

Fishery Management Report No. 12-01

Annual Management Report of the 2011 Yakutat Area Commercial Salmon Fisheries

by

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and

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February 2012

Alaska Department of Fish and Game

Divisions of Sport Fish and Commercial Fisheries



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Weights and measures (metric)		General		Mathematics, statistics	
centimeter	cm	Alaska Administrative Code	AAC	<i>all standard mathematical signs, symbols and abbreviations</i>	
deciliter	dL	all commonly accepted abbreviations	e.g., Mr., Mrs., AM, PM, etc.	alternate hypothesis	H_A
gram	g	all commonly accepted professional titles	e.g., Dr., Ph.D., R.N., etc.	base of natural logarithm	e
hectare	ha	at	@	catch per unit effort	CPUE
kilogram	kg	compass directions:		coefficient of variation	CV
kilometer	km	east	E	common test statistics	(F, t, χ^2 , etc.)
liter	L	north	N	confidence interval	CI
meter	m	south	S	correlation coefficient	
milliliter	mL	west	W	(multiple)	R
millimeter	mm	copyright	©	correlation coefficient (simple)	r
		corporate suffixes:		covariance	cov
Weights and measures (English)		Company	Co.	degree (angular)	$^\circ$
cubic feet per second	ft ³ /s	Corporation	Corp.	degrees of freedom	df
foot	ft	Incorporated	Inc.	expected value	E
gallon	gal	Limited	Ltd.	greater than	>
inch	in	District of Columbia	D.C.	greater than or equal to	\geq
mile	mi	et alii (and others)	et al.	harvest per unit effort	HPUE
nautical mile	nmi	et cetera (and so forth)	etc.	less than	<
ounce	oz	exempli gratia	e.g.	less than or equal to	\leq
pound	lb	(for example)		logarithm (natural)	ln
quart	qt	Federal Information Code	FIC	logarithm (base 10)	log
yard	yd	id est (that is)	i.e.	logarithm (specify base)	log ₂ , etc.
		latitude or longitude	lat. or long.	minute (angular)	'
Time and temperature		monetary symbols (U.S.)	\$, ¢	not significant	NS
day	d	months (tables and figures): first three letters	Jan,...,Dec	null hypothesis	H_0
degrees Celsius	°C	registered trademark	®	percent	%
degrees Fahrenheit	°F	trademark	™	probability	P
degrees kelvin	K	United States (adjective)	U.S.	probability of a type I error (rejection of the null hypothesis when true)	α
hour	h	United States of America (noun)	USA	probability of a type II error (acceptance of the null hypothesis when false)	β
minute	min	U.S.C.	United States Code	second (angular)	"
second	s	U.S. state	use two-letter abbreviations (e.g., AK, WA)	standard deviation	SD
Physics and chemistry				standard error	SE
all atomic symbols				variance	
alternating current	AC			population sample	Var
ampere	A			sample	var
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				

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COMMERCIAL SALMON FISHERIES**

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February, 2012

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This document should be cited as:

Woods, G. F. and N. L. Zeiser. 2012. Annual Management Report of the 2011 Yakutat Area commercial salmon fisheries. Alaska Department of Fish and Game, Fishery Management Report No. 12-01, Anchorage.

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ABSTRACT

The 2011 Yakutat set gillnet fishery produced a cumulative harvest of 500,200 salmon; this was 56% above the 2001–2010 average. The total harvest included 1,120 Chinook, 167,700 sockeye, 126,200 coho, 205,300 pink, and 900 chum salmon. The salmon harvest had an approximate exvessel value of \$2,382,760 to 122 active permit holders. The number of active permits was 7% above the recent 10-year average and comprised 69% of the total setnet permits in Yakutat. The 2011 sockeye salmon harvest of 167,700 was 38% above the recent 10-year average. Sockeye salmon harvest in the Situk-Ahrnklin Inlet, Alsek River, and Manby Shore fisheries was well above average while the remaining Yakutat District fisheries fell below average. Biological Escapement Goals (BEG) for sockeye salmon were met in all of sockeye salmon producing systems in Yakutat. Yakutat Bay, Situk-Ahrnklin, and Alsek Rivers together produced almost all of the area sockeye salmon harvest. The area's total coho salmon harvest of 126,200 was slightly below the recent 10-year average. The Situk-Ahrnklin and the Tsiu River produced 91% of the area coho salmon harvest. The area's Chinook salmon harvest of 1,123 was 42% below the recent 10-year average of 1,940. The top Chinook salmon producers were the Alsek River and Yakutat Bay. All fisheries for Chinook salmon, commercial, subsistence and sport were closed on the Situk-Ahrnklin River due to a low preseason projection. Dead Chinook salmon could not be retained for personal use but turned in for distribution to needy in the community. These conservation measures were lifted after the Chinook salmon run was over. The pink salmon harvest of 205,300 fish was well above the recent 10-year average. The chum salmon harvest of 900 was slightly below average. The Situk-Ahrnklin Inlet and Yakutat Bay fisheries produced most of the pink salmon, which were incidental to the sockeye salmon harvest.

Key words: Management, AMR, Annual Management Report, setnet, set gillnet, 2009 season, Chinook, sockeye, pink, chum, coho, salmon, Yakutat, Yakataga, fish ticket, Situk River, Situk-Ahrnklin Inlet, Yakutat Bay, Tsiu River, Alsek River, East River, BEG, Biological Escapement Goal, CPUE, catch per unit effort.

INTRODUCTION

The Yakutat set gillnet fisheries (Figure 1) are divided into two fishing districts; the Yakutat District, which extends from Cape Fairweather to Icy Cape, and the Yakataga District, which extends from Icy Cape to Cape Suckling. Yakutat District set gillnet fisheries primarily target sockeye and coho salmon although all five species of salmon are harvested. The Yakataga District fisheries only target coho salmon.

While the bulk of the Yakutat salmon harvest is usually reported from four or five major fisheries (the Alsek, Situk-Ahrnklin, and Tsiu Rivers, and Yakutat Bay), upwards of 25 different areas are open to commercial fishing each year. With few exceptions, set gillnetting is confined to the intertidal area inside the mouths of the various rivers and streams, and to the ocean waters immediately adjacent to each. Due to the terminal nature of these fisheries the department has been able to develop escapement goals for most of the major and several of the minor fisheries (Table 1).

Escapement counts performed inseason become the driving force in establishing openings, closures, and fishing times for each fishery. The fisheries are managed to ensure that escapement goals are met. In the case of glacial systems, it is often either difficult to see escapement, or escapement does not become visible until long after the fishery has occurred. Fisheries performance data, in the form of catch per unit of effort (CPUE), are compared with historical data to estimate run strength for management purposes. Two ocean fisheries, the Manby Shore and the Yakutat Bay fishery, occur within Yakutat Bay. Historical stock analysis of these fisheries indicates that the majority of sockeye salmon harvested, especially during the first six or seven weeks of the season, are of Situk-Ahrnklin origin. These fisheries are managed in accordance with Situk-Ahrnklin escapement goals.

YAKUTAT AREA SUMMARY

OVERVIEW

The 2011 Yakutat set gillnet fishery produced a cumulative harvest of 501,200 salmon. This was 56% above the recent 10-year average (Tables 2 and 3). Of the 179 Yakutat set gillnet permits, 122 were active this season which was 7% above the recent 10-year average. The average Yakutat permit holder earned \$19,500 for the 2011 season; this was 48% above the 10-year average (Table 4). Sockeye salmon harvests were 38% above the ten-year average. Sockeye salmon harvest in the Situk-Ahrnklin Inlet, Alsek River, and Manby Shore fisheries was well above average while the rest of the Yakutat District fisheries fell below average. The coho salmon harvest was slightly below the recent 10-year average. The Situk-Ahrnklin Inlet accounted for 63% of the coho salmon harvest while the Tsiu River accounted for 27% (Table 5). Almost all of the remote systems, although open to fishing, received very little effort for coho salmon in 2011. A buying station was maintained on the Tsiu River for the seventh time since 2001 and 34,750 coho salmon were harvested from the Tsiu. Coho salmon accounted for 25% of the total Yakutat area salmon harvest. The return of pink salmon to the Situk River was above average in 2011. There is little economic incentive to harvest pink salmon so they are harvested incidentally to sockeye and coho salmon. The harvest of 205,000 pink salmon in the Situk-Ahrnklin Inlet was well above average. The chum salmon harvest in the Yakutat area was slightly below the recent 10-year average, and the Chinook salmon harvest of 1,123 was 42% below the recent average.

