

# Steller Sea Lions in Alaska: Status and Current Management Issues



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# Outline

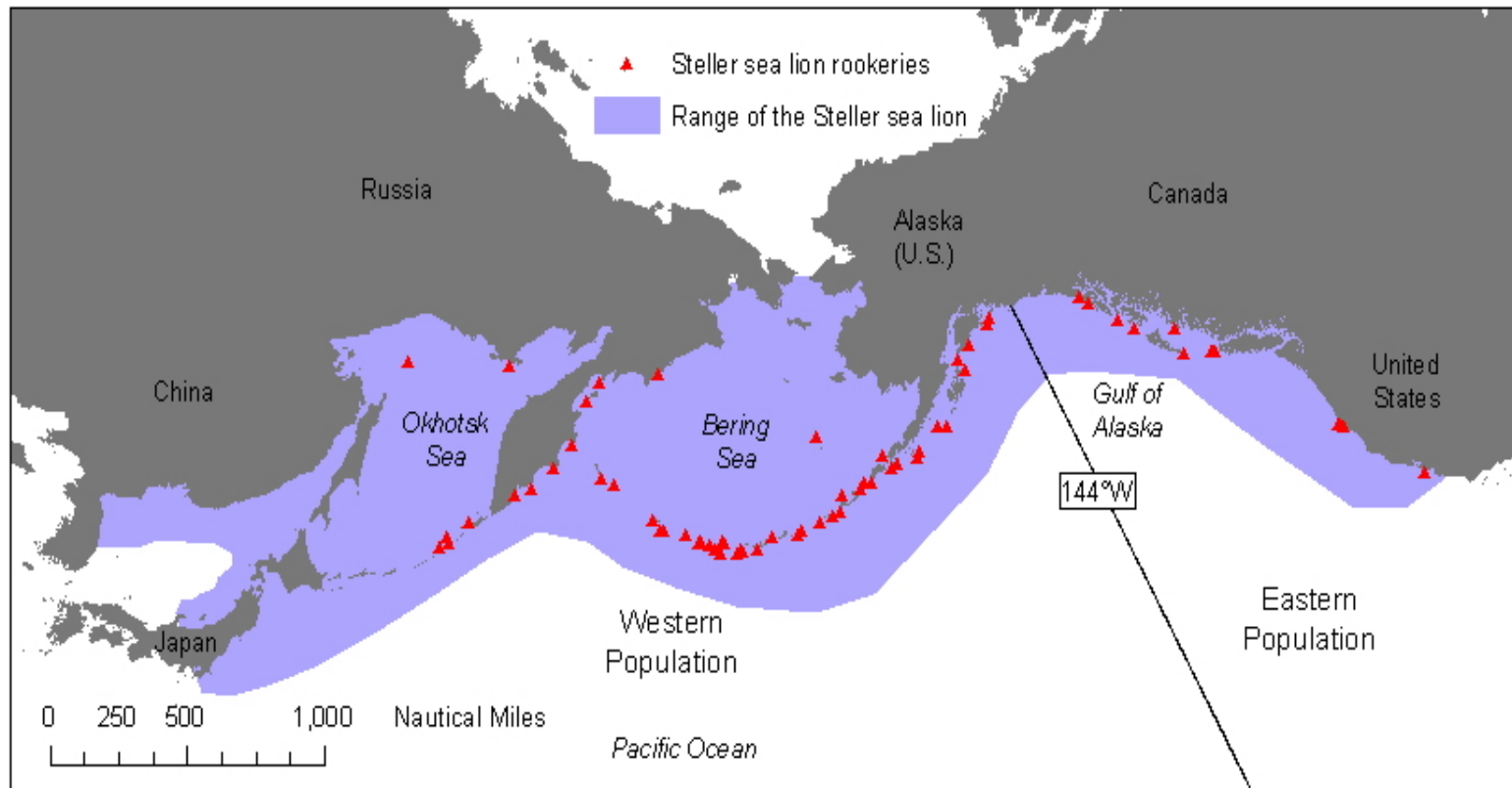
- History of ESA listing
- Recovery criteria and trends
- Status of current Section 7 consultation



