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Advisory Announcement

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2023 Yukon River Salmon Summer Fishery Announcement #26
2023 Yukon River Preliminary Summer Season Summary
Districts Affected: Yukon Area

The following is a summary of the 2023 Yukon River Chinook and summer chum salmon fisheries. All data reported here are considered preliminary. For management purposes, the Yukon River is divided into several fishing districts and subdistricts (Figure 1). The "summer season" refers to management of Chinook and summer chum salmon runs (May through July 15 in District 1). Management converts to "fall season" in District 1 on July 16, and the transition continues upriver as the fall chum salmon arrive in each District. Data presented in this summary applies to "summer season" species only.

Preseason Forecast and Management Strategy

The 2023 preseason run size outlook for Chinook salmon was 62,000 to 104,000 fish and for summer chum salmon the outlook was 280,000 to 900,000 fish. These potential run sizes were below average and warranted a cautious management approach. The management team met preseason to form the strategy based on outlooks and public input. The Yukon River Panel and Yukon River Drainage Fisheries Association (YRDFA) hosted preseason meetings in April. The run size outlooks, management strategies and research project plans were presented with time for discussion and questions. Fishermen from throughout the drainage discussed management options and concerns about environmental factors, bycatch, fish diseases, food security, and project operations. Additionally, there was discussion about the temporary Federal Special Action Requests proposing federal management of federal waters on the Yukon River for 2023 salmon season.

The preseason salmon management plan, including harvest strategies, was distributed in early May as Advisory Announcement #02 and mailed as a 4-page Outlook Flier to households. Due to the poor projected salmon run sizes, the summer season started with all salmon fishing closed, including subsistence, commercial, sport and personal use. Closures began in the lower river districts and were announced upriver based on salmon travel time. Subsistence fishing for nonsalmon species remained open in all areas of the Yukon River with 4-inch or smaller mesh gillnets that were limited to 60 feet maximum length and were required to be operated as set gillnets.

Inseason Assessment Overview

Extremely high-water levels were observed in the lower river causing multiple assessment monitoring projects to have a delayed start in 2023.

<u>Lower Yukon Test Fishery (LYTF)/ADF&G and YDFDA</u>

Ice-out occurred on May 27 on the Yukon River near Emmonak, which is 9 days later than average (2001–2022). The LYTF program is designed to assess salmon run timing and strength as Catch Per Unit Effort (CPUE), which gives an index of abundance and indicates the presence of large groups of fish or "pulses" entering the mouths of the river. Operations were conducted by ADF&G technicians and Yukon Delta Fishery Development Association (YDFDA) crew. The two established locations are Middle Mouth (upstream from the confluence of Middle Mouth and North Mouth) and Big Eddy (on South Mouth).

The driftnet operations began June 2 at Big Eddy and Middle Mouth with snag nets to clear drift zones. Drift gillnets used were 8.25-inch mesh for Chinook salmon and 5.5-inch mesh for summer chum salmon. The LYTF set gillnet sites were not operated in 2023.

Water temperatures were collected throughout the summer season and were near or below average for most of June through mid-July. Temperatures were above average in late July and August (Figure 2).

Salmon caught in the test fishery were donated mostly within District 1 communities in coordination with village Tribal Councils and with the assistance of YDFDA.

Chinook salmon

The Big Eddy drift net had a cumulative CPUE of 51.31, which was 14% of the historical average (370.94). The Middle Mouth drift gillnet CPUE was 68.74, which was 58% larger than the 2021–2022 average (43.48). The combined (Big Eddy and Middle Mouth) drift CPUE was 61.24, which was higher than the 2021–2022 average CPUE value of 55.99.

Due to conservation concerns, the LYTF set gillnet operations were discontinued in 2023 and all healthy Chinook salmon were released from the LYTF drift gillnets. In 2023, 113 Chinook salmon were caught, of which only 31 were retained, compared to around 700 Chinook salmon retained in an average year (2018–2022). The small number of fish retained in 2023 was due to the low abundance resulting in reduced catches and project operational changes designed to protect Chinook salmon. Additionally, when test fish catches are low, crews can retrieve and release fish alive quickly due to there being fewer salmon in the net to untangle.

Summer Chum

Big Eddy-Middle Mouth combined drift net was 1,704.30 cumulative CPUE, which was below the historical median of 2,799.08. A total of 1,735 summer chum salmon were caught, of which 1,631 fish were retained for sampling. The number retained in 2023 was less than the average of 2,430 summer chum salmon retained at this project.

Pilot Station Sonar (ADF&G)

Pilot Station Sonar is located at river mile 123 and provides abundance estimates and run timing information for Chinook and summer chum salmon and a variety of nonsalmon species. The test fishery at the sonar project is used to apportion the daily sonar counts by species and is also used to sample the salmon runs for age, sex, length, (ASL) and genetic data. The project uses a wide range of mesh sizes (2.75, 4.0, 5.0, 5.25, 6.5, 7.5, and 8.5 inches) and likely captures a representative sample across sizes and age classes. A total of 298 Chinook salmon were encountered in the test fishery and approximately 160 were retained, sampled, and distributed to households. A total of 1,975 summer chum salmon were caught and sampled. Of these 1,361 were released alive and 614 were retained and distributed locally.

The Pilot Station sonar project estimated the first Chinook salmon passed the sonar site on June 10, which was about 5 days later than average for years 2001–2022. This year the midpoint of the run occurred on July 1 and was 7 days later than average. The cumulative passage estimate at the Pilot Station sonar was 58,529 Chinook salmon (with a 90% confidence interval of 44,191 to 72,867 fish). This passage was the second lowest ever recorded at the project (2022 was the lowest) and about 33% of the average annual passage of 177,431 fish (2003–2022; Figure 3).