SOCKEYE SALMON

The sockeye salmon harvest of 167,700 was 38% above the recent 10-year average of 121,000 fish. The 2011 harvest of 65,600 Situk-Ahrnklin sockeye salmon was 28% above the recent five-year average of 51,200. The Situk-Ahrnklin Inlet was the peak producer for the area and accounted for 39% of the sockeye salmon harvest. The Situk River weir count of 90,000 sockeye salmon was over the top end of the Biological Escapement Goal (BEG) range of 30,000 to 70,000. The sockeye salmon return to the East Alsek River (East River) was 26,000 fish. The sockeye salmon return to the Doame River was 1,300 fish. Currently, these two systems are counted as one watershed and share a common BEG range of 13,000 to 26,000 sockeye salmon. Together, the escapement goal was attained, however commercial fishing is does not open in the East River until escapement of 13,000 fish has been observed. Commercial fishing was opened to sockeye salmon harvest on the East River in 2011. The East and Doame rivers are two separate systems with genetically distinct sockeye salmon populations; run timing for each is completely different. The department believes that the sockeye salmon populations may be in a state of transition due to changes in habitat within the drainage. It appears that the Doame stock is increasing in abundance and getting later in run timing, it also appears that East stocks are undergoing adaptation from zero check 4 year olds to one check 5 year olds. The department will continue to monitor these changes and may re-evaluate the spawning escapement goals in the future.

The Alsek River recorded an above average sockeye salmon return in 2011. The Alsek River set gillnet fishery harvested 24,200 sockeye; this more than doubled the recent five-year average of 11,700 fish (Table 6 and 7). Yakutat Bay, with a harvest of 27,600 sockeye accounted for 17% of the total sockeye salmon harvest. The Akwe River harvest of 21,400 sockeye salmon was well above average and the second highest within the recent five-year average. The Dangerous River

harvest of 4,100 sockeye was 13% below the recent five-year average, and was less than half of the 2009 harvest of 8,700 fish. Fifteen permits harvested 9,200 sockeye salmon in the Manby Shore fishery.

COHO SALMON

The 2011 coho salmon harvest of 126,200 was 8% below the recent 10-year average of 137,200 fish. Coho salmon returns during the period 1990–2002 were the strongest in the history of the Yakutat Area. Since 2002 coho salmon production for the Yakutat area has fallen back to historical averages. The Situk-Ahrnklin Inlet harvest of 80,000 coho salmon was 22% above the recent average of 65,500 fish. The only other major coho salmon producer in Yakutat in 2011 was the Tsiu River. The presence of a buying station on the river again prompted sustained effort on the Tsiu for the seventh year in a row. The Tsiu River harvest of 34,700 coho salmon was 20% below the recent five-year average of 44,000 fish. Yakutat Bay harvest of 6,700 coho salmon doubled the recent average of 3,200 fish. Minimal effort was recorded on Manby and Sudden Streams in 2011 and all catch figures are confidential. Yahtse and Yana rivers were not fished in 2011. The Alsek and East rivers and Manby Shore contributed small numbers of coho salmon to the total harvest.

CHINOOK SALMON

With the exception of the troll fisheries, there are no directed fisheries for Chinook salmon in the Yakutat Area, so all Chinook salmon are harvested incidentally in the sockeye salmon set gillnet fisheries. The principle producers of Chinook salmon are the Situk-Ahrnklin Inlet, the Alsek River, Yakutat Bay, and the Akwe River. The preseason projection for the Situk River was for a below average return in 2011 so conversation measures took place as mandated by 5 AAC 30.365, Situk-Ahrnklin Inlet and Lost River King Salmon Fisheries Management Plan. The commercial, sport, and subsistence fisheries for Chinook salmon on the Situk-Ahrnklin Inlet were closed in 2011. The BEG of 450-1,050 large Chinook salmon was not achieved in 2011, and fishermen were not allowed to retain or sell Chinook salmon throughout the end of the Chinook salmon season. The preseason projection for the Alsek River was for an above average Chinook salmon return, and the escapement was over the top end of the BEG. The Alsek River harvest of 550 Chinook salmon was only 3% below the recent average of 570 fish. A Chinook salmon test fishery was conducted on the Alsek River in 2011 and contributed another 420 Chinook salmon to the overall harvest. The Yakutat Bay harvest of approximately 260 Chinook salmon was 39% below the recent five-year average for the Bay. The Akwe River harvest of 180 Chinook salmon was 27% above the recent five-year average of 140 fish. The Alsek River and Yakutat Bay accounted for 72% of all Chinook salmon harvested in the Yakutat Area. The total harvest of 1,100 Chinook salmon was 42% below the recent 10-year average.

PINK SALMON

The 2011 pink salmon return to Yakutat was one of the strongest on record. By early August there were an estimated three million pink salmon in Yakutat Bay. The pink salmon harvest of 205,300 fish was well above the recent 10-year average of 66,000 fish. Pink salmon prices were \$0.34 per pound this season, which provided an economic incentive to target pink salmon in the fisheries. Yakutat Bay and the Situk-Ahrnklin Inlet were the top two producers for the area. The two fisheries together accounted for almost all of the pink salmon harvest in the Yakutat area. The Situk-Ahrnklin Inlet harvest of 142,000 pink salmon was well above the recent five-year average. The Yakutat Bay harvest of 62,800 pink salmon more than tripled the recent five-year

average of 18,000 fish. Pink salmon harvested in Yakutat Bay are predominantly of Situk River and Humpback Creek origin. The peak float survey count in the Situk River was 260,000 pink salmon.

CHUM SALMON

Chum salmon are a non-target species in the Yakutat Area due to the combination of low abundance and low price, and the harvest is entirely incidental. The East River had been the only major producer of chum in the Yakutat Area; however the chum salmon run in the East River has been in decline during the past decade, probably due to changes in habitat. In 2011, the East River fishery had a small harvest of 330 chum salmon that was slightly below the recent average. The area-wide chum salmon harvest of 900 fish was also just below the 10-year average. The Situk River and Yakutat Bay were the biggest chum producers' in the area.

YAKUTAT DISTRICT FISHERIES

ALSEK RIVER

Alsek River salmon management is conducted in cooperation with the Canadian Department of Fisheries and Oceans (DFO) under the auspices of the Pacific Salmon Commission (PSC). In February, 2005, the PSC reached bilateral agreement to allow directed Chinook salmon fisheries in the Taku and Stikine Rivers to begin in early May. Agreement was not reached to open the Alsek River Chinook salmon fishery until such time as run projections improved. The department was granted permission to conduct a test fishery for Chinook salmon. These test fisheries were conducted from 2005 through 2008, but was discontinued in 2009 and 2010 due to poor Chinook salmon returns. In 2011, the department conducted a fifth test fishery on the Alsek River. The goal of the test fishery is to enable the department to develop a method for determining the run strength of Chinook salmon on an inseason basis using test fishery catch per unit of effort (CPUE) as an index of abundance. The department has adopted regulatory language concerning a directed Chinook salmon fishery on the Alsek River pending bilateral agreement by the PSC.

The Alsek River Chinook salmon test fishery opened the week of May 18 in 2011 and was conducted through the end of June. At total of 421 Chinook and 157 sockeye salmon were harvested. All Chinook salmon were sampled for age, sex, length and genetics.

A total of 18 permit holders on the Alsek River harvested 550 Chinook, 24,200 sockeye, and 1,600 coho salmon in 2011. Virtually no pink or chum salmon were harvested (Table 6 and 7). The sockeye salmon harvest was well above the recent five-year average, and nearly doubled the 2010 harvest (Table 7). In 2011, the Alsek was opened to commercial fishing during statistical week 24, the first Sunday in June. Traditionally, adjustments to weekly fishing periods during the sockeye salmon season rely heavily on fishery performance data; the decision to extend any given period is generally based on CPUE data gathered during that period. Parent-year escapement information is also considered when determining the weekly fishing periods. The initial opening was extended from one to two days fishing time. The fishing periods remained at one day for the next two weeks of the season before being extended to two days again during the fourth week. By the middle of the sockeye salmon run, CPUE was indicating some strength to the run, and fishing periods were extended to three days for the next three weeks of the season. The strength of the run waned from that point on and fishing period time dropped to two days during statistical week 31, and remained at one day for the last two weeks of the season.

The Chinook salmon harvest of 550 was near the recent five-year average of 570 fish. The majority of these fish were harvested during the first three weeks of the season. The Klukshu weir escapement of 1,670 Chinook salmon was within the recommended BEG range of 1,100 to 2,300 fish (Table 8). The harvest was 47% above the recent five-year average and was the second highest escapement recorded during this period of time. The spawning escapement goal for Alsek River and Klukshu River Chinook salmon was recently updated and is pending final approval by the Transboundary Technical Committee (Bernard and Jones 2010). The current analysis suggests the appropriate spawning escapement goal for Klukshu River adult Chinook salmon is 800 to 1,200 fish.

The Klukshu River is an important tributary in the upper Alsek River drainage in Canada. The BEG for sockeye salmon was not attained at the Klukshu weir in 2008 and 2009 so conservation measures took place in 2010 and BEGs were met for both sockeye and Chinook. The Klukshu River weir count of approximately 21,400 sockeye salmon in 2011 was above average and over the top end of the escapement goal range of 7,500 to 15,000. This was 57% above the recent 10-year average of 13,700 sockeye salmon (Table 8). Aerial escapement surveys of sockeye salmon are typically conducted on the Tanis River, Cabin, and Basin Creeks. Due to inclement weather only upper Tanis Creek was surveyed one time on August 17 with a count of 500 sockeye salmon. The spawning escapement goal for Alsek River and Klukshu River sockeye salmon was recently updated and is pending final approval by the Transboundary Technical Committee (Eggers and Bernard 2011). The current analysis suggests the appropriate spawning escapement goal for Klukshu River sockeye salmon is 7,500 to 11,000 fish.

