



**2023 Board of Fisheries Work Session
North Pacific Fishery Management Council Update
ADF&G Extended Jurisdiction Section
October 12, 2023**

This report reflects actions taken by the North Pacific Fishery Management Council (Council) since the 2022 Board of Fisheries Work Session and Council actions currently under development. Information in this report is referenced from Council documents available at: <https://www.npfmc.org/>

Crab

The Fishery Management Plan for Bering Sea and Aleutian Islands King and Tanner Crabs (crab FMP) establishes a state/federal cooperative management regime for the major crab fisheries that defers most management measures to the State of Alaska with federal oversight. These crab fisheries are part of the federal Crab Rationalization Program with exclusive harvesting and processing quota issued to participants annually by the National Marine Fisheries Service (NMFS) based on the Total Allowable Catch (TAC) set by ADF&G. The fisheries, if opened by the State, have varying season lengths during the crab fishing year. Since the annual fishing season spans two calendar years, from July 1 through June 30, each season is referred to as a crab year. State harvest strategies for the Bering Sea crab fisheries have evolved over time but have maintained two major management objectives: to maintain a healthy stock that ensures reproductive viability and to provide for sustained levels of harvest over the long term. Only male crabs may be harvested, and no directed fishing is allowed during molting and mating periods.

2023 Eastern Bering Sea trawl survey: Bottom temperatures during the 2023 survey were near average and like 2022, the ‘cold pool’ of water extended further south into the Bering Sea, which contrasts with the prior three surveys in 2018, 2019, and 2021 when bottom temperatures were above average. The cold pool is usually correlated with positive effects on most crab species.

Eastern Bering Sea snow crab – Following the collapse of the snow crab stock in 2020, NMFS declared this stock overfished in October 2021 and implemented a rebuilding plan on August 31, 2023. The overfished status is based on a significant drop in estimated crab biomass from 2020 to 2021 after years of tracking a strong 2015 year-class coming into maturity. The best available science indicates that the crash of the snow crab stock was not overharvest; it was likely related to a very high abundance of snow crab coinciding with the 2019 marine heatwave in the North Pacific. The warm temperatures increased the caloric needs of crab while also reducing available food and the crab effectively starved. Although the snow crab collapse is attributed to the marine heat wave rather than overharvest, federal legislation requires

In the 2023 survey, all major components of the male snow crab population continued to be at or near all-time survey lows. Legal males declined by 45%, mature females declined by 29%, and immature females declined by 1% from the 2022 survey. The estimate of small males remains low but increased by 43% from the 2022 survey and these crabs are expected to reach legal size in approximately three to four years. The stock is estimated to be below the ADF&G regulatory threshold for opening a fishery and will remain closed in 2023/24.

Bristol Bay red king crab – The Bristol Bay red king crab (BBR) fishery has been closed for the past two seasons because the estimated mature female abundance was below the ADF&G regulatory threshold for opening a fishery. The 2023 survey showed that mature male biomass decreased by 21% from the 2022 survey; however, the estimated abundance of mature female crab in the survey increased by 46% and was above the ADF&G regulatory threshold to open a directed fishery. On October 6, 2023, ADF&G announced a TAC of 2.15 million pounds for the 2023/24 season.

Eastern Bering Sea Tanner crab – Tanner crab are managed with separate TACs east and west of 166° W longitude. Both the eastern and western areas were open during the 2022/23 season. In the 2023 survey, biomass of large males increased by 32% from the 2022 survey in the western area and decreased by 27% in the eastern area. Mature female biomass increased from 2022 by 20% in the west and decreased by 10% in the east. The estimates of mature male Tanner crab biomass were above the threshold required to open fisheries in both the western and eastern areas in 2023/24. On October 6, 2023, ADF&G announced a TAC of 1.32 million pounds in the western area and 760,000 pounds in the eastern area.

