

**ALASKA DEPARTMENT OF FISH AND GAME
DIVISION OF COMMERCIAL FISHERIES
NEWS RELEASE**



*Cora Campbell, Commissioner
Jeff Regnart, Director*



Contact:
Eric Newland, Area Management Biologist
Sabrina Garcia, Assistant Area Manager
Phone: (907) 267-2105
Fax: (907) 267-2442

Anchorage Area Office
333 Raspberry Road
Anchorage, Alaska 99518
Date Issued: 10/8/2014

2014 Preliminary Yukon River Summer Season Summary

This informational letter provides a preliminary summary of the 2014 summer season Yukon Area Chinook and summer chum salmon fisheries. Subsistence and personal use harvests for 2014 are not available at this time. For management purposes, the Yukon River is divided into several fishing districts and subdistricts (Figure 1).

2014 Preseason Outlook

Chinook Salmon

The Yukon River Chinook salmon run has experienced a dramatic decline in run size since 1998 (Figure 2). The cause of this drastic drop in abundance remains largely unknown. Though parent year escapement objectives were generally achieved throughout the drainage, Chinook salmon returns since 2007 have been much lower than expected. The 2014 run outlook, which attempts to account for low productivity observed since 2008, was 64,000–121,000 Chinook salmon. Thus, the 2014 Yukon River Chinook salmon run was anticipated to be extremely poor and potentially the worst on record. The lower end of this range was slightly below the run size observed in 2013 and would not provide any available surplus for subsistence harvest. As in recent years, initial management was based on the expectation that the 2014 Chinook salmon run size would likely be near the lower end of this range. Achieving escapement objectives was expected to be extremely challenging with this run size and severe conservation measures were necessary.

Summer Chum Salmon

The strength of the summer chum salmon run in 2014 was dependent on production from the 2010 (age-4 fish) and 2009 (age-5 fish) escapements, as these age classes generally dominate the run. Escapement in 2009 and 2010 was approximately 1.3 million summer chum salmon both years, though tributary escapements were highly variable. It is worth noting that poor runs have resulted from large escapements. Yukon River summer chum salmon generally exhibit strong run size correlations among adjacent years; however, it was expected that the 2014 total run in the Yukon River would be below the 2013 run. The 2014 summer chum preseason outlook was estimated to be 1.3 to 1.5 million fish.

The 2014 summer chum salmon run was anticipated to provide for escapements, a normal subsistence harvest, and a surplus for commercial harvest. Summer chum salmon runs have provided for a harvestable surplus in each of the last 10 years (2004–2013). Based on the preseason projection, it was expected that a commercially harvestable surplus of 300,000 to 500,000 summer chum salmon would be available in 2014. Similar to last year, the actual harvest of summer chum salmon in 2014 was anticipated to be affected by a weak Chinook salmon run, as Chinook salmon are incidentally harvested in summer chum salmon-directed fisheries. It was anticipated that gear types that allow for the live release of Chinook salmon, such as beach seines and dip nets, would be employed for both subsistence and commercial harvest of summer chum salmon.

2014 Preseason Management Strategy

Chinook and summer chum salmon management plans guide ADF&G (department) management actions. In response to continued poor Chinook salmon runs, the Yukon River Drainage Fisheries Association (YRDFA) facilitated a preseason planning meeting to provide managers, fishermen, tribal council representatives, and other stakeholders the opportunity to share information, provide input, and discuss management options available. The purpose of this meeting was to cooperatively identify practical management strategies that would assist in getting adequate numbers of Chinook salmon to their spawning grounds in Alaska and Canada. Based on input from this meeting, a preseason management plan was developed for the Yukon River summer season fishery that was extremely conservative. The preseason plan included the following key components:

- Before Chinook salmon enter the river, subsistence fishing opportunity for non-salmon species would be provided and gillnets would be restricted to 6-inch or smaller mesh size.
- Subsistence fishing for salmon would be closed in each district for most of the Chinook salmon run. Closures would be initiated in the Coastal District and District 1 when assessment information indicates that the first Chinook salmon have begun their migration along the coast and into the river. This closure would be similarly implemented in upriver fishing districts and subdistricts based on migratory timing. It was expected that subsistence fishing opportunity in the Coastal District and the Koyukuk, Innoko, and Tanana rivers would also be closed at times to protect Chinook salmon in those areas.
- During subsistence salmon fishing closures, non-salmon species may be harvested using 4-inch or smaller mesh size gillnets not exceeding 60-feet in length. However, targeting of Chinook salmon with this gear type would not be allowed. The opportunity to harvest non-salmon would be discontinued if this gear is used to target Chinook salmon.
- When summer chum salmon become abundant, subsistence and commercial fishing opportunities would be provided with selective gear such as dip nets, beach seines, and manned fish wheels. Fishermen must carefully and immediately release Chinook salmon alive when encountered in these gear types.
- Fishermen would be strongly encouraged to avoid fishing when and where Chinook salmon may be encountered.
- Subsistence restrictions would be relaxed after the Chinook salmon run has passed through each section of the river. If confidence is high that the Chinook salmon run is much better than anticipated, the use of 6-inch gillnets would be considered to allow for summer chum salmon harvest.

- The sport fishery for Chinook salmon would be closed in the U.S. portion of the Yukon River drainage (including the Tanana River drainage). Sport fishing for Chinook salmon, including catch-and-release fishing, would be prohibited. Chinook salmon may not be retained or possessed.

2014 Assessment

The department monitors a suite of assessment projects that provide critical salmon run timing, relative abundance, and stock composition information. Inseason run assessments included test fisheries, sonar passage estimates, subsistence and commercial harvest data, and age, sex, and length (ASL) data. In addition, genetic samples were collected and analyzed inseason to investigate stock contribution for both Chinook and summer chum salmon. Information from multiple assessment projects were corroborated when possible to provide the best information possible.

Initial assessment in the lower river is critical to implementing an inseason management plan to operate an orderly fishery throughout the drainage. Three projects on the lower river provided estimated inseason abundance and timing information: the Lower Yukon Test Fishery (LYTF), a set net project primarily designed to assess Chinook salmon run timing operated in the Middle and South Mouths of the Yukon River; a summer chum salmon directed drift gillnet test fishery using 5.5-inch mesh operated in the Middle and South Mouths of the Yukon River; and a sonar project near Pilot Station which provided mainstem abundance estimates for Chinook and summer chum salmon. As in recent years, additional drift gillnet test fishing was conducted throughout the season in the South Mouth with 8.25-inch mesh for Chinook salmon to provide supplemental run timing and relative abundance information. Given the anticipated low run size, efforts were made by the department this year to reduce Chinook salmon mortality in test fisheries. This included releasing Chinook salmon from drift test nets when their condition was deemed acceptable. Due to their lower mortality rates, drift net test fishing replaced set net test fishing in the South Mouth for Chinook salmon early in the season.

Ice break up in the lower river occurred on May 9, which was considerably earlier than the average break up date of May 23, based on the years 1980–2013. The first chum salmon of the year was reported to have been caught on May 15 in District 2 near Mt. Village. This is the earliest reported summer chum salmon subsistence harvest in more than 20 years. The first Chinook salmon harvested on the Yukon River was reported to have occurred on May 19 which is the earliest reported Chinook salmon subsistence harvest in a decade. During this early portion of the salmon runs, the department monitored subsistence harvest reports closely and relied on this information to guide initial management actions.

Test fishing operations were delayed until after subsistence fishing opportunity was discontinued. The LYTF was operational at the South Mouth site on May 27 and at the Middle Mouth site on June 7. The first Chinook salmon was caught in the test fishery on May 27. In an effort to reduce Chinook salmon mortality in the LYTF, the set net sites located in the Big Eddy area of the South Mouth were discontinued after June 6. Additionally, only one net operated in Middle Mouth in a further effort to reduce Chinook mortality. The LYTF concluded operations on July 7 with a cumulative CPUE of 36.55, which was well above the historical average CPUE of 26.08. The first quarter point, midpoint, and third quarter point were June 14, June 21, and June 25, respectively. The 8.25-inch drift gillnet project for Chinook salmon operated in Big Eddy until July 15 and provided valuable supplemental assessment information for Chinook

salmon entering the South Mouth of the Yukon River. In accordance with the goal of reducing Chinook salmon mortality, 622 Chinook salmon were released from the LYTF.

The preliminary cumulative passage estimate at the sonar project located near Pilot Station was approximately 137,500 Chinook salmon, which was below the historical average¹ of 143,000, and below the average of 195,800 for years with early run timing². Run assessment analysis was focused on making comparisons to other early years in order to make informed management decisions. The first quarter point, midpoint, and third quarter point were on June 12, June 19, and June 24, respectively. Chinook salmon entered the river in four pulses consisting of 22,300 fish, 44,400 fish, 21,500 fish, and 4,700 fish.

Genetic mixed stock analysis (MSA) on the first pulse of Chinook salmon at the sonar located near Pilot Station (June 1–11) indicated that 50% were Canadian-origin Chinook salmon. Genetic MSA on the second pulse of Chinook salmon at the sonar (June 12–20) indicated that 52% were Canadian-origin Chinook salmon. Samples analyzed from June 21–27 indicated that 24% of these samples were from Canadian-origin Chinook salmon. For more background information on genetic MSA for Yukon River Chinook salmon and related topics and updates, please refer to the department's Gene Conservation Laboratory webpage³.

