

High seas CWT recoveries in 2005 and 2006



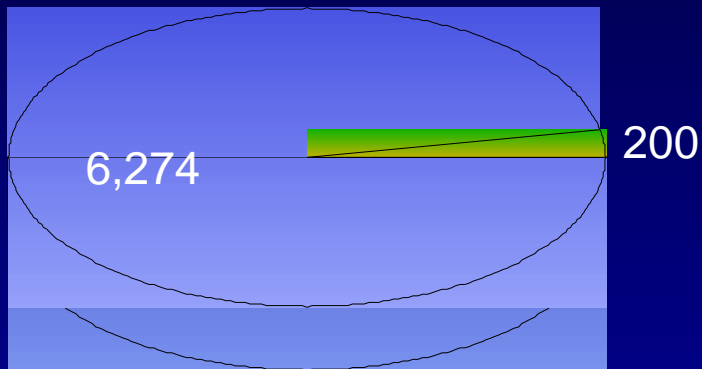
Adrian Celewycz

NOAA/NMFS Auke Bay Laboratory, Alaska Fisheries Science Center
11305 Glacier Hwy
Juneau, Alaska 99801

2007 meeting of the Regional Mark Committee of the PSMFC

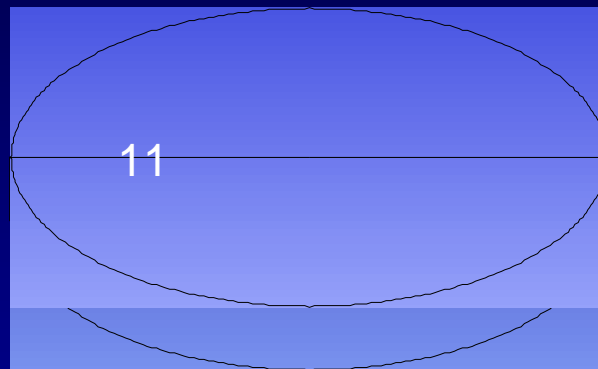
Bycatch of CWT salmonids in the 2005 trawl fishery in the Gulf of Alaska

Fish examined



Total Chinook caught = 31,896

CWTs



Total Estimated Contribution
of CWT Chinook = 637

 Sockeye	 Pink	 Chinook	 Steelhead
 Chum	 Coho		

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)

$$C = bR_T;$$

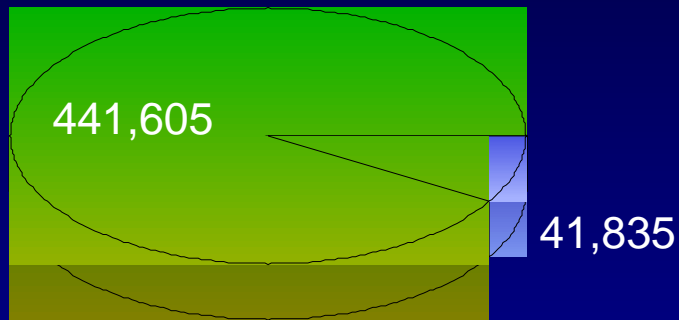
C = the total estimated contribution of the release group to the fishery in that area at that time;

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

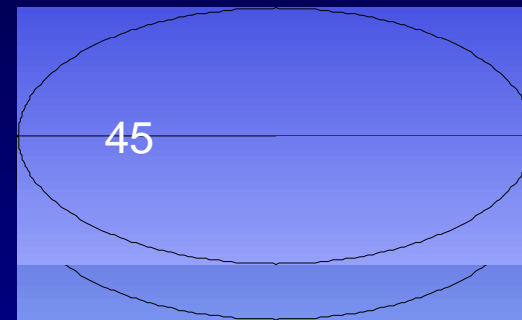
Bycatch of CWT salmonids in the 2005 trawl fishery in the Bering Sea and Aleutian Islands

Fish examined



Total Chinook caught = 69,908

CWTs



Total estimated Contribution
of CWT Chinook = 271

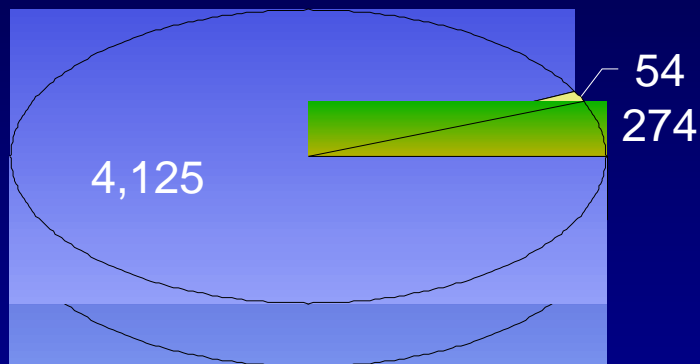
 Sockeye	 Pink	 Chinook	 Steelhead
 Chum	 Coho		

History of high seas CWT processing

- Late 1970s: Auke Bay Laboratory (ABL) began reporting recoveries of high seas tags (all from INPFC research cruises)
- 1981: ABL began processing CWTs collected by observers in 3 high seas fisheries:
 - Pacific Whiting (hake) trawl fishery off WA-OR-CA
 - GOA trawl fishery
 - BSAI trawl fishery
- 2002: ABL would still process CWTs collected by observers in:
 - GOA trawl fishery
 - BSAI trawl fishery
- 2002: NMFS, Northwest Fishery Science Center (NWFSC) began managing observer programs and processing cwts from:
 - Pacific Whiting (hake) trawl fishery off WA-OR-CA
 - Groundfish fishery off WA-OR-CA
- 2006: NMFS, NWFSC began reporting CWTs (2002 onward)

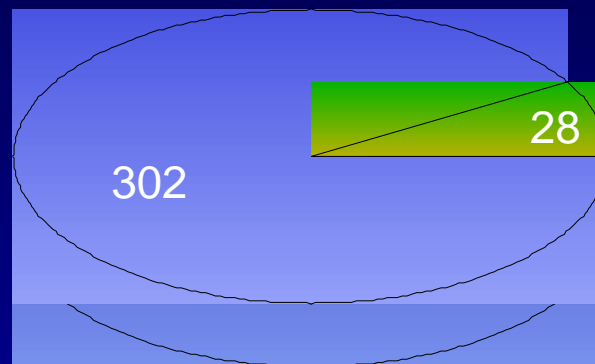
Bycatch of CWT salmonids in the 2005 trawl fishery off WA-OR-CA

