		0	0.000		0	0.000		0	0.000		0	0.000		0	0.000	
Spring Spawner	0	0.000		0	0.000		0	0.000		0	0.000		0	0.000		0	0.000	
Unknown	0	0.000		0	0.000		0	0.000		0	0.000		0	0.000		0	0.000	
Total ^b	0	0.000		0	0.000		0	0.000		0	0.000		0	0.000		0	0.000	

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	Stock Origin ^a																	
	Lower Cook Inlet			Other Cook Inlet			Other Alaska			Non - Alaska			Unknown			All		
	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Sample Size	Prop.	SE
Both^c																		
Immature	0	0.000		0	0.000		0	0.000		1	0.333	0.333	0	0.000		1	0.2	0.200
Fall Spawner	0	0.000		0	0.000		0	0.000		0	0.000	0.000	0	0.000		0	0.000	
Spring Spawner	1	1.000		0	0.000		0	0.000		1	0.333	0.333	0	0.000		2	0.4	0.245
Unknown	0	0.000		0	0.000		0	0.000		1	0.333	0.333	1	1.000		2	0.4	0.245
Total ^b	1	1.000		0	0.000		0	0.000		3	1.000		1	1.000		5	1.000	
Statistical Area																		
244-70	1	1.000		0	0.000		0	0.000		1	0.333	0.333	1	1.000		3	0.6	0.245
241-11	0	0.000		0	0.000		0	0.000		2	0.667	0.333	0	0.000		2	0.400	0.245
241-60	0	0.000		0	0.000		0	0.000		0	0.000		0	0.000		0	0	
Total	1	1.000		0	0.000		0	0.000		3	1.000		1	1.000		5	1.000	
All	1	0.200	0.200	0	0.000	0.000	0	0.000	0.000	3	0.600	0.245	1	0.200	0.200	5	1.000	

^a Stock group is combined tag codes by location of release for the coded wire tagged wild or hatchery fish sampled in the harvest: Lower Cook Inlet - Cook Inlet tributaries south of the Kasilof River drainage, Other Cook Inlet - Cook Inlet tributaries north of and including the Kasilof drainage, Other Alaska - All non-Cook Inlet drainages of Alaska, non-Alaska - Includes British Columbia, Washington and Oregon.

^b The number of maturity categories differs between the sexes, male Chinook salmon is 2 categories, immature or spring spawner, female is 3 categories, immature, fall spawner, spring spawner.

^c The number for both sexes does not sum by sex because maturity or location of release are not known for all tag recoveries.

Appendix B9.-Summary of information collected from coded wire tagged Chinook salmon recovered during random sampling north of Bluff Point in the Cook Inlet marine recreational fishery, June 24 through July 31, 1997, and 1998.

