



THE STATE
of ALASKA
GOVERNOR MIKE DUNLEAVY

Department of Fish and Game

Division of Commercial Fisheries
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September 11, 2023

Jon Kurland, Administrator
NOAA Fisheries, Alaska Region
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Dear Mr. Kurland,

In April 2015, the North Pacific Fishery Management Council (Council) adopted an action that lowers Chinook salmon bycatch caps in the Bering Sea walleye pollock fishery when Chinook salmon abundance in Western Alaska is at historically low levels.¹ The Council's action identifies historically low Western Alaskan Chinook salmon abundance using a three-system index of inriver adult Chinook salmon run sizes from the Unalakleet, Upper Yukon, and Kuskokwim rivers combined at or below the threshold level of 250,000 fish. The Council's action also specified a process by which the Alaska Department of Fish and Game (department) would provide postseason abundance estimates to the National Marine Fisheries Service (NMFS) by October 1, following the salmon season each year. If the threshold is not met, the low performance standard and hard cap applicable to the Bering Sea walleye pollock fishery is in effect the following year.

Methods and analyses used by the department to estimate the postseason run size for each of the three systems have been approved by the Council, and there were no changes to those methods in 2023. The methods used for the Unalakleet and Upper Yukon rivers are consistent with what is outlined in the Council's public review analysis.² Methods used for the Kuskokwim River were approved by the Council in June 2018³.

The 2023 three-system index of inriver adult Chinook salmon run sizes from the Unalakleet, Upper Yukon, and Kuskokwim rivers is 148,443 and is below the threshold level of 250,000.

The following details the preliminary total run estimates for each system:

Unalakleet River

An extremely low run size of Unalakleet River Chinook salmon returned in 2023 and was about half the run size observed in 2022. The preliminary 2023 postseason run size estimate of Unalakleet River Chinook salmon is **802**, based on the sum of reported commercial harvest, expected subsistence harvest, and estimated total escapement. A total of 11 Chinook salmon were commercially harvested in Norton Sound Subdistrict 6 (Unalakleet Subdistrict), and the total catch was assumed to be bound for the Unalakleet River. The department estimates approximately 100 Unalakleet River Chinook salmon were harvested for subsistence uses in 2023. Subsistence harvest in 2023 is expected to be smaller than the 2022 harvest (465 fish) due to reduced fishing opportunities in response to overlapping poor Chinook and chum salmon runs and concerns for not meeting the established Chinook salmon escapement goal on the North River. The North River Tower operated successfully throughout the Chinook salmon run, and standardized methods were used to estimate minor missed passage. The Unalakleet River weir was out of operation for nine days corresponding to the normal peak passage of Chinook salmon, and only 40 Chinook salmon were counted while the weir was

¹ <https://npfmc.legistar.com/LegislationDetail.aspx?ID=2237783&GUID=89E4DA9C-19B8-4BDE-8643-B19D68DD9EE3>

² Public Review draft Environmental Assessment/ Regulatory Impact Review/ Initial Regulatory Flexibility Analysis for Proposed Amendment to the Fishery Management Plan for Bering Sea Aleutian Islands Groundfish Bering Sea Chinook and Chum salmon bycatch management measures, March 2015.

³ <https://npfmc.legistar.com/LegislationDetail.aspx?ID=3486558&GUID=81056FD0-C9E8-4376-BD59-C2F6084C82E9&Options=ID|Text|&Search=Kuskokwim>

operational. Available methods to estimate missed passage at the Unalakleet River weir or expand North River Tower counts to the entire Unalakleet River drainage were considered unreliable. Aerial peak spawning surveys upriver from the Unalakleet River weir counted 70 Chinook salmon, which is considered a minimum escapement to the Unalakleet River. The sum of the North River Tower count and the Unalakleet River aerial survey count was used as a conservative estimate of total escapement to the Unalakleet River drainage. The preliminary total escapement of Chinook salmon to the Unalakleet River drainage was estimated to be 691 and is highly uncertain. The North River escapement was one of the smallest on record since the project began in 1972. While uncertain, the escapement upstream of the Unalakleet River weir was likely less than the 2022 run which was the smallest on record since the project began in 2010.