Fish examined



Total Chinook caught = 7822

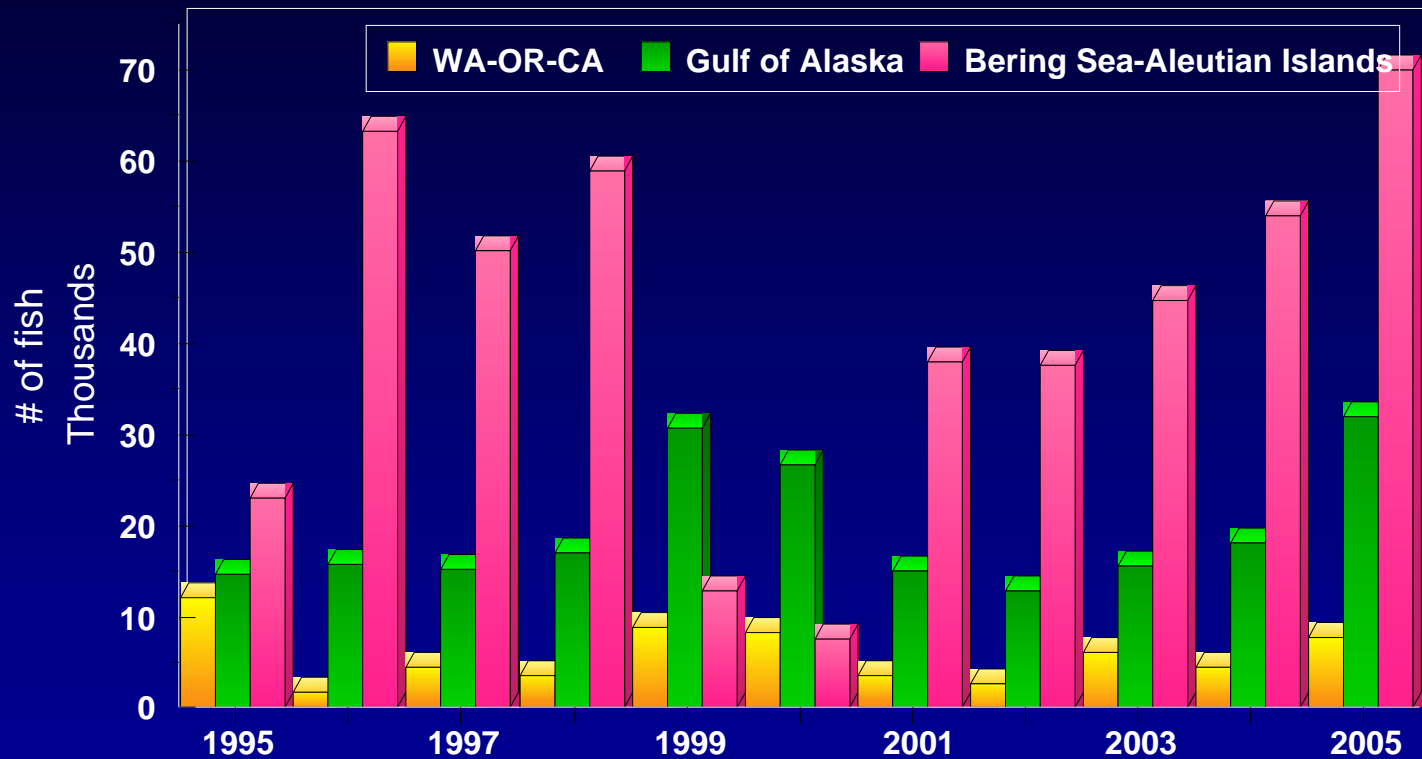
CWTs



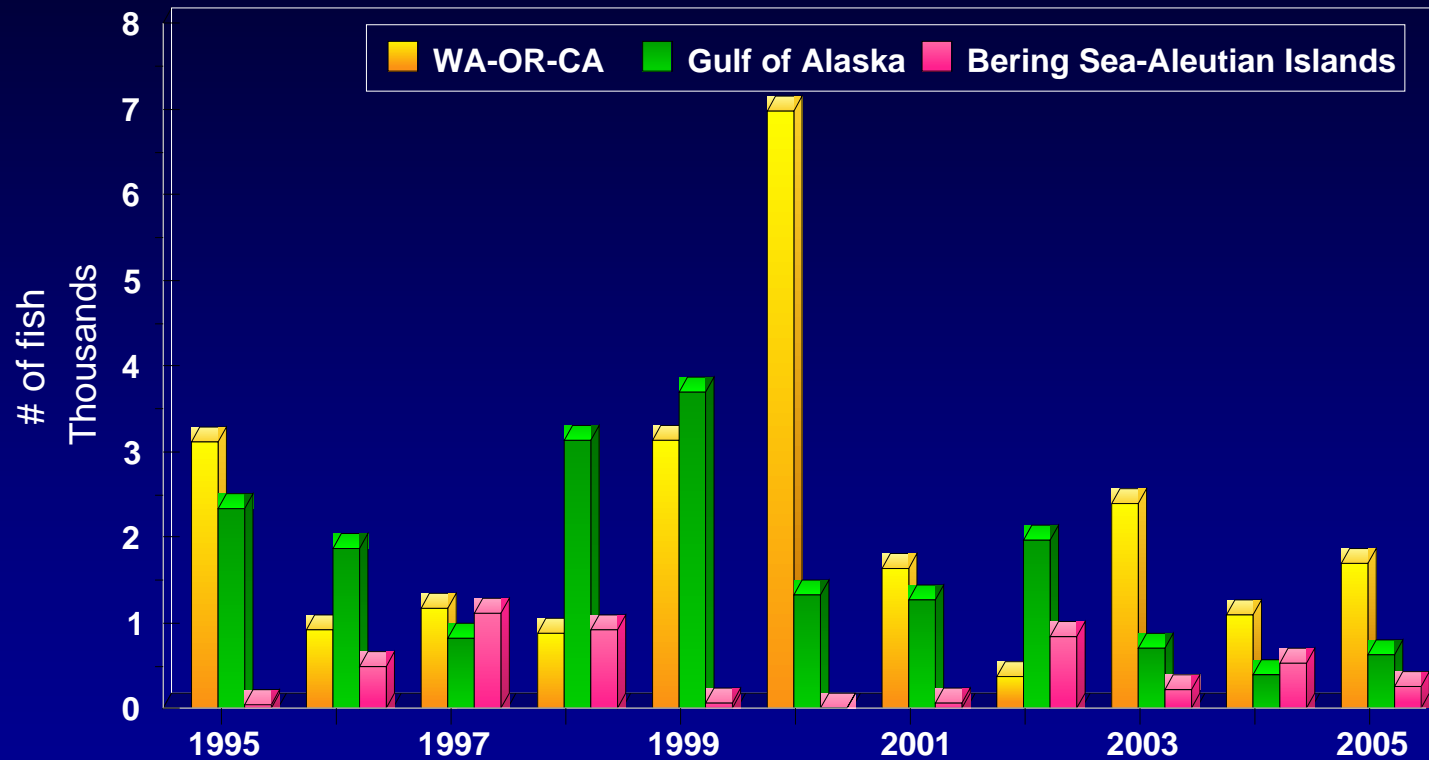
Total Estimated Contribution of Chinook = 1697



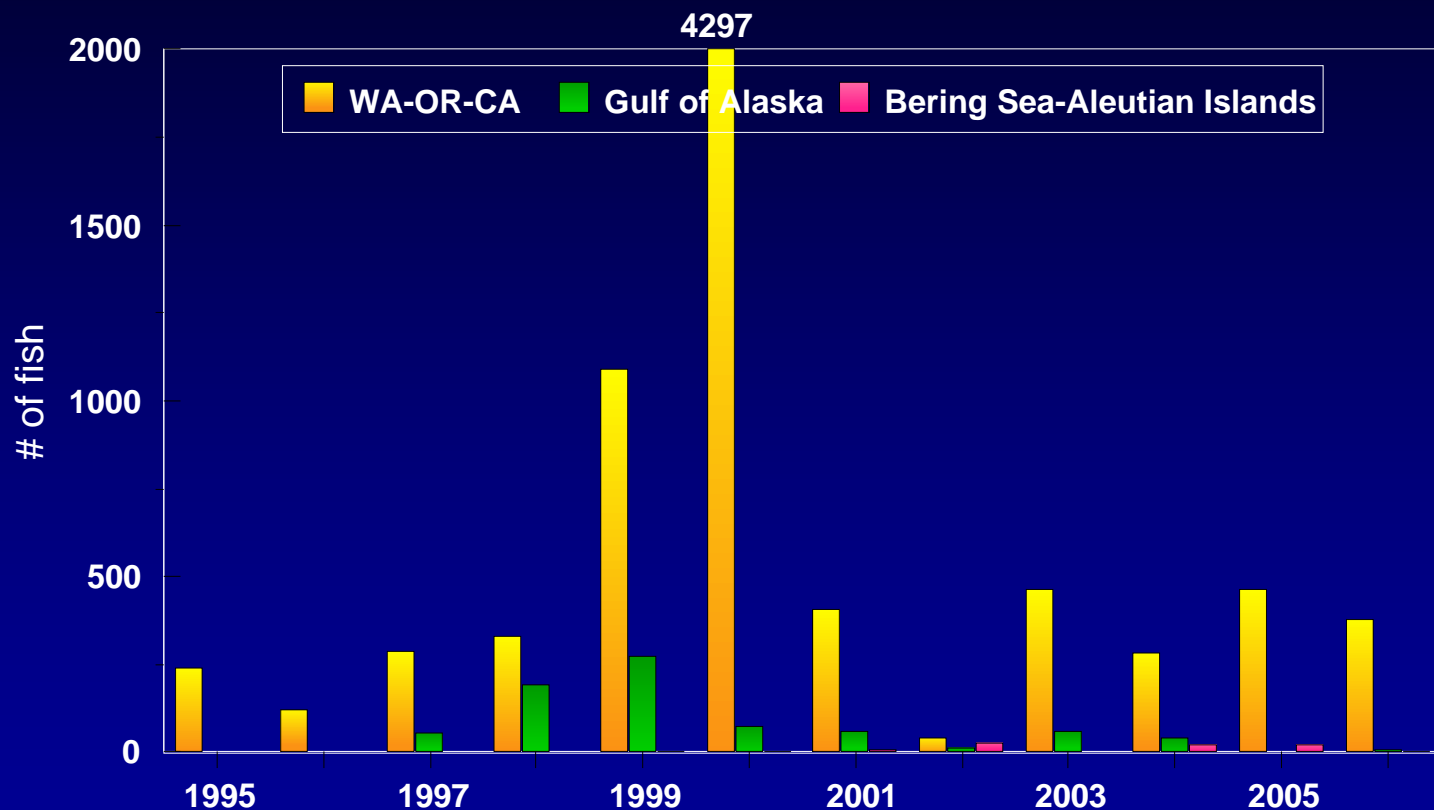
Total Chinook salmon bycatch in 3 high seas trawl fisheries, 1995-2005



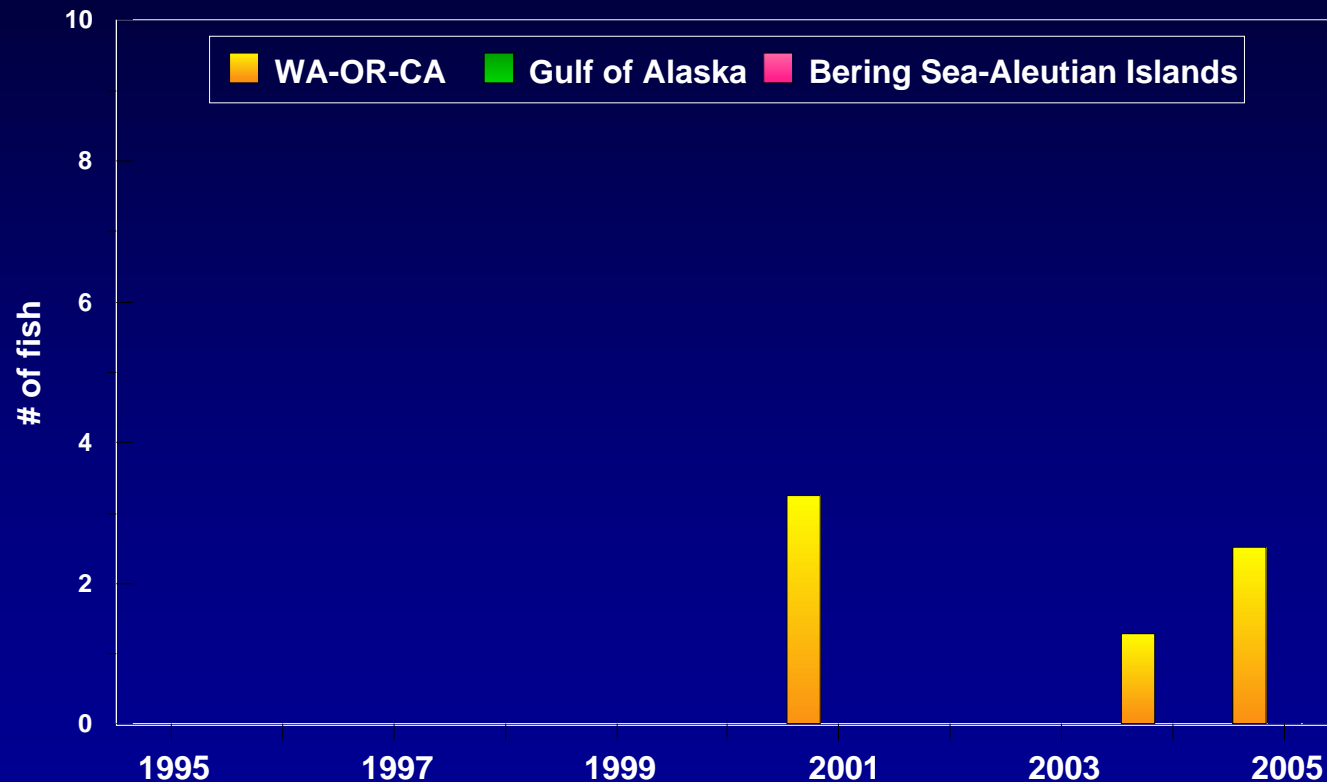
Total estimated contribution of CWT Chinook salmon captured in 3 high seas trawl fisheries, 1995-2005



