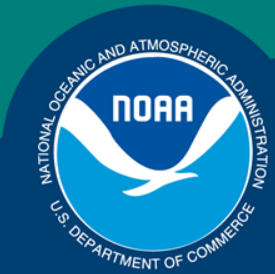


Science, Service, Stewardship



Aleutian Islands Pacific cod

Grant Thompson

Alaska Fisheries Science Center

**NOAA
FISHERIES
SERVICE**



AI Pcod: current approach

- Pacific cod in the BSAI are managed on a combined BS-and-AI basis
- The age-structured model has always been just for the BS
- BS model developed using Stock Synthesis (Tier 3a)
- BSAI catch and biomass values are computed by “inflating” values from the BS model
- Inflation factor (=1.10) based on ratio of endpoints from smoothed survey biomass estimates from BS and AI
 - $BSAI = BS_model \times (BS_survey + AI_survey) / BS_survey$

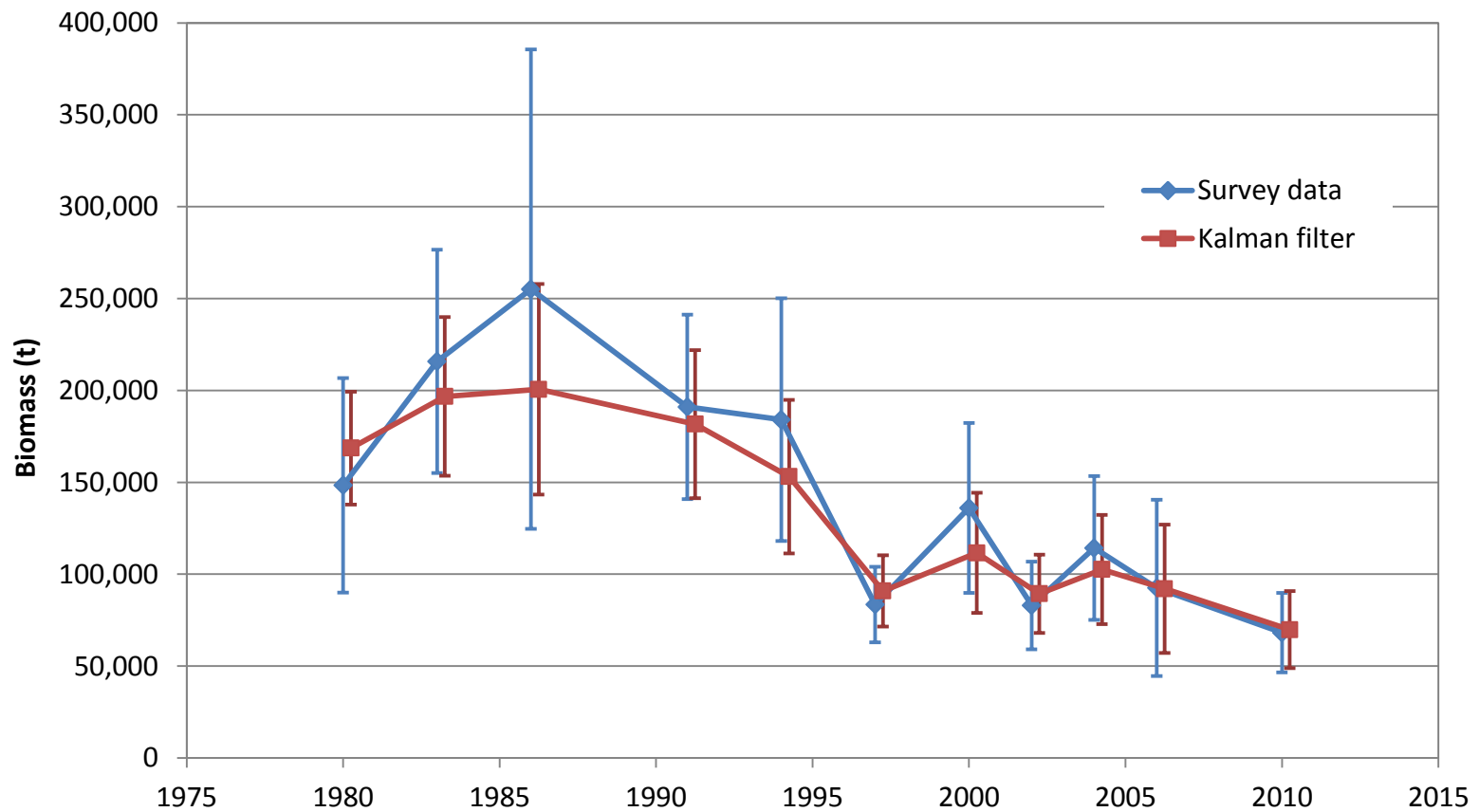


AI Pcod: moving toward split from BS

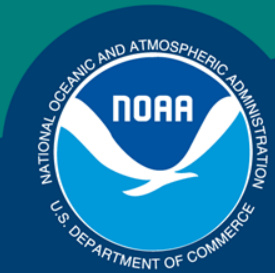
- Dec. 2003: SSC finds that ABC should be split by area
- Apr. 2004: Council initiates analysis for splitting
- Oct. 2008: SSC renews call for splitting, Council tables action on splitting pending further analysis
- Dec. 2010: SSC calls for AI assessment by 2011
- Sep. 2011: AI assessment (Tier 5) completed
- Dec. 2011: SSC declines to recommend split specs, calls for age-structured model by Oct. 2011
- July 2012: Age-structured model under development



