

# Salmon Bycatch Management measures and impact overview



Presentation to the Bristol Bay Regional Advisory Council

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Diana L. Stram, Ph.D

Senior Scientist, North Pacific Fishery Management Council

[diana.stram@noaa.gov](mailto:diana.stram@noaa.gov)

# The Guiding Law for U.S. Marine Fisheries

## The Magnuson-Stevens Fishery Conservation and Management Act – Adopted 1976



200-mile limit

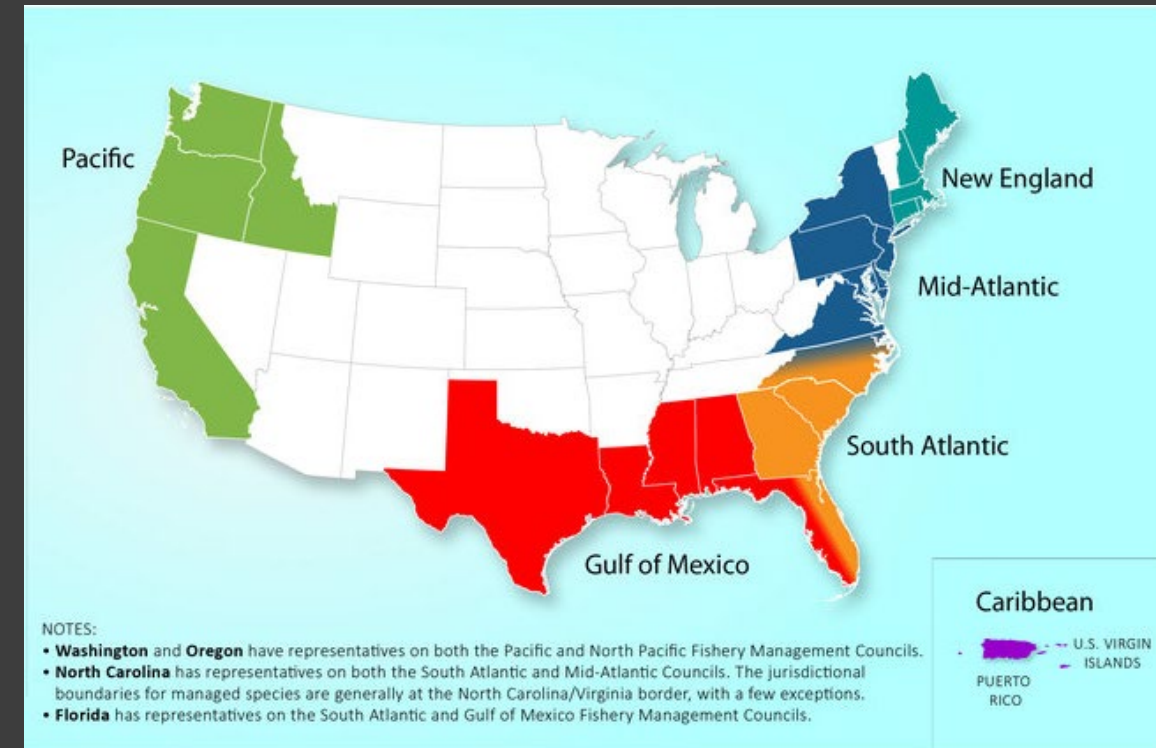
National Standards

8 Councils

Established the 3-200 nautical mile exclusive economic zone

Established National Standards and other requirements for conservation and management of resources.

Established a system of 8 Regional Councils, composed of fishermen and government representatives, to develop fishery regulations for their specific area.



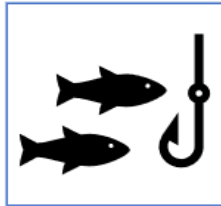
# Who is the Council?



- The North Pacific Fishery Management Council (Council) was established by the MSA
- Together, the Council and the National Marine Fisheries Service (NMFS) manage U.S. fisheries in Federal waters off Alaska
- Under the MSA, the Council is authorized to prepare and submit recommendations for management measures to the U.S. Secretary of Commerce
- NMFS approves, implements and enforces them
- Management is coordinated, and in some cases jointly managed, with the State of Alaska



# Council Meetings



## 5 Meetings Annually

3 in Anchorage  
1 in local fishing community  
1 in Seattle or Portland



## Access

All meetings are open to the public



## SSC & AP

AP and SSC provide input to Council at each meeting.



## Public Testimony

Public testimony is taken for each agenda item at the SSC, AP, and Council.



## Agenda & Schedule

Meeting agendas and schedules are published online.



## Listen Live

Audio is available to listen to the Council meetings online in real-time.





What Regions  
are Managed  
by the  
Council?

# What is Bycatch?

## Magnuson-Stevens Act definition for bycatch:

The term "bycatch" means fish which are harvested in a fishery but are not sold or kept for personal use and includes economic discards and regulatory discards. Such a term does not include fish released alive under a recreational catch and release fishery management program.

In other words: **Bycatch = Discarded fish**

Economic discards: Fish harvested that could be legally retained, but are of insufficient value to retain (e.g., sculpins, grenadiers, brittle stars)

Regulatory discards: Fish harvested that are required by regulation to be discarded whenever caught, or are required by regulation to be retained but not sold

- Prohibited Species Catch (PSC) : A special type of regulatory discard. Fish caught that must be returned to sea with a minimum of injury = Pacific halibut, Pacific herring, Pacific salmon, steelhead, king crab, bairdi, opilio crab.



# Why does the Council Focus on Chinook and Chum Bycatch Management?

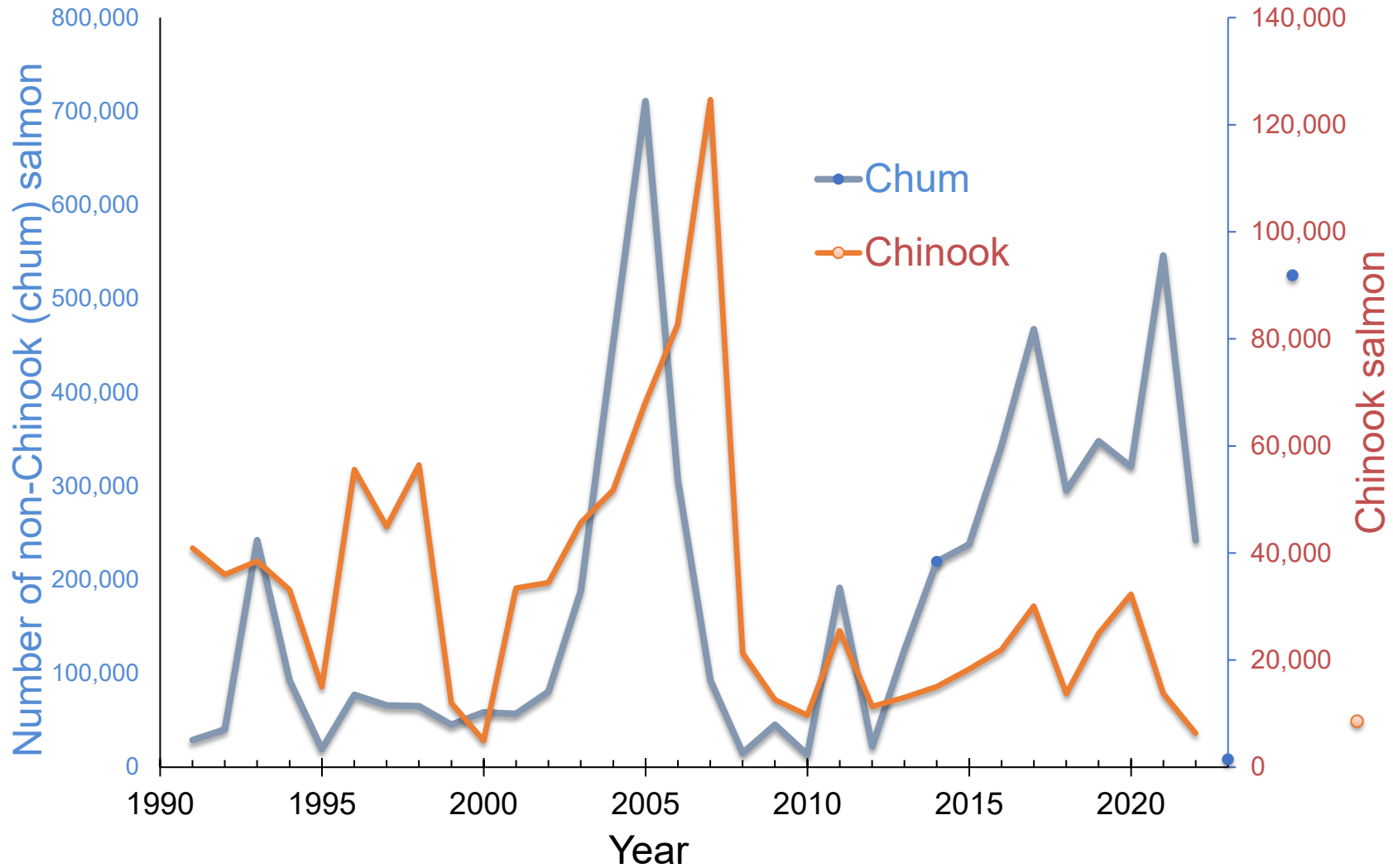
- The Bering Sea pollock fishery encounters both Chinook and chum salmon bycatch
- Bering Sea pollock fishery takes the majority of Chinook and chum salmon as bycatch (~ 95%)