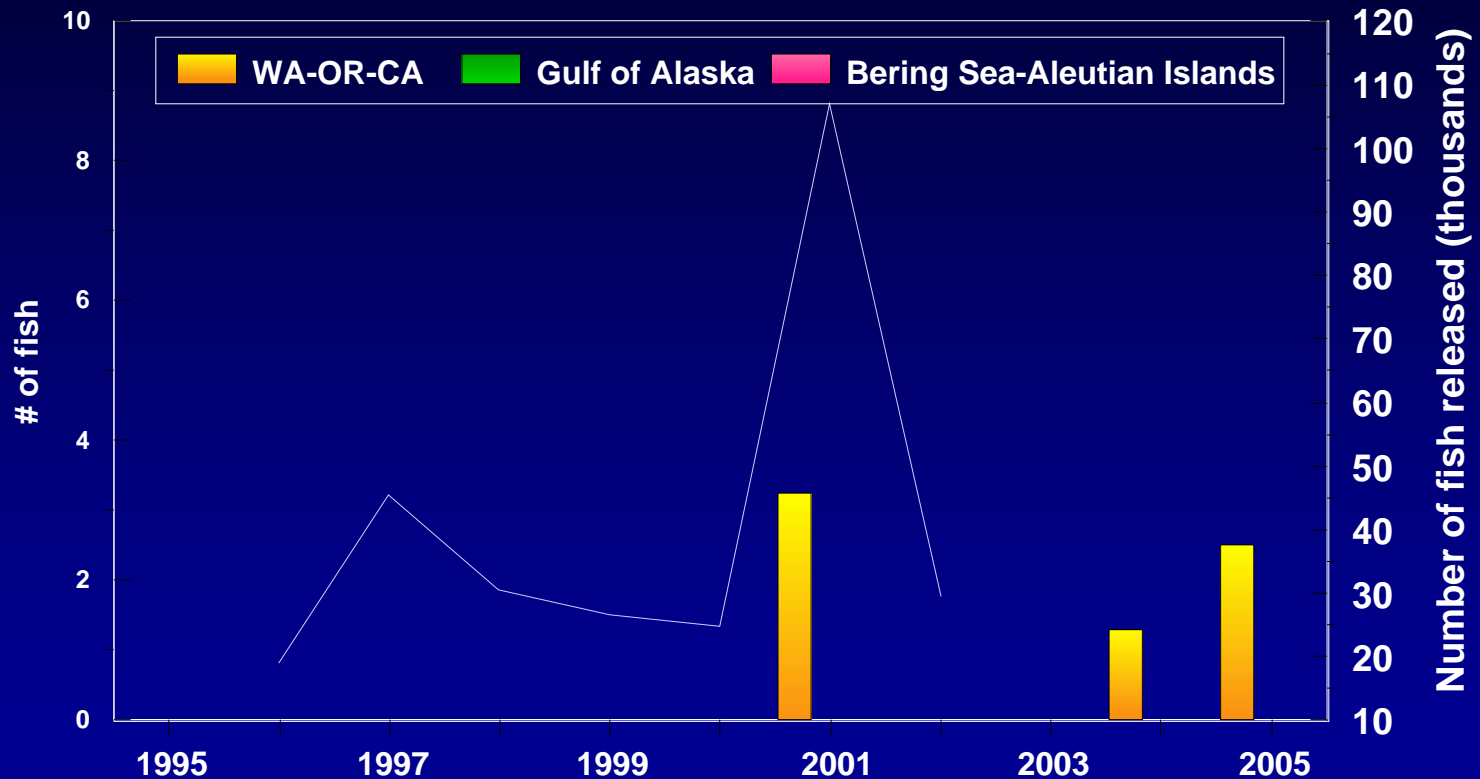
Total estimated contribution of current ESA-listed CWT (all ESUs) Chinook salmon captured in 3 trawl fisheries, 1995-2005



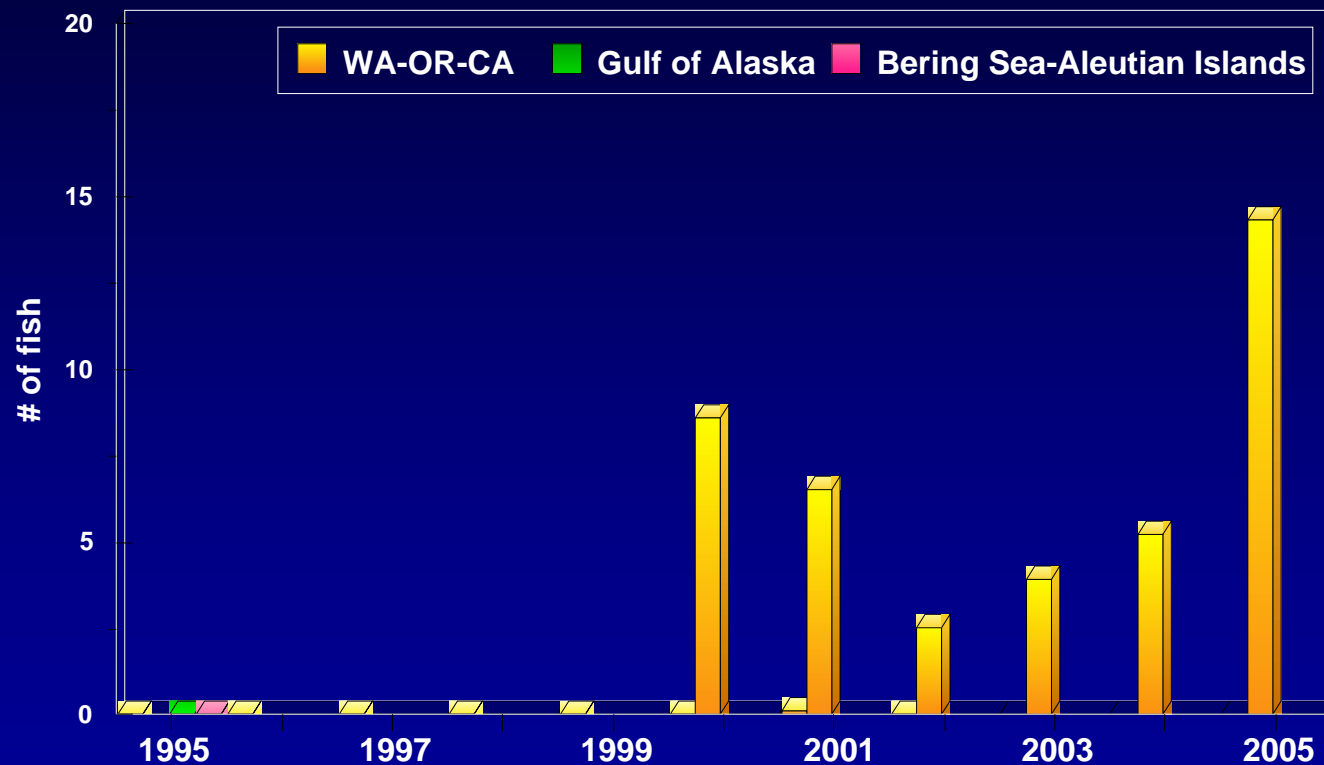
Total estimated contribution of current ESA-listed CWT (California Coastal ESU) Chinook salmon captured in 3 trawl fisheries, 1995-2005



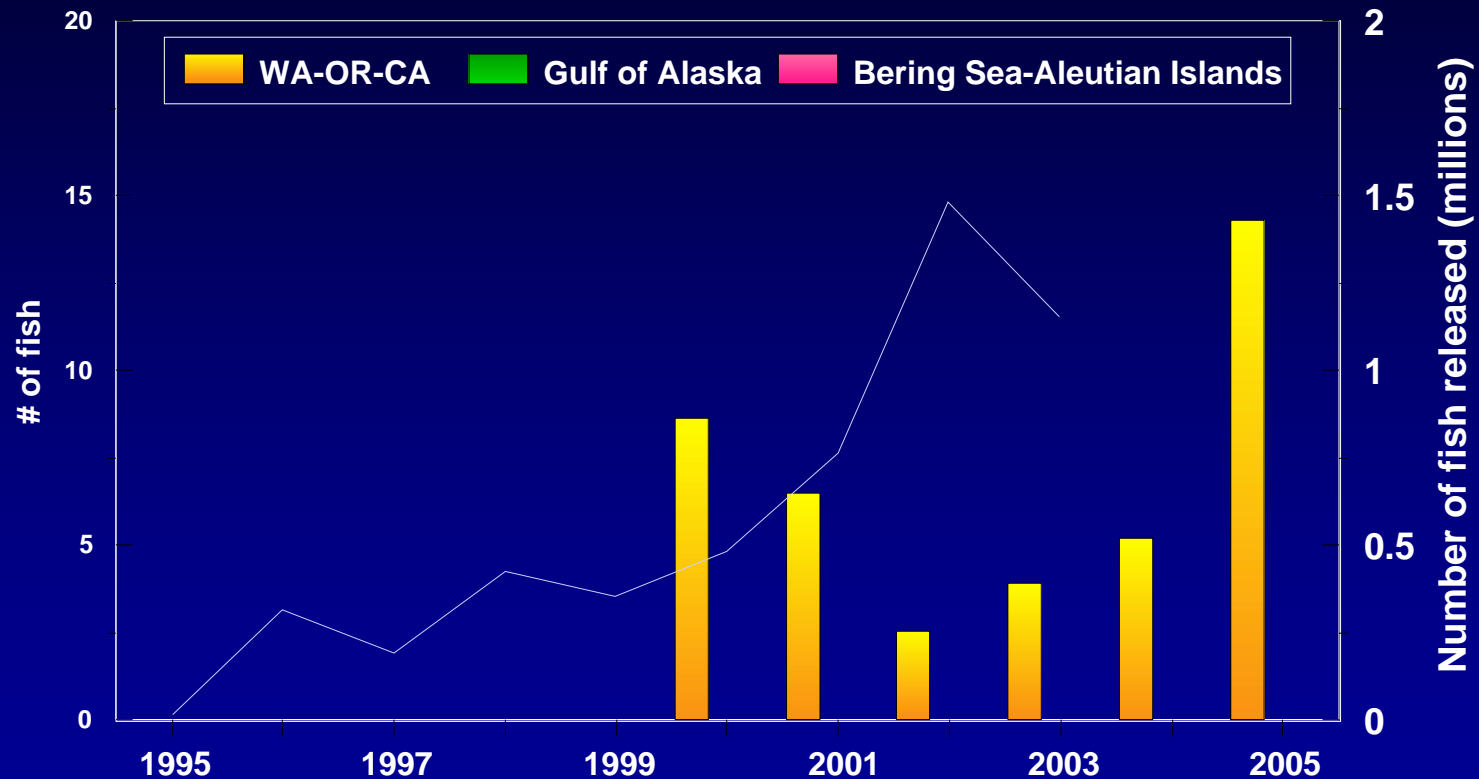
Total estimated contribution of current ESA-listed CWT (California coastal ESU) Chinook salmon captured in 3 trawl fisheries, 1995-2005, vs. # fish released by brood year



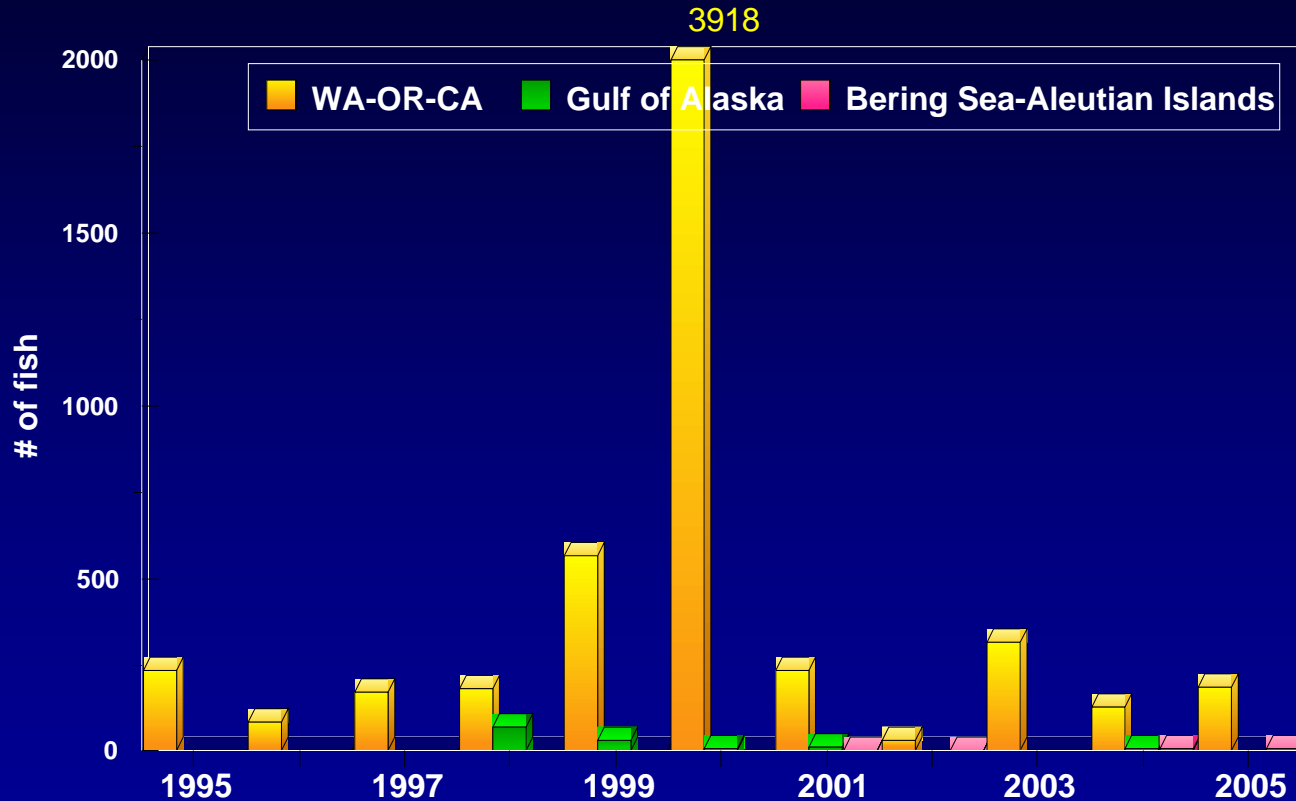
Total estimated contribution of current ESA-listed CWT (California Central Valley Spring ESU) Chinook salmon captured in 3 trawl fisheries, 1995-2005



