

*Science, Service, Stewardship*



# High Seas CWT Recoveries in 2009 and 2010

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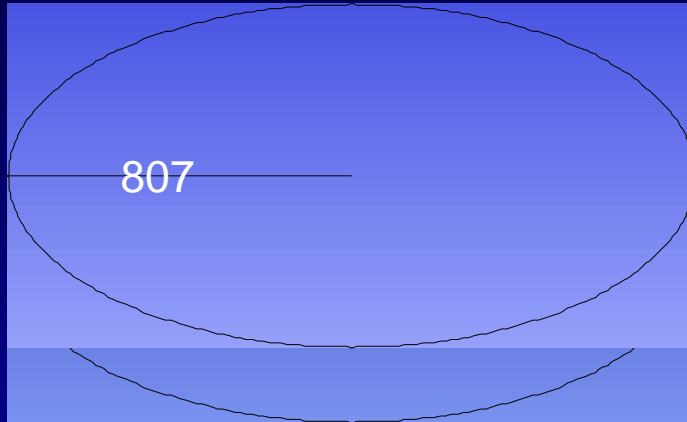
Juneau, AK 99801

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FISHERIES  
SERVICE**

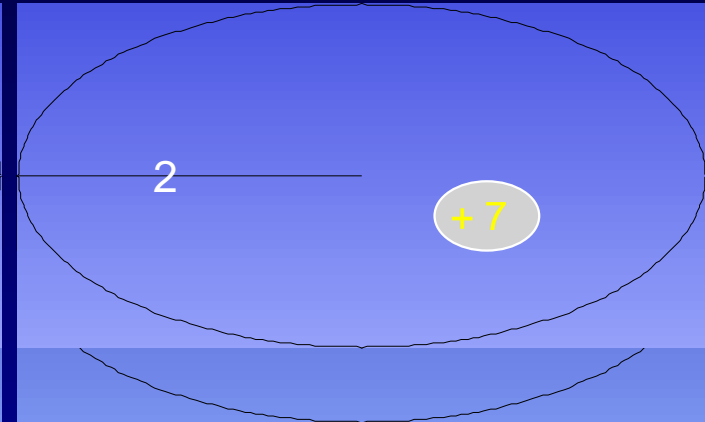
Annual Meeting of the Regional Mark Committee of the PSMFC,  
Victoria, BC, Canada, April 28-29, 2011

# Bycatch of CWT salmonids in the 2009 trawl fishery in the Gulf of Alaska

Fish examined



CWTs



Total Chinook caught = 7898

■ Sockeye ■ Chum ■ Pink ■ Coho ■ Chinook ■ Steelhead

# Total Estimated Contribution (C)

1)

$$R_T = aR_O;$$

$R_T$  = the estimated total recoveries of tags bearing the release group's code;

$R_O$  = the observed number of tags of the appropriate code;

$a$  = a sampling expansion factor: (total catch)/(sampled catch).

2)

$$C = bR_T;$$

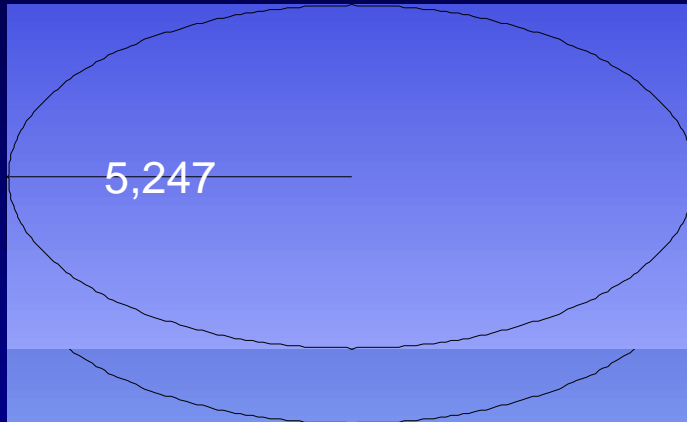
$C$  = the total estimated contribution of the release group to the fishery in that area at that time;

$b$  = a marking expansion factor: (total fish released)/(total fish marked).

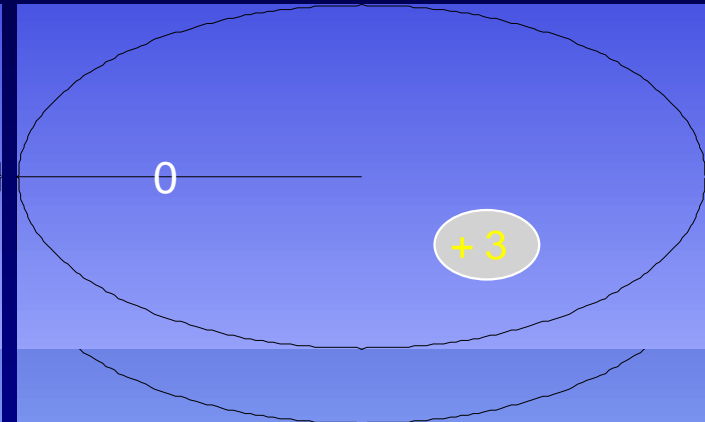
from Regional Overview of Coded Wire Tagging of  
Anadromous Salmon and Steelhead in Northwest America

# Bycatch of CWT salmonids in the 2009 trawl fishery in the Bering Sea and Aleutian Islands

Fish examined



CWTs

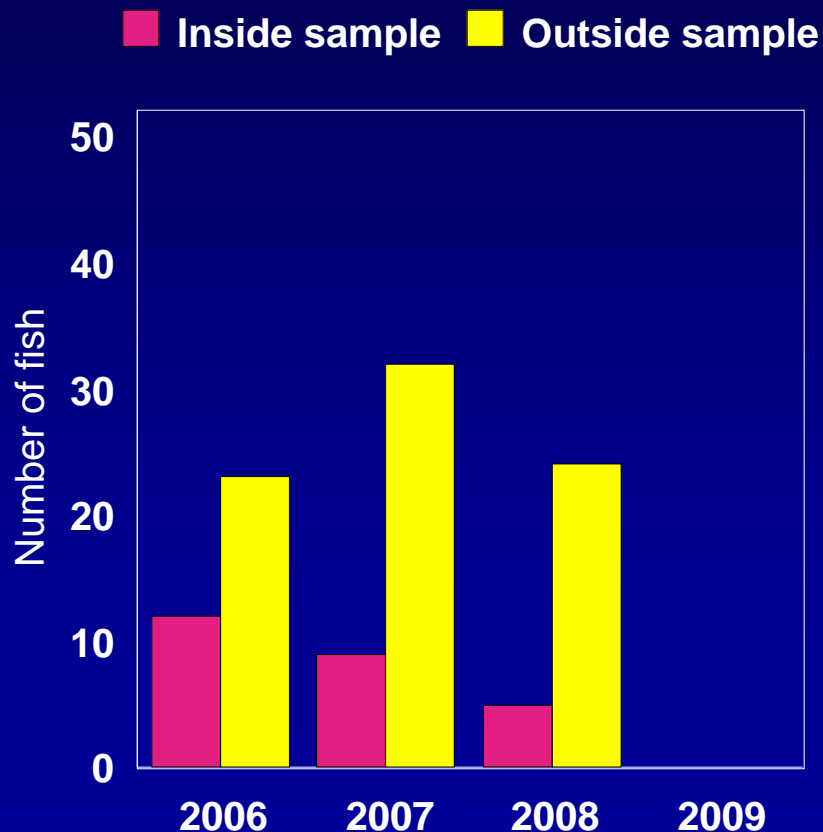


Total Chinook caught = 12,415

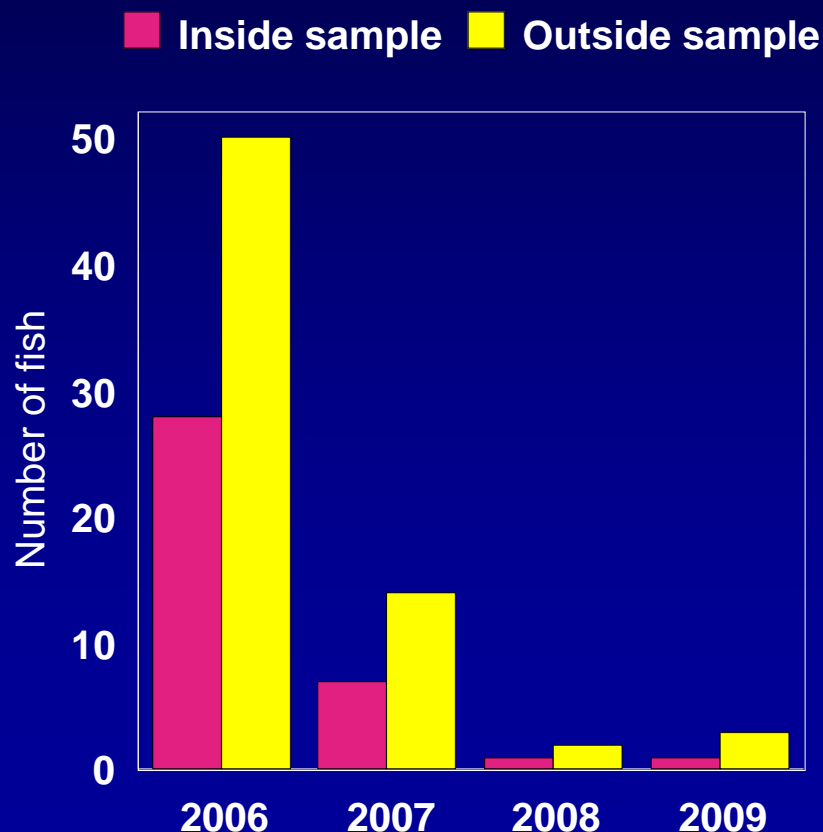
 Sockeye	 Pink	 Chinook	 Steelhead
 Chum	 Coho		

# Numbers of ad-clipped Chinook salmon recovered from inside and outside the sample in the GOA and BSAI trawl fisheries, 2006-2009

