



**NOAA**  
**FISHERIES**

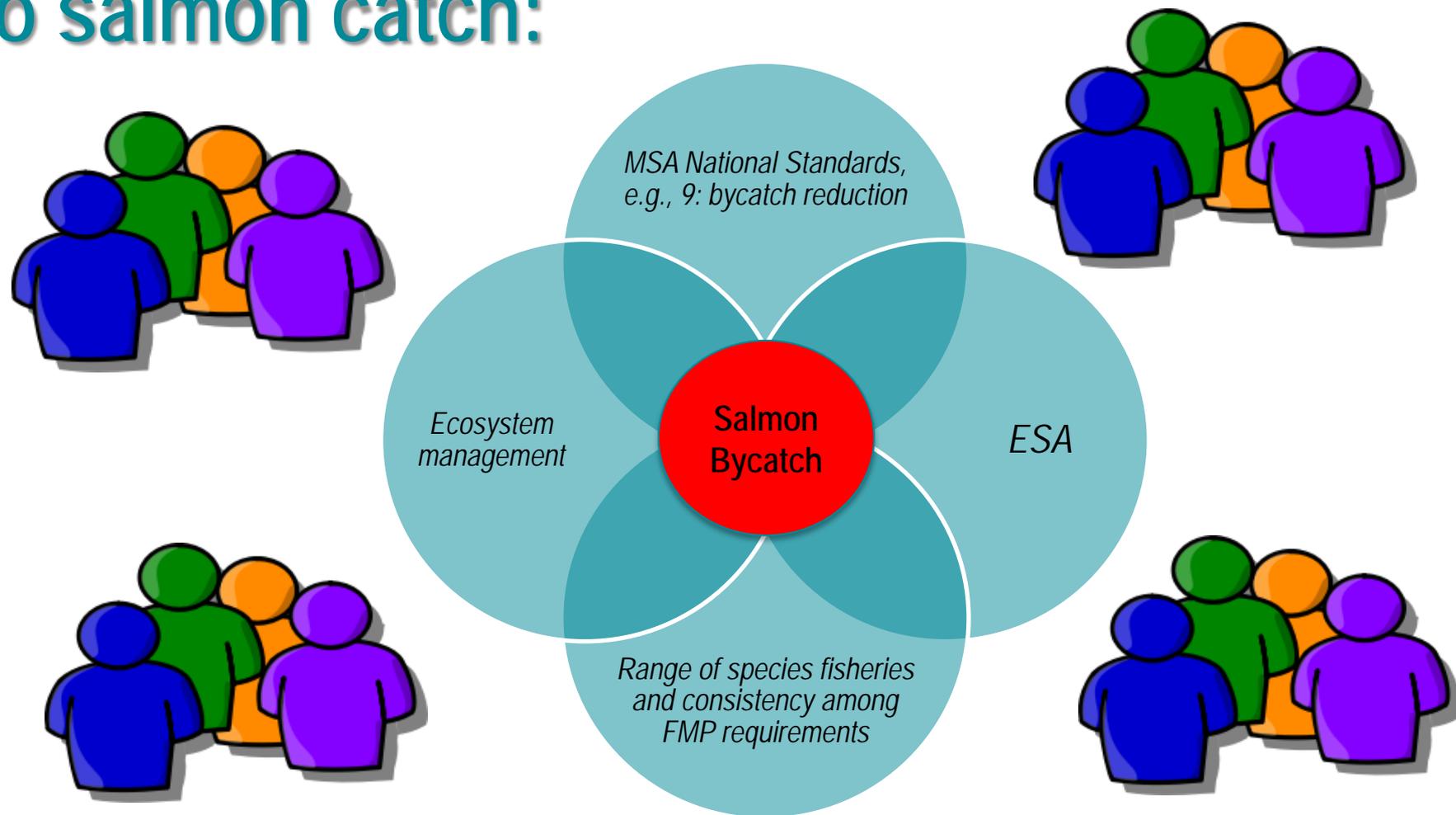
West  
Coast  
Region

# Salmon Bycatch in the Pacific Coast Groundfish Fisheries

June 12, 2015



# ESA is only one of several issues related to salmon catch:





# Council Requests, April 2015:

- Basis of current ESA consultation re-initiation
- Basis of consultation Incidental Take Statement take amounts
- Sampling overview
- Level and pattern of salmon bycatch
- Bycatch of ESA listed salmon populations
- Stock composition



# Why is current re-initiation required?

- Whiting ESA ITS take exceeded in 2014
- Changes in groundfish fishery management expected to change the action
- Significant new information since 2006 opinion

# NMFS needs Council input on:

- Expected salmon bycatch
- Expected distribution of salmon bycatch among groundfish sectors, particularly Chinook
- Measures that minimize salmon bycatch in groundfish fisheries
- Necessary to define the proposed action, provide robust consultation, allow flexibility



Important

*.....The following information reflects what has occurred, not necessarily what will occur..*

## Likely to reduce bycatch or increase data integrity

- Area-Management Restrictions
  - Restrict targeted whiting harvest shoreward of 100 fathoms in the Eureka catch area year round
  - At-sea whiting fishery north of 42°00' N. lat. no earlier than May 15.
  - At-sea processing/night fishing prohibited south of 42°00' N. lat.
  - Whiting fishing prohibited within the nearshore Klamath and Columbia River Salmon Conservation Zones.
  - Shore-based fishing allowed beginning April 1 between 40°30' and 42°00' N. lat., only 5% of the shore-based allocation allowed prior to the opening of the main shore-based fishery on June 15.
- Gear
  - Use of selective flatfish gear
  - Restrict use of large footrope gear?
- EFH designations?
- Increase VMS Ping Rates?

## Likely to increase bycatch or reduce data integrity

- Change Area-Management Restrictions?
  - Allow at-sea processing south of 42° N. lat.
  - Year round midwater trawl season coastwide
  - Reduce or eliminating trawl RCAs
- Increased access to rebuilt species? (2017-2018 Harvest Specifications)
- Changes in Gear?
  - Elimination of the selective flatfish gear requirement
  - Allow large footrope gear shoreward of the RCAs
  - Mesh size reductions
- Electronic Monitoring for IFQ vessels?