# ESA Listing History

- 1990 Steller sea lions listed as threatened
- 1993 Critical habitat designated
  - closures around rookeries and haulouts
- 1997 Split into Western and Eastern Distinct Population Segments (DPS) based on genetic differences
  - W DPS endangered, E DPS threatened

# Range of Steller Sea Lions





# Steller Sea Lion Designated Critical Habitat

50 CFR 226.202

## Foraging Area

■ Bogoslof

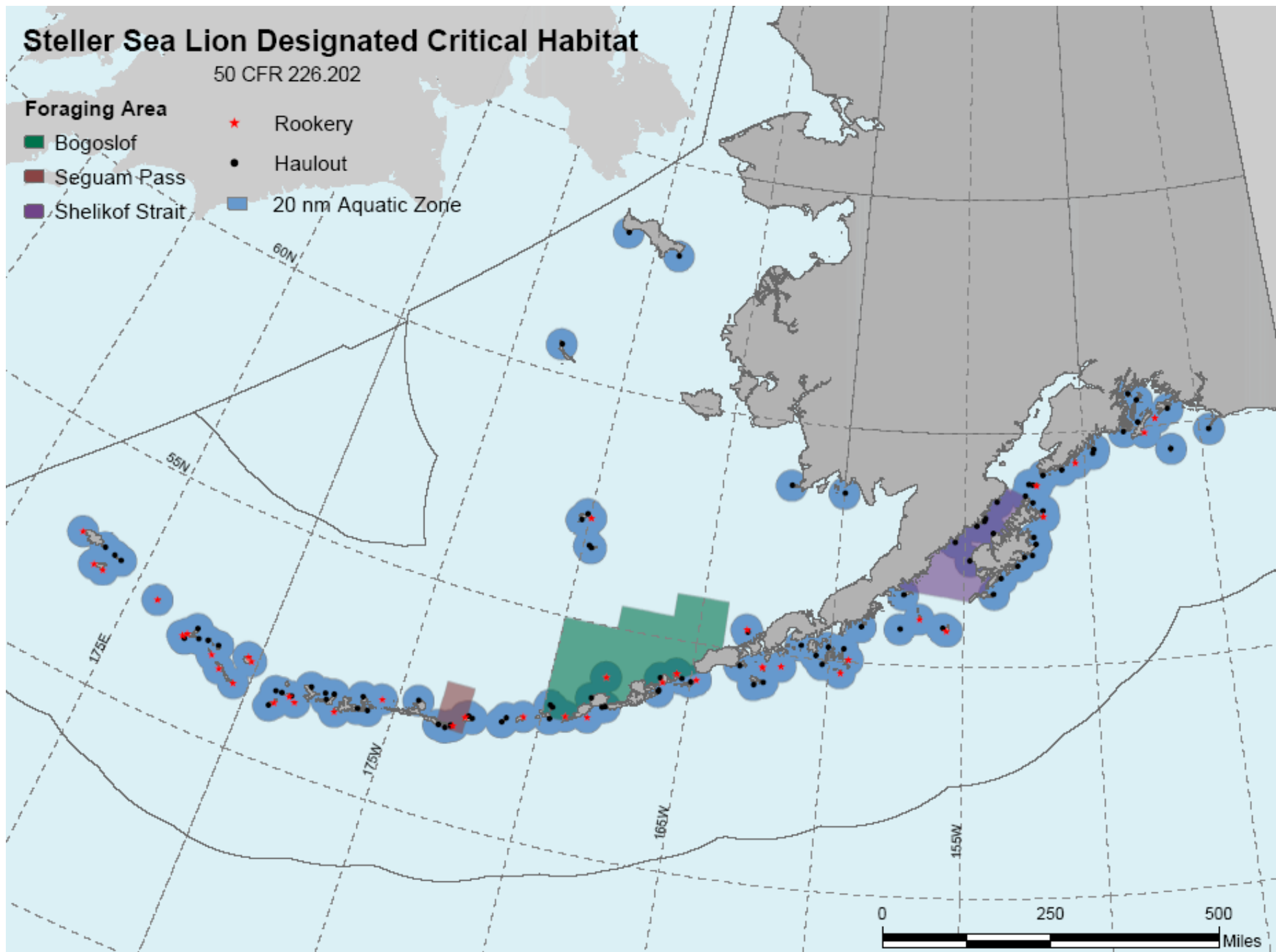
■ Seguam Pass

■ Shelikof Strait

★ Rookery

● Haulout

■ 20 nm Aquatic Zone



# Steller Sea Lion Protection Measures

- Starting in 1990, closures around haulouts and rookeries
- Prohibition on forage fish fishing since 1997
- Comprehensive suite of closures, and seasonal and area apportionments of groundfish TACs in 2001
- VMS required in directed pollock, Pacific cod, and Atka mackerel fisheries



