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Contributions of Coded Wire Tagged Chinook Salmon Stocks to the Early-run Marine Sport Fishery in Cook Inlet, 1999 through 2001

by

Robert N. Begich

November 2007

Alaska Department of Fish and Game **Divisions of Sport Fish and Commercial Fisheries**

Symbols and Abbreviations

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Weights and measures (metric)

centimeter	cm
deciliter	dL
gram	g
hectare	ha
kilogram	kg
kilometer	km
liter	L
meter	m
milliliter	mL
millimeter	mm

Weights and measures (English)

cubic feet per second	ft^3/s
foot	ft
gallon	gal
inch	in
mile	mi
nautical mile	nmi
ounce	oz
pound	lb
quart	qt
yard	yd

Time and temperature

day	d
degrees Celsius	°C
degrees Fahrenheit	°F
degrees kelvin	K
hour	h
minute	min
second	s

Physics and chemistry

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

General

Alaska Administrative Code	AAC
all commonly accepted abbreviations	e.g., Mr., Mrs., AM, PM, etc.
all commonly accepted professional titles	e.g., Dr., Ph.D., R.N., etc.
at	@
compass directions:	
east	E
north	N
south	S
west	W
copyright	©
corporate suffixes:	
Company	Co.
Corporation	Corp.
Incorporated	Inc.
Limited	Ltd.
District of Columbia	D.C.
et alii (and others)	et al.
et cetera (and so forth)	etc.
exempli gratia (for example)	e.g.
Federal Information Code	FIC
id est (that is)	i.e.
latitude or longitude	lat. or long.
monetary symbols (U.S.)	$, ¢
months (tables and figures): first three letters	Jan,...,Dec
registered trademark	®
trademark	™
United States (adjective)	U.S.
United States of America (noun)	USA
U.S.C.	United States Code
U.S. state	use two-letter abbreviations (e.g., AK, WA)

Measures (fisheries)

fork length	FL
mideye-to-fork	MEF
mideye-to-tail-fork	METF
standard length	SL
total length	TL

Mathematics, statistics

all standard mathematical signs, symbols and abbreviations	
alternate hypothesis	H_A
base of natural logarithm	*e*
catch per unit effort	CPUE
coefficient of variation	CV
common test statistics	(F, t, χ^2, etc.)
confidence interval	CI
correlation coefficient (multiple)	R
correlation coefficient (simple)	r
covariance	cov
degree (angular)	°
degrees of freedom	df
expected value	*E*
greater than	>
greater than or equal to	≥
harvest per unit effort	HPUE
less than	<
less than or equal to	≤
logarithm (natural)	ln
logarithm (base 10)	log
logarithm (specify base)	$\log_2$, etc.
minute (angular)	'
not significant	NS
null hypothesis	H_O
percent	%
probability	P
probability of a type I error (rejection of the null hypothesis when true)	α
probability of a type II error (acceptance of the null hypothesis when false)	β
second (angular)	"
standard deviation	SD
standard error	SE
variance	
population	Var
sample	var

FISHERY DATA SERIES NO. 07-54

CONTRIBUTIONS OF CODED WIRE TAGGED CHINOOK SALMON STOCKS TO THE EARLY-RUN MARINE SPORT FISHERY IN COOK INLET 1999 THROUGH 2001

by
Robert N. Begich
Alaska Department of Fish and Game, Division of Sport Fish, Homer

Alaska Department of Fish and Game
Division of Sport Fish, Research and Technical Services
333 Raspberry Road, Anchorage, Alaska 99518-1565

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Robert N. Begich
Alaska Department of Fish and Game, Division of Sport Fish
3298 Douglas Place, Homer, AK 99603-8027 USA

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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, Alaska from 1999 through 2001. 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, distance from shore when hooked, and location by statistical area of the harvest were also estimated.

Each year we examined an average of approximately 41% of the estimated early-run harvest that averaged 4,450 fish. Tagged stocks contributed an estimated 14.2%, 12.6% and 22.2% to the harvest during 1999, 2000 and 2001, respectively. Origin of the coded wire tagged harvest was of a broad Pacific Northwest distribution. Coded wire tagged non-Alaska stocks accounted for an average of 6% of the harvest, and tagged Cook Inlet stocks made up on average 7.2%. During 1999, 79% (SE = 1%) of harvested female Chinook salmon were spring spawners based on egg-size diameter, 61% (SE = 2%) in 2000, and 51% (SE = 2%) in 2001. The majority of the Chinook salmon harvest consisted of 3- and 4-ocean fish; these two age groups combined constituted approximately 77% to 88% of the harvest over 3 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 over 3 years.

Our data suggest that the vast majority of Chinook salmon classified as mature were of Cook Inlet origin and those classified as immature were from outside Cook Inlet. We found 91% of the Cook Inlet tag recoveries were classified as spring spawners over the 3-year study, while only 7% of the non-Alaska fish were classified as spring or fall spawners.

Keywords: Chinook salmon, *Oncorhynchus tshawytscha*, Cook Inlet, early run, cohort, stock, origin, coded wire tag, adipose finclip, maturity.

INTRODUCTION

Chinook salmon *Oncorhynchus tshawytscha* returning to the freshwaters of Cook Inlet to spawn immigrate to tributaries in two time segments. Early-run fish enter fresh water from May through late June, and those returning in 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 time period (May 1 through June 24).

The Cook Inlet marine recreational Chinook salmon fishery gained popularity through the late-1980s and early 1990s (Table 1). The greatest growth in fishing effort and harvest occurred along the east coast of Cook Inlet from Anchor Point to Cape Ninilchik during the early 1990s (Nelson 1995) (Figure 1). Growth of the marine fishery was primarily due to increased marketing by the sport fish guiding and tourism industries, availability of commercial boat launching services that accommodated the use of larger vessels, development of sport fishing lodges along Cook Inlet beaches, and restrictions to Cook Inlet freshwater Chinook salmon sport fisheries. As the marine fishery expanded, management concerns about 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, onsite creel survey from 1972-1986 (Hammarstrom 1974-1981; Hammarstrom and Larson 1982-1984, 1986; Hammarstrom et al. 1985). Secondly, since 1987, estimates of harvest and effort from the Statewide Harvest Survey (SWHS; Howe et al. 1995, 1996, 2001 a-d; Jennings et al. 2004; Mills 1979-1980, 1981a-b, 1982-1994; Walker et al. 2003) have been used to monitor this fishery (Szarzi 1999). Finally, a suite of projects to tag and recover wild stocks (Table 2) and hatchery releases (Table 3) are the third phase of monitoring.

Table 1.-Estimated Chinook salmon harvest in the early-run Cook Inlet marine recreational fishery north of Bluff Point, 1987 through 2001.

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	4,702
1997	5,646
1998	5,783
1999	4,907
2000	4,773
2001	3,671
Average 1987-2001	5,329
Average 1987-1991 [a]	4,247
Average 1992-1995 [b]	7,303
Average 1996-2001 [c]	4,914

[a] 1987-1991: Average annual harvest prior to expansion/growth of fishery.

[b] 1992-1995: Average annual harvest during expansion/growth of fishery.

[c] 1996-2001: Average annual harvest fol-lowing implementation of the Upper Cook Inlet Early-run Marine King Salmon Management Plan.

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 lower Kenai Peninsula drainages including the Anchor River, Stariski Creek, Deep Creek, and the Ninilchik River, from the Kasilof and Kenai rivers of 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

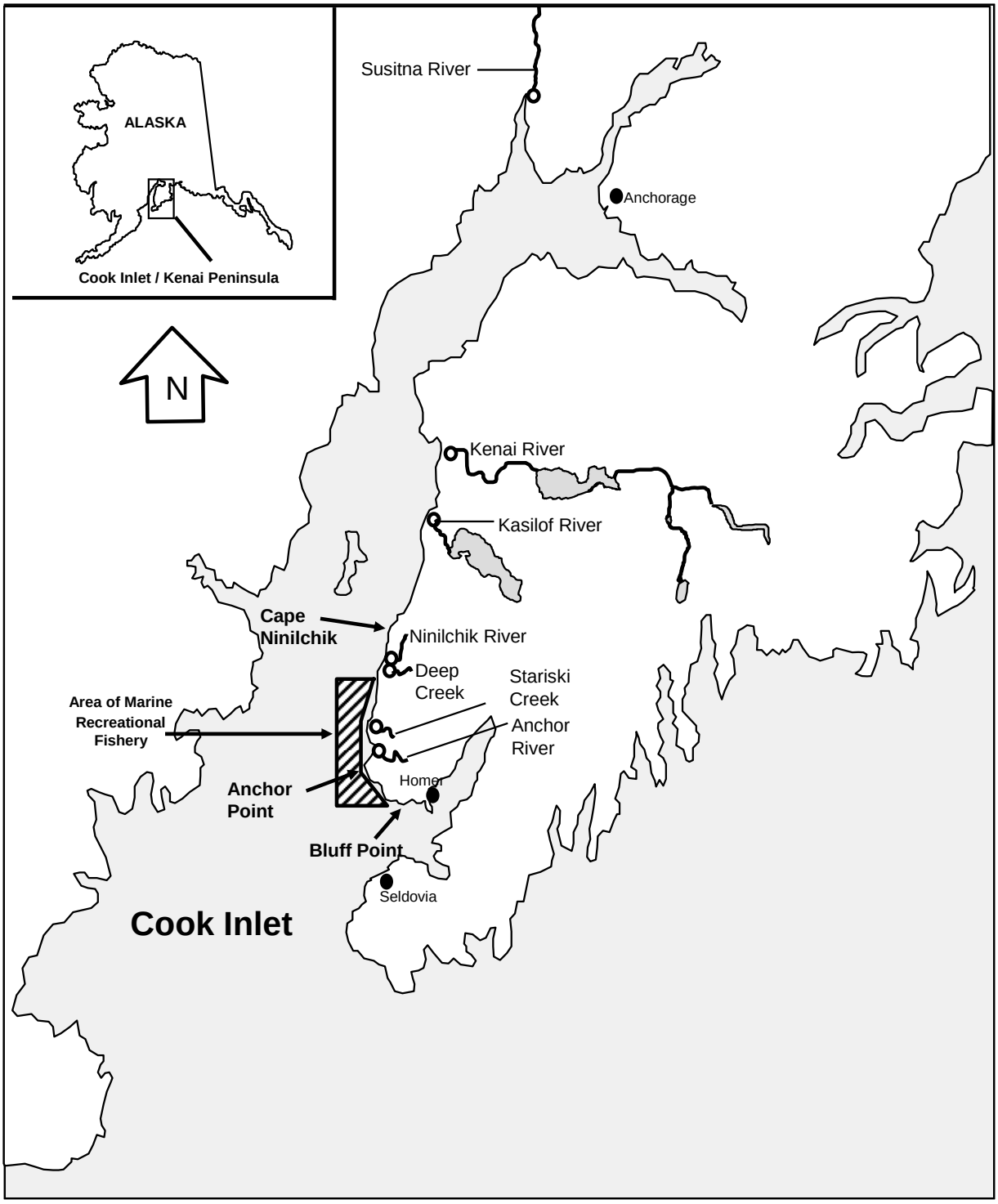

Figure 1.-Cook Inlet area, Chinook salmon producing tributaries, and area of marine Chinook salmon recreational fishery.

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

	Release		Number With a	Ocean Ages of Coded Wire Tagged Fish Returning to Cook Inlet, by Year								
Wild stock	Year	Life stage	Coded Wire Tag	1996	1997	1998	1999	2000	2001	2002	2003	2004
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[a]	31,928				2	3	4	5		
	1998	Smolt[a]	16,598					2	3	4	5	
	1999	Smolt[b]	46,000						2	3	4	5
Northern Cook Inlet												
Deshka River	1996	Smolt	61			2	3	4				
(Susitna Valley)		Fingerling	1,429				2	3	4			
	1997	Fingerling	17,000				2	3	4			
Willow Creek	1996	Fingerling	46,206				2	3	4			
(Susitna Valley)	1997	Fingerling	123,000					2	3	4		
	1998	Fingerling	78,325						2	3	4	
Deception Crk. (Susitna Valley)	1998	Fingerling	22,881						2	3	4	

[a] Includes smolt marked and released in the mainstem Kenai River as well as smolt marked and released in the Killey River (a tributary of the Kenai River).

[b] All smolt marked and released in the Killey River (a tributary of the Kenai River).

Table 3.-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.

Release/Return	Release	Number With a	Number	Ocean Ages of Coded Wire Tagged Fish Returning to Cook Inlet, by Year								
Location	Year	Coded Wire Tag	Released	1996	1997	1998	1999	2000	2001	2002	2003	2004
Lower Cook Inlet												
Ninilchik	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	4	
	2000	51,298	51,298							2	3	4
Homer Spit	1994	25,509	166,963	2	3	4						
Early-Run	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	4	
	2000	0	219,984							2	3	4
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	4	
	2000	0	68,114							2	3	
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	4	
	2000	0	83,277							2	3	4
Homer Spit	1994	91,679	156,873	2	3	4	5					
Late-run	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	5	
	1999	0	59,611						2	3	4	5

-continued-

Table 3.-Page 2 of 2.

Release/Return Location	Release Year	Number With a Coded Wire Tag	Number Released	Return to Cook Inlet by Year and Ocean Age of Coded Wire Tagged Fish								
				1996	1997	1998	1999	2000	2001	2002	2003	2004
Upper Cook Inlet												
Crooked Creek	1994	43,042	224,784	2	3	4						
(Kasilof River	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	4	
	2000	108,507	108,507							2	3	4
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	4	
	2000	0	265,582							2	3	4
Deception Creek	1994	45,919	177,913	2	3	4						
(Susitna Valley)	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	4	
	2000	205,051	206,496							2	3	4

initiated at Kenai River in 1993 and at Deep Creek in 1994, 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; Table 3). 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.

Estimates of the contribution of CWT Chinook salmon stocks to the 1996 early-run fishery documented that approximately 11% of the harvest was composed of hatchery-produced fish of Cook Inlet, British Columbia and Washington state origins (McKinley 1999). CWT stocks that contributed to the 1997 and 1998 early-run fishery were also identified as having broad Pacific Northwest origins (unpublished data).

Because of the potential harvest of large numbers of Cook Inlet Chinook salmon from fully allocated stocks and the proximity of the fishery to spawning streams of lower Kenai Peninsula stocks, continued sampling of Chinook salmon and estimation of the origin of contributing stocks to the marine sport fishery was necessary.

OBJECTIVES

For 1999, 2000 and 2001, 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 2) from May 1 through June 24 each year, 1999-2001. 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 (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 (Jennings et al. 2004) 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 was also estimated.

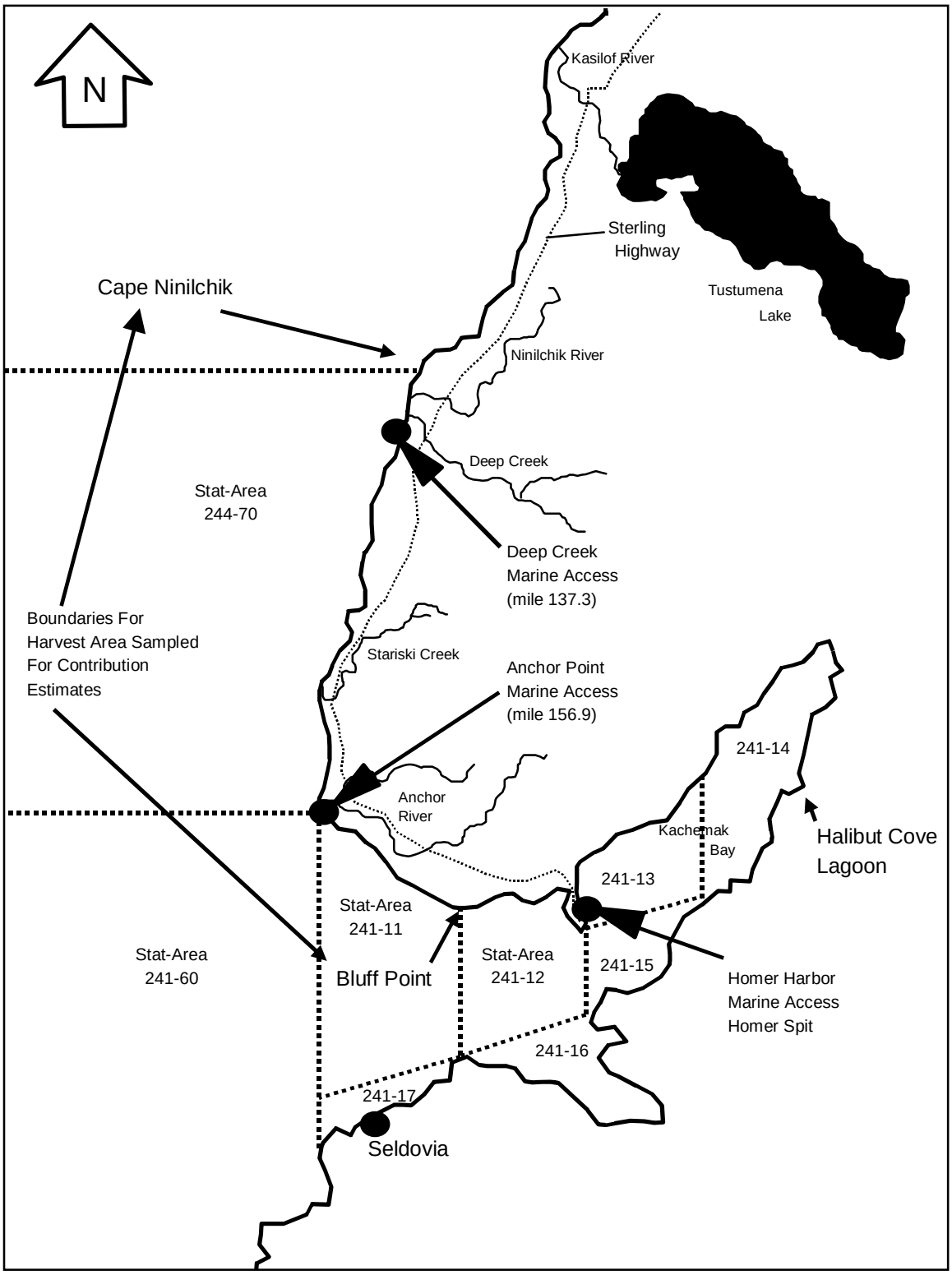

Figure 2.-The Cook Inlet marine area sampled, sampling locations, statistical areas, and lower Kenai Peninsula Chinook salmon producing rivers and stocking locations.

DATA COLLECTION

At each location sampled, interviews of anglers were conducted for 8 hours on each day sampled (see site specific procedures below). As many groups of anglers (boat-parties) were interviewed as possible each day as they secured their boats and unloaded their gear and harvest as they 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 without 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 ADF&G commercial salmon fishing subdistricts or statistical areas (hereafter referred to as statistical areas) for each fish examined.

The categories for distance from shore when hooked were:

1 = < ¼ mile out,

2 = ¼ < ½ mile out,

3 = ½ < ¾ mile out,

4 = ¾ < 1 mile out, and

5 = > 1 mile out.

The categories for harvest location were based on the following list of statistical areas:

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 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's (1973) 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 females 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 to 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 while 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 fish 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 spawner 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 for males and females 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 (Welander 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, it is widely known most Cook Inlet Chinook salmon stocks typically smolt at freshwater age-1 and Chinook salmon smolt released by Cook Inlet as well as many Pacific Coast hatcheries are zero check, hence the scale sample 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 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 1). 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 1200–2000 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 1). 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 the vast majority of 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 1). 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 were 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:

$$\hat{r}_j = \hat{N}\hat{p}_j\hat{\theta}_j^{-1}, \tag{1}$$

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:

$$\hat{p}_j = \frac{m_j}{\lambda\, n}, \tag{2}$$

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:

$$\lambda = \frac{a'\,t'}{a\,t}, \tag{3}$$

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:

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

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):

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

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

$$G\left(\hat{p}_j\right) = \frac{\hat{V}\left[\hat{p}_j\right]}{\hat{p}_j^2}, \tag{6}$$

$$G\left(\hat{N}\right) = \frac{\hat{V}\left[\hat{N}\right]}{\hat{N}^2}, \tag{7}$$

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

and where:

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

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

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

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

where:

$$\hat{\phi} = n / \hat{N}\,. \tag{10}$$

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

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

where $\hat{Cov}\left[\hat{r}_i, \hat{r}_k\right]$ is the covariance between the estimated contributions 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:

$$\hat{Cov}\left[\hat{r}_j, \hat{r}_k\right] \approx \hat{r}_j \; \hat{r}_k \; G\left(\hat{N}\right). \tag{12}$$

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; and for the groups "other Cook Inlet wild stocks" (does not include Deep Creek), and "other Cook Inlet hatchery stocks" (does not include 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:

$$\hat{p}_z = \frac{n_z}{n}, \tag{13}$$

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:

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

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

1999

From May 1 through June 24, 1999, we examined 2,019 of the estimated 4,907 (SE = 384) Chinook salmon harvested in the Cook Inlet marine recreational fishery north of Bluff Point (Table 4, Appendix A1). A total of 67 fish without adipose fins was observed. Tags were detected in 61 of 64 heads sent for decoding, and 60 tags were successfully decoded (Table 4). The weekly sample of harvested Chinook salmon peaked during May 15-21 (Figure 3). The number of Chinook salmon without adipose fins (n = 19) peaked during the week of June 5-11 (Figure 3).

The estimated contribution of coded wire tagged stocks was 607 fish (SE = 148) representing about 12% of the total harvest (Table 5, Figure 4). Thirty-four of the decoded tags were of lower Cook Inlet origin and accounted for an estimated 243 (SE = 84) Chinook salmon or 5.0% of the total estimated harvest (Table 6). Stocks in the other Cook Inlet group accounted for 2.5% (123, SE = 87 fish) of the total harvest. Overall contribution of coded wire tagged stocks of Cook Inlet origin was 366 (SE = 94) fish or approximately 7.5% of the total harvest. Less than 1% (36 fish, SE = 33) of the harvest consisted of fish in the other Alaska group (Table 6, Figure 4). The non-Alaska group accounted for 205 fish (SE = 104) or 4.2% of the total harvest, of which the majority originated in Washington state, followed by British Columbia (Table 6, Figure 4).

An estimated 156 (SE = 81) fish were 3- and 4-ocean fish of Deep Creek origin (Tables 5, 6). Recoveries from the other Cook Inlet wild group included one tagged fish each from the Kenai River and Willow Creek, although contribution estimates were not made for these stocks because of uncertainty regarding the marked proportion in returning adults. For Cook Inlet hatchery stocks 73 (SE = 12) fish were from Ninilchik River, while a total of 137 (SE = 41) fish were from the other Cook Inlet hatchery group (Table 6) that included Ship and Deception creeks as well as Homer Spit.

2000

During 2000, we examined 1,839 fish from an estimated harvest of 4,773 (SE = 362) Chinook salmon north of Bluff Point (Table 4). We collected 78 heads from Chinook salmon without an adipose fin out of a total of 79 observed in the harvest. CWTs were subsequently detected in 68 heads, and 66 of these tags were decoded (Table 4). Identical to 1999, the number of Chinook salmon examined from the harvest peaked during May 15-21 when 408 Chinook salmon were examined (Figure 3). We observed 25 Chinook salmon without adipose fins during the peak sampling week of May 15–21 (Figure 3).