# Basis of Consultation Authorized Take

- Whiting and bottom trawl fisheries have been dominant sectors
- Differences between the fisheries = separate ITS amounts
- Consultation authorized take established under the 1992 consultation
  - Whiting take: 0.05 Chinook/mt X US OY 220,000 mt whiting = 11,000 Chinook
  - Bottom trawl take:
    - (1985-1990 trawl effort < 300fm) X (Chinook bycatch rates by area) = 6,000 and 9,000 Chinook/year
    - 5,000 to 8,000 off Washington/northern Oregon + 1,000 Chinook off southern Oregon/California.
    - Average bottom trawl tow hours (2011 to 2013) are 47-52 percent of what occurred in 1987 but could increase if percentages of IFQ species increases.
- Accommodates variable nature of fishery, low bycatch of ESA stocks

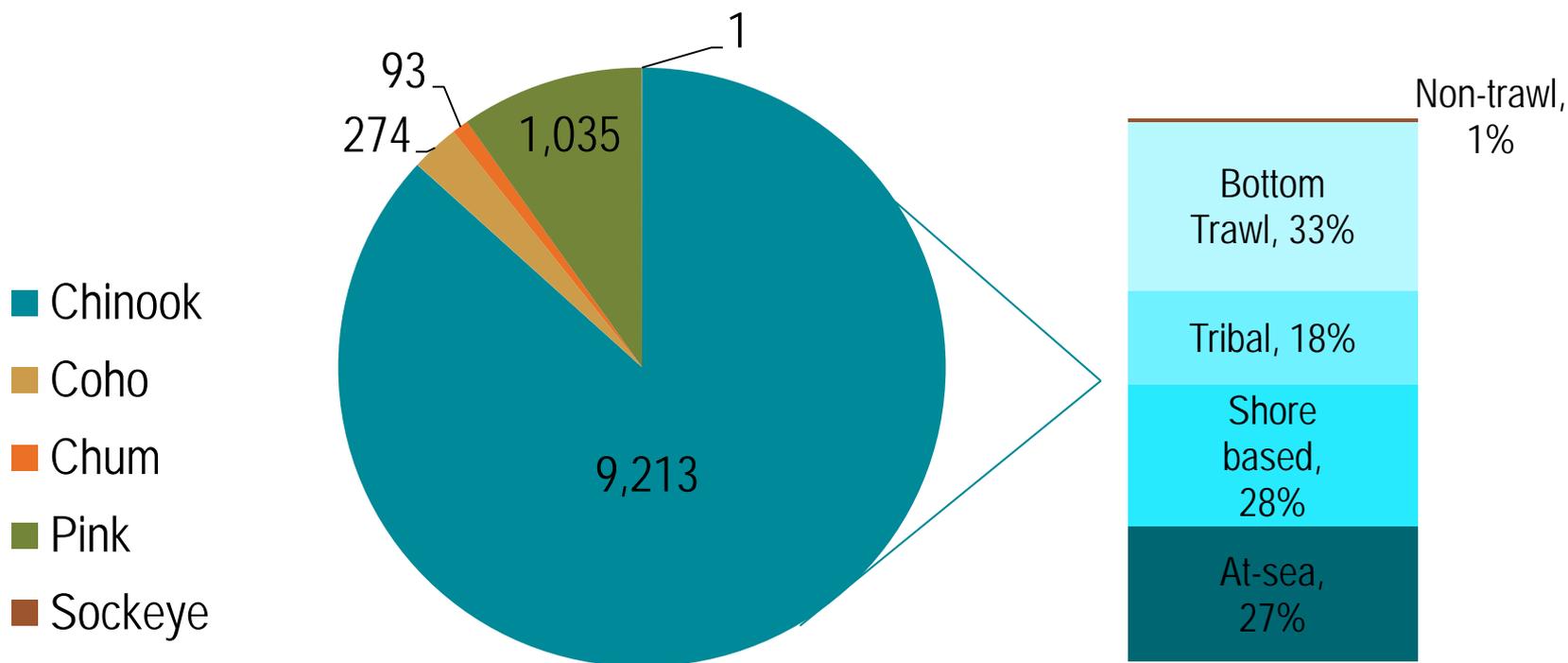
# Sampling of fishery and availability of data

	At-sea whiting *	Shorebased IFQ		OA/ LE fixed gear	Tribal	Recreational
		Shorebased whiting *	All Non-whiting *			
Coverage (observers)	100%	~100%	~100%	4-22%	More Information needed	None
Data sampled	Catch, Biological, Composition	Catch, Biological, Composition	Catch, Biological, Composition	Catch, Biological, Composition		State survey - catch data and effort
Data available Inseason?	Yes, within hours	Yes, landed catch only, within days	No,	No,	Yes, Whiting fishery only within days	Not available
Final post	months	1 year	1 year	>1 year after	months	

\* Electronic monitoring available under EFPs in place of 100% observer coverage beginning 2015

