

# PSC - Selective Fishery Evaluation Committee

## 2009 Update to Mark Committee

# Primary Duties of SFEC

- Serve as clearinghouse for coordination and reporting on MM and MSF programs
- Provide advice to the PSC regarding potential adverse impacts of MM and MSFs on the CWT program
- Assess and monitor the cumulative impacts of MSFs on stocks of concern to the PSC
- Review MM and MSF proposals

# 2009 Membership of the RCWG

## Canada

Roberta Cook<sup>a</sup>, CDFO

## U.S.

Ron Olson<sup>a</sup>, NWIFC

George Nandor, PSMFC

Ron Josephson, ADFG

Marianne McClure, CRIFC

Mark Kimbel, WDFW

Carrie Cook-Tabor, USFWS

Ken Johnson, ODFW

<sup>a</sup> *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



# 2009 Membership of the AWG

## Canada

Dr. Gayle Brown <sup>a b</sup>

Dr. Arlene Tompkins

## U.S.

Dr. Marianna

Alexandersdottir <sup>b</sup>, NWIFC

Dr. Gary Morishima <sup>a</sup>

Kirt Hughes, WDFW

Rishi Sharma, CRIFC

Dr. Kristin Ryding, WDFW

Dr. Norma Jean Sands, NMFS

Sean Clements, ODFW

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

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

# Primary AWG Tasks

- SFEC Annual Review of MSF Proposals
  - Provide advice to proponents regarding the design of MSFs and the conduct of sampling and monitoring programs
- Develop analytical tools for the evaluation of MM programs and MSFs and their potential impacts on the CWT program
- Design marking and sampling strategies that will achieve desired precision for CWT-based estimates

