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



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Date Issued: July 14, 2015 Time: 5:00 p.m.

2015 Kuskokwim River Salmon Fishery Update #6

The Alaska Department of Fish and Game (ADF&G) works cooperatively with U.S. Fish and Wildlife Service (USFWS) and various Tribal or community groups to monitor the health of Kuskokwim Area salmon stocks and provide data for inseason management.

ADF&G ensures that all assessment data are publicly available inseason. Detailed project summaries are prepared each week and presented to the Kuskokwim River Salmon Management Working Group. Management meetings are held each Wednesday at the ADF&G office in Bethel. Working Group meetings are open to the public, in person or via teleconference. Project summaries and associated meeting materials are available online by 5:00 PM Tuesday during the salmon season. In addition, select data are available daily by 10:00 AM.

Working Group Information Packets: http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareakuskokwim.kswg

Inseason Bethel Test Fish and Escapement Monitoring Data:

http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareakuskokwim.salmon#fishcounts

Assessment Overview

The Chinook salmon run is nearing completion in the lower and middle portions of the Kuskokwim River. It appears that the run timing was slightly early but very protracted compared to previous years. Bethel Test Fishery indicated that the run was weak and conservation measures were necessary to achieve drainage and tributary escapement goals. Telemetry tracking data confirm that Chinook salmon are entering spawning tributaries throughout the drainage. Weir escapements suggest that the peak of the Chinook salmon escapement has been observed at tributary monitoring locations. There is considerable evidence that established escapement goals will be achieved on the Kwethluk and George Rivers. Escapement success is uncertain for the Kogrukluk River weir. The improved escapement compared to recent years indicates that conservation measures and sacrifices by local subsistence users were effective.

Aerial surveys will be flown during the coming weeks to assess escapement success at a broad geographic scale. It is too soon to determine the adequacy of drainage-wide escapement, but the inseason evidence is encouraging.

The sockeye salmon run appears to be late and strong compared to prior years. Bethel Test Fishery indicates that the peak of the sockeye salmon run has passed the Bethel area. Aniak Test Fishery indicates that the peak of the run has likely passed in the middle river.

The chum salmon run continues to be of concern. Bethel Test Fishery indicates the 2015 chum salmon run may be one of the lowest on record. Similarly, Aniak Test Fishery indicates low numbers of chum salmon in the middle river relative to other species. Chum salmon escapement at all monitoring locations are well below average. There is mounting evidence that the established escapement goal on the Kogrukluk River may not be achieved. Conservation for chum salmon was warranted.

Chinook Salmon Tagging

ADF&G is tagging Chinook salmon downstream of Bethel near Fowler Island. The purpose of this study is to estimate the total number of Chinook salmon that return to the Kuskokwim River in 2015 and monitor the migration timing and speed of fish as they travel through the primary harvest areas towards their spawning grounds. Abundance estimation will be completed post season. Migration timing will be assessed inseason and preliminary results presented weekly.

As of July 13, ADF&G has caught 1,161 Chinook salmon of which 589 have been radiotagged. Peak daily catches ranging from 60–80 fish per day were observed at the tag site between June 17 and June 20. Since that time, daily catches have declined slowly to 10–15 Chinook salmon per day over the past week. Our best estimate is that 98%–99% of the Chinook salmon run has passed the tag site. We expect to catch very few Chinook salmon over the coming days. The tagging crew will attempt to deploy radio tags in the final few Chinook salmon. This end of season effort will help inform our understanding of where in the drainage the latest arriving fish are bound.

Radio tagged fish are being monitored as they migrate upriver using aerial surveys and tracking towers located between Bethel and McGrath. On average, tagged fish are swimming 22.5 miles per day. Tagged fish continue to move upriver towards their spawning grounds. Approximately 80% of the tagged fish are upriver from Tuluksak, 60% are upriver from Chuathbaluk, 38% are upriver from Sleetmute, and 16% are upriver from McGrath. Of the tagged fish located downriver of Tuluksak, 48% have been detected in the Kwethluk and Kisaralik Rivers combined. Majority of tagged fish have begun to enter spawning tributaries in the middle and headwaters portions of the Kuskokwim River.

