

Regional Information Report No. 1J17-07

2017 Yakutat Set Gillnet Fishery Management Plan

by

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May 2017

Alaska Department of Fish and Game

Division of Commercial Fisheries



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

REGIONAL INFORMANTION REPORT 1J17-07

2017 YAKUTAT SET GILLNET FISHERY MANAGEMENT PLAN

by
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ABSTRACT

The 2017 Yakutat set gillnet fishing season and fishing periods will open by regulation on Sunday as described in 5 AAC 30.310 and 5 AAC 30.320. The Alsek River will open on Sunday, June 4, Yakutat Bay and Dangerous River will open on Sunday, June 11, and the Situk-Ahrnklin Inlet and Manby Shore Outside Waters will open on Sunday, June 18. All Yakutat District fisheries will be open by Sunday, June 25 with the exception of the East Alsek, Akwe, and the Italio rivers which will open by emergency order when desired sockeye escapement levels can be documented. 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 management emphasis will transition to coho salmon. No formal preseason forecasting exists for the Yakutat salmon runs with the exception of Situk River Chinook salmon. The 2017 Situk River Chinook salmon preseason forecast is for a total run size of 475 large fish, resulting in no directed fisheries. Commercial, sport, and subsistence fisheries in the Situk River will remain closed until the escapement goal range for Chinook salmon is attained. Returns are expected to be average to above average for sockeye and coho salmon.

Key words: Yakutat, Yakutat Management Area (YMA), commercial set gillnet, fishing seasons, fishing periods, Chinook, sockeye, coho, pink and chum salmon, Biological Escapement Goals (BEGs), Sustainable Escapement Goals (SEGs), fishery management plan, preseason run expectations, forecasts.

INTRODUCTION

This management plan provides the expected run outlooks and harvest projections for the Yakutat commercial set gillnet fisheries in 2017.

The Yakutat Management 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 sockeye, Chinook, coho, 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. A power and hand-troll fishery also occurs and is managed out of the Sitka Fish and Game office. Approximately 170 commercial set gillnet limited entry permits are renewed annually. Set gillnet 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 set gillnet fisheries in the Yakutat area, although only about half of the available fisheries have been actively fished in recent history. Most of these fisheries target sockeye salmon from 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 (Humpy Creek). Historically, Humpy Creek supported a prolific commercial pink salmon fishery but there has been no reported harvest since 1996. With boom and bust returns and average prices of less than \$.05/lb., fishermen target other species of higher commercial value. The highest concentration of fishing effort in the Yakutat District occurs in the Situk-Ahrnklin Inlet and Yakutat Bay. Set gillnet fisheries in the Yakataga District predominantly harvest coho salmon. The primary fisheries for coho salmon occur in the Situk and Tsiu rivers.

The Situk and Alsek rivers are considered Pacific Salmon Treaty (Treaty) indicator stocks. There are seven Treaty indicator stocks in Southeast Alaska and escapement goals were not achieved for any of the seven Treaty indicator stocks in 2016. The department is taking strict conservation

measures for these stocks in 2017. The Yakutat Area Treaty stocks will also be managed with conservative time and area to protect returning Situk and Alsek rivers Chinook 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 Management Area from Monday to Sunday of each week starting in June.

2017 SALMON RUN EXPECTATIONS

The Alaska Department of Fish and Game (ADF&G) does not produce formal run forecasts for salmon runs in the Yakutat Area except for Situk River Chinook salmon. Area managers prepare harvest projections or harvest outlooks for the major fisheries in the area. Projections are based on parent-year escapements, trends in the commercial harvest, rearing conditions, and information on year-class strength. The overall Yakutat Area salmon runs are expected to be average to above average in 2017. The Situk River Chinook salmon run is expected to be below average. The Alsek River Chinook salmon run is expected to be average. Detailed projections by specific drainage area are presented on pages 6–12.

SOCKEYE SALMON

Alsek River

The overall Alsek River drainage sockeye salmon run is expected to be 74,000 fish: this is above the recent 10-year average run size estimate of 64,000 sockeye salmon. The 2012 parent-year sockeye salmon escapement through the Klukshu River weir was 17,000 fish. A total harvest of 5,000–13,000 sockeye salmon is expected in 2017.

