

Fishery Management Report No. 13-22

Annual Management Report of the 2012 Yakutat Area Commercial Salmon Fisheries

by

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and

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June 2013

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	≥
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	≤
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				

FISHERY MANAGEMENT REPORT NO. 13-22

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COMMERCIAL SALMON FISHERIES**

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ABSTRACT

The 2012 Yakutat set gillnet fishery produced a cumulative harvest of 254,000 salmon; this was 25% below the 2002–2011 average. The total harvest included 950 Chinook, 125,000 sockeye, 98,700 coho, 27,300 pinks, and 2,000 chum salmon. The salmon harvest had an approximate exvessel value of \$1,500,000 to 113 active permit holders. The number of active permits was 2% below the recent 10-year average and comprised 69% of the total setnet permits in Yakutat. The 2012 sockeye salmon harvest of 125,000 was average. Sockeye salmon harvests in the Situk-Ahrnklin Inlet, Alsek River, Dangerous River, and Manby Shore fisheries were 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 with the exception of the Lost River. The area's total coho salmon harvest of 99,000 was 24% below the recent 10-year average. The Situk-Ahrnklin and the Tsiu River produced 95% of the area coho salmon harvest. The area's Chinook salmon harvest of 950 was 48% below the recent 10-year average of 1,800. 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. The pink salmon harvest of 27,300 fish was well below the recent 10-year average. The chum salmon harvest of 2,000 was above 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, Annual Management Report (AMR), setnet, set gillnet, 2012 season, Chinook, sockeye, pink, chum, coho, salmon, Yakutat, Yakataga, fish ticket, Situk River, Situk-Ahrnklin Inlet, Yakutat Bay, Tsiu River, Alsek River, East River, Akwe River, Italio River, Biological Escapement Goal (BEG), Sustainable Escapement Goal (SEG), catch per unit effort (CPUE)

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 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 2012 Yakutat set gillnet fishery produced a cumulative harvest of 254,000 salmon. This was 25% below the recent 10-year average (Tables 2 and 3). Of the 179 Yakutat set gillnet permits, 113 were active this season which was slightly below the recent 10-year average of 115 permits. The average Yakutat permit holder earned \$13,200 for the 2012 season; this was slightly below the 10-year average (Table 4). Sockeye salmon harvests were nearly equal to the 10-year average. Sockeye salmon harvest in the Situk-Ahrnklin Inlet, Alsek River, Dangerous 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 below the recent 10-year average in 2012. The Situk-Ahrnklin Inlet accounted for 49% of the coho salmon harvest while the Tsiu River accounted for 46% (Table 5). Almost all of the remote systems, although open to fishing, received little or no effort for coho salmon in 2012. A buying station was maintained on the Tsiu River for the eighth time since 2001 and 46,000 coho salmon were harvested. Coho salmon accounted for 39% of the total Yakutat area salmon harvest. The return of pink salmon to the Situk River was poor and below average in 2012. There is little economic incentive to harvest pink salmon so they are harvested incidentally to sockeye and coho salmon. The harvest of 21,400 pink salmon in the Situk-Ahrnklin Inlet was well below average. The chum salmon harvest in the Yakutat area was above the recent 10-year average, and the Chinook salmon harvest of 950 was 48% below the recent average.

SOCKEYE SALMON

The sockeye salmon harvest of 125,000 was nearly equal to the recent 10-year average of 124,000 fish. The 2012 harvest of 53,000 Situk-Ahrnklin sockeye salmon was also right at the recent 5-year average of 52,000. The Situk-Ahrnklin Inlet was the peak producer for the area and accounted for 43% of the sockeye salmon harvest. The Situk River weir count of 62,500 sockeye salmon was near the upper 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 16,000 fish. The sockeye salmon return to the Doame River was 5,500 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 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 2012. 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 2012. The Alsek River set gillnet fishery harvested 18,200 sockeye; this was 25% above the recent five-year average of 14,500 fish (Table 6 and 7). Yakutat Bay, with a harvest of 24,000 sockeye accounted for 19% of the total sockeye salmon harvest. The Akwe River harvest of 6,000 sockeye salmon was 52%

below the recent five-year average, and was less than half of the 2011 harvest of 12,000 fish. The Dangerous River harvest of 6,000 sockeye was slightly above the recent five-year average of 5,000 fish. In the Manby Shore fishery, seven permits harvested 5,000 sockeye salmon.

COHO SALMON

The 2012 coho salmon harvest of 99,000 was 24% below the recent 10-year average of 129,000 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 48,000 coho salmon was 29% below the recent five-year average of 68,000 fish. The only other major coho salmon producer in Yakutat in 2012 was the Tsiu River. The presence of a buying station on the river again prompted sustained effort on the Tsiu for the eighth year in a row. The Tsiu River harvest of 46,000 coho salmon was right on target with the recent five-year average. Yakutat Bay harvest of nearly 3,000 coho salmon was slightly below the recent average. Minimal effort was recorded on the Akwe River and Sudden Streams in 2012 and all harvest figures are confidential. Manby Stream, and Yahtse and Yana rivers were not fished in 2012. 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, and Yakutat Bay. The preseason projection for the Situk River was for a below average return in 2012 so conservation measures took place for the second year in a row 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 2012. The BEG of 450-1,050 large Chinook salmon was not achieved in 2011 or in 2012, 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 average to above average Chinook salmon return, but the final escapement did not meet the BEG. The Alsek River harvest of 500 Chinook salmon was slightly below the recent five-year average. A Chinook salmon test fishery was conducted on the Alsek River in 2012 and contributed another 250 Chinook salmon to the overall harvest. The Yakutat Bay harvest of approximately 250 Chinook salmon was 39% below the recent five-year average for the Bay. The Akwe River harvest of 40 Chinook salmon was 71% below the recent five-year average of 125 fish. The Alsek River and Yakutat Bay accounted for 80% of all Chinook salmon harvested in the Yakutat Area. The total harvest of 950 Chinook salmon was 48% below the recent 10-year average.