AI Pcod: survey biomass time series



Science, Service, Stewardship



Aleutian Islands Pollock

Steve Barbeaux

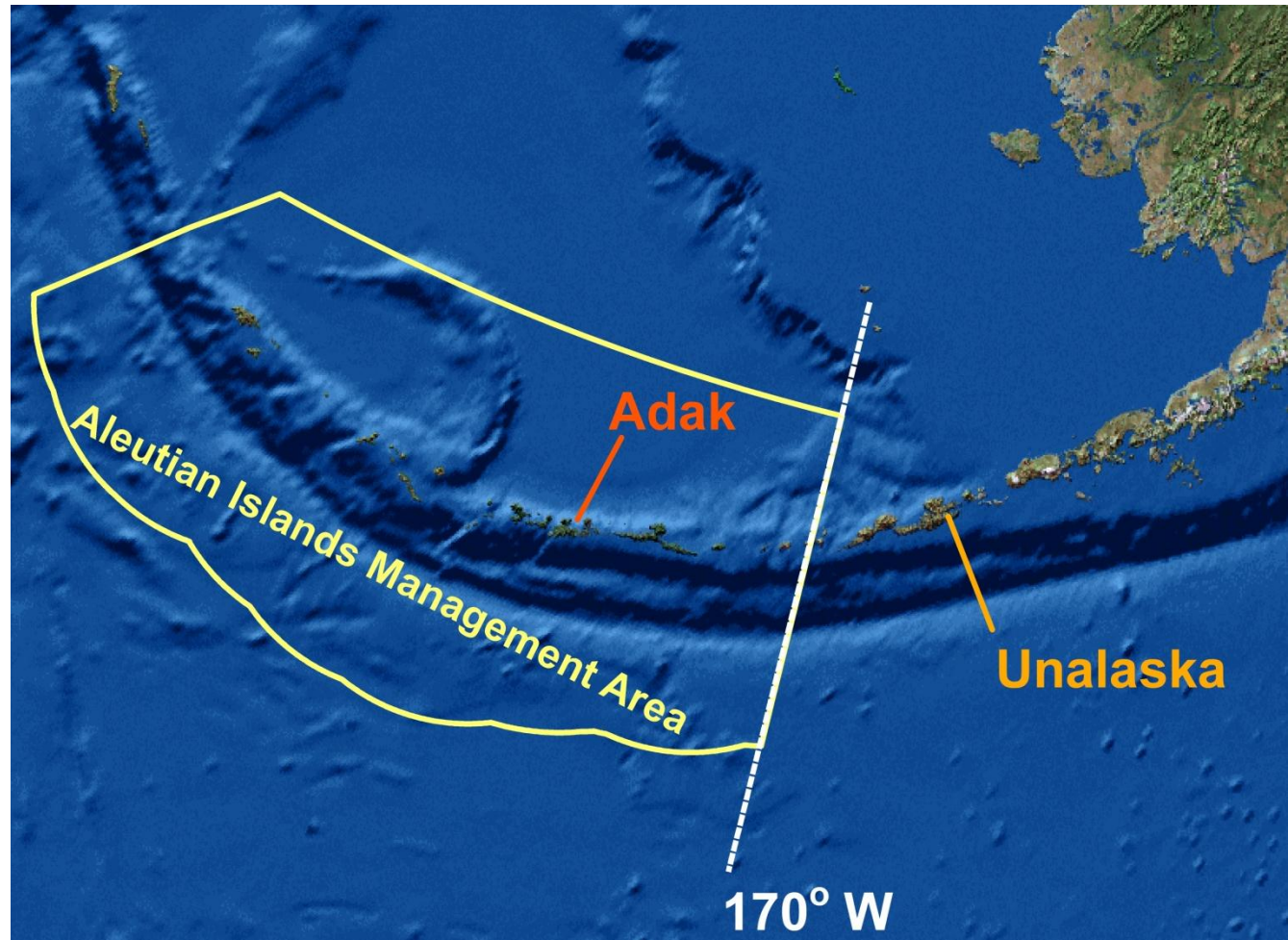
Alaska Fisheries Science Center

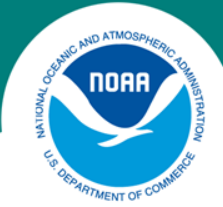
**NOAA
FISHERIES
SERVICE**



Aleutian Islands Management Area

The AI pollock TAC
is restricted to
19,000 t or ABC
whichever is lowest

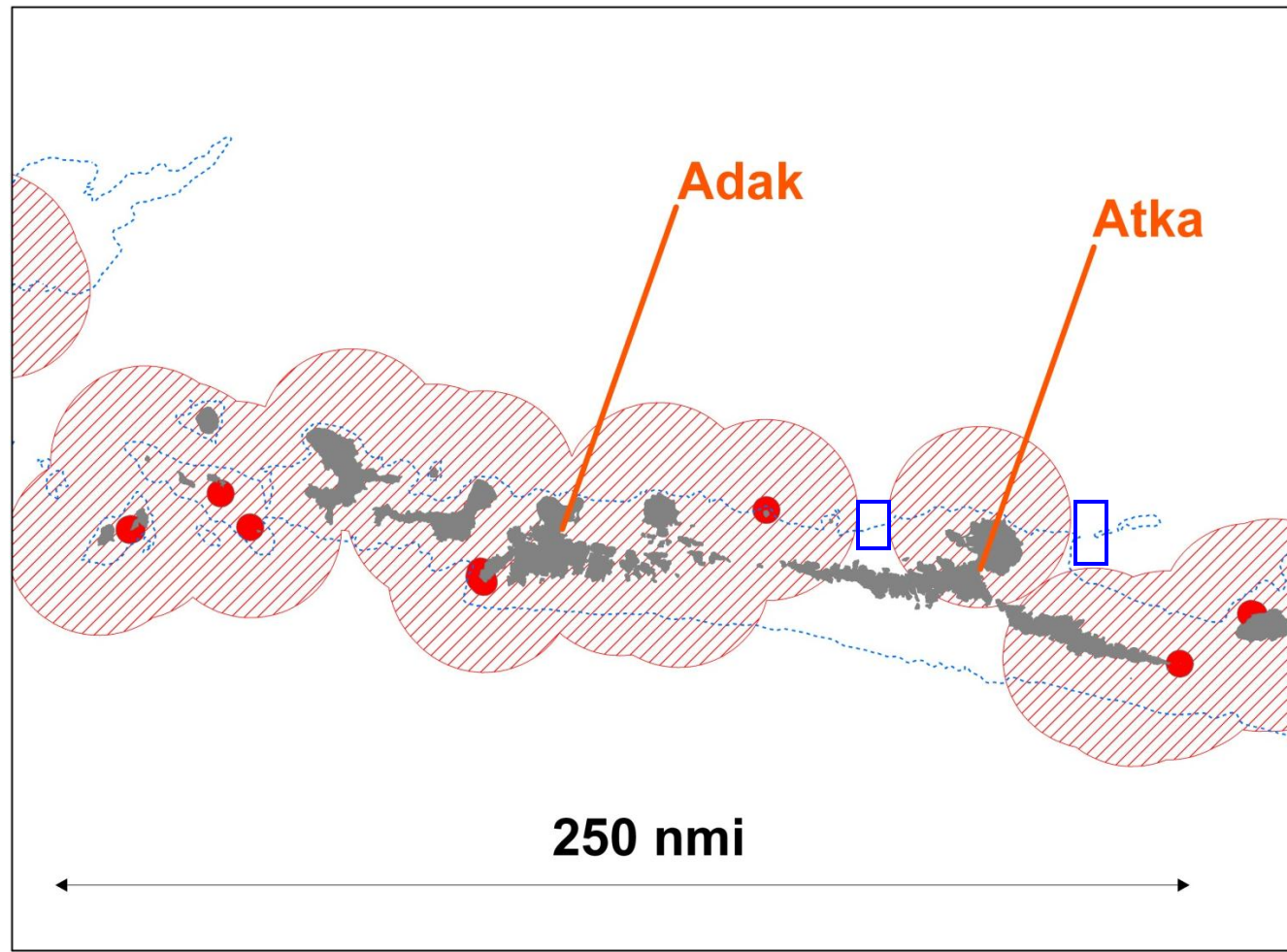




Central Aleutian Islands

**Fishing is restricted
to areas outside SSL
critical habitat**

**No directed fishery
catches from 2011
and 2012 to date**





2011 AI pollock assessment summary