East River

The parent year (2013) escapement was approximately 26,000 sockeye salmon. A normal run this year could lead to a harvest of 10,000–15,000 fish.

Akwe River

The parent year (2012) sockeye salmon harvest was 6,000 fish with a peak escapement count of 2,200 fish. The Akwe River has shown below average sockeye salmon production in the last few years. The fishery will not open until desired levels of escapement are observed. A harvest of 1,500–3,000 sockeye salmon is expected based on parent-year performance and recent fishery trends.

Italio River

The 2012 and 2013 parent-year escapements were 800 and 900 fish respectively. It is unlikely there will be a directed sockeye salmon fishery in the Italio River until adequate escapement levels are documented.

Situk River

The parent-year (2012) escapement was 62,000 sockeye salmon. A harvest of 30,000–50,000 with an escapement of approximately 80,000 sockeye salmon is expected. Sockeye salmon harvest and escapement may be affected by Chinook salmon conservation measures.

COHO SALMON

Tsiu/Kaliakh River

The parent-year (2013) escapement was 47,000 coho salmon, above the BEG of 10,000-29,000 fish. If there is any effort, a harvest of over 30,000 coho may be possible in the Tsiu River in 2017. In the Kaliakh River, a harvest of 1,000–3,000 coho salmon is possible.

Area wide

Parent-year escapements were average to above average in most systems. Based on recent trends in the fishery, the run is expected to be average in 2017. The area wide set gillnet harvest is expected to be 90,000–130,000 coho salmon. Effort, and how it is distributed throughout the area, will largely determine how many coho salmon are harvested.

CHINOOK SALMON

Situk River

The point estimate for the preseason Situk River Chinook salmon forecast in 2017 is 475 large (3-ocean age and older) fish. The commercial, sport, and subsistence fisheries will remain closed until the Chinook salmon BEG is attained.

Alsek River

Chinook salmon returns to the Alsek River are expected to be above average and above the BEG of 800-1,200 fish. The Canadian preseason forecast is for 1,400 Chinook salmon at the Klukshu River weir.

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. During periods of poor production, managers often have to curtail or even close fisheries to pass enough fish to the spawning grounds to maintain adequate levels of spawning abundance. 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) and Sustainable Escapement Goals (SEG) have been established for all major index areas and salmon species in the Yakutat Area (Table 1). Ground and aerial surveys are conducted annually on several drainages to monitor escapement and assure escapement goals are achieved.

During 2017, the major fishing areas can be expected to open on the dates shown in Table 2.

Table 1.–Yakutat area salmon escapement goals.

Species	System	Range	Goal Type	Year Established
Chinook	Klukshu River (Alsek River)	800–1,200	BEG	2013
	Alsek River (total)	3,500–5,300	BEG	2013
	Situk River	450–1,050	BEG	2003
Sockeye	East Alsek-Doame River	13,000–26,000	BEG	2003
	Klukshu River	7,500–11,000	BEG	2013
	Lost River	1,000	SEG	2009
	Situk River	30,000–70,000	BEG	2003
Coho	Lost River	1,400–4,200	BEG	2015
	Situk River	3,300–9,800	BEG	1994
	Tsiu/Tsivat Rivers	10,000–29,000	BEG	1994
Pink	Situk River ^a	33,000	SEG	2012

^a The escapement goal is for 33,000 pink salmon through the weir by August 5.

Table 2.–Opening dates for Yakutat Area fisheries in 2017.

Yakutat District		
Area	Opening Date	
Alsek River	4 June	
Dangerous River	11 June	
Yakutat Bay (south of 59°40' N lat.)	11 June	
Manby Shore Ocean	18 June	
Situk-Ahrnklin Inlet	18 June	
Lost River	by Emergency Order	
East River	by Emergency Order	
Akwe River	25 June or by Emergency Order	
Manby Shore Inside	25 June	
Remainder of the Yakutat District	25 June	
Italio River	by Emergency Order	
Yakataga District		
Season	Area	Opening Date
Sockeye salmon	All areas	by Emergency Order
Coho salmon	Kaliakh River	6 August
	Tsiu River	by Emergency Order (around August 18)