Salmon Species	2016	2017	2018	2019	2020	2021	2022
Sockeye		150	87	185	228	48	15
Coho		53	9	169	125	60	36
Pink	144	926	125	1,600	385	385	47
Chum	342,789	466,549	294,841	345,928	342,887	545,549	242,259
<b>Total non-Chinook</b>	<b>342,933</b>	<b>467,678</b>	<b>295,062</b>	<b>347,882</b>	<b>343,625</b>	<b>546,042</b>	<b>242,357</b>
<b>Percent Chum of non-Chinook</b>	<b>99.96%</b>	<b>99.76%</b>	<b>99.93%</b>	<b>99.44%</b>	<b>99.79%</b>	<b>99.91%</b>	<b>99.96%</b>

Table key: Count of non-Chinook salmon species caught by the Bering Sea pollock fishery from 2016-2022

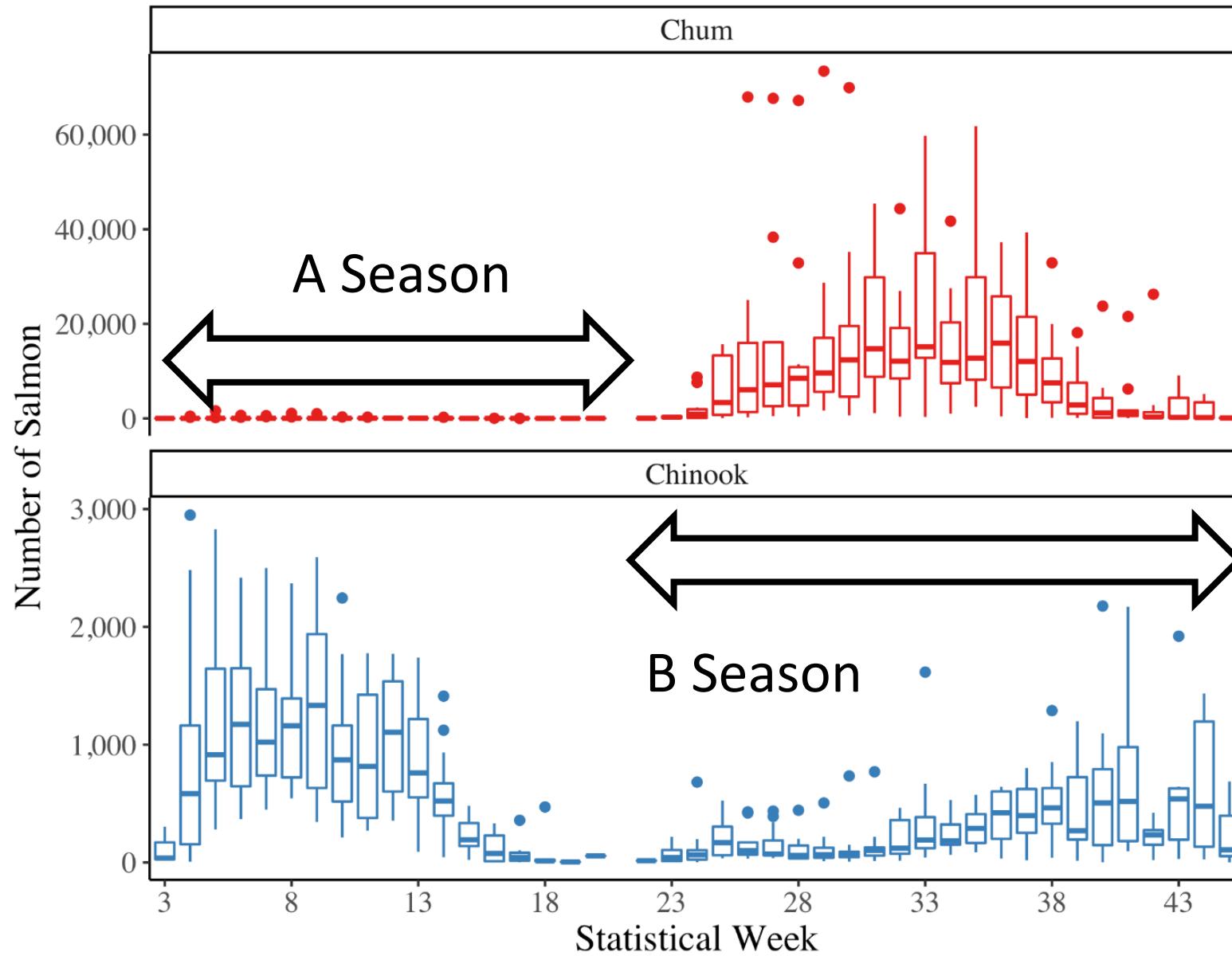


# 1991-2022 Bering Sea Chinook and chum salmon bycatch

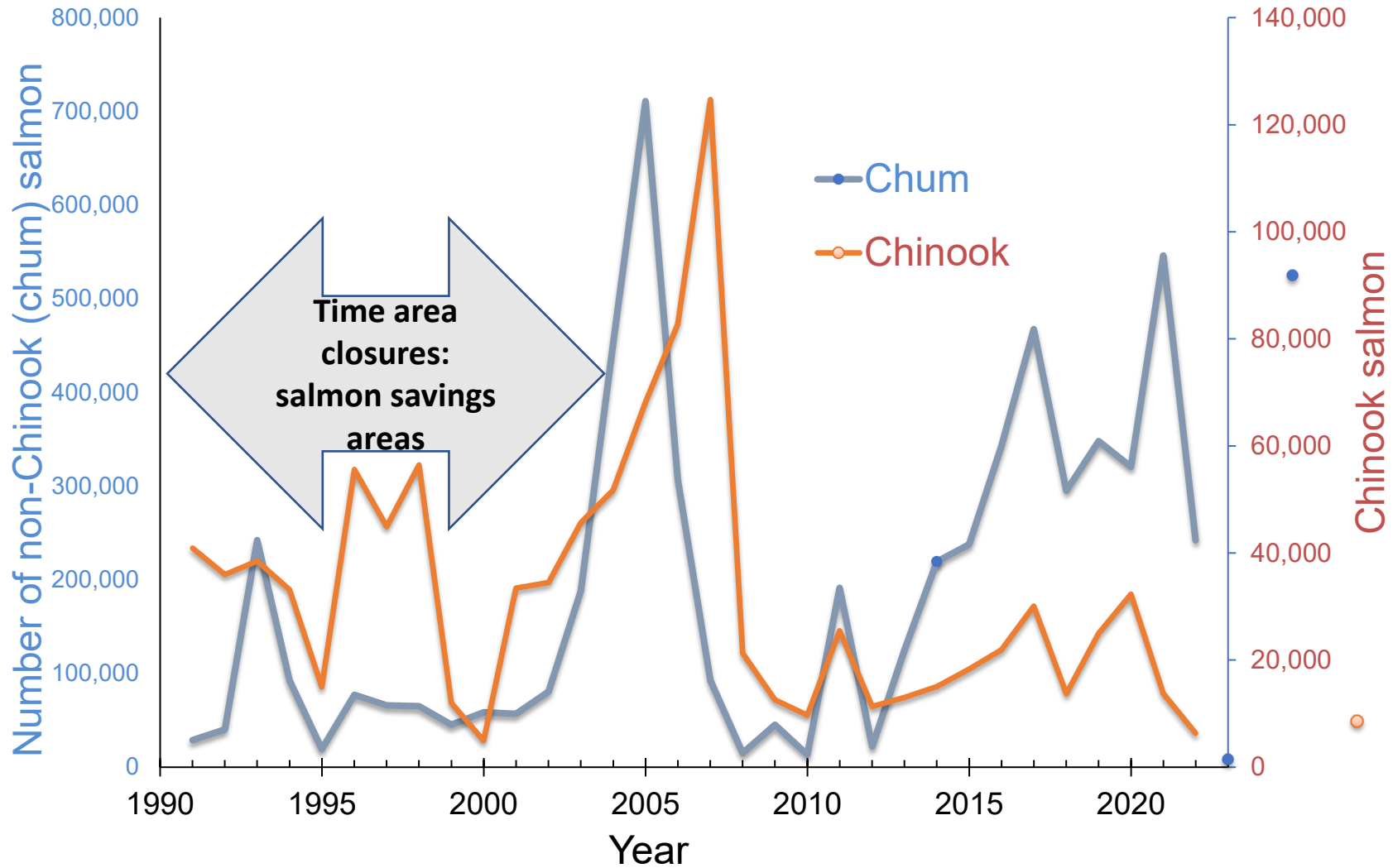




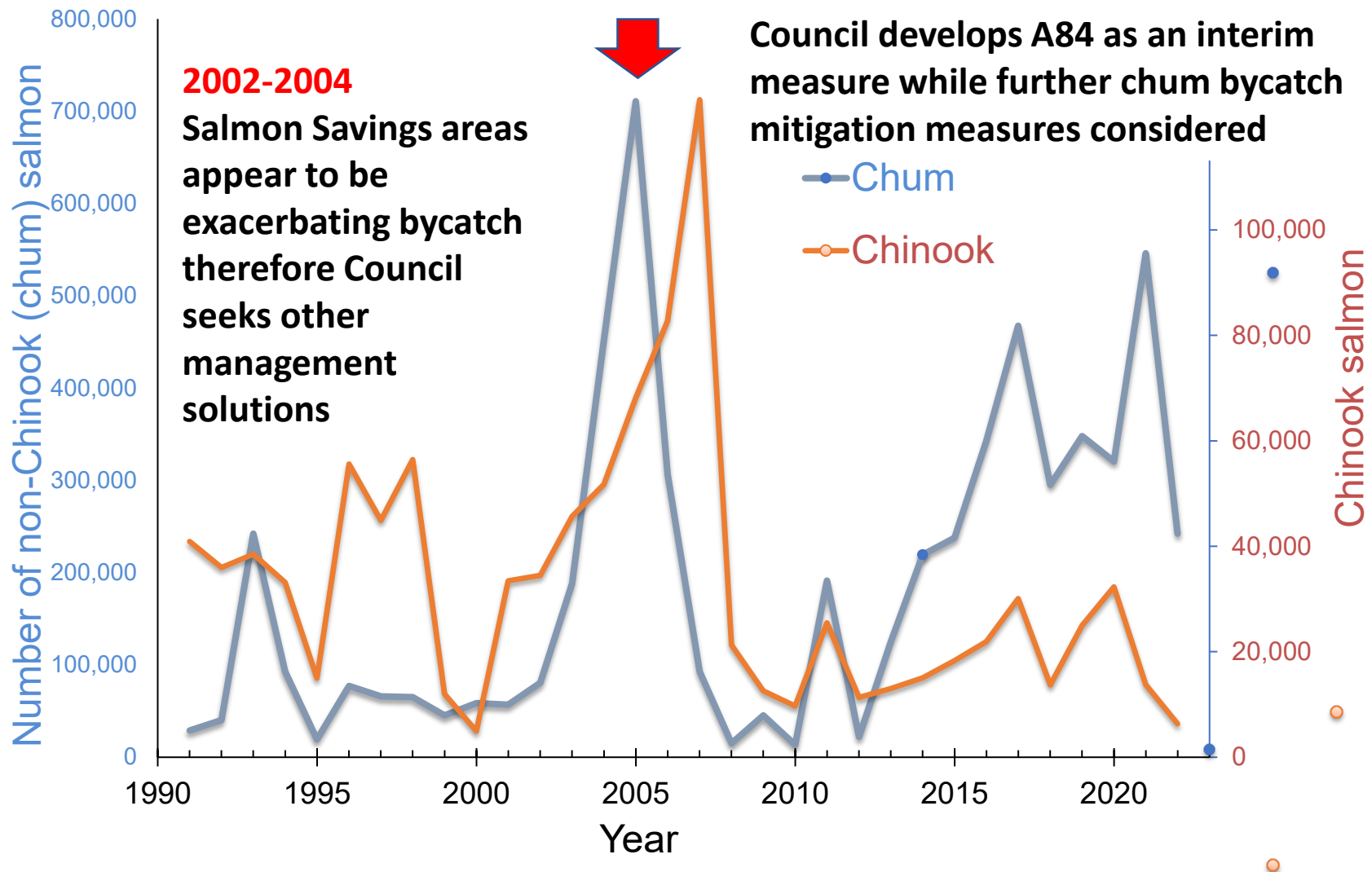
Chum Chinook



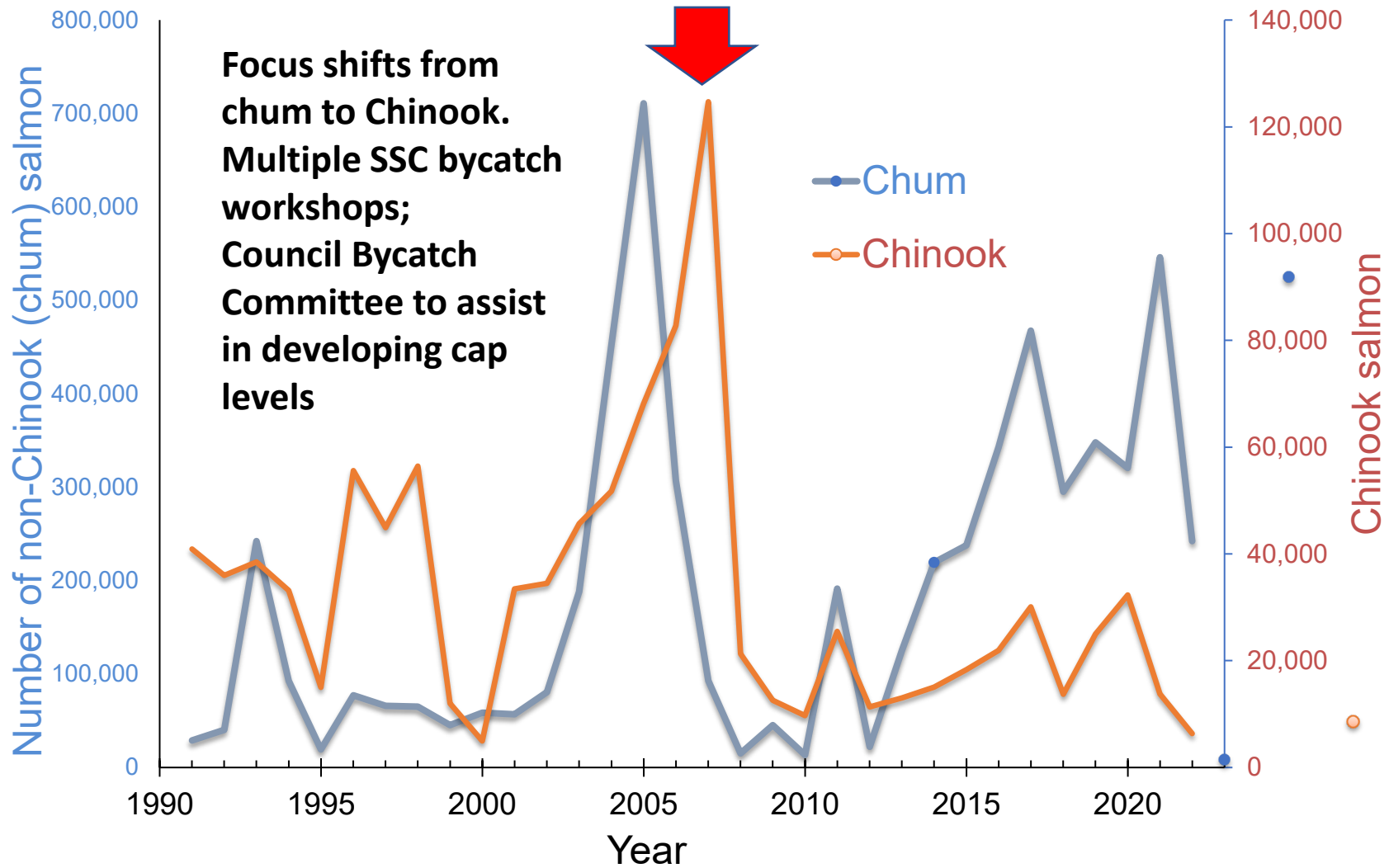
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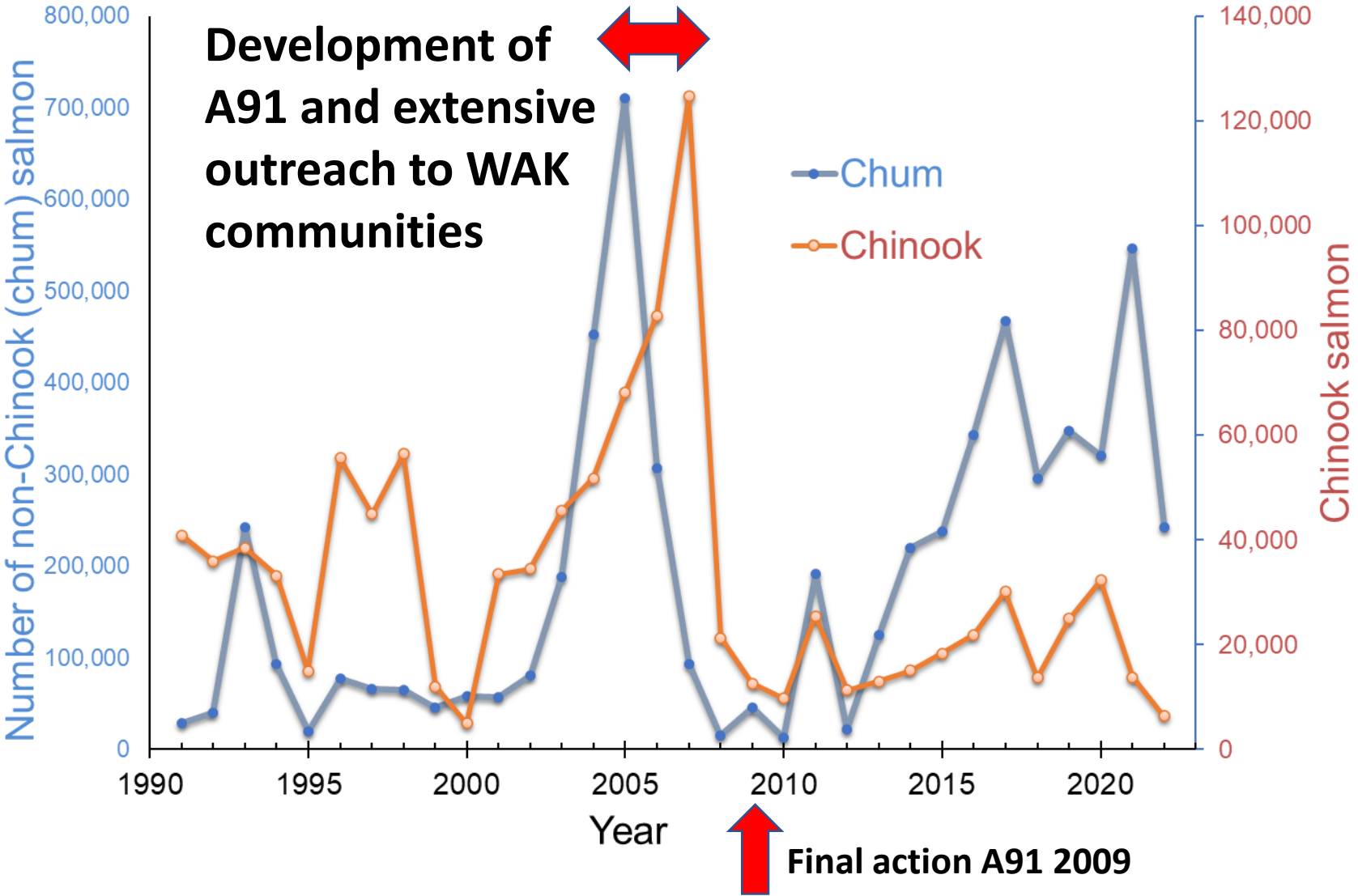