Chinook salmon with CWTs accounted for 12.6% (603 fish, SE = 137) (Table 7) of the estimated 4,773 fish (SE = 362) harvest. The lower Cook Inlet group accounted for approximately 3.1% (146 fish, SE = 70) of the harvest (Table 8). Twenty-five tags were recovered from fish in the other Cook Inlet group resulting in an estimated harvest of 175 (SE = 47) fish. Combined estimated contribution of all Cook Inlet stocks was 321 (SE = 87) fish or about 6.7% of the total harvest. The other Alaska group accounted for 1.6% of the harvest (78 fish, SE = 45), including wild fish from the Unuk River and hatchery releases from Herring Cove in Southeast Alaska. The non-Alaska group contributed an estimated 204 (SE = 89) Chinook salmon to the harvest and originated from hatchery releases in British Columbia, Washington, and Oregon (Table 7, Figure 4).

Table 4.-Values for estimating the contribution of coded wire tagged Chinook salmon stocks to the estimated early-run Cook Inlet marine recreational Chinook salmon harvest north of Bluff Point and summary of Chinook salmon sampled that were harvested south of Bluff Point, 1999 through 2001.

Year	Number Chinook Examined n	Number of Chinook Observed Without Adipose Fin a	Number of Heads Sent to Lab a'	Number of Tags Detected t	Number of Tags Decoded t'	Harvest Estimate N(hat)[a]	SE[a]	Proportion of Estimated Harvest Examined	Proportion Without adipose Fin Observed in Total Number Examined
North of Bluff Point									
1999	2,019	67	64	61	60[b]	4,907	384	0.411	0.033
2000	1,839	79	78	68	66	4,773	362	0.385	0.043
2001	1,552	93	89	78	78	3,671	314	0.423	0.060
Average	1,803	80	77	69	72	4,450		0.407	0.045
South of Bluff Point									
1999	136	12	10	10	9				0.088
2000	73	2	2	2	2				0.027
2001	263	18	17	13	13				0.068
Average	157	11	10	8	8				0.061

[a] Source Statewide Harvest Survey: Anchor River, Deep Creek, Whiskey Gulch and Ninilchik River Chinook salmon saltwater boat fishery. 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.

[b] One recovered tag from Deep Creek was marked as a coho smolt and harvest could not be estimated from this recovery. A total of 60 tags were decoded in 1999, harvest contribution was estimated from a total of 59 tags.

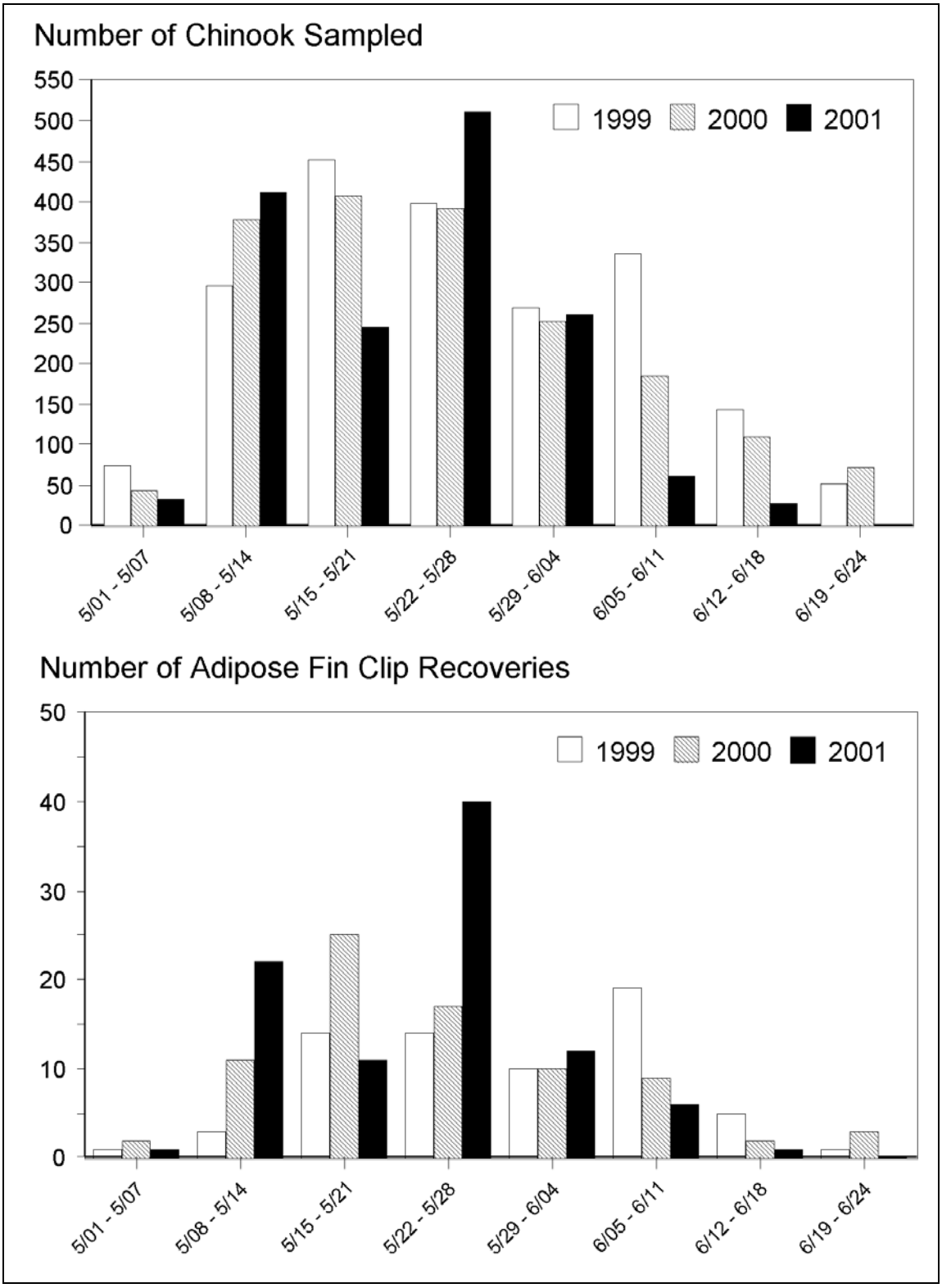

Figure 3.-Number of Chinook salmon sampled and number of adipose finclip recoveries by week from the Cook Inlet marine boat recreational fishery, May 1 through June 24, 1999 through 2001.

Table 5.-Summary of contribution statistics from coded wire tagged Chinook salmon recovered in the Cook Inlet marine recreational fishery, May 1 through June 24, 1999.

Tag Code	State or Province	Release/Origin Location[a]	Number of Coded Wire Tags Recovered	Inverse Theta[b]	Contribution to Total Harvest Represented by Each Tag Code	SE	Percent of Total Harvest Represented by Each Tag Code[d]	SE	Ocean Age Composition for each Ocean Age in Total Harvest[c]	SE	Percent Contribution of Tag Code to Corresponding Ocean Age Class of Harvest	SE
Ocean age = 2												
182832	BC	Yakoun R.	1	6.245	16.15	15.65	0.33%	0.32%			2.69%	2.58%
[e]312551	AK	(W) Kenai R. 244-30[e]	1	5.343	0.00							
312603	AK	Deception Cr. 247-41	1	1.005	2.60	2.04	0.05%	0.04%			0.43%	0.34%
312604	AK	Deception Cr. 247-41	2	1.011	5.23	2.93	0.11%	0.06%			0.87%	0.49%
312605	AK	Deception Cr. 247-41	1	1.005	2.60	2.04	0.05%	0.04%			0.43%	0.34%
312606	AK	Deception Cr. 247-41	1	1.009	2.61	2.05	0.05%	0.04%			0.43%	0.34%
312608	AK	Ninilchik R. 244-20	4	1.008	10.43	4.16	0.21%	0.08%			1.74%	0.71%
	2-Ocean Total		11		40		0.81%		12.36%	0.88%	6.53%	2.78%
Ocean age = 3												
32254	AK	L Port Walter 109-10	1	1.07	2.76	2.21	0.06%	0.04%			0.12%	0.10%
182146	BC	Chuckwalla R.	1	1.04	2.68	2.13	0.05%	0.04%			0.12%	0.09%
182152	BC	Salloomt R.	1	1.00	2.59	2.03	0.05%	0.04%			0.11%	0.09%
182255	BC	Kildala R.	1	3.41	8.81	8.30	0.18%	0.17%			0.39%	0.36%
233049	WA	Col. R. @ McNary Dam	1	1.00	2.59	2.03	0.05%	0.04%			0.11%	0.09%
312507	AK	Homer Spit 241-13	1	5.22	13.51	13.01	0.28%	0.26%			0.59%	0.57%
312508	AK	Ship Creek 247-50	4	5.77	59.71	29.13	1.22%	0.59%			2.61%	1.29%
312514	AK	Deception Cr. 247-41	1	3.98	10.29	9.78	0.21%	0.20%			0.45%	0.43%
312515	AK	Ninilchik R. 244-20	17	1.01	44.59	9.17	0.91%	0.17%			1.95%	0.43%
636001	WA	Columbia at Priest	2	25.85	133.75	94.16	2.73%	1.91%			5.86%	4.13%
1301030811	AK	(W) Deep Cr. 244-20	2	12.99	67.19	61.93	1.37%	0.96%			2.94%	2.71%
[e]1301031514	AK	(W) Willow Cr. 247-41[e]	1	29.93	0.00							
	3-Ocean Total		33		348		7.10%		46.67%	1.33%	15.22%	5.18%
Ocean age = 4												
312434	AK	Deception Cr. 247-41	1	3.995	10.33	9.82	0.21%	0.20%			0.52%	0.50%
43559	AK	(W) Unuk R. 101-75	1	12.937	33.46	33.20	0.68%	0.67%			1.69%	1.68%
312235	AK	(W) Deep Cr. 244-20	1	11.236	29.73	28.64	0.61%	0.60%			1.51%	1.49%
312402	AK	(W) Deep Cr. 244-20	1	11.236	29.73	28.64	0.61%	0.60%			1.51%	1.49%
312428	AK	Ship Creek 247-50	2	5.660	29.28	20.06	0.60%	0.41%			1.48%	1.02%
312435	AK	Ninilchik R. 244-20	7	1.010	18.29	5.85	0.37%	0.11%			0.93%	0.29%
1301030809	AK	(W) Deep Cr. 244-20	1	11.494	29.73	29.35	0.61%	0.60%			1.51%	1.49%
	4-Ocean Total		14		181		3.68%		40.24%	1.31%	9.14%	3.29%

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Table 5.-Page 2 of 2.

Tag Code	State or Province	Release/Origin Location[a]	Number of Coded Wire Tags Recovered	Inverse Theta[b]	Contribution to Total Harvest Represented by Each Tag Code	SE	Percent of Total Harvest Represented by Each Tag Code[d]	SE	Ocean Age Composition for each Ocean Age in Total Harvest[c]	SE	Percent Contribution of Tag Code to Corresponding Ocean Age Class of Harvest	SE
Ocean age = 5												
181558	BC	Conuma R.	1	14.708	38.05	37.55	0.78%	0.77%			100.00%	NA
5-Ocean Total			1		38		0.78%		0.61%	0.21%	100.00%	NA
Total All Ages			59		607	148	12.36%	2.75%	99.88%			

[a] 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.

[b] 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.

[c] Age composition for each ocean age class of harvest does not sum to 100% for all ages because an estimated 0.12% of Chinook salmon in the harvest were 1-ocean fish and no tags recovered were of the 1-ocean age class.

[d] The estimated contribution of the number of 5-ocean fish is greater than the estimated number of 5-ocean fish in the total harvest.

[e] Harvest contribution for this cohort was not estimated due to uncertainty regarding the estimate of theta.

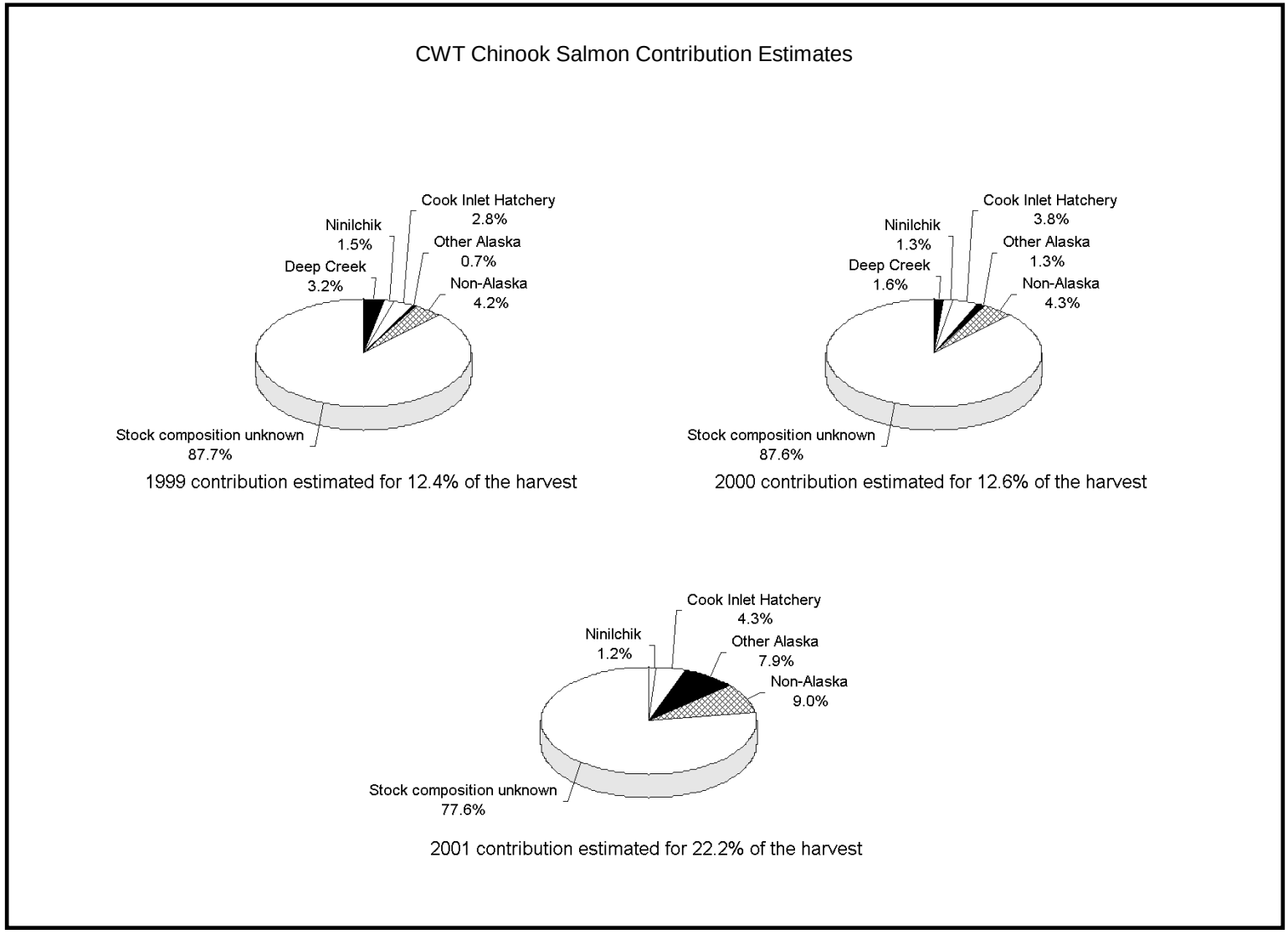

Figure 4.-CWT Chinook salmon contribution estimate results, 1999 through 2001.

Table 6.-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, 1999.

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	34	243	84	4.95%	1.45%
Other Cook Inlet	15	123	87	2.50%	1.75%
Other Alaska	2	36	33	0.74%	0.67%
Non-Alaska	8	205	104	4.17%	2.09%
All Stocks Total	59	607	148	12.36%	3.17%
Cook Inlet Wild Stocks					
Deep Creek	5	156	81	3.19%	1.41%
Other Cook Inlet[b]	2				
All Cook Inlet Wild	7	156	81	3.19%	1.41%
Cook Inlet Hatchery Stocks					
Ninilchik	28	73	12	1.49%	0.22%
Other Cook Inlet[c]	14	137	41	2.79%	0.82%
All Cook Inlet Hatchery	42	210	45	4.27%	0.85%
Cook Inlet Total	49	366	94	7.45%	1.64%

[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 the Kasilof River drainage; other Cook Inlet = Cook Inlet tributaries north of and including the Kasilof River drainage; Other Alaska = all non-Cook Inlet drainages of Alaska; non-Alaska = 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 Cook Inlet marine recreational fishery, May 1 through June 24, 2000.

Tag Code	State or Province	Release/Origin Location[a]	Number of Coded Wire Tags Recovered	Inverse Theta[b]	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[c]	SE	Percent Contribution of Tag Code to Corresponding Ocean Age Class of Harvest	SE
Ocean age = 2												
92319	OR	Santiam R. &N. FK-1	1	1.265	3.43	2.89	0.07%	0.06%			0.33%	0.28%
312532	AK	Deception Cr. 247-41	2	1.009	5.47	3.10	0.11%	0.06%			0.53%	0.30%
312635	AK	Ninilchik R. 244-20	4	1.028	11.14	4.52	0.23%	0.09%			1.08%	0.45%
2-Ocean Total			7		20.03		0.42%		21.69%	1.54%	1.93%	0.61%
Ocean age = 3												
44755	AK	Herring Cove 101-45	1	9.307	25.21	24.70	0.53%	0.52%			0.88%	0.87%
44756	AK	Herring Cove 101-45	1	10.180	27.57	27.07	0.58%	0.57%			0.97%	0.96%
182045	BC	Conuma EST.	1	23.417	63.42	62.92	1.33%	1.32%			2.22%	2.23%
182834	BC	Chuckwalla R.	3	1.256	10.21	5.00	0.21%	0.10%			0.36%	0.18%
182849	BC	Kildala R.	1	4.805	13.01	12.51	0.27%	0.26%			0.46%	0.44%
182850	BC	Kitimat R. Low	1	17.739	48.04	47.54	1.01%	1.00%			1.69%	1.68%
182851	BC	Kitimat R. Up.	1	9.705	26.28	25.78	0.55%	0.54%			0.92%	0.91%
312553	AK	(W) Deep Cr. 244-20	2	14.286	77.38	68.66	1.62%	1.14%			2.71%	2.43%
312555	AK	Crooked Cr 244-30	2	5.718	30.97	21.25	0.65%	0.44%			1.09%	0.76%
312556	AK	Ship Cr. 247-50	3	8.095	65.77	37.33	1.38%	0.78%			2.31%	1.33%
312558	AK	Halibut CV Lag 241-15	1	1.979	5.36	4.84	0.11%	0.10%			0.19%	0.17%
312603	AK	Deception Cr. 247-41	4	1.005	10.89	4.40	0.23%	0.09%			0.38%	0.16%
312604	AK	Deception Cr. 247-41	2	1.011	5.48	3.10	0.11%	0.06%			0.19%	0.11%
312605	AK	Deception Cr. 247-41	4	1.005	10.89	4.40	0.23%	0.09%			0.38%	0.16%
312606	AK	Deception Cr. 247-41	2	1.009	5.47	3.10	0.11%	0.06%			0.19%	0.11%
312607	AK	Deception Cr. 247-41	3	1.011	8.21	3.82	0.17%	0.08%			0.29%	0.14%
312608	AK	Ninilchik R. 244-20	17	1.008	46.41	9.60	0.97%	0.19%			1.63%	0.36%
501020206	WA	Yakima R-Low 37.0002	1	2.126	5.76	5.24	0.12%	0.11%			0.20%	0.19%
501020406	WA	Ringold Pond (Trout)	1	3.439	9.31	8.80	0.20%	0.18%			0.33%	0.31%
3-Ocean Total			51		495.65		10.38%		59.17%	1.83%	17.55%	4.38%

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Table 7.-Page 2 of 2.

Tag Code	State or Province	Release/Origin Location[a]	Number of Coded Wire Tags Recovered	Inverse Theta[b]	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[c]	SE	Percent Contribution of Tag Code to Corresponding Ocean Age Class of Harvest	SE
Ocean age = 4												
44712	AK	(W)Unuk R. 101-75	1	9.260	25.08	24.80	0.5%	0.52%			2.98%	2.88%
70927	OR	Tanner Cr.	1	8.050	21.80	21.30	0.5%	0.45%			2.59%	2.48%
312514	AK	Deception Cr. 247-41	3	3.978	32.32	17.89	0.7%	0.37%			3.84%	2.11%
312515	AK	Ninilchik R. 244-20	2	1.014	5.49	3.12	0.1%	0.06%			0.65%	0.37%
182345	BC	Kitsumkalum R.	1	1.010	2.74	2.18	0.1%	0.05%			0.32%	0.25%
	4-Ocean Total		8		87.43		1.77%		18.02%	1.43%	10.16%	4.37%
Total All Ages			66		603	137	12.64%	2.56%	98.88%			

[a] 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.

[b] 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.

[c] Age composition for each ocean age class of harvest does not sum to 100% for all ages because an estimated 1.12% of Chinook salmon in the harvest were1-ocean fish and no tags recovered were of the 1-ocean 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, 2000.

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	26	146	70	3.05%	1.16%
Other Cook Inlet	25	175	47	3.68%	0.99%
Other Alaska	3	78	45	1.63%	0.92%
Non-Alaska	12	204	89	4.27%	1.83%
All Stocks Total	66	603	137	12.64%	2.56%
Cook Inlet Wild Stocks					
Deep Creek	2	77	69	1.62%	1.14%
Other Cook Inlet[b]	0	0		0.00%	
All Cook Inlet Wild	2	77	69	1.62%	1.14%
Cook Inlet Hatchery Stocks					
Ninilchik	23	63	11	1.33%	0.22%
Other Cook Inlet[c]	26	181	49	3.79%	0.99%
All Cook Inlet Hatchery	49	244	52	5.12%	1.02%
Cook Inlet Total	51	321	87	6.74%	1.52%

[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 the Kasilof River drainage, other Cook Inlet - Cook Inlet tributaries north of and including the 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.

Recoveries of the Deep Creek stock accounted for an estimated 1.6% (77 fish, SE = 69) of the total harvest. No other Cook Inlet wild stocks other than Deep Creek were detected in the harvest. The Ninilchik hatchery group represented 1.3% (63 fish, SE = 11) of the total harvest (Table 8). The other Cook Inlet hatchery group represented 3.8% (181 fish, SE = 49) of the total harvest (Table 8, Figure 4). In total about 5.1% of the total harvest was comprised of marked Cook Inlet hatchery stocks (244 fish, SE = 52).

2001

We examined 1,552 Chinook salmon from an estimated harvest of 3,671 (SE = 314), and observed 93 fish without adipose fins (Table 4). Eighty-nine heads were sent to the Tag Lab, and tags were detected and decoded in 78 heads. Distinct from the previous 2 years the number of fish examined peaked 1 week later during the May 22-28 sampling week (Figure 3). Additionally, the number of Chinook salmon observed in the harvest without an adipose fin peaked during the same week (40, May 22-28, Figure 3).

An estimated 22.2% (815 fish, SE = 198) of the harvest was explained by coded wire tagged stocks (Table 9). The estimated harvest of fish from the lower Cook Inlet group was 79 (SE = 22) fish, while harvest of those from the other Cook Inlet group was 125 (SE = 37) fish (Table 10). In total coded wire tagged stocks of Cook Inlet origin accounted for 5.6% (204 fish, SE = 44) of the harvest. The Other Alaska group contributed an estimated 7.9% (289 fish, SE = 95) (Table 10, Figure 4). A total of 26 tagged Chinook salmon were from the non-Alaska group, representing 21 separate wild or hatchery releases from British Columbia, Washington or Oregon. Combined these coded wire tagged stocks contributed an estimated 322 (SE = 157) Chinook salmon (8.8%) to the total harvest (Table 10, Figure 4).