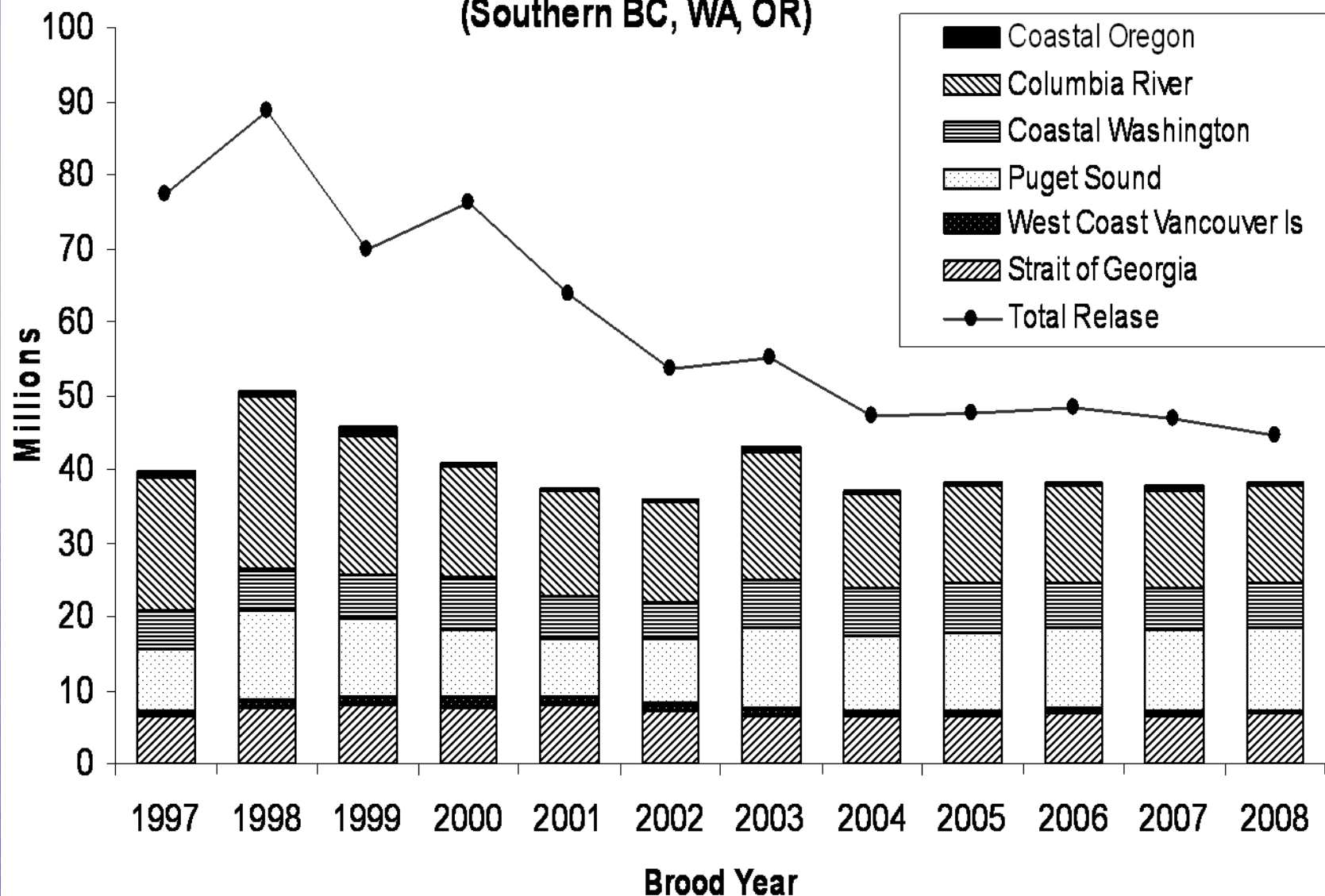


# 2009 Coho Mass Marking Proposals

Area	Agency	DIT Group	MM (millions)
Southern BC	CDFO	2	7.2
Puget Sound	WDFW/Tribes	7	10.9
	USFWS	1	0.3
WA Coast	USFWS	2	0.7