## Gulf of Alaska



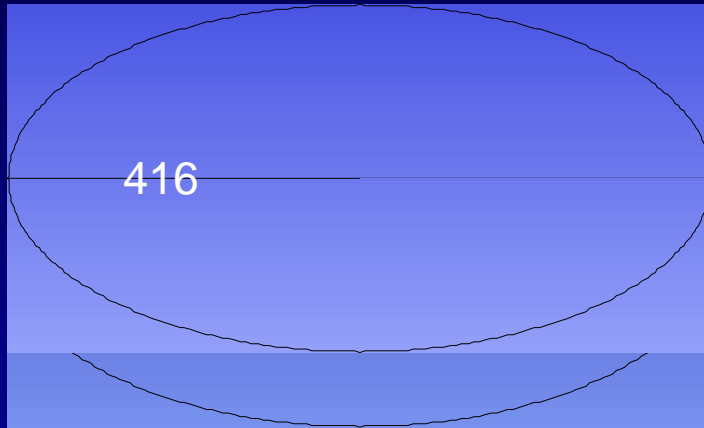
## Bering Sea-Aleutian Islands



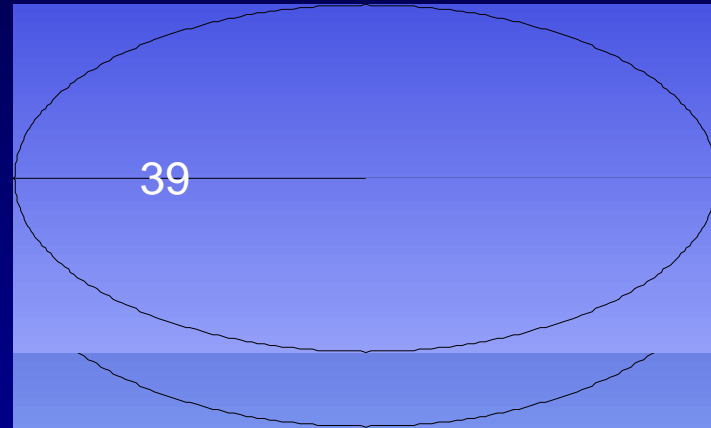
# Bycatch of CWT salmonids in the 2009 trawl fishery off WA-OR-CA

Fish examined

CWTs



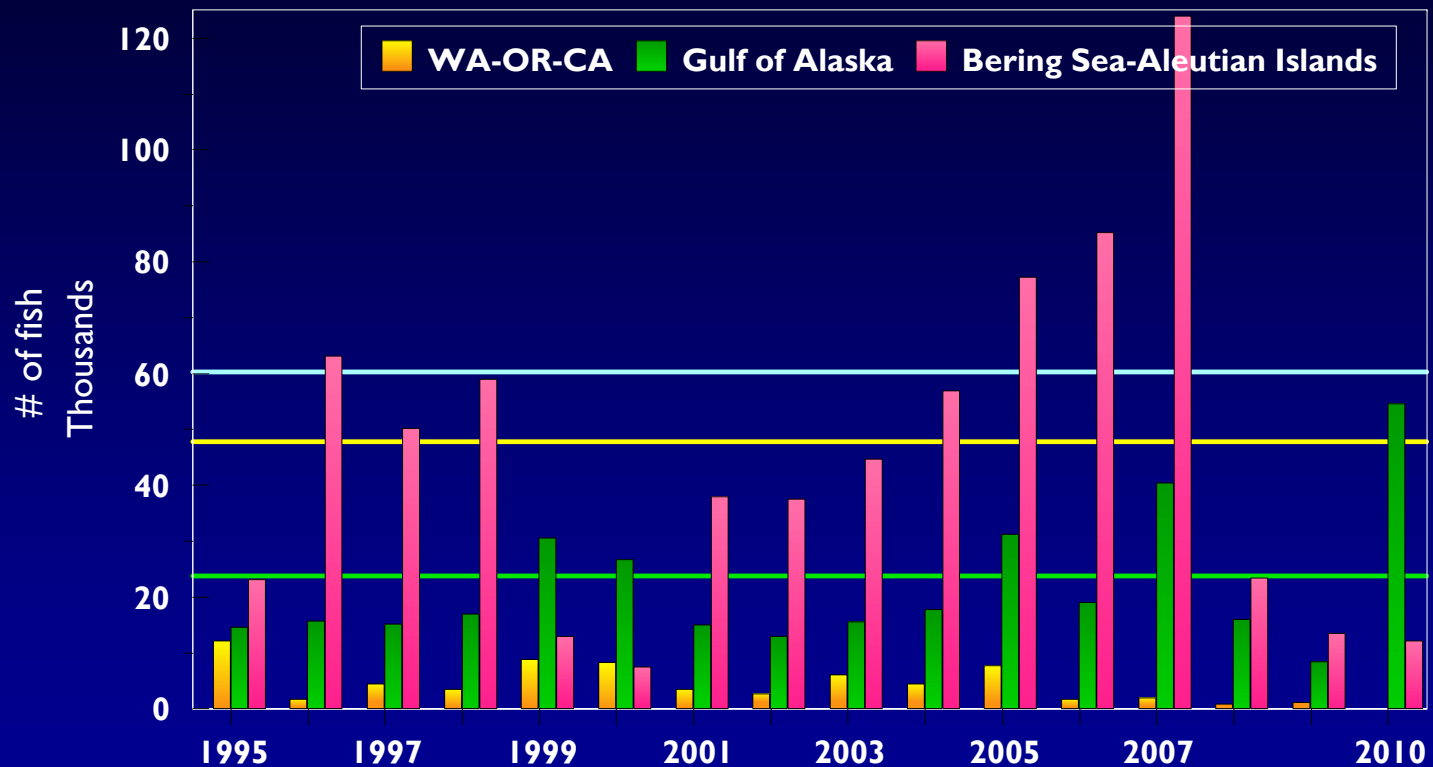
Total Chinook caught = 1163



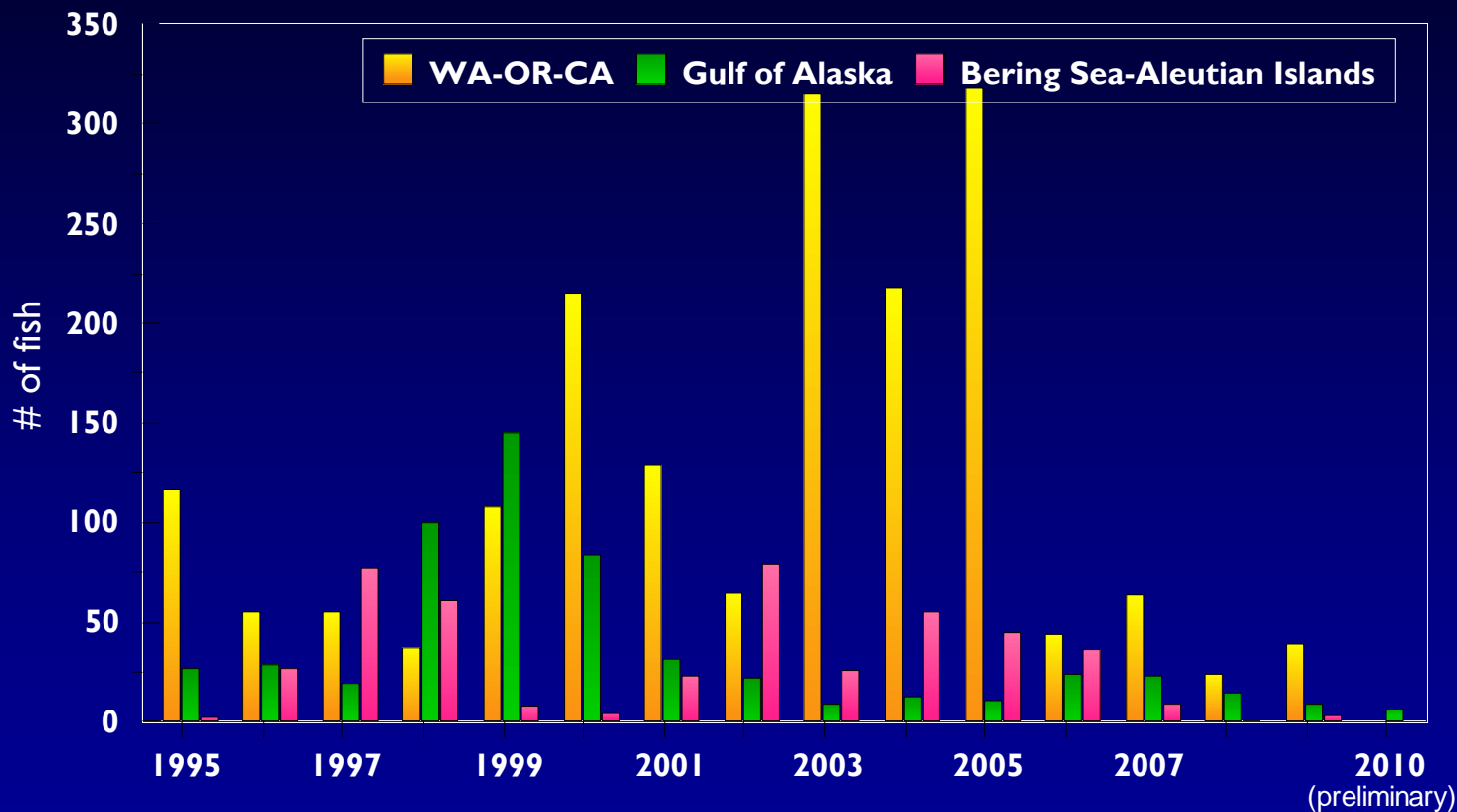
Total Estimated Contribution of  
CWT Chinook caught = 109

