MATANUSKA-SUSITNA BOROUGH Fish & Wildlife Commission

350 E Dahlia Ave., Palmer, Alaska 99645

Special Meeting - ADF&G Fishing Season Summary

December 7, 2023

Meeting Supplement - Table of Contents

Pg. **=** ***Item:***

Physical Location of Meeting: Assembly Chambers, DSJ Bldg, 350 E. Dahlia Ave., Palmer.
Remote Participation: See attached agenda.
Meeting Documents: Can be found on the FWC website: Matanuska-Susitna Borough - Fish & Wildlife Commision (matsugov.us)

Salmon Ocean Ecology Program

ADF&G has a new Salmon Ocean Ecology Program (SOEP) to understand the marine life of Alaskan salmon, use this information to assist fishery management decision-making, and help answer pressing questions about marine processes that influence the abundance and characteristics of our salmon populations.

- In collaboration with NOAA, ADF&G has been assessing marine salmon abundance and health for Yukon and Southeast AK salmon with longstanding monitoring programs. We are piloting new monitoring programs in the southern Bering Sea (Kuskokwim and Bristol Bay salmon) and in the Western Gulf (Cook Inlet, Kodiak, and Chignik salmon).
- SOEP is doing research to examine the health, diet, potential for competition and predation, distribution, and migration patterns of salmon in the ocean.
- We do have a Facebook page where we provide updates on our work: https://www.facebook.com/ADFGUnderseaWorldOfSalmonAndSharks
- Some of the new information we are learning from our projects is:
    - Yukon Chinook appear to be battling many different challenges when the Bering Sea and river are warmer, such as increased prevalence and severity of diseases acquired in the ocean, poorer condition when they return to the river, and more incidents of heat stress of returning adult spawners and poor survival of their offspring.
    - Some of our projects are specifically looking at concerns for king salmon and trying to provide tools for better management, such as a project tagging Chinook in the Bering Sea in order to understand and predict AYK Chinook marine migration patterns. Ultimately we hope the information provided by this project would enable the Bering Sea pollock fishery to avoid “hotspots” of Chinook abundance and reduce their bycatch.
    - Western Alaska Chum salmon appear to have had particularly poor marine survival during the recent marine heatwaves that occurred in the Bering Sea, likely due to poorer food quality available and higher metabolisms in the warmer water.

Summary of salmon bycatch management in federal groundfish trawl fisheries

Both Chinook salmon and chum salmon are prohibited species catch (PSC) in Bering Sea (BS) and Gulf of Alaska (GOA) groundfish fisheries. Salmon PSC is regulated by both hard caps (Chinook) and avoidance plans (BS Chinook and chum) to minimize bycatch in groundfish trawl fisheries.

By law, Chinook and chum salmon that are caught pollock fishing cannot be retained or sold and must be returned to sea with minimal injury, after an observer has determined the number of salmon and collected any scientific data or biological samples. When feasible, salmon caught as bycatch are donated to food banks. Chinook and chum salmon are caught most often as bycatch in the Bering Sea pollock fishery because they are in the same locations and depth as the pollock fishery. The Bering Sea pollock fishery is one of the cleanest in terms of incidental catch of other species. Less than 1% of the total catch in the Bering Sea pollock fishery is made up of other species.

The Council has been actively addressing Chinook and chum salmon bycatch since the mid-1990s. The Council's current management approach for salmon bycatch in the Bering Sea pollock fishery is to avoid salmon in all conditions of salmon and pollock abundance.

In 2011, Amendment 91 was implemented in the Bering Sea to increase incentives for fishers to further reduce Chinook salmon bycatch.

- There is an overall limit of 60,000 Chinook salmon for the pollock fleet. If the pollock fleet reaches that overall limit, the pollock fishery will close for the remainder of the year, even if the entire pollock catch limit has not been harvested.
- The Performance Standard is 47,591 Chinook Salmon ensures the pollock fleet does not reach the overall limit of 60,000 fish.