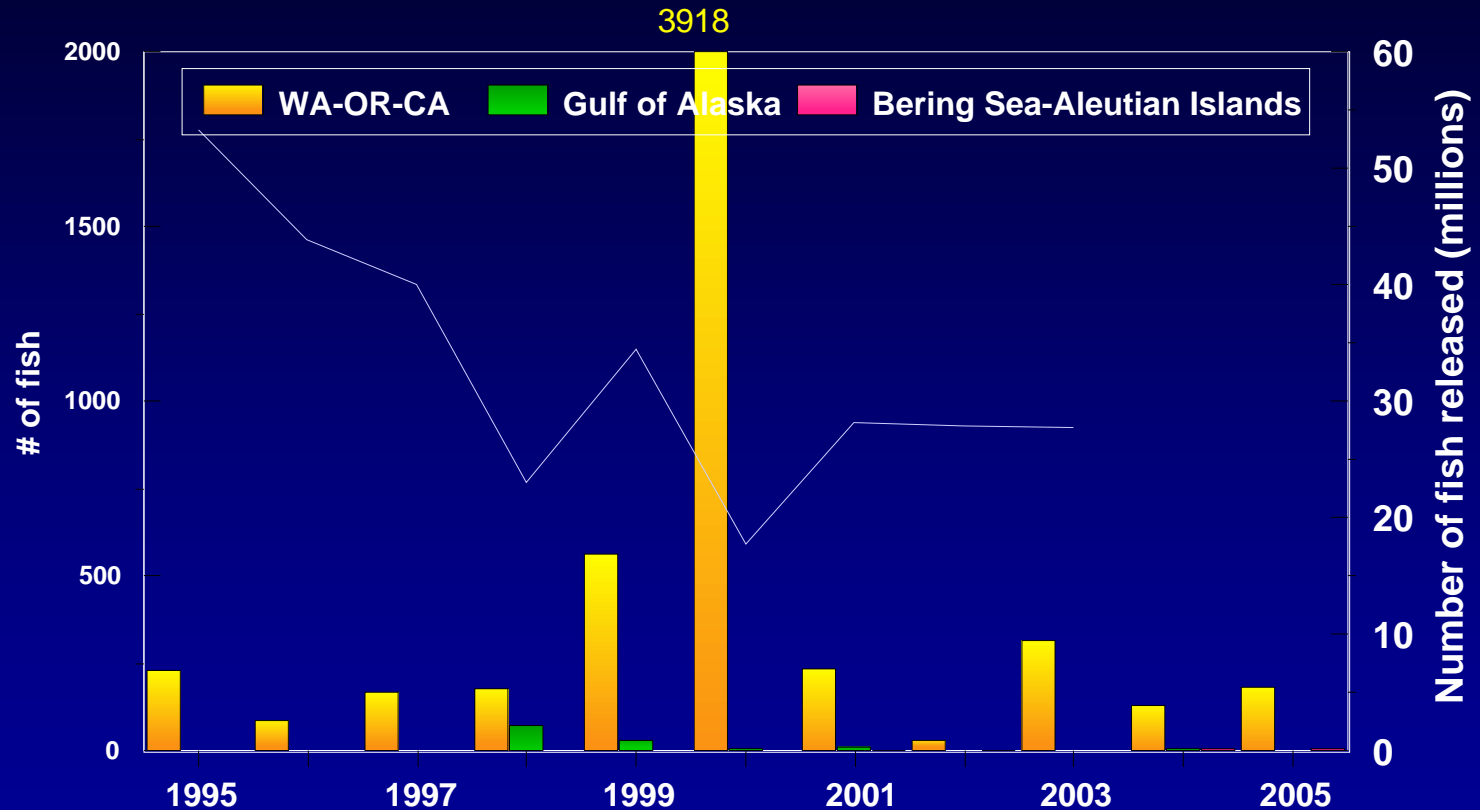
Total estimated contribution of current ESA-listed CWT (California Central Valley Spring ESU) Chinook salmon captured in 3 trawl fisheries, 1995-2005, vs. # fish released by brood year



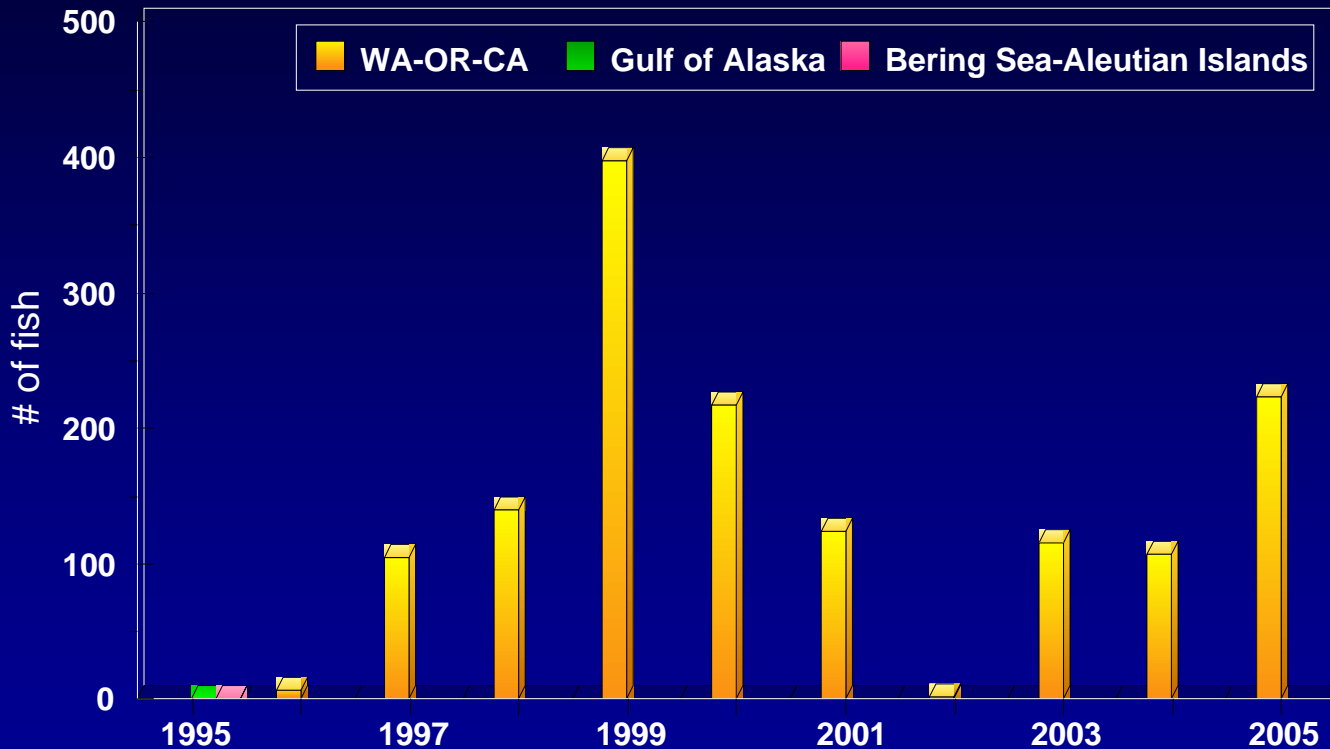
Total estimated contribution of current ESA-listed CWT (lower Columbia R. ESU) Chinook salmon captured in 3 trawl fisheries, 1995-2005



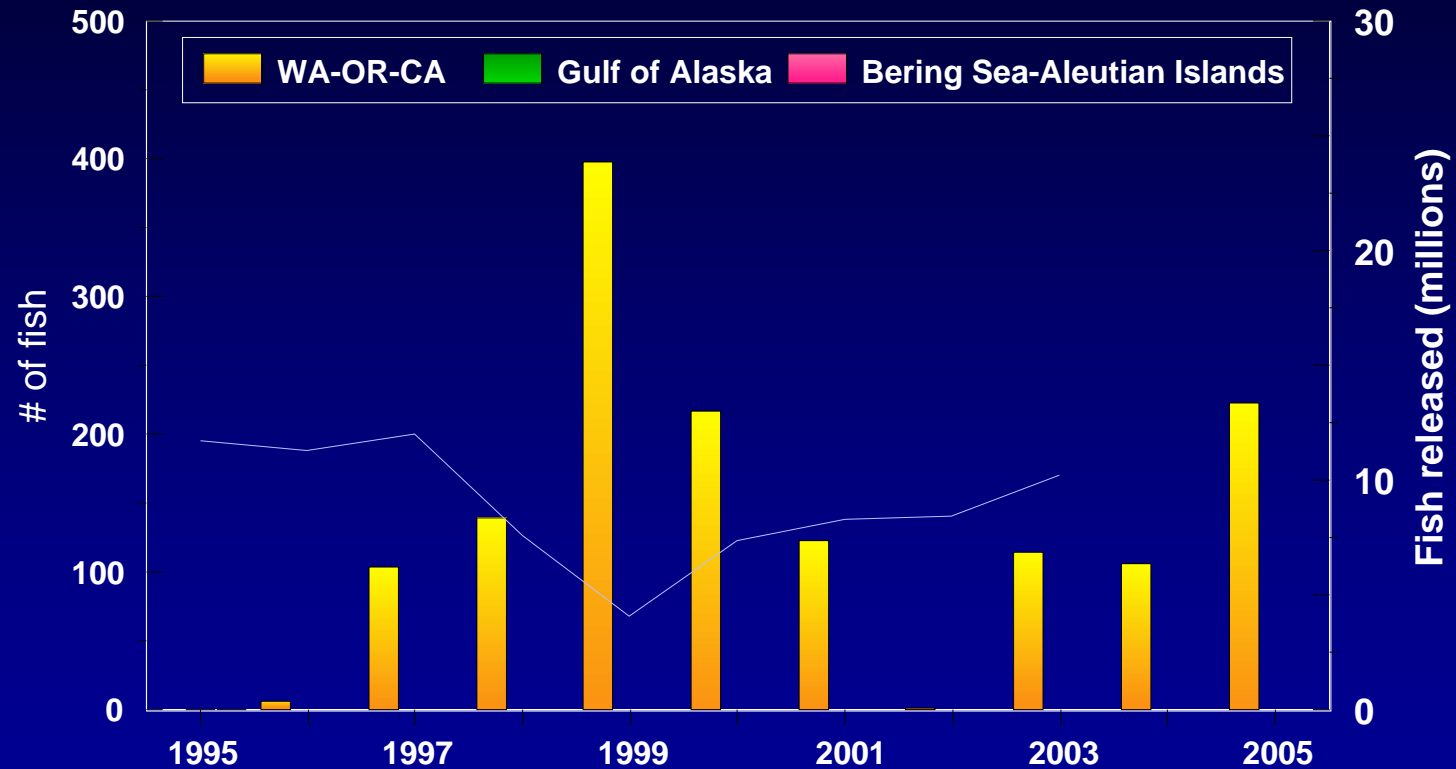
Total estimated contribution of current ESA-listed CWT (lower Columbia R. ESU) Chinook salmon captured in 3 trawl fisheries, 1995-2005, vs. # fish released by brood year



