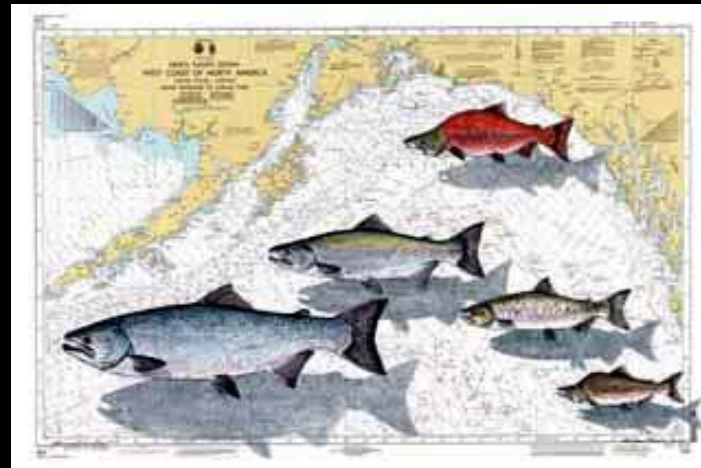


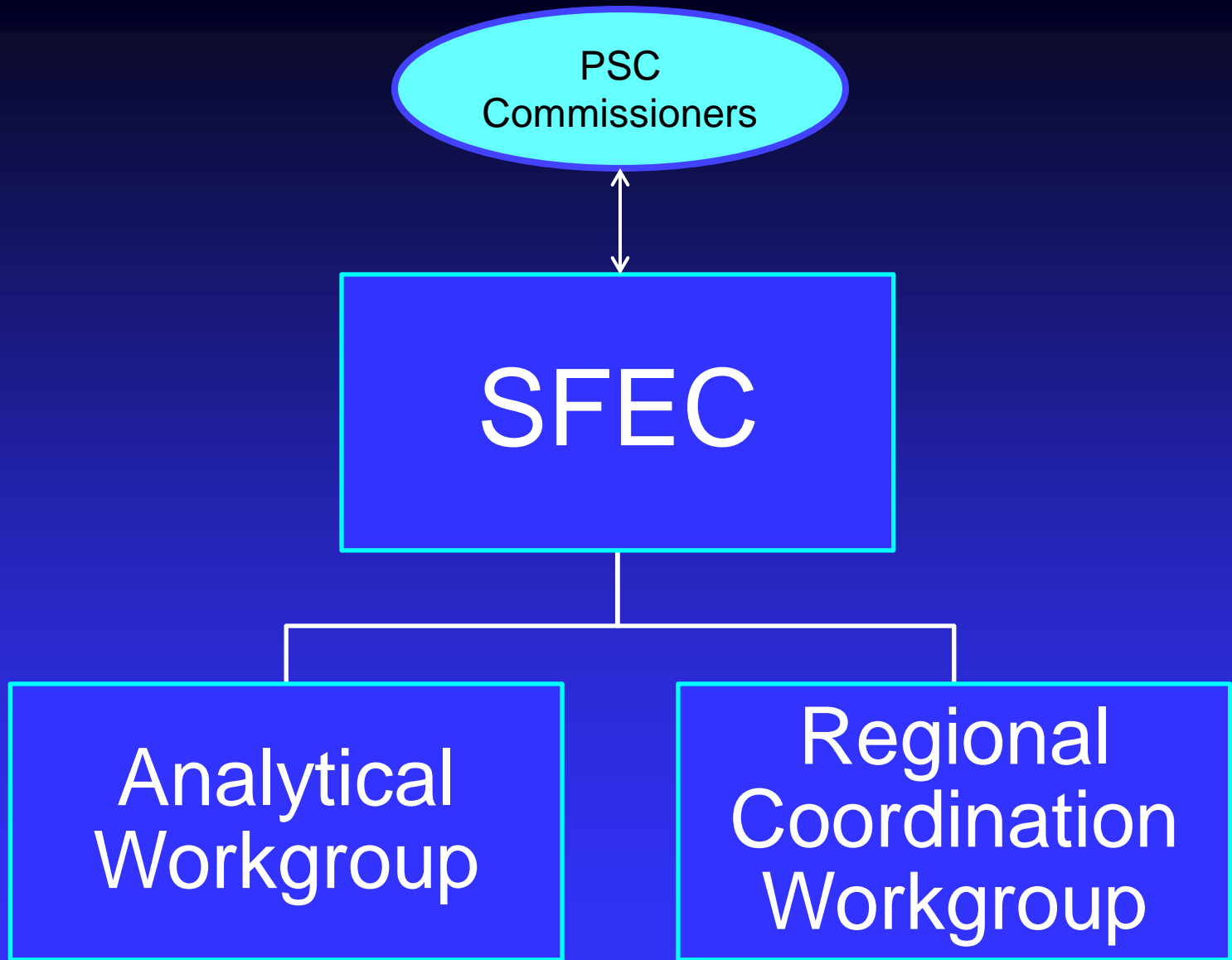
# PSC - SELECTIVE FISHERY EVALUATION COMMITTEE

## 2014 UPDATE TO MARK COMMITTEE



# Primary Duties of SFEC

- Clearinghouse for coordination and reporting on MM and MSF programs
- Provide advice to the PSC
- Develop analytical tools
- Assess and monitor the cumulative impacts of MSFs on stocks of concern to the PSC



# 2014 Membership of the AWG

## Canada

Robert Houtman<sup>a b</sup>

Arlene Tompkins

Joel Sawada

<sup>a</sup> Co-Chairs of SFEC

<sup>b</sup> Co-Chairs of AWG

## U.S.

Marianna Alexandersdottir<sup>b</sup>,  
NWIFC

Gary Morishima<sup>a</sup>

Micki Varney, ODFW

Laurie Peterson, WDFW

Kris Ryding, WDFW

Ryan Lothrop, WDFW

Jonathan Carey, WDFW

?, NOAA

# Primary AWG Tasks

- Develop analytical tools
  - Evaluate potential impacts on the CWT program
  - Exploitation rates
  - Tagging rates
  - Sampling rates
- Annual Review of MSF Proposals
  - Provide advice to proponents regarding the design of MSFs and the conduct of sampling and monitoring programs

# 2014 Membership of the RCWG

## Canada

Cheryl Lynch\*, DFO

## U.S.

Ron Olson\*, NWIFC

George Nandor, PSMFC

Ron Josephson, ADFG

Marianne McClure, CRIFC

Mark Kimbel, WDFW

Carrie Cook-Tabor, USFWS

Ken Johnson, ODFW

\* Co-Chairs

# Primary RCWG Tasks

- SFEC Annual Review of MM Proposals
  - Determine potential impacts on sampling and tagging programs, and suggest modifications
- Annual Coordination Report
  - Documentation of MM, DIT, MSF, and CWT Sampling Activities
- Coordinate and report on continuing research on ETD and MM technologies

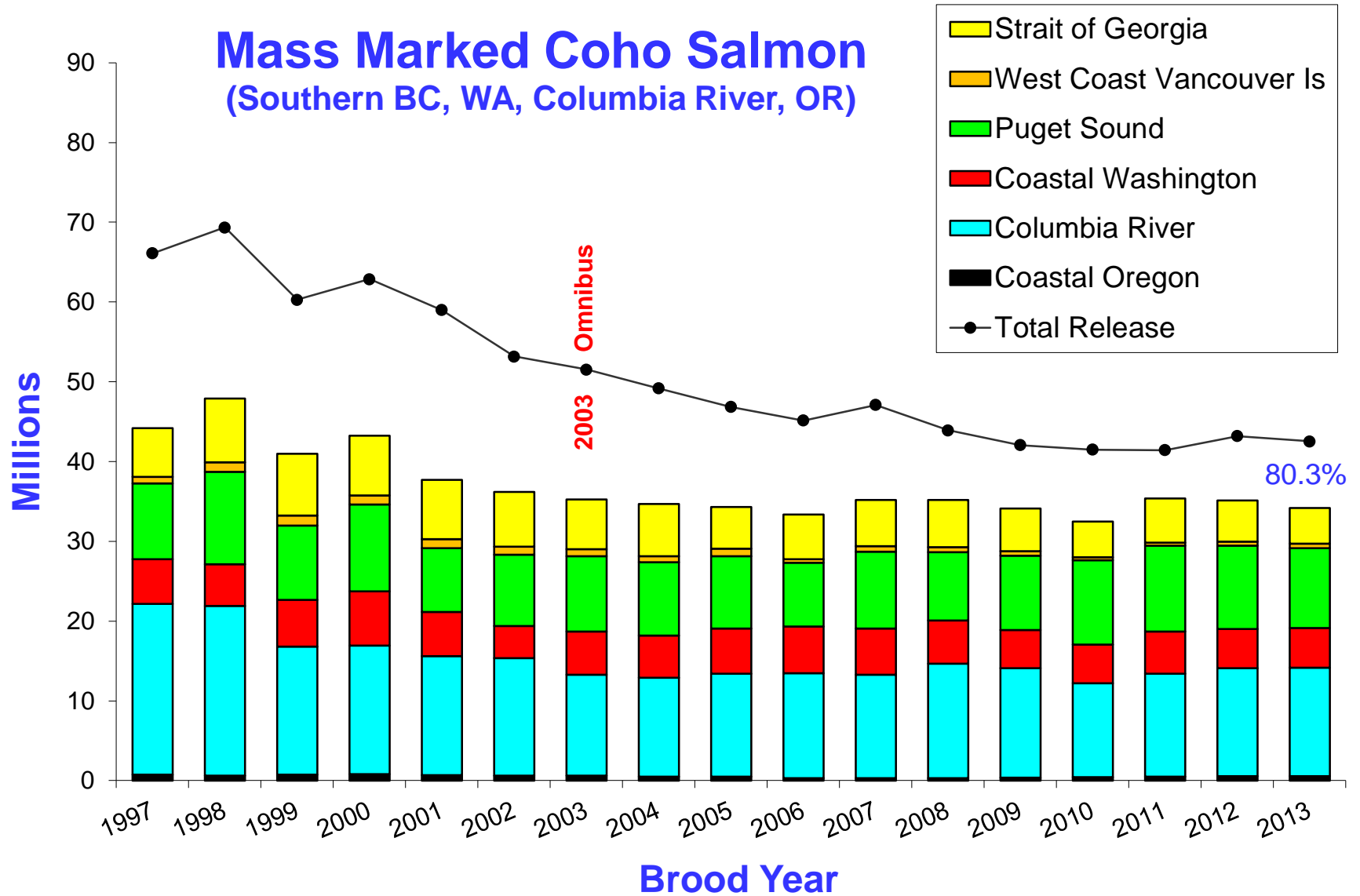
# Coho Mass Marking Proposals

Area	Agency	DIT Group	Mass Marking (millions)	
			2013	2014
Southern BC	CDFO	2	5.6	5.1
Puget Sound	WDFW/Tribes	6	10.2	9.8
	FWS	1	0.3	0.3
WA Coast	FWS	1?	0.7	0.7
	WDFW/Tribes	4	4.3	4.3
Columbia River	FWS	1	0.5	0.4
	WDFW	2	7.9	8.2
	ODFW	1	5.1	5.1
OR Coast	ODFW	-	0.5	0.5
	<b>Total</b>	<b>17 or 18</b>	<b>35.1</b>	<b>34.2</b>