The coho salmon harvest of 1,600 was slightly below the recent five-year average of 1,800 fish. Effort levels in the Alsek generally plummet during coho salmon season, and only six or less permits fished during the coho salmon season. The river was fished into the last week in September. The Alsek remained opened through the second week in October, and the river was not fished during the final two weeks of the season. Inclement weather during the fall makes it very difficult to obtain accurate escapement counts in local tributaries. The Klukshu weir escapement of 2,100 coho salmon was 10% below the recent 10-year average. The weir is usually removed prior to the completion of the coho salmon return and does not include fish that migrate after mid-October.

EAST RIVER

The East River experienced a harsh reversal of fortunes in 2008, with by far the poorest return on record and was not open to commercial fishing for sockeye salmon. By contrast, the 2009 escapement surveys indicated a strong return and the river opened to commercial fishing. In 2010, the sockeye return was just under the bottom end of the escapement goal and the river was once again closed to commercial fishing for sockeye salmon. In 2011, surveys indicated another strong sockeye salmon return and the river opened to commercial fishing on July 17th for 72 hours. Fishing periods remained at three days throughout the remainder of the season and the river was fished for five weeks for sockeye salmon. The peak escapement count of 26,000 fish was recorded on September 1. This met the top end of the BEG range of 13,000 to 26,000 fish. Minimal effort was recorded during the coho salmon season and the East was only fished one week of the last six weeks of the season. A total of 17 permits harvested 14,800 sockeye and 100 coho salmon (Tables 9 and 10). Although the East River is considered the only major producer of chum salmon in the Yakutat area, chum salmon were not targeted due to transportation costs, and no pink

salmon were harvested. The East River was surveyed for coho salmon on September 1 with an escapement count of 400 fish.

AKWE RIVER

The Akwe River sockeye salmon harvest of 21,300 fish was 157% above the recent five-year average of 9,300 fish (Table 11). It was the third highest harvest on record for the Akwe River and only the fourth time the river has recorded a harvest of over 20,000 sockeye salmon. The Akwe opened on the fourth Sunday in June and was fished for sockeye salmon during the first eight weeks of the season. The peak effort of seven permits was recorded during the second week of the season. A peak aerial survey count of 6,000 sockeye salmon was well over the BEG range of 600-1,500 fish. The coho salmon harvest of 1,600 fish was below the recent five-year average of 3,400 fish. Effort remained minimal during the coho salmon season. Historically, aerial surveys of the Akwe River have been of little value in determining escapement due to the turbidity of the river. The dramatic retreat of Chamberlain Glacier, which feeds Akwe Lake, has allowed the river to clear up, and aerial surveys of the river have become more effective in recent years. Weekly fishing times are announced at 1.5 days and then adjusted inseason according to fishery performance. Fishing periods were extended to 2.5 days during four weeks of the season due to the strength of the sockeye salmon run.

Markers were placed on the Akwe River one-half mile upstream of the terminus of the river to reduce the problem of fishing mixed stocks in the Italio and Akwe confluence. Some milling of all species may occur, and it is probable that some of the New Italio River stocks are intercepted in the Akwe River fishery. There will be a proposal to the Alaska Board of Fish this year to make this marker movement permanent.

ITALIO RIVERS

Three different rivers comprise the Italio River system: the Old, Middle, and New Italio Rivers. The Old Italio River has always been a separate river flowing into the Gulf of Alaska just east of the mouth of the Dangerous River. Geological changes in the mid-1980s changed the Italio River and created two distinct rivers where only one had existed before. The main river is now called the New Italio, and the original river channel is the Middle Italio. All three systems support coho populations, and the New Italio River also has a small run of sockeye salmon. With the decline in sockeye salmon production, the New Italio has not been opened to commercial fishing since 1987. Aerial surveys are conducted and peak counts of no more than 1,500 sockeye salmon are usually recorded. This year a peak aerial survey of 6,000 sockeye salmon was recorded on August 17. This is by far the highest sockeye salmon count in over 20 years. Coho returns in the Old and Middle Italio Rivers were strong and it was apparent that the BEG of 1,400-3,600 fish would be attained. Both rivers were open to commercial fishing for coho in 2011. Fewer than three permits fished, and harvest records are confidential. The Middle Italio was fished for two weeks and the Old Italio was not fished during the season. No late fall surveys were flown on these systems due to inclement weather.

DANGEROUS RIVER

The Dangerous River was opened to commercial fishing on the second Sunday in June. A total of five permits fished the Dangerous in 2011 and 4,100 sockeye salmon were harvested. Small numbers of Chinook salmon were harvested incidentally in the sockeye salmon fishery. The Dangerous River was not fished for coho salmon this year (Table 12). Escapement surveys of the

Dangerous River are ineffective due to the glacially occluded water. Weekly fishing times are announced at 2.5 days by regulation and then adjusted in accordance with fishery performance. Fishing times remained at 2.5 days through statistical week 31 and were then increased to 3.5 days for the next week before the onset of fall fishing time. Fishing time remained at 3.0 days throughout the coho salmon season.

SITUK-AHRNKLIN INLET

The Situk-Ahrnklin Inlet fishery recorded above average harvests of sockeye, coho, pink and chum salmon, and a below average harvest of Chinook salmon during the 2011 season (Table 13, Table 14). The Situk-Ahrnklin Inlet generated 55% of the Yakutat area set gillnet income (Table 15, Table 16). The total value of approximately \$1,306,000 was 47% above the 5-year average. The harvest of 65,700 sockeye salmon was also 28% above the recent average. Situk-Ahrnklin sockeye accounted for 39% of the area sockeye salmon harvest. The coho harvest of 80,000 was 22% above average, and accounted for 63% of the area's total coho salmon production. The pink salmon return to the Situk was above average, and the harvest of 142,000 was second only to the 2010 harvest of 143,000 pink salmon.

The Situk River weir was installed in the lower river for the 24th consecutive year and used for inseason management of the sockeye and Chinook salmon fisheries (Table 17). This was the 17th year that the resistance board or “floating” weir was used. Heavy rains and subsequent flooding are typical of the fall coho season and the weir is not maintained during the coho salmon run.

Prior to the start of the season, the Division of Sport Fisheries (DSF) announced a preseason forecast of a total return of 157 large (three-ocean age) Chinook salmon to the Situk River in 2011. This was by far the lowest preseason Chinook salmon forecast on record. Under the terms of 5 AAC 30.365, Situk-Ahrnklin Inlet and Lost River King Salmon Fisheries Management Plan, if the projected return of large Chinook salmon is less than 350 fish, the department shall close the Chinook salmon sport, subsistence, personal use, commercial set gillnetting, and trolling in State waters adjacent to the mouth of the Inlet for Chinook salmon. All these fisheries were closed by emergency order prior to the initial opening for the Situk-Ahrnklin Inlet set gillnet fishery.

5 AAC 30.365 makes no mention of sockeye salmon under this scenario. Sockeye and Chinook salmon run timing in the Situk-Ahrnklin Inlet is virtually identical for the two species, and the case could be made that for Chinook salmon conservation, the sockeye salmon commercial fisheries could also be closed, even if sport and subsistence fisheries remained open. The dilemma is best stated in terms of a question. How can a commercial net fishery for sockeye salmon be conducted in the Inlet when the subsistence fishery for Chinook salmon is closed? As stated previously, the Situk-Ahrnklin Inlet gillnet fishery produces over 50% of the exvessel value of the Yakutat gillnet fisheries, and the loss of the sockeye salmon fishery would have a negative economic impact on the community. The preseason projection for sockeye salmon was for an above average return, and without the net fishery to slow them down, final sockeye salmon escapement could easily reach three times the top end of the BEG range.

In April of 2011 department staff attended two meetings, one with the Yakutat Tlingit Tribe and one with the City & Borough of Yakutat, to outline a plan that would allow commercial fishing for sockeye salmon, while at the same time calling for stringent conservation measures for Chinook salmon. On May 10 a public meeting was hosted by staff at the Yakutat High School

auditorium and the plan was presented to the public. The plan as outlined contained three major provisions for Chinook salmon conservation:

- 1) There are three markers in place where the Situk River enters the Inlet that delineate fresh river water at mean low tide upstream of which are closed waters. It was recognized that approximately 75% of Chinook salmon taken in the commercial fishery came from the nets in open waters immediately adjacent to the closure lines. The markers would be moved further out to eliminate those sets, thus tripling the area of closed waters. When conservation measures were no longer needed, the markers would be returned to normal positioning.
- 2) 5 AAC 30.365 contains a “non-sale” provision under certain scenarios of low Chinook salmon abundance. The “non-sale” under this plan would become “non-retention.” All Chinook salmon in the nets would be returned to the water immediately. To address the waste issue of dead fish found in the nets, dead Chinook salmon could be turned in to a buyer at the time of sockeye salmon sale for distribution to elderly, legally blind, or 70% disabled within the community. Permit holder must closely attend their gear and release as many Chinook salmon unharmed as possible.
- 3) Finally, it was recognized that the department does not have regulatory authority to require permit holders to closely attend gear, therefore this requirement was of a voluntary nature. The department would closely monitor the fishery to see if this experimental plan was working. If it became clear that too many Chinook salmon were being killed, the only alternative would be to close the sockeye salmon fishery for the season. For this plan to work there must be a cooperative effort among all parties, the department, the community, and the permit holders. In other words, if you want a fishery for sockeye salmon, stay on your gear.