All age classes (ocean age 2 through 5) of marked Deep Creek, Kenai River and Willow Creek fish were represented in the return, but Cook Inlet wild stocks were not detected in the harvest. The Ninilchik hatchery group accounted for 1.2% (45 fish, SE = 9) of the total harvest (Table 10). Approximately 4.3% (159 fish, SE = 43) of the total harvest was from the other Cook Inlet hatchery group (Table 10, Figure 4). The estimated harvest of all Cook Inlet marked hatchery stocks was 204 (SE = 44) fish or about 5.6% of the total harvest.

ESTIMATES OF OCEAN AGE AND MATURITY COMPOSITION

1999

Ocean age of harvested Chinook salmon was determined for 825 fish (Table 11). The majority was 3-ocean (46.7%, SE = 1.6%) and 4-ocean (40.2%, SE = 1.6%) followed by 2-ocean (12.4%, SE = 1.0%) fish. The 5- and 1-ocean age classes combined comprised less than 1% of the harvest (Table 11). CWT recoveries accounted for an estimated 6.5% of the 2-ocean, 15.2% of the 3-ocean, 9.1% of the 4-ocean fish (Table 5). The relatively low fraction for the one coded wire tagged 5-ocean fish recovered in the harvest resulted in a contribution estimate that exceeded (> 100%) the estimated number of 5-ocean fish in the harvest. Finally, no coded wire tagged 1-ocean fish were recovered from the harvest.

The harvest of females consisted of 79.3% (SE = 1.4%) spring spawners, 12.1% (SE = 1.2%) fall spawners, and 8.6% (SE = 1.0%) immature fish (Table 12). The percent of spring spawners decreased from 90.0% (SE = 4.8%) during May 1-7 to 32.2% (SE = 6.1%) during June 12-18. Similarly, egg diameter decreased from 4.7 mm (SE = 0.1 mm) for May 1-7 to 3.1 mm (SE = 0.2 mm) for June 12-18 (Table 12). Spring spawners dominated the female harvest <¼ mile of shore (91.0%, SE = 1.2%), but harvest >1 mile offshore was evenly distributed among the three maturity classes (Table 12).

Table 9.-Summary of contribution statistics from coded wire tagged Chinook salmon recovered in the Cook Inlet marine recreational fishery, May 1 through June 24, 2001.

Tag Code	State or Province	Release/Origin Location[a]	Number of Coded Wire Tags Recovered	Inverse Theta[b]	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[c]	SE	Percent Contribution of Tag Code to Corresponding Ocean Age Class of Harvest	SE
Ocean age = 2												
40236	AK	Herring Cove 101-45	1	8.459	20.91	20.41	0.6%	0.56%			3.54%	3.46%
92511	OR	Fall Cr. Willamette	1	1.038	2.57	2.01	0.1%	0.05%			0.43%	0.34%
92520	OR	Molalla R	1	1.054	2.61	2.05	0.1%	0.06%			0.44%	0.35%
92522	OR	Willamette R, Mid Fk	1	1.032	2.55	1.99	0.07%	0.00054			0.43%	0.34%
92631	OR	Clackamas R	1	1.021	2.52	1.97	0.07%	0.05%			0.43%	0.33%
183103	BC	Deadman R	1	1.023	2.53	1.97	0.07%	0.05%			0.43%	0.34%
183433	BC	Robertson Cr	1	57.912	143.14	142.64	3.90%	3.89%			24.24%	24.16%
310131	AK	Deception Cr 247-41	1	1.009	2.49	1.93	0.07%	0.05%			0.42%	0.33%
310145	AK	Homer Spit 241-13	2	4.036	19.95	13.44	0.54%	0.36%			3.38%	2.30%
312618	AK	Deception Cr 247-41	2	1.009	4.99	2.75	0.14%	0.07%			0.84%	0.48%
312619	AK	Deception Cr 247-41	1	1.009	2.49	1.93	0.07%	0.05%			0.42%	0.33%
630610	WA	Similkameen R 490325	2	1.03	5.09	2.83	0.14%	0.08%			0.86%	0.49%
630606	WA	(M)Columbia R - General	1	1.021	2.52	1.97	0.07%	0.05%			0.43%	0.33%
2-Ocean Total			16		214		5.84%		16.08%	1.56%	36.31%	24.54%
Ocean age = 3												
32128	AK	L Port Walter 109-10	1	1.086	2.68	2.13	0.07%	0.06%			0.13%	0.10%
44727	AK	Taiya Inlet 115-34	2	1.033	5.11	2.84	0.14%	0.08%			0.24%	0.14%
44942	AK	Ketchikan Cr 101-47	1	4.713	11.65	11.14	0.32%	0.30%			0.56%	0.53%
44962	AK	Herring Cove 101-45	1	9.293	22.97	22.47	0.63%	0.61%			1.10%	1.08%
45002	AK	Herring Cove 101-45	1	12.094	29.89	29.39	0.81%	0.80%			1.43%	1.41%
45003	AK	Neets Bay 101-90	2	11.704	57.86	40.35	1.58%	1.09%			2.77%	1.94%
92450	OR	Clackamas R	1	1.047	2.59	2.03	0.07%	0.06%			0.12%	0.10%
182755	BC	Kitsumkalum R	2	1	4.94	2.72	0.13%	0.07%			0.24%	0.13%
183036	BC	Quinsam R	1	7.64	18.88	18.38	0.51%	0.50%			0.90%	0.88%
183214	BC	Kincolith R	1	1.869	4.62	4.09	0.13%	0.11%			0.22%	0.20%

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Table 9.-Page 2 of 3.

Tag Code	State or Province	Release/Origin Location[a]	Number of Coded Wire Tags Recovered	Inverse Theta[b]	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[c]	SE	Percent Contribution of Tag Code to Corresponding Ocean Age Class of Harvest	SE
Ocean age = 3 continued												
183904	BC	Kitimat R Low	1	17.597	43.49	42.99	1.18%	1.17%			2.08%	2.06%
183906	BC	Kildala R	1	3.557	8.79	8.28	0.24%	0.23%			0.42%	0.40%
183910	BC	Tranquille Est	1	2.09	5.17	4.64	0.14%	0.13%			0.25%	0.22%
312532	AK	Deception Cr 247-41	2	1.009	4.99	2.75	0.14%	0.07%			0.24%	0.13%
312629	AK	Crooked Cr 244-30	4	3.223	31.86	15.09	0.87%	0.41%			1.53%	0.73%
312630	AK	Ship Cr 247-50	3	4.925	36.52	20.37	0.99%	0.55%			1.75%	0.98%
312635	AK	Ninilchik R 244-20	13	1.028	33.03	7.65	0.90%	0.19%			1.58%	0.39%
471735	AK	Tamgas Cr	2	18.571	91.80	64.45	2.50%	1.75%			4.39%	3.10%
630133	WA	(W)Hanford Reach (36)	1	1.067	2.64	2.08	0.07%	0.06%			0.13%	0.10%
630458	WA	Kalama R 27.0002	1	5.57	13.77	13.26	0.38%	0.36%			0.66%	0.64%
630522	WA	Wenatchee R 45.0030	1	1.136	2.81	2.26	0.08%	0.06%			0.29%	0.24%
3-Ocean Total			43		436.06		11.88%		56.91%	2.09%	21.14%	17.45%
Ocean age = 4												
43829	AK	Unuk R 101-75	1	9.26	22.89	22.60	0.62%	0.61%			2.38%	2.35%
630133	WA	(W)Hanford Reach (36)	1	1	2.47	1.91	0.07%	0.05%			0.12%	0.09%
182528	BC	Atnarko R UP	1	14.398	35.59	35.09	0.97%	0.96%			3.70%	3.65%
182750	BC	Kitsukalum R	1	1.02	2.52	1.96	0.07%	0.05%			0.26%	0.20%
182754	BC	Kitsukalum R	1	1.02	2.52	1.96	0.07%	0.05%			0.26%	0.20%
182834	BC	Chuckwalla R	1	1.256	3.10	2.56	0.08%	0.07%			0.32%	0.27%
183355	BC	Tranquille EST	1	1.716	4.24	3.71	0.12%	0.10%			0.44%	0.39%
312555	AK	Crooked Cr 244-30	1	5.718	14.13	13.63	0.38%	0.37%			1.47%	1.42%
312556	AK	Ship Cr 247-50	1	8.095	20.01	19.51	0.55%	0.53%			2.08%	2.03%
312560	AK	Homer Spit 241-13	1	5.611	13.87	13.36	0.38%	0.36%			1.44%	1.39%
312603	AK	Deception Cr 247-41	1	1.005	2.48	1.92	0.07%	0.05%			0.26%	0.20%
312605	AK	Deception Cr 247-41	1	1.005	2.48	1.92	0.07%	0.05%			0.26%	0.20%
312606	AK	Deception Cr 247-41	1	1.009	2.49	1.93	0.07%	0.05%			0.26%	0.20%
312608	AK	Ninilchik R 244-20	5	1.008	12.46	4.43	0.34%	0.12%			1.30%	0.48%
44236	AK	(W)Unuk R 101-75	1	9.26	22.89	22.60	0.62%	0.61%			2.38%	2.35%
4-Ocean Total			19		164.15		0.04		26.19%	1.86%	16.94%	5.75%

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Table 9.-Page 3 of 3.

Tag Code	State or Province	Release/Origin Location[a]	Number of Coded Wire Tags Recovered	Inverse Theta[b]	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[c]	SE	Percent Contribution of Tag Code to Corresponding Ocean Age Class of Harvest	SE
Total All Ages			78		815	198	22.19%	5.06%	99.18%			

[a] 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.

[b] 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.

[c] Age composition for each ocean age class of harvest does not sum to 100% for all ages because an estimated 0.82% of Chinook salmon in the harvest were 1-ocean fish and no tags recovered were of the 1-ocean 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, 2001.

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	21	79	22	2.16%	0.56%
Other Cook Inlet	18	125	37	3.40%	0.96%
Other Alaska	13	289	95	7.86%	2.54%
Non-Alaska	26	322	157	8.76%	4.23%
All Stocks Total	78	815	198	22.19%	5.06%
Cook Inlet Wild Stocks					
Deep Creek	0	0		0.00%	
Other Cook Inlet[b]	0	0		0.00%	
All Cook Inlet Wild	0	0.00		0.00%	
Cook Inlet Hatchery Stocks					
Ninilchik	18	45	9	1.24%	0.23%
Other Cook Inlet[c]	21	159	43	4.32%	1.09%
All Cook Inlet Hatchery	39	204	44	5.56%	1.11%
Cook Inlet Total	39	204	44	5.56%	1.11%

[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 the Kasilof River drainage, other Cook Inlet - Cook Inlet tributaries north of and including the 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.-Age composition by week, distance from shore, and statistical area for Chinook salmon harvested north of Bluff Point in the Cook Inlet marine recreational fishery, May 1 through June 23, 1999.

	1-Ocean			2-Ocean			3-Ocean			4-Ocean			5-Ocean			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		11	0.177	0.049	49	0.790	0.052	2	0.032	0.023	62	0.075	0.009
5/08 - 5/14	0	0.000		4	0.030	0.015	35	0.263	0.038	94	0.707	0.040	0	0.000		133	0.161	0.013
5/15 - 5/21	0	0.000		23	0.131	0.025	77	0.438	0.038	76	0.432	0.037	0	0.000	0.000	176	0.213	0.014
5/22 - 5/28	0	0.000		28	0.167	0.029	80	0.476	0.039	59	0.351	0.037	1	0.006	0.006	168	0.204	0.014
5/29 - 6/04	0	0.000		20	0.180	0.037	65	0.586	0.047	26	0.234	0.040	0	0.000		111	0.135	0.012
6/05 - 6/11	1	0.010	0.010	16	0.162	0.037	63	0.636	0.049	17	0.172	0.038	2	0.020	0.014	99	0.120	0.011
6/12 - 6/18	0	0.000		9	0.155	0.048	40	0.690	0.061	9	0.155	0.048	0	0.000		58	0.070	0.009
6/19 - 6/24	0	0.000		2	0.111	0.076	14	0.778	0.101	2	0.111	0.076	0	0.000		18	0.022	0.005
Total	1	0.001	0.001	102	0.124	0.010	385	0.467	0.016	332	0.402	0.016	5	0.006	0.002	825	1.000	
Shore Distance																		
<1/4 mile	0	0.000		72	0.121	0.013	247	0.417	0.020	270	0.455	0.020	4	0.007	0.003	593	0.719	0.016
1/4 to 1/2	1	0.017	0.017	12	0.203	0.053	34	0.576	0.065	11	0.186	0.051	1	0.017	0.017	59	0.072	0.009
1/2 to 3/4	0	0.000		0	0.000	0.000	1	0.500	0.500	1	0.500	0.500	0	0.000	0.000	2	0.002	0.002
3/4 to 1	0	0.000		0	0.000		4	1.000		0	0.000		0	0.000		4	0.005	0.002
> 1 mile	0	0.000		18	0.108	0.024	99	0.593	0.038	50	0.299	0.036	0	0.000		167	0.202	0.014
Total	1	0.001	0.001	102	0.124	0.010	385	0.467	0.016	332	0.402	0.016	5	0.006	0.002	825	1.000	
Statistical Area																		
244-70	1	0.001	0.001	82	0.122	0.013	293	0.437	0.019	290	0.432	0.019	5	0.007	0.003	671	0.813	0.014
241-11	0	0.000		19	0.125	0.027	91	0.599	0.040	42	0.276	0.036	0	0.000		152	0.184	0.014
241-60	0	0.000		1	0.500	0.500	1	0.500	0.500	0	0.000	0.000	0	0.000		2	0.002	0.002
Total	1	0.001	0.001	102	0.124	0.010	385	0.467	0.016	332	0.402	0.016	5	0.006	0.002	825	1.000	

Table 12.-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 May 1 through June 24, 1999.

	Maturity												Egg Diameter			
	Immature			Fall Spawer			Spring Spawner			All						
Females	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Mean	SE	min	max
Week																
5/01 - 5/07	0	0.000		4	0.100	0.048	36	0.900	0.048	40	0.050	0.008	4.7	0.10	3.0	5.5
5/08 - 5/14	1	0.007	0.007	15	0.106	0.026	125	0.887	0.027	141	0.176	0.013	4.5	0.07	1.5	6.1
5/15 - 5/21	11	0.055	0.016	17	0.085	0.020	172	0.860	0.025	200	0.249	0.015	4.4	0.08	0.7	6.5
5/22 - 5/28	5	0.037	0.016	16	0.119	0.028	114	0.844	0.031	135	0.168	0.013	4.6	0.08	1.2	6.5
5/29 - 6/04	7	0.080	0.029	7	0.080	0.029	74	0.841	0.039	88	0.110	0.011	4.5	0.13	0.8	6.4
6/05 - 6/11	21	0.168	0.034	12	0.096	0.026	92	0.736	0.040	125	0.156	0.013	4.2	0.13	1.0	6.5
6/12 - 6/18	22	0.373	0.063	18	0.305	0.060	19	0.322	0.061	59	0.073	0.009	3.1	0.22	0.9	6.8
6/19 - 6/24	2	0.133	0.091	8	0.533	0.133	5	0.333	0.126	15	0.019	0.005	3.2	0.36	1.2	6.0
Total	69	0.086	0.010	97	0.121	0.012	637	0.793	0.014	803	1.000		43.2	0.40	0.7	6.8
Shore Distance																
<1/4 mile	10	0.017	0.005	42	0.073	0.011	524	0.910	0.012	576	0.717	0.016	4.6	0.04	0.8	6.8
1/4 to 1/2	18	0.184	0.039	14	0.143	0.036	66	0.673	0.048	98	0.122	0.012	4.0	0.16	0.7	6.5
1/2 to 3/4	2	0.222	0.147	0	0.000	0.000	7	0.778	0.147	9	0.011	0.004	4.3	0.49	1.8	5.6
3/4 to 1	0	0.000		0	0.000		1	1.000		1	0.001	0.001	5.4		5.4	5.4
> 1 mile	39	0.328	0.043	41	0.345	0.044	39	0.328	0.043	119	0.148	0.013	3.2	0.15	0.9	6.5
Total	69	0.086	0.010	97	0.121	0.012	637	0.793	0.014	803	1.000		43.2	0.40	0.7	6.8
Statistical Area																
244-70	31	0.045	0.008	56	0.082	0.010	600	0.873	0.013	687	0.856	0.012	4.5	0.04	0.7	6.8
241-11	37	0.343	0.046	38	0.352	0.046	33	0.306	0.045	108	0.134	0.012	3.0	0.16	0.9	6.2
241-60	1	0.125	0.125	3	0.375	0.183	4	0.500	0.189	8	0.010	0.004	4.2	0.60	1.5	6.5
Total	69	0.086	0.010	97	0.121	0.012	637	0.793	0.014	803	1.000		43.2	0.40	0.7	6.8

Table 13.-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, May 1 through June 24, 1999.

Males	Maturity								
	Immature			Spring Spawner			Total		
	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Total	Prop.	SE
Week									
5/01 - 5/07	8	0.348	0.102	15	0.652	0.102	23	0.029	0.006
5/08 - 5/14	46	0.414	0.047	65	0.586	0.047	111	0.139	0.012
5/15 - 5/21	32	0.200	0.032	128	0.800	0.032	160	0.200	0.014
5/22 - 5/28	46	0.251	0.032	137	0.749	0.032	183	0.229	0.015
5/29 - 6/04	41	0.366	0.046	71	0.634	0.046	112	0.140	0.012
6/05 - 6/11	58	0.443	0.044	73	0.557	0.044	131	0.164	0.013
6/12 - 6/18	43	0.754	0.058	14	0.246	0.058	57	0.071	0.009
6/19 - 6/24	14	0.609	0.104	9	0.391	0.104	23	0.029	0.006
Total	288	0.360	0.017	512	0.640	0.017	800	1.000	
Shore Distance									
<1/4 mile	174	0.295	0.019	416	0.705	0.019	590	0.738	0.016
1/4 to 1/2	21	0.300	0.055	49	0.700	0.055	70	0.088	0.010
1/2 to 3/4	1	0.077	0.077	12	0.923	0.077	13	0.016	0.004
3/4 to 1	1	0.333	0.333	2	0.667	0.333	3	0.004	0.002
> 1 mile	91	0.734	0.040	33	0.266	0.040	124	0.155	0.013
Total	288	0.360	0.017	512	0.640	0.017	800	1.000	
Statistical Area									
244-70	202	0.295	0.017	482	0.705	0.017	684	0.804	0.014
241-11	86	0.754	0.040	28	0.246	0.040	114	0.134	0.012
241-60	0	0.000		2	1.000	0.000	2	0.002	0.002
Total	288	0.360	0.017	512	0.640	0.017	800	1.000	

For males overall, 64.0% (SE = 1.7%) were spring spawners and 36.0% (SE = 1.7) were immature (Table 13). Spring spawners made up 65.2% (SE = 10.2%) of the male harvest during May 1- 7, but just 24.6% (SE = 5.8%) by June 12-18 (Table 13). Within ¼ mile of shore, 70.5% (SE = 1.9%) of males harvested were spring spawners, but only 26.6% (SE = 4.0%) > 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, 31 of 32 fish originating from lower Cook Inlet for which maturity was determined were estimated to be spring spawners (Table 14). Similarly 13 of 14 fish from other Cook Inlet releases were spring spawners, but none of the 7 fish from non-Alaska origins were spring spawners (Table 14).

2000

In 2000, the harvest was predominately 3-ocean fish (59.2%, SE = 1.8%). The remaining harvest was composed of 21.7% (SE = 1.5%) 2-ocean, 18.0% (SE = 1.4%) 4-ocean, and 1.1%

Table 14.-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, 1999.

	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
Week																		
5/01 - 5/07	0	0.000		0	0.000		1	0.500	0.500	0	0.000		0	0.000		1	0.015	0.015
5/08 - 5/14	2	0.057	0.040	1	0.067	0.067	0	0.000		0	0.000		0	0.000		3	0.045	0.025
5/15 - 5/21	6	0.171	0.065	4	0.267	0.118	0	0.000		1	0.125	0.125	3	0.429	0.202	14	0.209	0.050
5/22 - 5/28	9	0.257	0.075	4	0.267	0.118	0	0.000		1	0.125	0.125	0	0.000		14	0.209	0.050
5/29 - 6/04	8	0.229	0.072	1	0.067	0.067	0	0.000		0	0.000		1	0.143	0.143	10	0.149	0.044
6/05 - 6/11	9	0.257	0.075	5	0.333	0.126	1	0.500	0.500	3	0.375	0.183	1	0.143	0.143	19	0.284	0.055
6/12 - 6/18	1	0.029	0.029	0	0.000		0	0.000		2	0.250	0.164	2	0.286	0.184	5	0.075	0.032
6/19 - 6/24	0	0.000		0	0.000		0	0.000		1	0.125	0.125	0	0.000		1	0.015	0.015
Shore Distance																		
<1/4 mile	30	0.857	0.060	9	0.600	0.131	0	0.000		1	0.125	0.125	5	0.714	0.184	45	0.67164	0.058
1/4 to 1/2	3	0.086	0.048	5	0.333	0.126	0	0.000		1	0.125	0.125	0	0.000		9	0.13433	0.042
1/2 to 3/4	0	0.000		0	0.000		0	0.000		1	0.125	0.125	0	0.000		1	0.01493	0.015
3/4 to 1	0	0.000		0	0.000		0	0.000		0	0.000		0	0.000		0	0.000	
> 1 mile	2	0.057	0.040	1	0.067	0.067	2	1.000		5	0.625	0.183	2	0.286	0.184	12	0.1791	0.047
Maturity [b]																		
Female																		
Immature	0	0.000		0	0.000		0	0.000		1	0.500	0.500	0	0.000		1	0.03704	0.037
Fall Spawner	0	0.000		1	0.200	0.200	0	0.000		1	0.500	0.500	0	0.000		2	0.07407	0.051
Spring Spawner	17	1.000		4	0.800	0.200	1	1.000		0	0.000		2	1.000		24	0.88889	0.062
Unknown	0	0.000		0	0.000		0	0.000		0	0.000		0	0.000		0	0.000	
Total	17	0.630	0.095	5	0.185	0.076	1	0.037	0.037	2	0.074	0.051	2	0.074	0.051	27	1.00	
Male																		
Immature	1	0.025	0.038	0	0.000	0.000	0	0.000		5	0.125	0.148	0	0.000		6	0.150	0.057
Spring Spawner	14	0.350	0.116	9	0.225	0.139	1	0.025		0	0.000		2	0.050	0.109	26	0.650	0.076
Unknown	3	0.075	0.064	1	0.025	0.052	0	0.000		1	0.025	0.070	3	0.075	0.132	8	0.200	0.064
Total	18	0.450	0.080	10	0.250	0.069	1	0.025	0.025	6	0.150	0.057	5	0.125	0.053	40	1.000	

-continued-

Table 14.-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]																		
Both[c]																		
Immature	1	0.029	0.029	0	0.000		0	0.000		6	0.750	0.164	0	0.000		7	0.10448	0.038
Fall Spawner	0	0.000		1	0.067	0.067	0	0.000		1	0.125	0.125	0	0.000		2	0.02985	0.021
Spring Spawner	31	0.886	0.055	13	0.867	0.091	2	1.000		0	0.000		4	0.571	0.202	50	0.74627	0.054
Unknown	3	0.086	0.048	1	0.067	0.067	0	0.000		1	0.125	0.125	3	0.429	0.202	8	0.1194	0.040
Statistical Area																		
244-70	33	0.943	0.040	14	0.933	0.067	0	0.000		2	0.250	0.164	5	0.714	0.184	54	0.80597	0.049
241-11	2	0.057	0.040	1	0.067	0.067	2	1.000		6	0.750	0.164	2	0.286	0.184	13	0.19403	0.049
241-60	0	0.000		0	0.000		0	0.000		0	0.000		0	0.000		0	0.000	
Total	35	1.00		15	1.00		2	1.00		8	1.00		7	1.00		67	1.00	
All	35	0.522	0.061	15	0.224	0.051	2	0.030	0.021	8	0.119	0.040	7	0.10448	0.038	67	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 = British Columbia, Washington and Oregon.