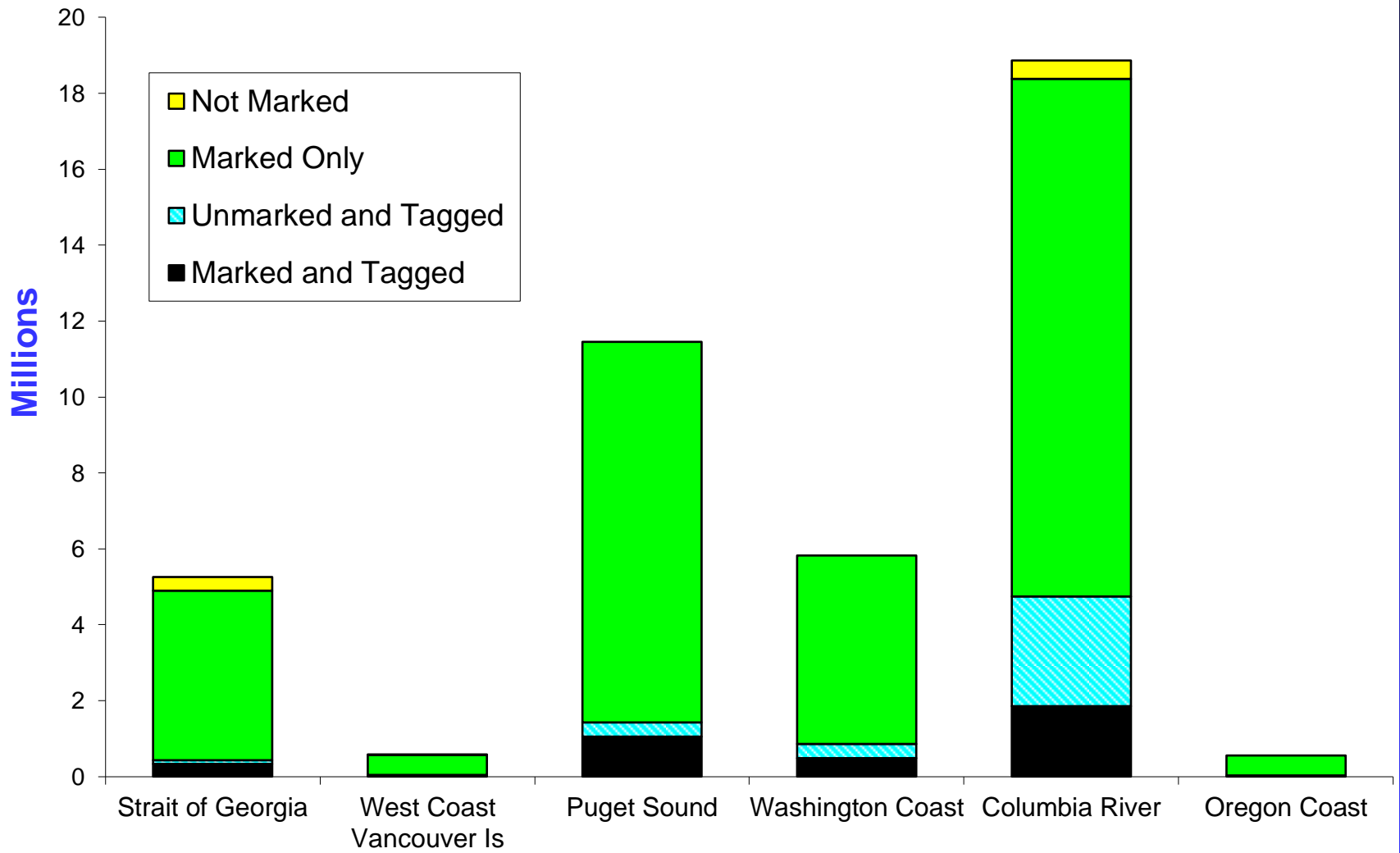


# Mass Marked Coho Salmon

(Southern BC, WA, Columbia River, OR)



