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

Cora Campbell, Commissioner
Jeff Regnart, Director

Contact:
Steve Hayes, Area Management Biologist
Eric Newland, Asst. Area Management Biologist
Phone: (907) 267-2105
Fax: (907) 267-2442

Anchorage Area Office
333 Raspberry Road
Anchorage, Alaska 99518

Date Issued: 10/1/12

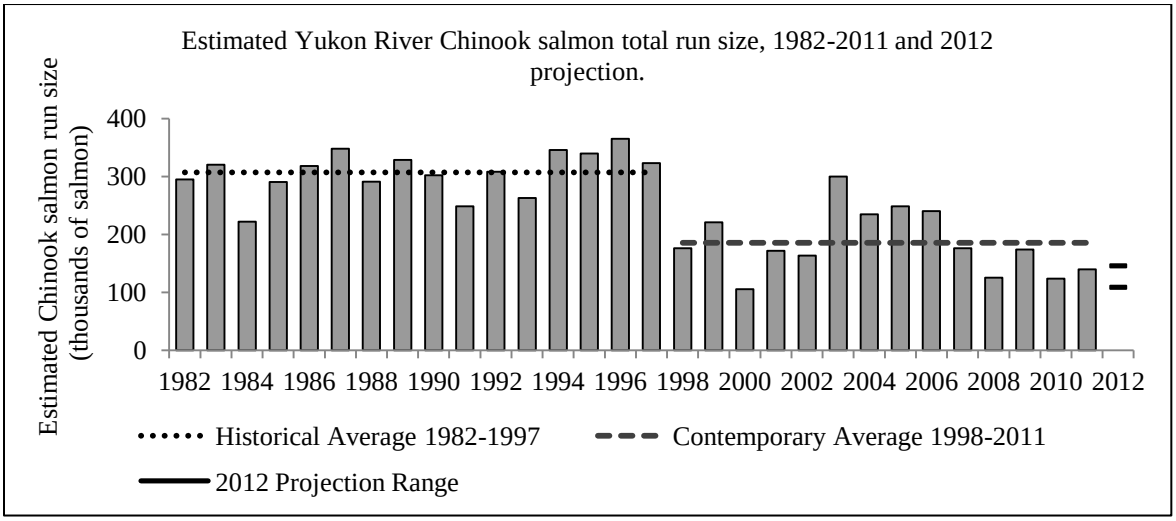
2012 Preliminary Yukon River Summer Season Summary

This informational letter provides a preliminary summer season summary of the 2012 Yukon Area Chinook and summer chum salmon fisheries. Subsistence and personal use harvests for 2012 are not available at this time. For management purposes, the Yukon River is divided into several fishing districts and subdistricts (Figure 1).

2012 Preseason Outlook

Chinook Salmon

The drainagewide run outlook was 109,000–146,000 Chinook salmon. Thus, the 2012 Yukon River Chinook salmon run was likely to be poor to below average. The following chart shows the historical estimated Yukon River Chinook salmon total run size, illustrating the drastic decline in run size beginning in 1998.



The cause of this 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. As in recent years, fishery managers planned to begin the 2012 season using conservative management strategies. One subsistence fishing period was to be closed on the first pulse of Chinook salmon until further inseason data was collected.

Summer Chum Salmon

The strength of the summer chum salmon run in 2012 was dependent on production from the 2008 (age-4 fish) and 2007 (age-5 fish) escapements, as these age classes dominate the run. The total runs during 2007 and 2008 were both approximately 1.9 million summer chum salmon, though tributary escapements were highly variable, however, 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, and it was expected that the total run in the Yukon River would be similar to the 2011 run of approximately 2.0 million fish. The high seas Bering Arctic Subarctic Integrated Surveys (BASIS) study indicated a decline in chum salmon in 2004 and 2005, but 2006 and 2007 results showed an increase. No BASIS survey was conducted in 2008. A collaborative effort between ADF&G and NOAA is in progress to test the applicability of BASIS juvenile salmon indices for run size forecasting.

The 2012 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 9 years (2003–2011). If inseason indicators of run strength suggested sufficient abundance existed to allow for a commercial fishery, the commercially harvestable surplus in the Alaskan portion of the drainage could range from 500,000 to 1,000,000 summer chum salmon. Similar to 2011, the actual commercial harvest of summer chum salmon in 2012 would likely be affected by a potentially poor Chinook salmon run, because Chinook salmon are incidentally harvested in chum salmon directed fisheries.

2012 Preseason Management Strategy

Chinook and summer chum salmon management plans guide ADF&G management actions. Because of recent poor Chinook salmon runs, 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. The purpose of the meeting was to work cooperatively to identify options and management strategies for 2012 that would assist in getting adequate numbers of fish to the spawning grounds, particularly to Canada, should the Chinook salmon run be similar to the recent below average to poor runs since 2007. 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.
- 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, an additional period 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 three to one 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.
- It was anticipated that the sale of incidental Chinook salmon harvested during summer chum commercial fishing periods would be prohibited.

Since 2001, the subsistence salmon fishery has operated on a schedule established by the Alaska Board of Fisheries (board) and implemented by ADF&G (department), 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 is based on current or past fishing schedules and provides reasonable opportunity for subsistence salmon fishing during years of normal to below average runs. The objectives of the schedule are to: 1) reduce harvest early in the run when there is 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.

Table 1.–Yukon Area subsistence salmon fishing schedule, 2012.