PINK SALMON

The pink salmon return to Yakutat in 2011 was one of the strongest on record with an estimated three million pink salmon in Yakutat Bay by early August. By contrast, the Yakutat Area experienced a reversal in fortunes in 2012 and had one of the poorest pink salmon returns since 2002. The pink salmon harvest of 27,000 fish was well below the recent 10-year average of 83,000, and was the lowest harvest during that time. Pink salmon prices were \$0.32 per pound this season, which was only two cents less than the 2011 pink salmon price. 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 harvested in the Yakutat area. The Situk-Ahrnklin Inlet harvest of 21,400 pink salmon was well below the recent five-year average of 80,000 fish. The Yakutat Bay harvest of 5,000 pink salmon also well below the recent five-year average of 27,000 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 33,600 pink salmon which met the newly established SEG of 33,000 fish through the weir by August 5.

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 producer of chum in the Yakutat Area; however the chum salmon run in the East River has been in decline for more than a decade, probably due to changes in habitat. In 2012, the East River fishery had a harvest of 1,200 chum salmon and was above the recent average. The area-wide chum salmon harvest of 2,000 fish was also above the 10-year average of approximately 1,000 fish. The East River was the biggest chum producer in the Yakutat Area.

YAKUTAT DISTRICT FISHERIES

ALSEK RIVER

Alsek River salmon management is conducted in cooperation with the Canadian Department of Fisheries and Oceans 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 test fisheries for Chinook salmon. A test fishing study was initiated because of the need for an inseason index of run timing and abundance for Alsek River Chinook salmon stocks. These test fisheries were conducted from 2005 through 2008, but was discontinued in 2009 and 2010 due to poor Chinook salmon returns. Test fishing was implemented in 2011, and again in 2012. 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 May 21 in 2012 and was conducted through the end of June. A total of 251 Chinook and 89 sockeye salmon were harvested. Over the six weeks opened to test fishing, two of those weeks were not fished due to unfishable water levels. All Chinook salmon were sampled for age, sex, length and genetics.

A total of 16 permit holders on the Alsek River harvested 500 Chinook, 18,000 sockeye, and 540 coho salmon in 2012. Virtually no pink or chum salmon were harvested (Table 6 and 7). The sockeye salmon harvest was well above the recent five-year average of 14,500 fish (Table 7). In 2012, the Alsek was opened to commercial fishing during statistical week 23, 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 Alsek River commercial fishery was initially opened for 24 hours. The sockeye run proved to be strong and fishing time was extended from one to two days for the next five weeks of the season. By week 31 there was a substantial drop in effort and fishing time remained at one day for the rest of the season. The

Chinook salmon harvest of 500 was slightly below the recent five-year average. The majority of these fish were harvested during the first three weeks of the season. The Klukshu weir escapement of 665 Chinook salmon was not within the recommended BEG range of 1,100 to 2,300 fish (Table 8). This was the fifth time the goal was not achieved in the past ten years although conservative inseason management decisions are practiced. 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. Both sockeye and Chinook salmon BEGs were met in 2010 and 2011. The Klukshu River weir count of approximately 17,000 sockeye salmon in 2012 was above average and over the top end of the escapement goal range of 7,500 to 15,000. This was 17% above the recent 10-year average of approximately 15,000 sockeye salmon (Table 8). Aerial escapement surveys of sockeye salmon are typically conducted on the Tanis River, Cabin, and Basin Creeks. Due to lack of funding these systems were not surveyed in 2012. 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 Alsek River coho salmon harvest of 540 was below the recent five-year average of 2,000 fish. Effort levels in the Alsek generally plummet during coho salmon season, and no more than three permits fished during the coho salmon season. The Alsek remained opened through the first week in October, and the river was not fished during the last four 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 nearly 600 coho salmon was 77% 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 has undergone major geological changes over the past several decades which have forced salmon stocks to adapt to their new environment. In the 1970s and 1980s the East River was the peak sockeye salmon producer in Yakutat. Those glory days were seen again in 2007. In 2008, the East River experienced a harsh turn of events and was 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 and 2012, surveys indicated another strong sockeye salmon return and the river opened to commercial fishing. In 2012, the East River commercial set gillnet fishery opened on July 24 for 24 hours. Fishing periods were extended to two days for the next four weeks of the sockeye season. A total of 17 permits harvested 12,000 sockeye salmon in 2012 (Tables 9 and 10). The peak escapement count of 16,000 sockeye salmon was recorded on July 22. This met the BEG range of 13,000 to 26,000 fish. The East River was only fished for coho salmon two of the last six weeks of the season.