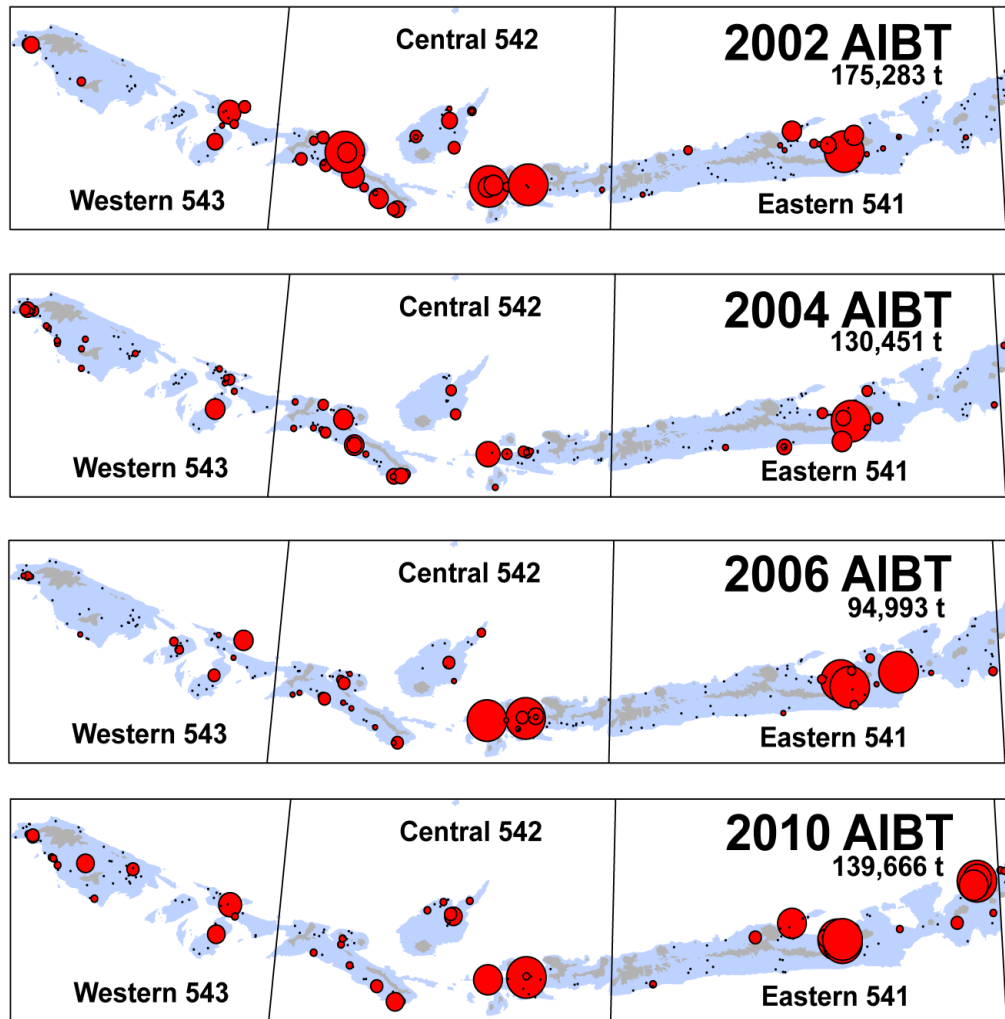
- **Age-structured stock assessment model framework the same as 2008 through 2011**
 - All NRA (west of 170° W) fishery and BT survey data (does not include “Basin” fishery data)
 - Aleutian Islands Cooperative Acoustic Survey Study (AICASS) 2006, 2007, and 2008 in CAI
- **AI pollock are at $B_{30\%}$, below $B_{40\%}$ reference level and therefore Tier 3b**



AI bottom trawl surveys

Highest abundance shifted from Central to Eastern AI in recent surveys

Shifts in abundance and high variability in the survey estimates make sub-area specific assessments problematic