2017 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 Biologists listed at the end of the plan. Most Yakutat gillnet openings for sockeye salmon will generally be from 6:00 a.m., Sunday through 6:00 p.m., Tuesday, with the exception of the Alsek River which initially opens from 12:01 p.m., Sunday through 12:00 noon, Monday unless extensions are announced. The East River will open when the lower bound of the BEG of 13,000 sockeye salmon has been attained. In 2017, the Alsek River will open on the first Sunday in June (June 4), Yakutat Bay and Dangerous River will open on the second Sunday in June (June 11), and Situk-Ahrnklin Inlet and Manby Shore Outside Waters will open on the third Sunday in June (June 18). By the fourth Sunday in June (June 25), all fisheries in the Yakutat District will be open with the exception of the East and the Italio rivers, which will open by emergency order if returns are surplus to escapement needs.

ALSEK RIVER

Commercial salmon landings from the Dry Bay fisheries averaged approximately 16,500 sockeye, 250 coho, and 500 Chinook salmon annually from 2012 through 2016. Canada's subsistence and sport harvest has averaged approximately 75 Chinook, 1,000 sockeye, and small numbers of coho salmon during the same period. Subsistence and sport fisheries in the Alaska portion of the river are relatively minor, harvesting about 200 salmon annually.

The principal escapement monitoring tool for Chinook and sockeye salmon stocks in the Alsek River is the Klukshu River weir. The Klukshu River is a tributary of the Tatshenshini River which in turn is a tributary of the Alsek River. Klukshu River salmon stocks represent an assumed large and variable portion of the total Alsek River salmon escapement.

Based on current stock-recruitment analysis, the recommended range of Klukshu River escapements that appears most likely to produce optimum yields is 800–1,200 Chinook salmon. Chinook salmon productivity has been in decline and the BEG was not achieved in 2005–2008, 2012, and 2016. The Klukshu River Chinook salmon brood year escapements in 2012 and 2013 were 693 and 1,227 Chinook salmon, respectively. These were below and above the revised escapement goal range. Based on these primary brood year escapements, the production outlook for 2017 is 1,400 Klukshu River Chinook salmon; this is slightly below the recent 10-year average of approximately 1,500 fish.

The Klukshu River sockeye salmon BEG range of 7,500-15,000 fish was also recently revised. The current Klukshu River sockeye salmon BEG is 7,500-11,000 fish, plus 3,000 sockeye salmon as per the 2009–2018 agreement reached during the U.S./Canada Pacific Salmon Treaty negotiations in February 2008. The BEG was not met in 2016. The 2017 overall Alsek drainage sockeye salmon run is expected to be approximately 74,000 fish; this is above the recent 10-year average run size of approximately 64,000 sockeye salmon. The outlook for 2017 is based on a predicted run of 17,000 Klukshu River sockeye salmon. Principal contributing brood years will be 2012 (Klukshu River escapement of 17,200 sockeye salmon) and 2013 (Klukshu River escapement of 3,800 sockeye salmon). The 10-year average Klukshu River sockeye salmon escapement is approximately 10,800 fish.

Coho salmon counted through the Klukshu River weir is only an index and not indicative of total escapement because the weir is removed before the run is over. There is no formal escapement

goal for coho salmon. The coho salmon escapements at the Klukshu river weir during the contributing brood year in 2013 (7,300 fish) and 2014 (300 fish) suggests the run in 2017 will be above average. The recent 10-year average weir count is approximately 2,200 coho salmon.

In 2017, the Alsek River commercial set gillnet fishery will be managed conservatively through statistical week 29 due to uncertainty in recent forecasts and failure to meet the escapement goal in 2016. Conservative management will be in effect until it can be ascertained that the Chinook and sockeye salmon BEGs will be attained. 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 4). Weekly openings will initially be set at 24 hours. The duration of weekly fishing periods will be based on a comparison of inseason fishery performance data (CPUE) to historical fishery performance data, as well as Klukshu River weir data. Fishing times may be extended when CPUE warrants. The Alsek River surf fishing area is expected to be open during the same periods as the inriver fishery. The surf fishing area includes the shoreline three-quarters of a mile each side of the river mouth seaward to the outermost bar at mean low tide. A six-inch maximum mesh restriction will be in place until July 1 to ensure drainage-wide Chinook salmon escapement levels are achieved.