Fewer than three permits fished during the coho salmon season and all harvest information is confidential. The East River harvest of 1,200 chum salmon was well above the recent average. Although the East River is considered the only consistent producer of chum salmon in the Yakutat area, chum salmon are not targeted due to transportation costs. Insignificant numbers of pink salmon were harvested. The East River was not surveyed for coho salmon in 2012 due to budget constraints.

AKWE RIVER

The Akwe River sockeye salmon harvest of nearly 6,000 fish was 52% below the recent five-year average of 12,000 fish (Table 11). It was the second lowest harvest for that time period. 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 2,200 sockeye salmon was over the top end of the BEG range of 600–1,500 fish. Fewer than three permits fished during the coho salmon season and harvest information is confidential. 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 initially 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 sockeye salmon escapement counts.

The lower Akwe River markers by regulation are approximately one-half mile downstream from the confluence of the Akwe and Italo rivers, and set gillnet permits targeting Akwe River fish can intercept New Italo River stocks in this area. Those markers have been moved upstream to 500 yards above the confluence by emergency order to protect New Italo stocks over the years since 1987. During the Board of Fish meeting in February 2012 a proposal to make this marker movement permanent was passed and put into regulation (5 AAC 30.350).

ITALIO RIVERS

Three different rivers comprise the Italo River system: the Old, Middle, and New Italo rivers. The Old Italo 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 Italo River and created two distinct rivers where only one had existed before. The main river is now called the New Italo, and the original river channel is the Middle Italo. All three systems support coho populations, and the New Italo River also has a small run of sockeye salmon. With the decline in sockeye salmon production, the New Italo 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. In 2011, a peak aerial survey of 6,000 sockeye salmon was recorded on August 17. That was the highest sockeye salmon count in over 20 years. The New Italo River sockeye salmon run appears to be rebuilding. This year the U.S. Forest Service installed fish weirs above the Italo Falls which is located just below Italo Lake. The weirs were equipped with Mini-DVR fish counting systems utilizing motion-detection video. The project results confirmed over 4,000 sockeye salmon escaped into the lake. The U.S. Forest Service plans to continue the project next year which will help the department with monitoring the Italo River sockeye salmon stocks. The Italo River has an established BEG for coho salmon of 1,400–3,600 fish. No late fall surveys

were conducted in 2012 due to inclement weather. The Italo rivers (Old, Middle, and New) were open to commercial fishing for coho in 2012 but were not fished.

DANGEROUS RIVER

The Dangerous River was opened to commercial fishing on the second Sunday in June. A total of six permits fished the Dangerous in 2012 and 6,000 sockeye salmon were harvested. 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 with the exception of statistical week 30 where the fishing period increased to 3.5 days. Fishing time remained at 3.0 days throughout the coho salmon season.

SITUK-AHRNKLIN INLET

The Situk-Ahrnklin Inlet fishery recorded below average harvests of Chinook, coho, pink, and chum salmon; however, the sockeye salmon harvest was average during the 2012 season (Tables 13 and 14). The Situk-Ahrnklin Inlet generated 52% of the Yakutat area set gillnet income (Tables 15 and 16). The total value of approximately \$772,500 was 17% below the 5-year average. The harvest of 53,200 sockeye salmon was also 2% above the recent average. Situk-Ahrnklin sockeye accounted for 43% of the area sockeye salmon harvest. The coho salmon harvest of 48,300 was 29% below average, and accounted for 49% of the area's total coho salmon production. The pink salmon return to the Situk was well below the recent five-year average and the lowest harvest on record for that time period. A harvest of 21,400 pink salmon was a third of the 2010 and 2011 harvests.

The Situk River weir was installed in the lower river for the 25th consecutive year and used for inseason management of the sockeye and Chinook salmon fisheries (Table 17). This was the 18th 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 Fish announced a preseason forecast of a total return of 500 large (ocean-age-3) Chinook salmon to the Situk River in 2012, with a range of 159–847 fish. This year's estimate was somewhat above last year's forecast of 155 large Chinook salmon, which was the lowest preseason forecast on record. The BEG for Situk River Chinook salmon is 730 ocean-age-3 and older fish, with a range of 450–1,050 fish. 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. Although the projection was greater than 350 Chinook salmon, this was too close to the bottom level of the BEG. With poor Chinook salmon returns for three years in a row, the department opted to manage the fisheries with strict conservation measures. 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. The case could be made that for Chinook salmon conservation, the sockeye salmon commercial and sport fisheries should be

closed, while 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 on average 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 average to an above average return. Without the net fishery to harvest surplus returns, there could be potential for over-escapement. In 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. The plan proved to be successful last year, and thus was implemented again in 2012. The plan as outlined contained three important 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. Prior to 2012, 5 AAC 30.365 contained a “non-sale” provision under certain scenarios of low Chinook salmon abundance. At the Board of Fish meeting this year, the board amended the regulation from “non-sale” to “non-retention.” All Chinook salmon in the nets would be returned to the water immediately. To address a concern about the potential waste of salmon from net mortalities, dead Chinook salmon would 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.
3. Finally, it was recognized that the department did not have regulatory authority to require permit holders to closely attend gear while fishing, 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 commercial sockeye salmon fishery for the season. For this plan to work there must be a cooperative effort among all the parties, the department, the community, and the permit holders. This plan was implemented in 2011; it appeared to be successful and was implemented again in 2012.