The Chinook salmon age composition, estimated from 262 samples collected from the drift gillnet test fishery at the Pilot Station sonar project (all mesh sizes combined), was less than 1% age-3, 6.5% age-4, 59.9% age-5, 30.2% age-6, and 3.1% age-7. The age composition for age-5 fish was above the recent 10-year average, however; all other age classes were below the recent 10-year average. The average length of all Chinook salmon encountered at Pilot Station sonar was 721 mm, well below the historical average (743 mm), and the third smallest on record (1995–present). The proportion of females was similar to the historical average at this project. Females were primarily age-6 and males were primarily age-5.

Genetic mixed stock analysis (MSA) at the Pilot Station sonar site typically indicates a declining percentage of Canada-origin Chinook salmon through the run. However, in 2023, the early group and first pulse of Chinook salmon (June 7 to June 26) indicated that 44% of the fish sampled were Canada-origin. The second pulse of Chinook salmon at the sonar (June 27 to July 3) indicated that 54% of the fish were Canada-origin. Genetic MSA on the third pulse and remaining groups of Chinook salmon sampled at the sonar (July 4 to July 23) indicated that 48% of the fish sampled were of Canada-origin with a weighted season total of 48% Canada-origin Chinook salmon. While the proportion of Canada-origin fish were above average, because it is an extremely small total run, these proportions do not accurately reflect the strength of the Canada run of Chinook salmon, which was estimated to be only 27,800 fish past Pilot Station Sonar. For more background information on genetic MSA for Yukon River Chinook salmon, please refer to the department's Gene Conservation Laboratory webpage[1].

Four pulses of summer chum salmon passed the sonar project; the largest group consisted of approximately 329,400 fish between July 10 and July 18. The first quarter point, midpoint, and third quarter point of the summer chum salmon run at the Pilot Station sonar were June 23, July 5, and July 12, respectively. This indicated that the summer chum salmon run was likely 7 days later than average and the second latest on record based on the midpoint at the sonar project.

An estimated 845,988 summer chum salmon were counted at the Pilot Station sonar project as of July 18 (with a 90% confidence interval of 810,015 to 881,961 fish), which was below the historical median of 1.2 million fish from years with late run timing. The preliminary summer chum salmon passage was similar to the 5-year average of 865,148 fish (2018–2022), and well below the 10-year and 20-year averages (Figure 4).

The 2023 total summer chum salmon passage estimated at Pilot Station sonar through July 18 is a conservative estimate consistent with historical data, however, the true total run size in 2023 was likely somewhat larger. Genetic MSA in 2023 indicated that summer chum salmon continued to pass the Pilot Station sonar beyond the administrative summer season cutoff date of July 18. In 2023, 73% (with a CI of 65% to 85%) of the chum salmon arriving from July 19 to July 31 at Pilot Station sonar were genetically summer chum salmon. Overall, an estimated 9% of the summer chum salmon run came in during the fall season.

Eagle Sonar (ADF&G and DFO)

The Eagle sonar operated from June 30 to October 6, with an estimated passage of 14,752 Chinook salmon, which is approximately 70% lower than the historical average and the second lowest season total estimate (2022 was the lowest). A small amount of harvest occurred incidentally in nonsalmon gear between the sonar project and border. The final border passage estimate will not be available until later this winter after all harvest permits have been returned. The test fish project encountered 173 Chinook salmon, all of which were released alive.

The Chinook salmon age composition, from 152 samples that were aged from the test fishery at the Eagle sonar project, was 3% age-4, 53% age-5, 38% age-6, 5% age-7, and less than 1% age-8 fish. The age

[1] http://www.adfg.alaska.gov/index.cfm?adfg=fishinggeneconservationlab.main

composition was below average for age-4 and age-6 fish, and above average for age-5 and age-7 fish. The percent female was 31%, which was well below the recent 10-year average of 45%. Average length of all Chinook salmon encountered at the Eagle sonar was 752 mm, the second smallest on record (2006, 736 mm). The average length for females (813 mm) was below the recent 10-year average.

Similar to last year, fewer Canada-origin Chinook salmon were counted at the Eagle sonar than were assessed at the Pilot Station sonar project. In 2023, this difference between estimates was approximately 12,000 fish, or 44% of the Canada-origin run as assessed by MSA at Pilot Station sonar project. Numerous research and assessment projects are examining this difference between project estimates and seeking to understand factors affecting Chinook salmon migration inriver.

Escapement Projects

Most assessment projects operated as normal in 2023, however the Henshaw Weir (Tanana Chiefs Conference) was not able to be deployed. There were no escapement goals met this year for Chinook salmon (Table 1).

Three escapement goals exist for summer chum salmon: a drainage-wide goal of 500,000–1,200,000 fish and goals at the East Fork Andreafsky River and the Anvik River (Table 2). The drainagewide summer chum salmon goal is assessed postseason by incorporating information from harvest, escapement and Pilot Station sonar estimates into a run reconstruction model. Subsistence harvest estimates will be available later this winter. Based on preliminary information, the lower end of the drainagewide goal was met. Summer chum salmon counts at the other projects (Gisasa River weir, Chena and Salcha River sonars) were well below the historic medians (Table 2).

Andreafsky River weir (USFWS) installation was delayed due to high water and the weir was fish tight on July 8. Due to high water, there were no counts from July 9 to July 14. Operations ended July 27. Cumulative passage was 194 Chinook salmon, which is below the cumulative average of 3,799 fish, and 2,308 summer chum salmon, which is below the cumulative median of 52,765 fish. Counts at this project should be considered a minimum estimate.

Anvik Sonar (ADF&G) operated from June 15 to July 26 and counted 60,556 summer chum salmon with a 90% confidence interval of 59,260 to 61,852 fish. Passage is well below the historic cumulative median of 450,229 fish and below the escapement goal range of 350,000–700,000 fish. The project was unable to count from July 10 to July 23 due to high water conditions and the total count at this project should be considered an underestimate (Figure 5).