# Salmon Bycatch in Groundfish Fishery

## Average Bycatch/year by Salmon Species: 2002-2014



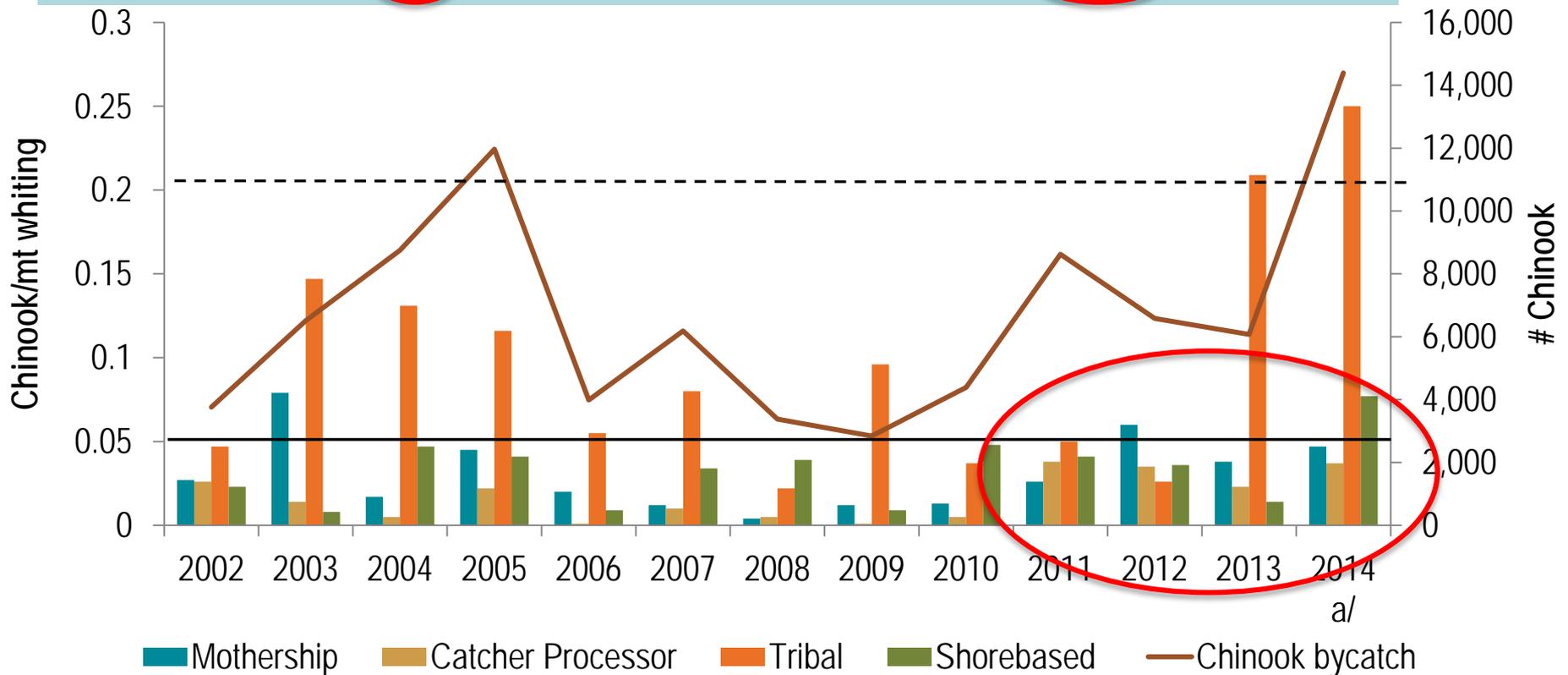
bottom trawl 4% of Chinook bycatch since 2009