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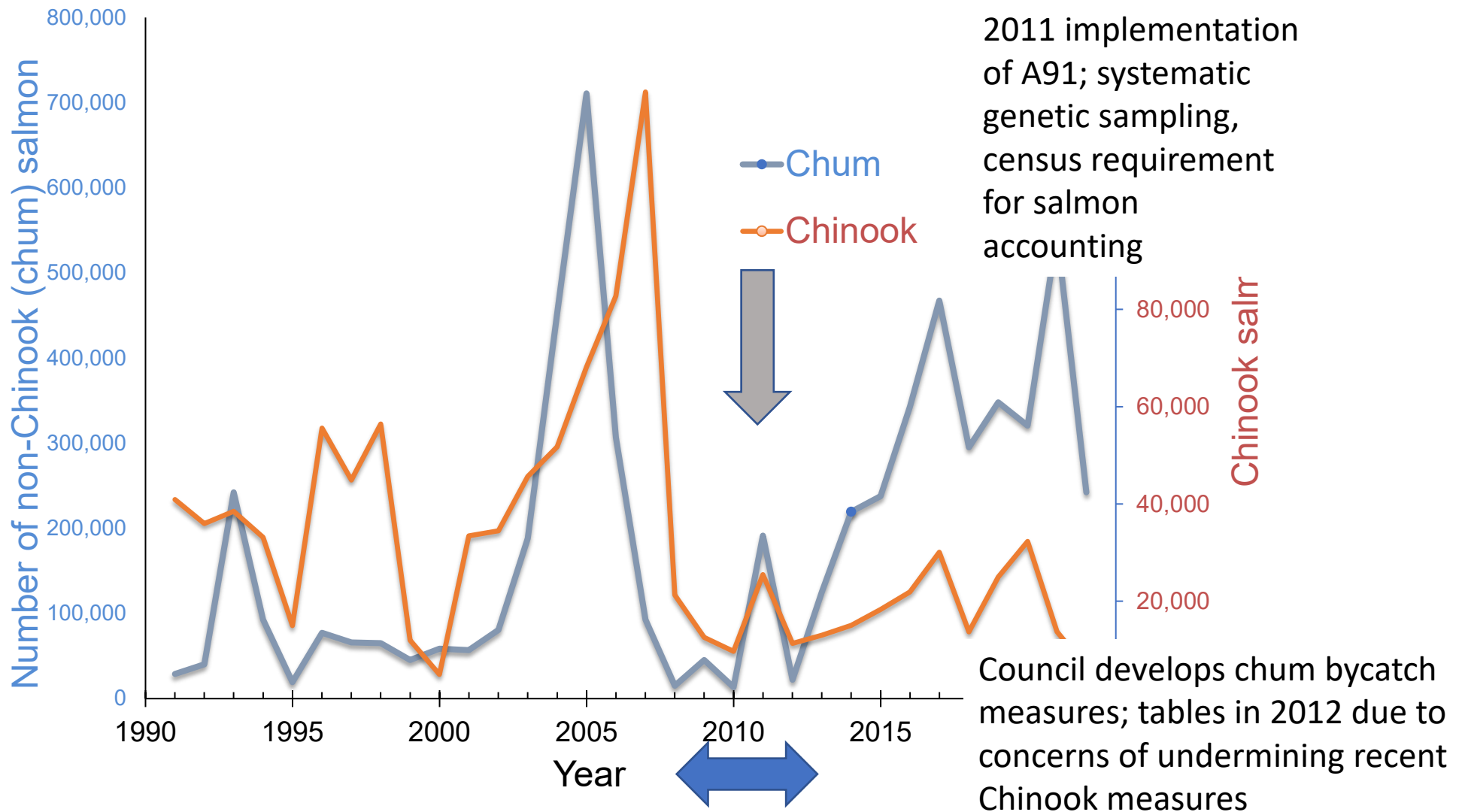
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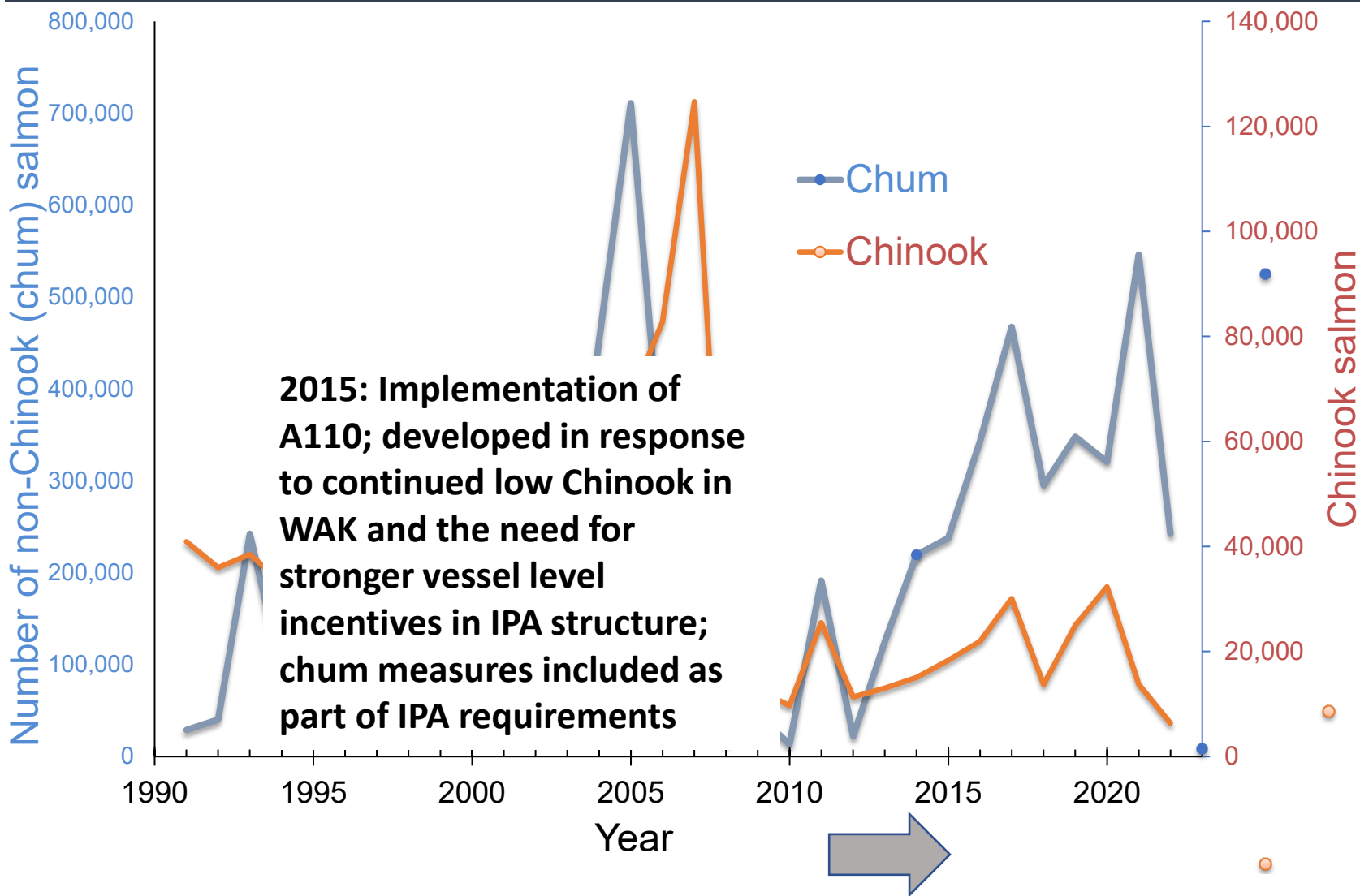
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# 1991-2022 Bering Sea Chinook and chum salmon bycatch



# 1991-2022 Bering Sea Chinook and chum salmon bycatch



# Measures to Minimize Salmon PSC in the BSAI

Note: Only Chinook and Chum salmon are caught in any numbers in BSAI and GOA groundfish fisheries.

