

Science, Service, Stewardship



Marine Fisheries and Research Review 2009 December Panel Meeting

December 7, 2009

**NOAA
FISHERIES
SERVICE**

NOAA



2009 Marine Fisheries and Research

2009 BSAI/GOA Salmon Bycatch Update

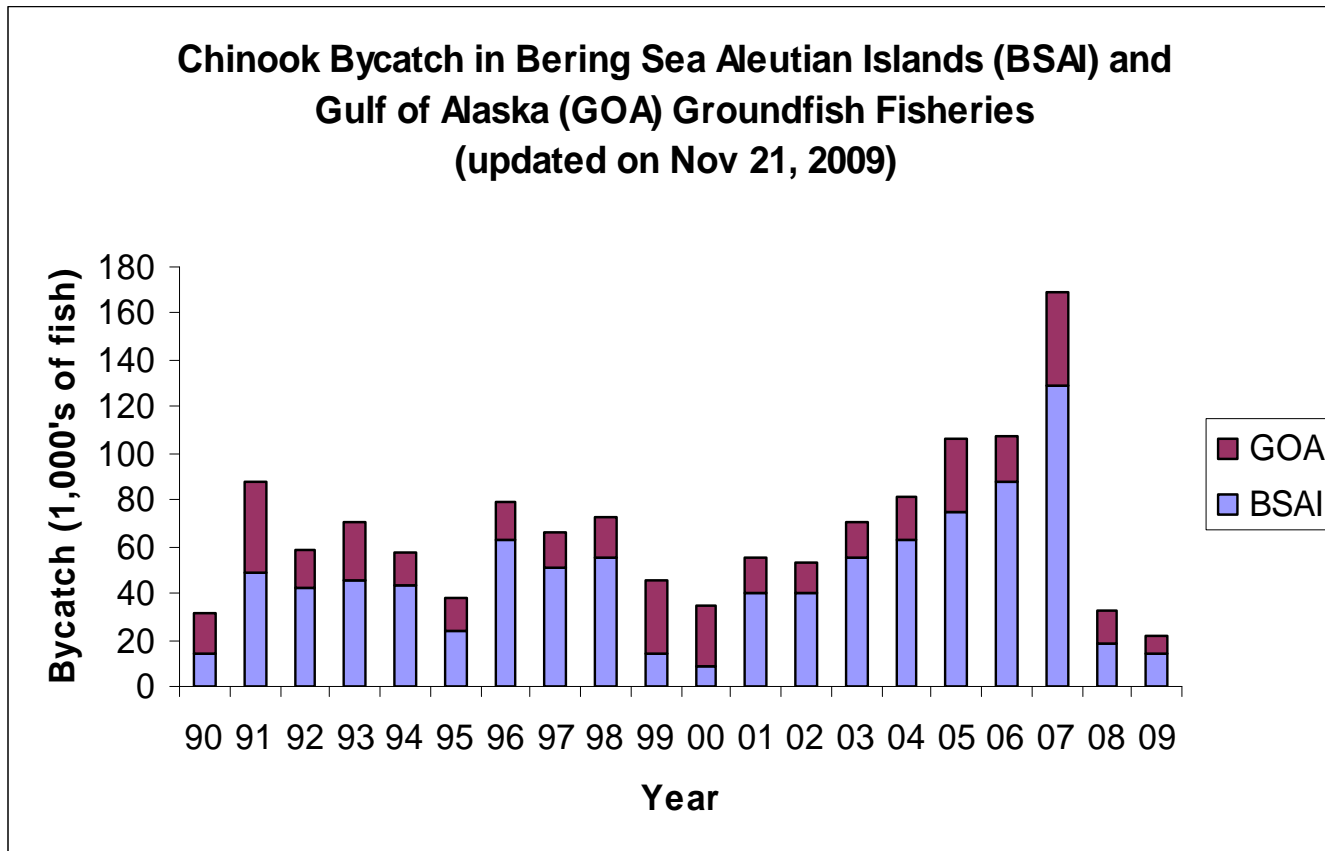
Marine Salmon Research Highlights

North Pacific Salmon Update

Status of the Bering Sea



BSAI/GOA Chinook salmon bycatch



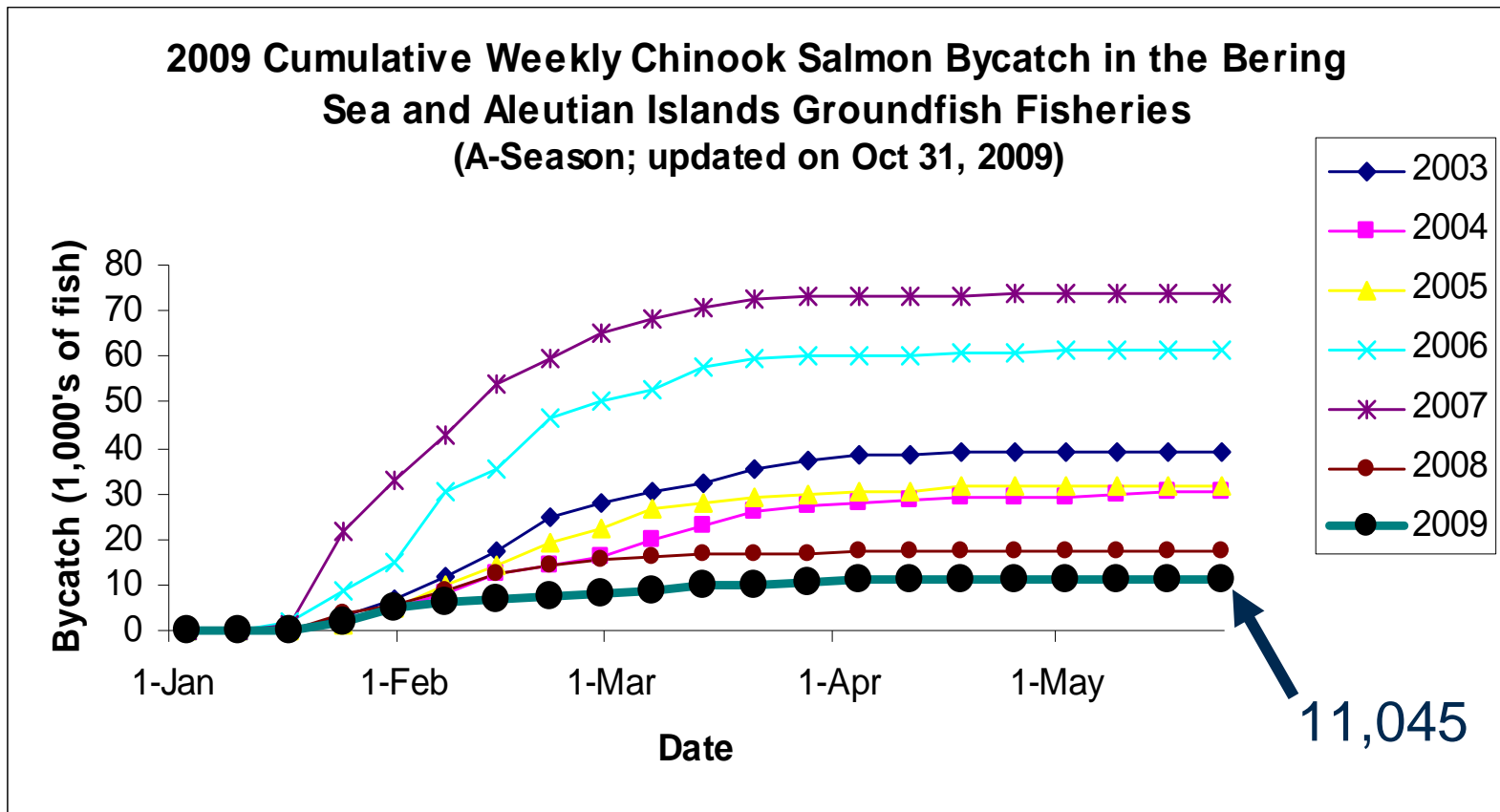
Source:

1990 – 2008 [http://www.npafc.org/new/publications/Documents/PDF%202008/1104\(USA\).pdf](http://www.npafc.org/new/publications/Documents/PDF%202008/1104(USA).pdf)

2009 http://alaskafisheries.noaa.gov/2009/car260_psc_salmon.csv



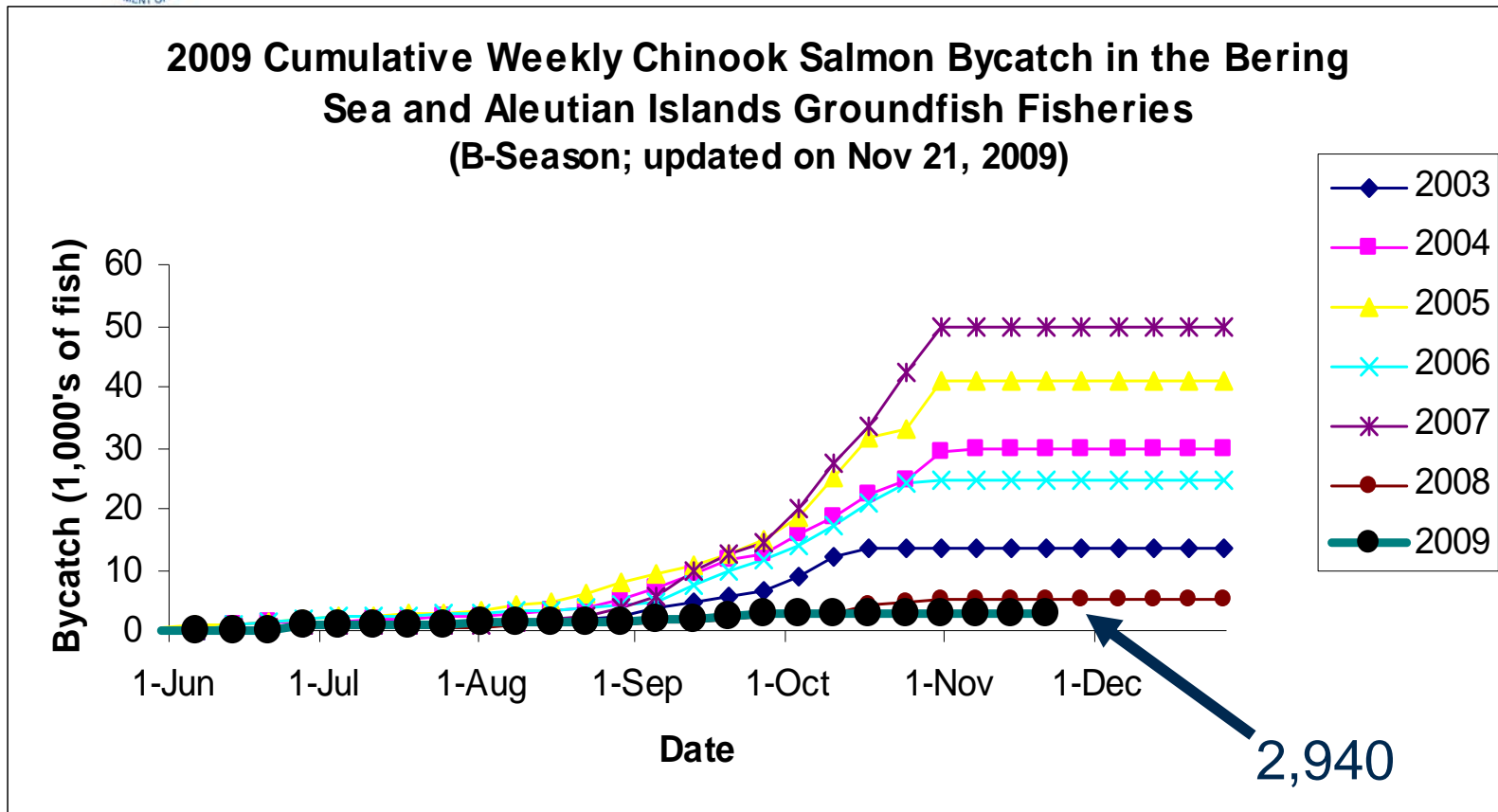
BSAI Chinook salmon bycatch A-season



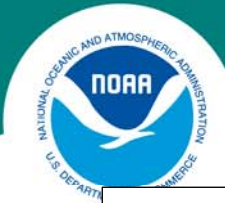
Source: 1990 – 2008 [http://www.npafc.org/new/publications/Documents/PDF%202008/1104\(USA\).pdf](http://www.npafc.org/new/publications/Documents/PDF%202008/1104(USA).pdf)
 2009 http://alaskafisheries.noaa.gov/2009/car260_psc_salmon.csv