■ Sockeye ■ Chum ■ Pink ■ Coho ■ Chinook ■ Steelhead

# Total Chinook salmon bycatch in 3 high seas trawl fisheries, 1995-2010

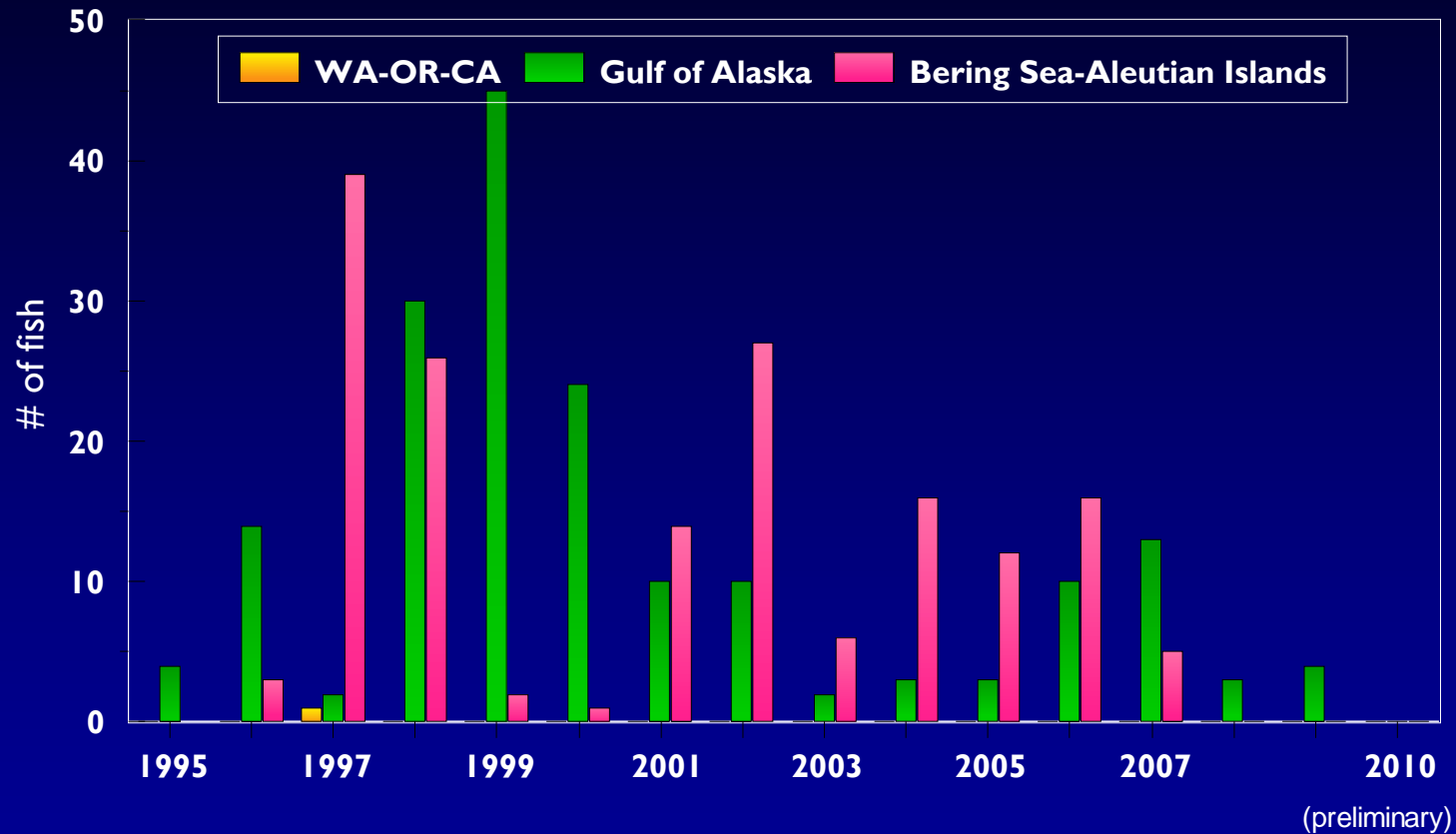


# Occurrence of CWT Chinook salmon captured in 3 high seas trawl fisheries, 1995-2010

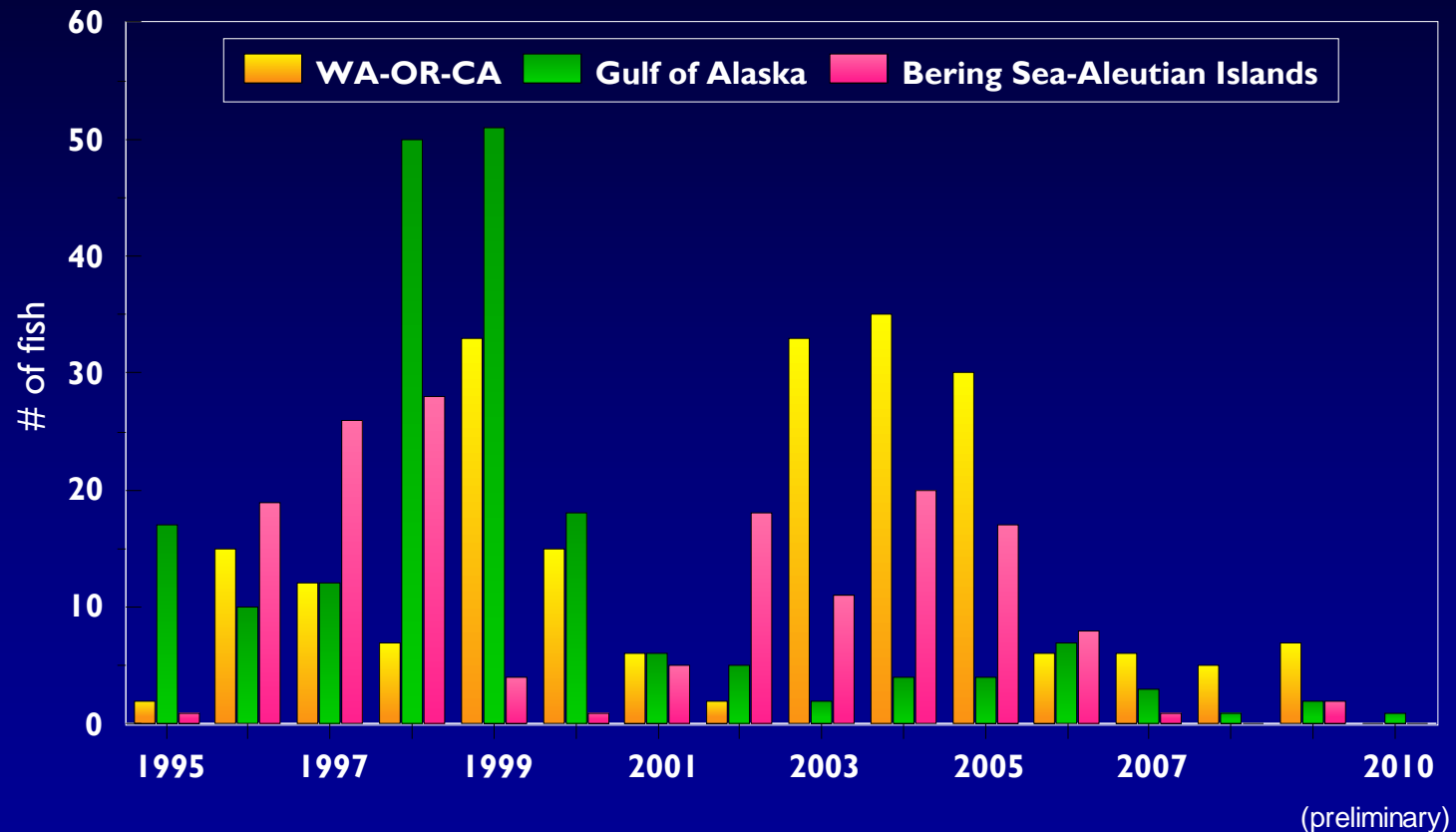




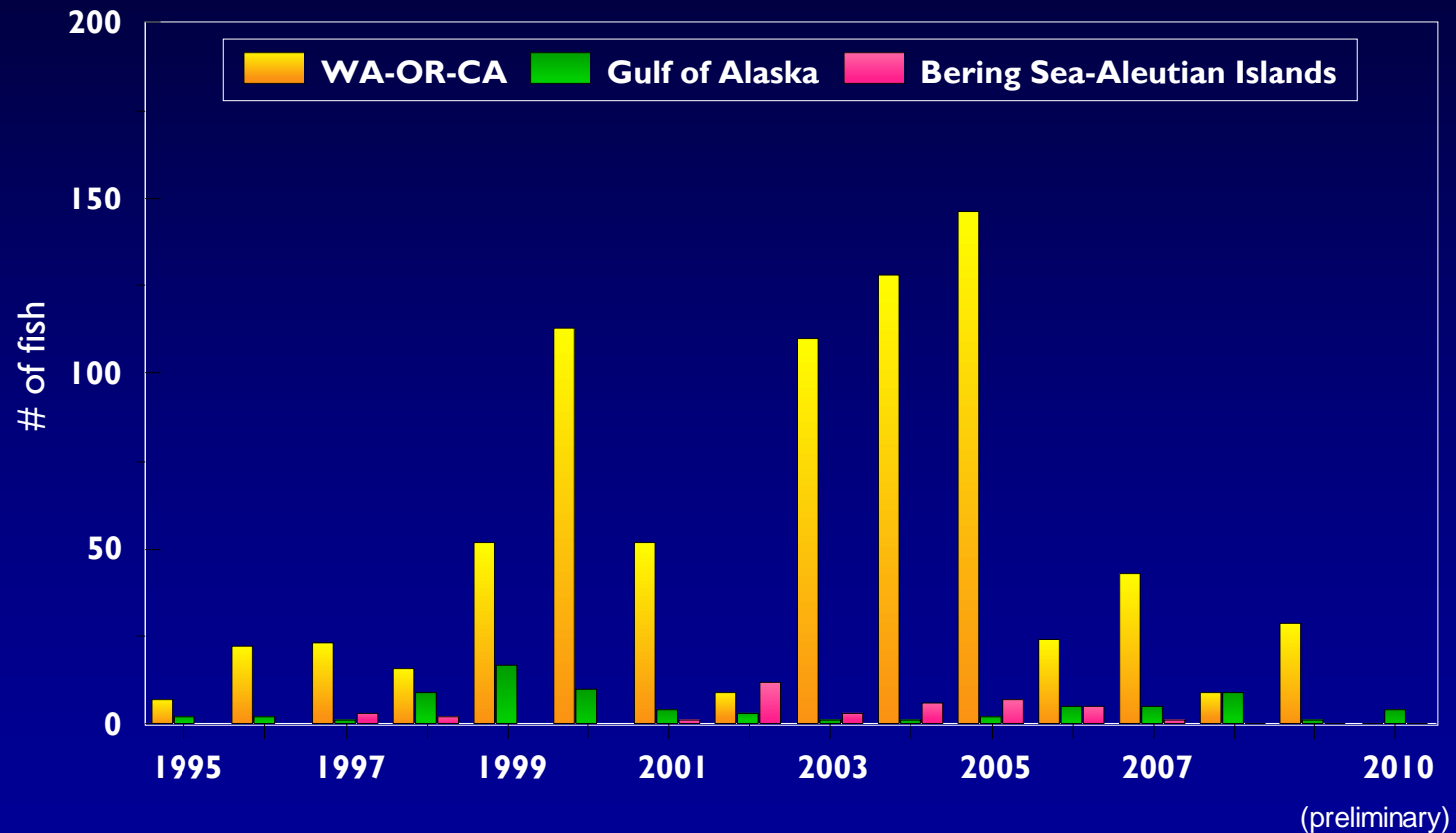
# Occurrence of AK-origin CWT Chinook salmon captured in 3 high seas trawl fisheries, 1995-2010



