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2011 Yakutat Set Gillnet Fishery Management Plan

by

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and

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Alaska Department of Fish and Game

Division of Commercial Fisheries



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

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2011 YAKUTAT SET GILLNET FISHERY MANAGEMENT PLAN

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ABSTRACT

The 2011 Yakutat set gillnet fishing seasons and fishing periods will open by regulation on Sunday as specified in 5 AAC 30.310 and 5 AAC 30.320. The Alsek River will open on Sunday, June 5, Yakutat Bay will open on Sunday, June 12, the Situk-Ahrnklin Inlet and Manby Shore Outside Waters will open on Sunday, June 19. All Yakutat District fisheries will be open by Sunday, June 26 with the exception of the East Alsek River and the Italo rivers which will open by emergency order when sockeye escapement levels can be documented. The East Alsek River will be managed for sockeye salmon into September. Set gillnet fisheries are managed by adjusting fishing times and areas in response to inseason assessments of run strength. Management strategies will concentrate on sockeye and Chinook salmon in June and July. Following the first Sunday in August, fall fishing periods will go into effect and the emphasis for management strategies will switch to coho salmon. No formal preseason forecast program exists for the Yakutat salmon runs with the exception of Situk River Chinook salmon. The Division of Sport Fish provides a formal preseason forecast for Chinook salmon returning to the Situk River. Returns are expected to be average to above average for sockeye salmon, and average to above average for coho salmon.

Keywords: Yakutat, set gillnet, fishing seasons, fishing periods, Chinook, sockeye, coho, pink and chum salmon, Biological Escapement Goals (BEGs), Sustainable Escapement Goals (SEGs), fishery management plan.

INTRODUCTION

The Yakutat area encompasses the waters of Alaska between Cape Suckling and Cape Fairweather. The area is divided into two fishing districts: the Yakataga District between Cape Suckling and Icy Cape, and the Yakutat District between Icy Cape and Cape Fairweather. All five salmon species are harvested in the Yakutat area, with coho, sockeye, Chinook, and pink salmon comprising the majority of the catch in order of commercial value.

Set gillnet gear is the only net gear permitted in the Yakutat area. About 170 commercial setnet entry permits are renewed annually. Setnet permit holders in the Yakutat area do not have registered sites and may fish in any open fishing area. They may also move between fishing areas during the season as long as not more than one area is fished concurrently.

There are 25 unique setnet fisheries in the Yakutat area. Most of these fisheries target sockeye salmon from mid-June through July and coho salmon in August and September. The only targeted pink salmon fishery occurs in the southeast portion of Yakutat Bay on fish returning to Humpback Creek. Set gillnet fisheries in the Yakataga District primarily harvest coho salmon.

In January 2006 the Alaska Board of Fisheries (BOF) adopted two regulations that permanently changed the weekly fishing periods and fishing seasons for the Yakutat Area from Monday to Sunday of each week. In 2011 the Alsek River will open on the first Sunday in June (June 5), Yakutat Bay and the Dangerous River will open on the second Sunday in June (June 12), and the Situk-Ahrnklin Inlet and Manby Shore Outside Waters will open on the third Sunday in June (June 19). By the fourth Sunday in June (June 26) all fisheries in the Yakutat District with the exception of the East River and the Italo rivers, may be open if expected returns are surplus to escapement needs. The East River will open in mid to late July when sockeye salmon escapement has been observed.

ANTICIPATED SALMON RETURN

No formal preseason forecast program exists for the Yakutat salmon runs except for Situk River Chinook salmon. Preseason expectations are based on parent-year spawning escapements, commercial catch trends, local observations of rearing conditions, and information on year-class strength. The 2011 Yakutat area salmon runs are expected to be average to above average for both

sockeye and coho salmon. Detailed projections by specific drainage area are presented on pages 11–12.