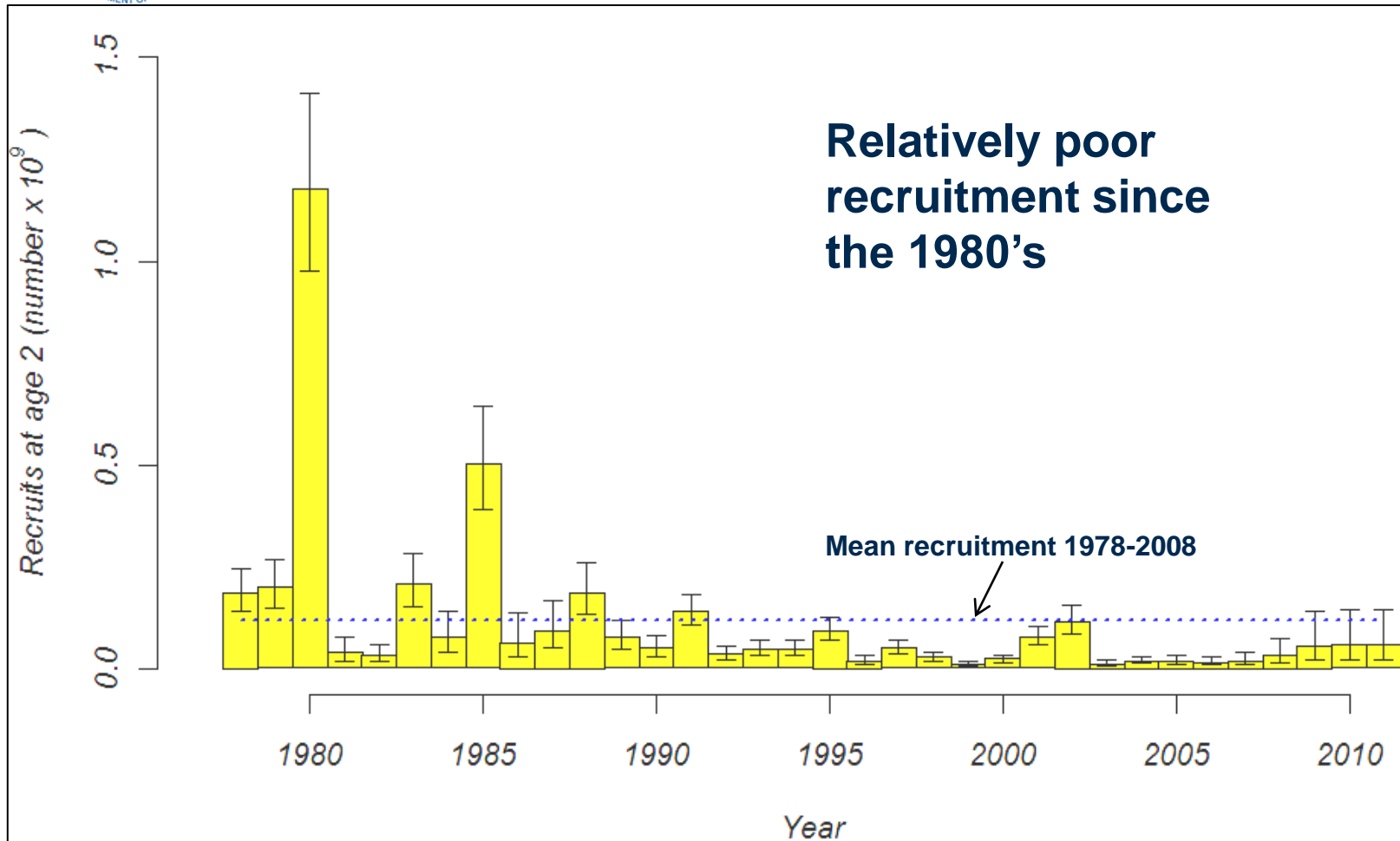


CPUE (tkm⁻²)

- 1 - 1000
- 1001 - 3000
- 3001 - 6000
- 6001 - 12000
- 12001 - 25000
- 25001 - 50000
- 50001 - 75000
- 75001 - 500000

