

Projected Impacts of Amendment 18A on South Atlantic Black Sea Bass Commercial Season Length

Southeast Regional Office
St. Petersburg, Florida

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**NOAA
FISHERIES
SERVICE**



INTRODUCTION

SEDAR-25 (2011):

Black Sea Bass is undergoing slight overfishing

Stock is not overfished: $MSST < \text{Stock Biomass} < SSB_{MSY}$

AMENDMENT 18A:

Will end overfishing and rebuild stock to SSB_{MSY} by 2016

3,500 lb gw qualifier for pot endorsement

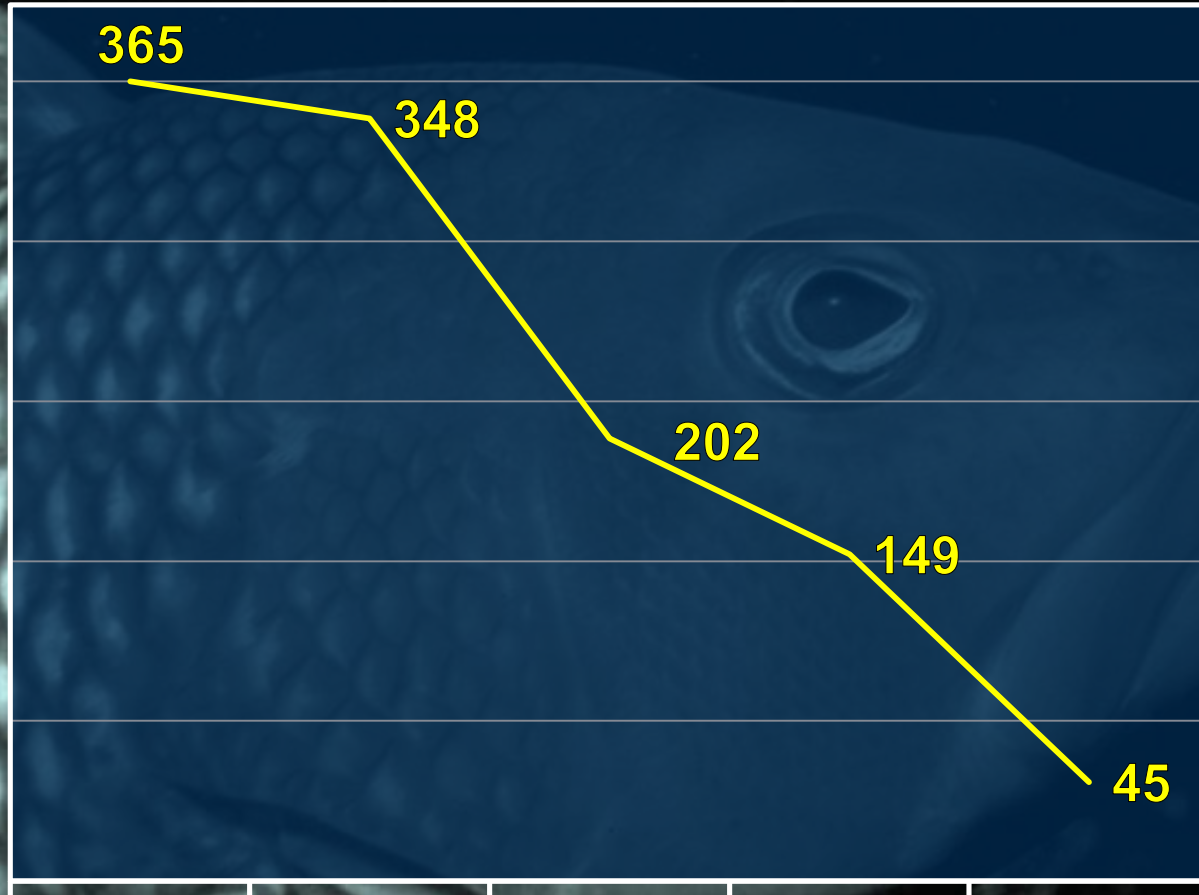
35 black sea bass pot limit

1,250 lb gw trip limit

} Preferred
alternatives

QUOTA CLOSURES

Open Days



pre-2008/2009

2008/2009

2009/2010

2010/2011

2011/2012

NORTH ATLANTIC RIGHT WHALE

- Highly endangered (<400 in population)
- Potentially vulnerable to entanglement in pot gear
- Multiple migrations from NC to NE FL between Nov-Apr



Photo Taken Under NOAA Scientific Permit No. 948-1692 to UNCW

The loss of one or two reproducing female right whales per year from human activity could lead to extinction.