In 2016, under Amendment 110, the Council improved Chinook and chum salmon bycatch management in the Bering Sea by creating a comprehensive salmon bycatch avoidance program. Additional regulations under Amendment 110 reduced the Chinook salmon hard cap limit and performance standard during times of very low runs in Western Alaska. Each year, ADF&G provides Chinook salmon total abundance based on post-season run size of Kuskokwim, Unalakleet, and Upper Yukon stocks. If the total is above 250,000 Chinook salmon, the bycatch must be less than 60,000 fish with a performance standard of 47,591 fish. If the total is below 250,000 Chinook salmon, the bycatch must be less than 45,000 with a performance standard of 33,318 fish.

- The 2022 and 2023 Bering Sea pollock fishery operated under the 45,000 fish limit with a performance standard of 33,318 fish.

Observer Program

NMFS has a comprehensive monitoring program that includes independent, at-sea observers and electronic cameras to collect data on salmon bycatch in the Bering Sea pollock fishery. NMFS uses this information to estimate how many Chinook and chum salmon are caught as bycatch from trawl vessels, where those fish came from, and whether a potential violation of laws occurred. No data is self reported by captains.

Every vessel in the Bering Sea pollock fishery is required to have at least one scientifically trained observer onboard or carry full electronic monitoring 100% of the time. Observers carefully monitor and count every Pacific salmon caught incidentally in the pollock nets, which provides very precise count of salmon bycatch.

- Catcher vessels that deliver pollock to shoreside processors or to motherships have one observer on board 100% of the time the vessel is operating or must retain all catch with cameras onboard to ensure discards do not occur. A census count of catcher vessel deliveries is conducted so every pollock delivery is monitored for salmon bycatch.
- Catcher processors and motherships have two observers onboard 100% of the time the vessel is operating. Every haul is monitored to ensure every salmon caught is counted and recorded.

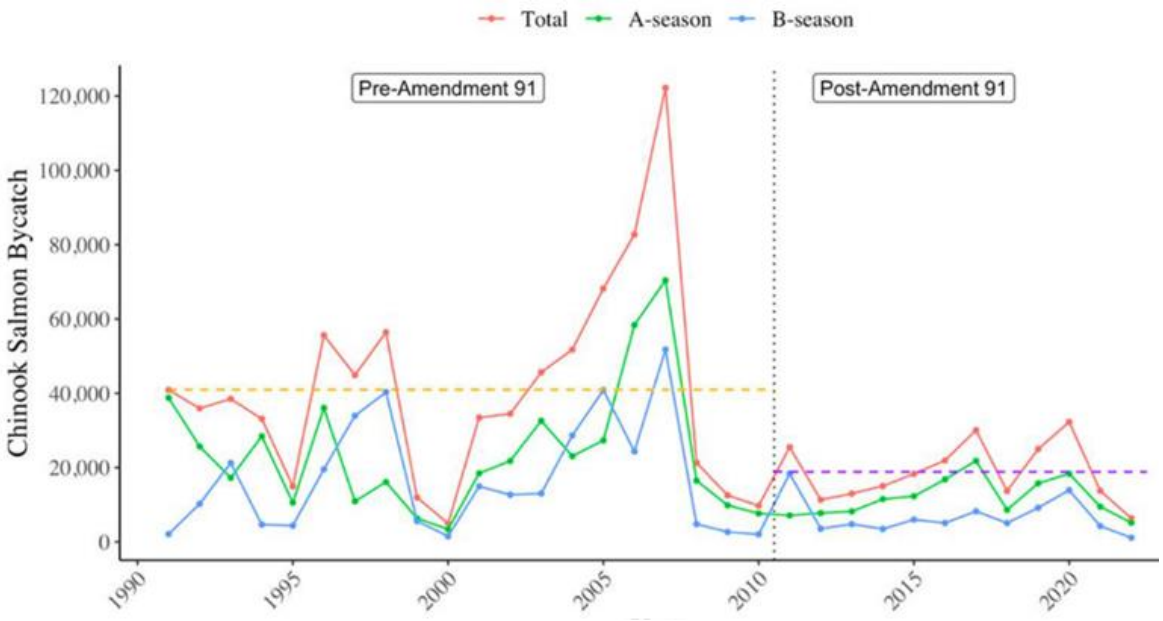
Bering Sea pollock trawl, Chinook salmon: In 2021 and 2022 an estimated 13,784 and 6,337 Chinook salmon, respectively, were taken in the BS pollock trawl fisheries. In both years Chinook salmon bycatch was below average and 2022 had the lowest overall Chinook salmon bycatch since 2000 (see figure below). In 2021, Coastal Western Alaska stocks [1] again made up the largest proportion of Chinook salmon bycatch samples taken in the Bering Sea pollock fishery (see table below).

