



Status of Southern Resident Killer Whales

Gary Wiles – Wildlife Program
Patrick Pattillo – Director's Office
Mike Cenci – Enforcement Program

Fish and Wildlife Commission, August 3, 2012

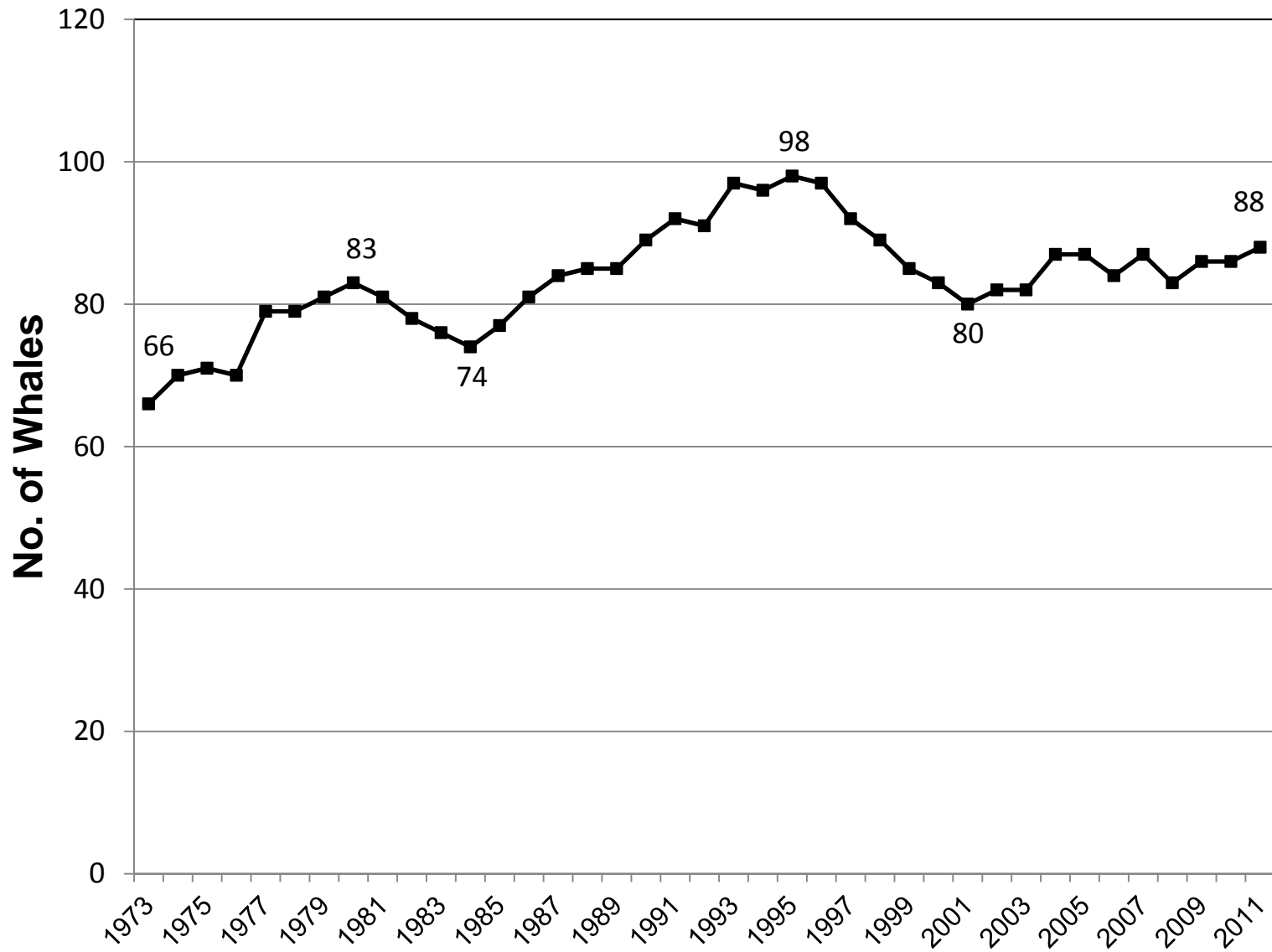


- Status and Threats
- Vessel Traffic & Enforcement