<http://rightwhalessouth.nmfs.noaa.gov>

WILL 18A IMPACT RIGHT WHALES?

Black sea bass stock is rebuilding → ACL may increase

Amendment 18A management measures should reduce effort and could extend the length of the commercial fishing season.



Will new management measures extend the commercial fishing season into right whale season (November-April)?

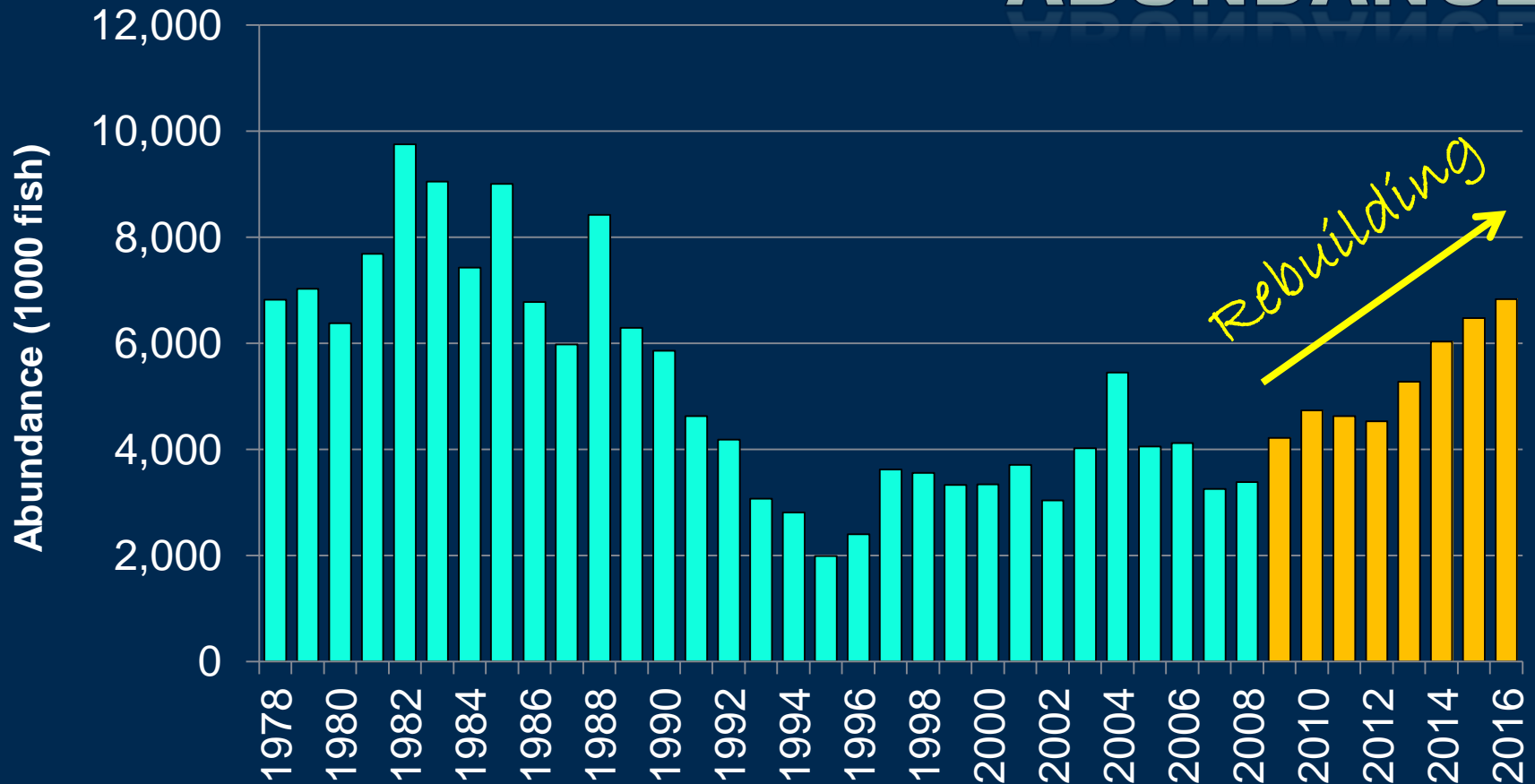


FORECASTING METHODS

- >10 methods evaluated for projecting season length
- Seasonal Auto-Regressive Integrated Moving Average (SARIMA) model provided best fit to data and had low retrospective bias for 2011/12 catch estimates.
- SARIMA predicted monthly black sea bass pot catch per day using a linear combination of historical logbook catch data (accounting for seasonal trends) and past, present, and future exploitable abundance.