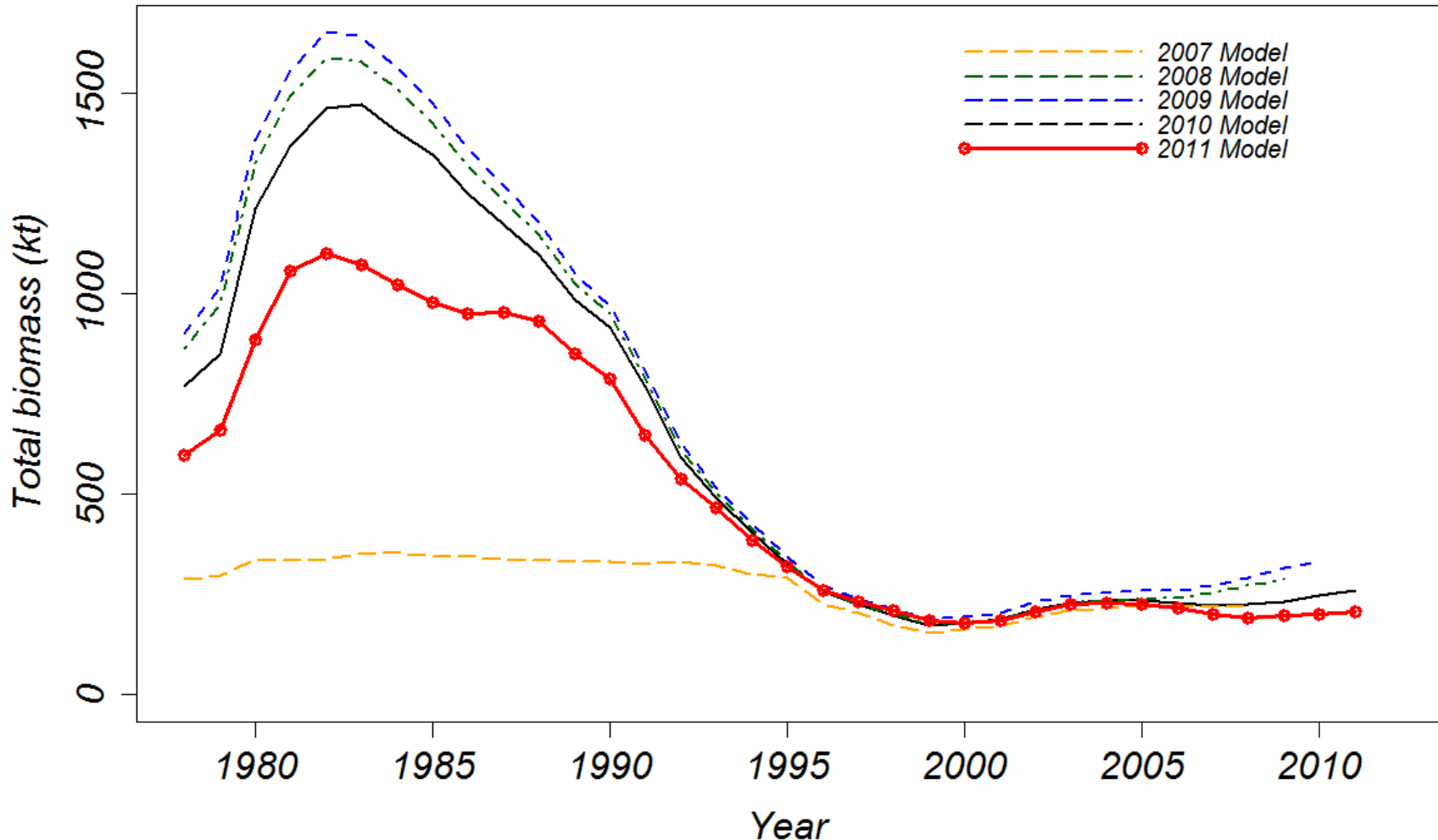


2011 assessment model estimates of AI pollock recruitment

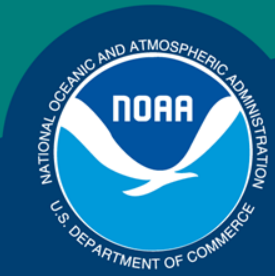




2011 assessment model estimates of total AI pollock biomass (age 2+)