# Trends in Chinook Bycatch in Groundfish Fishery



# Two Consultation requirements for Whiting Fishery: Chinook Catch and Chinook Bycatch Rate

Whiting ITS take  $0.05$  Chinook/mt X US OY 220,000 mt whiting = 11,000 Chinook

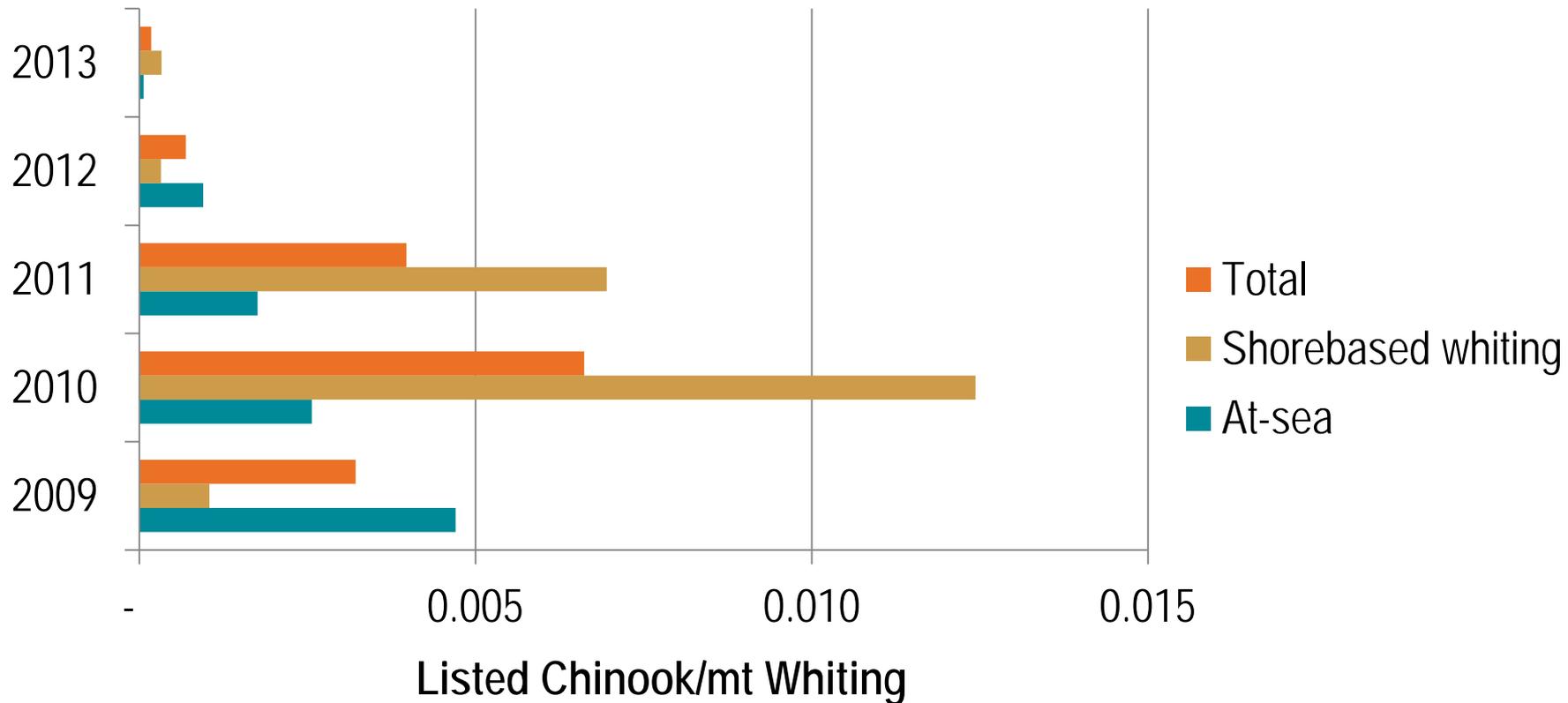


a/

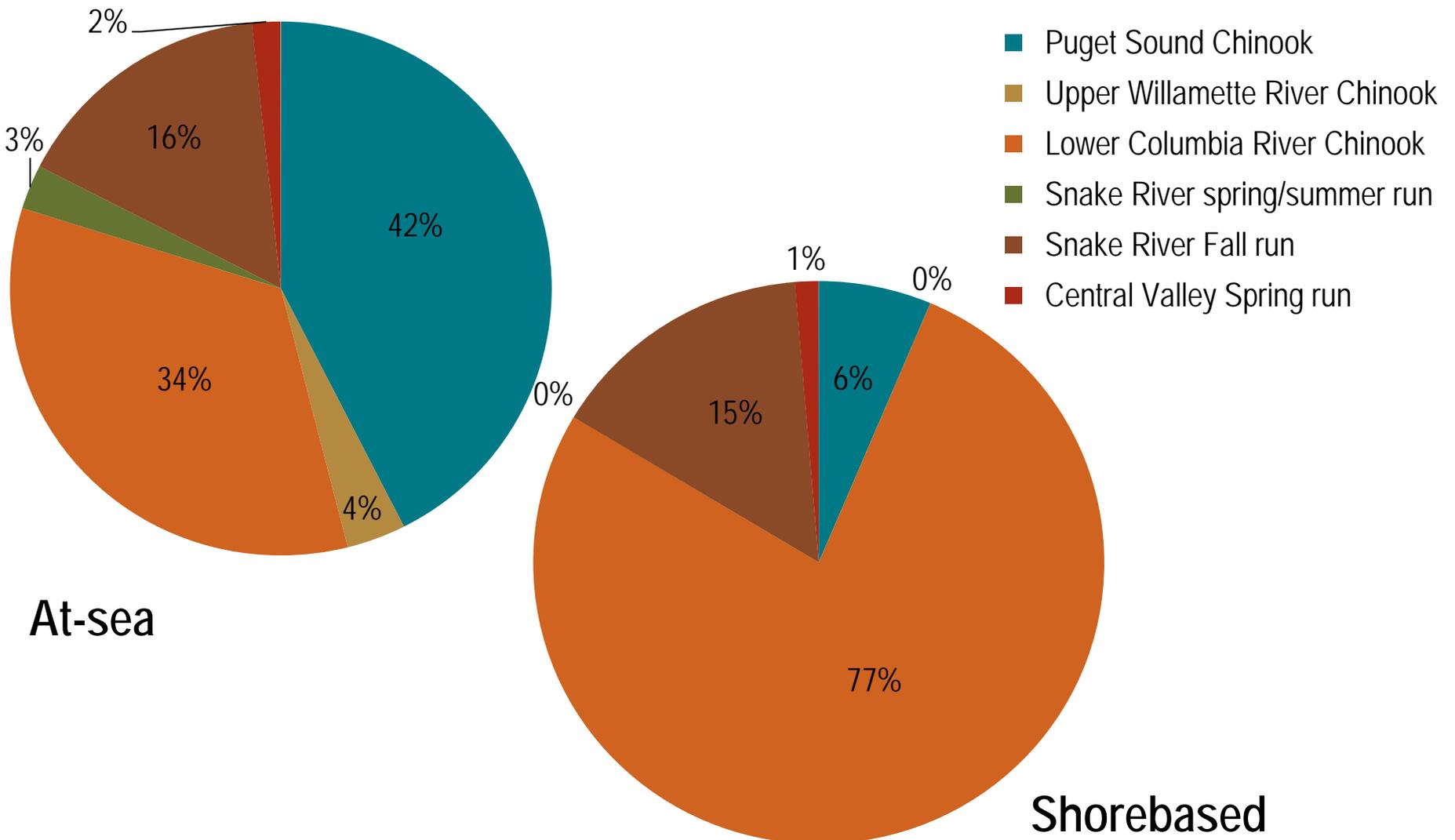
a/ preliminary data

# Bycatch of ESA listed Chinook in the whiting fishery is low

- 0.002 listed Chinook/mt whiting
- 0.07 listed Chinook/Chinook caught
- Bottom trawl: few recoveries

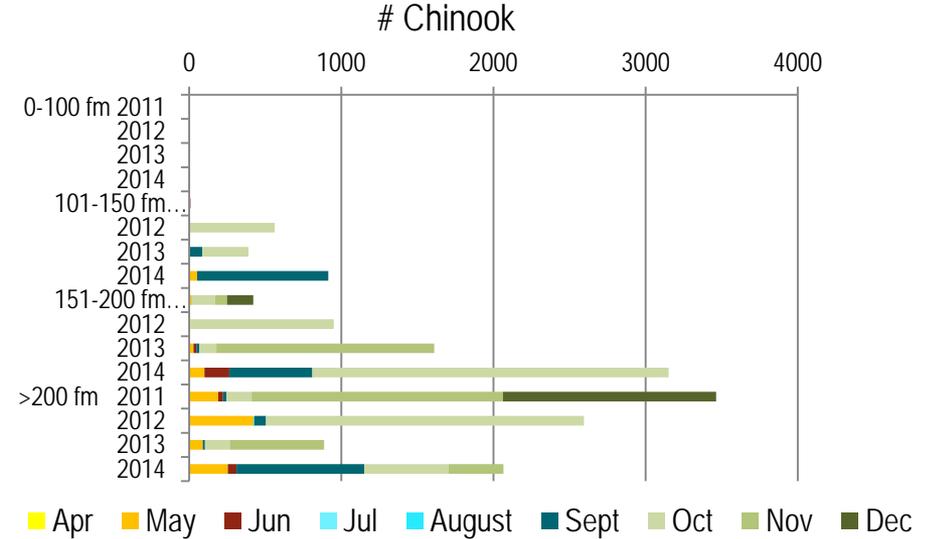
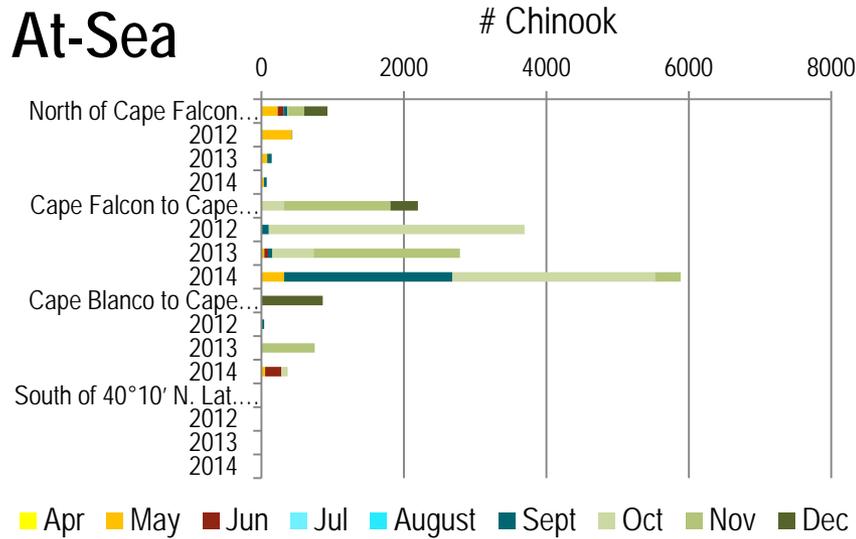