# Final Recovery Plan (2008) for Western DPS of Steller Sea Lions

- Reclassified as threatened if non-pup counts increase by 1.5% per year for 15 years; delisted if counts increase by 3% per year for 30 years
- Trends in at least 5 of 7 subregions must be consistent with overall trend; no two adjacent areas are declining:

1. Eastern GOA

2. Central GOA

3. Western GOA

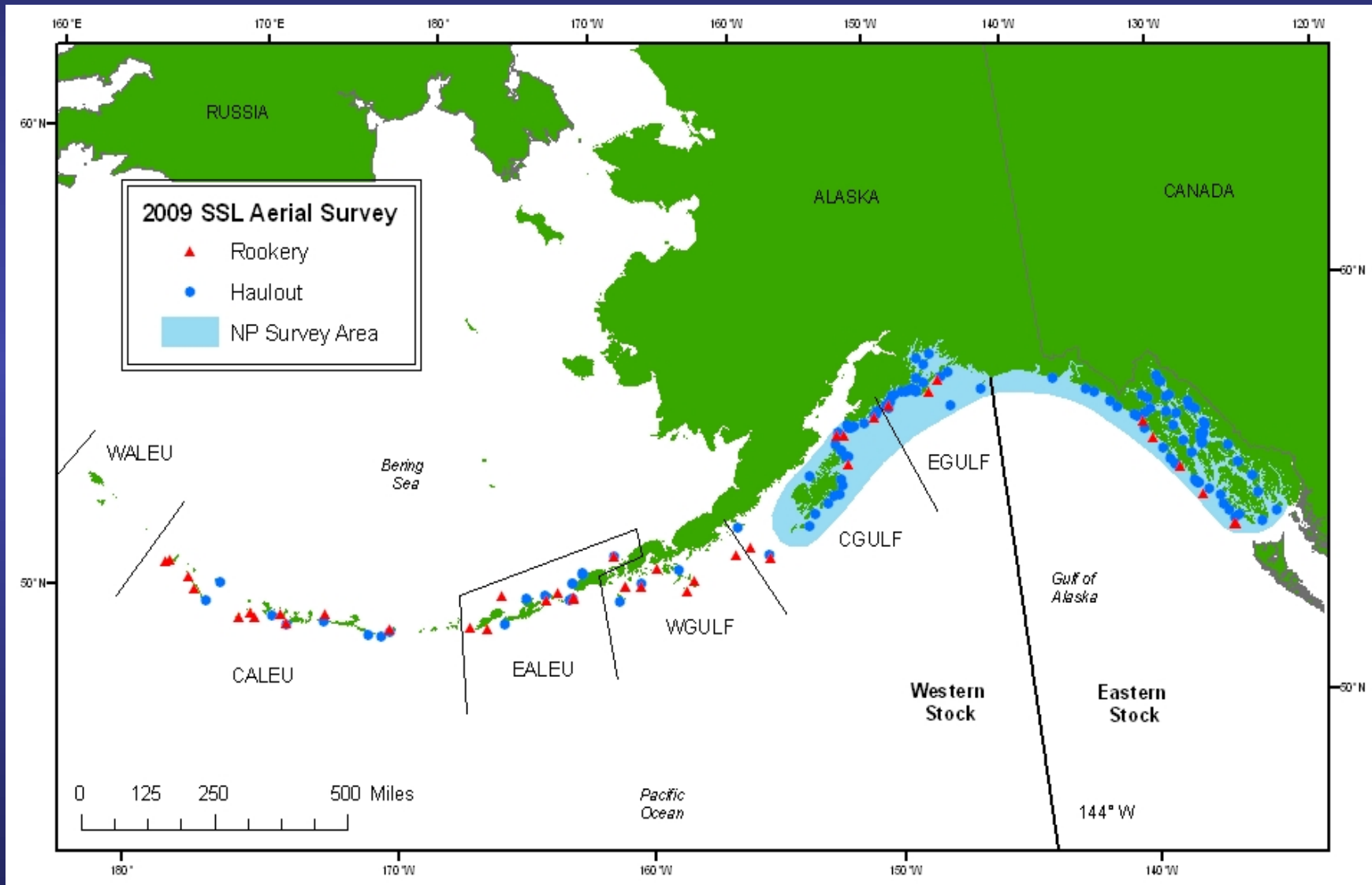
4. Eastern Aleutians

5. Central Aleutians

6. Western Aleutians

7. Russia/Asia

# Western SSL Subregions





# Reinitiation of Consultation

- October 2005: Council requested NMFS reinitiate Formal ESA Section 7 consultation on the groundfish fisheries as authorized under BSAI and GOA FMPs. Due to substantial new information since 2000 Biop and 2003 Supplement.