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

[c] Totals may not sum by sex because origin, sex and maturity are not known for all tags recovered.

(SE = 0.4%) 1-ocean fish (Table 15). Of the harvest represented by tagged stocks, 1.9% were 2-ocean, 17.6% were 3-ocean, and 10.2% were 4-ocean. Age 1-ocean and 5-ocean fish were not detected.

Among females, 60.8% (SE = 1.8%) were spring spawners, 22.6% (SE = 1.5%) were fall spawners, and 16.6% (SE = 1.4%) were immature (Table 16). The mean egg diameter of females decreased over the duration of the fishery and with distance from shore (Table 16). For males 59.1% (SE = 1.7%) were spring spawners and 40.9% (SE = 1.7%) were immature. Trends through time and with distance from shore were similar to females (Table 17).

Relative to origin, 24 of 25 Chinook salmon from lower Cook Inlet stocks were spring spawners (Table 18), whereas 16 of 22 fish from other Cook Inlet stocks were spring spawners (Table 18). Maturity composition for eight non-Alaska fish was determined of which one was a spring spawner (Table 18).

2001

Three-ocean Chinook salmon accounted for an estimated 56.9% (SE = 2.1%) of the harvest followed by 4-ocean (26.2%, SE = 1.9%) and 16.1% (SE = 1.6%) were 2-ocean (Table 19). Contribution of coded wire tags to the ocean age classes in the harvest was 36% 2-ocean, 21% 3-ocean and 17% 4-ocean (Table 9). One-ocean fish comprised less than 1% of the harvest and 5-ocean fish were not detected.

Among females, 51.0% (SE = 2.1%) were spring spawners, 27.6% (SE = 1.9%) were fall spawners, and 21.4% (SE = 1.7%) were immature (Table 20). The mean egg diameter of females was variable over the duration of the fishery and with distance from shore (Table 20). For males 63.0% (SE = 1.9%) were spring spawners and 37.0% (SE = 1.9%) were immature. Percent spawners was variable through the fishery, but decreased with distance from shore (Table 21).

Relative to origin, 19 of 20 Chinook salmon from lower Cook Inlet stocks were spring spawners (Table 22) and 16 of 18 fish from other Cook Inlet stocks were spring spawners (Table 22). For non-Alaska origin fish 3 of 24 were spring spawners (Table 22).

DISTANCE FROM SHORE AND LOCATION COMPOSITION

For 1999 through 2001 more Chinook salmon were harvested close to shore than farther out. The percentage of Chinook salmon hooked <¼ mile from shore was 73% (SE = 1%) during 1999, 70% (SE = 1%) in 2000, and 64% (SE = 1%) for 2001 (Tables 23, 24, and 25). In 1999, about 16% (SE = 1%) were hooked at a distance >1 mile from shore, 20% (SE = 1%) in 2000, and 14% (SE = 1%) in 2001. The balance of the harvest, typically less than 20%, was hooked at the intermediate distances (Tables 23, 24 and 25).

Chinook salmon were harvested predominantly in statistical area 244-70 (Tables 23, 24, 25). Typically statistical area 241-11, the area bordered by Bluff Point, accounted for an average of approximately 14% of the annual sampled harvest, while an average of less than about 1% was from the off-shore statistical area 241-60 (Tables 23, 24, 25).

Of recoveries from lower Cook Inlet and other Cook Inlet stocks in 1999 and 2000, the majority were hooked <¼ mile from shore, whereas non-Alaska fish tended to be hooked >1 mile from shore (Tables 14 and 18). Most of the lower Cook Inlet and other Cook Inlet fish were

Table 15.-Age composition by week, distance from shore, and statistical area for Chinook salmon harvested north of Bluff Point in the Cook Inlet marine recreational fishery, May 1 through June 24, 2000.

	1-Ocean			2-Ocean			3-Ocean			4-Ocean			5-Ocean			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		1	0.091		7	0.636	0.152	3	0.273	0.141	0	0.000		11	0.018	0.005
5/08 - 5/14	0	0.000		2	0.020	0.014	59	0.578	0.049	41	0.402	0.049	0	0.000		102	0.163	0.014
5/15 - 5/21	1	0.007	0.007	29	0.215	0.035	75	0.556	0.043	30	0.222	0.036	0	0.000		135	0.215	0.015
5/22 - 5/28	1	0.006	0.006	38	0.228	0.033	106	0.635	0.037	22	0.132	0.026	0	0.000		167	0.266	0.016
5/29 - 6/04	0	0.000		16	0.216	0.048	47	0.635	0.056	11	0.149	0.042	0	0.000		74	0.118	0.012
6/05 - 6/11	3	0.052	0.029	14	0.241	0.057	39	0.672	0.062	2	0.034	0.024	0	0.000		58	0.093	0.011
6/12 - 6/18	0	0.000		15	0.349	0.074	25	0.581	0.076	3	0.070	0.039	0	0.000		43	0.069	0.009
6/19 - 6/24	2	0.054	0.038	21	0.568	0.083	13	0.351	0.080	1	0.027	0.027	0	0.000		37	0.059	0.009
Total	7	0.011	0.004	136	0.217	0.015	371	0.592	0.018	113	0.180	0.014	0	0.000	0.000	627	1.000	
Shore Distance																		
<1/4 mile	3	0.007	0.004	71	0.160	0.017	273	0.613	0.023	98	0.220	0.020	0	0.000		445	0.710	0.017
1/4 to 1/2	0	0.000		3	0.214	0.114	8	0.571	0.137	3	0.214	0.114	0	0.000		14	0.022	0.006
1/2 to 3/4	0	0.000		2	0.182	0.122	9	0.818	0.122	0	0.000		0	0.000		11	0.018	0.005
3/4 to 1	0	0.000		8	0.000		10	0.500	0.115	2	0.100	0.069	0	0.000		20	0.032	0.007
> 1 mile	4	0.029	0.014	52	0.380	0.042	71	0.518	0.043	10	0.073	0.022	0	0.000		137	0.219	0.015
Total	7	0.011	0.004	136	0.217	0.015	371	0.592	0.018	113	0.180	0.014	0	0.000	0.000	627	1.000	
Statistical Area																		
244-70	4	0.008	0.004	81	0.168	0.017	294	0.610	0.022	103	0.214	0.019	0	0.000		482	0.769	0.016
241-11	3	0.023	0.013	52	0.391	0.042	70	0.526	0.043	8	0.060	0.021	0	0.000		133	0.212	0.015
241-60	0	0.000		3	0.250	0.131	7	0.583	0.149	2	0.167	0.112	0	0.000		12	0.019	0.005
Total	7	0.011	0.004	136	0.217	0.015	371	0.592	0.018	113	0.180	0.014	0	0.000		627	1.000	

Table 16.-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, May 1 through June 24, 2000.

	Maturity												Egg Diameter			
	Immature			Fall Spawner			Spring Spawner			All						
Females	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Mean	SE	min	max
Week																
5/01 - 5/07	3	0.176	0.095	7	0.412	0.123	7	0.412	0.123	17	0.023	0.006	3.4	0.37	0.7	5.8
5/08 - 5/14	12	0.077	0.021	32	0.205	0.032	112	0.718	0.036	156	0.214	0.015	4.3	0.10	1.0	6.4
5/15 - 5/21	11	0.071	0.021	26	0.167	0.030	119	0.763	0.034	156	0.214	0.015	4.3	0.09	1.5	6.3
5/22 - 5/28	11	0.075	0.022	24	0.164	0.031	111	0.760	0.035	146	0.200	0.015	4.2	0.09	1.0	6.4
5/29 - 6/04	25	0.240	0.042	26	0.250	0.043	53	0.510	0.049	104	0.142	0.013	3.4	0.15	0.5	6.1
6/05 - 6/11	17	0.243	0.052	22	0.314	0.056	31	0.443	0.060	70	0.096	0.011	3.3	0.18	0.8	6.6
6/12 - 6/18	33	0.647	0.068	11	0.216	0.058	7	0.137	0.049	51	0.070	0.009	3.3	0.18	1.0	6.0
6/19 - 6/24	9	0.300	0.085	17	0.567	0.092	4	0.133	0.063	30	0.041	0.007	2.6	0.24	1.0	6.0
Total	121	0.166	0.014	165	0.226	0.015	444	0.608	0.018	730	1.000		2.8	0.50	5.0	6.6
Shore Distance																
<1/4 mile	41	0.083	0.012	84	0.170	0.017	368	0.746	0.020	493	0.675	0.017	4.2	0.05	0.5	6.4
1/4 to 1/2	9	0.188	0.057	7	0.146	0.051	32	0.667	0.069	48	0.066	0.009	3.9	0.21	1.0	6.6
1/2 to 3/4	3	0.200	0.107	6	0.400	0.131	6	0.400	0.131	15	0.021	0.005	3.3	0.33	1.0	4.9
3/4 to 1	5	0.278		8	0.444		5	0.278		18	0.025	0.006	3.1	0.43	1.0	6.4
> 1 mile	63	0.404	0.039	60	0.385	0.039	33	0.212	0.033	156	0.214	0.015	2.7	0.12	0.5	6.1
Total	121	0.166	0.014	165	0.226	0.015	444	0.608	0.018	730	1.000		2.8	0.50	5.0	6.6
Statistical Area																
244-70	73	0.127	0.014	96	0.167	0.016	405	0.706	0.019	574	0.786	0.015	4.1	0.60	5.0	6.4
241-11	39	0.300	0.040	55	0.423	0.043	36	0.277	0.039	130	0.178	0.014	2.9	1.30	10.0	6.6
241-60	9	0.346	0.095	14	0.538	0.100	3	0.115	0.064	26	0.036	0.007	2.6	2.50	5.0	6.0
Total	121	0.166	0.014	165	0.226	0.015	444	0.608	0.018	730	1.000		2.8	0.50	5.0	6.6

Table 17.-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, May 1 through June 24, 2000.

Males	Maturity								
	Immature			Spring Spawner			Total		
	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Total	Prop.	SE
Week									
5/01 - 5/07	11	0.846	0.104	2	0.154	0.104	13	0.020	0.006
5/08 - 5/14	58	0.457	0.044	69	0.543	0.044	127	0.198	0.016
5/15 - 5/21	40	0.286	0.038	100	0.714	0.038	140	0.218	0.016
5/22 - 5/28	41	0.273	0.037	109	0.727	0.037	150	0.234	0.017
5/29 - 6/04	24	0.293	0.051	58	0.707	0.051	82	0.128	0.013
6/05 - 6/11	36	0.537	0.061	31	0.463	0.061	67	0.105	0.012
6/12 - 6/18	30	0.789	0.067	8	0.211	0.067	38	0.059	0.009
6/19 - 6/24	22	0.917	0.058	2	0.083	0.058	24	0.037	0.008
Total	262	0.409	0.017	379	0.591	0.017	641	1.000	
Shore Distance									
<1/4 mile	137	0.301	0.022	318	0.699	0.022	455	0.710	0.018
1/4 to 1/2	21	0.477	0.076	23	0.523	0.076	44	0.069	0.010
1/2 to 3/4	7	0.538	0.144	6	0.462	0.144	13	0.020	0.006
3/4 to 1	13	0.722	0.109	5	0.278	0.109	18	0.028	0.007
> 1 mile	84	0.757	0.041	27	0.243	0.041	111	0.173	0.015
Total	262	0.409	0.017	379	0.591	0.017	641	1.000	
Statistical Area									
244-70	169	0.328	0.021	346	0.672	0.021	515	0.803	0.016
241-11	88	0.759	0.040	28	0.241	0.040	116	0.181	0.015
241-60	5	0.500	0.167	5	0.500	0.167	10	0.016	0.005
Total	262	0.409	0.019	379	0.591	0.019	641	1.000	

Table 18.-Chinook salmon CWT recoveries summarized for stock origin by week, distance from shore, maturity, statistical area, and ocean age from the sample of CWTs harvested north of Bluff Point in the Cook Inlet marine recreational fishery, May 1 through June 24, 2000.

	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
Week																		
5/01 - 5/07	0	0.000		1	0.042	0.042	0	0.000		1	0.083	0.083	0	0.000		2	0.025	0.018
5/08 - 5/14	4	0.154	0.072	2	0.083	0.058	1	0.333	0.333	2	0.167	0.112	2	0.143	0.097	11	0.139	0.039
5/15 - 5/21	13	0.500	0.100	8	0.333	0.098	1	0.333	0.333	0	0.000	0.000	3	0.214	0.114	25	0.316	0.053
5/22 - 5/28	6	0.231	0.084	7	0.292	0.095	1	0.333	0.333	1	0.083	0.083	2	0.143	0.097	17	0.215	0.047
5/29 - 6/04	3	0.115	0.064	2	0.083	0.058	0	0.000		3	0.250	0.131	2	0.143	0.097	10	0.127	0.038
6/05 - 6/11	0	0.000		4	0.167	0.078	0	0.000		3	0.250	0.131	2	0.143	0.097	9	0.114	0.036
6/12 - 6/18	0	0.000		0	0.000		0	0.000		1	0.083	0.083	1	0.071	0.071	2	0.025	0.018
6/19 - 6/24	0	0.000		0	0.000		0	0.000		1	0.083	0.083	2	0.143	0.097	3	0.038	0.022
Shore Distance																		
<1/4 mile	24	0.923	0.053	22	0.917	0.058	0	0.000		4	0.333	0.142	9	0.643	0.133	59	0.747	0.049
1/4 to 1/2	2	0.077	0.053	0	0.000		1	0.333	0.333	1	0.083	0.083	0	0.000		4	0.051	0.025
1/2 to 3/4	0	0.000		1	0.042	0.042	0	0.000		0	0.000		2	0.143	0.097	3	0.038	0.022
3/4 to 1	0	0.000		0	0.000		0	0.000		1	0.000		0	0.000		1	0.013	0.013
> 1 mile	0	0.000		1	0.042	0.042	2	0.667	0.333	6	0.500	0.151	3	0.214	0.114	12	0.152	0.041
Maturity [b]																		
Female																		
Immature	0	0.000	0.000	0	0.000	0.000	0	0.000	0.000	2	0.400	0.245	0	0.000	0.000	2	0.061	0.042
Fall Spawner	0	0.000	0.000	2	0.250	0.164	2	0.667	0.333	2	0.400	0.245	0	0.000	0.000	6	0.182	0.068
Spring Spawner	13	1.000	0.000	6	0.750	0.164	1	0.333	0.333	1	0.200	0.200	4	1.000	0.000	25	0.758	0.076
Unknown	0	0.000	0.000	0	0.000	0.000	0	0.000	0.000	0	0.000	0.000	0	0.000	0.000	0	0.000	0.000
Total	13	1.00	0.000	8	1.00	0.000	3	1.00	0.000	5	1.00	0.000	4	1.00	0.000	33	1.00	
Male																		
Immature	1	0.077	0.077	4	0.121		0	0.000		3	0.091	0.051	1	0.030		9	0.273	0.079
Spring Spawner	11	0.846	0.104	10	0.303	0.081	0	0.000	0.000	0	0.000		4	0.121	0.058	25	0.758	0.076
Unknown	1	0.077	0.077	0	0.000	0.000	0	0.000		0	0.000	0.000	0	0.000	0.000	1	0.030	0.030
Total	13	0.371	0.083	14	0.400	0.084	0	0.000	0.000	3	0.086	0.048	5	0.143	0.060	35	1.000	

-continued-

Table 18.-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]																		
Both[C]																		
Immature	1	0.038	0.038	4	0.167	0.078	0	0.000	0.000	5	0.417	0.149	1	0.071	0.071	11	0.139	0.039
Fall Spawner	0	0.000	0.000	2	0.083	0.058	2	0.667	0.333	2	0.167	0.112	0	0.000	0.000	6	0.076	0.030
Spring Spawner	24	0.923	0.053	16	0.667	0.098	1	0.333	0.333	1	0.083	0.083	9	0.643	0.133	51	0.646	0.054
Unknown	1	0.038	0.117	2	0.083	0.058	0	0.000	0.000	4	0.333	0.142	4	0.286	0.125	11	0.139	0.039
Statistical Area																		
244-70	26	1.000		22	0.917	0.058	2	0.667	0.333	4	0.333	0.142	9	0.643	0.133	63	0.797	0.046
241-11	0	0.000		2	0.083	0.058	1	0.333	0.333	5	0.417	0.149	5	0.357	0.133	13	0.165	0.042
241-60	0	0.000		0	0.000		0	0.000		3	0.250	0.131	0	0.000		3	0.038	0.022
Total	26	1.00		24	1.00		3	1.00		12	1.00		14	1.00		79	1.00	
All	26	0.329	0.053	24	0.304	0.052	3	0.038	0.022	12	0.152	0.041	14	0.17722	0.043	79	1.00	

[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 = British Columbia, Washington and Oregon.

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

[c] Totals may not sum by sex because origin, sex and maturity are not known for all tags recovered.

Table 19.-Age composition by week, distance from shore, and statistical area for Chinook salmon harvested north of Bluff Point in the Cook Inlet marine recreational fishery, May 1 through June 24, 2001.

	1-Ocean			2-Ocean			3-Ocean			4-Ocean			5-Ocean			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		1	0.200		1	0.200	0.200	3	0.600	0.245	0	0.000		5	0.010	0.004
5/08 - 5/14	0	0.000		12	0.088	0.024	89	0.650	0.041	36	0.263	0.038	0	0.000		137	0.282	0.019
5/15 - 5/21	0	0.000		3	0.034	0.019	53	0.602	0.052	32	0.364	0.052	0	0.000		88	0.181	0.016
5/22 - 5/28	3	0.027	0.015	27	0.239	0.040	54	0.478	0.047	29	0.257	0.041	0	0.000		113	0.233	0.018
5/29 - 6/04	0	0.000		30	0.288	0.045	55	0.529	0.049	19	0.183	0.038	0	0.000		104	0.214	0.017
6/05 - 6/11	1	0.029	0.029	4	0.114	0.055	22	0.629	0.083	8	0.229	0.072	0	0.000		35	0.072	0.011
6/12 - 6/18	0	0.000		1	0.333	0.333	2	0.667	0.333	0	0.000	0.000	0	0.000		3	0.006	0.003
6/19 - 6/24	0	0.000		0	0.000	0.000	0	0.000	0.000	0	0.000	0.000	0	0.000		0	0.000	
Total	4	0.008	0.004	78	0.161	0.016	276	0.569	0.021	127	0.262	0.019	0	0.000	0.000	485	1.000	
Shore Distance																		
<1/4 mile	4	0.012	0.006	56	0.167	0.020	182	0.543	0.027	93	0.278	0.025	0	0.000		335	0.691	0.020
1/4 to 1/2	0	0.000		11	0.155	0.043	42	0.592	0.059	18	0.254	0.052	0	0.000		71	0.146	0.015
1/2 to 3/4	0	0.000		1	0.250	0.250	1	0.250	0.250	2	0.500	0.289	0	0.000		4	0.008	0.004
3/4 to 1	0	0.000		2	0.000		10	0.714		2	0.143		0	0.000		14	0.029	0.007
> 1 mile	0	0.000		8	0.131	0.044	41	0.672	0.061	12	0.197	0.051	0	0.000		61	0.126	0.014
Total	4	0.008	0.004	78	0.161	0.016	276	0.569	0.021	127	0.262	0.019	0	0.000		485	1.000	
Statistical Area																		
244-70	4	0.010	0.005	68	0.168	0.019	223	0.551	0.025	110	0.272	0.022	0	0.000		405	0.835	0.016
241-11	0	0.000		9	0.164	0.050	33	0.600	0.067	13	0.236	0.058	0	0.000		55	0.113	0.013
241-60	0	0.000		1	0.040	0.040	20	0.800	0.082	4	0.160	0.075	0	0.000		25	0.052	0.009
Total	4	0.008	0.004	78	0.161	0.016	276	0.569	0.021	127	0.262	0.019	0	0.000		485	1.000	

Table 20.-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, May 1 through June 24, 2001.

Females	Maturity												Egg Diameter			
	Immature			Fall Spawner			Spring Spawner			All						
	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Mean	SE	min	max
Week																
5/01 - 5/07	0	0.000		3	0.300	0.153	7	0.700	0.153	10	0.012	0.004	4.2	0.33	3.0	6.0
5/08 - 5/14	46	0.293	0.036	54	0.344	0.038	57	0.363	0.039	157	0.182	0.016	3.1	0.11	1.0	6.5
5/15 - 5/21	23	0.211	0.039	39	0.358	0.046	47	0.431	0.048	109	0.126	0.014	3.4	0.14	1.0	6.5
5/22 - 5/28	28	0.154	0.027	36	0.198	0.030	118	0.648	0.035	182	0.210	0.017	4.0	0.10	0.9	6.9
5/29 - 6/04	12	0.145	0.039	17	0.205	0.045	54	0.651	0.053	83	0.096	0.012	3.9	0.16	0.8	6.5
6/05 - 6/11	10	0.345	0.090	7	0.241	0.081	12	0.414	0.093	29	0.034	0.007	3.2	0.31	1.0	6.2
6/12 - 6/18	6	0.462	0.144	5	0.385	0.140	2	0.154	0.104	13	0.015	0.005	2.5	0.45	0.5	6.2
6/19 - 6/24	0	0.000		0	0.000		1	1.000		1	0.001	0.001	4.0		0.4	4.0
Total	125	0.214	0.017	161	0.276	0.019	298	0.510	0.021	584	1.000		3.6	0.06	0.5	6.9
Shore Distance																
<1/4 mile	75	0.199	0.021	107	0.285	0.023	194	0.516	0.026	376	0.435	0.021	3.6	0.07	0.5	6.9
1/4 to 1/2	23	0.221	0.041	18	0.173	0.037	63	0.606	0.048	104	0.120	0.013	3.8	0.15	0.8	6.5
1/2 to 3/4	0	0.000		5	0.333	0.126	10	0.667	0.126	15	0.017	0.005	3.9	0.24	2.2	5.2
3/4 to 1	1	0.143	0.143	5	0.714	0.184	1	0.143	0.143	7	0.008	0.004	2.9	0.62	1.8	6.5
> 1 mile	26	0.317	0.052	26	0.317	0.052	30	0.366	0.054	82	0.095	0.012	3.2	0.19	1.0	6.5
Total	125	0.214	0.017	161	0.276	0.019	298	0.510	0.021	584	1.000		3.6	0.06	0.5	6.9
Statistical Area																
244-70	102	0.204	0.018	129	0.257	0.020	270	0.539	0.022	501	0.579	0.020	3.7	0.07	0.8	6.9
241-11	17	0.262	0.055	25	0.385	0.061	23	0.354	0.060	65	0.075	0.011	3.1	0.02	0.5	6.5
241-60	6	0.333	0.114	7	0.389	0.118	5	0.278	0.109	18	0.021	0.006	3.1	0.36	1.0	6.0
Total	125	0.214	0.017	161	0.276	0.019	298	0.510	0.021	584	1.000		3.6	0.06	0.5	6.9

Table 21.-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, May 1 through June 24, 2001.