# Composition of ESA listed Chinook Bycatch

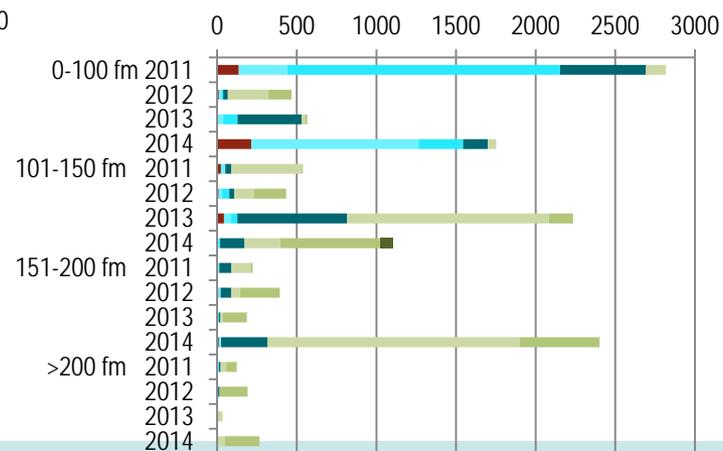
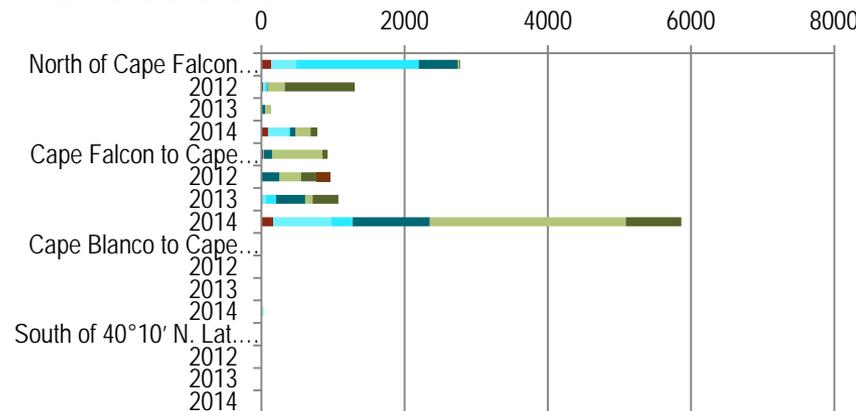