- March 2006: NMFS coordinated with State of Alaska re: Council reinitiation request; State parallel groundfish fisheries included in reinitiation per State's request.
- June 2006: NMFS reinitiated Formal Consultation.

# Reinitiation of Consultation

- April 2008: NMFS notified the Council that more time was required to complete draft Biop.
- April 2009: Council requested that NMFS extend consultation period to incorporate 2009 SSL survey data into draft Biop.
- March 2010: NMFS notified Council that more time was required for internal review of the draft Biop.

*Science, Service, Stewardship*



## **August 2010 Draft Biological Opinion**

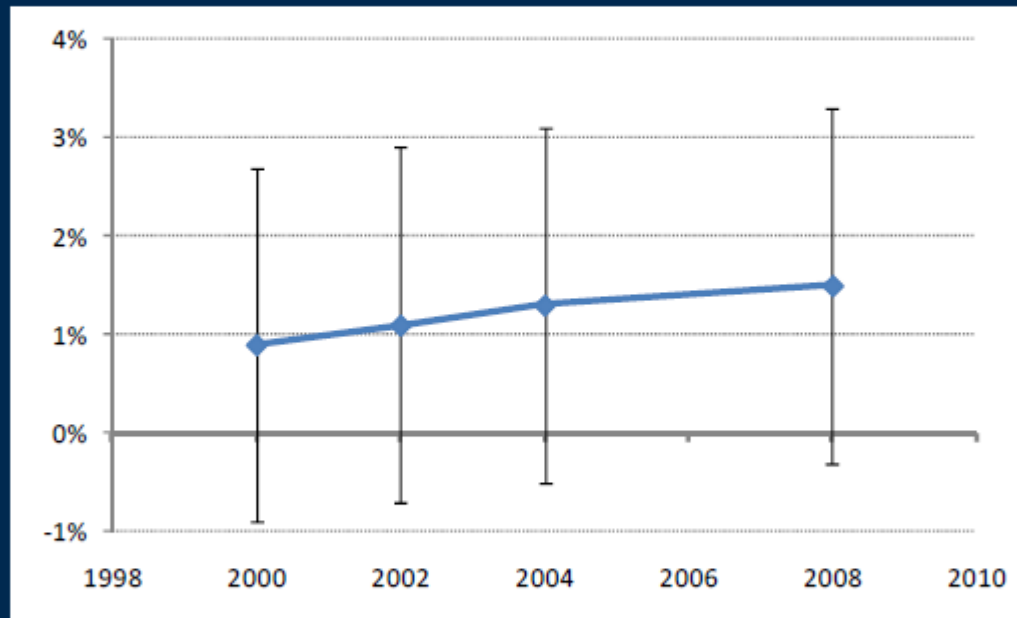
**Effects of the Groundfish Fisheries Off  
Alaska on ESA Listed Species Including  
the Western DPS of Steller Sea Lions**