The Situk-Ahrnklin Inlet fishery opened by regulation on the third Sunday in June, and the fishing period remained at 2.5 days for the first two weeks of the season. The sockeye salmon return did prove to be above average and fishing periods got extended to 3.5, 4.5, 6.75, and 7 days a week over the next four weeks. The end of the return remained strong, and fishing periods remained on extended time through the end of August. The harvest of 65,700 sockeye salmon was 28% above the five-year average of 51,200. A total of 90,000 sockeye salmon passed through the weir in 2010 and this exceeded the upper limit of the BEG range of 30,000 to 70,000.

A total of 22 dead Chinook salmon were retained from nets to be distributed to the needy within the community. The weight average for these fish was 7.33 pounds, indicating they were two-ocean fish, and would not have counted as escapement under the terms of the management plan. No large Chinook salmon were reported turned in. Total escapement of large Chinook salmon through the weir was 240 fish; this exceeded the preseason projection of 157 fish. Over 1,000 one and two-ocean jacks passed through the weir which may indicate some return to a period of higher Chinook salmon abundance. Most importantly, the plan for Chinook salmon worked. The department now has a model to conduct a sockeye salmon fishery in the Situk-Ahrnklin Inlet with minimum impact on Chinook salmon during periods of low abundance.

The harvest of 80,000 coho salmon was 22% above the recent five-year average of 65,500. The 14-year period from 1992–2005 was the most productive in the history of the Situk-Ahrnklin

Inlet coho salmon fishery, with ten of the fourteen years recording a harvest in excess of 100,000 coho salmon. Seven of those fourteen years recorded harvests in excess of 150,000 fish. There has been a downturn in this level of production since 2003, and the 2011 harvest was the second highest in the past five years. The long-term historical record yields a different perspective. During the 30-year period 1961–1991 the average coho salmon harvest in the Situk-Ahrnklin Inlet fishery was 31,500, and only four of those years produced a harvest of over 50,000 coho salmon. Escapement survey conditions were poor throughout most of the 2011 season. A peak Situk River escapement survey of approximately 3,650 coho salmon was recorded on October 4, within the BEG range of 3,300-9,800 fish. The Situk River was not surveyed in September due to inclement weather and flood conditions, and it is probable that final escapement numbers were well up in the BEG range. The commercial fishing period remained at three days for the first three weeks of the season, and was then extended to four days for two weeks before returning to three days during the last two weeks of the season. A peak count of 61 permits fished during the fourth week of September, and this effort was above average for recent coho salmon seasons. This year continues the recent reversal of historical effort patterns. Prior to 2000 peak effort levels in the Situk-Ahrnklin Inlet were recorded during the sockeye salmon season when as many as 90 permits fished the Inlet. Effort then dropped to about 50 permits during the fall when some effort was removed to some of the more remote coho salmon systems. Now, more effort is remaining in Yakutat Bay during the sockeye salmon season. And with economics limiting the remote coho salmon fisheries, more effort is now being seen in the Inlet during the fall.

The pink salmon harvest of 142,200 was second only to the 2010 harvest of 143,000 and was well above the recent 5-year average of 77,400 fish. In 2011, 170,000 pink salmon passed through the Situk weir. The peak of the pink run occurs between the end of the sockeye season and the onset of the coho salmon season. Effort levels always diminish during this time, as fewer permits are willing to fish for pink salmon because of the comparatively low price. In 2011 the pink salmon price was 34 cents per pound. A final escapement count of 260,000 pink salmon was recorded on August 12. The chum salmon harvest of 300 fish was 3% above the recent five-year average.

LOST RIVER

Because of the shift of the Lost River in 1999 that resulted in the river changing from discharging directly into the Gulf of Alaska to discharging into the Situk-Ahrnklin estuary, 5AAC 39.220 was implemented to protect Lost River stocks. Beginning in the 1999 season, regulatory markers have been placed in the Situk-Ahrnklin estuary to delineate areas that closed the Lost River to commercial fishing. This closure forced the displacement of some traditional fishing sites and many of these fishermen have elected to transfer their enterprises to either the Situk-Ahrnklin Inlet or to Yakutat Bay.

The Lost River was not opened to commercial set gillnetting in 2011. The peak sockeye salmon escapement count of just over 1,000 fish met the Sustainable Escapement Goal (SEG) of 1,000 fish for the Lost River. The peak coho salmon escapement count of 1,200 was below the SEG of 2,000 fish. Very few surveys were conducted during the fall due to inclement weather and flood events, it is possible the SEG for coho salmon was attained. It is assumed that Lost River salmon stocks are harvested in the Situk-Ahrnklin fishery. The lower end of the Situk-Ahrnklin estuary appears highly mutable and the conservation measures enacted from 1999–2010 will continue to be necessary in the future.

YAKUTAT BAY

Sockeye salmon pass through Yakutat Bay on their journey to all of the river systems east of the Bay, the Lost, the Situk-Ahrnklin, the Dangerous, the Italios and the Akwe, and to a lesser extent, to both the Alsek and East Rivers. The migration route carries the fish around Ocean Cape, and from there eastward they stay just outside the outermost breakers all the way down the coast. The years 2007 and 2008 saw a proliferation of 75 fathom Yakutat Bay gillnets clustered off Ocean Cape in the middle of that migration route. There is a line that delineates where a 75 fathom net can be fished in the Bay that runs from the southernmost point of Ocean Cape to Point Manby, and those nets must be east and north of that line. Nets began crowding this line, and were then seen south and west of the line. The waters east and south of the line do not open to fishing as the remainder of the district until the fourth Sunday in June, and legal gear there is one 15 fathom net, not a 75 fathom Yakutat Bay net. In 2009 and 2010 the markers were removed from the southernmost point of Ocean Cape to Ocean Cape itself, thus closing all waters outside the Bay to commercial fishing. This was done to prevent the illegal fishing activities that occurred in the Ocean Cape area in 2007 and 2008. By 2011 the Alaska Wildlife Trooper (AWT) post had reopened along with a skiff capable of patrolling those waters, and the markers were returned to the southernmost point of Ocean Cape prior to the initial Yakutat Bay opening. No illegal activities were reported from the Ocean Cape area in 2011.

Yakutat Bay recorded harvests of 250 Chinook, 27,600 sockeye, 6,600 coho, 62,800 pink and 200 chum salmon in 2011 (Table 18). The sockeye salmon harvest of 27,600 was 2% below the recent five-year average (Table 19). The Yakutat Bay sockeye salmon harvest was second only to the Situk-Ahrnklin Inlet harvest this year. A total of 50 discreet permits fished Yakutat Bay in 2011, with a peak effort of 20 permits fished during the first week of the season. The Yakutat Bay fishery opened on the second Sunday in June, and fishing time remained at 2.5 days for the first three weeks of the season. Fishing time was then increased to 3.5 days for one week, and then to 4.5 days for the next four weeks. Chinook salmon are harvested incidentally in the sockeye salmon fishery, and the harvest of 250 Chinook salmon was 39% below the recent 5-year average.

Yakutat Bay has never been a major coho salmon producer, perhaps due to the concentration of effort elsewhere during coho salmon season. The 2011 coho salmon harvest of 6,600 fish was 108% above the recent five-year average and was the highest harvest for that period of time. Effort levels always remain low in Yakutat Bay for coho salmon, and a peak count of eight permits fished the Bay during the third week of September.

The Yakutat Bay pink salmon harvest of 62,800 fish was 246% above the recent five-year average and was the highest pink salmon harvest in the Bay since the peak years of the Humpback Creek fishery in the early 1980s. Pink salmon have not been targeted in Yakutat Bay in recent years due to the decline of the Humpback Creek fishery. The Bay had the highest return of pink salmon in memory this year, with an estimated three million pink salmon seen within the Bay. Pink salmon were targeted in the Bay this year, with a peak effort of 13 permits recorded during the first week of September. The most common refrain heard from permit holders was that a 75 fathom set gillnet was extremely inefficient gear for pink salmon, and a harvest of 60,800 fish out of the huge biomass of pink salmon seen in the Bay would seem to bear this out. An aerial survey of the intertidal area adjacent to the mouth of Humpback Creek was flown on August 17 with a recorded estimate of 50,000 pink salmon. Most of the pink salmon targeted in

the Bay were harvested from inside the islands in the vicinity of Humpback Creek and in Redfield Cove.

MANBY FISHERIES

The Manby Shore ocean fishery is located along the western shore of Yakutat Bay. This fishery harvests stocks that are destined for the Situk River and the Manby Shore streams. Historical data is difficult to interpret because, prior to the mid-1980s, harvests from the ocean fishery were combined with harvests from the area's inside waters. Also, before 1950, all the Manby Shore and Manby streams' harvests were recorded with those from Yakutat Bay. It is likely that the ocean fishery for sockeye developed in 1977 since fairly consistent sockeye salmon harvests begin to appear in the record at that time. Weekly fishing periods are usually adjusted according to Situk River escapement needs. The Manby Shore fishery opened on the third Sunday of June and was fished for the next five weeks. A total of 15 permits harvested 9,200 sockeye salmon, and 136% above the recent five-year average (Table 20). The harvest of 100 Chinook and 500 coho salmon was also well above average.