Area	Regulatory Subsistence Fishing Periods	Date Schedule To Begin	Open Fishing Times
Coastal District	7 days/wk	All Season	M/T/W/TH/F/SA/SU - 24 hours/day
District Y-1	Two 36-hour periods/wk	May 31	Mon. 8 pm to Wed. 8 am / Thu. 8 pm to Sat. 8 am
District Y-2	Two 36-hour periods/wk	June 3	Wed. 8 pm to Fri. 8 am / Sun. 8 pm to Tue. 8 am
District Y-3	Two 36-hour periods/wk	June 6	Wed. 8 pm to Fri. 8 am / Sun. 8 pm to Tue. 8 am
Subdistrict Y- 4A	Two 48-hour periods/wk	June 10	Sun. 6 pm to Tue. 6 pm / Wed. 6 pm to Fri. 6 pm
Subdistrict Y-4B, C	Two 48-hour periods/wk	June 17	Sun. 6 pm to Tue. 6 pm / Wed. 6 pm to Fri. 6 pm
Koyukuk and Innoko Rivers	7 days/wk	All Season	M/T/W/TH/F/SA/SU - 24 hours/day
Subdistrict Y-5A, B, C	Two 48-hour periods/wk	June 22	Tue. 6 pm to Thu. 6 pm / Fri. 6 pm to Sun. 6 pm
Subdistrict Y-5D	7 days/wk	All Season	M/T/W/TH/F/SA/SU - 24 hours/day
Subdistrict Y-6	Two 42-hour periods/wk	All Season	Mon. 6 pm to Wed. Noon / Fri. 6 pm to Sun. Noon
Old Minto Area	5 days/wk	All Season	Friday 6 pm to Wednesday 6 pm

Note: this schedule was subject to change depending on run strength.

2012 Assessment

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

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 inseason abundance and timing information: the Lower Yukon Test Fishery (LYTF), a set net project primarily designed to assess Chinook salmon run timing operated near Emmonak; a summer chum salmon directed drift gillnet test fishery using 5.5 inch mesh; and Pilot Station sonar which provided mainstem abundance estimates for Chinook and summer chum salmon. As in recent years, additional drift test fishing was conducted throughout the season in the South Mouth with 8.25-inch mesh gillnets for Chinook salmon to provide supplemental run timing and relative abundance information.

Ice break up in the lower river occurred on May 25. This was later than the average break up date of May 23. However, coastal ice was still present near the river mouths until around June 20. In the lower river, the water level continued to be high and the debris load moderate until the middle of June. The LYTF was operational at the South Mouth site on May 28 and at the Middle Mouth site on June 4. On June 8, the first Chinook salmon was caught in the subsistence fishery in the lower river and pm June 11 in the LYTF. An early group of Chinook and chum salmon entered the river from June 13 through June 22 as indicated by an increase in catch rates recorded by LYTF and reports from subsistence fishermen. The first pulse of Chinook salmon was observed in the LYTF project on June 24–26, a second pulse on June 28 through July 2, a third pulse on July 2–4, and a fourth pulse on July 6–8. The Big Eddy set nets were not effective

at monitoring Chinook salmon this year. The LYTF concluded operations several days early at the Big Eddy location to conserve Chinook salmon on July 11. Operations at the Middle Mouth location concluded on July 15. The LYTF finished with a cumulative CPUE of 7.09, which was the lowest on record and well below the historical average of 22.24. The first quarter point, midpoint, and third quarter point were June 26, July 2, and July 7, 11 days later than average respectively. The Chinook salmon drift gillnet project operated in Big Eddy until July 15 and provided valuable supplemental assessment information to the Big Eddy LYTF.

The Pilot Station sonar project preliminary cumulative passage estimate was 106,700 Chinook salmon, which was below the historical average[1] of 148,000, and below the average of late run years of 134,000 In response to the late run timing, run assessment analysis was focused on making comparisons to other late run years in order to make informed management decisions. The first quarter point, midpoint, and third quarter point were on June 24, June 28, and July 2 respectively. The sonar assessment provided an estimate for the first pulse of Chinook salmon of approximately 16,800 fish. The estimate for the second pulse was about 42,600. The estimate for the third pulse was about 9,000 fish and the estimate for the fourth pulse came in around 9,500 fish.

Genetic mixed stock analysis (MSA) on the first pulse of Chinook salmon past LYTF (June 11–25) and Pilot Station sonar (June 10–25) revealed that 45% were Canadian-origin Chinook salmon. Genetic MSA on the second and third pulses of Chinook salmon past Pilot Station sonar (June 26–30 and July 1–7, respectively) revealed that approximately 47% and 45%, respectively, were Canadian-origin Chinook salmon suggesting the Canadian run size was weak and similar to 2008 and 2010. For more background information on MSA for Yukon River Chinook salmon, please refer to the department's Gene Conservation Laboratory webpage for related documents and the latest updates (http://www.adfg.alaska.gov/index.cfm?adfg=fishinggeneconservationlab.yukonchinook_baseline).

The summer chum salmon drift gillnet project in the Lower Yukon River indicated pulses entering the mouth beginning approximately June 13, June 20, June 23, June 26 and July 2. The largest of these pulses passed Pilot Station sonar from June 27 through July 1 and contained approximately 600,400 summer chum salmon. The summer chum salmon run comprised approximately 2.1 million fish passing Pilot Station sonar, which was above the historical median of 1.4 million for the project. The first quarter point, midpoint, and third quarter point were June 24, June 29, and July 5, respectively.

2012 Subsistence Fishery

Subsistence Fishery Overview

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 in order 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

[1] Average includes years 1995, 1997, 1999, 2002-2008, and 2010. The sonar did not operate in 1996 and project difficulties occurred in 2000, 2001, and 2009.

the Coastal District, Districts 1–3, and Subdistrict 4-A in which 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 more 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 up river districts consistent with migratory timing.

Based on historical run timing information, the first pulse of Chinook salmon was expected to be migrating past the southern portion of the Coastal District during the second week of June. In order to provide protection to Chinook salmon migrating along the coastline to the Yukon River Mouth, gillnet fishing gear was restricted to 6 inch or smaller mesh size 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 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 subdisticts were further subdivided into smaller areas.

As the run further developed inseason assessment information indicated that the Chinook salmon run size would likely 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 inch or smaller mesh size for the remainder of the season. In the northern portion of the Coastal District, as well as Districts 1 through 5 a second pulse closure was implemented immediately following the first pulse closure. This created a continuous closure of both the first and second pulses. The second pulse closure was followed by a reduced subsistence fishing period in Districts 1 through 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 three separate subdistricts to better manage fish as they move through this large area to meet the IMEG into Canada. Beginning July 12, 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 are 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 in an attempt to meet the agreed to IMEG for the Canadian stock. After allowing one short, 36-hour, subsistence salmon fishing period in each area of Subdistrict 5-D, subsistence salmon fishing was again closed in Subdistrict 5-D for the remainder of the summer season. Subsistence closures were most pronounced in Subdistrict 5-D, as management options such as gear restrictions were not implemented to allow

harvest of summer chum salmon. Unfortunately, very few summer chum salmon are 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, in an effort to provide protection for Alaskan Chinook salmon stocks. Gillnets were restricted to 6 inches or smaller mesh size in the Innoko River from June 24 through July 18 and in the Koyukuk River from July 3–22.