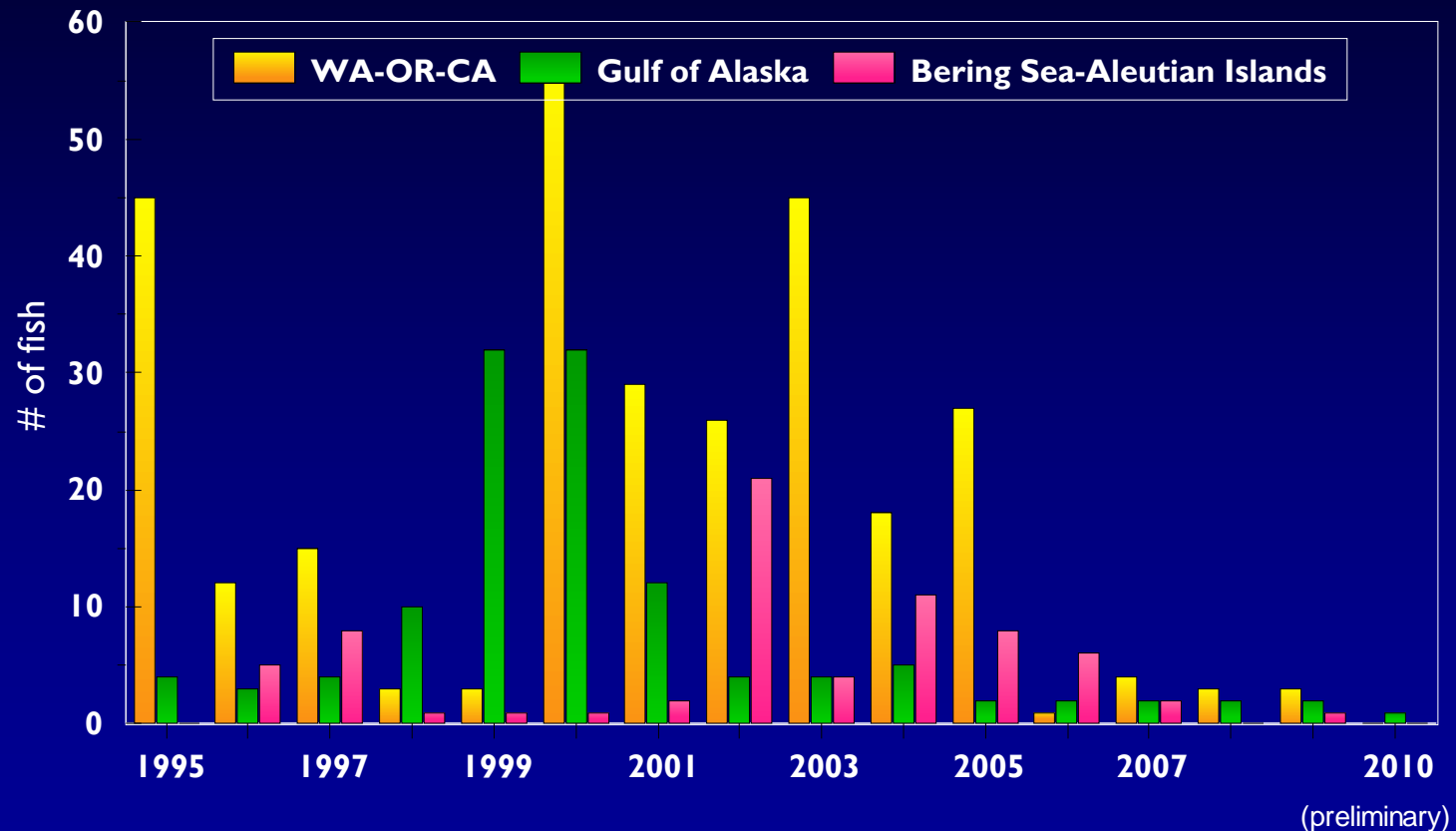
# Occurrence of BC-origin CWT Chinook salmon captured in 3 high seas trawl fisheries, 1995-2010



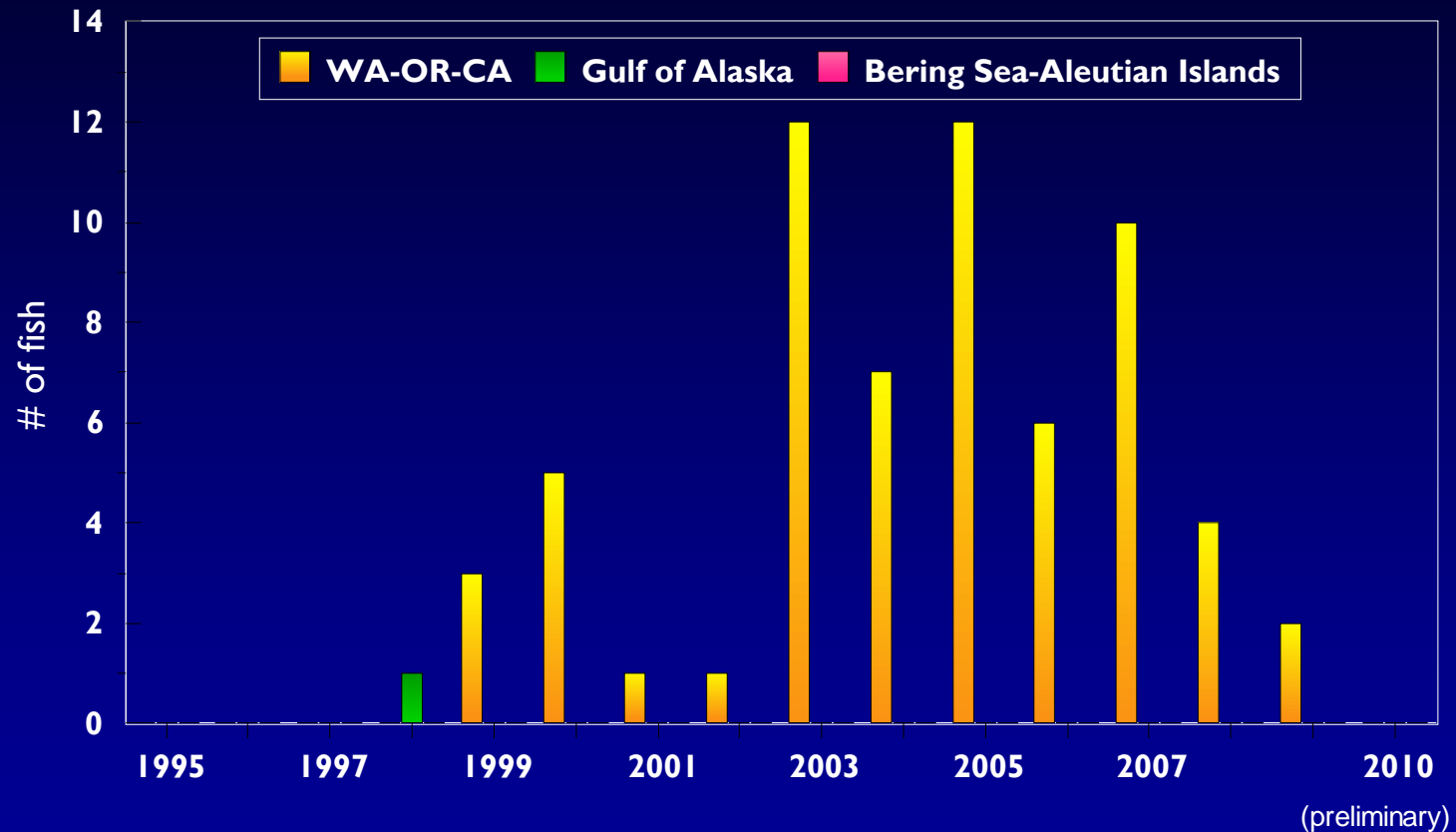
# Occurrence of WA-origin CWT Chinook salmon captured in 3 high seas trawl fisheries, 1995-2010



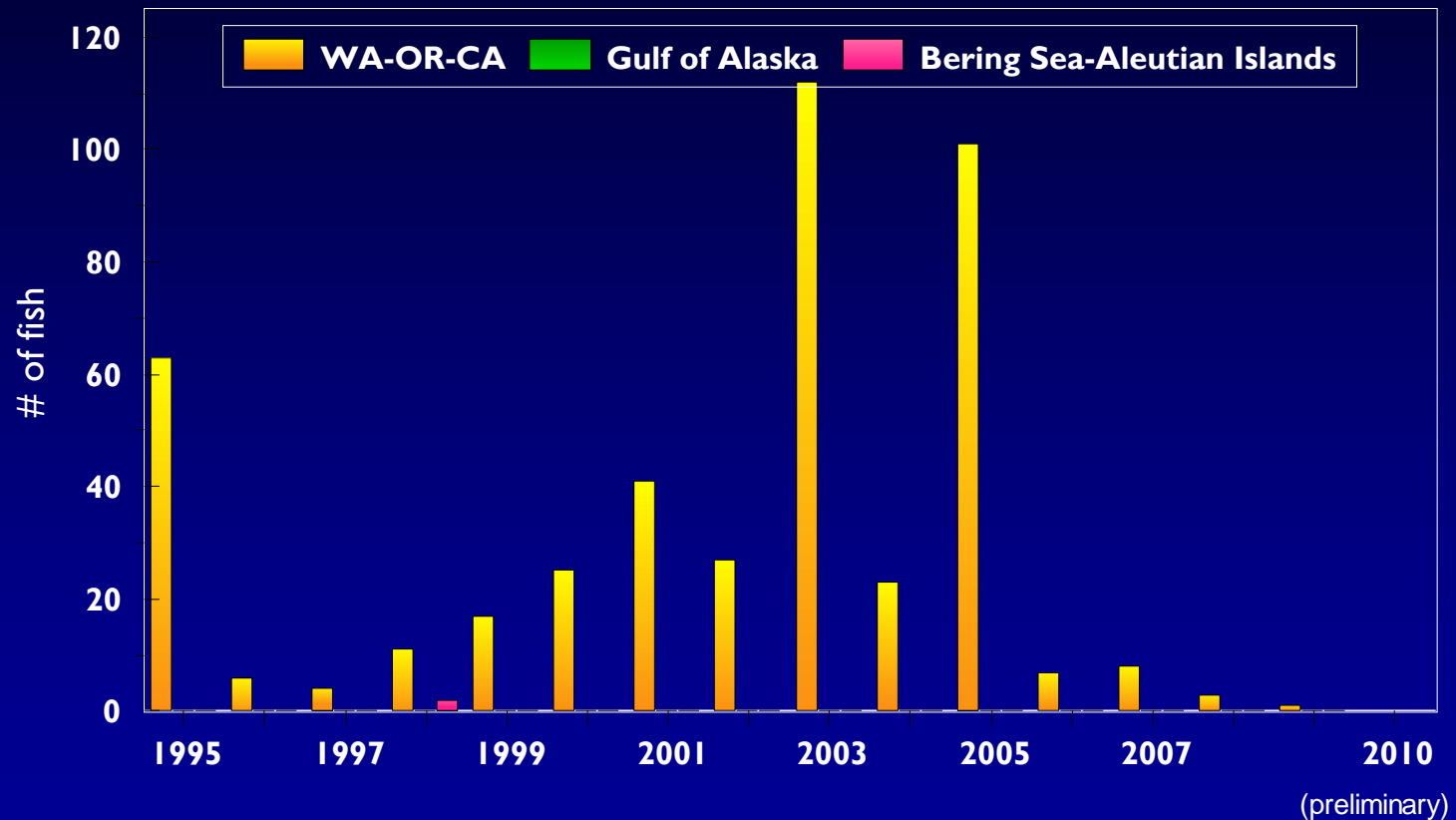
# Occurrence of **OR-origin** CWT Chinook salmon captured in 3 high seas trawl fisheries, 1995-2010



