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Annual Management Report Yukon Area, 2012

by

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Alaska Department of Fish and Game **Division of Commercial Fisheries**

Symbols and Abbreviations

The following symbols and abbreviations, and others approved for the Système International d'Unités (SI), are used without definition in the following reports by the Divisions of Sport Fish and of Commercial Fisheries: Fishery Manuscripts, Fishery Data Series Reports, Fishery Management Reports, and Special Publications. All others, including deviations from definitions listed below, are noted in the text at first mention, as well as in the titles or footnotes of tables, and in figure or figure captions.

Weights and measures (metric)

centimeter	cm
deciliter	dL
gram	g
hectare	ha
kilogram	kg
kilometer	km
liter	L
meter	m
milliliter	mL
millimeter	mm

Weights and measures (English)

cubic feet per second	ft^3/s
foot	ft
gallon	gal
inch	in
mile	mi
nautical mile	nmi
ounce	oz
pound	lb
quart	qt
yard	yd

Time and temperature

day	d
degrees Celsius	°C
degrees Fahrenheit	°F
degrees kelvin	K
hour	h
minute	min
second	s

Physics and chemistry

all atomic symbols	
alternating current	AC
ampere	A
calorie	cal
direct current	DC
hertz	Hz
horsepower	hp
hydrogen ion activity (negative log of)	pH
parts per million	ppm
parts per thousand	ppt, ‰
volts	V
watts	W

General

Alaska Administrative Code	AAC
all commonly accepted abbreviations	e.g., Mr., Mrs., AM, PM, etc.
all commonly accepted professional titles	e.g., Dr., Ph.D., R.N., etc.
at	@
compass directions:	
east	E
north	N
south	S
west	W
copyright	©
corporate suffixes:	
Company	Co.
Corporation	Corp.
Incorporated	Inc.
Limited	Ltd.
District of Columbia	D.C.
et alii (and others)	et al.
et cetera (and so forth)	etc.
exempli gratia (for example)	e.g.
Federal Information Code	FIC
id est (that is)	i.e.
latitude or longitude	lat or long
monetary symbols (U.S.)	$, ¢
months (tables and figures): first three letters	Jan,...,Dec
registered trademark	®
trademark	™
United States (adjective)	U.S.
United States of America (noun)	USA
U.S.C.	United States Code
U.S. state	use two-letter abbreviations (e.g., AK, WA)

Mathematics, statistics

all standard mathematical signs, symbols and abbreviations	
alternate hypothesis	H_A
base of natural logarithm	*e*
catch per unit effort	CPUE
coefficient of variation	CV
common test statistics	(F, t, χ^2, etc.)
confidence interval	CI
correlation coefficient (multiple)	R
correlation coefficient (simple)	r
covariance	cov
degree (angular)	°
degrees of freedom	df
expected value	*E*
greater than	>
greater than or equal to	≥
harvest per unit effort	HPUE
less than	<
less than or equal to	≤
logarithm (natural)	ln
logarithm (base 10)	log
logarithm (specify base)	$\log_2$, etc.
minute (angular)	'
not significant	NS
null hypothesis	H_O
percent	%
probability	P
probability of a type I error (rejection of the null hypothesis when true)	α
probability of a type II error (acceptance of the null hypothesis when false)	β
second (angular)	"
standard deviation	SD
standard error	SE
variance	
population	Var
sample	var

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The Regional Information Report Series was established in 1987 and was redefined in 2007 to meet the Division of Commercial Fisheries regional need for publishing and archiving information such as area management plans, budgetary information, staff comments and opinions to Alaska Board of Fisheries proposals, interim or preliminary data and grant agency reports, special meeting or minor workshop results and other regional information not generally reported elsewhere. Reports in this series may contain raw data and preliminary results. Reports in this series receive varying degrees of regional, biometric and editorial review; information in this series may be subsequently finalized and published in a different department reporting series or in the formal literature. Please contact the author or the Division of Commercial Fisheries if in doubt of the level of review or preliminary nature of the data reported. Regional Information Reports are available through the Alaska State Library and on the Internet at: http://www.adfg.alaska.gov/sf/publications/.

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ABSTRACT

The 2012 Yukon Area management report summarizes management activities of the Alaska Department of Fish and Game, Division of Commercial Fisheries in the Yukon Area of Alaska. The report details the use of Yukon Area salmon species in 2012 by commercial, subsistence (Aboriginal), personal use (domestic), and sport (recreational) fisheries. Alaska and Canada fisheries are summarized because the Yukon River is a transboundary river. It also provides a summary of governing organizations and actions that influenced fisheries management in 2012. The report summarizes Yukon River salmon age and sex composition sampling efforts and escapement estimates at assessment projects (complete documentation of assessment projects and results may appear in separate reports).

Key words Chinook salmon *Oncorhynchus tshawytscha*, chum salmon *Oncorhynchus keta*, coho salmon *Oncorhynchus kisutch*, Pacific herring *Clupea pallasii*, whitefish *Coregonus*, Arctic lamprey *Lethenteron camtschaticum*, escapement, commercial harvest, subsistence harvest, season outlook, Yukon River Panel, Yukon Area, Yukon River.

INTRODUCTION

This report summarizes the 2012 season and provides information concerning the management of the subsistence, commercial, and personal use salmon fisheries in the Yukon Area (Figure 1) within the Arctic-Yukon-Kuskokwim (AYK) Region. Harvest information and data collected from selected management and research projects are included. Summaries of the 2012 commercial whitefish *Coregonus* and commercial lamprey *Lethenteron camtschaticum* are on file with the AYK Management Group, Division of Commercial Fisheries in Anchorage. There was no commercial harvest of herring *Clupea pallasii* in the Cape Romanzof District in 2012. Comprehensive information regarding the Alaska and Canadian Yukon River drainage fisheries, including historical harvest and escapement information are published by year in the *Annual management report, Yukon Area* (e.g. Estensen et al. 2013).[1]

PRESEASON CHINOOK SALMON MANAGEMENT STRATEGY

In 2012, the drainagewide run outlooks were 109,000–146,000 Chinook *Oncorhynchus tshawytscha* and 1.5–2 million summer chum *O. keta* salmon (JTC 2013). The Yukon River Drainage Fisheries Association (YRDFA) facilitated an in-person preseason meeting to provide managers, fishermen, tribal council representatives, and other stakeholders the opportunity to share information, provide input, and discuss management options. Based on input from this meeting, a preseason management plan was developed for the Yukon River summer season fishery. The preseason plan included the following key components:

- Initial management would be based on preseason projections and shift to inseason assessment information as runs developed.
- Escapement in both Alaska and Canada would be maintained as the highest management priority, with the Canadian interim management escapement goal (IMEG) of 42,500–55,000 Chinook salmon as the highest concern.
- The preseason border passage objective was approximately 50,000 Chinook salmon based upon the IMEG and harvest sharing agreement.
- Providing for subsistence fishing opportunity would remain the highest priority use.
- It was unlikely there would be any directed Chinook salmon commercial openings.
- The regulatory subsistence salmon fishing schedule would begin May 31 in District 1 and be implemented chronologically with the upriver migration.

[1] Current and historical Division of Commercial Fisheries reports are available in the publications database: http://www.adfg.alaska.gov/sf/publications/

- To conserve the greatest number of Canadian-origin Chinook salmon, fishing time on the first pulse of Chinook salmon would be reduced. Beginning in District 1, one fishing period would be closed (approximately 5 day closure) and this action would be similarly implemented in upriver fishing districts and subdistricts, based on migratory timing.
- If inseason assessment indicated Chinook salmon run strength continued to be poor after closing the first period, additional periods may be closed or subsistence fishing time may be reduced.
- Due to the considerable distance between the upper and lower boundaries in some districts and subdistricts, it was anticipated that these areas would be further subdivided and managed separately.
- All Tanana River fisheries would be managed to meet Chinook salmon escapement goals for the Chena and Salcha rivers.
- In the sport fishery, retention of Chinook salmon would not be permitted in the mainstem Yukon River. In the Yukon River tributaries (excluding the Tanana River drainage), the Chinook salmon bag and possession limit would be reduced from 3 to 1 fish.
- A surplus of summer chum salmon was anticipated above escapement and subsistence needs. However, the extent of a directed chum commercial fishery would be dependent upon the strength of the Chinook salmon run. and;
- It was anticipated that the sale of incidental Chinook salmon harvested during summer chum salmon commercial fishing periods would be prohibited.