## Regulatory measures

- Chinook Salmon PSC Limits

### Amendment 91

#### Performance Standard

**47,591** Each pollock sector (shoreside, at-sea, mothership, CDQ) gets relative share of total for year.

**Incentive** – If a sector exceeds its share in 2 of 7 years, it is limited to the performance share thereafter.

#### Overall PSC limit

**60,000** The entire pollock fishery is shut down if this limit is hit.

### Amendment 110

If Western AK 3-river system index > 250,000  
then Performance Standard = **47,591**  
and overall PSC limit = **60,000**

If Western AK 3-river system index < 250,000  
then Performance Standard = **33,318**  
and overall PSC limit = **45,000**

Western AK 3-river system index: Each year, ADF&G provides a Chinook salmon abundance using the 3-System Index for western Alaska based on the post-season in-river Chinook salmon run size for the Kuskokwim, Unalakleet, and Upper Yukon aggregate stock grouping.

- Incentive Plan Agreements (IPA) Requirements for Chinook and chum in regulation

## Industry measures under IPAs to meet regulatory requirement

- Pollock fishery cooperative IPAs: incentives for captains to avoid Chinook salmon and chum salmon bycatch under any condition of pollock and Chinook salmon abundance in all years; rewards for avoiding Chinook salmon, and penalties for failure to avoid Chinook salmon at the vessel level.
- Hotspot closures
- Salmon escape panels
- Donation to foodba



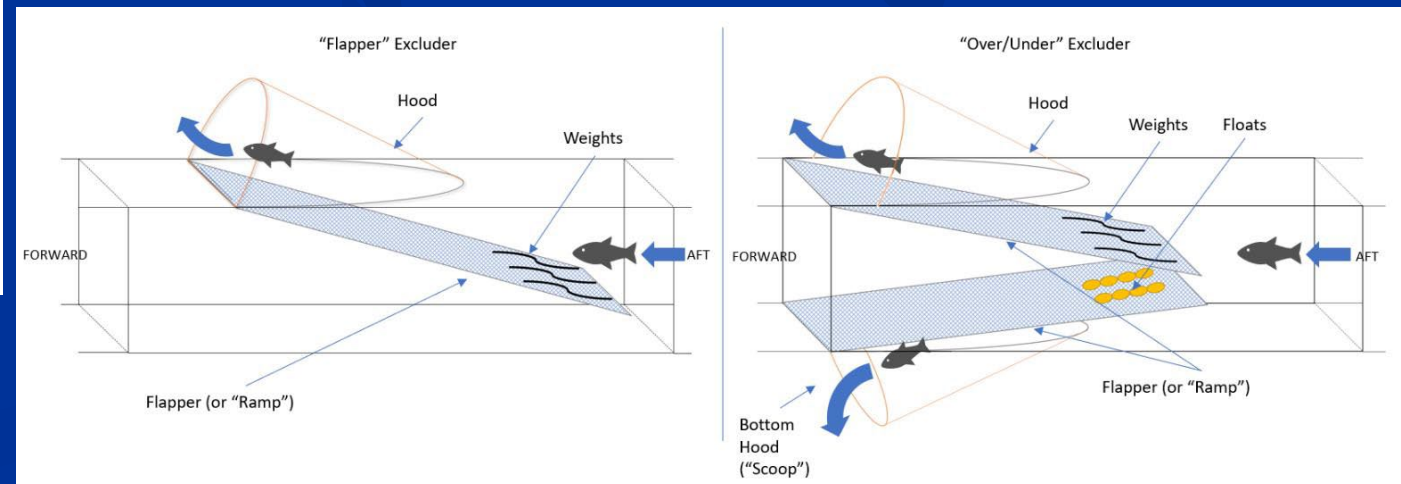
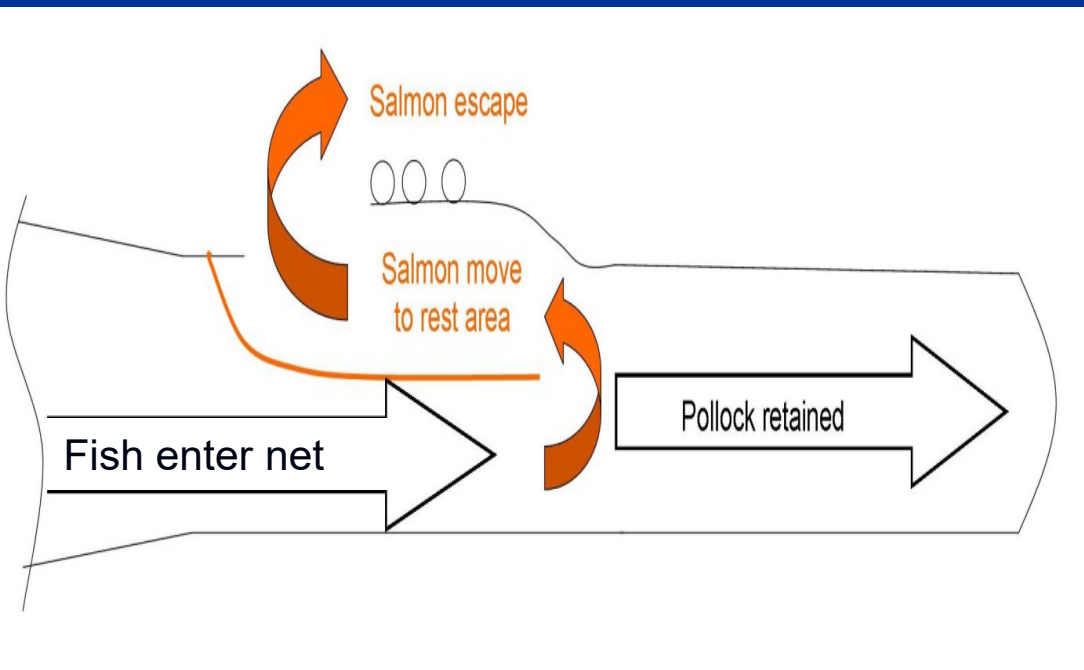


# Salmon excluders



Pollock industry has been developing excluder designs for 20 years

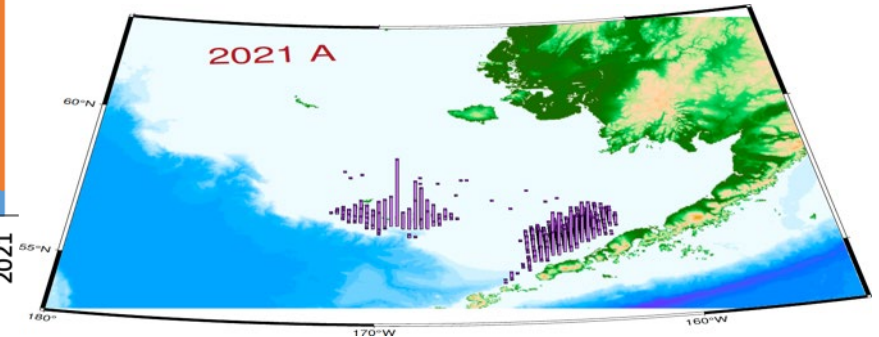
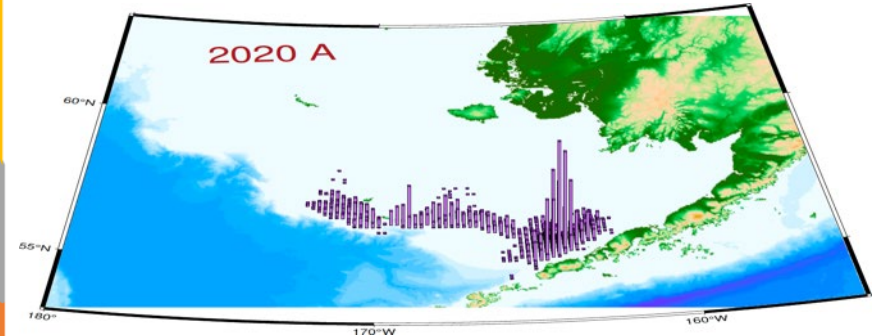
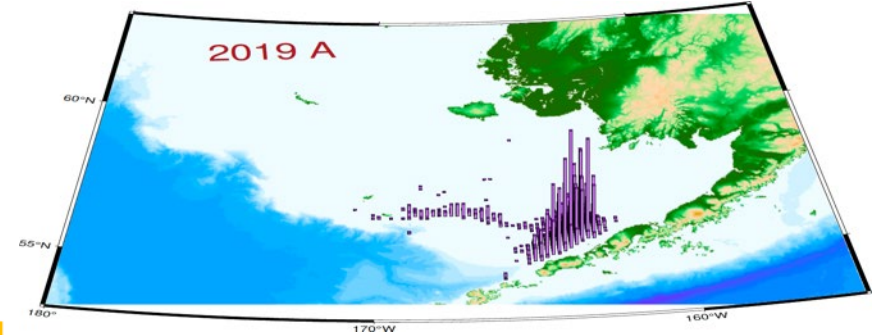
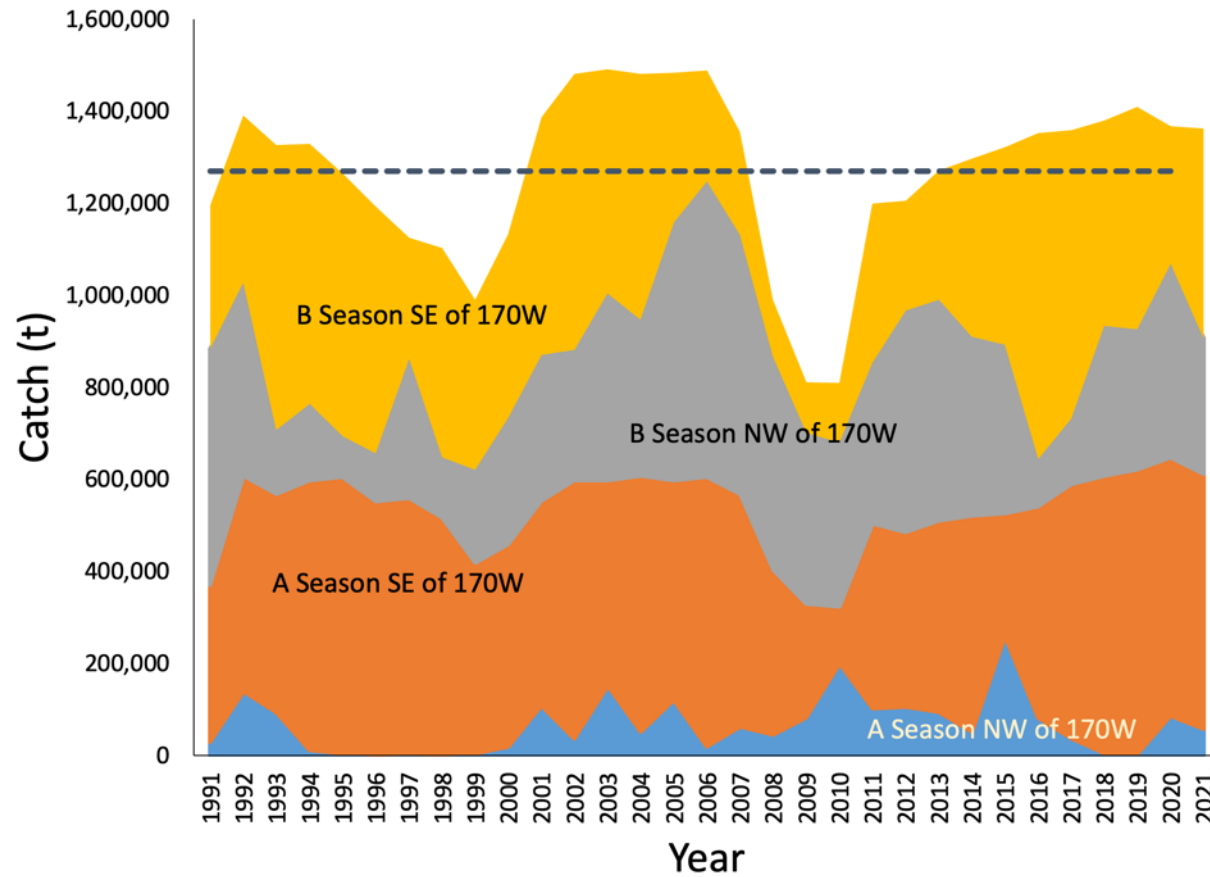
- Most recent Chinook tests indicate range of up to 39% (low of 9%) Chinook escapement with ~ 1% pollock loss
- Variable by vessel and Horsepower