Males	Maturity								
	Immature			Spring Spawner			Total		
	Sample Size	Prop.	SE	Sample Size	Prop.	SE	Total	Prop.	SE
Week									
5/01 - 5/07	2	0.200	0.133	8	0.800	0.133	10	0.016	0.005
5/08 - 5/14	75	0.487	0.040	79	0.513	0.040	154	0.240	0.017
5/15 - 5/21	51	0.537	0.051	44	0.463	0.051	95	0.148	0.014
5/22 - 5/28	46	0.204	0.027	179	0.796	0.027	225	0.351	0.019
5/29 - 6/04	34	0.296	0.043	81	0.704	0.043	115	0.179	0.015
6/05 - 6/11	17	0.567	0.092	13	0.433	0.092	30	0.047	0.008
6/12 - 6/18	11	1.000	0.000	0	0.000	0.000	11	0.017	0.005
6/19 - 6/24	1	1.000		0	0.000		1	0.002	0.002
Total	237	0.370	0.019	404	0.630	0.019	641	1.000	
Shore Distance									
<1/4 mile	124	0.289	0.022	305	0.711	0.022	429	0.669	0.019
1/4 to 1/2	39	0.351	0.046	72	0.649	0.046	111	0.173	0.015
1/2 to 3/4	11	0.647	0.119	6	0.353	0.119	17	0.027	0.006
3/4 to 1	6	0.750	0.164	2	0.250	0.164	8	0.012	0.004
> 1 mile	57	0.750	0.050	19	0.250	0.050	76	0.119	0.013
Total	237	0.370	0.019	404	0.630	0.019	641	1.000	
Statistical Area									
244-70	171	0.309	0.020	383	0.691	0.020	554	0.864	0.014
241-11	56	0.767	0.050	17	0.233	0.050	73	0.114	0.013
241-60	10	0.714	0.125	4	0.286	0.125	14	0.022	0.006
Total	237	0.370	0.019	404	0.630	0.019	641	1.000	

Table 22.-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, 2001.

	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
Week																		
5/01 - 5/07	0	0.000		0	0.000	0.000	0	0.000		1	0.038	0.038	0	0.000		1	0.011	0.011
5/08 - 5/14	1	0.048	0.048	7	0.389	0.118	3	0.231	0.122	11	0.423	0.099	0	0.000		22	0.237	0.044
5/15 - 5/21	4	0.190	0.088	2	0.111	0.076	0	0.000	0.000	3	0.273	0.141	2	0.133	0.091	11	0.118	0.034
5/22 - 5/28	11	0.524	0.112	8	0.444	0.121	8	0.615	0.140	5	0.192	0.079	8	0.533	0.133	40	0.430	0.052
5/29 - 6/04	4	0.190	0.088	0	0.000	0.000	1	0.077	0.077	3	0.115	0.064	4	0.267	0.118	12	0.129	0.035
6/05 - 6/11	1	0.048	0.048	1	0.056	0.056	1	0.077	0.077	2	0.077	0.053	1	0.067	0.067	6	0.065	0.026
6/12 - 6/18	0	0.000		0	0.000		0	0.000		1	0.038	0.038	0	0.000		1	0.011	0.011
6/19 - 6/24	0	0.000		0	0.000		0	0.000		0	0.000		0	0.000		0	0.000	
Shore Distance																		
<1/4 mile	19	0.905	0.066	13	0.722	0.109	9	0.692	0.133	16	0.615	0.097	8	0.533	0.133	65	0.699	0.048
1/4 to 1/2	0	0.000	0.000	4	0.222		1	0.077	0.077	3	0.115	0.064	5	0.000		13	0.140	0.036
1/2 to 3/4	0	0.000		0	0.000	0.000	0	0.000		0	0.000		0	0.000		0	0.000	
3/4 to 1	0	0.000		0	0.000		2	0.154	0.104	1	0.000		0	0.000		3	0.032	0.018
> 1 mile	2	0.095	0.066	1	0.056	0.056	1	0.077	0.077	6	0.231	0.084	2	0.133	0.091	12	0.129	0.035
Maturity [b]																		
Female																		
Immature	1	0.100	0.100	0	0.000		1	0.100	0.100	8	0.444	0.121	1	0.167	0.167	11	0.212	0.057
Fall Spawner	0	0.000		0	0.000		5	0.500	0.167	8	0.444	0.121	0	0.000	0.000	13	0.250	0.061
Spring Spawner	9	0.900	0.100	8	1.000		4	0.400	0.163	2	0.111	0.076	4	0.667	0.211	27	0.519	0.070
Unknown	0	0.000		0	0.000		0	0.000		0	0.000		1	0.167	0.167	1	0.019	0.019
Total	10	0.19	0.055	8	0.15	0.051	10	0.19	0.055	18	0.35	0.067	6	0.12	0.045	52	1.00	
Male																		
Immature	0	0.000		2	0.200	0.133	1	0.333	0.333	5	0.833	0.167	1	0.200	0.200	9	0.265	0.077
Spring Spawner	10	1.000		8	0.800	0.133	1	0.333	0.333	1	0.167	0.167	4	0.800	0.200	24	0.706	0.079
Unknown	0	0.000		0	0.000		1	0.333	0.333	0	0.000		0	0.000		1	0.029	0.029
Total	10	0.294	0.079	10	0.294	0.079	3	0.088	0.049	6	0.176	0.066	5	0.147	0.062	34	1.000	

-continued-

Table 22.-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]																		
Both[C]																		
Immature	1	0.048	0.048	2	0.111	0.076	2	0.154	0.104	13	0.500	0.100	2	0.133	0.091	20	0.215	0.043
Fall Spawner	0	0.000	0.000	0	0.000		5	0.385	0.140	8	0.308	0.092	0	0.000		13	0.140	0.036
Spring Spawner	19	0.905	0.066	16	0.889	0.076	5	0.385	0.140	3	0.115	0.064	9	0.600	0.131	52	0.559	0.052
Unknown	1	0.048	0.048	0	0.000		1	0.077	0.077	2	0.077	0.053	4	0.267	0.118	8	0.086	0.029
Statistical Area																		
244-70	19	0.905	0.066	17	0.944	0.056	10	0.769	0.122	20	0.769	0.084	13	0.867	0.091	79	0.849	0.037
241-11	2	0.095	0.066	1	0.056	0.056	2	0.154	0.104	6	0.231	0.084	1	0.067	0.067	12	0.129	0.035
241-60	0	0.000		0	0.000		1	0.077	0.077	0	0.000		1	0.000		2	0.022	0.015
Total	21	1.00		18	1.00		13	1.00		26	1.00		15	0.93		93	1.00	
All	21	0.226	0.044	18	0.194	0.041	13	0.140	0.036	26	0.280	0.047	15	0.16129	0.038	93	1.00	

[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 has 2 categories, immature or spring spawner, female has 3 categories, immature, fall spawner, spring spawner.

[c] Totals may not sum by sex because origin, sex and maturity are not known for all tags recovered.

Table 23.-Summary of unmarked and CWT recovered Chinook salmon harvested north of Bluff Point by week, statistical area, distance from shore, Cook Inlet marine recreational fishery, May 1 through June 24, 1999.

	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				
5/01 - 5/07	73	0.037	0.004	0.986	0.014	1	0.015	0.015	0.014	0.014	74	0.037	0.003
5/08 - 5/14	292	0.150	0.008	0.990	0.006	3	0.045	0.025	0.010	0.006	295	0.146	0.006
5/15 - 5/21	437	0.224	0.009	0.969	0.008	14	0.209	0.050	0.031	0.008	451	0.223	0.007
5/22 - 5/28	384	0.197	0.009	0.965	0.009	14	0.209	0.050	0.035	0.009	398	0.197	0.007
5/29 - 6/04	259	0.133	0.008	0.963	0.012	10	0.149	0.044	0.037	0.012	269	0.133	0.006
6/05 - 6/11	318	0.163	0.008	0.944	0.013	19	0.284	0.055	0.056	0.013	337	0.167	0.006
6/12 - 6/18	137	0.070	0.006	0.965	0.016	5	0.075	0.032	0.035	0.016	142	0.070	0.004
6/19 - 6/24	52	0.027	0.004	0.981	0.019	1	0.015	0.015	0.019	0.019	53	0.026	0.003
Total	1,952	1.000		0.967	0.004	67	1.000		0.033	0.004	2,019	1.000	
Shore Distance		By Distance		Within Distance			By Distance		Within Distance				
< 1/4 mile	1,430	0.733	0.010	0.969	0.004	45	0.672	0.058	0.031	0.004	1,475	0.731	0.008
1/4 to 1/2	188	0.096	0.007	0.954	0.015	9	0.134	0.042	0.046	0.015	197	0.098	0.005
1/2 to 3/4	22	0.011	0.002	0.957	0.043	1	0.015	0.015	0.043	0.043	23	0.011	0.002
3/4 to 1	7	0.004	0.001	1.000	0.000	0	0.000	0.000	0.000	0.000	7	0.003	0.001
> 1 mile	305	0.156	0.008	0.962	0.011	12	0.179	0.047	0.038	0.011	317	0.157	0.006
Total	1,952	1.000		0.967	0.004	13	1.000		0.006	0.002	2,019	1.000	
Statistical Area		By Area		Within Area			By Area		Within Area				
244-70	1,674	0.858	0.008	0.969	0.004	54	0.806	0.049	0.031	0.004	1,728	0.856	0.006
241-11	268	0.137	0.008	0.954	0.013	13	0.194	0.049	0.046	0.013	281	0.139	0.006
241-60	10	0.005	0.002	1.000	0.000	0	0.000	0.000	0.000	0.000	10	0.005	0.001
Total	1,952	1.000		0.967	0.004	67	1.000		0.033	0.004	2,019	1.000	

Table 24.-Summary of unmarked and CWT recovered Chinook salmon harvested north of Bluff Point by week, statistical area, distance from shore, Cook Inlet marine recreational fishery, May 1 through June 24, 2000.

	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				
5/01 - 5/07	41	0.023	0.004	0.953	0.032	2	0.025	0.018	0.047	0.032	43	0.023	0.003
5/08 - 5/14	368	0.209	0.010	0.971	0.009	11	0.139	0.039	0.029	0.009	379	0.206	0.007
5/15 - 5/21	383	0.218	0.010	0.939	0.012	25	0.316	0.053	0.061	0.012	408	0.222	0.008
5/22 - 5/28	374	0.213	0.010	0.957	0.010	17	0.215	0.047	0.043	0.010	391	0.213	0.007
5/29 - 6/04	242	0.138	0.008	0.960	0.012	10	0.127	0.038	0.040	0.012	252	0.137	0.006
6/05 - 6/11	176	0.100	0.007	0.951	0.016	9	0.114	0.036	0.049	0.016	185	0.101	0.006
6/12 - 6/18	107	0.061	0.006	0.982	0.013	2	0.025	0.018	0.018	0.013	109	0.059	0.004
6/19 - 6/24	69	0.039	0.005	0.958	0.024	3	0.038	0.022	0.042	0.024	72	0.039	0.004
Total	1,760	1.000		0.957	0.005	79	1.000		0.043	0.005	1,839	1.000	
Shore Distance		By Distance		Within Distance			By Distance		Within Distance				
< 1/4 mile	1,237	0.703	0.011	0.954	0.006	59	0.747	0.049	0.046	0.006	1,296	0.705	0.008
1/4 to 1/2	102	0.058	0.006	0.962	0.019	4	0.051	0.025	0.038	0.019	106	0.058	0.004
1/2 to 3/4	27	0.015	0.003	0.900	0.056	3	0.038	0.022	0.100	0.056	30	0.016	0.002
3/4 to 1	39	0.022	0.004	0.975	0.025	1	0.013	0.013	0.025	0.025	40	0.022	0.003
> 1 mile	355	0.202	0.010	0.967	0.009	12	0.152	0.041	0.033	0.009	367	0.200	0.007
Total	1,760	1.000		0.957	0.005	16	1.000		0.009	0.002	1,839	1.000	
Statistical Area		By Stat Area		Within Stat Area			By Stat Area		Within Stat Area				
244-70	1,403	0.797	0.010	0.957	0.005	63	0.797	0.046	0.043	0.005	1,466	0.726	0.008
241-11	309	0.176	0.009	0.960	0.011	13	0.165	0.042	0.040	0.011	322	0.159	0.007
241-60	48	0.027	0.004	0.941	0.033	3	0.038	0.022	0.059	0.033	51	0.025	0.003
Total	1,760	1.000		0.957	0.005	79	1.000		0.043	0.005	1,839	1.000	

Table 25.-Summary of unmarked and CWT recovered Chinook salmon harvested north of Bluff Point by week, statistical area, distance from shore, Cook Inlet marine recreational fishery, May 1 through June 24, 2001.

	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				
5/01 - 5/07	31	0.021	0.004	0.969	0.031	1	0.011	0.011	0.031	0.031	32	0.021	0.003
5/08 - 5/14	389	0.267	0.012	0.946	0.011	22	0.237	0.044	0.054	0.011	411	0.265	0.009
5/15 - 5/21	235	0.161	0.010	0.955	0.013	11	0.118	0.034	0.045	0.013	246	0.159	0.007
5/22 - 5/28	471	0.323	0.012	0.922	0.012	40	0.430	0.052	0.078	0.012	511	0.329	0.009
5/29 - 6/04	249	0.171	0.010	0.954	0.013	12	0.129	0.035	0.046	0.013	261	0.168	0.007
6/05 - 6/11	56	0.038	0.005	0.903	0.038	6	0.065	0.026	0.097	0.038	62	0.040	0.004
6/12 - 6/18	26	0.018	0.003	0.963	0.037	1	0.011	0.011	0.037	0.037	27	0.017	0.003
6/19 - 6/24	2	0.001	0.001	1.000		0	0.000		0.000	0.000	2	0.001	0.001
Total	1,459	1.000		0.940	0.006	93	1.000		0.060	0.006	1,552	1.000	
Shore Distance		By Distance		Within Distance			By Distance		Within Distance				
< 1/4 mile	940	0.644	0.013	0.935	0.008	65	0.699	0.048	0.065	0.008	1,005	0.648	0.009
1/4 to 1/2	253	0.173	0.010	0.951	0.013	13	0.140	0.036	0.049	0.013	266	0.171	0.007
1/2 to 3/4	35	0.024	0.004	1.000	0.000	0	0.000	0.000	0.000	0.000	35	0.023	0.003
3/4 to 1	29	0.020	0.004	0.906	0.052	3	0.032	0.018	0.094	0.052	32	0.021	0.003
> 1 mile	202	0.138	0.009	0.944	0.016	12	0.129	0.035	0.056	0.016	214	0.138	0.007
Total	1,459	1.000		0.940	0.006	93	1.000		0.060	0.006	1,552	1.000	
Statistical Area		By Area		Within Area			By Area		Within Area				
244-70	1,229	0.842	0.010	0.940	0.007	79	0.849	0.037	0.060	0.007	1,308	0.843	0.007
241-11	189	0.130	0.009	0.940	0.017	12	0.129	0.035	0.060	0.017	201	0.130	0.006
241-60	41	0.028	0.004	0.953	0.032	2	0.022	0.015	0.047	0.032	43	0.028	0.003
Total	1,459	1.000		0.940	0.006	93	1.000		0.060	0.006	1,552	1.000	

recovered in statistical area 244-70. Conversely, most of the non-Alaska fish were recovered in statistical area 241-11 (Tables 14 and 18). During 2001 harvest of lower Cook Inlet and other Cook Inlet fish followed a similar pattern relative to distance and location to that of 1999 and 2000. However, the majority of non-Alaska fish were recovered <¼ mile of shore (61.5%) and in statistical area 244-70 (76.9%) (Table 22).

HARVEST CHARACTERISTICS SOUTH OF BLUFF POINT

1999

We sampled 136 Chinook salmon harvested south of Bluff Point, 12 of which were marked (Tables 26, 27). The number of fish examined peaked during the week of May 22 through May 28 when 46 Chinook salmon were observed, or about 34% (SE = 4%) of the harvest. Twenty-nine percent (SE = 4%, n = 40) were hooked >1 mile from shore and 30% (SE = 4%, n = 41) of Chinook salmon sampled were harvested <¼ mile of shore (Table 26).

Among coded wire tag recoveries, five Cook Inlet origin fish (lower Cook Inlet and other Cook Inlet combined) were spring spawners and all non-Alaska origin fish were either immature or fall spawners (Table 27). Lastly, about 29.4% (SE = 3.9%) of the marked Chinook salmon harvested were hooked >1 mile from shore (Table 26), and 4 of the 12 marked fish examined were harvested in statistical area 241-60 (Table 26).

2000

Only two of 73 Chinook salmon examined from south of Bluff Point had CWTs and did not have adipose fins (Table 28). The majority of the examined harvest (71%) occurred by May 28 (Table 28). Forty-two percent (SE = 5.9%, n = 30) of the unmarked fish were hooked >1 mile from shore. Both tags recovered were of non-Alaska origin (Appendix A2).

2001

From a sample of 263 Chinook salmon harvested south of Bluff Point, 18 had an adipose finclip (Tables 29, 30, Appendix A2). Unlike the 2 previous years, the majority of Chinook salmon examined was harvested after June 4 (Tables 26, 28, 29). For the 18 recoveries 7 were from stocks in the non-Alaska group, 5 were from the lower Cook Inlet, 1 was from the other Alaska group and 5 tags could not be decoded.

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 1999 through 2001.

Beginning with the marked wild stock at Deep Creek, our contribution estimates were relatively small, even though tagged cohorts of 3- and 4-ocean age returned during each year sampled. For 1999 and 2000 (no tags recovered in 2001) the estimated marine harvest was 156 and 77, respectively, while inriver returns (escapement plus sport harvest) were 2,797 and 2,085. Thus exploitation rates for the Deep Creek return in the marine sport fishery were about 0.05 in 1999 and 0.07 in 2000. Further, weir counts from 1999 and 2000 are incomplete (Begich 2002; Begich and Evans 2005). In other words the inriver return estimates are biased low or are minimum counts because it is known Chinook salmon began immigrating into Deep Creek

Table 26.-Summary of unmarked Chinook salmon and those with CWTs recovered from harvest south of Bluff Point by week, statistical area, distance from shore, Cook Inlet marine recreational fishery, May 1 through June 24, 1999.

South of Bluff Point	Unmarked Chinook					CWT-Marked Chinook			Total Chinook		
	Number Sampled	Proportion	SE	Proportion	SE	Number Sampled	Proportion	Proportion	Number Sampled	Prop.	SE
Week		By Week		Within Week			By Week	Within Week			
5/01 - 5/07	0	0.000		0.000		0	0.000	0.000	0	0.000	
5/08 - 5/14	8	0.065	0.022	1.000	0.000	0	0.000	0.000	8	0.059	0.020
5/15 - 5/21	27	0.218	0.037	0.900	0.056	3	0.250	0.100	30	0.221	0.036
5/22 - 5/28	42	0.339	0.043	0.913	0.042	4	0.333	0.087	46	0.338	0.041
5/29 - 6/04	10	0.081	0.025	0.909	0.091	1	0.083	0.091	11	0.081	0.023
6/05 - 6/11	7	0.056	0.021	1.000	0.000	0	0.000	0.000	7	0.051	0.019
6/12 - 6/18	18	0.145	0.032	0.900	0.069	2	0.167	0.100	20	0.147	0.030
6/19 - 6/24	12	0.097	0.027	0.857	0.097	2	0.167	0.143	14	0.103	0.026
Total	124	1.000		0.912	0.024	12	1.000	0.088	136	1.000	
Shore Distance		By Distance		Within Distance			By Distance	Within Distance			
< 1/4 mile	40	0.323	0.042	0.976	0.024	1	0.083	0.024	41	0.301	0.039
1/4 to 1/2	36	0.290	0.041	0.900	0.048	4	0.333	0.100	40	0.294	0.039
1/2 to 3/4	9	0.073	0.023	0.818	0.122	2	0.167	0.182	11	0.081	0.023
3/4 to 1	4	0.032	0.016	1.000	0.000	0	0.000	0.000	4	0.029	0.015
> 1 mile	35	0.282	0.041	0.875	0.053	5	0.417	0.125	40	0.294	0.039
Total	124	1.000		0.912	0.024	12	1.000	0.088	136	1.000	

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Table 26.-Page 2 of 2.

South of Bluff Point	Unmarked Chinook					CWT-Marked Chinook			Total Chinook		
	Number Sampled	Proportion	SE	Proportion	SE	Number Sampled	Proportion	Proportion	Number Sampled	Prop.	SE
Statistical Area		By Area		Within Area			By Area	Within Area			
241-11	32	0.258	0.039	0.914	0.048	3	0.250	0.086	35	0.257	0.038
241-60	30	0.242	0.039	0.882	0.056	4	0.333	0.118	34	0.250	0.037
241-15	7	0.056	0.021	0.875	0.125	1	0.083	0.125	8	0.059	0.020
241-16	2	0.016	0.011	1.000	0.000	0	0.000	0.000	2	0.015	0.010
241-17	24	0.194	0.036	0.923	0.053	2	0.167	0.077	26	0.191	0.034
241-20	2	0.016	0.011	1.000	0.000	0	0.000	0.000	2	0.015	0.010
241-30	8	0.065	0.022	1.000	0.000	0	0.000	0.000	8	0.059	0.020
232-01	17	0.137	0.031	1.000	0.000	0	0.000	0.000	17	0.125	0.028
232-02	2	0.016	0.011	0.500	0.289	2	0.167	0.500	4	0.029	0.015
Total	124	1.000		0.912	0.024	12	1.000	0.088	136	1.000	

Table 27.-Chinook salmon CWT recoveries summarized for stock origin by week, distance from shore, maturity, and statistical area from the sample of CWTs harvested south of Bluff Point in the Cook Inlet marine recreational fishery, May 1 through June 24, 1999.

