



Kuskokwim River Salmon Situation

March 20, 2023

Salmon Bycatch Committee

Terese Schomogyi

Kuskokwim River Inter-Tribal Fish Commission

Outline

Kuskokwim River Salmon Situation

- Chinook salmon
- Chum salmon
- Coho salmon

AYK Regional Salmon Situation

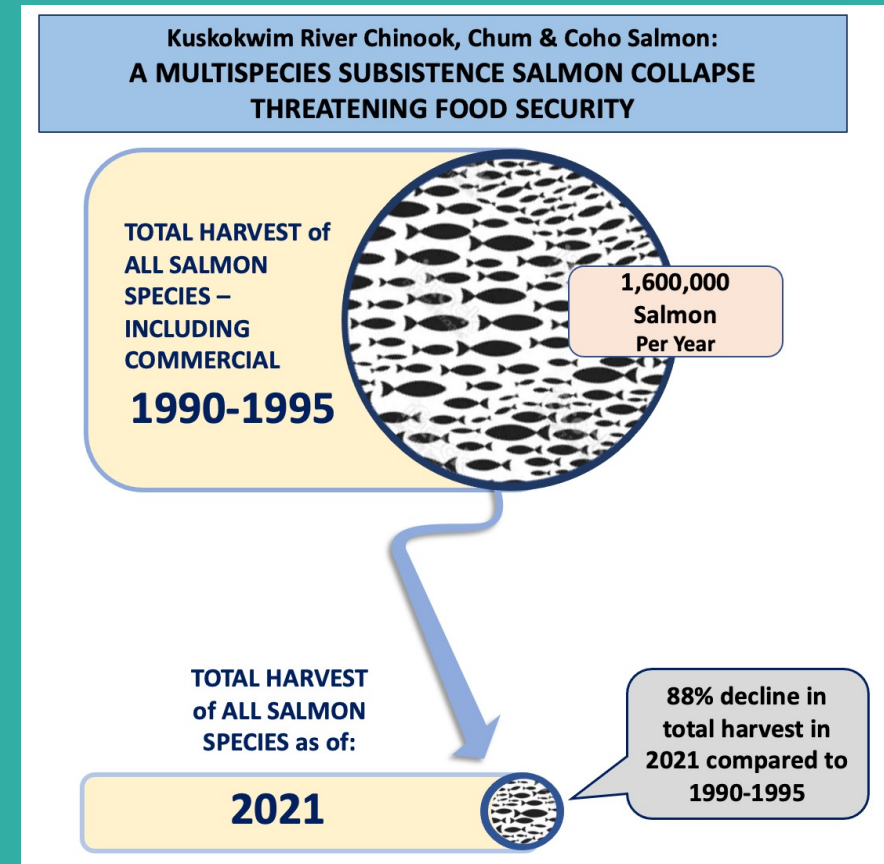
Cumulative Impacts Contribute to Salmon Declines