The Situk-Ahrnklin Inlet fishery opened by regulation on the third Sunday in June, and the fishing period remained at 2.5 days throughout the sockeye salmon season until the onset of the coho salmon season. The harvest of 53,200 sockeye salmon was nearly equal to five-year average of 52,100. A total of approximately 62,000 sockeye salmon passed through the weir in 2012 and this was within the BEG range of 30,000 to 70,000. A total of 89 dead Chinook salmon were retained from nets to be distributed to the Yakutat Senior Center. The weight average for these fish was 8.98 pounds, indicating the majority of them 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 321 fish; this was slightly less than the preseason projection of 500 fish. This was the third

consecutive year that the BEG was not attained. The department will take measures to ensure that Chinook salmon are conserved in the Situk-Ahrnklin Inlet while providing opportunities for harvesting sockeye salmon.

The harvest of 48,300 coho salmon was 29% below the recent five-year average of 68,000. The 14-year period from 1992 to 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 2012 harvest was the lowest harvest 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 2012 season. A peak Situk River escapement survey of approximately 3,000 coho salmon was recorded on October 11, just under the BEG range of 3,300–9,800 fish. Survey conditions on the Situk River were extremely poor throughout October due to inclement weather and flood conditions, and it is probable that final escapement numbers were within in the BEG range. The commercial fishing period remained at three days throughout the coho salmon season. A peak count of 55 permits fished during the second 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 shifted to some of the more remote coho salmon systems. Now, more effort is remaining in Yakutat Bay during the sockeye salmon season. And with economic considerations limiting participation in more remote coho salmon fisheries, effort levels have increased in the Inlet during the fall.

The pink salmon harvest of 21,400 was well below the recent 5-year average of approximately 80,000 fish. 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 2012 the pink salmon price was 32 cents per pound. Harvests of Situk River pink salmon increased in the past two decades, from an average of 12,000 prior to 1990, to 34,000 in the 1990s and 54,000 in the 2000s. From 2001 to 2011, the Situk River harvest accounted for an average of 82% of the Yakutat area pink salmon harvest. Pink salmon estimates of greater than 500,000 fish obtained during boat surveys of the Situk River in 2005, 2007, and 2010, also suggest pink salmon returns have been at their highest levels since statehood. However, the 2012 pink salmon return to the Situk River plummeted and was the lowest harvest in the last seven years. The chum salmon harvest of 250 fish was 5% below the recent five-year average.

Escapement estimates of Situk River pink salmon have been assessed by weir or boat survey counts since 1991; however, the weir is usually removed in early August, well before the peak of the pink salmon run. In addition, peak annual survey counts are not conducted every year due to lack of man power and/or poor river conditions. Given uncertainties regarding total escapements, the escapement goal was reevaluated and based on a more stable index of escapement (Piston and Heintz 2011). The new escapement goal is an SEG threshold of 33,000 pink salmon counted at the weir through August 5th. In 2012, 33,660 pink salmon were counted through the weir prior

to its removal, and the goal was attained. No late fall surveys were conducted this year due to high water and poor visibility.

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 2012. The peak sockeye salmon escapement count of just over 450 fish did not meet the Sustainable Escapement Goal (SEG) of 1,000 fish for the Lost River. The peak coho salmon escapement count of 2,200 was just above the SEG of 2,000 fish. Very few surveys were conducted during the fall due to inclement weather and flood events. 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 to 2012 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, designated as the remainder of the district, do not open to fishing until the fourth Sunday in June. When this occurs legal gear allowed in the area 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 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 or in 2012.

Yakutat Bay recorded harvests of 250 Chinook, 24,000 sockeye, 2,700 coho, 5,300 pink and 300 chum salmon in 2012 (Table 18). The sockeye salmon harvest of 24,000 was 10% below the recent five-year average (Table 19). The Yakutat Bay sockeye salmon harvest was second only to the Situk-Ahrnklin Inlet harvest in 2012. A total of 39 permits fished in Yakutat Bay, with a peak effort of 27 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 throughout the span

of the sockeye season. 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 2012 coho salmon harvest of 2,600 fish was 31% below the recent five-year average and was only a third of the 2011 harvest. Effort levels always remain low in Yakutat Bay for coho salmon, and a peak count of 12 permits fished the Bay during the fourth week of August.

The Yakutat Bay pink salmon harvest of 5,300 fish was 80% below the recent 5-year average and was the lowest pink salmon harvest in the Bay since 2005. 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 historical return of pink salmon in 2011, with an estimated three million pink salmon seen within the Bay. Pink salmon were targeted in 2011, but permit holders claimed that a 75 fathom set gillnet was extremely inefficient gear for pink salmon. Systematic surveys to estimate spawning escapement into Humpy Creek have not been conducted since the mid-1990s, because there was very little fishing effort at Humpy Creek in the early 1990s (despite fisheries openings) and no directed fishery since 1996 (Woods 2003). In 2005, the escapement goal for Humpy Creek was eliminated due to lack of fishing effort on the stock (Heinl and Geiger 2005).

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 seven weeks. Fewer than three permits fished four of those seven weeks. A total of seven permits harvested 5,100 sockeye salmon, and was 49% above the recent five-year average (Table 20). The harvest of 55 Chinook salmon was just above the recent average. The Manby Shore ocean fishery was not fished for coho in 2012.

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 2012 Manby Stream was not fished for sockeye salmon. Sudden Stream was fished for only two weeks of the sockeye season and fewer than three permits fished, and harvest 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 2012. 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 2012. No aerial surveys of these systems were conducted due budget constraints.