In 2014, approximately 1.9 million summer chum salmon passed the sonar project near Pilot Station, which was on track with the historical median of 1.9 million for the project. The first quarter point, midpoint, and third quarter point were June 18, June 23, and June 30, respectively. Four large pulses of summer chum were detected with the largest group, approximately 341,800 fish, passing the sonar project from June 20–23.

2014 Subsistence Fishery Overview

As in recent years, management of the 2014 summer salmon season was particularly challenging due to the wide disparity in run strength between the overlapping Chinook and summer chum salmon runs.

In response to what was expected to be both an early and poor Chinook salmon run, a precautionary management approach was taken and gillnets were restricted to 6-inch or smaller mesh size beginning May 18 in the lower river districts and the Coastal District. The intent was to have a gear restriction already in place when Chinook salmon began their migration while still providing fishing opportunity for non-salmon species (e.g., sheefish) traditionally harvested in the Lower Yukon immediately following break up.

Consistent with the preseason management plan, conservative actions were broadly implemented very early in the Chinook salmon run. Subsistence salmon fishing was closed in the Northern portion of the Coastal District and Districts 1–3 on May 26. Subsistence salmon fishing closures were similarly implemented in upriver districts chronologically as Chinook salmon migrated through these areas. Based on the expectation that the 2014 Chinook salmon run could potentially be one of the poorest runs on record, these closures were expected to be in place for nearly the entire duration of the Chinook salmon run.

¹ Average includes years 1995, 1997, 2000, 2002–2008, and 2010–2013. The sonar did not operate in 1996 and project difficulties occurred in 2000, 2001, and 2009.

² Years with early run timing used for comparison include 1995, 1997, 2003, and 2004.

³ http://www.adfg.alaska.gov/index.cfm?adfg=fishinggeneconservationlab.yukonchinook_baseline

Subsistence fishing opportunity was provided for the harvest of non-salmon species, such as sheefish, whitefish, and northern pike, with 4-inch or smaller mesh size gillnets. During the lengthy subsistence closures intended to protect Chinook salmon gillnets with 4-inch mesh or smaller and less than 60 feet were allowed to be used to harvest non-salmon species. This opportunity to harvest non-salmon was provided 24 hours a day seven days a week throughout the drainage. The department encouraged fishermen to avoid fishing for non-salmon species in areas where Chinook salmon were known to migrate. Fishermen were cautioned that this non-salmon fishing opportunity would be discontinued if Chinook salmon were targeted with this gear type.

When assessment information indicated that summer chum salmon were beginning to enter the river a subsistence fishing schedule was implemented that allowed summer chum salmon harvest in Districts 1–3 using dip nets only seven days a week beginning June 1. Chinook salmon were required to be immediately released alive. The northern portion of the Coastal District remained closed. On June 9, a commercial and subsistence fishing schedule was established for Districts 1 and 2 in which beach seine gear was also allowed for subsistence fishing.

Subsistence fishing opportunity for summer chum salmon with selective gear types, such as fish wheels, dip nets, and beach seines, was also provided in District 4. Subsistence fishing for summer chum salmon with beach seine and dip net gear only was allowed in the Anvik River Special Management Area, which includes the lower 12 miles of the Anvik River. As in previous years, Subdistrict 4-A was subdivided into two separate management areas allowing for more management precision and flexibility when altering the subsistence fishing schedule. Fish wheel and dip net opportunity coincided with the migration of summer chum salmon through Subdistricts 4-A, 4-B, and 4-C. As with the lower river districts, all Chinook salmon were required to be released alive from these selective gear types.

While the subsistence salmon fishing closures were similarly implemented in Subdistricts 5-A, 5-B, 5-C, and 5-D, harvest opportunity with selective gear types was not provided as very few summer chum salmon migrate through these mainstem subdistricts. The most severe reductions in subsistence fishing opportunity occurred in these subdistricts to avoid offering opportunity that would primarily target Chinook salmon.

Additional management actions were taken in Subdistricts 5-A, 5-B, and 5-C, after enforcement and public reports indicated the 4-inch or smaller mesh size gillnets were being used to target Chinook salmon. Unfortunately, the opportunity to harvest non-salmon species in Subdistricts 5-A, 5-B, and 5-C was closed for approximately one week beginning June 30. Discontinuing this subsistence fishing opportunity using the 4-inch or smaller mesh size gillnets was one of the most difficult decisions managers faced this season. The department and USFWS plan to address this issue at meetings throughout this winter to discuss options on how to handle similar situations more effectively in the future.

Conservative management actions were also taken in Yukon River tributaries in an effort to provide protection for the Alaskan Chinook salmon stocks. In the Tanana River, subsistence salmon fishing was closed to protect Chinook salmon from June 29–July 6 in Subdistricts 6-A and 6-B and from June 29–July 7 in the Old Minto Area. Additionally, in Subdistrict 6-C, personal use salmon fishing was closed from June 25–July 28, nearly spanning the entire duration of the Chinook salmon run. The Koyukuk and Innoko Rivers were closed to subsistence salmon fishing from June 18–July 28 and June 19–July 2, respectively. Subsistence salmon fishing reopened

with gillnets restricted to 6-inch or smaller mesh to target summer chum salmon. This gear restriction was in place for the remainder of the Chinook salmon run in both tributaries.

Assessment information from the sonar near Pilot Station on June 25 indicated the Chinook salmon run was on track to be near the high end of the preseason outlook. While the 2014 Chinook salmon run was proving to be better than initially expected, assessment information indicated that the run was still on track to be below average in size. A Chinook salmon run size of that magnitude did not warrant Chinook salmon directed harvest opportunities; however, limited restricted gillnet opportunity was initially provided to target the abundant summer chum salmon while the weekly dip net and beach seine subsistence fishing schedule was still in place. Special subsistence only fishing periods were allowed with 6-inch or smaller mesh gillnets in Districts 1–3 to maximize summer chum salmon harvest while minimizing the impact to Chinook salmon. The first of these periods began on June 28 in both District 1 and District 2. These fishing periods were extremely brief, only three hours in duration. Assessment information indicated the Chinook salmon run was coming to an end, therefore, incidental harvest of Chinook salmon was expected to be minimal during these periods.

When it was determined that the Chinook salmon run was more than 90% complete in a given district, subsistence fishing restrictions and closures were incrementally relaxed. Initially, each district was returned to their respective traditional subsistence fishing schedule with gillnet and fish wheel gear restrictions in place. At that time the opportunity to use selective fishing gear, such as dip nets and beach seines, was discontinued in Districts 1–4. After approximately one week, these gillnet and fish wheel gear restrictions were lifted as the Chinook salmon run was essentially over.

The 2014 season will be marked as the most conservatively managed Chinook salmon season in recent history. Maintaining a management course that was focused on meeting escapement objectives would not have been possible without the full cooperation and understanding of the fishermen of the Yukon River. Over the course of the last several years, Yukon River fishermen have exhibited incredible flexibility, complying with schedule changes and gear restrictions. The department acknowledges the continued commitment made by Yukon River fishermen to conserve the valuable Chinook salmon resource for future generations.

The 2014 preliminary subsistence harvest estimates will not be available until later this winter. However, for a point of reference, slightly less conservative management actions taken in 2013 resulted in an estimated harvest of approximately 12,500 Chinook salmon, which is a 75% reduction of the average annual harvest of approximately 50,000 fish. Based on the aggressively conservative actions taken in 2014 and inseason harvest reports, it is plausible that the Chinook salmon subsistence harvest should be less than what was observed in 2013.

2014 Commercial Fishery

Lower Yukon Districts

In 2014, for the seventh consecutive year, no commercial periods targeting Chinook salmon were allowed in the mainstem Yukon River or in the Tanana River. However, liberal commercial fishing opportunity was provided to target the available surplus of summer chum salmon in Districts 1 and 2, Subdistrict 4-A, and District 6. Since Chinook salmon are encountered incidentally in a commercial summer chum salmon fishery, a suite of strategies were used to conservatively manage these fisheries to minimize the impact to the weak Chinook salmon run.

An early break up and the use of selective gear types allowed the department to open commercial harvest of summer chum salmon using dip nets and beach seines beginning June 9 in District 1 and District 2. District 1 was on a six days a week commercial fishing schedule from 12:00 noon Mondays until 12:00 midnight Fridays. District 2 was also on a six days a week schedule from 12:00 noon Mondays until 10:00 p.m. Fridays. The impact to Chinook salmon was expected to be minimal as fishermen were required to immediately release incidentally caught Chinook salmon back to the water alive. The department allowed twenty-one 12-hour periods in District 1 and twenty-three 10-hour periods in District 2 using dip nets and beach seines only, for a combined harvest of approximately 272,800 summer chum salmon, with 5,440 Chinook salmon reported released alive (Table 1). Dip nets accounted for the majority of the summer chum harvest taken with these gear types. Although effort increased in 2014, few fishermen used beach seines to commercially harvest summer chum salmon (Appendix A).

Table 1.—Summer chum and pink salmon harvest and Chinook salmon released, by dip net and beach seine, during the Lower Yukon commercial fishery, 2014.