Since 2001, the subsistence salmon fishery has operated on a schedule established by the Alaska Board of Fisheries (BOF) and implemented by ADF&G, which is chronologically consistent with migratory timing as the run progresses upstream. Subsistence fishing is open 7 days per week until the schedule is established. The subsistence salmon fishing schedule was based on current or past fishing schedules and provided reasonable opportunity for subsistence salmon fishing during years of normal to below average runs. The objectives of the schedule were to: 1) reduce harvest early in the run when there was a higher level of uncertainty, 2) spread the harvest throughout the run to reduce harvest impacts on any particular component of the run, and 3) distribute subsistence fishing opportunity among all users during years of low salmon runs.

SUMMER SEASON SUBSISTENCE SALMON FISHERY SUMMARY

Management of the 2012 summer salmon season was particularly challenging due to the wide disparity in run strength between the overlapping Chinook and summer chum salmon runs. Efforts to conserve Chinook salmon were initiated at the beginning of the run and intensified as the season progressed to protect the run all the way to spawning areas in both Alaska and Canada. Subsistence closures were utilized to provide protection to the first and second pulses. Gear restrictions and reductions in subsistence fishing periods were utilized to provide further protection for the later pulses. Gear restrictions were primarily implemented to allow fishermen the opportunity to harvest summer chum salmon while still conserving Chinook salmon. Furthermore, subsistence fishing opportunity with gear restrictions was implemented in the Coastal District, Districts 1–3, and Subdistrict 4-A, where summer chum salmon were available to harvest. Subdistricts 4-B and 4-C, and District 5 did not have mesh size restrictions due to the lack of gear and/or the lack of summer chum salmon in the area. These areas were restricted with further reduced fishing time to protect Chinook salmon. Some fishermen reported voluntarily

lowering their Chinook salmon subsistence harvest to protect the weak run, opting to shift their harvest to alternative fish species to provide for their subsistence needs. Other fishermen chose to maximize their harvest by fishing harder when given the limited opportunity.

Based on the preseason projection, the Chinook salmon run was expected to be large enough to provide for escapement but not large enough to meet all subsistence use. Consistent with preseason management strategies, a conservative management plan was initiated early in the season. On May 31, the regulatory subsistence salmon fishing schedule was implemented in District 1, and was then chronologically implemented in upriver districts consistent with migratory timing.

Based on historical run timing information, the first pulse of Chinook salmon was expected to migrate past the southern portion of the Coastal District during the second week of June. To provide protection to Chinook salmon migrating along the coastline to the Yukon River mouth, gillnet fishing gear was restricted to 6.0 inch or smaller mesh size from June 6 through June 12 in the southern portion of the Coastal District. However, the Chinook salmon run appeared to be tracking later than average. In response to the slowly developing Chinook salmon run, gillnet gear was restricted to 6.0 inch or smaller mesh in Districts 1 and 2 beginning June 18 and June 20, respectively. Based on inseason information, a subsistence salmon fishing period was cancelled to protect the first pulse beginning in District 1 on June 20 and implemented chronologically as the pulse migrated upriver. To ensure full protection of Chinook salmon pulses through Subdistricts 4-A and 5-D, these long subdistricts were further subdivided into smaller areas.

As the run further developed inseason, assessment information indicated that the Chinook salmon run size would probably be near or below the lower end of preseason projection (109,000–146,000). Consequently, it became apparent that further conservation measures would be required to meet escapement goals. The southern portion of the Coastal District was restricted to 6.0 inch or smaller mesh size for the remainder of the season. In the northern portion of the Coastal District, as well as Districts 1–5, a second pulse closure was implemented immediately following the first pulse closure. This created a continuous closure of the first and second pulses. The second pulse closure was followed by a reduced subsistence fishing period in Districts 1–4. These reduced subsistence periods were implemented to provide fishermen opportunity to harvest some summer chum salmon while conserving Chinook salmon.

Subdistrict 5-D was divided into 3 separate subdistricts (Figure 2) to better manage fish as they moved through this large area and meet the IMEG into Canada. Beginning July 12, the lower Subdistrict 5-D was closed to subsistence salmon fishing to protect the first and second pulses. The middle and upper Subdistrict 5-D areas were also closed as the fish migrated through the area, on July 15 and July 17, respectively. Unfortunately, due to the low passage numbers at the Eagle sonar, it was necessary to further restrict all of Subdistrict 5-D to achieve the Canadian stock IMEG. After allowing 1 short, 36-hour subsistence salmon fishing period in each area of Subdistrict 5-D, subsistence salmon fishing was closed in Subdistrict 5-D for the remainder of the summer season. Subsistence closures were most pronounced in Subdistrict 5-D because management options, such as gear restrictions were not implemented to allow harvest of summer chum salmon. Unfortunately, very few summer chum salmon were headed for the upper portion of the Yukon River above the confluence of the Tanana River.

Conservative management actions were also taken in Yukon River tributaries to protect Alaska Chinook salmon stocks. Gillnets were restricted to 6.0 inches or smaller mesh size in the Innoko River from June 24 through July 18, and in the Koyukuk River from July 3 to July 22.

In the Tanana River, Subdistricts 6-A and 6-B, including the Old Minto Area, subsistence salmon fishing gear was restricted to fish wheels, which had to be equipped with a chute, had to be attended while in operation, and all Chinook salmon caught had to be returned to the water alive. These restrictions were in effect from July 20 through July 25. Additionally, personal use salmon fishing in Subdistrict 6-C was closed from July 20 through July 29.

SUMMER SEASON COMMERCIAL SALMON FISHERY SUMMARY

In response to a poor Chinook salmon run and the need to fulfill the Canadian border passage objective based upon the IMEG, meet Alaska escapement needs, and provide for subsistence uses, no commercial periods targeting Chinook salmon were allowed in the Yukon River mainstem or in the Tanana River in 2012.

The summer chum commercial salmon fishery was delayed until the midpoint of the Chinook salmon run to reduce incidental harvest of Chinook salmon. At that time, a harvestable surplus of summer chum had been identified and a total run size of approximately 2 million summer chum salmon were projected based on Pilot Station sonar. The first summer chum salmon directed commercial periods took place on June 29 in District 1 and on July 2 in District 2. Gillnet gear was restricted to 6.0 inch or smaller mesh throughout the commercial season. Concurrent subsistence and commercial fishing periods in Districts 1 and 2 were instituted intermittently throughout the season, primarily early in the summer chum salmon commercial season when the subsistence schedule was still in effect. The intent of concurrent openings was to streamline commercial and subsistence fishing into a single event harvest, therefore reducing the amount of time that Chinook salmon were susceptible to harvest.

The sale of incidentally caught Chinook salmon was not allowed per emergency order during the summer season because subsistence fishing had been restricted during the season in Districts 1-5. This action helped ensure fishermen would not target Chinook salmon during commercial fishing periods. Fishermen could release any incidentally caught live Chinook salmon or use them for subsistence purposes. In Districts 1 and 2, fishermen could donate them to the local processor who would process the fish and deliver them free of charge to communities upriver that wanted them for subsistence use.

ADF&G took further measures to provide commercial summer chum salmon harvest opportunities while still protecting Chinook salmon. Using inseason assessment and run timing information, portions of districts that indicated a low abundance of Chinook salmon were opened to summer chum directed commercial fishing. Moreover, commercial fishing was limited to areas and or times in which incidental harvest rates were anticipated to be low. The area opened to commercial fishing in Periods 1–8 in District 1 were restricted to the South Mouth only. This action was taken because Chinook salmon abundance was low in the South Mouth and Chinook salmon were entering the river primarily through the North and Middle Mouths at this point in the season, similar to 2011. The area open to commercial fishing included waters from the lower point of Head of Passes downstream to Chris Point, both of which were identified by an ADF&G regulatory marker, and included Black River, Kwiguk Pass, and coastal waters from Chris Point to 1 mile north of Kwiguk Pass. North and Middle Mouth passes north of the mainstem South Mouth were closed to commercial fishing. Unfortunately, this strategy of limiting the area open

to commercial fishing to minimize the incidental harvest of Chinook salmon was more difficult to implement in District 2. As the Yukon River becomes more channelized in this area, salmon from each of the mouths are present. The first District 2 commercial fishing period was restricted to down river from the confluence of the Andreafsky River and Yukon River, marked by the downstream ADF&G regulatory marker, to the Districts 1 and 2 boundary line at the Anuk River to protect Chinook salmon above the Andreafsky River. The second and third District 2 commercial fishing periods were restricted to down river of the slough at the community of Pilot Station to the Districts 1 and 2 boundary to protect Chinook salmon still migrating above Pilot Station. During the season, ADF&G scheduled 10 commercial fishing periods in District 1 and 6 periods in District 2.