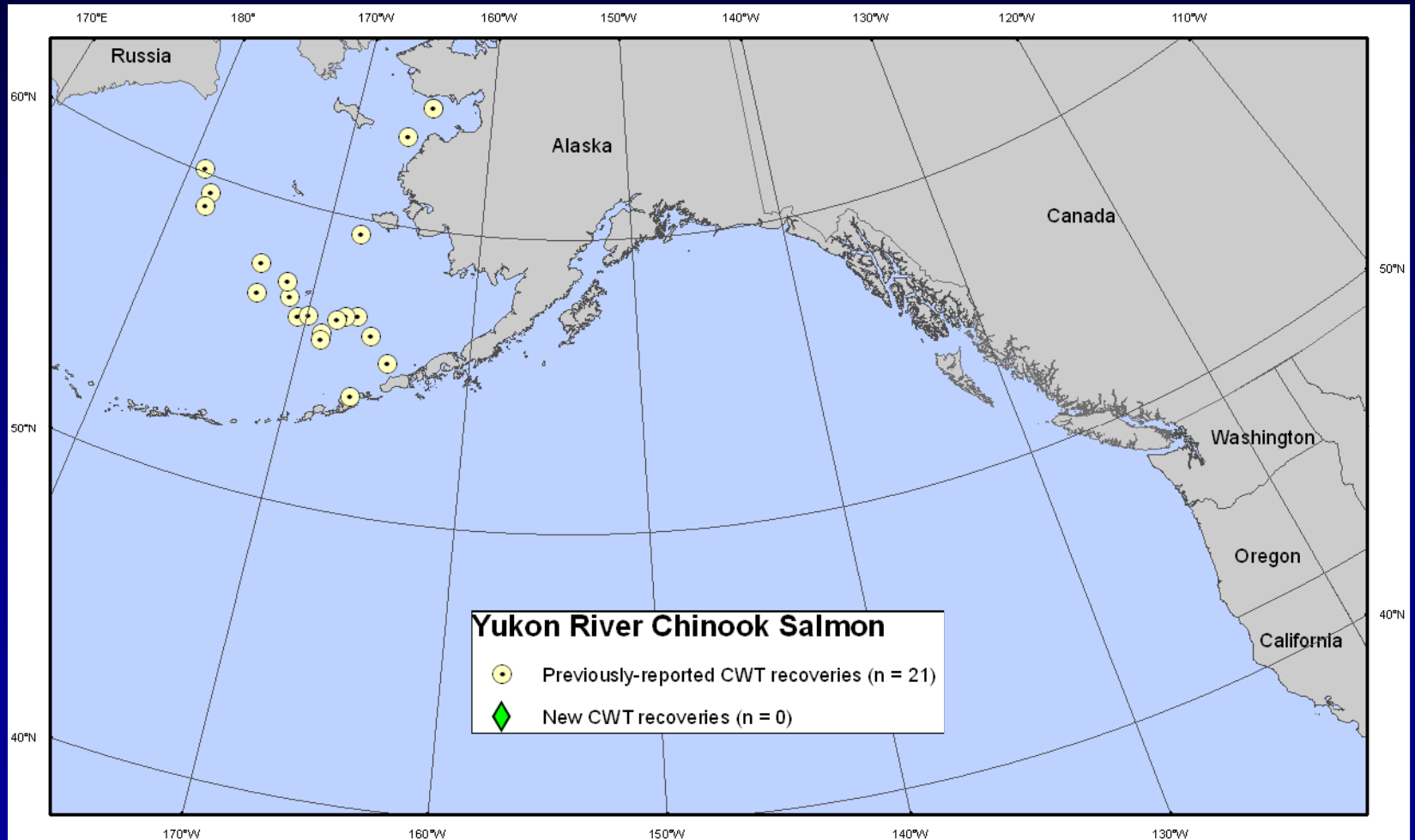
# Occurrence of ID-origin CWT Chinook salmon captured in 3 high seas trawl fisheries, 1995-2010



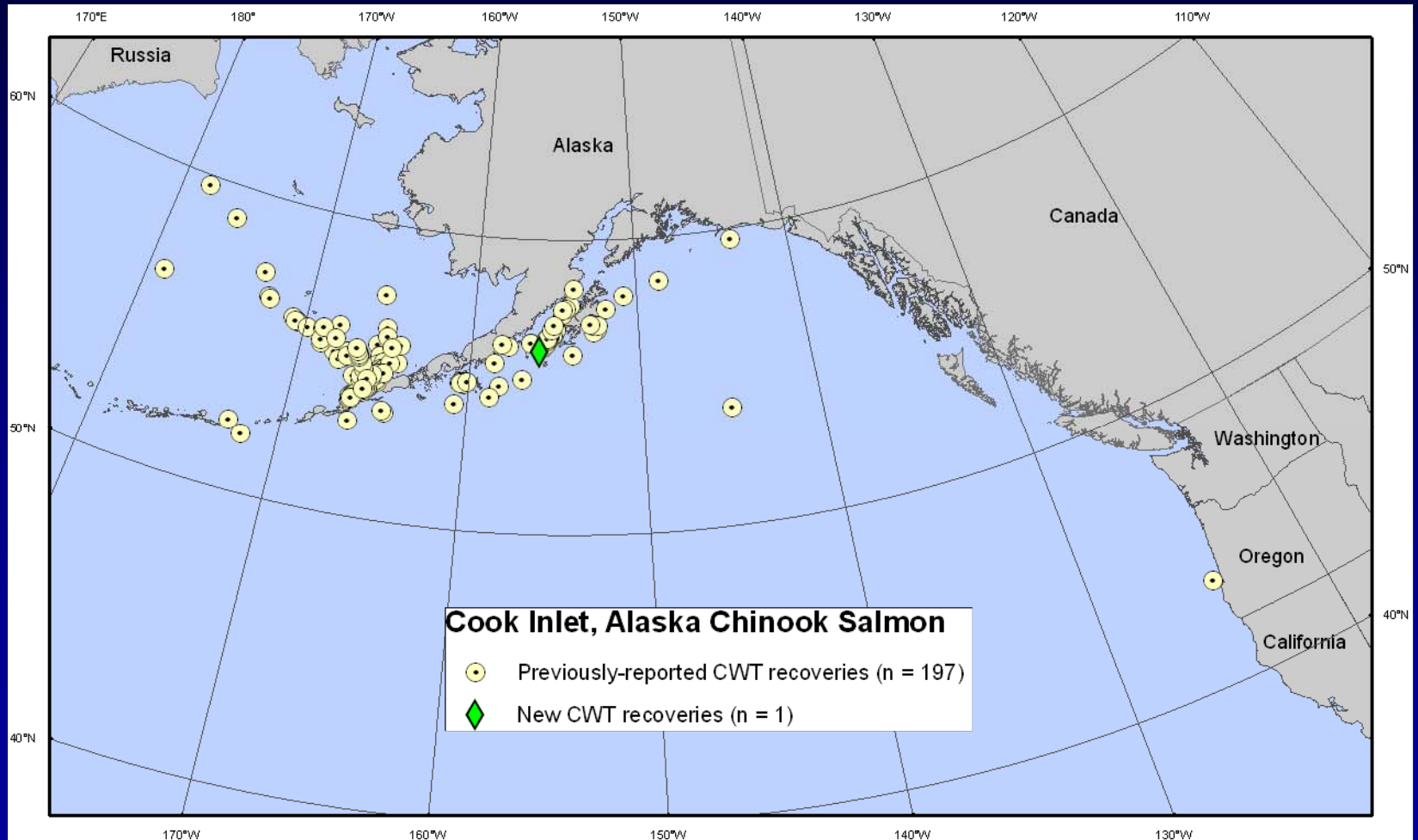
# Occurrence of CA-origin CWT Chinook salmon captured in 3 high seas trawl fisheries, 1995-2010



