



**2024 Board of Fisheries Work Session  
North Pacific Fishery Management Council Update  
ADF&G Extended Jurisdiction Section  
October 15, 2024**

This report reflects actions taken by the North Pacific Fishery Management Council (Council) since the 2023 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/>

**Bering Sea/Aleutian Islands Crab**

The Fishery Management Plan for Bering Sea and Aleutian Islands (BSAI) King and Tanner Crabs establishes a cooperative state and federal management regime for the major crab fisheries that delegates most management measures to the State with federal oversight. Most BSAI crab fisheries are managed under the federal Crab Rationalization Program, a catch share program that was implemented with the intent of benefiting harvesters, processors, and coastal communities through allocations of harvesting and processing privileges and regional delivery requirements. The fisheries, if opened by the State, have seasons that typically span two calendar years and are set within the ‘crab year’ from July 1 through June 30. State harvest strategies for the BSAI 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.

In October 2024, the Council established annual harvest specifications for Bristol Bay red king crab, Bering Sea Tanner crab, and Bering Sea snow crab, and biennial specifications for St. Matthew Island 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 Total Allowable Catch (TAC) for open fisheries so that all crab removals remain below the ABC.

	<b>OFL (mlb)</b>	<b>ABC (mlb)</b>	<b>TAC (mlb)</b>
Bristol Bay red king crab	11.07	8.86	2.31
Bering Sea Tanner crab	91.03	72.82	1.77 east / 4.50 west
Bering Sea snow crab	43.21	15.12	4.72
St. Matthew Island blue king crab	0.28	0.21	closed

2024 Eastern Bering Sea bottom trawl survey: Bottom temperatures during the 2024 survey were near the long-term average and the extent of the ‘cold pool’, which is usually correlated with positive effects on most crab species, was intermediate compared to 2022 and 2023 when it extended further south towards the Alaska Peninsula and the more northerly compression of the cold pool in 2019 and 2021 when bottom temperatures were above average.

*Eastern Bering Sea snow crab* – Following the collapse of the snow crab stock in 2020, the National Marine Fisheries Service (NMFS) declared this stock overfished and the Council recommended a rebuilding plan that NMFS implemented in August 2023. Scientists have attributed the stock collapse

to starvation due to the 2018 through 2019 marine heatwave in the eastern Bering Sea that coincided with a very high abundance of snow crab. This period of warm ocean temperatures increased the caloric needs of snow crab while also reducing their spatial distribution and available food.

Both male and female abundance increased across all size classes in the 2024 trawl survey which is a change from the previous three years where only immature males increased in abundance. Overall abundance of large, legal-sized males is still low compared to historical levels. For the first time in two years, the estimated spawning biomass of snow crab is above the threshold to open a fishery, and ADF&G announced a TAC of 4.72 million pounds for the 2024/25 season.

At the October Council meeting, representatives from Trident Seafoods notified the Council that the processing plant in St. Paul would not operate for the 2024/25 snow crab fishery because it is not economically viable under the small TAC. The Crab Rationalization Program requires a portion of snow crab harvester quota to be delivered in the north region, which includes St. Paul, to maintain historical delivery patterns. The Crab Rationalization Program also includes provisions for an exemption from the north region delivery requirement to accommodate unanticipated circumstances that could impair or prevent crab deliveries within a commercially reasonable period of time after harvest. To be granted the exemption, all holders of harvester and processor quota with a north region delivery requirement and affected community organizations must agree and submit a request to NMFS by October 15 to receive the exemption for the 2024/25 snow crab season. Information on the status of the exemption is available from NMFS at: <https://www.fisheries.noaa.gov/alaska/sustainable-fisheries/alaska-fisheries-management-reports#bsai-crab>.

*Bristol Bay red king crab* – After a two-season closure due to low mature female abundance, the Bristol Bay red king crab fishery reopened in 2023/24 with a TAC of 2.15 million pounds. In the 2024 trawl survey the estimated mature male abundance increased 40% to nine million crab however, abundance is still near the lowest levels seen since the mid-1990s. The 2024 estimated survey abundance of mature female crab was similar to 2023. The estimated mature female abundance and effective spawning biomass are both above the thresholds in the state harvest strategy and ADF&G announced a TAC of 2.31 million pounds for the 2024/25 season.