Any Chinook salmon caught but not sold must be reported on fish tickets. A total of 2,421 Chinook salmon were reported as incidentally harvested in Districts 1 and 2 during the summer season. The prohibition of Chinook salmon sales continued through the fall season. A total of 103 Chinook salmon were caught but not sold in the fall season. Genetic mixed stock analysis of incidentally caught Chinook salmon in the summer chum commercial fishery revealed that approximately 30% of the Chinook salmon caught were of Canadian-origin. The combined cumulative summer chum salmon commercial harvest in Districts 1 and 2 was 207,849 fish (Table 1).

In Subdistrict 4-A, 1 buyer operated out of Kaltag and targeted summer chum salmon. New regulations adopted by the BOF in March 2012 allowed ADF&G to open summer chum salmon directed commercial fishing periods in Subdistrict 4-A during times of Chinook salmon conservation using fish wheels only. Fish wheels had to be attended during operations and all Chinook salmon caught in fish wheels had to be immediately released to the water alive. The summer chum salmon harvest in Subdistrict 4-A was 108,222 fish (Table 2). At no time during this fishery were Chinook salmon allowed to be sold or kept for subsistence purposes. A total of 59 Chinook salmon were reported as caught and released alive back to the water.

District 6 was managed using inseason assessment information provided by multiple projects operated in the Tanana River drainage. Early season high water events hampered operations at the Chena and Salcha River counting tower projects, which made it challenging to accurately assess the salmon runs. However, a harvestable surplus of summer chum salmon was identified based on subsistence harvest information, as well as indications from lower river genetics and assessment data. Based on this surplus and market interest, ADF&G scheduled the first commercial fishing period to target chum salmon in District 6 on July 20. During the season, the BOF met by teleconference on July 17 to consider an emergency petition to amend the *Yukon River Summer Chum Salmon Management Plan* (5 AAC 05.362). The BOF adopted an emergency regulation only for the 2012 season, which specified that during the District 6 summer chum season, in order to conserve Chinook salmon, only fish wheels could be used. Fish wheels had to be attended during operations and all Chinook salmon caught in fish wheels had to be immediately released to the water alive. ADF&G scheduled 7 commercial fishing periods and the harvest was 3,504 summer chum salmon (Table 2). Chinook salmon could not be sold. A total of 24 Chinook salmon were recorded on fish tickets as caught but not sold.

A total of 8 buyers and/or catcher/sellers registered for the 2012 Yukon Area commercial salmon season (Table 3). A total of 36 commercial periods were announced during the summer season in 2012 (Tables 2 and 4). The total combined Yukon Area commercial harvest was 319,575 summer chum salmon (Table 1). A total of 427 permit holders participated in the summer chum

salmon fishery (Table 2). Yukon River fishermen in Alaska received an average of $0.64 per pound for summer chum salmon for an estimated total value of $1,166,802 (Table 2). No Chinook salmon were sold in the Yukon Area in 2012.

FALL SEASON OVERVIEW

The fall season began by regulation on July 16 in lower river Districts 1 and 2. Based on a preseason projection of greater than 800,000 fall chum salmon, all areas returned to their regulatory subsistence fishing schedules commensurate the switch to fall management based on timing of fish migrating up river. The schedules were as follows: commercial fishing continued in Districts 1 and 2 and subsistence fishing was open 7 days a week, except for 12 hours before, during, and 12 hours after commercial openings. Because there were no commercial openings scheduled, District 3 went to a 7 day a week subsistence schedule on July 18. District 4 went to a 5 day per week schedule, Subdistricts 5-A, 5-B, and 5-C remained on their regulatory schedule of two 48-hour periods per week, District 6 was on a two 42-hour periods per week regulatory schedule, and Subdistrict 5-D was returned to a 7 day per week schedule.

The first pulse of fall season chum salmon entered the Yukon River on July 16. Fall chum salmon continued to enter the Yukon River over 4 additional pulses through September 7. The pulses that entered through August 8 occurred regularly at a rate of about once a week. In between pulses, daily passage of fall chum salmon past Pilot Station sonar project was steady and numbers were mostly above 3,000 fish. Run assessment indicated there was a surplus available for commercial harvest and regular commercial fishing periods were scheduled in both Districts 1 and 2. A lull in daily fall chum salmon passage occurred from August 9 through August 18. This coincided with hot (12–18°C), dry, and calm weather in the lower Yukon River drainage. No commercial fishing periods were scheduled in Districts 1 and 2 during this time. The fifth and largest pulse entered the Yukon River on August 16. From that point, run assessment continued to show a commercial surplus and regular commercial fishing periods in Districts 1 and 2 were scheduled throughout the remaining season. Commercial fishing periods were regularly scheduled in Subdistricts 4-A, 5-B, and 5-C from mid-August through early October, and in District 6 from September through early October. Finally, subsistence fishing was liberalized to 7 days a week, 24 hours a day on August 24 in District 4, on September 26 in Subdistricts 5-A, 5-B, and 5-C, and on September 28 in District 6.

The first pulse of coho *O. kisutch* salmon entered Yukon River on August 16. There were 2 additional pulses of coho salmon through September 7. Pilot Station sonar passage estimates attributed to coho salmon were below average throughout the season. Coho salmon continued to enter Yukon River drainage after September 7 and were monitored at 2 lower river test fisheries but no additional pulses were observed. Coho salmon were harvested incidentally in fall chum salmon directed commercial openings. Because of their high incidental commercial harvest, coupled with below average passage based on 2 test fisheries and Pilot Station sonar estimates, a coho salmon directed commercial fishery in the lower river in September was not prosecuted in 2012.

FALL SEASON COMMERCIAL FISHING SUMMARY

A total of 8 buyers and/or catcher/sellers registered for the 2012 Yukon Area commercial salmon season (Table 3). A total of 49 commercial periods were announced during the fall season in 2012 (Tables 5 and 6) and most of the commercial harvest occurred in the lower river districts. A

regular schedule of commercial fishing periods was established in Districts 4–6, but limited markets resulted in low fishing effort and relatively small harvests. The 2012 total commercial harvest for the Yukon River fall season in the Alaska portion of the drainage was 289,692 fall chum and 74,789 coho salmon (Table 1). The exvessel value of the total fall chum salmon harvest was $1,413,660 and $542,201 for coho salmon harvest (Tables 5 and 7). A total of 469 individual permit holders participated in the 2012 fall chum and coho salmon fishery (Tables 5 and 7).

YUKON AREA SUBSISTENCE/PERSONAL USE FISHING SUMMARY

An estimated 30,486 Chinook salmon, 127,313 summer chum salmon, 99,719 fall chum salmon, and 21,633 coho salmon were harvested for subsistence use in the Alaska portion of the Yukon River drainage (Table 8). A complete summary of the Yukon Area subsistence and personal use fisheries are published annually in the report series *Subsistence and personal use salmon harvests in the Alaska portion of the Yukon River drainage*.

AGE AND SEX COMPOSITION

Age and sex compositions were collected from the Chinook salmon subsistence harvest (Drobny 2013; Molyneaux and Stockdale 2013) and from the incidental commercial harvest and Lower Yukon River test fishery catches. Age and sex composition was collected from the summer and fall chum salmon commercial harvest; Lower Yukon River test fishery catches and results are published annually in the report series *Salmon age and sex composition and mean lengths for the Yukon River Area*.

YUKON AREA SALMON ESCAPEMENT

Chinook Salmon

Chinook salmon escapement goals for the East Fork Andreafsky, Nulato, and Salcha rivers were achieved. However, the Anvik and Chena River escapement goals were not met (Table 9). Season cumulative counts on the Gisasa River were below average. High water conditions on the Chena River precluded counting for much of the season. The Chinook salmon escapement was estimated to be 32,656 fish in the mainstem Yukon River in Canada, which was below the IMEG range of 42,500–55,000 fish (Table 9).

Summer Chum Salmon

Most summer chum salmon producing tributaries experienced above average escapement. The East Fork Andreafsky River sustainable escapement goal (SEG) and Anvik River biological escapement goal (BEG) were achieved. Counts at the Gisasa River and Henshaw Creek were above average. Salcha River escapement as assessed by tower counts was above the historical median. Escapement on the Chena River was difficult to assess because of environmental conditions (Table 9).

