



Scup Gear Restricted Areas Framework Adjustment



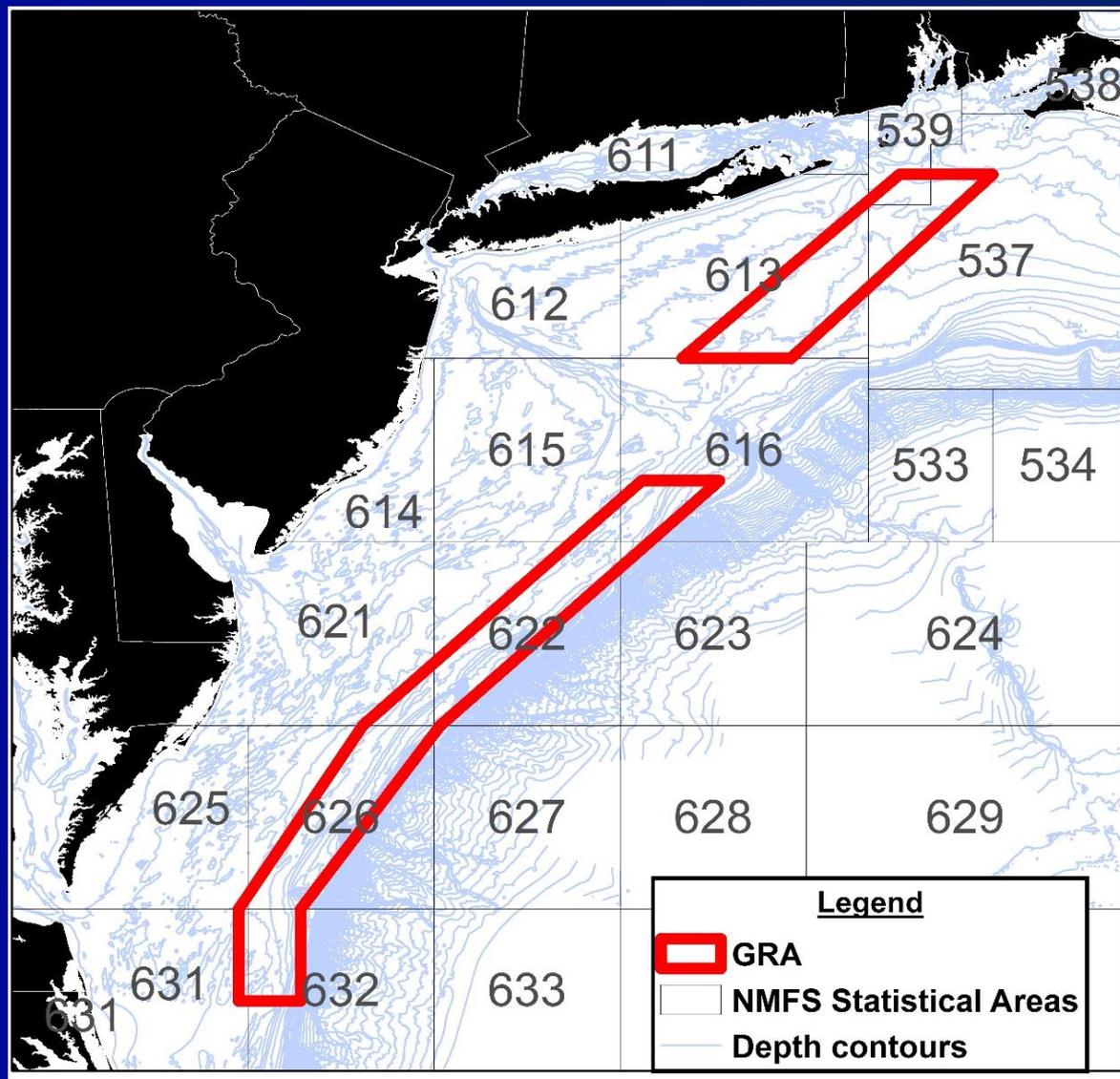
New Bern, NC

February 10, 2016

Objectives

- Review AP feedback
- Consider management alternatives and new analysis of impacts

Current Scup GRAs



Current GRA Regulations

- Apply to trawl vessels that fish for or possess longfin squid, black sea bass, or silver hake/whiting
- Must fish with nets with ≥ 5 inch diamond mesh
- If in the Southern GRA Jan 1 - Mar 15
- If in the Northern GRA Nov 1 - Dec 31

History of the GRAs

SAW 27 (1998): “Fishing mortality should be reduced substantially and immediately. Reduction in fishing mortality from discards will have the most impact on the stock...This could be most effectively accomplished by reducing discards from small-mesh fisheries.”

(SAW 31, 2000 - similar conclusions)

History of the GRAs

- GRAs implemented 2000
- Modified in 2000, 2001, and 2004
- GRA Exemption Program (2003-2005)
- Feb 2014 – Council first considers current framework to modify GRAs

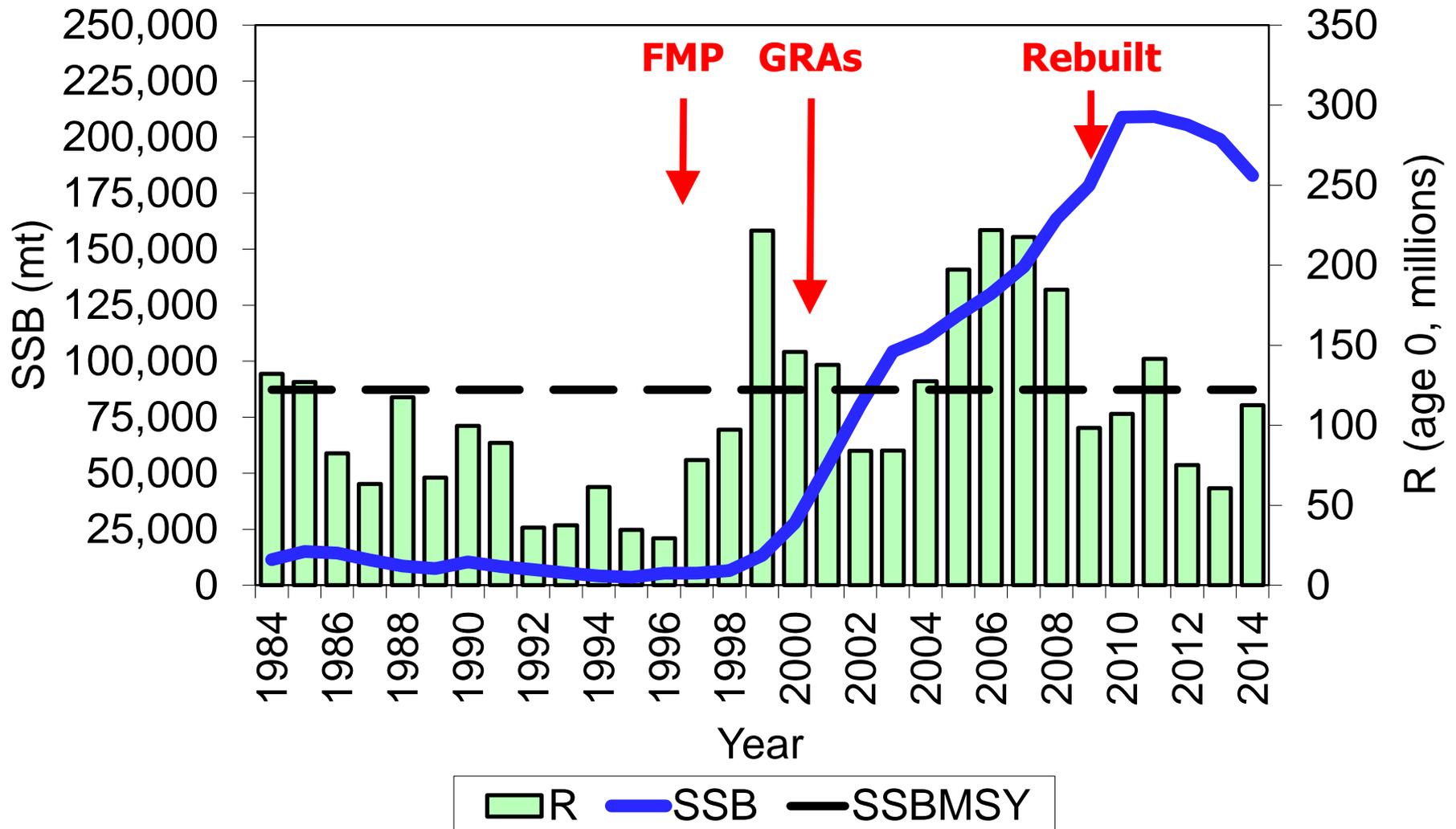
NEFSC Analysis

- Observer data, 1989-2013
- 1989-2013: most commercial fishery scup discards occurred in small mesh tows in statistical areas that include GRAs
- Discards have decreased since GRA implementation
- Relatively high scup discards in recent years in areas/times outside GRA