Gisasa River weir (USFWS) had a delayed start due to high water preventing weir installation, and the weir was not fish tight from July 10 to July 16. Counts at this project should be considered underestimates. The season total count of 489 Chinook salmon is much lower than the historical average of 2,000 fish. The summer chum salmon count was 16,913 which is well below the historical median of 42,747 fish.

The Chena and Salcha River escapement projects are operated by ADF&G Sport Fish Division. The Chena River escapement project operated from June 29 to August 11. The preliminary estimates are 1,070 (SE = 74) Chinook salmon and 717 (SE = 85) chum salmon. Carcass surveys were conducted from August 1 to August 11 and a total of 28 Chinook salmon and 11 chum salmon were sampled. The Salcha River escapement project operated from July 6 to August 4. The preliminary estimates are 1,213 (SE = 81) Chinook salmon and 652 (SE = 54) chum salmon. Carcass surveys were conducted on August 1, August 3–4, August 9, and August 11. A total of 96 Chinook salmon and 10 chum salmon were sampled. Various samples were collected for research partners during the 2023 season. Environmental DNA was collected daily in-season at each tower site for the University of Alaska Fairbanks. During carcass surveys, retained eggs and muscle tissue was collected from female Chinook salmon on both rivers for ADF&G Commercial Fisheries Division

(CFD) and United States Geological Survey. Chum salmon vertebrate were collected on the Salcha River during carcass surveys for ADF&G-CFD.

Aerial surveys of the East and West Forks of the Andreafsky River, Anvik River, Nulato River, Henshaw Creek and Alatna River were conducted under various conditions. Counts were below average for Chinook and summer chum salmon.

Fish Health

Subsistence fishers reported increasing presence of *Ichthyophonus* disease in 2020, prompting concerns for the survival of upriver migrating Chinook salmon. Beginning in 2021, ADF&G and partner organizations began coordinating efforts to evaluate the biological impacts of *Ichthyophonus* disease and determine if pre-spawn *en route* mortality of adult Yukon River Chinook salmon was occurring. Those efforts culminated in multi-year funding to support an *Ichthyophonus* study and a drainagewide tagging study. The 2023 season was the second of a three-year (2022–2024) collaboration between ADF&G and USFWS, which aims to develop an annual *Ichthyophonus* monitoring program, build support to increase community based *Ichthyophonus* monitoring, and build new tools capable of estimating annual disease-associated mortality. The 2023 season was also the initial feasibility year of a three-year (2023–2025) drainagewide Chinook salmon tagging project operated by ADF&G and the YDFDA, which aims to determine if large-scale *en route* mortality is occurring and, if so, where. Data analysis for both programs is ongoing, and results will be shared in the future. Preliminary findings, however, support the current hypothesis that *Ichthyophonus*-associated *en route* mortality may be contributing to low numbers of Yukon River Chinook salmon reaching spawning grounds in Alaska and Canada. These two projects are part of a broader collaborative effort to better understand the health of Yukon River Chinook salmon and determine what actions can be taken in the future to improve fish health and incorporate these concerns into fishery management decision making. For more information about this broader collaboration, see the article titled "Working Together to Monitor the Health of Yukon River Salmon" in the YRDFA fall newsletter[2].

Subsistence Fishery Overview

Subsistence fishery closures began on June 2 in the Coastal District and District 1 and progressed upriver based on run timing (Table 3). During the salmon fishing closures, fishermen could use nonsalmon gear, including hand line, longline, fyke net, dip net, and spear. Gillnets of 4-inch or smaller mesh were restricted to set nets 60 feet in length. Hook and line gear could be used for subsistence throughout the Yukon River Area, except for the Tanana River drainage, the Dall River drainage, and some closed waters adjacent to the Dalton and Steese highways.

Nonsalmon subsistence fishing opportunities remained open 24 hours a day, 7 days a week throughout the entire summer season. Fishermen were asked to release all Chinook salmon alive from selective and nonsalmon gear whenever possible, and to avoid fishing in areas where salmon could be caught. Pink and sockeye salmon could be retained all season. Despite full closures for Chinook salmon, a small number are known to be harvested incidentally in 4-inch mesh subsistence gear.

At the historic first quarter point of the summer chum salmon run at Pilot Station Sonar (June 22), inseason projections indicated that the summer chum salmon run would be above the lower end of the drainagewide escapement goal. Openings with selective gear types to target summer chum salmon (while releasing all Chinook salmon alive) were announced up through Subdistrict 5-C on regulatory schedules. Starting July 9, selective gear openings were extended to 24 hours a day, 7 days a week (Table 3).

Fishing opportunity for summer chum salmon was extended past the traditional start date of fall season management up through Subdistrict 5-C and in the Tanana River. For example, District 1 transitions to fall

[2] https://yukonsalmon.org/yukon-fisheries-news-fall-2023/

season management on July 16, but remained open with selective gear types for chum, sockeye, and pink salmon until July 25 (Table 3).

The post season subsistence salmon harvest survey returned to in person household visits in September and October. Surveyors traveled to 32 communities. Additional follow-up surveys by phone and mail are ongoing. During the survey households are asked about salmon and nonsalmon harvests. Salmon harvest estimates will be available in January.

Commercial Fishery

No commercial salmon fishing periods occurred in 2023 due to poor Chinook and summer chum salmon abundance and subsistence fishery restrictions. The average summer chum salmon commercial harvest from 2013–2020 was 272,586 fish with an exvessel value of nearly $1.5 million dollars (Appendices A1 and B1). For the fifteenth consecutive year, no commercial periods targeting Chinook salmon were allowed in the Yukon Management Area.