	WDFW/Tribes	4	5.5
Columbia River	USFWS	1	0.3
	WDFW	2	8.5
	ODFW	0	4.2
Oregon Coast	ODFW	0	0.4
Total		21	38.0

A)

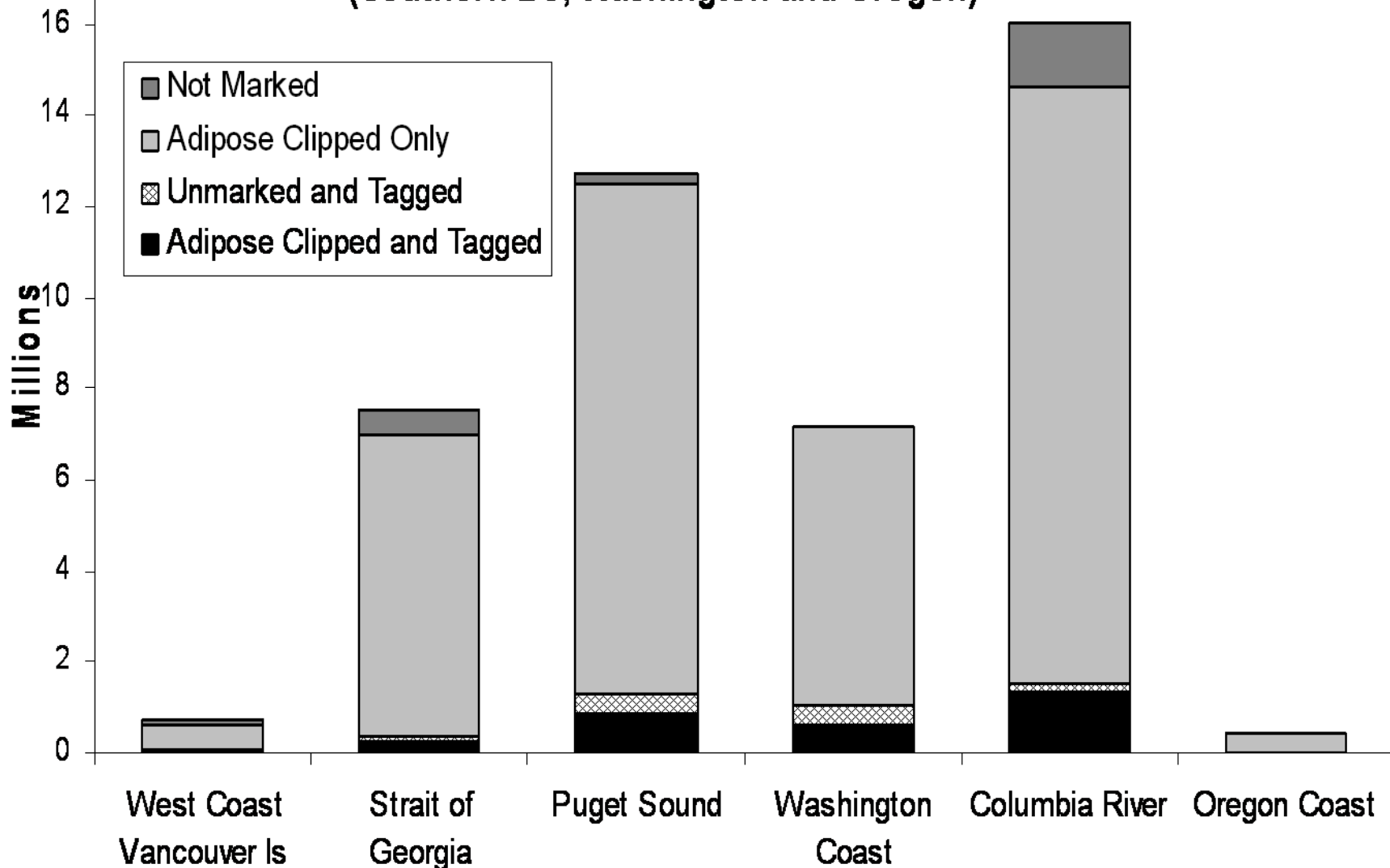
# Mass Marked Coho Salmon (Southern BC, WA, OR)