ADF&G is conducting a Salmon Tag Lottery. Tagged fish are identifiable by a brightly colored plastic tag attached to their back, and a metal antennae coming out of their mouth. *It is okay if you harvest one of these tagged fish*. If you do, please call 1-800-267-2104 and return the radio tag to the ADF&G office in Bethel. In appreciation, you will be entered into the monthly Lottery and eligible for a cash prize of \$200 and a seasonal cash prize of \$500. So far, 72 tagged fish have been reported harvested in the subsistence fishery – 6% of all tags deployed. Thank you to all who reported catching a tagged fish – you have been entered into the monthly lottery.

Bethel Test Fishery

Bethel Test Fishery (BTF) is the primary inseason run assessment tool for Kuskokwim River salmon and is operated the same way each year. The daily Catch Per Unit Effort (CPUE) is used to index run timing and relative abundance of Chinook, chum, sockeye, and coho salmon. These data have only limited utility for estimating total run size or escapement. *The 2015 data is not directly comparable to prior years due to subsistence fishing restrictions*. The Bethel Test Fishery continues to operate on schedule.

The Chinook salmon run through the lower Kuskokwim River is coming to an end. Over the past week, daily CPUE has fallen below 10. Cumulative CPUE as of July 13 is 543, which is below the recent 10-yr average and above the recent 5-yr average for this date. However, recent years include some of the lowest run sizes on record. The historical mid-point of the Chinook salmon run is June 22. On average, 95% of the Chinook salmon run has passed Bethel as of July 13. It appears that the Chinook salmon run was a few days early and protracted compared to past years. Our best estimate is that 95%–98% of the run has passed the test site. Inseason projections suggest that the end of season CPUE for Chinook salmon will likely be between 550 and 560, which corresponds to a below average run size, similar to what has been observed in recent years.

The peak of the sockeye salmon run has passed through the lower river. BTF observed a considerable decrease in sockeye salmon catches over the past week, indicating the run is coming to an end. As of July 13, cumulative CPUE is 1,803, which is above the 5- and 10-yr averages for this date. The historical midpoint of the sockeye salmon run is June 28. On average, 95% of the sockeye salmon run has passed Bethel as of July 13. The 2015 run appears to be late compared to past years, and our best estimate is that 94%–95% of the run has passed the test site. Inseason projections suggest the end of season CPUE for sockeye salmon will likely be between 1,850 and 1,920, which corresponds to a very strong run.

The peak of the chum salmon run has passed through the lower river. BTF continues to catch small numbers of chum each day. Chum salmon cumulative CPUE as of July 13 is 1,521. The cumulative CPUE is the fifth lowest on record for this date and is well below the 5- and 10-yr averages. The historical mid-point of the chum salmon run is July 4. Chum salmon run timing appears to be average. On average, 78% of the chum salmon run has passed Bethel, as of July 13. Our best estimate is that 69%–89% of the run has passed the test site. Inseason projections suggest that the end of season CPUE for chum salmon will likely be between 1,730 and 1,990 which correspond to a very weak run.

The first coho salmon was captured in the BTF on July 11, which is similar to past years. The historical mid-point of the coho salmon run is August 8. We expect the coho salmon run to build over the coming weeks. ADF&G will shift toward coho salmon management in late July as the abundance of coho salmon begins to exceed other species.

Aniak Test Fishery

The Aniak Test Fishery is operated cooperatively by the Native Village of Napaimute and ADF&G. <u>*The 2015 data is not directly comparable to CPUE observed at the Bethel Test Fishery.*</u>

As of July 13, the Aniak Test Fishery has caught 357 Chinook salmon, 6,497 chum salmon, and 146 sockeye salmon. Cumulative CPUE is 2,916 Chinook salmon, 5,424 chum salmon, and 1,221 sockeye salmon. Over this past week, daily catches of Chinook salmon were low indicating the peak of the run has passed the Aniak area. The chum and sockeye salmon abundance continued to build over the past week; although, relatively low catches of both species on July 13 may indicate the peak of the run has passed the

Aniak area. The last day of project operations will be July 14. The Aniak Test Fishery proved to be an informative tool for evaluating the run timing and relative abundance of salmon species in the middle portion of the Kuskokwim River.