NEFSC Analysis

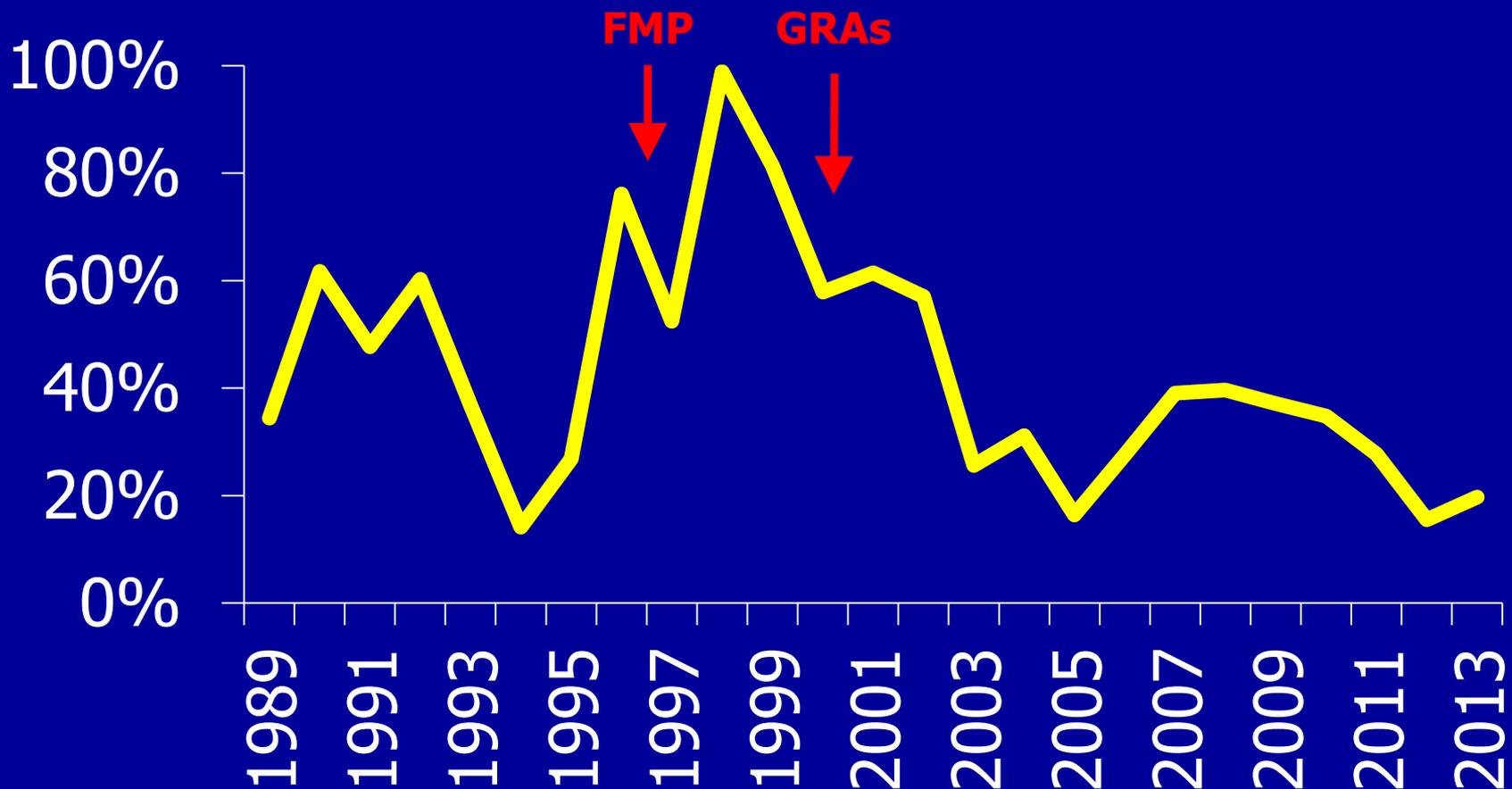
“...the GRAs have likely reduced the discard mortality of small scup, and are responsible for the improved post-recruitment survival of these small scup”