FISHERY MANAGEMENT

Set gillnet fisheries in the Yakutat area are managed by adjusting fishing times and areas in response to inseason assessments of run strength. These actions are taken to provide adequate spawning escapements and to allow harvests of salmon that are surplus to escapement goals. Inseason assessment methods include both fishery performance and spawning escapement information. In the glacial systems, fishery performance data is utilized for management because poor visibility prevents the accurate observation of spawning escapements. Biological Escapement Goals (BEG) have been established for all major areas and salmon species in the Yakutat Area (Table 1).

Table 1.–Yakutat area salmon escapement goals.

Species	System	Range	Year Established.
Chinook	Klukshu River (Alsek River)	800–1,200	2011
	Alsek River (total)	3,500–5,300	2011
	Situk River	450–1,050	2003
Sockeye	East Alsek-Doame River	13,000–26,000	2003
	Klukshu River	7,500–11,000	2011
	Lost River	1,000	2009
	Situk River	30,000–70,000	2003
Coho	Lost River	2,200	1994
	Situk River	3,300–9,800	1994
	Tsiu/Tsivat Rivers	10,000–29,000	1994
Pink	Situk River (even-year)	42,000–105,000	1995
	Situk River (odd-year)	54,000–200,000	1995

During 2011, the major fishing areas can be expected to open on the dates shown in the following table (Table 2):

Table 2.--Opening dates for Yakutat area fisheries in 2011.

Yakutat District		
Area	Opening Date	
Alsek River	5 June	
Dangerous River	12 June	
Yakutat Bay (south of 59 °40' N lat.)	12 June	
Manby Shore Ocean	19 June	
Situk-Ahrnklin Inlet	19 June	
Lost River	by Emergency Order	
East River	by Emergency Order	
Akwe River	26 June	
Manby Shore Inland	26 June	
Remainder of the Yakutat District	26 June	
Italio River	by Emergency Order	
Yakataga District		
Season	Area	Opening Date
Sockeye salmon	All areas	by Emergency Order
Coho salmon	Kaliakh River	7 August
	Tsiu River	by Emergency Order (around August 20)

2011 SUMMER MANAGEMENT PLAN

This management plan concentrates on the major fisheries in the Yakutat area. Information on areas that are fished only occasionally is available from the Yakutat area management biologist listed at the end of the plan. Most Yakutat gillnet openings for sockeye salmon will generally run from 6:00 a.m. Sunday through 6:00 p.m. Tuesday.

ALSEK RIVER

The Alsek River, located 45 miles southeast of Yakutat, is a major transboundary river that drains a large area east of the coastal mountain range. The Alsek extends approximately 130 miles from its mouth upriver into the Yukon Territory of Canada. The U.S./Canada border is approximately 40 miles upstream from the river mouth. The river supports large populations of Chinook, sockeye, and coho salmon, and small populations of pink and chum salmon. Alaskan set gillnet fisheries target sockeye and coho salmon. Canadian subsistence and sport fisheries target sockeye and Chinook salmon.

Commercial salmon landings from the Alaskan portion of the Alsek River averaged approximately 12,600 sockeye, 1,500 coho, and 520 Chinook salmon annually from 2005 through 2010; excluding the 2008 return which was an outlier. The Canadian subsistence and sport harvest has averaged approximately 120 Chinook, 1,140 sockeye, and 20 coho salmon during the same period. Subsistence and sport fisheries in the Alaskan portion of the river are relatively minor, harvesting about 200 salmon annually.