## Brood Year 2013 Coho Marking Plans

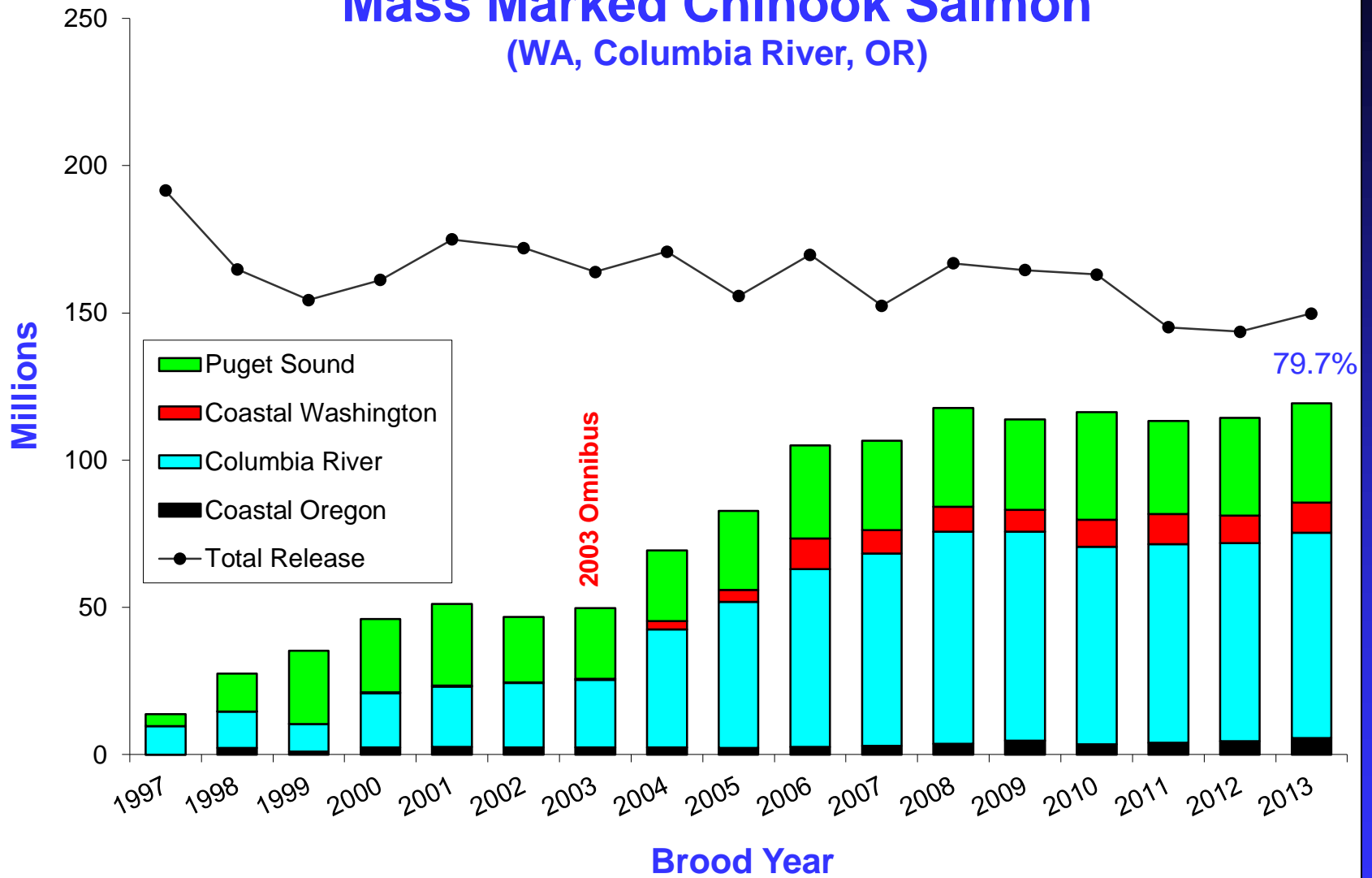


# Chinook Mass Marking Proposals

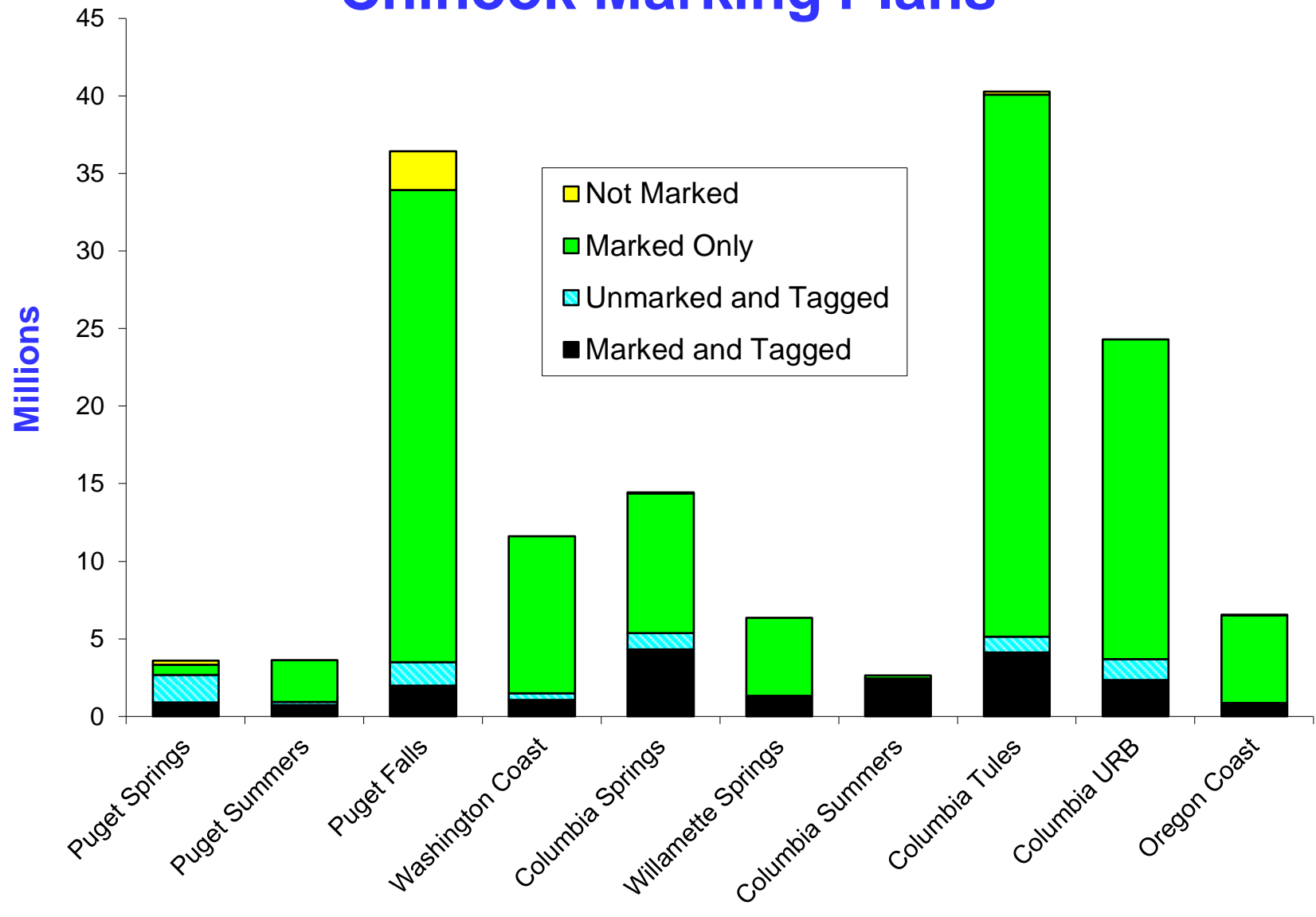
Area	Run	Agency	DIT Groups	Mass Marking (millions)	
				2013	2014
BC	L. Fraser R.	CDFO	4 <b>0</b>	-	-
Puget Sound	All	WDFW/Tribal	7	33.2	33.8
WA Coast	Spring/Summer	WDFW/Tribal	-	0.2	0.2
	Fall	FWS	-	1.0	<b>2.1 +</b>
		WDFW/Tribal	2	8.2	7.9
OR Coast	All	ODFW	-	4.5	<b>5.6 +</b>
Columbia Basin	Spring	ODFW	-	5.9	5.6
		WDFW/Tribal	1	3.6	3.4
		FWS	-	3.2	3.2
	Summer	FWS	-	0.2	0.2
	Fall Tule	FWS	1	11.2	11.2
		WDFW	-	16.7	<b>14.1 -</b>
		ODFW	1	7.9	<b>9.1 +</b>
	Fall URB	WDFW	1	8.8	<b>12.7 +</b>
		ODFW	-	4.3	<b>2.4 -</b>
		FWS	1	3.1	<b>5.6 +</b>
	Snake R. Fall	IDFG/ODFW	-	0.6	0.7
	Snake R. Spr.	All	-	2.0	1.8
<b>Total Chinook</b>			<b>14</b>	<b>114.4</b>	<b>119.4</b>

# Mass Marked Chinook Salmon

(WA, Columbia River, OR)



# Chinook Marking Plans

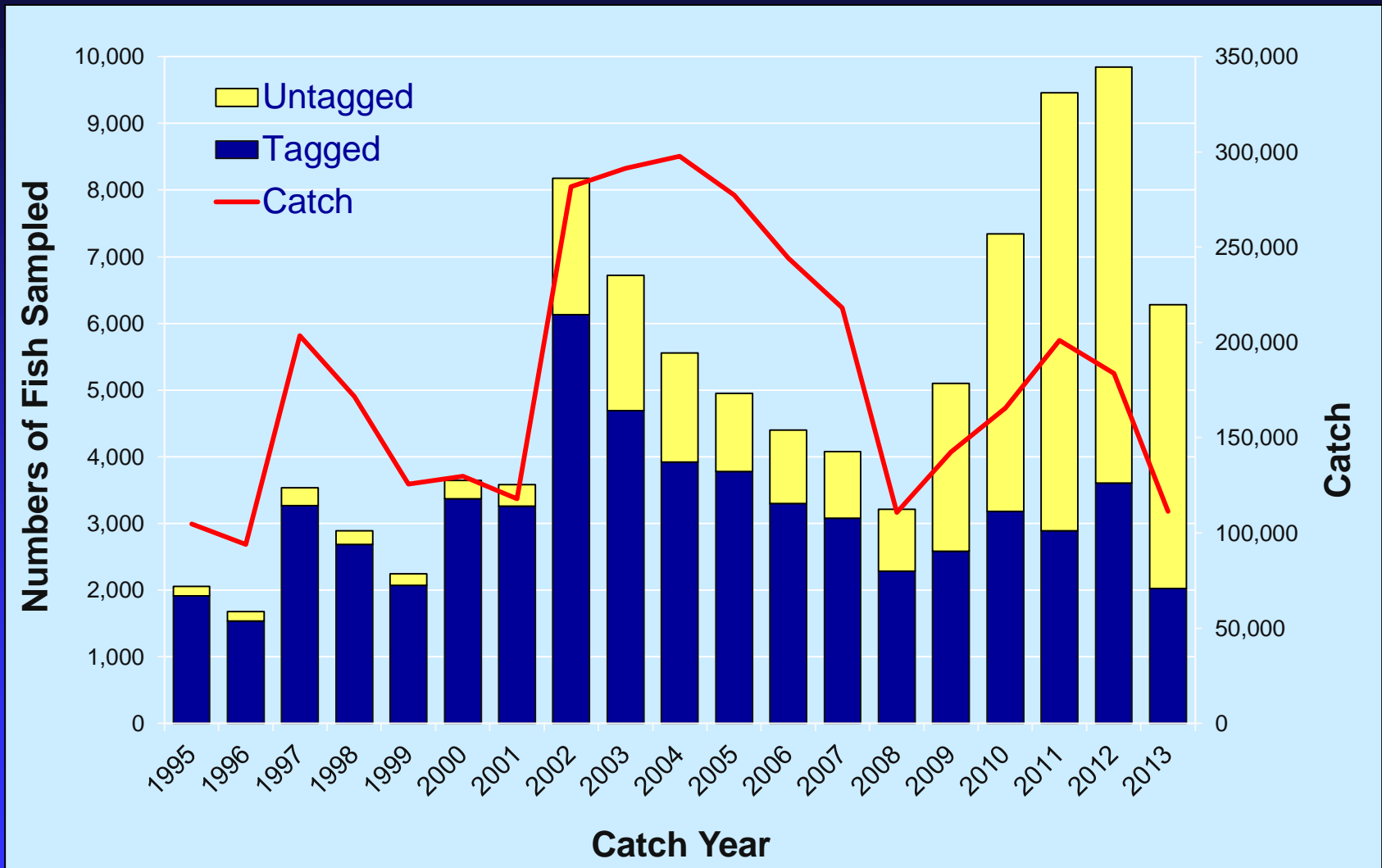


# Projected Sampling Encounters of 2011 Marked & Untagged Chinook

State/Province	# Fish Encountered
Alaska	10,221
British Columbia	19,000
California	188

~ reduced from previous year estimates ~

# Alaska's Chinook Troll Fishery



*Figure from Ron Josephson*

# Issues

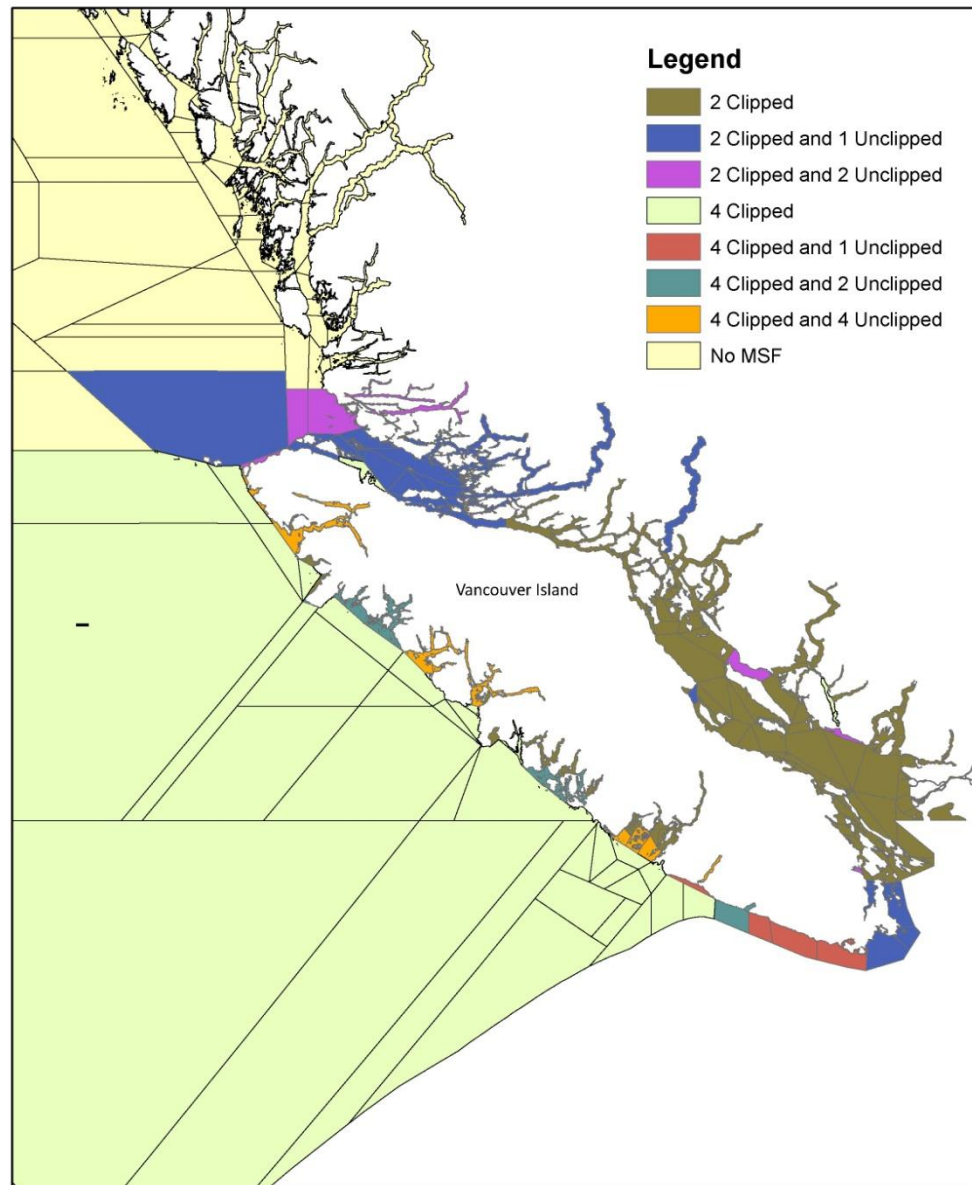
1. More DITs continue to be needed
  - Primarily in Columbia River and OR coast
2. Lack of complete coastwide electronic tag detection
  - Columbia River fall Chinook Fisheries
  - Escapement
3. Complete escapement reporting
  - BC