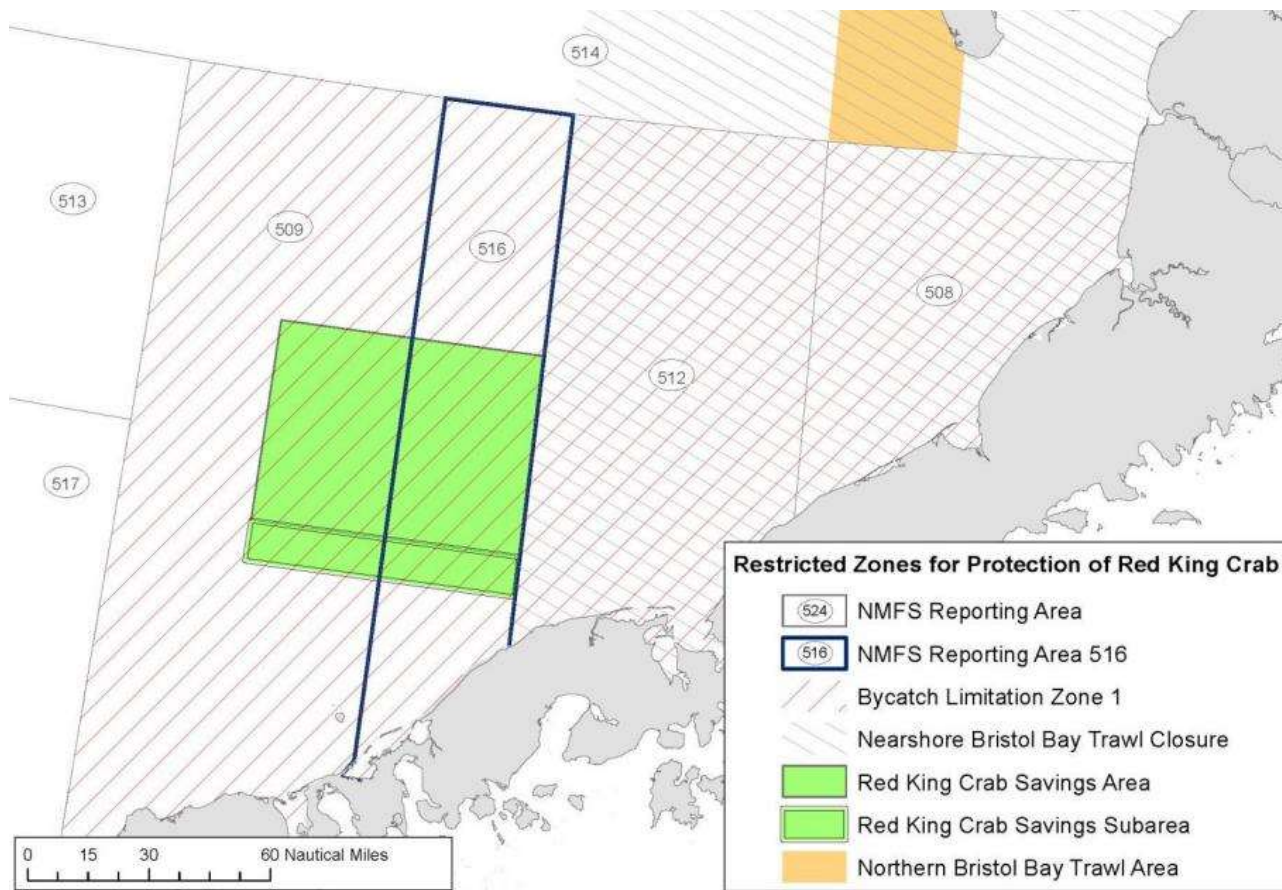
Harvest specifications: In October 2023, the Council established annual harvest specifications for BBR, Bering Sea Tanner crab, and Bering Sea snow crab, and biennial specifications for Pribilof Islands blue king crab. Federal harvest specifications include setting an annual Overfishing Limit (OFL) and an Acceptable Biological Catch (ABC) limit. ADF&G determines whether fisheries can open based on the State harvest strategies and sets an annual TAC for open fisheries so that all crab removals remain below the ABC.

	OFL (mlb)	ABC (mlb)	TAC (mlb)
Bristol Bay red king crab	9.75	7.80	2.15
Bering Sea Tanner crab	79.82	59.86	0.76 east / 1.32 west
Bering Sea snow crab	22.70	17.00	closed
Pribilof Islands blue king crab	0.0026	0.0019	closed

Bristol Bay red king crab bycatch and closure areas: Given ongoing concerns over low recruitment and stock abundance, the Council is considering additional management measures to reduce BBR mortality from groundfish fishing in areas important to the stock. The proposed actions include closing the Red King Crab Savings Area year-round to all or some commercial groundfish fishing gears and/or closing NMFS reporting Area 512 to fishing for Pacific cod with pots if specified BBR stock thresholds are not met.