**A)**

## Brood Year 2008 Coho Marking Plans (Southern BC, Washington and Oregon)



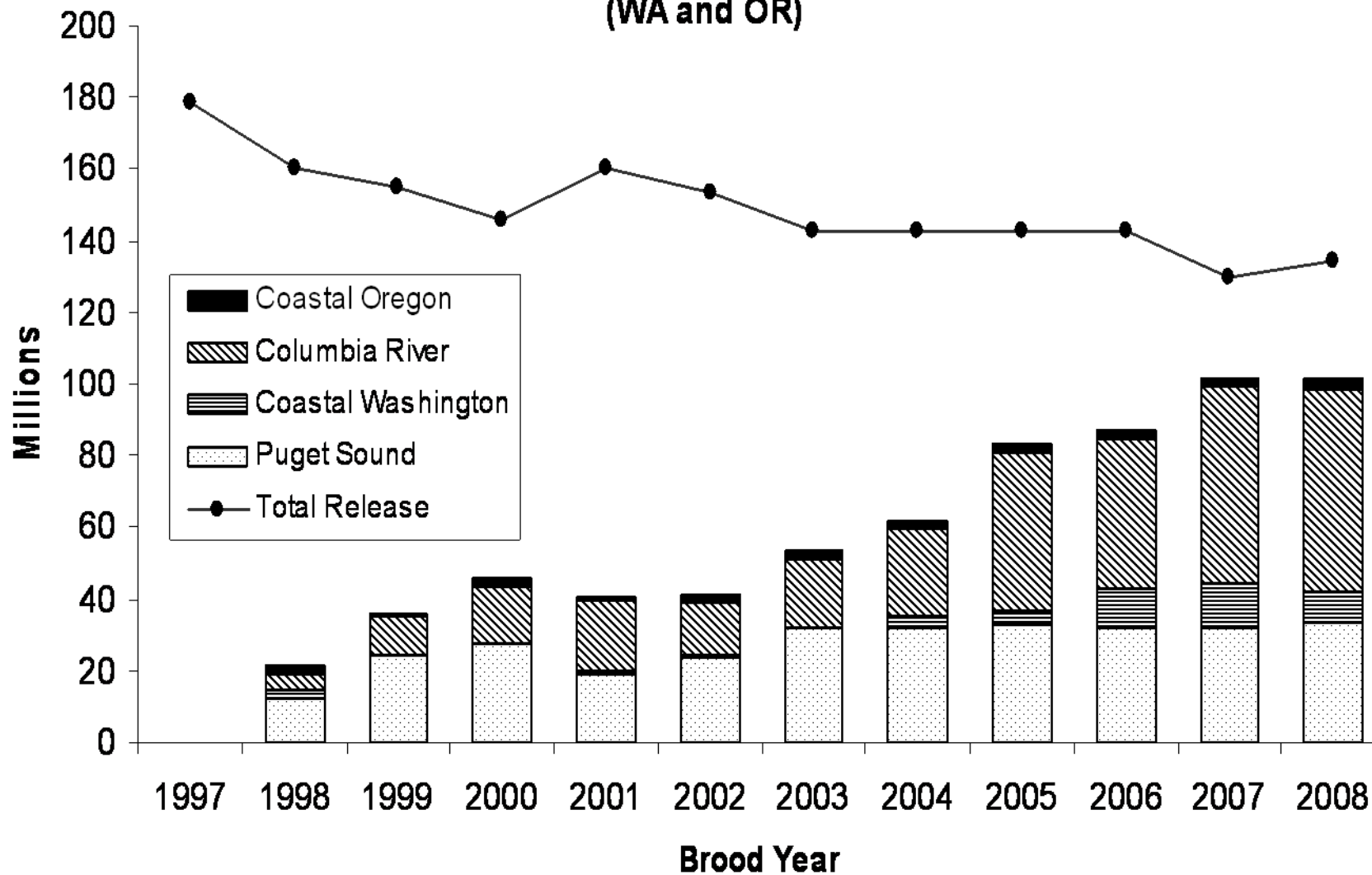
# Chinook Mass Marking Proposals

Area	Run	Agency	DIT Groups	2007 MM (Millions)	2008 MM (Millions)	2008 MM (Millions)
Puget Sound	Spring	WDFW	2	0.4	0.4	0.4
	Summer	WDFW & Tribal	1	2.0	2.0	2.0
	Fall	WDFW & Tribal	6	29.4	29.9	30.9
WA Coast	Spring	WDFW	0	0.2	0.4	0.4
	Fall	USFWS	0	2.1	2.3	0.5
		WDFW & Tribal	1	8.7	9.3	8.0
OR Coast	Spring	ODFW	0	2.3	2.3	2.5
Columbia Basin	Spring	ODFW	2	5.3	5.3	4.3
		WDFW	1	3.0	3.0	2.7
	Fall Tule	USFWS	2	14.2	14.2	10.4
		WDFW	1	17.9	18.0	23.5
		ODFW	1		5.3	5.5
	Fall URB	ODFW	0		7.7	7.7
		USFWS	0	1.6	1.6	1.6
Total			17	87.1	101.7	101.3