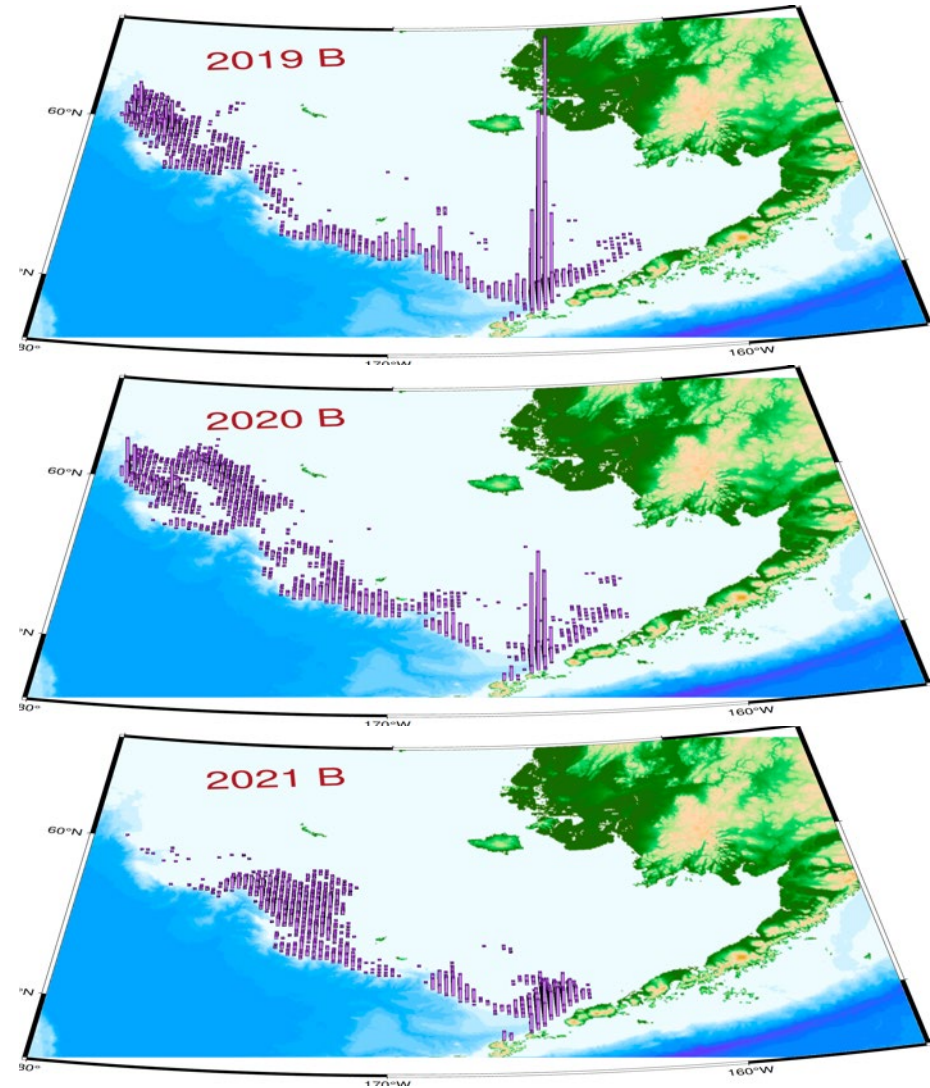
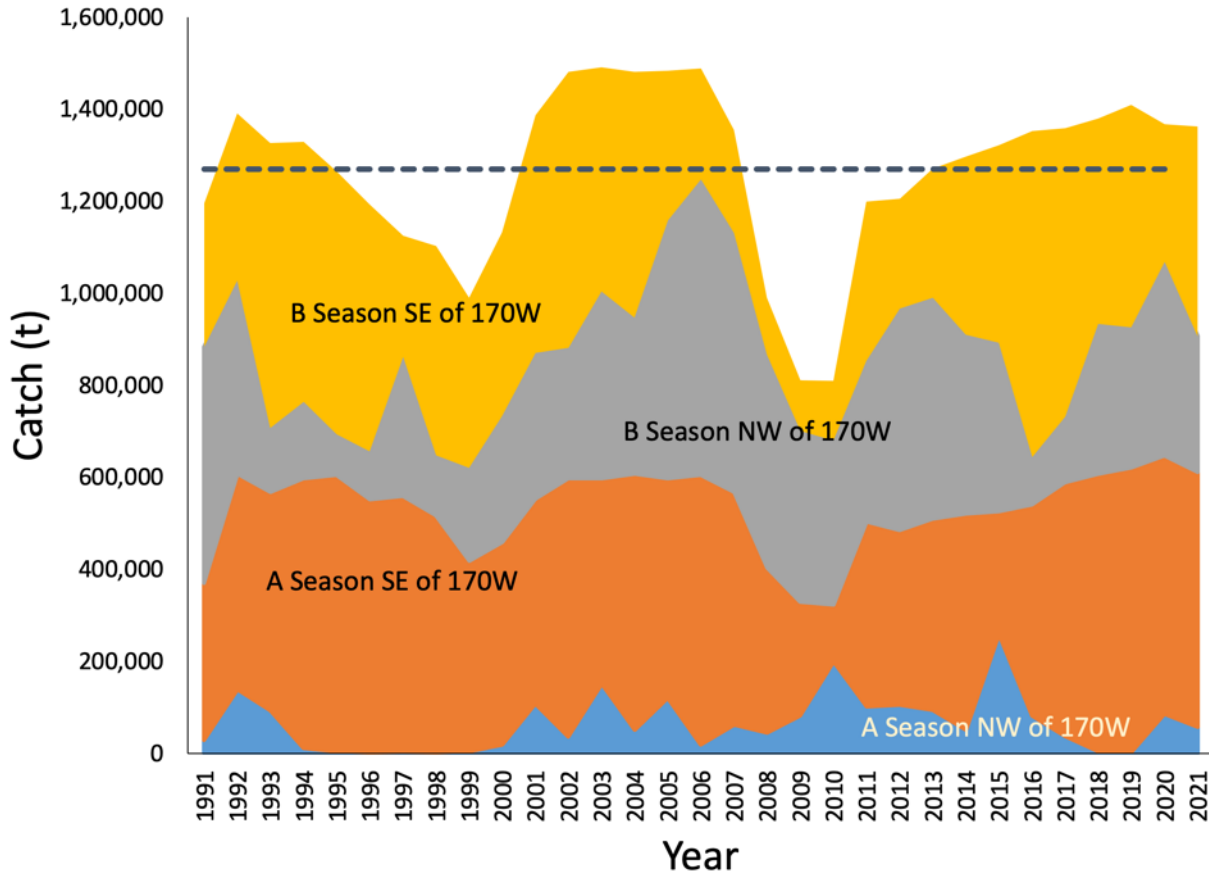
Note: detailed drawings and construction plans for excluder designs available from John Gruver ([jgruver@ucba.org](mailto:jgruver@ucba.org))/Swan Nets.