- Effects of Fisheries

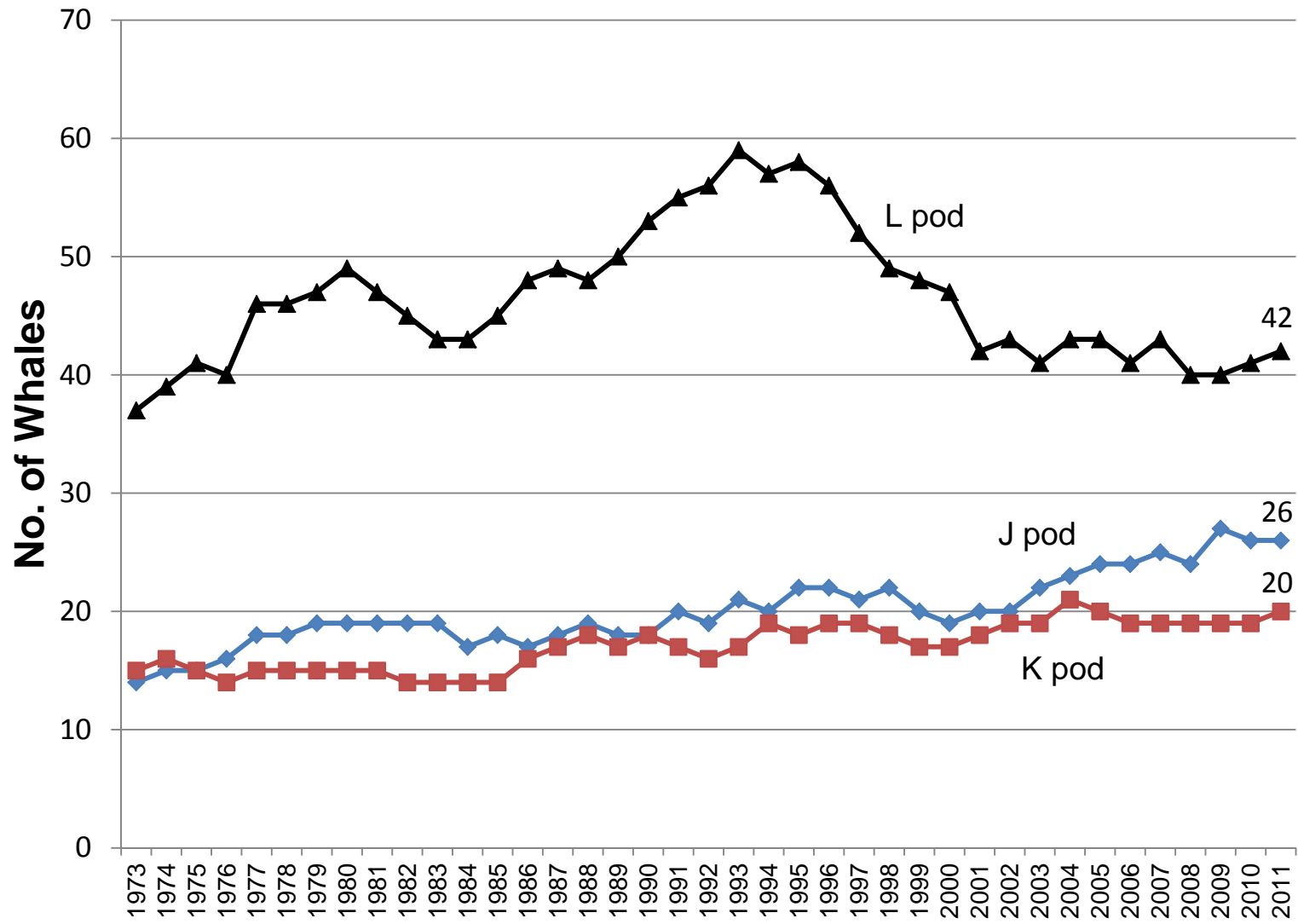
Current Population Status and Threats

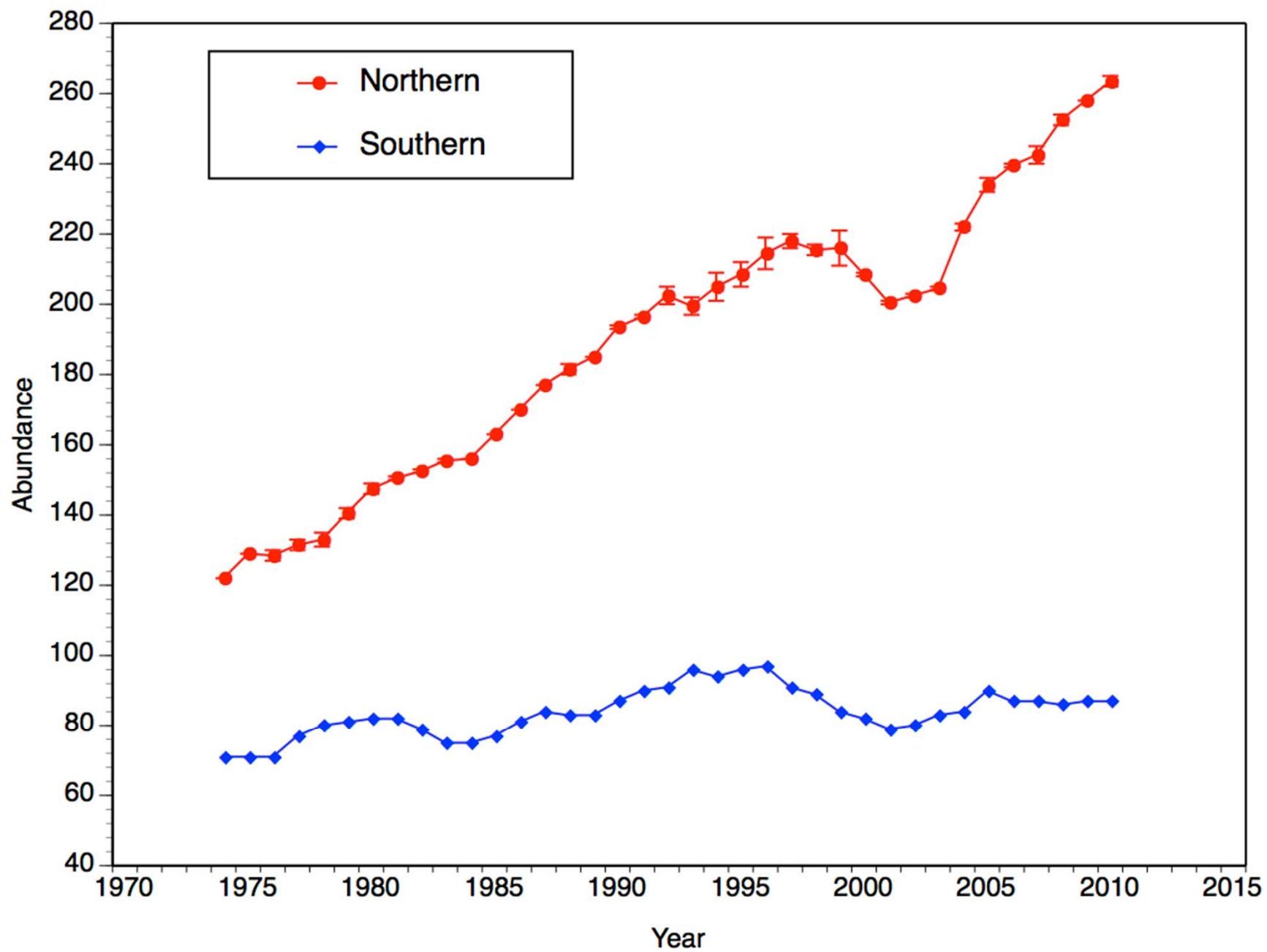


Total southern resident numbers, 1973-2011

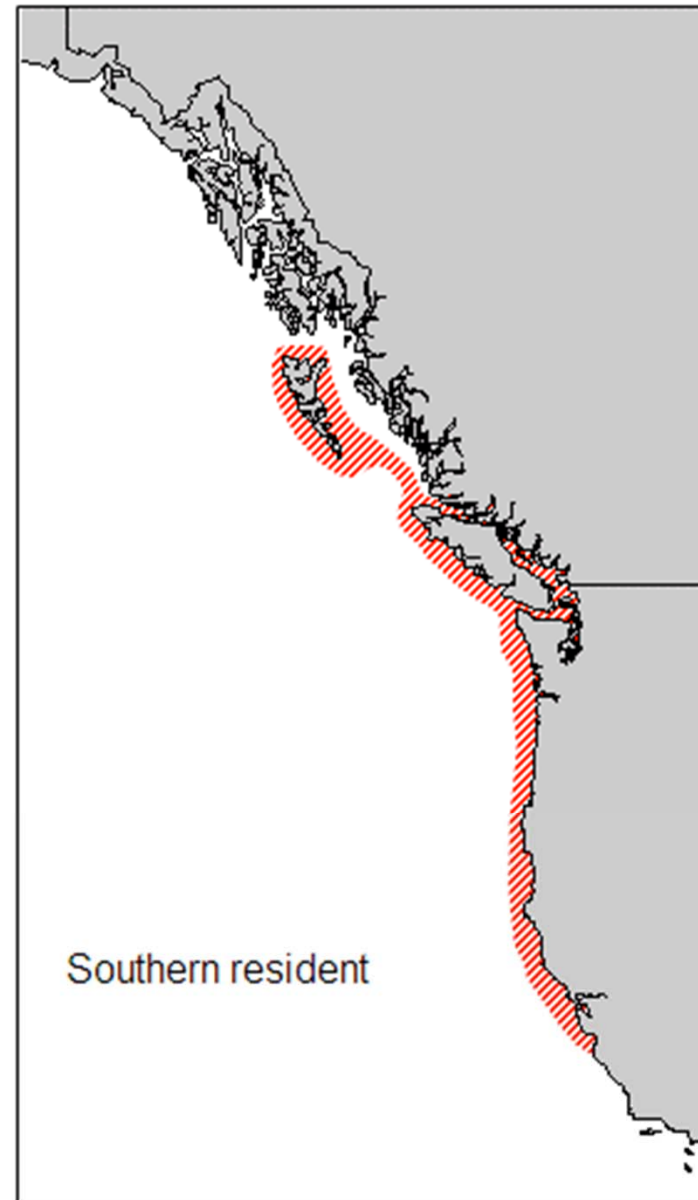
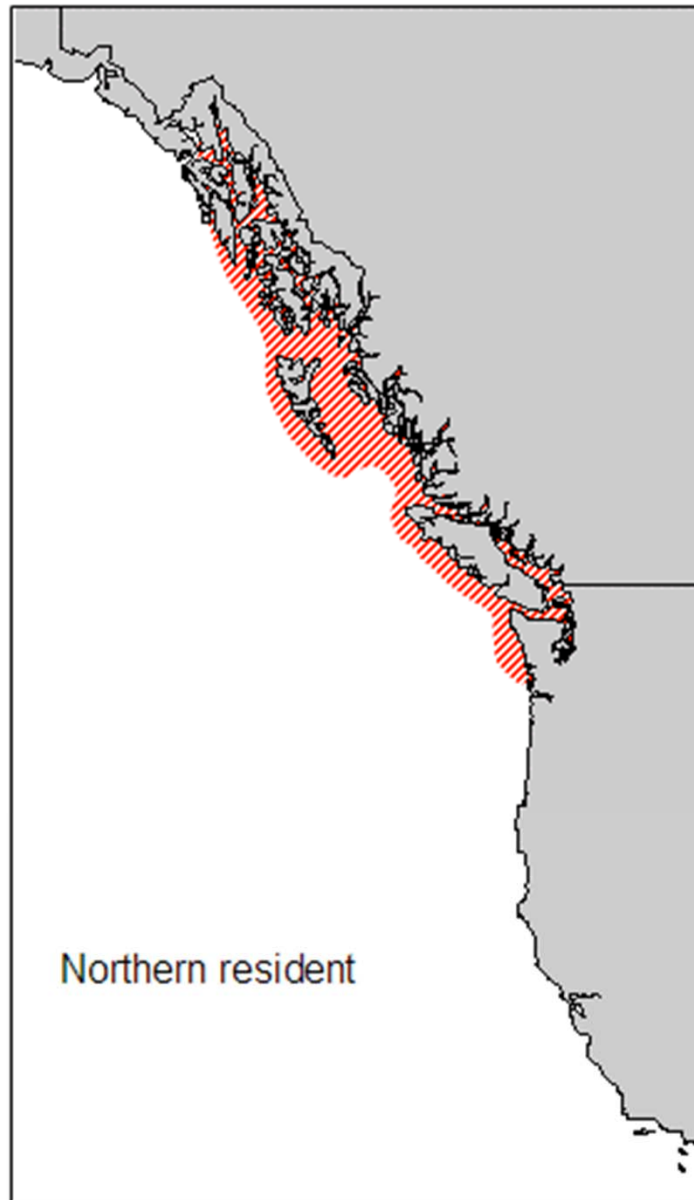