YAKATAGA DISTRICT FISHERIES

OVERVIEW

The Yakataga District opened on August 1 in 2012. The Tsiu River sustained a normal commercial fishery for the eighth year in a row. The Kaliakh River, Tashalich River, Eight Mile Creek, and the Seal River were open, but not fished in 2012.

TSIU RIVER

The Tsiu River is home to a productive coho salmon run during a 6–8 week window in August to early October. 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 2012 Yakutat Seafoods maintained a buying station on the Tsiu River and flew fish to Yakutat with a DC-3. This marked the eighth time since 2001 that a processor maintained a presence on the Tsiu. A total of 13 permits fished on the Tsiu River in 2012. This was about half the number of permits that fished in 2011, but just below the recent average. The harvest of 46,000 coho salmon was equal to the recent 5-year average (Table 21).

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. After an abnormally dry season in 2010, the Tsiu River returned to normal fishing conditions in 2011. In 2012, inclement weather on the Tsiu River limited commercial fishing times and the river was only fished three out of the six weeks opened to commercial fishing. The initial opening was on Sunday, August 26, after desired escapements were observed. The river was fished two 24-hour periods that first week with catches promising a strong coho run. Two 24-hour periods were announced for the second week, but the second period was only fished for 12 hours due to storm warnings. The third week was opened by regulation but the second opener for that week was only fished for 11 hours due to limited hauling capacity. The weather turned bad for the next ten days with gales and heavy rain causing massive flooding and unfishable conditions. With continued forecasts of inclement weather fishing operations shut down for the season. The Tsiu River was opened to commercial fishing through the end of September, but not fished during the last three weeks of the season. A peak aerial survey on August 24 revealed 11,000 coho salmon on the spawning grounds, this was within the BEG range of 10,000 to 29,000 fish. More surveys were conducted thereafter, but survey conditions were not optimal. Department staff on the grounds observed schools of fish pushing into the river after commercial fishing was closed. Based on these observations a minimal escapement of 15,000 coho salmon is likely.

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TABLES AND FIGURES

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

Species	Stock	Type	Escapement Goal	ADF&G EG/ Document
Sockeye	Situk River	Weir-Total Count	30,000–70,000	RIR No. 1J95-22 ^a
Sockeye	Akwe River	Aerial Survey Index	600–1,500	RIR No. 1J95-16 ^b
Sockeye	East Alsek River	Aerial Survey Index	13,000–26,000	SP No. 03-04 ^c
Sockeye	Lost River	Aerial Survey Index	1,000	RIR No. 1J95-16 ^b
Sockeye	Klukshu River	Weir-Total Count	7,500–15,000	RIR No. 1J00-24 ^d
Chinook	Klukshu River	Weir-Total Count	1,100–2,300	FMR No. 98-2 ^e
Chinook	Situk River	Weir-Total Count	450–1,050	SP No. 03-01 ^f
Pink	Situk River	Weir-pass by August 5	33,000	SP No. 11-18 ^g
Coho	E. Alsek-Doame	Aerial Survey Index	2,500–8,500	RIR No. 1J94-14 ^h
Coho	Akwe River	Aerial Survey Index	1,800–5,000	RIR No. 1J94-14 ^h
Coho	Italio River	Aerial Survey Index	1,400–3,600	RIR No. 1J94-14 ^h
Coho	Situk River	Aerial Survey Index	3,300–9,800	RIR No. 1J94-14 ^h
Coho	Lost River	Aerial Survey Index	2,200	RIR No. 1J94-14 ^h
Coho	Kaliakh River	Aerial Survey Index	4,000–14,000	RIR No. 1J94-14 ^h
Coho	Tsiu/Tsivat	Aerial Survey Index	10,000–29,000	RIR No. 1J94-14 ^h

Note: All escapement goals are biological escapement goals (BEG) except three. The Lost River sockeye and coho, and the Situk River pink salmon escapement goal are considered sustainable escapement goals (SEG).

^a Clark et al. 1995b

^b Clark et al. 1995a

^c Clark et al. 2003

^d Clark and Etherton 2000

^e McPherson et al. 1998

^f McPherson et al. 2003

^g Piston and Heintz 2011

^h Clark and Clark 1994

Table 2.–Total salmon harvest by species in the Yakutat area set gillnet fishery by fishing period, 2012.

Week	Ending Date	Chinook	Sockeye	Coho	Pink	Chum	Total
23	9-Jun	59	110	0	0	0	169
24	16-Jun	172	3,170	2	0	9	3,353
25	23-Jun	261	10,842	11	0	27	11,141
26	30-Jun	116	12,600	56	0	13	12,785
27	7-Jul	125	15,989	75	8	7	16,204
28	14-Jul	74	24,687	148	33	19	24,961
29	21-Jul	70	17,673	260	225	76	18,304
30	28-Jul	29	18,168	88	1,887	133	20,305
31	4-Aug	23	13,626	189	5,453	526	19,817
32	11-Aug	2	2,892	407	1,898	484	5,683
33	18-Aug	5	3,868	2,752	10,363	586	17,574
34	25-Aug	6	972	6,041	5,069	140	12,228
35	1-Sep	0	114	23,413	1,910	73	25,510
36	8-Sep	0	30	24,313	409	36	24,788
37	15-Sep	0	34	30,507	60	20	30,621
38	22-Sep	0	0	4,248	0	6	4,254
39	29-Sep	0	4	4,337	6	4	4,351
40	6-Oct	0	1	1,830	22	3	1,856
41	13-Oct	closed	closed	closed	closed	closed	0
Totals		942	124,780	98,677	27,343	2,162	253,904

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

Year	Active Permits	Chinook	Sockeye	Coho	Pink	Chum	Total
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	316,238
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
2012	113	942	124,780	98,677	27,343	2,162	253,904
2002–2011 Avg.	115	1,791	124,126	129,300	83,243	1,039	339,498
2012 ^a	-2%	-48%	1%	-24%	-67%	108%	-25%

^a Percentage deviation from 10-year average.