Fall Chum Salmon

The 2012 fall chum salmon drainagewide escapement was estimated to be greater than 568,900 fish, which was below upper end of the SEG range of 300,000–600,000 fish (Table 9). The fall chum salmon escapement of 205,404 into Chandalar River exceeded the upper end of the BEG range of 74,000–152,000 fish, whereas the escapement of 73,000 fish on the right bank of the Sheenjek River was within the BEG range of 50,000–104,000 fish (total combined passage was estimated to be 104,700 for both banks). The Fishing Branch River estimated escapement of

22,399 fall chum salmon was within the IMEG range of 22,000–49,000 fish. The fall chum salmon escapement was estimated to be 137,662 fish in the mainstem Yukon River in Canada, which exceeded the IMEG range of 70,000–104,000 fish and provided for harvest sharing agreement (Table 9).

Coho Salmon

There are few coho salmon spawning escapement assessment projects in the Yukon River drainage because of funding limitations. The sonar at Pilot Station was operated a week longer than usual, through September 7 (since 2008), with an estimated passage of 106,800 coho salmon (data on file with the Yukon Management Group, ADF&G Division of Commercial Fisheries, Fairbanks). The Delta Clearwater River (DCR) had the only established escapement goal for coho salmon, which was an SEG range of 5,200–17,000 fish. A boat survey conducted in the DCR in late October observed slightly more than 5,230 coho salmon (Table 9), therefore the lower end of the goal was achieved.

ALASKA BOARD OF FISHERIES ACTIONS

Proposal 385 was considered when the Alaska Board of Fisheries met to review statewide regulatory fisheries proposals in Anchorage from March 20 to March 24, 2012. This proposal sought to give ADF&G emergency order authority to allow commercial fishing for summer chum salmon during times of Chinook salmon conservation, using fish wheels only in Subdistrict 4-A, with the requirement that fishermen must use a live box or chute to release Chinook salmon. The proposal was amended to require that the fish wheel be attended while in operation and that all Chinook salmon caught must be returned to the water alive immediately, with no method of release specified. The amended language passed unanimously.

U.S./CANADA YUKON RIVER SALMON AGREEMENT AND PANEL

For the 2012 season the Panel agreed to 1-year Canadian IMEG ranges of 42,500–55,000 Chinook salmon and 70,000–104,000 fall chum salmon based on the Eagle sonar project. The agreed upon IMEG range for the Fishing Branch River was a range of 22,000–49,000 fall chum salmon based on the Fishing Branch River weir count. In addition to escapement needs, Alaska is required to share harvestable surpluses of the Canadian run component, with Canada receiving 20–26% of the available total allowable catch (TAC) for Canadian bound Chinook salmon and 29–35% of the available TAC for Canadian bound fall chum salmon (JTC 2013).

ENFORCEMENT

The primary enforcement authority for violations of Fish and Game regulations is the Department of Public Safety, Alaska Wildlife Troopers (AWT). AWT monitored subsistence, personal use, and commercial fisheries within the Yukon Area. Typically, patrols were conducted in the Yukon Area using float planes and skiffs during salmon fisheries from June 15 through August 30. Due to the need for increased enforcement in the Kuskokwim Area in 2012, a shortage of AWT staff resulted in reduced enforcement activity in the Yukon Area in 2012.

FEDERAL SUBSISTENCE MANAGEMENT

The Federal Subsistence Board (FSB) met in January 2011 to review proposals regarding regulation changes to the Code of Federal Regulations under the Federal Subsistence Management Program on federal public lands within the State of Alaska. The FSB deferred 2

proposals, one which requested that federal public waters of Yukon River Subdistrict 5-D be further subdivided into 3 subdistricts to provide managers additional flexibility to more precisely regulate harvest while conserving Chinook salmon run that spawn in the upper Yukon River and another which requested that customary trade in the Yukon River Fisheries Management Area be prohibited in any year when Chinook salmon runs are insufficient to fully satisfy subsistence needs and subsistence fisheries are restricted. These 2 proposals as well as other proposals submitted in 2012 were addressed by the FSB in January 2013.

The Yukon Area federal management staff work closely with ADF&G Division of Commercial Fisheries Yukon Area managers by sharing information and coordinating management actions. Many public fisheries related meetings are attended throughout the year by both agencies, jointly and individually, that are preceded with considerable effort to provide consistent stock information, management strategy expectations, and rational for enacted management actions. The State of Alaska ADF&G area managers are the lead agency staff and have authority throughout the entire Yukon Area, whereas the federal management authority is primarily limited to overlapping waters adjacent to Federal Conservation Units. During the 2012 fishing season, federal managers (USFWS Fairbanks) issued 36 Streamlining Actions (33 summer; 3 fall) which aligned federal regulations with state regulations that were established through emergency order authority. Management of the Yukon Area commercial fishery by ADF&G prompted issuance of 6 Federal Memorandums of Concurrence (5 summer; 1 fall). These memorandums documented federal consideration which resulted in concluding state actions taken in regulating the commercial fishery and provided adequate assurances for escapement and federal subsistence needs. No Federal Special Actions were issued during the 2012 season, which would be used to implement changes in federal rules that differ from state regulations.

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Employees of the Alaska Department of Fish and Game, U.S. Fish and Wildlife Service, Yukon Delta Fisheries Development Association, and other agencies and organizations worked long and irregular hours at various locations throughout the Yukon Area collecting data presented in this report; we gratefully acknowledge their hard work.

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TABLES AND FIGURES

Table 1.–Total utilization, in numbers of salmon, by district and country, Yukon River drainage, 2012.

District	Fishery	Chinook [a]	Summer Chum [a]	Fall Chum [a]	Coho [a]
1	Subsistence	4,313	35,370	7,622	3,350
	Commercial	0	150,800	139,842	39,757
	Test fish sales	0	1,274	74	39
	Total	4,313	187,444	147,538	43,146
2	Subsistence	6,881	32,566	3,332	1,346
	Commercial	0	57,049	129,284	29,063
	Test fish sales	0	1,138	92	0
	Total	6,881	90,753	132,708	30,409
3	Subsistence	2,362	8,690	637	556
	Commercial	0	n/a	n/a	n/a
	Total	2,362	8,690	637	556
Total	Subsistence	13,556	76,626	11,591	5,252
Lower	Commercial	0	207,849	269,126	68,820
Yukon	Test fish sales	0	2,412	166	39
Area	Total	13,556	286,887	280,883	74,111
4	Subsistence	7,662	21,555	18,055	3,556
	Commercial	0	108,222	811	0
	Total	7,662	129,777	18,866	3,556
5	Subsistence	6,466	4,892	54,350	3,092
	Commercial	0	n/a	2,419	634
	Total	6,466	4,892	56,769	3,726
6	Subsistence	627	678	15,302	9,540
	Commercial	0	3,504	17,336	5,335
	Personal use	71	321	410	100
	Total	698	4,503	33,048	14,975
Total	Subsistence	14,755	27,125	87,707	16,188
Upper	Commercial	0	111,726	20,566	5,969
Yukon	Personal use	71	321	410	100
Area	Total	14,826	139,172	108,683	22,257
Total	Subsistence	28,311	103,751	99,298	21,440
Yukon	Commercial	0	319,575	289,692	74,789
River	Personal use	71	321	410	100
(Alaska)	Test fish sales	0	2,412	166	39
	Sport fish [b]	345	271	n/a	131
	Total	28,727	426,330	389,566	96,499
	Domestic	n/a	n/a	0	0
Total	Aboriginal (mainstem)	2,000	n/a	700	0
Canada	Test fish harvest	n/a	n/a	n/a	0
	Commercial	0	n/a	3,205	0
	Subtotal	2,000	n/a	3,905	0
	Porcupine Aboriginal	200	n/a	3,118	n/a
	Total	2,200	n/a	7,023	0
	Grand total	30,927	426,330	396,589	96,499

[a] Commercial harvest includes fish sold in the round. Does not include subsistence harvest from coastal communities of Hooper Bay and Scammon Bay.

[b] Assume majority of chum salmon harvested during summer season.

Table 2.–Summary of the summer chum salmon commercial salmon harvest, by district, Yukon Area, 2012.

District	Periods	Permits	Number	Pounds	Average weight	Price per pound	Exvessel value
1	10	242	150,800	951,456	6.3	0.75	712,699
2	6	178	57,049	355,776	6.2	0.75	266,832
3			No commercial openings				
4[a]	13	11	108,222	490,731	4.5	0.37	180,254
5			No commercial openings				
6	7	3	3,504	19,701	5.6	0.36	7,017
TOTAL	36	427	319,575	1,817,664	5.7	0.64	1,166,802

Table 3.–Salmon processors, buyers, catcher-sellers, and associated data, Yukon Area, 2012.