Historically, the set gillnet fishery targeted Chinook salmon during May in the Alaskan portion of the Alsek River. However, due to what was thought to be depressed runs, the directed Chinook salmon fishery has been closed since 1962 and Chinook salmon have been harvested only incidentally during the sockeye salmon fishery in early June. The Transboundary River Panel of the Pacific Salmon Commission reached bilateral agreement to reopen the Stikine and Taku Inlet gillnet fisheries, and they also established a test fishery for the Alsek that took place in late May of 2005, 2006, 2007, and 2008. Because the bottom end of the Chinook salmon escapement goal of 1,100 fish in place at the time of the fisheries was not attained in 2005 through 2008 the test fishery was suspended in 2009 and 2010 to facilitate Chinook salmon escapement. Escapements improved in 2009 and 2010 and were within the desired objectives. The test fishery for Chinook salmon will be conducted in 2011. It is anticipated that the Transboundary River Panel will at some point reach bilateral agreement to reopen the Alsek River to commercial fishing for Chinook salmon in May. In January, 2006 the BOF adopted regulatory language to allow for this fishery should agreement be reached. The principal escapement monitoring tool for Chinook stocks in the Alsek River is the Klukshu River weir. The escapement goal of 1,100 to 2,300 Chinook salmon through the Klukshu weir was recently re-examined. A revised joint escapement goal for the Klukshu stock was adopted by both DFO and ADF&G in 2011, which recommends an escapement goal range of 800 to 1,200 Chinook spawners in the Klukshu drainage. Canadians and U.S. managers have agreed to a minimum escapement goal of 800 spawners in the Klukshu drainage in 2011. The 2011 Chinook salmon run is expected to produce fish surplus to the Klukshu River escapement goal.

The 2011 overall Alsek drainage sockeye salmon run is expected to be approximately 84,400 fish; this is well above the recent 10-year average of 62,000 fish. Recent sockeye and Chinook salmon returns have been below average, primarily due to poor marine survival, and this forecast must be viewed with some caution. The principle contributing brood years will be 2006 (Klukshu escapement of 12,500 sockeye salmon) and 2007 (Klukshu escapement of 8,479 sockeye salmon). Both the early and late run segments of the Alsek sockeye run are expected to be above average in 2011. The current data pertinent to the escapement goal of 7,500 to 15,000 sockeye salmon through the Klukshu weir was recently re-examined and a new BEG was adopted in 2011. As a result of this analysis, Canadian and U.S. managers have set a spawning escapement goal range of 7,500 to 11,000 sockeye salmon. The Department of Fish and Game will manage the Alsek River commercial set gillnet fishery to achieve the agreed upon escapement goal range plus 3,000 sockeye salmon as per the 2009-2018 agreement reached during the U.S./Canada Pacific Salmon Treaty (PST) negotiations in February 2008. The outlook for the 2011 sockeye salmon run is expected to produce maximum sustainable yields of at least 7,500 to 11,000 spawners through the Klukshu River weir. The BEG for sockeye salmon was not attained in 2008 and 2009. According to Treaty language any transboundary system that does not attain the BEG for three years in a row comes under scrutiny. This can and may include a complete closure of a fishery. As a result, in 2010 the Alsek River was managed very conservatively in an attempt to meet the BEG and the goal was achieved. In 2011 the Alsek will open downstream

from a marker located three miles below the southern end of Alsek Basin on the first Sunday in June (June 5). Weekly openings will initially be set at 24 hours. The duration of weekly fishing periods will be based on fishery performance data (CPUE) and Klukshu weir data. Gillnets will be restricted to a maximum mesh size of 6 inches through July 1 to minimize Chinook salmon harvest. Fishing time will be based on a comparison of current to historical fishery performance data. With management strategies returning to traditional regimes, there could be extensions of fishing periods when CPUE warrants.

The Alsek River surf fishing area is expected to be open during the same periods as the in-river fishery. The surf fishing area includes the shoreline, 0.75 of a mile in each direction, from the river mouth to the outermost bar where the surf breaks.

DANGEROUS RIVER

The Dangerous River will be opened downstream from the Dangerous River Bridge on June 12. Catch and effort from this system has been sporadic. Three permits fished the Dangerous during the 2006 parent year, and approximately 2,400 sockeye salmon were harvested. In 2010 three permits harvested 4,000 sockeye salmon which is slightly below the recent 5-year average of 4,500 fish. The Dangerous River is seldom fished for coho salmon. Marine waters adjacent to the mouth of the Dangerous will be open to the same fishing periods as the Dangerous River itself.

YAKUTAT BAY

Three separate set gillnet fisheries occur in Yakutat Bay. The Yakutat Bay fishery occurs in the ocean waters of Yakutat Bay south of 59°40' N. latitude and will open on the second Sunday of June (June 12). The Manby Shore Ocean fishery encompasses the ocean waters of Yakutat Bay north of 59°40' N. latitude and will open the third Sunday of June (June 19). The Manby Shore Inside Waters fishery will open on the fourth Sunday of June (June 26) in streams along the northern shore of Yakutat Bay.