BSAI Chinook salmon bycatch B- Season

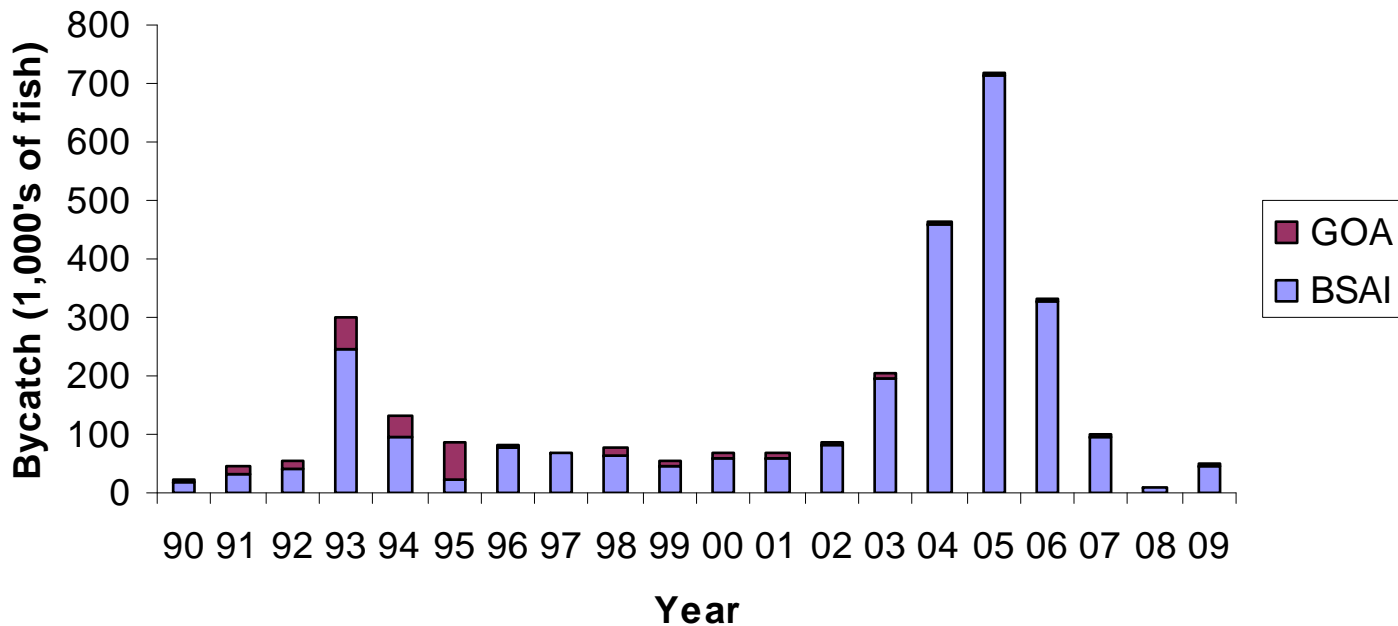


Source: 1990 – 2008 [http://www.npafc.org/new/publications/Documents/PDF%202008/1104\(USA\).pdf](http://www.npafc.org/new/publications/Documents/PDF%202008/1104(USA).pdf)
 2009 http://alaskafisheries.noaa.gov/2009/car260_psc_salmon.csv



BSAI/GOA non-Chinook salmon bycatch

Non-Chinook Bycatch in Bering Sea Aleutian Islands (BSAI) and Gulf of Alaska (GOA) Groundfish Fisheries (updated on Oct 31, 2009)



Source:

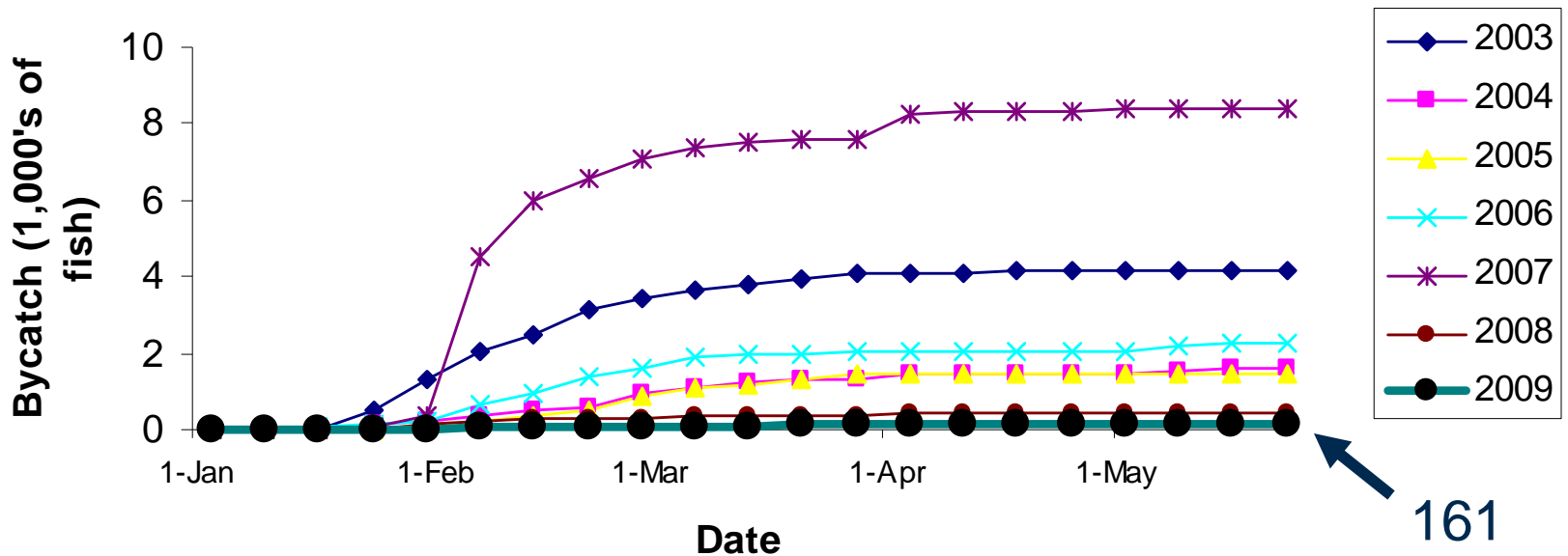
1990 – 2008 [http://www.npafc.org/new/publications/Documents/PDF%202008/1104\(USA\).pdf](http://www.npafc.org/new/publications/Documents/PDF%202008/1104(USA).pdf)

2009 http://alaskafisheries.noaa.gov/2009/car260_psc_salmon.csv



BSAI non-Chinook salmon bycatch A-season

2009 Cumulative weekly Non-Chinook Salmon Bycatch in the Bering Sea and Aleutian Islands Groundfish Fisheries (A-Season; updated on Oct 31, 2009)



Source:

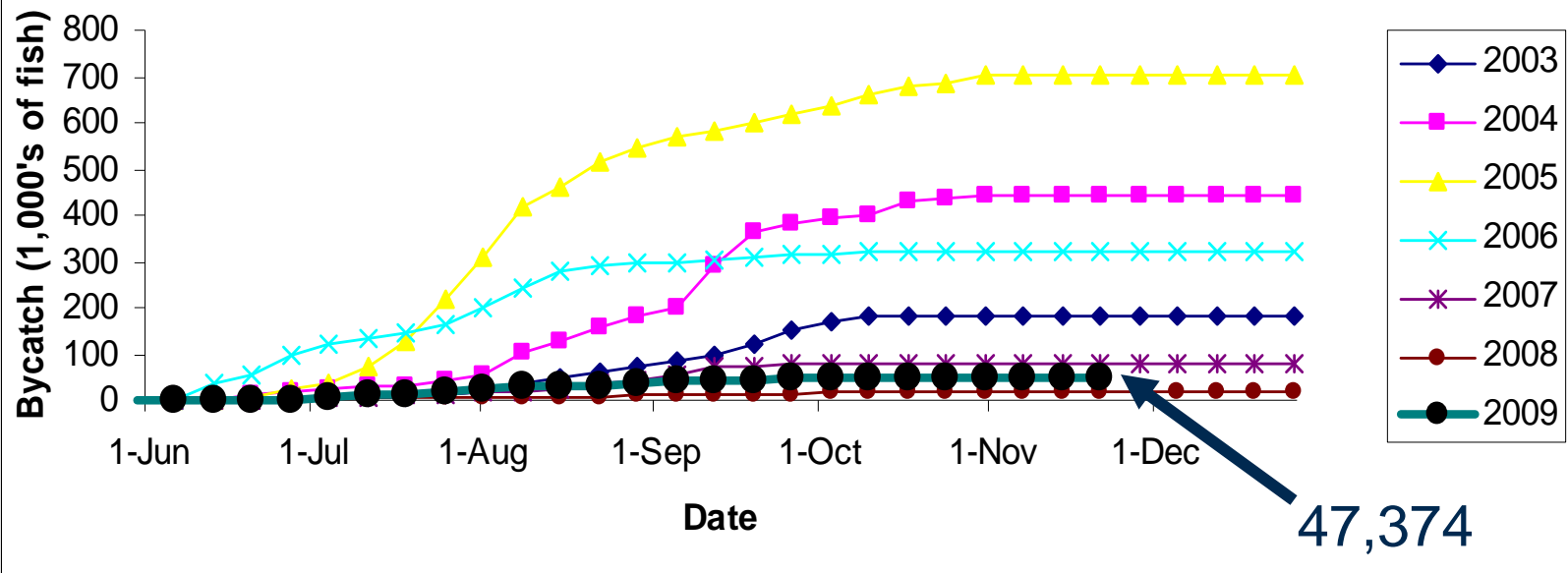
1990 – 2008 [http://www.npafc.org/new/publications/Documents/PDF%202008/1104\(USA\).pdf](http://www.npafc.org/new/publications/Documents/PDF%202008/1104(USA).pdf)