The Manby Shore stream fisheries include the waters of Manby Stream, Sudden Stream, Spoon River, and Esker Creek. The fishing history of these systems is imprecise because some, or none, may be fished in any given year. Sudden and Manby Streams produce both sockeye and coho, while the Esker Creek and Spoon River fisheries target only coho salmon. In 2011 Manby Stream was fished for sockeye salmon. Fewer than three permits fished, and catch records are confidential. Escapement counts are limited due to the glacial nature of most Manby area streams and no surveys of these inside waters were conducted in 2011. Escapement goals have not been formulated for the inside waters along the Manby Shore.

YANA RIVER TO ICY BAY

Neither the Yana nor the Yahtse rivers were fished in 2011. No aerial surveys of these systems were conducted due to inclement weather.

YAKATAGA DISTRICT FISHERIES

OVERVIEW

The Yakataga District opened on August 1 in 2011. The Tsiu River sustained a normal commercial fishery for the seventh year in a row. The Kaliakh River, Tashalich River, Eight Mile Creek, and the Seal River were open, but not fished in 2011 (Table 21).

TSIU RIVER

The Tsiu River is remote from processors and fish have been transported from the site in the round in a DC-3 or similar aircraft. In 2011 Yakutat Seafoods maintained a buying station on the Tsiu River and flew fish to Yakutat with a DC-3. This marked the seventh time since 2001 that a processor maintained a presence on the Tsiu. A total of 21 permits fished on the Tsiu River in 2011 which is an increase in effort from recent years. The harvest of 34,700 coho salmon was 21% below the recent 5-year average (Table 21).

Inclement weather in 2011 marked a return to a more "normal" fishing conditions on the Tsiu River after the abnormally dry season in 2010. There are no processing facilities on the grounds, no slime line, no ice making capability, and nets can only be in the water when the weather is

good enough to fly fish to market. To an extent, an attempt is made to schedule openings around the weather, but in many instances this is to no avail. The river was fished a total of five weeks in 2011. The initial opening was on Sunday, August 31, approximately one week later than normal due to storm systems moving through the area. The river was fished two 24-hour periods that first week. The following week had three 24-hour openings, but the first two were not fished due to weather. Two 24-hour periods were announced for the third week, but the second one was unfishable and a third period was announced for that week. Only one opening was fishable during the fourth week of the season. Two openings were announced for the last week of September, but after the first period the buying station closed for the year. A small number of permit holders were able to arrange for a turbo Beaver to haul fish, but nets could only be in the water when it was known that plane was in the air. With continued forecasts of inclement weather fishing operations shut down for the season. The Tsiu River was open, but not fished during the first two weeks of October. A peak aerial survey on September 27 revealed 21,000 coho salmon on the spawning grounds, this was within the BEG range of 10,00 to 29,000 fish.

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TABLES AND FIGURES

Table 1.–Summary of Yakutat salmon stock biological escapement goals (BEG) and source documentation.

Species	Stock	Type	Escapement Goal	BEG Document
Sockeye	Situk River	Weir-Total Count	30,000–70,000	ADFG-RIR No. 1J95-22
Sockeye	Akwe River	Aerial Survey Index	600–1,500	ADFG-RIR No. 1J95-16
Sockeye	East Alsek River	Aerial Survey Index	13,000–26,000	SPEC-PUB No. 03-04
Sockeye	Italio River	Aerial Survey Index	Not Established	Not Established
Sockeye	Lost River	Aerial Survey Index	1,000	ADFG-RIR No. 1J95-16
Sockeye	Klukshu River	Weir-Total Count	7,500–15,000	ADFG-RIR No. 1J00-24
Chinook	Klukshu River	Weir-Total Count	1,100–2,300	ADFG-F. Man. No. 98-2
Chinook	Situk River	Weir-Total Count	450–1,050	SPEC-PUB No. 03-01
Pink	Situk-Even Year	Weir	42,000–105,000	ADFG-RIR NO. 1J95-08
Pink	Situk-Odd Year	Weir	54,000–200,000	ADFG-RIR NO. 1J95-08
Pink	Humpy Cr. Even	Aerial Survey Index	3,300–8,000	ADFG-RIR NO. 1J95-08
Pink	Humpy Cr. Odd	Aerial Survey Index	7,000–18,000	ADFG-RIR NO. 1J95-08
Coho	E. Alsek-Doame	Aerial Survey Index	2,500–8,500	ADFG-RIR No. 1J94-14
Coho	Akwe River	Aerial Survey Index	1,800–5,000	ADFG-RIR No. 1J94-14
Coho	Italio River	Aerial Survey Index	1,400–3,600	ADFG-RIR No. 1J94-14
Coho	Situk River	Aerial Survey Index	3,300–9,800	ADFG-RIR No. 1J94-14
Coho	Lost River	Aerial Survey Index	2,200	ADFG-RIR No. 1J94-14
Coho	Kaliakh River	Aerial Survey Index	4,000–14,000	ADFG-RIR No. 1J94-14
Coho	Tsiu/Tsivat	Aerial Survey Index	10,000–29,000	ADFG-RIR No. 1J94-14

Sources: Clark 1995; Clark et al. 1995a and b, 2003; Clark and Clark 1994; Clark and Etherton 2000; McPherson et al. 1998; 2003.

Note: All escapement goals are Biological Escapement Goals (BEG) except two. The Lost River sockeye and coho escapement goals are considered SEGs (sustainable escapement goal).

Table 2.–Total salmon harvest by species in the Yakutat area set gillnet fishery by fishing period, 2011.

Week	Ending Date	Chinook	Sockeye	Coho	Pink	Chum	Total
24	11-Jun	209	991	0	0	0	1,200
25	18-Jun	228	1,877	12	0	19	2,136
26	25-Jun	190	8,360	32	1	10	8,593
27	2-Jul	175	19,500	120	12	19	19,826
28	9-Jul	106	29,786	411	138	11	30,452
29	16-Jul	125	35,872	828	477	16	37,318
30	23-Jul	39	32,213	942	7,267	42	40,503
31	30-Jul	18	17,338	528	13,276	38	31,198
32	6-Aug	13	10,127	506	9,674	84	20,404
33	13-Aug	14	8,685	865	40,434	305	50,303
34	20-Aug	4	2,203	2,667	34,381	176	39,431
35	27-Aug	1	409	5,115	53,231	52	58,808
36	3-Sep	1	172	15,946	32,694	52	48,865
37	10-Sep	0	79	13,949	8,043	12	22,083
38	17-Sep	0	64	23,095	5,157	13	28,329
39	24-Sep	0	21	25,682	417	33	26,153
40	1-Oct	0	6	23,449	57	6	23,518
41	8-Oct	0	1	7,515	1	11	7,528
42	15-Oct	0	0	4,553	1	1	4,555
Totals		1,123	167,704	126,215	205,261	900	501,203

Table 3.—Ten-year comparison of Yakutat area set gillnet effort and salmon harvest.

Year	Active Permits	Chinook	Sockeye	Coho	Pink	Chum	Total
2000	125	2,460	99,182	170,948	64,349	1,185	338,124
2001	115	2,633	141,534	205,265	32,230	406	328,068
2002	88	2,510	112,656	200,888	15,590	204	331,848
2003	104	3,847	154,441	74,343	48,418	542	281,591
2004	112	2,734	88,282	196,930	23,207	1,555	312,708
2005	115	1,140	79,443	82,887	60,436	525	224,431
2006	105	1,330	138,734	86,085	88,864	1,225	316,218
2007	120	1,879	236,869	76,550	87,997	2,782	406,077
2008	129	1,309	35,282	153,712	65,227	546	256,076
2009	123	1,533	105,825	133,808	76,956	871	318,993
2010	128	501	122,020	161,584	160,470	1,239	445,814
2011	122	1,123	167,704	126,215	205,261	900	501,203
2001–2010 Avg.	114	1,942	121,509	137,205	65,940	990	322,182
2011 Deviation ^a	7%	-42%	38%	-8%	211%	-9%	56%

^a Percentage deviation from 10-year average.

Table 4.–Average earnings from set gillnet fishing, Yakutat area, 1980–2011.