YAKUTAT BAY AND MANBY SHORE OCEAN FISHERIES

Following the initial Yakutat Bay opening in 2009 the marker denoting the southernmost point of Ocean Cape was removed, and was replaced with a new marker at the northernmost point of Ocean Cape. An illegal open ocean fishery had developed off Ocean Cape in 2007 and 2008 with as many as 10 or 12 nets openly fishing in closed waters south and east of the line that existed then. Enforcement of this fishery was problematic during that time because the Alaska Wildlife Troopers had no personnel in the Yakutat Area. The marker was moved to the northernmost point of Ocean Cape to eliminate a new and developing fishery that was being conducted in an illegal manner. In 2010 the marker remained at the northernmost point of Ocean Cape to minimize potential violations in the vicinity of Ocean Cape. At the end of the 2010 fishing season an Alaska Wildlife Trooper was stationed in Yakutat and now the closed waters regulation can and will be enforced. Because of this, the marker will be moved back to the original location as defined by regulation at the southernmost point of Ocean Cape in 2011.

Both the Yakutat Bay and Manby Shore Ocean fisheries harvest mixed stocks of sockeye salmon. Tag recovery data collected in 1987 indicated that a major portion of the Yakutat Bay sockeye harvest was of Situk origin. Because of the high Situk River sockeye salmon contribution to the Yakutat Bay and Manby Shore ocean fisheries, both fisheries will be managed to conserve or harvest Situk River sockeye from the third week in June through the

third week of July. The Yakutat Bay fishery will open on Sunday, June 12 for 2.5 days. The weekly fishing period will be limited to a maximum of 4.5 days due to the mixed stock nature of the ocean fisheries and the potentially adverse impact on weaker Yakutat area stocks.

The Manby Shore fishery will open on Sunday, June 19. Weekly fishing periods will depend on Situk River sockeye salmon run strength.

SITUK-AHRNKLIN INLET AND LOST RIVERS

The Situk-Ahrnklin Inlet is the site of the oldest and, historically, most productive fishery in the Yakutat area. Located about nine miles by road from Yakutat, the Situk-Ahrnklin fishery normally supports the largest concentration of fishing effort in Yakutat (up to 100 permits). Fishing occurs primarily in the inlet, although some fishing occurs at the river mouth and in the adjoining surf-fishing area. Sockeye salmon make up the major portion of the harvest during the summer and coho salmon dominate the catch during the fall. Situk-Ahrnklin harvests have averaged about 55,600 sockeye, 56,600 coho, 78,400 pink and 90 Chinook salmon (2005–2010, excluding the outlier year of 2008.).

The 2006 brood year Situk River sockeye salmon escapement was approximately 90,400 fish. This was well above the BEG range of 30,000 to 70,000 sockeye salmon established for the Situk River drainage. Return per spawner data indicates that the 2011 Situk River sockeye salmon run could approach 200,000 fish. A mid-range escapement of 50,000 could leave somewhere in the vicinity of 150,000 fish available for harvest. Sockeye salmon returns in recent years have not lived up to preseason expectations, and the actual surplus available for harvest may not exceed 100,000 sockeye salmon.

The Situk-Ahrnklin Inlet will open initially on Sunday, June 19. Fishing periods will be based on fishery performance and escapements through the Situk River weir. A run-timing model will be used to estimate the total Situk River sockeye salmon run after several weeks of harvest and escapement data are available. A similar model will be used to project Situk Chinook salmon abundance.