2009 http://alaskafisheries.noaa.gov/2009/car260_psc_salmon.csv



BSAI non-Chinook salmon bycatch B-season

2009 Cumulative weekly Non-Chinook Salmon Bycatch in the Bering Sea and Aleutian Islands Groundfish Fisheries (B-Season; updated on Nov 21, 2009)



Source:

1990 – 2008 [http://www.npafc.org/new/publications/Documents/PDF%202008/1104\(USA\).pdf](http://www.npafc.org/new/publications/Documents/PDF%202008/1104(USA).pdf)

2009 http://alaskafisheries.noaa.gov/2009/car260_psc_salmon.csv



Marine Fisheries and Research Overview

Jim Murphy, NOAA – JTC presentation
jim.murphy@noaa.gov

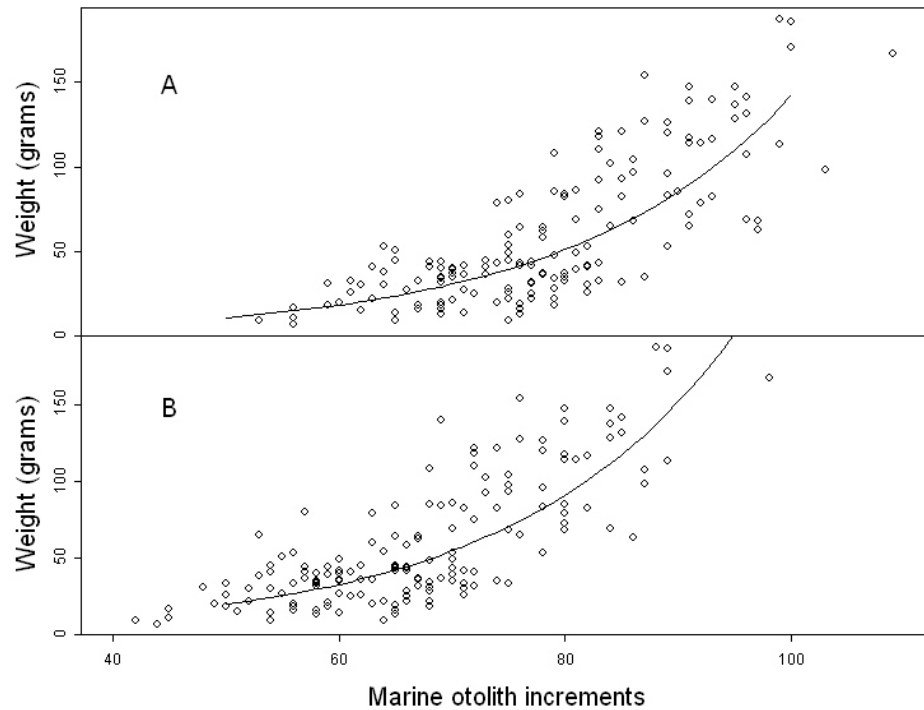
2009 AFSC Bering Sea Salmon Research Highlights

- Chum salmon ecology: AYKSSI final report
 - Working Hypothesis: faster growth == better survival
 - Marine growth rates
 - Growth potential and ocean carrying capacity
- Chinook salmon distribution and abundance
 - Stock structured distribution
 - 2009 Northern Bering Shelf Survey (Juvenile Chinook & chum Index)



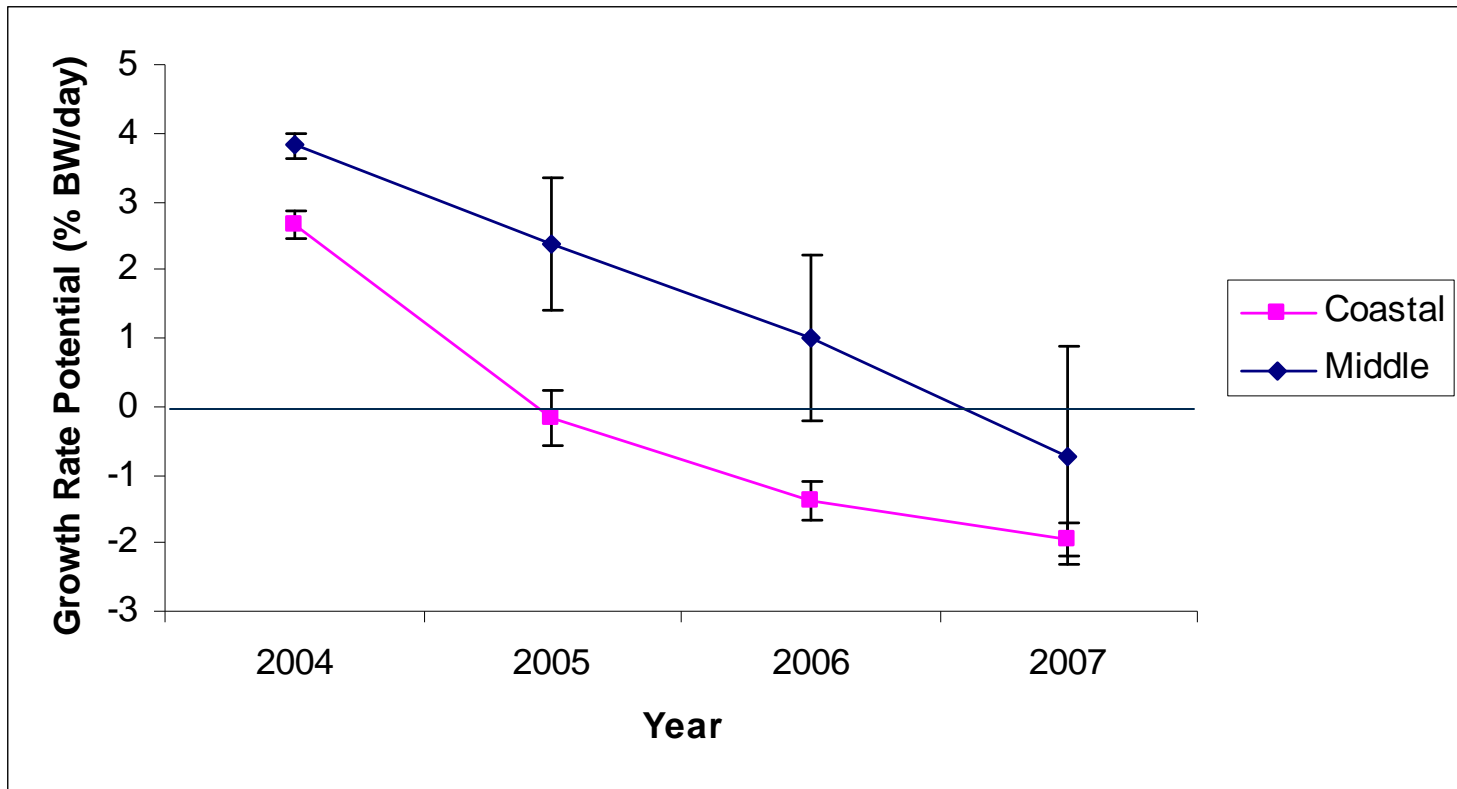
Juvenile Chum Salmon Marine Growth Rates (Murphy et al. 2009) *in* Marine Ecology of Juvenile Chum Salmon: AYKSSI Final Report

5% body wt per day





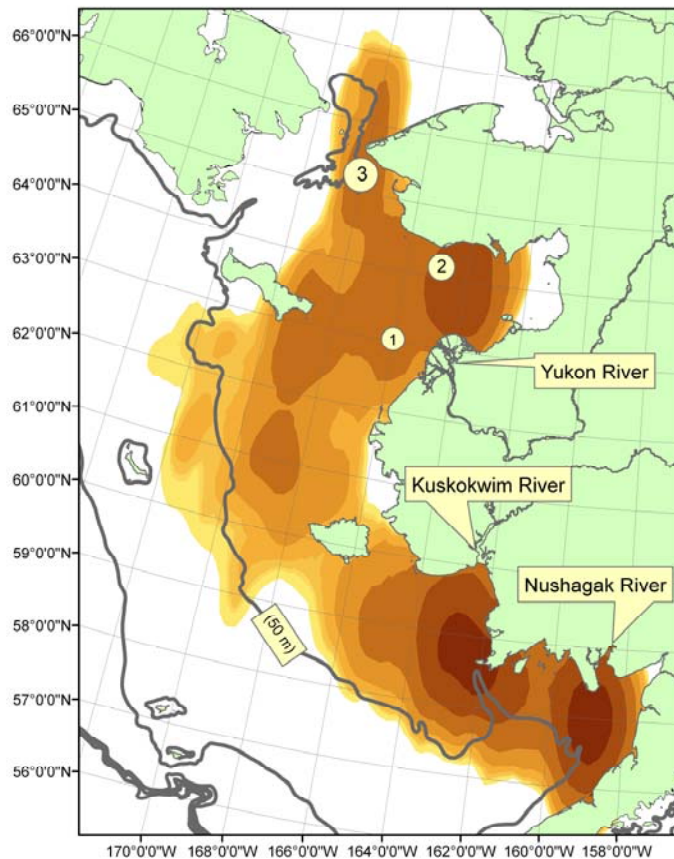
Juvenile chum salmon growth potential (Farley and Moss 2009) *in* Marine Ecology of Juvenile Chum Salmon: AYKSSI Final Report



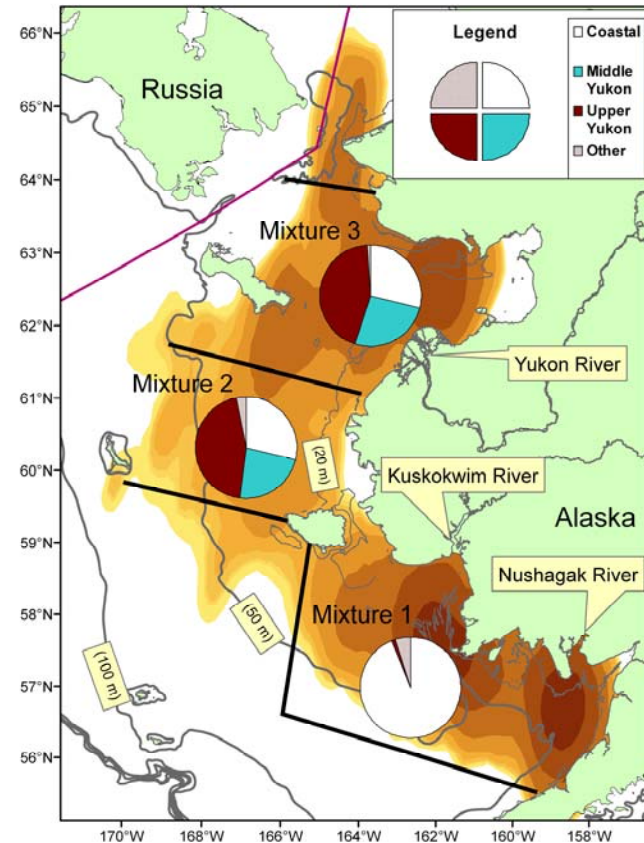


Juvenile Chinook salmon stock distribution
(Murphy et al. 2009) *in* NPAFC Bulletin #5, BASIS
Symposium Proceedings