DANGEROUS RIVER

The Dangerous River will open downstream from the Dangerous River Bridge on June 11. Weekly openings will be from 6:00 a.m., Sunday, through 6:00 p.m., Tuesday, until closed by emergency order. Catch data and fishing effort from this system has been sporadic. During the parent year of 2012, 6 permits fished the Dangerous River and approximately 6,000 sockeye salmon were harvested. This harvest was above the recent five-year average of 4,000 fish. In 2015 and 2016, less than three permits fished and harvest information is confidential. The Dangerous River is seldom fished for coho salmon. Marine waters adjacent to the mouth of the Dangerous will be open for the same fishing periods as the Dangerous River.

YAKUTAT BAY AND MANBY SHORE OCEAN FISHERIES

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 11) for 2.5 days. 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 18) for 2.5 days. Weekly fishing periods will depend on Situk River sockeye salmon run strength. The Manby Shore Inside Waters fishery will open on the fourth Sunday of June (June 25) in streams along the northern shore of Yakutat Bay.

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 salmon harvest was of Situk River 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 salmon from the third week in June through the third week of July. 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.

SITUK-AHRNKLIN INLET

The Situk-Ahrnklin Inlet is the site of the oldest and, historically, most productive fishery in the Yakutat area. Located approximately 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 Inlet harvests have averaged 51,000 sockeye, 100,000 coho, and 33,000 pink salmon (2012–2016). The Situk-Ahrnklin Inlet commercial fishery for Chinook salmon has been closed since 2010.

The 2012 parent-year escapement was 62,500 sockeye salmon; above the midpoint of the BEG range of 30,000–70,000 fish established for the Situk River drainage. Recent trends and return per spawner data indicates that the 2017 Situk River sockeye salmon run could approach 150,000 fish. A mid-range escapement of 50,000 could leave approximately 100,000 fish available for harvest. The Situk-Ahrnklin Inlet will open initially on Sunday, June 18. Fishing periods will be based on fishery performance and escapement through the Situk River weir. The escapement of Chinook and sockeye salmon through the weir serve as an inseason indicator of stock strength. Adjustment to the Situk-Ahrnklin Inlet commercial set gillnet fisheries may be made on the basis of these counts. 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.

The Chinook salmon commercial, subsistence, and sport fisheries in the Situk River drainage are managed under the guidelines of the *Situk-Ahrnklin Inlet and Lost River King Salmon Fisheries Management Plan* (5 AAC 30.365). The Division of Sport Fish provides a formal preseason forecast for Chinook salmon returning to the Situk River. The point estimate for the preseason Situk River Chinook salmon forecast in 2017 is 475 large (3-ocean age and older) fish with a 95% confidence interval of 150 to 800 fish. The Situk River drainage is managed for a BEG range of 450–1,050 large-sized Chinook salmon. Given recent poor production and low escapements, a run of that size in the Situk River is not expected to achieve the escapement goal if normal fisheries are prosecuted. The department plans to implement conservative management actions in 2017.

From 2010 through 2012, and again in 2015 and 2016, the Situk River Chinook salmon stock failed to achieve the BEG. Conservative management actions have been in place since 2010 and during those seven years of conservation, the escapement goal has only been achieved twice. Although the department's conservative plan has been successful in some years, with high variability in recent survivals and uncertainty in forecasts, the department feels that further restrictions are deemed necessary in order to pass as many Chinook salmon as possible to the spawning grounds in an attempt to achieve the Chinook salmon escapement goal.

The department will continue to protect and rebuild the Situk River Chinook salmon stocks in 2017. Efforts to reduce impacts on these stocks will focus on the high abundance Chinook salmon areas and migration corridors in the Situk-Ahrnklin Inlet near the mouth of the Situk River. Management measures anticipated by the department for Chinook salmon conservation during the sockeye salmon fishery in 2017 include:

- a) The area at the mouth of the Situk River that is closed by regulation will be enlarged to encompass the area of high Chinook salmon abundance in the Inlet. Commercial set

gillnet fishing **AND** subsistence fishing is prohibited near the mouth of the Situk River west of a line from an ADF&G regulation marker located at the southeast end of Johnson Slough (59°25.766' N. latitude, 139°33.181' W. longitude), to a regulation marker directly across the Inlet on Black Sand Spit (59°26.430' N. latitude, 139°34.908' W. longitude), to a regulation marker westward along the beach of Black Sand Spit (59°26.430' N. latitude, 139°34.908' W. longitude), to a regulation marker west of the Yakutat Seafoods buying station (59°26.704' N. latitude, 139°34.563' W. longitude). **All waters of Johnson Slough are closed** to commercial fishing until the Chinook salmon run is over, as announced by ADF&G news release.