South of Bluff Point	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
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	1	0.250	0.250	0	0.000		0	0.000		1	0.250	0.250	1	0.333	0.333	3	0.250	0.131
5/22 - 5/28	1	0.250	0.250	0	0.000		0	0.000		1	0.250	0.250	2	0.667	0.333	4	0.333	0.142
5/29 - 6/04	1	0.250	0.250	0	0.000		0	0.000		0	0.000		0	0.000		1	0.083	0.083
6/05 - 6/11	0	0.000		0	0.000		0	0.000		0	0.000		0	0.000		0	0.000	
6/12 - 6/18	0	0.000		1	1.000		0	0.000		1	0.250	0.250	0	0.000		2	0.167	0.112
6/19 - 6/24	1	0.250	0.250	0	0.000		0	0.000		1	0.250	0.250	0	0.000		2	0.167	0.112
Shore Distance																		
<1/4 mile	1	0.250	0.250	0	0.000		0	0.000		0	0.000		0	0.000		1	0.083	0.083
1/4 to 1/2	2	0.500	0.289	0	0.000		0	0.000		1	0.250	0.250	1	0.333	0.333	4	0.333	0.142
1/2 to 3/4	1	0.250	0.250	1	1.000		0	0.000		0	0.000		0	0.000		2	0.167	0.112
3/4 to 1	0	0.000		0	0.000		0	0.000		0	0.000		0	0.000		0	0.000	
> 1 mile	0	0.000		0	0.000		0	0.000		3	0.750	0.250	2	0.667	0.333	5	0.417	0.149
Maturity [b]																		
Female																		
Immature	0	0.000	0.000	0	0.000		0	0.000		1	0.500		0	0.000		1	0.167	0.167
Fall Spawner	0	0.000		0	0.000		0	0.000		1	0.500		0	0.000		1	0.167	0.167
Spring Spawner	3	1.000	0.000	0	0.000		0	0.000		0	0.000		1	1.000		4	0.667	0.211
Unknown	0	0.000		0	0.000		0	0.000		0	0.000			0.000		0	0.000	0.000
Total	3	0.50	0.224	0	0.00		0	0.00		2	0.33	0.211	1	0.17	0.167	6	1.00	
Male																		
Immature	0	0.000		0	0.000		0	0.000		2	1.000	0.000	0	0.000		2	0.500	0.289
Spring Spawner	1	1.000		1	1.000		0	0.000		0	0.000	0.000	0	0.000		2	0.500	0.289
Unknown	0	0.000		0	0.000		0	0.000		0	0.000		0	0.000		0	0.000	0.000
Total	1	0.250	0.250	1	0.250	0.250	0	0.000	0.000	2	0.500	0.289	0	0.000	0.000	4	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]																		
Both[c]																		
Immature	0	0.000		0	0.000		0	0.000		3	0.750	0.250	0	0.000		3	0.250	0.131
Fall Spawner	0	0.000		0	0.000		0	0.000		1	0.250	0.250	0	0.000		1	0.083	0.083
Spring Spawner	4	1.000		1	1.000		0	0.000		0	0.000		1	0.333	0.333	6	0.500	0.151
Unknown	0	0.000		0	0.000		0	0.000		0	0.000		2	0.667	0.333	2	0.167	0.112
Statistical Area																		
241-11	0	0.000		1	1.000		0	0.000		1	0.250	0.250	1	0.333	0.333	3	0.250	0.131
241-60	0	0.000		0	0.000		0	0.000		2	0.500	0.289	2	0.667	0.333	4	0.333	0.142
241-15	1	0.250	0.250	0	0.000		0	0.000		0	0.000		0	0.000		1	0.083	0.083
241-16	0	0.000		0	0.000		0	0.000		0	0.000		0	0.000		0	0.000	0.000
241-17	2	0.500	0.289	0	0.000		0	0.000		0	0.000		0	0.000		2	0.167	0.112
241-20	0	0.000		0	0.000		0	0.000		0	0.000		0	0.000		0	0.000	
241-30	0	0.000		0	0.000		0	0.000		0	0.000		0	0.000		0	0.000	
232-01	0	0.000		0	0.000		0	0.000		1	0.250	0.250	0	0.000		1	0.083	0.083
232-02	1	0.250	0.250	0	0.000		0	0.000		0	0.000		0	0.000		1	0.083	0.083
Total	4	1.000		1	1.000		0	0.000		4	1.000		3	1.000		12	1.000	
All	4	0.333	0.142	1	0.083	0.083	0	0.000		4	0.333	0.142	3	0.250	0.131	12	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 has 2 categories, immature or spring spawner, female has 3 categories, immature, fall spawner, spring spawner.

[c] Totals may not sum by sex because origin, sex and maturity are not known for all tags recovered.

Table 28.-Summary of unmarked and CWT recovered Chinook salmon harvested south of Bluff Point by week, statistical area, distance from shore, Cook Inlet marine recreational fishery, May 1 through June 24, 2000.

South of Bluff Point	Unmarked Chinook					CWT-Marked Chinook			Total Chinook		
	Number Sampled	Proportion	SE	Proportion	SE	Number Sampled	Proportion	Proportion	Number Sampled	Prop.	SE
Week		By Week		Within Week			By Week	Within Week			
5/01 - 5/07	4	0.056	0.028	0.000		0	0.000	0.000	4	0.055	0.027
5/08 - 5/14	10	0.141	0.042	1.000	0.000	0	0.000	0.000	10	0.137	0.041
5/15 - 5/21	21	0.296	0.055	0.955	0.045	1	0.500	0.045	22	0.301	0.054
5/22 - 5/28	15	0.211	0.049	0.938	0.063	1	0.500	0.063	16	0.219	0.049
5/29 - 6/04	10	0.141	0.042	1.000	0.000	0	0.000	0.000	10	0.137	0.041
6/05 - 6/11	7	0.099	0.036	1.000	0.000	0	0.000	0.000	7	0.096	0.035
6/12 - 6/18	0	0.000		0.000		0	0.000	0.000	0	0.000	0.000
6/19 - 6/24	4	0.056	0.028	1.000	0.000	0	0.000	0.000	4	0.055	0.027
Total	71	1.000		0.973	0.019	2	1.000	0.027	73	1.000	
Shore Distance		By Distance		Within Distance			By Distance	Within Distance			
< 1/4 mile	8	0.113	0.038	1.000		0	0.000	0.000	8	0.110	0.037
1/4 to 1/2	16	0.225	0.050	1.000		0	0.000	0.000	16	0.219	0.049
1/2 to 3/4	7	0.099	0.036	1.000		0	0.000	0.000	7	0.096	0.035
3/4 to 1	10	0.141	0.042	1.000		0	0.000	0.000	10	0.137	0.041
> 1 mile	30	0.423	0.059	0.938	0.043	2	1.000	0.063	32	0.438	0.058
Total	71	1.000		0.973	0.019	2	1.000	0.027	73	1.000	

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Table 28.-Page 2 of 2.

South of Bluff Point	Unmarked Chinook					CWT-Marked Chinook			Total Chinook		
	Number Sampled	Proportion	SE	Proportion	SE	Number Sampled	Proportion	Proportion	Number Sampled	Prop.	SE
Statistical Area		By Area		Within Area			By Area	Within Area			
241-11	43	0.606	0.044	0.956	0.031	2	0.167	0.044	45	0.616	0.057
241-12	6	0.085	0.025	1.000		0	0.000	0.000	6	0.082	0.032
241-15	8	0.113	0.029	1.000		0	0.000	0.000	8	0.110	0.037
241-16	1	0.014	0.011	1.000		0	0.000	0.000	1	0.014	0.014
241-17	12	0.169	0.034	1.000		0	0.000	0.000	12	0.164	0.044
241-20	1	0.014	0.011	1.000		0	0.000	0.000	1	0.014	0.014
241-30	0	0.000	0.000			0	0.000	0.000	0	0.000	
232-01	0	0.000	0.000			0	0.000	0.000	0	0.000	
232-02	0	0.000	0.000			0	0.000	0.000	0	0.000	
Total	71	1.000		0.973	0.019	2	0.167	0.027	73	1.000	

Table 29.-Summary of unmarked and CWT recovered Chinook salmon harvested south of Bluff Point by week, statistical area, distance from shore, Cook Inlet marine recreational fishery, May 1 through June 24, 2001.

South of Bluff Point	Unmarked Chinook					CWT-Marked Chinook			Total Chinook		
	Number Sampled	Proportion	SE	Proportion	SE	Number Sampled	Proportion	Proportion	Number Sampled	Prop.	SE
Week		By Week		Within Week			By Week	Within Week			
5/01 - 5/07	26	0.106	0.020	0.963	0.012	1	0.056	0.037	27	0.103	0.019
5/08 - 5/14	23	0.094	0.019	0.920	0.017	2	0.111	0.080	25	0.095	0.018
5/15 - 5/21	5	0.020	0.009	1.000	0.000	0	0.000	0.000	5	0.019	0.008
5/22 - 5/28	51	0.208	0.026	0.927	0.017	4	0.222	0.073	55	0.209	0.025
5/29 - 6/04	8	0.033	0.011	0.889	0.020	1	0.056	0.111	9	0.034	0.011
6/05 - 6/11	87	0.355	0.031	0.946	0.015	5	0.278	0.054	92	0.350	0.029
6/12 - 6/18	20	0.082	0.018	0.833	0.024	4	0.222	0.167	24	0.091	0.018
6/19 - 6/24	25	0.102	0.019	0.962	0.012	1	0.056	0.038	26	0.099	0.018
Total	245	1.000		0.932	0.016	18	1.000	0.068	263	1.000	
Shore Distance		By Distance		Within Distance			By Distance	Within Distance			
< 1/4 mile	71	0.290	0.041	0.934	0.016	5	0.278	0.066	76	0.289	0.028
1/4 to 1/2	2	0.008	0.008	0.667	0.030	1	0.056	0.333	3	0.011	0.007
1/2 to 3/4	0	0.000		0.000		0	0.000	0.000	0	0.000	0.000
3/4 to 1	5	0.020	0.013	1.000	0.000	0	0.000	0.000	5	0.019	0.008
> 1 mile	167	0.682	0.042	0.933	0.016	12	0.667	0.067	179	0.681	0.029
Total	245	1.000		0.932	0.016	18	1.000	0.068	263	1.000	

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Table 29.-Page 2 of 2.

South of Bluff Point	Unmarked Chinook					CWT-Marked Chinook			Total Chinook		
	Number Sampled	Proportion	SE	Proportion	SE	Number Sampled	Proportion	Proportion	Number Sampled	Prop.	SE
Statistical Area		By Area		Within Area			By Area	Within Area			
241-11	94	0.734	0.039	0.887	0.031	12	0.667	0.113	106	0.726	0.037
241-12	0	0.000		0.000		0	0.000	0.000	0	0.000	
241-15	30	0.234	0.038	0.857	0.060	5	0.278	0.143	35	0.240	0.035
241-16	0	0.000		0.000		0	0.000	0.000	0	0.000	
241-17	1	0.008	0.008	0.500	0.500	1	0.056	0.500	2	0.014	0.010
241-20	0	0.000		0.000		0	0.000	0.000	0	0.000	
241-30	0	0.000		0.000		0	0.000	0.000	0	0.000	
232-01	3	0.023	0.013	1.000		0	0.000	0.000	3	0.021	0.012
232-02	0	0.000		0.000		0	0.000	0.000	0	0.000	
Total	128	1.000		0.877	0.027	18	1.000	0.123	146	1.000	

Table 30.-Chinook salmon CWT recoveries summarized for stock origin by week, distance from shore, maturity, and statistical area from the sample of CWTs harvested south of Bluff Point in the Cook Inlet marine recreational fishery, May 1 through June 24, 2001.

South of Bluff Point	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
Week																		
5/01 - 5/07	0	0.000		0	0.000		0	0.000		0	0.000		1	0.200	0.200	1	0.056	0.056
5/08 - 5/14	0	0.000		0	0.000		0	0.000		1	0.143	0.143	1	0.200	0.200	2	0.111	0.076
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	2	0.400	0.245	0	0.000		0	0.000		0	0.000		2	0.400	0.245	4	0.222	0.101
5/29 - 6/04	0	0.000		0	0.000		1	1.000		0	0.000		0	0.000		1	0.056	0.056
6/05 - 6/11	2	0.400	0.245	0	0.000		0	0.000		2	0.286	0.184	1	0.200	0.200	5	0.278	0.109
6/12 - 6/18	1	0.200	0.200	0	0.000		0	0.000		3	0.429	0.202	0	0.000		4	0.222	0.101
6/19 - 6/24	0	0.000		0	0.000		0	0.000		1	0.143	0.143	0	0.000		1	0.056	0.056
Shore Distance																		
<1/4 mile	2	0.400	0.245	0	0.000		1	1.000		0	0.000		2	0.400	0.245	5	0.278	0.109
1/4 to 1/2	1	0.200	0.200	0	0.000		0	0.000		0	0.000		0	0.000		1	0.056	0.056
1/2 to 3/4	0	0.000		0	0.000		0	0.000		0	0.000		0	0.000		0	0.000	
3/4 to 1	0	0.000		0	0.000		0	0.000		0	0.000		0	0.000		0	0.000	
> 1 mile	3	0.600	0.245	0	0.000		0	0.000		7	1.000		3	0.600	0.245	13	0.722	0.109
Maturity [b]																		
Female																		
Immature	0	0.000		0	0.000		1	0.000		1	0.250	0.250	0	0.000		2	0.143	0.097
Fall Spawner	0	0.000		0	0.000		0	0.000		1	0.250	0.250	2	0.500	0.289	3	0.214	0.114
Spring Spawner	5	1.000		0	0.000		0	0.000		2	0.500	0.289	1	0.250	0.250	8	0.571	0.137
Unknown	0	0.000		0	0.000		0	0.000		0	0.000		1	0.250	0.250	1	0.071	0.071
Total	5	0.36	0.133	0	0.00		1	0.07	0.071	4	0.29	0.125	4	0.29	0.125	14	1.00	
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	
Total	0	0.000	0.000	0	0.000	0.000	0	0.000	0.000	2	1.000		0	0.000	0.000	2	0.143	

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Table 30.-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]																		
Both[C]																		
Immature	0	0.000		0	0.000		1	1.000		3	0.429	0.202	0	0.000		4	0.222	0.101
Fall Spawner	0	0.000		0	0.000		0	0.000		1	0.143	0.143	2	0.400	0.245	3	0.167	0.090
Spring Spawner	5	1.000		0	0.000		0	0.000		2	0.286	0.184	1	0.200	0.200	8	0.444	0.121
Unknown	0	0.000		0	0.000		0	0.000		0	0.000		3	0.600	0.245	3	0.167	0.090
Statistical Area																		
241-11	2	0.400	0.245	0	0.000		0	0.000		7	1.000		3	0.600	0.245	12	0.667	0.114
241-60	0	0.000		0	0.000		0	0.000		0	0.000		0	0.000		0	0.000	
241-15	2	0.400	0.245	0	0.000		1	1.000		0	0.000		2	0.400	0.245	5	0.278	0.109
241-16	0	0.000		0	0.000		0	0.000		0	0.000		0	0.000		0	0.000	
241-17	1	0.200	0.200	0	0.000		0	0.000		0	0.000		0	0.000		1	0.056	0.056
241-20	0	0.000		0	0.000		0	0.000		0	0.000		0	0.000		0	0.000	
241-30	0	0.000		0	0.000		0	0.000		0	0.000		0	0.000		0	0.000	
232-01	0	0.000		0	0.000		0	0.000		0	0.000		0	0.000		0	0.000	
232-02	0	0.000		0	0.000		0	0.000		0	0.000		0	0.000		0	0.000	
Total	5	1.000		0	0.000		1	1.000		7	1.000		5	1.000		18	1.000	
All	5	0.278	0.109	0	0.000		1	0.056	0.056	7	0.389	0.118	5	0.278	0.109	18	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 has 2 categories, immature or spring spawner, female has 3 categories, immature, fall spawner, spring spawner.

[c] Totals may not sum by sex because origin, sex and maturity are not known for all tags recovered.

before the weir was installed in 1999 and 2000 to count the number of Chinook salmon. Consequently, marine exploitation was likely less than 0.05 for both years. Similarly, contribution estimates for Ninilchik River hatchery fish were also low (<100 fish) for each year. Since the hatchery return to Ninilchik River occurs at the same time as the wild return, we have no reason to believe 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.

Given the low exploitation rate of Deep Creek fish, interception of Kenai River Chinook salmon was probably low also because the Kenai River is even further from the marine fishery than Deep Creek. Specific contribution of the Kenai River stock could not be estimated because insufficient numbers of fish were marked in the Kenai River and the proportion of marked adults recovered during inriver sampling was also too low to provide reliable estimates of the marked proportion (unpublished data). However, the marked proportion for the 1997 smolt-tagging year (brood year 1995) did appear to be much higher than in other years, allowing some sensitivity analysis on the issue of Kenai River contributions. For example, if 10% of the marine harvest was of Kenai River origin, we would have expected to have seen six to seven CWTs in 2001 and four to five tagged 3-ocean fish in 2001 (Table 31). However, because none was observed, it is suspected that the numbers of Kenai River Chinook salmon harvested is small.

Managers had presumed that Chinook salmon bound for the Deep Creek and Kenai River systems and systems in between mingled within the fishery and were more exposed to the fishery than those migrating to Northern Cook Inlet regions. It was a concern that large numbers of Chinook salmon originating from the lower Cook Inlet Chinook salmon producing streams as well as from the Kenai and Kasilof rivers were being harvested in the marine fishery. Our findings indicate that the numbers of fish harvested from these stocks was less than previously believed.

Contribution estimates for several upper and northern Cook Inlet hatchery stocks were also small. 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. The majority of stocks in this harvest was of non-Alaska origin and ranged from about 5% in 1999 to approximately 16% in 2001. 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 harvest 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

Table 31.-Expected recoveries of coded wire tagged Kenai River Chinook salmon cohorts at a 10% contribution to the total harvest in the 1999 through 2001 Cook Inlet marine Chinook salmon fishery.

Return Year	Brood Year	Ocean age in year of return	Theta	Marine Harvest	Number Sampled	Harvest age composition[d]	Number sampled by age	Expected number of tag recoveries	Number of Kenai fish harvested if contribution was 10% of total harvest
1999	1992[a]	5	0.0022			0.005	10	0.00	2
	1993[a]	4	0.0022			0.405	818	0.18	199
	1994[b]	3	0.0103			0.465	939	0.97	228
	1995[c]	2	0.0548			0.122	246	1.35	60
Total				4,907	2,019			2.5	489
2000									
	1993[a]	5	0.0022			0.000	0	0.0	0
	1994[b]	4	0.0103			0.176	324	0.3	84
	1995[c]	3	0.0548			0.597	1,098	6.0	285
	1996[c]	2	0.0530			0.216	397	2.1	103
Total				4,773	1,839			8.5	472
2001									
	1994[b]	5	0.0103			0.000	0	0.0	0
	1995[c]	4	0.0548			0.261	405	2.2	96
	1996[c]	3	0.0530			0.566	878	4.7	208
Total				3,671	1,552			6.9	304

[a] Marked as fry.

[b] Marked as fry and smolt.

[c] Marked as smolt.

[d] Age compositions do not include estimates for 1-ocean fish.

origin and those classified as immature are from outside Cook Inlet. We found 91% (118/130 = 0.91) of the Cook Inlet tag recoveries were classified as spring spawners over the 3-year study, while only 7% (3/40) of the non-Alaska fish were classified as spring or fall spawners. 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. Specifically, we estimated the proportion of the total harvest that was comprised of spring spawners at 72%, 60%, and 57% for 1999, 2000 and 2001 respectively, while estimates of the contribution of CWT non-Cook Inlet groups increased from 4.9% in 1999 to 16.9% during 2001. Maturity data from several years should be further investigated to help identify the magnitude of Cook Inlet stock exploitation in the unmarked portion of the harvest. In addition, trends in the location, week, and distance from shore of both Cook Inlet and non-Cook Inlet harvests were evident and further review of these data is recommended so that temporal/spatial variations in stock specific harvests can be examined.

The 2001 early-run Chinook salmon harvest of 3,671 fish was the lowest estimated for this fishery since 1987 and is the smallest estimated since implementation of the Upper Cook Inlet Early-run Marine King Salmon Management Plan in 1996 (Table 1). The plan focused on stabilizing the marine harvest north of Bluff Point and protection of local stocks through the

creation of: (1) a special harvest zone in which angler effort and harvest is restricted, and (2) expanded marine sanctuaries surrounding Lower Cook Inlet Chinook salmon producing stream mouths where fishing is prohibited. Since implementation, harvest has declined from the 1992 through 1995 average of 7,303 Chinook salmon annually to an average of 4,914 Chinook salmon per year from 1996 through 2001. Given the smaller harvests since 1996 and findings from this 3-year study regarding stock specific harvests of Cook Inlet origin Chinook salmon, no further restrictions can be recommended at this time.

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APPENDIX A. SUMMARY OF CODED WIRE TAG RECOVERY INFORMATION.

Appendix A1.-Summary of information collected from coded wire tagged Chinook salmon recovered during random sampling of the recreational fishery north of Bluff Point, May 1 Through June 24, 1999 through 2001.

Sample#	Recovery Location	Recovery Date	Tag Code	Brood Year	Actual Age[a]		Scale Age[b]		State or Province	Rearing code and location[c]	Release Date	Release Location	Sex	Egg diameter or maturity	Stat. Area	Shore Distance
					Fresh	Ocean	Fresh	Ocean								
Recovery summary for 1999																
99DU5505	Anchor P.	5/9/99	312434	1994	0	4	0	4	AK	(H) Ft. Richardson	05/25/95	Deception Cr. 247-41	M	Mature	244-70	1
99DU5515	Anchor P.	5/19/99	312508	1995	0	3	R	3	AK	(H) Elmendorf	06/07/96	Ship Creek 247-50	F	4.1	244-70	2
99DU5518	Anchor P.	5/21/99	312604	1996	0	2	1	3	AK	(H) Ft. Richardson	06/20/97	Deception Cr. 247-41	M	Mature	244-70	1
99DU5521	Anchor P.	5/22/99	312515	1995	0	3	1	3	AK	(H) Ft. Richardson	06/13/96	Ninilchik R. 244-20	M	Mature	244-70	1
99DU5523	Anchor P.	5/23/99	312508	1995	0	3	1	3	AK	(H) Elmendorf	06/07/96	Ship Creek 247-50	F	4.2	244-70	2
99DU5522	Anchor P.	5/23/99	1301031514	1995	0	3	1	2	AK	(W) Willow Creek	09/11/96	Willow Cr. 247-41	M	Mature	244-70	1
99DU5527	Anchor P.	5/27/99	312603	1996	0	2	R		AK	(H) Ft. Richardson	06/20/97	Deception Cr. 247-41	M	Mature	244-70	2
99DU5572	Anchor P.	6/5/99	312515	1995	0	3	1	3	AK	(H) Ft. Richardson	06/13/96	Ninilchik R. 244-20	F	4.8	244-70	1
99DU5538	Anchor P.	6/5/99	312515	1995	0	3	0	3	AK	(H) Ft. Richardson	06/13/96	Ninilchik R. 244-20	M	Mature	244-70	1
99DU5541	Anchor P.	6/6/99	181558	1993	0	5	0	4	BC	(H) Conuma River	05/17/94	Conuma R.	M	Immature	244-70	2
99DU5542	Anchor P.	6/7/99	312608	1996	0	2	R	2	AK	(H) Ft. Richardson	06/17/97	Ninilchik R. 244-20	M	Mature	244-70	1
99DU5575	Anchor P.	6/8/99	182255	1995	0	3	1	3	BC	(H) Kitimat River	06/04/96	Kildala R.	UKN	UKN	244-70	1
99DU5574	Anchor P.	6/8/99	312515	1995	0	3	0	3	AK	(H) Ft. Richardson	06/13/96	Ninilchik R. 244-20	UKN	UKN	244-70	1
99DU5573	Anchor P.	6/8/99	312515	1995	0	3	R	3	AK	(H) Ft. Richardson	06/13/96	Ninilchik R. 244-20	F	4.0	244-70	2
99DU5544	Anchor P.	6/8/99	312604	1996	0	2	1	3	AK	(H) Ft. Richardson	06/20/97	Deception Cr. 247-41	M	Mature	244-70	2
99DU5545	Anchor P.	6/9/99	1301030809	1994	0	4	1	4	AK	(W) Deep Creek	08/12/95	Deep Cr. 244-20	UKN	UKN	244-70	1
99DU5551	Anchor P.	6/11/99	312605	1996	0	2	0	2	AK	(H) Ft. Richardson	06/20/97	Deception Cr. 247-41	M	Mature	244-70	2
99DT5507	Deep Crk.	5/14/99	312435	1994	0	4	1	4	AK	(H) Ft. Richardson	05/31/95	Ninilchik R. 244-20	M	Immature	244-70	1
99DT5539	Deep Crk.	5/14/99	1301030811	1994	1	3	1	3	AK	(W) Deep Creek	08/14/96	Deep Cr. 244-20	F	5.0	244-70	1
99DT5508	Deep Crk.	5/15/99	312515	1995	0	3	1	4	AK	(H) Ft. Richardson	06/13/96	Ninilchik R. 244-20	F	4.3	244-70	1
99DT5509	Deep Crk.	5/16/99	312428	1994	0	4	0	4	AK	(H) Elmendorf	06/07/95	Ship Creek 247-50	F	5.9	244-70	1
99DT5542	Deep Crk.	5/16/99	312435	1994	0	4	R		AK	(H) Ft. Richardson	05/31/95	Ninilchik R. 244-20	F	5.0	244-70	1
99DT5541	Deep Crk.	5/16/99	312515	1995	0	3	1	4	AK	(H) Ft. Richardson	06/13/96	Ninilchik R. 244-20	M	Mature	244-70	1
99DT5540	Deep Crk.	5/16/99	312515	1995	0	3	1	3	AK	(H) Ft. Richardson	06/13/96	Ninilchik R. 244-20	F	4.0	244-70	1
99DT5509	Deep Crk.	5/16/99	LOST	UNKN			1	4					F	4.4	244-70	1
99DT5510	Deep Crk.	5/19/99	LOST	UNKN			U								244-70	1
99DT5544	Deep Crk.	5/21/99	312235	1993	1	4	1	4	AK	(W) Deep Creek	07/21/95	Deep Cr. 244-20	M	Mature	244-70	1
99DT5543	Deep Crk.	5/21/99	312428	1994	0	4	0	4	AK	(H) Elmendorf	06/07/95	Ship Creek 247-50	F	5.2	244-70	1
99DT5512	Deep Crk.	5/21/99	NO TAG	UNKN			1	4					M	Mature	244-70	1