District	Gear	Chinook Salmon		Pink Salmon			Summer Chum Salmon		
		Number of Fishermen	Number Caught and Released	Number	Pounds	Avg. Wt.	Number	Pounds	Avg. Wt.
1	Dip Net	181	1,788	13,183	43,787	3.3	98,585	613,895	6.2
	Beach Seine	12	147	3,161	11,064	3.5	12,471	80,011	6.4
2	Dip Net	162	3,480	1,368	5,193	3.8	161,186	1,018,092	6.3
	Beach Seine	4	25	0	0	-	607	3,541	5.8
Total:		343	5,440	17,712	60,044	3.4	272,849	1,715,539	6.3

The use of gillnet gear was delayed until inseason assessment indicated the majority of the Chinook salmon run had migrated upriver in an effort to reduce incidental harvest of Chinook salmon. Gillnet opportunity with 6-inch gear began on July 3 in District 1 and July 6 in District 2. Six-inch gillnets were used for the last six commercial periods in both districts (Appendix A).

Concurrent subsistence and commercial fishing periods were regularly instituted throughout the entire commercial fishing seasons. These use of these concurrent periods is most critical during the gillnet portion of the commercial season in Districts 1 and 2. Concurrent openings streamline commercial and subsistence fishing into a single event, therefore reducing the amount of time that Chinook salmon were susceptible to harvest.

The sale of incidentally caught Chinook salmon was prohibited by emergency order during the entire commercial fishing season. This action helped ensure fishermen would not target Chinook salmon during gillnet commercial fishing periods; and fishermen could either release incidentally caught Chinook salmon alive or use them for subsistence purposes. It was required to report any Chinook salmon caught but not sold on fish tickets. A total of 440 Chinook salmon were reported incidentally harvested in Districts 1 and 2 during the summer season. A total of 30 Chinook salmon were caught but not sold in the fall season (Appendix A). Chinook salmon sales were also prohibited throughout the fall season.

The preliminary cumulative summer chum salmon commercial harvest for Districts 1 and 2 combined was 427,347 fish (Appendix B). The summer chum salmon harvest was 79% above

the 2009–2013 average harvest of 238,929 fish (Appendix B). Dip net and beach seine harvest was a significant contributor in making the 2014 summer chum salmon harvest in the Lower Yukon the largest on record since 1989.

Upper Yukon Districts

As in recent years, summer chum salmon directed commercial fishing periods in Subdistrict 4-A were allowed with fish wheels only. Commercial fishing began June 23 where fishermen were required to man fish wheels at all times and release Chinook salmon to the water alive. After the vast majority of the Chinook salmon run migrated through the area, the requirements that commercial fish wheels be manned at all times and that all Chinook salmon be released alive was discontinued. A total of thirty-five 24-hour periods were implemented resulting in a total of 840 fishing hours (Appendix A). The preliminary cumulative summer chum salmon harvest for Subdistrict 4-A was 96,385 fish (Appendix A), with the majority of the harvest being female. A single fish buyer operated in Kaltag during the 2014 season and the summer chum salmon harvest was 50% above the most recent 5-year average (2009–2013) (Appendix B). A total of 341 Chinook salmon were reported as caught and released alive back to the water (Appendix A).

District 6 was managed using inseason assessment information provided by multiple projects that operated in the Tanana River drainage. A harvestable surplus of summer chum salmon was expected based upon sonar abundance estimates and genetic stock composition information. Given the available surplus and favorable market interest, the department scheduled the first summer chum salmon-directed commercial fishing period in District 6 on July 11 (Appendix A). As in Subdistrict 4-A, commercial fishing gear was initially restricted to manned fish wheels and all Chinook salmon caught in fish wheels had to be immediately released alive. These gear restrictions were relaxed on July 28 after the Chinook salmon run in the Tanana River was nearly over. The department scheduled eight commercial fishing periods and the preliminary cumulative harvest was 6,912 summer chum salmon (Appendix A). A total of 201 Chinook salmon were recorded as caught but not sold, 190 were caught and released alive and 11 were kept for personal use.

The total commercial harvest for the entire Yukon Area was 530,644 summer chum salmon, which was 79% above the 2009–2013 average harvest of 296,701 fish (Appendix B).

2014 Fishing Effort and Exvessel Value

A total of 416 permit holders participated in the summer chum salmon fishery, which was approximately 15% below the 2004–2013 average of 487 permit holders (Appendix C). The Lower Yukon Area (Districts 1–3) and Upper Yukon Area (Districts 4–6) are separate Commercial Fisheries Entry Commission (CFEC) permit areas. A total of 405 permit holders fished in the Lower Yukon Area in 2014, which was approximately 14% below the 2004–2013 average of 472. In the Upper Yukon Area, 11 permit holders fished, which was approximately 28% below the 2004–2013 average of 15.

Yukon River fishermen in Alaska received an estimated \$1.86 million for their summer chum salmon harvest in 2014, approximately 4% above the 2004–2013 average of \$1.79 million (Appendix D). Additionally, fishermen received \$54,638 from the sale of pink salmon in Districts 1 and 2. Lower Yukon River exvessel value was estimated to be \$1.7 million. In 2014 fishermen received \$0.60 per pound for summer chum salmon and \$1.00 a fish for pink salmon. The estimated average income for Lower Yukon Area fishermen in 2014 was \$4,071.

Upper Yukon Area fishermen received an average of \$0.29 per pound for summer chum salmon sold in the round. The average price paid in the Upper Yukon Area was slightly above the 2004–2013 average of \$0.26 per pound (Appendix D). The exvessel value was estimated to be \$157,211. The average income for Upper Yukon Area fishermen that participated in the 2014 fishery was \$15,496. Zero Chinook salmon were sold in the Yukon Area in 2014.

2014 Age and Sex Composition

Test Fisheries

The Chinook salmon age composition from the 8.5-inch mesh LYTF (Lower Yukon River Test fishery, Big Eddy and Middle Mouth sites combined) set nets was 1% age-4, 51% age-5, 46% age-6, and 3% age-7 fish. The sample size was 615 fish and females comprised 46% of the samples. The age-5 percentage was above average, age-6 was below average, and females were below average (Table 2).

The Chinook salmon age composition from the Pilot Station sonar drift nets was 4% age-3, 10% age-4, 66% age-5, 20% age-6, and 1% age-7 fish. The sample size was 431 fish and females comprised 30% of the samples. The age-5 and age-3 percentages were above average, age-6 was below average, and females were below average (Table 2).

The Chinook salmon age composition from the Eagle sonar drift nets was 7% age-4, 51% age-5, 40% age-6, and 1% age-7 fish. The sample size was 595 fish and females comprised 35% of the samples. Similar with other Chinook salmon test fisheries, the Eagle sonar test fishery age-5 percentage was above average, age-6 was below average, and females were below average (Table 2).

The Chinook salmon age and sex composition from other projects are not yet available.

The summer chum salmon age composition from the 5.5-inch mesh LYTF drift nets was 26% age-4, 69% age-5, and 5% age-6 fish. The sample size was 1,579 fish and females comprised 55% of the samples. The age-4 percentage was below average, age-5 was above average, and females were near average.

Table 2.–Yukon River Chinook salmon age and female percentages from selected projects, 2014.

Percent (%)	Chinook Salmon					
	<i>LYTF 8.5" Mesh Gillnet</i>		<i>Sonar Project near Pilot Station</i>		<i>Eagle Sonar Project</i>	
	Historical average ^a	2014	Historical average ^b	2014	Historical average ^c	2014
5-year old	29	51	45	66	42	51
6-year old	65	46	42	20	47	40
female	54	46	41	30	42	35

^a The averages only include years when samples were collected throughout the season and include samples with a 35 day season minimum (1994, 1998-2013). Averages were not weighted by number of fish sampled each year.

^b The average includes years from 1998 through 2013.

^c The average includes years from 2005-2013.

Subsistence Harvest

Due to subsistence fishing restrictions this season, only limited subsistence harvest sampling occurred and sample sizes were not sufficient for analysis.

Commercial Harvest

The summer chum salmon age composition from the District 1 commercial harvest was 32% age-4, 63% age-5, and 4% age-6 fish. The sample size was 1,095 fish collected from seven periods and females comprised 55% of the harvest.

The summer chum salmon age and sex composition from commercial harvests in Subdistrict 4-A and District 6 are not yet available.

2014 Escapement

Chinook Salmon

Chinook salmon escapement goals for the East Fork Andreafsky River Weir, West Fork Andreafsky River Aerial, Anvik River Index Aerial, and Eagle Sonar were met (Table 3 and Appendix E). Unfortunately, due to high water, escapement projects on the Chena and Salcha rivers did not operate. Sonar was implemented on the Chena River and preliminary counts and species apportionment estimates suggest the Chena River escapement goal for Chinook salmon was met. Preliminary Chinook salmon passage at Eagle sonar, and subsequently border passage estimate, was approximately 64,500 fish (Table 3 and Appendix E). These numbers, however, are subject to change with postseason data analysis.

Table 3.–Escapement goals and estimates for Chinook salmon at selected Yukon River tributaries. Escapement estimates are preliminary.