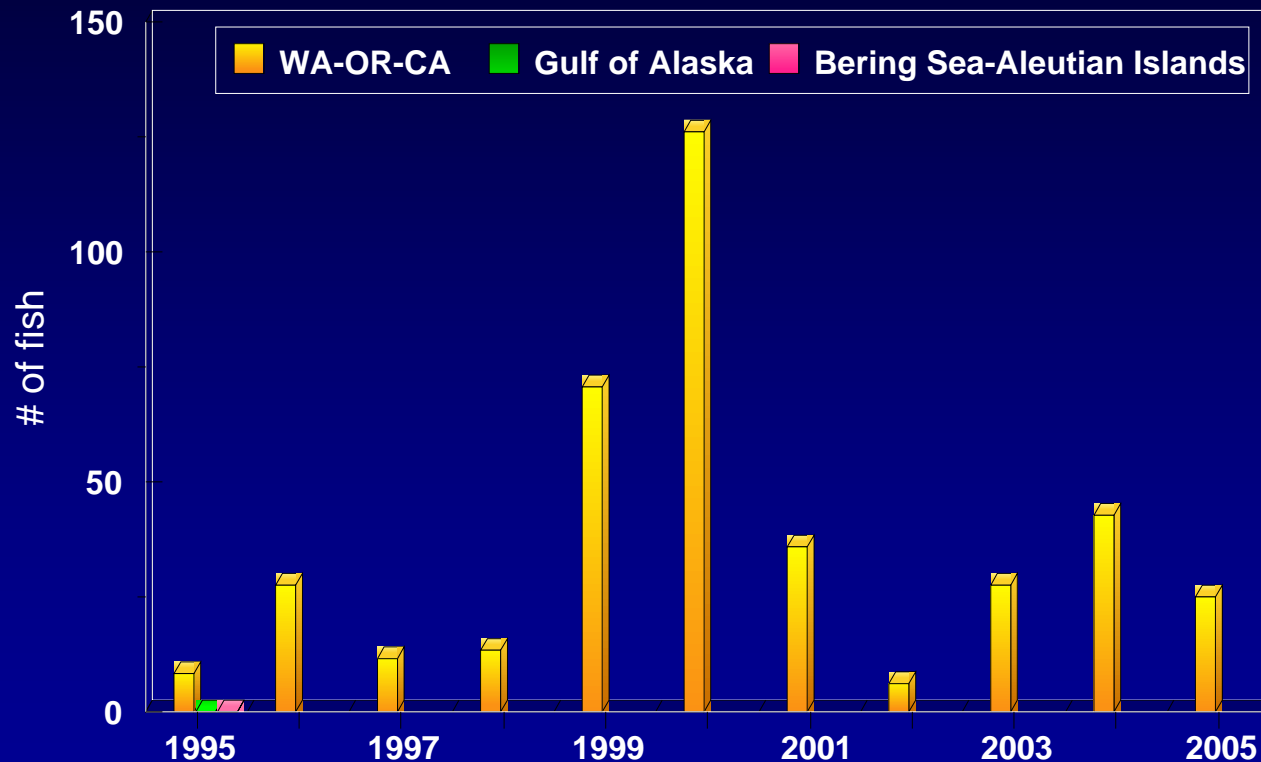
Total estimated contribution of current ESA-listed CWT (Puget Sound ESU) Chinook salmon captured in 3 trawl fisheries, 1995-2005



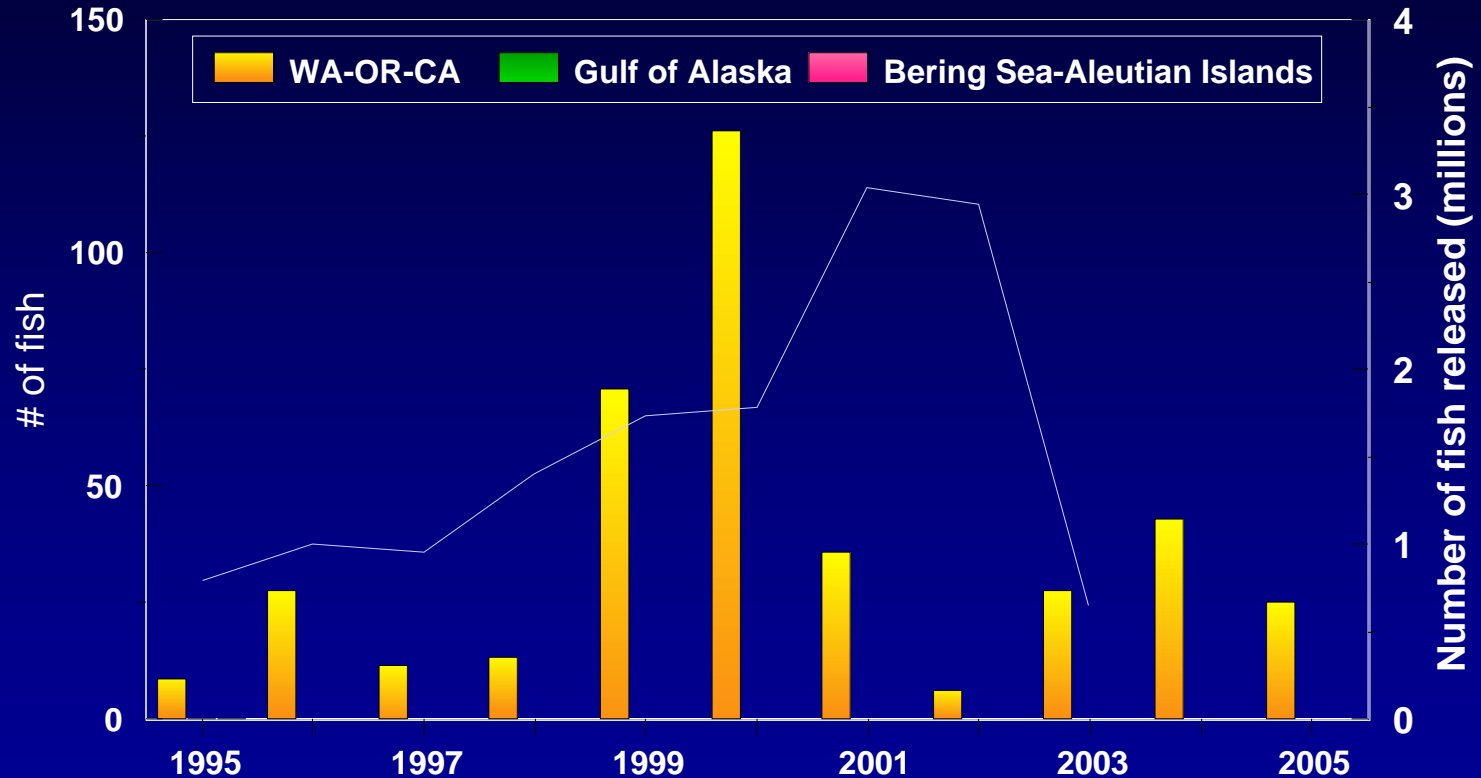
**Total estimated contribution of current ESA-listed
CWT (Puget Sound ESU) Chinook salmon captured
in 3 trawl fisheries, 1995-2005,
vs. # of fish released by brood year**



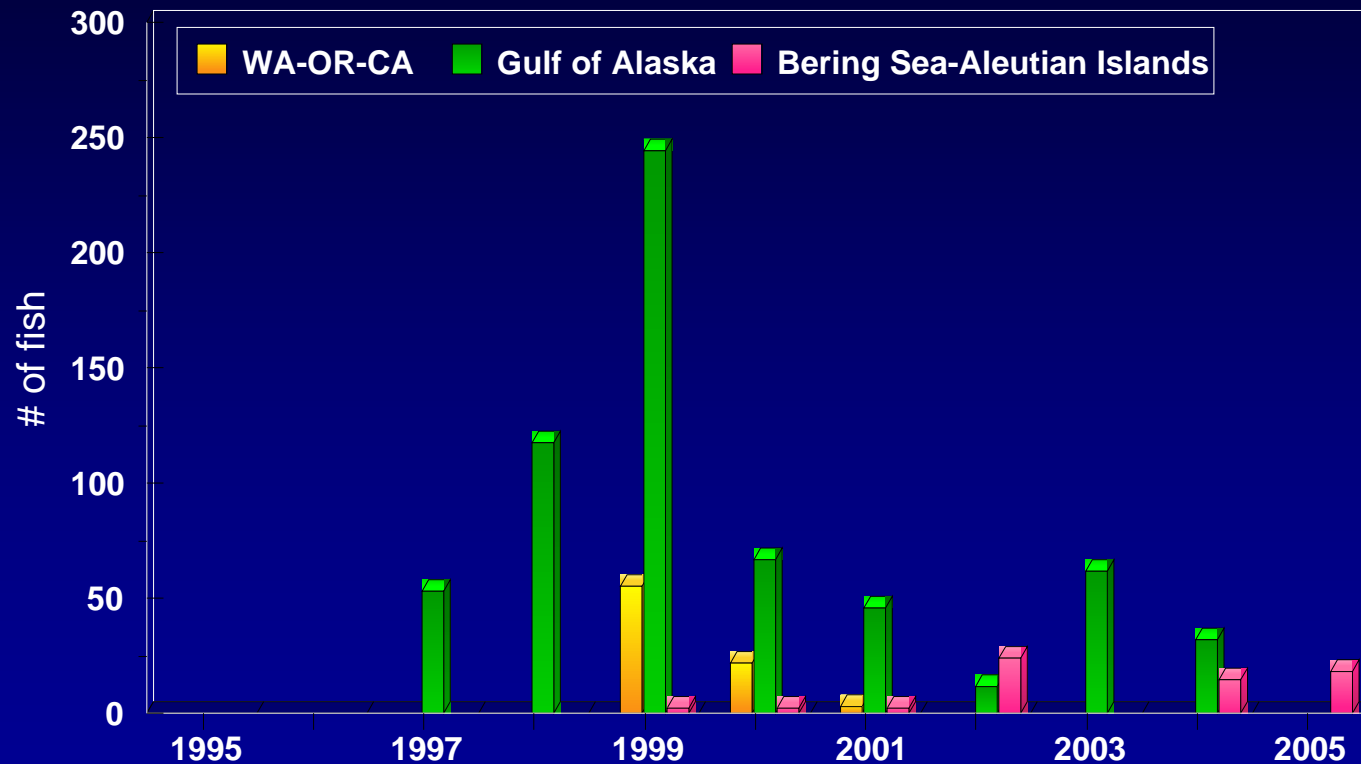
Total estimated contribution of current ESA-listed CWT (Snake River Fall ESU) Chinook salmon captured in 3 trawl fisheries, 1995-2005