**B)**

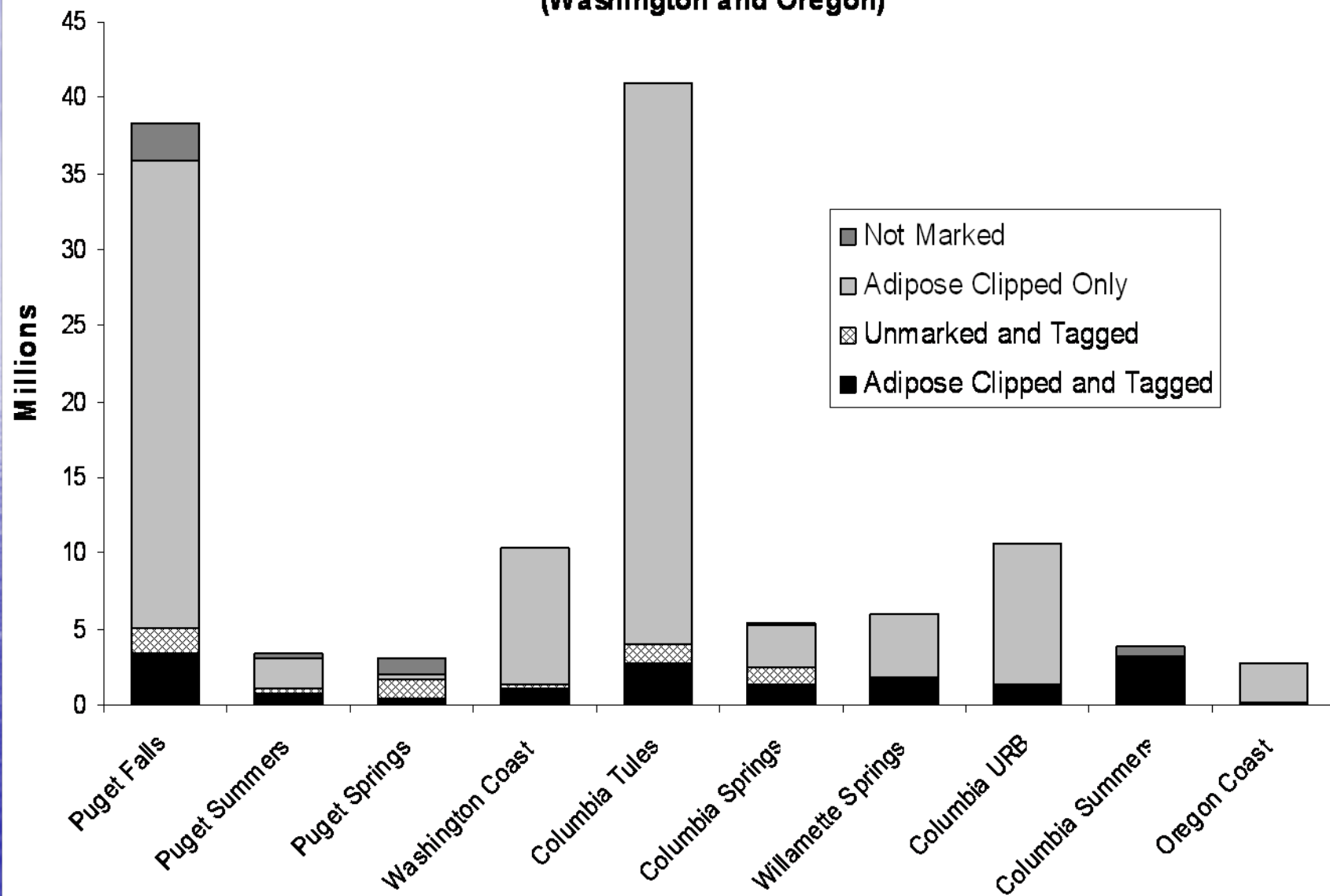
## Mass Marked Chinook Salmon (WA and OR)



B)

## Brood Year 2008 Chinook Marking Plans

(Washington and Oregon)





# Coho CWT Sampling Methodologies

Region	Fishery	Sampling Type
Alaska	All	Visual
Northern BC	Commercial	Visual
	Sport	Voluntary (Visual)
West Coast Van. Is.	Commercial	Electronic
	Sport	Voluntary (Visual)
Strait of Georgia	Commercial	Electronic
	Sport	Voluntary (Visual)
Puget Sound	All	Electronic
Washington Coast	All	Electronic
Oregon Coast	Commercial	Electronic
	Sport	Electronic
Columbia Basin	Commercial	Electronic
	Sport	Electronic
California	All	Visual

# Chinook CWT Sampling Methodologies

Region	Fishery	Sampling Type
Alaska	All	Visual
Northern BC	Commercial	Electronic *
	Sport	Voluntary (Visual)
Southern BC.	Commercial	Electronic
	Sport	Voluntary (Visual)
Puget Sound	All	Electronic
Washington Coast	All	Electronic
Columbia Basin	Commercial	Electronic / Visual for Falls
	Sport	Electronic / Visual for Falls
Oregon Coast	Commercial	Visual
	Sport	Visual
California	All	Visual

*\* Tags from unmarked fish, except freezer boats, are not decoded*



# Projected sampling encounters<sup>1</sup> of 2009 marked & untagged Chinook

- 10,000 untagged marked fish in AK
- 25,400 untagged marked fish in BC

<sup>1</sup> *Beginning in 2011*



# Projected Sampling Encounters of 2009 Marked & Untagged Chinook

State/Province	# Fish Encountered
Alaska	10,000
British Columbia	25,400
California	9,300

# Early Chinook Wandering Studies

Study	Detection Rate
ADFG (1995)	98 %
NWIFC/USFWS (1999)	99 %
CDFO (1999)	96 %
WDFW (1999)	91 %