Credit Della Tinker

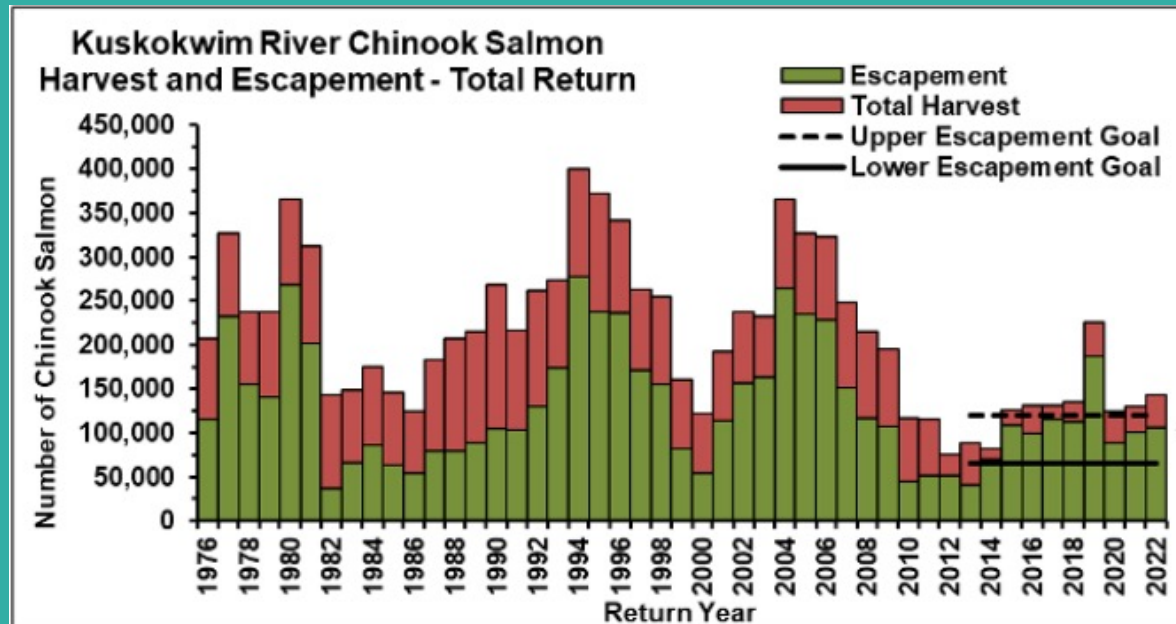
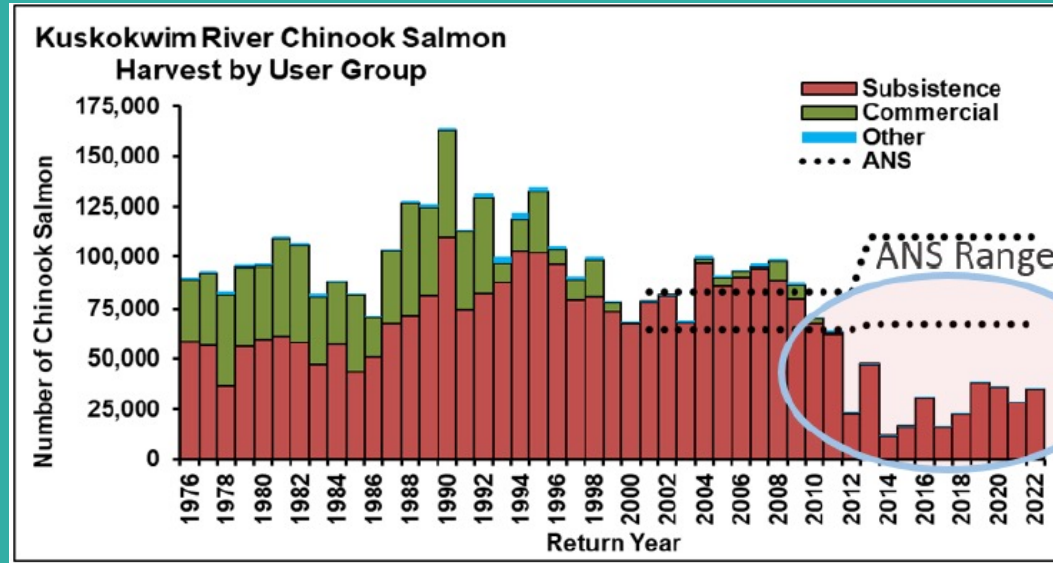
Kuskokwim Salmon Situation: Overview

- The 2022 season was the most restricted subsistence fishing season.
- Below average Chinook salmon returns, with escapement goals met because of conservation closures.
- Unprecedentedly low chum and coho salmon returns.
- Strong sockeye salmon returns.
- Multi-species salmon collapse without an abundant “backup” species.
- Burden of conservation rests only on Kuskokwim communities.