Biomass and Recruitment

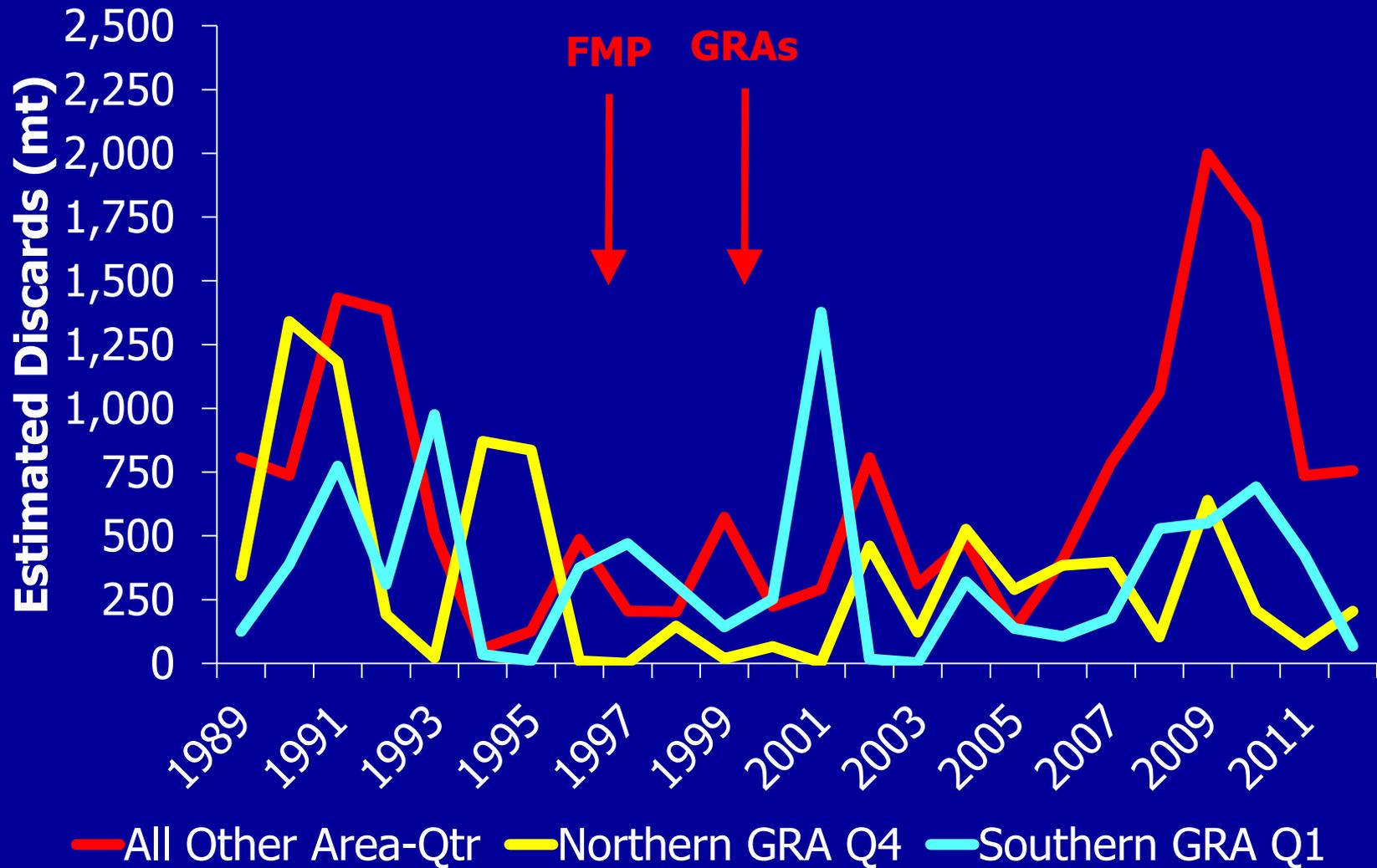


NEFSC Analysis

Observed Scup Discards as Percentage of Total Catch



NEFSC Analysis



Alternatives

1: No Action / *Status Quo*

1a: *Status Quo* N GRA

1b: *Status Quo* S GRA

2: Expand N GRA into stat area 613

3: Modify the area of the S GRA

3a: Hank Lackner proposal

3b: Hank Lackner proposal + corals

3c: Remove stat area 632

3d: Expand into stat area 616

4 Eliminate the GRAs

4a: Eliminate N GRA

4b: Eliminate S GRA

Alternative 1

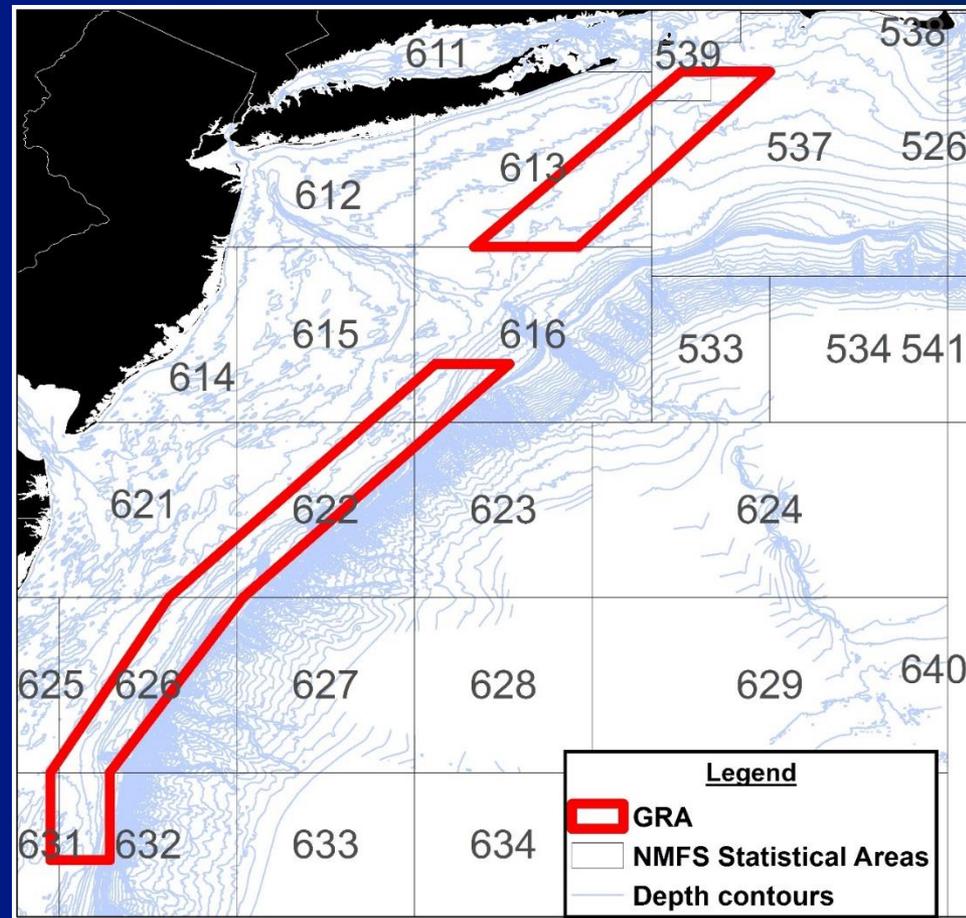
No action/*status quo*

1a: *Status quo*

N GRA

1b: *Status quo*

S GRA



Alternative 1

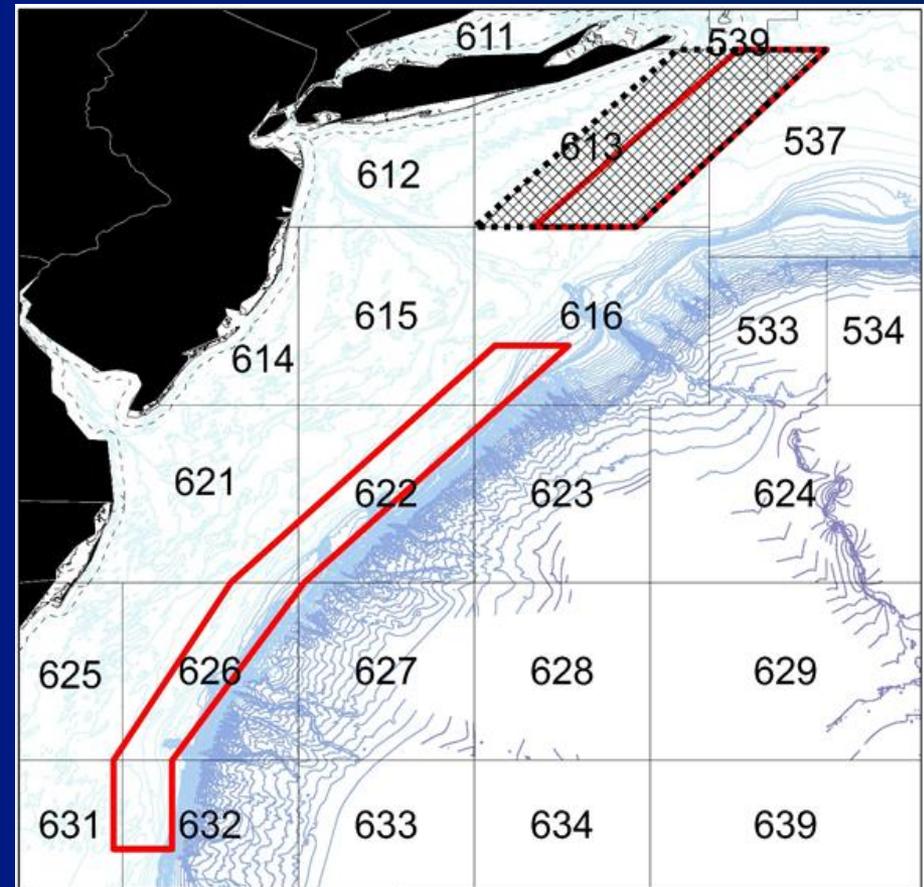
No action/*status quo*

AP comments:

- 16 advisors present at Jan. 2016 meeting
- 1 supported either no change or small modifications