Yukon River CWTs



Genetic Stock ID



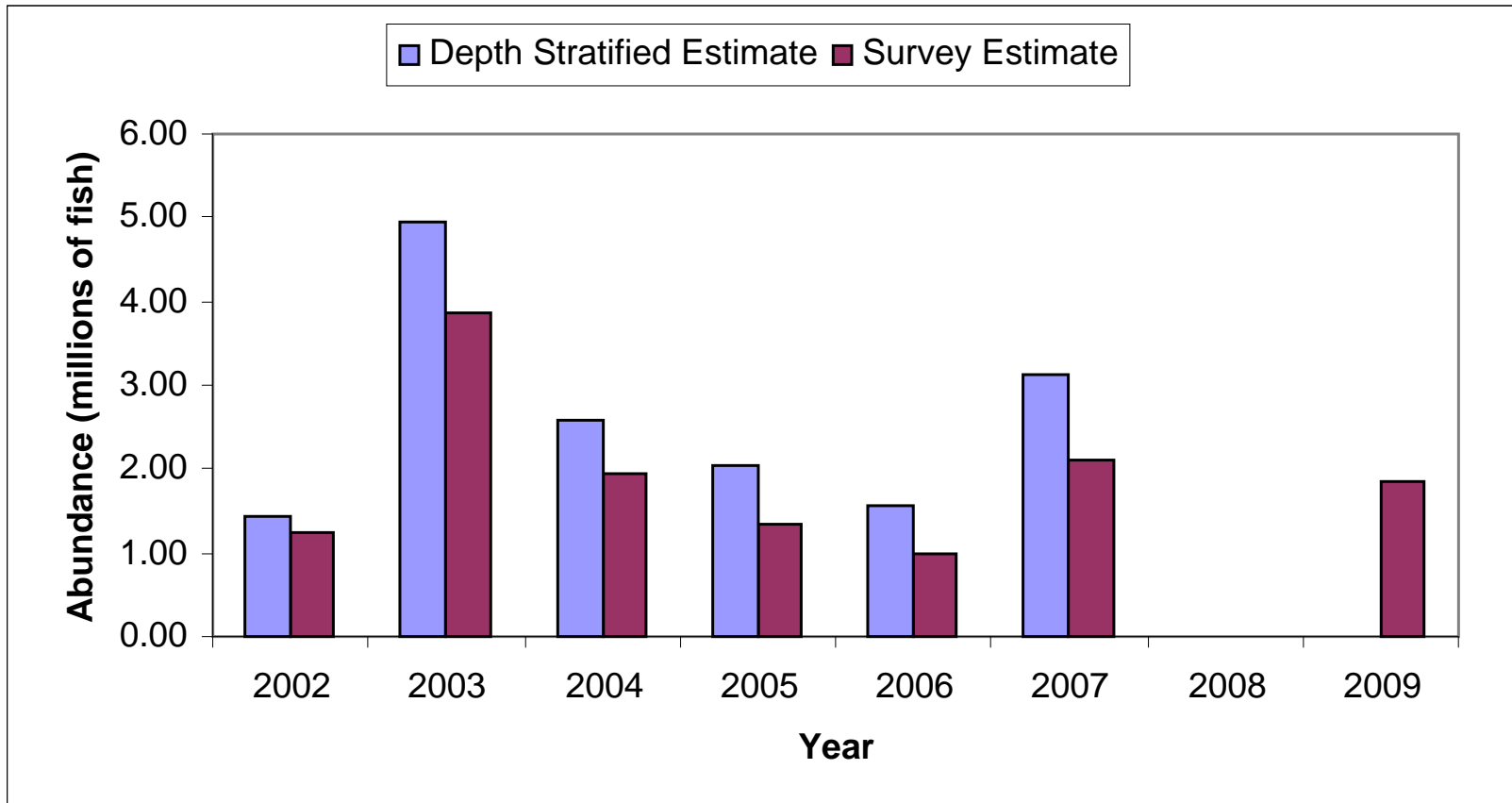


2009 BASIS September Survey



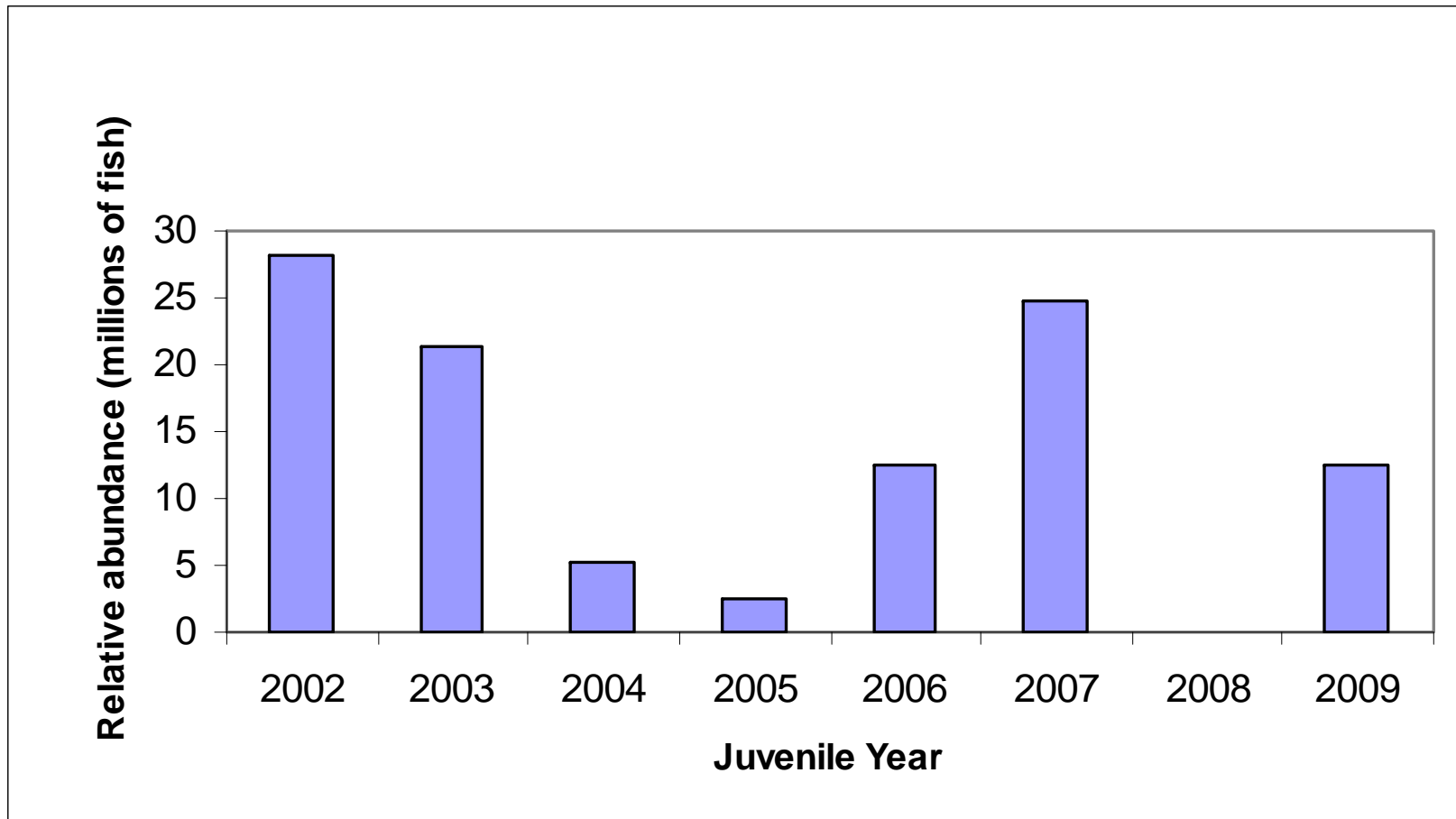


Northern Bering Shelf Juvenile Chinook Salmon Index (preliminary)



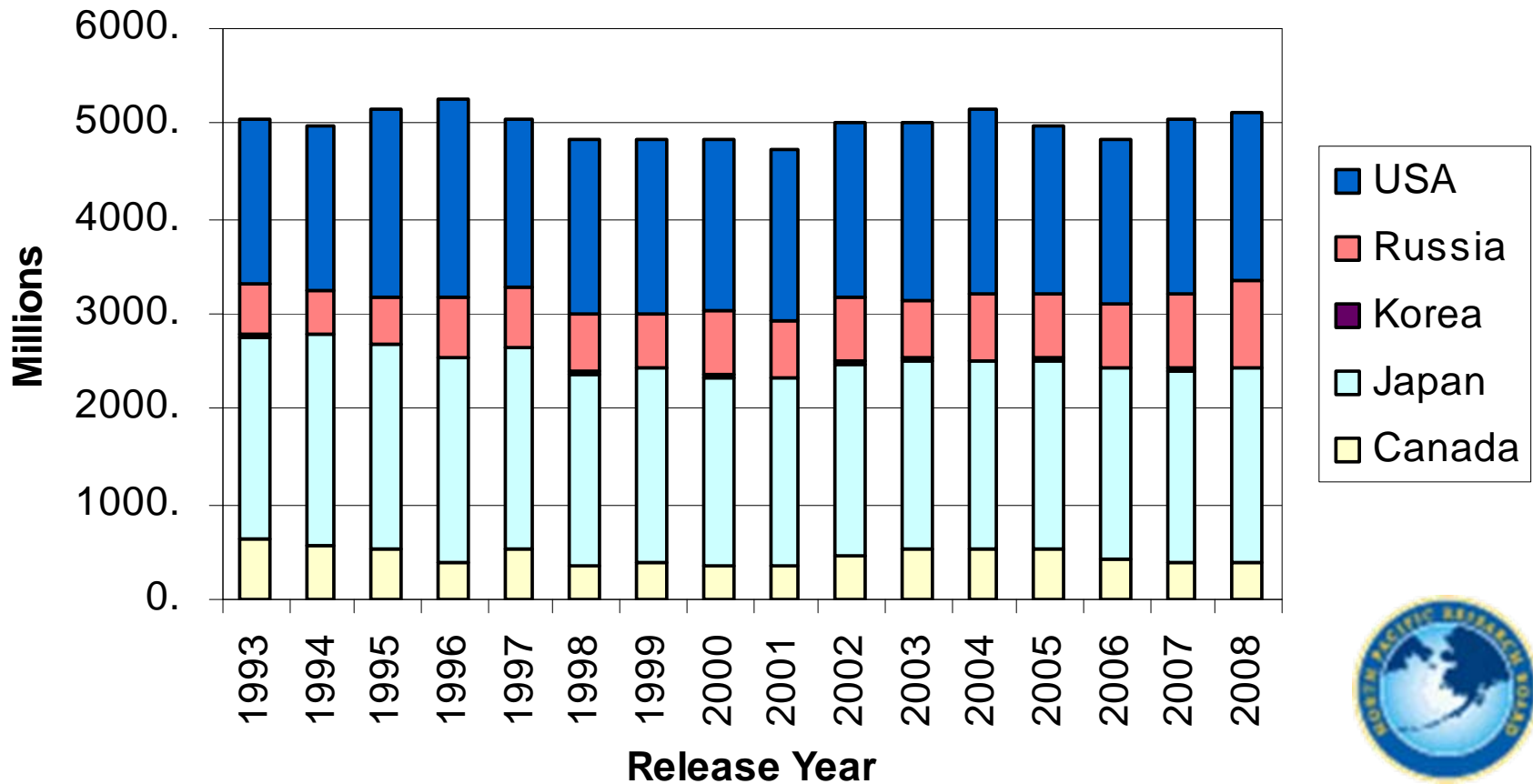


Northern Bering Shelf Juvenile Chum Salmon Index (preliminary)