Commercial operation (Processing location/buying station)	Product	District
Kwik'pak Fisheries LLC 2909 Arctic Blvd Anchorage, AK 99503 (Emmonak/Mountain Village)	Fresh salmon Frozen salmon Salmon roe	1 and 2
David Herbert P.O. Box 287 St. Mary's, AK 99658 (St. Mary's)	Fresh salmon	2
Yukon River Gold LLC. 107 Fairside Dr. Lynden, WA 98264 (Kaltag)	Fresh salmon Frozen salmon Salmon roe	4
Interior Alaska Fish Processors 2400 Davis Rd. Fairbanks, AK 99701 (Fairbanks, Yukon Bridge, Nenana)	Fresh/frozen salmon Salmon roe Salted/brined salmon Smoked salmon	5 and 6
Wild Alaska River Fisheries P.O. Box 172 Nenana, Alaska 99760 (Nenana)	Fresh salmon Salmon roe	5 and 6
Aquatech 6221Petersburg St. Anchorage, AK 99705 (Nenana)	Fresh salmon Frozen salmon Salmon roe	5 and 6
Stephen O'Brien P.O. Box 42 Manley Hot Springs, AK 99756 (Manley Hot Springs)	Fresh salmon	6
David Dausel P.O. Box 80291 Fairbanks, AK 99708 (Fairbanks)	Fresh salmon	6

Table 4.–Chinook and summer chum salmon commercial harvest by district and period in Districts 1, 2, 4, and 6, Yukon Area, 2012.

District 1

Period	Starting time	Start date	Ending time	End date	Hours fished	Number of fishermen	Chinook salmon Number caught but not sold	Summer chum salmon Number	Summer chum salmon Pounds	Summer chum salmon Avg wt
1	8:00 PM	6/29	12:00 midnight	6/29	4	144	290	16,105	103,072	6.4
2	8:00 PM	7/1	12:00 midnight	7/1	4	162	121	13,679	85,574	6.3
3	6:00 PM	7/2	12:00 midnight	7/2	6	153	173	14,982	94,503	6.3
4	4:00 PM	7/3	10:00 PM	7/3	6	161	421	27,341	172,038	6.3
5	4:00 PM	7/5	10:00 PM	7/5	6	157	231	14,597	92,233	6.3
6	4:00 PM	7/6	10:00 PM	7/6	6	149	198	17,824	112,785	6.3
7	4:00 PM	7/7	10:00 PM	7/7	6	147	94	11,526	72,096	6.3
8	4:00 PM	7/9	12:00 midnight	7/9	8	172	124	23,856	150,156	6.3
9	8:00 PM	7/10	12:00 midnight	7/10	4	164	72	7,379	46,903	6.4
10	6:00 PM	7/13	12:00 midnight	7/13	6	135	32	3,511	22,096	6.3
						FALL SEASON	71			
District 1 subtotal:					56	242	1,827	150,800	951,456	6.3

District 2

Period	Starting time	Start date	Ending time	End date	Hours fished	Number fishermen	Chinook salmon Number caught but not sold	Summer chum salmon Number	Summer chum salmon Pounds	Summer chum salmon Avg wt
1	8:00 PM	7/2	12:00 midnight	7/2	4	64	125	7,346	45,540	6.2
2	8:00 PM	7/8	11:00 PM	7/8	3	102	126	7,251	44,763	6.2
3	6:00 PM	7/11	12:00 midnight	7/11	6	114	164	13,288	82,902	6.2
4	8:00 PM	7/12	12:00 midnight	7/12	4	130	120	11,522	72,443	6.3
5	5:00 PM	7/15	10:00 PM	7/15	5	119	76	5,911	36,101	6.1
6	12:00 noon	7/18	9:00 PM	7/18	9	111	54	11,731	74,027	6.3
						FALL SEASON	32			
District 2 subtotal:					31	178	697	57,049	355,776	6.2
Lower Yukon Area, summer season, Districts 1 and 2 subtotal:					87	413	2,524	207,849	1,307,232	6.3

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Table 4.–Page 2 of 2.

Period	Starting time	Start date	Ending time	End date	Hours fished	Number fishermen	Chinook salmon Number caught and released	Summer chum salmon Number	Pounds	Avg wt
1	8:00 PM	7/1	8:00 AM	7/2	12	–	–	–	–	–
2	8:00 PM	7/2	8:00 AM	7/3	12	–	–	–	–	–
3	8:00 PM	7/3	8:00 AM	7/4	12	–	–	–	–	–
4	8:00 PM	7/4	8:00 AM	7/5	12	–	–	–	–	–
5	8:00 PM	7/5	8:00 AM	7/6	12	–	–	–	–	–
6	8:00 PM	7/6	8:00 AM	7/7	12	–	–	–	–	–
7	8:00 PM	7/7	8:00 AM	7/8	12	7	4	4,447	24,014	5.4
8	8:00 PM	7/8	8:00 AM	7/9	12	7	3	2,900	13,195	4.6
9	8:00 PM	7/9	8:00 AM	7/10	12	9	4	4,047	18,212	4.5
10	8:00 PM	7/10	8:00 AM	7/11	12	9	2	4,532	20,847	4.6
11	8:00 PM	7/11	8:00 AM	7/12	12	7	–	3,702	16,474	4.5
12	8:00 PM	7/12	8:00 AM	7/13	12	9	–	4,121	18,132	4.4
13	8:00 PM	7/13	8:00 PM	7/30	408	11	46	84,473	379,858	4.5
						FALL SEASON	0			
District 4 subtotal:					552	11	59	108,222	490,732	4.5

Subdistricts 6-A, 6-B, and 6-C

Period	Starting time	Start date	Ending time	End date	Hours fished	Number fishermen		Chinook Number caught but not sold	Summer chum salmon Number	Pounds	Avg wt
1	6:00 PM	7/20	12:00 PM	7/22	42	1		0	358	2,148	6.0
2	6:00 PM	7/23	12:00 PM	7/25	42	1		0	505	3,030	6.0
3	6:00 PM	7/25	6:00 PM	8/1	168	–		–	–	–	–
4	6:00 PM	8/3	12:00 PM	8/5	42	2		15	1,431	7,869	5.5
5	6:00 PM	8/6	12:00 PM	8/8	42	–		–	–	–	–
6	6:00 PM	8/10	12:00 PM	8/12	42	2	9	9	1,210	6,654	5.5
7	6:00 PM	8/13	12:00 PM	8/15	42	–		–	–	–	–
						FALL SEASON		0	–	–	–
District 6 subtotal:					420	3		24	3,504	19,701	5.6
Upper Yukon Area, summer season, Districts 4 and 6 subtotal:					972	14		24	111,726	510,433	5.6
Yukon Area, summer season, Districts 1 through 6 total:					1,059	427		2,548	319,575	1,817,665	5.7

Note: No commercial fishing occurred in Districts 3 and 5, and Subdistricts 4-B and 4-C. En dash indicates no data available.

Table 5.–Summary of the fall chum commercial salmon harvest, by district, Yukon Area, 2012.

District	Periods	Permits	Number	Pounds	Average weight	Price per pound	Exvessel value
1	13	266	139,842	961,219	6.9	0.75	720,993
2	11	201	129,284	885,543	6.8	0.75	664,313
3			No commercial openings				
4[a]	8	4	811	5,205	6.4	0.27	1,395
5[b]	8	3	2,419	19,117	7.9	0.21	4,003
6	9	5	17,336	122,049	7.0	0.19	22,956
TOTAL	49	469	289,692	1,993,133	6.9	0.71	1,413,660

[a] Commercial fishing only occurred in Subdistrict 4-A.

[b] Commercial fishing only occurred in Subdistricts 5-B and 5-C.

Table 6.–Fall chum and coho salmon commercial harvest by district or subdistrict, and by period, set and drift gillnets combined, Districts 1, 2, and 3, and set gillnets and fish wheels combined Districts 4, 5, and 6, Yukon Area, 2012.