Canadian Fisheries

The preseason outlook was for a run size of approximately 26,000 to 43,000 Canada-origin Chinook salmon. Fishery Managers at the Department of Fisheries and Oceans Canada (DFO) implemented Canadian Chinook salmon fisheries according to International (i.e. Pacific Salmon Treaty; Yukon River Salmon Agreement) and Domestic allocation provisions outlined in Canada's Yukon River Integrated Fisheries Management Plan (IFMP). Preseason information and the in-season estimates at the Pilot Station sonar project suggested a run below the preseason forecast, and taking into consideration escapement goals, harvest shares, and the IFMP, the Chinook salmon run was considered to have no available harvest allocation. The recreational fishery was closed, and the long-term closure of the commercial and domestic fisheries remained in effect. As the season developed and it became progressively apparent that the passage at the Eagle sonar project would be well below levels required to achieve spawning escapement objectives, DFO relayed information to First Nations who managed their fisheries accordingly, as no harvest share was available (i.e. "Red" zone). DFO maintained the closures in the recreational, commercial, and domestic fisheries throughout the 2023 Chinook salmon run. While not all information is currently available, due to low numbers of Chinook salmon and measures taken by First Nations, the indication is that First Nation harvest on the Mainstem Yukon River is expected to be minimal.

Federal Special Action

The Alaska Department of Fish and Game (ADF&G) and the U.S. Fish and Wildlife Service (USFWS) have coordinated on this season summary announcement. The Federal manager issued Federal emergency special actions to restrict the selective gear opportunities for summer chum salmon to federally-qualified subsistence users only in federal public waters. For information regarding Federal subsistence fishing regulations contact the USFWS Yukon River Subsistence Fishery Manager Holly Carroll at 907-351-3029.

This is an announcement by the ADF&G and the USFWS. Federal Special Actions will be posted on www.doi.gov/subsistence/fisheries-special-actions.

ADF&G Advisory Announcements will be posted on www.cfnews.adfg.alaska.gov/ and shared on Facebook at www.facebook.com/YukonRiverFishingADFG.

Table 1.–Escapement goals and passage estimates for Chinook salmon at selected Yukon River tributaries, 2023.

Project	Current Goal	Type of Goal	Historical Average [a]	Estimate
East Fork Andreafsky Weir	2,100–4,900	SEG	3,799	194 [b]
Pilot Station Sonar	–	–	171,649	58,529
Gisasa River Weir	–	–	2,000	489 [b]
Chena River Tower	2,800–5,700	BEG	5,663	1,070
Salcha River Tower	3,300–6,500	BEG	7,738	1,213
Eagle Sonar	– [c]	–	51,631	14,752 [d]

Note: En dash indicates no goal at the project.

[a] Historical average includes all years the projects operated fully; years excluded have incomplete datasets due to weather and technical difficulties.

[b] High water prevented counts for a notable portion of the season. Estimates of missed passage are not available. Numbers shown are observed (i.e., minimum) counts only.

[b] The recent interim management escapement goal (IMEG) of 42,500–55,000 fish was not renewed by the Yukon River Panel in 2023.

[d] The passage estimate at Eagle Sonar is not an escapement estimate. Some harvest (U.S. and Canada) occurs between the project location and the spawning habitats.

Table 2. –Escapement goals and passage estimates for summer chum salmon at selected Yukon River tributaries, 2023.

Project	Current Goal	Type of Goal	Historical Median [a]	Estimate
Drainagewide [b]	500,000–1,200,000	BEG	1,183,009	845,988
East Fork Andreafsky Weir	>40,000	SEG	52,765	2,308 [c]
Anvik Sonar	350,000–700,000	BEG	450,229	60,556
Gisasa River Weir	–	–	42,747	16,913
Chena River Tower	–	–	8,091	717
Salcha River Tower	–	–	13,882	652

Note: En dash indicates no escapement goal at the project.

[a] Historical median includes all years the projects operated with the exclusion of years the projects operated poorly.

[b] Estimate of abundance at the Pilot Station sonar. Final drainagewide escapement will incorporate subsistence harvest estimates.

[c] High water prevented counts for a notable portion of the season. Estimates of missed passage are not available. Numbers shown are observed (i.e., minimum) counts only.

Table 3.–Subsistence salmon management actions, 2023.

District or Subdistrict	Closure date [a]	Selective gear on Regulatory Schedule [b]	Selective gear open 24/7 - Summer [b]	Selective gear open - Fall [c]
Coastal District	June 2	June 26	n/a	July 25
District 1	June 2	June 26	July 9	July 25
District 2	June 4	June 28	July 9	July 28
District 3	June 7	June 28	July 9	July 30
Innoko River	June 21	June 28 [d]	July 9	July 30
Koyukuk River	June 29	July 2 [d]	July 9	August 6
4-A Lower	June 12	July 2	July 9	August 2
4-A Upper	June 15	July 2	July 9	August 6
4-B and 4-C	June 21	July 5	July 9	August 8
5-A, 5-B, 5-C	June 25	July 11	July 11	August 14
5-D Lower	June 29	Closed	Closed	Closed
5-D Middle	July 2	Closed	Closed	Closed
5-D Upper	July 4	Closed	Closed	Closed
6-A	June 27	n/a [e]	July 14	August 25
6-B and Old Minto	June 29	n/a [e]	July 14	August 25
6-C (Personal Use)	July 2	July 21	n/a [f]	August 25
Upper Tanana	July 3	n/a [e]	July 24	August 25
Kantishna	June 27	n/a [e]	July 14	August 25
Lake Minchumina	June 27 [g]	n/a [e]	July 14	August 25
Tolovana River and Minto Flats	June 29 [g]	n/a [e]	July 14	August 25

[a] Also the start date for 4-inch or smaller mesh gillnets restricted to 60 feet in length and required to be operated as a set net. This restriction remained in place during the summer and fall seasons.

