Regional Information Report No. 1J11-08

2011 Management Plan for the Lynn Canal (District 15) Drift Gillnet Fishery

by

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May 2011

Alaska Department of Fish and Game **Division of 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)

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

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May 2011

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This document should be cited as:
Bachman, Randall L. 2011. 2011 management plan for the Lynn Canal (District 15) drift gillnet fishery. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 1J11-08, Douglas.

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ABSTRACT

Generally, for 2011, returns of sockeye salmon to Lynn Canal are expected to be below average. Due to indications of poor freshwater survival of the 2006 brood year for Chilkoot Lake sockeye salmon returns for this stock are expected to be poor in 2011. Average sockeye salmon returns to the Chilkat River mainstem and below average returns to Chilkat Lake are expected for 2011. Hatchery chum salmon returning to Amalga and Boat Harbor release sites are also expected to be average in abundance. Pink salmon returns are expected to be well above average in 2011. Fall chum and coho salmon returns are expected to be near average. This document describes plans for the management of the 2011 Lynn Canal (District 15) drift gillnet salmon fishery. The purpose of this plan is to provide commercial fishers and processors with a general idea of how the fishery is to be managed, what options are available to the manager, the conditions that trigger management actions and an idea of the expected run size of targeted salmon stocks. This plan will also serve as a reference that consolidates important historical harvest, escapement data and current fisheries information.

Key words: salmon, *Oncorhynchus spp*., drift gillnet fishery, Southeast Alaska, Lynn Canal (District 15), management plan.

INTRODUCTION

The Lynn Canal drift gillnet fishery targets sockeye, summer chum, coho, and fall chum and pink salmon. Chinook salmon are taken incidentally.

Sockeye salmon runs in Lynn Canal have historically been among the largest in Southeast Alaska (Bachman, 2010). The coho and fall chum salmon runs to the Chilkat River are among the largest in northern Southeast Alaska (Bachman and McGregor, 2001). In recent years, Chilkat Lake sockeye, Chilkat River mainstem sockeye, coho and fall chum salmon stocks have been productive and meeting escapement goals. Chilkat River fall chum salmon returns have been above average in the last several years with the exception of 2010. Production of Chilkoot Lake sockeye salmon has been below average since brood year 2008 and is not expected to improve in 2011. The department believes that the decline in Chilkoot Lake sockeye salmon production is caused by a downturn in zooplankton production during 2005 through 2007 brood years (Bachman and Sogge, 2006, Kelley and Bachman, 1999). Wide fluctuations in zooplankton abundance have been observed in Chilkoot Lake in recent years and hydroacoustic estimates since 2005 have improved. Returns of Chilkoot Lake sockeye salmon is expected to improve in 2012. The 2011 return of Chilkat Lake sockeye salmon is expected to be below average. Returns of Chilkat Lake sockeye salmon is predicted to below average due to below average returns during the 2005–2007 brood years. Management strategies designed to ensure proper escapement of sockeye salmon to systems in the District will be in place during 2011.

Sockeye salmon are targeted from June through early September. The primary stocks originate from Chilkat Lake, Chilkoot Lake, Berners Bay rivers, and mainstem spawning areas of the Chilkat River. Hatchery and wild summer chum salmon are harvested from late June through early August. Fall chum and coho salmon are targeted from September through early October. The primary fall chum salmon stocks originate in the Klehini and Chilkat rivers. Productive coho salmon stocks originate from the Chilkat and Berners Bay river systems.

During the 2009 Board of Fish meeting, revised escapement goals for Chilkoot and Chilkat Lake sockeye salmon were presented based on an updated spawner-recruit analysis. Weekly escapement targets for Chilkoot Lake sockeye salmon are based on the historical run timing of fish through the Chilkoot River weir. Chilkat Lake sockeye salmon escapement goals are now based on a weir count corrected series of data based on years where mark-recapture estimates were used to estimate escapement of this stock. Continuing in 2011, sockeye and coho salmon

escapement into Chilkat Lake will be assessed with a DIDSON (**D**ual frequency **ID**entification **SON**ar) system. This system has allowed the department to monitor the escapement of Chilkat Lake sockeye salmon during all environmental conditions and will allow the department to review escapement goals for this stock. This equipment has enabled department crews to monitor Chilkat Lake salmon escapement during flow reversal, severe whether events and during periods of high boat traffic.

FISHERY AREA

The Lynn Canal drift gillnet fishery occurs in the waters of District 15. The district is divided into three regulatory sections: 15-A (upper Lynn Canal), 15-B (Berners Bay), and 15-C (lower Lynn Canal). These regulatory sections are further divided into eight statistical areas (Figure 1).

CONTRIBUTING STOCKS

Stocks targeted by the gillnet fishery and the harvest timing are as follows:

1. Sockeye salmon contribute to the fishery from June through early September. The primary stocks originate in Chilkat and Chilkoot lakes (Figure 2). Sockeye salmon originating from Chilkat Lake, Chilkoot Lake and other areas are managed separately. The return timing for the Chilkat and Chilkoot lake sockeye salmon stocks in the Lynn Canal drift gillnet fishery is presented in detail in Figure 3.
2. DIPAC hatchery chum and wild pink salmon stocks are both harvested from late June through July. The return timing for Chinook, summer chum, pink and coho salmon stocks to the Lynn Canal drift gillnet fishery is shown in Figure 4.
3. Fall chum and coho salmon are harvested from September through early October. The primary fall chum salmon stocks originate in the Klehini and Chilkat rivers. The primary coho salmon stocks originate in the Chilkat River drainage and rivers within Berners Bay.

For 2011, the southeast Alaska drift gillnet fishery is limited to a share of “Treaty” king salmon. This allocation generally does not include Alaskan hatchery produced fish. This amount is based on 2.9% of the Chinook all gear quota for Southeast Alaska. In District 15, the Lynn Canal and Chilkat River King Salmon Fishery Management Plan (5 AAC 33.384, shown in Appendix A) will guide the management in Chilkat Inlet during the first three weeks of the season based on a preseason projected inriver forecast for mature Chilkat River Chinook salmon. This plan establishes management measures for subsistence, commercial, and sport fisheries, which harvest Chilkat River Chinook salmon.

Historical catches for sockeye, coho, pink, chum, and Chinook salmon in the Lynn Canal drift gillnet fishery are shown in Table 1 and Figure 5.

GENERAL MANAGEMENT GOAL

The overall management goal is to achieve desired spawning escapement levels while harvesting the available surplus for a long-term maximum sustainable yield of all Lynn Canal salmon stocks. Specific management goals for the 2011 Lynn Canal drift gillnet fishery and formal escapement goals are as follows and are presented in tabular form as Table 2:

1. Obtain an escapement of between 38,000 and 86,000 (weir count units) sockeye salmon to Chilkoot Lake.

2. Obtain an escapement of between 70,000 and 150,000 sockeye salmon to Chilkat Lake. The escapement will be monitored in season by the lower Chilkat River fish wheel project and the final escapement will be derived from DIDSON counts at the outlet of Chilkat Lake.
3. Obtain an escapement of between 1,750 to 3,500 three-ocean age and older king salmon to the Chilkat River.
4. Obtain a peak foot escapement count between 4,000 and 9,200 coho salmon to Berners River.
5. Obtain a peak index stream count for Chilkat River drainage coho salmon that corresponds to a total escapement of 30,000 to 70,000 fish.
6. Provide for sufficient chum, coho, and pink salmon spawning escapements to the Chilkat, Chilkoot, and Berners rivers and other Lynn Canal systems, while harvesting those fish in excess of escapement needs.
7. Harvest all DIPAC hatchery-produced chum salmon available in the Boat Harbor Terminal Harvest Area or in the Vanderbilt Reef (Postage stamp) area while conserving wild stock summer chum salmon migrating to streams on the western shoreline of Lynn Canal and other wild stocks originating in upper Lynn Canal.

2011 OUTLOOK

CHILKAT RIVER DRAINAGE SOCKEYE SALMON

The 2011 forecasted return of Chilkat Lake sockeye salmon is expected to be below average. The expected total return may be below the average of 206,700 fish (Table 3). The department no longer collects information on Chilkat Lake sockeye salmon smolt abundance, therefore returns for 2011 are not predictions but characterized as general expectations based on escapement and lake rearing conditions. Zooplankton density during 2007, the lake rearing smolt year for the 2011 return was below the previous 10-year average of 115,000 organisms/m^2 (Figure 6) and the 2008 level was well above average.

The 2011 run size of Chilkat River mainstem sockeye salmon is expected to be near average based on parental year escapement and the average proportion of 2-ocean aged fish in the 2010 escapement.

Chilkat Lake escapement estimates of 84,000 and 73,000 during the 2005 and 2006 parent years were within the sustainable escapement goal range of 70,000 to 150,000 (Table 4, Figure 7, bottom). Although no total smolt abundance estimates are available for the dominant smolt years (2007 and 2008) for the 2011 return, the average size and weight of age-1.0 and age-2.0 smolt sampled were above the historical average in 2008 indicating productive rearing conditions in Chilkat Lake (Table 5). On average, 72.5% of the Chilkat Lake sockeye salmon escapements are 3-ocean age fish (34.0% are age-1.3 fish, 38.3% are age-2.3 fish and 0.2% is age-3.3 fish, (Table 6). Approximately 26.0% of this run is fish that have spent 2 years in the marine environment, or 2-ocean age fish. The proportion of 2-ocean age fish in the 2010 escapement was near average indicating an average return of 3-ocean age fish in 2011.

Escapement estimates of the Chilkat River mainstem sockeye salmon escapements in 2006, 2007, and 2008, (the dominant parent-years) were 24,000, 19,700 fish and 35,700 fish, respectively (Table 7). Escapement estimates during the parent years for the 2010 return were

near the historical 1994 to 2009 average of 32,800 fish for all brood years except 2006 which was well below this average. The dominant age classes for this run includes age-0.2 (20.5%), age-0.3 (37.9%), and age-1.3 (28.8%) fish (Table 8). The proportion of age-0.2 and age-1.2 fish in the 2010 escapement is near average indicating that the 2010 return of age-0.3 and 1.3 fish to the mainstem Chilkat River may be near average in run strength.

CHILKOOT SOCKEYE SALMON

Returns of Chilkoot Lake sockeye salmon in 2011 are expected to be well below average based on poor zooplankton and smolt production for the 2011 return. The total return of 215,464 Chilkoot Lake sockeye salmon in 2006 (dominant brood year) was well above average (Table 9). The Chilkoot Lake sockeye salmon weir count during the dominant parental brood year (2006) for the 2011 return was 96,200 fish, well above the desired escapement goal range (Table 10, Figure 7, top). The Chilkoot River weir is used to collect scale samples for age composition, and to monitor the escapement of this stock during the commercial fishery (Kelley and Bachman, 1999, Bachman and Sogge 2006, Eggers et al, 2010).

The reason production is expected to be down for the 2011 return of Chilkoot Lake sockeye salmon is due to a severe drop zooplankton production in 2007 possibly caused by the very warm summer weather in 2004 and 2005. The 2007 fall hydroacoustic pre-smolt estimate and zooplankton density was well below average indicating poor lake rearing conditions in 2007. (Table 11; Figure 8). Due to expected low returns of Chilkoot Lake sockeye salmon the department will implement management decisions in the commercial drift gillnet salmon fishery to achieve target escapement levels within the escapement goal range for this stock. Smolt abundance has improved since 2008.

Age composition of the 2010 escapement was near average for most of the dominant age classes with the exception of age-1.2 fish. The proportion of age-1.2 fish in the 2010 Chilkoot Lake escapement was below average (Table 12). Given this information, the department is expecting a poor return of Chilkoot Lake sockeye salmon for 2011. Management decisions will continue to be based on inseason data and site specific sampling results from the District 15 drift gillnet fishery.

BERNERS SOCKEYE SALMON

An average run of Berners Bay sockeye salmon is expected in 2011 for similar reasons the Chilkat River mainstem run is expected to be average in run strength. Total escapement estimates are not available for Berners Bay sockeye salmon systems since harvests are typically a mix of Chilkat River mainstem and possibly other sockeye stocks. Peak aerial escapements to Berners Bay streams were near or generally above average for all brood years. The 2007 and 2008 commercial harvests of Berners Bay and Chilkat River mainstem sockeye salmon were estimated at 17,276 and 17,016 fish respectively. These harvests are near the historic 1976 to 2010 average harvest of 14,978 fish (Table 13).

SUMMER CHUM AND PINK SALMON

The majority of the summer chum salmon production in the district is from hatchery releases at Amalga Harbor and the Boat Harbor terminal harvest areas by the Douglas Island Pink and Chum Salmon Inc. (DIPAC). DIPAC has been enhancing the chum salmon returns to Lynn Canal since 1987 (Table 14). Projections for the Boat Harbor Terminal Harvest Area chum salmon return in 2011 is approximately 358,050 fish. This forecast return is above the historical

average of 201,194 fish (Table 15). The preseason projection for the Amalga Harbor chum salmon return is approximately 1,451,950 fish, well above the 1991–2010 average of 1,009,178 fish (Table 15).

Strong returns of pink salmon are expected in 2011 and pink salmon escapements in the 2009 parent year for Sawmill Creek showed a moderate level escapement (Figure 9).

Based on parental-year escapement counts, the wild summer chum salmon return in 2011 should be average in run strength but at a much lower scale than the hatchery summer chum salmon return. Escapements of wild chum salmon to the Endicott River during the important parent years (2006–2008) of the 2011 return were well below average (Figure 10).

The majority of the summer chum salmon harvest in lower Lynn Canal is comprised of hatchery fish from remote release sites at Boat Harbor and Amalga Harbor. Smaller numbers of wild chum salmon are produced from local area streams such as Sawmill Creek and other Berners Bay rivers on the eastern side of Lynn Canal. The Endicott, Beardslee, and St. James Bay rivers on the western side of Lynn Canal are also important contributors to the wild summer chum harvest in the drift gillnet fishery.

FALL CHUM SALMON

The 2010 return of Chilkat River drainage fall chum salmon stock is expected to be above average. For the Chilkat River parent years, the peak aerial survey counts were 2,000 and 29,250 fish. These counts were well above the peak aerial escapement count average of 23,000 fish in 2007. No late aerial surveys were completed in 2006 therefore the peak count of 2,000 fish in 2006 does not indicate a poor escapement as this run typically peaks during the late fall. Peak aerial survey counts in the Klehini River were 21,400 fish. No survey was conducted in 2008. The total drainage wide estimated escapement in 2006 and 2007 based on mark-recapture index methods was 704,000 and 331,000 chum salmon. These estimates are above average for years where total drainage escapements estimates are available.

The commercial harvests during the dominant parental brood years (2006 and 2007) were near the previous ten-year average. A relationship between fish wheel catch and mark-recapture estimates has been developed for this stock. Results from mark-recapture work during years 2002 to 2005, it was estimated that 1.5% of the total number of fall chum salmon returning to the Chilkat River drainage are captured in the fish wheels (Bachman 2005; Eggers and Heinl).

COHO SALMON

The Chilkat River drainage coho salmon return is expected to be average during 2011. Coho salmon systems in the district include the Chilkat River, Berners River and Chilkoot River. Parent-year survey counts at the Chilkat River tributaries and Chilkoot River drainage were generally good and above the 10-year average. The 2007 and 2008 escapements to Berners Bay (3,915 and 6,900) were below the escapement goal range of 4,000 to 9,200 fish in 2007 and within goals in 2008.

Sport Fish Division has been conducting coho salmon smolt coded-wire tagging (CWT) studies on the Chilkat River to estimate smolt size, age structure, production of coho salmon smolts and marine survival of coho salmon since 1999 (Ericksen 2003). The 2007 and 2008 Chilkat River fish wheel catches of 1,658 and 3,217 coho were below the previous 10-year average in 2007 and above the average in 2008 (Figure 11). Chilkat River escapement estimates for coho salmon in 2007 and 2008 were 25,500 and 57,400 fish, respectively. These escapement counts were below

the escapement goal range in 2007 and within goals in 2008 (Figure 2). Estimates of harvest were below average in 2007 and near the previous 10-year average in 2008 (Table 1). Forecasts for Lynn Canal coho stocks are based on recent marine survival trends, trapping CPUE and escapement estimates. Prior to 2005, the average marine survival for years 1999 to 2003 for Chilkat River coho salmon was 11.4%. In recent years, the average marine survival has dropped to 7.1% in years 2005 to 2008 (Brian Elliott *Unpublished data).* The 2008–2010 return exhibited a marine survival rate of 11–12%, an increase over prior years. If marine survival rates are similar to 2010, the Chilkat River coho salmon return in 2011 could be above average.

Coho salmon production from streams in Berners Bay has been in decline through 2009. Coho salmon smolt production in Berners Bay has been below average since 2005 and has improved in 2010. Marine survival for this stock has decreased in recent years as well from a 1990–2004 average of 17.5% to a 2005–2009 average of 10.7%. A roughly similar proportionate decline in smolt production and marine survival has been observed in the Chilkat, Taku and Auke Creek drainages. Information collected in 2010 indicated fresh water and marine survival may be increasing for Berners Bay coho salmon.

CHINOOK SALMON

The 2011 preseason inriver abundance forecast for large (≥ age 1.3) Chilkat River Chinook salmon is estimated to be 2,193 fish. This estimate is below historical averages but within the inriver abundance goal range of 1,850 to 3,600 fish. Since the preseason forecast is projected to be within the inriver abundance goal range, the northern line in Chilkat Inlet will move northward to Glacier Point on the third week of the season (week 28) and may be moved to the latitude of Cannery point by the fourth week of the season depending on sockeye and Chinook salmon run strength as indicated by information collected by the lower Chilkat River fish wheel and drift net projects.

2011 MANAGEMENT PLAN

The Lynn Canal drift gillnet fishery will open at 12:01 p.m. on June 19, the third Sunday of June (statistical week 26, Appendix B1). Weekly fishing periods are established by emergency order and announced to the public by news releases that are generally issued on Thursday afternoons.