Table 4.—Average earnings from set gillnet fishing, Yakutat area, 1980–2012.

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
2012	\$1,496,399	113	\$13,242	\$17,644
Average				
2002–2011	\$2,569,158	115	\$14,155	\$14,048
2012				
Deviation ^a	-42%	-2%	-6%	26%

^a Percent Deviation from 10-year average.

Table 5.–Harvest of salmon in the Yakutat area set gillnet fishery by fishing area, 2012.

Area	Chinook	Sockeye	Coho	Pink	Chum	Total
Alsek	510	18,217	536	0	1	19,264
East	5	12,124	78	4	1223	13,434
Akwe	36	5,888	1,187	564	381	8,056
Italio	Closed					
Middle Italio	Closed					
Old Italio	Closed					
Dangerous	0	5,814	30	104	5	5,953
Situk	89	53,168	48,328	21,395	254	123,234
Lost	Closed					
Yakutat Bay	247	23,836	2,672	5,275	280	32,310
Manby Shore	55	5,084	25	1	12	5,177
Manby Stream	Not Fished					
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	0	45,821	0	6	45,827
Seal River	Not Fished					
Tashalich	Not Fished					
Kiklukh	Not Fished					
Totals	942	124,780	98,677	27,343	2,162	253,255

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

Table 6.–Harvest of salmon in the Alsek River set gillnet fishery by fishing period, 2012.

Week	Ending Date	Boats	Chinook	Sockeye	Coho	Pink	Chum	Total	Days
23	9-Jun	9	59	110	0	0	0	178	1.0
24	16-Jun	13	123	1,508	0	0	0	1,631	2.0
25	23-Jun	12	234	2,393	0	0	0	2,627	2.0
26	30-Jun	12	52	2,563	0	0	0	2,615	2.0
27	7-Jul	13	32	4,163	4	0	0	4,199	2.0
28	14-Jul	13	9	4,755	0	0	0	4,764	2.0
29	21-Jul	11	1	979	1	0	0	981	1.0
30	28-Jul	10	0	1,082	0	0	0	1,082	1.0
31	4-Aug	4	0	210	0	0	0	210	1.0
32-33	18-Aug	^a	^a	^a	^a	^a	^a	^a	2.0
34	25-Aug	3	0	44	82	0	0	126	1.0
35	1-Sep	^a	^a	^a	^a	^a	^a	^a	1.0
36	8-Sep	3	0	3	367	0	1	371	1.0
37-40	6-Oct	Not fished							1.0
Totals		16	510	18,217	536	0	1	19,264	20.0

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

Table 7.–Harvest of salmon in the Alsek River set gillnet fishery, 2012 and 5-year harvest comparison.

Year	Boats	Chinook	Sockeye	Coho	Pink	Chum	Total	Days
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
2012	16	510	18,217	536	0	1	19,264	20.0
2007–2011 Average	18	540	14,534	1,951	0	9	17,600	38.8
2012 Deviation ^a	-11%	-6%	25%	-73%	0%	-88%	9%	-48%

^a Percentage deviation from 5-year average.

Table 8.–Klukshu River Weir escapement, 1976–2012.

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
2012	665	17,267	572
2002–2011 average	1,478	14,775	2,495

^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, 2012.

Week	Ending Date	Boats	Chinook	Sockeye	Coho	Pink	Chum	Total	Days
30	28-Jul	16	4	5,391	1	4	63	5,463	1.0
31	4-Aug	13	1	4,463	2	0	214	4,680	2.0
32	11-Aug	10	0	1,245	11	0	323	1,579	2.0
33	18-Aug	8	0	1,012	18	0	468	1,498	2.0
34	25-Aug	3	0	13	12	0	75	100	2.0
35	1-Sep	a	a	a	a	a	a	a	3.0
36	8-Sep	a	a	a	a	a	a	a	3.0
37–40	6-Oct	Not Fished							12.0
Totals		17	5	12,124	78	4	1,223	13,434	27.0

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

Table 10.–Harvest of salmon in the East River set gillnet fishery, 2012 and 5-year harvest comparison.

Year	Boats	Chinook	Sockeye	Coho	Pink	Chum	Total	Days
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
2012	17	5	12,124	78	4	1,223	13,434	27.0
2007–2011 Average	16	5	17,088	408	41	415	17,976	31.60
2012 Deviation ^a	6%	0%	-29%	-80%	-90%	195%	-25%	-15%

^a Percentage deviation from 5-year average.

Table 11.–Harvest of salmon in the Akwe River set gillnet fishery, 2012, and 5-year harvest comparison.