Stream	Current Goal	Type of Goal	2014 Escapement
East Fork Andreafsky River Weir	2,100–4,900	SEG	5,949
West Fork Andreafsky River Aerial	640–1,600	SEG	1,695
Anvik River Index Aerial	1,100–1,700	SEG	1,584
Nulato River Aerial (Forks Combined)	940–1,900	SEG	- ³
Chena River Tower	2,800–5,700	BEG	4,358 ^{2,4}
Salcha River Tower	3,300–6,500	BEG	- ²
Border Passage	42,500–55,000	IMEG ⁵	64,522 ¹

¹ Since subsistence harvest is anticipated to be minimal or zero above Eagle Sonar to the border, border passage was estimated to be equal to Eagle Sonar passage.

² Project operations were hindered by high water conditions for much of the season.

³ Aerial survey was not flown due to run timing and/or water conditions.

⁴ Estimate based on sonar counts.

⁵ The US/Canada Yukon River Panel agreed to a 1-year Canadian Interim Management Escapement Goal (IMEG) of 42,500–55,000 Chinook salmon based on the Eagle sonar program. In order to meet this goal, the passage at Eagle sonar must include a minimum of 42,500 fish for escapement, provide for a subsistence harvest in the community of Eagle upstream of the sonar (approximately 1,000–2,000 fish), and incorporate Canadian harvest sharing as dictated in the US/Canada Yukon River Treaty (20–26% of the total allowable catch).

Summer Chum Salmon

Most tributaries producing summer chum salmon experienced below average escapement (Appendix B). The Anvik River Biological Escapement Goal (BEG) was achieved, but counts at the East Fork Andreafsky River Weir were below the escapement goal for that system (Table 4). The estimated passage of summer chum salmon at the Gisasa River weir was below average (Appendix B). Henshaw Creek weir and Chena and Salcha rivers counting towers did not operate in 2014 due to high water conditions. Sonar was implemented on the Chena River to estimate fish passage.

Table 4.–Escapement goals and estimates for summer chum salmon at selected Yukon River tributaries. Escapement estimates are preliminary.

Stream	Current Goal	Type of Goal	2014 Escapement
East Fork Andreafsky River Weir	> 40,000	SEG	37,793
Anvik River Sonar	350,000–750,000	BEG	399,223
Gisasa River Weir	N/A		32,137 ¹
Henshaw Creek Weir	N/A		- ¹
Chena River Tower	N/A		17,076 ^{1,2}
Salcha River Tower	N/A		- ¹

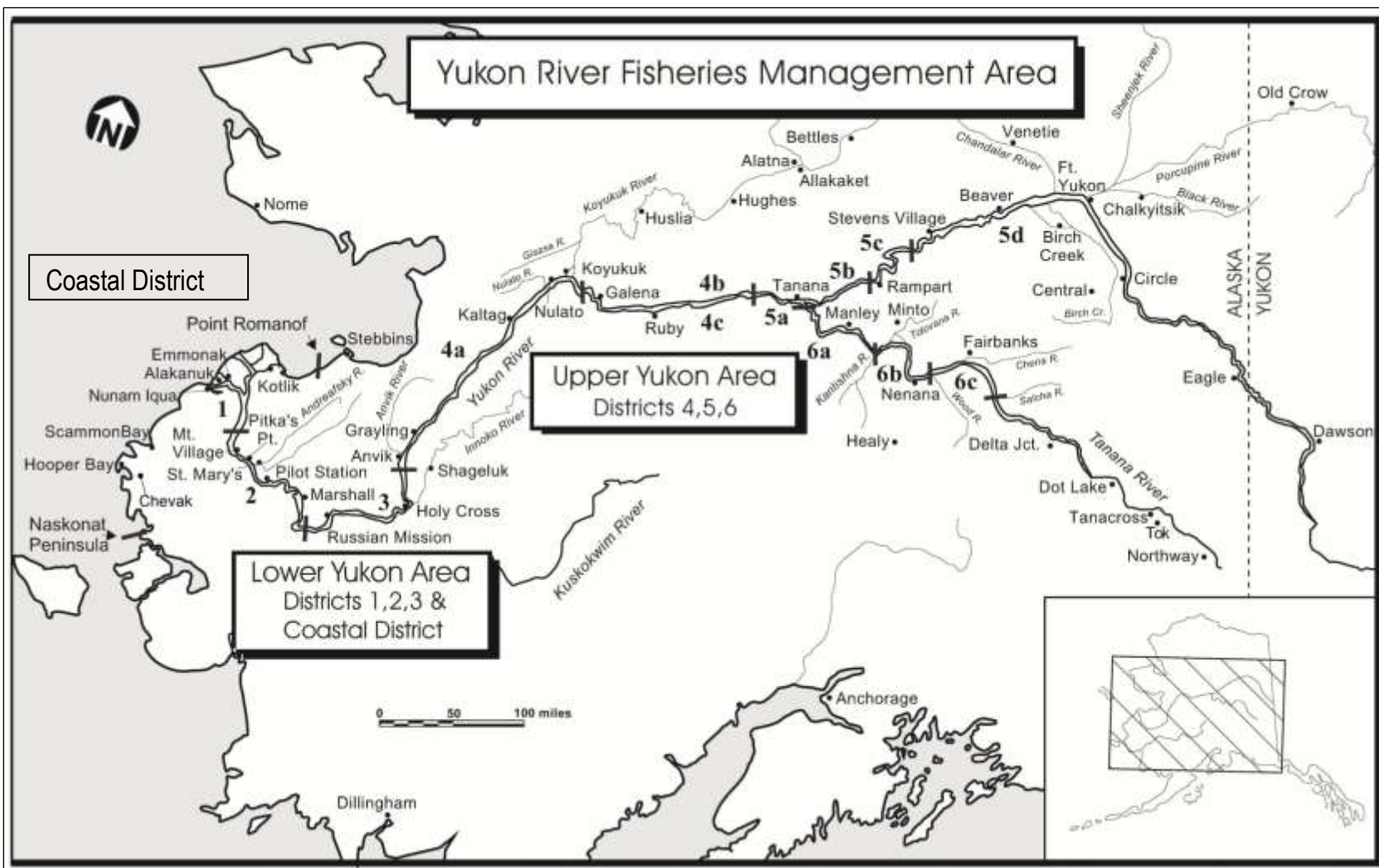
¹ Project operations were hindered by high water conditions.

² Estimate based on sonar counts.

Canadian Fisheries

The preseason outlook was for a run of approximately 31,000 to 61,000 Canadian-origin Chinook salmon. The Department of Fisheries and Oceans (DFO) managers conducted Chinook salmon fisheries according to available abundance and international harvest sharing provisions.

Based on the projected border passage of 64,500 Chinook salmon, which was above the preseason projection and the IMEG range of 42,500–55,000, the Chinook salmon run was classified to be in the “green management zone”. Although a green zone level on management was achieved, and would technically allow for an unrestricted First Nations fishery, the majority of First Nations chose to refrain from harvesting Chinook salmon in recognition of long-term conservation concerns. The domestic and commercial fishery remained closed throughout the 2014 Chinook salmon run. Recreational harvest limits were zero catch and retention and all angling was closed in the area of the Yukon River near the mouth of Tatchun River. While not all information is currently available, the preliminary First Nation harvest is estimated to be less than 100 Chinook salmon. Therefore, the 2014 harvest is expected to be considerably lower than the 2013 harvest (1,904 Chinook salmon), which was the lowest harvest on record. Several communities curtailed fishing effort altogether.



13

Figure 1.—Yukon Area communities and fishing districts.