In 2011, ADF&G intends to manage the summer Lynn Canal drift gillnet fishery to obtain escapements within the established escapement goal ranges (Table 2) for all salmon stocks. The department intends to manage the fishery to minimize harvest of wild north bound stocks while harvesting returns of hatchery chum salmon in Section 15-C. The fall Lynn Canal drift gillnet fishery will be managed to conserve Klehini River (early-run) fall chum salmon while providing opportunity to harvest Chilkat River fall chum and coho salmon later in the season if run strength indicates a harvestable surplus. It is anticipated that area, time and gear restrictions will be in place to protect projected poor returns of Chilkoot and Chilkat Lake sockeye salmon during the summer season.

SECTION 15-A

Section 15-A will open for two days south of the latitude of Seduction Point beginning 12:01 PM Sunday June 19 (statistical week 26) with no mesh restriction. If the Chilkoot River weir count through June 16 is less than 2,500 sockeye salmon, the eastern side of Section 15-A will be

closed. If the weir count is 2,500 sockeye salmon or greater on June 16, the eastern portion of 15-A may be opened in the area south of Seduction Point. During the first three weeks of the season, Chilkat Inlet will be managed in accordance to the Chilkat River King Salmon Fishery Management Plan (Appendix A.1). Since the preseason forecast for Chilkat River drainage Chinook salmon is within the goal range, during the first two weeks of the season, Chilkat Inlet will be closed north of the latitude of Seduction Point. In week 28, Chilkat Inlet may be open south of the latitude of the Glacier Point-Twin Coves line. In week 29, Chilkat Inlet may be open south of the northernmost tip of Kochu Island (latitude). Chilkat Lake sockeye salmon run strength as measured by the lower Chilkat River fish wheel project will dictate commercial fishery openings in Chilkat Inlet after statistical week 28. It is likely that the northern boundary line within Chilkat Inlet will remain at the northernmost tip of Kochu Island or Cannery Point for the remainder of the summer season if escapements of Chilkat Lake sockeye salmon are projected to be within the escapement goal range. ADF&G is forecasting a below average return of sockeye salmon to Chilkoot and Chilkat Lake and an average return to the Chilkat River mainstem fish. It is likely that openings in northern Section 15-A will be very conservative if sockeye returns are below average. Decisions will be dictated by the results of various in season stock assessment programs operating on the Chilkat and Chilkoot River drainages. If the inseason information system indicates that the Chilkat Lake sockeye salmon return is not forecasted to meet minimum escapement goals, limits in time and area of western and northern Section 15-A will be implemented to increase sockeye escapement within desired goal ranges. A six-inch minimum mesh size gear restriction may be in place during the late summer season in section 15-A to reduce the harvest rate on Chilkat Lake sockeye salmon if needed. Data from the Chilkat River fish wheel mark-recapture program and from the commercial fishery will be used to judge run strength inseason for Chilkat River drainage salmon stocks.

Chilkat mainstem sockeye salmon returns overlap with early Chilkat Lake sockeye returns and peaks in early to middle July followed by late run Chilkat Lake sockeye salmon, which dominate during August (Figure 12). Return timing is tied to freshwater age: mainstem sockeye salmon are predominantly age 0, Chilkat Lake early run fish are predominantly age 1, and Chilkat Lake late run fish are predominantly age 2.

Fall fishery management in Section 15-A will begin from statistical week 34 until the end of the season. As in recent years, the northern boundary line in Section 15-A will move northward in stages as the coho and fall chum stocks begin to migrate back to parental streams. Depending on effort levels, and coho and fall chum salmon run strength, fishing opportunity in Section 15-A will be based on overall inriver abundance of chum and coho salmon. Fishermen are reminded that any extensions in fishing time during the fall season could be announced with little advanced notice as requested by industry. Extensions in fishing opportunity will be based on results of in river stock assessment and projected escapement in comparison to escapement goals.

SECTION 15-B

During years of high coho salmon abundance, openings in Section 15-B (south of the latitude of Cove Point; Figure 13) occurred for 2 or 3 days from week 38 through the end of the season. Inseason information collected from coded wire tag recoveries and commercial harvest from various gear types will provide the data to manage fishing opportunity is Section 15-B. Since the preseason forecast is for a below average return of coho salmon for Berners Bay streams, it is unlikely that openings within Berners Bay will occur in 2011. Inseason information collected

from coded wire tag recoveries and commercial harvest from other gear types will provide the data to manage commercial fishing opportunity in Section 15-B.

SECTION 15-C

Section 15-C will open for two days beginning 12:01 PM Sunday, June 19 with a six-inch minimum mesh size restriction except for the Boat Harbor terminal harvest area. If the Chilkoot River weir count is less than 2,500 sockeye salmon through June 16, the eastern side of Section 15-C will be closed north of the latitude of Bridget Point (excluding the Boat Harbor Terminal Harvest Area).

Due to the below average expected returns of Chilkoot and Chilkat Lake sockeye salmon, open fishing time in Section 15-C will be limited to 2 or 3 days (except for the Boat Harbor THA). If in season projections for the Chilkat or Chilkoot Lake sockeye salmon returns are below the escapement goal range projection, it is possible that additional time, area, and gear restrictions be placed in Section 15-C during the summer season to boost escapement of sockeye salmon to desired levels.

To provide adequate escapements for northbound wild salmon stocks while providing opportunity to harvest hatchery chum salmon, some openings may be limited to the small area in eastern Section 15-C (known as the "postage stamp area") and defined as:

> the waters of Section 15-C from the eastern shoreline of Lynn Canal at the latitude of Vanderbilt Reef Light to Vanderbilt Reef Light and east of a line from Vanderbilt Reef Light to Little Island Light, (Figure 13).

Depending on effort and run strength levels, this area could open on the 3rd and/or 4th day during peak weeks (statistical weeks 27 through 31) of the hatchery chum salmon return. This strategy will be used to provide opportunity to harvest summer chum salmon while reducing the harvest of northbound wild salmon stocks migrating through section 15-C. The decision to use this strategy will be considered inseason based on Chilkat River fish wheel, Chilkoot River weir counts, aerial survey results and results from site-specific sampling of the District 15 commercial fishery. Since the Chilkoot Lake sockeye salmon return is expected to be poor, openings in eastern Section 15-C could be limited to just the postage stamp area during peak weeks (week 27–29 of sockeye salmon presence in the fishery.

The Boat Harbor Terminal Harvest Area (THA) will be opened for extended periods beginning in week 27 (June 26). The Boat Harbor THA is defined as: those waters within two nautical miles of the western shoreline of Lynn Canal south of the latitude of Lance Point at 58°43.95' N. latitude and north of a point 2.4 miles north of Point Whidbey at 58°37.05' N. latitude. The northern line of the Boat Harbor area will at the latitude of Danger Point (58°41.73' N. latitude) through week 31. The purpose of this strategy is to decrease the harvest rate on Endicott River and other western Lynn Canal wild chum salmon stocks that migrate through this area during the summer season when returns of hatchery chum salmon are present. This action has been in place for the last several seasons. Escapements of wild chum salmon to the Endicott River have improved in recent years due to this action (Figure 10).

The section within the Boat Harbor area west of a line from the entrance to the Boat Harbor proper area will be opened continuously beginning the first week of the season. This strategy will be used to harvest returns of hatchery chum salmon that enter the Boat Harbor proper area with little risk to wild salmon stocks outside of this area.

Fall season management will begin in statistical week 34 (August 14). Management of Section 15-C during the fall season will be based on overall coho and fall chum salmon run strength and fishing effort levels. Commercial fishing effort will be directed at harvesting coho and fall chum salmon in Section 15-A and C in excess of escapement needs. Fishing time will more likely be limited from 2 to 3 days each week in the fall season. Weekly openings may be limited to 2 days each week during the early portion of the fall chum salmon return to boost Klehini River fall chum escapement. Any extensions to area or fishing time in the fall season will depend on the results of various stock assessment projects and aerial survey results in the Chilkat and Chilkoot watersheds. Extensions could be announced without advance notice during the fall season if salmon returns warrant. Shortened extension notice was requested by industry during the 2009 drift gillnet task force meeting.

Golden North Salmon Derby

In order to avoid conflicts with sport fisheries, the District 15 drift gillnet fishery will not be open concurrent with the 2011 Juneau Golden North Salmon Derby (August 12 to 14). Consequently, during Statistical Week 34, the District 15 gillnet fishery will not open until Monday, August 15.

2011 STOCK ASSESSMENT PROJECTS

The Haines Commercial Fisheries Division's salmon stock assessment projects include the Chilkoot River weir, Chilkat River fish wheels, Chilkat Lake weir/DIDSON and the marine fishery performance project (Appendices C & D). Funding for the Chilkoot River weir, Chilkat Lake weir/DIDSON and marine fishery performance projects are supported through the general fund. Funding from the Southeast Alaska Sustainable Salmon Fund (ASSF) supports the Chilkat River fish wheel project. The funding for the fish wheel project is secured through fiscal year 2013. State funding is being sought for this project as federal grant funds are increasingly more difficult to obtain.

Information collection from the Chilkat River fish wheel, Chilkoot River, marine fishery performance and Chilkat Lake DIDSON projects form the inseason escapement and commercial catch information system are used to make fishery decisions to manage the drift gillnet fishery in Lynn Canal.

Information from the lower Chilkat River fish wheel program is used to estimate the spawning escapements of Chilkat Lake and Chilkat River mainstem sockeye salmon through mark-recapture experiments. Sockeye salmon are marked at the fish wheels and ratios of marked to unmarked fish are determined from recaptured fish at spawning locations throughout the valley. Since this program began in 1994, the average escapement to Chilkat Lake and the Chilkat River mainstem area are estimated at 119,600 and 32,800 respectively, using mark-recapture methods (Tables 4 and 7). A dual frequency identification sonar (DIDSON) will be used again to enumerate Chilkat Lake sockeye salmon into Chilkat Lake. Severe flow reversals and increased in boat traffic into and out of Chilkat Lake have made sockeye salmon enumeration into this system very difficult through traditional visual means. Using DIDSON technology to estimate spawning escapement for this stock will improve the quality of escapement estimates for this lake system. The goal of this project is to provide an accurate escapement assessment of Chilkat Lake sockeye salmon over a number of years to assess and refine escapement goals for this stock.

A mark-recapture project utilizing the Chilkat River fish wheels began in 2002 to measure the abundance of fall chum salmon from June 8 through October 19 (Bachman 2005). This mark-recapture study has documented escapements of approximately 204,100 in 2002, 165,700 in 2003, 309,520 in 2004 and 202,000 in 2005. This information is used to estimate escapement of fall chum salmon to the Chilkat River based on a 1.5% catch rate.

The Chilkoot Lake weir project has been in operation since 1976. The weir will operate beginning the first week in June to estimate the spawning escapement of Chilkoot Lake sockeye salmon.

Abundance of zooplankton, a chief food item for rearing Chilkoot Lake sockeye fry, was negatively affected by interannual reductions in summer euphotic zone depth in 2004 through 2005. Chilkoot Lake functions as a clear lake during spring and early summer, changing to a glacial lake in the summer. With increasing air temperatures, rapid glacier melt, more silt is increasing the lake's turbidity. Increased turbidity causes a reduction in euphotic zone depth, in primary production, and in carrying capacity at all trophic levels (Riffe, 2006). The intensity of the change depends on summer weather patterns. Currently, rearing conditions in Chilkoot Lake have improved but the hot summer of 2009 may reduce sockeye salmon production from this system. Improved zooplankton abundance and higher numbers of rearing sockeye salmon were documented in 2008, 2009 and 2010 (Table 11, Figure 8).

As in previous years, the department's management crews as part of the marine fishery performance project will be on the fishing grounds during commercial fishing periods to sample sockeye and Chinook salmon and to estimate fishery catch rates and composition during each opening. The department requests that commercially caught sockeye and king salmon be retained in separate fish holds or totes so department staff can collect scale and length data from targeted fish while monitoring the fishery. The sockeye salmon scale samples that are collected from the commercial gillnet fishery form the basis of our stock separation analysis and is used to adjust fishing opportunity in the district. The department vessels stand by on **channel 10 VHF** when on the fishing grounds.

Please report any commercial fisheries violations to the Alaska Wildlife Troopers at (907) 766-2533 (Haines), (907) 465-4000 (Juneau).

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TABLES

Table 1.–Historical catches of king, sockeye, coho, pink, and chum salmon in the District 15 (Lynn Canal) drift gillnet fishery by regulatory Section, 1977–2010.

	Chinook				Sockeye				Coho			
Year	**15-A**	**15-B**	**15-C**	**Total**	**15-A**	**15-B**	**15-C**	**Total**	**15-A**	**15-B**	**15-C**	**Total**
1978	457	0	79	536	105,491	0	2,989	108,480	26,084	0	27,081	53,165
1979	3,554	0	18	3,572	192,692	0	282	192,974	23,426	0	3,589	27,015
1980	434	0	6	440	53,096	0	891	53,987	26,120	0	2,778	28,898
1981	1,083	2	215	1,300	81,740	1,289	10,166	93,195	30,452	109	14,089	44,650
1982	5,878	1	66	5,945	268,290	160	5,432	273,882	47,719	78	24,573	72,370
1983	1,993	5	121	2,119	349,884	155	19,791	369,830	53,622	66	15,822	69,510
1984	5,822	13	264	6,099	320,277	3,759	10,546	334,582	43,637	58	24,520	68,215
1985	2,753	177	330	3,260	233,972	7,736	61,533	303,241	64,547	414	33,329	98,290
1986	2,141	41	590	2,772	248,264	1,100	40,541	289,905	48,046	4	34,071	82,121
1987	3,021	2	200	3,223	381,856	1,244	32,236	415,336	31,195	15	22,541	53,751
1988	1,136	27	94	1,257	327,330	17,469	7,000	351,799	50,984	410	30,142	81,536
1989	1,478	33	444	1,955	351,706	9,249	110,959	471,914	29,484	98	20,725	50,307
1990	364	16	290	670	248,878	3,612	104,928	357,418	36,260	48	26,764	63,072
1991	462	0	283	745	275,428	0	32,383	307,811	23,031	0	105,334	128,365
1992	225	0	385	610	230,229	0	55,806	286,035	30,021	0	78,732	108,753
1993	302	0	439	741	119,754	0	53,359	173,113	7,499	0	52,453	59,952
1994	253	4	723	980	111,061	80	60,588	171,729	55,925	13,805	71,034	140,764
1995	56	0	772	831	41,570	505	34,351	88,572	21,093	11,632	43,696	79,949
1996	106	0	491	642	65,031	0	41,354	149,961	16,525	0	29,885	52,658
1997	280	0	487	834	52,669	0	42,413	118,348	2,034	0	12,558	15,572
1998	375	0	304	679	114,467	0	20,470	134,937	7,003	0	19,115	26,118
1999	373	0	180	553	145,917	0	17,613	163,530	4,478	0	30,852	35,330
2000	140	0	157	297	76,732	0	32,648	109,380	7,652	0	27,984	35,636
2001	373	0	1,229	1,672	57,055	0	90,756	147,811	10,932	0	23,283	34,215
2002	64	0	518	582	41,677	6	40,326	82,014	23,823	12,574	41,544	77,941
2003	71	0	594	665	57,370	74	37,692	95,136	17,769	10,408	28,929	57,106
2004	365	0	440	805	73,944	130	77,171	151,245	13,323	5,822	32,815	51,960
2005	309	0	402	711	38,249	0	27,220	65,469	10,435	0	17,512	27,947
2006	51	0	292	343	114,091	96	31,280	145,467	25,875	5,400	23,875	55,133
2007	413	0	650	1,063	108,247	0	58,551	156,798	7,173	0	10,964	18,137
2008	85	0	574	659	12,831	0	33,824	46,655	25,498	0	21,434	46,932
2009	119	0	562	681	77,202	0	49,392	126,594	17,980	0	17,835	35,815
2010	230	0	645	875	58,617	0	42,351	100,968	31,314	0	34,556	65,870
Averages												
2001–10	208	0	598	806	63,928	31	47,857	111,816	18,412	3,420	25,273	47,106
1978–10	1,160	6	261	1,430	131,992	916	25,400	159,857	30,222	1,314	22,393	54,140

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Table 1.–Page 2 of 2.