**NOAA  
FISHERIES  
SERVICE**

15 Aug 2010- SSC

# Western DPS SSL Non-Pup Growth Rates in the 2000s

Annual estimated growth rates 2000-08

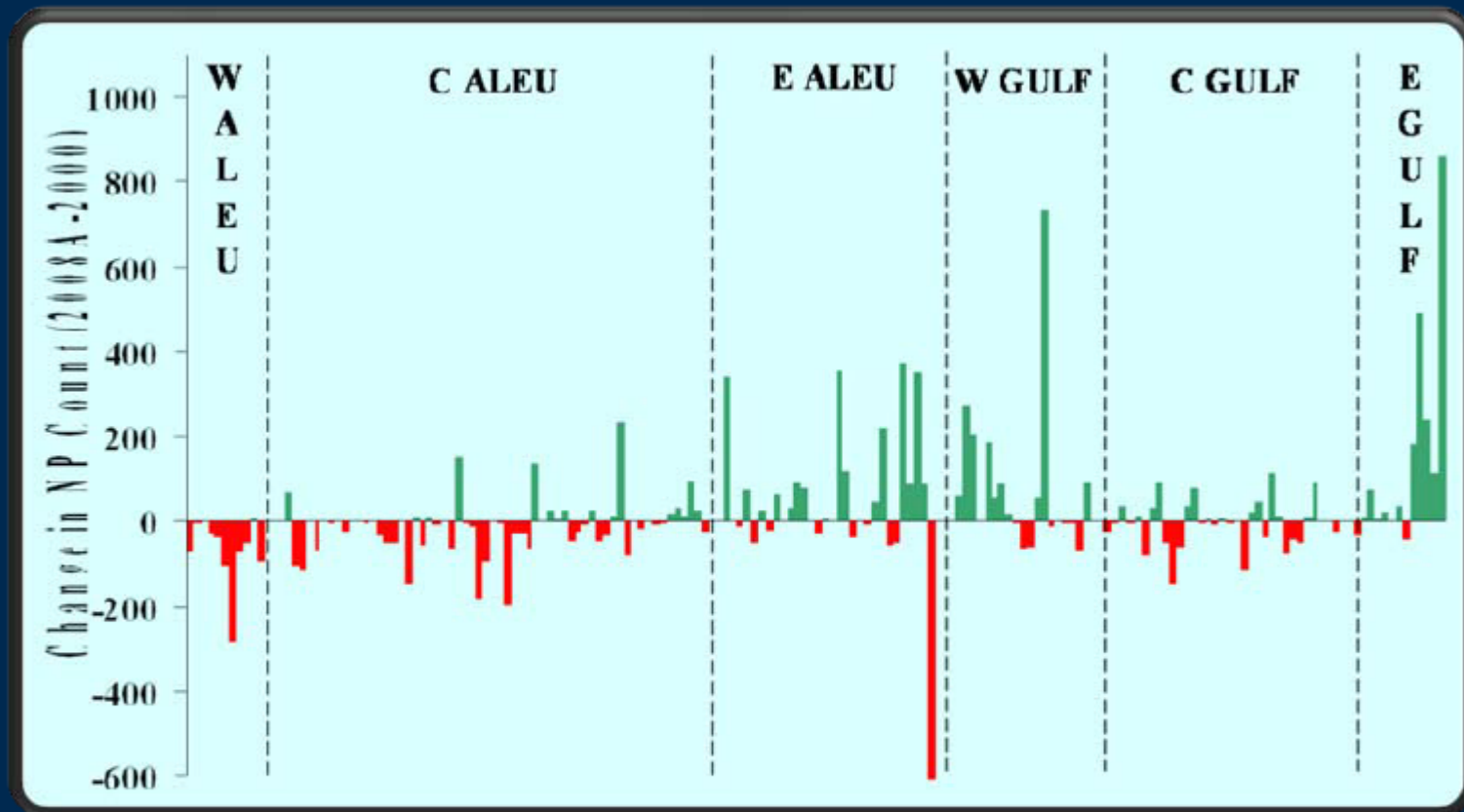


Johnson 2010

2008: ~ 1.5% yr<sup>-1</sup> but uncertain

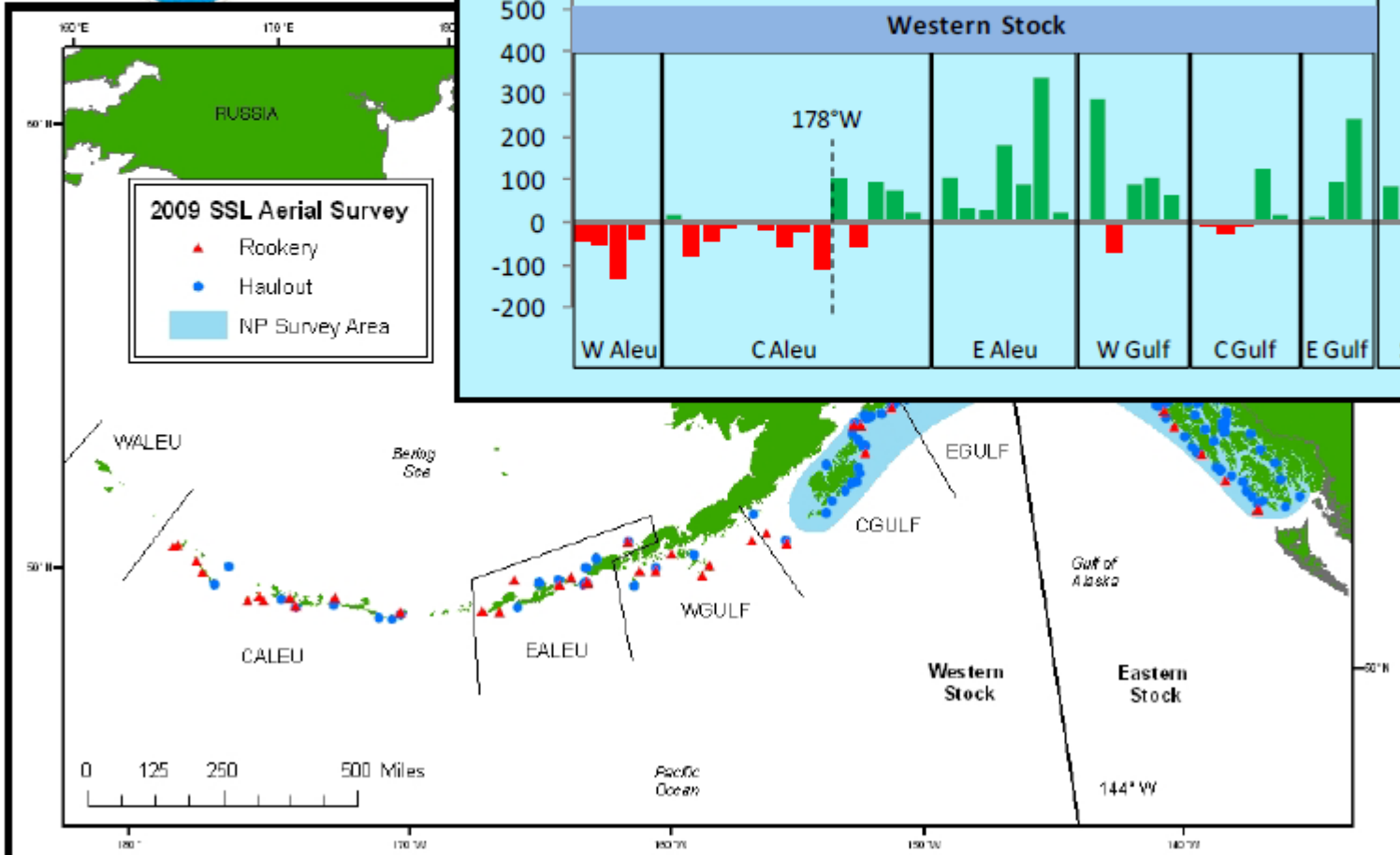
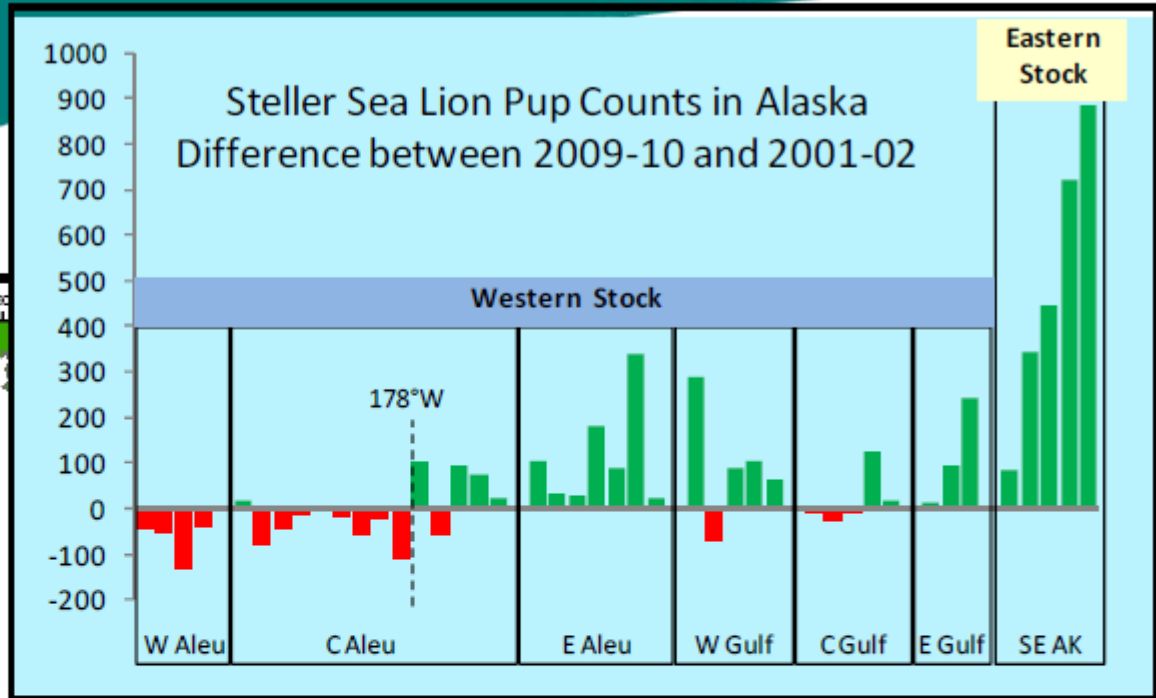