# Patterns: Seasonality

## At-Sea

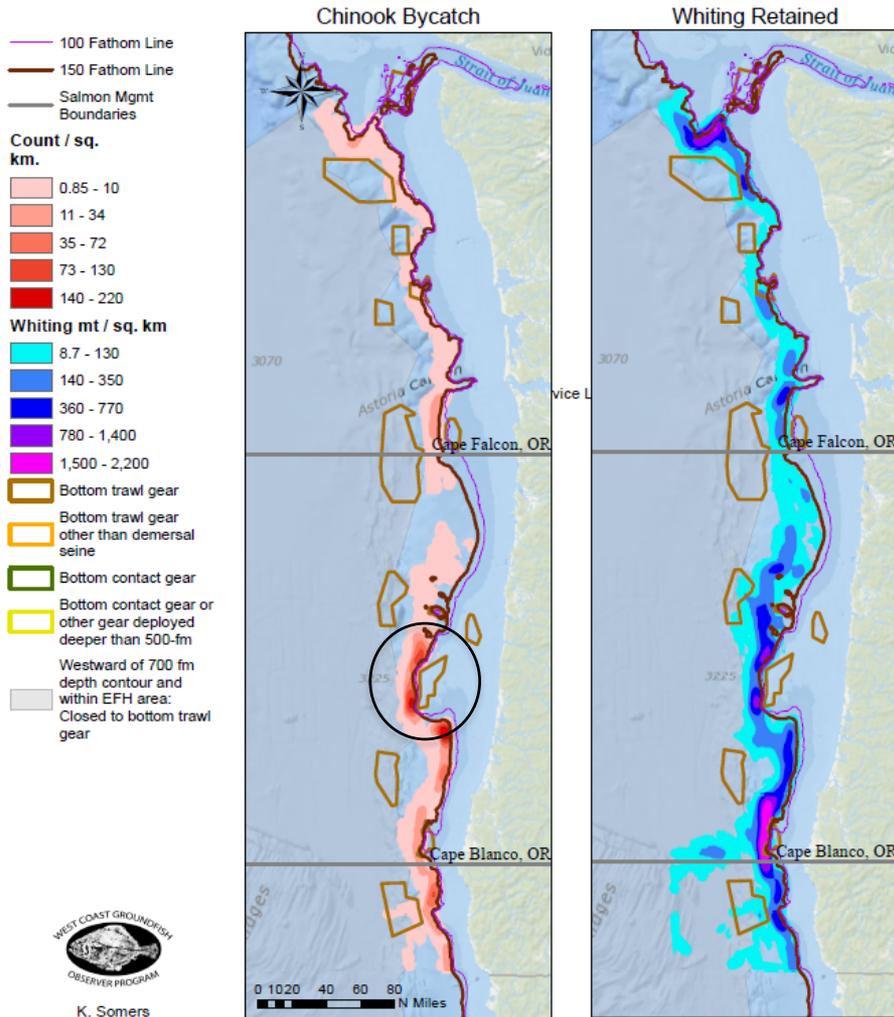


## Shorebased

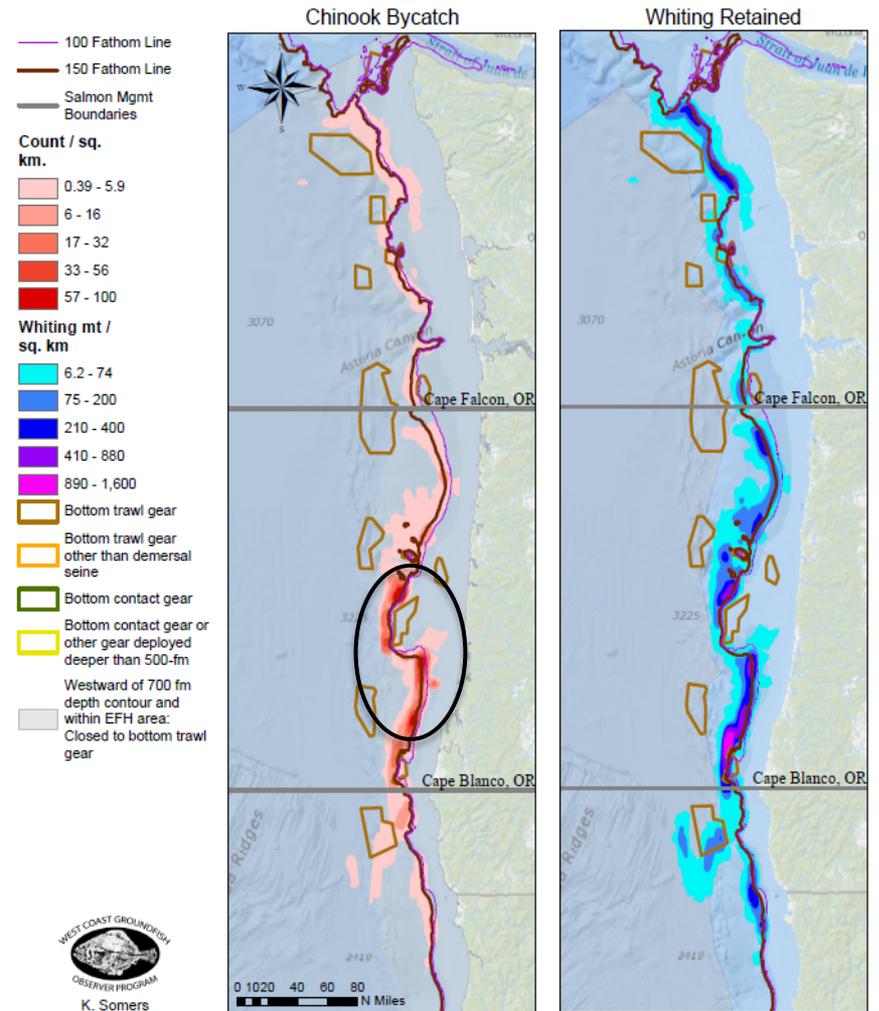


# Patterns: Latitude and depth

At-Sea Pacific Whiting Catcher/Processor 2011-2014

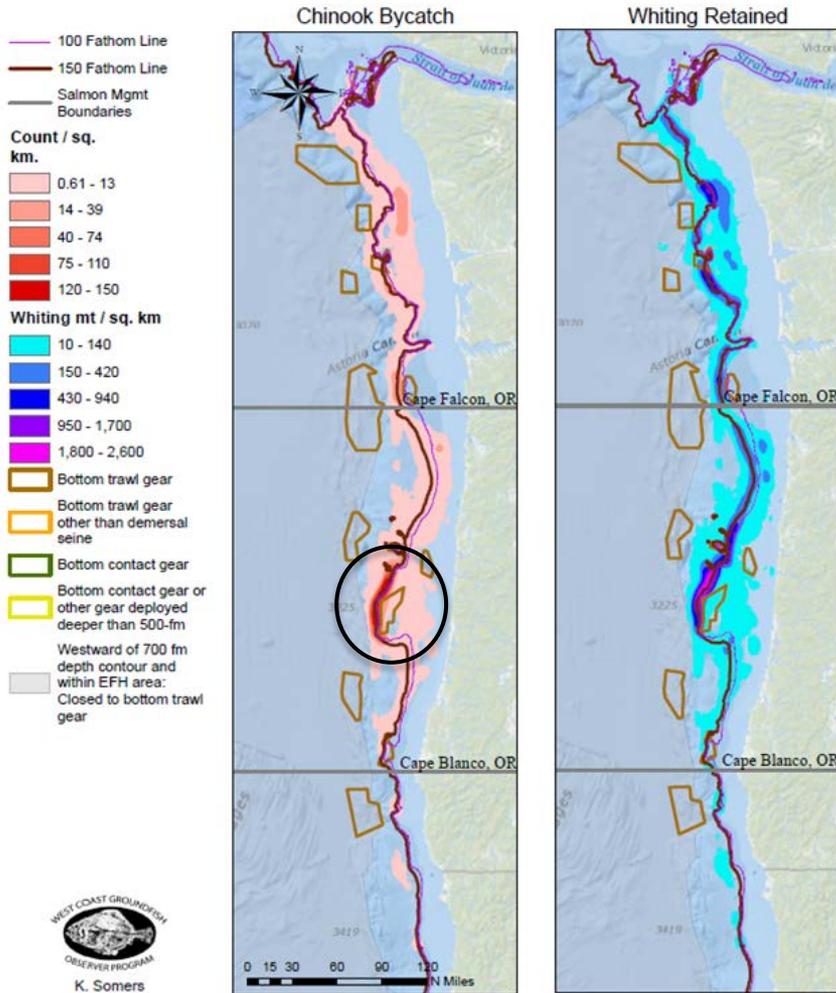


At-Sea Pacific Whiting Mothership 2011-2014

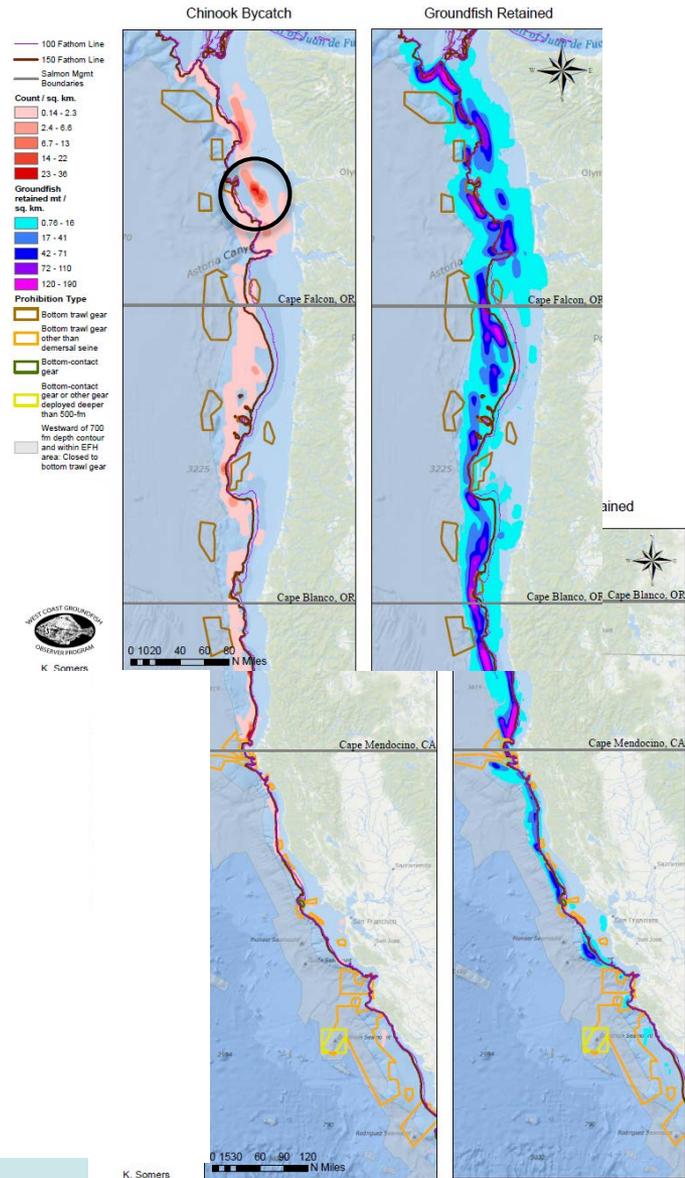