	Pink				Chum					
Year	**15-A**	**15-B**	**15-C**	**Total**	**15-A**	**15-B**	**15-C**	**Total**	**Summer**	**Fall**
1978	3,260	0	551	3,811	82,443	0	35,985	118,428	7,845	110,583
1979	28,752	0	11	28,763	225,713	0	17,119	242,832	7,006	235,826
1980	79,441	0	2,902	82,343	157,515	0	11,338	168,853	19,888	148,965
1981	112,471	4,107	20,692	137,270	90,619	508	26,248	117,375	13,215	104,160
1982	67,415	126	1,509	69,050	271,659	37	34,889	306,585	5,337	301,248
1983	134,319	452	22,775	157,546	311,510	1,116	28,519	341,145	19,303	321,842
1984	68,611	2,128	7,261	78,000	552,232	10,177	79,829	642,238	59,567	582,671
1985	169,644	6,079	63,357	239,080	582,649	12,377	103,784	698,810	77,806	621,004
1986	31,927	34	6,154	38,115	305,610	1,357	74,415	381,382	18,987	362,395
1987	124,066	430	41,255	165,751	295,663	548	96,727	392,938	26,698	366,240
1988	193,991	10,343	4,070	208,404	284,127	28,664	64,792	377,583	60,206	317,377
1989	61,365	291	48,798	110,454	90,735	3,508	29,388	123,631	28,813	94,818
1990	48,645	1,247	51,207	101,099	122,157	2,908	85,477	210,542	84,282	126,260
1991	3,815	0	1,657	5,472	100,121	0	110,068	210,189	100,627	109,562
1992	243,297	0	108,265	351,562	114,157	0	131,090	245,247	132,505	112,742
1993	680	0	10,656	11,336	62,190	0	244,376	306,566	229,284	77,282
1994	57,648	2	89,627	147,277	155,172	4,482	525,795	685,449	529,380	156,069
1995	883	0	14,641	5,799	62,206	1,332	494,792	568,368	493,279	75,089
1996	1,290	0	958	2,358	55,321	0	337,709	415,547	340,021	75,526
1997	13,601	0	36,864	32,962	28,410	0	425,122	461,614	431,699	29,915
1998	22,260	0	10,091	32,351	29,933	0	130,736	160,669	136,515	24,154
1999	36,989	0	25,748	62,737	46,947	0	303,947	350,894	290,325	60,569
2000	15,938	0	5,070	21,008	66,848	0	686,181	753,029	680,536	72,493
2001	26,709	0	41,009	67,718	66,024	0	377,501	443,525	358,987	84,538
2002	37,938	0	50,106	88,044	44,184	632	620,869	665,685	625,743	39,518
2003	33,936	0	19,685	53,621	35,487	2,114	356,287	393,888	348,820	45,672
2004	62,157	0	36,184	98,341	74,618	1,061	668,977	744,656	666,038	78,257
2005	89,755	0	120,078	209,833	63,048	0	263,847	326,895	240,055	86,840
2006	66,422	0	28,278	94,700	64,371	984	1,028,857	1,094,212	1,035,956	58,257
2007	50,260	0	39,522	89,782	76,888	0	746,270	823,158	754,590	65,629
2008	4,312	0	21,722	26,034	69,552	0	1,002,583	1,072,135	991,260	80,875
2009	41,264	0	49,950	91,213	56,495	0	789,185	845,680	784,121	61,559
2010	79,710	0	91,344	171,054	70,623	0	694,006	764,629	695,267	69,362
Averages										
2000-10	47,642	0	58,577	106,218	62,129	479	654,838	717,446	658,043	59,134
1978–10	44,682	495	22,897	67,542	161,511	1,538	215,269	379,115	207,142	171,919

Table 2.–Biological and sustainable escapement goals for Lynn Canal salmon stocks by species and location.

Species	Stock	Escapement Goal Type	Escapement Goal Range	Escapement Method
Sockeye[a]	Chilkoot Lake Total	Sustainable	38,000 to 86,000	Weir Count
Sockeye[a]	Chilkat Lake Total	Biological	70,000 to 150,000	DIDSON Count
Coho[b]	Berners River	Biological	4,000 to 9,200	Peak Foot Count
Coho[c]	Chilkat River Combined	Biological	30,000 to 70,000	Sum of Peak Foot Index Counts
Chinook[d]	Chilkat River Combined	Biological	1,750 to 3,500	Mark-Recapture Estimate
Fall Chum[e]	Chilkat River Total	Sustainable	75,000 to 170,000	Fish wheel index

[a] Eggers et al. 2009
[b] Shaul and Crabtree. 2005
[c] Ericksen and Fleischman. 2006.
[d] Ericksen and McPherson. 2004
[e] Eggers and Heinl. 2008

Table 3.–Annual total return of Chilkat Lake sockeye salmon by week, 1980 to 2010.

Stat. Week	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
23	—	—	—	—	—	—	—	—	—	62	—	1	—	—	—	—
24	—	—	—	—	—	—	—	—	—	689	202	44	10	—	—	57
25	675	1,542	469		2,550	408	88	—	—	13,398	2,358	1,516	53	2,358	—	4,516
26	1,053	1,960	2,170	1,452	6,348	1,732	361	1,968	2,438	19,180	6,021	2,727	3,452	2,886	6,261	7,021
27	1,152	1,826	4,061	3,116	11,132	1,731	1,304	5,307	5,497	18,284	7,966	3,157	6,280	6,120	10,224	10,474
28	3,560	1,635	3,524	16,747	5,413	6,456	1,227	3,713	5,416	13,456	8,758	3,902	5,310	9,787	15,900	14,557
29	4,355	3,053	3,087	19,741	12,331	5,459	1,997	12,411	7,607	20,959	13,254	2,892	12,216	9,417	16,880	11,359
30	6,685	6,171	3,618	16,317	14,147	3,471	2,229	7,580	4,127	25,615	12,637	4,928	10,681	10,541	14,476	20,856
31	3,401	3,123	13,135	18,993	9,295	9,962	2,266	6,073	10,476	15,994	11,372	6,294	7,825	9,317	17,780	19,782
32	5,550	5,934	30,622	24,469	12,203	11,705	10,775	15,401	8,462	35,253	26,950	10,202	15,267	13,613	21,151	22,516
33	10,337	1,746	30,708	23,031	21,367	11,493	30,806	11,230	13,569	18,503	35,594	7,870	25,623	26,504	46,225	20,818
34	12,510	3,430	18,548	17,307	7,807	27,805	45,640	10,041	7,337	21,241	2,948	14,332	15,416	33,161	29,319	44,587
35	13,799	19,487	21,353	22,356	21,427	39,750	15,353	12,649	7,008	21,047	36,947	19,423	36,915	38,108	35,280	28,202
36	11,032	8,097	12,250	25,274	22,913	20,105	45,368	4,112	7,106	12,212	23,929	11,436	22,689	29,950	32,105	17,769
37	29,820	19,652	8,004	15,674	22,509	11,180	13,083	1,852	11,491	16,250	4,020	7,726	8,234	5,901	26,137	23,374
38–42	22,099	54,893	55,708	53,618	44,058	41,970	21,811	26,325	13,532	47,778	14,331	16,245	39,656	112,784	4,012	2,048
Total	126,028	132,549	207,257	258,095	213,500	193,227	192,308	118,662	104,066	299,921	207,287	112,695	209,627	310,447	275,752	247,937
Mean	9,002	9,468	14,804	19,853	15,250	13,802	13,736	9,128	8,005	18,745	13,819	7,043	13,975	22,175	21,212	16,529

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Table 3.–Page 2 of 2.

Stat Week	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	80–10 Average
23	—	—	—	—	—	—	—	—	—	—	—	0	—	—	—	21
24	—	476	592	258	53	105	683	144	87	157	—	0	—	—	—	237
25	987	5,003	4,308	1,127	3,861	2,046	6,595	1,875	1,237	904	592	795	—	7,432	168	2,572
26	5,954	6,569	14,634	10,292	18,395	8,353	8,177	2,920	3,810	2,776	1,588	883	646	10,214	2,601	5,317
27	11,981	15,157	29,804	20,235	21,008	10,802	10,290	3,940	9,299	3,836	3,270	1,092	423	18,679	4,941	8,464
28	34,411	8,338	31,533	46,640	18,335	14,305	10,457	3,244	16,586	5,469	2,443	2,007	3,871	8,426	10,318	10,830
29	30,905	8,469	36,090	35,884	16,039	23,472	12,363	4,519	16,485	5,863	3,198	2,339	1,716	17,748	7,131	12,234
30	31,177	15,775	31,506	39,289	15,403	26,331	14,267	5,321	14,643	6,020	5,225	7,828	2,822	17,867	7,825	13,077
31	34,786	23,640	32,112	28,573	16,273	19,647	16,056	6,598	13,620	5,896	9,914	4,219	3,058	8,710	9,012	12,813
32	58,568	31,728	41,282	36,690	21,336	27,652	23,266	17,393	20,781	7,876	11,358	5,028	4,221	21,435	15,768	19,821
33	39,784	17,349	36,814	33,663	18,377	16,358	16,560	26,531	20,962	6,468	7,661	7,235	4,545	26,230	18,113	20,389
34	37,510	20,648	31,761	35,772	18,609	11,091	14,304	24,585	18,984	7,395	10,140	5,670	5,522	11,666	10,272	18,560
35	31,720	26,064	31,529	35,087	11,137	10,136	13,927	25,053	15,236	7,373	11,075	9,055	8,484	12,221	14,136	21,011
36	20,683	22,670	19,649	19,154	12,845	10,546	15,655	23,323	15,124	11,933	8,712	13,575	6,428	14,904	17,792	17,398
37	18,089	29,896	27,720	15,695	6,044	3,396	7,806	11,063	3,356	11,904	7,724	10,465	11,182	14,299	8,804	13,302
38–42	2,676	77,078	46,224	42,015	12,474	6,395	4,996	10,510	7,968	23,066	6,250	12,035	5,921	6,213	19,942	27,569
Total	359,232	308,859	430,106	398,822	210,190	190,635	175,403	167,019	178,177	106,937	89,150	82,226	116,043	237,948	146,821	206,675
Mean	25,659	20,591	27,704	26,692	14,013	12,709	11,694	11,135	11,878	7,129	6,368	5,873	8,289	13,219	10,487	14,193

Table 4.–Annual escapements of Chilkat Lake sockeye salmon by week, 1980–2010.

Stat Week	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
23	—	—	—	—	—	—	—	—	—	62	—	1	—	—	—	—
24	—	—	—	—	—	—	—	—	—	689	202	44	10	—	—	57
25	72	3	—	—	302	—	—	—	—	5,802	639	305	53	75	—	2,232
26	887	0	31	368	1,441	7	4	88	59	10,690	3,615	901	1,016	1,745	1,510	5,323
27	1,152	5	532	1,248	5,436	98	2	1,777	2,015	7,845	1,660	1,600	1,653	3,557	3,456	8,471
28	3,560	141	605	11,144	623	1,317	602	2,197	496	2,295	4,353	1,971	1,762	4,240	8,223	9,674
29	4,355	549	461	15,284	3,280	1,141	139	5,601	9	8,126	9,566	503	6,529	3,552	5,125	9,387
30	4,575	1,071	2,515	8,935	6,011	334	20	2,542	722	15,810	2,380	2,812	5,034	7,615	8,025	18,775
31	2,100	1,002	1,743	10,750	929	812	24	1	1,969	3,161	1,449	2,234	2,263	5,336	8,184	17,172
32	2,100	266	3,496	6,865	141	2,029	1	123	1,965	4,340	1,925	3,724	3,579	6,490	9,375	17,973
33	2,100	729	509	4,254	2,971	157	3	1,776	200	11	380	1,821	1,197	14,537	34,085	15,054
34	5,666	1,450	4,073	5,589	1,417	1,555	138	1,875	566	3,207	2,948	4,295	5,768	6,643	17,559	25,643
35	6,910	767	5,151	1,433	14,899	4,434	736	6,193	280	7,582	7,167	10,732	10,357	23,593	16,367	21,007
36	10,351	4,967	1,575	5,475	18,015	3,271	1,006	1,618	469	8,379	9,647	5,380	13,172	19,677	19,346	13,394
37	29,613	18,652	6,091	10,526	18,512	3,372	5,364	27	7,973	15,019	259	2,260	6,014	1,251	18,274	20,377
38	10,739	1,113	20,378	21,097	21,106	12,639	6,943	259	2,254	34,155	664	3,264	8,779	61,222	4,012	—
39	7,015	6,134	25,516	9,455	17,510	17,688	3,796	18,033	2,747	2,713	4,465	1,873	22,150	32,323	—	—
40	3,374	32,516	7,467	9,398	2,252	5,258	3,762	6,165	4,551	2,936	3,552	1,091	6,171	297	—	—
41	778	10,222	78	7,305	424	2,009	831	0	655	3,053	4,456	1,427	1,891	2,947	—	—
42	—	4,502	—	5,081	—	1,603	576	318	663	4,600	904	6,651	342	14,630	—	—
Total	95,347	84,089	80,221	134,207	115,269	57,724	23,947	48,593	27,593	140,475	60,231	52,889	97,740	209,730	153,540	184,541
Mean	5,609	4,672	5,014	7,895	6,067	3,396	1,330	2,700	1,533	7,024	3,170	2,644	5,144	10,487	10,236	13,182

–Continued–

Table 4.–Page 2 of 2.

Stat Week	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	1980–10 Average
23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	32
24	—	476	395	270	53	105	683	140	81	157	—	—	—	—	—	240
25	—	1,857	2,562	1,140	3,861	392	4,695	1,398	1,150	904	82	76	—	7,432	168	1,600
26	2,720	3,618	6,382	5,737	14,933	4,580	6,169	2,148	2,441	2,281	611	51	65	9,101	1,488	2,904
27	11,051	11,759	12,307	12,659	13,238	5,014	6,699	2,827	5,757	2,312	1,303	354	3,429	15,753	2,015	4,741
28	32,814	5,951	10,495	26,856	10,034	6,595	7,185	1,883	8,046	3,600	1,618	1,154	720	2,325	4,217	5,700
29	28,393	5,713	12,343	16,442	9,594	12,139	6,745	3,027	7,909	4,401	1,729	1,565	1,900	14,586	3,969	6,583
30	28,308	13,187	9,500	20,819	8,399	19,314	9,037	2,498	7,426	4,795	2,789	4,070	1,284	15,278	5,236	7,713
31	26,778	16,044	10,900	14,853	7,176	12,945	11,728	2,968	7,984	4,713	8,219	2,720	2,227	4,042	4,344	6,347
32	42,335	22,138	15,897	17,906	8,886	20,775	15,074	10,872	15,718	5,949	10,904	3,409	2,633	8,243	2,576	8,636
33	22,358	11,283	17,350	21,197	9,347	11,512	14,182	16,530	14,216	4,966	6,838	6,816	1,852	10,786	2,669	8,119
34	17,767	9,617	16,221	20,962	11,167	10,196	10,325	16,080	14,305	4,922	9,578	4,361	2,265	3,418	2,024	7,794
35	21,848	14,521	19,738	20,035	7,145	9,084	10,109	16,637	10,692	5,059	9,399	8,081	4,986	3,672	5,587	9,813
36	13,942	18,044	12,723	9,563	9,647	9,641	13,339	16,996	12,648	9,886	6,662	12,982	10,659	4,403	7,291	9,812
37	14,112	27,518	19,149	10,180	5,595	3,139	7,219	8,805	2,537	9,067	7,159	10,387	5,323	8,614	3,119	9,855
38	425	42,800	12,857	13,788	6,492	2,813	2,379	5,654	2,455	15,324	4,911	11,981	3,758	4,600	3,566	11,414
39	—	9,474	18,121	10,382	3,009	2,519	1,354	4,156	2,095	5,702	1,263	—	11,334	4,036	3,039	9,182
40	—	21,328	10,598	10,685	1,742	924	902	—	2,235	—	—	—	6,275	26,616	5,008	7,296
41	—	3,475	3,163	2,899	1,003	—	287	—	1,219	—	—	—	1,030	8,862	1,947	2,607
42	—	—	413	—	—	—	—	—	366	—	—	—	11,995	1,266	3,643	3,597
Total	262,852	238,803	211,114	236,374	131,322	131,687	128,111	112,619	119,280	84,039	73,064	68,008	71,735	153,033	61,906	119,606
Mean	17,523	11,940	11,111	13,132	7,296	7,746	7,468	7,039	6,923	5,252	4,871	4,858	4,220	8,502	2,601	6,933

Note: From 1994 through 2007, estimates of escapement are determined from mark-recapture methods. From 2008 through 2010, escapement counted with DIDSON.

Table 5.–Percent age, average length and average weight composition of Chilkat Lake sockeye salmon smolt, 1989–1990, 1994–2006 and 2008.

	Age %			AVG Length (mm)			AVG Weight (g)		
Year	**age-1.0**	**age-2.0**	**age-3.0**	**age-1.0**	**age-2.0**	**age-3.0**	**age-1.0**	**age-2.0**	**age-3.0**
1989	76.0%	24.0%	—	100.2	121.0	—	8.9	14.6	—
1990	27.0%	73.0%	—	103.9	118.9	—	10.0	14.8	—
1994	51.0%	49.0%	—	102.3	119.5	—	9.9	14.8	—
1995	62.0%	37.0%	4.0%	92.5	115.4	147.4	7.1	13.2	27.2
1996	42.0%	58.0%	2.0%	86.3	107.2	185	5.7	10.3	56.0
1997	13.0%	86.0%	1.0%	95.2	101.2	154.5	7.0	8.8	34.4
1998	64.0%	27.0%	9.0%	92.7	109.4	138.3	7.3	11.2	22.7
1999	34.0%	64.0%	2.0%	88.1	107.6	155.8	5.3	9.5	37.7
2000	7.1%	92.6%	0.3%	93.8	104.8	120.4	7.1	9.4	14.3
2001	47.0%	49.6%	3.4%	92.5	113.4	131.5	6.8	11.8	19.0
2002	26.8%	72.9%	0.2%	85.5	92.7	175	5.2	6.3	38.7
2003	75.3%	24.1%	0.6%	88.9	111.4	136.9	5.9	11.4	21.1
2004	57.0%	42.8%	0.1%	87.2	93.8	115	5.6	6.8	12.5
2005	87.0%	13.0%	0.0%	93.0	116.0	n/a	6.9	14.1	n/a
2006	72.0%	27.1%	0.9%	95.4	114.9	149	7.1	12.8	30.1
2007	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2008	69.1%	30.8%	0.1%	108.7	124.6	135.5	11.2	17.2	26.5
Average.	50.6%	48.2%	1.8%	94.1	110.7	145.4	7.3	11.7	28.4

Note: Chilkat Lake sockeye salmon smolt data not collected in 2007 to 2010.

Table 6.–Percent composition by age class, of sockeye salmon escapements to Chilkat Lake, 1982 to 2010.