PREDICTOR VARIABLE: POT-EXPLOITABLE ABUNDANCE

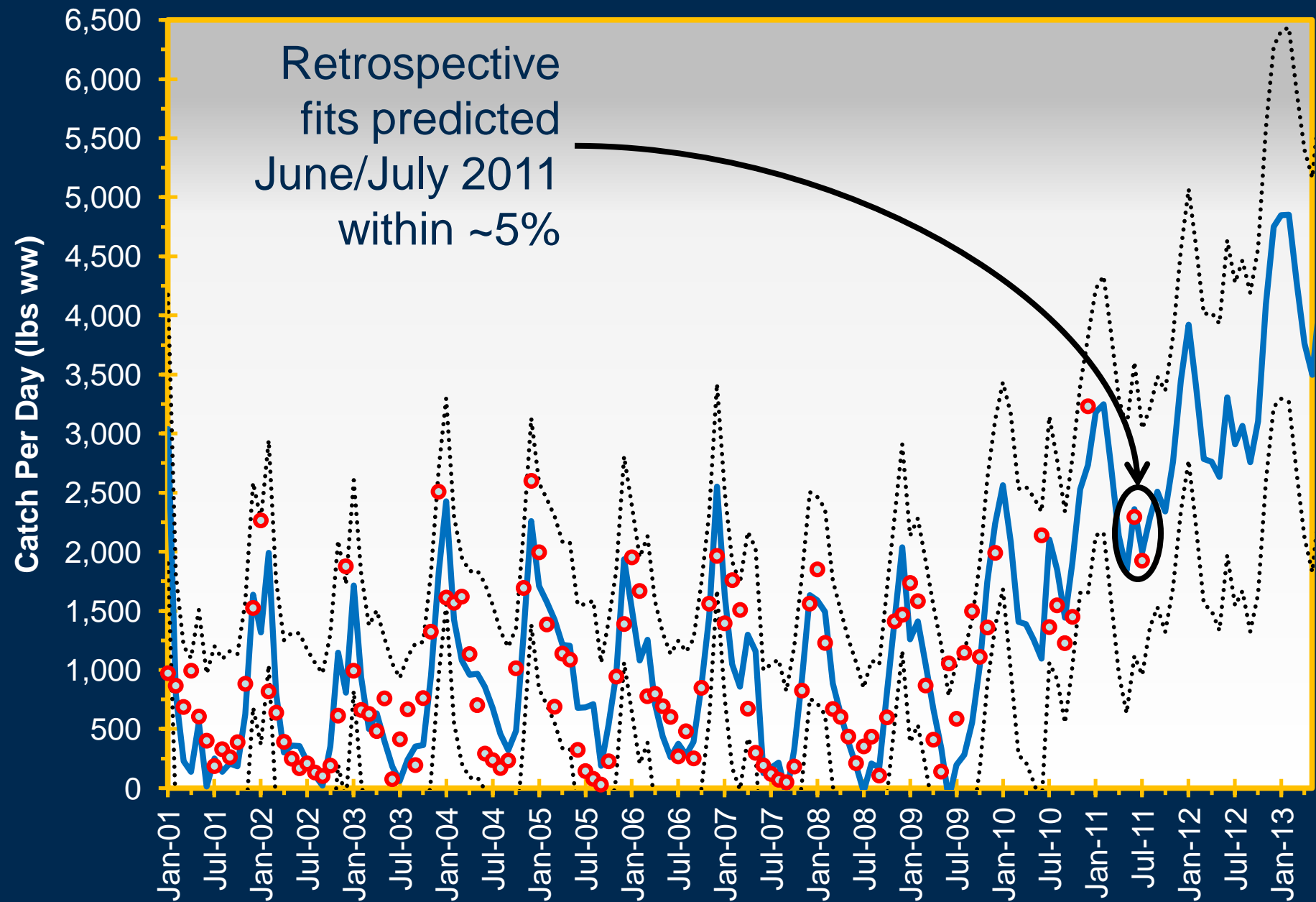