# Issues (continued)

4. Agencies not submitting post-season MSF reports
5. Inadequate modeling capacity to evaluate impacts of large-scale MSFs on Chinook
6. Mixed-bag regulations hinder ability to estimate mortalities in MSFs

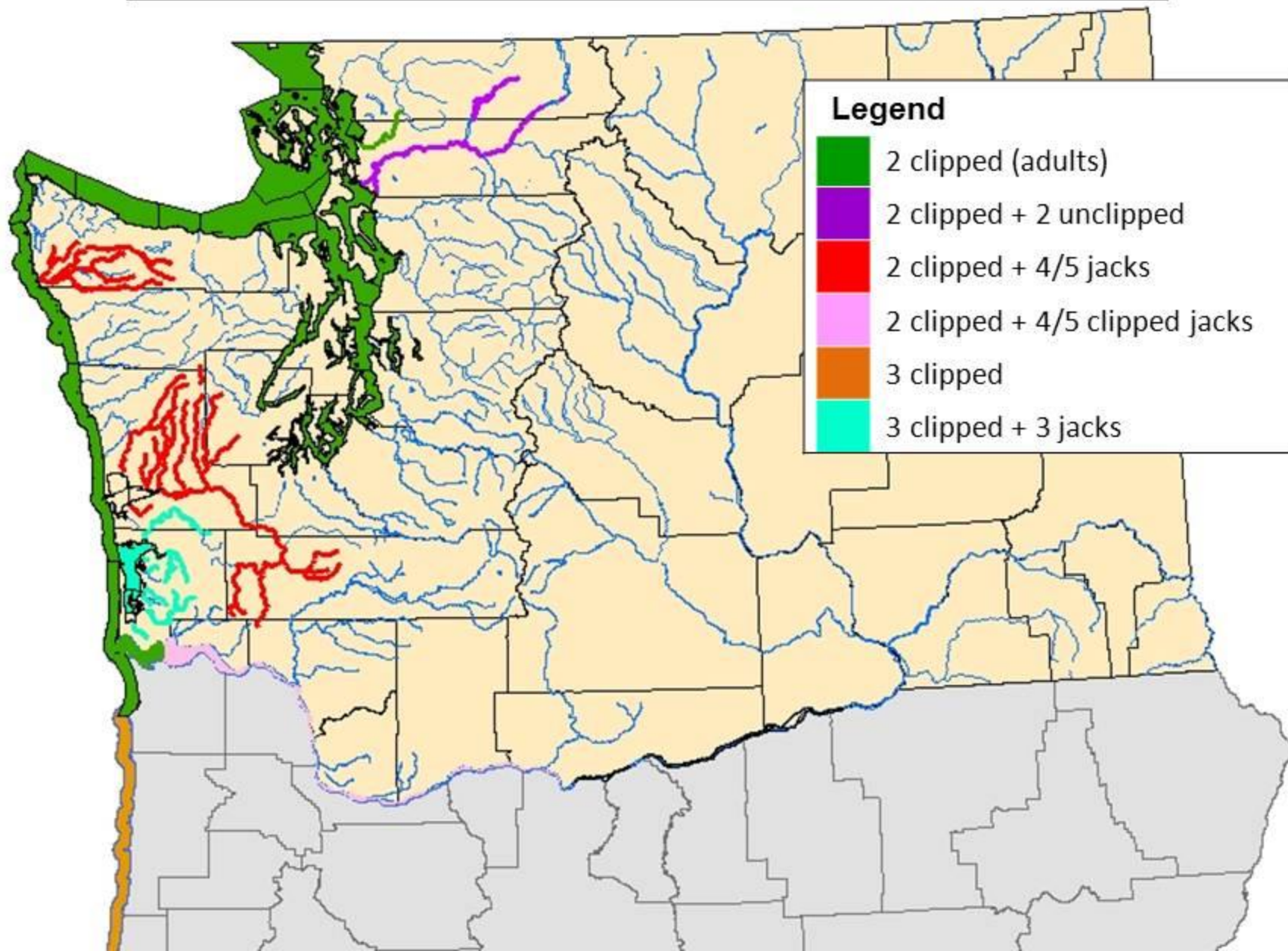
# Bag Limits for Southern British Columbia Coho Recreational Fishery by PFMA Sub Area



\* Bag limits may vary by date as well as by portion of subarea, but in this schematic, the maximum clipped and unclipped for any part of the year is displayed, for the entire subarea.

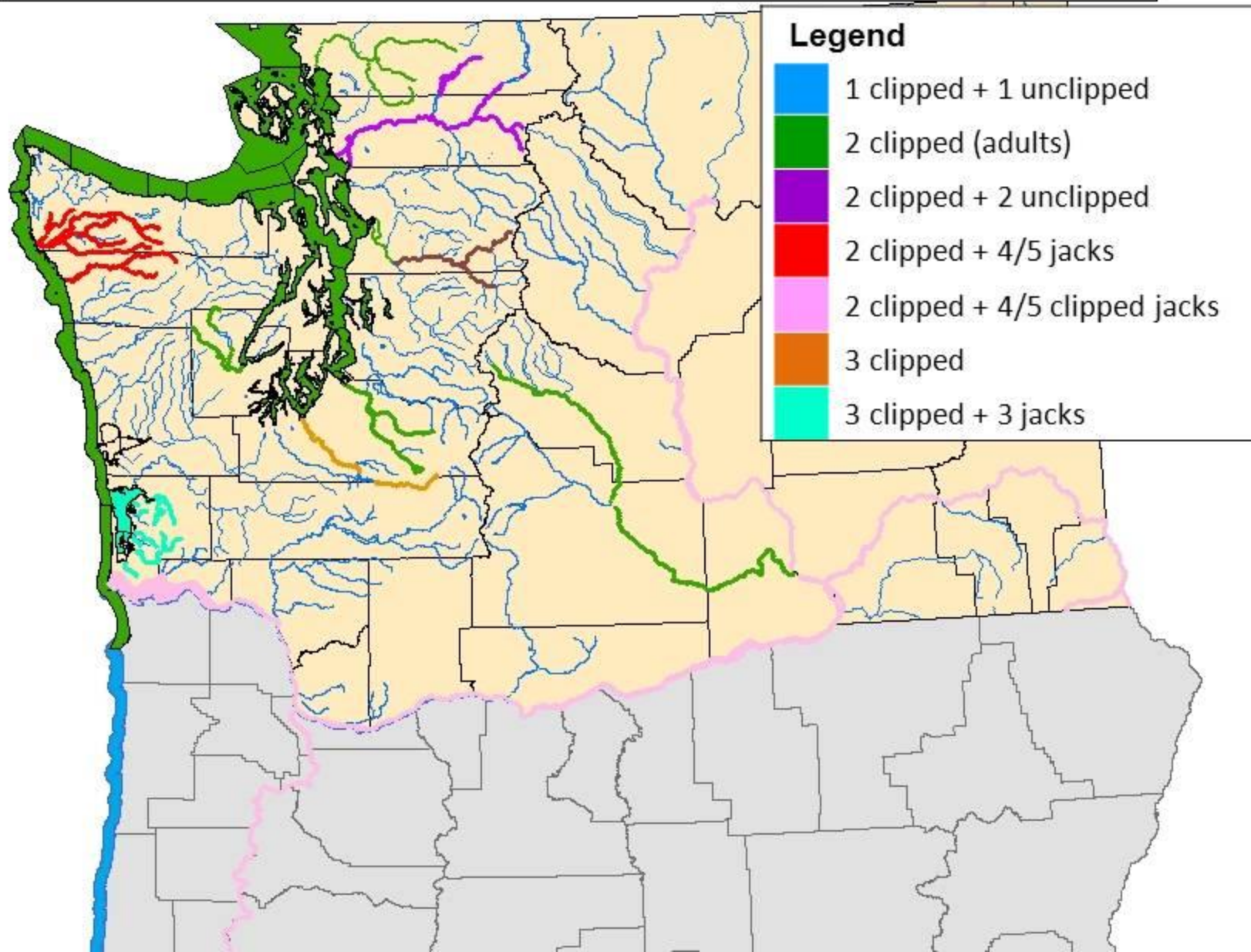
# Bag Limits Proposed for 2014

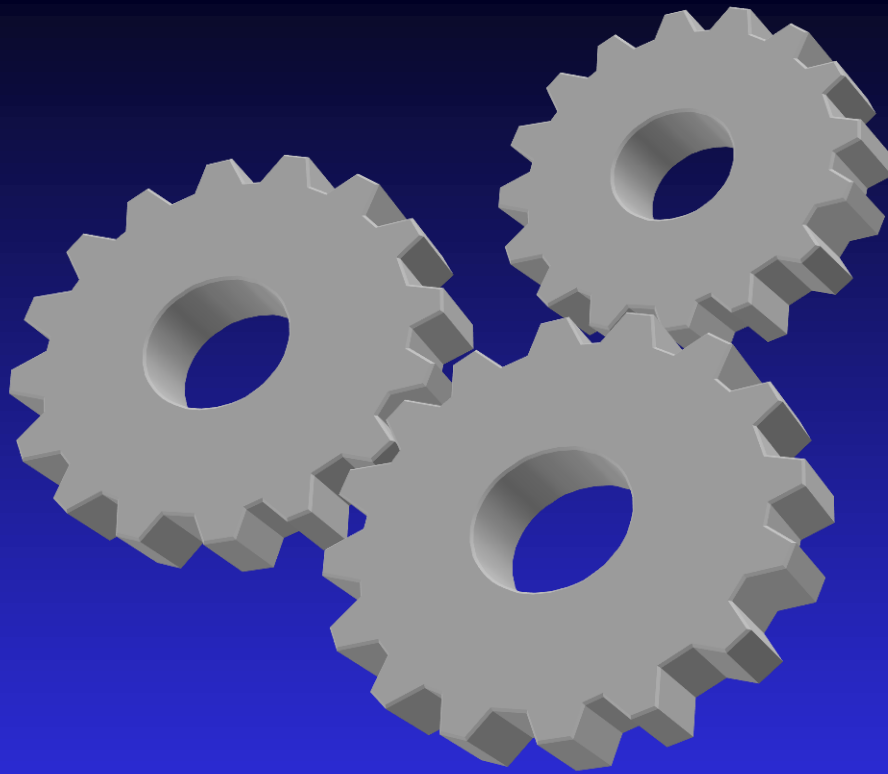
## Coho Recreational Mark-Selective Fisheries