Upper Yukon River

An extremely low run size of Upper Yukon River Chinook salmon returned in 2023 with the run only slightly larger than the record low observed in 2022. The preliminary postseason run size estimate of Upper Yukon River Chinook salmon is **16,804**, based on the preliminary assessment of total passage into Canada and expectations of the total harvest in Alaska. Chinook salmon passage into Canada was based on a sonar project operated near the U.S./Canada border, downriver from Eagle, Alaska. The preliminary sonar count is 15,304 (90% CI: 15,081–15,527). The total harvest of Upper Yukon River Chinook salmon in Alaska is expected to be about 1,500. The potential for a very small Chinook salmon and summer chum salmon runs were forecasted pre-season, and in-season assessment indicated the Chinook salmon run was very weak. As such, conservation actions were implemented to protect both Chinook salmon and chum salmon which co-migrate throughout much of the Yukon River. There were no commercial salmon fisheries opened in the Yukon River drainage in 2023, relevant sport fisheries were closed, subsistence fishing was closed for all salmon beginning June 2 in the lower portion of the river, and subsistence closures were applied in upriver districts commensurate with salmon run timing. Selective gear openings for subsistence harvest of summer chum were allowed starting June 26 in the lower river once a majority of Chinook had passed and in-season run projections for summer chum indicated we would be above the lower end of the escapement goal. All Chinook salmon were required to be released alive from selective gear. Limited harvest of Upper Yukon River Chinook salmon occurred in test fisheries operated by the department and cooperative partners and in small-mesh gillnet opportunities directed at non-salmon species. The 2023 preliminary harvest of 1,500 is a maximum expectation and was informed by the 2021 and 2022 harvest of Canadian-origin Chinook salmon, which resulted from full subsistence salmon fishing closures like those imposed in 2023, except for some late season subsistence opportunity with selective gear for summer chum salmon. The preliminary total run size of Upper Yukon River Chinook salmon was below the lower end of the pre-season run forecast (80% CI: 26,000–43,000), and about half of the in-season run size estimate (i.e., 28,000) based on independent sonar and genetic stock identification programs operated in the lower portion of the Yukon River.

Kuskokwim River

The preliminary postseason run size estimate of Kuskokwim River Chinook salmon is **130,837** fish (95% CI: 98,692–173,452), based on preliminary results of a maximum likelihood model. The total run estimate was informed by direct observations of escapement and an expectation of drainagewide harvest. The preliminary escapement estimate (103,989) is uncertain (95% CI: 71,844–146,604) because the model was informed by only one weir project and eight aerial surveys. Poor weather conditions prevented the department from flying a subset of aerial surveys during the 2023 season. Additionally, extended periods of missed passage resulted in the inability to produce escapement estimates at three out of four weirs that are used to inform the model. The total harvest of Kuskokwim River Chinook salmon is expected to be 26,848. No commercial harvest of Kuskokwim River Chinook salmon occurred during the 2023 season. Nearly all harvest occurred in the subsistence fishery, and minimal harvest occurred in test fisheries operated by the department and collaborators. Subsistence fishing restrictions were implemented throughout the Chinook salmon run in 2023. U.S. Fish and Wildlife Service (USFWS) estimated that approximately 21,062 Chinook salmon were harvested within a portion of the Yukon Delta National Wildlife refuge during subsistence fishing openings announced by Federal Special Actions. A preliminary estimate of drainagewide subsistence harvest was generated using a seven-year relationship between partial harvest estimates developed in-season by USFWS and drainagewide estimates developed post-season by the department. The preliminary total run size of Kuskokwim River Chinook salmon was within the pre-season run forecast of 115,000–170,000 fish but larger

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than an independent total run estimate of approximately 97,000 Chinook salmon, based on a sonar project operated near Bethel, Alaska plus harvest downriver.

Sincerely,



Sam Rabung
Director, Division of Commercial Fisheries

cc: Doug Vincent-Lang, Commissioner
Rachel Baker, Deputy Commissioner
David Witherell, NPFMC