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, the fish wheel had to be attended at all times 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.

Subsistence harvest surveys are currently being conducted by the department and the 2012 harvest information is not available at this time.

2012 Commercial Fishery

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 2012 in the Yukon River mainstem or in the Tanana River.

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 was projected based on Pilot Station sonar. The first summer chum salmon directed commercial periods took place June 29 in District 1 and July 2 in District 2. Gillnet gear was restricted to 6 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 these 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 (Table 2).

The sale of incidentally caught Chinook salmon was not allowed by 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 1–2, fishermen could donate them to Kwik'Pak Fisheries, the local processor who would process the fish and deliver them to communities upriver that wanted them for subsistence use for free.

The department 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, as was seen in 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 markers, and included Black River, Kwiguk Pass, and coastal waters from Chris Point to one 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 is more difficult to implement in District 2. As the Yukon River begins to become more channelized in this area, salmon from each of the mouths are present. The first period open to commercial fishing within District 2 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 District 1 and 2 boundary line at the Anuk River to protect Chinook salmon above the Andreasfky River. The second and third commercial fishing periods in District 2 were restricted to down river of the slough at the community of Pilot Station to the District 1 and District 2 boundary to protect Chinook salmon still migrating above Pilot Station. During the season, the department scheduled ten commercial fishing periods in District 1 and six in District 2.

It was required to report on fish tickets any Chinook salmon caught but not sold. A total of 2,421 Chinook salmon were reported 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 (Tables 2). Genetic MSA of incidentally caught Chinook salmon in the summer chum commercial fishery revealed approximately 30% of the Chinook salmon caught were of Canadian-origin. The preliminary cumulative summer chum salmon commercial harvest for Districts 1 and 2 combined was 207,849 fish (Table 2). The summer chum salmon harvest was 84% above the 2002–2011 average harvest of 112,783 fish (Table 4).

In Subdistrict 4-A, one buyer operated out of Kaltag and targeted summer chum salmon. New regulations adopted by the board in March 2012 allowed the department to open summer chum salmon directed commercial fishing periods in Subdistrict 4-A during times of Chinook salmon conservation with fish wheels only. Fish wheels had to be attended at all times during operations, and all Chinook salmon caught in the fish wheels had to be immediately released to the water alive. The preliminary cumulative summer chum salmon harvest for Subdistrict 4-A was 108,222 fish with the majority of the harvest being female (Table 2). Thirteen periods were implemented with a total of 552 fishing hours (Table 2). The summer chum salmon harvest was 438% above the most recent 5-year average (2007–2011). 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 upon subsistence harvest information, as well as indications from lower river genetics and assessment data. Based upon this surplus and market interest, the department scheduled the first commercial fishing period to target chum salmon in District 6 on July 20. During the season, the board met by teleconference on July 17 to consider an emergency petition regarding an amendment to the *Yukon River Summer Chum Salmon Management Plan* (5 AAC 05.362). The

board adopted an emergency regulation only for the 2012 season specifying that during the summer chum season in District 6, in order to conserve Chinook salmon only fish wheels could be used. Fish wheels had to be attended at all times during operations, and all Chinook salmon caught in the fish wheels had to be immediately released to the water alive. The department scheduled seven commercial fishing periods and the preliminary cumulative harvest was 3,504 summer chum salmon (Table 2). No Chinook salmon were allowed to be sold. A total of 24 Chinook salmon were recorded on fish tickets as caught but not sold.

The total commercial harvest for Yukon Area combined was 319,575 summer chum salmon, which is 163% above the 2002–2011 average harvest of 121,637 fish (Table 4).

2012 Fishing Effort and Exvessel Value

A total of 427 permit holders participated in the summer chum salmon fishery, approximately 18% below the 2002–2011 average of 519 permit holders (Table 5). 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 413 permit holders fished in the Lower Yukon Area in 2012, which was approximately 18% below the 2002–2011 average of 502. In the Upper Yukon Area, 14 permit holders fished, which was approximately 20% below the 2002–2011 average of 17.

Yukon River fishermen in Alaska received an estimated $1.2 million for their summer chum salmon harvest in 2012, approximately 37% below the 2002–2011 average of $1.85 million (Table 6). Lower Yukon River exvessel value was estimated to be $980,400 and fishermen received $0.75 per pound for summer chum salmon. The estimated average income for Lower Yukon Area fishermen in 2012 was $2,374.

Upper Yukon Area fishermen received an average of $0.37 per pound for summer chum salmon sold in the round. The average price paid in the Upper Yukon Area was slightly above the 2002–2011 average of $0.25 per pound (Table 6). The exvessel value was estimated to be $187,300. The average income for Upper Yukon Area fishermen that participated in the 2012 fishery was $13,377. No Chinook salmon were sold in the Yukon Area in 2012.

2012 Age and Sex Composition

Test Fisheries

The Chinook salmon age composition from the 8.5 inch LYTF set nets through the end of season was 1% age-4, 30% age-5, 67% age-6, and 2% age-7 fish. The sample size was 807 fish. Females comprised 63% of the sample.

The Chinook salmon age composition from the 8.25 inch Big Eddy drift nets through the end of the season was 2% age-4, 32% age-5, 64% age-6, and 2% age-7 fish. The sample size was 238 fish. Females comprised 62% of the sample.

The summer chum salmon age composition from the 5.5 inch LYTF drift nets through the end of season was 69% age-4, 26% age-5, and 5% age-6 fish. The sample size was 1,576 fish. Females comprised 57% of the sample.

The Chinook salmon age composition from the 7.5 inch Mountain Village drift gillnet test fishery was 2% age-4, 45% age-5, 49% age-6, and 4% age-7 fish. The sample size was 443 fish. Females comprised 44% of the sample.