Chinook salmon are taken incidentally in the set gillnet fishery, and the Situk commercial catch of Chinook salmon is largely dependent on fishing time allowed for sockeye salmon. The point estimate for the preseason Situk River Chinook salmon forecast in 2011 is 155 large (3-ocean age and older) fish, with a range of 52–257 fish. This year's estimate is well below last year's forecast (2010 = 1,000 large fish). The BEG for Situk River Chinook salmon is 730 three ocean age and older fish, with a range of 450–1,050 fish. According to Yakutat Commercial Fishing Regulation 5 AAC 30.365, if the preseason projection is below 350 fish, the Commissioner **shall close** the sport, subsistence, personal use, commercial set gillnet, and troll fisheries for Chinook salmon. No personal use fishery exists in the Situk-Ahrnklin Inlet. The sport fishery for Chinook salmon closed on April 6, 2011, and the subsistence fishery closed on May 19, 2011. During the commercial set gillnet fishery for sockeye salmon Chinook salmon may not be retained. The troll fishery in the marine waters adjacent to the mouth of the Situk-Ahrnklin Inlet will close at the start of the summer season on July 1, 2011.

5 AAC 30.365 makes no mention of sockeye salmon management strategies during periods of low Chinook salmon abundance. Management measures anticipated by the department for sockeye salmon in 2011 include:

1. An attempt will be made to conduct subsistence and commercial fisheries for sockeye salmon with conservation measures in place for Chinook salmon.

- a) The closed area at the mouth of the Situk River will be enlarged to encompass the area of high Chinook salmon abundance in the Inlet. This will be a line from the far eastern end of Johnson Slough to a marker on the shore of Black Sand Spit to a marker west of the mouth of the Situk River in the vicinity of the Yakutat Seafoods buying station.
- b) Chinook salmon may not be retained in the commercial fishery for individual personal use. Dead Chinook salmon may be delivered to the buying stations at the time of sockeye salmon delivery for distribution to the Yakutat Senior Center and other needy in the community.
- c) Permits must closely attend the gear when it is in fishing configuration and release Chinook salmon alive. The department has no regulatory authority to enforce this, but the alternative may be a closure of the fishery for sockeye salmon. A public meeting was held in the Yakutat High School auditorium on May 10, 2011 to address this issue. The community and the fishermen must work together to make this plan work. This plan has the backing of the Yakutat Tlingit Tribe, the City and Borough of Yakutat, and the Yakutat Fish & Game Advisory Committee. If you, as a permit holder, want to fish for sockeye salmon, stay on your gear when it is in fishing configuration.
- d) Subsistence fishing for sockeye salmon will remain open. It is a condition of the subsistence permit that subsistence fishermen in the Situk-Ahrnklin Inlet must closely attend their gear at all times when it is fishing. Chinook salmon may not be retained.
- e) The commercial set gillnet fishery in the Situk-Ahrnklin Inlet will open by regulation on the third Sunday in June (June 19) for a 60 hour period (2.5 days). Subsequent weekly fishing periods may be adjusted as the effectiveness of this plan is evaluated inseason.

Management options for maximizing harvest of Situk River pink salmon are limited due to the overlap in run timing with sockeye and coho salmon. Escapement goals for pink salmon in the Situk River are 42,000 to 105,000 in even years and 54,000 to 200,000 in odd years. The parent year (2009) escapement past the Situk weir was 62,787 pink salmon. Subsequent float surveys recorded a peak escapement count of over 100,000 pink salmon.

Steelhead trout in post-spawning condition occasionally accumulate in the Situk River prior to the time they emigrate to the ocean. When the emigration is late, there is a potential for the Situk set gillnet fishery to harvest a larger than normal number of adults. The rate of emigration of spawned-out steelhead often increases following periods of heavy rainfall. If a major emigration is expected to occur during a scheduled gillnet fishing period, the opening may be delayed for a few days to reduce the incidental harvest of steelhead.

During the winter of 1998/1999 the Lost River mouth underwent geological changes and discharged into the Situk/Ahrnklin Estuary instead of the Gulf of Alaska. The Lost River continues to flow into the Situk/Ahrnklin Estuary. Prior to the 1999 fishing season ADF&G developed a management plan for the Lost River and Situk/Ahrnklin Estuary with the intent of meeting escapement requirements for the Lost River. This plan closed the Lost River and the North bank of the Situk/Ahrnklin Estuary between an ADF&G regulatory marker approximately