## Bag Limits Proposed for 2014 Chinook Recreational Mark-Selective Fisheries



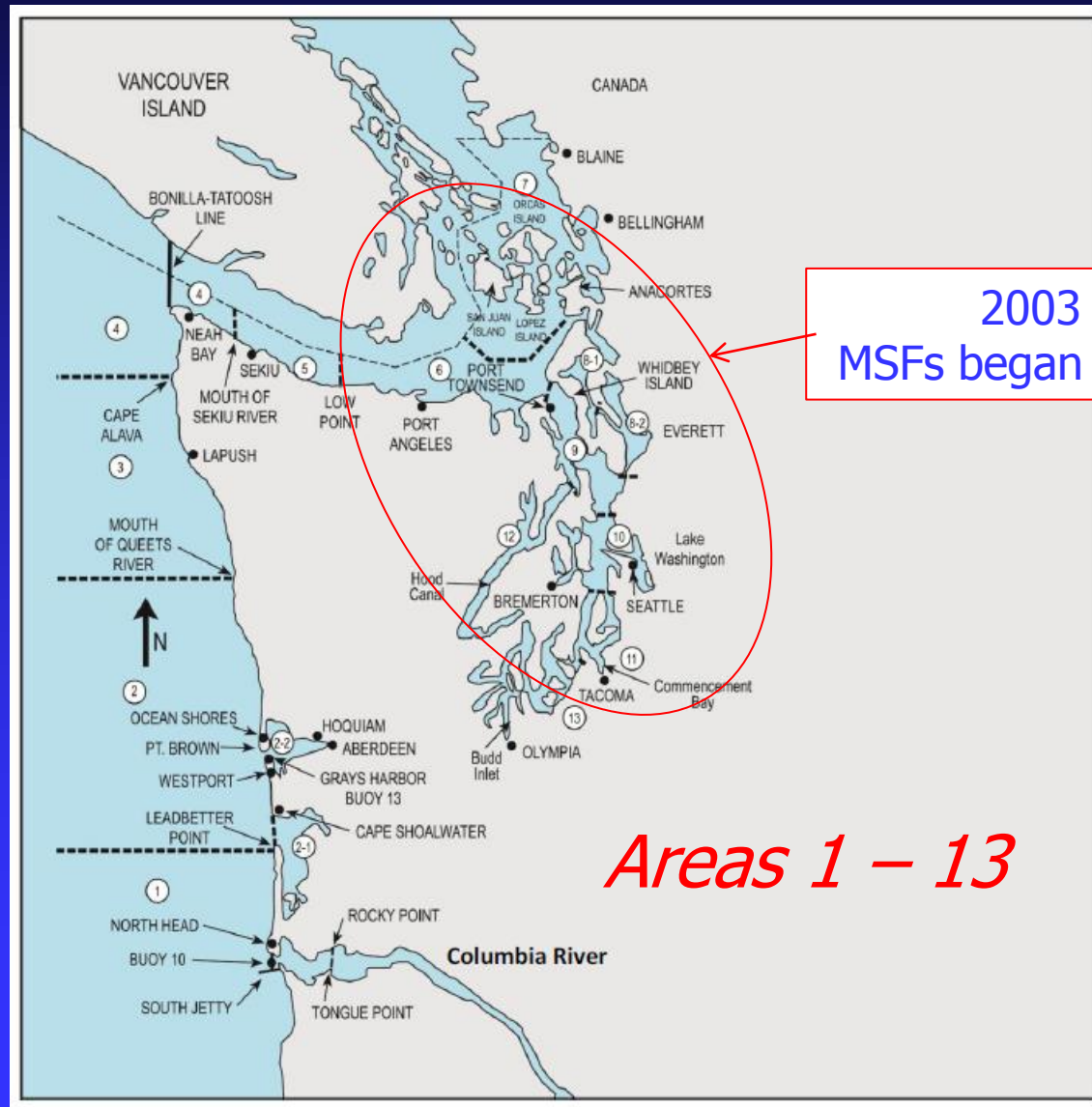


# Mark-Selective Fishery Evaluations

# Are MSFs Operating as Intended?

- Increased or consistent harvest opportunity
- Better brood stock management
- Unmarked mortalities are within established goals
- Regulations are clear
- Fishery management tools are sufficient
- ..... and many more

# NWIFC – Summary of Chinook MSFs



2003  
MSFs began in P.S.

*Areas 1 – 13*

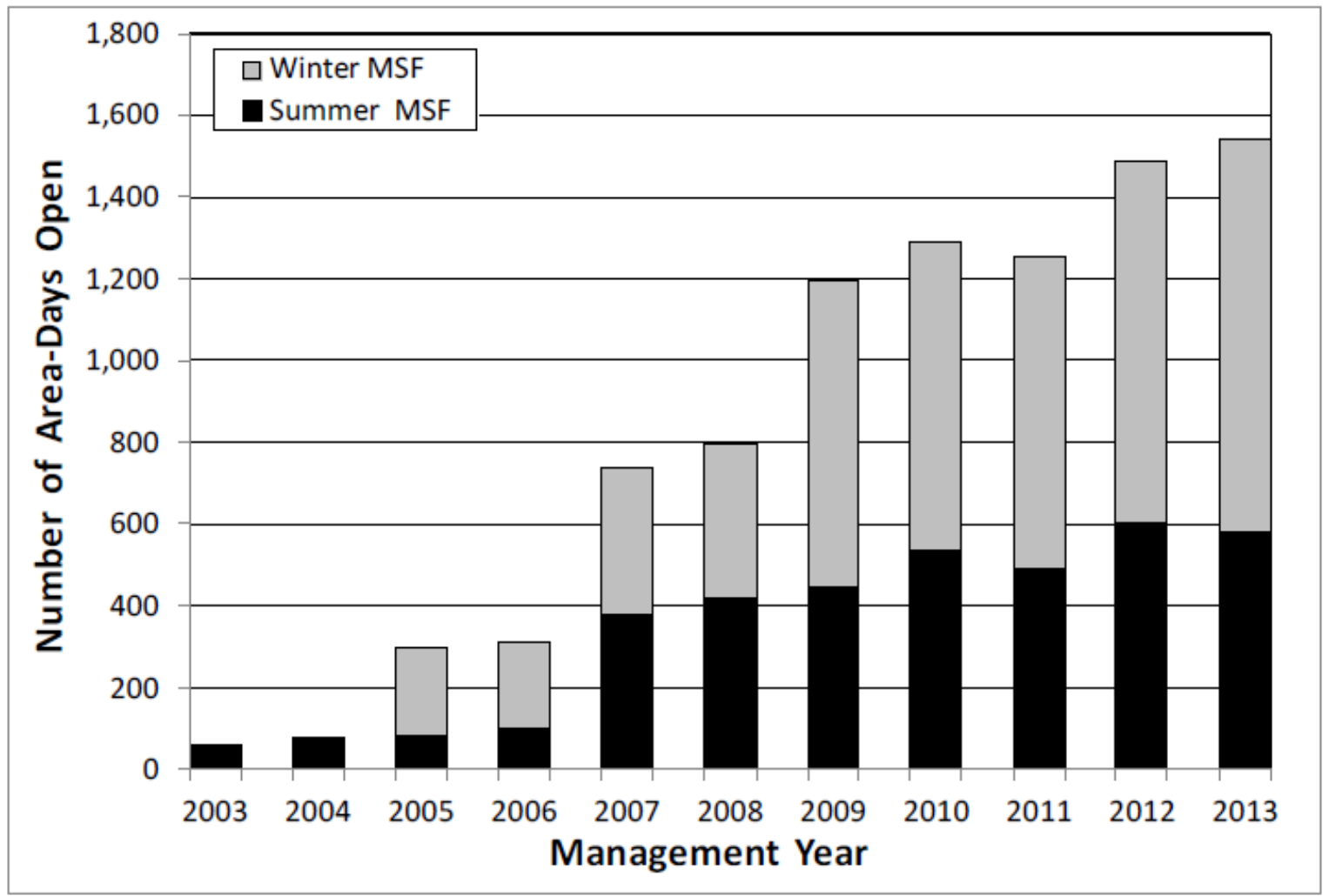
Robert Conrad  
2014

# Fishery Assessments

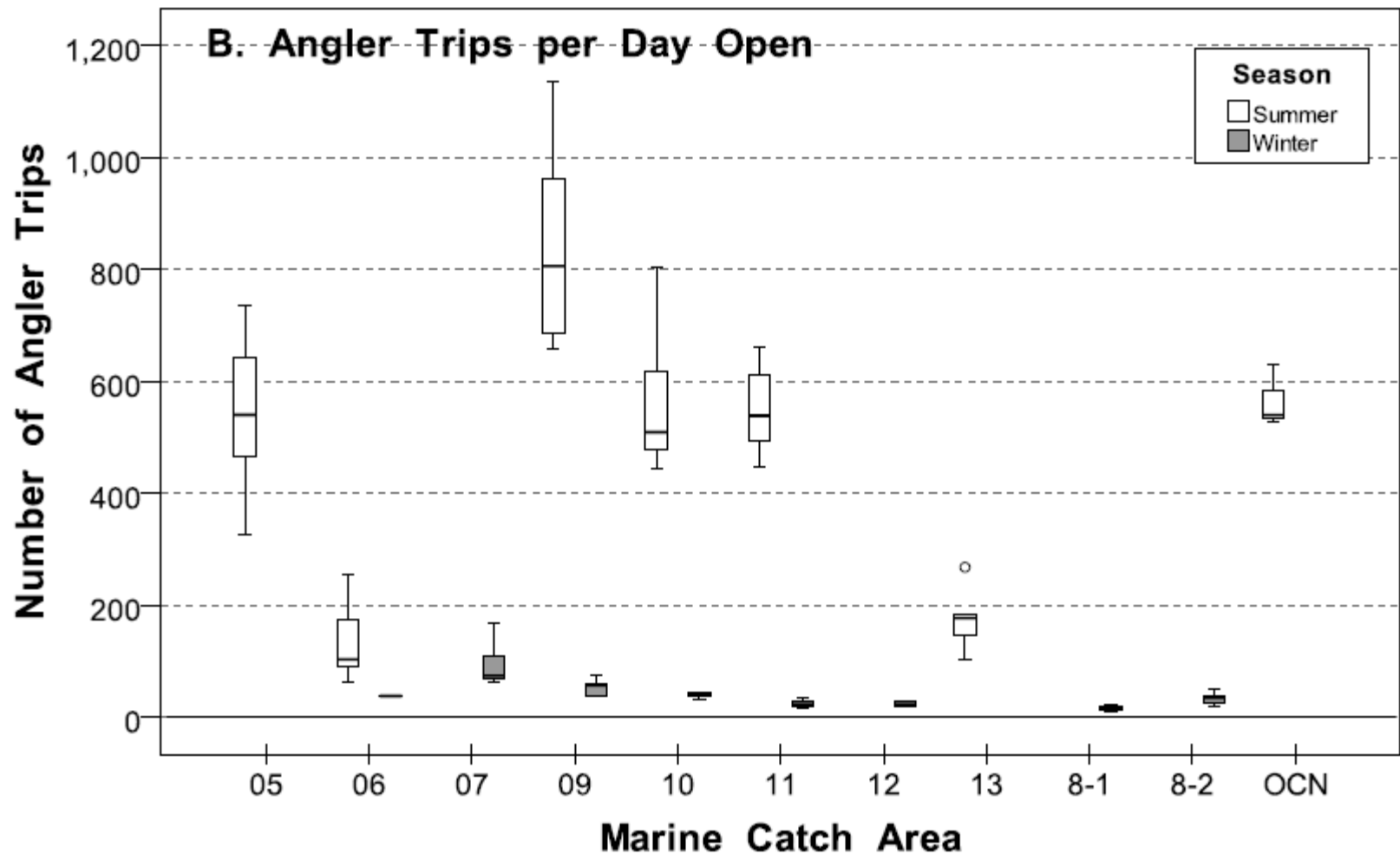
- Intensive Monitoring
  - Statistically designed creel survey
  - Mark-status & size composition sampling
  - Effort surveys
  - Total encounter and release mortality estimates
  - In-season estimates are available
- Baseline Monitoring
  - Relies on catch record card system
  - Estimates are available a year after the fishery