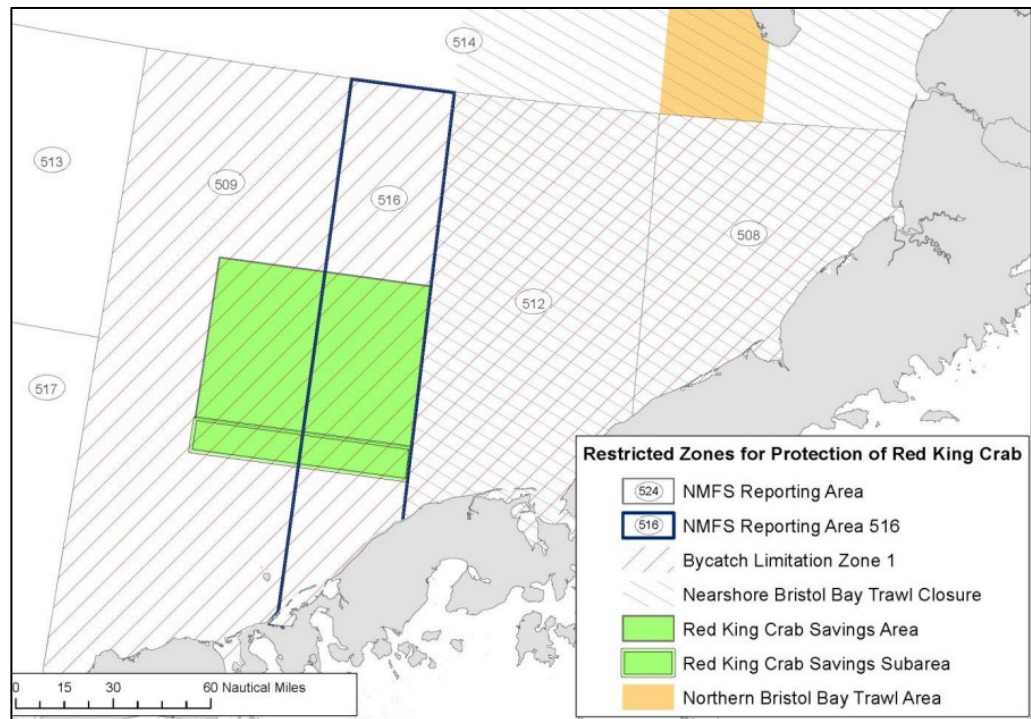
*Eastern Bering Sea Tanner crab* – Tanner crabs are managed with separate TACs east and west of 166° W longitude. Both the eastern and western areas were open during the 2023/24 season. In the 2024 survey, Tanner crab abundance increased in both the eastern and western areas with a larger increase in the western area. The abundance of ‘large’ males greater than 103 mm increased 86% from 2023 in the western area and 37% in the eastern area. Mature female abundance in the western area increased 275% from 2023 and is at the highest level in the time series from 1988 through 2024. Estimates of mature male Tanner crab biomass in the east and west areas are above the thresholds in the state harvest strategy and ADF&G announced a TAC of 1.77 million pounds in the eastern area and 4.50 million pounds in the western area. The combined TAC of 6.27 million pounds is a 201% increase from last season.

Bristol Bay red king crab bycatch and closure areas: Given ongoing concerns over low recruitment and stock abundance, beginning in 2023 the Council considered additional management measures to reduce Bristol Bay red king crab mortality from federal groundfish fishing in areas important to the stock. The actions considered included 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 stock thresholds for Bristol Bay red king crab were not met.

The figure below shows the existing federal groundfish fishery closures aimed at protecting Bristol Bay red king crab. 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 (bottom) 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 Bristol Bay red king crab fishery is closed. The groundfish trawl fisheries have crab bycatch limits in Zone 1 and cannot fish in Zone 1 if a groundfish trawl sector 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 December 2023, the Council received status reports from the groundfish and crab sectors on the efficacy of voluntary measures taken in 2023 to avoid crab bycatch and reduce crab mortality in the groundfish fisheries and reduce discard mortality in the directed crab fisheries. The non-pelagic trawl fleet implemented ‘move



on’ measures that require the vessel to change fishing locations if the skipper notes the presence of red king crab in a tow. This measure was effective in maintaining low bycatch of red king crab in the non-pelagic trawl fisheries.

The pelagic trawl fleet fishing for pollock increased communication on crab bycatch encounters between skippers and crab bycatch information is included in weekly bycatch reports sent to the fleet. These measures have increased awareness and crab bycatch remains low in the directed pollock fisheries. Further research is underway in collaboration with Alaska Pacific University’s Fisheries, Aquatic Science, and Technology Laboratory to catalog the different gear configurations used in the directed pollock fisheries as well as the range of fishing behaviors.

Directed crab fishery representatives reported continued effort to use ‘best fishing’ practices for handling of crab and pot soak times and noted that increased communication between skippers helped the fleet avoid concentrations of female red king crab.

In February 2024, the Council reviewed an analysis of additional fixed closure areas to protect Bristol Bay red king crab but recommended taking no further action at this time. The analysis concluded that the benefits to the Bristol Bay red king crab stock resulting from such closures were uncertain and unquantifiable and that the proposed closures likely would result in increased bycatch of salmon, herring, halibut, and other crab species due to displaced effort in other areas. The analysis indicated that fishing in the proposed closure areas has yielded low bycatch and high catch of target species in recent years for affected pelagic trawl and pot fisheries. To maintain focus on determining whether additional management measures are needed to reduce the impacts of groundfish fishing on the Bristol Bay red king crab stock, the Council intends to use ongoing research to inform potential future closures and crab avoidance measures that change in space and time to respond to seasonal crab movement and are adaptable to evolving ecosystem conditions that affect crab distribution and abundance. See “Pelagic Trawl Gear” section below for additional information.