# Ocean distribution of Yukon R. Chinook salmon from CWT recoveries, 1981-2010

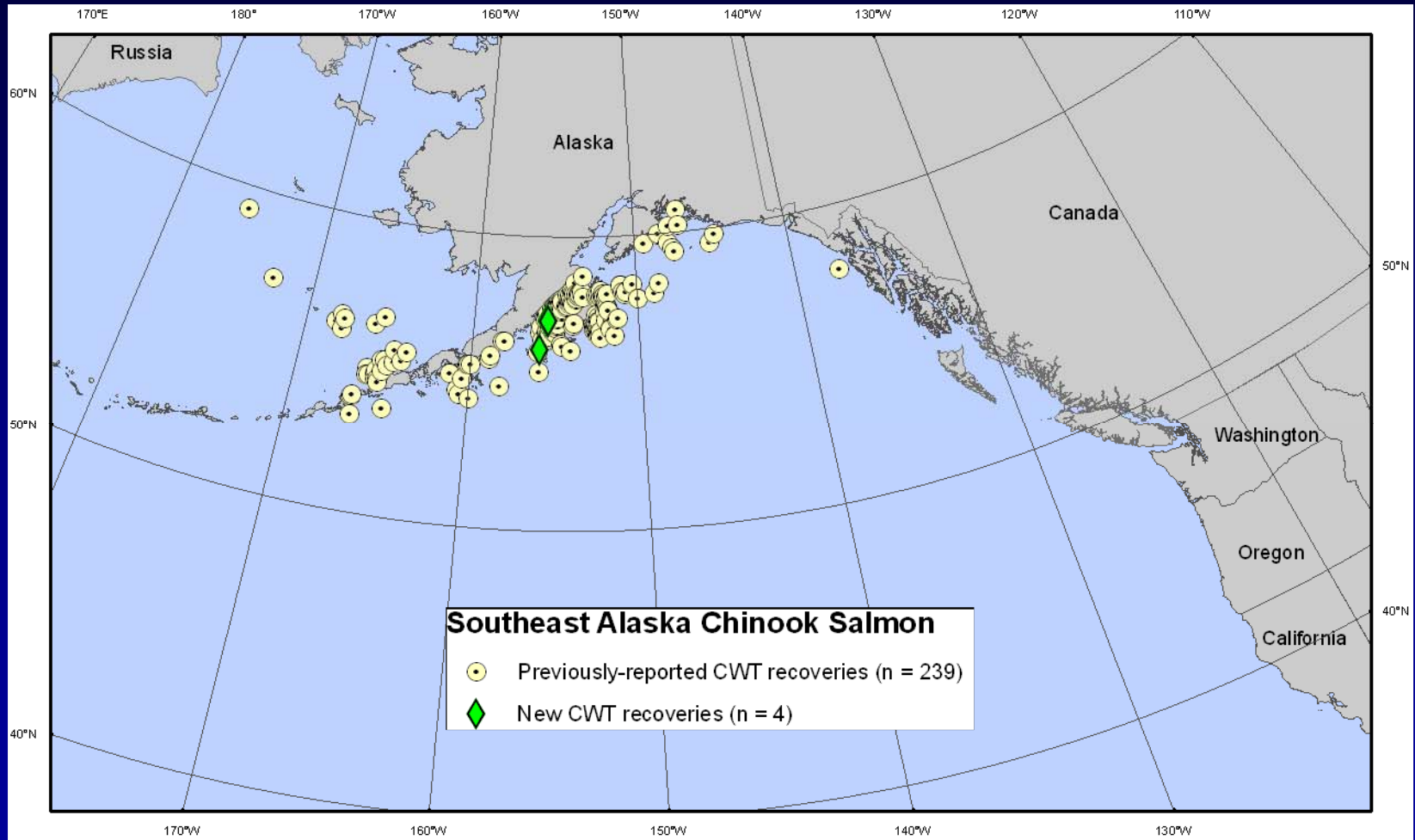


# Ocean distribution of Cook Inlet Chinook salmon from CWT recoveries, 1981-2010

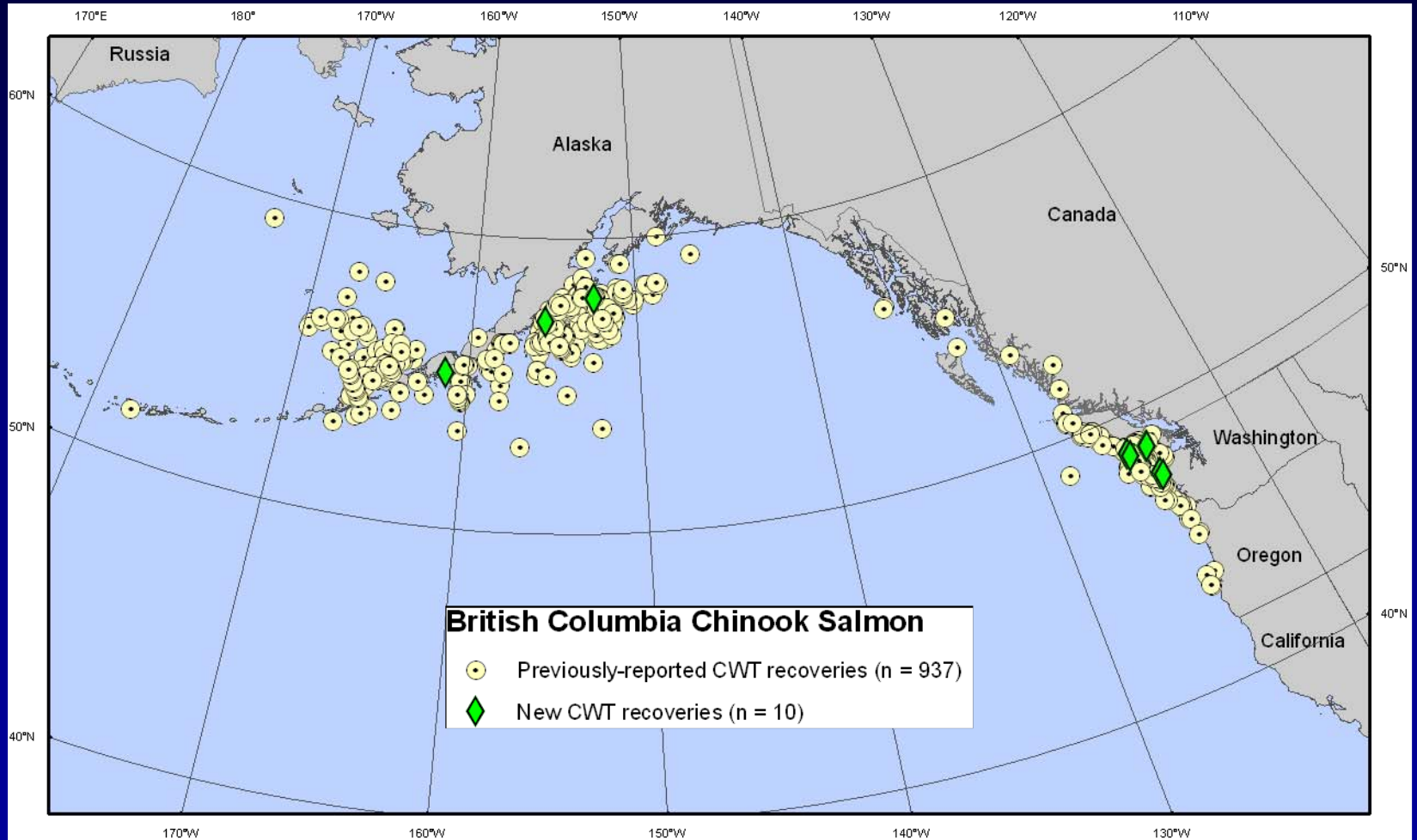




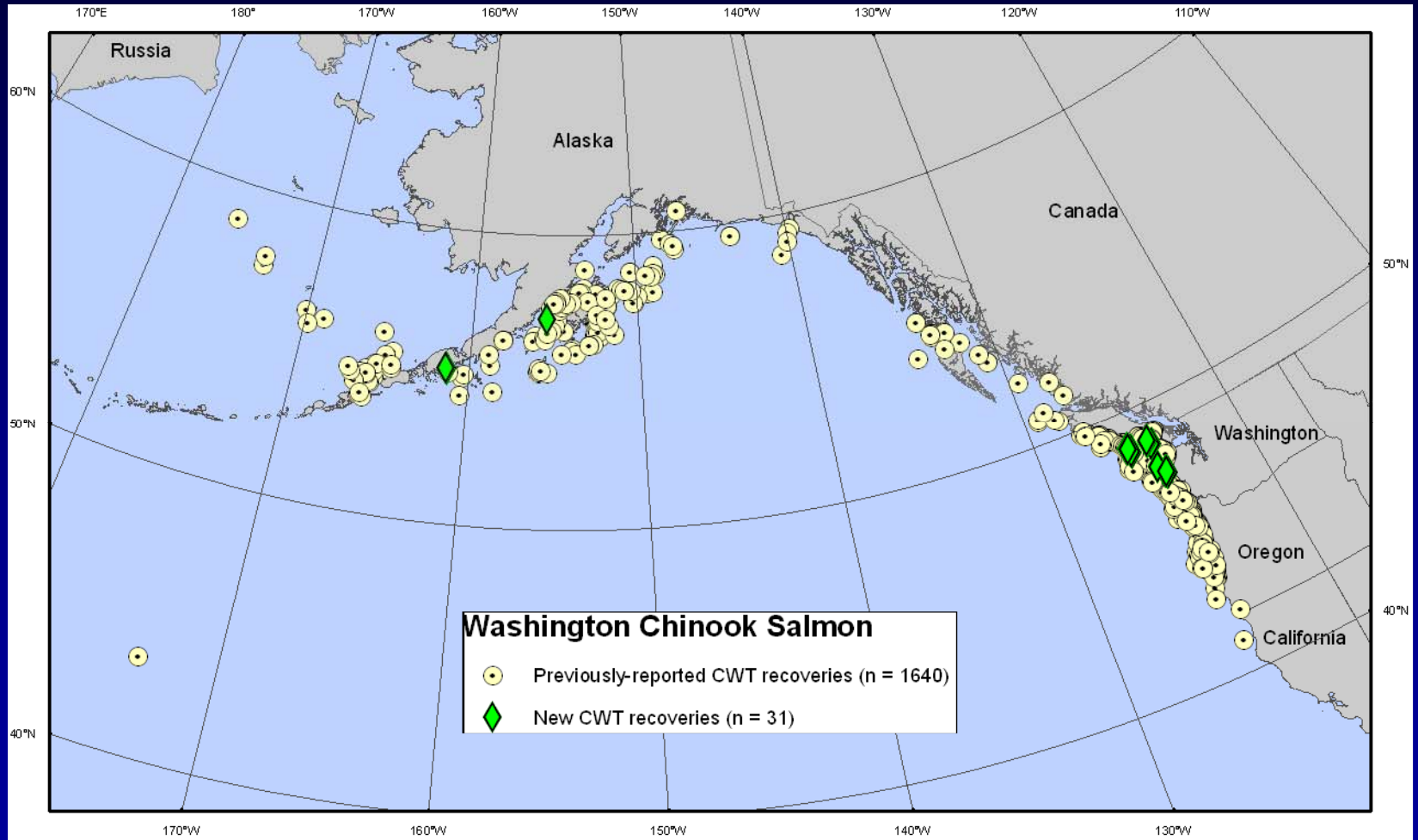
# Ocean distribution of SE Alaska Chinook salmon from CWT recoveries, 1981-2010