100 yards above the confluence of the Lost River and the Situk/Ahrnklin Estuary and a marker located 100 yards below the confluence. Sockeye salmon are never seen during escapement surveys in Tawah Creek prior to the week of July 11. During the week of July 11 both markers will be moved out to 500 yards from the confluence to protect returning sockeye salmon stocks to the Lost River drainage. This marker configuration will remain in effect through the coho salmon season. While coho salmon escapement goals for both the Lost River and the Situk/Ahrnklin system have been consistently met using this management scenario, the escapement goal of 1,000 sockeye salmon for the Lost River was not attained in 2007, 2008, and 2009. In 2010 1,525 sockeye salmon were counted in the Lost River drainage meeting the escapement goal objective. It is anticipated that the Lost River will remain closed to commercial fishing for the entire season. The intent of this closure is to achieve the Sustainable Escapement Goal (SEG) goal for both sockeye and coho salmon, while providing for a normal fishery in the Situk-Ahrnklin Inlet. Regulatory marker placement at the mouth of the Lost River may change during the course of the season as escapement or river channel movement warrants.

EAST RIVER

The East River is a short, clear river originating from upwelling Alsek River water and local drainage of the eastern portion of Dry Bay. The area open to inriver commercial fishing extends from the mouth to two miles upstream; the adjacent ocean waters within two miles of the mouth in each direction out to 500 yards from the shore at low tide are also open to commercial fishing. The surf and ocean areas are open during the same periods as the inriver fishery.

Prior to 1994 the East River had been one of the most productive sockeye salmon fisheries in the Yakutat area, however salmon catches have dramatically declined. From 1994–1998, average catch was about 37,000 sockeye, 1,500 chum, and 7,400 coho salmon. The river was closed to commercial fishing for sockeye during the 1999, 2000, 2001, and 2002 seasons. The East was opened during coho season in 2002, and for both sockeye and coho salmon from 2003–2007. During those recent-year openings sockeye salmon catches steadily increased, from a low of 2,500 in 2003 to a high of almost 63,000 in 2007. In 2007 the East opened during the second week of July, some years it does not open until the third or fourth week of July. The river was not open to fishing in 2008. In 2009 escapement goals for sockeye were met and the fishery was opened to commercial fishing on July 19. In 2010 the East River was not open during sockeye season but opened during coho season on September 4. Escapement goals for both sockeye and coho salmon were met in 2010.

The East River will be managed to achieve the BEG of 13,000 to 26,000 sockeye salmon. Escapement will be closely monitored, and the East will not open until the lower end of the escapement goal is attained. The duration of the weekly fishing periods will be based on escapement observations. Returns to the East River are predominantly age 4 (0.3). The 2007 parent-year escapement was estimated at 40,000 sockeye salmon, almost doubling the upper end of the BEG range.

AKWE RIVER

The Akwe River is a glacial river system located about 35 miles south of Yakutat. The lower seven miles of the river are wide and shallow and flow parallel to the beach before entering the ocean. The commercial fishery occurs in this lower portion of the river. The 2006–2010 average Akwe River harvest was approximately 8,500 sockeye and 120 Chinook salmon. Historically,

the Akwe coho salmon harvest has averaged approximately 4,000 fish, but the recent average of 3,600 has been due to the decreased effort because of market conditions.

The sockeye salmon return to the Akwe River is expected to be average in 2011 based on parent-year fishery performance and effort. The 2006 parent year harvest of 6,000 sockeye salmon was slightly below the recent average and the long-term historical average. Parent-year escapement counts were minimal due to the turbidity of the river. The sockeye fishery is scheduled to open on Sunday, June 26 and the season will extend through early August. Inseason management will be based on fishery performance and index escapement counts, and reductions in the normal 2.5-day weekly fishing period may be necessary to insure adequate escapement. An escapement goal (peak aerial count) of 600 to 1,500 sockeye salmon has been established for the Akwe River.

The Akwe River will be open upstream of regulatory markers located approximately 500 yards upstream from the confluence of the New Italo River to the upper markers located 2.5 miles downstream from the westernmost end of the Sand Dunes, a fishing area of about 3 and one half miles.