Year	Yakutat Setnet Income	Active Setnet Permits	Aver. Earning Per Permit	Previous 10-Year- Aver. Income
1980	\$1,929,752	150	\$12,865	-
1981	\$2,333,300	152	\$15,351	-
1982	\$2,084,140	149	\$13,988	-
1983	\$1,355,470	131	\$10,347	-
1984	\$2,375,790	137	\$17,342	-
1985	\$3,010,580	149	\$20,225	\$13,944
1986	\$1,981,807	153	\$12,953	\$15,283
1987	\$5,077,589	155	\$32,759	\$15,607
1988	\$8,944,228	160	\$55,901	\$17,302
1989	\$4,174,510	164	\$25,454	\$21,124
1990	\$4,493,681	161	\$27,911	\$22,018
1991	\$2,248,558	162	\$13,880	\$23,223
1992	\$5,238,058	165	\$31,745	\$23,076
1993	\$2,916,782	158	\$18,461	\$23,852
1994	\$3,331,851	151	\$22,065	\$25,663
1995	\$2,968,274	148	\$20,055	\$26,135
1996	\$2,375,047	140	\$16,925	\$26,118
1997	\$2,975,854	142	\$20,957	\$26,516
1998	\$1,350,752	144	\$9,380	\$25,335
1999	\$1,960,794	129	\$15,200	\$24,306
2000	\$1,478,049	125	\$11,824	\$23,171
2001	\$1,130,969	115	\$9,830	\$18,044
2002	\$747,218	88	\$8,491	\$17,636
2003	\$1,135,551	104	\$10,919	\$15,319
2004	\$1,606,082	112	\$14,340	\$14,565
2005	\$911,193	115	\$7,923	\$13,792
2006	\$1,695,830	105	\$16,150	\$12,579
2007	\$2,479,100	120	\$20,659	\$12,501
2008	\$1,693,845	129	\$13,131	\$12,472
2009	\$1,640,016	123	\$13,333	\$12,847
2010	\$2,185,611	128	\$17,075	\$12,660
2011	\$2,382,763	122	\$19,531	\$16,112
Average 2001–2010	\$1,522,542	114	13,185	14,242
2011 Deviation ^a	57%	7%	48%	13%

^a Percent Deviation from 10-year average.

Table 5.–Harvest of salmon in the Yakutat area set gillnet fishery by fishing area, 2011.

Area	Chinook	Sockeye	Coho	Pink	Chum	Total
Alsek	546	24,169	1,614	0	11	26,340
East	0	14,867	99	0	330	15,296
Akwe	178	21,360	1,639	225	24	23,426
Italio	Closed					
Middle Italio	a	a	a	a	a	a
Old Italio	a	a	a	a	a	a
Dangerous	9	4,114	6	0	0	4,129
Situk	22	65,661	79,911	142,061	307	287,962
Lost	Closed					
Yakutat Bay	257	27,612	6,646	62,774	215	97,504
Manby Shore	111	9,203	503	29	11	9,857
Manby Stream	a	a	a	a	a	a
Spoon			Not Fished			
Sudden	a	a	a	a	a	a
Esker			Not Fished			
Yahtse			Not Fished			
Yana			Not Fished			
Jetty Creek			Not Fished			
Big River			Not Fished			
Kaliakh			Not Fished			
Tsiu	0	16	34,745	171	2	34,934
Seal River			Not Fished			
Tashalich			Not Fished			
Kiklukh			Not Fished			
Totals	1,123	167,704	126,215	205,261	900	445,814

^a Fewer than 3 permits, all catch figures are confidential.

Table 6.–Harvest of salmon in the Alsek River set gillnet fishery by fishing period, 2011.

Week	Ending Date	Boats	Chinook	Sockeye	Coho	Pink	Chum	Total	Days
24	11-Jun	11	209	991	0	0	0	1,200	2.0
25	18-Jun	12	164	585	0	0	0	749	1.0
26	25-Jun	12	133	495	0	0	0	628	1.0
27	2-Jul	13	28	2,156	0	0	0	2,184	2.0
28	9-Jul	12	7	6,423	0	0	0	6,430	3.0
29	16-Jul	15	5	7,118	0	0	0	7,123	3.0
30	23-Jul	8	0	4,572	0	0	0	4,572	3.0
31	30-Jul	5	0	1,364	0	0	0	1,364	2.0
32-34	20-Aug	4	0	444	27	0	0	471	5.0
35	27-Aug			Not Fished					3.0
36	3-Sep	4	0	9	468	0	1	478	3.0
37	10-Sep	4	0	9	466	0	4	479	3.0
38-39	24-Sep	6	0	0	160	0	6	166	6.0
40-42	15-Oct			Not Fished					9.0
Totals		18	546	24,169	1,614	0	11	25,844	46.0

Table 7.–Harvest of salmon in the Alsek River set gillnet fishery, 2011 and 5-year catch comparison.

Year	Boats	Chinook	Sockeye	Coho	Pink	Chum	Total	Days
2006	19	700	10,066	701	2	3	11,437	45.0
2007	21	685	20,057	134	0	1	22,028	47.0
2008	20	593	2,870	2,668	0	2	6,133	33.0
2009	14	602	12,906	3,454	0	20	16,982	38.0
2010	19	273	12,668	1,884	0	9	16,498	17.0
2011	18	546	24,169	1,614	0	11	26,358	59.0
2006–2010 Average	19	571	11,713	1,768	0	7	14,616	36.0
2011 Deviation ^a	-5%	-4%	106%	-9%	0%	57%	80%	64%

^a Percentage deviation from 5-year average.

Table 8.–Klukshu River Weir escapement, 1976–2011.

Year	Chinook^a	Sockeye^b	Coho
1976	1,278	11,691	1,572
1977	3,144	26,791	2,758
1978	2,976	26,867	30
1979	4,405	12,308	175
1980	2,637	11,739	704
1981	2,113	20,323	1,170
1982	2,369	33,699	189
1983	2,537	20,492	303
1984	1,672	12,727	1,402
1985	1,458	18,620	350
1986	2,708	24,880	62
1987	2,616	10,504	202
1988	2,037	9,341	2,774
1989	2,456	23,542	2,219
1990	1,915	25,995	315
1991	2,489	18,977	8,540
1992	1,366	20,215	1,145
1993	3,302	16,740	788
1994	3,735	15,038	1,232
1995	5,678	22,202	3,650
1996	3,602	8,317	3,465
1997	2,757	11,012	307
1998	1,347	13,580	1,961
1999	2,190	5,069	2,371
2000	1,365	5,551	4,832
2001	1,825	10,290	748
2002	2,240	25,711	9,921
2003	1,671	32,120	3,689
2004	2,525	15,348	750
2005	1,070	3,373	683
2006	568	13,455	420
2007	677	8,956	300
2008	436	2,731	4,275
2009	1,568	5,731	424
2010	2,357	18,936	2365
2011	1,670	18,960	2,365
2001–2010 average	1,494	13,665	2,358

^a Chinook salmon escapement goal range is 1,100 to 2,300 fish.

^b Sockeye salmon escapement goal range is 7,500 to 15,000 fish.

^c Coho numbers are an index; weir is removed before run is over.

Table 9.–Harvest of salmon in the East River set gillnet fishery by fishing period, 2011.

Week	Ending Date	Boats	Chinook	Sockeye	Coho	Pink	Chum	Total	Days
30	23-Jul	9	0	3,449	0	0	9	3,458	3.0
31	30-Jul	13	0	4,596	1	0	14	4,611	3.0
32	6-Aug	11	0	2,979	1	0	36	3,016	3.0
33	13-Aug	12	0	3,715	7	0	229	3,951	3.0
34	20-Aug	3	0	128	1	0	37	166	3.0
35-38	17-Sep			Not Fished					12.0
39	24-Sep	a	a	a	a	a	a	a	3.0
40-42	15-Oct			Not Fished					9.0
Totals		17	0	14,867	99	0	330	15,390	39.0

^a Fewer than 3 permits, all catch figures are confidential.

Table 10.–Harvest of salmon in the East River set gillnet fishery, 2011 and 5-year catch comparison.

Year	Boats	Chinook	Sockeye	Coho	Pink	Chum	Total	Days
2006	15	4	14,848	316	0	5	15,173	49.5
2007	33	13	63,080	56	203	1,256	64,608	51.0
2008	3	0	1	165	0	0	166	18.0
2009	22	10	7,388	1,042	4	275	8,719	33.0
2010	5	0	103	680	0	214	997	17.0
2011	17	0	14,867	99	0	330	15,390	39.0
2006–2010								
Average	16	5	17,084	452	41	350	17,933	34.00
2011								
Deviation ^a	6%	-100%	-13%	-78%	-100%	-6%	-14%	15%

^a Percentage deviation from 5-year average.

Table 11.–Harvest of salmon in the Akwe River set gillnet fishery, 2011, and 5-year-catch comparison.

Year	Boats	Chinook	Sockeye	Coho	Pink	Chum	Total	Days
2006	7	256	5,833	3,725	25	34	9,873	51.0
2007	9	238	24,087	1,987	0	10	26,322	45.0
2008	8	72	3,120	2,535	1	3	5,731	36.5
2009	5	90	7,251	2,270	56	15	9,682	32.0
2010	7	43	6,080	6,351	30	255	12,759	34.0
2011	7	178	21,360	1,639	225	24	23,426	43.0
2006– 2010 Average	7	140	9,274	3,374	22	63	12,873	40.0
2011 Deviation ^a	0%	-21%	157%	-52%	922%	-62%	82%	8%

^a Percent deviation from 5-year average.

Table 12.–Harvest of salmon in the Dangerous River set gillnet fishery, 2011, and 5-year catch comparison.