# Seasonal and area catch patterns

## Eastern Bering Sea pollock



# B-season fishery distributions

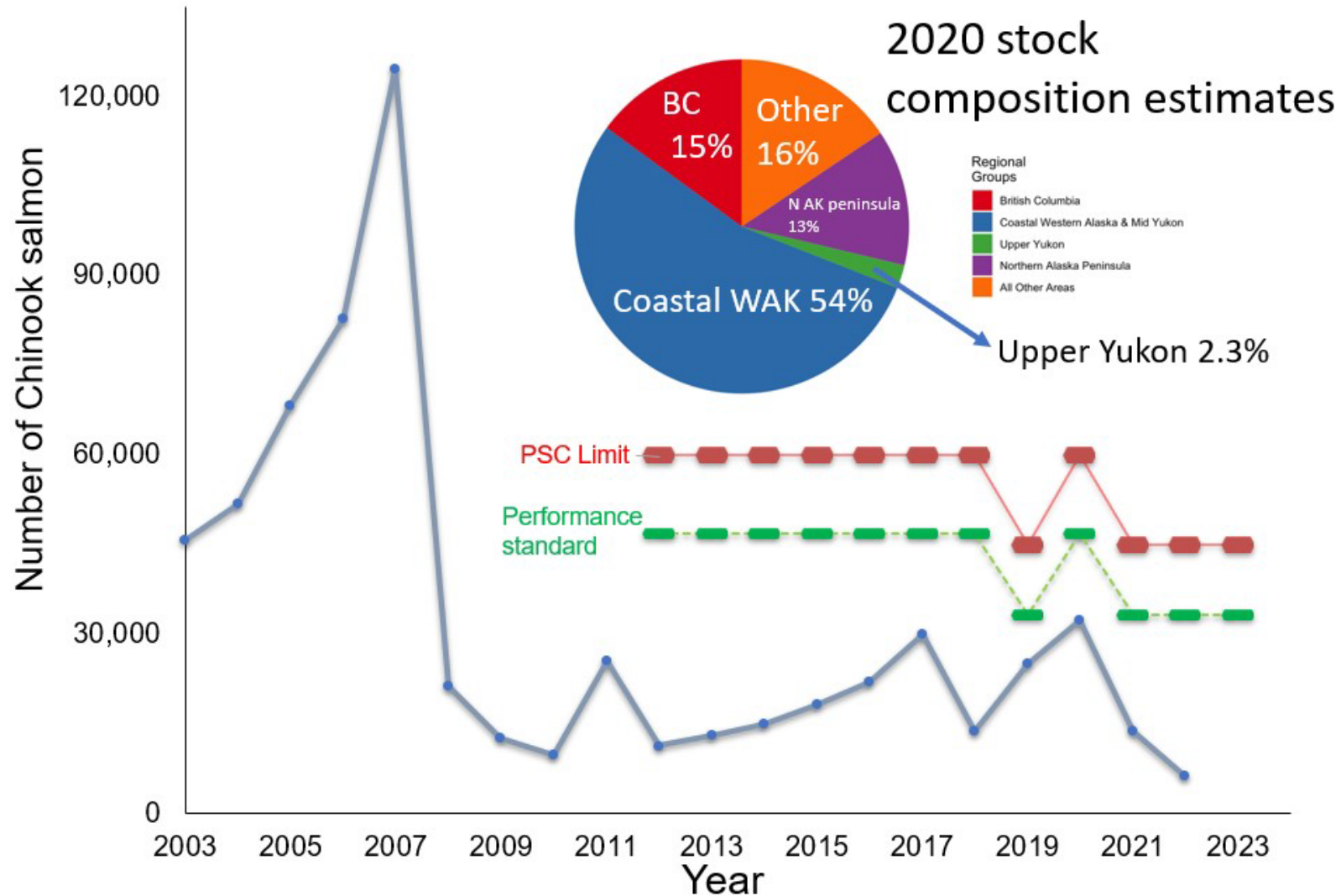




# Genetics Summary

# Trends and genetic breakouts: Chinook

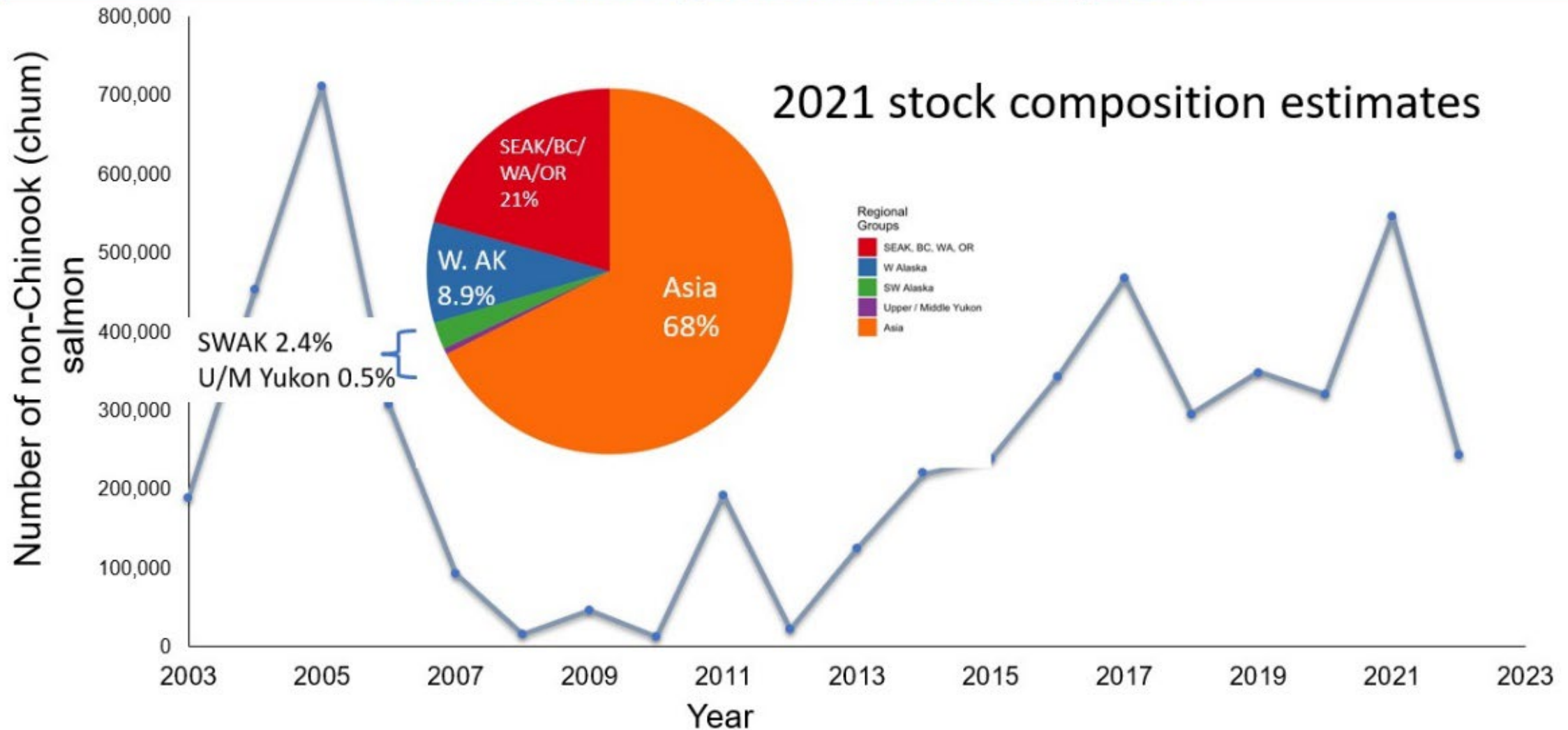
## 2003-2022 Bering Sea Chinook Salmon Bycatch



Chinook 2023:  
\*8,265 as of 3/2/23

# Trends and genetic breakouts: Chum

2003-2022 Bering Sea Chum Salmon Bycatch



# Council actions: June 2022 and December 2022

## June 2022:

- Create Salmon Bycatch Committee (nominations submitted over summer, appointed November)
- Tasked with;
  - Review State of Alaska Bycatch Task Force recommendations including Western Alaska Salmon subcommittee recommendations
  - Review staff discussion paper on Chum Salmon Bycatch
  - Review current information, including Local, Traditional, and Subsistence knowledge, and needed research to determine what is driving western Alaska salmon declines.

## December 2022:

- Task Committee to provide recommendations to the Council on a range of management measures (both regulatory and within IPA structure) including a PSC limit for chum salmon bycatch. Report to Council in April 2023.