[b] Summer season openings with selective gear (dip nets, beach seines, and manned fish wheels) allowed retention of summer chum, pink, and sockeye salmon. Chinook salmon were required to be released alive.

[c] Fall season openings with selective gear allowed retention of coho, pink and sockeye salmon. Chum and Chinook salmon were required to be released alive. Fishing was open 24 hours per day, 7 days per week.

[d] Innoko and Koyukuk Rivers were opened for two 36- or 48-hour periods per week, matching schedules in District 3 and 4.

[e] Fishing with selective gear opened 24 hours per day, 7 days per week, and was not limited to the regulatory schedule.

[f] The Personal Use fishery in Subdistrict 6-C remained on the regulatory schedule and was not opened 24 hours per day.

[g] Fishing with 7.5-inch or less mesh closed for salmon but remained open with 6-inch or smaller mesh for nonsalmon (pike and whitefish).

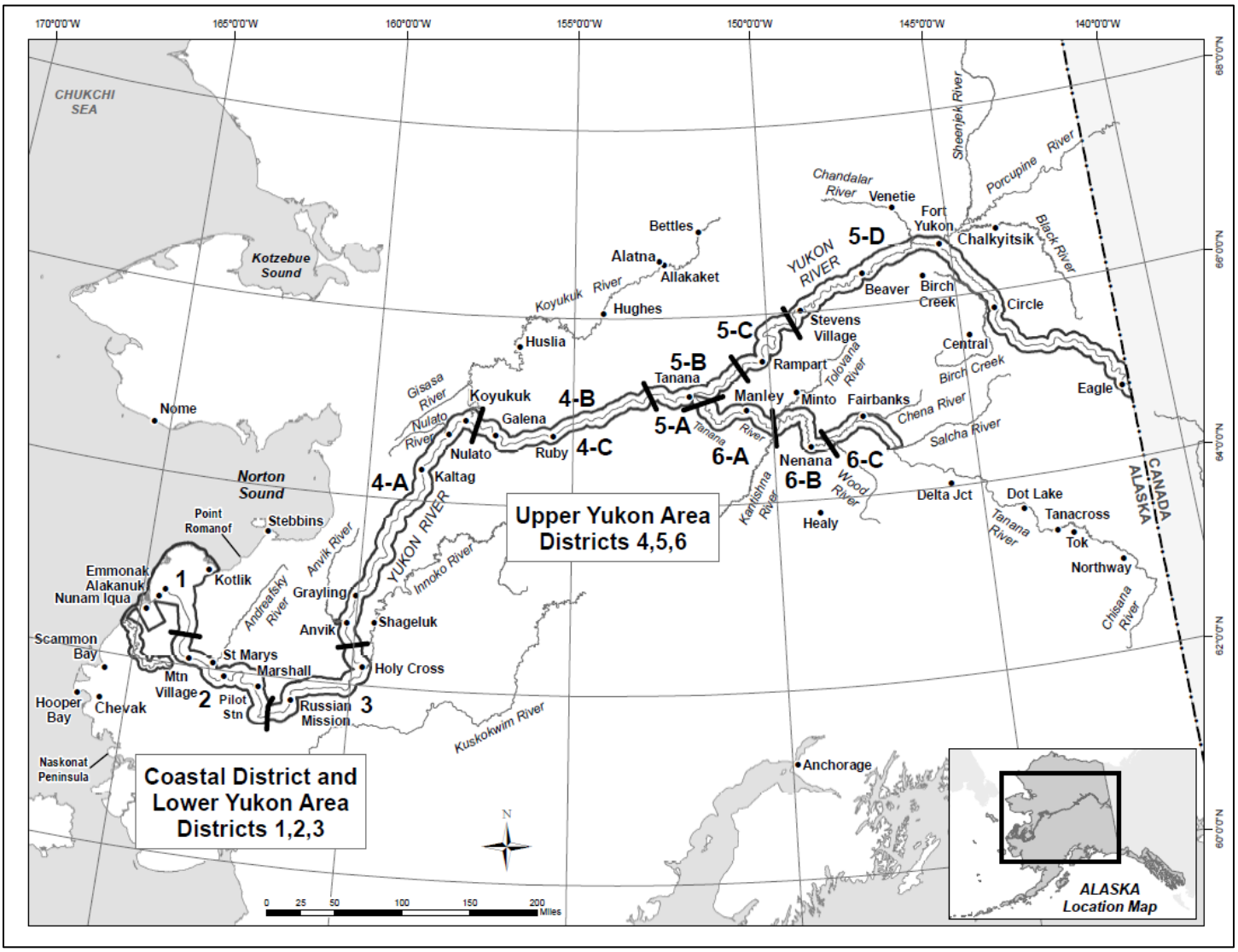

Figure 1.–Yukon Area communities and fishing districts.