Science, Service, Stewardship



Aleutian Islands Atka Mackerel

Sandra Lowe

Alaska Fisheries Science Center

**NOAA
FISHERIES
SERVICE**

NOAA



2011 BSAI Atka mackerel assessment summary

Model and data

- BSAI = Aleutian Islands + Southern Bering Sea
- No changes in assessment methodology
- Age-structured stock assessment model framework the same as 2008 through 2011
- Fishery age composition updated, 2010 survey biomass and age data incorporated

Results

- Recruitment estimates increased (2006 and 2007 year classes)
- $B_{2012} = 128,800$ t
 - 50% of unfished spawning biomass and above $B_{40\%}$ (102,300 t), **Tier 3a**

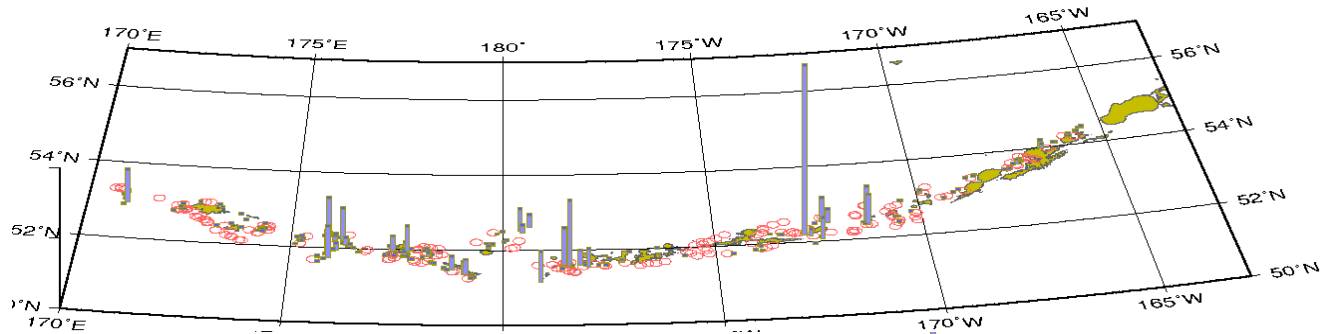
2012 projections

- Age 3+ biomass down ~7% relative to last year's est. 2011 biomass
- Yield at $F_{40\%}$ down ~4% relative to 2011 ABC
- OFL at $F_{35\%}$ down ~4% relative to the 2011 OFL



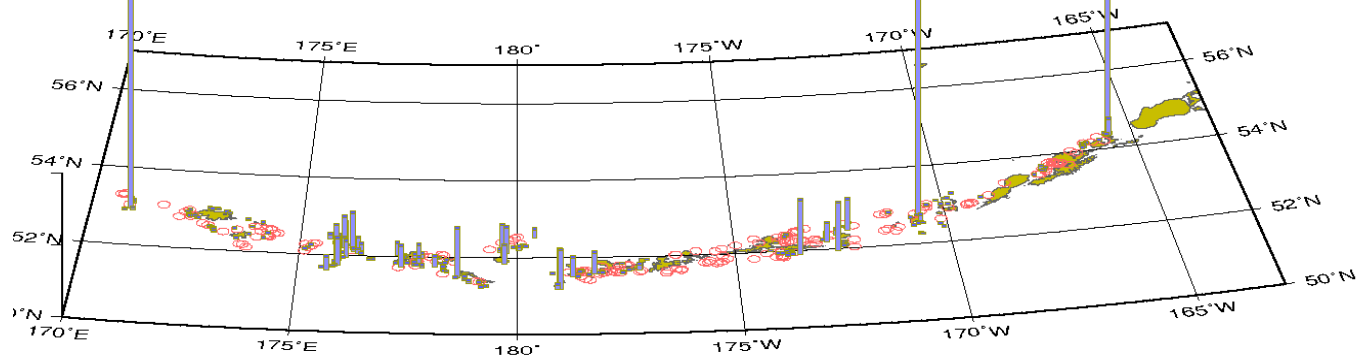
Bottom trawl survey CPUE distributions of Atka mackerel catches

Atka Mackerel 2006



2010 AI survey biomass up 16% relative to 2006

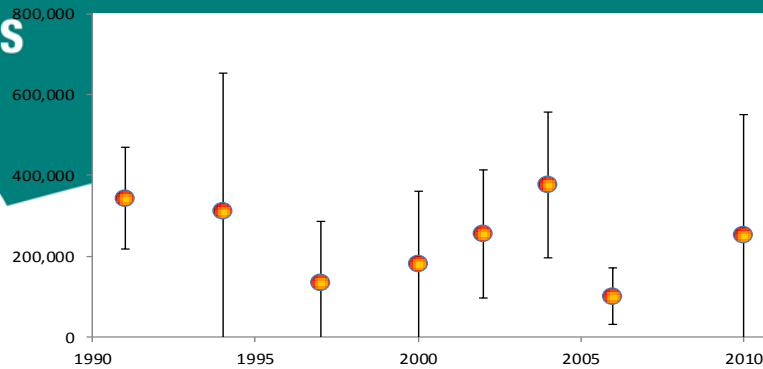
Atka Mackerel 2010





Survey biomass (t)