Crab Rationalization Program 17-year review: In June 2024, the Council received the 17-year Crab Rationalization (CR) Program review. The 17-year review found that the CR Program has met many of the social and economic goals and objectives that were originally identified. Additionally, replacing derby fishing with individual fishing quotas has allowed managers to open fisheries during recent low TAC years, which likely would have remained closed under a derby fishery. The review identified several factors affecting fishery participants that are external to the CR Program, such as low TACs, closed fisheries, and poor market conditions. Data in the review demonstrated that these factors have had significant impacts on the crab fisheries, especially for active processors.

Based on information in the program review and public comment, the Council requested information to inform consideration of two potential changes to the CR Program. The first is focused on regulations implementing the arbitration program developed to resolve price disputes between holders of processor quota and harvester quota. The information will help determine if regulatory changes could reduce industry costs and/or increase transparency and predictability for the arbitration program. The second issue focuses on options for making captain and crew harvester shares (C-shares) more accessible to current and potential new participants in the CR Program fisheries. The Council is scheduled to review information on these two topics at its December 2024 meeting.

### **Gulf of Alaska Tanner crab protections**

In February 2024, the Council reviewed a discussion paper with information on potential increased observer monitoring and Gulf of Alaska (GOA) Tanner crab protections off the east side of Kodiak Island in statistical areas 525702 and 525630. These areas overlap the Barnabas Gully, which is an area of high productivity for many species and has consistently contained a high proportion of the Tanner crab abundance in the Kodiak District. After receiving a substantial amount of public comment from potentially affected Tanner crab and groundfish fishery participants, the Council requested additional information in an expanded paper to help the Council understand conflicting views expressed in public testimony about the potential impacts of additional Tanner crab protections. The expanded paper is expected to help inform potential groundfish closures that recognize the importance of the Tanner crab and groundfish fisheries to Kodiak by:

- identifying the areas of highest Tanner crab abundance within the Barnabas gully for consideration of a smaller closure area,
- evaluating potential modifications to existing crab closure areas,

- expanding the time series provided for Tanner crab distribution, groundfish harvest, and Tanner crab bycatch,
- providing additional economic information on the Tanner crab and groundfish fisheries, and
- discussing the impacts of groundfish and crab fishery timing on processing capacity in Kodiak.

### **Pelagic trawl gear**

In October 2024, the Council reviewed a preliminary analysis on proposed regulatory amendments to modify the definition of pelagic trawl gear used in the Bering Sea and GOA. The purpose of the action is to align the definition with current gear configurations which include salmon excluders and technology used to monitor the gear. This action is necessary because current federal regulations, implemented in 1993, define specific limitations for pelagic trawl gear and specify that all other trawl gear is defined as non-pelagic. Since 1993, there have been regular advances in technology and bycatch reduction that have resulted in net configurations that are technically out of compliance with the limitations in the pelagic trawl definition. These include having floats in salmon bycatch excluders used in the codend and other areas of the net as well as metallic components associated with instruments that monitor the net while fishing. At the recommendation of NMFS, the Council is moving forward to address the pelagic trawl gear definition as an essential step in ongoing efforts to minimize the impacts of pelagic trawl gear on bycatch, sensitive habitat, and unobserved mortality. The Council affirmed that this action is intended to have a narrow scope and is solely focused on changes to the regulatory definition of pelagic trawl gear which will help facilitate the process to incentivize trawl gear innovation. At the October 2024 meeting, the Council revised its purpose and need statement and amended the alternatives to define specific regions of the net where floatation, metallic components, and technology used to monitor the net and fishing performance are allowed. The Council is scheduled to review the revised analysis and tentatively take final action on this action in June 2025.

Under this agenda item, the Council received considerable public comment related to a separate discussion paper requested in February 2024 to incentivize pelagic trawl gear innovations with several objectives including minimizing impacts on sensitive habitats and bycatch species such as crab. At the October 2024 meeting, the Council prioritized moving forward with the discussion paper, which is intended to be informed by ongoing research being conducted by GOA and Bering Sea pelagic trawl fishery participants to more precisely estimate bottom contact from the gear and potential impacts on important species and sensitive habitats. The discussion paper is scheduled to be reviewed by the Council in June 2025.

The State supports continued work with industry and NMFS to find ways to further minimize the impacts of pelagic trawl gear on benthic habitat and non-target species. A “Gear Innovation Initiative<sup>1</sup>” has been introduced by the pollock industry to better understand pelagic trawl gear interactions with benthic habitat, unobserved mortality on crab, and enforceability of bottom contact characteristics of pelagic trawl gear. This project encompasses three stages: (1) gear cataloging, (2) gear modeling, and (3) empirical measurement of seafloor contact. Field studies are expected to begin in 2025.