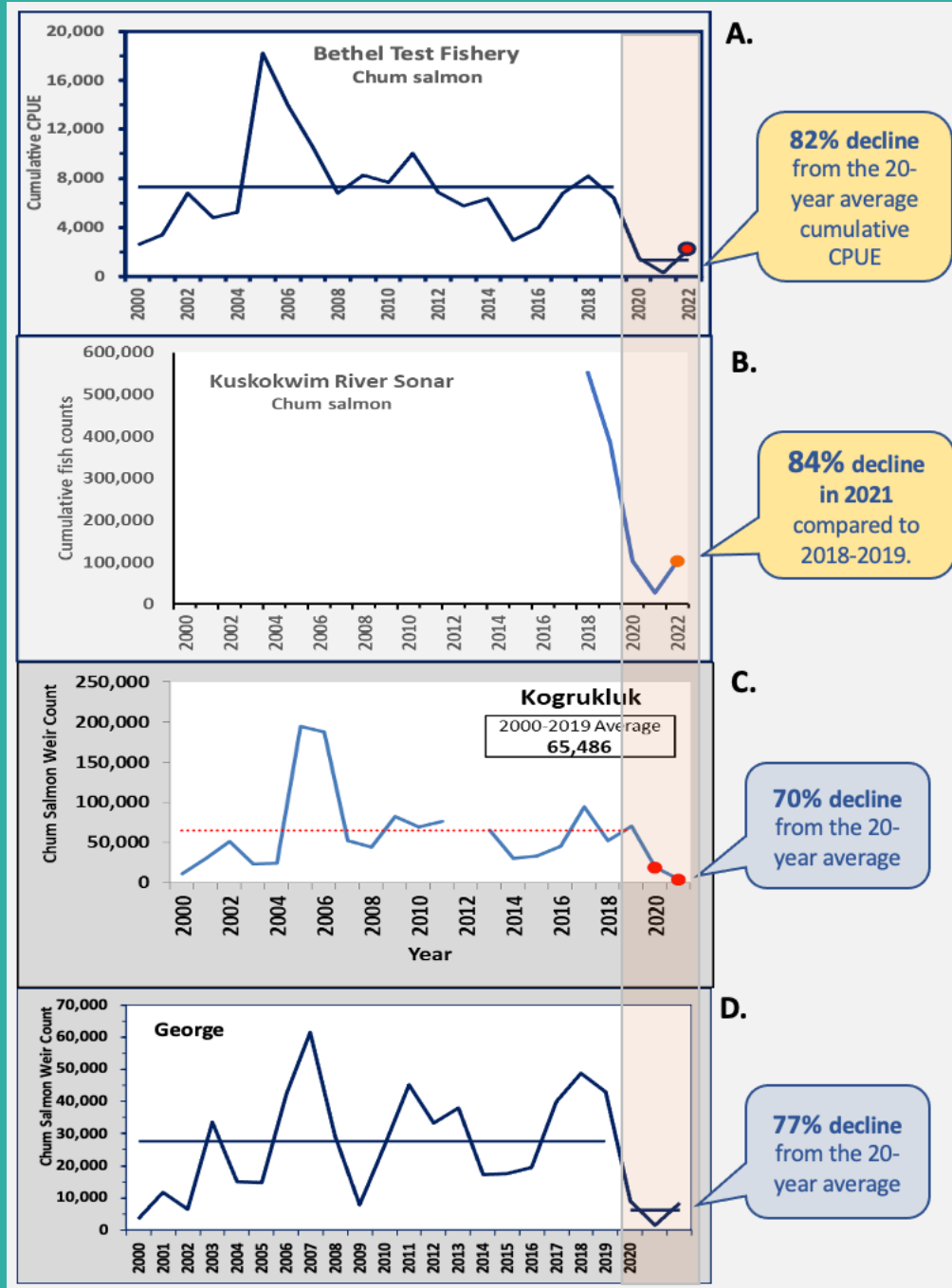
Kuskokwim Chinook Salmon 2022

- Total run: 143,000 fish (CI: 106,565–193,565; 41% below average)
- Spawner escapement: 105,000 fish
- Estimated lower river subsistence harvest: 29,950 fish (CI: 27,410–32,630)
- Harvest meeting roughly one-third of long-term harvest needs.



Kuskokwim Chum Salmon 2022

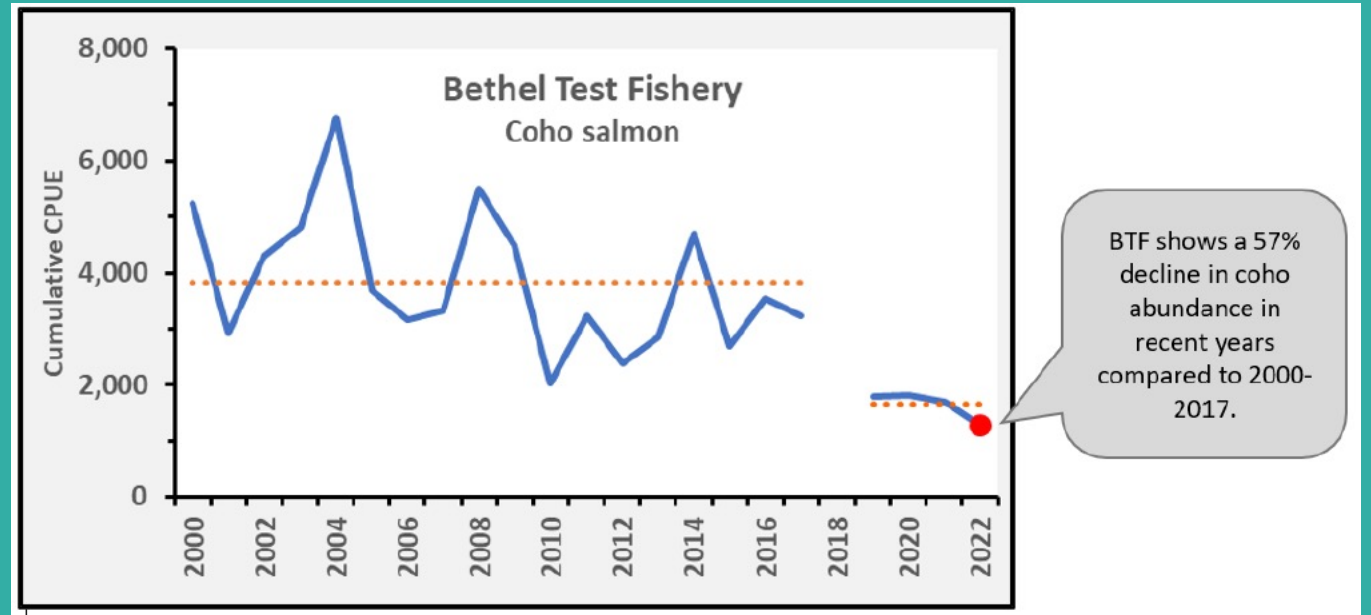
- No total run estimate.
- Kogrukluk River weir SEG (15,000–49,000 fish) not met in 2021 or 2022
- 2022 Kogrukluk spawner abundance: 13,471 fish
- Estimated lower river subsistence harvest: 3,630 fish (CI: 3,100–4,170)



Kuskokwim Coho Salmon 2022

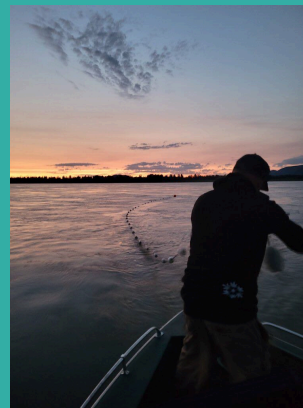
- Closures August 17–September 15.
- No total run estimate.
- No escapement or ANS levels met; lowest harvest and spawner abundance on record.