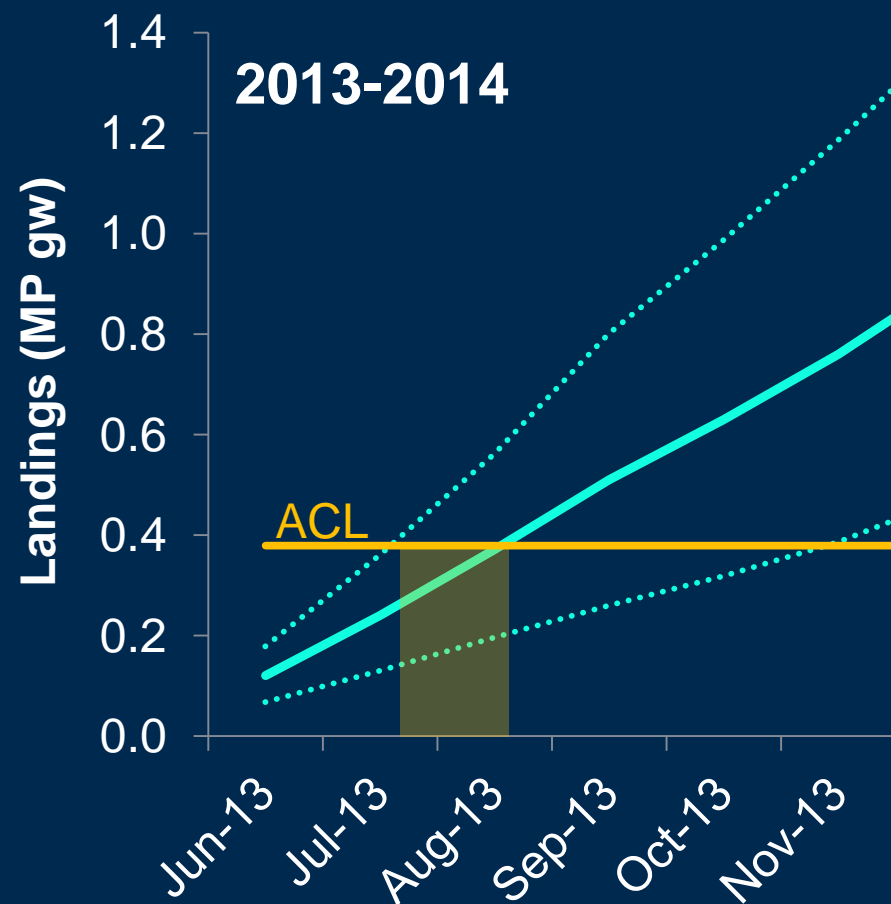
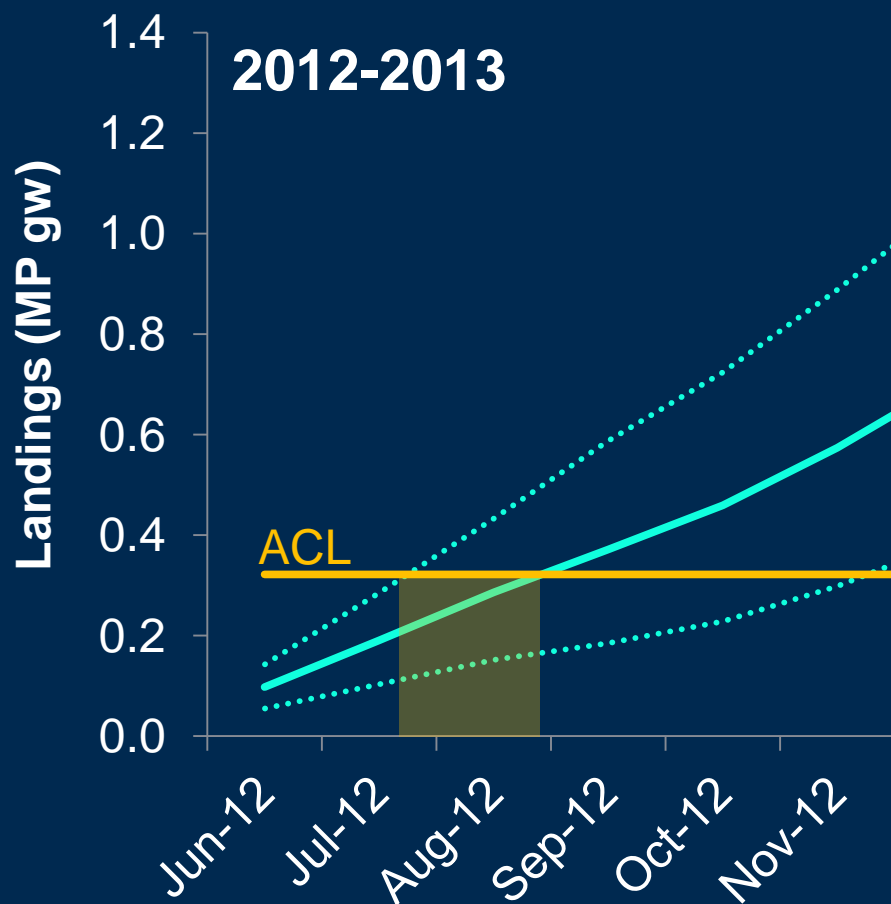
FORECASTING METHODS