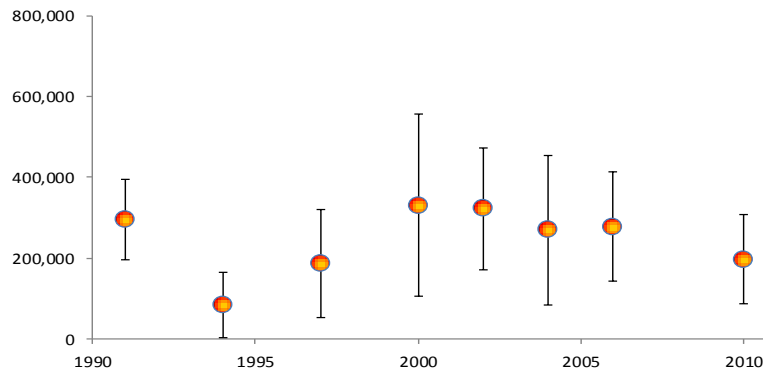
Western Aleutians



2010 AI survey relative to 2006

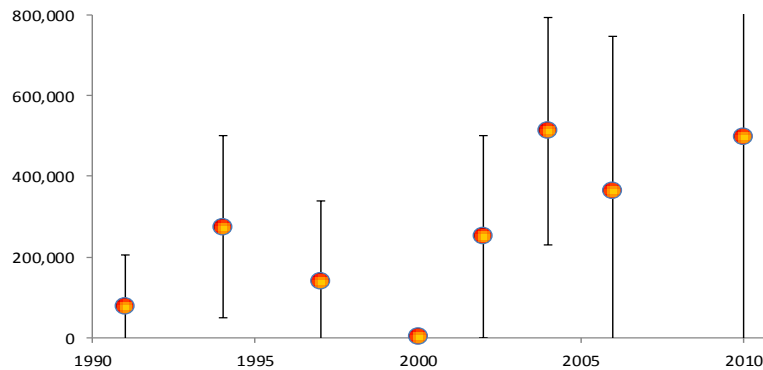
151% increase, $CV=59\%$ (543)

Central Aleutians



29% decrease, $CV=28\%$ (542)

Eastern Aleutians + S. Bering Sea



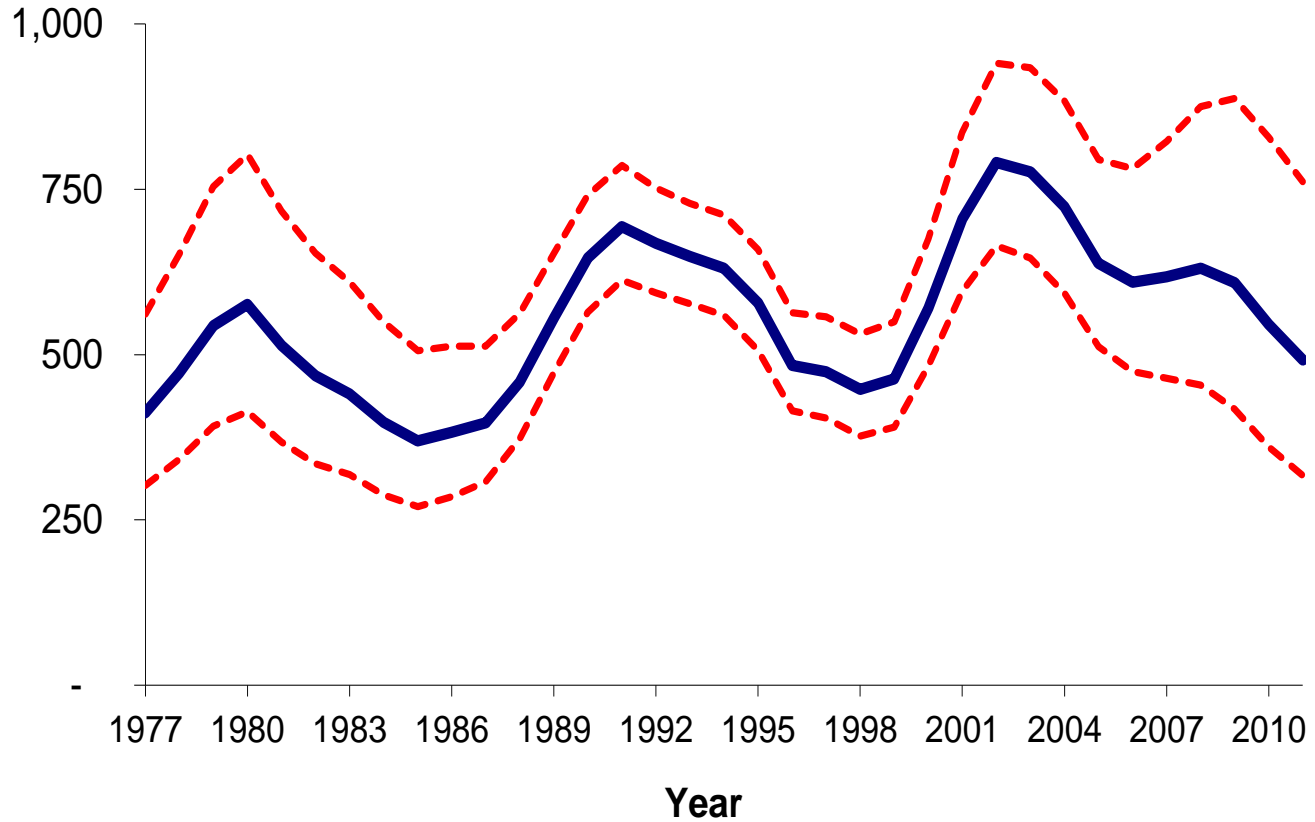
13% increase, $CV=75\%$ (541)