“It’s devastation up here.”
–Betty Magnuson (McGrath Native Community)



Experiences of our Communities

- Windowed harvest opportunities & closures, June through September
- Increasing water temperatures
- Increasing sockeye & downward trend of Chinook/chum/coho salmon abundance
- Loss of & challenges to traditional fishing practices
- Continued salmon bycatch in BSAI and intercept in Area M



*Credit KRITFC,
Crystal Lang,
Rachel Konteh*



AYK Regional Salmon Situation

CHUM SALMON CRASH THREATENS SUSTAINABILITY

Alaska Dept. of Fish & Game Arctic-Yukon-Kuskokwim Database Management System.

Impacts on Coastal Western Alaska subsistence communities from the recent chum salmon crash

YUKON RIVER

Anvik

Failed to meet escapement goal multiple years since 2016

92%
DECLINE

2021-22 compared to 2010-19 average

YUKON RIVER

Drainage Wide

Summer chum escapement in 2021 was the lowest on record

84%
DECLINE

2021-22 compared to 2010-19 average

2021-22 compared to 2010-19 average

91%
DECLINE

KUSKOKWIM RIVER

Kwethluk

2022 escapement of chum salmon was the lowest ever observed

2021-22 compared to 2010-19 average

86%
DECLINE

KUSKOKWIM RIVER

Salmon River

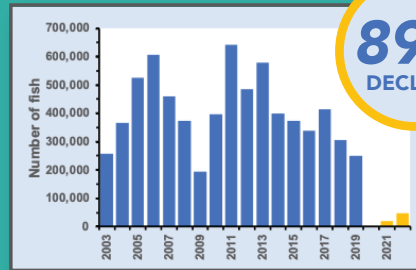
2021 & 2022 escapements of chum salmon were the lowest ever observed

KUSKOKWIM RIVER
INTER-TRIBAL FISH COMMISSION



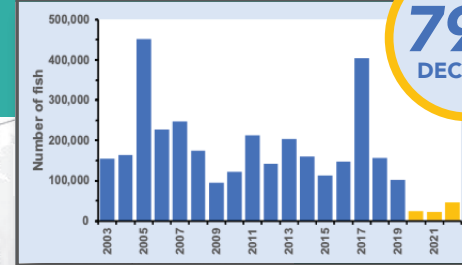
Snapshot: Yukon River

SUMMER CHUM - ANVIK R.

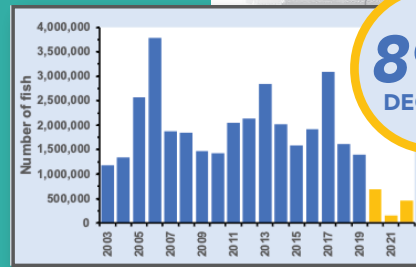
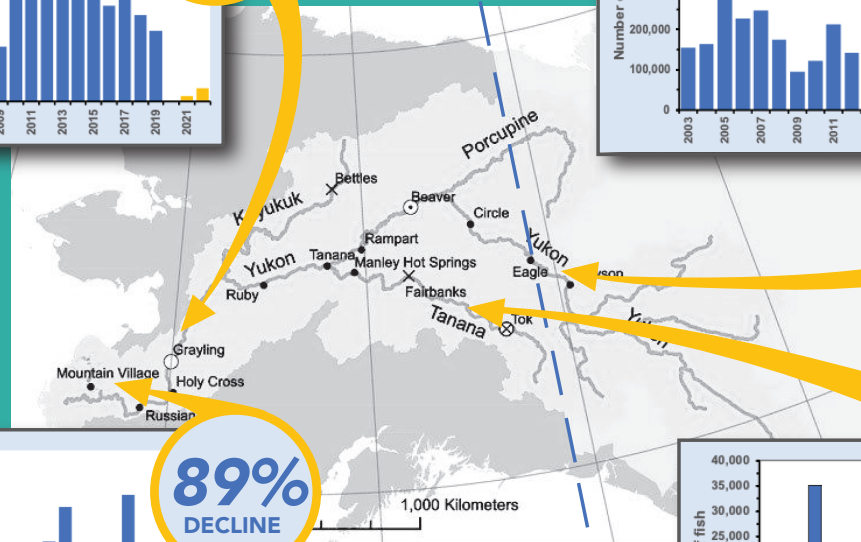