# What is next?

## **March 20-21, 2023**

Salmon Bycatch Committee to meet in Anchorage and **provide recommendations to the Council** on:

Purpose and Need (P and N) statement for analysis

Conceptual alternatives (Caps, IPA changes)

### **SALMON BYCATCH COMMITTEE MEETING** In person and virtual

**March 20-21, 2023 9am-4pm**

At this meeting, the committee will review proposed purpose and need statements and conceptual alternatives for chum bycatch management. Recommendations from the committee will be presented to the Council at the April meeting.

There will be opportunities for questions and public comment. You are welcome to submit comments in advance through the Council's eAgenda

<https://meetings.npfmc.org/Meeting/Details/2980>

Via zoom: <https://us06web.zoom.us/j/82995429776>

Meeting ID: 829 9542 9776 Passcode: NPFMC

UAA Gorsuch Commons #107, 3700 Sharon Gagnon Lane

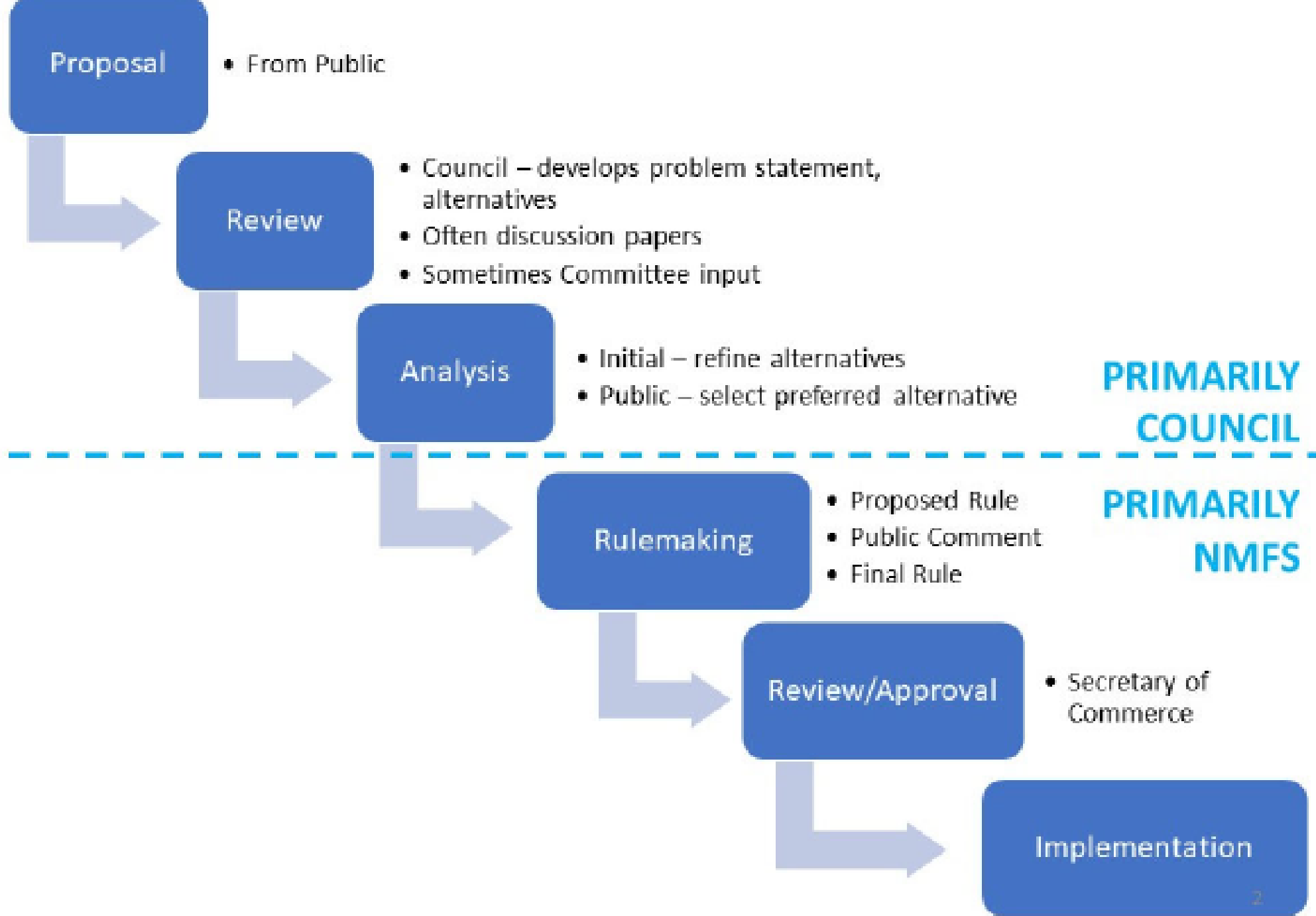
## Council meeting:

- Review SBC recommendations
- Possibly adopt P and N and alternatives to initiate an analysis

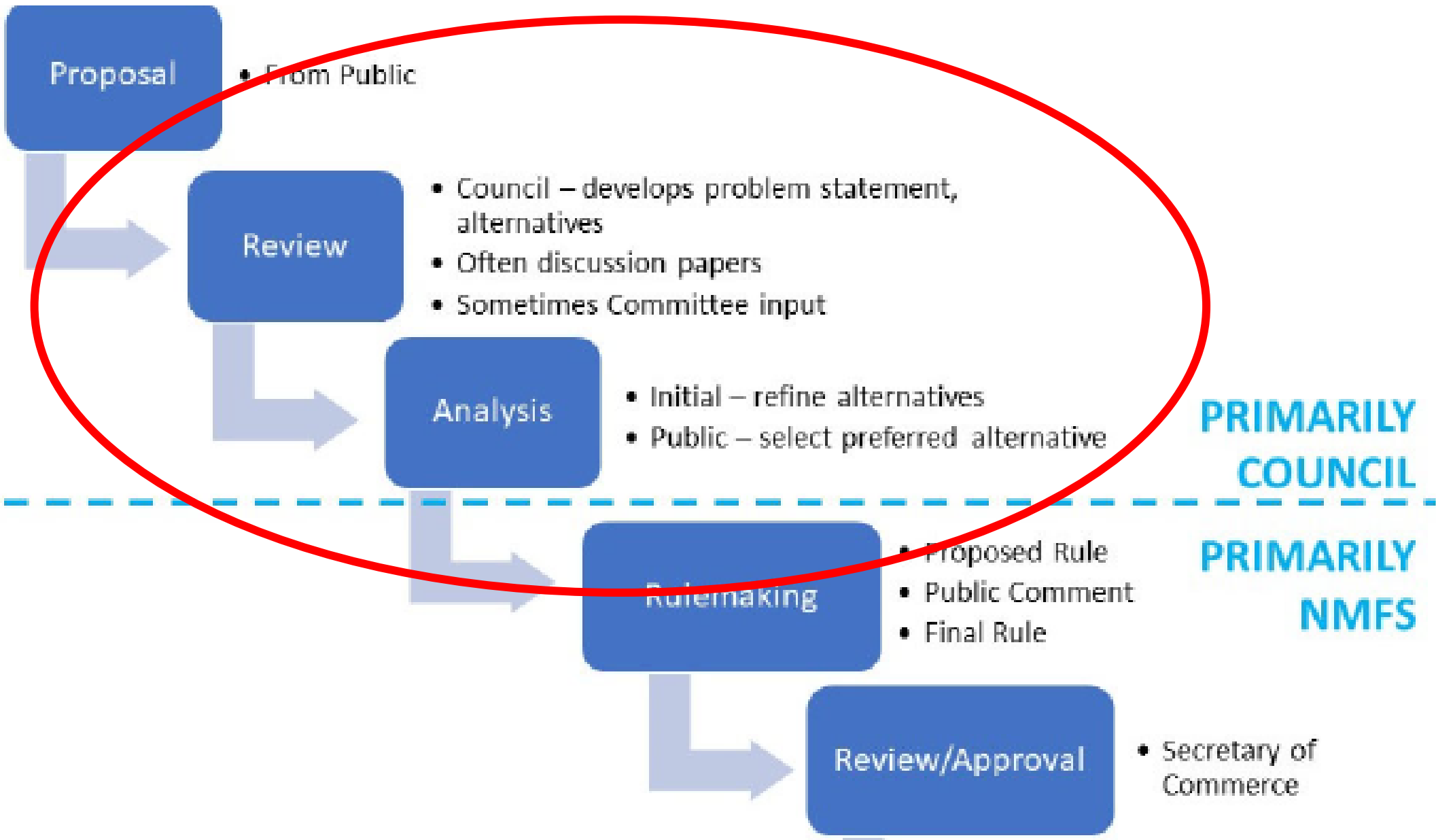
## April 2023



Approximately 2 years



Approximately 2 years



## Additional Resources:

North Pacific Fishery Management Council:

<https://www.npfmc.org/>

National Oceanic and Atmospheric Administration, National Marine Fisheries Service:

<https://www.fisheries.noaa.gov/region/alaska>

National Oceanic and Atmospheric Administration, Alaska Fisheries Science Center:

<https://www.fisheries.noaa.gov/region/alaska>

Alaska Department of Fish and Game:

<https://www.adfg.alaska.gov/index.cfm?adfg=fishing.main>

U.S. Regional Fishery Management Councils:

[www.fisherycouncils.org](http://www.fisherycouncils.org)

International Pacific Halibut Commission:

<https://www.iphc.int/>

Thank you!

Questions?



North Pacific Fishery Management Council

1007 West Third, Suite 400

Anchorage, Alaska 99501

Phone: (907) 271-2809