The figure below shows the existing groundfish fishery closures aimed at protecting BBR. Year-round closures include the Nearshore Bristol Bay Trawl Closure Area east of 162° W longitude to all trawl gear and the Red King Crab Savings Area to non-pelagic trawl gear. NMFS reporting Area 516, east of 163° W longitude is closed seasonally from March 15 to June 15 to all trawl gear and the Red King Crab Savings Subarea, the southernmost portion of the Red King Crab Savings Area, is closed to non-pelagic trawl gear year-round when the directed BBR fishery is closed. The groundfish trawl fisheries have crab bycatch limits in Zone 1 and cannot fish in Zone 1 if a groundfish trawl fishery reaches its

portion of the bycatch limit. None of the fishery closure areas or bycatch limits apply to groundfish fishing with longline, pot, or jig gear.



In June 2023, the Council reviewed an [analysis](#) on additional area closures to protect BBR and requested additional information to help inform decisions on the action alternatives. Requests for additional information included further characterization of the potential benefits of additional closures to the BBR stock and consultation with fishing industry participants to understand the impacts of shifting groundfish fishing effort out of these areas on catches of target species and other bycatch species. The Council is scheduled to review a revised analysis in February 2024.

Salmon

The Council has taken several actions to minimize Chinook and chum salmon bycatch in federal groundfish fisheries. Chinook salmon is limited by hard caps in the Bering Sea and Gulf of Alaska (GOA) and the Bering Sea pollock fishery operates under avoidance plans for Chinook and chum salmon that provide incentives to avoid salmon at all times to help minimize salmon bycatch. Full retention of all Chinook salmon bycatch is required on all pollock vessels to ensure bycatch accounting is accurate and to enable genetic sampling. Reaching a Chinook bycatch limit closes the pollock fishery.

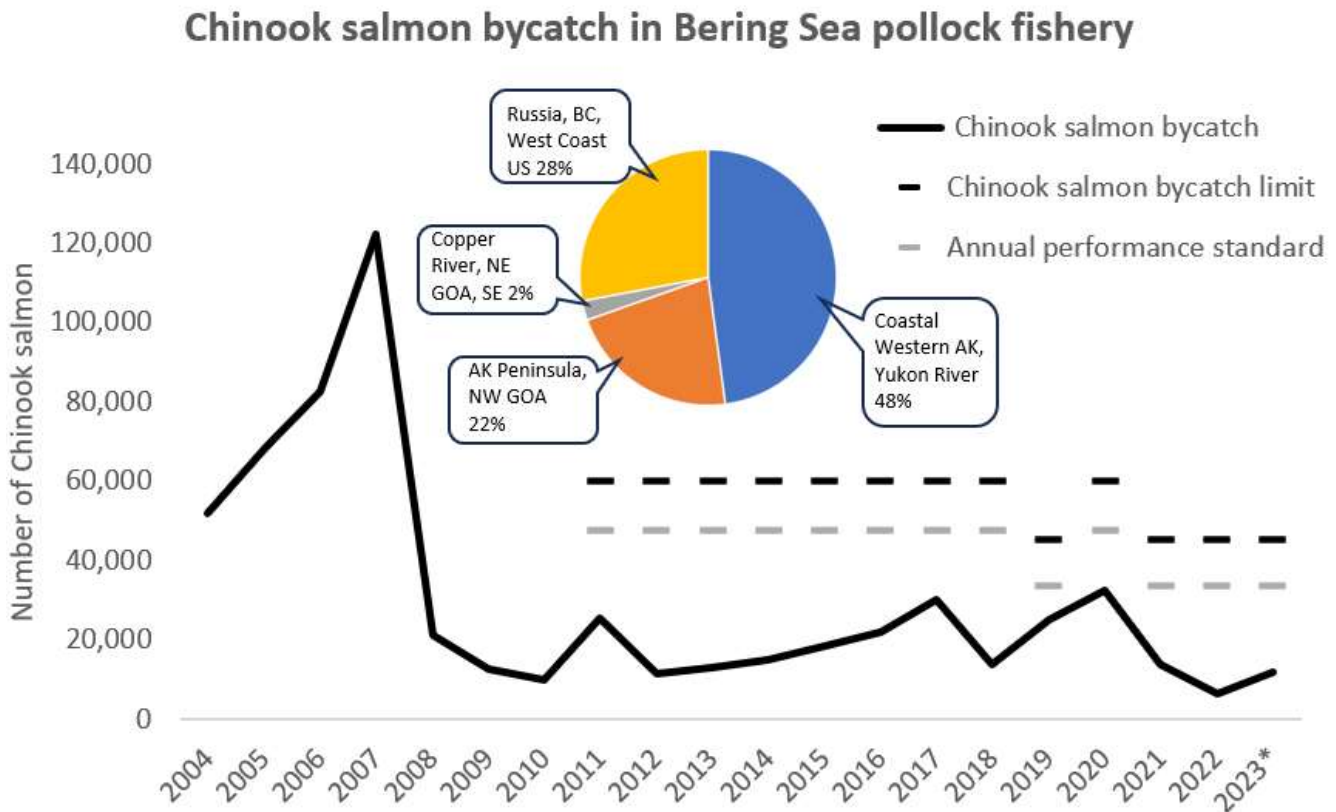
Genetic samples are taken from Chinook salmon in federal pollock, rockfish and some non-pollock trawl fisheries to estimate the proportion of bycatch from individual salmon stock groups. Chum