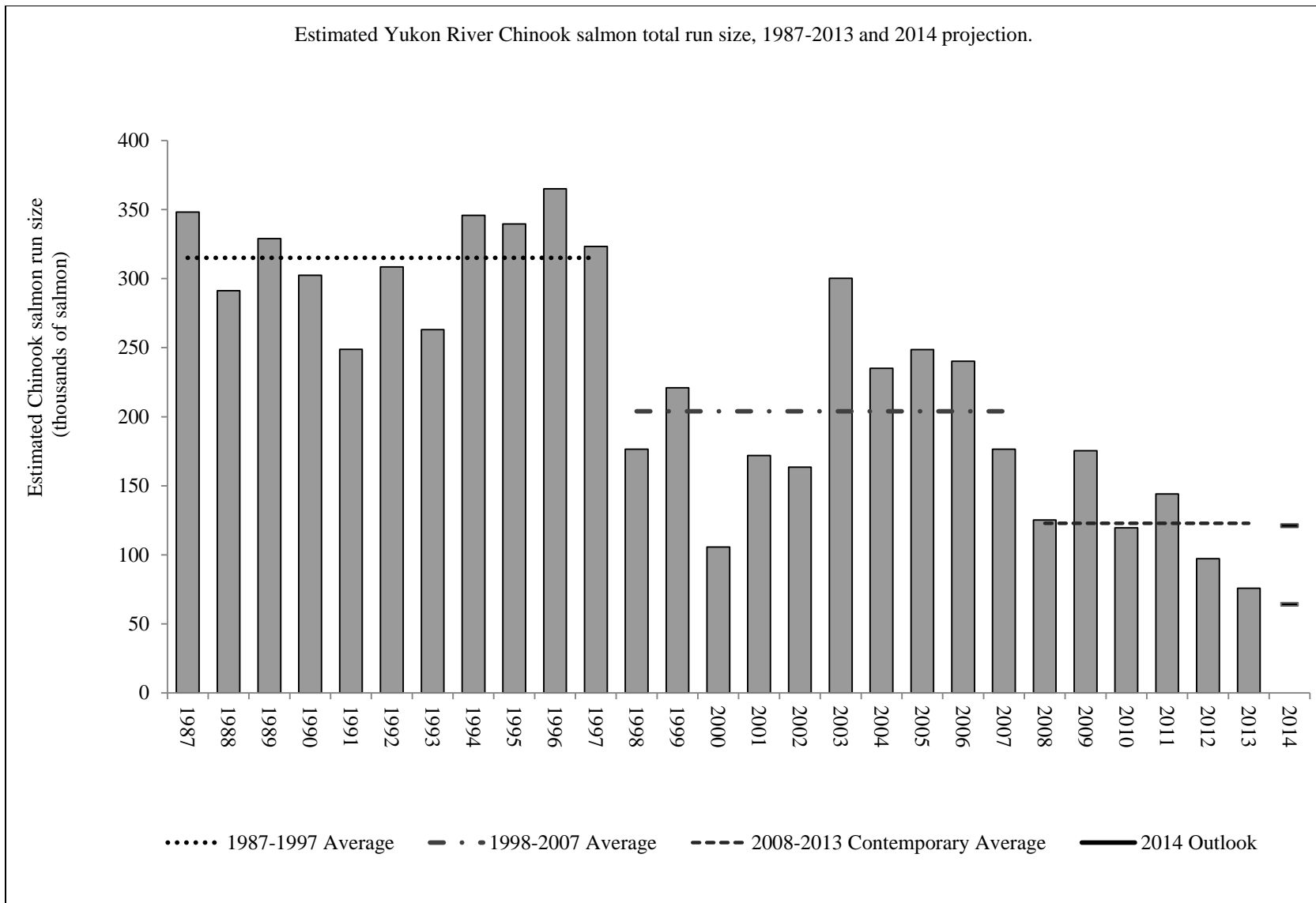


Figure 2.—Yukon River Chinook salmon historical estimated total run size and projected run size in 2014, illustrating the drastic decline beginning in 1998.

Appendix A.–Preliminary summer season commercial harvest summary, Yukon Area, 2014.

District 1															
Period	Starting Time	Start Date	Ending Time	End Date	Hours Fished	Gear Type Type ^a	Mesh Size	Number of Fishermen	Chinook Salmon		Summer Chum Salmon		Pink Salmon		
									Number Caught and Released	Number Caught but Not Sold	Number	Pounds	Avg. Wt.	Number	
1	^a 12:00 PM	9-Jun	12:00 AM	9-Jun	12	DN/BS		85	111		4,214	28,843	6.8		
2	^a 12:00 PM	10-Jun	12:00 AM	10-Jun	12	DN/BS		51	18		1,969	13,158	6.7		
3	^a 12:00 PM	11-Jun	12:00 AM	11-Jun	12	DN/BS		74	167		4,150	28,400	6.8		
4	^a 12:00 PM	12-Jun	12:00 AM	12-Jun	12	DN/BS		45	27		1,582	10,351	6.5		
5	^a 12:00 PM	13-Jun	12:00 AM	13-Jun	12	DN/BS		21	15		958	6,184	6.5		
6	^a 12:00 PM	15-Jun	12:00 AM	15-Jun	12	DN/BS		93	210		7,777	49,416	6.4		
7	^a 12:00 PM	16-Jun	12:00 AM	16-Jun	12	DN/BS		71	89		3,431	21,664	6.3		
8	^a 12:00 PM	17-Jun	12:00 AM	17-Jun	12	DN/BS		92	220		8,912	58,038	6.5	67	
9	^a 12:00 PM	18-Jun	12:00 AM	18-Jun	12	DN/BS		90	197		9,002	57,974	6.4	559	
10	^a 12:00 PM	19-Jun	12:00 AM	19-Jun	12	DN/BS		87	168		7,690	48,485	6.3	689	
11	^a 12:00 PM	20-Jun	12:00 AM	20-Jun	12	DN/BS		102	178		12,101	78,043	6.4	1,202	
12	^a 12:00 PM	22-Jun	12:00 AM	22-Jun	12	DN/BS		111	143		9,824	60,715	6.2	196	
13	^a 12:00 PM	23-Jun	12:00 AM	23-Jun	12	DN/BS		105	154		9,625	58,328	6.1		
14	^a 12:00 PM	24-Jun	12:00 AM	24-Jun	12	DN/BS		85	52		6,101	36,583	6.0		
15	^a 12:00 PM	25-Jun	12:00 AM	25-Jun	12	DN/BS		3	2		128	738	5.8		
16	^a 12:00 PM	26-Jun	12:00 AM	26-Jun	12	DN/BS		68	45		4,426	25,464	5.8		
17	^a 12:00 PM	27-Jun	12:00 AM	27-Jun	12	DN/BS		109	86		6,998	40,032	5.7		
18	^a 12:00 PM	29-Jun	12:00 AM	29-Jun	12	DN/BS		78	30		4,686	27,383	5.8		
19	^a 12:00 PM	30-Jun	12:00 AM	30-Jun	12	DN/BS		31	4		1,083	6,267	5.8		
20	^a 12:00 PM	1-Jul	12:00 AM	1-Jul	12	DN/BS		47	14		1,666	9,238	5.5	7,626	
21	^a 12:00 PM	2-Jul	12:00 AM	2-Jul	12	DN/BS		66	13		4,733	28,602	6.0	6,005	
22	8:00 PM	3-Jul	12:00 AM	3-Jul	4	R	6.0	142		34	13,677	88,904	6.5	3,048	
23	3:00 PM	7-Jul	12:00 AM	7-Jul	9	R	6.0	137		13	7,204	44,943	6.2	7,769	
24	3:00 PM	9-Jul	12:00 AM	9-Jul	9	R	6.0	134		23	9,732	61,643	6.3	6,385	
25	3:00 PM	11-Jul	12:00 AM	11-Jul	9	R	6.0	159		24	21,624	143,036	6.6	5,938	
26	12:00 PM	13-Jul	12:00 AM	13-Jul	12	R	6.0	128		21	13,831	93,485	6.8	6,225	
27	12:00 PM	15-Jul	12:00 AM	15-Jul	12	R	6.0	150		11	21,116	155,049	7.3	3,580	
									Fall Season		13				
District 1 Subtotal:					307				231	1,943	139	198,240	1,280,966	6.5	49,289

-continued-

Appendix A.–Page 2 of 4.

District 2															
Period	Starting Time	Start Date	Ending Time	End Date	Hours Fished	Gear Type Type ^a	Mesh Size	Number Fishermen	Chinook Salmon		Summer Chum Salmon		Pink Salmon		
									Number Caught and Released	Number Caught but Not Sold	Number	Pounds	Avg. Wt.	Number	
1	12:00 PM	9-Jun	10:00 PM	9-Jun	10	DN/BS		38	30		2,634	18,487	7.0		
2	12:00 PM	10-Jun	10:00 PM	10-Jun	10	DN/BS		56	15		4,018	27,758	6.9		
3	12:00 PM	11-Jun	10:00 PM	11-Jun	10	DN/BS		69	113		6,232	42,608	6.8		
4	12:00 PM	12-Jun	10:00 PM	12-Jun	10	DN/BS		61	63		4,408	29,175	6.6		
5	12:00 PM	13-Jun	10:00 PM	13-Jun	10	DN/BS		48	27		2,117	14,184	6.7		
6	12:00 PM	15-Jun	10:00 PM	15-Jun	10	DN/BS		39	99		1,618	10,778	6.7		
7	12:00 PM	16-Jun	10:00 PM	16-Jun	10	DN/BS		63	164		4,291	28,972	6.8		
8	12:00 PM	17-Jun	10:00 PM	17-Jun	10	DN/BS		79	273		5,902	38,649	6.5	6	
9	12:00 PM	18-Jun	10:00 PM	18-Jun	10	DN/BS		94	450		10,026	66,145	6.6	47	
10	12:00 PM	19-Jun	10:00 PM	19-Jun	10	DN/BS		101	419		13,333	88,886	6.7	102	
11	12:00 PM	20-Jun	10:00 PM	20-Jun	10	DN/BS		110	361		15,412	100,539	6.5	388	
12	12:00 PM	22-Jun	10:00 PM	22-Jun	10	DN/BS		92	289		10,560	68,195	6.5	490	
13	12:00 PM	23-Jun	10:00 PM	23-Jun	10	DN/BS		91	245		10,839	69,183	6.4	103	
14	12:00 PM	24-Jun	10:00 PM	24-Jun	10	DN/BS		87	217		8,727	54,649	6.3		
15	12:00 PM	25-Jun	10:00 PM	25-Jun	10	DN/BS		69	142		6,936	42,484	6.1		
16	12:00 PM	26-Jun	10:00 PM	26-Jun	10	DN/BS		63	107		5,231	31,332	6.0		
17	12:00 PM	27-Jun	10:00 PM	27-Jun	10	DN/BS		75	90		4,953	28,797	5.8		
18	12:00 PM	29-Jun	10:00 PM	29-Jun	10	DN/BS		95	66		8,298	48,590	5.9		
19	12:00 PM	30-Jun	10:00 PM	30-Jun	10	DN/BS		109	95		12,029	71,064	5.9		
20	12:00 PM	1-Jul	10:00 PM	1-Jul	10	DN/BS		94	97		9,196	53,157	5.8	10	
21	12:00 PM	2-Jul	10:00 PM	2-Jul	10	DN/BS		64	77		6,253	35,559	5.7	24	
22	12:00 PM	3-Jul	10:00 PM	3-Jul	10	DN/BS		53	46		4,198	24,966	5.9	18	
23	12:00 PM	4-Jul	10:00 PM	4-Jul	10	DN/BS		59	23		4,582	27,476	6.0	180	
24	4:00 PM	6-Jul	10:00 PM	6-Jul	6	R	6.0	130		110	16,358	105,133	6.4	462	
25	4:00 PM	8-Jul	10:00 PM	8-Jul	6	R	6.0	129		83	9,679	60,737	6.3	912	
26	4:00 PM	10-Jul	10:00 PM	10-Jul	6	R	6.0	105		37	5,493	34,839	6.3	655	
27	2:00 PM	12-Jul	11:00 PM	12-Jul	9	R	6.0	79		42	6,814	44,247	6.5	860	
28	2:00 PM	14-Jul	11:00 PM	14-Jul	9	R	6.0	112		34	13,396	90,765	6.8	514	
29	2:00 PM	16-Jul	11:00 PM	16-Jul	9	R	6.0	123		8	15,574	109,800	7.1	609	
								Fall Season							
District 2 Subtotal:					275				183	3,508	331	229,107	1,467,154	6.4	5,380
Lower Yukon Area, Summer Season,															
Districts 1, 2, and 3 Subtotal ^{b,c} :					582				405	5,451	470	427,347	2,748,120	6.4	54,653