The relative contribution of Coastal Western Alaska stocks steadily declined from 2011 to 2017 but increased from 2017 until 2021. In both 2021 and 2022, there were large increases in the contribution of North Alaska Peninsula stocks and in 2022 these stocks made up the largest proportion of Chinook in the pollock fishery for the first time since systematic genetic sampling started. Despite the increased proportion of North Alaska Peninsula stocks in 2022, the total number of Chinook salmon caught in 2022 was very low and the estimated number of North Alaska Peninsula stocks caught in 2022 was lower than in recent years.

Through August 24, 2023, a total of 11,277 Chinook salmon have been taken in the Bering Sea pollock fishery.

Stock	2021	2022
Russia	0.3%	0.0%
Coast W AK	51.4%	40.3%
Mid Yukon	1.9%	0.0%
Up Yukon	0.2%	0.1%
N AK Pen	21.8%	43.6%
NW GOA	2.3%	1.2%
Copper	0.1%	0.1%
NE GOA	0.0%	0.3%
Coast SE AK	3.4%	1.9%
BC	7.3%	7.1%
West Coast US	4.9%	5.4%

[1] Coastal Western Alaska Chinook salmon stocks include Nushagak, Kuskokwim, Norton Sound, and Lower and Middle Yukon.



Gulf of Alaska pollock trawl, Chinook salmon: In 2021 and 2022, an estimated 10,595 and 13,173 Chinook salmon, respectively, were caught as bycatch in the GOA pollock trawl fisheries. Both years were below the average Chinook salmon bycatch of 14,948 from 2011 through 2022. The stock compositions in both years were generally similar to previous years with British Columbia (~50%), West Coast US (~30%), and Coastal Southeast Alaska (~15%) making up the majority of Chinook salmon bycatch sampled.

Through August 24, 2023, an estimated 9,518 Chinook salmon have been taken in the Gulf of Alaska groundfish trawl fisheries.