Sizes and trends of the 3 southern resident pods, 1973-2011





Ranges of Northern & Southern Resident Killer Whale Populations



Threats to the population



- Prey availability
- Contaminants
- Vessel disturbance
- Major oil spills

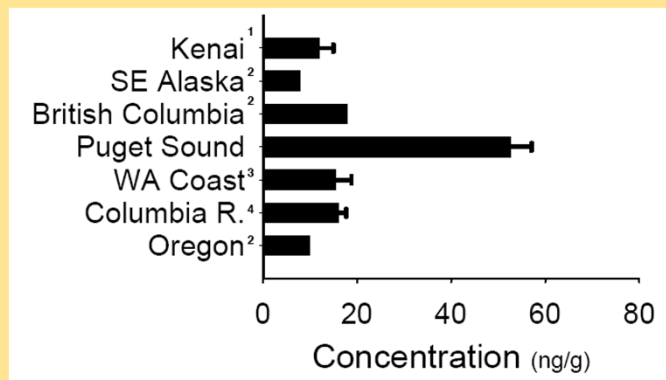
High Pollutant Levels in SRKW's



- High levels of PCBs, DDTs, and flame retardants (PBDEs)
- PCB levels 3-5 times higher in Puget Sound chinook

Modeling shows that current PCB levels can put Southern Residents well above the threshold associated with immune and endocrine system disfunction in other marine mammals

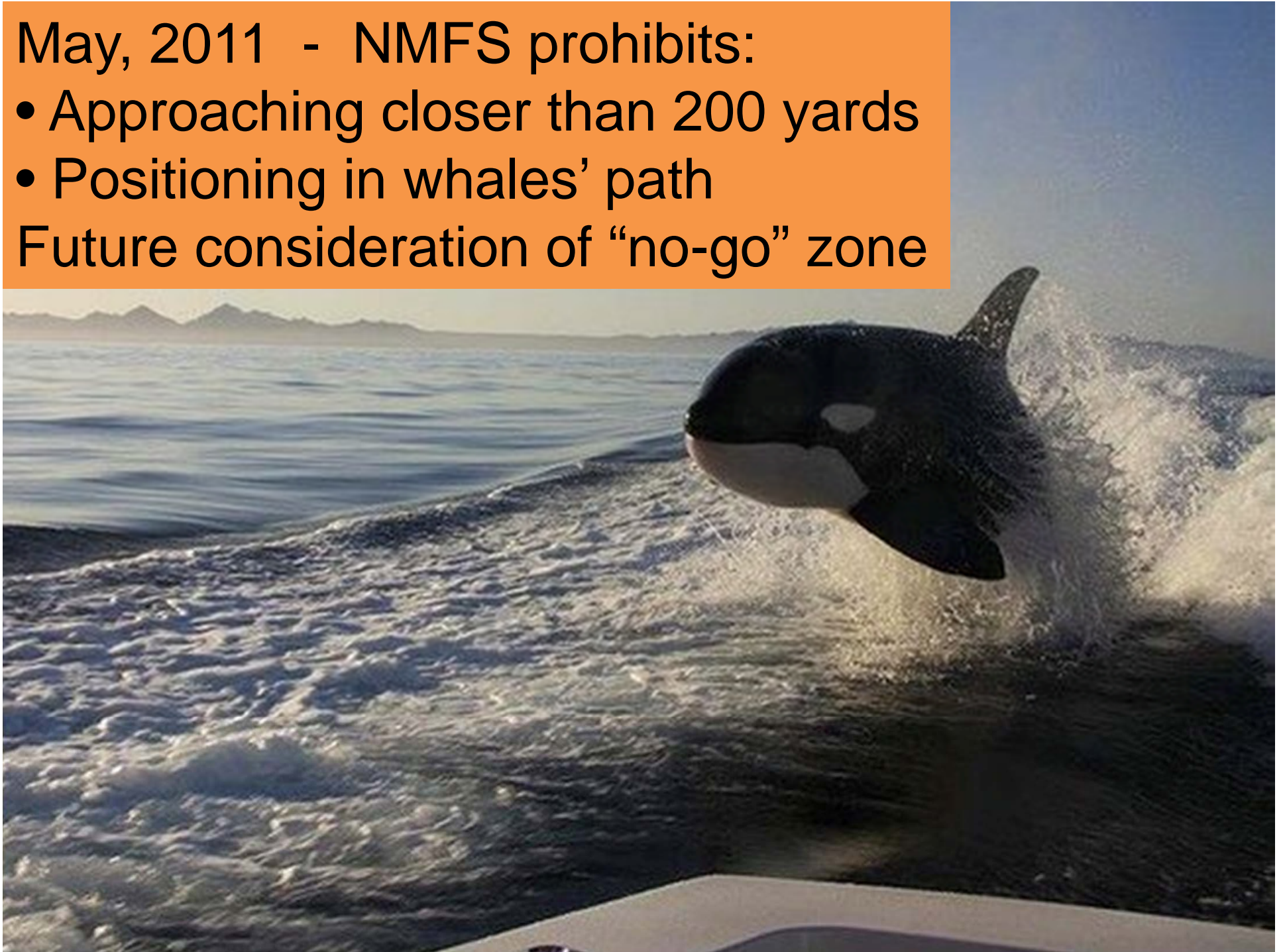
PCB concentrations in West Coast chinook



May, 2011 - NMFS prohibits:

- Approaching closer than 200 yards
- Positioning in whales' path

Future consideration of “no-go” zone



Section 7(a)(2) of the ESA requires federal agencies to insure that their actions are not likely to jeopardize the continued existence of listed species or result in the adverse modification or destruction of critical habitat.