salmon samples are primarily taken in the BSAI pollock trawl fishery because very little chum salmon bycatch occurs in GOA trawl fisheries. The Council receives annual genetic reports each spring from samples taken in the groundfish fisheries the previous year. The Council also receives [annual reports](#) from the Bering Sea pollock fishery cooperatives on fleet performance under salmon avoidance plans required in regulation.

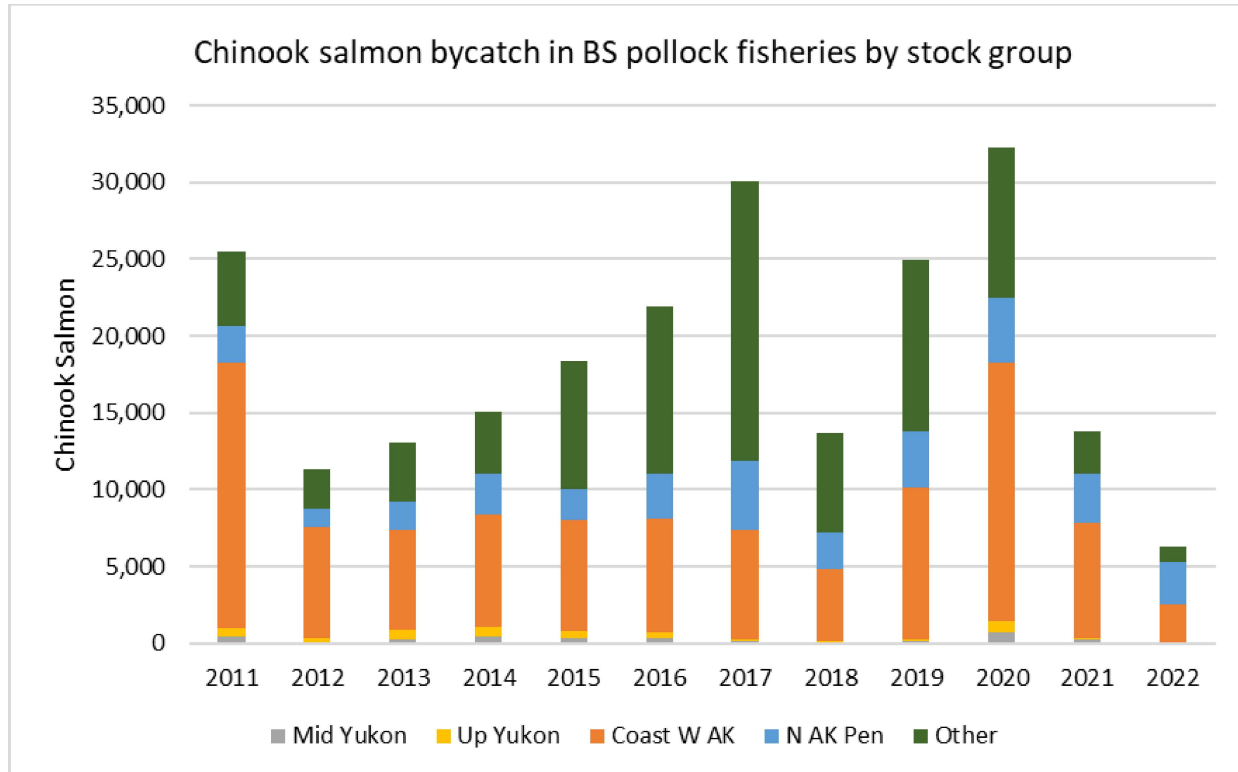
[Chinook salmon bycatch in the Bering Sea pollock fishery](#) –Amendment 91 to the Bering Sea and Aleutian Islands Groundfish Fishery Management Plan established two Chinook salmon bycatch limits for the Bering Sea pollock fishery: a 60,000 total Chinook salmon limit and a ‘performance standard’ limit of 47,591 Chinook salmon. Amendment 91 also established industry-developed contractual arrangements, referred to as incentive plan agreements (IPAs), that are required in regulation and work in conjunction with the bycatch limit and performance standard limit to minimize bycatch at all levels of Chinook salmon abundance.