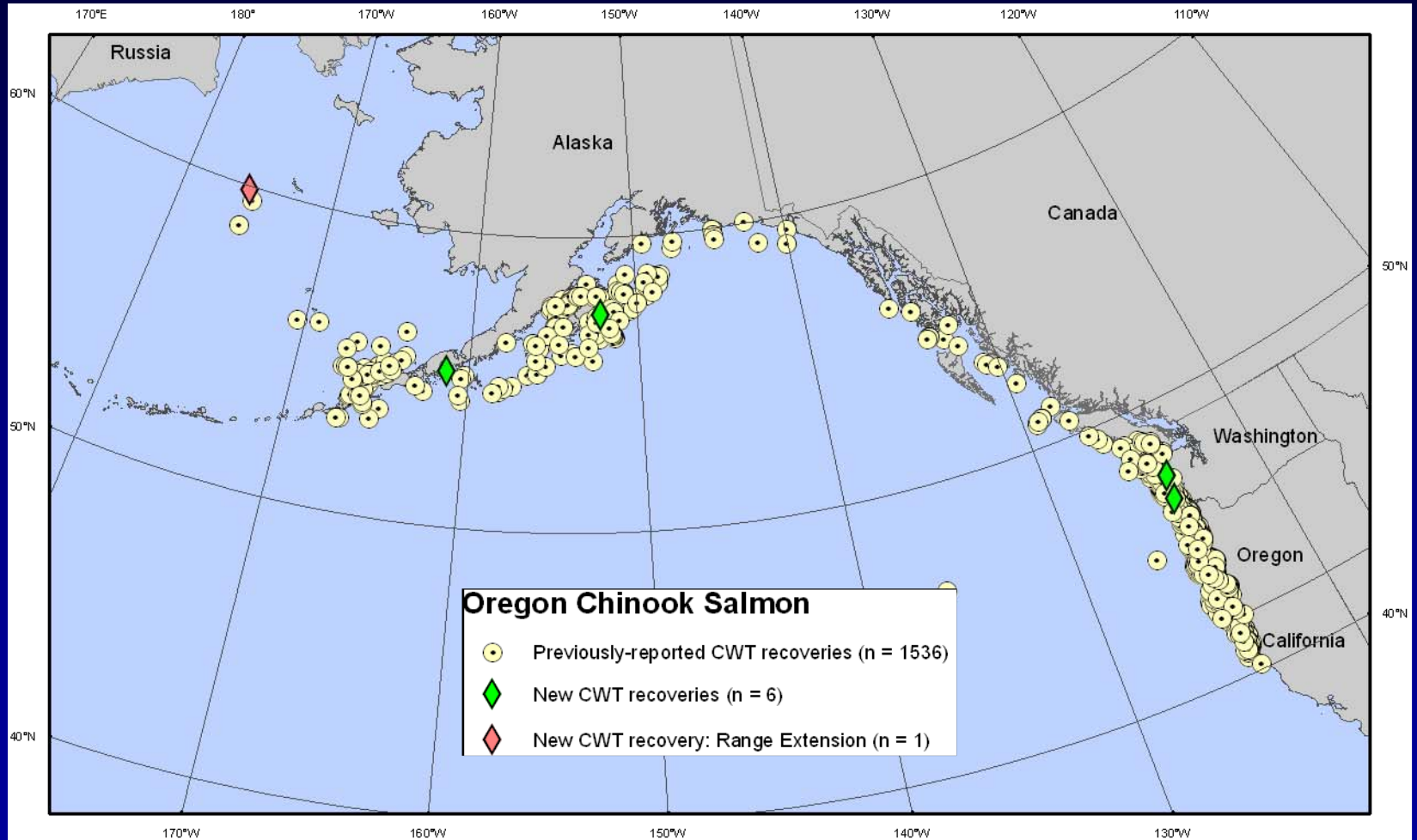
# Ocean distribution of BC Chinook salmon from CWT recoveries, 1981-2010



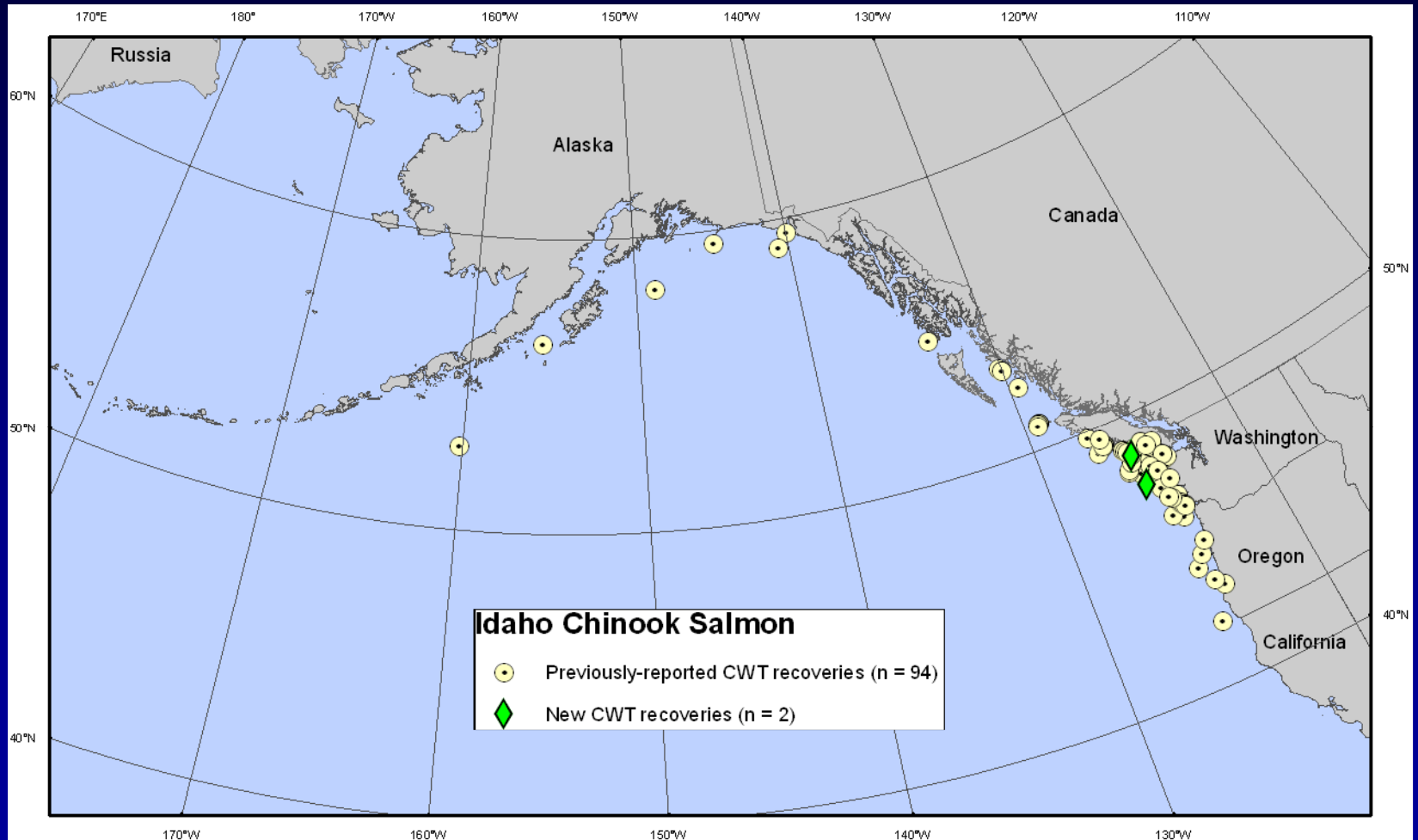
# Ocean distribution of Washington Chinook salmon from CWT recoveries, 1981-2010



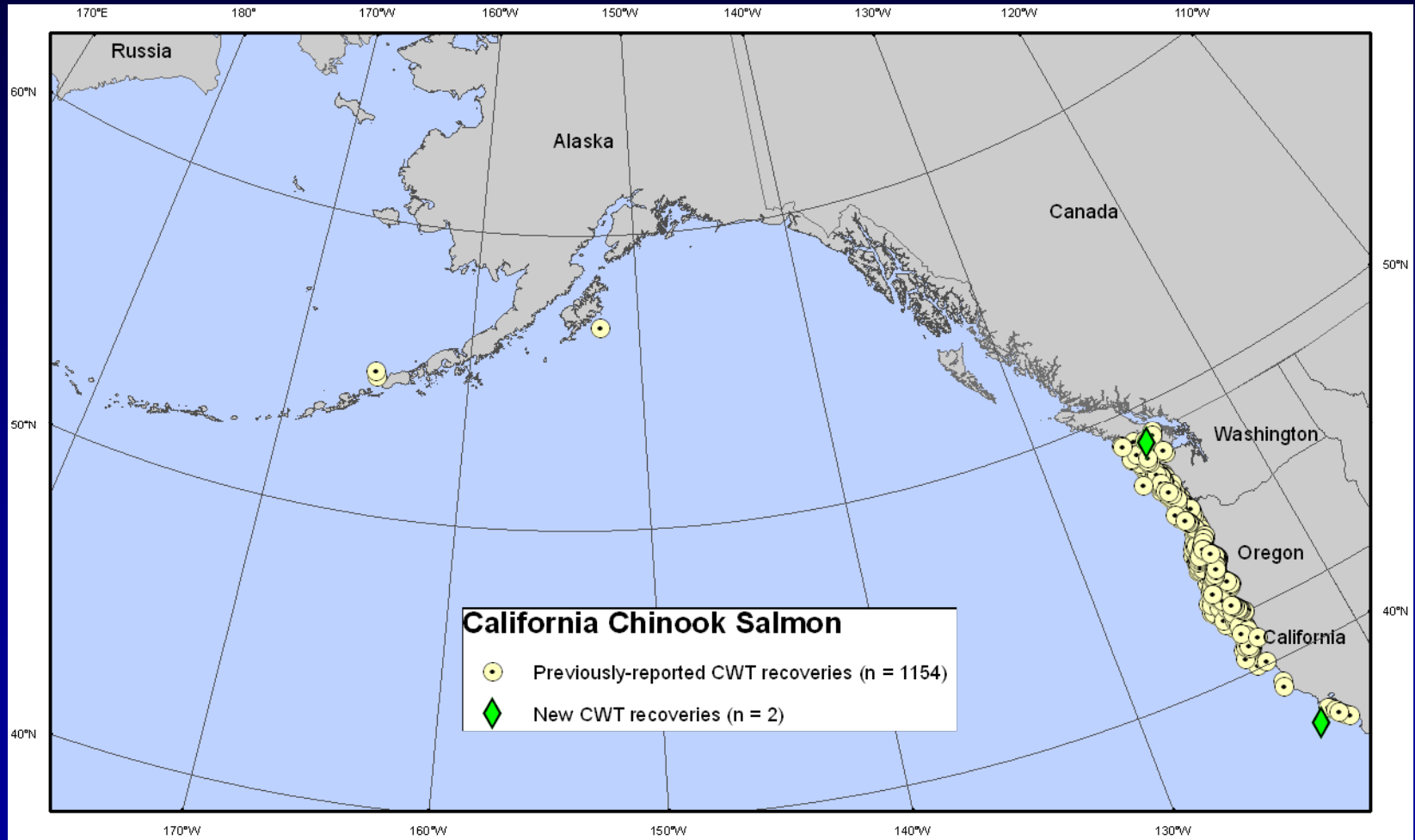
# Ocean distribution of Oregon Chinook salmon from CWT recoveries, 1981-2010