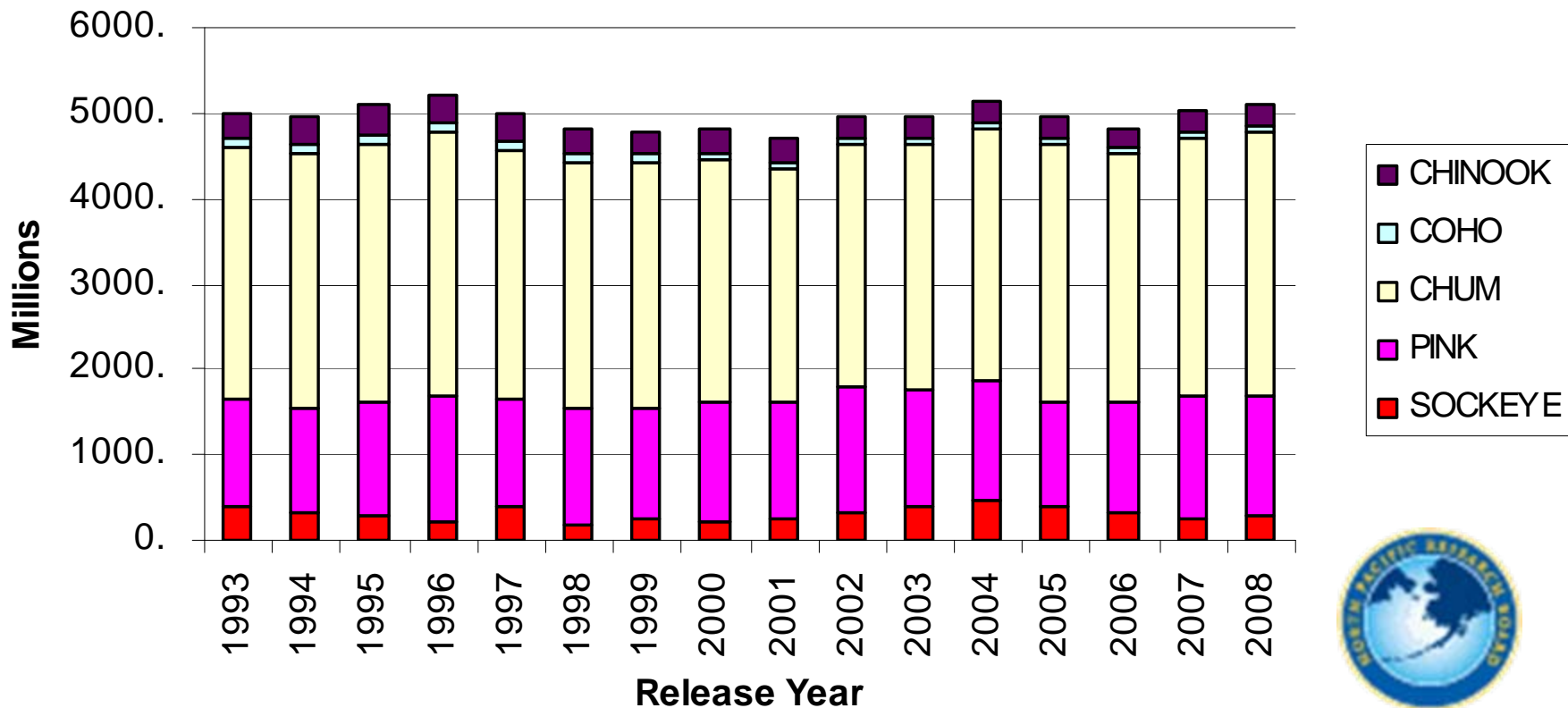


Salmon Hatchery Production Releases by Country





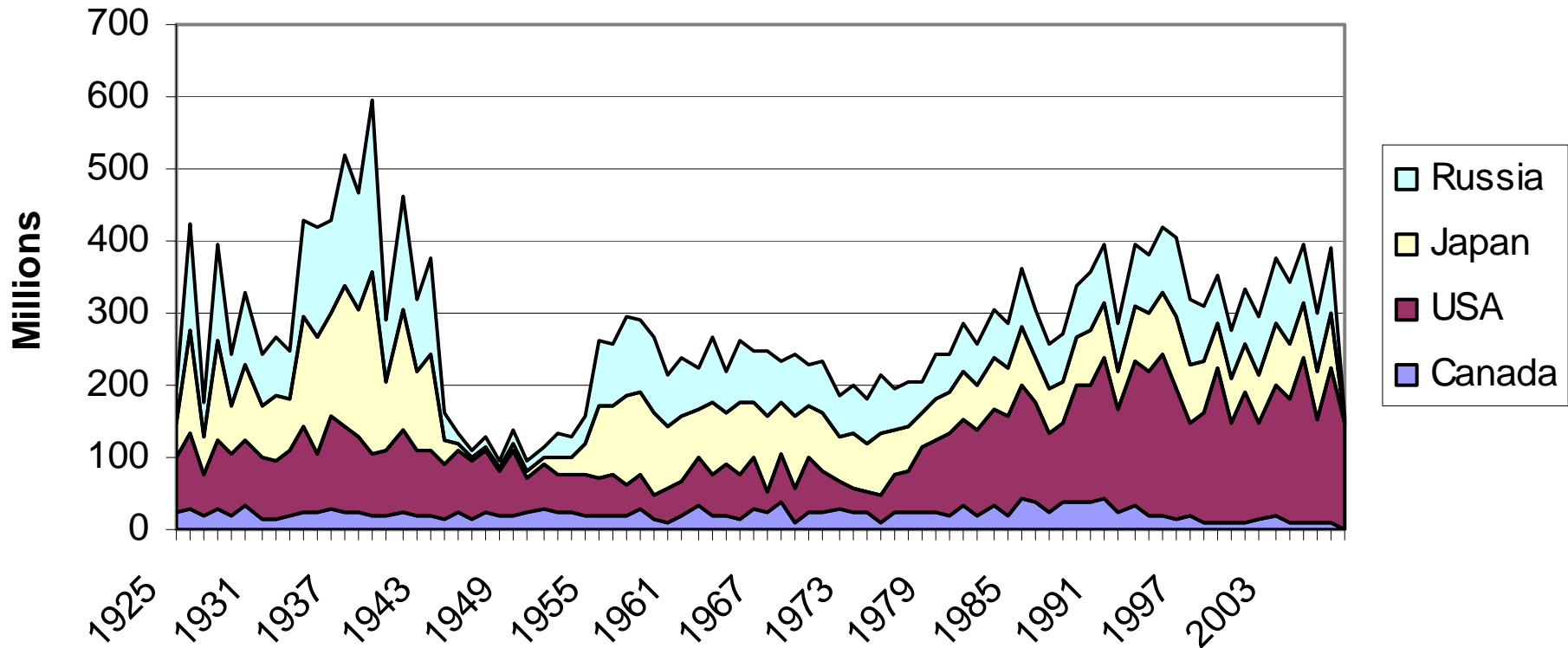
Hatchery Production by Species





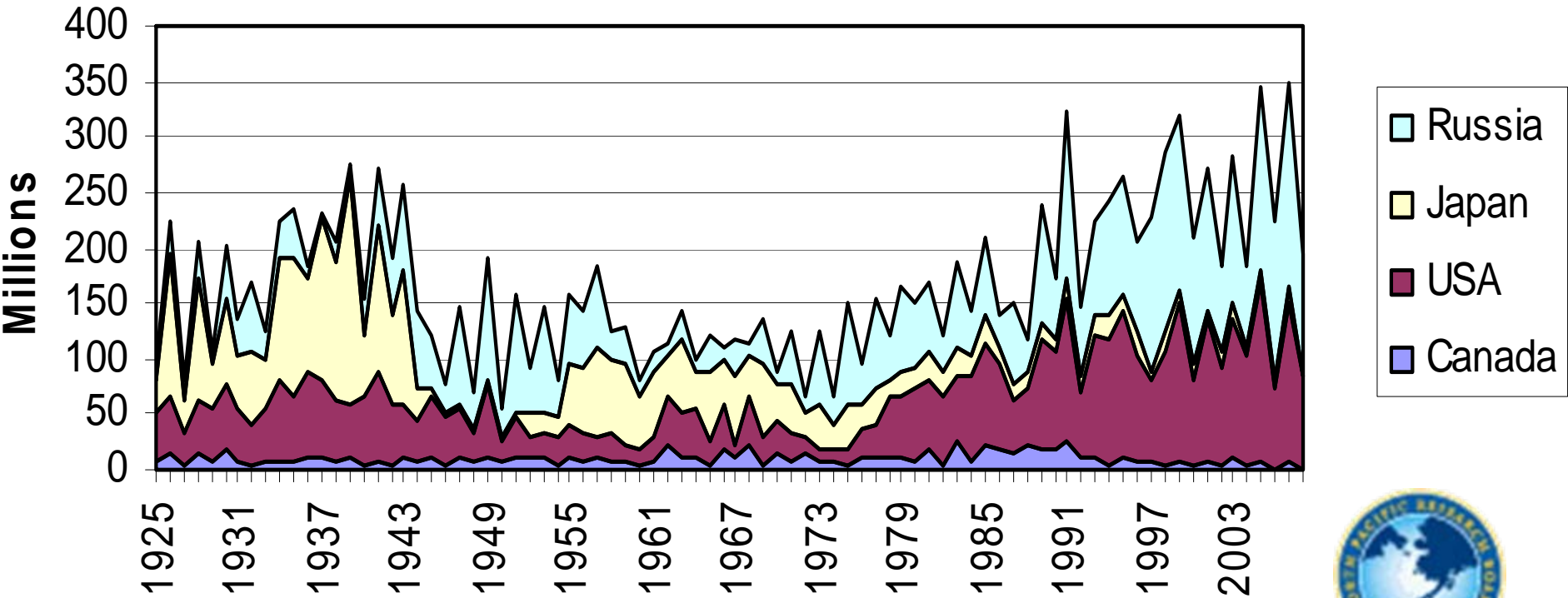
Salmon Catches by Country number of fish - all species

(2008 not complete)