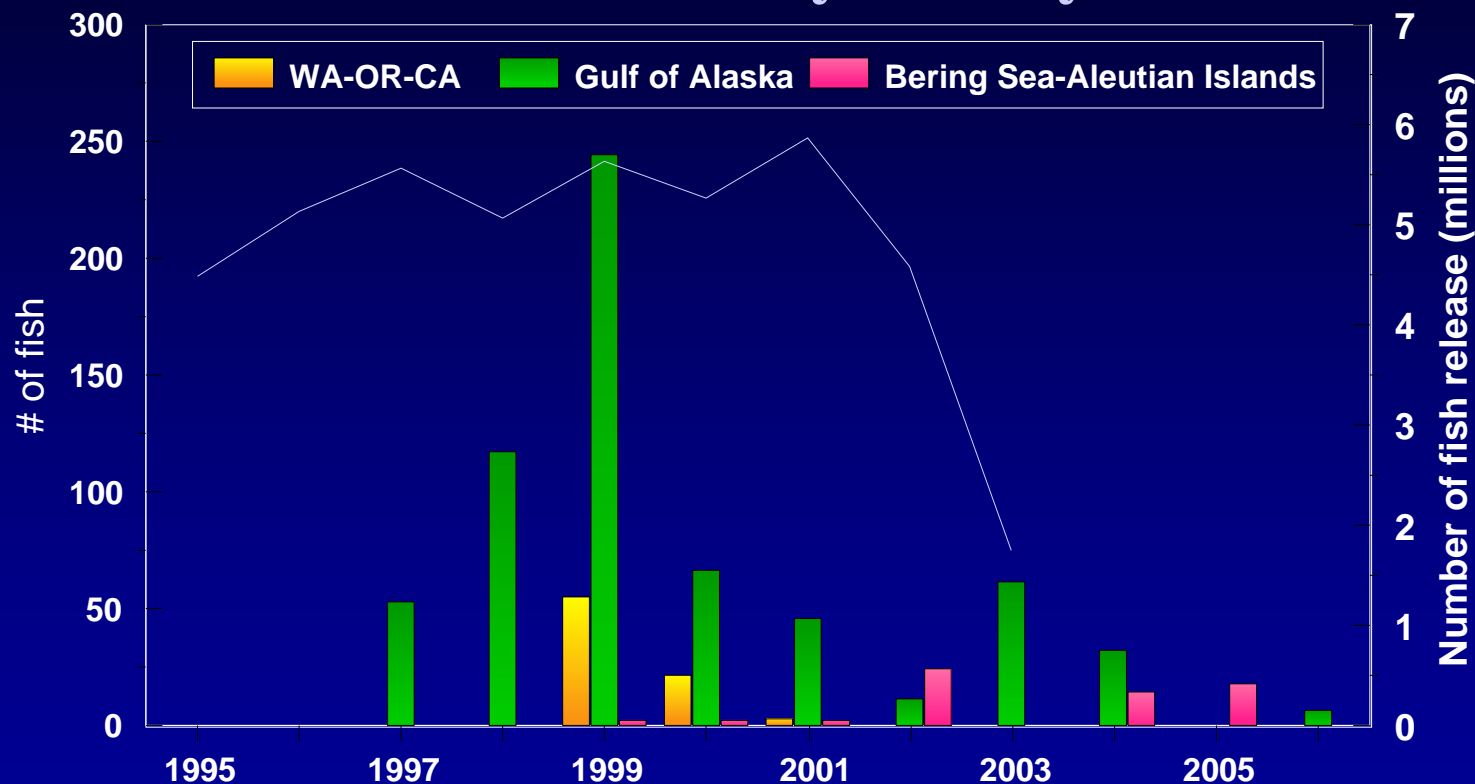
**Total estimated contribution of current
ESA-listed CWT (Snake River ESU) Chinook
salmon captured in 3 trawl fisheries, 1995-2005,
vs. # fish released by brood year**



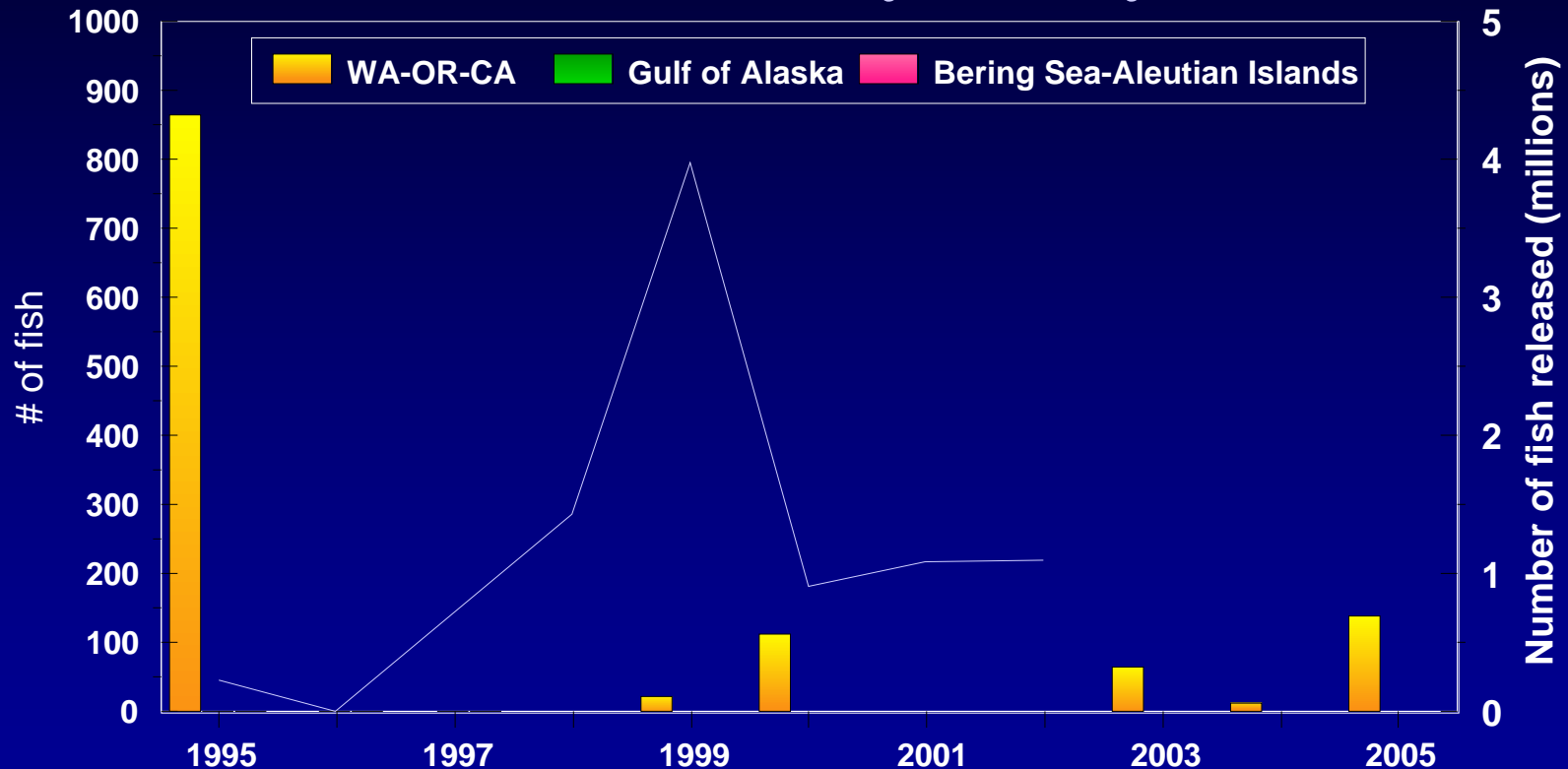
Total estimated contribution of current ESA-listed CWT (upper Willamette R. ESU) Chinook salmon captured in 3 trawl fisheries, 1995-2005



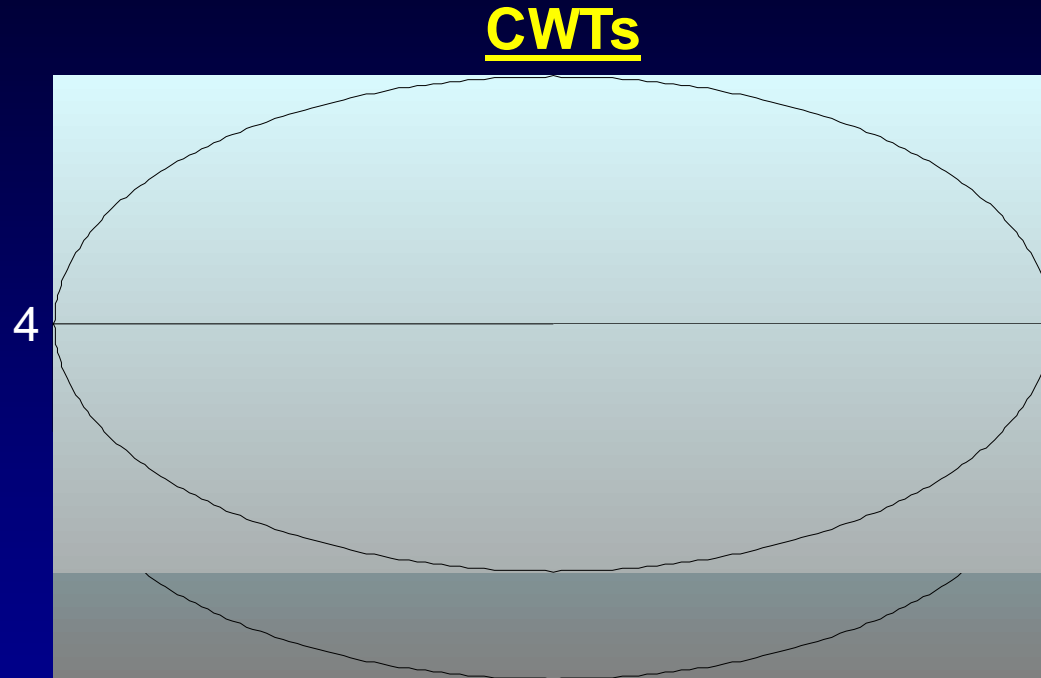
Total estimated contribution of current ESA-listed CWT (upper Willamette R. ESU) Chinook salmon captured in 3 trawl fisheries, 1995-2005 vs. # fish released by brood year