Sample #	Recovery location	Recovery date	Tag Code	Brood Year	State or Province ^a	Rearing code and location ^b	Release date	Release location	Sex	Egg diameter or maturity	Stat. Area	Shore distance ^c
Recovery summary for 1997												
97DT5551	Deep Cr	7/5/1997	312246	1992	AK	(W) Kenai River	8/25/1993	Kenai River 244-30	M	Mature	244-70	1
97DU5998	Anchor Pt	7/17/1997	312206	1991	AK	(H)Crooked Cr 244-30	7/21/1993	Twin Falls CR 244-70(B)	F	5.0	244-70	1
97DT5557	Deep Cr	7/13/1997	312206	1991	AK	(H)Crooked Cr 244-30	7/21/1993	Twin Falls CR 244-70(B)	M	Mature	244-70	2
97DU5583	Anchor Pt	7/18/1997	312206	1991	AK	(H)Crooked Cr 244-30	7/21/1993	Twin Falls CR 244-70(B)	F	4.5	244-70	2
97DT5971	Deep Cr	7/15/1997	312206	1991	AK	(H)Crooked Cr 244-30	7/21/1993	Twin Falls CR 244-70(B)	U	Unkn	244-70	1
97DT5559	Deep Cr	7/15/1997	312206	1991	AK	(H)Crooked Cr 244-30	7/21/1993	Twin Falls CR 244-70(B)	M	Mature	244-70	1
97DU5997	Anchor Pt	7/17/1997	312319	1992	AK	(H)Crooked Cr 244-30	7/18/1994	Homer Spit 241-13	F	5.5	244-70	1
97DU5581	Anchor Pt	7/16/1997	312319	1992	AK	(H)Crooked Cr 244-30	7/18/1994	Homer Spit 241-13	M	Mature	244-70	1
97DU5578	Anchor Pt	7/13/1997	312319	1992	AK	(H)Crooked Cr 244-30	7/18/1994	Homer Spit 241-13	M	Mature	244-70	1
97DU5582	Anchor Pt	7/17/1997	312320	1992	AK	(H)Crooked Cr 244-30	7/18/1994	Homer Spit 241-13	M	Mature	244-70	1
97DU5584	Anchor Pt	7/19/1997	312320	1992	AK	(H)Crooked Cr 244-30	7/18/1994	Homer Spit 241-13	F	4.9	244-70	1
97DT5563	Deep Cr	7/23/1997	312260	1992	AK	(W) Kenai River	8/16/1993	Kenai River 244-30	M	Mature	244-70	5
97DT5567	Deep Cr	7/25/1997	312206	1991	AK	(H)Crooked Cr 244-30	7/21/1993	Twin Falls CR 244-70(B)	F	5.6	244-70	1
97DT5562	Deep Cr	7/20/1997	312206	1991	AK	(H)Crooked Cr 244-30	7/21/1993	Twin Falls CR 244-70(B)	F	6.0	244-70	1
97DU5585	Anchor Pt	7/20/1997	312206	1991	AK	(H)Crooked Cr 244-30	7/21/1993	Twin Falls CR 244-70(B)	F	6.0	244-70	1
97185997	Homer	7/18/1997	312319	1992	AK	(H)Crooked Cr 244-30	7/18/1994	Homer Spit 241-13	M	Mature	241-60	5
97185619	Homer	7/18/1997	312319	1992	AK	(H)Crooked Cr 244-30	7/18/1994	Homer Spit 241-13	M	Mature	241-60	5
97185998	Homer	7/18/1997	312320	1992	AK	(H)Crooked Cr 244-30	7/18/1994	Homer Spit 241-13	M	Mature	241-60	5
97185999	Homer	7/18/1997	181557	1993	BC	(H)-Nitinat R	5/13/1994	(H)-Nitinat R	M	Immature	241-60	5
97185622	Homer	7/20/1997	312319	1992	AK	(H)Crooked Cr 244-30	7/18/1994	Homer Spit 241-13	F	6.7	241-60	5
97185625	Homer	7/23/1997	181426	1993	BC	(H)-Nitinat R	5/26/1994	(H)-Nitinat R	F	1.1	241-60	5
97185627	Homer	7/24/1997	180917	1992	BC	(H) San Juan R.	6/17/1993	(H) Harris Cr/SWVI	F	5.3	241-60	5
76683	Deep CK.	7/20/1997	NO TAG						M	Mature	244-70	1
76684	Deep CK.	7/29/1997	NO TAG						M	Mature	244-70	1
76685	Deep CK.	7/5/1997	NO TAG						F	5.8	244-70	1
76693	Deep CK.	7/4/1997	NO TAG						F	5.4	244-70	1
76699	Deep CK.	7/4/1997	NO TAG						M	Mature	244-70	1
80353	Deep CK.	7/18/1997	NO TAG						F	5.6	244-70	1

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Sample #	Recovery location	Recovery date	Tag Code	Brood Year	State or Province ^a	Rearing code and location ^b	Release date	Release location	Sex	Egg diameter or maturity	Stat. Area	Shore distance ^c
80362	Deep CK.	7/14/1997	NO TAG						F	6.2	244-70	1
80364	Deep CK.	7/15/1997	NO TAG						M	Mature	244-70	1
80419	Anchor Pt	6/30/1997	NO TAG						F	6.5	244-70	2
98396	Anchor Pt	7/1/1997	NO TAG						F	5.5	244-70	2
Recovery summary for 1998												
98185589	Homer	7/7/1998	181426	1993	BC	(H) Nitinat R	5/26/1994	Nitinat R	U	Unkn	241-11	5
98185592	Homer	7/11/1998	182223	1994	BC	(H) Robertson Cr	6/10/1995	Robertson Cr	F	4.2	241-11	5
98DU5599	Anchor Pt.	7/17/1998	312319	1992	AK	(H)Crooked Cr 244-30	7/18/1994	Homer Spit 241-13	F	5.5	244-70	1
98DU5579	Anchor Pt.	6/29/1998	635328	1994	WA	(H)Fallert Cr. Hatchery	3/31/1996	Fallert Cr. 27.0017	F	1.6	244-70	1
98DU5584	Anchor Pt.	7/4/1998	NO TAG						F	7.5	244-70	1

^a AK = Alaska, BC = British Columbia (Canada), OR = Oregon, WA = Washington

^b Name of hatchery facility fish were raised or stream name of wild stock origin. H=hatchery stock, W=wild stock.

^c Shore distance (d) codes: (1) $d < 1/4$ mile, (2) $1/4 \leq d < 1/2$ mile, (3) $1/2 \leq d < 3/4$ mile, (4) $3/4 \leq d < 1$ mile, and (5) $d \geq 1$ mile.