The summer chum salmon age composition from the 5.5 inch Dall Point drift gillnet test fishery was 61% age-4, 32% age-5, and 6% age-6 fish. The sample size was 465 fish. Females comprised 38% of the sample.

Age composition data from other projects are not yet available.

Subsistence Harvest

Samples from the subsistence harvest in Districts 1 and 2 were obtained throughout the season from subsistence fishermen working in conjunction with the Association of Village Council Presidents (AVCP). The Chinook salmon age composition from the Districts 1 and 2 subsistence harvest was 4% age-4, 57% age-5, 37% age-6, and 2% age-7 fish. The sample size was 502 fish. Females comprised 26% of the sample.

Commercial Harvest

The Chinook salmon age composition, sampled from the incidental catch during the Districts 1 and 2 commercial harvests was 19% age-4, 50% age-5, 30% age-6, and 1% age-7 fish. The sample size was 636 fish. Females comprised 30% of the sample.

The summer chum salmon age composition from the District 1 commercial harvest was less than 1% age-3, 71% age-4, 24% age-5, and 5% age-6 fish. The sample size was 800 fish. Females comprised 49% of the sample.

The summer chum salmon age and sex composition from the Subdistrict 4-A and District 6 commercial harvest are not available at this time.

2012 Escapement

Chinook Salmon

Chinook salmon escapement goals for the East Fork Andreafsky, Nulato, and Salcha rivers were achieved (Table 3). However, the Anvik and Chena Rivers escapement goals were not met. Season cumulative counts on the Gisasa River were below average. High water conditions on the Chena River precluded counting for much of the season. Preliminary Chinook salmon passage at Eagle sonar is 35,227 fish, yielding a preliminary border passage estimate of approximately 34,227 fish. These numbers, however, are subject to change with postseason data analysis. Selected 2012 escapement estimates for tributaries with goals were as follows:

Stream	Current Goal	Type of Goal	2012 Escapement
East Fork Andreafsky River Weir	2,100–4,900	SEG	2,517
West Fork Andreafsky River Aerial	640–1,600	SEG	ND
Anvik River Index Aerial	1,100–1,700	SEG	451
Nulato River Aerial (Forks Combined)	940–1,900	SEG	1,373
Chena River Tower	2,800–5,700	BEG	1,627[1]
Chena River Aerial	N/A		472
Salcha River Tower	3,300–6,500	BEG	7,053
Canadian Border	42,500–55,000	IMEG[2]	34,227

[1] Project operations were hindered by high water conditions for much of the season.

[2] 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).

[3] Data are preliminary.

Summer Chum Salmon

Most summer chum salmon producing tributaries experienced above average escapement (Table 4). The East Fork Andreafsky River SEG and Anvik River BEG were achieved. Counts at the Gisasa and Henshaw rivers 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. Selected 2012 escapement estimates for tributaries were as follows:

Stream	Current Goal	Type of Goal	2011 Escapement
East Fork Andreafsky River Weir	> 40,000	SEG	56,680
Anvik River Sonar	350,000–750,000	BEG	483,506
Gisasa River Weir	N/A		83,423
Henshaw Creek Weir	N/A		292,082
Chena River Tower	N/A		7,666[1]
Salcha River Tower	N/A		44,999

[1] Project operations were hindered by high water conditions for much of the season.

Canadian Fisheries

The preseason outlook was for a run of approximately 54,000 to 73,000 Canadian-origin Chinook salmon, and Canadian fishery managers conducted Chinook salmon fisheries according to available abundance and international harvest sharing provisions. Based on the projected border passage of between 32,000 and 36,000 Chinook salmon, Department of Fisheries and Oceans (DFO) managers classified the Chinook salmon run to be in the "yellow zone", which indicates that some fisheries would be restricted to ensure an adequate spawning escapement. First Nations fishermen were asked to reduce their harvest to ensure fish to the spawning grounds. Beginning July 12, the sport fishery catch was varied to zero, and beginning July 26 all angling was closed on Tatchun Creek until further notice. The domestic and commercial fishery remained closed throughout the season. The preliminary First Nation harvest to date is

approximately 1,500 Chinook salmon. DFO inseason fishery management decision matrix for Chinook salmon is shown below.

	Border Escapement Projections	Fishery	Guideline Harvest	Anticipated Management Action
RED ZONE	0 – 30,000	TF	0	No fishing; assessment using Eagle sonar.
		FN	0	Closed.
		CF	0	Closed.
		RF	0	Closed, i.e. Chinook quota varied to zero.
		DF	0	Closed.
YELLOW ZONE	30,000 – 51,000	TF	0	Not required. Assessment data using Eagle sonar.
		FN	0 to 8,000	Catch target to vary with abundance within zone: 0 at run size of 30,000; 8,000 catch at run of 51,000. Catch is subject to International harvest sharing provisions.
		CF	0	Closed.
		RF	0	Closed, i.e. Chinook quota varied to zero.
		DF	0	Closed.
GREEN ZONE	>51,000	TF	0	Not required. Assessment data using Eagle sonar.
		FN	8,000+	Unrestricted.
		CF	Variable	Catch target to vary with abundance and be consistent with International agreement on harvest shares.
		RF	100-700	Expected harvest range based on recent harvests. Opportunities subject to abundance and International agreement on harvest shares.
		DF	100–300	

Legend: TF = test fishery; FN = First Nation fishery; CF = commercial fishery; RF = recreational fishery; DF = domestic fishery.

It is important to note that the incorporation of the IMEG range of 42,500–55,000 in 2012 results in the following decision thresholds:

a. The recreational, commercial and domestic fisheries would not open unless it was expected the border escapement would be greater than 51,000 Chinook salmon based on projections from the Eagle sonar program. Fishing opportunities afforded to these fishing sectors would depend on the run size projections and harvest sharing provisions. A border escapement of > 51,000 is sufficient to allow for a full First Nation fishery, while allowing enough fish to reach the spawning grounds to satisfy the lower end of the escapement goal range.

b. Consideration would be given to restricting First Nation fisheries if the run size to the border was projected to be in the 30,000 to 51,000 range and the expected catch was consistent with harvest sharing provisions. All other fisheries would not be permitted to target Chinook salmon.

c. First Nation fisheries would be closed if the border escapement projection was < 30,000. Border escapement projections this low, i.e. in the RED zone, represent a high conservation risk. The RED zone was formerly described as a border escapement of < 19,000; this has been modified in 2010 to be consistent with the switch from mark–recapture, to sonar-based assessment. The former benchmark of 19,000 was established based on mark-recapture units and it is inappropriate to continue using it given the switch to sonar.