Year	Sample Size	Age Class (percent)									
		1.1	**1.2**	**1.3**	**1.4**	**2.1**	**2.2**	**2.3**	**2.4**	**3.2**	**3.3**
1982	1,630	0.4	2.3	12.9	0.0	2.6	45.3	34.8	0.0	1.3	0.1
1983	2,848	0.7	3.2	38.0	0.0	2.7	27.9	27.1	0.0	0.1	0.0
1984	2,728	0.1	1.5	22.8	0.0	1.5	53.6	20.2	0.0	0.2	0.0
1985	1,333	0.6	0.7	9.2	0.2	3.3	39.7	45.7	0.0	0.5	0.0
1986	940	0.0	1.7	1.6	0.0	0.5	20.6	73.1	0.0	1.9	0.5
1987	1,461	0.9	1.8	24.5	0.0	2.7	34.2	35.0	0.1	0.5	0.2
1988	1,918	0.0	0.8	47.3	0.2	0.0	7.9	43.4	0.1	0.1	0.1
1989	3,874	0.0	0.7	42.8	0.1	0.0	28.9	27.3	0.0	0.0	0.1
1990	2,635	0.0	1.8	14.0	0.5	0.0	24.8	58.0	0.1	0.8	0.0
1991	1,602	0.0	2.1	36.1	0.1	0.0	21.8	39.5	0.2	0.0	0.2
1992	2,505	0.0	1.1	40.8	0.2	0.0	16.9	40.7	0.0	0.0	0.1
1993	2,367	0.0	6.4	15.0	0.0	0.0	36.2	38.7	0.0	3.6	0.0
1994	2,187	0.0	2.6	58.6	0.1	0.0	11.4	26.6	0.0	0.1	0.6
1995	2,691	0.0	5.5	27.1	0.9	0.0	17.7	48.6	0.0	0.1	0.0
1996	308	0.0	10.4	67.5	0.0	0.0	8.8	13.3	0.0	0.0	0.0
1997	750	0.4	38.8	19.9	0.0	1.3	14.0	25.6	0.0	0.0	0.0
1998	1,198	0.1	4.9	69.4	0.0	0.3	19.0	6.0	0.2	0.0	0.0
1999	2,548	0.0	1.7	31.6	0.1	0.0	14.3	52.0	0.2	0.0	0.0
2000	2,316	0.0	2.4	5.1	0.3	0.0	7.8	81.4	0.1	2.8	0.0
2001	2,441	0.0	2.9	54.7	0.1	0.0	11.8	25.9	0.2	0.1	4.1
2002	2,504	0.0	2.5	26.5	0.4	0.1	20.1	50.3	0.0	0.0	0.0
2003	2,169	0.2	5.1	21.0	0.2	0.4	14.8	57.5	0.3	0.3	0.0
2004	3,004	0.1	3.5	49.7	0.0	0.2	17.2	28.4	0.2	0.1	0.4
2005	2,264	0.1	3.9	33.5	0.7	0.3	9.5	51.8	0.1	0.0	0.0
2006	2,063	0.1	4.8	51.8	0.0	0.6	7.0	34.9	0.0	0.0	0.4
2007	1,568	0.6	6.3	30.0	0.6	2.2	20.3	39.1	0.5	0.3	0.0
2008	878	0.8	12.9	45.9	0.6	0.5	24.9	14.2	0.1	0.0	0.1
2009	2,234	0.3	2.5	57.3	0.0	0.0	19.8	19.8	0.0	0.0	0.0
2010	1,165	0.9	2.7	30.5	1.1	1.1	12.2	51.2	0.1	0.1	0.0
Average	2,004	0.2	4.7	34.0	0.2	0.7	21.0	38.3	0.1	0.4	0.2
SE		0.0	0.2	0.6	0.0	0.0	0.4	0.6	0.0	0.0	0.0

Table 7.–Weekly and annual escapement of Chilkat River mainstem sockeye salmon, 1994 to 2010.

Statistical Week	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	1994–2010 Average
23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
24	—	27	—	69	65	—	53	51	98	47	81	—	—	—	—	—	—	61
25	—	1,410	—	270	1,153	39	309	55	1,745	992	288	703	164	33	253	1,663	1,028	674
26	137	2,867	585	162	3,820	431	2,222	1,294	4,917	4,051	1,662	2,777	1,003	222	3,243	3,899	911	2,012
27	1,061	3,700	4,428	1,189	2,842	1,565	5,817	2,254	7,001	7,555	4,279	3,257	2,345	824	3,185	5,170	6,139	3,683
28	3,427	3,529	12,508	1,059	2,893	5,571	8,440	2,261	6,159	5,474	6,541	3,694	2,382	2,560	6,679	2,591	5,234	4,765
29	1,434	3,116	10,239	1,433	3,312	2,671	13,472	3,145	5,068	4,330	7,002	4,736	1,638	2,068	10,046	2,646	6,122	4,852
30	2,242	4,283	11,416	3,277	3,335	5,001	7,805	6,645	3,966	2,684	3,789	6,813	2,263	5,083	4,906	2,032	3,817	4,668
31	2,720	3,140	6,615	2,845	4,271	2,607	8,025	2,627	4,884	2,597	5,169	4,816	4,551	1,760	2,282	2,867	3,479	3,839
32	3,170	1,588	5,207	2,222	1,252	2,891	4,944	2,330	2,136	3,608	6,670	7,188	2,778	1,793	2,473	3,035	3,285	3,328
33	8,431	1,229	1,036	613	1,201	1,724	2,318	964	1,200	1,958	3,905	4,681	2,564	1,252	647	1,119	1,966	2,165
34	1,882	449	661	371	243	1,083	657	209	996	1,505	2,518	4,803	2,349	328	925	431	1,732	1,244
35	886	740	398	430	481	257	139	34	432	1,071	1,890	3,098	1,126	715	751	1,603	247	841
36	691	—	217	140	—	381	65	29	484	249	899	2,702	529	805	177	267	122	517
37	105	—	59	377	90	—	—	26	—	—	104	854	243	102	133	295	30	202
38	—	—	—	180	—	133	—	—	—	—	52	519	—	2,057	—	84	—	504
39	—	—	—	—	—	—	—	—	—	—	—	180	—	88	—	144	—	137
Total	26,186	26,078	53,369	14,637	24,958	24,354	54,266	21,924	39,086	36,121	44,849	50,824	23,936	19,693	35,699	27,848	34,142	32,822
Average	2,182	2,173	4,447	976	1,920	1,873	4,174	1,566	3,007	2,779	2,990	3,388	1,841	1,313	2,746	1,857	2,624	2,462

Note: Estimates based on mark-recapture methods. Weekly estimates are calculated from stock proportions of sockeye salmon captured in the lower Chilkat River fish wheel project.

Table 8.– Percent composition by age class, of sockeye salmon escapements to Chilkat River mainstem areas, 1984 to 2010.

Year	Sample Size	Age Class (percent)										
		0.1	**0.2**	**0.3**	**0.4**	**1.1**	**1.2**	**1.3**	**1.4**	**2.2**	**2.3**	**2.4**
1984	145	0.0	6.2	26.2	0.0	0.7	2.1	64.8	0.0	0.0	0.0	0.0
1985	136	0.0	14.7	42.6	0.0	0.0	0.0	39.7	0.7	1.5	0.7	0.0
1986	114	0.0	6.1	49.1	0.9	0.0	14.9	26.3	0.9	0.0	0.9	0.9
1987	51	0.0	9.8	9.8	0.0	0.0	3.9	74.5	0.0	0.0	2.0	0.0
1988	93	1.1	36.6	32.3	0.0	1.1	23.7	5.4	0.0	0.0	0.0	0.0
1989	195	0.0	4.6	27.2	0.0	0.0	3.6	63.1	0.0	0.5	1.0	0.0
1990	57	0.0	14.0	19.3	0.0	0.0	5.3	57.9	0.0	0.0	3.5	0.0
1991	310	0.6	21.0	52.3	0.0	1.0	9.7	15.5	0.0	0.0	0.0	0.0
1992	437	0.5	18.3	24.9	0.5	2.1	3.2	50.6	0.0	0.0	0.0	0.0
1993	67	0.0	1.5	85.1	0.0	0.0	0.0	13.4	0.2	0.0	0.0	0.0
1994	574	2.4	31.5	26.5	0.0	2.4	20.4	16.0	0.0	0.5	0.0	0.0
1995	474	0.0	29.7	36.1	0.2	0.0	12.4	21.5	0.0	0.0	0.0	0.0
1996	585	0.0	11.6	62.4	0.0	0.2	5.6	20.2	0.0	0.0	0.0	0.0
1997	437	0.2	18.3	62.9	0.0	0.0	3.2	15.3	0.0	0.0	0.0	0.0
1998	429	1.2	28.0	42.0	0.0	1.9	7.5	19.6	0.0	0.0	0.0	0.0
1999	334	5.1	47.3	14.4	0.0	4.2	20.1	8.4	0.0	0.6	0.0	0.0
2000	556	0.0	28.4	62.6	0.0	0.4	4.5	4.1	0.0	0.0	0.0	0.0
2001	438	0.0	3.4	49.8	0.0	0.0	6.8	40.0	0.0	0.0	0.0	0.0
2002	302	0.7	13.6	21.9	0.0	0.7	10.9	52.3	0.0	0.0	0.0	0.0
2003	547	0.0	47.9	21.4	0.0	2.6	13.3	14.4	0.0	0.0	0.2	0.0
2004	848	0.0	14.4	47.6	0.0	0.0	21.9	15.8	0.0	0.2	0.0	0.0
2005	1,158	0.2	20.3	30.4	0.0	2.2	19.5	27.1	0.0	0.2	0.0	0.0
2006	762	2.1	16.7	34.6	0.3	1.2	8.0	37.1	0.0	0.0	0.0	0.0
2007	609	0.8	48.3	7.1	0.2	2.1	26.6	14.9	0.0	0.0	0.0	0.0
2008	726	1.1	8.3	63.4	0.0	0.6	13.9	12.0	0.0	0.6	0.3	0.0
2009	570	0.1	31.9	32.3	0.0	0.1	15.1	20.0	0.0	0.0	0.0	0.0
2010	1,183	1.6	22.3	51.4	0.1	2.2	7.9	14.1	0.0	0.3	0.0	0.0
Average	450	0.6	20.5	37.9	0.1	0.9	10.6	28.8	0.1	0.2	0.3	0
SE		0.0	0.5	0.7	0.0	0.0	0.3	0.7	0.0	0.0	0.0	0.0

Table 9.–Annual total return of Chilkoot Lake sockeye salmon by week, 1980–2010.

Stat Week	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
23	0	0	0	0	333	8	25	11	0	571	328	1	31	65	309	185
24	0	25	252	467	3,349	6	101	176	95	4,266	2,060	471	4,744	249	2,687	295
25	1,312	3,394	14,437	2,764	13,273	630	414	198	1,082	26,973	5,062	8,300	8,775	2,592	1,117	1,747
26	1,479	4,255	13,272	10,175	14,204	6,975	647	21,421	6,097	15,106	14,736	7,186	9,426	13,123	8,630	1,507
27	1,824	2,309	6,972	6,636	12,092	3,372	2,992	23,211	28,807	13,475	9,912	5,030	21,317	11,730	8,852	1,332
28	2,241	3,346	7,306	7,186	18,878	6,926	4,685	8,025	20,534	28,206	9,938	9,064	10,118	12,017	7,004	2,164
29	5,894	16,810	10,680	7,929	28,068	2,856	4,025	51,328	29,550	45,814	13,233	13,531	15,498	9,274	3,760	1,069
30	10,184	24,110	28,921	41,318	61,590	8,196	7,809	54,190	25,275	37,381	46,320	30,131	16,556	8,745	3,351	1,754
31	10,225	20,685	56,819	61,978	56,888	37,270	13,506	51,040	54,337	65,123	31,621	53,137	22,984	10,374	7,558	1,944
32	27,834	12,128	41,839	45,339	46,017	33,668	29,464	95,943	46,488	48,270	36,726	57,302	25,652	9,309	3,951	561
33	28,288	17,209	29,943	44,734	26,207	32,265	33,637	47,338	49,678	35,796	32,794	44,373	30,146	7,798	4,431	795
34	14,261	11,611	21,130	25,253	27,087	55,628	49,703	49,361	25,032	10,998	13,553	41,469	15,382	7,946	4,518	633
35	11,971	5,567	10,965	31,197	13,338	17,265	27,309	19,521	28,384	8,312	18,492	24,411	16,460	4,436	3,640	502
36	1,205	4,751	2,272	26,034	7,454	12,367	15,178	6,455	13,495	4,337	12,215	11,310	7,161	3,030	2,182	562
37	518	915	1,865	7,794	3,258	2,817	7,277	1,466	4,577	1,245	4,568	6,968	2,703	2,010	721	76
38–42	122	49	892	3,008	173	1,102	1,682	496	1,811	890	630	1,995	837	553	119	29
Total	117,35	127,16	247,56	321,81	332,20	221,35	198,45	430,18	335,24	346,76	252,18	314,67	207,79	103,25	62,830	15,155

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Table 9.–Page 2 of 2.

Stat. Week	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	80–10 Mean
23	0	873	0	1	0	89	102	15	41	0	247	418	5	1		122
24	129	2,317	117	59	174	265	2,005	342	233	417	644	2,905	12	25	35	933
25	1,862	13,611	327	143	413	3,928	3,427	709	1,640	1,270	2,359	4,986	212	179	581	4,120
26	5,389	8,785	824	859	2,637	9,025	4,118	1,629	996	3,583	4,729	996	665	1,532	3,910	6,384
27	3,574	5,899	969	2,181	2,800	9,965	4,105	4,090	3,285	2,984	8,811	4,197	1,760	5,692	3,206	7,206
28	5,987	4,825	909	1,270	4,696	8,109	7,457	5,789	8,910	4,635	8,857	9,586	1,980	4,952	6,655	7,815
29	3,060	4,762	1,241	1,326	6,157	20,119	9,984	7,982	13,370	5,051	12,256	14,317	4,290	6,912	7,118	12,170
30	12,819	7,866	1,864	2,184	7,546	21,434	13,098	12,623	19,284	8,581	16,842	36,837	3,640	6,094	15,501	19,098
31	12,518	8,212	2,067	3,048	8,566	31,855	11,090	28,349	20,488	5,699	30,090	45,040	19,064	9,877	35,531	26,677
32	9,726	3,775	2,091	2,633	7,696	24,341	9,722	24,257	23,907	7,749	32,841	22,170	3,516	7,004	13,186	24,358
33	5,213	2,786	1,469	1,329	7,272	8,378	4,048	11,720	21,505	7,261	23,251	21,203	1,752	4,083	8,882	19,212
34	3,180	4,405	1,293	1,378	3,033	2,523	5,341	2,888	6,466	11,869	33,045	9,835	1,928	2,067	3,889	15,055
35	3,363	2,997	818	3,058	3,201	2,204	3,448	4,086	9,716	10,019	24,619	12,604	831	1,157	2,506	10,529
36	1,226	1,588	280	2,517	3,297	1,267	3,850	1,630	8,071	7,707	11,871	6,938	480	526	1,890	5,908
37	1,056	468	237	1,225	602	271	839	657	4,000	2,847	5,002	1,646	275	409	639	2,224
38-42	499	0	34	331	139	12	4	13	224	826	247	50	32	43	14	544
Total	69,600	73,167	14,541	23,542	58,229	143,785	82,636	106,778	142,133	80,498	215,464	204,889	40,440	50,584	103,543	162,704

Table 10.–Annual weir counts of Chilkoot Lake sockeye salmon by week, 1976–2010.

Stat Week	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1993	1994
23	124	14	844	3	—	—	—	—	333	8	25	11	—	571	328	1	65	309
24	623	9,572	1,957	8,738	—	25	252	467	3,349	6	101	176	95	4,266	2,060	471	249	2687
25	241	35,751	1,368	2,730	391	1,108	12,220	2,764	11,100	104	163	198	1,082	21,300	2,778	5,599	2,592	1,117
26	3,579	11,150	274	469	1,157	2,177	9,440	8,860	7,444	4,681	224	16,583	1,506	2,466	12,190	3,083	5,431	4,752
27	735	3,361	6,677	407	1,824	559	2,623	4,062	4,406	783	857	6,879	22,846	1,009	1,893	2,097	2,306	4,170
28	397	6,970	1,311	309	2,241	606	1,981	3,304	9,993	463	3,650	3,365	5,872	913	1,980	2,528	5,883	4,241
29	1,752	1,844	2,526	95	5,894	7,346	5,095	4,090	6,738	810	2,328	7,000	4,389	2,122	0	5,436	3,488	1,141
30	4,091	1,854	7,650	2,871	9,239	15,951	17,574	21,548	11,917	3,601	5,467	8,134	2,554	2,942	4,989	21,990	5,021	2,123
31	28,061	9,016	3,465	22,765	8,294	9,006	20,806	12,747	9,610	19,778	11,438	8,998	5,416	3,614	1,853	17,870	5,864	5,158
32	13,587	9,561	5,157	31,000	20,860	9,963	13,358	4,507	8,020	9,832	21,563	9,944	5,824	4,313	1,995	7,317	6,807	1,342
33	11,827	6,059	2,316	16,091	21,333	15,631	8,287	3,614	5,522	12,501	12,276	5,899	5,683	2,157	4,255	8,229	4,298	2,140
34	5,205	1,019	1,469	5,140	12,968	10,659	4,938	2,720	11,185	7,013	11,839	16,978	10,851	2,793	13,553	4,115	4,857	3,220
35	346	372	155	3,880	10,669	5,028	2,655	3,016	3,435	4,432	6,348	6,018	6,650	3,067	13,734	5,077	2,222	2,736
36	49	403	56	933	1,077	4,519	1,518	4,366	4,474	2,817	5,416	3,918	4,544	1,840	9,147	3,988	899	1,656
37	118	103	106	427	479	794	1,404	2,604	2,891	1,546	5,071	738	2,646	876	2,128	1,879	1,427	624
38	410	2	83	8	45	—	822	1,070	—	480	762	217	759	232	365	416	418	—
39	142	—	12	70	36	—	—	502	—	145	409	112	381	216	5	294	—	—
40–42	10	—	28	10	5	—	—	102	—	26	87	17	176	203	71	248	—	—
Total	71,297	97,051	35,454	95,946	96,512	83,372	102,973	80,343	100,417	69,026	88,024	95,185	81,274	54,900	73,324	90,638	51,827	37,416

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Table 10.–Page 2 of 2.