District 1

Period	Starting time	Start date	Ending time	End date	Hours fished		Number fishermen	Fall chum salmon			Coho salmon			Chinook salmon			
					Drift	Set		Number	Pounds	Avg wt	Number	Pounds	Avg wt	Number	Pounds	Avg wt	Number caught but not sold[a]
1	10:00 AM	7/16	10:00 PM	7/16	9	12	99	3,307	20,718	6.3	0	0	-	0	0	–	31
2	10:00 AM	7/19	10:00 PM	7/19	9	12	204	24,233	165,701	6.8	1	8	8.0	0	0	–	28
3	1:00 PM	7/23	10:00 PM	7/23	6	9	125	2,881	19,085	6.6	5	37	7.4	0	0	–	0
4	1:00 PM	7/26	10:00 PM	7/26	6	9	194	29,116	206,155	7.1	170	1,064	6.3	0	0	–	7
5	1:00 PM	7/30	10:00 PM	7/30	6	9	190	20,156	137,369	6.8	1,100	6,698	6.1	0	0	–	3
6	1:00 PM	8/2	10:00 PM	8/2	9	9	146	5,296	35,748	6.8	770	4,752	6.2	0	0	–	0
7	5:00 PM	8/5	10:00 PM	8/5	5	5	169	11,500	79,701	6.9	1,345	8,078	6.0	0	0	–	0
8	10:00 AM	8/9	10:00 PM	8/9	9	12	173	4,327	29,722	6.9	2,965	17,822	6.0	0	0	–	2
9	10:00 AM	8/18	7:00 PM	8/18	9	9	155	17,294	120,784	7.0	13,184	83,816	6.4	0	0	–	0
10	10:00 AM	8/20	10:00 PM	8/20	9	12	196	8,383	56,536	6.7	8,487	53,196	6.3	0	0	–	0
11	9:00 AM	8/23	9:00 PM	8/23	9	12	141	4,571	30,681	6.7	4,499	29,067	6.5	0	0	–	0
12	9:00 AM	8/27	9:00 PM	8/27	9	12	140	5,748	38,375	6.7	4,734	29,406	6.2	0	0	–	0
13	9:00 AM	8/30	9:00 PM	8/30	9	12	134	3,030	20,644	6.8	2,497	15,692	6.3	0	0	–	0
District 1 subtotal:					104	134	266	139,842	961,219	6.9	39,757	249,636	6.3	0	0	–	71

District 2

Period	Starting time	Start date	Ending time	End date	Hours fished	Number fishermen	Fall chum salmon			Coho salmon			Chinook salmon			
							Number	Pounds	Avg wt	Number	Pounds	Avg wt	Number	Pounds	Avg wt	Number caught but not sold[a]
1	3:00 PM	7/22	9:00 PM	7/22	6	147	13,421	88,824	6.6	6	34	5.7	0	0	–	23
2	3:00 PM	7/25	9:00 PM	7/25	6	68	3,061	20,390	6.7	12	61	5.1	0	0	–	4
3	3:00 PM	7/30	9:00 PM	7/30	6	155	17,341	119,811	6.9	277	1,575	5.7	0	0	–	1
4	3:00 PM	8/1	9:00 PM	8/1	6	157	13,247	90,716	6.8	436	2,513	5.8	0	0	–	2
5	3:00 PM	8/4	9:00 PM	8/4	6	143	10,828	74,220	6.9	760	4,535	6.0	0	0	–	1
6	12:00 PM	8/7	9:00 PM	8/7	9	151	15,191	103,657	6.8	1,665	9,667	5.8	0	0	–	1
7	12:00 PM	8/19	9:00 PM	8/19	9	149	38,806	271,181	7.0	9,417	58,515	6.2	0	0	–	0
8	3:00 PM	8/22	9:00 PM	8/22	6	138	9,242	62,273	6.7	7,596	46,253	6.1	0	0	–	0
9	9:00 AM	8/26	6:00 PM	8/26	9	101	3,526	23,830	6.8	3,545	21,947	6.2	0	0	–	0
10	9:00 AM	8/29	6:00 PM	8/29	9	88	2,700	17,952	6.6	3,592	22,264	6.2	0	0	–	0
11	2:00 PM	8/31	6:00 PM	8/31	4	112	1,921	12,689	6.6	1,757	10,618	6.0	0	0	–	0
District 2 subtotal:					76	201	129,284	885,543	6.8	29,063	177,982	6.1	0	0	–	32

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Table 6.–Page 2 of 3.

	Hours fished		Number	Fall chum salmon			Coho salmon			Chinook salmon			
	Drift	Set	fishermen	Number	Pounds	Avg wt	Number	Pounds	Avg wt	Number	Pounds	Avg wt	Number caught but not sold[a]
Lower Yukon Area, fall season, Districts 1, 2, and 3 subtotal:	180	134	457	269,126	1,846,762	6.9	68,820	427,618	6.2	0	0	–	103

Subdistrict 4-A

Period	Starting time	Start date	Ending time	End date	Hours fished	Number fishermen	Fall chum salmon Number	Pounds	Avg wt	Coho salmon Number	Pounds	Avg wt	Chinook salmon Number	Pounds	Avg wt	Number caught but not sold[a]
1	8:00 AM	8/9	6:00 PM	8/12	82	[b]	[b]	[b]	[b]	[b]	[b]	–	[b]	[b]	–	[b]
2	6:00 PM	8/14	6:00 PM	8/19	120	0	–	–	–	–	–	–	–	–	–	–
3	6:00 PM	8/21	6:00 PM	8/26	120	0	–	–	–	–	–	–	–	–	–	–
4	6:00 PM	8/27	6:00 PM	9/2	144	4	372	2,372	6.4	0	0	–	0	0	–	0
5	6:00 PM	9/2	6:00 PM	9/9	168	[b]	[b]	[b]	[b]	[b]	[b]	–	[b]	[b]	–	[b]
6	6:00 PM	9/11	6:00 PM	9/16	120	0	–	–	–	–	–	–	–	–	–	–
7	6:00 PM	9/18	6:00 PM	9/23	120	0	–	–	–	–	–	–	–	–	–	–
8	6:00 PM	9/25	6:00 PM	9/30	120	0	–	–	–	–	–	–	–	–	–	–
District 4 subtotal:					994	4	811	5,205	6.4	0	0	–	0	0	–	0

Subdistricts 5-B and 5-C

Period	Starting time	Start date	Ending time	End date	Hours fished	Number fishermen	Fall chum salmon Number	Pounds	Avg wt	Coho salmon Number	Pounds	Avg wt	Chinook salmon Number	Pounds	Avg wt	Number caught but not sold[a]
1	6:00 PM	8/14	6:00 PM	8/19	120	3	1,384	11,872	8.6	0	0	–	0	0	–	0
2	6:00 PM	8/21	6:00 PM	8/26	120	0	–	–	–	–	–	–	–	–	–	–
3	6:00 PM	8/28	6:00 PM	9/2	120	0	–	–	–	–	–	–	–	–	–	–
4	6:00 PM	9/4	6:00 PM	9/9	120	0	–	–	–	–	–	–	–	–	–	–
5	6:00 PM	9/11	6:00 PM	9/16	120	0	–	–	–	–	–	–	–	–	–	–
6	6:00 PM	9/18	6:00 PM	9/23	120	0	–	–	–	–	–	–	–	–	–	–
7	6:00 PM	9/25	6:00 PM	9/30	120	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]
8	6:00 PM	10/2	6:00 PM	10/7	120	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]
District 5 subtotal:					960	3	2,419	19,117	7.9	634	3,170	5.0	0	0	–	0

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Table 6.–Page 3 of 3.

Subdistricts 6-A, 6-B, and 6-C																
							Fall chum salmon			Coho salmon			Chinook salmon			
Period	Starting time	Start date	Ending time	End date	Hours fished	Number fishermen	Number	Pounds	Avg wt	Number	Pounds	Avg wt	Number	Pounds	Avg wt	Number caught but not sold[a]
1	6:00 PM	8/31	12:00 PM	9/2	42	3	715	5,191	7.3	40	200	5.0	–	–	–	–
2	6:00 PM	9/3	12:00 PM	9/5	42	3	930	6,614	7.1	0	0	–	–	–	–	–
3	6:00 PM	9/7	12:00 PM	9/9	42	3	1,030	7,164	7.0	0	0	–	–	–	–	–
4	6:00 PM	9/10	12:00 PM	9/12	42	3	2,148	15,516	7.2	325	1,501	4.6	–	–	–	–
5	6:00 PM	9/14	12:00 PM	9/16	42	4	3,216	22,437	7.0	1,298	6,829	5.3	–	–	–	–
6	6:00 PM	9/17	12:00 PM	9/19	42	5	4,746	34,345	7.2	1,460	6,918	4.7	–	–	–	–
7	6:00 PM	9/21	12:00 PM	9/23	42	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]
8	6:00 PM	9/24	12:00 PM	9/30	138	3	3,184	21,613	6.8	1,502	7,510	5.0	–	–	–	–
9	6:00 PM	10/1	12:00 PM	10/3	42	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]
District 6 subtotal:					474	5	17,336	122,049	7.0	5,335	26,678	5.0	0	0	–	0
Upper Yukon Area, fall season, Districts 4, 5, and 6 subtotals:					2,428	12	20,566	146,371	7.1	5,969	29,848	5.0	0	0	–	0
Yukon Area, fall season, Districts 1 through 6 total:					2,902	469	289,692	1,993,133	6.9	74,789	457,466	6.1	0	0	–	103

Note: No commercial fishing occurred in District 3 and Subdistricts 4-B, 4-C, 5-A, and 5-D. En dash indicates no data available.