MANBY SHORE INSIDE FISHERY

Management of the Manby Shore inside fisheries (waters upstream of the mean high-tide line) will be based on the abundance of local stocks. During the summer, these fisheries harvest salmon primarily from Manby and Sudden Streams. A 2.5-day weekly fishing period can be expected during the initial opening period scheduled for June 1. Additional open periods will depend on fishery performance.

HUMPBACK (HUMPY) CREEK FISHERY

The Humpy Creek fishery located in the southeastern portion of Yakutat Bay targets pink salmon. An average run is expected at Humpy Creek for the 2011 season based on the 2009 parent year. Inseason management of this fishery will be based on observed pink salmon escapement to Humpy Creek and the availability of pink salmon in the Yakutat Bay fishery. Escapement goals (peak aerial count) of 3,300 to 8,000 pink salmon in even years and 7,000 to 18,000 pink salmon in odd years have been established for Humpy Creek. There has not been a directed fishery on Humpy Creek since 1988.

ITALIO RIVER

The Italo River is located adjacent to the Akwe River. The Italo supports small runs of sockeye and coho salmon. The course of the Italo River changed and flowed into the lower Akwe River during the winter of 1986/1987 and both rivers now share a common mouth. Both Italo and Akwe salmon stocks are present in this area and for some distance upstream in each river. Determination of Akwe or Italo run strengths based on fishing success in the junction area is not possible. Therefore, the junction and a portion of each river above the junction is closed to set gillnet fishing.

The Italo River sockeye salmon fishery has not been open since 1987. When the Italo River changed channel and entered the Akwe River lagoon, the homing ability of Italo River sockeye salmon may have been negatively affected. As a result, it may take several years for the productivity of the Italo River sockeye stock to return to historic levels. The Italo River fishery may open by emergency order if good escapements are observed. Prior to 2002 an escapement goal of 2,500 to 7,000 sockeye was established for the Italo River. Based on an analysis

completed in the winter of 2002–2003 the escapement goal for the Italo was rescinded and no formal goal is in place due to changes in productivity of the system.

YAKATAGA DISTRICT

The Yakataga District is not expected to be open during the sockeye season in 2011. It will open by emergency order in early August based on coho escapement.

2011 FALL MANAGEMENT PLAN

Fall fishing is directed primarily at harvesting coho salmon, although sockeye as well as fall chum salmon can contribute to the catches on the East River. The fall fishing season generally will start on the first Sunday of August. At that time, the regulatory weekly fishing period changes in most areas to a 12:01 p.m. opening, and 12:00 noon, closing time. During the fall, set gillnet fishing occurs in both the Yakutat and Yakataga Districts. In the Yakutat District, the fall coho salmon fishery occurs primarily in the same areas as the summer sockeye salmon fishery. In the Yakataga District, there are areas where only coho salmon fishing takes place.

Overall catches and escapements of coho salmon in the Yakutat area were average to slightly above average in the parent year (2007). The peak escapement count for Situk River coho was within the BEG range of 3,300 to 9,800 fish. The upper end of the goal range was attained in the Tsiu River, though no late surveys were flown due to inclement weather. Although the parent year return was above average, coho salmon returns since 2003 have been average to below average for the most part. The 2011 coho salmon run is expected to be average to above average Area-wide.

A potential concern regarding Yakutat area coho salmon is based on both climatic and geological effects. Yakutat has been through an eight-year period of drought. The land is rising away from the water table due to some of the highest rates of isostatic rebound found in the world. These factors dramatically affect fresh water rearing habitat for coho salmon. Forest Highway 10 crosses many streams, tributaries of the Situk and Ahrnklin Rivers and of Seal Creek. At least five of these streams, although listed in the Anadromous Stream Catalog as important for both spawning and rearing of coho salmon, no longer exist. These streams have not had any water in them at all for almost eight years. It is possible that these events will negatively impact coho salmon production in the Yakutat area.