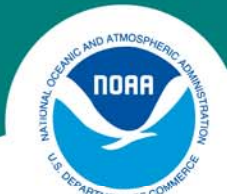




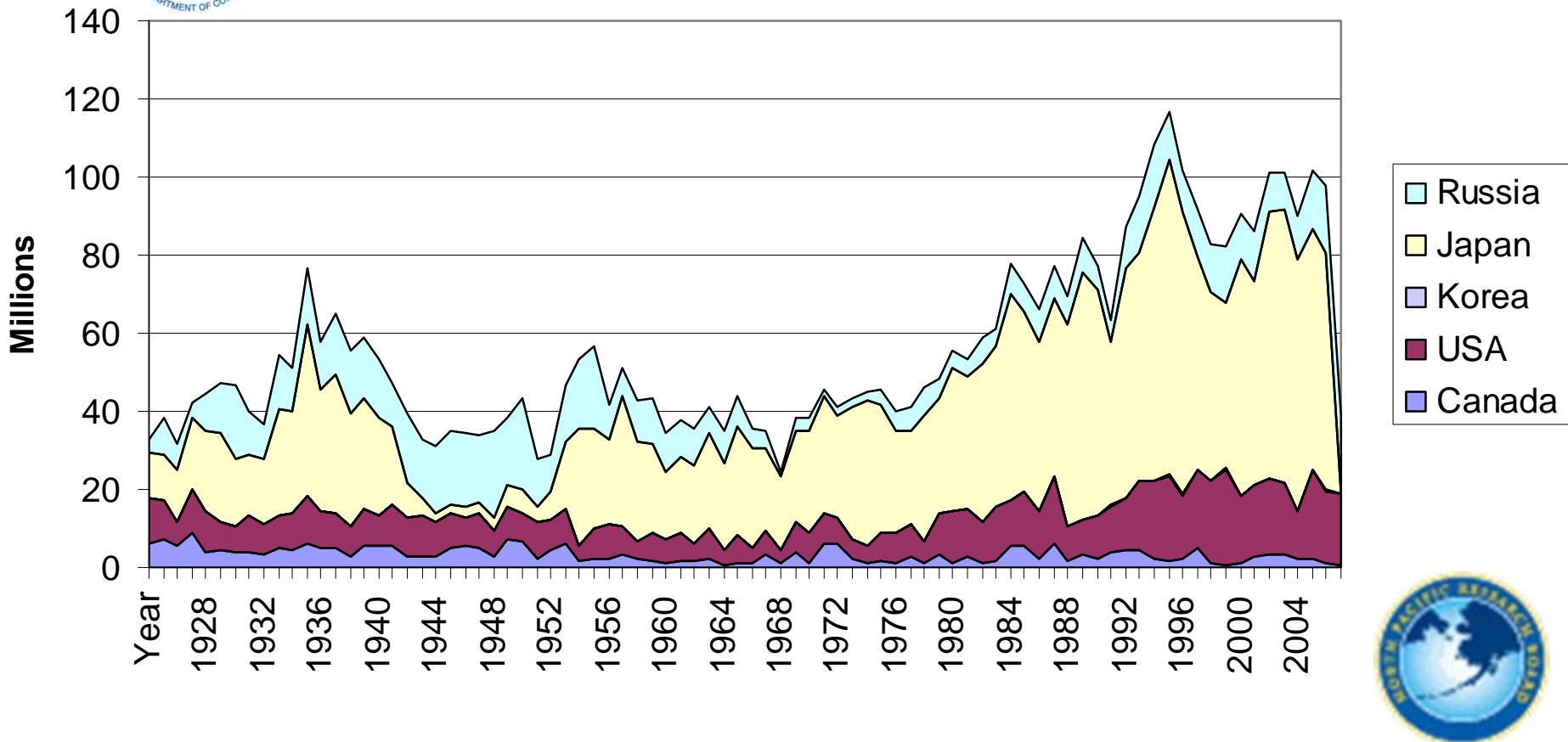
Pink Salmon Catches by Country 1925 – 2008 (preliminary)



Irvine, J.R., M. Fukuwaka, T. Kaga, J.H. Park, K.B. Seong, S. Kang, V. Karpenko, N. Klovach, H. Bartlett, and E. Volk. 2009. Status of North Pacific Salmon. NPAFC Doc. 1199. 141 pp. (Available at <http://www.npafc.org>).

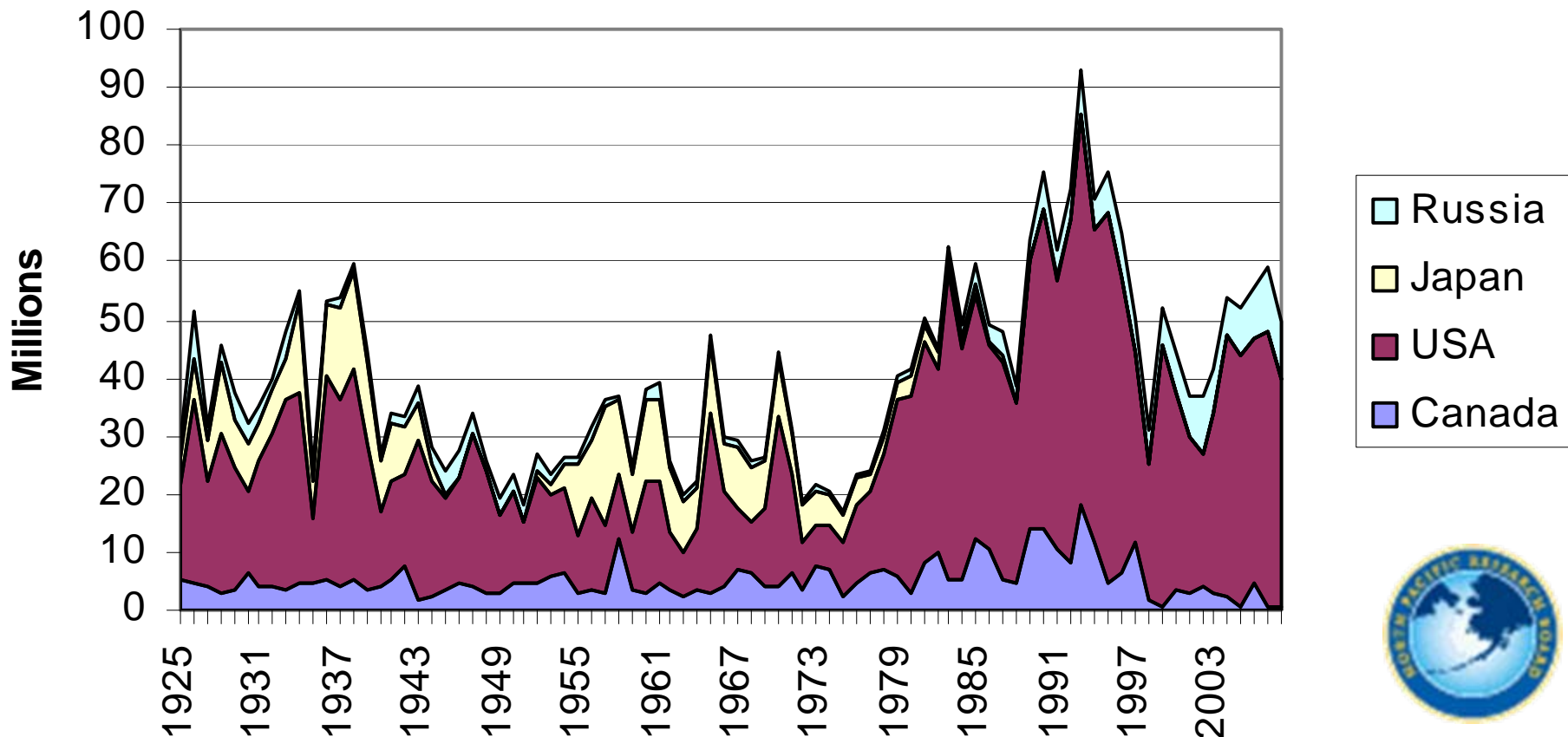


Chum Salmon Catches by Country 1925 – 2008 (not complete)

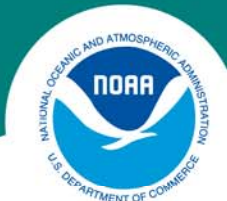




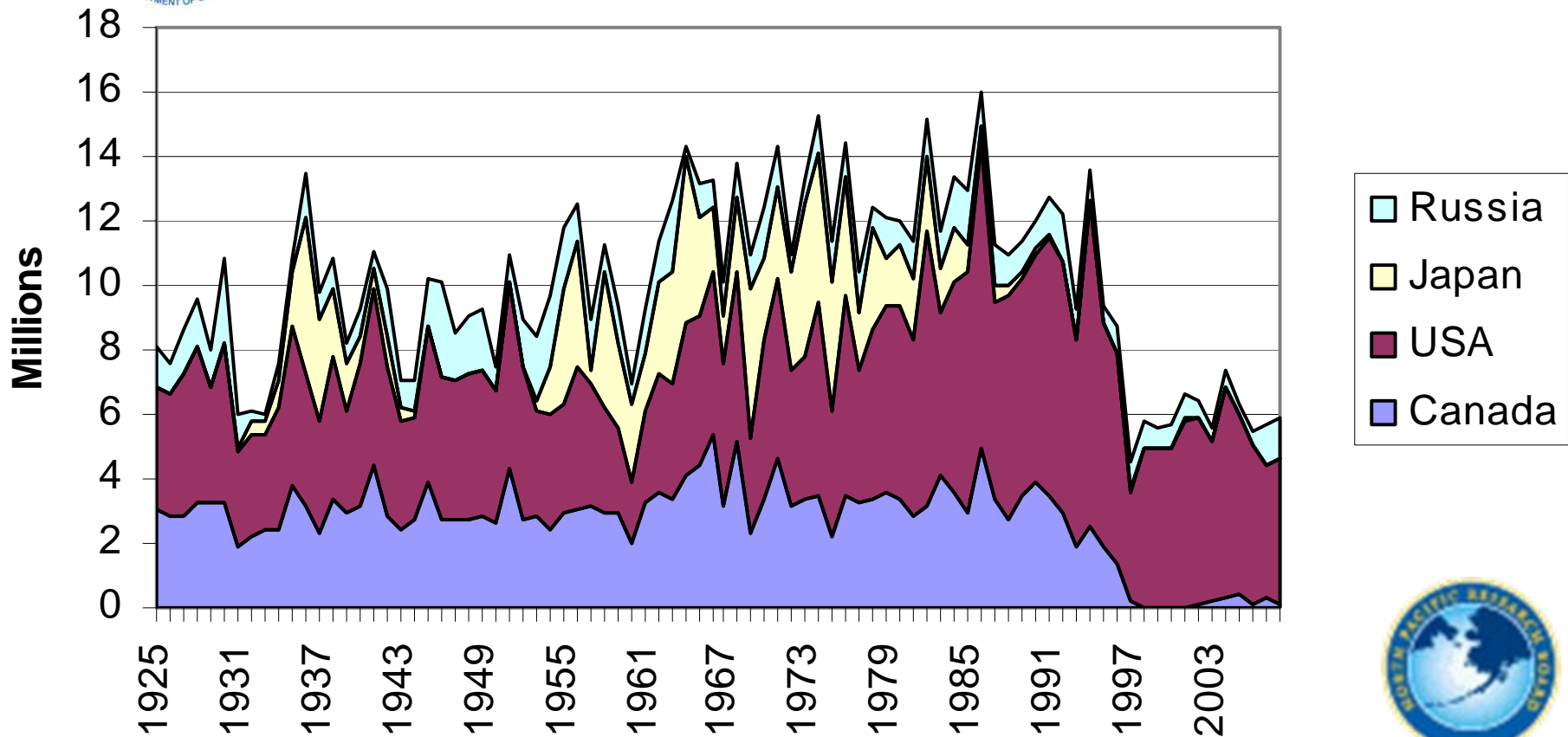
Sockeye Salmon Catches by Country 1925 – 2008 (preliminary)



Irvine, J.R., M. Fukuwaka, T. Kaga, J.H. Park, K.B. Seong, S. Kang, V. Karpenko, N. Klovach, H. Bartlett, and E. Volk. 2009. Status of North Pacific Salmon. NPAFC Doc. 1199. 141 pp. (Available at <http://www.npafc.org>).