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<sup>1</sup> Gear Innovation Initiative: [https://meetings.npfmc.org/CommentReview/DownloadFile?p=6ef84616-0ee9-4b2b-8e7c-16a3f7ab14dc.pdf&fileName=Gear%20Innovation%20Initiative\\_10\\_05\\_Final%20with%20Appendices.pdf](https://meetings.npfmc.org/CommentReview/DownloadFile?p=6ef84616-0ee9-4b2b-8e7c-16a3f7ab14dc.pdf&fileName=Gear%20Innovation%20Initiative_10_05_Final%20with%20Appendices.pdf)



## Salmon bycatch

The Council has taken several actions to minimize Chinook and chum salmon bycatch in federal groundfish fisheries. Chinook salmon bycatch is limited by hard caps in both the Bering Sea and GOA and reaching a salmon bycatch limit closes the fishery subject to the limit. Additionally, 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 and that are required by federal regulations. Full retention of all salmon bycatch on pollock vessels is required to ensure bycatch accounting is accurate and to enable genetic sampling.

Genetic samples are taken from Chinook salmon caught as bycatch in the Bering Sea pollock trawl fishery and from pollock, rockfish and some non-pollock trawl fisheries in the GOA to estimate the proportion of bycatch from individual salmon stock groups. Chum salmon samples are primarily taken in the Bering Sea pollock fishery because very little chum salmon bycatch occurs in GOA trawl fisheries. The Council receives annual genetic reports 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.

When considering the impacts of bycatch on specific salmon stocks, it is important to note that bycatch is one of several factors affecting the number of returning adults to Alaskan river systems. The number of Chinook or chum salmon caught as bycatch is larger than the number of adults that would have returned to Alaska rivers because the bycatch is primarily composed of immature fish which are subject to predation and other types of natural mortality before maturing and returning to freshwater systems in future years. Chinook salmon taken as bycatch are predominantly age 3 or age 4 fish and range in age from 3 to 7 years. Bycaught chum salmon range in age from 3 to 5 years and both Chinook and chum salmon from a given brood year mature and return to the rivers at multiple ages.

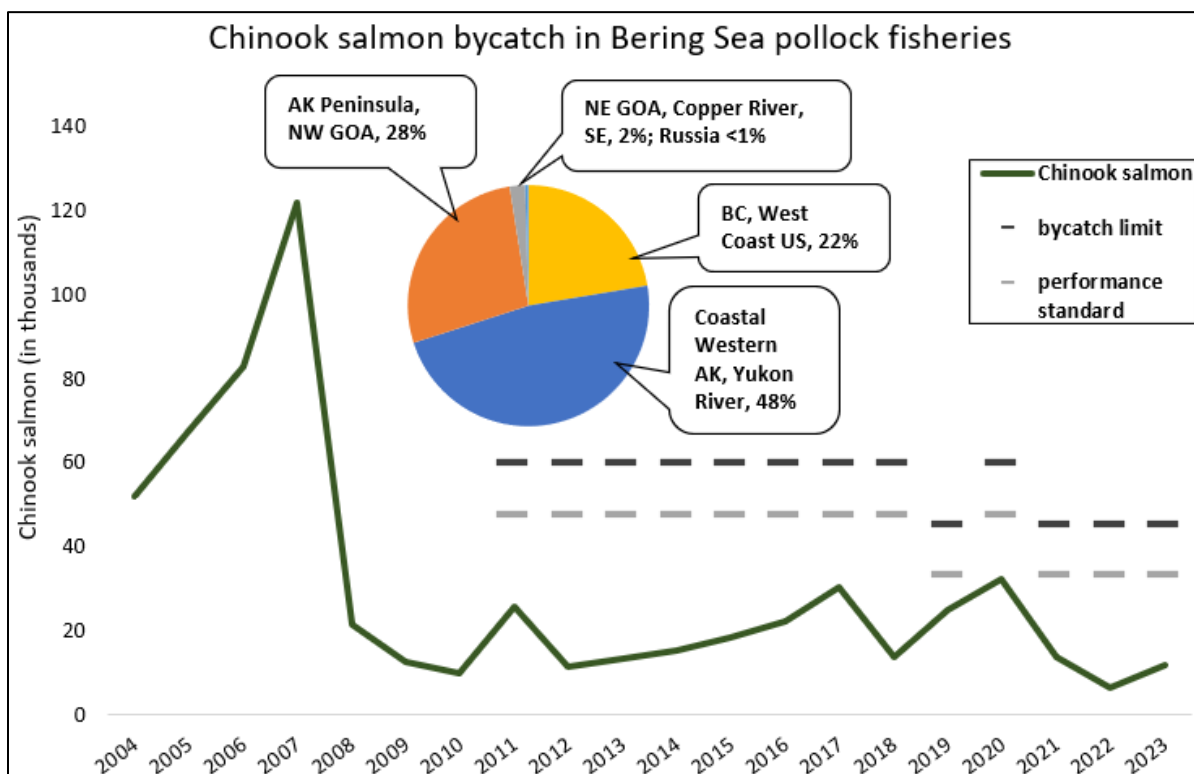
Previous Council analyses for Bering Sea salmon bycatch management actions estimated the number of Western Alaska (WAK) Chinook salmon that would have returned to spawn if not caught as bycatch as a proportion of total salmon returns to WAK river systems. This type of analysis requires sufficient information on the bycatch and salmon stocks of interest to complete an adult equivalency analysis, or AEQ, used to estimate an impact rate of bycatch on annual salmon returns. In 2022, the Council received an updated AEQ analysis<sup>2</sup> for WAK Chinook salmon that estimated the annual impact rates from 2011 to 2021. The average impact rate, calculated as the AEQ mortality divided by total run size, for Chinook salmon bycatch in the Bering Sea pollock fishery is 1.91% for the combined coastal WAK stocks, ranging from 1.32% to 3.40%, and averaged 0.6% for the Upper Yukon River stock, ranging from 0.37% to 1.10%. Impact rate analyses have not been completed for WAK chum salmon because total run reconstructions are not available for most of the stocks included in the coastal WAK chum salmon stock grouping. An impact rate for Yukon fall chum salmon would be possible but may not reflect trends across all WAK chum salmon stocks. The Council is considering other options for analyzing the impacts of bycatch on WAK chum salmon stocks, see “Chum salmon bycatch in the Bering Sea pollock fishery” below for additional information.