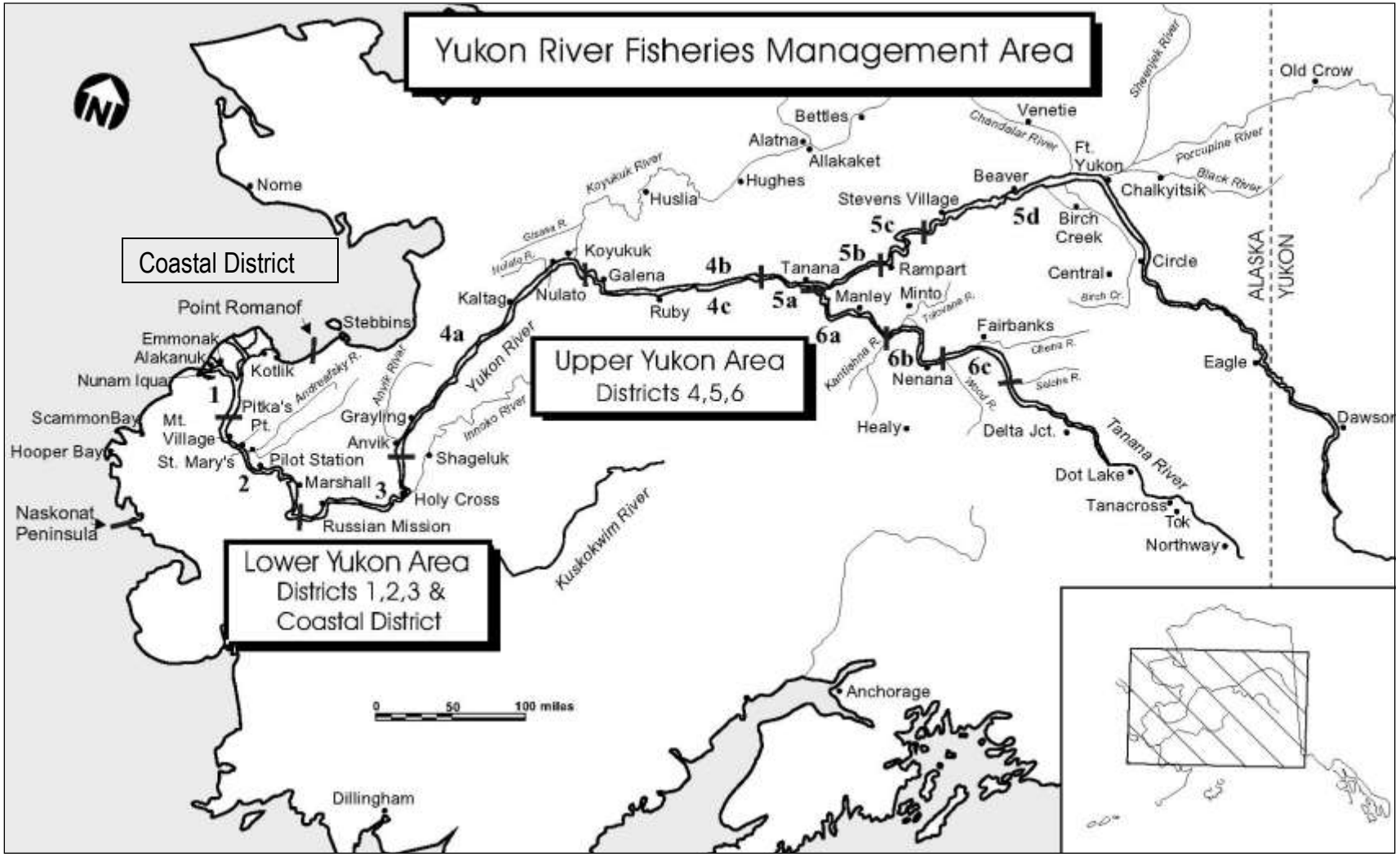


Figure 1.–Yukon Area communities and fishing districts.

Table 2.–Preliminary summer season commercial harvest summary, Yukon Area, 2012.

District 1

Period		Starting Time	Start Date	Ending Time	End Date	Hours Fished	Mesh Size	Number of Fishermen	Chinook Salmon Number Caught but Not Sold	Summer Chum Salmon Number	Summer Chum Salmon Pounds	Summer Chum Salmon Avg. Wt.
1	[a]	8:00 PM	6/29	12:00 midnight	6/29	4	R	144	290	16,105	103,072	6.4
2	[a]	8:00 PM	7/1	12:00 midnight	7/1	4	R	162	121	13,679	85,574	6.3
3	[a]	6:00 PM	7/2	12:00 midnight	7/2	6	R	153	173	14,982	94,503	6.3
4	[a]	4:00 PM	7/3	10:00 PM	7/3	6	R	161	421	27,341	172,038	6.3
5	[a]	4:00 PM	7/5	10:00 PM	7/5	6	R	157	231	14,597	92,233	6.3
6	[a]	4:00 PM	7/6	10:00 PM	7/6	6	R	149	198	17,824	112,785	6.3
7	[a]	4:00 PM	7/7	10:00 PM	7/7	6	R	147	94	11,526	72,096	6.3
8	[a]	4:00 PM	7/9	12:00 midnight	7/9	8	R	172	124	23,856	150,156	6.3
9		8:00 PM	7/10	12:00 midnight	7/10	4	R	164	72	7,379	46,903	6.4
10		6:00 PM	7/13	12:00 midnight	7/13	6	R	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	Mesh Size	Number Fishermen	Chinook Salmon Number Caught Not Sold	Summer Chum Salmon Number	Summer Chum Salmon Pounds	Summer Chum Salmon Avg. Wt.
1	[b]	8:00 PM	7/2	12:00 midnight	7/2	4	R	64	125	7,346	45,540	6.2
2	[c]	8:00 PM	7/8	11:00 PM	7/8	3	R	102	126	7,251	44,763	6.2
3	[c]	6:00 PM	7/11	12:00 midnight	7/11	6	R	114	164	13,288	82,902	6.2
4		8:00 PM	7/12	12:00 midnight	7/12	4	R	130	120	11,522	72,443	6.3
5		5:00 PM	7/15	10:00 PM	7/15	5	R	119	76	5,911	36,101	6.1
6		12:00 noon	7/18	9:00 PM	7/18	9	R	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, 2, and 3 Subtotal: [d,e]						87		413	2,524	207,849	1,307,232	6.3