-continued-

Appendix A.–Page 3 of 4.

District 4

Period	Starting Time	Start Date	Ending Time	End Date	Hours		Gear Type	Mesh Size	Number Fishermen	Chinook Salmon		Summer Chum Salmon		Pink Salmon
					Fished 4-A					Number Caught and Released	Number Caught but Not Sold	Number	Pounds	Avg. Wt.
1	^d 12:01 AM	23-Jun	12:00 AM	23-Jun	24		FW		-	-	-	-	-	
2	^d 12:01 AM	24-Jun	12:00 AM	24-Jun	24		FW		1	0	277	1,884	6.8	
3	^d 12:01 AM	25-Jun	12:00 AM	25-Jun	24		FW		-	-	-	-	-	
4	^d 12:01 AM	26-Jun	12:00 AM	26-Jun	24		FW		-	-	-	-	-	
5	^d 12:01 AM	27-Jun	12:00 AM	27-Jun	24		FW		4	13	2,525	14,494	5.7	
6	^d 12:01 AM	28-Jun	12:00 AM	28-Jun	24		FW		6	16	5,406	32,977	6.1	
7	^d 12:01 AM	29-Jun	12:00 AM	29-Jun	24		FW		7	22	10,634	57,424	5.4	
8	^d 12:01 AM	30-Jun	12:00 AM	30-Jun	24		FW		6	8	3,860	22,774	5.9	
9	^d 12:01 AM	1-Jul	12:00 AM	1-Jul	24		FW		7	8	4,034	22,590	5.6	
10	^d 12:01 AM	2-Jul	12:00 AM	2-Jul	24		FW		6	17	4,132	24,379	5.9	
11	^d 12:01 AM	3-Jul	12:00 AM	3-Jul	24		FW		8	20	4,211	22,739	5.4	
12	^d 12:01 AM	4-Jul	12:00 AM	4-Jul	24		FW		9	30	4,667	22,868	4.9	
13	^d 12:01 AM	5-Jul	12:00 AM	5-Jul	24		FW		9	27	4,511	23,006	5.1	
14	^d 12:01 AM	6-Jul	12:00 AM	6-Jul	24		FW		9	28	3,478	18,086	5.2	
15	^d 12:01 AM	7-Jul	12:00 AM	7-Jul	24		FW		7	20	2,994	14,970	5.0	
16	^d 12:01 AM	8-Jul	12:00 AM	8-Jul	24		FW		8	1	2,585	14,476	5.6	
17	^d 12:01 AM	9-Jul	12:00 AM	9-Jul	24		FW		8	17	4,523	20,354	4.5	
18	^d 12:01 AM	10-Jul	12:00 AM	10-Jul	24		FW		10	20	4,479	22,395	5.0	
19	^d 12:01 AM	11-Jul	12:00 AM	11-Jul	24		FW		9	18	5,036	26,187	5.2	
20	^d 12:01 AM	12-Jul	12:00 AM	12-Jul	24		FW		10	27	4,112	19,326	4.7	
21	^d 12:01 AM	13-Jul	12:00 AM	13-Jul	24		FW		9	18	4,123	20,203	4.9	
22	^d 12:01 AM	14-Jul	12:00 AM	14-Jul	24		FW		6	9	2,379	11,657	4.9	
23	^d 12:01 AM	15-Jul	12:00 AM	15-Jul	24		FW		5	10	2,997	15,584	5.2	
24	^d 12:01 AM	16-Jul	12:00 AM	16-Jul	24		FW		7	5	2,762	12,705	4.6	
25	^d 12:01 AM	17-Jul	12:00 AM	17-Jul	24		FW		7	4	2,297	10,566	4.6	
26	^d 12:01 AM	18-Jul	12:00 AM	18-Jul	24		FW		6	0	1,560	7,488	4.8	
27	^d 12:01 AM	19-Jul	12:00 AM	19-Jul	24		FW		7	0	1,464	6,881	4.7	
28	^d 12:01 AM	20-Jul	12:00 AM	20-Jul	24		FW		6	2	982	4,517	4.6	
29	12:01 AM	21-Jul	12:00 AM	21-Jul	24		FW/GN	6.0	6	1	1,311	5,768	4.4	
30	12:01 AM	22-Jul	12:00 AM	22-Jul	24		FW/GN	6.0	5	-	1,011	4,550	4.5	
31	12:01 AM	23-Jul	12:00 AM	23-Jul	24		FW/GN	6.0	5	-	745	3,427	4.6	
32	12:01 AM	24-Jul	12:00 AM	24-Jul	24		FW/GN	6.0	4	-	664	2,855	4.3	
33	12:01 AM	25-Jul	12:00 AM	25-Jul	24		FW/GN	6.0	5	-	1,065	5,112	4.8	
34	12:01 AM	26-Jul	12:00 AM	26-Jul	24		FW/GN	6.0	6	-	1,561	7,337	4.7	
35	12:01 AM	27-Jul	12:00 AM	27-Jul	24		FW/GN	6.0	-	-	-	-	-	
District 4 Subtotal:					840				10	341	96,385	499,579	5.2	-

-continued-

Appendix A.–Page 4 of 4.

Subdistricts 6-A, 6-B, and 6-C														
Period	Starting Time	Start Date	Ending Time	End Date	Hours	Gear Type	Mesh Size	Number Fishermen	Chinook Salmon		Summer Chum Salmon		Pink Salmon	
					Fished 6-AB				Number Caught and Released	Number Caught but Not Sold	Number	Pounds	Avg. Wt.	Number
1	^d 6:00 PM	11-Jul	12:00 PM	13-Jul	42	FW		1	83		666	4,222	6.3	
2	^d 6:00 PM	14-Jul	12:00 PM	16-Jul	42	FW		1	57		935	4,963	5.3	
3	^d 6:00 PM	18-Jul	12:00 PM	20-Jul	42	FW		1	29		1,021	6,708	6.6	
4	^d 6:00 PM	21-Jul	12:00 PM	23-Jul	42	FW		1	11		506	3,305	6.5	
5	^d 6:00 PM	25-Jul	12:00 PM	27-Jul	42	FW		1	7		1,188	7,605	6.4	
6	6:00 PM	28-Jul	12:00 PM	30-Jul	42	FW/GN	6.0	1	3	6	1,589	9,596	6.0	
7	6:00 PM	1-Aug	12:00 PM	3-Aug	42	FW/GN	6.0	1		5	1,007	6,129	6.1	
8	6:00 PM	4-Aug	12:00 PM	6-Aug	42	FW/GN	6.0	-		-	-	-	-	-
District 6 Subtotal:					336			1	190	11	6,912	42,528	6.2	0
Upper Yukon Area, Summer Season, Districts 4, 5, and 6 Subtotal:														
					1,176			11	531	11	103,297	542,107	5.2	0
Yukon Area, Summer Season, Districts 1 Through 6 Total ^{b,c} :														
					1,758			416	5,971	481	530,563	3,290,227	6.2	54,653

Note: Chinook salmon caught in gillnets were not allowed to be sold throughout the summer and fall season. Chinook salmon caught in dip nets, beach seines, and fish wheels were to be immediately released alive. DN = dip net; BS = beach seine; GN = gillnet; FW = fish wheel. No commercial fishing occurred in Districts 3 and 5.