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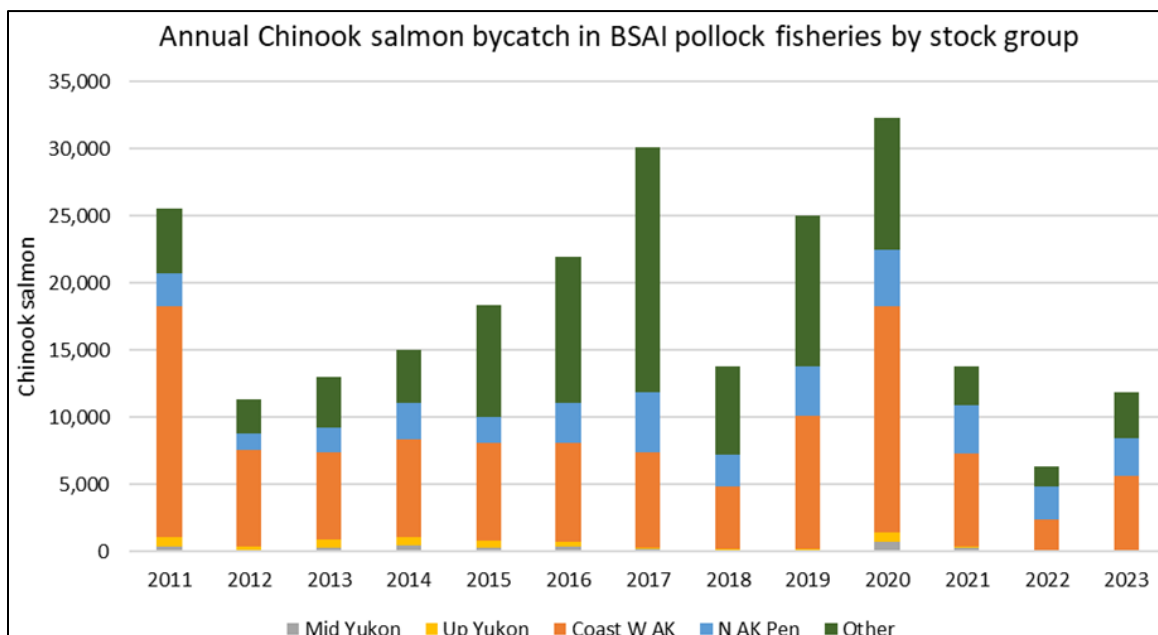
<sup>2</sup> Update of Chinook salmon mortality and impacts due to bycatch in the EBS pollock fishery. June 2022, agenda item D1c: <https://meetings.npfmc.org/CommentReview/DownloadFile?p=c8471f79-1542-46e8-ac34-cc34fd351278.pdf&fileName=D1c%20Chinook%20Salmon%20AEQ.pdf>

Chinook salmon bycatch in the Bering Sea pollock fishery – There are two Chinook salmon bycatch limits for the Bering Sea pollock fishery. A higher limit of 60,000 Chinook salmon with a ‘performance standard’ limit of 47,591 fish and a lower limit of 45,000 Chinook salmon with a performance standard of 33,318 fish in years following low WAK Chinook salmon abundance. The lower Chinook bycatch and performance standard limits have been in place during five of the last six years and will be in place again during 2025. The annual performance standard limits are divided among the pollock fishing sectors and are typically further subdivided to the vessel level to promote vessel-level accountability. The Council also recommended the establishment of 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 2023, a total of 11,855 Chinook salmon were taken as bycatch in the Bering Sea pollock fishery (figure below). Based on average stock composition estimates from 2019 through 2023, 48% of salmon bycatch originated from Coastal WAK and Yukon River stocks, 22% from North Alaska Peninsula and NW GOA stocks, 2% from NE GOA, Copper River, and SE, and 2% originated from the Copper River, NE GOA, and Southeast Alaska stocks. Through October 10, 2024, a total of 7,721 Chinook salmon have been taken as bycatch in the Bering Sea pollock fishery.