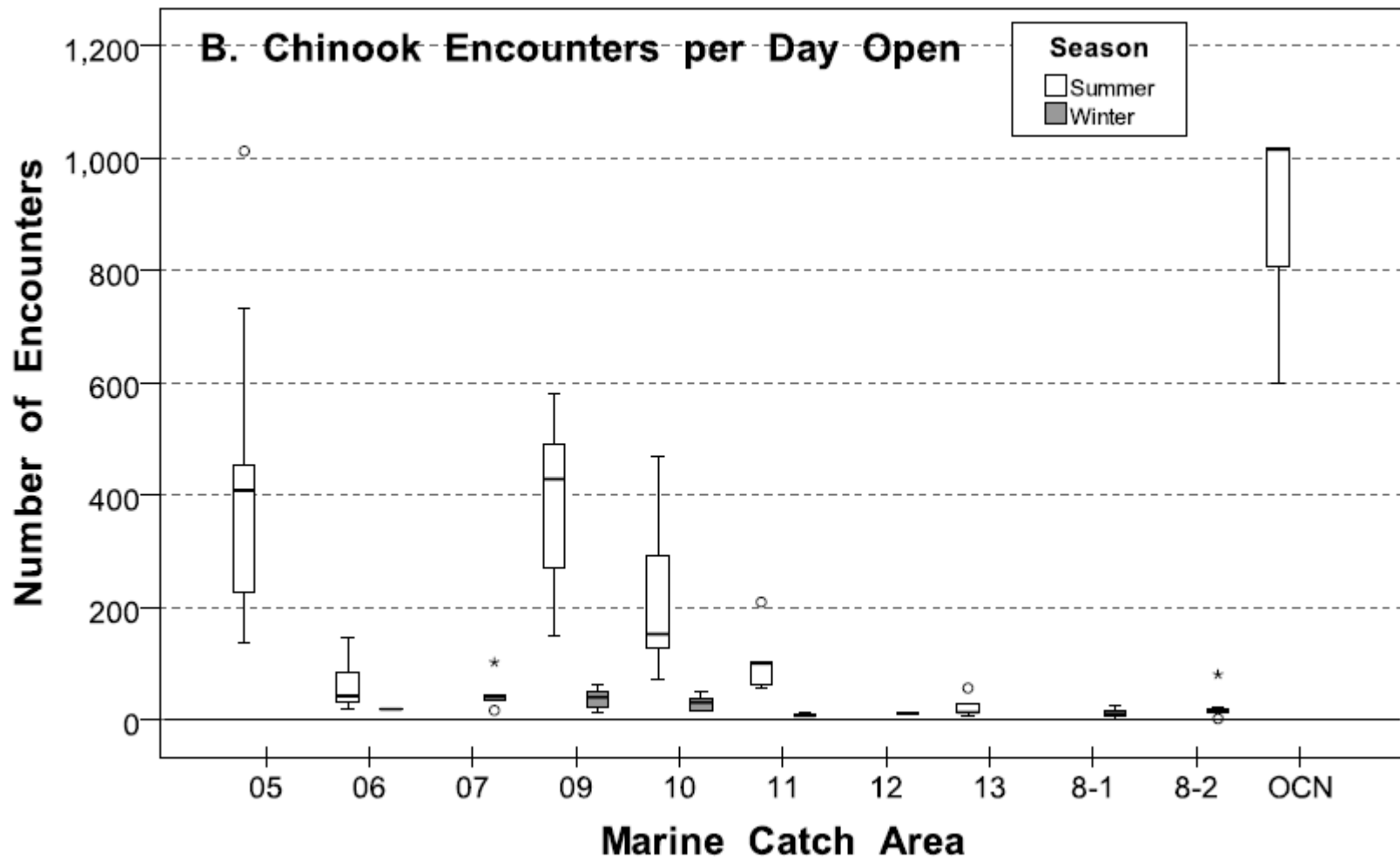
# MSF Area-Days (Areas 1-13)