- ^a Under new commercial fishing regulations adopted by the Alaska Board of Fisheries in 2013, the department may allow the use of dip nets and beach seines.
- ^b The number of fishermen is the unique number of permits fished. Some fishermen may fish multiple areas, therefore the subtotals will not necessarily add up by district.
- ^c Includes Chinook salmon caught but not sold in the fall season.
- ^d Fish wheels were to be manned at all times. Chinook salmon caught in fish wheels were to be released immediately back to the water alive.

Appendix B.–Summer Chum salmon commercial harvest and escapement comparisons, Yukon River, 2004–2014.

Summer Chum Salmon Commercial Harvest ^a													2014 Percent Change From Recent 5-Year Average (In Parentheses)
District/Subdistrict	Guideline Harvest Range	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
1		13,993	23,965	21,816	106,790	67,459	71,355	102,267	163,439	150,800	207,871	198,240	42% (139,146)
2		5,782	8,313	25,543	69,432	58,139	86,571	80,948	103,071	57,049	171,272	229,107	130% (99,782)
<i>Subtotal 1 & 2</i>	251,000-755,000	19,775	32,278	47,359	176,222	125,598	157,926	183,215	266,510	207,849	379,143	427,347	79% (238,929)
3	6,000-19,000			116	1								
4A	113,000-338,000				7,304	23,746	4,589	44,207		108,222	100,507	96,385	50% (64,381)
4BC	16,000-47,000												
<i>Subtotal 4</i>					7,304	23,746	4,589	44,207		108,222	100,507	96,385	50% (64,381)
5ABC		25	0	0	0								
5D													
<i>Subtotal 5</i>	1,000-3,000	25	0	0	0								
6	13,000-38,000	6,610	8,986	44,621	14,674	1,846	7,777	5,466	8,651	3,504	5,937	6,912	10% (6,267)
Total	400,000-1,200,000	26,410	41,264	92,096	198,201	151,190	170,292	232,888	275,161	319,575	485,587	530,644	79% (296,701)

Escapement													2014 Percent Change From Recent 5-Year Average (In Parentheses)
Project	Goal	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
East Fork Andraefsky River Weir	>40,000 SEG ^b	64,883	20,127	102,260	69,642	57,259	8,770	72,839	100,473	56,680	61,234	37,793	^c -37% (59,999)
Pilot Station Sonar		1,357,826	2,439,616	3,767,044	1,726,885	1,665,667 ^d	1,285,437	1,327,581	1,977,808	2,130,899	2,747,248	1,922,086	^c 1% (1,893,795)
Anvik River Sonar	350,000-700,000 BEG ^e	365,353	525,391	605,485 ^f	460,121	374,928	193,099	396,173	642,527	483,972	577,877	399,223	^c -13% (458,730)
Henshaw Creek Weir		86,474	237,481	^g	44,425	97,281	156,201	105,398	248,247	292,082	285,008		^j (217,387)
Gisasa River Weir		37,851	172,259	261,305	46,257	36,938	25,904	47,669	95,796	83,423	80,055	32,137	^c -52% (66,569)
Clear Creek Tower		15,661	26,420	29,166	6,029 ^h	^g	^g	^g	^g	^g	^g	^g	^g
Chena River Tower		15,162 ⁱ	2,928 ⁱ	35,109 ⁱ	4,999	1,300 ⁱ	16,516	7,560	^j	6,882	21,372	17,076 ^{cj,k}	31% (13,083)
Salcha River Tower		47,861	193,085	111,869	13,069	2,212 ⁱ	31,035	22,185	31,002 ⁱ	46,252	60,980		^j (38,291)
ESCAPEMENT INDEX ¹		617,584	1,151,271	1,116,028	638,513	569,918	431,525	651,824	1,118,045	969,291	1,086,526	486,229	-43% (851,422)

-continued-

Appendix B.–Page 2 of 2.

Note: Unless otherwise indicated, blank cells indicate years in which no commercial fishing occurred or harvest numbers were insufficient to generate summary information.

- ^a Commercial harvest includes the estimated harvest of females to produce roe sold, except for Districts 3 and 4, which also includes the estimated number of males harvested to produce roe sold.
- ^b SEG = "Sustainable escapement goal", as defined by the Sustainable Fisheries Policy.
- ^c Data are preliminary.
- ^d Due to the large run of pink salmon observed in 2008, species apportionment issues were encountered. After more thorough analysis, sonar estimates have been adjusted post season.
- ^e BEG= "Biological escapement.
- ^f HTI and DIDSON sonar equipment used in 2006. Estimates reported are DIDSON derived.
- ^g Project did not operate.
- ^h Videography count.
- ⁱ Incomplete count due to late installation and/or early removal of project.
- ^j No count due to high water conditions that prevented counting for much of the season.
- ^k Due to high water, DIDSON sonar equipment was used and preliminary species apportionment was estimated using average run timing.
- ^l The escapement index is the summed escapements for East Fork Andreafsky weir, Anvik sonar, Gisasa weir , Henshaw weir, and Salcha tower.

Appendix C.—Number of commercial salmon fishing gear permit holders who delivered fish, listed by district and season, Yukon Area, 1971–2014.

Year	Chinook and Summer Chum Salmon Season								Total
	Lower Yukon Area				Upper Yukon Area				
	District 1	District 2	District 3	Subtotal ^a	District 4	District 5	District 6	Subtotal	
1971	405	154	33	592	-	-	-	-	592
1972	426	153	35	614	-	-	-	-	614
1973	438	167	38	643	-	-	-	-	643
1974	396	154	42	592	27	31	20	78	670
1975	441	149	37	627	93	52	36	181	808
1976	453	189	42	684	80	46	29	155	839
1977	392	188	46	626	87	41	18	146	772
1978	429	204	22	655	80	45	35	160	815
1979	425	210	22	657	87	34	30	151	808
1980	407	229	21	657	79	35	33	147	804
1981	448	225	23	696	80	43	26	149	845
1982	450	225	21	696	74	44	20	138	834
1983	455	225	20	700	77	34	25	136	836
1984	444	217	20	613	54	31	27	112	725
1985	425	223	18	666	74	32	27	133	799
1986	441	239	7	672	75	21	27	123	795
1987	440	239	13	659	87	30	24	141	800
1988	456	250	22	678	95	28	33	156	834
1989	445	243	16	687	98	32	29	159	846
1990	453	242	15	679	92	27	23	142	821
1991	489	253	27	678	85	32	22	139	817
1992	438	263	19	679	90	28	19	137	816
1993	448	238	6	682	75	30	18	123	805
1994	414	250	7	659	55	28	20	103	762
1995	439	233	0	661	87	28	21	136	797
1996	448	189	9	627	87	23	15	125	752
1997	457	188	0	639	39	29	15	83	722
1998	434	231	0	643	0	18	10	28	671
1999	412	217	5	631	5	26	6	37	668
2000	350	214	-	562	-	-	-	-	562
2001	-	-	-	-	-	-	-	-	-
2002	323	223	-	540	-	14	6	20	560
2003	352	217	-	556	3	16	7	26	582
2004	396	213	-	550	-	14	6	20	570
2005	370	228	-	578	-	12	5	17	595
2006	379	214	6	569	-	15	10	25	594
2007	359	220	3	564	5	12	10	27	591
2008	266	181	-	444	8	-	5	13	457
2009	213	166	-	376	6	-	5	11	387
2010	264	181	-	440	5	-	5	10	450
2011	230	183	-	403	-	-	5	5	408
2012	242	178	-	413	11	-	3	14	427
2013	220	174	-	384	9	-	2	11	395
2014	231	183	-	405	10	-	1	11	416
2004-2013 Avg.	294	194	5	472	7	13	6	15	487
2014 Percent Change From Historical Avg.	-21.4%	-5.6%		-14.2%	36.4%		-82.1%	-28.1%	-14.6%

Note: En dash (–) indicates no commercial fishing activity occurred. Some individual fishermen in the Lower Yukon Area may have operated in more than one district during the season.

^a Since 1984 the subtotal for the Lower Yukon Area was the unique number of permits fished. Prior to 1984, the subtotals are additive for District 1, 2, and 3.

Appendix D.–Value of commercial salmon fishery to Yukon Area fishermen, 1994–2014.