# Status of western DPS of SSL



Western SSL Non-Pup Counts in Alaska Compare  
2008 to 2000

# Status of western DPS of SSL



# Western DPS SSL Non-Pup Counts: 2000-2008

From rookeries/haulouts consistently surveyed since 1991

Year	wAI	cAI	eAI	wGOA	cGOA	eGOA	Total
2000	1633	6560	4990	3996	4555	2102	23836
2002	1196	6547	5261	4617	4594	2615	24829
2004	1286	6885	5991	5233	4028	3015	26438
2006	--	--	6031	--	--	3101	--
2008 (adj)	894	5817	6405	5558	4602	3313	26589
<i>Annual Rate of Change</i>	0.935	0.985	1.033	1.041	0.999	1.056	1.014
<i>Overall Change 2000-2008</i>	-45%	-11%	28%	39%	1%	58%	12%

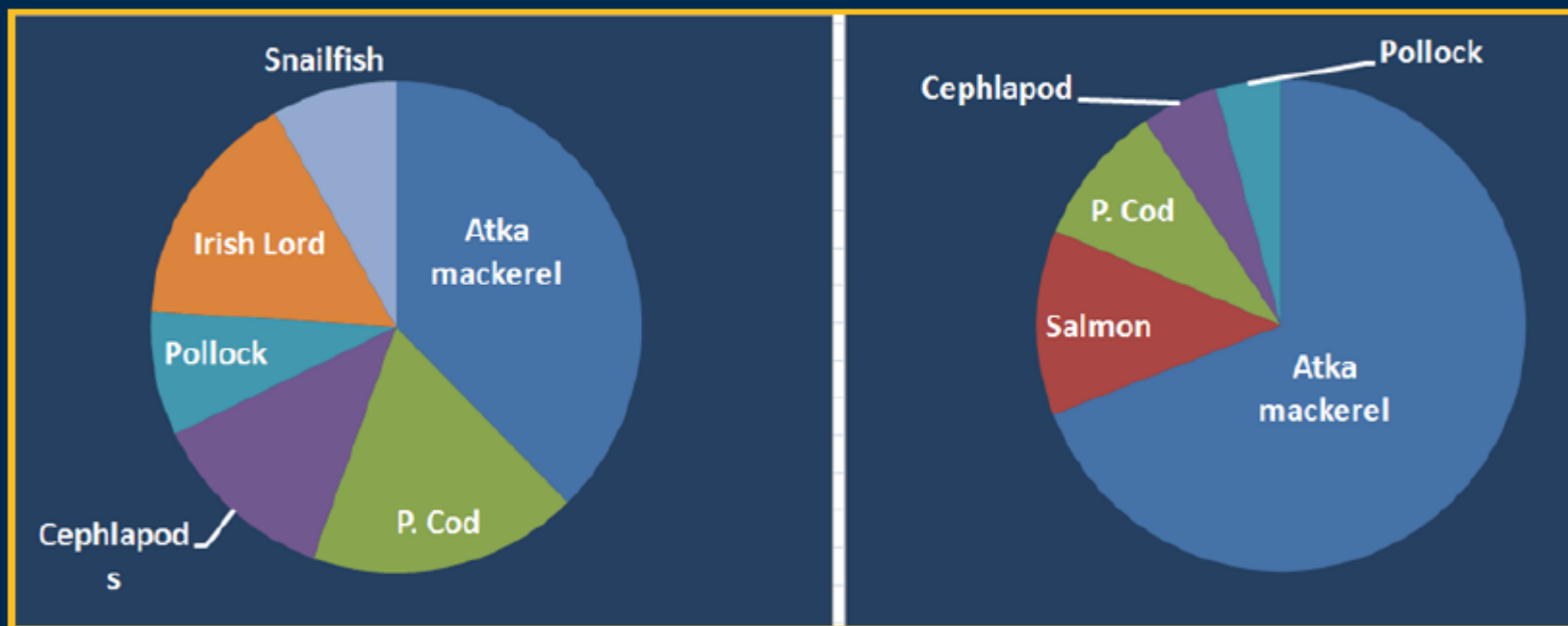
Notes: 1) Russia/Asia subpopulation ROC = 1.043

2) Overall wSSL ROC is approximately 1.021

3) If declines in wAI and cAI ended, wSSL ROC in US = 1.025

# Frequency of Occurrence of Prey Items in SSL scats collected 1999-2005

## Western and Central AI



Winter

Summer



## Evidence for Nutritional Stress: wDPS

- Evidence and data gaps for assessing potential biological manifestations of nutritional stress in wDPS of SSL presented in Table 3.17
- Of n=32 indicators, data are available to assess 17; data not yet analyzed for 3.
- Of the indicators assessed for nutritional stress, 13 were negative and 1 was positive.

	Negative	Positive
Emaciated Pups (<4 wks)	Reduced pup counts	Reduced Birth Rate
Reduced pup size	Reduced non-pup counts	
Reduced pup weight	Change in blood chemistry	
Reduced growth rate	Increased disease	
Reduced survival		