# Results of Chinook Mouth Wanding Studies

		% Detections		
Study	# CWTs	Standard Wanding	Combined Wanding	Tube Detector
WDFW, 2001 Hatchery	1,332	90.5	99.3	100
NWIFC, 2001 Hatchery	368	99.7	99.7	100
ADFG, 2004-06 Troll	2,534	98.2	99.9	
CDFO, 2003-04 Gill net	115		61.7	
CDFO, 2006 Troll	435		94.0	
CDFO, 2004-05 Spawning ground	591		91.0	



# Coho MSFs

Fishery and Location	2008	2009
Sport, Southern BC	√	√
Commercial, Southern BC	√	√
Sport, Lower Fraser freshwater	√	√
FSC, Lower Fraser freshwater	√	√
Sport, Washington coast	√	√
Commercial, WA areas 1-4	√	√
Sport, Puget Sound	√	√
Sport, Nooksack River	√	<b>N</b>
Sport, Lower Columbia River (since 1999)	√	√
Commercial troll, Oregon coast (since 1999)	√	√
Sport, Oregon coast	√	√

# Chinook MSFs in BC and Puget Sound

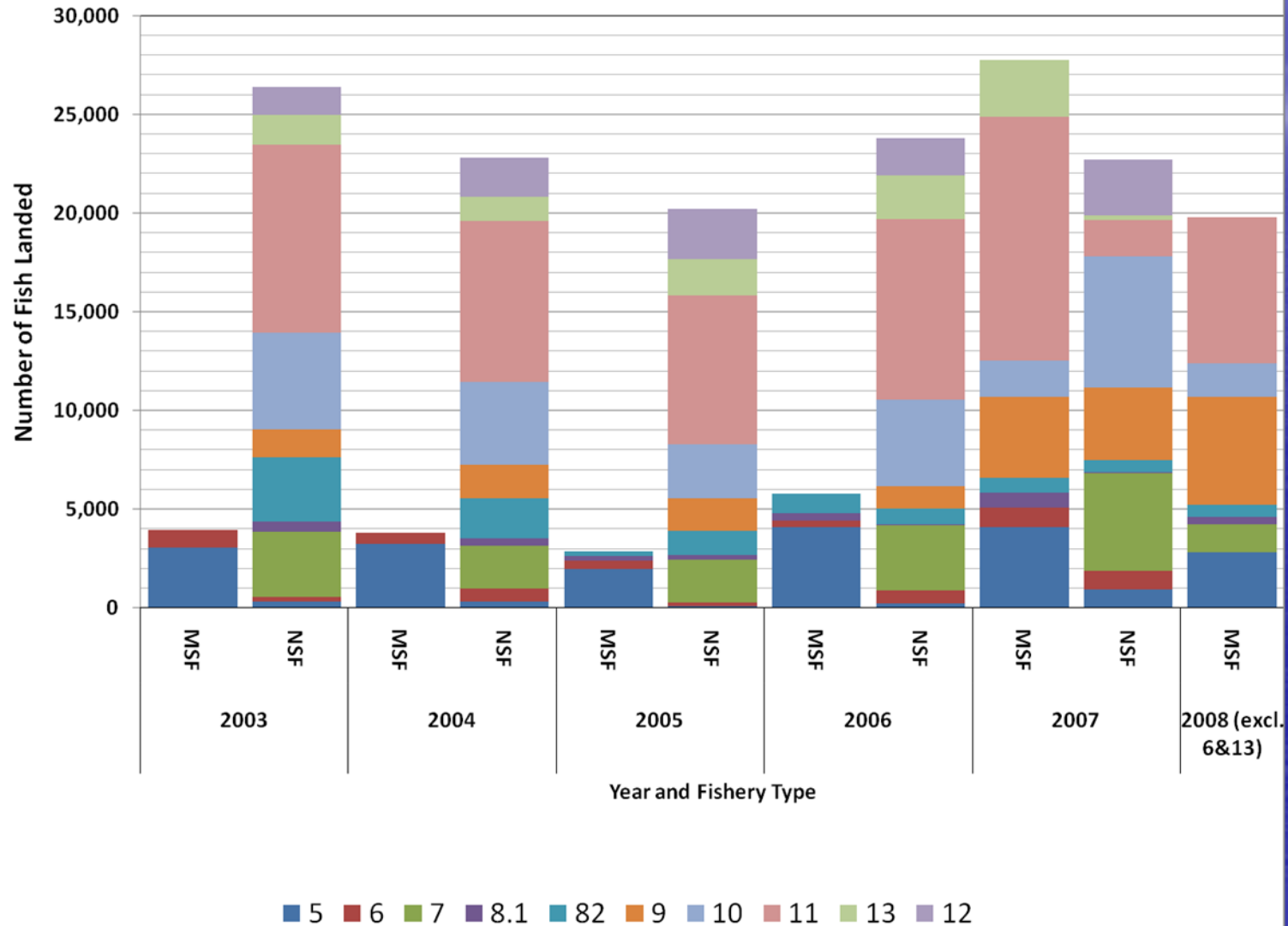
Fishery and Location	2008	2009
Sport in Strait of Juan de Fuca, BC	√	√
WCVI sport		N
Sport summer, WA area 5&6	√	√
Sport summer, WA area 9,10,11,13	√	√
Sport winter, WA area 7-13	√	√
Sport, Nooksack River	√	√
Sport, Skykomish River	√	√
Sport, Carbon & Puyallup River	√	√
Sport, Upper Skagit River	√	√
Sport, Nisqually River, Jul-Jan	√	√
Sport, Skokomish Chinook		N