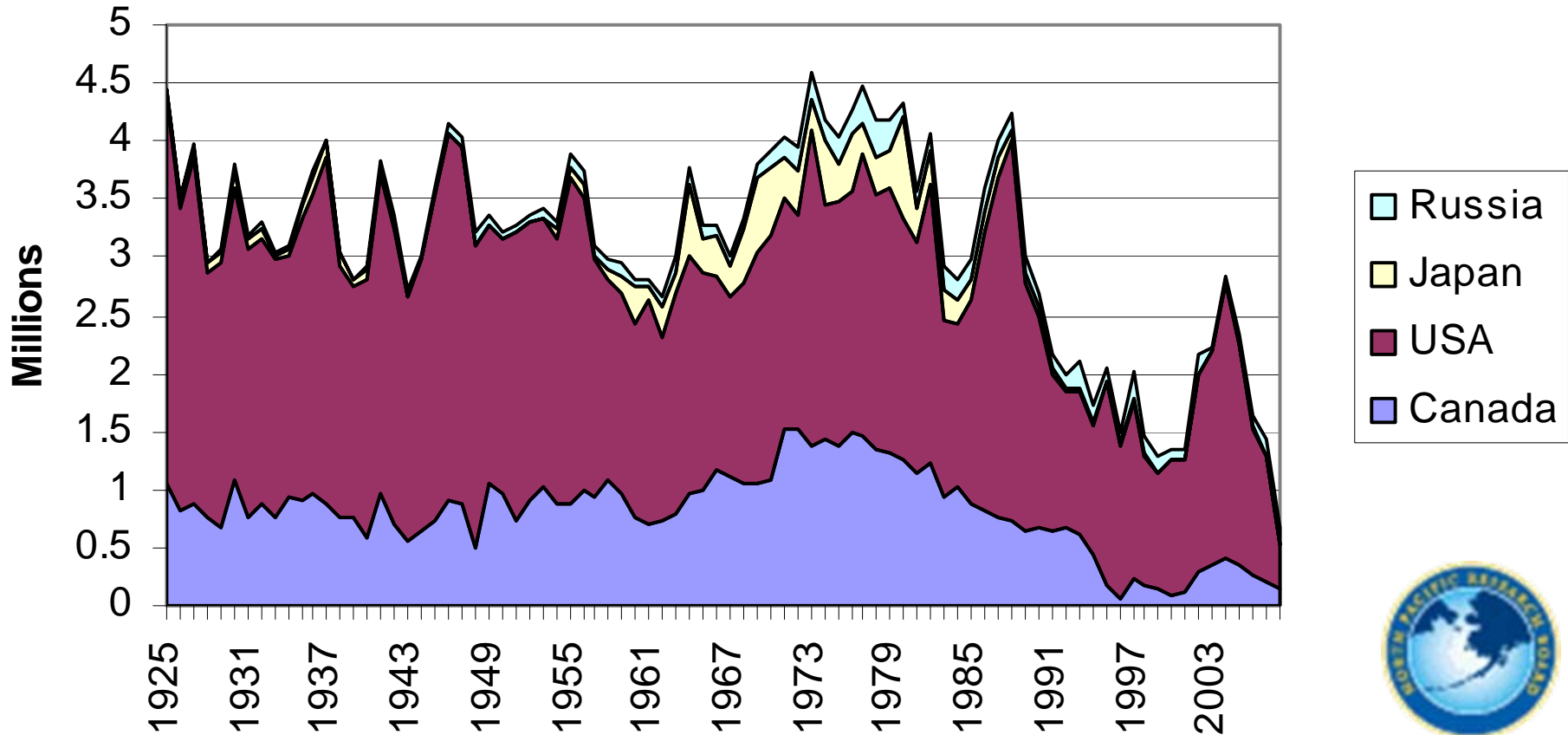


Coho Salmon Catches by Country 1925 – 2008 (preliminary)





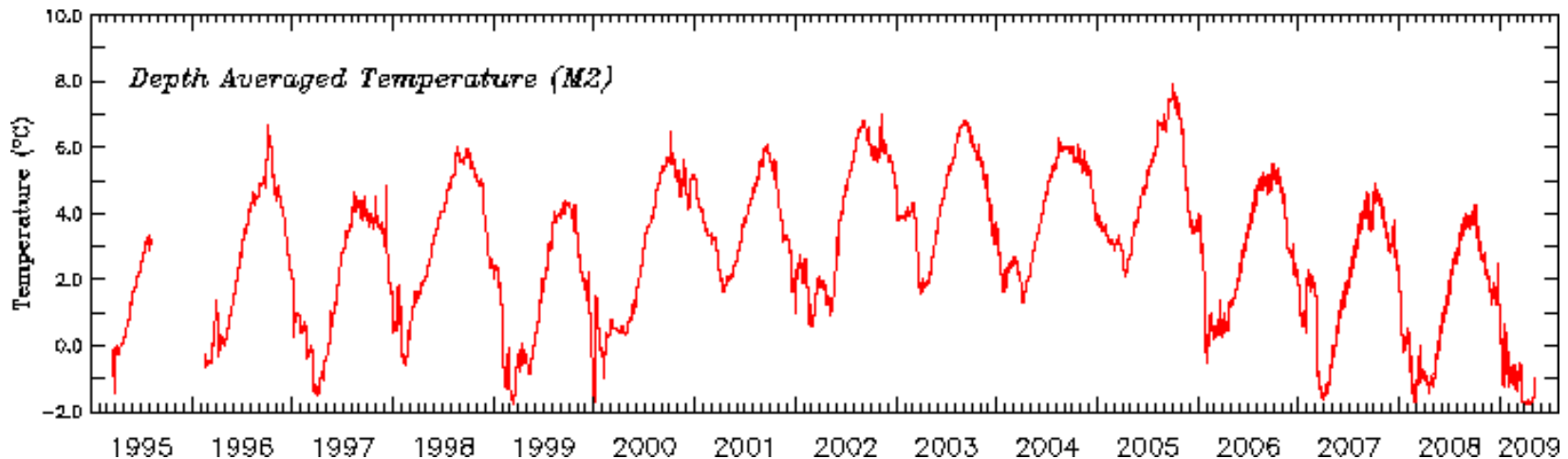
Chinook Salmon Catches by Country 1925 – 2008 (preliminary)





Status of the Bering Sea

- *2008/2009 was the third winter in a row with cold temperatures and extensive springtime sea ice cover.*



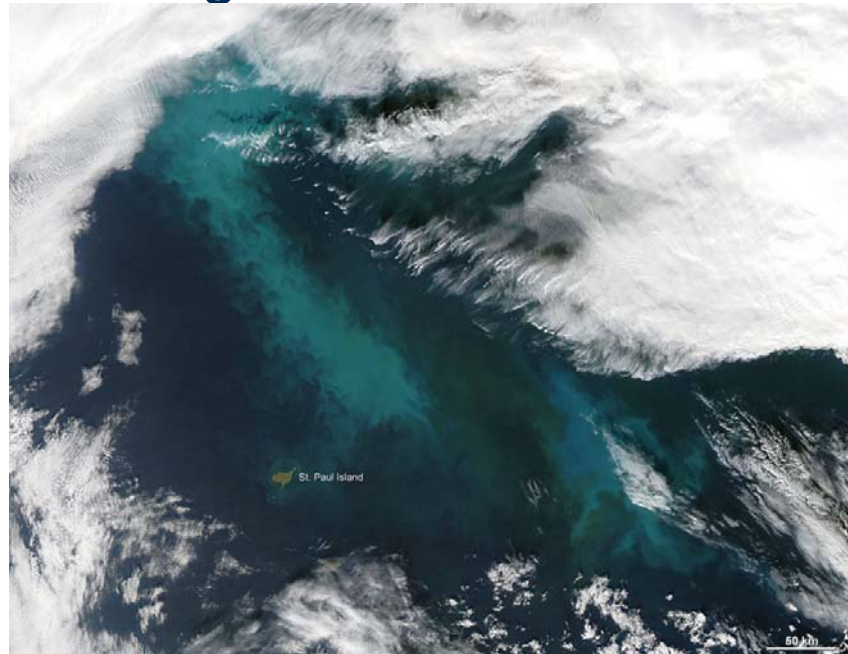
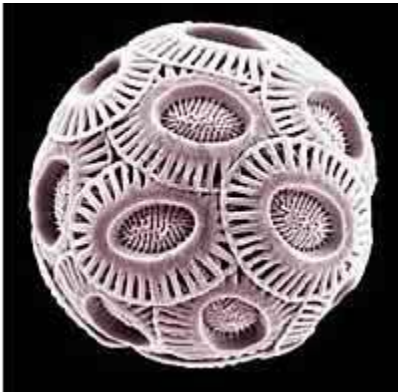
This lead to a large cold pool remaining in the middle shelf - Summer surface temperatures above 2008 but below long term average



Status of the Bering Sea

- *A substantial coccolithophore bloom developed in the Eastern Bering Sea During 2009.*