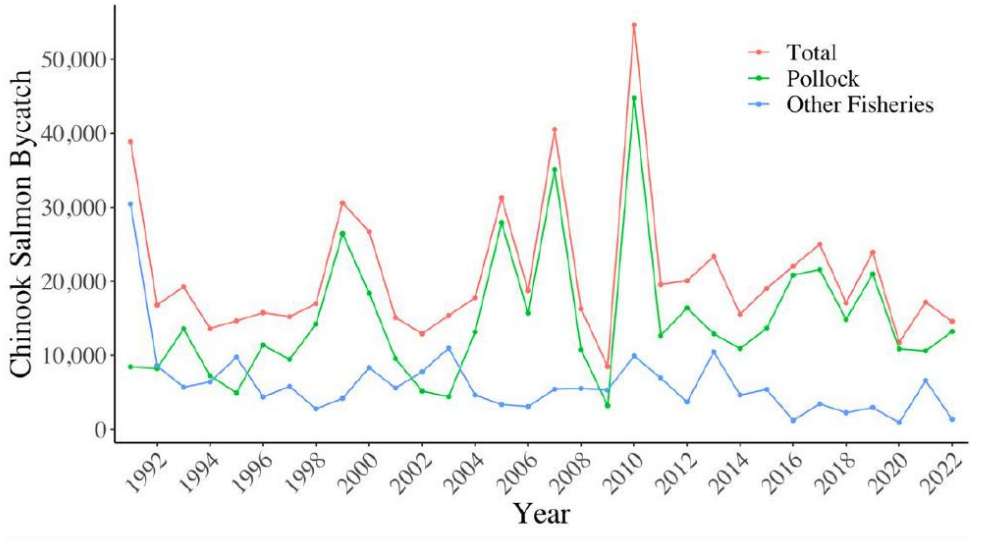
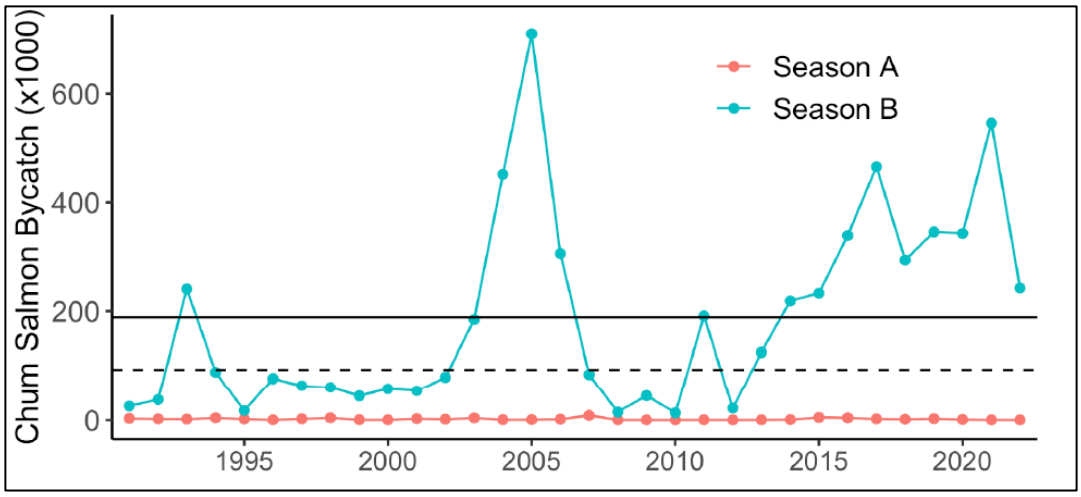


Figure 2. -- Yearly estimated Chinook salmon bycatch in the Gulf of Alaska pollock and non-pollock trawl fisheries (NMFS 2022).

Bering Sea chum salmon: In 2021 and 2022, an estimated 546,042 and 242,375 chum salmon, respectively were caught in the BS pollock fishery with over 99% of chum salmon bycatch occurring in the B season. The 2022 total is lower than recent years but higher than both the mean and median annual chum salmon bycatch since 1991 and the fifth lowest since 2011 (see figure below).



In 2022, the majority of chum salmon caught in the BS pollock fishery originated in North America, which contrasts with recent years when the majority of chum were of Asian origin. While the contribution of all North American stocks increased from 2021 to 2022, Western Alaska was the largest, increasing from 8.9% to 20.9%.

Numbers of chum salmon bycatch and percent contribution, by stock, in the 2022 BS pollock fishery

Stock	Chum	Percent
SE Asia	27,146	11.2%
NE Asia	80,953	33.4%
W Alaska	50,656	20.9%
Up/Mid Yukon	4,605	1.9%
SW Alaska	8,968	3.7%
E GOA/PNW	70,289	29.0%

Despite overall chum salmon bycatch decreasing by 300,000 fish from 2021 to 2022, the numbers of Western Alaska chum salmon stayed relatively the same at ~51,000. This is slightly higher than the average Western Alaska chum bycatch of ~40,000 from 2011 through 2022.

In April 2023 the Council initiated action to further reduce Western Alaska chum salmon bycatch in the Bering Sea pollock fishery. The Council will review a preliminary analysis at their October 2023 meeting. Through August 24, 2023, an estimated 83,582 chum salmon have been taken in the BS pollock fishery.