Year	Boats	Chinook	Sockeye	Coho	Pink	Chum	Total	Days
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
2012	5	36	5,888	1,187	564	381	8,056	39.0
2007–2011 Average	7	124	12,380	2,956	62	61	15,584	38.1
2012 Deviation ^a	-29%	-71%	-52%	-60%	807%	525%	-48%	2.4

^a Percent deviation from 5-year average.

Table 12.–Harvest of salmon in the Dangerous River set gillnet fishery, 2012, and 5-year harvest comparison.

Year	Boats	Chinook	Sockeye	Coho	Pink	Chum	Total	Days
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
2012	6	0	5,814	30	104	5	5,953	38.0
2007–2011 Average	8	16	5,085	62	121	8	5,291	51.0
2012 Deviation ^a	-25%	-100%	14%	-51%	-14%	-38%	13%	-25%

^a Percent deviation from 5-year average.

Table 13.–Harvest of salmon in the Situk-Ahrnklin Inlet set gillnet fishery by fishing period, 2012.

Week	Ending Date	Boats	Chinook	Sockeye	Coho	Pink	Chum	Total	Days
25	23-Jun	34	3	5522	0	0	1	5526	2.5
26	30-Jun	41	10	5,778	0	0	2	5,790	2.5
27	7-Jul	40	3	4,072	2	4	1	4,082	2.5
28	14-Jul	43	23	12,989	5	13	2	13,032	2.5
29	21-Jul	50	31	11,607	2	158	9	11,807	2.5
30	28-Jul	45	12	7,125	9	1,653	41	8,840	2.5
31	4-Aug	45	6	3,146	70	3,820	52	7,094	2.5
32	11-Aug	26	0	772	207	1,460	20	2,459	3.0
33	18-Aug	34	1	1,556	1,798	7,386	44	10,785	3.0
34	25-Aug	40	0	456	5098	4,545	40	10,139	3.0
35	1-Sep	53	0	80	7,855	1,859	8	9,802	3.0
36	8-Sep	52	0	26	10,232	409	5	10,672	3.0
37	15-Sep	55	0	34	13,148	60	16	13,258	3.0
38	22-Sep	48	0	0	4,248	0	6	4,254	3.0
39	29-Sep	43	0	4	4,074	6	4	4,088	3.0
40	6-Oct	24	0	1	1,580	22	3	1,606	3.0
41	13-Oct	Closed							
Total		71	89	53,168	48,328	21,395	254	123,234	44.5

Table 14.–Harvest of salmon in the Situk-Ahrnklin Inlet set gillnet fishery, 2012 and 5-year harvest comparison.

Year	Boats	Chinook	Sockeye	Coho	Pink	Chum	Total	Days
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	69.8
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
2012	71	89	53,168	48,328	21,395	254	123,234	44.5
2007–2011 Average	80	107	52,119	67,786	79,695	267	215,322	59.2
2012 Deviation ^a	-11%	-17%	2%	-29%	-73%	-5%	-43%	-25%

^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, 1975–2012.

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%
2012	1,496,399	772,554	52%
2002–2011 Average	1,647,662	945,837	60%
2012 Deviation ^a	-9%	-18%	-13%

^a Percentage deviation from average.

Table 16.—Dollar value of salmon harvest in the Situk-Ahrnklin set gillnet fishery, 1975–2012.

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
2012	0	373,835	372,174	25,195	1,350	772,554
2002–2011 Average	5,765	355,382	526,588	57,376	767	945,824
2012 Deviation ^a	-100%	5%	-29%	-56%	76%	-18%

^a Percent deviation from 10-year average.

Table 17.–Situk Weir escapement counts, 1988–2012.

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
2012	6/1–8/7	321	62,467	17	33,620	11
1989–2010 Average		2,183	61,755	229	138,348	39

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 Pink salmon escapement goal (SEG) is 33,000 fish passed through the weir by August 5.

Table 18.–Harvest of salmon in the Yakutat Bay set gillnet fishery by fishing period, 2012.

Week	Ending Date	Boats	Chinook	Sockeye	Coho	Pink	Chum	Total	Days
24	16-Jun	27	49	1662	2	0	9	1722	2.5
25	23-Jun	26	20	2,374	11	0	21	2426	2.5
26	30-Jun	26	31	2,306	55	0	10	2402	2.5
27	7-Jul	26	41	6,455	65	4	6	6571	2.5
28	14-Jul	26	37	4,399	130	20	14	4600	2.5
29	21-Jul	24	30	2,338	249	61	34	2712	2.5
30	28-Jul	16	13	1,330	78	184	15	1620	2.5
31	4-Aug	18	14	2,072	88	1,112	51	3337	2.5
32	11-Aug	11	2	138	187	342	19	688	3.0
33	18-Aug	11	4	567	929	2,977	74	4551	4.0
34	25-Aug	12	6	171	849	524	25	1575	3.0
35	1-Sep	a	a	a	a	a	a	a	3.0
36–40	8-Sep	Not fished							15.0
41	13-Oct	Closed							0.0
Totals		39	247	23,836	2,672	5,253	280	32,288	48.0

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

Table 19.–Harvest of salmon in the Yakutat Bay set gillnet fishery, 2012, and 5-year harvest comparison.