Stat Week	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	76–10 Mean
23	185	—	873	—	1	—	89	102	15	41	—	247	418	5	1	0	185
24	295	129	2317	117	59	174	265	2,005	342	233	417	644	2,905	12	25	35	1,366
25	243	459	6,677	327	143	413	2,811	2,451	448	1,640	1,270	1,358	2,860	147	179	118	3,651
26	342	1,418	3,433	664	521	2,494	4,171	3,195	1,165	—	3,098	3,801	2,859	590	969	2,566	3,841
27	317	1,956	1,407	857	1,980	2,208	3,125	1,869	2,805	1,178	1,886	6,400	2,046	1,375	4,167	898	2,999
28	298	4,393	3,143	676	884	2,558	3,083	4,138	4,074	3,288	2,963	6,650	2,856	888	1,761	2,962	2,959
29	325	2,482	2,440	791	668	3,385	7,953	6,193	7,207	5,343	4,013	8,805	956	2,748	3,807	3,331	3,604
30	1,517	12,040	4,805	1,534	1,734	5,154	11,168	10,433	11,437	10,724	6,778	6,810	9,509	2,485	4,544	12,955	7,740
31	1,731	9,163	3,919	1,687	2,706	4,756	21,480	7,599	21,041	12,655	3,588	11,503	8,796	18,137	8,077	26,690	10,803
32	417	6,743	3,524	1,924	1,864	6,359	11,231	4,775	14,103	8,750	3,382	12,972	8,778	2,028	4,839	8,648	8,391
33	545	3,867	2,606	1,352	1,041	6,344	5,094	2,994	5,677	9,457	2,710	6,832	11,385	1,436	2,152	5,920	6,398
34	237	2,655	4,246	1,217	1,108	2,699	2,320	4,764	1,251	3,583	4,755	11,886	5,670	1,623	1,596	3,150	5,391
35	270	2,919	2,880	678	3,058	3,067	2,064	3,322	3,564	7,307	7,272	9,783	8,009	782	928	1,971	4,050
36	472	1,081	1,540	261	2,262	3,246	1,182	3,716	902	7,333	6,336	5,501	4,186	455	244	1,722	2,708
37	15	969	444	216	990	559	247	805	428	3,908	2,259	3,011	1,328	246	256	600	1,239
38	—	465	—	34	265	139	—	—	—	156	451	—	—	—			362
39	—	—	—	—	—	—	—	—	—	—	—	—	—	—			194
40–42	—	—	—	—	—	—	—	—	—	—	—	—	—	—			82
Total	7,209	50,739	44,254	12,335	19,284	43,555	76,283	58,361	74,459	75,596	51,178	96,203	72,561	32,957	33,545	71,566	65,443

Table 11.–Selected data for Chilkoot Lake, annual autumn hydroacoustic pre-smolt estimates, total adult return, and average annual zooplankton density and biomass for years 1987–2010.

Year	Survey Date	Estimated No. of Juveniles	Total Return	Average Zooplankton density (no./m2)	Average Zooplankton biomass (mg/m2)
1987	30-Oct	1,344,951	430,180	172,295	207
1988	2-Oct	3,066,118	335,242	131,446	147.5
1989	16-Oct	874,794	346,763	46,872	135.5
1990	25-Oct	607,892	252,188	53,987	145.5
1991	22-Oct	475,404	314,679	9,751	25
1992	N/A	N/A	207,790	N/A	N/A
1993	N/A	N/A	103,251	N/A	N/A
1994	N/A	N/A	62,830	N/A	N/A
1995	6-Nov	260,797	15,155	26,579	84.7
1996	24-Oct	418,152	69,600	44,081	143.75
1997	22-Oct	755,060	73,167	15,063	46
1998	6-Oct	1,446,736	14,552	46,678	91.5
1999	14-Oct	351,096	23,542	14,329	46
2000	13-Oct	1,190,717	58,229	62,156	247
2001	17-Oct	696,000	143,785	88,791	275
2002	10-Oct	1,196,701	82,636	46,434	194
2003	10-Oct	1,384,754	106,778	46,788	155
2004	5-Nov	996,046	142,133	126,233	221
2005	9-Nov	247,243	80,498	3,265	8
2006	9-Nov	356,957	245,464	72,332	211
2007	9-Nov	140,237	204,889	19,887	33
2008	16-Oct	1,020,388	40,440	136,887	279
2009	27-Oct	832,991	50,584	15,133	45
2010	27-Oct	830,394	103,543	NA	NA
Average		880,639	146,163	58,949	137

Note: 2010 Zooplankton density and biomass results not available.

Table 12.–Percent composition by age class, of sockeye salmon escapements to Chilkoot Lake, 1982 to 2010.

Year	Sample Size	Age Class (percent)										
		0.3	**1.1**	**1.2**	**1.3**	**1.4**	**2.1**	**2.2**	**2.3**	**2.4**	**3.2**	**3.3**
1982	1,687	0.1	0.0	19.0	78.4	0.9	0.1	0.5	0.9	0.0	0.0	0.0
1983	1,790	0.1	0.1	12.0	60.4	0.2	0.1	1.4	25.8	0.0	0.0	0.0
1984	1,902	0.0	0.0	4.5	86.7	0.8	0.0	0.4	7.6	0.0	0.0	0.0
1985	1,623	0.0	0.1	12.2	66.4	2.4	0.0	2.6	15.9	0.3	0.1	0.0
1986	2,147	0.0	0.0	13.2	67.0	0.6	0.0	2.2	16.8	0.1	0.0	0.0
1987	2,207	0.0	0.0	8.4	69.2	0.2	0.0	2.2	19.8	0.1	0.0	0.0
1988	2,661	0.0	0.0	4.4	77.9	1.4	0.0	2.7	13.2	0.3	0.0	0.0
1989	2,586	0.0	0.0	4.5	54.9	1.2	0.0	5.0	33.5	0.4	0.0	0.5
1990	2,815	0.0	0.0	2.0	45.4	0.1	0.0	1.5	49.1	0.1	0.0	0.1
1991	2,297	0.0	0.0	12.5	55.9	0.4	0.0	4.9	25.9	0.3	0.0	0.1
1992	2,039	0.0	0.0	1.8	62.6	0.7	0.0	5.8	28.3	0.5	0.1	0.1
1993	2,075	0.0	0.0	2.6	35.6	0.3	0.0	1.8	59.0	0.4	0.0	0.2
1994	1,986	0.1	0.0	1.8	66.9	0.6	0.0	1.6	28.8	0.2	0.1	0.1
1995	606	0.0	0.0	44.1	30.7	0.8	0.0	3.8	20.0	0.7	0.0	0.0
1996	2,063	0.0	0.0	6.2	84.2	0.2	0.0	0.8	8.5	0.0	0.0	0.0
1997	2,111	0.0	0.0	2.2	90.1	0.1	0.0	0.4	7.1	0.0	0.0	0.0
1998	941	0.0	0.0	5.0	60.6	1.4	0.0	2.1	30.6	0.1	0.0	0.1
1999	2,033	0.0	0.0	28.8	46.5	0.2	0.0	8.1	16.3	0.2	0.0	0.0
2000	2,228	0.0	0.0	13.2	58.6	0.1	0.0	1.9	26.1	0.0	0.0	0.0
2001	2,345	0.3	0.0	4.8	89.8	0.0	0.0	0.2	4.9	0.0	0.0	0.0
2002	2,836	0.0	0.0	6.4	89.6	0.5	0.0	1.1	2.5	0.0	0.0	0.0
2003	2,611	0.0	0.0	41.3	45.0	0.4	0.0	4.2	9.1	0.0	0.0	0.0
2004	2,715	0.0	0.0	14.8	71.0	0.0	0.0	5.9	8.1	0.0	0.0	0.0
2005	2,730	0.0	0.0	19.9	67.5	0.0	0.0	3.9	8.6	0.0	0.0	0.0
2006	2,581	0.0	0.0	8.2	80.4	0.0	0.0	0.9	10.4	0.0	0.0	0.0
2007	3,020	0.0	0.0	7.1	79.0	0.6	0.0	0.6	12.7	0.0	0.0	0.0
2008	947	0.3	0.0	10.2	84.1	0.2	0.0	0.6	4.2	0.3	0.0	0.0
2009	1,841	0.0	0.0	26.0	70.0	0.3	0.0	1.9	1.8	0.0	0.0	0.0
2010	2,493	0.0	0.0	4.9	83.0	0.1	0.0	2.9	8.9	0.0	0.1	0.0
Average	2,135	0.0	0.0	11.8	67.5	0.5	0.0	2.5	17.4	0.1	0.0	0.0
SE		0.0	0.0	0.4	0.6	0.0	0.0	0.1	0.5	0.0	0.0	0.0

Table 13.–Annual harvests of Chilkat River mainstem and Berners Bay rivers, and other non-Chilkat or Chilkoot Lake, sockeye salmon by week, 1978 to 2010.

Stat Week	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
25	548	504	381	143	44	—	355	134	16	—	—	3,214	1,823	2,213	—	—	—
26	1,759	1,328	56	101	210	49	514	1,688	599	734	968	3,381	1,783	6,782	4,926	2,321	1,178
27	207	0	725	145	145	255	491	5,173	1,233	6,958	6,611	2,440	6,998	4,097	8,241	4,258	2,418
28	386	494	158	150	155	294	383	6,691	4,365	983	4,889	1,742	2,221	2,470	5,650	3,296	2,135
29	316	501	73	181	175	105	309	273	738	872	5,100	2,030	1,054	3,451	4,275	3,012	2,619
30	577	1,414	0	116	172	268	561	522	897	263	1,057	1,725	4,601	1,012	3,327	2,757	1,323
31	486	1,942	76	154	549	1,204	706	746	597	330	1,316	2,922	4,669	1,729	2,488	1,738	2,400
32	0	0	75	67	128	740	536	448	903	350	442	1,956	4,251	1,138	2,356	879	2,236
33	269	165	8	0	329	663	244	377	948	111	348	366	3,088	224	1,422	433	2,291
34	74	492	3	14	0	256	73	68	825	121	101	494	0	151	280	246	1,623
35	29	195	3	0	0	78	130	48	206	22	100	233	297	635	280	33	723
36	6	35	0	0	0	42	48	0	87	0	122	98	216	0	184	12	263
37	1	14	0	0	0	1	0	10	0	7	23	19	40	38	0	0	32
38–42	0	32	0	0	1	0	0	0	0	0	33	5	3	24	0	0	11
Total	4,658	7,116	1,558	1,071	1,908	3,955	4,350	16,178	11,414	10,751	21,110	20,625	31,044	23,964	33,429	18,985	19,252
Mean	333	508	111	77	136	283	311	1,156	815	768	1,508	1,473	2,217	1,712	2,388	1,460	1,481

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Table 13.–Page 2 of 2.

Stat Week	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Mean
25	1,282	1,828	1,466	—	—	—	1,451	385	332	—	—	406	701	581			890
26	1,165	3,309	1,441	1,309	1,818	204	4,376	388	1,197	2,051	273	842	1,422	1,399	728	736	1,547
27	976	1,245	2,070	820	535	2,007	6,071	1,502	2,782	5,465	896	2,158	1,476	2,594	2,571	1,588	2,580
28	1,696	1,743	1,046	1,050	937	14,631	2,289	3,249	2,032	9,130	1,516	925	1,640	2,715	5,225	2,063	2,677
29	744	2,311	1,133	4,122	2,444	4,572	4,000	2,193	1,597	6,280	1,321	1,204	2,078	3,124	4,432	3,219	2,117
30	799	2,660	1,447	1,509	1,124	3,016	1,083	902	839	2,926	1,683	2,365	5,722	3,309	1,977	3,762	1,688
31	457	5,535	1,495	1,520	1,093	1,594	1,331	1,123	1,804	2,096	1,603	848	1,587	1,474	2,595	3,110	1,616
32	385	5,695	769	921	949	581	537	317	663	1,605	2,752	353	978	828	2,900	4,468	1,249
33	250	2,916	168	293	417	209	198	243	930	2,467	935	320	419	489	2,469	1,082	760
34	396	1,051	278	102	108	61	0	124	157	861	1,648	56	418	276	614	498	348
35	100	333	210	31	59	29	24	8	42	415	328	293	478	156	396	152	184
36	90	145	95	6	85	0	0	11	167	234	135	353	291	21	487	110	101
37	61	87	24	21	0	0	0	3	52	13	135	97	38	24	166	35	29
38–42	29	34	0	0	5	0	0	0	5	28	15	12	27	26	80	11	12
Total	8,430	28,893	11,642	11,704	9,575	26,903	21,361	10,446	12,599	33,571	13,240	10,232	17,276	17,016	24,641	20,834	14,978
Mean	602	2,064	832	900	737	2,069	1,526	746	900	2,582	1,018	682	1,234	1,215	1,895	1,603	1,095

Table 14.–Summary of releases of DIPAC chum salmon from Boat Harbor and Amalga Harbor, 1988–2010 and planned releases in 2011.

Brood Year	Release Year	Boat Harbor Releases	Boat Harbor Release Size (g)	Amalga Harbor Releases	Amalga Harbor Release Size (g)	Total Releases
1987	**1988**	5,170,000	—	—	—	5,170,000
1988	**1989**	8,508,356	0.77	—	—	8,508,356
1989	**1990**	8,300,782	1.31	—	—	8,300,782
1990	**1991**	9,337,000	0.88	34,744,923	0.87	44,081,923
1991	**1992**	6,709,659	0.62	35,918,054	1.08	42,627,713
1992	**1993**	9,545,177	0.75	36,147,451	1.23	45,692,628
1993	**1994**	6,464,450	0.86	34,817,531	1.38	41,281,981
1994	**1995**	8,931,491	1.06	34,472,077	1.49	43,403,568
1995	**1996**	8,536,780	0.7	34,979,646	1.22	43,516,426
1996	**1997**	7,759,020	1.4	34,535,728	1.33	42,294,748
1997	**1998**	7,217,000	1.45	49,155,073	1.52	56,372,073
1998	**1999**	9,262,694	1.32	7,655,324	3.44 (L/L[a])	60,045,708
		—	—	43,127,690	1.53 (Reg[b])	—
1999	**2000**	9,010,000	1.61	8,722,507	4.04 (L/L)	62,228,963
		—	—	44,496,456	1.55 (Reg)	—
2000	**2001**	14,883,720	1.17	7,604,465	4.07 (L/L)	60,911,856
		—	—	38,423,671	1.41 (Reg)	—
2001	**2002**	11,263,498	0.69	17,452,832	0.72	28,716,331
2002	**2003**	5,400,000	2.62 (L/L)	17,400,000	4.02 (L/L)	47,100,000
		6,800,000	1.78 (Reg)	17,500,000	2.39 (Reg)	—
2003	**2004**	5,960,363	3.24 (L/L)	12,006,165	4.20 (L/L)	50,618,272
		8,615,776	1.54 (Reg)	24,035,968	2.29 (Reg)	—
2004	**2005**	6,100,000	(L/L)	11,500,000	(L/L)	63,000,000
		7,400,000	(Reg)	25,300,000	(Reg)	—
2005	**2006**	13,742,501	(L/L, Reg)	34,718,622	(L/L, Reg)	48,461,123
2006	**2007**	14,901,861	(L/L, Reg)	48,090,292	(L/L, Reg)	62,992,153
2007	**2008**	14,719,643	(L/L, Reg)	45,334,725	(L/L, Reg.)	60,054,368
2008	**2009**	14,251,927	(L/L, Reg)	43,970,489	(L/L, Reg)	58,222,416
2009	**2010**	13,651,000	(L/L, Reg)	44,104,000	(L/L, Reg)	57,775,000
2010	**2011**[c]	15,000,000	(L/L, Reg)	46,000,000	(L/L, Reg)	61,000,000

[a] Late large release –Fry are held and fed for longer periods prior to release.
[b] Regular release –Normal fry release timing
[c] Planned releases.
Source: Douglas Island Pink and Chum Inc.

Table 15.–Summary of returns from DIPAC summer chum salmon enhancement projects in lower Lynn Canal, 1991–2010 with projections for 2011.

Year	Total Commercial Catch	% Estimated Hatchery Contribution	Estimated Hatchery Contribution	Boat Harbor			Amalga Harbor		
				Commercial Catch[b]	Cost Recovery	Total Return	Commercial Catch[b]	Cost Recovery	Total Return
1991	111,465	50.1%	55,818	55,818	0	55,818	0	0	0
1992	162,231	52.9%	85,811	85,811	0	85,811	0	0	0
1993	246,174	78.2%	192,446	192,446	0	192,446	0	0	0
1994	568,850	81.4%	463,106	135,640	0	135,640	327,466	124,994	452,460
1995	499,167	91.2%	455,336	176,495	0	176,495	278,841	267,533	546,374
1996	340,021	78.2%	265,957	62,477	10,872	73,349	203,480	968,448	1,171,928
1997	431,699	87.8%	378,851	163,350	2,920	166,270	215,502	692,593	908,095
1998	136,515	83.4%	113,885	59,001	0	59,001	54,884	508,686	563,570
1999	290,325	85.5%	248,167	96,438	0	96,438	151,729	723,298	875,028
2000	680,536	88.6%	602,838	226,317	0	226,317	376,521	1,342,141	1,718,662
2001	358,987	85.1%	305,590	84,005	0	84,005	221,585	540,124	761,709
2002	630,486	94.5%	595,690	143,912	0	143,912	451,778	1,151,413	1,603,191
2003	348,820	96.8%	329,961	91,507	0	91,507	238,454	1,826,922	2,065,376
2004	688,471	91.7%	631,307	316,675	0	398,524	288,548	1,060,801	1,408,117
2005	240,055	92.1%	222,553	95,028	0	95,028	127,525	248,071	375,596
2006	1,035,956	96.0%	994,615	565,897	0	565,897	428,718	1,767,409	2,109,516
2007	750,999	95.0%	711,161	427,427	0	427,427	283,734	874,598	1,158,332
2008	991,260	95.0%	940,308	467,000	0	319,000	486,000	946,704	1,433,000
2009	784,121	98.0%	768,439[c]	400,000	0	400,000	337,000	1,066,597	1,403,597
2010	677,000	92.0%	625,000	231,000	0	231,000	394,000	1,004,000	1,629,000
2011[a]						358,050			1,451,950
91–09 Average	498,657	86.0%	432,547	203,812	690	201,194	243,288	755,717	1,009,178

[a] 2011 projected return.
[b] Includes contribution to the Lynn Canal commercial drift gillnet fishery only.
[c] Includes small numbers of other hatchery chum salmon in the harvest.
Source: Douglas Island Pink and Chum Inc.