In response to multiple years of historically low Chinook salmon abundance, the Council modified the program in 2017 to implement a lower Chinook salmon bycatch limit of 45,000 fish and a performance standard limit of 33,318 fish in years following low Western Alaska Chinook abundance. The lower Chinook bycatch and performance standard limits were in place during the 2019, 2021, 2022, and 2023 seasons and will be in place again during 2024.

In 2022, an estimated 6,337 Chinook salmon were taken as bycatch in the Bering Sea pollock fishery (figure below). Through October 5, 2023, a total of 11,722 Chinook salmon were taken as bycatch. Based on stock composition estimates from 2018 through 2022, 48% of the bycatch originated from Coastal Western Alaska and Yukon River stocks, 22% was from North Alaska Peninsula and NW GOA stocks, and 2% originated from the Copper River, NE GOA, and Southeast Alaska stocks.

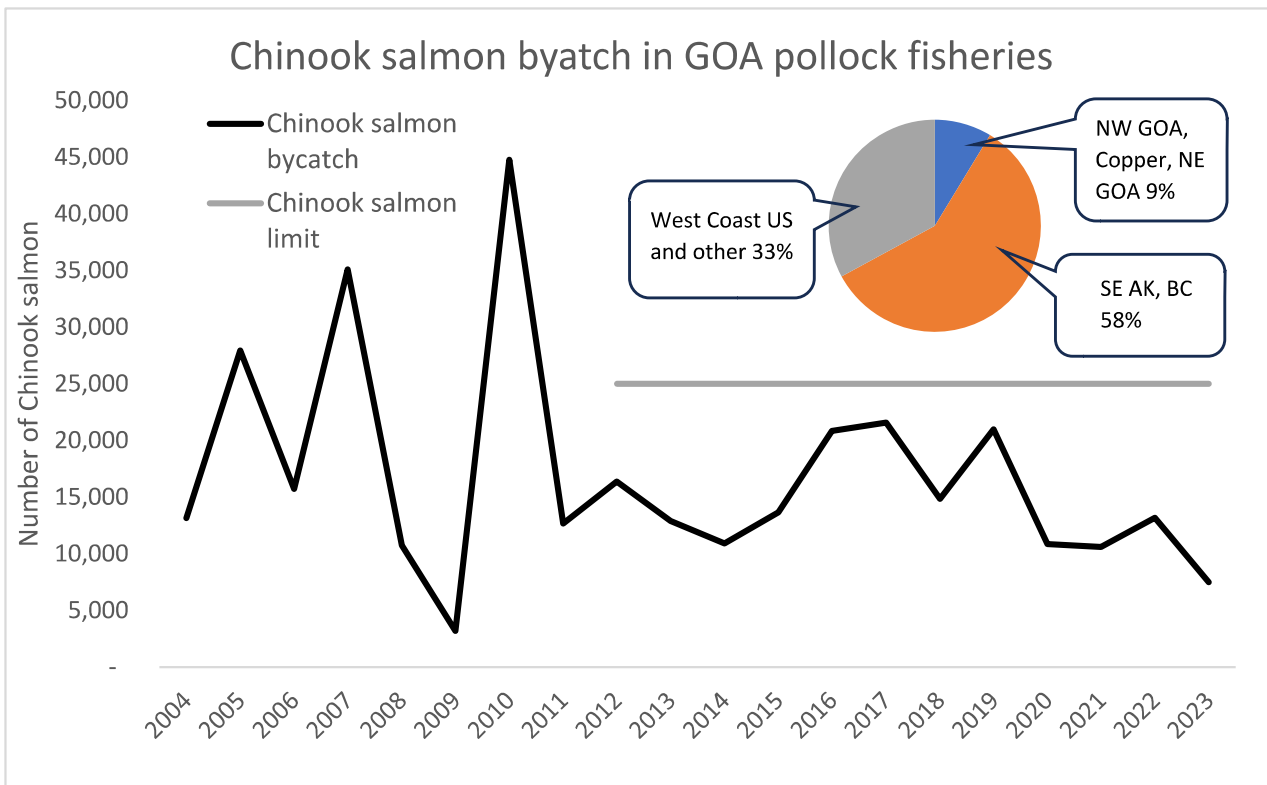