District 4

Period		Starting Time	Start Date	Ending Time	End Date	Hours Fished 4-A	Hours Fished 4-BC	Number of Fishermen	Chinook Salmon Number Caught and Released	Summer Chum Salmon Number	Summer Chum Salmon Pounds	Summer Chum Salmon Avg. Wt.
1	[f]	8:00 PM	7/1	8:00 AM	7/2	12						
2	[f]	8:00 PM	7/2	8:00 AM	7/3	12						
3	[f]	8:00 PM	7/3	8:00 AM	7/4	12						
4	[f]	8:00 PM	7/4	8:00 AM	7/5	12						
5	[f]	8:00 PM	7/5	8:00 AM	7/6	12						
6	[f]	8:00 PM	7/6	8:00 AM	7/7	12						
7	[f]	8:00 PM	7/7	8:00 AM	7/8	12		7	4	4,447	24,014	5.4
8	[f]	8:00 PM	7/8	8:00 AM	7/9	12		7	3	2,900	13,195	4.6
9	[f]	8:00 PM	7/9	8:00 AM	7/10	12		9	4	4,047	18,212	4.5
10	[f]	8:00 PM	7/10	8:00 AM	7/11	12		9	2	4,532	20,847	4.6
11	[f]	8:00 PM	7/11	8:00 AM	7/12	12		7		3,702	16,474	4.5
12	[f]	8:00 PM	7/12	8:00 AM	7/13	12		9		4,121	18,132	4.4
13	[f]	8:00 PM	7/13	8:00 PM	7/30	408		11	46	84,473	379,858	4.5
District 4 Subtotal:						552	0	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 6-A	Hours Fished 6-BC	Number of Fishermen	Chinook Salmon Number Caught but Not Sold	Summer Chum Salmon Number	Summer Chum Salmon Pounds	Summer Chum Salmon Avg. Wt.
1	[f]	6:00 PM	7/20	12:00 midnight	7/22	42	42	1		358	2,148	6.0
2	[f]	6:00 PM	7/23	12:00 midnight	7/25	42	42	1		505	3,030	6.0
3	[f]	6:00 PM	7/25	6:00 PM	8/1	168	168					
4		6:00 PM	8/3	12:00 midnight	8/5	42	42	2	15	1,431	7,869	5.5
5		6:00 PM	8/6	12:00 midnight	8/8	42	42					
6		6:00 PM	8/10	12:00 midnight	8/12	42	42	2	9	1,210	6,654	5.5
7		6:00 PM	8/13	12:00 midnight	8/15	42	42					
District 6 Subtotal:						420	420	6	24	3,504	19,701	5.6
Upper Yukon Area, Summer Season, Districts 4, 5, and 6 Subtotal:						972		17	24	111,726	510,433	4.6
Yukon Area, Summer Season, Districts 1 Through 6 Total: [d, e]						1,059		430	2,548	319,575	1,817,665	5.7

Table 2.–Page 2 of 2.

Note: Chinook salmon caught in commercial fishing periods were not allowed to be sold throughout the summer and fall season.

[a] No commercial fishing occurred in Districts 3 and 5. Mesh size R indicates 6-inch maximum mesh size. The area open to commercial fishing was restricted to the South Mouth only.

[b] The area open to commercial fishing was downriver from the confluence of the Andreafsky and the Yukon Rivers to the Y-1 and Y-2 boundary line at the Anuk River.

[c] The area open to commercial fishing was downriver of the slough at the community of Pilot Station to the Y-1 and Y-2 boundary line at the Anuk River.

[d] 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.

[e] Includes Chinook salmon caught but not sold in the fall season.

[f] Commercial fishing was restricted to fish wheels only that must be manned at all times of operation. Chinook salmon caught in fish wheels during the commercial period must immediately be released to the water alive.

Table 3.–Chinook salmon commercial harvest and escapement comparisons, Yukon River, 2001–2012.

Chinook Salmon Commercial Harvest [a]

District/Subdistrict	Guideline Harvest Range	2002	2003	2004	2005	2006	2007	2008	2009 [b]	2010	2011 [b]	2012 [b]	Comparison of 2012 to 10-Yr. Average	Recent 10-Year Average (2002-2011)
1		11,087	22,709	28,403	16,694	23,748	18,616	2,530	90	5,744	36	0	-100%	12,966
2		11,434	14,220	24,145	13,413	19,843	13,306	2,111	226	4,153	46	0	-100%	10,290
Subtotal 1 & 2	60,000-120,000	22,521	36,929	52,548	30,107	43,591	31,922	4,641	316	9,897	82	0	-100%	21,141
3	1,800-2,200					315	190		95					253
4A														
4BC			562											
Subtotal 4	2,250-2,850		562											
5ABC	2,400-2,800	564	908	1,546	1,469	1,839	1,241							1,261
5D	300-500	207	226											217
Subtotal 5		771	1,134	1,546	1,469	1,839	1,241							1,143
6	600-800	836	1,813	2,057	453	84	281							921
Total Alaska	67,350-129,150	24,128	40,438	56,151	32,029	45,829	33,634	4,641	316	9,897	82			24,715
Canada [c]		9,070	9,446	10,946	10,977	8,758	4,794	3,399	4,297	2,456	4,594	1,500 [d]		6,874