Alternative 2

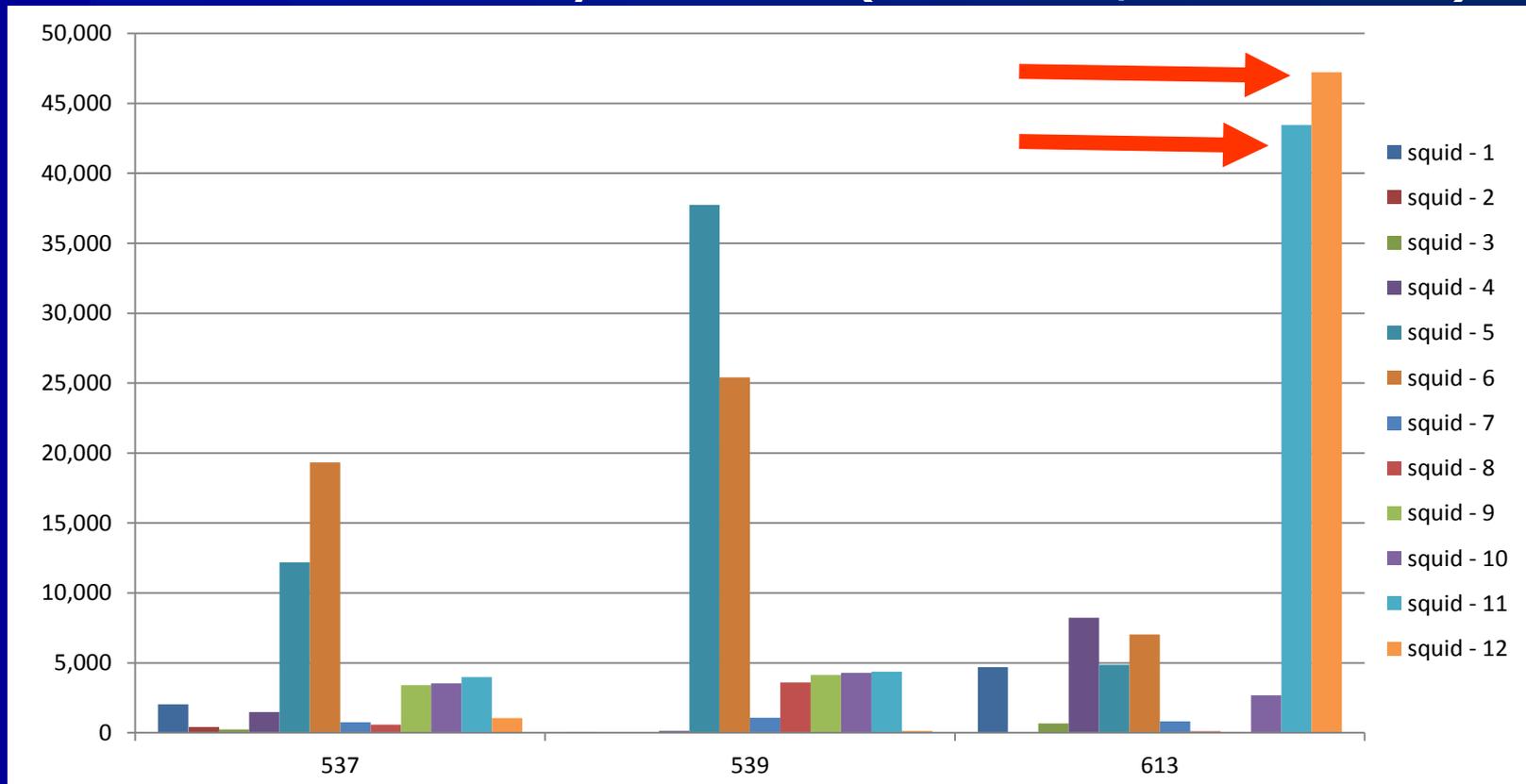
Expand N GRA to include more of stat area 613



Alternative 2

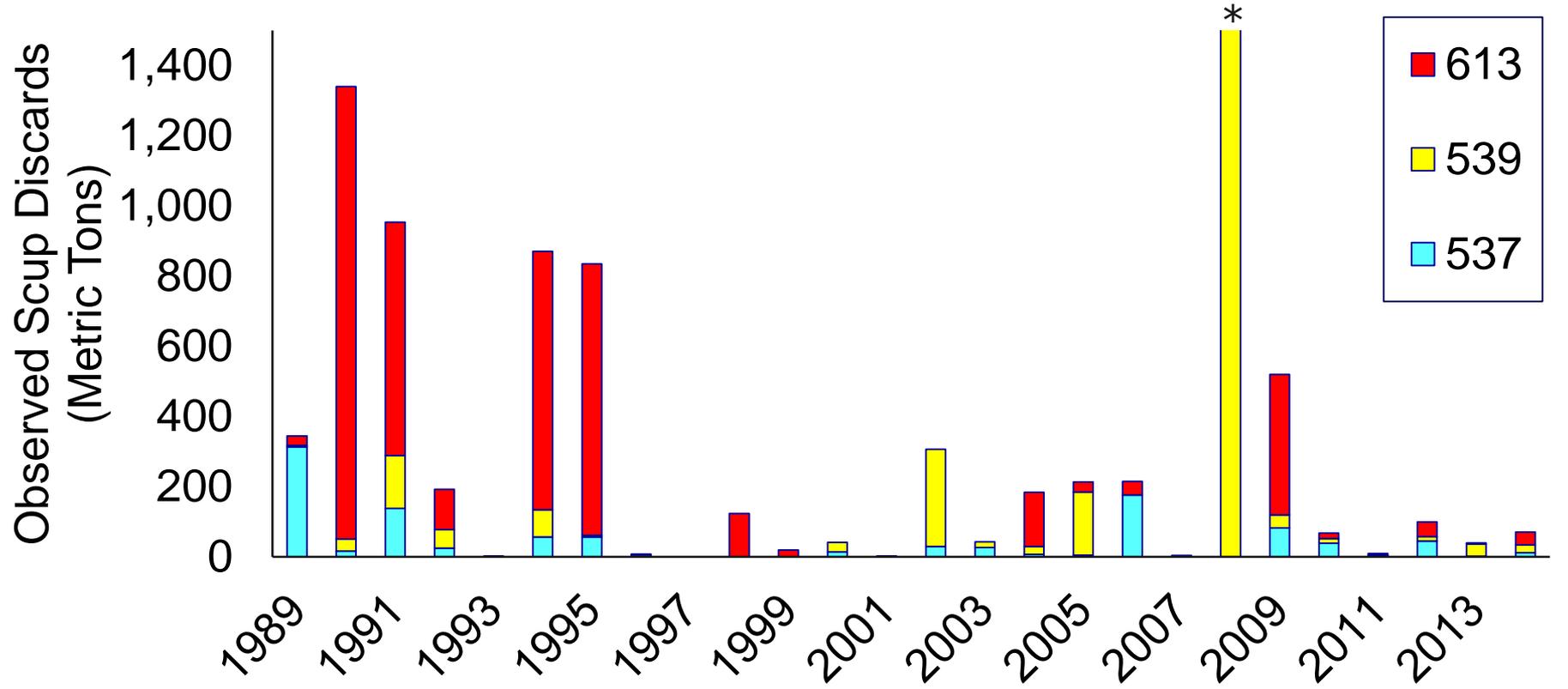
Expand N GRA into area 613

Figure 10. Northern GRA statistical area 'squid' mesh observed discards by month (Jan = 1, Dec = 12).



Alternative 2

Expand N GRA to include more of stat area 613



* Observed discards in 2008 were 7,417 MT

Alternative 2

Expand N GRA to include more of stat area 613

AP comments:

- No advisors supported any alternatives which would expand GRAs (Alt. 2 and Alt. 3d)