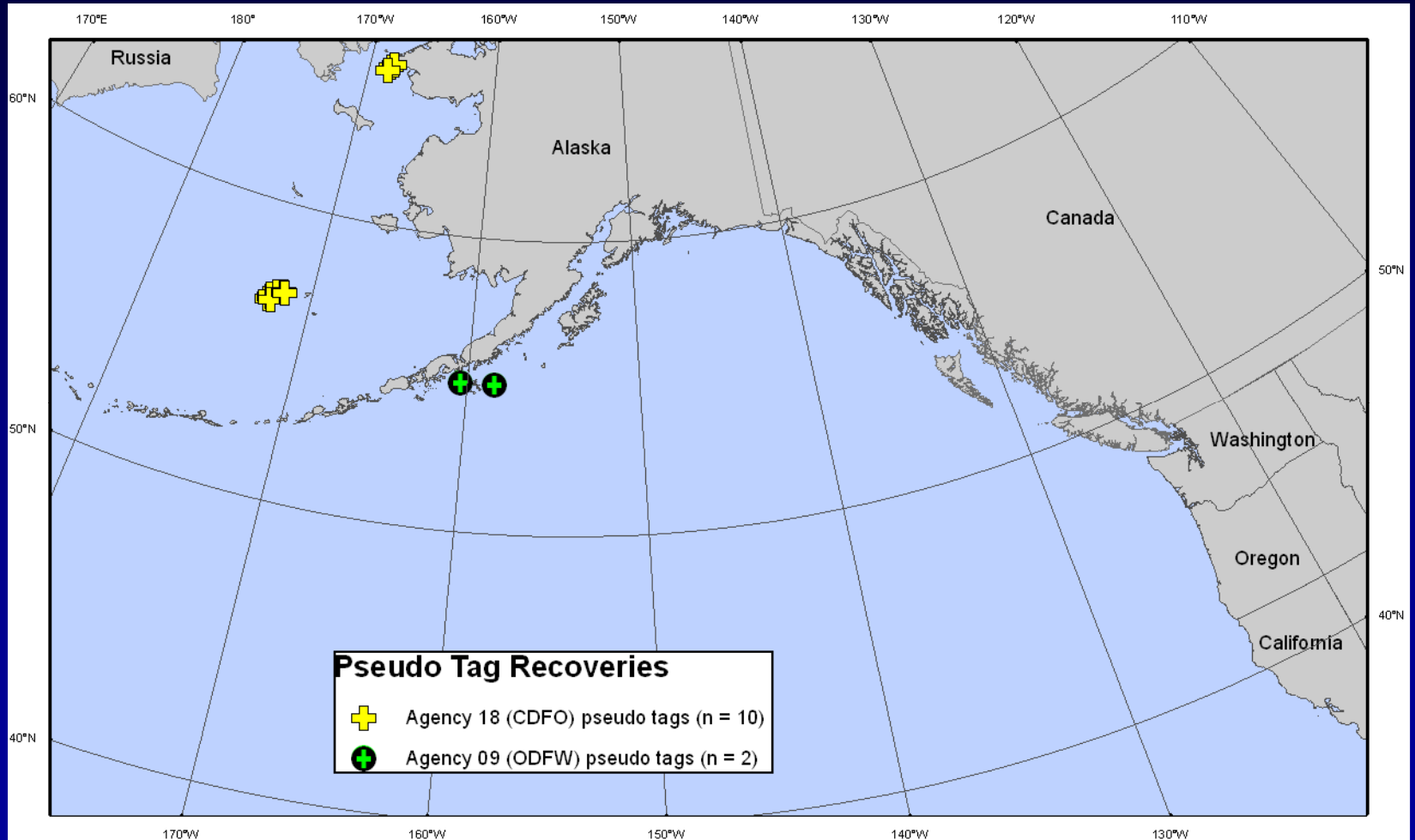
# Ocean distribution of Idaho Chinook salmon from CWT recoveries, 1981-2010



# Ocean distribution of California Chinook salmon from CWT recoveries, 1981-2010

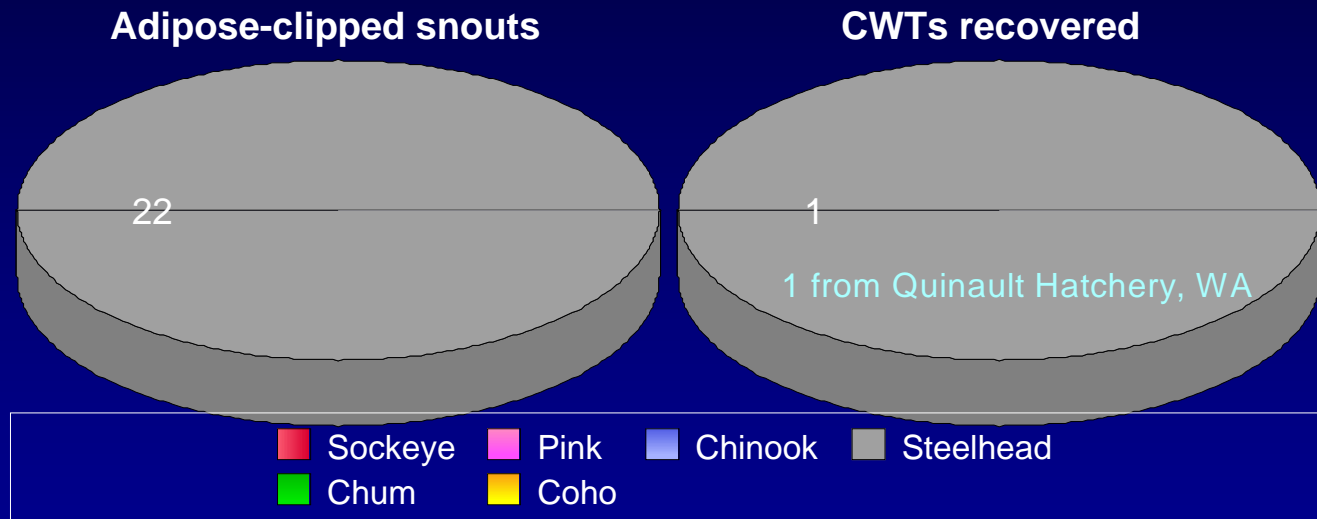


# Ocean distribution of Pseudo-Tagged Chinook salmon, 2007-2010



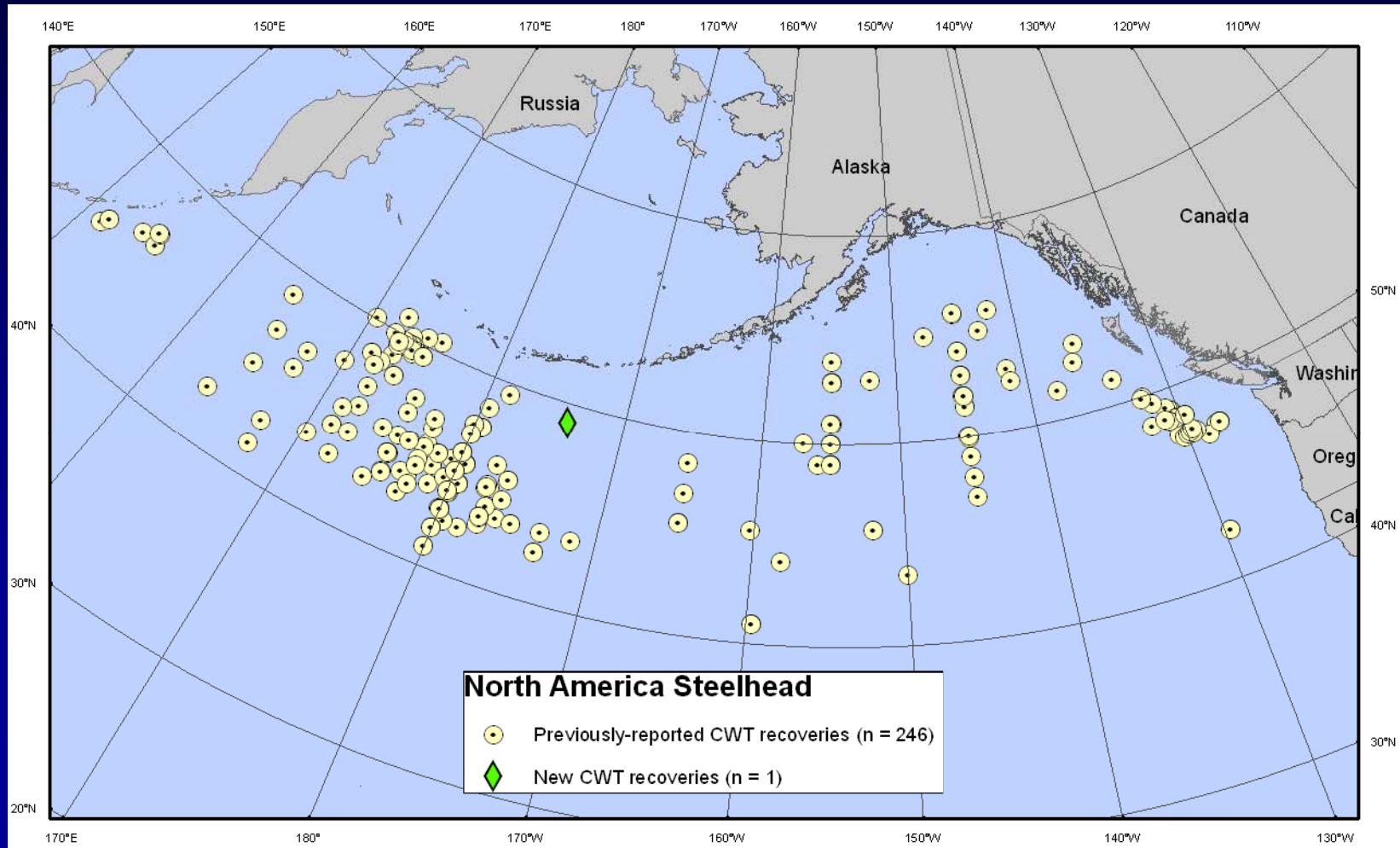


# Occurrence of CWT salmonids in FAJ (Japanese) research on the high seas in 2010





# Ocean distribution of North America steelhead from CWT recoveries, 1981-2010



# Changes in 2011 Observer Sampling for CWTs in Bycatch of GOA and BSAI Trawl Fisheries

- Ad-clipped salmon will only be sampled from INSIDE the sample,
- 1 / 10 Chinook salmon will be sampled for genetics,
- Ad-clipped salmon will be collected only from fish sampled for genetics (10% of total catch)

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Any  
questions?

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