[a] Chinook salmon caught but not sold during fall season are added in summer season harvest.

[b] Less than 3 fishermen and confidentiality waivers were not signed, therefore data unavailable.

Table 7.–Summary of the coho salmon commercial salmon harvest, by district, Yukon Area, 2012.

District	Periods	Permits	Number	Pounds	Average weight	Price per pound	Exvessel value
1	13	266	39,757	249,636	6.3	1.25	312,670
2	11	201	29,063	177,982	6.1	1.25	222,103
3			No commercial openings				
4[a]	8	4	0	0	–	–	–
5[b]	8	3	634	3,170	5.0	0.20	634
6	9	5	5,335	26,678	5.0	0.25	6,794
TOTAL	49	469	74,789	457,466	6.12	1.19	542,201

Note: En dash indicates no data available.

[a] Commercial fishing only occurred in Subdistrict 4-A.

[b] Commercial fishing only occurred in Subdistricts 5-B and 5-C.

Table 8.–Subsistence and personal use salmon harvest estimates, including commercially related and test fishery harvests provided for subsistence use, and related information, Yukon Area, 2012.

Community	Number of fishing households [a]	Number of dogs [b]	Estimated harvest				Primary gear used [c]		
			Chinook	Summer chum	Fall chum	Coho	Set gillnet	Drift gillnet	Fish wheels
Hooper Bay [c]	114	289	1,090	15,799	1	7	106	8	0
Scammon Bay	73	108	1,014	7,442	10	86	73	0	0
Coastal District total	187	397	2,104	23,241	11	93	179	8	0
Nunam Iqua	25	51	195	1,977	210	18	24	1	0
Alakanuk [c]	85	202	1,081	9,012	449	252	21	64	0
Emmonak [c]	88	219	1,864	15,829	5,890	2,660	7	81	0
Kotlik [c]	99	110	1,173	8,552	1,073	420	53	46	0
District 1 subtotal	297	582	4,313	35,370	7,622	3,350	105	192	0
Mountain Village [c]	103	158	1,789	9,031	685	256	11	92	0
Pitkas Point [c]	14	30	261	1,153	9	53	0	14	0
St. Marys [c]	89	118	2,344	10,763	1,423	141	3	86	0
Pilot Station [c]	47	52	1,078	5,716	1,031	329	5	42	0
Marshall [c]	48	150	1,409	5,903	184	567	9	39	0
District 2 subtotal	301	508	6,881	32,566	3,332	1,346	28	273	0
Russian Mission [c]	53	127	1,711	2,508	282	319	10	43	0
Holy Cross	32	112	576	1,147	339	237	8	24	0
Shageluk	11	64	75	5,035	16	0	11	0	0
District 3 subtotal	96	303	2,362	8,690	637	556	29	67	0
Lower Yukon River total	694	1,393	13,556	76,626	11,591	5,252	162	532	0
Anvik	25	73	435	1,371	569	214	8	17	0
Grayling	47	188	1,081	2,616	804	26	16	31	0
Kaltag	35	58	1,346	186	2,830	928	12	23	0
Nulato	50	131	1,955	254	2,729	41	0	50	0
Koyukuk	26	57	614	828	1,331	62	2	24	0
Galena	76	259	742	718	2,947	276	48	24	4
Ruby	47	129	1,316	3,891	4,408	1,806	36	0	11
District 4 Yukon River subtotal	306	895	7,489	9,864	15,618	3,353	122	169	15
Huslia	41	248	165	7,306	1,909	165	41	0	0
Hughes	5	49	0	428	2	0	5	0	0
Allakaket	14	777	5	3,850	508	38	14	0	0
Alatna	5	16	0	100	18	0	5	0	0
Bettles	1	52	3	7	0	0	1	0	0
Koyukuk River subtotal	66	1,142	173	11,691	2,437	203	66	0	0
District 4 subtotal	372	2,037	7,662	21,555	18,055	3,556	188	169	15

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Table 8.–Page 2 of 2.

Community	Number of fishing households [a]	Number of dogs [b]	Estimated harvest				Primary gear used [c]		
			Chinook	Summer chum	Fall chum	Coho	Set gillnet	Drift gillnet	Fish wheels
Tanana	44	303	2,100	4,333	20,465	3,060	31	0	13
Rampart	5	2	190	71	190	0	5	0	0
Fairbanks (FNSB)	34	164	558	172	793	0	32	0	2
Stevens Village	8	78	330	188	277	0	8	0	0
Birch Creek	0	5	0	0	0	0	0	0	0
Beaver	17	22	71	27	174	2	15	1	1
Fort Yukon	50	328	2,141	0	12,659	4	25	0	25
Circle	7	33	280	0	161	5	3	0	4
Central	3	3	66	0	0	0	2	0	1
Eagle [c,d]	15	219	167	0	18,731	0	8	0	7
Other District 5 [g]	19	59	477	101	443	21	15	0	1
District 5 Yukon River subtotal	202	1,216	6,380	4,892	53,893	3,092	144	1	54
Venetie	14	146	86	0	295	0	14	0	0
Chalkyitsik	3	35	0	0	162	0	3	0	0
Chandalar and Black Rivers subtotal	17	181	86	0	457	0	17	0	0
District 5 subtotal	219	1,397	6,466	4,892	54,350	3,092	161	1	54
Manley	8	72	174	58	2,164	1,374	6	0	2
Minto [f]	5	85	99	64	2	0	5	0	0
Nenana	25	288	296	370	8,671	5,904	16	0	8
Healy	4	35	0	0	595	760	4	0	0
Fairbanks (FNSB)	41	319	129	435	4,280	1,602	34	0	5
Other District 6	23	148	0	72	0	0	19	0	0
District 6 Tanana River subtotal [g]	106	947	698	999	15,712	9,640	84	0	15
Upper Yukon River total	697	4,381	14,826	27,446	88,117	16,288	433	170	84
Alaska, Yukon River total [h]	1,391	5,774	28,382	104,072	99,708	21,540	595	702	84
Alaska, Yukon Area total	1,578	6,171	30,486	127,313	99,719	21,633	774	710	84
AK, Yukon Area percentages of the total	–	–	11%	46%	36%	8%	49%	45%	5%
Included in the communities above:									
Survey community subtotal	1,389	4,744	25,996	117,615	61,253	11,151	625	710	54
Subsistence permit subtotal	158	1,427	2,338	838	33,197	8,125	119	0	30
Test fishery subtotal	–	–	2,057	8,355	2,438	816	–	–	–
District 6 commercial retained	–	–	24	184	2,421	1,441	–	–	–
Subsistence harvests subtotal	1,547	6,171	30,415	126,992	99,309	21,533	744	710	84

[a] Does not include 35 households with Tolovana River pike permits. Includes 4 households that fished District 5 and District 6 permit areas.

[b] Totals for gear and household may not be equal due to a small number of fishermen using unknown or 'Other' gear types.

[c] Includes salmon distributed from test fishery projects.

[d] Permit holders harvested 91 Chinook and 11,681 fall chum salmon above the Eagle sonar project.

[e] "Other District 5" includes residents of Anchorage, Manley, Minto, Nenana, Tanana, Wasilla, Willow, and Wiseman, and the Upper Tanana River drainage community of Tok who obtained a household permit and fished in a Yukon River permit required area.

[f] Includes the harvest of 2 fall chum salmon from Tolovana River pike permits.

[g] "Other District 6" includes residents of the Upper Tanana River drainage communities of Delta Junction, Dot Lake, Northway, Tanacross, and Tok, and the community of Anderson who obtained a permit and fished in the Tanana River

[h] Total excluding Coastal District was used to assess objectives under the Yukon River Salmon Agreement.

Table 9.–Summary of 2012 salmon escapement counts compared to existing goals.