Year	Boats	Chinook	Sockeye	Coho	Pink	Chum	Total	Days
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
2012	39	247	23,836	2,672	5,275	280	32,310	48.0
2007–2011 Average	53	407	26,530	3,880	27,382	480	58,667	56.0
2012 Deviation ^a	-26%	-39%	-10%	-31%	-80%	-42%	-45%	-14%

^a Percentage deviation from 5-year average.

Table 20.–Harvest of salmon in the Manby Shore Ocean set gillnet fishery, 2012, and 5-year harvest comparison.

Year	Boats	Chinook	Sockeye	Coho	Pink	Chum	Total	Days
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
2012	7	55	5,084	25	1	12	5,177	44.5
2007–2011 Average	10	38	3,417	34	107	28	3,623	48.2
2012 Deviation ^a	-30%	45%	49%	-26%	-99%	-57%	43%	-7%

^a Percent deviation from 5-year average.

Table 21.–Harvest of salmon in the Tsiu River set gillnet fishery, 2012, and 5-year harvest comparison.

Year	Boats	Chinook	Sockeye	Coho	Pink	Chum	Total	Days
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	20.0
2011	21	0	16	34,745	171	2	34,934	34.0
2012	13	0	0	45,821	0	6	45,827	12.0
2007–2011 Average	14	1	20	45,572	59	1	45,752	25.6
2012 Deviation ^a	-7%	-100%	-100%	0.5%	-100%	500%	0.2%	-53%

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

^a Percent deviation from 5-year average.

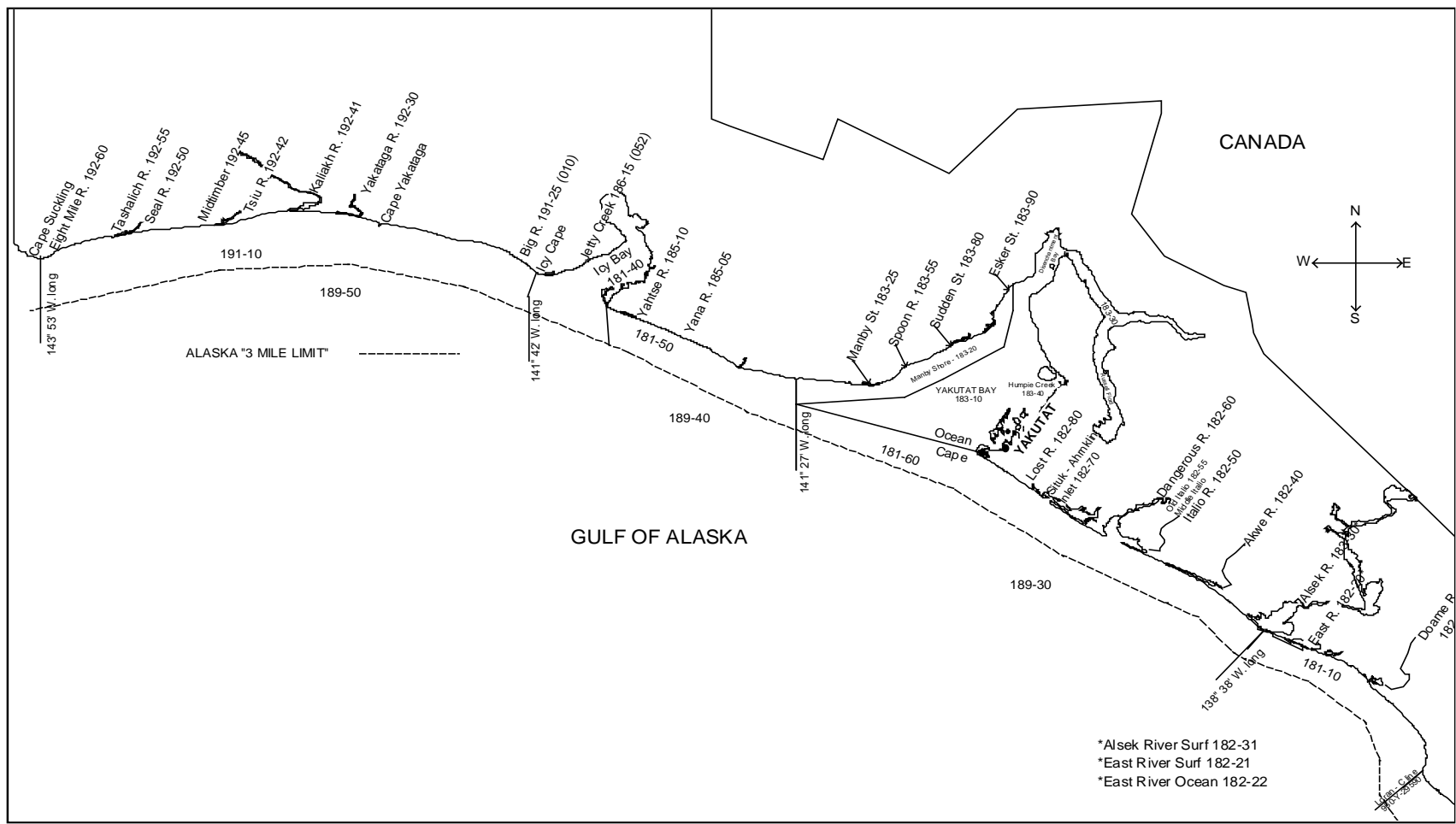


Figure 1.—Yakutat Area map, showing statistical reporting areas.