Alternative 3

Modify the area of the S GRA

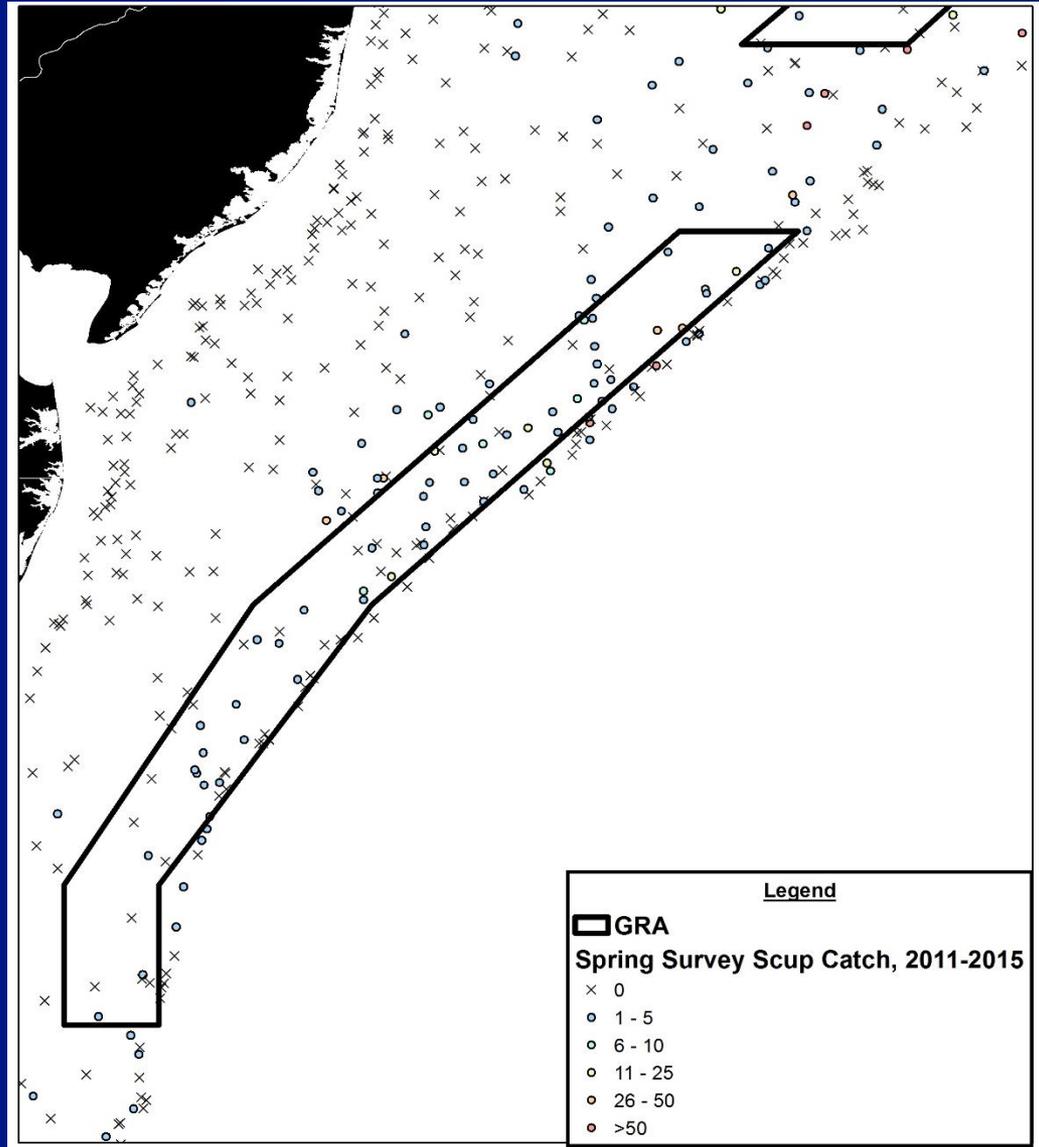
4 sub-alternatives

Analysis of biological impacts (new)