89%
DECLINE

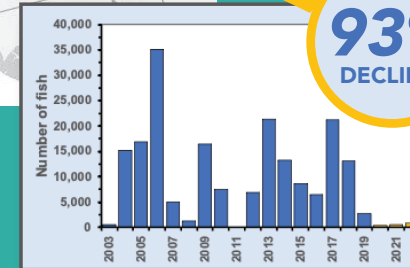
TOTAL FALL CHUM - CAN



79%
DECLINE



89%
DECLINE



93%
DECLINE

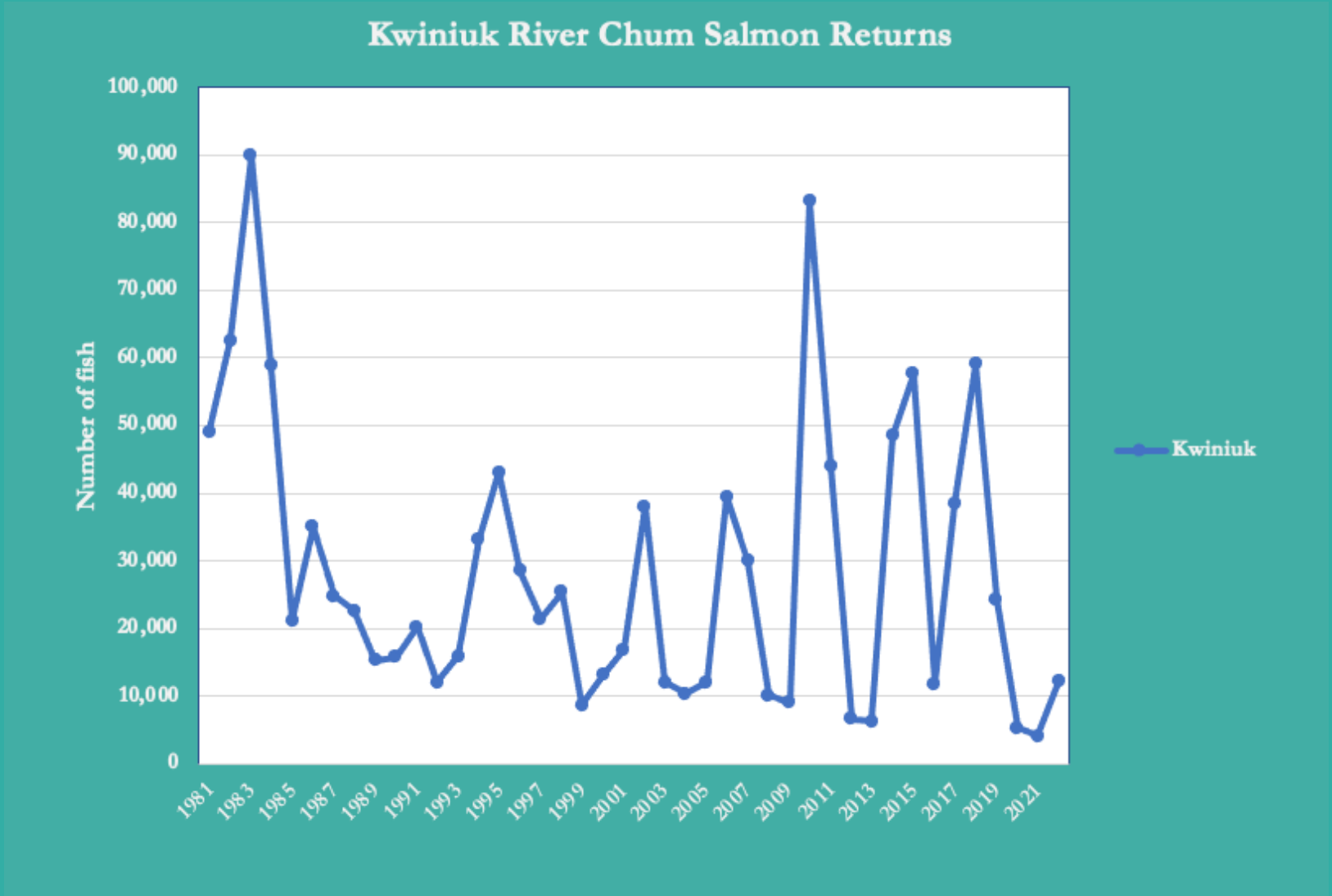
TOTAL SUMMER CHUM PASSAGE
AT PILOT STATION

SUMMER CHUM - CHENA R.

KUSKOKWIM RIVER
INTER-TRIBAL FISH COMMISSION



Snapshot: Kwiniuk River, Norton Sound



Cumulative Impacts Contribute to Salmon Declines

“

We need to look at both ends, from the beginning of the routes of the salmon to the headwaters spawning grounds.

–James Nicori, Elder Advisor (Organized Village of Kwethluk)

Cumulative Impacts Contribute to Salmon Declines

FACTORS AFFECTING 2022 WESTERN ALASKA CHUM SALMON RUNS SALMON RUNS AND SUBSISTENCE HARVESTS



1




PARENT SPAWNERS & EGGS
2017 & 2018

Returning spawners experienced poor forage conditions during 2014-16 GOA MHW; stressful river temperatures in 2017; low summer water levels 2017 & 2018.



2

MARINE JUVENILES (Summer)
2018 & 2019

Marine heat wave conditions; empty stomachs; poor food quality and poor condition.

3

MARINE JUVENILES (Winter)
2019

Gulf of Alaska MHW during first winter at sea.