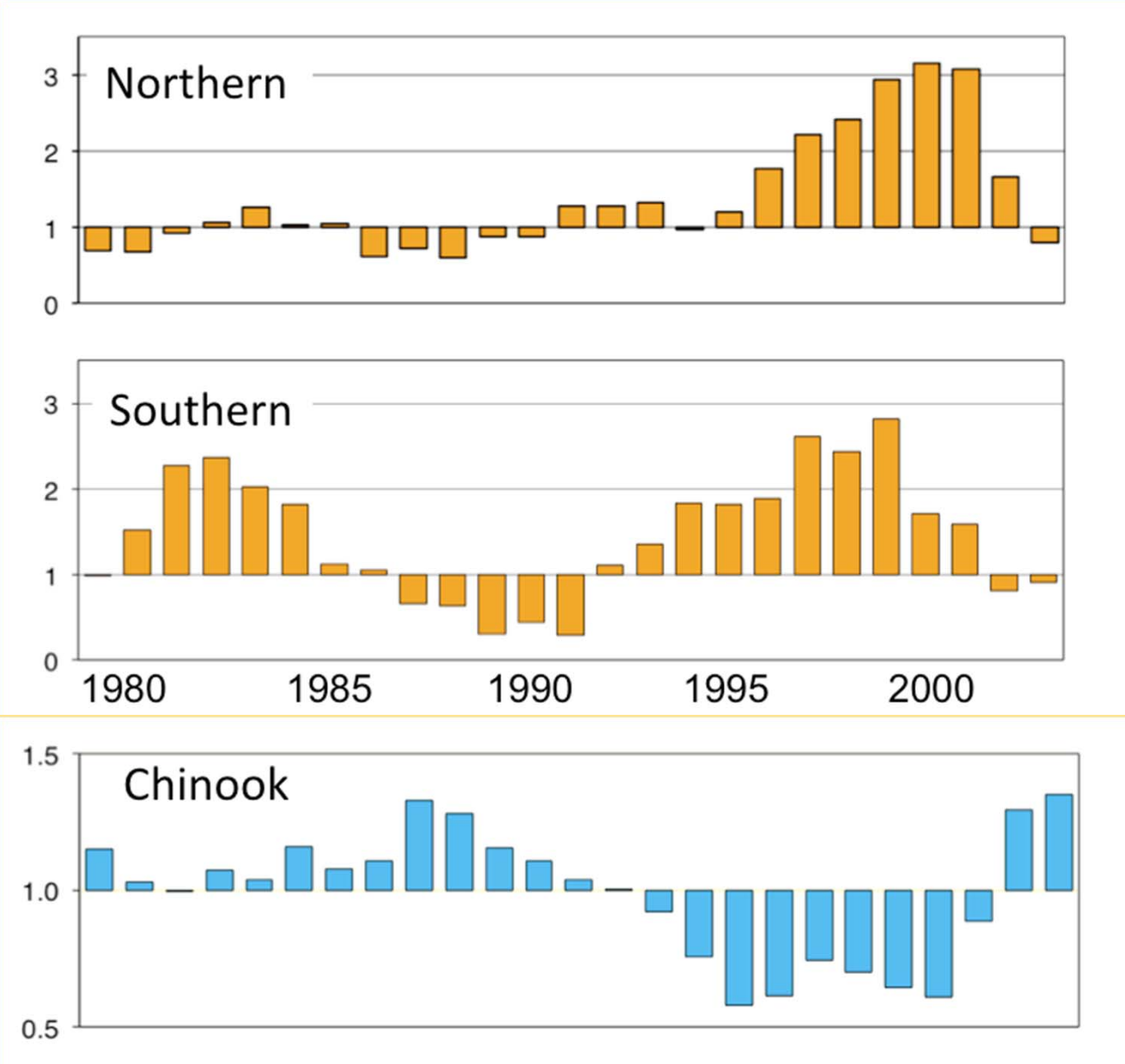


“New scientific information continues to emerge that will help inform future consultations.”

NMFS Conclusions 2010:

- **Fisheries cause a measurable reduction in prey**
- **... raises concerns about the effects of fisheries on Southern Residents**

Are resident killer whale population dynamics related to prey abundance?



NOAA/DFO: Bilateral Workshop Process to Consider Effects of Fisheries on Southern Resident Killer Whales

Summer 2011:

Identify Science Panel

Workshop 1:

Sept 21-23, 2011

Workshop 2:

March 13-15, 2012

May-June, 2012:

Science Panel first draft report:

- Preliminary findings
- Information/data gaps, uncertainties identified

Workshop 3:

September 18-20, 2012

Nov. 30, 2012

Science Panel Final Report

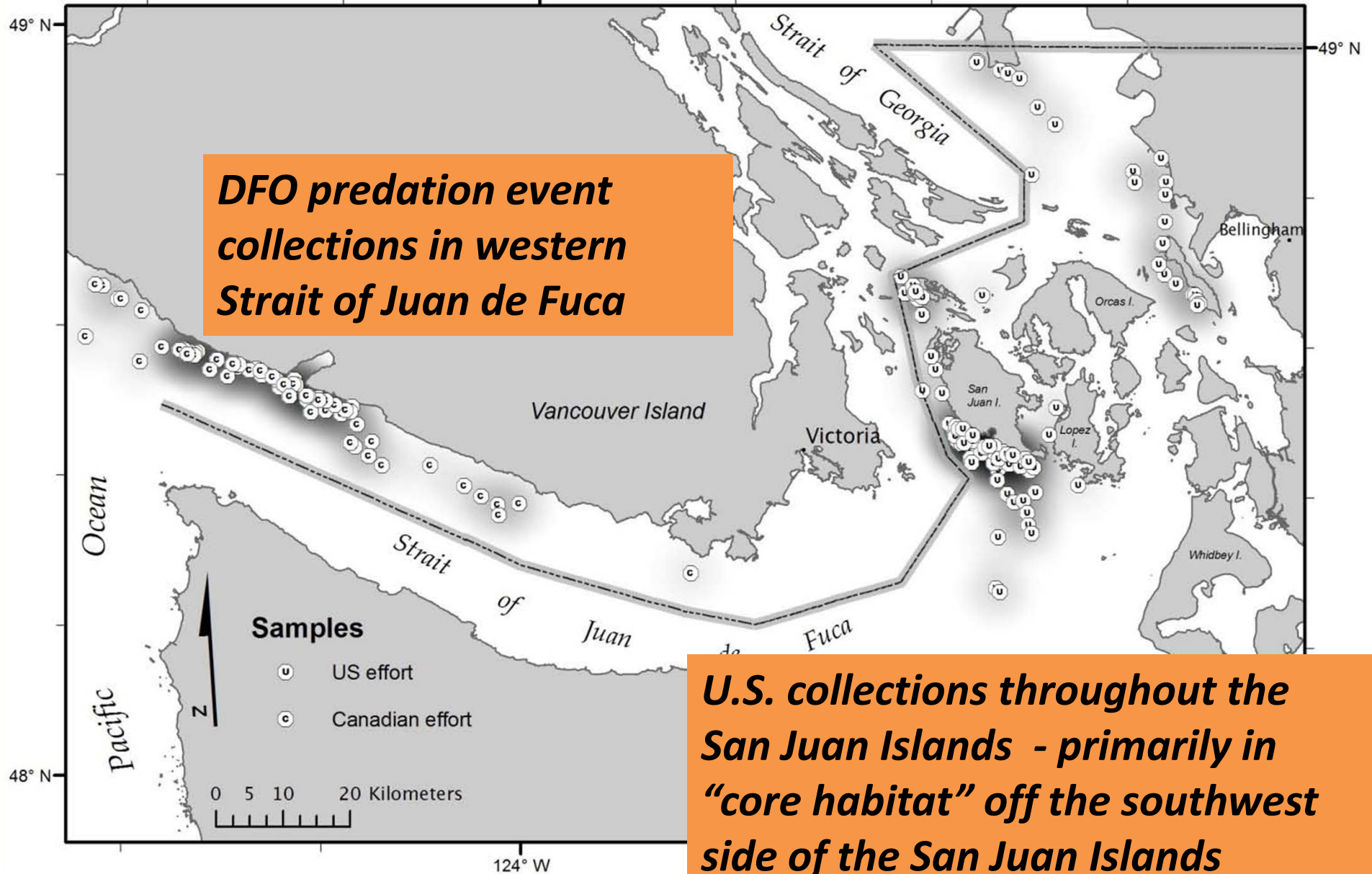
By Jan. 31, 2013

NOAA finalizes Alternative Fishing Regimes report

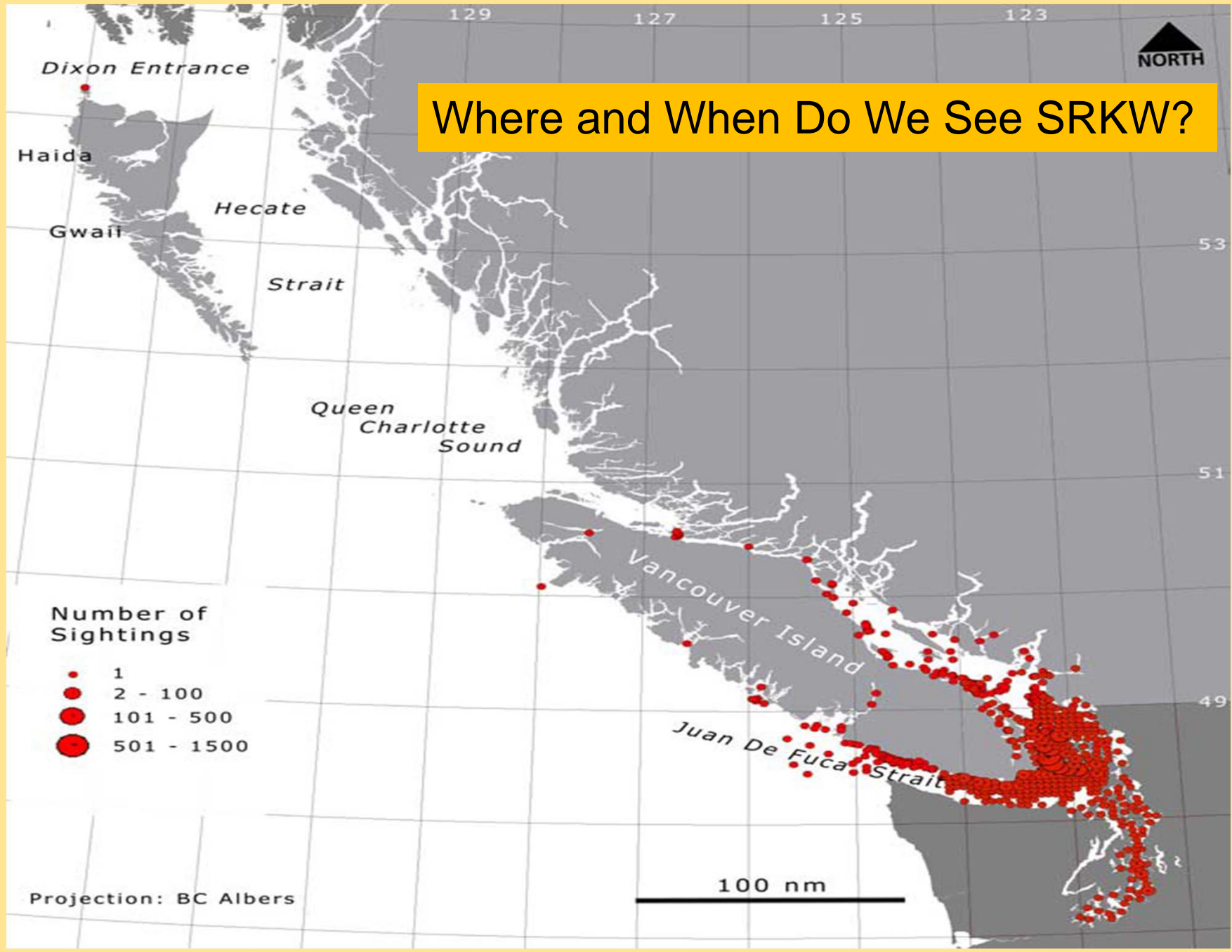
By March 31, 2013

NOAA initiates or reinitiates ESA fishery consultations if necessary

Predation Event Collections: Collaborative effort between DFO and U.S. researchers

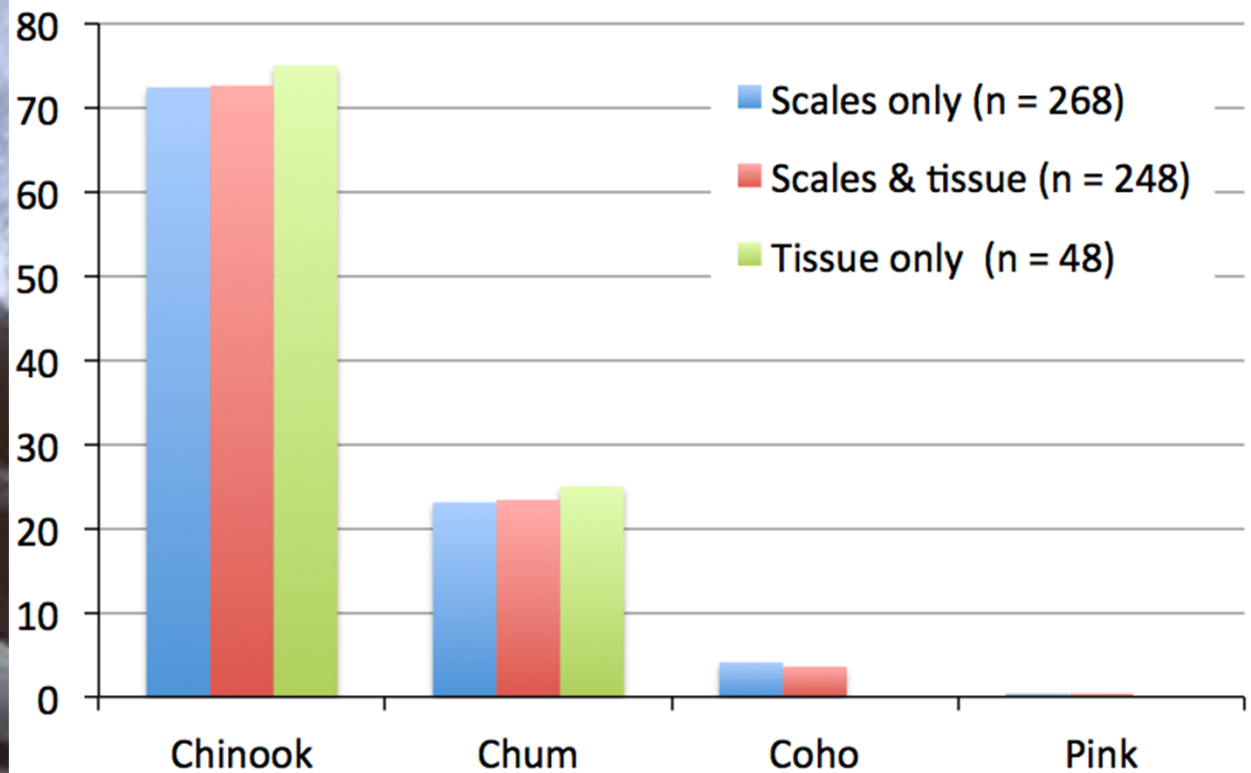


Where and When Do We See SRKW?