Total estimated contribution of Klamath River CWT Chinook salmon captured in 3 trawl fisheries, 1995-2005 vs. # fish released by brood year

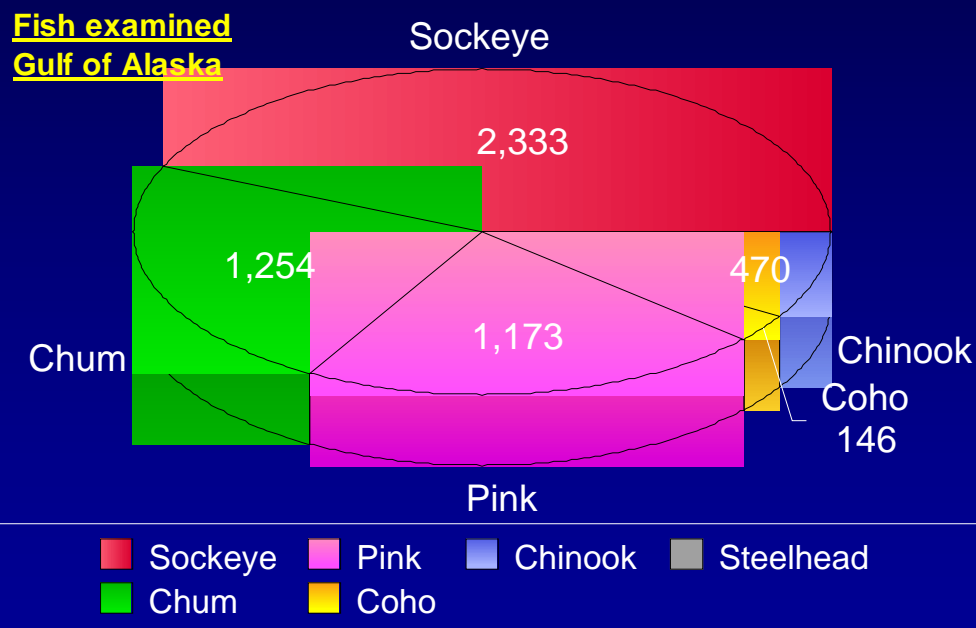


Occurrence of cwt salmonids in FAJ (Japanese) research on the high seas in 2005

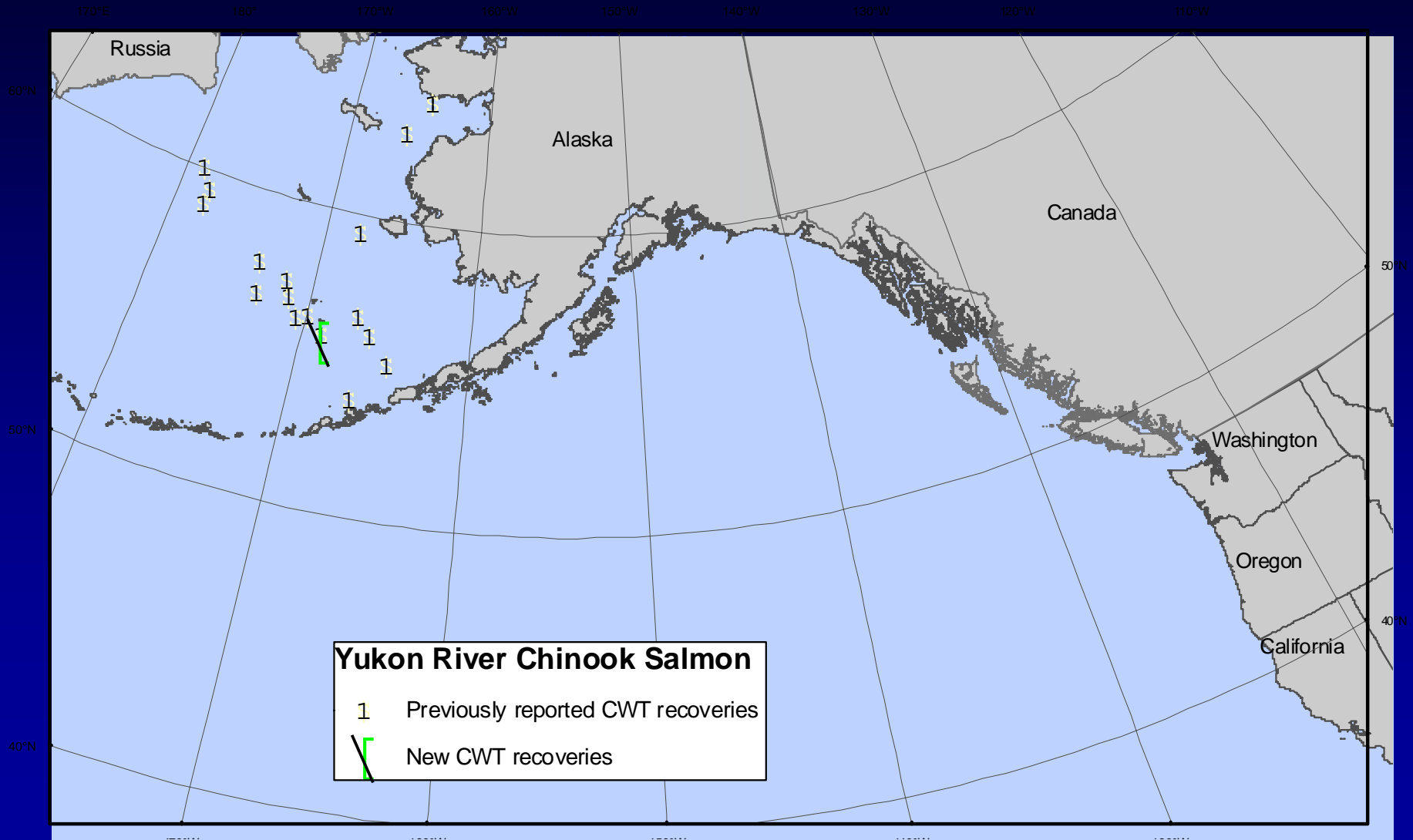


 Sockeye	 Pink	 Chinook	 Steelhead
 Chum	 Coho		

Number of salmon examined for CWTs in 2005
high seas research in the Gulf of Alaska
(OCC cooperative research conducted by NMFS and
FRI, supported by NPAFC)



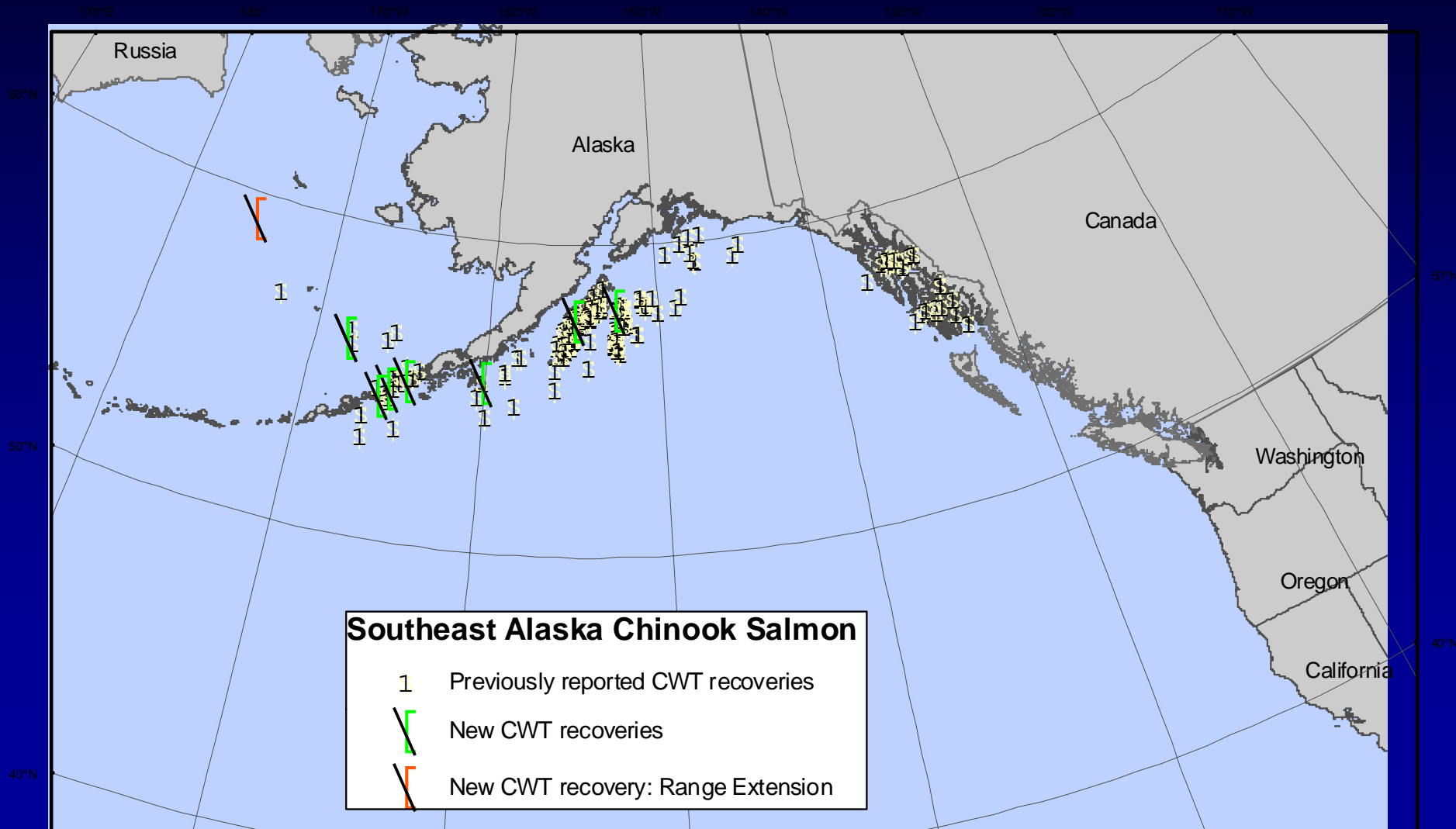
Ocean distribution of Yukon R. Chinook salmon from CWT recoveries, 1981-2006