6

"I support being conservative 100%. We have to. The fish aren't there and something is happening, whether it's high seas fishing or global warming. I hope they take action and start doing more than they're doing now."

—Betty Magnuson, McGrath (Kuskokwim)

"There were hardly any chum salmon, and I'm not sure if we can attribute that to a few years back when the river systems were hot and the water was hot and there were a lot of dead salmon that were floating on the river because of the warm water."

—Myron Naneng, Bethel (Kuskokwim)

"And then not only the ocean life, but also what's happening in our spawning rivers. The health of those because of climate change. Too much snow, not enough snow; too cold, too warm. How different everything is. I think there's a lot of things that come into play."

—Anonymous (Kuskokwim)

"My people are hurting. You're denying our way of life from generation to generation. [Salmon is] our winter food source that sustains us through the long winter months."

—Evon Waska, Bethel (Kuskokwim)

4

"People are calling me asking for more opportunities to get something to eat for dinner. We need to take a look at Area M and the North Pacific Fishery Management Council. We are paying a heavy price for their bycatch."

—Mike Williams Sr., Akiak (Kuskokwim)



7




ADULT RUNS
2022

Third year of catastrophically low chum runs. Food security impacted.

5 **6**



MATURING ADULTS 2022

Marine temperatures decreased from marine heatwave conditions.



Above average S AK Peninsula fishery harvest since 2018.



4




IMMATURES
2020 & 2021

~82,400 Western Alaska chum caught as bycatch.

+ = positive effect **-** = negative effect

Graphic creation: Ocean Conservancy, KRITFC, ADF&G, USGS, NOAA Fisheries

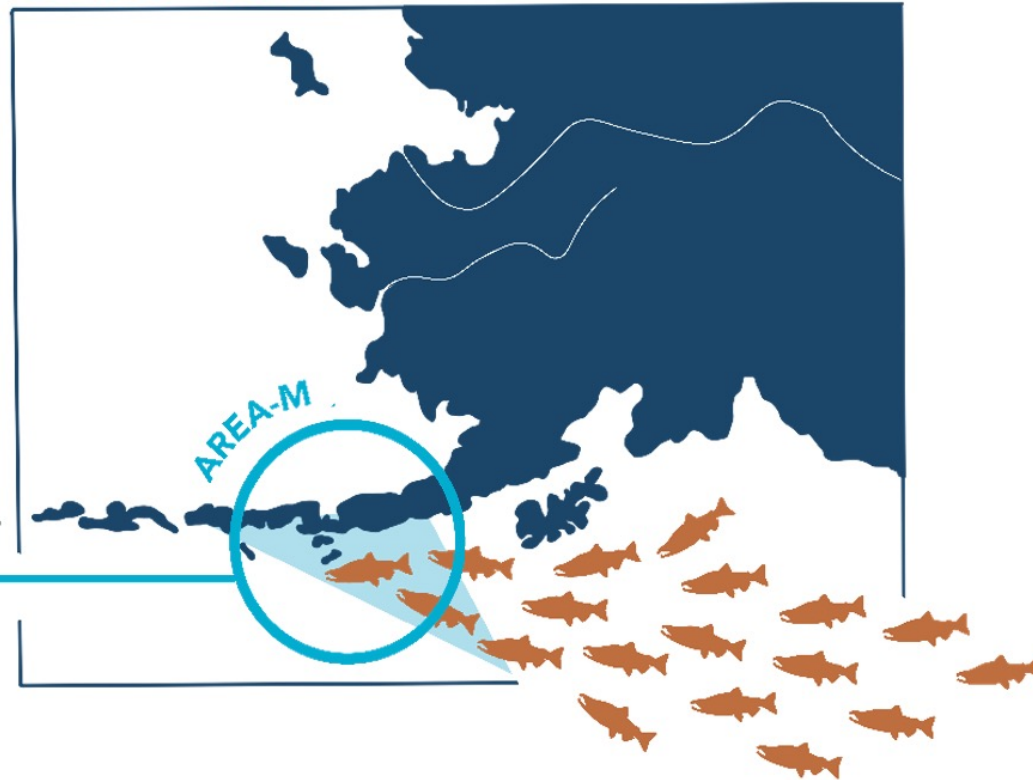


Cumulative Impacts Contribute to Salmon Declines

INTERCEPT FISHERY

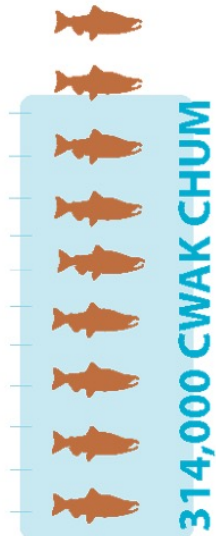
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The June **AREA M** intercept fishery targets chum and sockeye as they pass from the Gulf of Alaska to the Bering Sea.