Prey Studies Reveal: During Summer Period (May-September)

- Chinook Primary Prey
- Large Chinook
- Fraser River 80%-90%

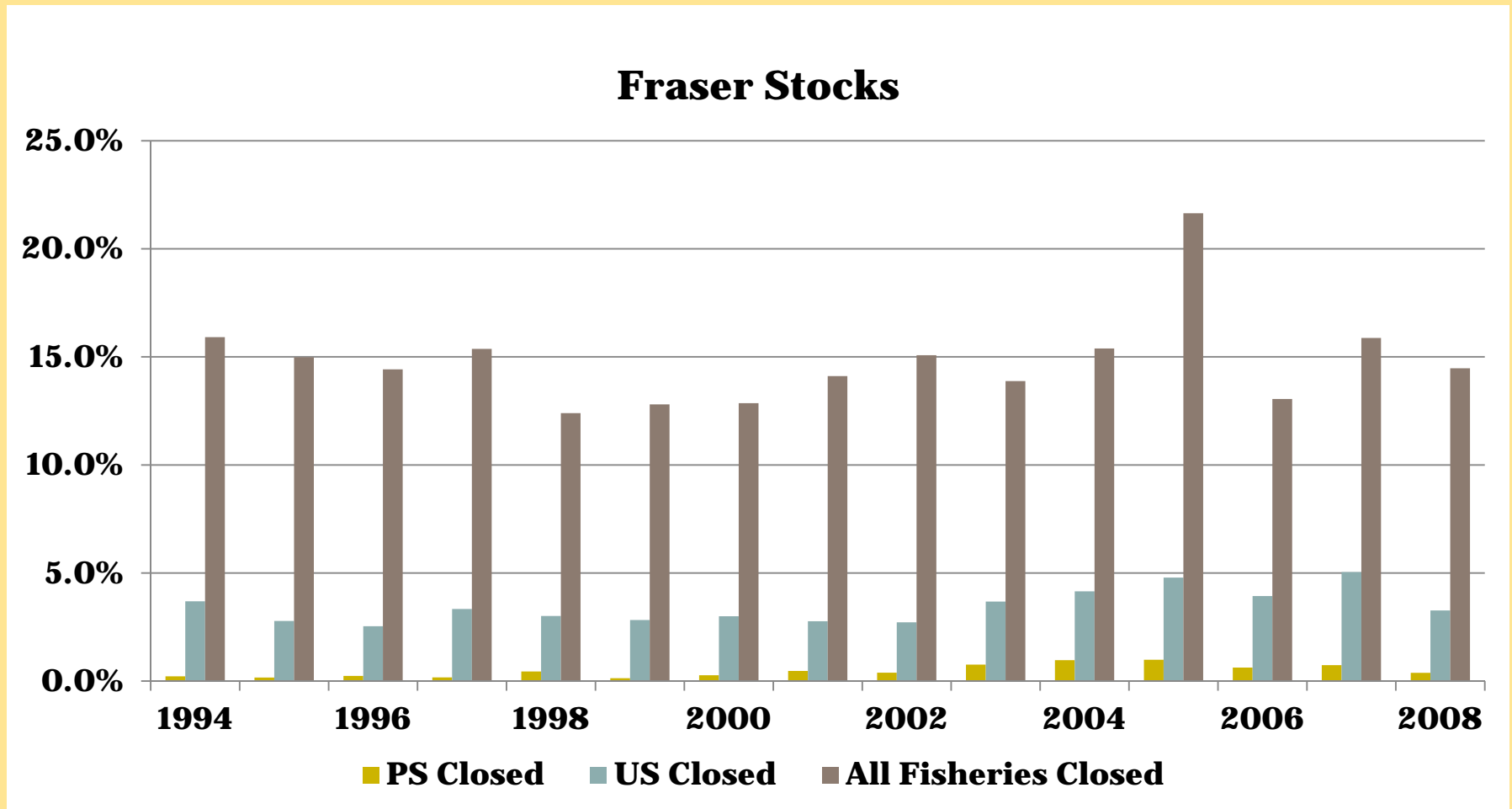


NMFS Analytical Approach:

(1) Estimate the reduction in prey available to the whales caused by salmon fisheries, considering:

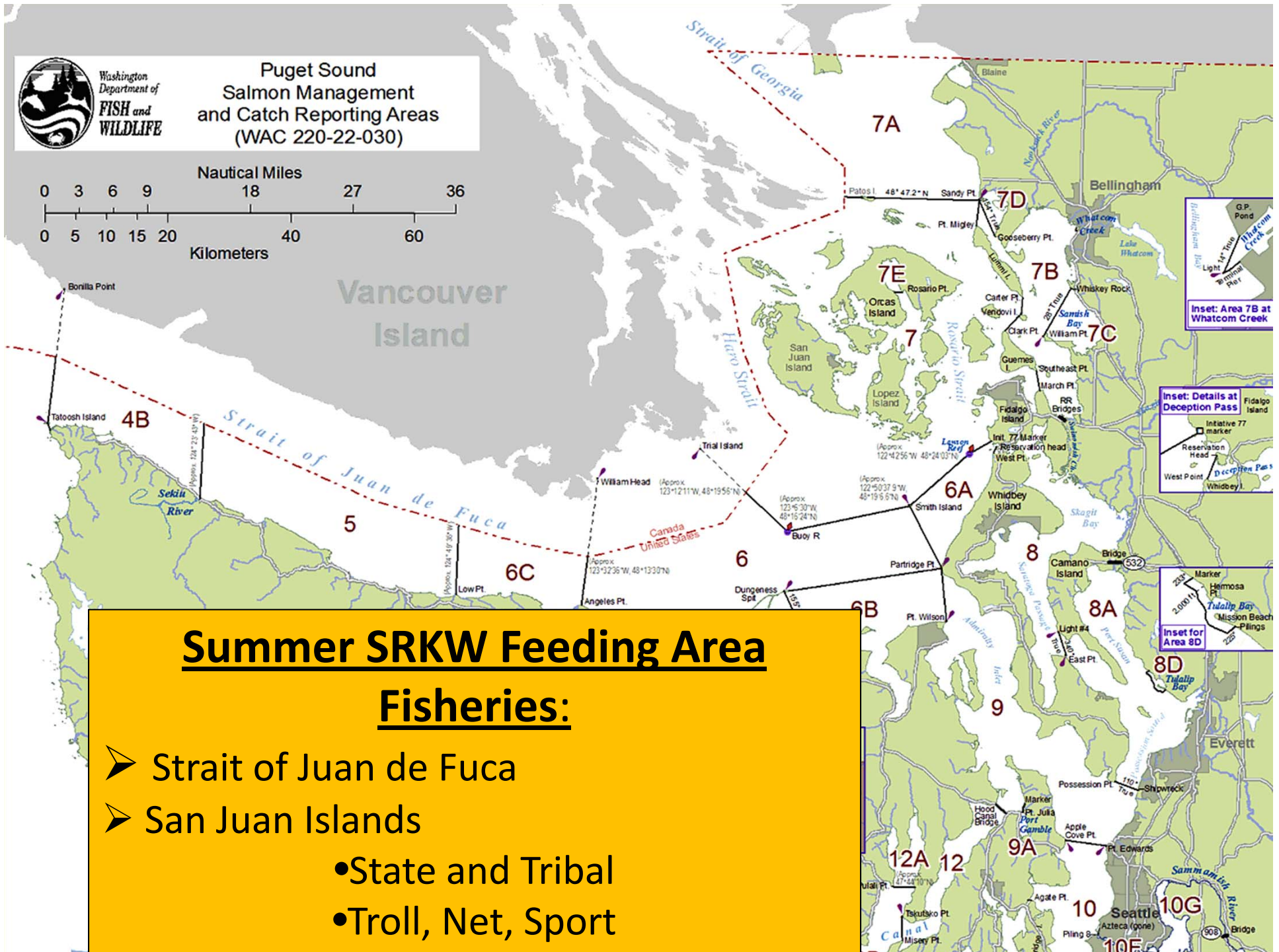
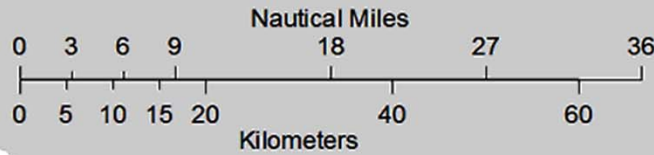
- All U.S. and Canadian salmon fisheries.
- Predominance of large Chinook in the Southern Resident diet.
- Estimate the ratio of Chinook prey available to the whales' Chinook needs.
- Observational reports about poor body condition of individual whales
- Studies of correlations between Chinook abundance and measures of health of the whale population.