Chinook Salmon Escapement

Project	Escapement Goal	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Comparison of 2012 to 5-Yr. Average	Recent 5-Year Average (2007-2011)
East Fork Andreafsky River Weir	2,100-4,900 SEG [e]	4,123	4,336	8,045	2,239	6,463	4,504	4,242	3,004	2,413	5,213	2,517 [d]	-35%	3,875
East Fork Andreafsky River Aerial [d]	960-1,700 SEG [e]	1,447	1,116 [g]	2,879	1,715	591 [g]	1,758	278 [g]	84 [g]	537	620	[h]		655
West Fork Andreafsky River Aerial [d]	640-1,600 SEG [f]	917	1,578 [g]	1,317	1,492	824	976	262 [g]	1,678	858	1,173	[h]		989
Pilot Station Sonar		123,213	268,537	156,606	159,441	169,403	125,553	130,643 [i]	144,049 [j]	120,175	123,369	106,731 [d]	-17%	128,758
Anvik River Index Aerial [e]	1,100-1,700 SEG [f]	1,329	973	3,304 [g]	1,922	1,776	1,497	827 [g]	590	721	501	451 [d]	-45%	827
Henshaw Creek Weir		649	763	1,248	1,059	[k]	740	766	1,637	857	1,796	922 [d]	-20%	1,159
Nulato River Tower		2,696	1,716	[k]	[k]	[k]	[k]	[k]	[k]	[k]	[k]	[k]		
Nulato River Aerial [e]	940-1,900 SEG [f]	1,884	1,584	[h]	1,321	553	1,292	2,583	922	2,251	711	1,373	-12%	1,552
Gisasa River Weir		2,025	1,901	1,774	3,111	3,030	1,425	1,735	1,955	1,516	2,692	2,692 [d]	44%	1,865
Gisasa River Aerial [e]	420-1,100 SEG [f]	506	[h]	731	958	843	593	487	515	264	906	[h]		553
Chena River Tower/MR Tagging	2,800-5,700 BEG [l]	6,967 [m]	11,100	9,645	[n]	2,936	3,806	3,208	5,253	2,382	[n]	1,627 [d]	-56%	3,662
Salcha River Tower/MR Tagging	3,300-6,500 BEG [l]	4,644 [m]	11,758 [m]	15,761 [m]	5,988	10,679	6,425	5,415 [o]	12,774 [o]	6,135	[n]	7,053 [d]	-8%	7,687
Eagle Sonar					81,527	73,691	41,697	38,097	69,957	35,074	51,271	35,227 [d]	-25%	47,219
Canadian Estimated Escapement	IMEG 42,500-55,000 [p]	42,359	80,594	48,469	67,985	62,630	34,904	33,883	65,278	32,010	46,307	32,727 [d]	-23%	42,476
ESCAPEMENT INDEX [q]		62,814	111,405	83,694	79,323	85,738	51,064	48,483	88,264	44,456	54,212	46,616	-19%	57,296

-continued-

Table 3.–Page 2 of 2.

[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. In 2012, no sales of Chinook salmon occurred in either the summer or fall season.

[c] Total harvest for all fisheries 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] Mark and recapture tagging estimate; tower counts were minimum/incomplete due to late installation and/or early removal of project, or high water events/weather conditions.

[n] No counts due to high water conditions that prevented counting for much of the season.

[o] Tower counts were minimum due to high water events/weather conditions.

[p] In 2008, the escapement goal was revised to an Interim Mananagement Escapment Goal (IMEG) of 45,000 which was continued in 2009. Since 2010 the IMEG has been established as a range, 42,500–55,000.

[q] The escapement index is the summed escapements for East Fork Andreafsky weir, Nulato tower, Gisasa weir, Chena and Salcha towers, and Canada mainstem border passage minus the Canadian catch.

Table 4.–Summer chum salmon commercial harvest and escapement comparisions, Yukon River, 2001–2012.

Summer Chum Salmon Commercial Harvest [a]

District/Subdistrict		Guideline Harvest Range	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Comparison of 2012 to 10-Yr. Average	Recent 10-Year Average (2002-2011)
1			6,327	3,579	13,993	23,965	21,816	106,790	67,459	71,355	102,267	163,439	150,800	160%	58,099
2			4,027	2,583	5,782	8,313	25,543	69,432	58,139	86,571	80,948	103,071	57,049	28%	44,441
Subtotal 1 & 2		251,000-755,000	10,354	6,162	19,775	32,278	47,359	176,222	125,598	157,926	183,215	266,510	207,849	84%	112,783
3		6,000-19,000					116	1							
Anvik River	Est. Fish														
	lbs. Roe	100,000													
4A	Est. Fish	113,000-338,000						7,304	23,746	4,589	44,207		108,222		19,962
	lbs. Roe	61,000-183,000						5,938	21,575	3,906					10,473
4BC	Est. Fish	16,000-47,000		62											62
	lbs. Roe														
Subtotal 4				62				7,304	23,746	4,589	44,207		108,222		15,982
5ABC			6		25		20								17
5D															
Subtotal 5		1,000-3,000	6		25		20								17
6	Est. Fish	13,000-38,000	3,198	4,461	6,610	8,986	44,621	14,674	1,842	7,777	5,466	8,651	3,504	-67%	10,629
	lbs. Roe														
Total		400,000-1,200,000	13,558	10,685	26,410	41,264	92,116	198,201	151,186	170,292	232,888	275,161	319,575	164%	121,176