FIGURES

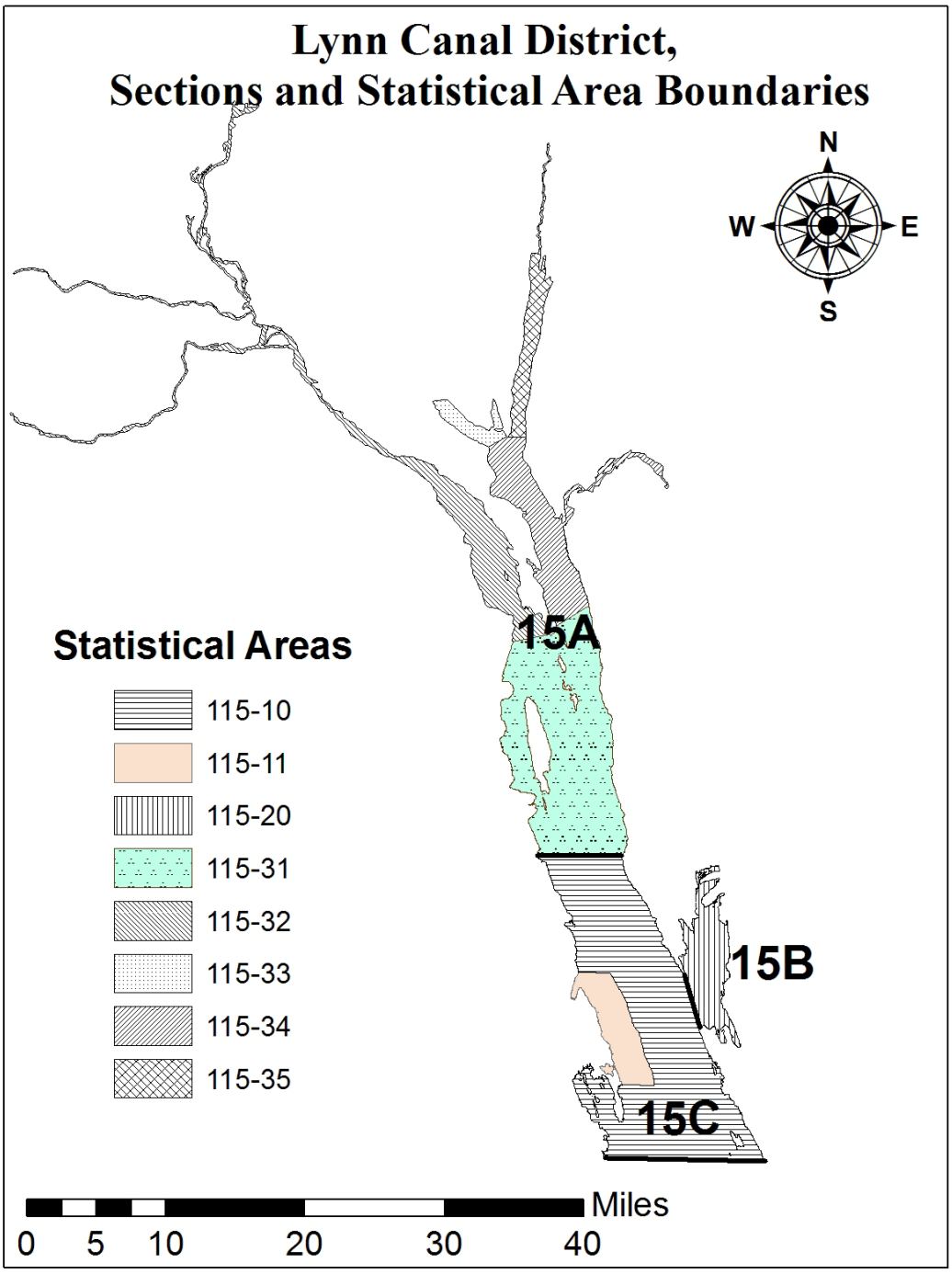

Figure 1.–Map of the Lynn Canal district and statistical area boundaries.

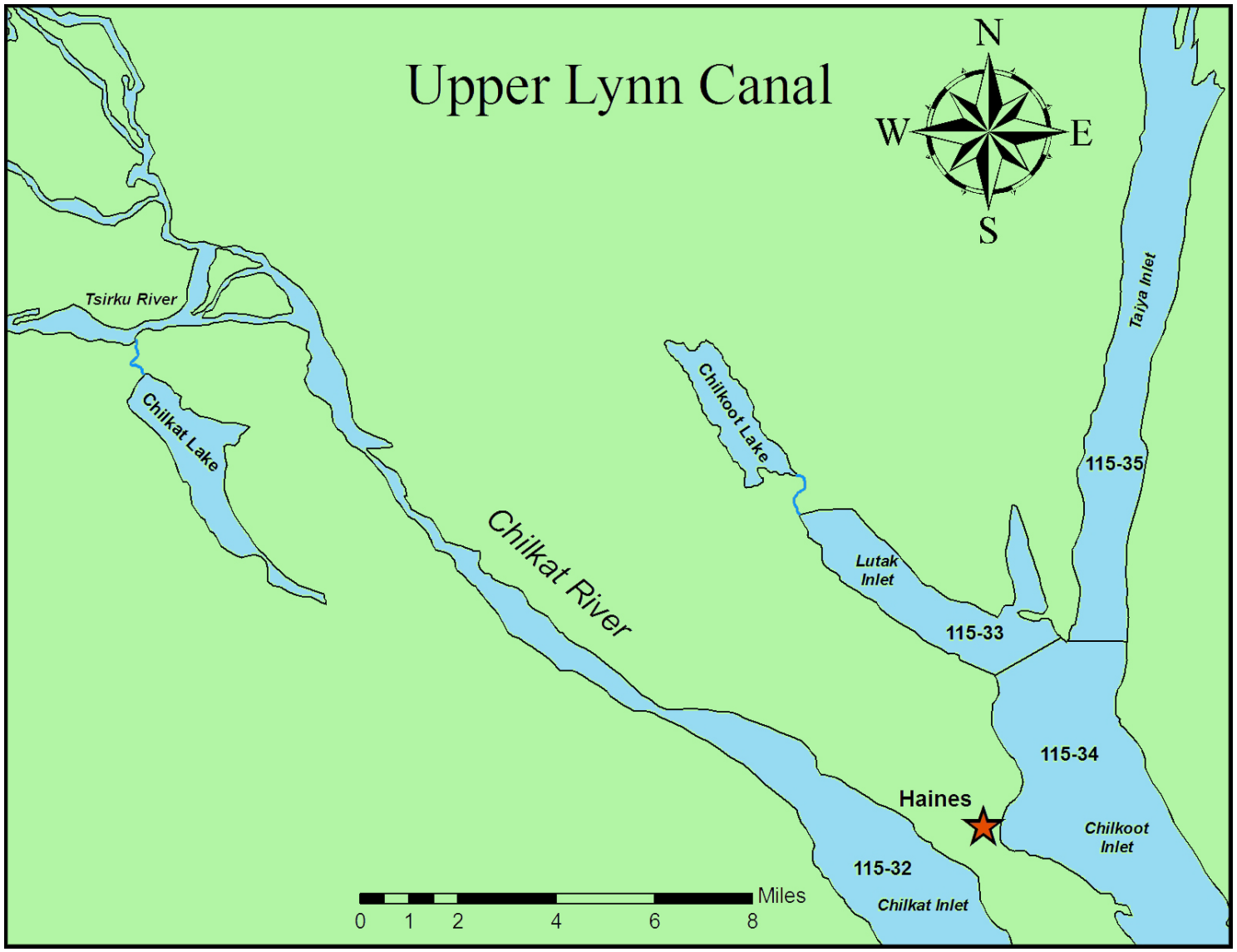

Figure 2.–Map of upper Lynn Canal showing Chilkat and Chilkoot lakes.

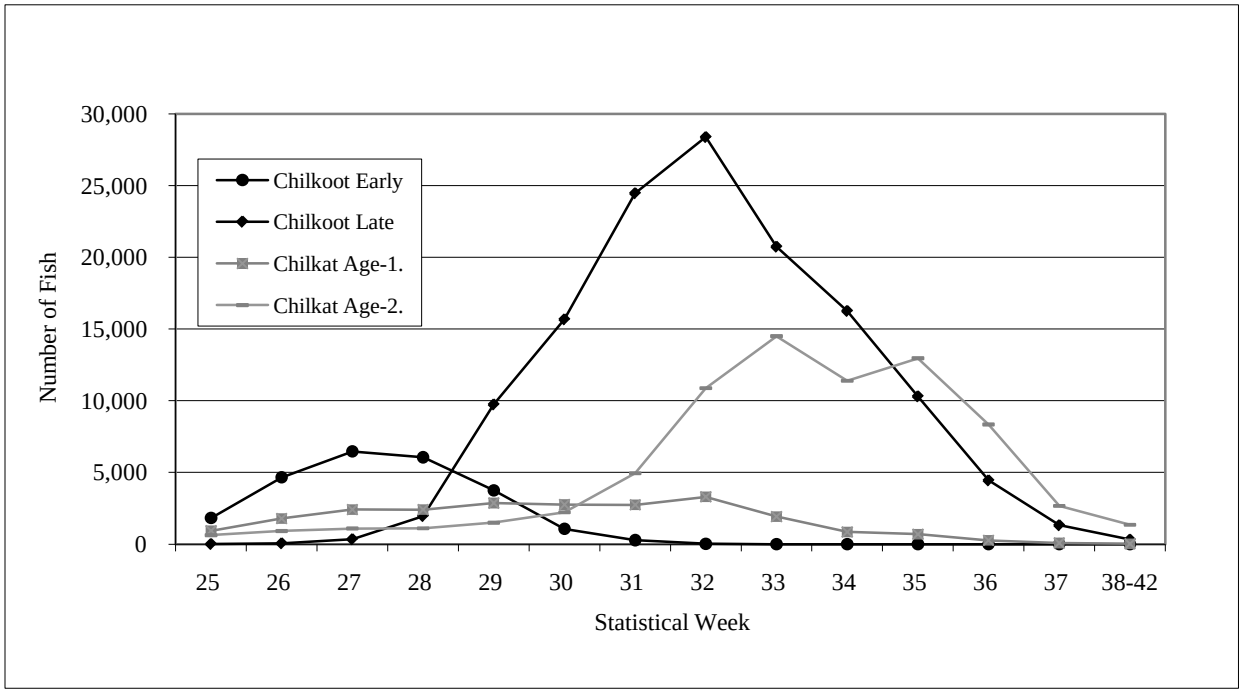

Figure 3.–Lynn Canal sockeye salmon weekly abundance by stock/age (Data from 1983 to 1992 average).

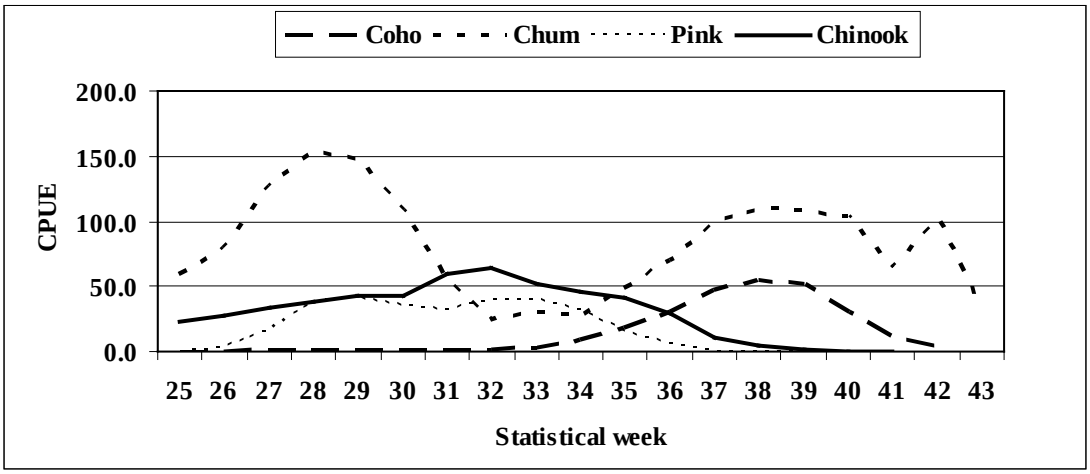

Figure 4.–Run timing (weekly proportion CPUE) of Chinook, coho, summer and fall chum, and pink salmon in the Lynn Canal drift gillnet fishery. Data for period 1970 to 2010.

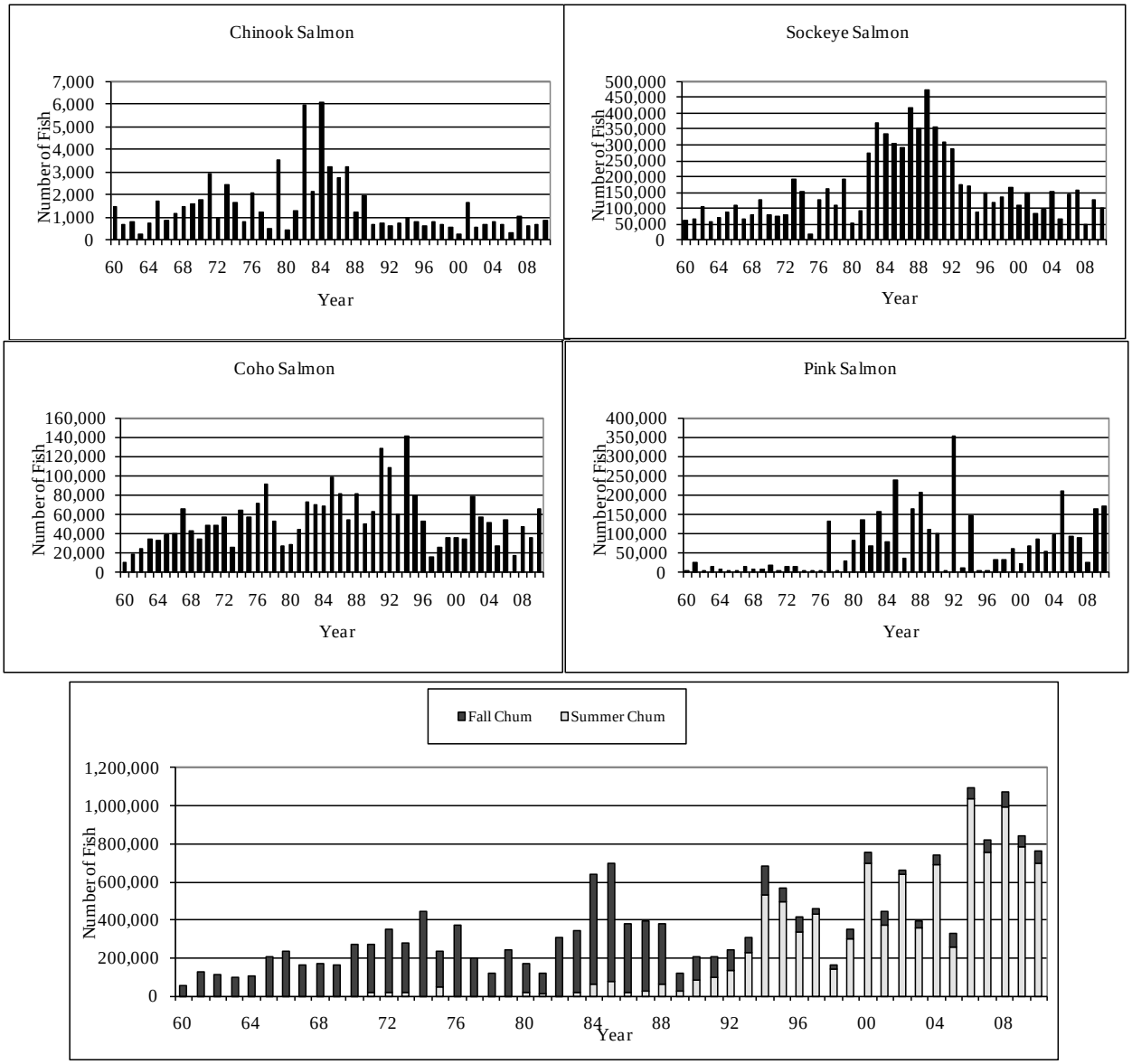

Figure 5.–Historical commercial catches of Chinook, sockeye, coho, pink, and chum (summer and fall) salmon in the District 15 (Lynn Canal) drift gillnet fishery, 1960 to 2010.