Year	Boats	Chinook	Sockeye	Coho	Pink	Chum	Total	Days
2006	3	41	2,352	0	3	0	2,393	53.0
2007	5	4	5,768	18	2	0	5,792	41.5
2008	7	21	2,800	24	104	7	2,956	41.5
2009	22	44	8,747	256	498	31	9,576	55.0
2010	3	2	3,997	4	1	0	4,004	62.5
2011	5	9	4,114	6	0	0	4,129	51.0
2006–2010 Average	8	22	4,733	60	122	8	4,944	51.0
2011 Deviation ^a	-38%	-59%	-13%	-90%	-100%	-100%	-16%	2%

^a Percent deviation from 5-year average.

Table 13.–Harvest of salmon in the Situk-Ahrnklin Inlet set gillnet fishery by fishing period, 2011.

Week	Ending	Boats	Chinook	Sockeye	Coho	Pink	Chum	Total	Days
	Date								
26	25-Jun	42	0	5,003	0	0	1	5,004	2.5
27	2-Jul	43	1	10,780	1	5	3	10,790	2.5
28	9-Jul	47	6	9,364	30	60	0	9,460	3.5
29	16-Jul	48	5	14,299	9	417	4	14,734	4.5
30	23-Jul	55	6	12,048	31	5,793	10	17,888	6.75
31	30-Jul	46	2	6,345	14	11,439	10	17,810	7.0
32	6-Aug	38	0	3,179	60	7,160	28	10,427	4.75
33	13-Aug	38	0	2,423	591	35,586	45	38,645	5.0
34	20-Aug	46	2	1661	2399	27,205	107	31,374	5.0
35	27-Aug	39	0	301	4,566	27,057	20	31,944	4.0
36	3-Sep	47	0	133	7,027	18501	37	25,698	3.0
37	10-Sep	57	0	58	7,864	4316	6	12,244	3.0
38	17-Sep	57	0	47	12,141	4215	7	16,410	3.0
39	24-Sep	61	0	15	21,228	269	13	21,525	4.0
40	1-Oct	57	0	4	14,168	36	5	14,213	4.0
41	8-Oct	53	0	1	6,783	1	10	6,795	3.0
42	15-Oct	31	0	0	2,999	1	1	3,001	3.0
Total		86	22	65,661	79,911	142,061	307	287,962	68.5

Table 14.–Harvest of salmon in the Situk-Ahrnklin Inlet set gillnet fishery, 2011 and 5-year catch comparison.

Year	Boats	Chinook	Sockeye	Coho	Pink	Chum	Total	Days
2006	74	6	62,118	49,336	72,139	457	184,056	79.0
2007	77	83	62,059	41,900	61,591	415	166,048	54.5
2008	80	91	10,625	95,874	43,250	166	150,006	45.0
2009	84	307	49,016	69,978	66,640	147	186,088	69.3
2010	85	50	72,185	70,727	143,234	310	286,506	58.0
2011	85	22	65,661	79,911	142,061	307	287,962	68.5
2006–2010 Average	80	107	51,201	65,563	77,371	299	194,541	62.0
2011 Deviation ^a	6%	-79%	28%	22%	84%	3%	48%	10%

^a Percentage deviation from 5-year average.

Table 15.–Exvessel value of Situk-Ahrnklin set gillnet fishery relative to the total Yakutat area exvessel set gillnet fishery, 1975–2011.

Year	Yakutat Setnet Income (\$USD)	Situk Setnet Income (\$USD)	Percent Value of Situk
1975	713,860	256,760	36%
1976	1,214,550	485,680	40%
1977	2,065,055	890,630	43%
1978	2,669,791	767,690	29%
1979	3,239,000	715,280	22%
1980	1,929,752	419,070	22%
1981	2,333,300	612,050	26%
1982	2,084,140	372,000	18%
1983	1,355,470	205,750	15%
1984	2,375,790	575,120	24%
1985	3,010,580	524,560	17%
1986	1,981,807	180,677	9%
1987	5,077,589	1,248,984	25%
1988	8,944,228	2,601,441	29%
1989	4,174,510	1,244,788	30%
1990	4,493,681	1,189,260	26%
1991	2,248,558	1,183,752	53%
1992	5,238,058	2,063,143	39%
1993	2,916,782	1,192,148	41%
1994	3,331,851	1,686,803	51%
1995	2,968,274	1,716,842	58%
1996	2,375,047	1,351,005	57%
1997	2,975,854	1,687,084	57%
1998	1,350,752	652,129	48%
1999	1,960,794	1,097,412	56%
2000	1,487,207	740,165	50%
2001	1,130,969	705,325	62%
2002	745,218	601,704	80%
2003	1,135,551	782,143	69%
2004	1,606,082	1,156,074	72%
2005	911,193	488,192	54%
2006	1,695,830	889,519	52%
2007	2,479,100	911,724	37%
2008	1,693,845	1,092,913	64%
2009	1,641,423	858,378	52%
2010	2,185,611	1,372,001	63%
2011	2,382,763	1,305,724	55%
2001–2010 Average	1,552,482	885,797	61%
2011 Deviation ^a	57%	47%	-10%

^a Percentage deviation from average.

Table 16.—Dollar value of salmon harvest in the Situk-Ahrnklin set gillnet fishery, 1975–2011.

Year	Chinook (USD)	Sockeye (USD)	Coho (USD)	Pink (USD)	Chum (USD)	Total (USD)
1975	7,000	128,000	114,560	7,000	4	256,760
1976	24,000	345,300	108,000	8,300	80	485,680
1977	21,000	588,560	255,530	25,230	310	890,630
1978	10,000	333,150	417,270	7,140	126	767,690
1979	29,560	430,350	223,950	31,200	220	715,280
1980	22,540	155,130	218,190	23,100	106	419,070
1981	25,000	237,710	308,270	40,440	625	612,050
1982	5,610	170,940	191,240	3,800	410	372,000
1983	4,830	101,000	96,300	3,300	315	205,750
1984	12,310	50,740	498,530	10,640	2,400	575,120
1985	11,330	122,770	385,000	4,750	710	524,560
1986	3,276	59,771	116,648	688	294	180,677
1987	23,908	755,662	454,035	9,682	5,394	1,248,984
1988	10,350	1,018,060	1,522,176	40,223	10,632	2,601,441
1989	No Sale	899,505	283,090	58,445	3,748	1,244,788
1990	No Sale	816,615	352,937	18,638	1,070	1,189,260
1991	12,071	651,684	518,138	1,399	460	1,183,752
1992	29,404	929,241	1,093,096	9,816	1,586	2,063,143
1993	11,553	503,262	669,648	6,479	1,206	1,192,148
1994	27,336	309,766	1,342,174	7,102	425	1,686,803
1995	168,055	432,684	1,078,470	36,913	720	1,716,842
1996	58,024	578,758	703,278	10,342	603	1,351,005
1997	31,317	166,254	1,436,891	52,282	340	1,687,084
1998	24,845	196,850	390,977	39,163	93	652,129
1999	81,060	488,915	515,785	10,738	474	1,096,972
2000	28,905	222,598	464,086	22,852	584	740,165
2001	17,179	241,597	433,935	12,427	187	705,325
2002	4,832	180,146	413,938	2,751	38	601,704
2003	27,850	441,995	293,676	18,885	249	782,143
2004	22,693	165,665	963,105	3,400	1,211	1,156,074
2005	0	207,988	252,553	27,064	587	488,192
2006	20	432,874	411,629	44,637	386	889,519
2007	0	523,214	336,002	51,167	1,211	911,594
2008	0	87,572	949,730	55,204	407	1,092,913
2009	2,022	328,357	521,304	6,306	387	858,376
2010	173	645,752	544,028	180,304	1,744	1,372,001
2011	62	540,253	579,919	184,039	1,452	1,305,724
2001–2010 Average	7,477	325,516	511,990	40,215	641	885,784
2011 Deviation ^a	-99%	66%	13%	358%	127%	47%

^aPercent deviation from 10-year average.

Table 17.–Situk Weir escapement counts, 1988–2011.

Year	Dates of Operation	Chinook^a	Sockeye^b	Coho^c	Pink^d	Chum
1988	6/7–8/21	885	46,404	1,694	78,754	228
1989	5/31–8/17	637	84,383	0	288,246	0
1990	6/1–7/28	1,274	61,375	0	0	0
1991	6/10–7/27	1,613	67,737	0	4,168	3
1992	4/18– 8/5	1,985	63,877	0	29,278	0
1993	6/10–8/5	4,091	62,110	0	16,285	0
1994	5/21– 8/4	4,416	72,474	4	79,055	4
1995	5/10– 8/3	8,231	42,463	4	66,273	17
1996	5/6–8/6	4,151	61,269	65	157,012	15
1997	5/7–8/8	5,001	42,051	18	466,267	35
1998	5/3–8/5	5,329	50,546	8	97,392	0
1999	5/9–8/6	2,786	61,544	2	27,586	0
2000	5/10–8/8	3,091	41,544	189	332,510	53
2001	5/20–8/8	696	60,330	20	121,267	13
2002	5/10–8/8	1,024	68,743	40	98,190	22
2003	5/8–8/8	2,615	89,720	1	375,333	12
2004	5/8–8/9	798	42,544	184	145,914	111
2005	5/8–7/31	613	66,476	137	279,648	0
2006	5/11–8/13	749	90,383	320	115,079	283
2007	5/11–8/15	677	61,799	39	224,024	18
2008	5/11–7/23	414	22,540	0	1,275	6
2009	5/12–8/5	904	83,959	10	62,287	2
2010	5/11–8/5	170	47,865	2706	84,594	1
2011	5/9/-8/7	240	89,993	46	169,908	112
1989–2010		2,330	61,170	170	139,622	27
Average						

Note: In 1992 and from 1994 to the present, the weir has been operated by Division of Sport Fish in May and early June to count emigrant steelhead.