- b) Chinook salmon may not be sold or 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 (blind, disabled, or 65 years of age or older).
- c) The department requests that permit holders closely attend their gear when it is in fishing configuration and release Chinook salmon alive. The department has no regulatory authority to enforce this measure, but the alternative may be a closure of the fishery for sockeye salmon. 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 Chinook salmon will be closed until the Chinook salmon BEG is attained. 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 18) for a 60-hour period (2.5 days). Subsequent weekly fishing periods may be adjusted as the effectiveness of this plan is evaluated inseason.
- f) The sport fishery for Chinook salmon in the Situk River will be closed due to low projected abundance. Management measures may be adjusted inseason if Chinook returns meet escapement goals.

Management options for maximizing harvest of Situk River pink salmon are limited due to the overlap in run timing with sockeye and coho salmon. The historical BEG for pink salmon in the Situk River of 42,000–105,000 in even years and 54,000–200,000 in odd years was reevaluated in 2010. Given uncertainties regarding total escapements, the revised spawning escapement goal for Situk River pink salmon is now based on a more stable index of escapement. The recommended goal is a lower bound SEG of 33,000 pink salmon counted through the Situk River weir by August 5 (Piston and Heintz 2011). The parent year (2015) escapement past the Situk weir was 74,729 pink salmon and the SEG was achieved.

Steelhead trout in post-spawning condition occasionally accumulate in the Situk River prior to emigrating to the ocean. When the emigration is late, there is a potential for the Situk River 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. Alternately, steelhead may be held upstream from the weir for release during a commercial fishery closure.

LOST RIVER

During the winter of 1998/1999 the Lost River changed course and discharged into the Situk/Ahrnklin Inlet instead of the Gulf of Alaska. The Lost River continues to flow into the Situk/Ahrnklin Inlet today. Lost River stocks have since been harvested incidentally in the Situk-Ahrnklin set gillnet fishery. Since 1999, an area 100-500 yards on either side of the river mouth has been closed to commercial fishing to conserve Lost River salmon. Sockeye salmon productivity in the Lost River has been declining from various causes. In addition to some incidental harvest by the Situk River commercial fishery, evident geological changes are occurring in the drainage. The Lost River is managed to achieve a lower-bound SEG of 1,000 sockeye salmon and an SEG of 1,400–4,200 coho salmon. The Lost River sockeye salmon escapement goal was not attained in 2007–2009 or 2012–2016. Returns of Lost River sockeye salmon in 2017 are expected to be below average based on parent-year escapement and recent trends in low productivity. Restrictions in time and area near the mouth of the Lost River will be implemented until the department can observe desired levels of escapement. The department feels a more conservative approach is deemed necessary for sustaining the health of these stocks.

CLOSED WATERS:

The Lost River inriver fishery will remain closed to commercial fishing for the entire season. In 2017, the area closed to commercial fishing by regulation (5 AAC 30.350 (a)(7)) will be enlarged and announced by ADF&G news release. The intent of this closure is to achieve the escapement goal for sockeye salmon while providing for a normal fishery in the Situk-Ahrnklin Inlet. Regulatory marker placement at the mouth of the Lost River may change by emergency order during the course of the season as escapement or river channel movement warrants.

EAST ALSEK-DOAME RIVERS

The East River will be managed to achieve the BEG of 13,000–26,000 sockeye salmon. Returns to the East River are predominantly age-4 (0.3). The 2013 parent-year escapement was within the BEG range with a peak count of 19,200 sockeye salmon observed on August 1. Escapement will be closely monitored throughout the run and the East River will not open to commercial fishing until the lower bound of the BEG range is attained. The East Alsek River will be managed for sockeye salmon into September. The duration of the weekly fishing periods will be based on escapement observations.

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 2012–2016 average Akwe River harvest was approximately 5,000 sockeye and 35 Chinook salmon. Historically, the Akwe coho salmon harvest has averaged approximately 4,000 fish, but the recent average of 1,000 fish has been due to decreased effort because of market conditions and lack of air transportation in the fall.