Biological Impacts

NEFSC Spring
Survey
2011-2015

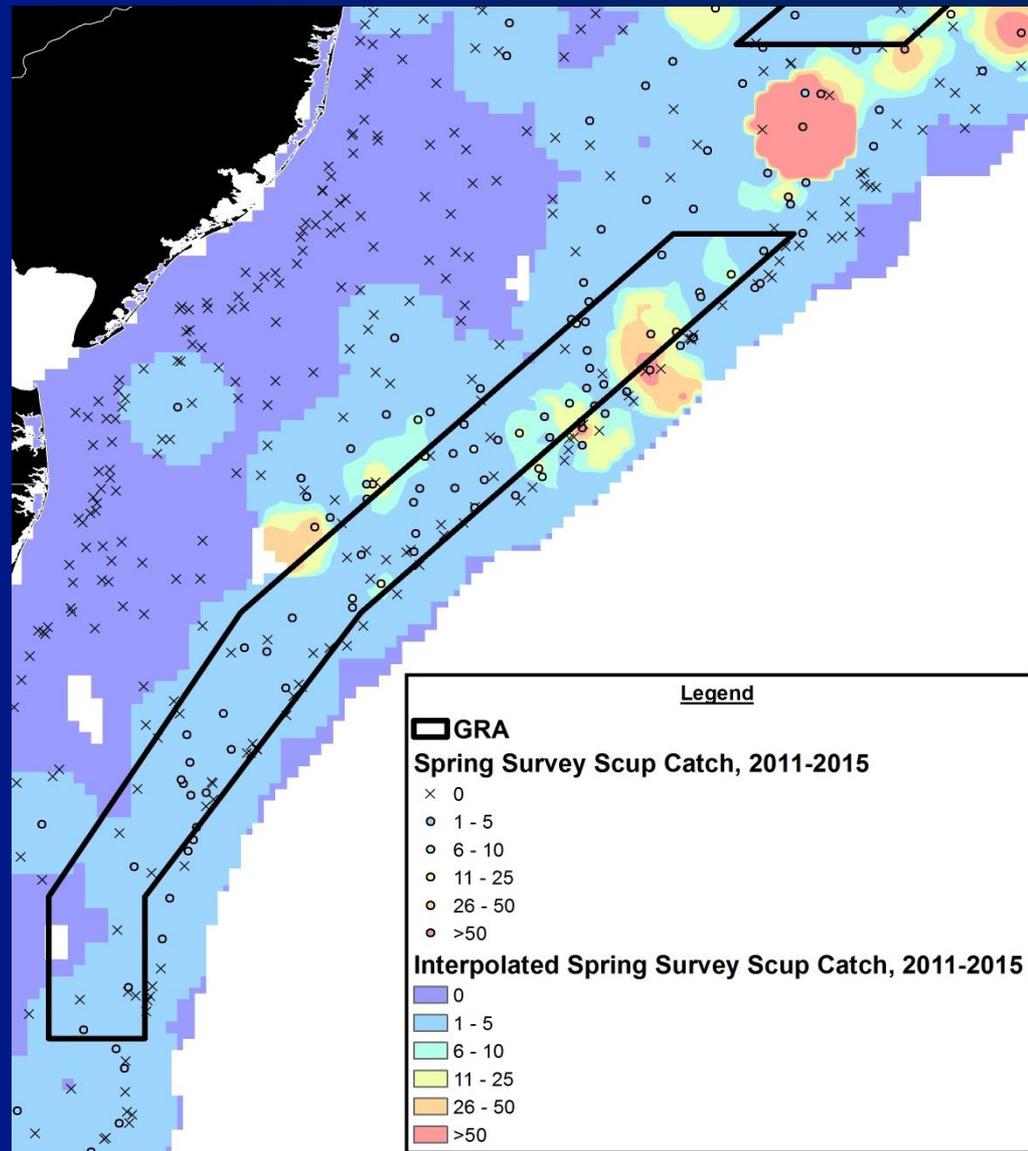
Point Data



Biological Impacts

NEFSC Spring
Survey
2011-2015

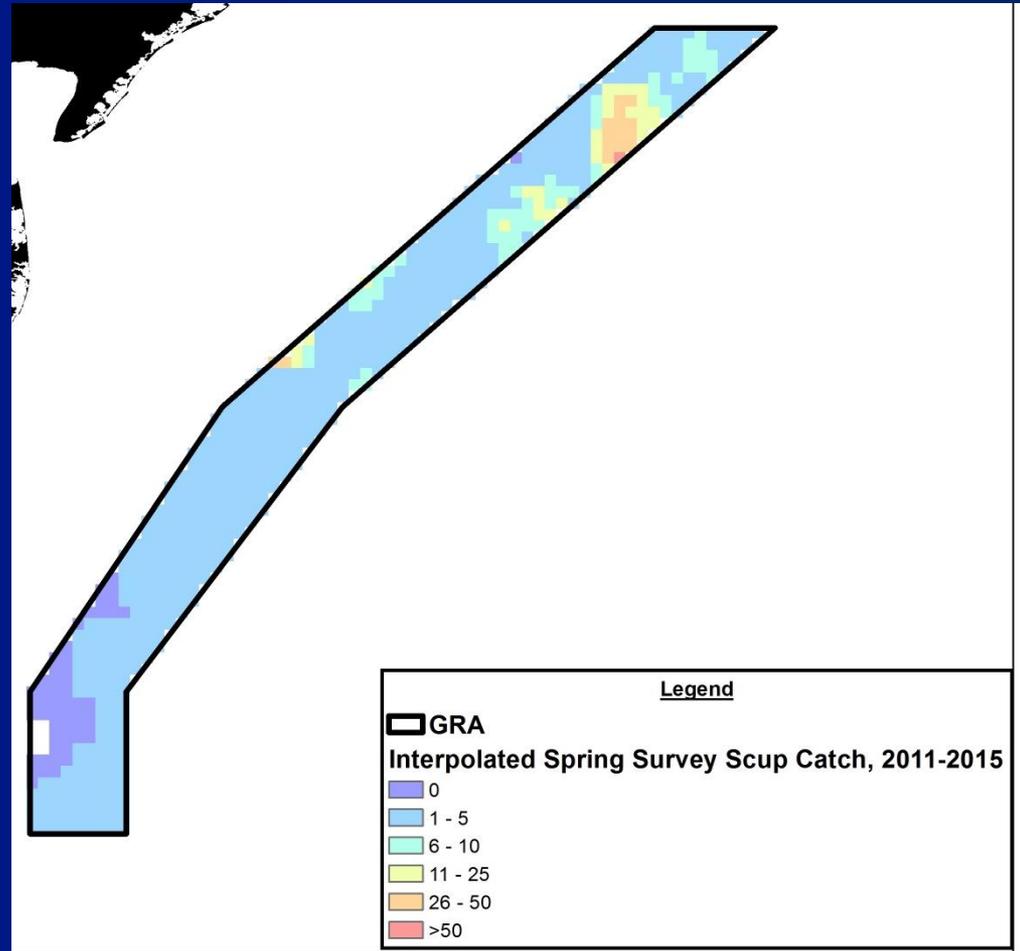
Interpolated
Scup Catch



Biological Impacts

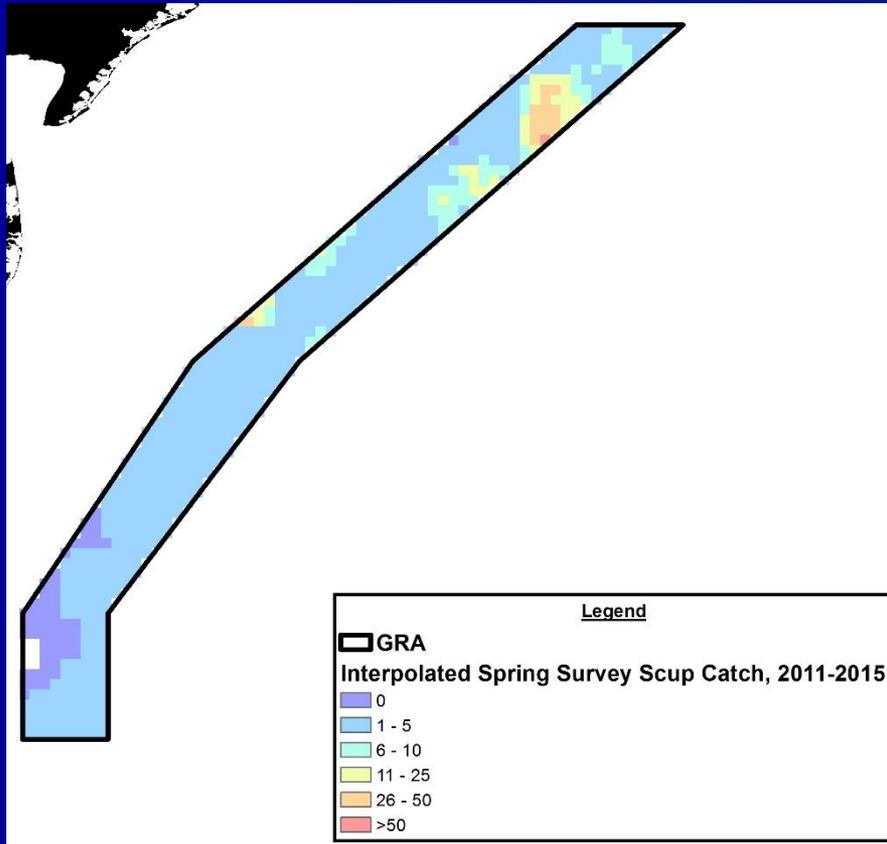
**NEFSC Spring
Survey
2011-2015**

**Interpolated
Scup Catch
Within GRA**

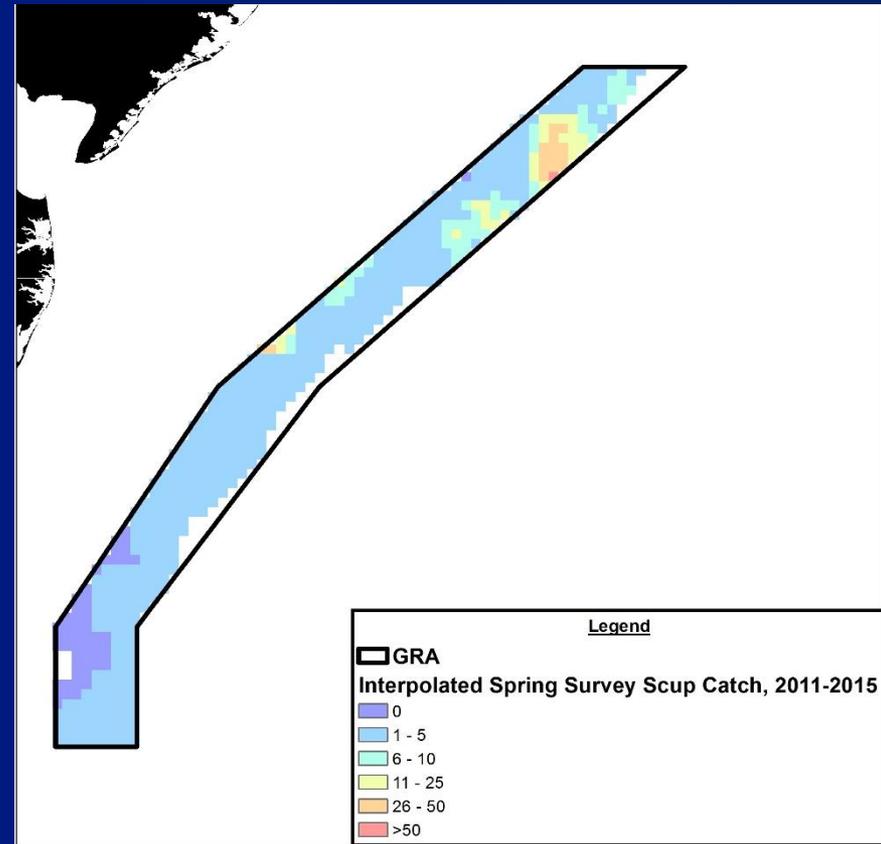


Biological Impacts

Status Quo – 100%