- Projections excluded permit holders not meeting endorsement lb qualifier.
- Historical harvest constrained to trip limit if landings previously exceeded trip limit.
- Model fit accounts for missing landings due to quota closures.
- Non-pot gear landings were projected as a percentage of pot gear landings using the most recent 3-year average of months when the commercial sector was open.

RESULTS: SARIMA MODEL FIT



PROJECTED LANDINGS OF BLACK SEA BASS 3500 LB GW ENDORSEMENTS + OTHER GEARS



Notes: ACLs from constant *F* rebuilding projections given 50% overage in 2011-2012 landings (SEDAR 25 2011).

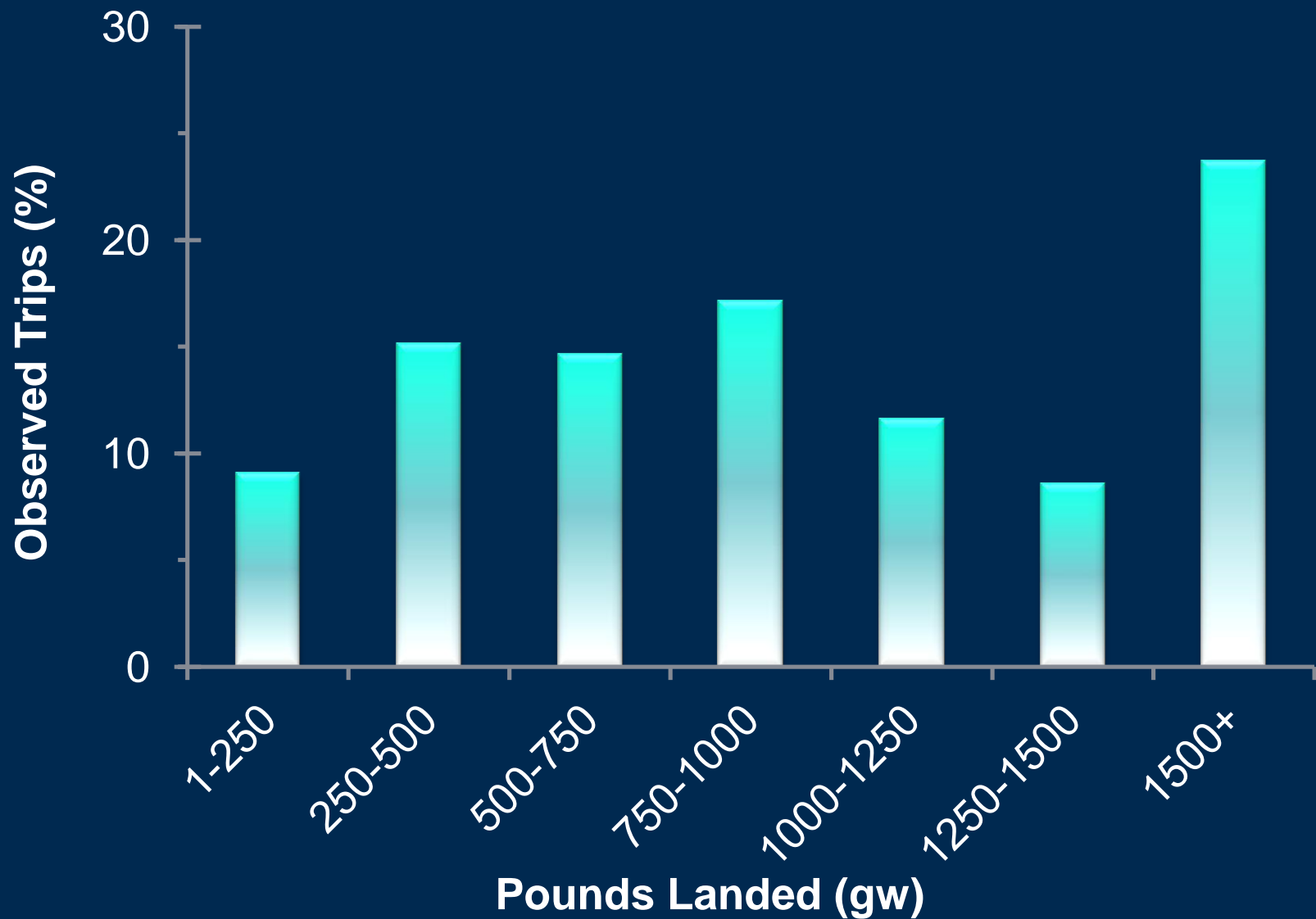
QUALIFICATION LEVEL VS. 2012/13 CLOSURE DATE