Stock/location	Assessment method	Goal type	Goals	2012 Escapement
Chinook Salmon Stock				
E. Fork Andreafsky	Weir	SEG	2,100–4,900	2,517
W. Fork Andreafsky	Aerial survey	SEG	640–1,600	[a]
Anvik	Aerial survey	SEG	1,100–1,700	451
Nulato (Forks Combined)	Aerial survey	SEG	940–1,900	1,373
Gisasa	Weir	none	–	1,323
Henshaw	Weir	none	–	922
Chena	Tower/Sonar	BEG	2,800–5,700	2220 [b]
Salcha	Tower	BEG	3,300–6,500	7,165
Goodpaster	Tower	none	–	752
Canadian Upper Yukon River	Sonar-harvest	IMEG	42,500–55,000	32,656
Summer Chum Salmon Stock				
E. Fork Andreafsky	Weir	BEG	>40,000	56,680
Anvik	Sonar	BEG	350,000–700,000	484,091
Gisasa	Weir	none	–	83,423
Henshaw	Weir	none	–	292,082
Salcha	Tower	none	–	44,999
Fall Chum Salmon Stock				
Yukon Drainagewide	Run Reconstruction	SEG	300,000–600,000	568,900
Chandalar	Sonar	BEG	74,000–152,000	205,404
Sheenjek	Regression	BEG	50,000-104,000	104,701 [c]
Tanana [d]	Regression	BEG	61,000–136,000	102,000
Delta	Ground Surveys	BEG	6,000–13,000	9,377
Fishing Branch	Weir/Sonar	IMEG	22,000–49,000	22,399
Canadian Upper Yukon River	Sonar-Harvest	IMEG	70,000–104,000	137,662
Coho Salmon Stock				
Delta Clearwater River	Boat Survey	SEG	5,200–17,000	5,230

Note: Biological escapement goal (BEG), sustainable escapement goal (SEG) and interim management escapement goal (IMEG).

[a] Incomplete, poor timing and/or poor survey conditions resulting in minimal or inaccurate counts.

[b] Estimate includes an expansion for missed counting days based on using 2 DIDSON sonars to assess Chinook salmon passage.

[c] Total estimate from both banks includes 72,746 right bank and 31,955 left bank. Goal was measured by right bank passage only.

[d] The Tanana River escapement estimate was based on regression with Mainstem Yukon 1995–2012 (excluding 2005) minus Tanana River harvests.

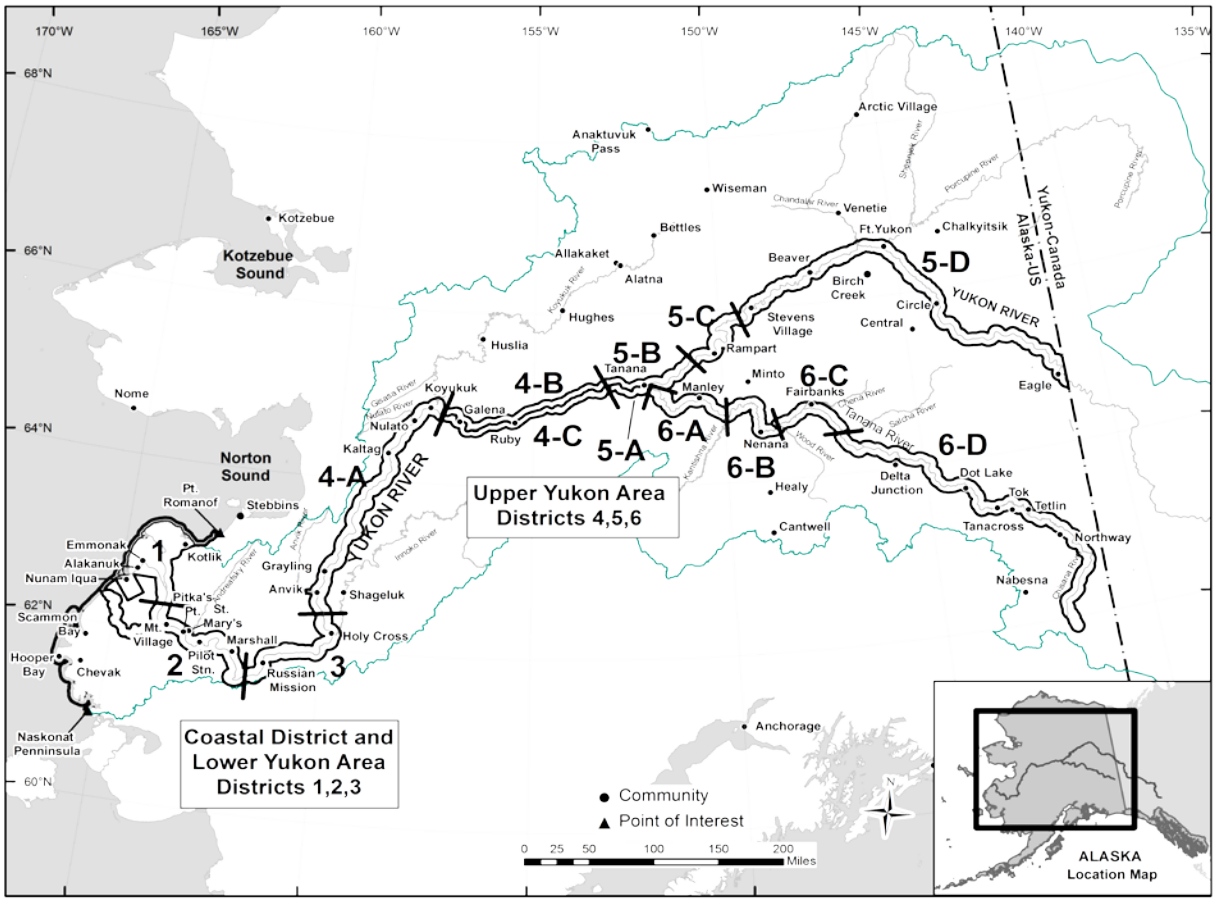

Figure 1.–Yukon management area.

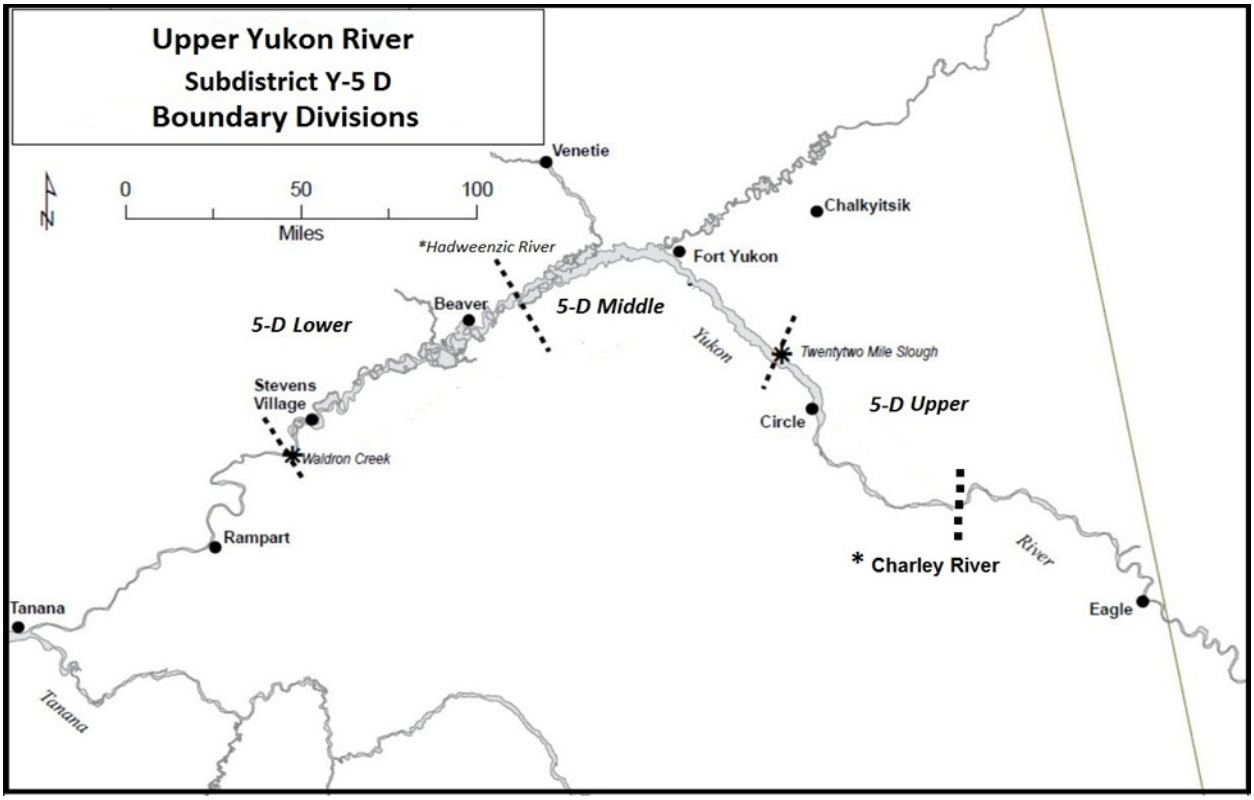

Figure 2.–Upper Yukon River.