^a Chinook salmon weir counts are for large, three ocean or older, fish. The Chinook salmon escapement goal range of 450–1,050 fish is for large fish.

^b Sockeye salmon escapement goal range is 30,000–70,000 fish.

^c The Situk weir is not operated through the end of the coho salmon return and is not a useful measure of escapement for this species.

^d This odd-year pink salmon escapement goal range is 59,000–200,000 fish.

Table 18.—Harvest of salmon in the Yakutat Bay set gillnet fishery by fishing period, 2011.

Week	Ending	Boats	Chinook	Sockeye	Coho	Pink	Chum	Total	Days
	Date								
25	18-Jun	29	64	1,292	12	0	19	1,387	2.5
26	25-Jun	16	43	1,329	11	0	6	1,389	2.5
27	2-Jul	20	26	2,460	91	5	14	2,596	2.5
28	9-Jul	23	42	8,588	381	75	11	9,097	3.5
29	16-Jul	23	25	2,780	429	39	9	3,282	4.5
30	23-Jul	23	15	5,693	840	1,444	7	7,999	4.5
31	30-Jul	19	16	3,095	513	1,673	11	5,308	4.5
32	6-Aug	18	11	1,154	445	2,514	19	4,143	4.5
33	13-Aug	11	12	793	263	4,848	29	5,945	5.0
34	20-Aug	13	2	281	243	7,176	32	7,734	5.0
35	27-Aug	11	1	108	549	26,174	32	26,864	5.0
36	3-Sep	13	0	9	363	14,119	9	14,500	5.0
37	10-Sep	7	0	12	136	3,636	2	3,786	3.0
38	17-Sep	7	0	12	665	923	5	1,605	3.0
39	24-Sep	8	0	6	1,315	148	9	1,478	3.0
40	1-Oct	4	0	0	281	0	0	281	3.0
41	8-Oct	a	a	a	a	a	a	a	3.0
42	15-Oct	a	a	a	a	a	a	a	3.0
Totals		50	257	27,612	6,646	62,774	215	97,504	67

^a Fewer than three permits, all catch figures are confidential.

Table 19.—Harvest of salmon in the Yakutat Bay set gillnet fishery, 2011, and 5-year-catch comparison.

Year	Boats	Chinook	Sockeye	Coho	Pink	Chum	Total	Days
2006	46	317	35,893	3,254	16,681	725	56,870	60.0
2007	56	788	59,602	6,384	25,808	1,100	93,682	50.5
2008	56	518	14,976	2,072	21,869	362	39,737	47.5
2009	56	380	15,367	3,246	9,258	348	28,599	60.5
2010	46	92	15,092	1,052	17,200	377	33,813	54.5
2011	50	257	27,612	6,646	62,774	215	97,504	67.0
2006–2010 Average	52	419	28,186	3,202	18,163	582	50,540	55.0
2011 Deviation ^a	-4%	-39%	-2%	108%	246%	-63%	93%	22.0

^a Percentage deviation from 5-year average.

Table 20.—Harvest of salmon in the Manby Shore Ocean set gillnet fishery, 2011, and 5-year-catch comparison.

Year	Boats	Chinook	Sockeye	Coho	Pink	Chum	Total	Days
2006	9	34	5,823	6	14	1	5,878	59.5
2007	8	6	1,014	1	42	1	1,063	51.5
2008	6	14	885	21	2	6	928	37.0
2009	12	100	2,830	60	378	33	3,401	48.0
2010	13	33	8,938	52	5	71	9,099	48.0
2011	15	111	9,203	503	29	11	9,857	56.5
2006–2010 Average	10	37	3,898	28	88	22	4,074	49.0
Deviation 2011 ^a	50%	200%	136%	1696%	-67%	-50%	142%	15.0%

^a Percent deviation from 5-year average.

Table 21.—Harvest of salmon in the Tsiu River set gillnet fishery, 2010, and 5-year catch comparison.

Year	Boats	Chinook	Sockeye	Coho	Pink	Chum	Total	Days
2006	12	0	0	26,438	0	0	26,438	25.0
2007	12	0	5	22,318	0	0	22,823	28.0
2008	10	0	2	49,292	1	0	49,293	23.0
2009	10	0	74	43,723	121	2	43,920	23.2
2010	19	6	3	77,780	0	3	77,792	21.0
2011	21	0	16	34,745	171	2	34,934	34.0
2006-2010 Average	13	1	17	43,910	24	1	44,053	24.0
Deviation ^a	62%	-100	-6%	-21%	613%	100%	-21%	42%

Note: For 5-year comparison, days are for coho salmon season only.

^a Percent deviation from 5-year average.

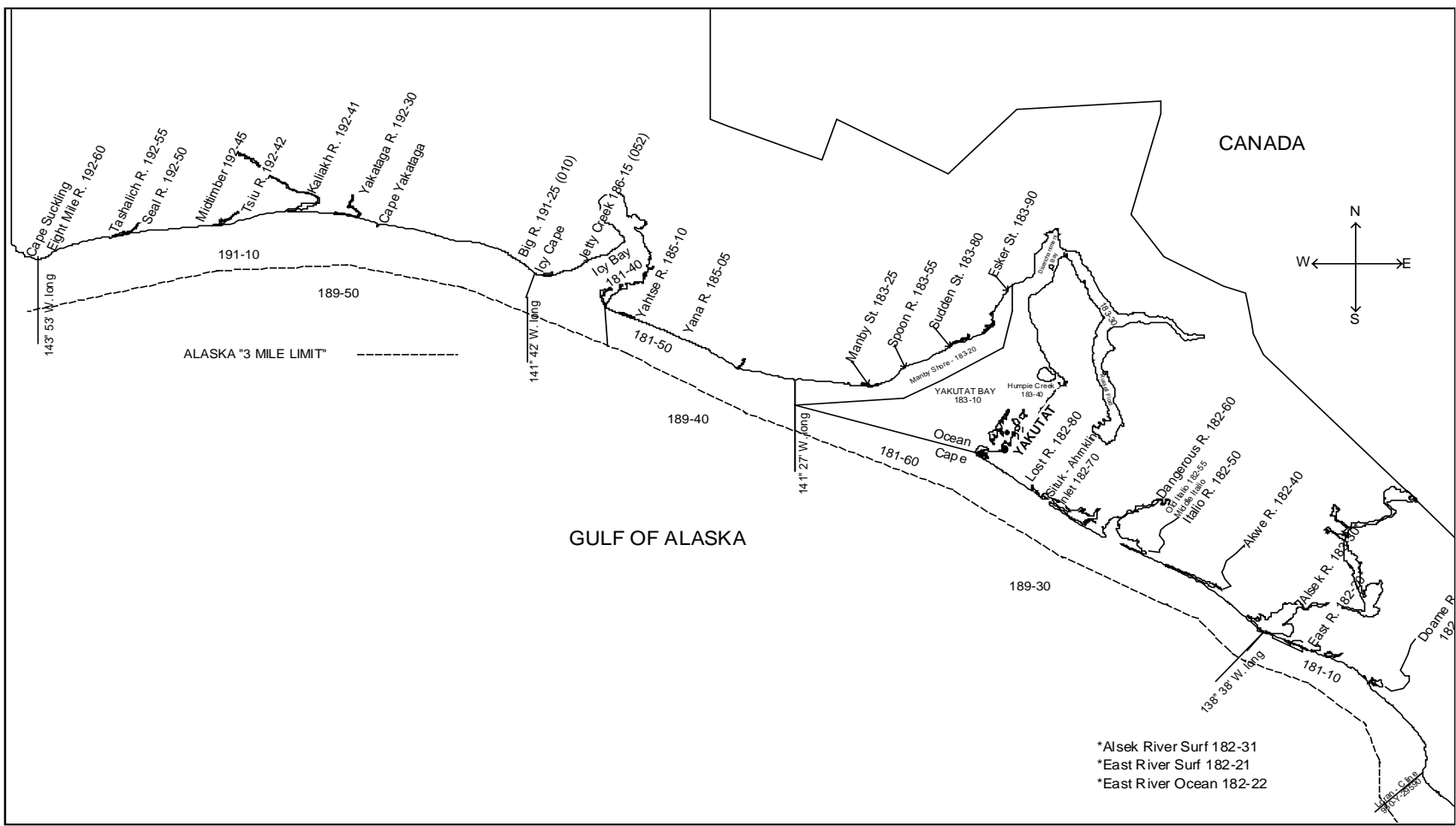


Figure 1.-Yakutat Area map, showing statistical reporting areas.