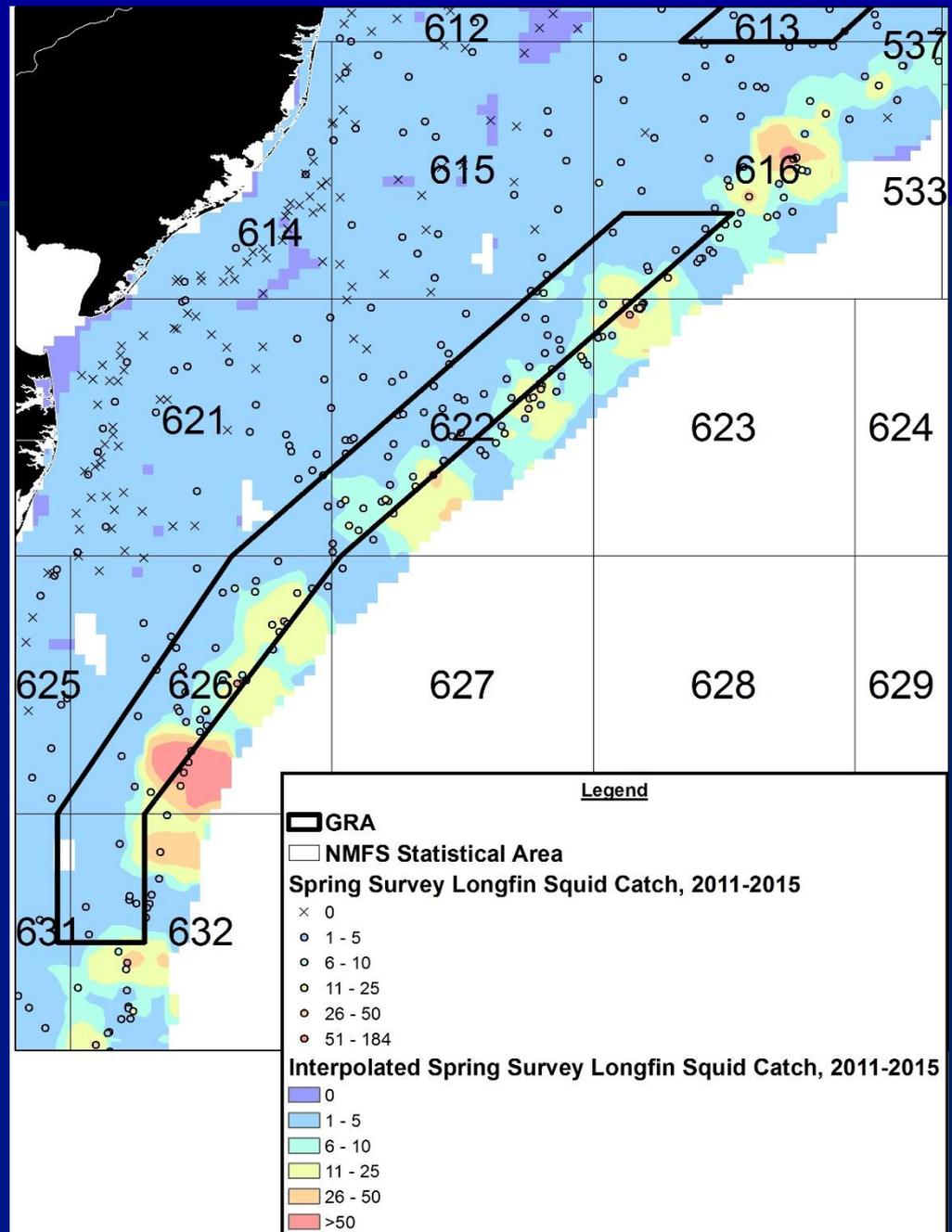
Alt. 3A and 3B – 88%



Biological Impacts

NEFSC Spring Survey 2011-2015

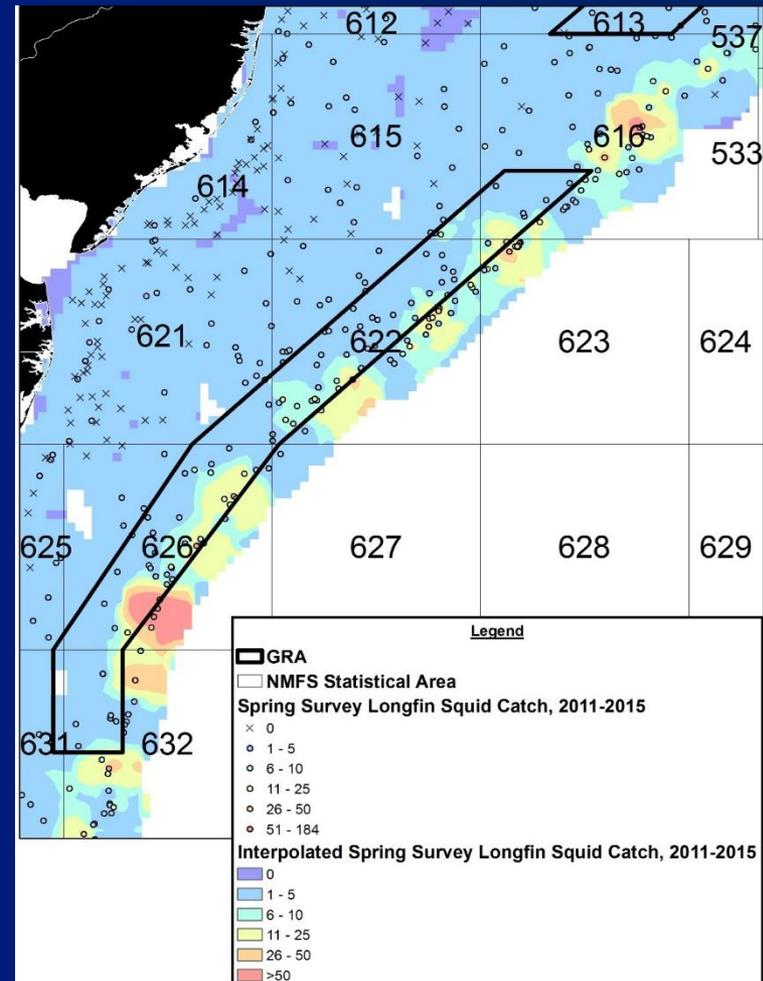
Interpolated Longfin Squid Catch



Biological Impacts

Caveats!

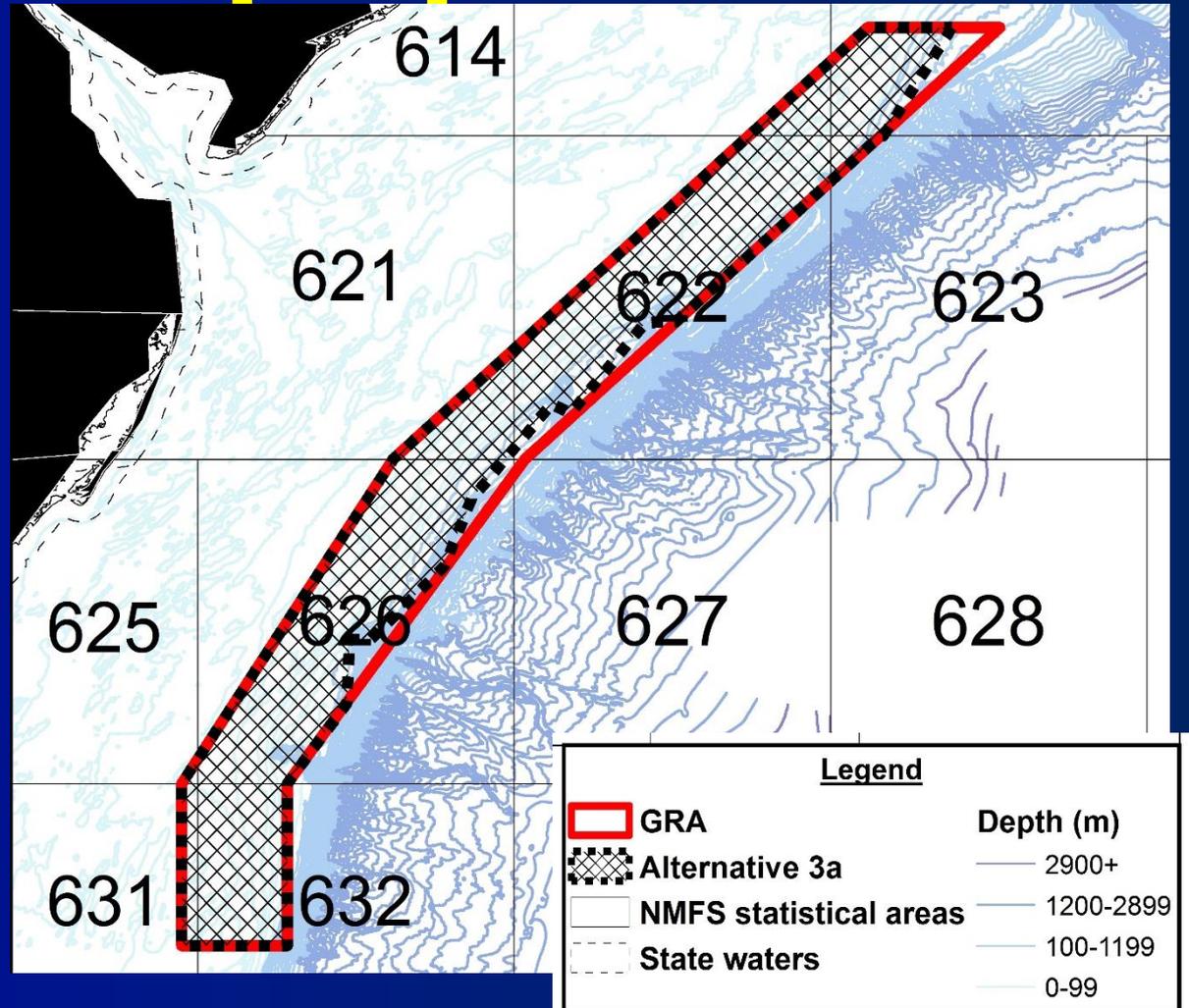
- Spring survey catches – not assessment estimates
- Timing
 - Spring survey mostly March-April
 - S GRA Jan-Mar 15
- Assumes catch can be interpolated based only on distance