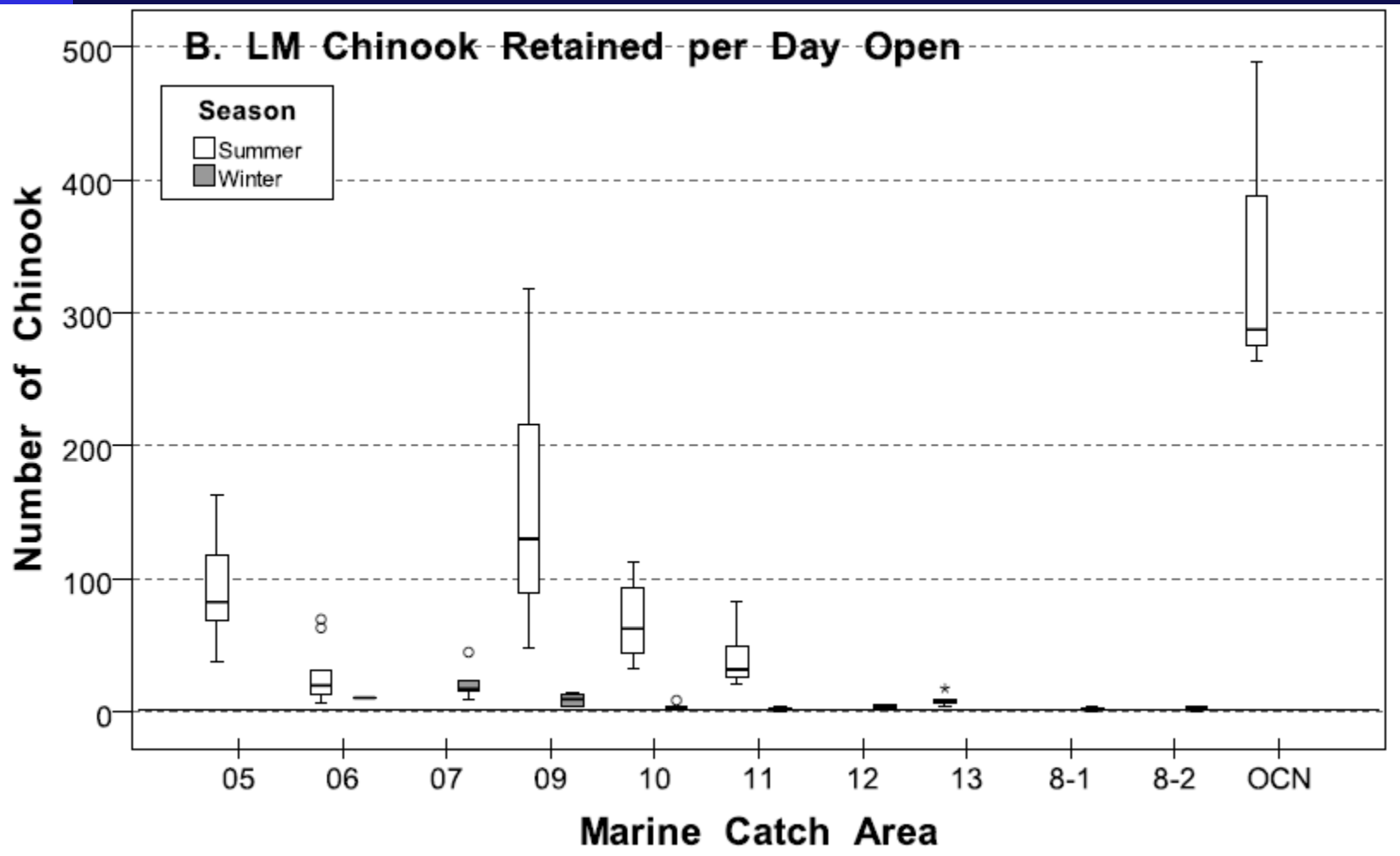
# Angler Trips - Chinook



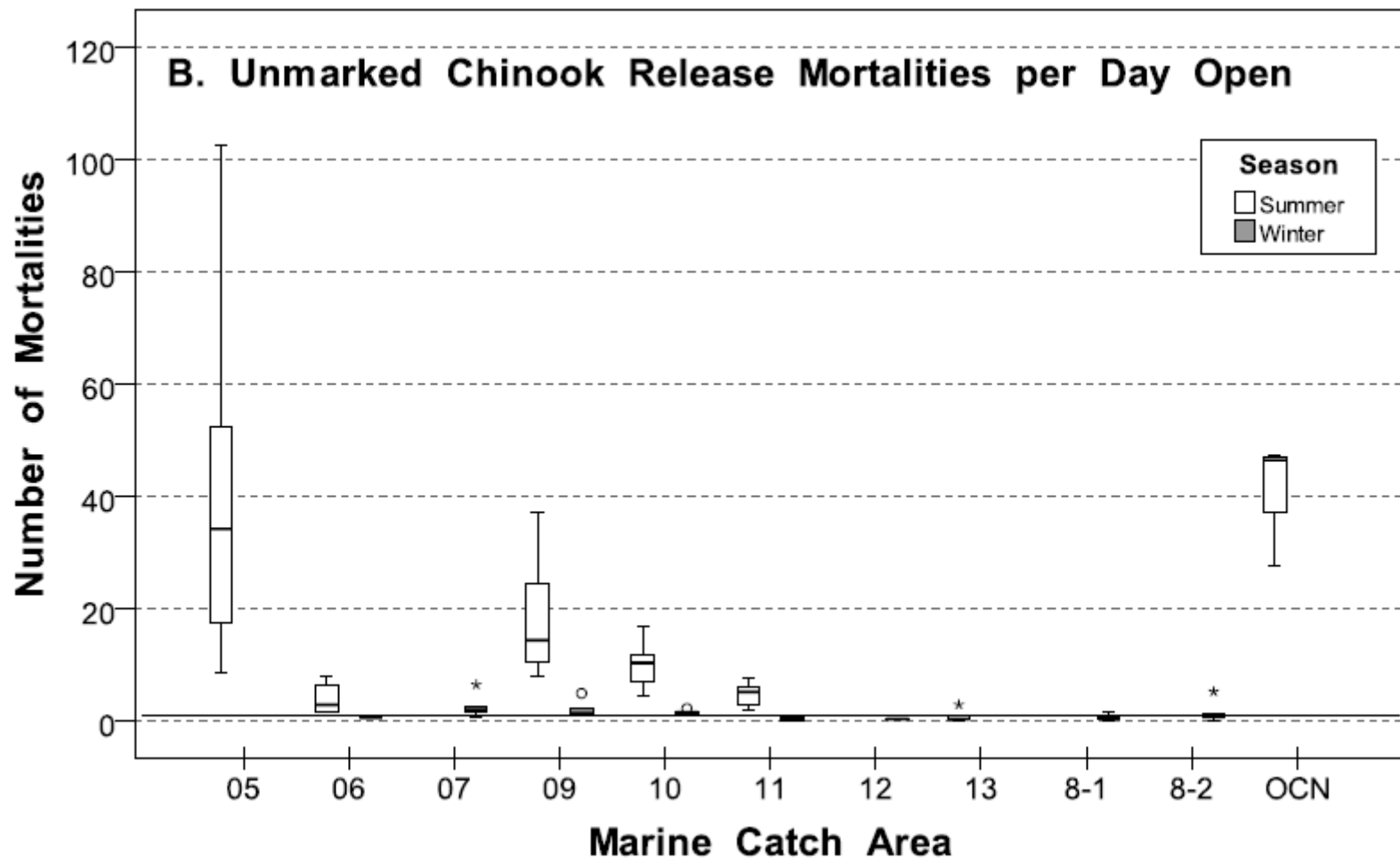
# Encounters



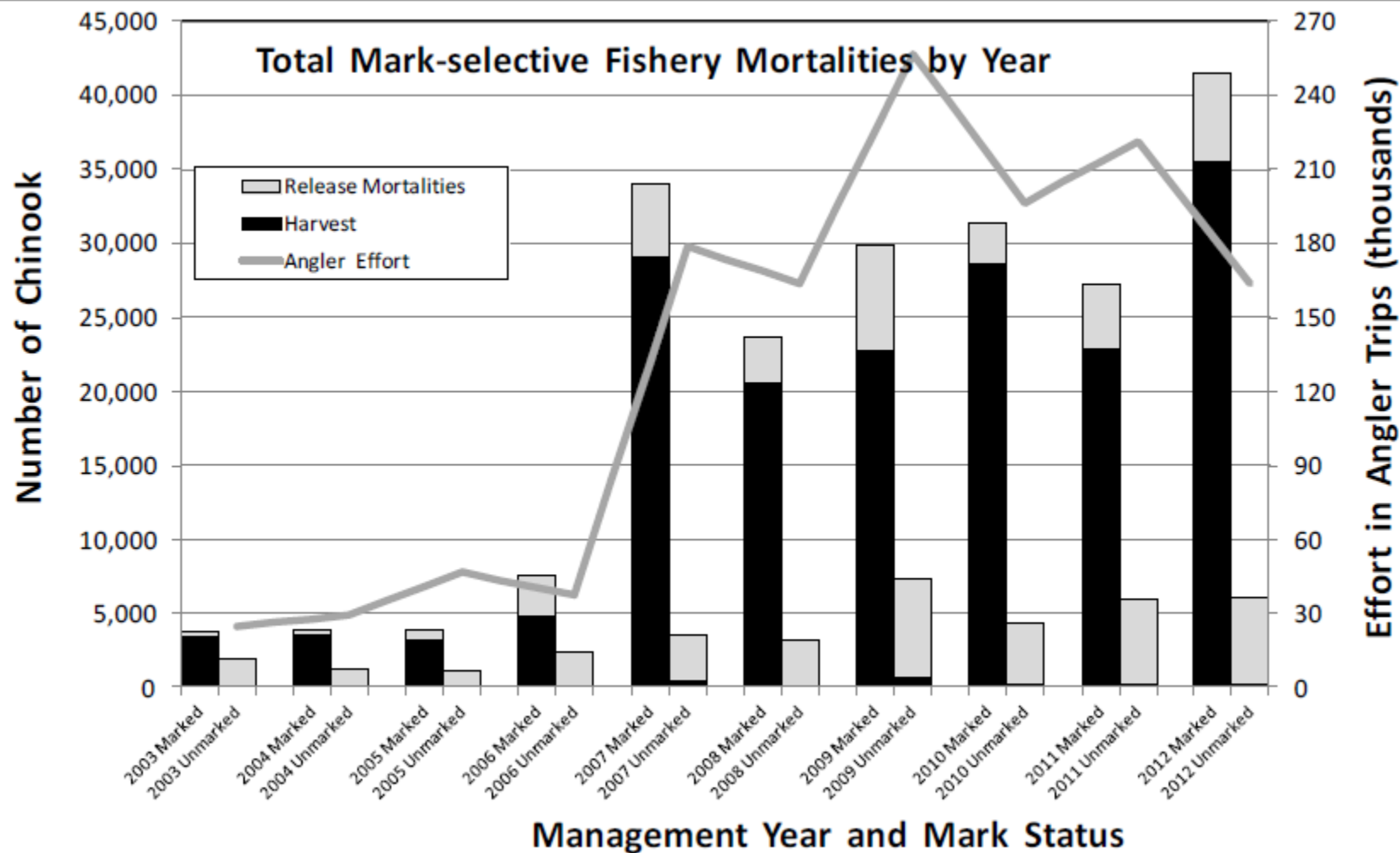
# Retained



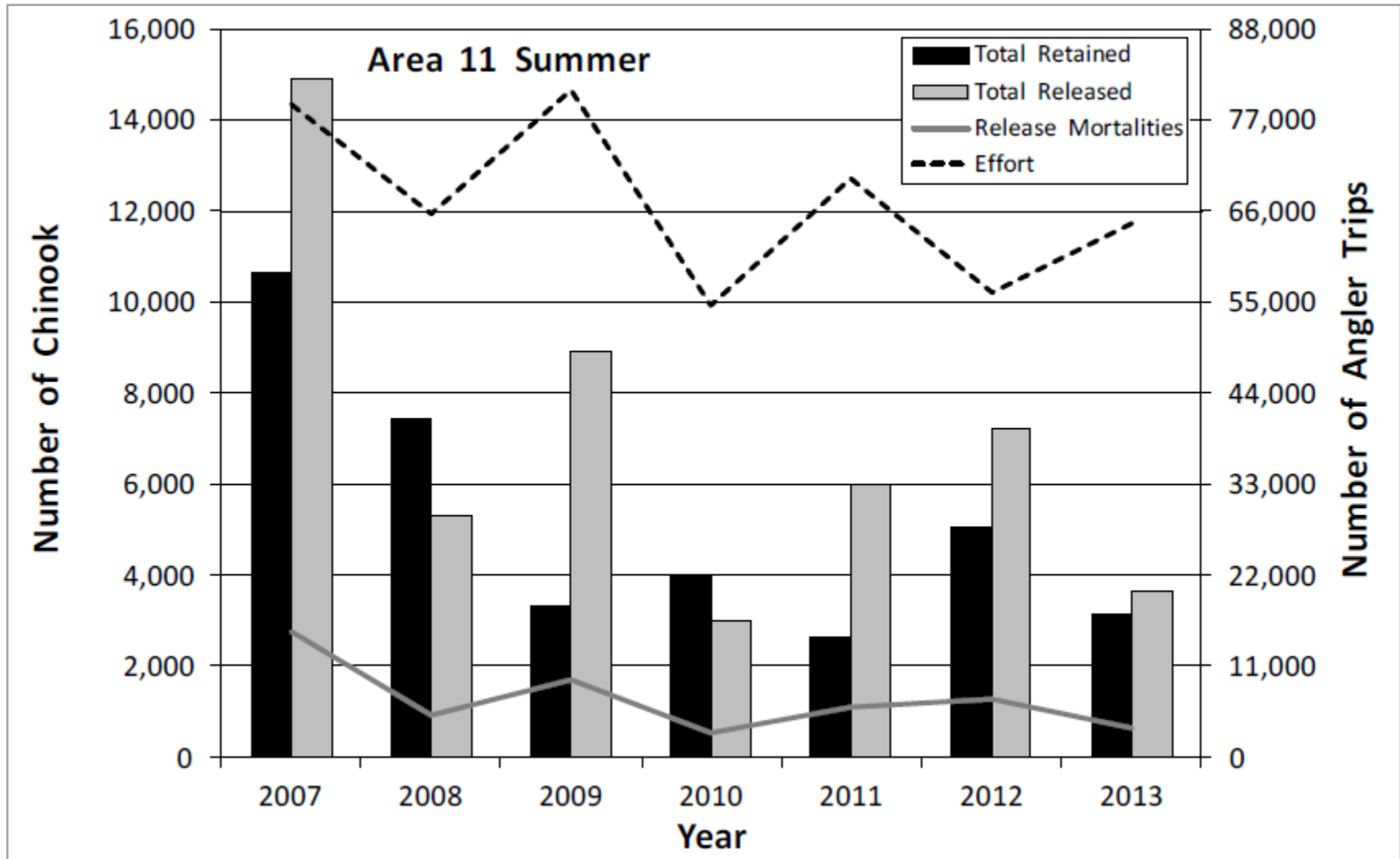
# Mortalities of Unmarked Fish



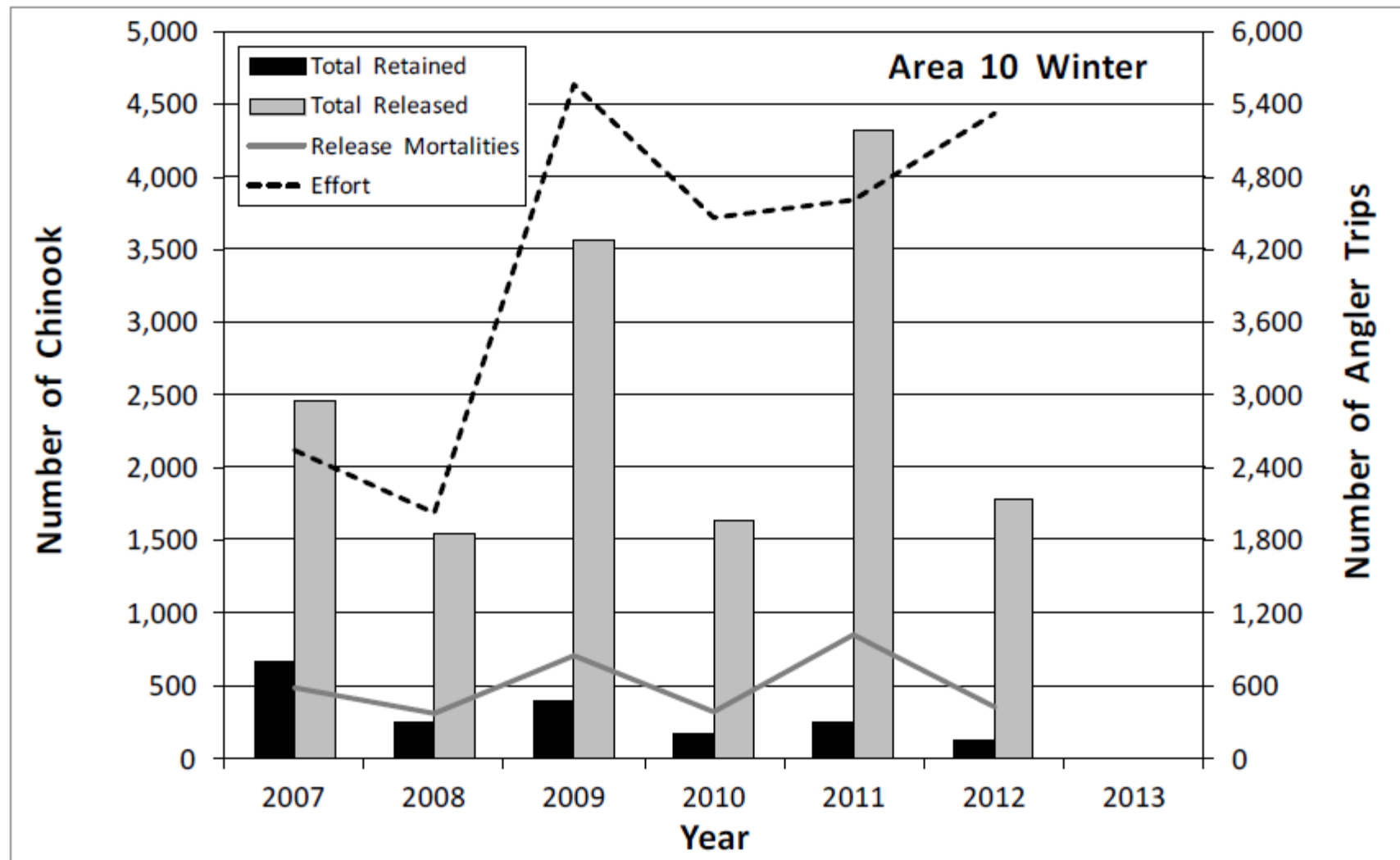
# Harvest & Release Mortalities



# Harvest & Release Mortalities

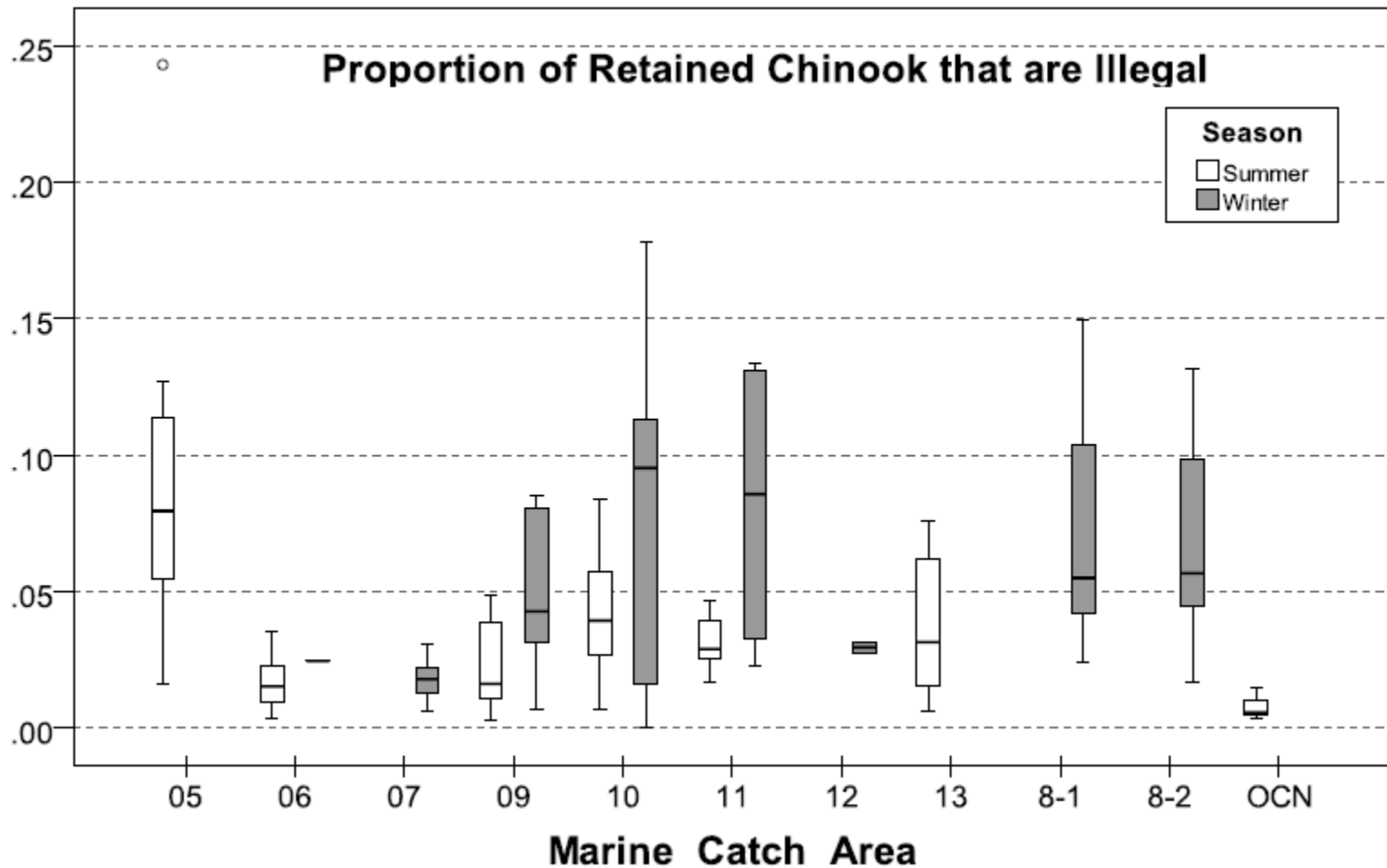


# Harvest & Release Mortalities

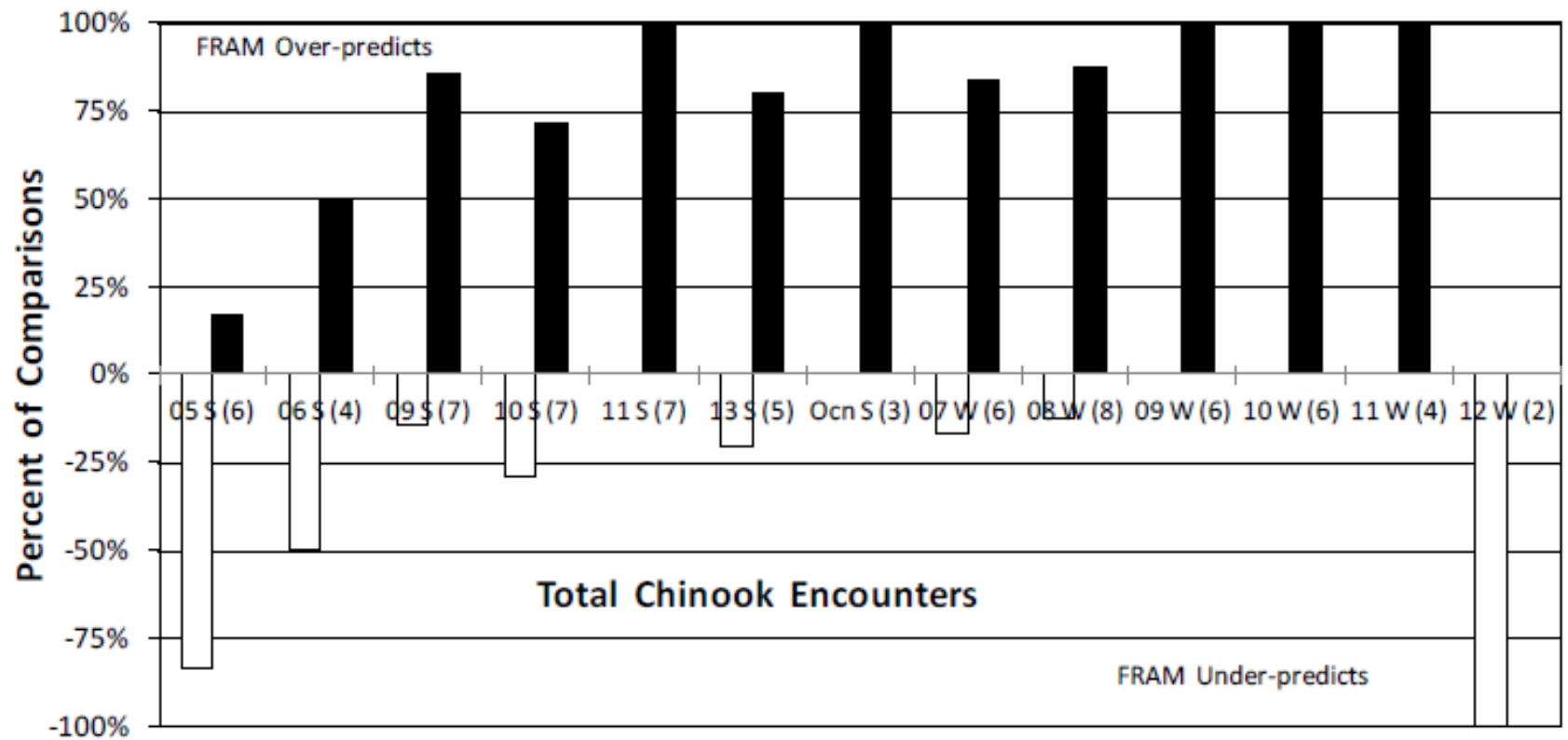




# Other Stats – illegal retention



# FRAM projections vs. Estimates



Encounters

# Conclusions & Next Steps

- Bias in FRAM projections
  - Calibration of the pre-season model is needed
- More years of assessment are needed
  - Many fisheries have occurred for a small # of years
- Stock-specific evaluations are needed
  - Only summaries of total Chinook impacts available
  - CWT+DNA samples in some fisheries are available
  - DNA samples have not been analyzed

# **Q&A About Parental Based Tagging (PBT)**

Gary Morishima (Quinault Management Center)  
Marianna Alexandersdottir (Northwest Indian Fisheries Commission)

October 17, 2013

Ron has copies available



*Questions?*