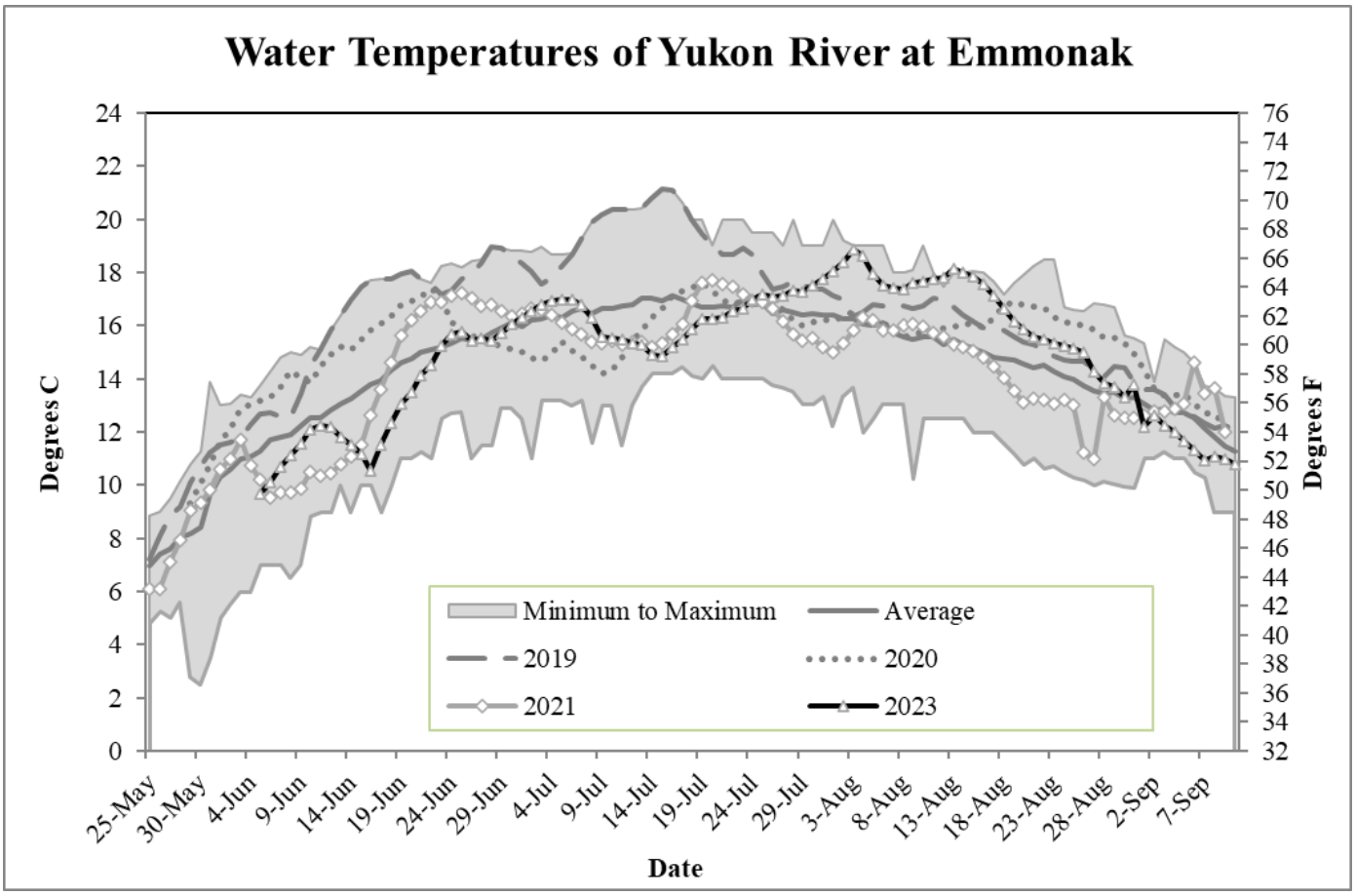

Figure 2.– Average daily water temperatures collected (from hand-held thermometers 1984–present and loggers 2004–2022) in the Yukon River near Emmonak, comparing 2023 and select years to historical minimum, maximum, and average temperatures.

Note: Measurements from 2023 include handheld thermometer and logger readings from June 19 through August 27, while pre and post logger deployment was taken with handheld thermometers only.