In 2022, an estimated 2,554 Coastal Western Alaska, 6 Yukon River, and 3,253 North Alaska Peninsula Chinook salmon were taken as bycatch in the Bering Sea pollock fishery (figure below). This was less than the recent five-year average bycatch of 8,293 Coastal Western Alaska, 431 Yukon River, and 3,252 North Alaska Peninsula Chinook salmon. Stock composition estimates from the 2023 bycatch will be available in the spring of 2024.

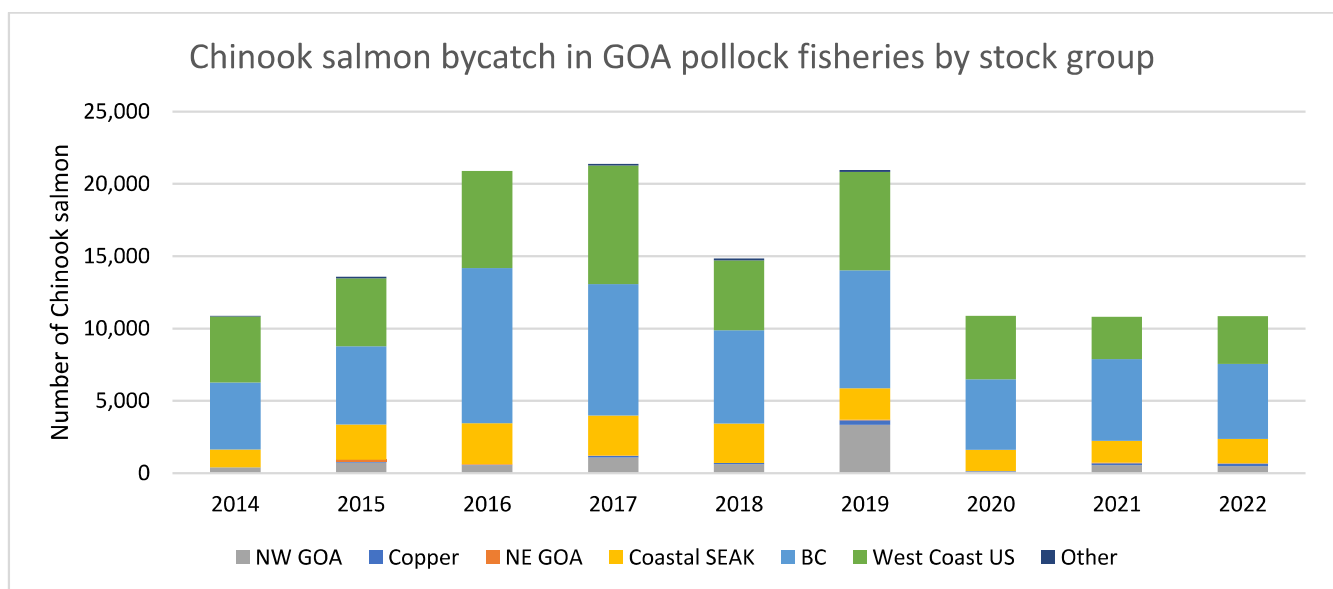


[*Chinook salmon bycatch in the Gulf of Alaska trawl fisheries*](#) – In the Gulf of Alaska (GOA) groundfish trawl fisheries, the majority of Chinook salmon bycatch occurs in the directed pollock fishery though trawl fisheries for flatfish, rockfish, and Pacific cod also intercept Chinook salmon. Amendment 93 to the GOA Groundfish Fishery Management Plan established Chinook salmon bycatch limits for the GOA pollock trawl fisheries. The total Chinook salmon bycatch limit of 25,000 fish for the directed pollock fisheries is apportioned between the Western GOA (6,684 fish) and Central GOA (18,316 fish) management areas.