Summer Chum Salmon Escapement

Project	Escapement Goal	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Comparison 2012 5-Yr. Average	Recent 5-Year Average (2007-2011)
East Fork Andreafsky River Weir	>40,000 SEG[b]	44,194	22,461	64,883	20,127	102,260	69,642	57,259	8,770	72,839	100,473	56,680[c]	-8%	61,797
Pilot Station Sonar		1,088,463	1,168,518	1,357,826	2,439,616	3,767,044	1,726,885	1,665,667[d]	1,421,646	1,405,533	1,977,808	2,130,899[c]	30%	1,639,508
Anvik River Sonar	350,000-700,000 BEG[e]	459,058	256,920	365,353	525,391	605,485[f]	460,121	374,928[d]	193,099	396,173	642,528	483,506[c]	17%	413,370
Henshaw Creek Weir		25,249	22,556	86,474	237,481	[g]	44,425	97,281	156,201	105,398	248,247	292,082[c]	124%	130,310
Nulato River Tower		72,232	19,590	[h]	[h]	[h]	[h]	[h]	[h]	[h]	[h]	[h]		
Gisasa River Weir		33,481	25,999	37,851	172,259	261,305	46,257	36,938	25,904	47,669	95,796	83,423[c]	65%	50,513
Clear Creek Tower		13,150	6,159	15,661	26,420	29,166	6,029[i]	[h]	[h]	[h]	[h]	[h]		6,029
Chena River Tower		1,021[g]	573[g]	15,162[g]	2,928[g]	35,109[g]	4,999	1,300[g]	16,516	7,560	333[c, g]	7,666[c]	25%	6,142
Salcha River Tower		20,837[g]	[j]	47,861	193,085	111,869	13,069	2,212[g]	31,035[c]	22,185[c]	31,002[c]	44,999[c]	126%	19,901
ESCAPEMENT INDEX [k]		656,072	348,099	617,584	1,151,271	1,116,028	638,513	569,918	431,525	651,824	1,118,379	968,356	42%	682,032

-continued-

Table 4.–Page 2 of 2.

[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 goal", as defined by the Sustainable Fisheries Policy. Range established in 2001.

[f] HTI and DIDSON sonar equipment used in 2006. Estimates reported are DIDSON derived.

[g] Project counts not comparable to other years; incomplete counts due to early removal of project or high water events/weather conditions.

[h] Did not operate.

[i] Videography count.

[j] No counts due to high water conditions that prevented counting for much of the season.

[k] The escapement index is the summed escapements for East Fork Andreafsky weir, Anvik sonar, Gisasa weir, Hensaw weir, Nulato, and Salcha towers.

Table 5.–Number of commercial salmon fishing gear permit holders who delivered fish, listed by district and season, Yukon Area, 1971–2012.

	Chinook and Summer Chum Salmon Season								
	Lower Yukon Area				Upper Yukon Area				
Year	District 1	District 2	District 3	Subtotal [a]	District 4	District 5	District 6	Subtotal	Total
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
2002-2011 Avg.	315	203	5	502	5	14	6	17	519
2012 vs. Avg.	-23.2%	-12.1%		-17.7%	103.7%		-53.1%	-19.5%	-17.8%

Note: Endash indicates no commercial fishing activity occurred.

[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. Some individual fishermen in the Lower Yukon Area may have operated in more than one district during the season.

Table 6.–Value of commercial salmon fishery to Yukon Area fishermen, 1977–2012.

	Chinook					Summer Chum						Value by Species		Value by Area		
	Lower Yukon		Upper Yukon			Lower Yukon			Upper Yukon							
Year	$/lb	Value	$/lb	$/Roe	Value	$/lb	$/Roe	Value	$/lb	$/Roe	Value	Chinook	Summer Chum	Lower	Upper	Total
1977	0.85	1,841,033	1.37		148,766	0.40		1,007,280	0.27	2.66	306,481	1,989,799	1,313,761	2,848,313	455,247	3,303,560
1978	0.90	2,048,674	0.87		66,472	0.45		2,071,434	0.24	N/A	655,738	2,115,146	2,727,172	4,120,108	722,210	4,842,318
1979	1.09	2,763,433	1.00		124,230	0.52		2,242,564	0.25	3.00	444,924	2,887,663	2,687,488	5,005,997	569,154	5,575,151
1980	1.04	3,409,105	0.85		113,662	0.20		1,027,738	0.23	2.50	627,249	3,522,767	1,654,987	4,436,843	740,911	5,177,754
1981	1.20	4,420,669	1.00		206,380	0.40		2,741,178	0.20	3.00	699,876	4,627,049	3,441,054	7,161,847	906,256	8,068,103
1982	1.41	3,768,107	1.02		162,699	0.40		1,237,735	0.18	2.75	452,837	3,930,806	1,690,572	5,005,842	615,536	5,621,378
1983	1.40	4,093,562	1.08		105,584	0.34		1,734,270	0.16	1.66	281,883	4,199,146	2,016,153	5,827,832	387,467	6,215,299
1984	1.50	3,510,923	0.95		102,354	0.26		926,922	0.23	1.78	382,776	3,613,277	1,309,698	4,437,845	485,130	4,922,975
1985	1.50	4,294,432	0.86		82,644	0.35		1,032,700	0.23	1.94	593,801	4,377,076	1,626,501	5,327,132	676,445	6,003,577
1986	1.63	3,165,078	0.89		73,363	0.38		1,746,455	0.22	2.08	634,091	3,238,441	2,380,546	4,911,533	707,454	5,618,987
1987	1.98	5,428,933	0.79		136,196	0.48		1,313,618	0.19	2.22	323,611	5,565,129	1,637,229	6,742,551	459,807	7,202,358
1988	2.97	5,463,800	1.04		142,284	0.66		5,001,100	0.23	4.33	1,213,991	5,606,084	6,215,091	10,464,900	1,356,275	11,821,175
1989	2.77	5,181,700	0.84		108,178	0.34		2,217,700	0.24	4.41	1,377,117	5,289,878	3,594,817	7,399,400	1,485,295	8,884,695
1990	2.84	4,820,859	0.72		105,295	0.24		497,571	0.11	4.41	506,611	4,926,154	1,004,182	5,318,430	611,906	5,930,336
1991	3.70	7,128,300	0.70	2.92	97,140	0.36		782,300	0.18	4.21	627,177	7,225,440	1,409,477	7,910,600	724,317	8,634,917
1992	4.12	9,957,002	0.91	2.82	168,999	0.27		606,976	0.30	4.53	525,204	10,126,001	1,132,180	10,563,978	694,203	11,258,181
1993	2.70	4,884,044	1.06	5.52	113,217	0.37		226,772	0.35	8.53	203,762	4,997,261	430,534	5,110,815	316,979	5,427,794
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	718,240
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
2002-2011 Avg.	3.85	1,643,692.67	0.97	1.75	30,705	0.28		323,755	0.25	2.65	27,436	1,664,162	351,191	1,803,499	45,859	1,848,937
2012 vs. Avg.						167.9%		202.8%	45.8%			-100.0%	232.5%	-45.6%	308.4%	-36.8%

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.