The sockeye salmon run to the Akwe River is expected to be average to above average in 2016 based on parent-year fishery performance and effort. The 2012 parent-year harvest of 6,000 sockeye salmon was below the recent five-year average of 9,500 fish. Parent-year escapement

counts were minimal due to the turbidity of the river. The system has undergone geologic change in the last two decades resulting in an increase in water flow from a glacial tributary and a reduction in water clarity that has limited the usefulness of aerial surveys in assessing escapement. An escapement goal (peak aerial count) of 600–1,500 sockeye salmon was once established for the Akwe River. In 2006, the BEG was eliminated as a result of the inability to adequately assess escapement.

Low levels of sockeye salmon escapement were observed in 2016 and the fishery closed on July 17 for the duration of the sockeye salmon fishery. In 2017, the sockeye salmon fishery in the Akwe River will not open until adequate levels of spawning abundance are observed. If a commercial fishery is announced, inseason management will be based on fishery performance and index escapement counts; reductions in the normal 1.5-day weekly fishing period may be necessary to ensure adequate escapement. The Akwe River fishery will take place 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 3.5 river 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 25. Additional open periods will depend on fishery performance.

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 began flowing 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, in order to protect Italo River stocks, fishing is closed to set gillnets from the mouth to 500 yards upstream from the confluence of the New Italo River. 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 affected. As a result, it may take additional time for the productivity of the Italo River sockeye stock to return to historical levels. The Italo River fishery may open by emergency order if adequate escapement is observed. Prior to 2002, an escapement goal of 2,500–7,000 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. Aerial surveys will be conducted throughout the season to monitor run strength. The Italo River sockeye salmon stocks appear to be rebuilding according to recent surveys.

YAKATAGA DISTRICT

The Yakataga District is not expected to be open during the sockeye salmon season in 2017. It will open by emergency order in early August based on coho salmon escapement.

2017 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 begins 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 above average in the parent year (2013). The Situk River peak escapement count of 5,000 coho salmon fell within the BEG range of 3,300–9,800 fish. The 2013 parent-year peak escapement count for Tsiu River coho salmon of 47,000 fish was well above the BEG range of 10,000–29,000 fish. The 2017 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 in a drought stage for nearly a decade. 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 Waters 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 ten 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 6 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 Alsek River will continue to be managed for sockeye salmon CPUE until statistical week 35 (~August 27). 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 salmon escapement surveys.

BEGs were developed for seven Yakutat area coho salmon streams in 1994, based on stock-recruit analyses that contained several untested assumptions, including expansion factors for peak survey counts. Three of the systems have supported only minimal commercial fisheries in recent years and are no longer consistently surveyed for coho salmon escapements. The BEGs for Kaliakh, East Alsek, and Akwe rivers have been eliminated and currently only three systems have escapement goals for coho salmon, one of which is in the Yakataga District. The two coho salmon stocks in the Yakutat District that have escapement goals are the Situk River (BEG of 3,300–9,800 fish) and the Lost River (SEG of 1,400–4,200 fish).

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 inriver 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, harvests have averaged 36,000 coho salmon. The Kaliakh River has not been fished in the last six years and had only minor effort in 2004 and from 2006 through 2010. The Tsiu River recorded minor effort in 2004 and supported a more normal fishery from 2005 through 2013. Fishing effort has diminished the last three years due to changes in the river with fewer areas to fish and minimal air transportation. The parent-year (2013) escapement count of 47,000 coho salmon was well over the BEG range of 10,000–29,000 fish. No surveys were flown after September 20 due to inclement weather. The Kaliakh has not been surveyed since 2007. The 2017 coho salmon return is expected to be average to above average in both the Tsiu and Kaliakh Rivers.

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. Due to either extremely low water levels or major geological changes in the Tsiu River, the regulatory markers have been moved annually to ensure adequate escapement before opening the commercial fishery. Changes in the river occur annually and it should be expected that the regulatory markers will be moved again in 2017. 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 6. Market conditions will determine whether or not the Yakataga District is fished in 2017. The area is remote and fish must be flown to Yakutat for processing at a high expense. It is possible that it will be economically unfeasible to fish the district.

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