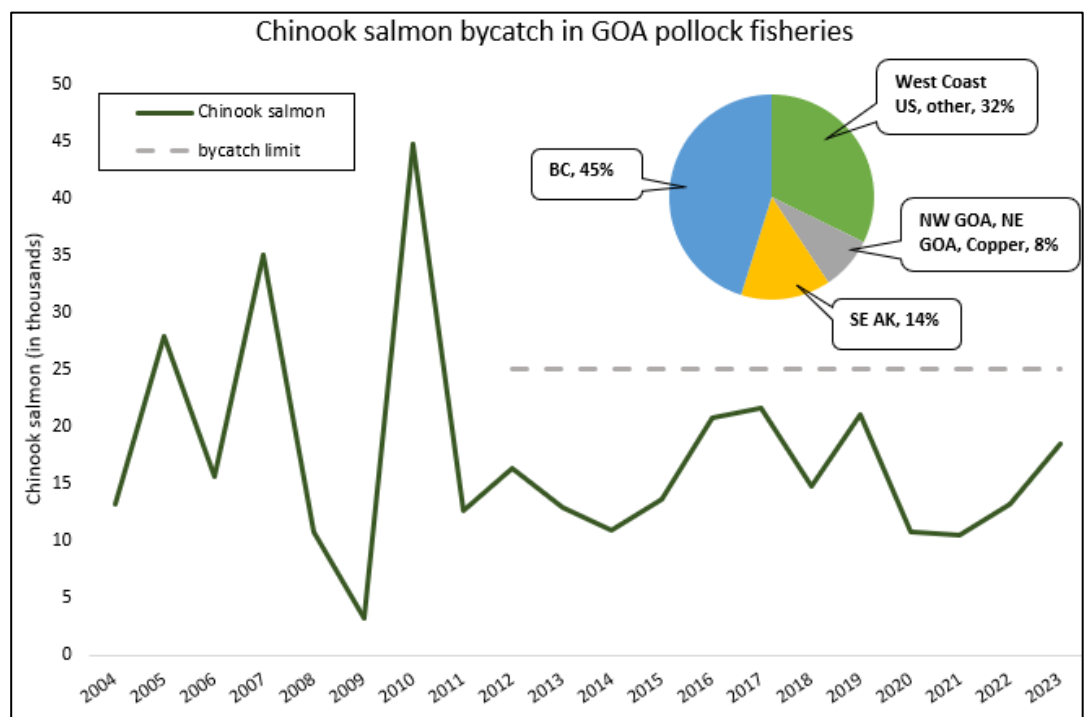


Using composition estimates applied to salmon bycatch from the 2023 Bering Sea pollock fishery an estimated 5,596 Chinook originated from Coastal WAK, 31 from the Yukon River, 2,840 from the North Alaska Peninsula, and 3,384 Chinook salmon from all other stock groupings (figure below).



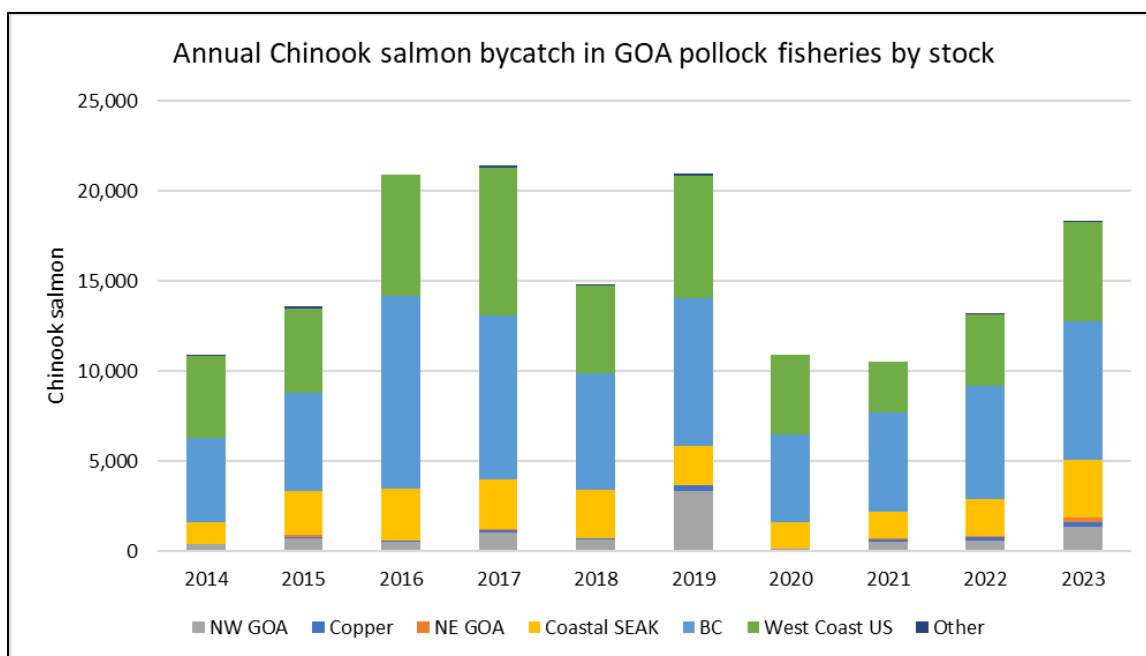
Chinook salmon bycatch in the Gulf of Alaska trawl fisheries – In the GOA groundfish trawl fisheries, the majority of Chinook salmon bycatch occurs in the directed pollock fishery. Other trawl fisheries for flatfish, rockfish, and Pacific cod also intercept Chinook salmon. Amendment 93 to the GOA Groundfish 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 2023, total Chinook salmon bycatch in the GOA pollock fisheries was estimated at 18,432 fish (figure below). Based on stock composition estimates from 2019 through 2023, 8% of the bycatch was composed of NW GOA, Copper River, and NE GOA stocks; 14% was composed of Southeast Alaska stocks; 45% was composed of British Columbia stocks; and 32% were Chinook salmon originating from the West Coast US and other areas.