QUALIFICATION LEVEL VS. CLOSURE DATE

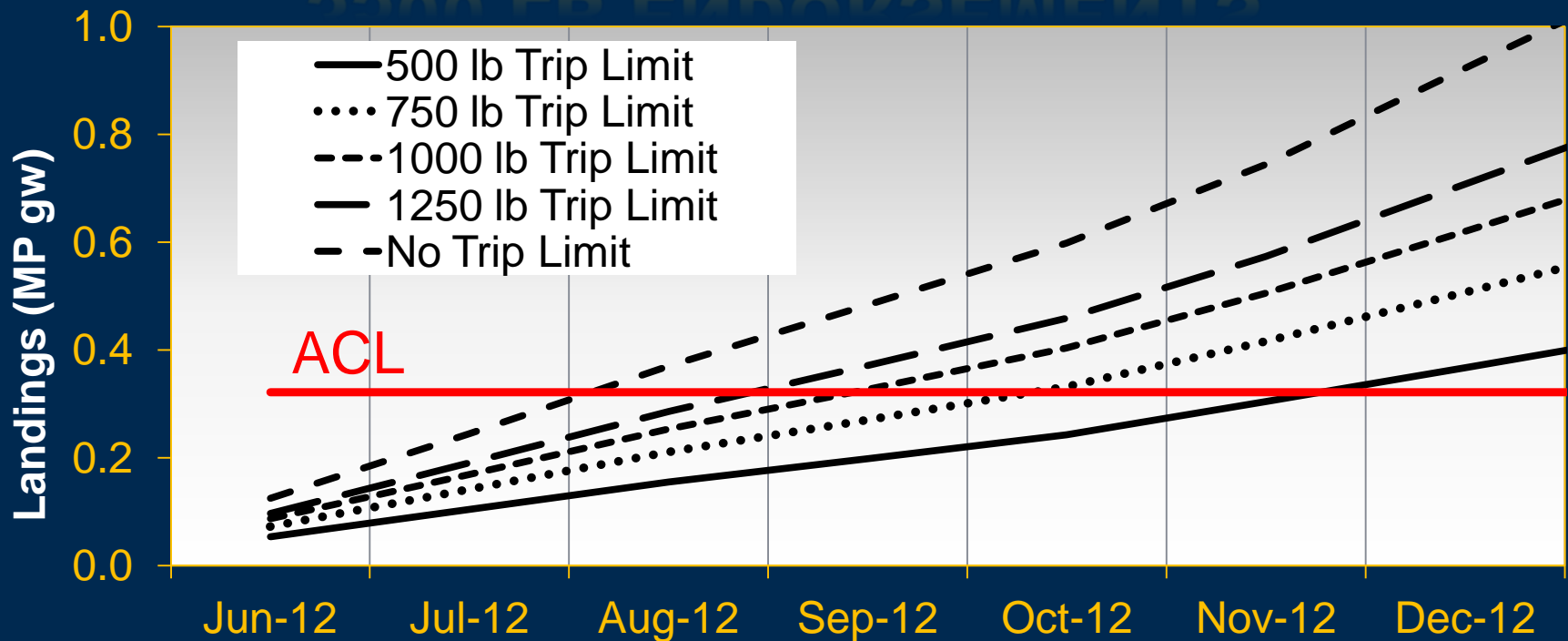
Qual. Level	Number of Permits with Endorsements	2012-2013 Fishing Season		2013-2014 Fishing Season	
		UCL	Mean	UCL	Mean
500 lbs	50	July	August	July	July
1,000 lbs	41	July	August	July	July
2,000 lbs	34	July	August	July	August
2,500 lbs	28	July	August	July	August
3,000 lbs	24	July	August	July	August
3,500 lbs	21	July	Aug/Sept	July	August
5,000 lbs	18	July	September	July	August
10,000 lbs	9	September	December	September	December

CATCH-PER-TRIP (2011)