Kwethluk River Weir

The Kwethluk River weir is operated by USFWS and used to index salmon escapement to the lower Kuskokwim River tributaries. As of July 13, a total of 3,708 Chinook salmon, 2,769 chum salmon, and 3,743 sockeye salmon have been counted past the weir. On average, the mid-point of the escapement past the weir is July 8 for sockeye salmon, July 14 for Chinook salmon, and July 19 for chum salmon. The Chinook salmon escapement is shaping up to be much larger than in recent years. Inseason projections suggest that the escapement goal will likely be achieved. Chum salmon escapement is the second lowest on record for this date. Sockeye salmon escapement to date is the second largest on record for this location.

A sustainable escapement goal of 4,100–7,500 Chinook salmon has been established by ADF&G for this river. The escapement goal has not been achieved since 2009.

Tuluksak River Weir

The Tuluksak River weir is operated by USFWS. As of July 13, a total of 217 Chinook salmon, 627 chum salmon, and 95 sockeye salmon have been counted past the weir. On average, the mid-point of the escapement past the weir is July 14 for Chinook salmon and July 21 for chum salmon. Chinook salmon escapement to date is similar to the small returns observed at this location in recent years. The chum salmon escapement is the lowest on record for this date.

No salmon escapement goals have been established by ADF&G for this river.

Salmon River (Aniak River) Weir

The Salmon River (Aniak) weir is operated by ADF&G and used to index salmon escapement to the Aniak River drainage. The weir was successfully installed on June 19. As of July 13, a total of 451 Chinook salmon and 459 chum salmon have been counted past the weir. Only 2 sockeye salmon have been observed to date. On average, the mid-point of the escapement past the weir is July 21 for Chinook salmon, July 22 for chum salmon, and August 6 for sockeye salmon. Cumulative Chinook salmon escapement to date is below average for this location. Chum salmon escapement is the second lowest on record.

No weir-based salmon escapement goals have been established by ADF&G for this river.

George River Weir

The George River weir is operated by ADF&G and used to index salmon escapement to middle Kuskokwim River tributaries. The weir was successfully installed on June 15. As of July 13, a total of 1,676 Chinook salmon and 3,018 chum salmon have been counted past the weir. On average, the midpoint of the escapement past the weir is July 9 for Chinook salmon and July 16 for chum salmon. Chinook salmon escapement to date is below the historical average for this location. However, inseason projections suggest the escapement goal will likely be achieved. Chum salmon escapement to date is well below the historical average, and is the fifth lowest escapement on record at this location.

A sustainable escapement goal of 1,800–3,300 Chinook salmon has been established by ADF&G for this river. The escapement goal was achieved in 2014.

Tatlawiksuk River Weir

The Tatlawiksuk River weir is operated by ADF&G and used to index salmon escapement to middle Kuskokwim River tributaries. The weir was successfully installed on June 13. As of July 13, a total of 1,717 Chinook salmon and 4,436 chum salmon have been counted past the weir. On average, the midpoint of the escapement past the weir is July 10 for Chinook salmon and July 16 for chum salmon. Chinook salmon escapement to date is above average for this location. Chum salmon escapement is well below average, and is the fourth lowest on record for this location.

No salmon escapement goals have been established by ADF&G for this river.

Kogrukluk River Weir

The Kogrukluk River weir is operated by ADF&G and used to index salmon escapement to the Holitna River drainage. The weir was successfully installed on June 21. As of July 13, a total of 2,771 Chinook salmon, 2,793 chum salmon, and 179 sockeye salmon were counted past the weir. On average, the midpoint of the escapement past the weir is July 13 for Chinook salmon, July 15 for chum salmon, and July 16 for sockeye salmon. Chinook salmon escapement to date is below the historical average for this location and there is evidence that the end of season escapement may be below the established goal. Chum salmon escapement is well below average and is the third lowest on record for this location. It is unlikely that the chum salmon escapement goal will be achieved at this location. Sockeye salmon escapement is well below average, but within the range of observations for years with late run timing.