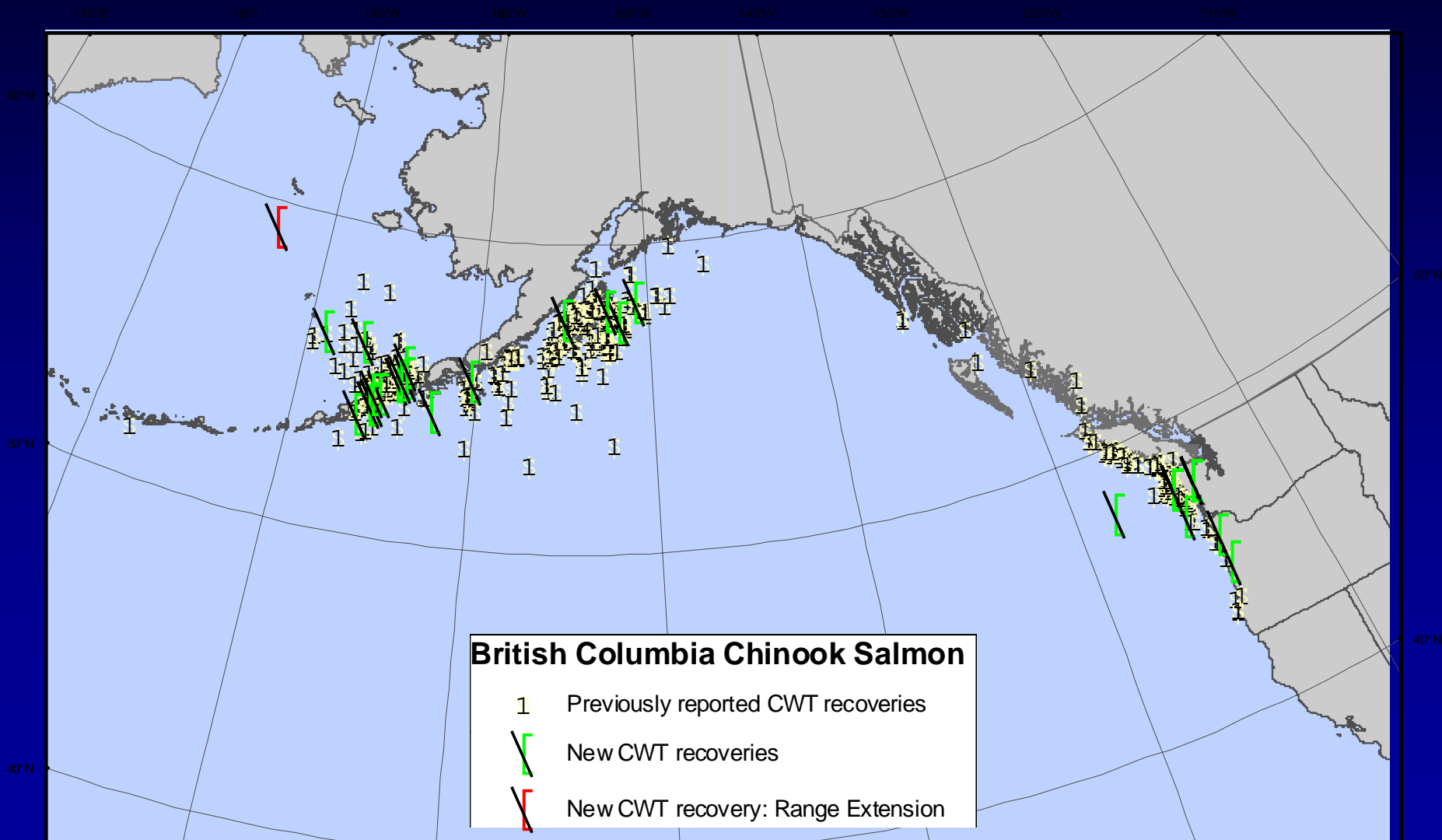
Ocean distribution of Cook Inlet Chinook salmon from CWT recoveries, 1981-2006



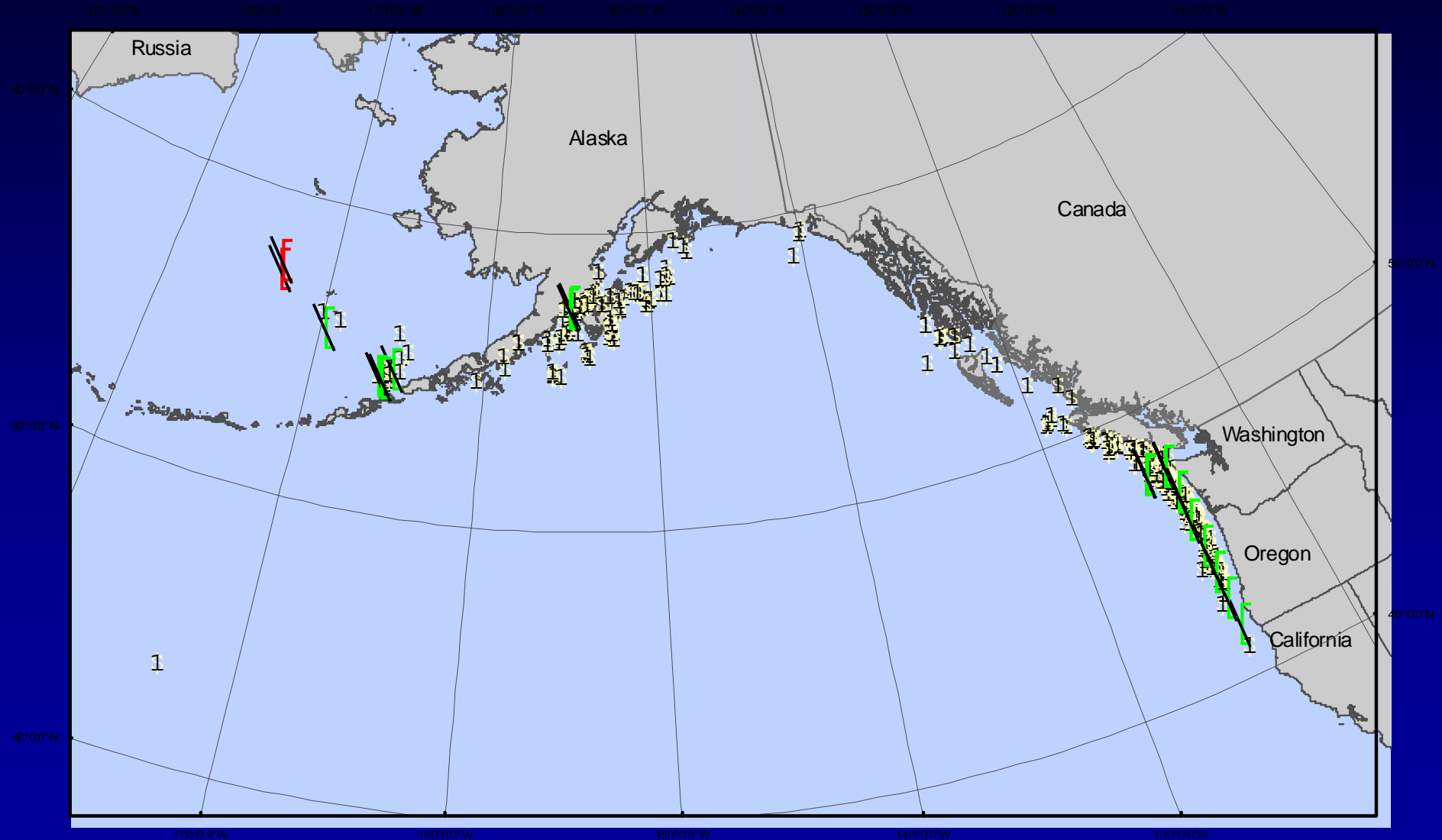
Ocean distribution of SE Alaska Chinook salmon from CWT recoveries, 1981-2006



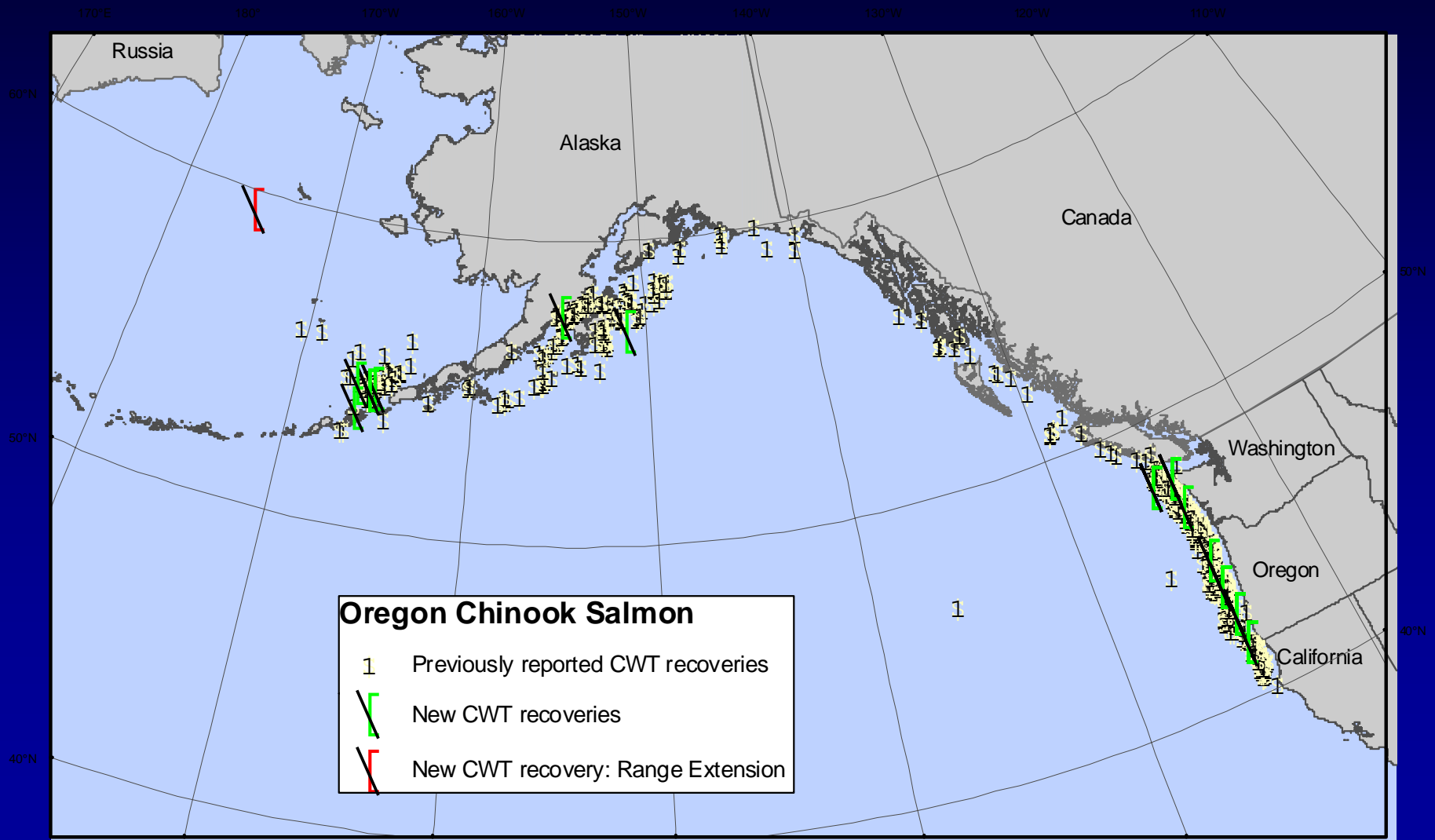
Ocean distribution of BC Chinook salmon from CWT recoveries, 1981-2006



Ocean distribution of Washington Chinook salmon from CWT recoveries, 1981-2006



Ocean distribution of Oregon Chinook salmon from CWT recoveries, 1981-2006



Ocean distribution of Idaho Chinook salmon from CWT recoveries, 1981-2006



Ocean distribution of CA Chinook salmon from CWT recoveries, 1981-2006



Ocean distribution of North America steelhead from CWT recoveries, 1981-2006