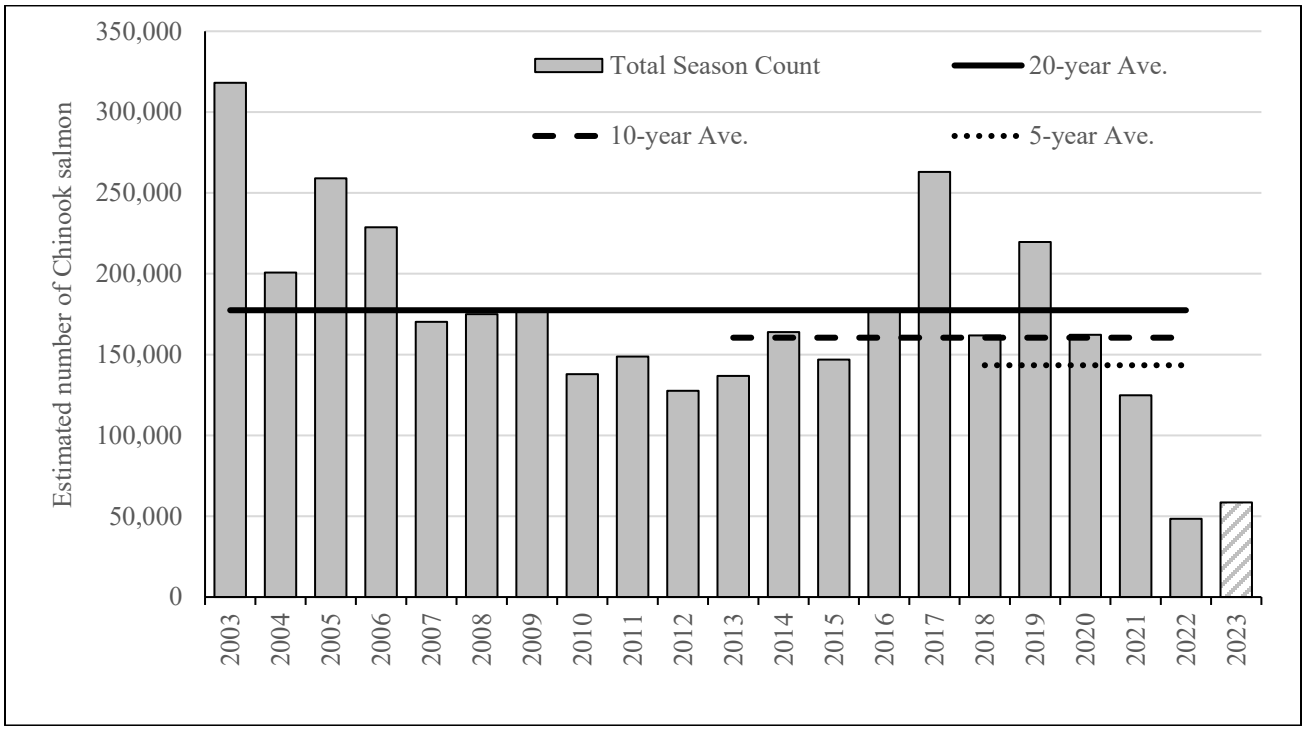

Figure 3.–Estimated Chinook salmon passage at Pilot Station sonar.

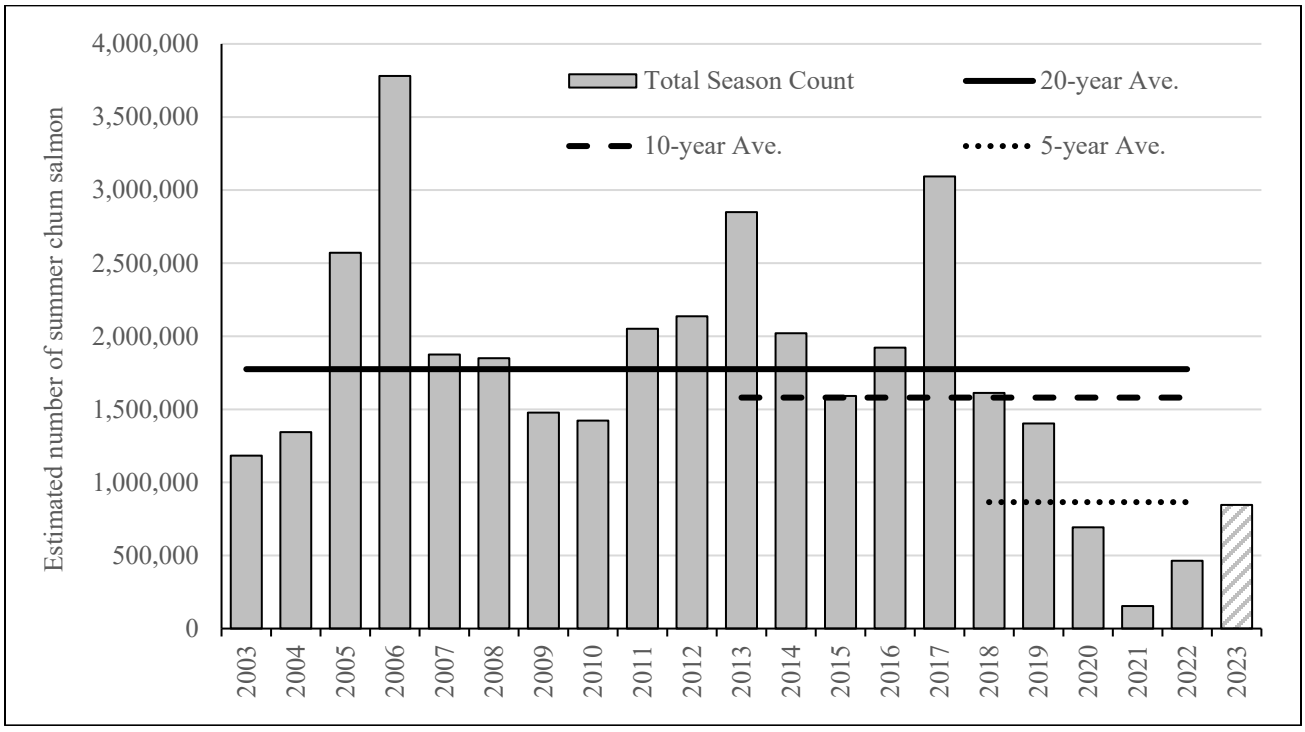

Figure 4.–Estimated summer chum passage at Pilot Station sonar.