Using composition estimates applied to bycatch from the 2023 GOA trawl fisheries, an estimated 1,859 Chinook salmon originated from NW GOA, Copper River, and NE GOA stocks; 3,208 fish were from Southeast Alaska stocks; 7,702 fish were from British Columbia stocks; and 5,526 fish were from West Coast US and other areas (figure below).

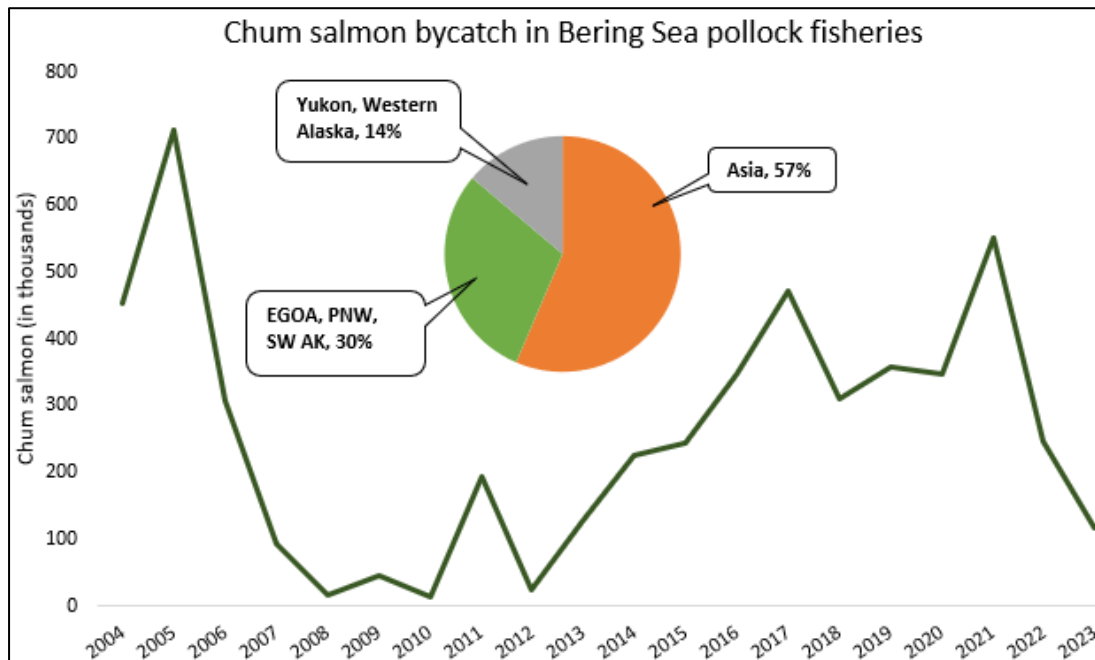


Through October 10, 2024, an estimated 23,455 Chinook salmon were taken in the Western and Central GOA pollock fisheries. Over the weekend of September 21 and 22, several catcher vessels directed fishing for pollock in the Central GOA encountered large amounts of Chinook salmon. The vessels were fully monitored, either with an on-board observer or an electronic monitoring system. Observers at the shoreside processors counted all Chinook salmon and collected genetic data. The Chinook salmon limit for the Central GOA pollock trawl fisheries is 18,316 fish. The pollock fleet voluntarily ceased fishing operations starting on September 23 to allow time for NMFS to evaluate the incoming information. On September 25, NMFS determined the Chinook salmon PSC limit for Central GOA pollock had been exceeded, and the fishery was closed with approximately 35%, or 50,000 metric tons (~110 million pounds), of the Central GOA pollock quota uncaught.