% Increase of Mature Four and Five Year Old Chinook from Marine Fisheries Closures





Puget Sound
Salmon Management
and Catch Reporting Areas
(WAC 220-22-030)



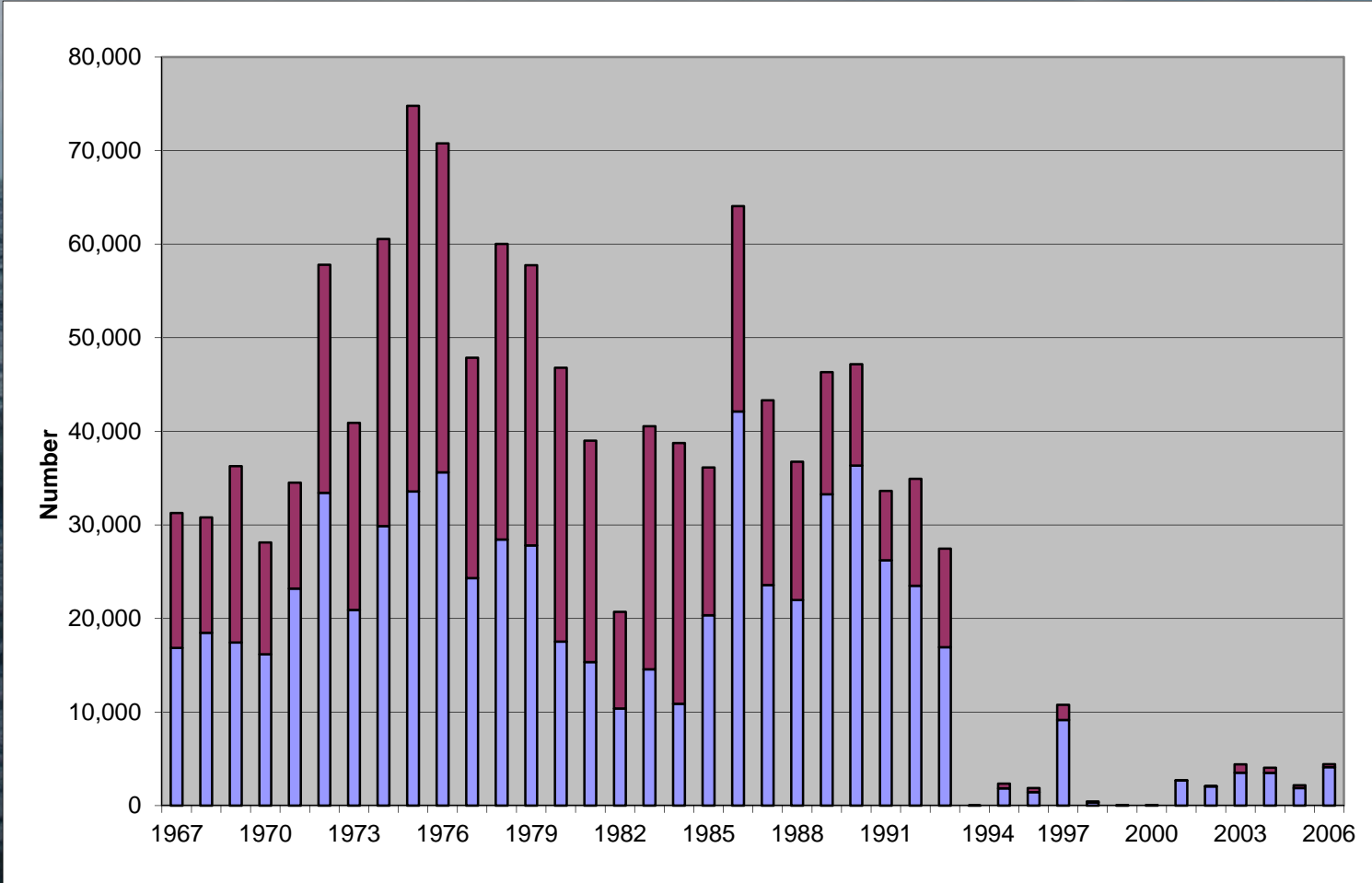
Summer SRKW Feeding Area

Fisheries:

- Strait of Juan de Fuca
- San Juan Islands
 - State and Tribal
 - Troll, Net, Sport

Areas 5&6 Recreational Fishery

| 1975-1993 Avg. | 2001-2008 Avg. |
|----------------|----------------|
| 52,737 | 4,728 |