Year	Chinook					Summer Chum						Value by Species		Value by Area		Total	
	Lower Yukon		Upper Yukon			Lower Yukon			Upper Yukon			Chinook	Summer Chum	Lower	Upper		
	\$/lb	Value	\$/lb	\$/Roe	Value	\$/lb	\$/Roe	Value	\$/lb	\$/Roe	Value						
1994	2.07	4,169,270	0.92	3.11	124,270	0.21		79,206	0.20	3.77	396,685	4,293,540	475,891	4,248,476	520,955	4,769,431	
1995	2.09	5,317,508	0.77	2.64	87,059	0.16		241,598	0.13	3.57	1,060,322	5,404,567	1,301,920	5,559,106	1,147,381	6,706,487	
1996	1.95	3,491,582	0.95	2.57	47,282	0.09	2.96	89,020	0.07	3.05	966,277	3,538,864	1,055,297	3,580,602	1,013,559	4,594,161	
1997	2.46	5,450,433	0.97	1.62	110,713	0.10		56,535	0.07	1.08	96,806	5,561,146	153,341	5,506,968	207,519	5,714,487	
1998	2.51	1,911,370	0.91	2.00	17,285	0.14		26,415	0.18	1.90	821	1,928,655	27,236	1,937,785	18,106	1,955,891	
1999	3.80	4,950,522	1.10	2.11	74,475	0.10		19,687	0.18	2.25	1,719	5,024,997	21,406	4,970,209	76,194	5,046,403	
2000	4.57	725,606				0.17		8,633				725,606	8,633	734,239		734,239	
2001																	
2002	3.77	1,691,105	0.75	1.75	20,744	0.06		4,342	0.32	2.25	6,176	1,711,849	10,518	1,695,447	26,920	1,722,367	
2003	2.37	1,871,202	0.80		40,957	0.05		1,585	0.27		6,879	1,912,159	8,464	1,872,787	47,836	1,920,623	
2004	2.80	3,063,667	0.77		38,290	0.05		8,884	0.27		9,645	3,101,957	18,529	3,072,551	47,935	3,120,486	
2005	3.43	1,952,109	0.87		24,415	0.05		11,004	0.25		13,479	1,976,524	24,483	1,963,113	37,894	2,001,007	
2006	3.94	3,290,367	1.30		32,631	0.05		23,862	0.16		42,988	3,322,998	66,850	3,314,229	75,619	3,389,848	
2007	3.73	1,939,114	1.33		27,190	0.19		220,715	0.25	2.36	34,421	1,966,304	255,136	2,159,829	61,611	2,221,440	
2008	4.64	325,470				0.40		326,930	0.25	3.00	65,840	325,470	392,770	656,606 ^a	65,840	722,896	
2009	5.00	20,970				0.50		514,856	0.26	3.00	20,430	20,970	535,286	535,826	20,430	556,256	
2010	5.00	639,230				0.70		823,967	0.23		61,534	639,230	885,501	1,463,197	61,534	1,524,731	
2011						0.75		1,301,403	0.26		12,966		1,314,369	1,301,403	12,966	1,314,369	
2012						0.75		980,424	0.37		187,272		1,167,696	980,424	187,272	1,167,696	
2013						0.75		1,721,524	0.30		150,852		1,872,376	1,721,524	150,852	1,872,376	
2014						0.60		1,648,872	0.29		157,211		1,806,083	1,703,510 ^b	157,211	1,860,721	
2004-2013	4.08	1,604,418	1.01		32,697	0.35		593,357	0.26	2.79	59,943	1,621,922	653,300	1,716,870	72,195	1,789,110	
2014 Percent Change from Historical Avg.								71.9%				162.3%	-100.0%	176.5%	-0.8%	117.8%	4.0%

Note: Blank cells indicate no sales occurred or harvest level was insufficient to generate summary information.

^a Includes \$4,656 in sales of pink salmon in Districts 1 and 2.

^b Includes \$54,638 in sales of pink salmon in Districts 1 and 2.

Appendix E.–Chinook salmon commercial harvest and escapement comparisons, Yukon River, 2004–2014

Chinook Salmon Commercial Harvest ^a													
District/Subdistrict	Guideline Harvest Range	2004	2005	2006	2007	2008	2009 ^b	2010	2011 ^b	2012 ^b	2013 ^b	2014 ^b	2014 Percent Change from 10-Year Average (In Parentheses)
1		28,403	16,694	23,748	18,616	2,530	90	5,744	36	0	0	0	-100% (9,586)
2		24,145	13,413	19,843	13,306	2,111	226	4,153	46	0	0	0	-100% (7,724)
<i>Subtotal 1 & 2</i>	60,000-120,000	52,548	30,107	43,591	31,922	4,641	316	9,897	82	0	0	0	-100% (17,310)
3	1,800-2,200			315	190								(253)
4A													
4BC													
<i>Subtotal 4</i>	2,250-2,850												(1,524)
5ABC	2,400-2,800	1,546	1,469	1,839	1,241								
5D	300-500												
<i>Subtotal 5</i>		1,546	1,469	1,839	1,241								
6	600-800	2,057	453	84	281								(719)
<i>Total Alaska</i>	67,350-129,150	56,151	32,029	45,829	33,634	4,641	316	9,897	82				(22,822)
Canada ^c		3,785	4,066	2,332		1	364	0	4	0	0	0	-100% (1,172)

Chinook Salmon Escapement													
Project	Escapement Goal	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2014 Percent Change From 5-Year Average (In Parentheses)
East Fork Andreafsky River Weir	2,100-4,900 SEG ^f	8,045	2,239	6,463	4,504	4,242	3,004	2,413	5,213	2,517	1,998	5,949	^d 96% (3,029)
East Fork Andreafsky River Aerial ^e	960-1,700 SEG ^f	2,879	1,715	591 ^g	1,758	278 ^g	84 ^g	537	620	^h	1,441	^h	(671)
West Fork Andreafsky River Aerial ^e	640-1,600 SEG ^f	1,317	1,492	824	976	262 ^g	1,678	858	1,173	^h	1,090	1,695	^d 41% (1,200)
Pilot Station Sonar		156,606	159,441	169,403	125,553	130,643 ⁱ	144,049 ^j	120,175	123,369	106,731	117,159	137,666	^d 13% (122,297)
Anvik River Index Aerial ^e	1,100-1,700 SEG ^f	3,304	1,922	1,776	1,497	827 ^g	590	721	501	451	940	1,584	^d 147% (641)
Henshaw Creek Weir		1,248	1,059	^k	740	766	1,637	857	1,796	922	772	ⁿ	(1,197)
Nulato River Aerial ^e	940-1,900 SEG ^f	1,321	553	1,292	2,583	922	2,260	711	1,401	1,373	1,118	^h	(1,373)
Gisasa River Weir		1,774	3,111	3,030	1,425	1,735	1,955	1,516	2,692	1,323	1,126	1,570	^d -9% (1,722)
Gisasa River Aerial ^e	420-1,100 SEG ^f	731	958	843	593	487	515	264	906	^h	^h	^h	(562)
Chena River Tower	2,800-5,700 BEG ^l	9,645	ⁿ	2,936	3,806	3,208	5,253	2,382	ⁿ	2,220	1,859	4,358 ^{d,m,n}	49% (2,929)
Salcha River Tower	3,300-6,500 BEG ^l	15,761	5,988	10,679	6,425	5,415 ^o	12,774	6,135	3,537 ^p	7,165	5,465	ⁿ	(7,015)
Eagle Sonar			81,527	73,691	41,697	38,097	69,957	35,074	51,271	34,747	30,725	64,522	^d 45% (44,355)
Canadian Estimated Escapement ^q	IMEG 42,500-55,000 ^r	48,469	67,985	62,630	34,904	33,883	65,278	32,010	46,307	32,656	28,669	64,422	^d 57% (40,984)
ESCAPEMENT INDEX ^s		83,694	79,323	85,738	51,064	48,483	88,264	44,456	57,749	45,881	39,117	76,299	38% (55,093)

-continued-

Appendix E. Page 2 of 2

Note: Unless otherwise indicated, blank cells indicate years in which no commercial fishing occurred or harvest numbers were insufficient to generate summary information.

- ^a Commercial harvest includes the estimated harvest of females to produce roe sold.
- ^b Since 2009 the department has had the authority to prohibit the sale of Chinook salmon in times of conservation. In 2009, 131 Chinook salmon were sold during the final period of the summer season, and 185 were sold in the fall season. In 2011, no Chinook salmon were sold during the summer season, and 82 were sold during the fall season. From 2012-2014, no sales of Chinook salmon occurred in either the summer or fall season.
- ^c Harvest in the commercial fishery in Canadian mainstem Yukon River.
- ^d Data are preliminary.
- ^e Aerial surveys rated good to fair unless noted otherwise.
- ^f SEG = "Sustainable escapement goal", as defined by the Sustainable Fisheries Policy.
- ^g Aerial surveys rated as incomplete and/or poor survey conditions; data not comparable to other years.
- ^h Aerial survey not conducted.
- ⁱ Due to the large run of pink salmon observed in 2008, species apportionment issues were encountered. After more thorough analysis, sonar estimates have been adjusted post season.
- ^j Inseason run assessment was hampered by high water that affected Pilot Station sonar.
- ^k Did not operate.
- ^l BEG = "Biological escapement goal", as defined by the Sustainable Fisheries Policy. Range established in 2001.
- ^m Due to high water, DIDSON sonar equipment was used and preliminary species apportionment was estimated using average run timing.
- ⁿ No count due to high water conditions that prevented counting for much of the season.
- ^o Estimates include an expansion for missed counting days based on average run timing. Minimum documented abundances from successful counting days were 4,644 in 2002, 11,758 in 2003, and 5,415 in 2008.
- ^p Aerial survey estimate. High water conditions prevented tower counting during much of the season.
- ^q Canadian escapement estimated as border passage minus total Canadian harvest.
- ^r In 2008, the escapement goal was revised to an Interim Management Escarpment Goal (IMEG) of 45,000 which was continued in 2009. Since 2010 the IMEG has been established as a range, 42,500-55,000.
- ^s The escapement index is the summed escapements for East Fork Andreafsky weir, Gisasa weir, Chena and Salcha towers, and Canada mainstem border passage minus the Canadian catch.