Oct 8, 2009



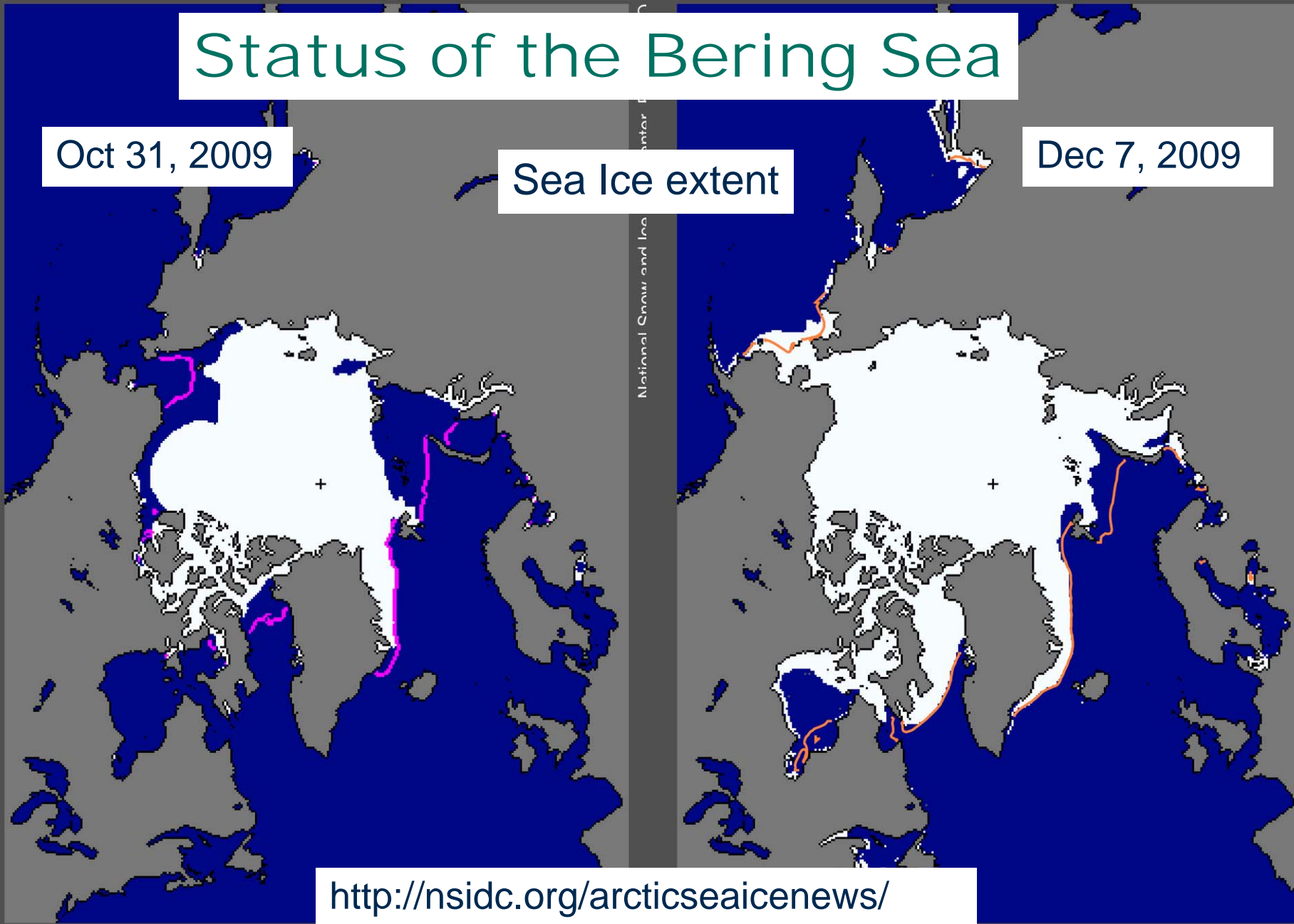
Source: Nov, 2009 SAFE report: Appendix C Ecosystem considerations for 2010

Status of the Bering Sea

Oct 31, 2009

Sea Ice extent

Dec 7, 2009



<http://nsidc.org/arcticseaicenews/>

Total extent = 7.5 million sq km

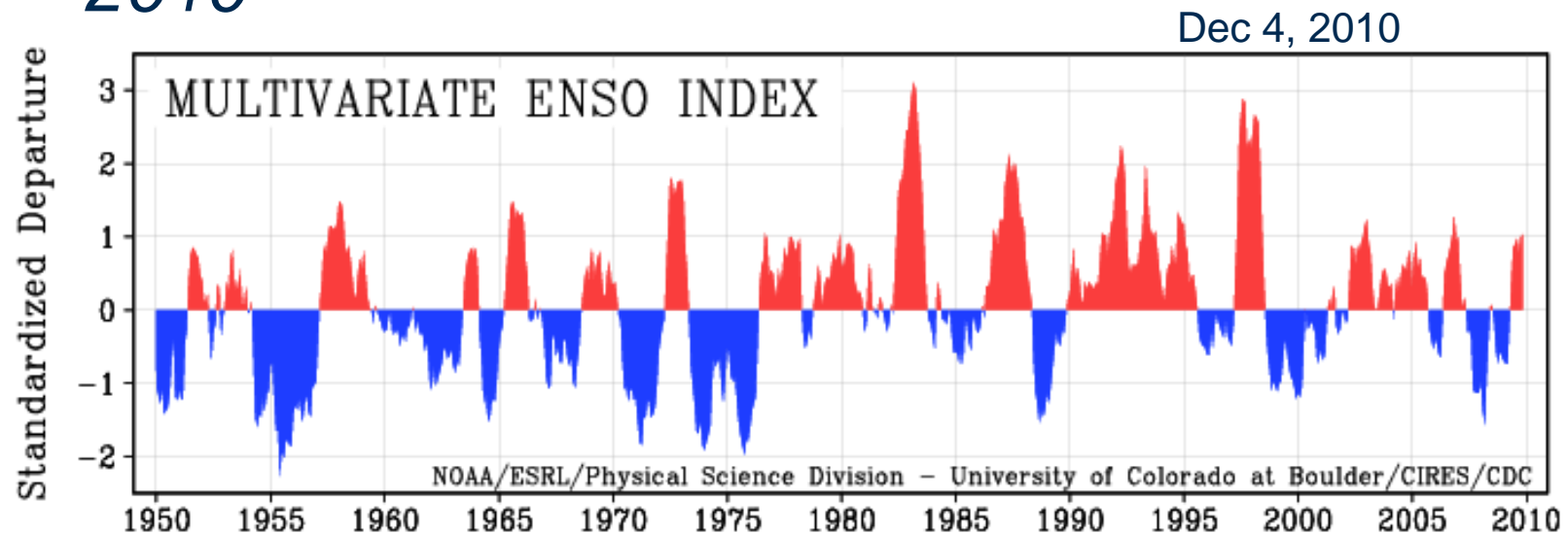
National Snow and Ice Data Center

National Snow and Ice Data Center, Boulder, CO

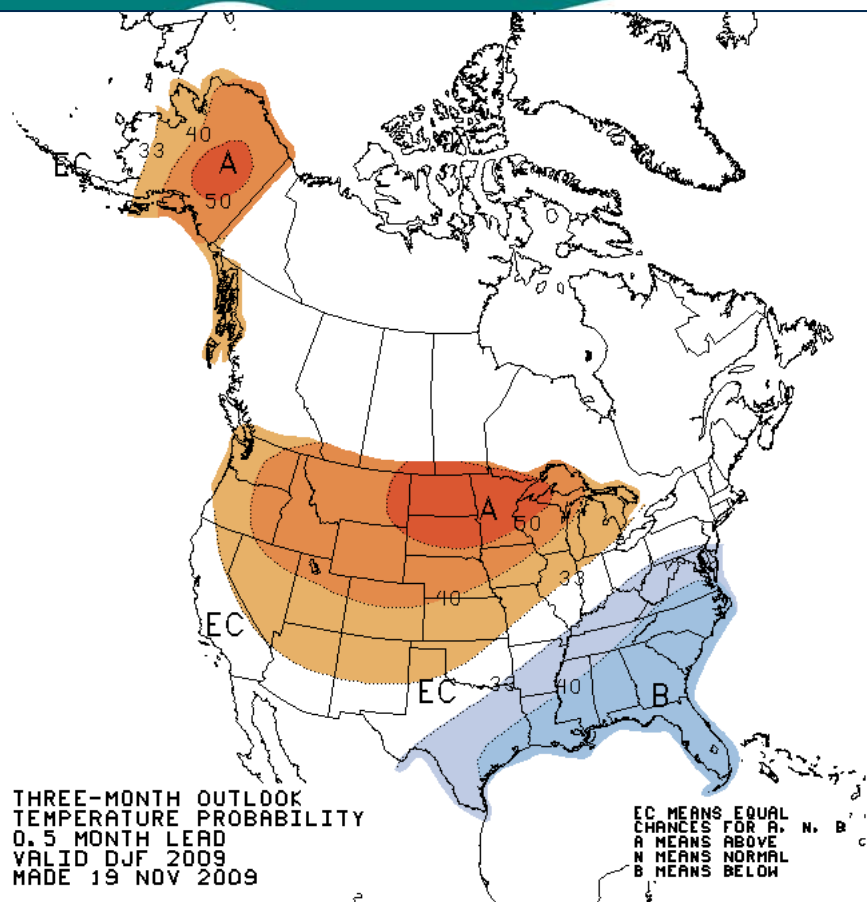


Status of the Bering Sea

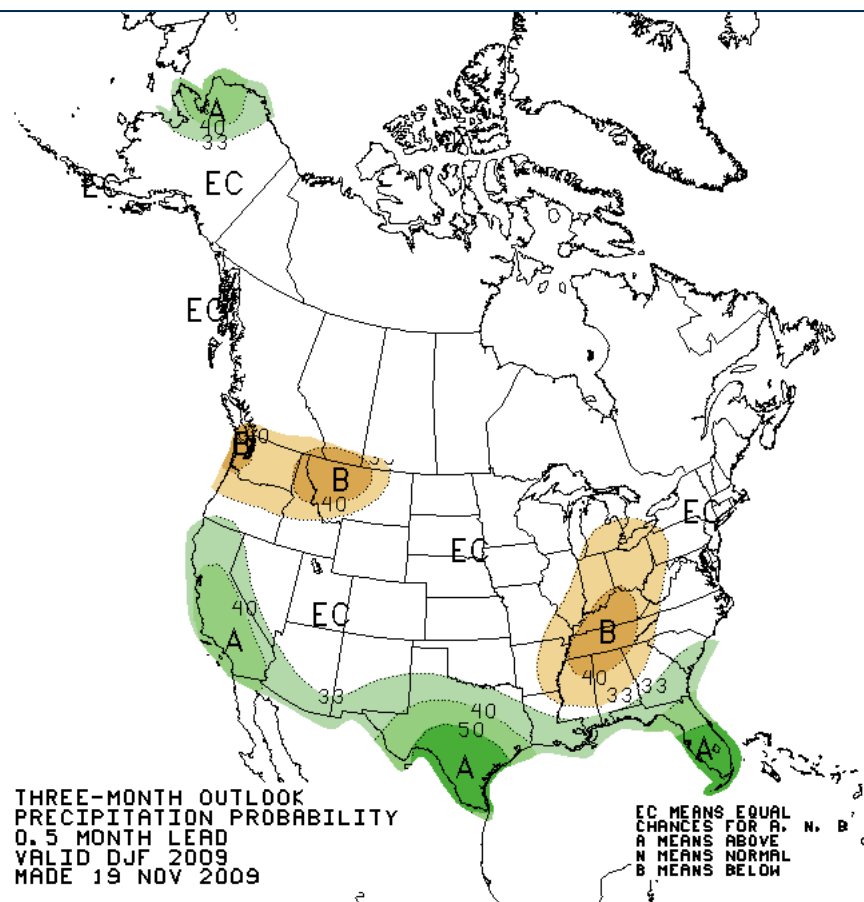
- El Nino conditions developed in the summer of 2009 - may lead to warmer waters in 2010*



http://www.esrl.noaa.gov/psd/enso/enso.mei_index.html



Temperature



Precipitation