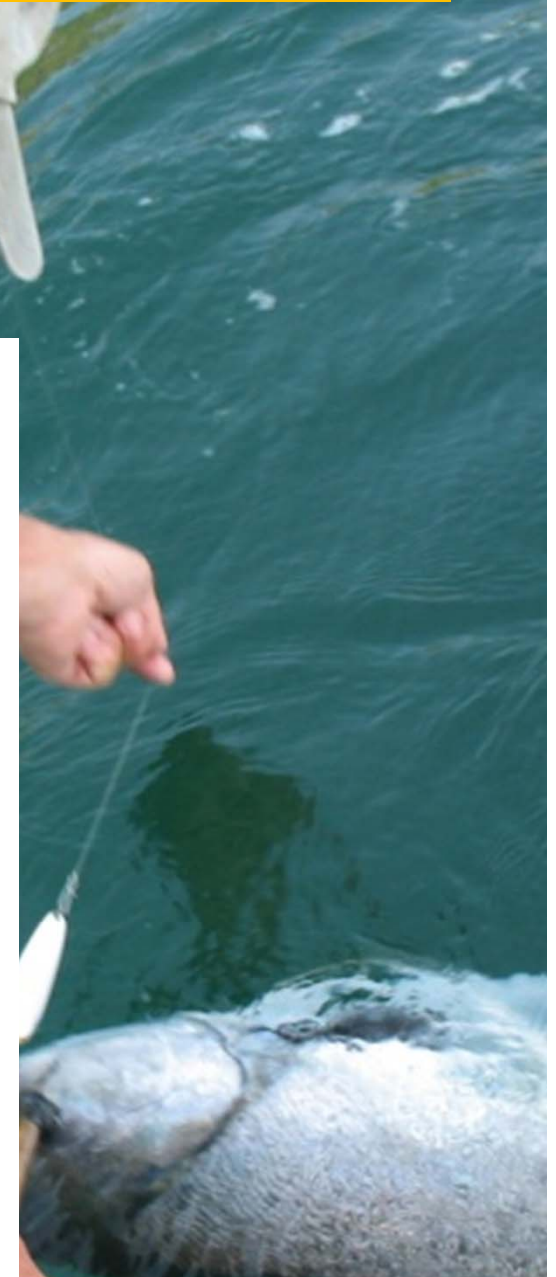
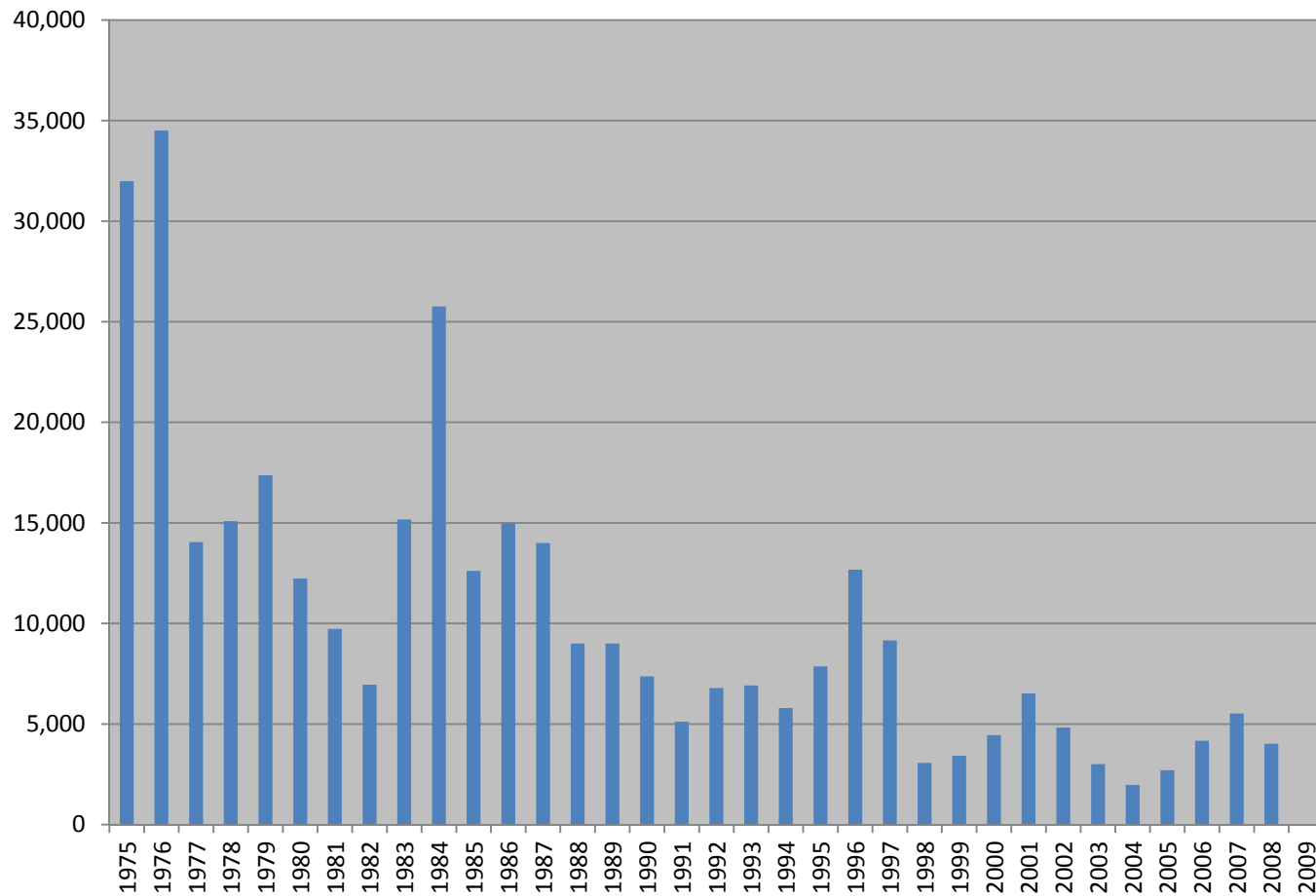
San Juan Island Recreational Fishery

1975-1993 Avg.

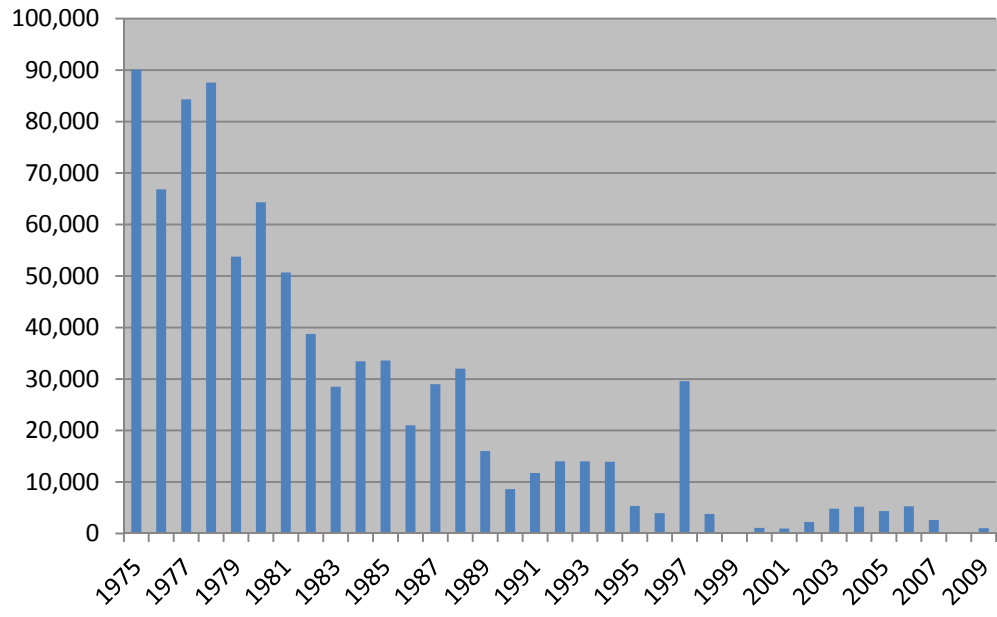
2004-2008 Avg.

14,138

3,677



Pink and Sockeye Net Fisheries



1975-1993 Avg.

40,960

2005-2009 Avg.

2,664

Washington Fishery Summary:

- **Chinook impact of fisheries occurring simultaneous to prime SRKW feeding time and area reduced by ~90% from historical levels**
 - Due to closure or restrictions as management response to status of wild Puget Sound Chinook stocks
- **Pink & Sockeye net fisheries are the only fishery with significant Fraser River Chinook impact**
 - Less than 3,000 Chinook per year
 - Sport and Troll target Puget Sound stocks