Sustainable escapement goals have been established by ADF&G for Chinook salmon (4,800–8,800), chum salmon (15,000–49,000), sockeye salmon (4,400–17,000), and coho salmon (13,000–28,000). Goals were achieved for all species except Chinook salmon in 2014.

<u>Telaquana Lake Weir</u>

The Telaquana Lake weir is operated cooperatively by ADF&G and National Park Service. The weir is used to index escapement for lake-spawning sockeye salmon. Staff was redeployed to the lake on July 9, and the weir was successfully installed on July 11. We believe that <1% of the escapement would have passed prior to the weir being installed. As of July 13, at total of 1,510 sockeye salmon have been observed past the weir. Cumulative escapement is the second lowest on record for this location; however, it is very early in the escapement at this location.

Salmon River (Pitka Fork) Weir

The Salmon River (Pitka Fork) weir is operated by ADF&G and MTNT (McGrath, Takotna, Nikolai, Telida) and used to index Chinook salmon escapement to the headwaters upriver from McGrath. The weir was successfully installed on June 1. The very early installation date was in response to local area residents who reported seeing Chinook salmon historically in early June. The first Chinook salmon passed the weir on June 27. As of July 13, a total of 2,574 Chinook salmon and one chum salmon have passed the weir. This is the first year that this weir has operated since 1981, and no comparable data exists at this time.

Kuskokwim Bay Weirs

The Kanektok River weir has been in operation since June 22. As of July 12, total passage through the weir is 1,620 Chinook, 30,212 sockeye, and 1,841 chum salmon. Chinook salmon escapements are above average for this date, while the escapement of sockeye and chum salmon are below average.

The Middle Fork Goodnews River weir has been in operation since June 25. As of July 12, total passage through the weir is 416 Chinook, 27,018 sockeye, and 1,504 chum salmon. Sockeye salmon escapement has exceeded the lower bound of the biological escapement goal (18,000–40,000 fish). Chinook, sockeye and chum salmon passage is below average.

Inseason Subsistence Harvest Monitoring

Orutsararmiut Native Council (ONC) in coordination with ADF&G collect subsistence fishing reports from Bethel area fish camps in an attempt to understand salmon harvest timing and success. ONC staff visit area fish camps each week during the salmon season, share fisheries updates, and answer questions about research and management. In addition, this project provides an opportunity for subsistence fishermen to share information and feedback with managers. Project updates will be provided every Wednesday by ONC to the Kuskokwim River Salmon Management Working Group.

Kuskokwim River Sonar Feasibility

ADF&G is assessing the feasibility of operating sonar on the mainstem Kuskokwim River to count the total number of salmon by species. If the project proves viable, it could provide daily counts of salmon and greatly strengthen inseason management capabilities. The feasibility efforts began in 2014 and are continuing in 2015.

Two potential sonar sites have been identified. One is located near the upper confluence of the Kuskokwim River and Church Slough and the other is located downriver from the community of Akiak. Staff has completed 1–2 weeks of feasibility work at both sites – including testing sonar equipment and drift gillnet fishing. All fish harvested were donated to the communities of Kwethluk and Akiak. Over the past week, staff relocated to the lower site to collect additional data. The data collection phase of the feasibility study is scheduled to end in mid-July. Staff will relocate to Fairbanks to begin the analysis portion of this project.

Tributary Escapement Monitoring – Aerial Surveys

Aerial surveys are flown throughout 15 Kuskokwim River tributaries for Chinook salmon and 3 Kuskokwim Bay tributaries for Chinook salmon and sockeye salmon. Aerial surveys are an index of escapement to a very broad geographic area – meaning not all fish are counted, but the number of fish observed is related to the number of fish that escaped. ADF&G will begin flying aerial surveys this coming week. Aerial surveys will be flown between July 17th and August 5th starting with headwater tributaries and ending in the lower Kuskokwim River and Bay.

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