Cumulative Impacts Contribute to Salmon Declines

AREA M UNRESTRICTED HARVEST



UNRESTRICTED HARVEST

ADF&G and current BOF regulations allowed AREA M fishers to harvest over **314,000** Western Alaska chum salmon during 2021 - 2022

2

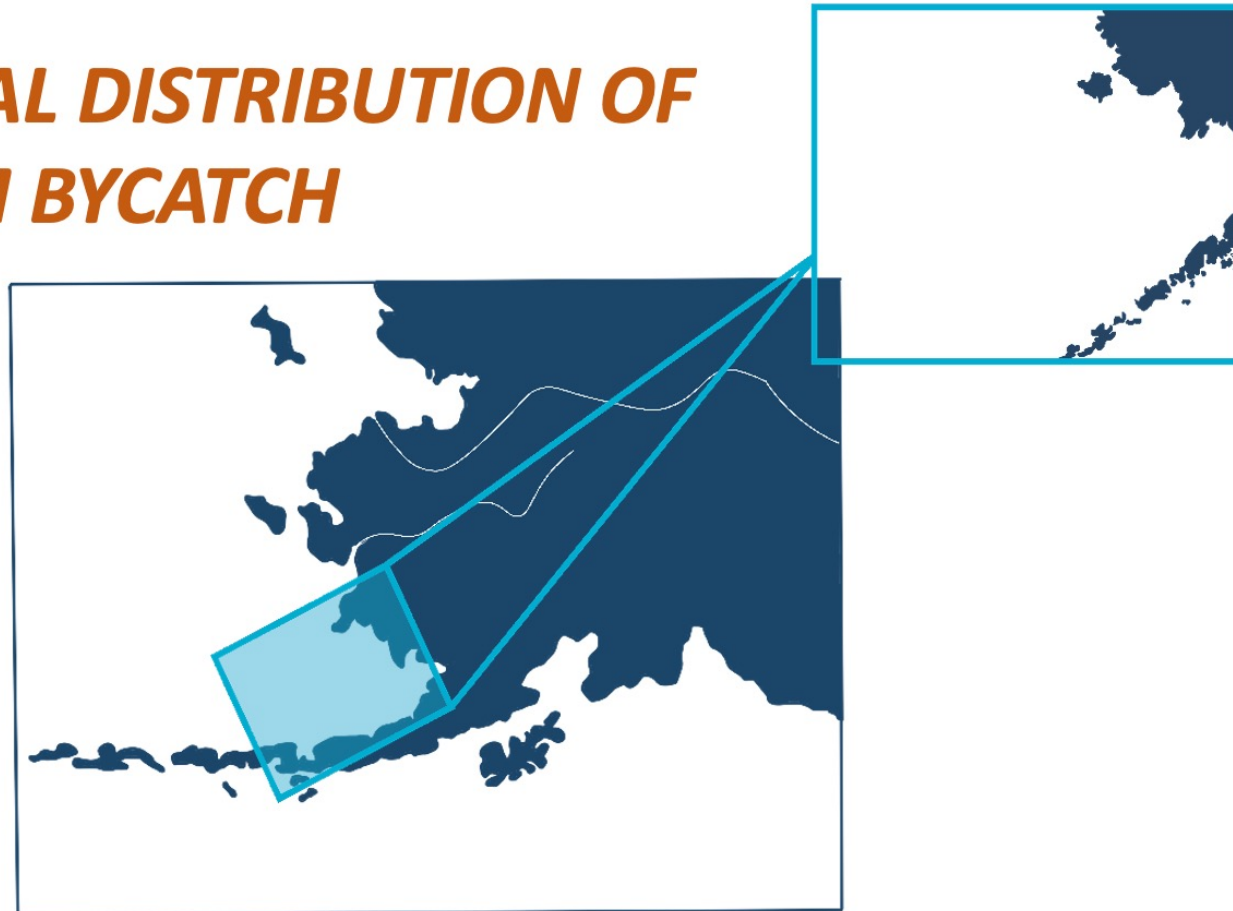
AREA M

Coastal Western Alaska (CWAK)
chum salmon harvested in
Area M in 2021-2022



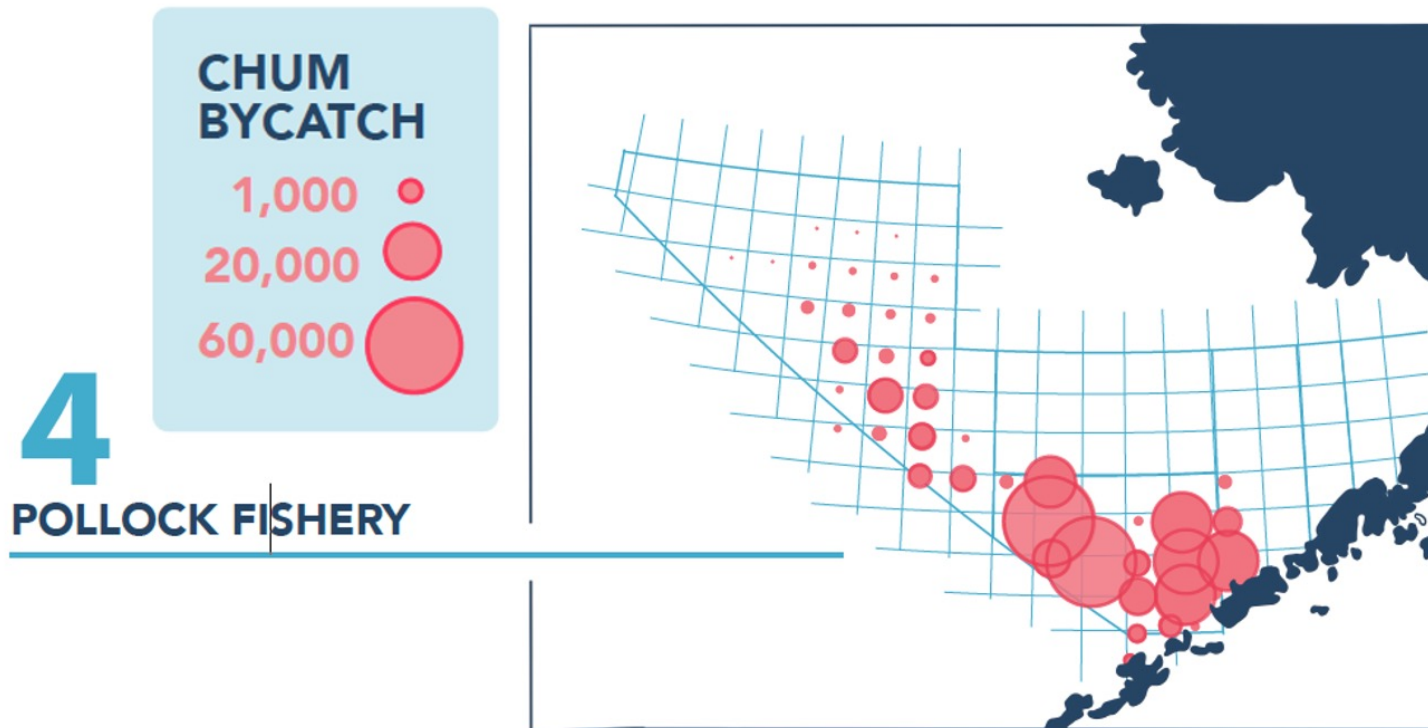
Cumulative Impacts Contribute to Salmon Declines

SPATIAL DISTRIBUTION OF CHUM BYCATCH



Cumulative Impacts Contribute to Salmon Declines

SPATIAL DISTRIBUTION OF CHUM BYCATCH



Cumulative Impacts Contribute to Salmon Declines

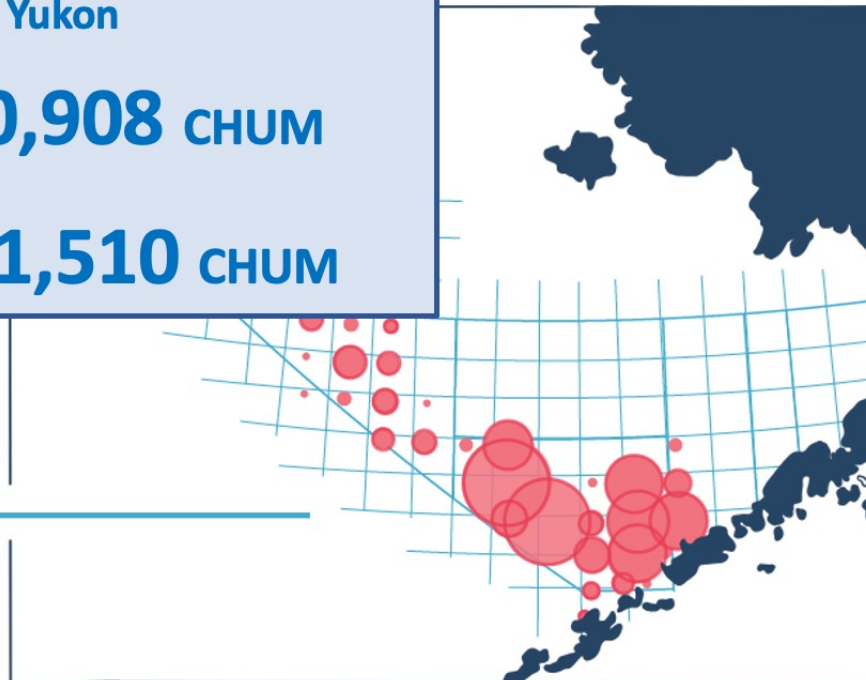
CUMULATIVE IMPACTS OF CHUM INTERCEPTION & BYCATCH

CWAK + Upper Yukon

2020 = 30,908 CHUM

2021 = 51,510 CHUM

POLLOCK FISHERY



**CHUM
BYCATCH**

1,000



20,000



60,000



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INTER-TRIBAL FISH COMMISSION



Cumulative Impacts Contribute to Salmon Declines

CUMULATIVE IMPACTS OF CHUM INTERCEPTION & BYCATCH



In 2021, when AYK subsistence fisheries were closed or severely restricted & escapement goals were not met, over a quarter million chum salmon bound for CWAK were legally taken in commercial fisheries.

KUSKOKWIM RIVER
INTER-TRIBAL FISH COMMISSION



Questions?

Quyana, Tsen'ahn, Thank You