# Patterns: Latitude and Depth

IFQ Shoreside Pacific Whiting Midwater Trawl 2011- 014



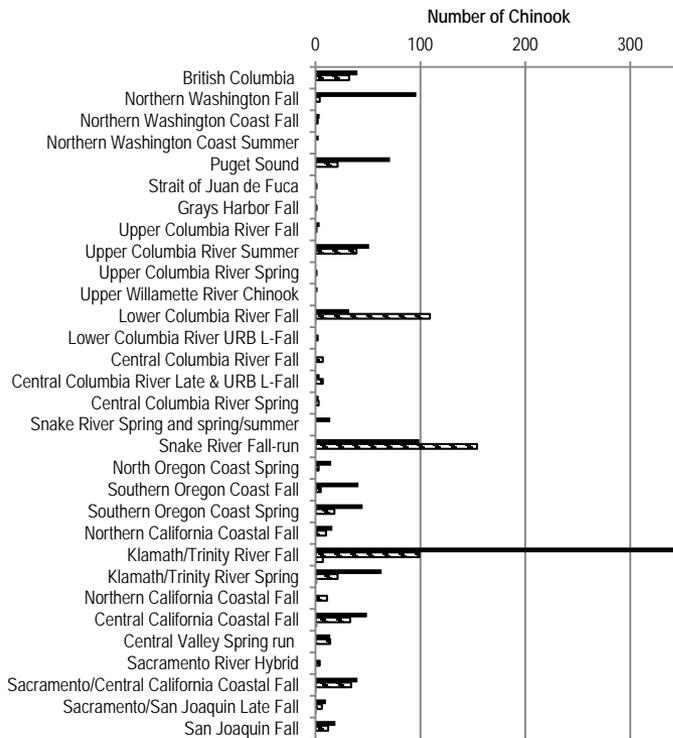
IFQ Bottom Trawl WA/OR 2011 - 2014



# Chinook stock composition: CWT and GSI

- ✓ Differences among sectors
- ✓ Variability in time and area
  - ❖ Southern stocks earlier
  - ❖ Generally aligned with area

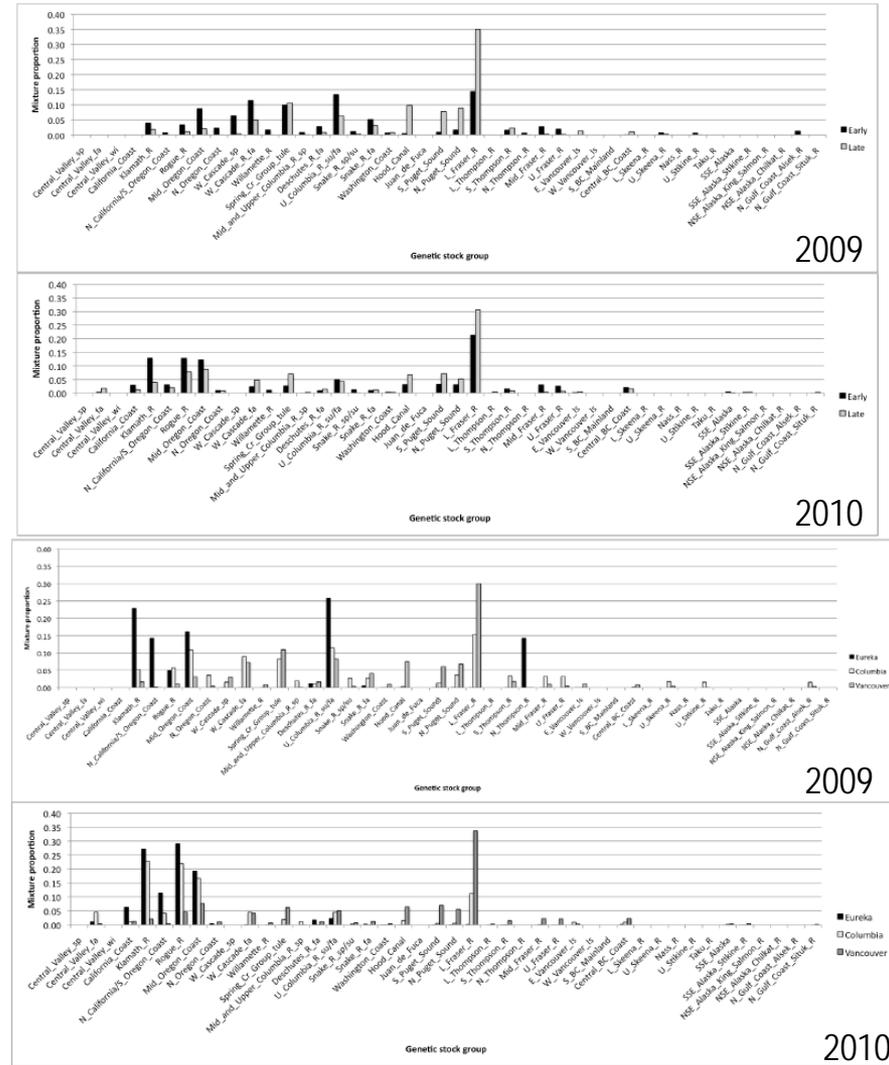
Observed CWT Recoveries (2009-2013)