Year



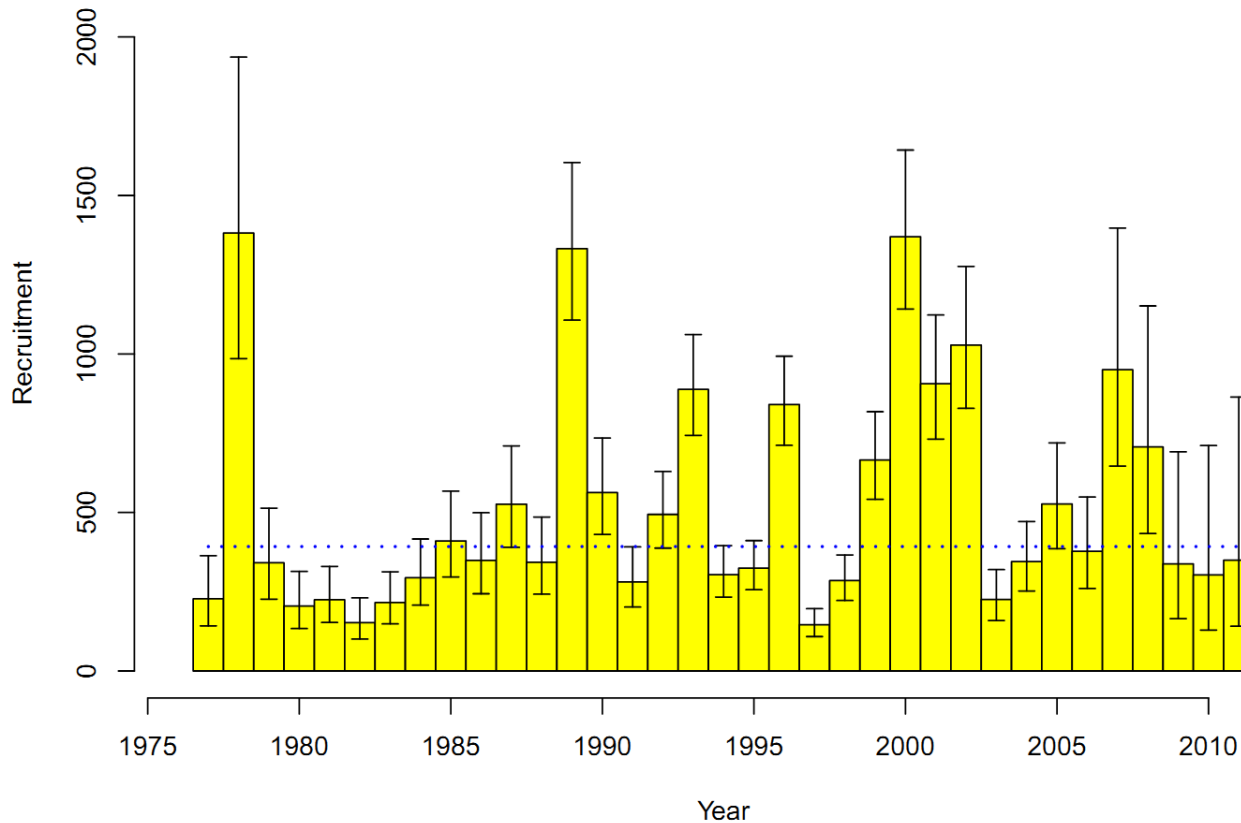
2011 assessment model estimates of BSAI Atka mackerel total biomass (age 1+)

Total biomass (1,000s of t)





BSAI Atka mackerel age 1 recruitment as estimated from the 2011 assessment





BSAI Atka mackerel ABC apportionment

Approved methodology based on most recent 4-survey weighted average:

	2002	2004	2006	2010	2011 Apportionment	Recommended 2012 & 2013 Apportionment
541	30.26%	44.20%	48.91%	52.57%	47.27%	47.27%
542	38.94%	23.27%	37.51%	20.74%	28.09%	28.09%
543	30.80%	32.52%	13.58%	26.69%	24.64%	24.64%
Weights	8	12	18	27		

2012 assessment: 2002 survey drops out, include 2012 survey