# Chinook MSFs in Col. R. and OR

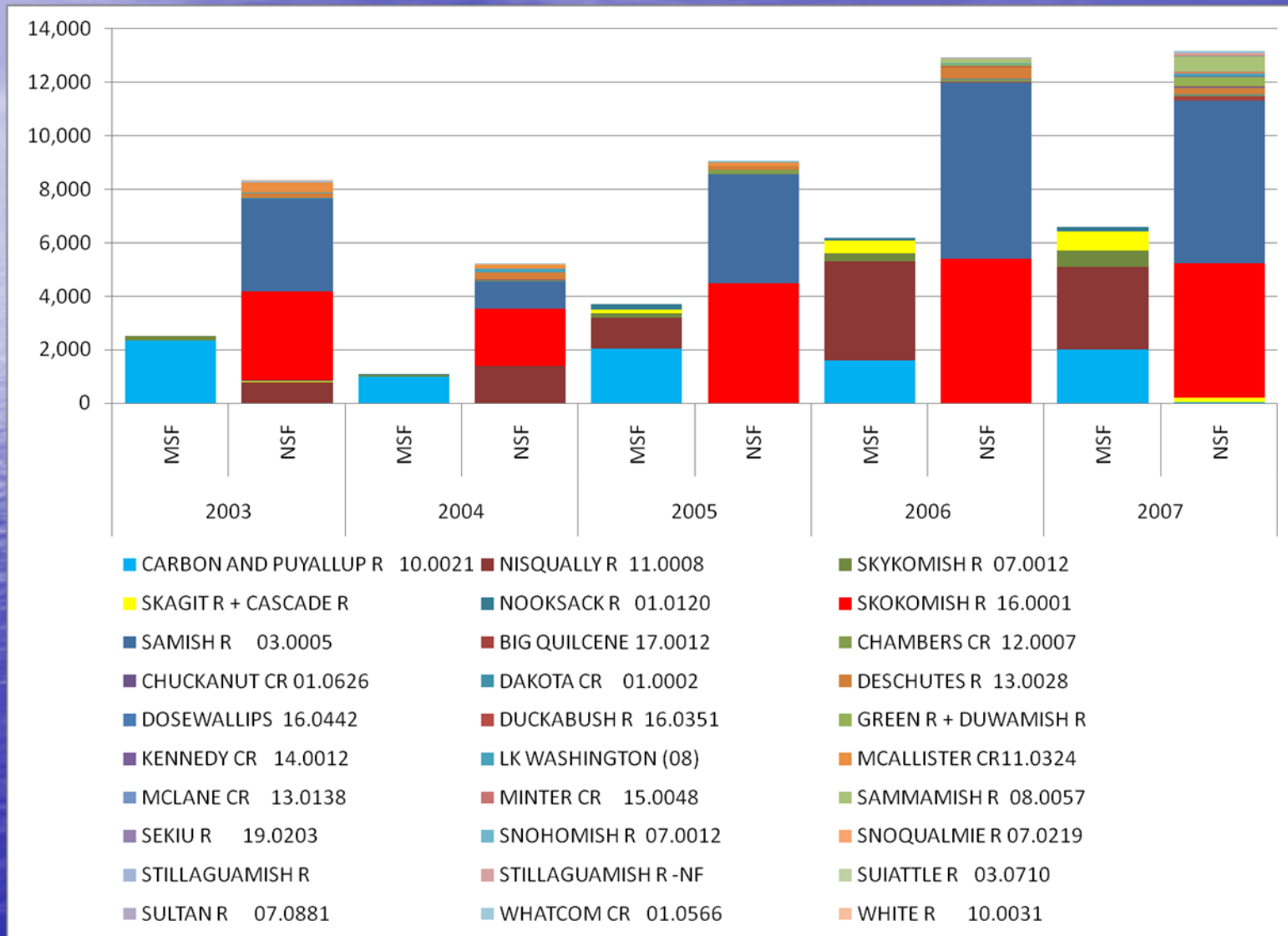
Fishery and Location	2008	2009
Sport, Columbia River (on summer run)	√	√
Sport, Lower Columbia River (on spring run)	√	√
Commercial, Lower Columbia River (on spring run with tangle net)	√	√
Commercial, Lower Columbia River (on spring run with large net)	√	√
Sport, Yakima River (on spring run)	√	√
Sport, WA Coast Chinook, Areas 1-2		N
Troll, WA Coast Chinook Areas 1-2		N
Sport, Col. R. fall Chinook		N
Sport, Lower Snake River fall Chinook		N
Sport, Willamette River on spring run)	√	√
Sport, Oregon coast (terminal areas)	√	√