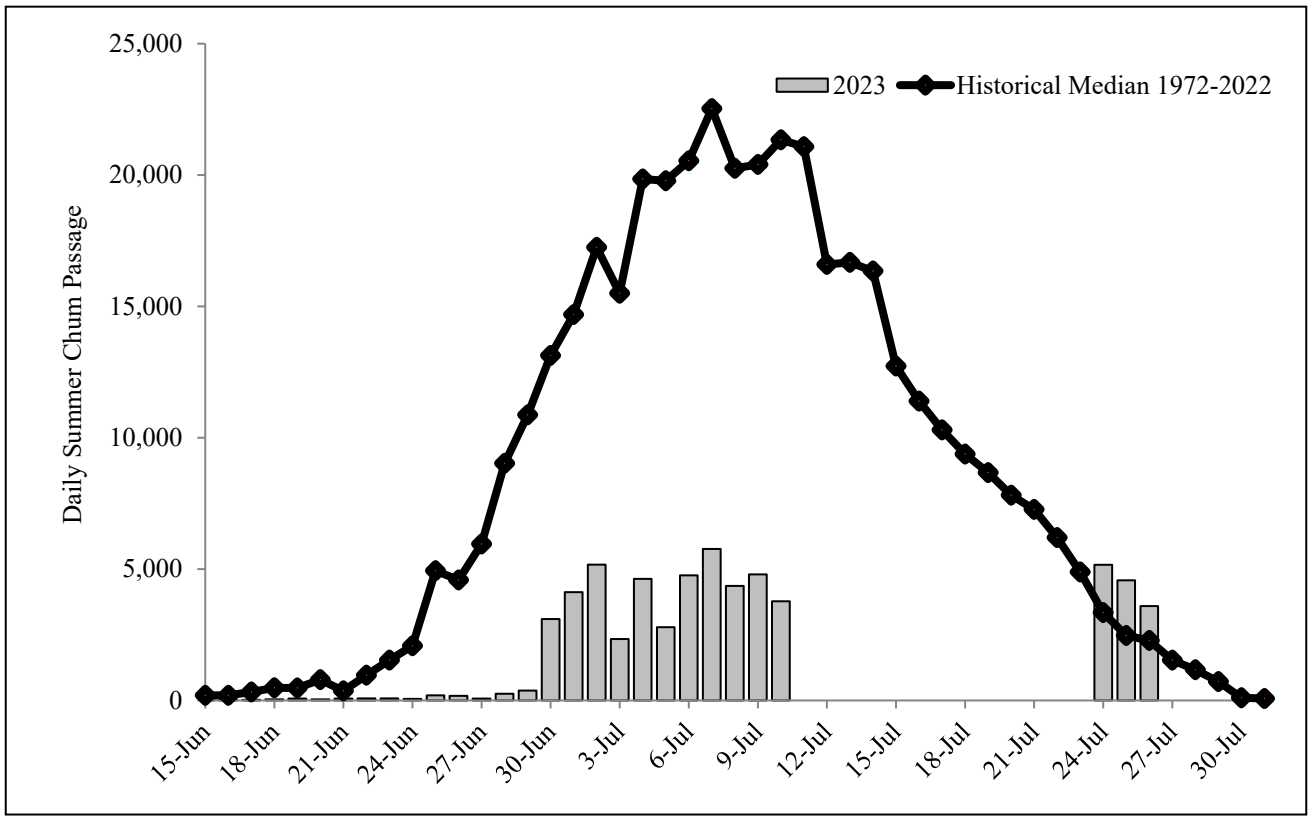

Figure 5.– Anvik River daily sonar passage counts attributed to summer chum salmon.
Note: Historical median does not include 2020. In 2023, the project did not operate from July 10 to July 23 due to high water.

Appendix A1.–Summer chum salmon commercial harvests by district for 2013–2023 and guideline harvest ranges.

	Guideline Harvest for Districts 1 and 2: 251,000–755,000			113,000–338,000	13,000–38,000	400,000–1,200,000
	District 1	District 2	Districts 1 and 2	Subdistrict 4-A	District 6	Total Districts 1–6
2013	207,871	171,272	379,143	100,507	5,937	485,587
2014	198,240	229,107	427,347	96,385	6,912	530,644
2015	172,639	181,447	354,086	–	4,770	358,856
2016	293,522	228,267	521789	–	4,020	525,809
2017	345,395	47,770	393165	159,051	4,300	556,516
2018	250,958	195,423	446,381	126,892	3,427	576,700
2019	183,658	41,835	225,493	–	1,596	227,089
2020	9,613	4,355	13,968	–	–	13,968
2021	–	–	–	–	–	–
2022	–	–	–	–	–	–
2023	–	–	–	–	–	–
2013–2020 Average	207,737	137,435	345,172	120,709	4,423	409,396

Note: Commercial harvest only includes summer chum salmon sold in the round. Averages do not include 2021–2023 when no commercial fisheries occurred.

Appendix B1.–Value of commercial salmon fishery to Yukon Area fishermen, 2013–2023.

	Chinook		Summer Chum				Value by species (dollars)		Value by area (dollars)			Total
	Lower Yukon		Lower Yukon		Upper Yukon							Yukon Area
Year	$/lb	Value ($)	$/lb	Value ($)	$/lb	Value ($)	Chinook	Summer chum	Lower		Upper	(dollars)
2013	–	–	0.75	1,721,524	0.3	152,110	–	1,873,634	1,721,552	[a]	152,110	1,873,662
2014	–	–	0.60	1,648,866	0.29	154,959	–	1,803,825	1,662,634	[b]	154,959	1,817,593
2015	–	–	0.60	1,259,908	0.23	7,166	–	1,267,074	1,262,034	[b]	7,166	1,269,200
2016	–	–	0.60	1,903,490	0.26	6,030	–	1,909,520	1,958,311	[b]	6,030	1,964,341
2017	–	–	0.60	1,470,353	0.34	276,682	–	1,747,035	1,470,353	[c]	276,682	1,747,035
2018	–	–	0.60	1,679,448	0.33	217,064	–	1,896,512	1,695,468	[b]	217,064	1,912,549
2019	6.59	210,079	0.60	820,654	0.29	2,819	210,079	807,367	1,034,117	[c, d]	2,819	1,036,936
2020	–	–	0.60	51,067	–	–	–	51,067	51,440	[d]	–	51,440
2021	–	–	–	–	–	–	–	–	–		–	–
2022	–	–	–	–	–	–	–	–	–		–	–
2023	–	–	–	–	–	–	–	–	–		–	–
2013–2020 Ave.	6.59	210,079	0.62	1,319,414	0.29	116,690	210,079	1,419,504	1,356,989		116,690	1,459,094

Note: En dash indicates no sales occurred or harvest level was insufficient to generate summary information. Averages do not include 2021–2023 when no commercial fisheries occurred.

[a] Includes sales of coho salmon in Districts 1 and 2.

[b] Includes sales of pink and coho salmon sold during the summer season in Districts 1 and 2.

[c] Does not include value from Chinook salmon sold during fall season. Value of Chinook salmon sold in fall season was $9,922 in 2017 and $41,594 in 2019.

[d] Includes sales of pink salmon in Districts 1 and 2.