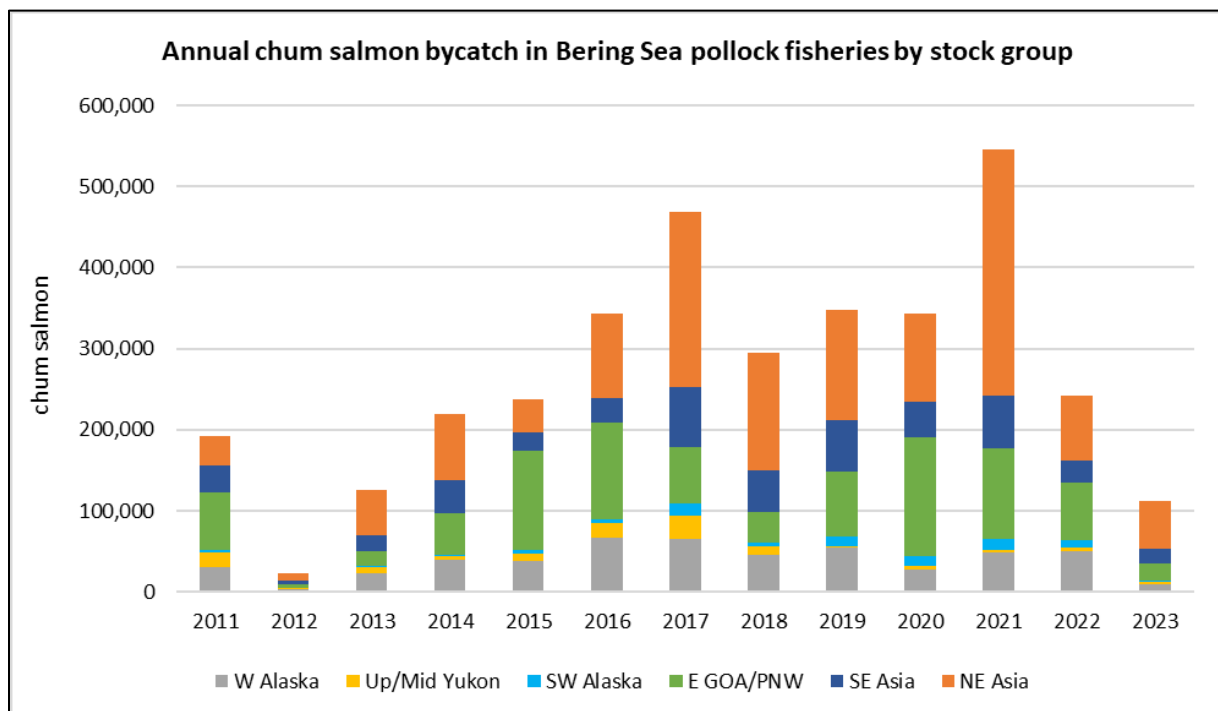
Scientists and managers have not determined what factors may have contributed to unusually high encounters of Chinook salmon in the Central GOA pollock fishery this season. When the Council recommended the Chinook salmon bycatch limits it recognized those limits were likely to be constraining to the GOA pollock fisheries in some years and could result in impacts to the communities that depend on those fisheries. While the Chinook salmon bycatch limits operated as intended, and closed the pollock fishery when the limit was reached, the negative economic effects of the closure are likely severe for the fishery participants, the community of Kodiak, and support businesses that rely on the fall pollock season.

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 2023, an estimated 112,303 chum salmon were caught as bycatch in the Bering Sea pollock fishery (figure below). Based on stock composition estimates from 2019 through 2023, 14% of the salmon bycatch originated from Western Alaska and

the Yukon River, 30% from SW Alaska, Eastern GOA and Pacific NW stocks, and 57% was composed of Asian stocks, primarily from Russia and Japan. Through October 10, 2024, a total of 35,054 chum salmon have been caught in the Bering Sea pollock fishery.



Using composition estimates applied to bycatch from 2023, an estimated 9,321 Western Alaska and 2,583 Middle/Upper Yukon chum salmon were caught in the Bering Sea pollock fishery (figure below). This was well below the recent five-year average of 44,872 Western Alaska and 4,396 Middle/Upper Yukon chum salmon. Stock composition estimates from 2024 bycatch will be available in spring 2025.



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

The management alternatives include consideration of a Bering Sea-wide limit on total chum salmon bycatch in the pollock fishery. The Council is also considering an alternative to establish an abundance-based Bering Sea-wide total chum salmon bycatch limit using annual run strength indicators from the Yukon River, Kuskokwim River, and Norton Sound region. As an alternative to a Bering Sea-wide bycatch limit, the Council is considering implementation of an inseason bycatch cap for an area identified as a ‘corridor’ near the Alaska Peninsula during June through August when a higher proportion of WAK chum salmon are present based on historical genetic data.

Other pollock fishery management alternatives under consideration include additional regulatory requirements and management measures to be implemented through the IPAs, including:

- requiring the pollock sector IPAs to describe how fleet salmon avoidance measures incorporate historical genetic stock composition data to focus on WAK chum salmon avoidance,
- increasing the frequency of monitoring for potential chum salmon avoidance closures to more than once per week,
- requiring use of salmon excluders at all times,
- requiring the development of outlier provisions for vessels with chum salmon bycatch that is higher than an established threshold,
- increased inseason reporting of salmon bycatch to western and interior Alaska salmon users, and
- prohibiting fishing in chum salmon avoidance areas for all vessels regardless of performance when the chum salmon bycatch rate (chum per ton of pollock) exceeds an established threshold.

In February 2025, the Council will review a draft impact analysis to analyze the potential environmental, social, cultural, and economic impacts of these alternatives as required by federal law.