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Sample#	Recovery Location	Recovery Date	Tag Code	Brood Year	Actual Age[a] Fresh	Actual Age[a] Ocean	Scale Age[b] Fresh	Scale Age[b] Ocean	State or Province	Rearing code and location[c]	Release Date	Release Location	Sex	Egg diameter or maturity	Stat Area	Shore Distance
Recovery summary for 1999 continued																
99DT5514	Deep Crk.	5/23/99	312608	1996	0	2	1	2	AK	(H) Ft. Richardson	06/17/97	Ninilchik R. 244-20	M	Mature	244-70	1
99DT5545	Deep Crk.	5/24/99	312515	1995	0	3	1	3	AK	(H) Ft. Richardson	06/13/96	Ninilchik R. 244-20	F	4.9	244-70	1
99DT5515	Deep Crk.	5/24/99	312608	1996	0	2	1	2	AK	(H) Ft. Richardson	06/17/97	Ninilchik R. 244-20	M	Mature	244-70	1
99DT5546	Deep Crk.	5/24/99	1301030811	1994	1	3	1	3	AK	(W) Deep Creek	08/14/96	Deep Cr. 244-20	M	Mature	244-70	1
99DT5516	Deep Crk.	5/25/99	312435	1994	0	4	1	4	AK	(H) Ft. Richardson	05/31/95	Ninilchik R. 244-20	F	5.2	244-70	1
99DT5549	Deep Crk.	5/28/99	312435	1994	0	4	1	3	AK	(H) Ft. Richardson	05/31/95	Ninilchik R. 244-20	F	6.0	244-70	1
99DT5517	Deep Crk.	5/28/99	312508	1995	0	3	0	3	AK	(H) Elmendorf	06/07/96	Ship Creek 247-50	F	3.0	244-70	1
99DT5548	Deep Crk.	5/28/99	312515	1995	0	3	1	4	AK	(H) Ft. Richardson	06/13/96	Ninilchik R. 244-20	M	Mature	244-70	1
99DT5547	Deep Crk.	5/28/99	312515	1995	0	3	1	3	AK	(H) Ft. Richardson	06/13/96	Ninilchik R. 244-20	F	4.8	244-70	1
99DT5550	Deep Crk.	5/29/99	312435	1994	0	4	1	4	AK	(H) Ft. Richardson	05/31/95	Ninilchik R. 244-20	F	6.0	244-70	1
99DT5518	Deep Crk.	5/29/99	312435	1994	0	4	R		AK	(H) Ft. Richardson	05/31/95	Ninilchik R. 244-20	M	Mature	244-70	1
99DT5551	Deep Crk.	5/29/99	312507	1995	0	3	U		AK	(H) Elmendorf	06/05/96	Homer Spit 241-13	U	Unkn	244-70	1
99DT5552	Deep Crk.	5/29/99	312508	1995	0	3	1	3	AK	(H) Elmendorf	06/07/96	Ship Creek 247-50	M	Mature	244-70	1
99DT5518	Deep Crk.	5/29/99	312515	1995	0	3	1	4	AK	(H) Ft. Richardson	06/13/96	Ninilchik R. 244-20	F	4.2	244-70	1
99DT5553	Deep Crk.	5/29/99	312608	1996	0	2	U		AK	(H) Ft. Richardson	06/17/97	Ninilchik R. 244-20	M	Mature	244-70	1
99DT5554	Deep Crk.	5/29/99	LOST	UNKN			U						F	4.0	244-70	1
99DT5519	Deep Crk.	6/2/99	312402	1993	1	4	R		AK	(W) Deep Creek	06/26/95	Deep Cr. 244-20	F	6.1	244-70	1
99DT5523	Deep Crk.	6/5/99	312515	1995	0	3	1	3	AK	(H) Ft. Richardson	06/13/96	Ninilchik R. 244-20	F	5.7	244-70	1
99DT5555	Deep Crk.	6/5/99	312551	1995	1	2	R	2	AK	(W) Kenai R.	06/30/97	Kenai R. 244-30	M	Mature	244-70	1
99DT5556	Deep Crk.	6/6/99	312514	1995	0	3	1	3	AK	(H) Ft. Richardson	06/18/96	Deception Cr. 247-41	M	Mature	244-70	1
99DT5525	Deep Crk.	6/6/99	312515	1995	0	3	1	3	AK	(H) Ft. Richardson	06/13/96	Ninilchik R. 244-20	M	Mature	244-70	1
99DT5557	Deep Crk.	6/6/99	LOST	UNKN			1	3					M	Mature	244-70	1
99185501	Homer	5/5/99	32254	1994	1	3	1	4	AK	(H) Little Port Walter	05/16/96	L Port Walter 109-10	F	4.2	241-11	5
99185510	Homer	5/15/99	312435	1994	0	4	R	4	AK	(H) Ft. Richardson	05/31/95	Ninilchik R. 244-20	M	Mature	244-70	2
99185574	Homer	5/15/99	636001	1995	0	3	0	3	WA	(H)Priest Rapids Hatch.	06/24/96	Columbia at Priest	F	1.8	241-11	3
99185528	Homer	5/24/99	636001	1995	0	3	0	3	WA	(H)Priest Rapids Hatch.	06/24/96	Columbia at Priest	M	Immature	241-11	5
99185538	Homer	5/29/99	312515	1995	0	3	1	3	AK	(H) Ft. Richardson	06/13/96	Ninilchik R. 244-20	F	5.2	244-70	2
99185537	Homer	5/29/99	312549	1994	2	2	0	4	AK	(W) Deep Cr. Non-sense	07/30/97	Deep Cr. 244-20	F	6.0	244-70	1
99185572	Homer	6/5/99	43559	1994	0	4	U		AK	(W) Unuk R.	10/25/95	Unuk R. 101-75	M	Mature	241-11	5
99185547	Homer	6/5/99	182832	1996	0	2	0	2	BC	(H)-Masset CDP	07/08/97	Yakoun R.	F	2.2	241-11	5

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Appendix A1.-Page 3 of 9.

Sample#	Recovery Location	Recovery Date	Tag Code	Brood Year	Actual Age[a] Fresh	Actual Age[a] Ocean	Scale Age[b] Fresh	Scale Age[b] Ocean	State or Province	Rearing code and location[c]	Release Date	Release Location	Sex	Egg diameter or maturity	Stat Area	Shore Distance
Recovery summary for 1999 continued																
99185547	Homer	6/5/99	312515	1995	0	3	1	3	AK	(H) Ft. Richardson	06/13/96	Ninilchik R. 244-20	M	Mature	241-11	5
99185552	Homer	6/8/99	312606	1996	0	2	0	2	AK	(H) Ft. Richardson	06/20/97	Deception Cr. 247-41	U		241-11	5
99185573	Homer	6/16/99	182152	1995	0	3	1	3	BC	(H) Snootli Cr.	06/04/96	Salloomt R.	M	Immature	241-11	5
99185556	Homer	6/16/99	LOST	UNKN									u		241-11	5
99185556	Homer	6/16/99	LOST	UNKN									u		241-11	5
99185557	Homer	6/17/99	312515	1995	0	3	1	3	AK	(H) Ft. Richardson	06/13/96	Ninilchik R. 244-20	F	5.8	241-11	5
99185558	Homer	6/18/99	182146	1995	0	3	1	3	BC	(H) Snootli Cr.	05/24/96	Chuckwalla R.	M	Immature	241-11	5
99185565	Homer	6/22/99	233049	1995	0	3	1	3	WA	(M) Mixed Columbia	06/21/96	Col. R. @ McNary Dam	M	Immature	241-11	5
Recovery summary for 2000																
00DU5504	Anchor P.	5/7/00	182834	1996	0	3	1	3	BC	(H) Snootli Cr.	06/13/97	Chuckwalla R.	F	3.2	241-60	5
00DU5506	Anchor P.	5/9/00	312608	1996	0	3	R		AK	(H) Ft. Richardson	06/17/97	Ninilchik R. 244-20	F	5.4	244-70	1
00DU5511	Anchor P.	5/13/00	44712	1995	0	4	R		AK	(W) Unuk R.	10/16/96	Unuk R. 101-75	F	3.0	244-70	5
00DU5509	Anchor P.	5/13/00	182834	1996	0	3	1	3	BC	(H) Snootli Cr.	06/13/97	Chuckwalla R.	F	1.0	241-60	5
00DU5510	Anchor P.	5/13/00	312555	1996	0	3			AK	(H) Elmendorf	05/30/97	Crooked Cr 244-30	M	Immature	244-70	1
00DU5513	Anchor P.	5/14/00	182850	1996	0	3	1	3	BC	(H) Kitimat R.	05/16/97	(H) Kitimat R. Low	U	Unkn	244-70	1
00DU5514	Anchor P.	5/16/00	312515	1995	0	4	1	3	AK	(H) Ft. Richardson	06/13/96	Ninilchik R. 244-20	M	Mature	244-70	2
00DU5517	Anchor P.	5/18/00	312514	1995	0	4	1	3	AK	(H) Ft. Richardson	06/18/96	Deception Cr. 247-41	F	3.5	244-70	1
00DU5520	Anchor P.	5/18/00	312604	1996	0	3	R		AK	(H) Ft. Richardson	06/20/97	Deception Cr. 247-41	M	Mature	244-70	1
00DU5518	Anchor P.	5/18/00	312607	1996	0	3	1	3	AK	(H) Ft. Richardson	06/20/97	Deception Cr. 247-41	F	3.0	244-70	1
00DU5519	Anchor P.	5/18/00	312635	1997	0	2	1	2	AK	(H) Ft. Richardson	06/15/98	Ninilchik R. 244-20	M	Mature	244-70	1
00DU5523	Anchor P.	5/20/00	312558	1996	0	3	1	3	AK	(H) Elmendorf	06/09/97	Halibut CV Lag 241-15	F	5.2	244-70	1
00DU5524	Anchor P.	5/20/00	312608	1996	0	3	1	3	AK	(H) Ft. Richardson	06/17/97	Ninilchik R. 244-20	F	5.7	244-70	1
00DU5525	Anchor P.	5/20/00	312608	1996	0	3	1	3	AK	(H) Ft. Richardson	06/17/97	Ninilchik R. 244-20	F	4.7	244-70	1
00DU5528	Anchor P.	5/21/00	312556	1996	0	3	0	3	AK	(H) Elmendorf	06/10/97	Ship Cr. 247-50	F	6.0	244-70	1
00DU5527	Anchor P.	5/21/00	312605	1996	0	3			AK	(H) Ft. Richardson	06/20/97	Deception Cr. 247-41	U	Unkn	244-70	1
00DU5531	Anchor P.	5/25/00	312532	1997	0	2	1	2	AK	(H) Ft. Richardson	06/26/98	Deception Cr. 247-41	M	Immature	244-70	1
00DU5532	Anchor P.	5/25/00	312608	1996	0	3	1	3	AK	(H) Ft. Richardson	06/17/97	Ninilchik R. 244-20	M	Mature	244-70	1
00DU5530	Anchor P.	5/25/00	312608	1996	0	3	1	3	AK	(H) Ft. Richardson	06/17/97	Ninilchik R. 244-20	U	Unkn	244-70	2
00DU5533	Anchor P.	5/26/00	312515	1995	0	4	1	4	AK	(H) Ft. Richardson	06/13/96	Ninilchik R. 244-20	M	Immature	244-70	1
00DU5534	Anchor P.	5/26/00	312555	1996	0	3	1	3	AK	(H) Elmendorf	05/30/97	Crooked Cr. 244-30	U	Unkn	244-70	1

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Sample#	Recovery Location	Recovery Date	Tag Code	Brood Year	Actual Age[a] Fresh	Actual Age[a] Ocean	Scale Age[b] Fresh	Scale Age[b] Ocean	State or Province	Rearing code and location[c]	Release Date	Release Location	Sex	Egg diameter or maturity	Stat Area	Shore Distance
Recovery summary for 2000 continued																
00DU5535	Anchor P.	5/27/00	44755	1995	1	3	1	3	AK	(H) Whitman Lake	05/19/97	Herring Cove 101-45	F	4.2	244-70	2
00DU5537	Anchor P.	5/28/00	312514	1995	0	4	0	4	AK	(H) Ft. Richardson	06/18/96	Deception Cr. 247-41	M	Mature	241-11	3
00DU5539	Anchor P.	5/29/00	182345	1995	0	4	1	3	BC	(H) Terrace	06/13/96	Kitsumkalum R.	U	Unkn	241-11	1
00DU5543	Anchor P.	6/2/00	70927	1995	0	4	1	4	OR	(H) Bonneville Hatch	06/12/96	Tanner Cr.	F	2.2	241-60	5
00DU5545	Anchor P.	6/2/00	312606	1996	0	3	R		AK	(H) Ft. Richardson	06/20/97	Deception Cr. 247-41	F	4.4	244-70	1
00DU5544	Anchor P.	6/2/00	312608	1996	0	3	R		AK	(H) Ft. Richardson	06/17/97	Ninilchik R. 244-20	M	Mature	244-70	1
00DU5548	Anchor P.	6/3/00	312608	1996	0	3	R		AK	(H) Ft. Richardson	06/17/97	Ninilchik R. 244-20	F	4.5	244-70	1
00DU5551	Anchor P.	6/4/00	312603	1996	0	3	R		AK	(H) Ft. Richardson	06/20/97	Deception Cr. 247-41	M	Mature	244-70	1
00DU5552	Anchor P.	6/5/00	312604	1996	0	3	1	3	AK	(H) Ft. Richardson	06/20/97	Deception Cr. 247-41	M	Mature	244-70	1
00DU5557	Anchor P.	6/7/00	NO TAG				1	3					M	Mature	244-70	1
00DU5560	Anchor P.	6/8/00	182834	1996	0	3	1	2	BC	(H) Snootli Cr.	06/13/97	Chuckwalla R.	M	Immature	244-70	2
00DU5558	Anchor P.	6/8/00	182849	1996	0	3	1	3	BC	(H) Kitimat R.	05/07/97	Kildala R.	U	Unkn	244-70	1
00DU5559	Anchor P.	6/8/00	312607	1996	0	3	R		AK	(H) Ft. Richardson	06/20/97	Deception Cr. 247-41	M	Mature	244-70	1
00DU5562	Anchor P.	6/9/00	312605	1996	0	3	R		AK	(H) Ft. Richardson	06/20/97	Deception Cr. 247-41	U	Unkn	244-70	1
00DU5577	Anchor P.	6/16/00	501020406	1996	0	3	0	2	WA	(H) Ringold Springs Hatch	06/20/97	Ringold Pond (Trout)	F	1.0	241-11	5
00DT5001	Deep Crk.	5/1/00	312514	1995	0	4	1	3	AK	(H) Ft. Richardson	06/18/96	Deception Cr. 247-41	M	Immature	244-70	1
00DT5005	Deep Crk.	5/10/00	HEAD LOST				1	3					M	Immature	244-70	1
00DT5006	Deep Crk.	5/11/00	312608	1996	0	3	0	3	AK	(H) Ft. Richardson	06/17/97	Ninilchik R. 244-20	F	5.7	244-70	1
00DT5998	Deep Crk.	5/13/00	312553	1995	1	3	1	3	AK	(W) Deep Cr. 244-20	07/30/97	(W) Deep Cr. 244-20	F	5.0	244-70	1
00DT5999	Deep Crk.	5/13/00	312608	1996	0	3	0	3	AK	(H) Ft. Richardson	06/17/97	Ninilchik R. 244-20	F	5.2	244-70	1
00DT5008	Deep Crk.	5/13/00	HEAD LOST										M	Mature	244-70	1
00DT5009	Deep Crk.	5/14/00	312605	1996	0	3	0	3	AK	(H) Ft. Richardson	06/20/97	Deception Cr. 247-41	M	Mature	244-70	1
00DT5010	Deep Crk.	5/16/00	312608	1996	0	3	R	4	AK	(H) Ft. Richardson	06/17/97	Ninilchik R. 244-20	M	Mature	244-70	1
00DT5997	Deep Crk.	5/16/00	312635	1997	0	2	0	2	AK	(H) Ft. Richardson	06/15/98	Ninilchik R. 244-20	M	Mature	244-70	1
00DT5996	Deep Crk.	5/16/00	HEAD LOST				1	3					M	Mature	244-70	1
00DT5994	Deep Crk.	5/19/00	312532	1997	0	2	R	2	AK	(H) Ft. Richardson	06/26/98	Deception Cr. 247-41	M	Immature	244-70	1
00DT5993	Deep Crk.	5/19/00	312605	1996	0	3	1	3	AK	(H) Ft. Richardson	06/20/97	Deception Cr. 247-41	F	4.4	244-70	1
00DT5995	Deep Crk.	5/19/00	312607	1996	0	3	1	3	AK	(H) Ft. Richardson	06/20/97	Deception Cr. 247-41	M	Mature	244-70	1
00DT5991	Deep Crk.	5/19/00	312608	1996	0	3	R	3	AK	(H) Ft. Richardson	06/17/97	Ninilchik R. 244-20	F	5.2	244-70	1
00DT5011	Deep Crk.	5/19/00	312635	1997	0	2	1	2	AK	(H) Ft. Richardson	06/15/98	Ninilchik R. 244-20	M	Mature	244-70	1

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Sample#	Recovery Location	Recovery Date	Tag Code	Brood Year	Actual Age[a] Fresh	Actual Age[a] Ocean	Scale Age[b] Fresh	Scale Age[b] Ocean	State or Province	Rearing code and location[c]	Release Date	Release Location	Sex	Egg diameter or maturity	Stat Area	Shore Distance
Recovery summary for 2000 continued																
00DT5992	Deep Crk.	5/19/00	UNREADABLE				1	3					F	5.0	244-70	1
00DT5012	Deep Crk.	5/20/00	312608	1996	0	3	R		AK	(H) Ft. Richardson	06/17/97	Ninilchik R. 244-20	M	Mature	244-70	1
00DT5989	Deep Crk.	5/20/00	312608	1996	0	3	1	3	AK	(H) Ft. Richardson	06/17/97	Ninilchik R. 244-20	F	4.6	244-70	1
00DT5990	Deep Crk.	5/20/00	312635	1997	0	2	1	2	AK	(H) Ft. Richardson	06/15/98	Ninilchik R. 244-20	M	Mature	244-70	1
00DT5013	Deep Crk.	5/21/00	312608	1996	0	3	R	4	AK	(H) Ft. Richardson	06/17/97	Ninilchik R. 244-20	M	Mature	244-70	1
00DT5988	Deep Crk.	5/24/00	312608	1996	0	3	R		AK	(H) Ft. Richardson	06/17/97	Ninilchik R. 244-20	F	5.0	244-70	1
00DT5014	Deep Crk.	5/24/00	312608	1996	0	3	1	3	AK	(H) Ft. Richardson	06/17/97	Ninilchik R. 244-20	F	4.4	244-70	1
00DT5015	Deep Crk.	5/25/00	312556	1996	0	3	0	3	AK	(H) Elmendorf	06/10/97	Ship Cr. 247-50	F	5.3	244-70	1
00DT5987	Deep Crk.	5/25/00	312608	1996	0	3	1	3	AK	(H) Ft. Richardson	06/17/97	Ninilchik R. 244-20	F	5.0	244-70	1
00DT5016	Deep Crk.	5/26/00	92319	1996	0	2	1	3	OR	(H) Marion Forks	03/03/98	Santiam R. &N. FK-1	F	4.2	244-70	1
00DT5986	Deep Crk.	5/26/00	NO TAG				R	3					F	4.7	244-70	1
00DT5985	Deep Crk.	5/27/00	312556	1996	0	3	R		AK	(H) Elmendorf	06/10/97	Ship Cr. 247-50	F	5.0	244-70	1
00DT5017	Deep Crk.	5/27/00	312603	1996	0	3	1	3	AK	(H) Ft. Richardson	06/20/97	Deception Cr. 247-41	M	Mature	244-70	1
00DT5018	Deep Crk.	5/28/00	HEAD LOST										M	Mature	244-70	1
00DT5020	Deep Crk.	6/2/00	312553	1995	1	3	R	3	AK	(W) Deep Cr. 244-20	07/30/97	(W) Deep Cr. 244-20	M	Mature	244-70	1
00DT5022	Deep Crk.	6/4/00	UNREADABLE				R						F	4.2	244-70	1
00DT5023	Deep Crk.	6/7/00	NO TAG				1	3					F	4.2	244-70	1
00DT5024	Deep Crk.	6/8/00	312603	1996	0	3	0	3	AK	(H) Ft. Richardson	06/20/97	Deception Cr. 247-41	F	4.4	244-70	1
185514	Homer	5/19/00	44756	1995	1	3	1	3	AK	(H) Whitman Lake	05/16/97	Herring Cove 101-45	F	3.0	241-11	5
185519	Homer	5/21/00	HEAD LOST										U	Unkn	241-11	3
185525	Homer	5/25/00	312603	1996	0	3	1	3	AK	(H) Ft. Richardson	06/20/97	Deception Cr. 247-41	M	Mature	241-11	5
185533	Homer	5/29/00	312606	1996	0	3	0	2	AK	(H) Ft. Richardson	06/20/97	Deception Cr. 247-41	M	Mature	241-11	3
185537	Homer	6/2/00	501020206	1996	0	3	0	2	WA	(H) Prosser Hatchery	04/07/97	Yakima R-Low 37.0002	M	Immature	241-11	5
185545	Homer	6/11/00	182851	1996	0	3	1	3	BC	(H) Kitimat R.	05/05/97	Kitimat R. Up.	M	Immature	241-11	4
185548	Homer	6/13/00	HEAD LOST				1	3					U	Unkn	241-11	5
185553	Homer	6/22/00	182045	1996	0	3	1	2	BC	(H) Conuma R.	05/31/97	Conuma EST.	F	2.0	241-11	5
185554	Homer	6/22/00	HEAD LOST				1	2					U	Unkn	241-11	5
185553	Homer	6/22/00	HEAD LOST				0	2					U	Unkn	241-11	5