■ At-sea Pacific Whiting Fisheries a/   ■ Pacific Whiting Shorebased IFO   ■ Bottom Trawl

\*Preliminary analysis

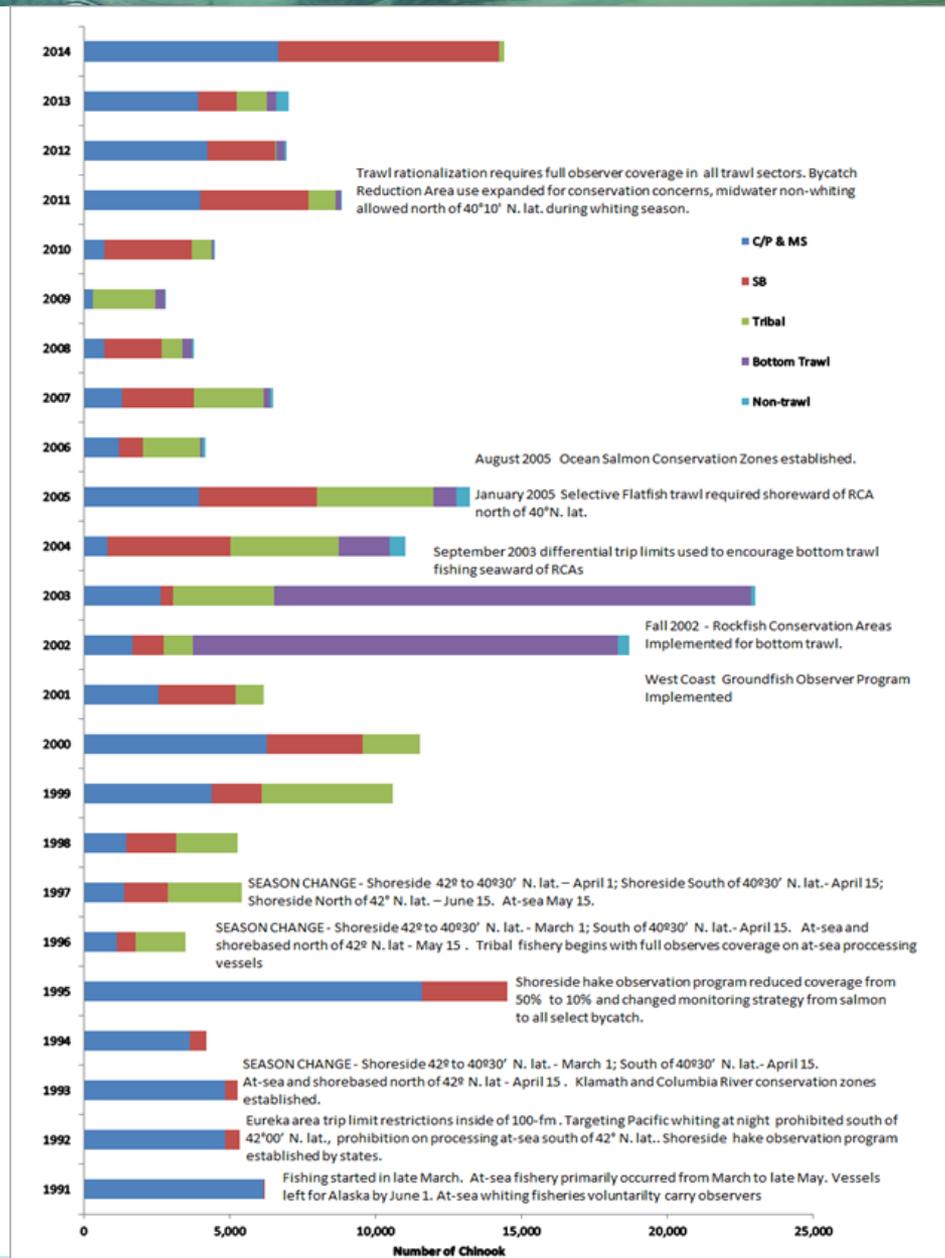
Genetics (At Sea Whiting 2009-2010)



## In summary.....

- Chinook bycatch generally low, but patterns are likely to change. Consultation must consider what changes are likely to occur.
- You have a lot of data, catch patterns and fishery history in front of you that will be helpful to develop tools and management measures to minimize bycatch as the fishery evolves.

Successful history  
of bycatch  
reduction.....  
.....where will the  
fishery go from  
here?



# Next Steps for NMFS



- **Further analysis:**

- 2011-2013 GSI
- Compare CWT and GSI results and refine
- Additional data and analysis for bottom trawl

- **Draft Biological Opinion**

- Finalize description of the Action based on Council input
- Incorporate additional information and analysis
- Complete draft biological opinion: ~4 months after receiving final recommendations through Council process
- Brief and receive input from Council on draft biological opinion
- Finalize biological opinion through NMFS review, NOAA General Counsel, and any requested additional Council engagement

# NMFS needs Council input on:

How will expected salmon bycatch change?



Will the distribution of salmon bycatch among groundfish sectors change? How?



What is the best way to structure the consultation for longevity?

Additional or different measures to minimize salmon bycatch in groundfish fisheries that would change current assessment?