YAKUTAT DISTRICT

Fall fishing will begin on Sunday, August 7 in the Yakutat District, except in the East River where management will continue to be based on sockeye salmon run strength through most of August and into September. The initial fishing periods can be expected to extend from 12:01 p.m. Sunday through 12:00 noon Wednesday. Inseason management of all Yakutat District fall fisheries will be based on fishery performance data and inseason coho escapement surveys.

The following BEGs have been established for coho salmon in the Yakutat District: East River 2,500 to 8,500; Akwe River 1,800 to 5,000; Italo Rivers 1,400 to 3,600; Situk River 3,300 to 9,800. The Lost River has a newly adopted SEG threshold of 2,200 coho salmon.

Fishing time and area adjustments will be made for each river as needed for conservation. A closed area can be expected in the Yahtse River to protect schools of milling coho salmon at tributary mouths. The actual closed water area will be based on inseason observations of coho

schooling behavior, which is related to river flow conditions. Several small coho streams are located along the forelands west of the Yahtse River to Cape Yakataga. Most of these streams have very small numbers of spawning coho and cannot support in-river set gillnet fisheries. The area from the Yahtse River to Cape Yakataga will remain closed until harvestable surpluses are evident.

YAKATAGA DISTRICT

The major fisheries in the Yakataga District occur for coho salmon on the Kaliakh and Tsiu Rivers, located about 125 miles northwest of Yakutat. The Tsiu River is the more productive of the two rivers; in recent years, catches have averaged about 44,000 coho salmon. The Kaliakh River had minor recorded effort in 2004, no effort in 2005, and minor effort again in 2006, 2007, and 2008. It was not fished in 2009 and recorded minor effort in 2010. The Tsiu recorded minor effort in 2004 and supported a more normal fishery from 2005 through 2010. Prior to 2004 it had not been fished since 2001 due to market conditions. The parent-year (2007) escapement count of 14,000 coho salmon was within the BEG range of 10,000 to 29,000 fish and was recorded well before the end of the coho salmon fishery. No later surveys were flown. The Kaliakh was not surveyed in 2007. The 2011 coho salmon return is expected to be average in both the Tsiu and Kaliakh Rivers. The BEG range for the Kaliakh is 4,000 to 14,000 coho salmon.

The Tsiu River will open by Emergency Order and opening dates and fishing periods will be determined from observed escapements above and below the regulatory markers. The Kaliakh River weekly fall fishing periods will normally open from 9:00 a.m., Sunday through 9:00 a.m., Wednesday, beginning on August 1. Market conditions will determine whether or not the Yakataga District is fished in 2011. The area is remote and fish must be flown to markets. It is possible that it will be economically unfeasible to fish the district.

2011 SALMON RUN EXPECTATIONS

SOCKEYE SALMON

Alsek River

The parent-year sockeye salmon escapement was approximately 13,400 through the Klukshu River Weir. A total catch of around 10,000 to 16,000 sockeye salmon is expected in 2011.

East River

The parent year escapement was approximately 40,000 sockeye salmon. A normal return this year could lead to a catch of approximately 5,000 to 10,000 fish.

Akwe River

The parent year sockeye salmon harvest was 24,000 fish. A peak escapement count of 200 sockeye salmon was obtained for the Akwe in 2007. The Akwe has shown above average sockeye salmon production in recent years. A catch of 5,000 to 7,500 sockeye salmon is expected based on parent year performance and recent fishery trends.

Italio River

Parent-year escapements were low and it is unlikely there will be a directed sockeye salmon fishery in the Italio River in 2011.

Situk River

The parent-year escapement was approximately 90,400 sockeye salmon. A catch of around 70,000 to 90,000 with an escapement of about 60,000 sockeye salmon is expected.

COHO SALMON

Tsiu/Kaliakh River

If there is any effort, a catch of over 60,000 coho may be possible in the Tsiu River in 2011. In the Kaliakh River, a harvest of 1,000 to 3,000 coho salmon is possible.

Areawide

Parent-year escapements were average to slightly above average in most areas. Based on recent trends in the fishery, the run is expected to be average to above average. The area wide set gillnet catch is expected to be about 80,000 to 125,000 coho salmon, but effort and how it is distributed throughout the area, will largely determine how many coho are harvested.

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