TRIP LIMIT VS. CLOSURE DATE

3500 LB ENDORSEMENTS



Fishing Year	Alt. 1 None	Alt. 2 500 lb	Alt. 3 750 lb	Alt. 4 1,000 lb	Alt. 5 1,250 lb
June 2012- May 2013	July-Aug	Sept-Nov	Aug-Oct	Aug-Sept	July- Sept
June 2013- May 2014	July	Sept-Nov	Aug-Sept	July-Aug	July-Aug



SOURCES OF UNCERTAINTY

Additional factors may also affect season length:

LONGER SEASON

Seasonal Shift in Landings

Pot Limit Reduces Catch Rate

SHORTER SEASON

Increased Average Size

Effort Compensation

Gear Switching

Additional (non-Logbook) Landings

Derby Fishing

Underestimation of 2011 Catch



CONCLUSION

Forecasts based on preferred alternatives in Amendment 18A indicate closure likely in **Aug** (UCL: **July**; LCL: **Nov**)

Under the current suite of preferred alternatives in Amendment 18A, it appears legal black sea bass pot gear will pose no risk to North Atlantic right whales through May 2014.



sammyseafood.com

QUESTIONS?

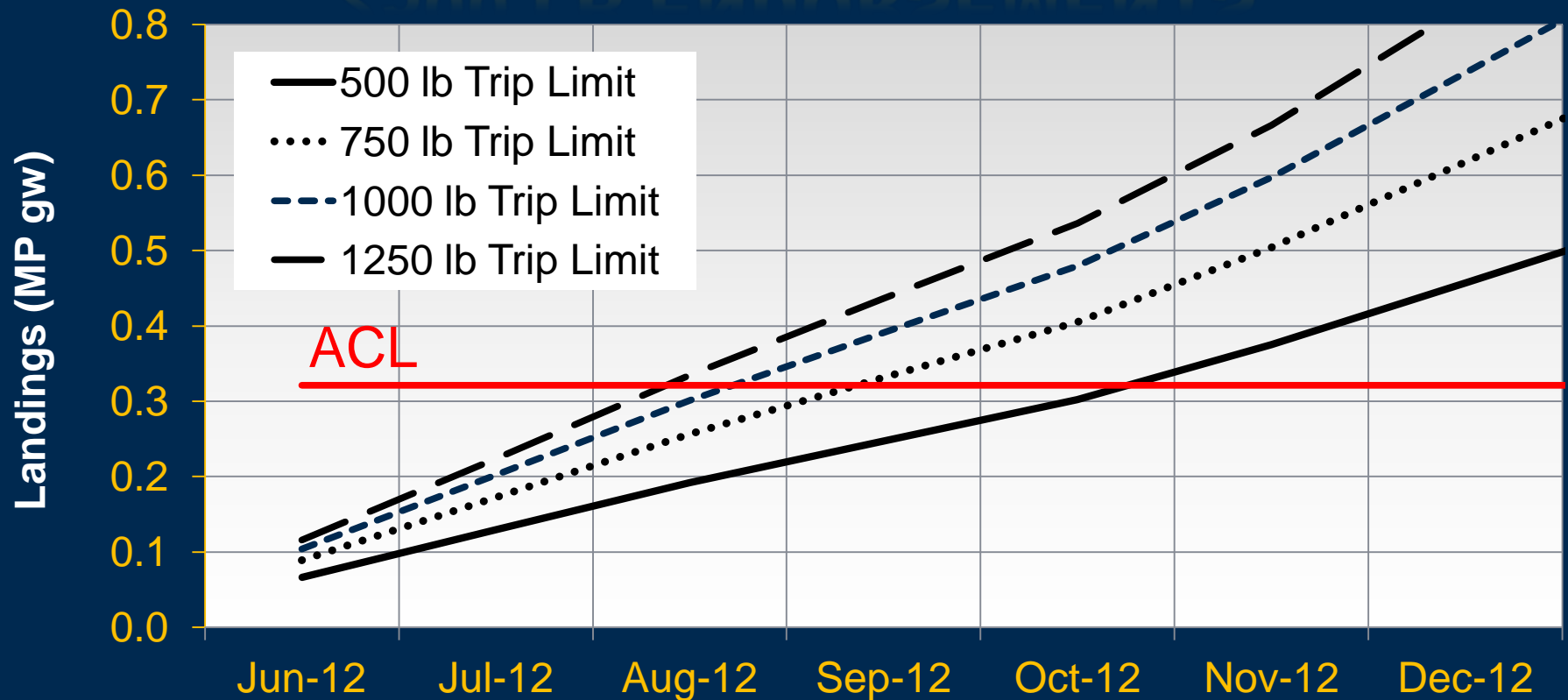


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TRIP LIMIT VS. CLOSURE DATE

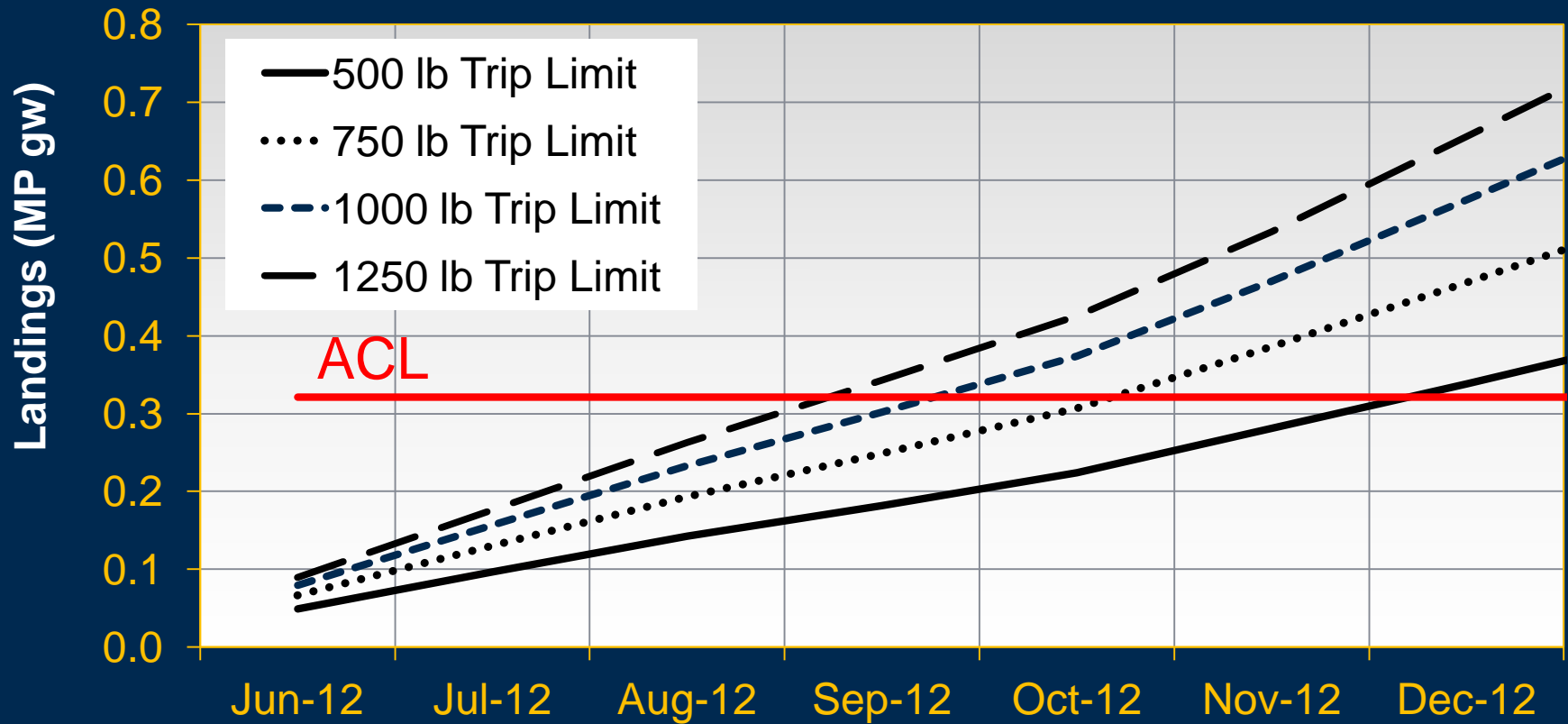
2500 LB ENDORSEMENTS



Fishing Year	Alt. 1 None	Alt. 2 500 lb	Alt. 3 750 lb	Alt. 4 1,000 lb	Alt. 5 1,250 lb
June 2012- May 2013	July-Aug	Aug-Oct	Aug-Sept	July-Aug	July-Aug

TRIP LIMIT VS. CLOSURE DATE

5000 LB ENDORSEMENTS



Fishing Year	Alt. 1 None	Alt. 2 500 lb	Alt. 3 750 lb	Alt. 4 1,000 lb	Alt. 5 1,250 lb
June 2012- May 2013	July-Aug	Sept-Dec	Aug-Oct	Aug-Sept	July-Sept