In 2022, total Chinook salmon bycatch in the GOA pollock fisheries was estimated at 13,173 fish (figure below). Through October 5, 2023, an estimated 7,475 Chinook salmon have been taken in the GOA pollock fisheries. Based on stock composition estimates from 2018 through 2022, 9% of the bycatch was composed of NW GOA, Copper River, and NE GOA stocks, 58% was composed of Southeast Alaska and British Columbia stocks, and 33% were Chinook salmon originating from the West Coast and other areas.



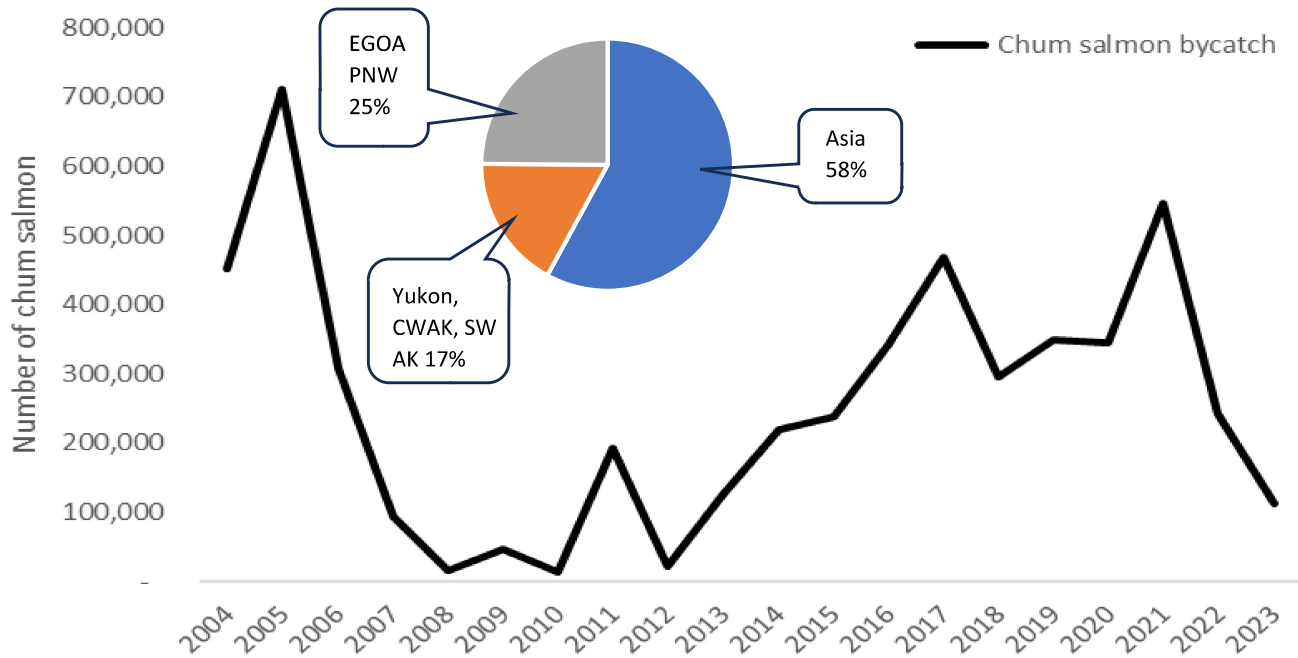
In 2022, an estimated 674 Chinook salmon were from NW GOA, Copper River, and NE GOA stocks, 6,885 fish were from Southeast Alaska and British Columbia stocks, and 3,306 fish were from West Coast US and other areas. This was less than the recent five-year average of 1,191 Chinook salmon from NW GOA, Copper River, and NE GOA stocks, 7,976 fish from Southeast Alaska and British Columbia stocks, and 4,505 fish from West Coast US and other area stocks.