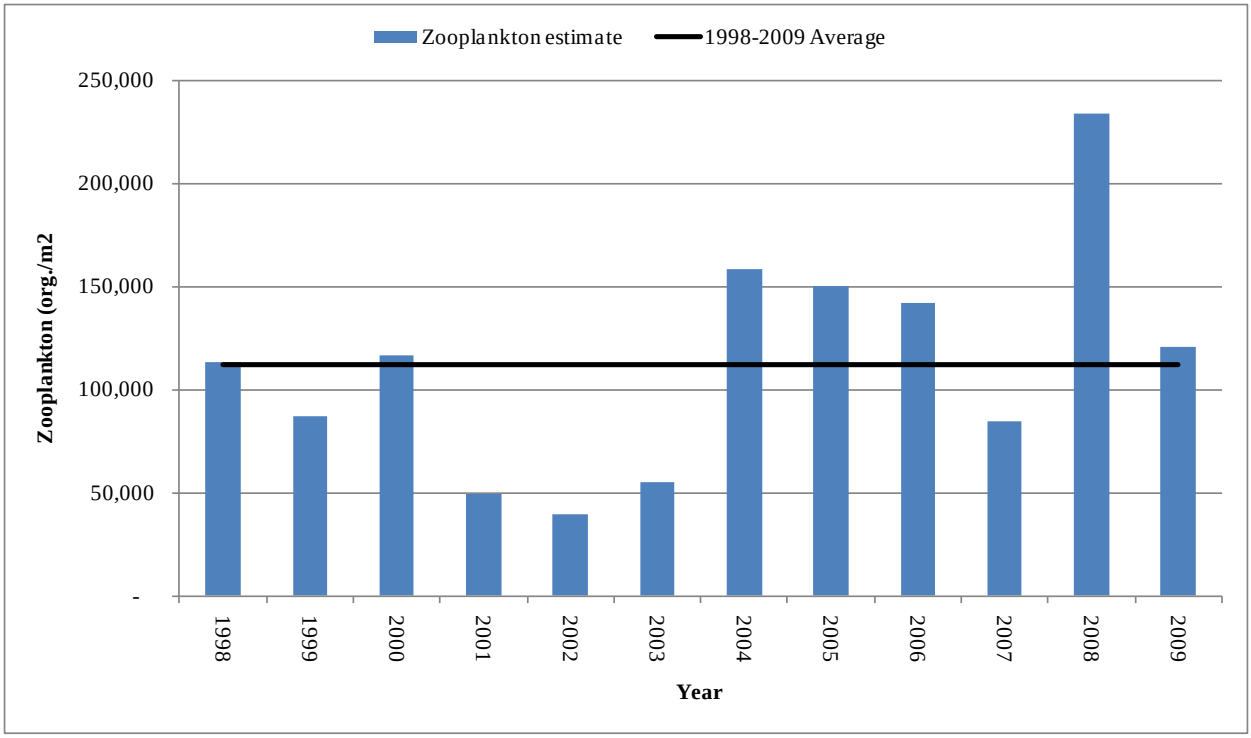

Figure 6.–Historical zooplankton abundance estimates for Chilkat Lake, 1998-2009.

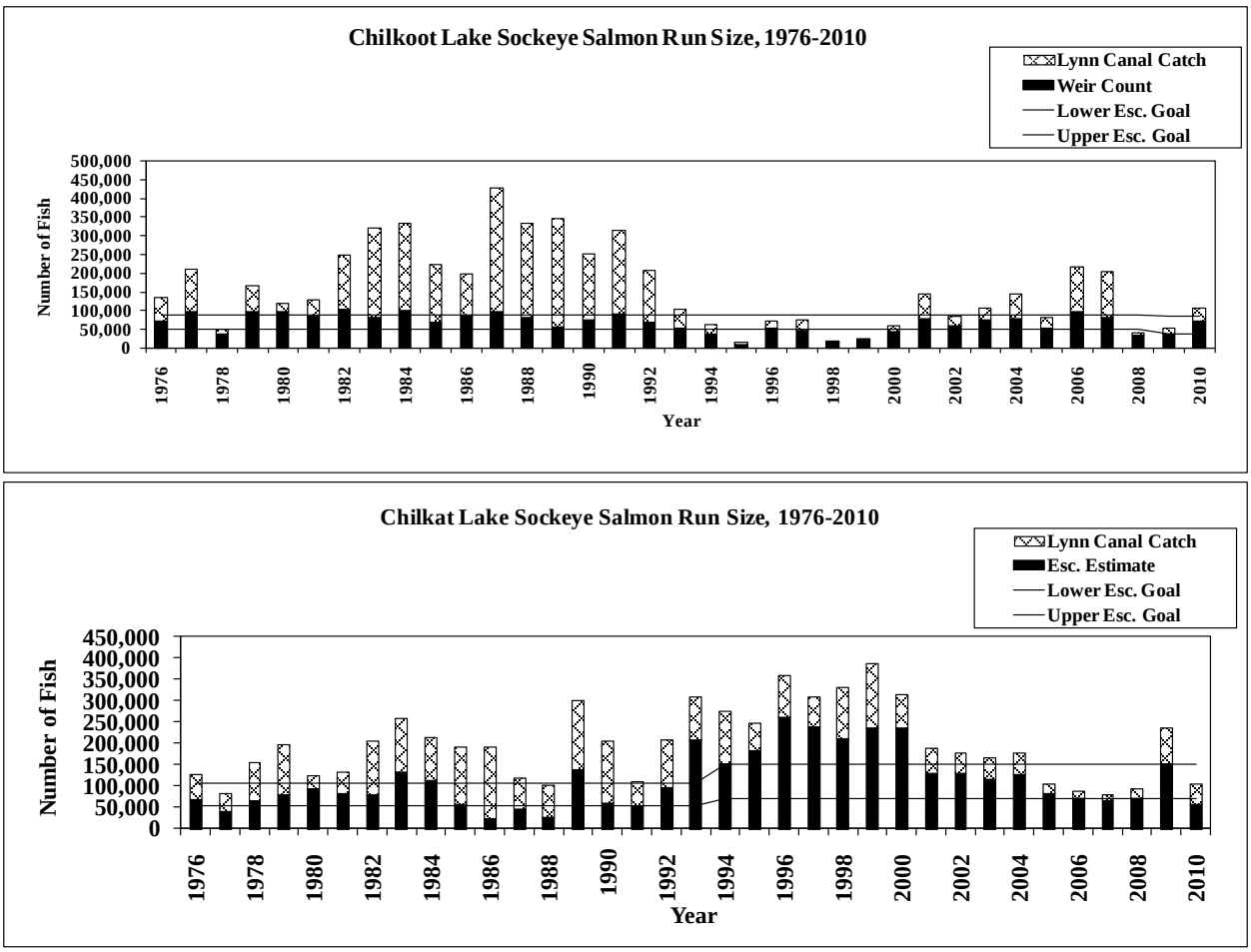

Figure 7.–Historical escapement and harvest of Chilkoot and Chilkat lake sockeye salmon, 1976 to 2010 compared to escapement goals.

Note: Escapements estimates in 1994–2007 in Chilkat Lake were based on mark-recapture estimates. Marine harvest of sockeye salmon for Chilkoot Lake in 1998 and 1999 was estimated to be 2,200 and 4,258 fish, respectively.

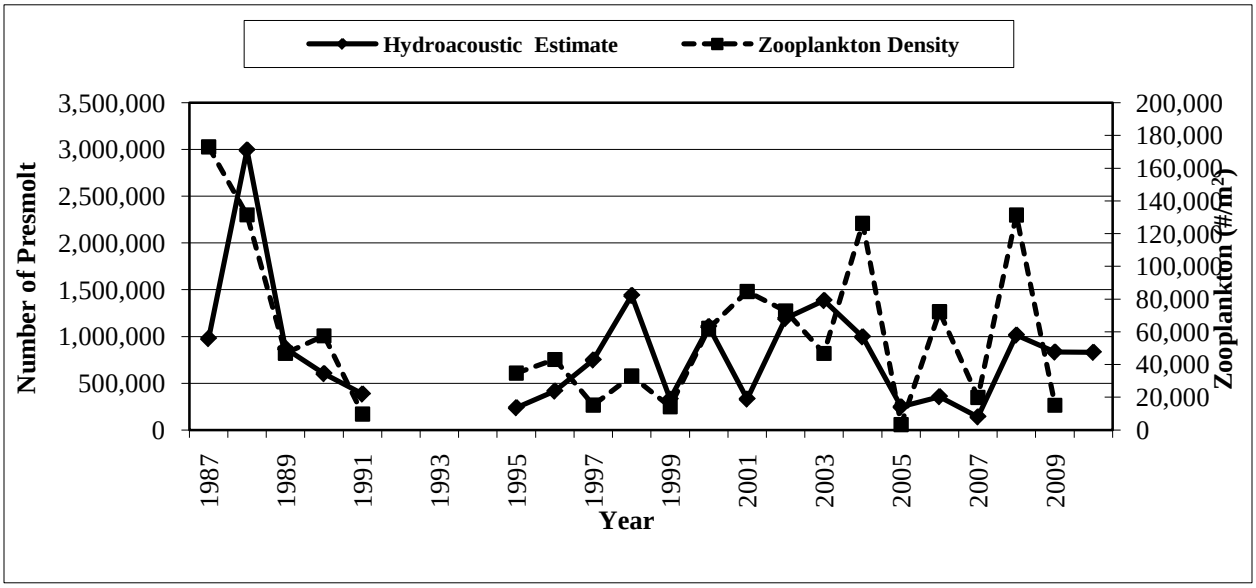

Figure 8.–Yearly comparisons of Chilkoot Lake autumn hydroacoustic counts of juvenile sockeye salmon and average zooplankton densities, 1987–1991 and 1995–2010.

Source: A. Piston, ADF&G Commercial Fisheries Division, unpublished data. 2010 zooplankton estimate is not available.

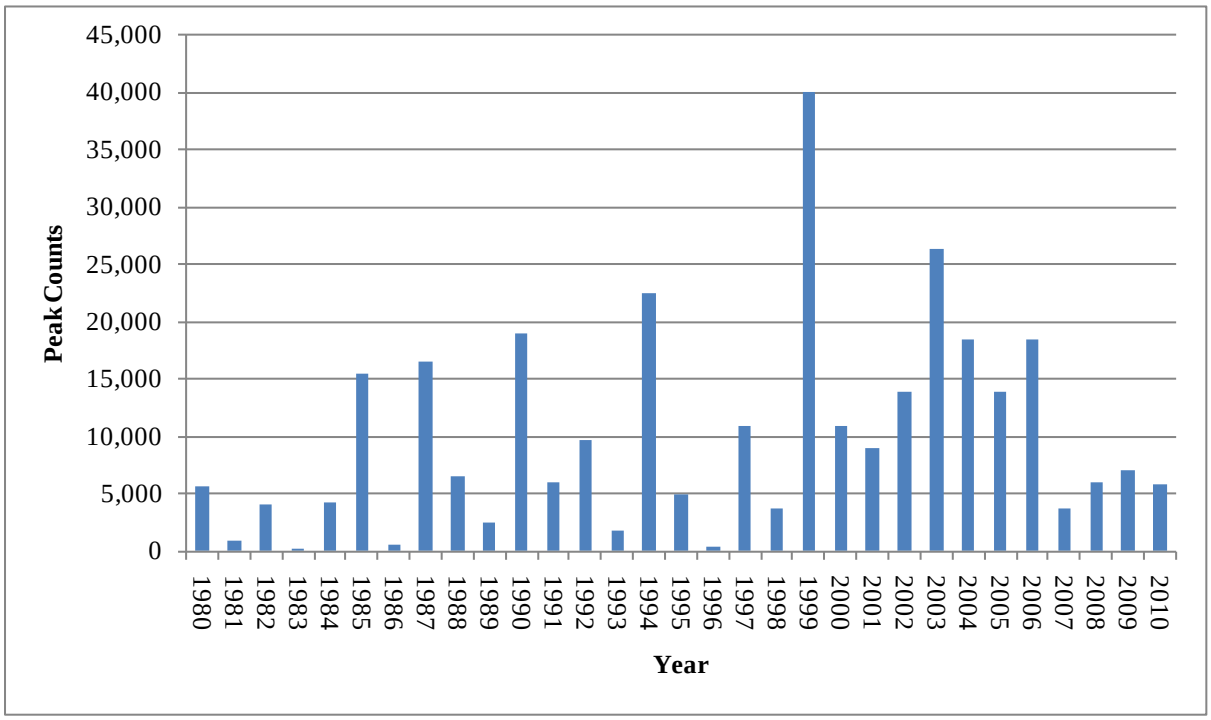

Figure 9.–Peak survey results for Sawmill Creek pink salmon, 1997–2010.

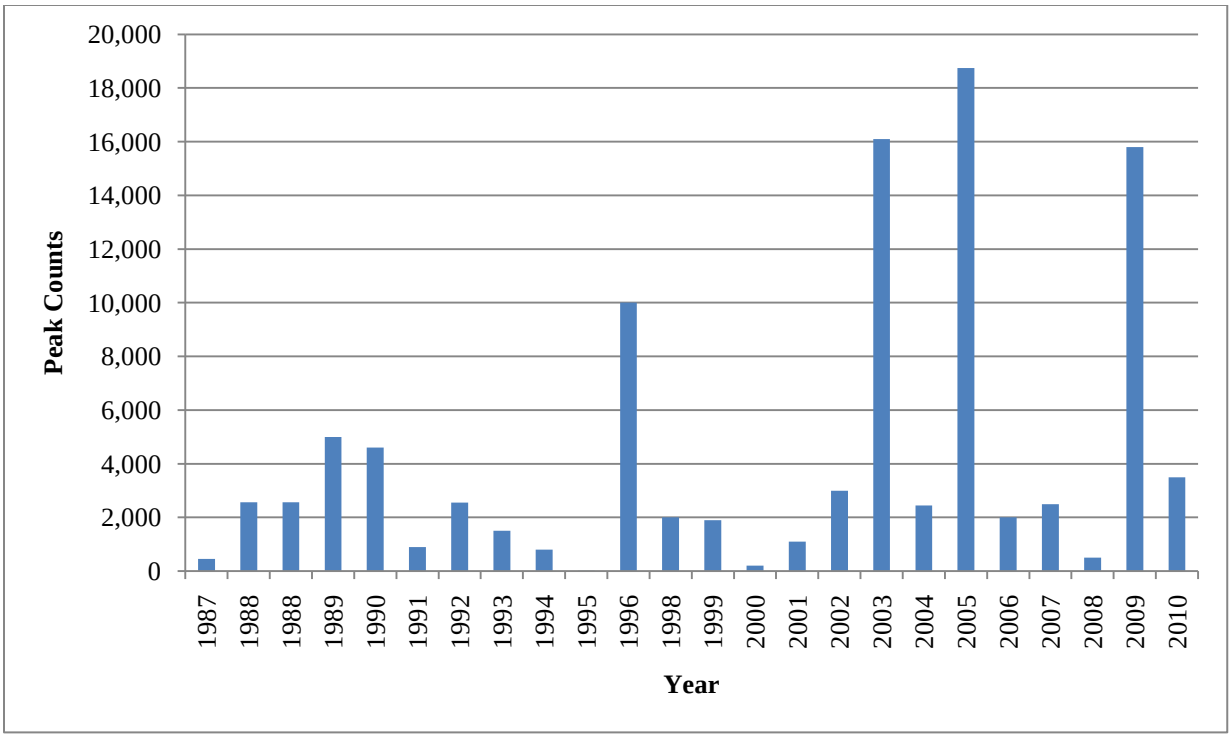

Figure 10.–Peak aerial survey results for Endicott chum salmon, 1987 to 2010.

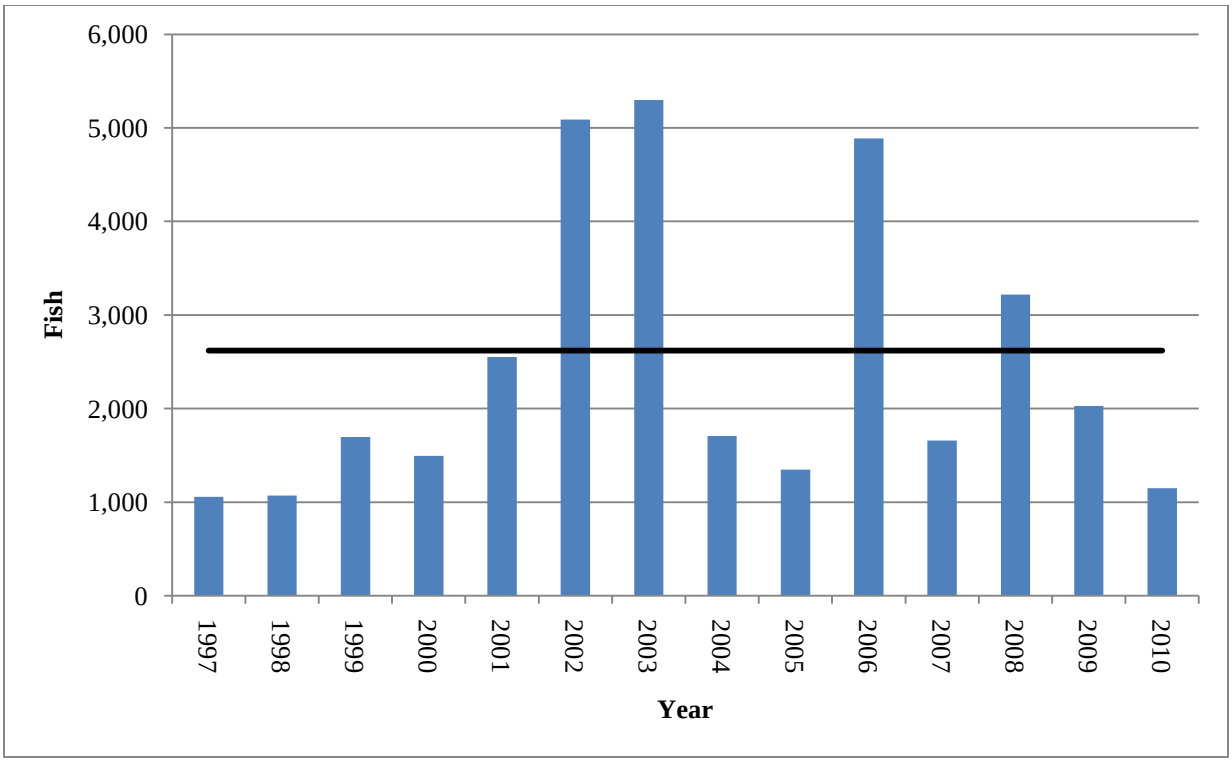

Figure 11.–Total Chilkat River coho salmon fish wheel catch by year, 1999 to 2010.