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Sample#	Recovery Location	Recovery Date	Tag Code	Brood Year	Actual Age[a] Fresh	Actual Age[a] Ocean	Scale Age[b] Fresh	Scale Age[b] Ocean	State or Province	Rearing code and location[c]	Release Date	Release Location	Sex	Egg diameter or maturity	Stat Area	Shore Distance
Recovery summary for 2001																
01DU5504	Anchor P.	5/9/01	183904	1997	0	3	UNKN		BC	(H) Kitimat R	5/13/98	R-Kitimat R Low	F	2.5	244-70	1
01DU5505	Anchor P.	5/10/01	183906	1997	0	3	UNKN		BC	(H) Kitimat R	5/7/98	R-Kildala R	M	Immature	244-70	1
01DU5507	Anchor P.	5/11/01	630610	1997	0	2	1	2	WA	(H) Eastbank Hatch	4/26/99	Similkameen R 490325	F	1.5	244-70	1
01DU5506	Anchor P.	5/11/01	43829	1995	1	4	1	4	AK	(W) Unuk R 101-75	4/19/97	Unuk R 101-75	F	4.0	244-70	1
01DU5509	Anchor P.	5/12/01	182750	1996	0	4	1	4	BC	Terrace	6/20/97	R-Kitsumkalum R	F	3.6	244-70	1
01DU5508	Anchor P.	5/12/01	312606	1996	0	4	1	4	AK	(H) Ft. Richardson	6/20/97	Deception Cr 247-41	F	6.0	244-70	1
01DU5510	Anchor P.	5/12/01	312603	1996	0	4	1	4	AK	(H) Ft. Richardson	6/20/97	Deception Cr 247-41	F	5.8	244-70	2
01DU5511	Anchor P.	5/13/01	630458	1997	0	3	R	2	WA	(H) Kalama Falls Hatch	6/24/98	Kalama R 27.0002	M	Immature	244-70	2
01DU5512	Anchor P.	5/13/01	312618	1998	0	2	1	2	AK	(H) Ft. Richardson	6/17/99	Deception Cr 247-41	M	Mature	244-70	1
01DU5514	Anchor P.	5/14/01	182528	1996	0	4	1	4	BC	(H) Snootli Cr	6/13/97	R-Atanrko R UP	F	2.2	244-70	1
01DU5515	Anchor P.	5/14/01	182755	1996	0	3	R	3	BC	(H) Terrace	4/27/98	R-Kitsumkalum R	F	2.2	244-70	1
01DU5516	Anchor P.	5/14/01	44236	1995	1	4	R		AK	(W) Unuk R 101-75	10/20/96	UNUK R 101-75	F	3.0	244-70	1
01DU5517	Anchor P.	5/14/01	182754	1996	0	4	1	3	BC	(H) Terrace	6/20/97	R-Kitsumkalum R	F	2.5	244-70	1
01DU5518	Anchor P.	5/15/01	92520	1997	0	2	R		OR	(H) Willamette Hatch	3/3/99	Mollala R	F	1.0	244-70	1
01DU5523	Anchor P.	5/18/01	92631	1997	0	2	R		OR	(H) Clackamas Hatch.	3/17/99	Clackamas R	F	1.0	244-70	1
01DU5524	Anchor P.	5/18/01	312608	1996	0	4	1	4	AK	(H) Ft. Richardson	6/17/97	Ninilchik R 244-20	F	1.0	244-70	1
01DU5526	Anchor P.	5/19/01	312635	1997	0	3	1	3	AK	(H) Ft. Richardson	6/15/98	Ninilchik R 244-20	F	6.0	244-70	1
01DU5529	Anchor P.	5/20/01	312555	1996	0	4	R	4	AK	(H) Elmendorf	5/30/97	Crooked Cr 244-30	M	Mature	244-70	1
01DU5534	Anchor P.	5/25/01	44727	1996	0	3	1	3	AK	(H) Jerry Myers	6/10/98	Taiya Inlet 115-34	F	4.0	244-70	1
01DU5535	Anchor P.	5/25/01	44942	1996	0	3	R		AK	(H) Deer Mtn	5/15/98	Ketchikan Cr 101-47	F	3.0	244-70	1
01DU5537	Anchor P.	5/26/01	NO TAG				UNKN						F	6.5	244-70	2
01DU5538	Anchor P.	5/26/01	32128	1996	0	3	UNKN		AK	(H) Little Port Walter	5/15/98	L Port Walter 109-10	F	5.2	244-70	2
01DU5540	Anchor P.	5/26/01	45003	1996	0	3	UNKN		AK	(H) Crystal Lk/Neets Bay	5/26/98	Neets Bay 101-90	M	Mature	244-70	1
01DU5539	Anchor P.	5/26/01	NO TAG				R						F	1.8	244-70	1
01DU5541	Anchor P.	5/26/01	44727	1996	0	3	UNKN		AK	(H) Jerry Myers	6/10/98	Taiya Inlet 115-34	M	Immature	241-60	4
01DU5544	Anchor P.	5/27/01	45002	1996	0	3	1	3	AK	(H) Whitman Lk	5/6/98	Herring Cove 101-45	F	4.2	244-70	1
01DU5545	Anchor P.	5/27/01	312532	1997	0	3	R	3	AK	(H) Ft. Richardson	6/26/98	Deception Cr 247-41	M	Mature	244-70	2
01DU5547	Anchor P.	5/28/2001	312605	1996	0	4			AK	(H) FORT RICHARDSON	6/20/1997	Deception Cr 247-41	F	5.5	241 -11	1
01DU5555	Anchor P.	5/31/01	183433	1998	0	2	1	2	BC	(H) Robertson Cr	5/31/99	R-Robertson Cr	M	Immature	241-11	5

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Sample#	Recovery Location	Recovery Date	Tag Code	Brood Year	Actual Age[a] Fresh	Actual Age[a] Ocean	Scale Age[b] Fresh	Scale Age[b] Ocean	State or Province	Rearing code and location[c]	Release Date	Release Location	Sex	Egg diameter or maturity	Stat Area	Shore Distance
Recovery summary for 2001 continued																
01DU5566	Anchor P.	6/5/01	471735	1996	0	3	1	3	AK	(H) Tamgas Cr	5/14/98	Tamgas CR	F	3.5	241-11	5
01DU5568	Anchor P.	6/6/01	310145	1998	0	2	1	4	AK	(H) Elmendorf	6/7/99	Homer Spit 241-13	M	Mature	241-11	5
01DU5567	Anchor P.	6/6/01	183214	1996	0	3	1	3	BC	(H) Kincolith R	5/20/98	R-Kincolith R	M	Immature	244-70	5
01DU5570	Anchor P.	6/7/01	NO TAG				1	3					M	Mature	244-70	5
01DU5575	Anchor P.	6/11/01	630133	1996	1	3	1	4	WA	(W) Columbia -Mid	6/6/97	Hanford Reach (36)	F	1.0	241-11	5
01DT5503	Deep Crk.	5/5/01	92450	1997	0	3	1	3	OR	(H) Clackamas Hatch	8/3/98	Clackamas R	M	Mature	244-70	1
01DT5508	Deep Crk.	5/11/01	182834	1996	0	4	1	4	BC	(H) Snootli CR	6/13/97	Chuckwalla R	F	1.5	244-70	1
01DT5507	Deep Crk.	5/11/01	312608	1996	0	4	1	4	AK	(H) Ft. Richardson	6/17/97	Ninilchik R 244-20	M	Mature	244-70	1
01DT5509	Deep Crk.	5/12/01	44962	1996	0	3	1	3	AK	(H) Whitman Lake	5/6/98	Herring Cove 101-45	F	3.5	244-70	1
01DT5512	Deep Crk.	5/13/01	92253	1996	0	4	1	3	OR	(H) McKenzie	2/5/98	McKenzie R-1	F	1.5	244-70	2
01DT5511	Deep Crk.	5/13/01	312556	1996	0	4	R		AK	(H) Elmendorf	6/10/97	Ship Cr 247-50	F	5.0	244-70	5
01DT5510	Deep Crk.	5/13/01	312629	1997	0	3	1	2	AK	(H) Elmendorf	6/4/98	Crooked Cr 244-30	M	Mature	244-70	1
01DT5513	Deep Crk.	5/14/01	312629	1997	0	3	1	4	AK	(H) Elmendorf	6/4/98	Crooked Cr. 244-30	M	Mature	244-70	1
01DT5514	Deep Crk.	5/14/01	312630	1997	0	3	1	2	AK	(H) Elmendorf	6/3/98	Ship Creek 247-50	M	Immature	244-70	1
01DT5516	Deep Crk.	5/18/01	HEAD LOST				R						F	5.0	244-70	1
01DT5519	Deep Crk.	5/19/01	182755	1996	0	3	R	3	BC	(H) Terrace	4/27/98	R-Kitsumkalum R	M	Immature	244-70	1
01DT5518	Deep Crk.	5/19/01	312629	1997	0	3	1	3	AK	(H) Elmendorf	6/4/98	Crooked Cr. 244-30	F	4.0	244-70	1
01DT5517	Deep Crk.	5/19/01	312608	1996	0	4	1	4	AK	(H) Ft. Richardson	6/17/97	Ninilchik R 244-20	M	Mature	244-70	1
01DT5520	Deep Crk.	5/20/01	312608	1996	0	4	R	4	AK	(H) Ft. Richardson	6/17/97	Ninilchik R 244-20	M	Mature	244-70	1
01DT5523	Deep Crk.	5/24/01	183355	1996	0	4	1	4	BC	(H) Tofino	6/30/97	R-Tranquille Est	F	2.3	244-70	1
01DT5522	Deep Crk.	5/24/01	312630	1997	0	3	1	3	AK	(H) Elmendorf	6/3/98	Ship Cr 247-50	F	5.0	244-70	1
01DT5527	Deep Crk.	5/25/01	183036	1997	0	3	R		BC	(H) Quinsam R	5/13/98	R-Quinsam R	F	1.1	244-70	1
01DT5524	Deep Crk.	5/25/01	312635	1997	0	3	R		AK	(H) Ft. Richardson	6/15/98	Ninilchik R 244-20	M	Mature	244-70	1
01DT5526	Deep Crk.	5/25/01	312635	1997	0	3	1	3	AK	(H) Ft. Richardson	6/15/98	Ninilchik R 244-20	F	5.1	244-70	1
01DT5528	Deep Crk.	5/25/01	312635	1997	0	3	R		AK	(H) Ft. Richardson	6/15/98	Ninilchik R 244-20	F	5.5	244-70	1
01DT5525	Deep Crk.	5/25/01	312635	1997	0	3	R		AK	(H) Ft. Richardson	6/15/98	Ninilchik R 244-20	M	Mature	244-70	1
01DT5534	Deep Crk.	5/26/01	NO TAG				1	3					M	Mature	244-70	1
01DT5533	Deep Crk.	5/26/01	312635	1997	0	3	1	3	AK	(H) Ft. Richardson	6/15/98	Ninilchik R 244-20	F	5.0	244-70	1
01DT5535	Deep Crk.	5/26/01	312635	1997	0	3	R		AK	(H) Ft. Richardson	6/15/98	Ninilchik R 244-20	M	Mature	244-70	1
01DT5529	Deep Crk.	5/26/01	312532	1997	0	3	R		AK	(H) Ft. Richardson	6/26/98	Deception Cr 247-41	F	5.2	244-70	1

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Sample#	Recovery Location	Recovery Date	Tag Code	Brood Year	Actual Age[a] Fresh	Actual Age[a] Ocean	Scale Age[b] Fresh	Scale Age[b] Ocean	State or Province	Rearing code and location[c]	Release Date	Release Location	Sex	Egg diameter or maturity	Stat Area	Shore Distance
Recovery summary for 2001 continued																
01DT5531	Deep Crk.	5/26/01	92522	1997	0	2	1	2	OR	(H) Dxter Ponds	3/5/99	Willamette R. MidFrk	F	4.5	244-70	1
01DT5530	Deep Crk.	5/26/01	312618	1998	0	2	R		AK	(H) Ft. Richardson	6/17/99	Deception Cr 247-41	M	Mature	244-70	1
01DT5532	Deep Crk.	5/26/01	312635	1997	0	3	R		AK	(H) Ft. Richardson	6/15/98	Ninilchik R 244-20	M	Mature	244-70	1
01DT5540	Deep Crk.	5/27/01	312635	1997	0	3	R		AK	(H) Ft. Richardson	6/15/98	Ninilchik R 244-20	F	4.5	244-70	1
01DT5537	Deep Crk.	5/27/01	92511	1997	0	2	R		OR	(H) Willamette Hatch	3/3/99	Fall Cr. -Willamette	F	9.0	244-70	1
01DT5536	Deep Crk.	5/27/01	312629	1997	0	3	1	3	AK	(H) Elmendorf	6/4/98	Crooked Cr. 244-30	M	Immature	244-70	2
01DT5538	Deep Crk.	5/27/01	NO TAG				R	2					M	Mature	244-70	1
01DT5539	Deep Crk.	5/27/01	312635	1997	0	3	R	3	AK	(H) Ft. Richardson	6/15/98	Ninilchik R 244-20	F	5.5	244-70	1
01DT5548	Deep Crk.	5/28/01	471735	1996	0	3	1	3	AK	(H) Tamgas Cr	5/14/98	Tamgas Cr	F	2.2	244-70	1
01DT5547	Deep Crk.	5/28/01	NO TAG				1	4					U	Unkn	244-70	2
01DT5566	Deep Crk.	5/28/01	183103	1997	0	2	1	2	BC	(H) Deadman R	4/16/99	Deadman R.	F	3.5	244-70	2
01DT5549	Deep Crk.	5/28/01	40236	1997	0	2	1	2	AK	(H) Whitman Lake	5/17/99	Herring Cove 101-45	F	1.5	244-70	1
01DT5541	Deep Crk.	5/28/01	NO TAG				R	3					F	4.5	244-70	1
01DT5542	Deep Crk.	5/28/01	NO TAG				1	4					F	5.5	244-70	2
01DT5543	Deep Crk.	5/28/01	312619	1998	0	2	1	2	AK	(H) Ft. Richardson	6/17/99	Deception Cr 247-41	M	Mature	244-70	1
01DT5546	Deep Crk.	5/28/01	312560	1996	0	4	R	4	AK	(H) Elmendorf	6/5/97	Homer Spit 241-13	M	Mature	244-70	1
01DT5544	Deep Crk.	5/28/01	310131	1998	0	2	R		AK	(H) Ft. Richardson	6/17/99	Deception Cr 247-41	M	Mature	244-70	1
01DT5545	Deep Crk.	5/28/01	312635	1997	0	3	R	3	AK	(H) Ft. Richardson	6/15/98	Ninilchik R 244-20	F	5.2	244-70	1
01DT5551	Deep Crk.	5/29/01	310145	1998	0	2	R	2	AK	(H) Elmendorf	6/7/99	Homer Spit 241-13	M	Mature	244-70	1
01DT5550	Deep Crk.	5/29/01	HEAD LOST				1	3					U	Unkn	244-70	1
01DT5550	Deep Crk.	5/29/01	HEAD LOST				1	2					U	Unkn	244-70	1
01DT5553	Deep Crk.	6/2/01	NO TAG				R						F	Unkn	244-70	2
01DT5555	Deep Crk.	6/3/01	312608	1996	0	4	1	4	AK	(H) Ft. Richardson	6/17/97	Ninilchik R 244-20	F	5.0	244-70	1
01DT5554	Deep Crk.	6/3/01	312635	1997	0	3	1	3	AK	(H) Ft. Richardson	6/15/98	Ninilchik R 244-20	F	4.8	244-70	1
01DT5557	Deep Crk.	6/7/01	312630	1997	0	3	1	3	AK	(H) Elmendorf	6/3/98	Ship Cr. 247-50	F	5.0	244-70	2
1185019	Homer	5/18/01	NO TAG				R						M	Mature	241-11	2
1185020	Homer	5/18/01	630522	1997	0	3	1	3	WA	(H) Dryden Pond	4/28/98	Wenatchee R 45.0030	U	Unkn	241-11	4
1185042	Homer	5/29/01	45003	1996	0	3	1	3	AK	(H) Crystal LK/Neets Bay	5/26/98	Neets Bay 101-90	M	Unkn	241-11	4
1185045	Homer	6/1/01	630606	1997	?	?	R	2	WA	(M) Wells Dam (47)	4/21/99	Columbia R - General	U	Unkn	241-11	5
1185046	Homer	6/1/01	HEAD LOST										M	1.0	241-11	5

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Sample#	Recovery Location	Recovery Date	Tag Code	Brood Year	Actual Age[a] Fresh	Actual Age[a] Ocean	Scale Age[b] Fresh	Scale Age[b] Ocean	State or Province	Rearing code and location[c]	Release Date	Release Location	Sex	Egg diameter or maturity	Stat Area	Shore Distance
Recovery summary for 2001 continued																
1185048	Homer	6/2/01	183910	1997	0	3	1	3	BC	Tofino	5/29/98	R-Tranquille Est	F	2.1	241-11	5
1185049	Homer	6/2/01	312635	1997	0	3	UNKN		AK	(H) Ft. Richardson	6/15/98	Ninilchik R 244-20	U	Unkn	241-11	5
1185065	Homer	6/16/01	630610	1997	0	2	1	2	WA	(H) Eastbank Hatch	4/26/99	Similkameen R 490325	F	1.2	241-11	5

[a] Actual fresh age and ocean age are the ages determined by comparing the brood year, release year, and the year of harvest.

[b] The estimated fresh age and estimated ocean age as determined from scales. R=regenerated. Unkn=unknown.

[c] Name of hatchery facility fish were raised or steam name of wild stock origin. H=hatchery stock. W=wild stock.

Note: Shore Distance

The categories for distance from shore when hooked were:

1 = < ¼ mile out,

2 = ¼ < ½ mile out,

3 = ½ < ¾ mile out,

4 = ¾ < 1 mile out, and

5 = > 1 mile out.

Appendix A2.-Summary of information collected from coded wire tagged Chinook salmon recovered during random sampling of the recreational fishery south of Bluff Point, May 1 Through June 24, 1999 through 2001.

Sample#	Recovery Location	Recovery Date	Tag Code	Brood Year	Actual Age[a] Fresh	Actual Age[a] Ocean	Scale Age[b] Fresh	Scale Age[b] Ocean	State or Province	Rearing code and location[c]	Release Date	Release Location	Sex	Egg diameter or maturity	Stat. Area	Shore Distance
Recovery summary for 1999																
99DU5520	Anchor P.	5/22/99	LOST	UNKN											241-60	5
99DU5520	Anchor P.	5/22/99	NO TAG	UNKN			1	3					F	4.5	241-60	5
99DU5561	Anchor P.	6/18/99	183147	1995	0	3	1	3	BC	(H) Snootli Cr.	6/11/96	Atnarko R. upper	M	Immature	241-60	5
99DU5560	Anchor P.	6/18/99	312514	1995	0	3	1	3	AK	(H) Ft. Richardson	6/18/96	Deception Cr. 247-41	M	Mature	241-11	3
99DU5569	Anchor P.	6/25/99	182146	1995	0	3	R		BC	(H) Snootli Cr.	5/24/96	Chuckwalla	F	1.3	241-60	5
99185509	Homer	5/15/99	181318	1994	0	4	R	4	BC	(H) Shotbolt Bay	6/16/95	Kilbella Bay	M	Immature	241-11	5
99185520	Homer	5/22/99	182502	1995	0	3	U		BC	(H)-Robertson Cr.	6/3/96	Robertson Cr.	F	2.2	232-01	2
99185521	Homer	5/22/99	312429	1994	1	3	1	4	AK	(H) Ft. Richardson	6/13/96	Seldovia Hbr. 241-11	F	5.8	241-17	2
99185517	Homer	5/21/99	312510	1995	0	3	1	4	AK	(H) Elmendorf	6/12/96	Seldovia Hbr. 241-11	M	Mature	241-17	3
99185561	Homer	6/20/99	312510	1995	0	3	1	3	AK	(H) Elmendorf	6/12/96	Seldovia Hbr. 241-11	F	5.2	232-01	2
99185546	Homer	6/4/99	312515	1995	0	3	1	2	AK	(H) Ft. Richardson	6/13/96	Ninilchik R. 244-20	F	5.2	241-15	1
99185519	Homer	5/21/99	LOST	UNKN									u		241-11	2
Recovery summary for 2000																
185518	Homer	5/20/00	92320	1996	1	2	R		OR	(H) Marion Forks	3/3/98	N. Santiam R.	M	Immature	241-11	5
185523	Homer	5/25/00	183355	1996	0	3	1	3	BC	(H) Tofino	6/30/97	Tranquille EST.	F	2.2	241-11	5
Recovery summary for 2001																
1185006	Homer	5/5/01	NO TAG				1	3					F	3.0	241-11	5
1185014	Homer	5/14/01	182559	1997	0	3	1	3	BC	(H) Nitinat R	5/8/98	Sooke Hrbr	F	4.0	241-11	5
1185015	Homer	5/14/01	HEAD LOST				1	3					F	2.2	241-11	5
1185029	Homer	5/26/01	NO TAG				1	2					F	Unknown	241-15	1
1185034	Homer	5/27/01	312558	1996	0	4	1	4	AK	(H) Elmendorf	6/9/97	Halibut Cove La 241-15	F	5.6	241-15	1
1185033	Homer	5/27/01	NO TAG				1	2					U	Unknown	241-15	1
1185038	Homer	5/28/01	312631	1997	0	3	UNKN		AK	(H) Elmendorf	6/9/98	Seldovia Hbr. 241-11	F	5.8	241-17	2
1185041	Homer	5/29/01	40235	1997	0	2	1	2	AK	(H) Whitman Lake	5/17/99	Herring Cove 101-45	F	1.8	241-15	1
1185053	Homer	6/6/01	312635	1997	0	3	R	3	AK	(H) Ft. Richardson	6/15/98	Ninilchik R. 244-20	F	5.6	241-11	5
1185054	Homer	6/7/01	92507	1997	0	3	1	3	OR	(H) Willamette Hatch	11/3/98	Willamette - 1	M	Immature	241-11	5
1185057	Homer	6/8/01	312631	1997	0	3	1	3	AK	(H) Elmendorf	6/9/98	Seldovia Hbr. 241-11	F	5.6	241-11	5
1185059	Homer	6/9/01	NO TAG				1	3					F	5.7	241-11	5
1185061	Homer	6/11/01	183813	1997	0	3	1	3	BC	(H) Masset	6/25/98	Yakoun R	F	4.0	241-11	5
1185062	Homer	6/12/01	312632	1997	0	3	1	3	AK	(H) Elmendorf	6/12/98	Halibut Cove La 241-15	F	6.1	241-15	1
1185067	Homer	6/16/01	183910	1997	0	3	UNKN		BC	(H) Tofino	5/29/98	Tranquille EST.	F	2.8	241-11	5
1185066	Homer	6/16/01	182755	1996	0	3	1	3	BC	(H) Terrace	4/27/98	Kitsumkalum R	F	1.6	241-11	5

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Sample#	Recovery Location	Recovery Date	Tag Code	Brood Year	Actual Age[a] Fresh	Actual Age[a] Ocean	Scale Age[b] Fresh	Scale Age[b] Ocean	State or Province	Rearing code and location[c]	Release Date	Release Location	Sex	Egg diameter or maturity	Stat Area	Shore Distance
Recovery summary for 2001 continued																
1185069	Homer	6/18/01	182755	1996	0	3	1	3	BC	(H) Terrace	4/27/98	Kitsumkalum R	M	Immature	241-11	5
1185072	Homer	6/20/01	183831	1998	0	3	UNKN		BC	(H) Robertson Cr	6/25/98	(H) Robertson Cr	U	Unknown	241-11	5

[a] Actual fresh age and ocean age are the ages determined by comparing the brood year, release year, and the year of harvest.

[b] The estimated fresh age and estimated ocean age as determined from scales. R=regenerated. Unkn=unknown.

[c] Name of hatchery facility fish were raised or steam name of wild stock origin. H=hatchery stock. W=wild stock.

Note: Shore Distance

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