## Conclusions – Chapter 7

- Some conservation measures implemented since 2000 FMP Biop effective in ameliorating stressors, esp. in some sub-regions.
- However, measures not adequate to prevent Jeopardy or Adverse modification
- Basis:
  - Continued decline in abundance SSLs in western and central AI; low pup:nonpup ratio in wAI
  - Spatial and temporal distribution of fisheries, overall harvest amounts of important prey, and low overall forage availability in western and central AI



## Criteria and Standards Used to Establish and Evaluate RPAs

- Promote recovery of SSL numbers in sub-regions where numbers likely to drop below 50% of baseline
- Promote recovery of SSL numbers in sub-regions where two juxtaposed areas are in decline
- Promote overall increase in numbers in wSSL DPS
- More severe conservation measures implemented where declines are most severe
- Establish opportunity for adaptive management approach
- From a regulatory perspective, feasible implementation of RPA by 1 January 2011

# Summary of Draft RPA

- Closes W. Aleutians to fishing for Pacific cod and Atka mackerel
- In Central Aleutians, reduces Atka mackerel fishery to 47% of ABC and restricts Pacific cod fishery in critical habitat
- Limits areas open to P. cod fishing in E. Aleutians.



# Council Actions

- Recommended revised RPA to NMFS in August 2010 with less stringent measures
- Recommended refocusing research priorities on Aleutian Islands
- Recommended scientific review

# Upcoming

- Council meets December 8-14, 2010 in Anchorage
- NMFS will present the Final BiOp
- New management measures scheduled for implementation in January 2011