[Chum salmon bycatch in the Bering Sea pollock fishery](#) – Nearly all chum salmon bycatch occurs during the pollock B-season from June through October. In 2022, an estimated 242,375 chum salmon

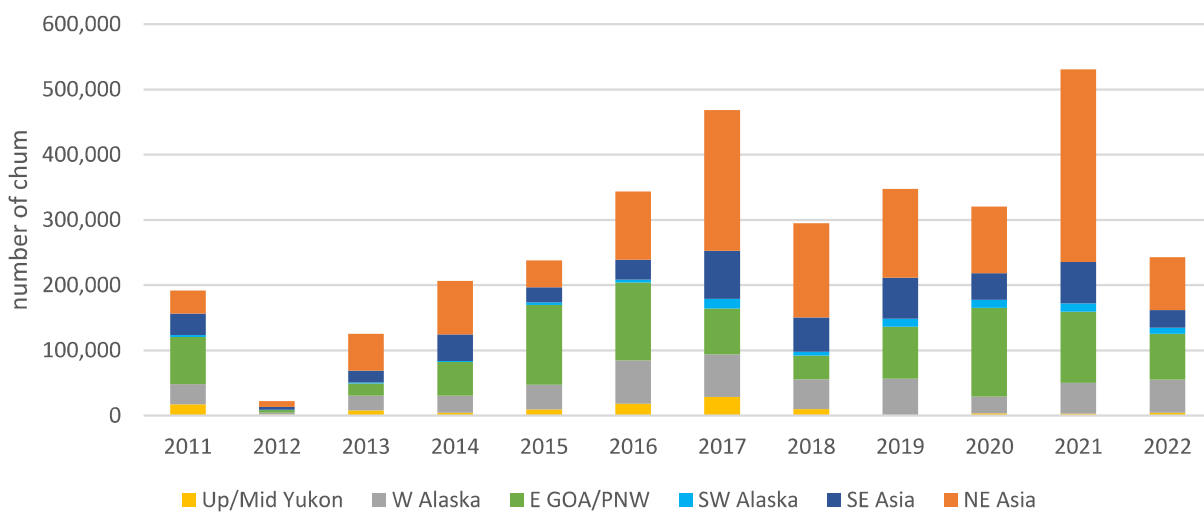
were caught as bycatch in the Bering Sea pollock fishery (figure below). Through October 5, 2023, a total of 112,081 chum salmon were caught in the pollock fishery. Based on stock composition estimates from 2018 through 2022, 17% of the salmon bycatch originated from Western Alaska and the Yukon River, 25% from SW Alaska, Eastern GOA and Pacific NW stocks, and 58% was composed of Asian stocks, primarily hatchery fish from Russia and Japan.

Chum salmon bycatch in Bering Sea pollock fishery



In 2022, an estimated 50,670 Western Alaska and 4,606 Middle/Upper Yukon chum salmon were caught in the Bering Sea pollock fishery. This was slightly higher than the recent five-year average of 44,872 Western Alaska and 4,396 Middle/Upper Yukon chum salmon. Stock composition estimates from the 2023 bycatch will be available in the spring of 2024.

Chum salmon bycatch in BS pollock fisheries by stock group



The Council is currently considering additional management measures aimed at minimizing western Alaska chum bycatch while maintaining the priority of current Chinook salmon bycatch avoidance objectives and achieving optimum yield in the Bering Sea pollock fishery. The pollock fishery intercepts chum salmon originating from the North Pacific and predominantly hatchery origin Russia and Asia chum, therefore the Council action is focused on bycatch of western Alaska origin chum salmon, as returns of these fish have declined substantially in recent years, negatively impacting an important source of subsistence for western and interior Alaska residents.

At its October 2023 meeting, the Council revised the management alternatives that will be analyzed for review in spring 2024:

- A bycatch cap on the total number of chum salmon taken in the Bering Sea pollock fishery. The potential caps range from 200,000 to 550,000 total chum salmon, or about 35,400 to 97,350 coastal western Alaska chum salmon.
- Using annual run strength indicators from the Yukon River, Kuskokwim River, and Norton Sound region to trigger various caps.
- An annual cap on western Alaska origin chum salmon bycatch, ranging from 40,000 to 53,000 western Alaska chum salmon.
- Additional regulatory requirements and management measures for the pollock fleet to avoid bycatch by closing areas in near real-time throughout the season in response to when chum salmon are on the fishing grounds.

The Council is scheduled to take final action on this issue by December 2024.