# Chinook MSFs in PS Marine Areas



# PS Chinook Freshwater Fisheries



# MM and Regional Coordination Issues

- Discontinuation of DITs
  - Review where DITs should be required and where alternatives can be used
- Lack of coastwide electronic tag detection
- Blank wire ?



# MSF issues

- Expansion of Chinook MSF in marine areas
  - Puget Sound
  - S Washington Coast
  - BC sport Strait of Juan de Fuca
  - BC WCVI sport fishery
- Potential problems
  - Agencies are not submitting proposals for review
  - Stocks from multiple jurisdictions without DIT
  - Monitoring, sampling and reporting provisions?
  - Mark rates adequate?
  - Agencies not submitting post-season MSF reports
  - Inadequate modeling capacity to evaluate impacts of large-scale MSFs on Chinook

# DITs in WA coastal Chinook MSF

Indicator stocks		DIT		DIT in 2009 by age				
		Recommend	Current					
Stock	Release Hatchery			2	3	4	5	6
Col R springs	KALAMA FALLS							
	LEWIS RIVER	Yes	Yes	x	x	x	x	x
Lower River Tules	BIG CR	Yes	Yes	x	x			
	COWLITZ	Yes	No					
Mid Columbia Tules	SPRING CR NFH	Yes	Yes	x	x	x	x	
Summer Chinook	TURTLE ROCK							
	WELLS	Yes	No					
U Col R summers	SIMILKAMEEN							
Upriver Brights	PRIEST RAPIDS	Yes	No					
Snake River yearlings	LYONS FERRY		Yes	x	x	x	x	x
Snake River fingerling		Yes	No					
Oregon coast	ELK R							
	SALMON R	Yes	No					



# Summary of Review (RCWG only)

- Total proposed MM is for 38 million coho and 102 million Chinook
- Coho MM remains constant
- No new Chinook MMing. Only 4.8 million fall Chinook unmarked.
- Sampling methodologies continue to differ by agency and are not coordinated with MM and DIT
- Increases in untagged fish sampled may reduce sample rates and will impose additional costs.



# Summary of Review (cont.)

- Adequately sampling and reporting of CWT recoveries of unmarked DIT releases is only occurring in WA.
- The CWT system still remains functional for ad-marked CWT fish. It also is still the only method available to the PST for estimating and monitoring coast wide exploitation rates on individual stocks of coho and Chinook.

# Summary of Review (cont.)

- MM, DIT, and CWT sampling programs are not sufficiently coordinated to support analysis by PSC technical committees. The PSC should continue to support technical and policy processes to develop agreements to clarify responsibilities for maintaining a functional CWT system.





The End