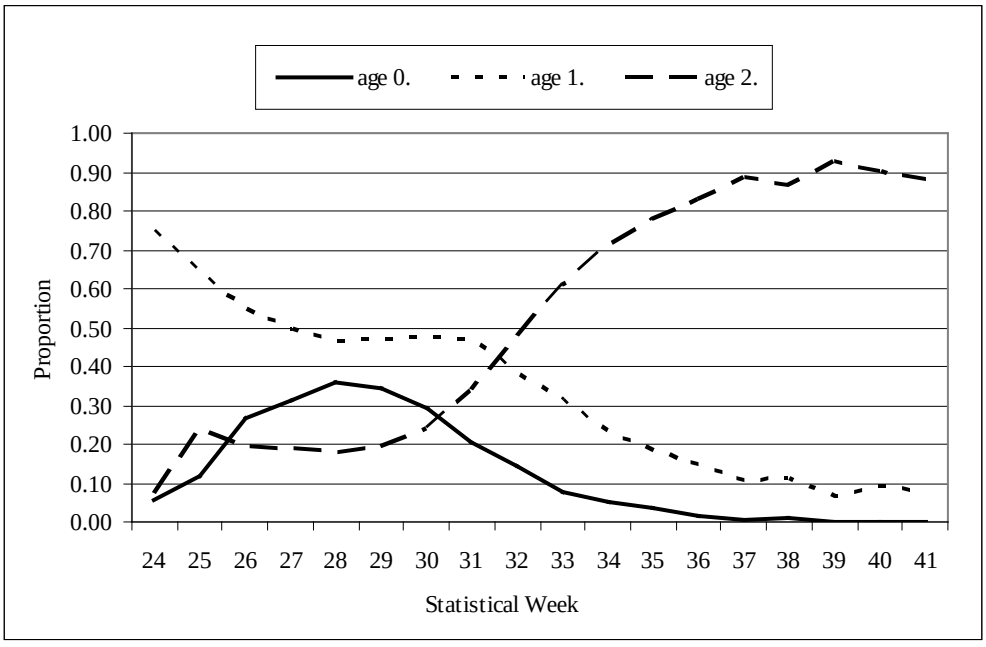

Figure 12.–Average 1994 to 2010 run timing for Chilkat River sockeye salmon stocks at the Chilkat River fish wheels, based on fresh water age class.

Note: age-0 are predominantly mainstem, age-1 are predominantly Chilkat Lake early run, and age-2 are predominantly Chilkat Lake late stock.

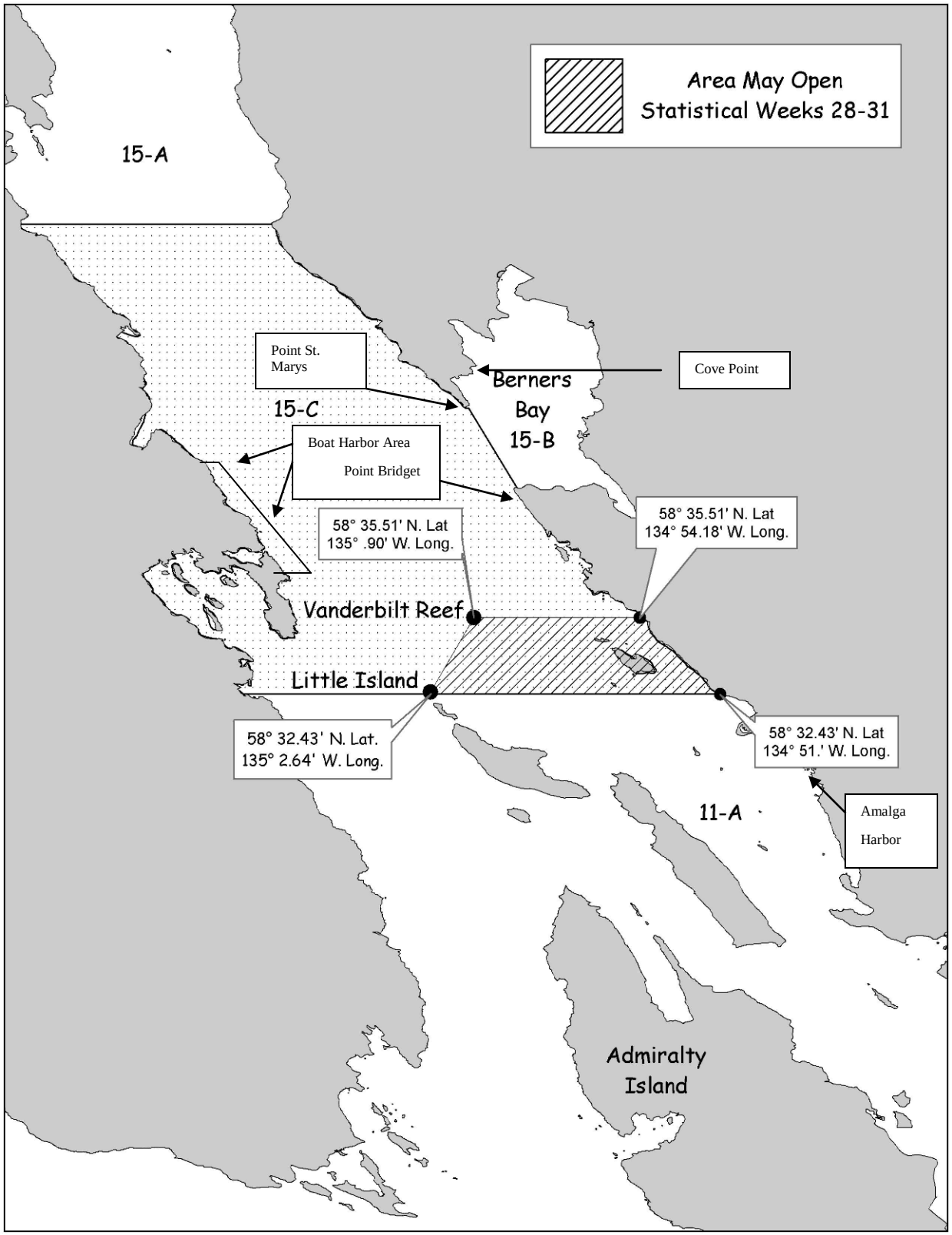

Figure 13.–Map showing area in Lower Lynn Canal that may be opened for additional time during peak weeks of hatchery chum return (Statistical Weeks 28 to 31).

APPENDICES

Appendix A.–5 AAC 33.384. Lynn Canal and Chilkat River King Salmon Fishery Management Plan.

(a) The purpose of this management plan is to ensure biological spawning escapement requirements of king salmon to the Chilkat River. It is the intent of the Board of Fisheries (board) that the Chilkat River king salmon be harvested in the fisheries that have historically harvested them. The board, through this management plan, recognizes that the commercial drift gillnet fishery in Chilkat Inlet, and the subsistence fisheries in Chilkat Inlet and the Chilkat River are directed primarily toward sockeye salmon but catch king salmon incidentally. A secondary goal of this management plan is to provide a reasonable opportunity to harvest sockeye salmon in the Chilkat Inlet and Chilkat River subsistence fisheries while minimizing the incidental harvest of king salmon. This management plan provides the department guidelines to preclude allocation conflicts between the various user groups of this resource. The department shall manage the Chilkat River king salmon stocks in a conservative manner consistent with sustained yield principles.

(b) The department shall close the subsistence net fisheries in Chilkat Inlet north of a line extending from an ADF&G regulatory marker approximately one mile south of Anchorage Point to an ADF&G regulatory marker directly north of the Lenikof Cove boat ramp, through July 15. In the Chilkat River, that portion of the river from Haines highway mile 19, continuing upstream to Well's Bridge, are closed from approximately the third week of June through the fourth week of July.

(c) The department shall manage the commercial and sport fisheries in Lynn Canal to achieve an inriver run goal of 1,850 to 3,600 king salmon in the Chilkat River upstream of the department fish wheels located approximately adjacent to mile 9 of the Haines highway. The inriver run goal provides for the following:

(1) a biological escapement goal (BEG) of 1,750 to 3,500 large king salmon (three ocean age and older) to the Chilkat River; and

(2) an incidental harvest of king salmon in the Chilkat River subsistence sockeye fishery.

(d) The department will evaluate the inriver run of king salmon based on the following:

(1) The pre-season projected run of Chilkat River king salmon to Lynn Canal;

(2) inseason fisheries performance; and

(3) inriver stock assessment programs.

(e) The department shall manage the commercial and drift gillnet and troll fisheries in Lynn Canal, and the sport king salmon fishery in Chilkat Inlet, as follows:

(1) the department shall close the commercial troll fishery in Chilkat Inlet north of a ADF&G regulatory marker immediately north of Seduction Point through July 14;

(2) if the projected inriver run of king salmon to the Chilkat River is 1,850 fish (three ocean age and older) or less, the department shall:

(A) close the commercial drift gillnet fishery in Chilkat Inlet north of a ADF&G regulatory marker immediately north of Seduction Point through the first two weeks of the fishery; during the third and fourth week of the fishery, the Chilkat Inlet north of Glacier Point shall be closed; during the fifth week, the commercial drift gillnet fishery in Chilkat Inlet north of Cannery Point shall be closed; and

–continued–

(B) close sport fishing for king salmon in Chilkat Inlet north of a ADF&G regulatory marker immediately north of Seduction Point through June 30; close king salmon fishing in Chilkat Inlet north of a line extending from an ADF&G regulatory marker one mile south of Anchorage Point to an ADF&G regulatory marker directly north of the Letnikof Cove boat ramp, through July 15; in the remainder of Chilkat Inlet north of Seduction Point, from July 1 to July 15, sport fisherman are allowed a bag and possession limit of one king salmon, 28 inches or greater in length;

(3) if the projected inriver run of king salmon to the Chilkat River is 1,850 to 3,600 fish the department shall;

(A) close the commercial drift gillnet fishery in Chilkat Inlet north of a ADF&G regulatory marker immediately north of Seduction Point through the first two weeks of the fishery; during the third week of the fishery, close the area in Chilkat Inlet north of Glacier Point; during the fourth week, close the area in Chilkat Inlet north of Cannery Point; and

(B) close sport fishing for king salmon in Chilkat Inlet north of a line extending from an ADF&G regulatory marker approximately one mile south of Anchorage Point to an ADF&G regulatory marker directly north of the Lenikof Cove boat ramp from April 15 through July 15;

(4) if the projected inriver run of king salmon to the Chilkat River is greater than 3,600 fish the department shall;

(A) close the commercial drift gillnet fishery in Chilkat Inlet north of a ADF&G regulatory marker immediately north of Seduction Point through the first week of the fishery; during the second week of the fishery, close the area in Chilkat Inlet north of Glacier Point; during the third week, close the area in Chilkat Inlet north of Cannery Point; and

(B) close sport fishing for king salmon in Chilkat Inlet north of a line extending from an ADF&G regulatory marker approximately one mile south of Anchorage Point to an ADF&G regulatory marker directly north of the Lenikof Cove boat ramp from April 15 through July 15; the commissioner may, through emergency order, increase the bag and possession limits of king salmon north of Seduction Point.

Appendix B.–Calendar dates for statistical weeks in 2011.

Week	Beginning Date	Ending Date	Week	Beginning Date	Ending Date
1	1-Jan	1-Jan	28	3-Jul	9-Jul
2	2-Jan	8-Jan	29	10-Jul	16-Jul
3	9-Jan	15-Jan	30	17-Jul	23-Jul
4	16-Jan	22-Jan	31	24-Jul	30-Jul
5	23-Jan	29-Jan	32	31-Jul	6-Aug
6	30-Jan	5-Feb	33	7-Aug	13-Aug
7	6-Feb	12-Feb	34	14-Aug	20-Aug
8	13-Feb	19-Feb	35	21-Aug	27-Aug
9	20-Feb	26-Feb	36	28-Aug	3-Sep
10	27-Feb	5-Mar	37	4-Sep	10-Sep
11	6-Mar	12-Mar	38	11-Sep	17-Sep
12	13-Mar	19-Mar	39	18-Sep	24-Sep
13	20-Mar	26-Mar	40	25-Sep	1-Oct
14	27-Mar	2-Apr	41	2-Oct	8-Oct
15	3-Apr	9-Apr	42	9-Oct	15-Oct
16	10-Apr	16-Apr	43	16-Oct	22-Oct
17	17-Apr	23-Apr	44	23-Oct	29-Oct
18	24-Apr	30-Apr	45	30-Oct	5-Nov
19	1-May	7-May	46	6-Nov	12-Nov
20	8-May	14-May	47	13-Nov	19-Nov
21	15-May	21-May	48	20-Nov	26-Nov
22	22-May	28-May	49	27-Nov	3-Dec
23	29-May	4-Jun	50	4-Dec	10-Dec
24	5-Jun	11-Jun	51	11-Dec	17-Dec
25	12-Jun	18-Jun	52	18-Dec	24-Dec
26	19-Jun	25-Jun	53	25-Dec	31-Dec
27	26-Jun	2-Jul			

Appendix C.–Data collected from the inseason information program to determine fishery performance by species.

Sockeye Salmon

a. Inseason abundance forecasts: Forecasts will be obtained by comparing current-year total return information (catch plus escapement), and expanding those results by historical run timing percentages for each stock.

b. Escapement tracking: Daily escapements are tracked at the Chilkoot River weir and Chilkat Lake DIDSON project. The Chilkoot River weir provides timely data for inseason assessment as fish pass that weir within one week of fishery. Chilkat River drainage sockeye salmon escapements will be monitored using two fish wheels in the lower Chilkat River. The Chilkat Lake weir will be operated to estimate escapement via DIDSON and to provide a site for biological sampling.

c. Inseason catch figures: Inseason catch figures are from the ADF&G fish ticket system. In the first 24 hours of an opening interview data from the fleet is used to estimate catches. After that time a sub sample of deliveries is expanded to total effort to estimate weekly catch. Each processor is contacted for estimated catch for the week.

d. Stock contributions: Inseason catch stock contributions are estimated each week from random scale samples. Estimates are made for three groups: Chilkoot Lake, Chilkat Lake, and a combination of Berners Bay and Chilkat mainstem sockeye salmon. Postseason stock contributions are made to add to the historic database from which models are derived. Escapements are sampled for scales to determine age structure of spawners in order to combine with catch data for spawner-recruit and historical databases.

e. Fishery monitoring: Site-specific fishery performance data and scale sampling are used to monitor migration paths and identify areas of overlap between stocks. Information is also provided on fish buildups in specific areas.

–continued–

Summer/Fall Chum and Pink Salmon

a. Inseason catch figures: Inseason catch data are obtained from the ADF&G fish ticket system. In the first 24 hours of an opening interview data from the fleet are used to estimate total harvests. After that time, a sub sample of deliveries is expanded to total effort to estimate catches. Processors are contacted for weekly catch estimates.

b. Aerial surveys and fish wheel catch: Escapement rates and distribution are monitored by aerial survey inseason when feasible and throughout the peak spawning period. Current fish wheel catches of salmon are compared to historical years when mark-recapture methods were used to estimate escapement of fall chum salmon.

c. Fishery monitoring: Collect catch data and other fishery performance information such as effort level, fishing conditions, influence of northerly winds on rate of entry into Chilkat River, and observations of fish buildups.

d. Fish wheel index: Lower Chilkat River fish wheel catch rates will be compared to the historical database to be used as an indicator of abundance.

Coho Salmon

a. Inseason catch figures: Inseason catch figures from the ADF&G fish ticket system and processor reports.

b. Aerial and foot surveys: Peak spawner counts are not obtained until postseason. However, in some index systems, Berners River and Chilkoot Lake, early season surveys provide an indication of escapement rates when water levels and conditions allow.

c. Fishery monitoring: Availability of coho salmon is judged by comparing current CPUE and catch to the historical average and by the relative abundance of coho salmon in specific areas.

d. Fish wheel index: Lower Chilkat River fish wheel catch rates will be compared to the historical database to be used as an indicator of abundance.

e. Berners River coded-wire tag monitoring and inseason projections: Coded-wire tag recoveries for Berners River and Chilkat River coho salmon are monitored inseason by commercial fisheries staff. Data collected from this program will be used to project the total return of Berners and Chilkat River coho salmon. This system is used as an index for other Lynn Canal coho salmon stocks.

Appendix D.–Inclusive dates of operation for Chilkoot and Chilkat weirs and Chilkat River fish wheels, 1976 to 2009.

Year	Chilkoot Lake Weir Operation	Chilkat Lake Weir Operation	Chilkat River Fish Wheel Operation
1976	5/30–11/2	6/3–10/21	Not operated
1977	5/28–9/11	6/3–9/27	8/21–10/21
1978	6/6–11/7	6/05–11/05	8/14–11/9
1979	6/9–11/5	6/9–11/11	—
1980	6/15–10/5	6/15–10/08	—
1981	6/10–10/12	6/11–10/22	—
1982	6/3–9/16	6/24–10/06	10/5–10/26
1983	6/4–11/13	6/22–11/12	8/9–10/3
1984	6/3–9/14	6/9–10/07	—
1985	6/5–10/21	6/23–10/22	—
1986	6/6–10/29	6/16–11/14	—
1987	6/4–11/2	6/19–11/20	—
1988	6/9–11/12	6/18–11/14	—
1989	6/4–10/30	6/5–10/28	—
1990	6/3–10/30	6/6–11/13	8/14–10/25
1991	6/7–10/8	7/10–10/24	5/8–7/20
1992	6/2–9/26	6/8–10/15	—
1993	6/3–9/30	6/13–10/14	—
1994	6/4–9/24	5/20–10/5	6/18–9/11
1995	6/5–9/11	6/8–10/9	6/16–9/16
1996	6/6–9/11	Weir not operated	6/22–9/16
1997	6/4–9/9	Weir not operated	6/11–10/09
1998	6/4–9/13	6/9–10/13	6/9–10/13
1999	6/4–9/13	6/30–10/28	6/7–10/08
2000	6/3–9/12	6/16–10/18	6/9–10/07
2001	6/7–9/12	6/19–10/13	6/6–10/07
2002	6/8–9/11	6/23–10/18	6/7–10/19
2003	6/6–9/9	6/27–10/10	6/6–10/21
2004	6/3–9/12	7/6–10/13	6/7–10/19
2005	6/6–9/12	6/28–10/12	6/7–10/11
2006	6/5–9/13	6/27–10/11	6/9–10/14
2007	6/4–9/12	7/13–10/15	6/7–10/9
2008	6/3–9/12	6/27–10/19	6/9–10/10
2009	6/5-9/10	6/15-10/12	6/11-10/09
2010	6/6-9/14	6/18-10/20	