Alternative 3a

Hank Lackner proposal

7% decrease
in the size of
the Southern
GRA



Alternative 3a

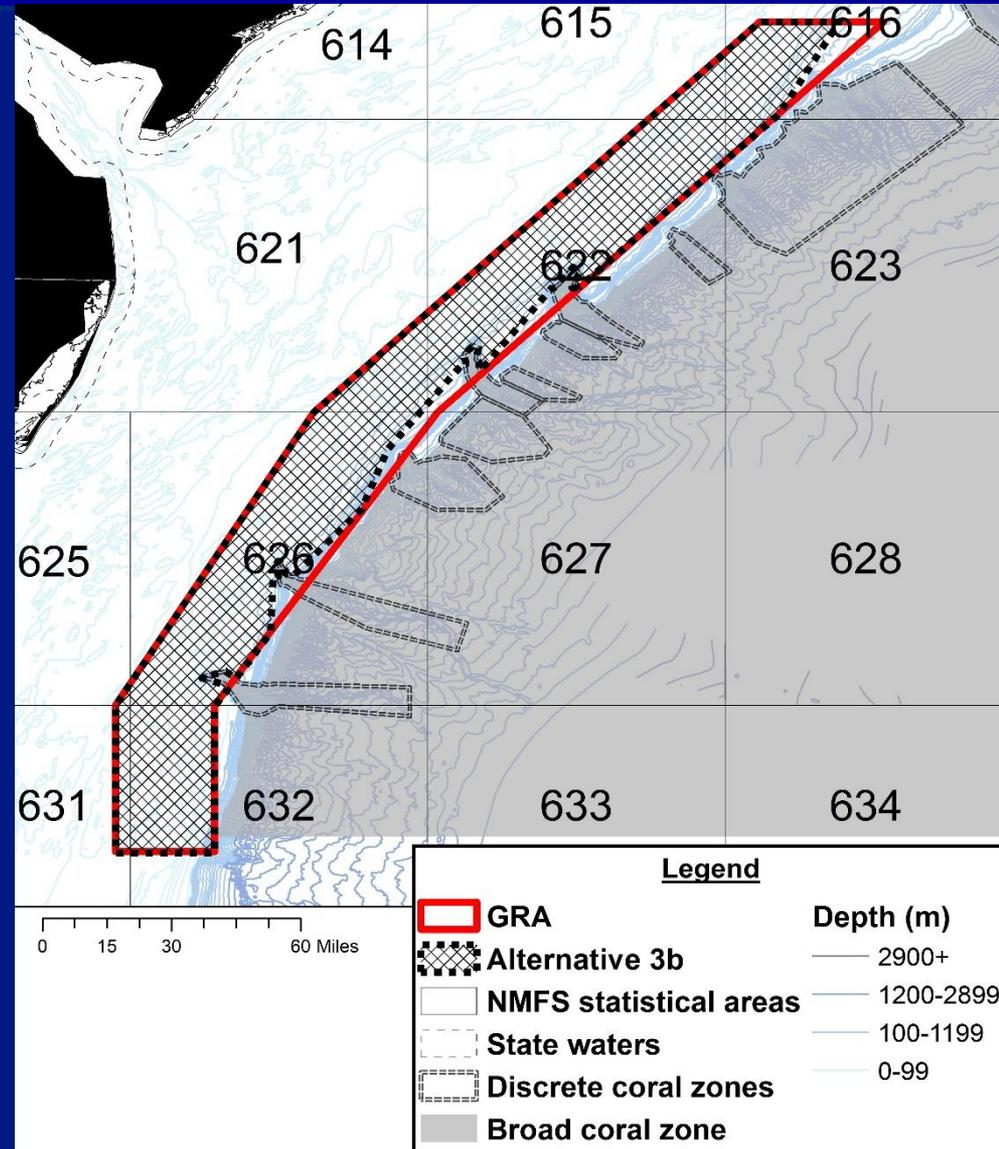
Hank Lackner proposal

- Removes certain canyon areas from S GRA
- Meant to restore access to important areas for squid fishing
- Decreases size of S GRA by 7%

Alternative 3b

**Hank Lackner
proposal with
modifications
for coral areas**

**8% decrease
in the size of
the Southern
GRA**



Alternative 3b

Hank Lackner proposal with modifications for coral areas

- Identical to 3a but with coral areas removed from GRA in areas of overlap
- Added by Council in Dec. 2015
- Reduces size of S GRA by 8%
- Impacts would be identical to 3a - bottom tending gear already prohibited in coral areas

Alternatives 3a and 3b

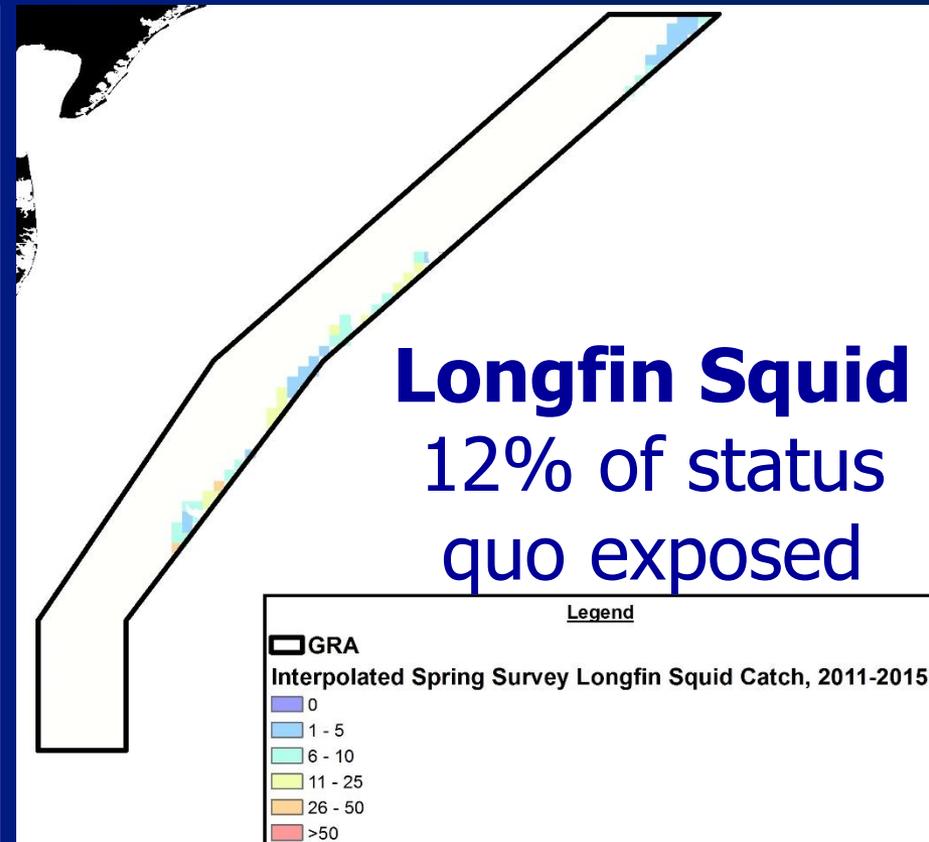
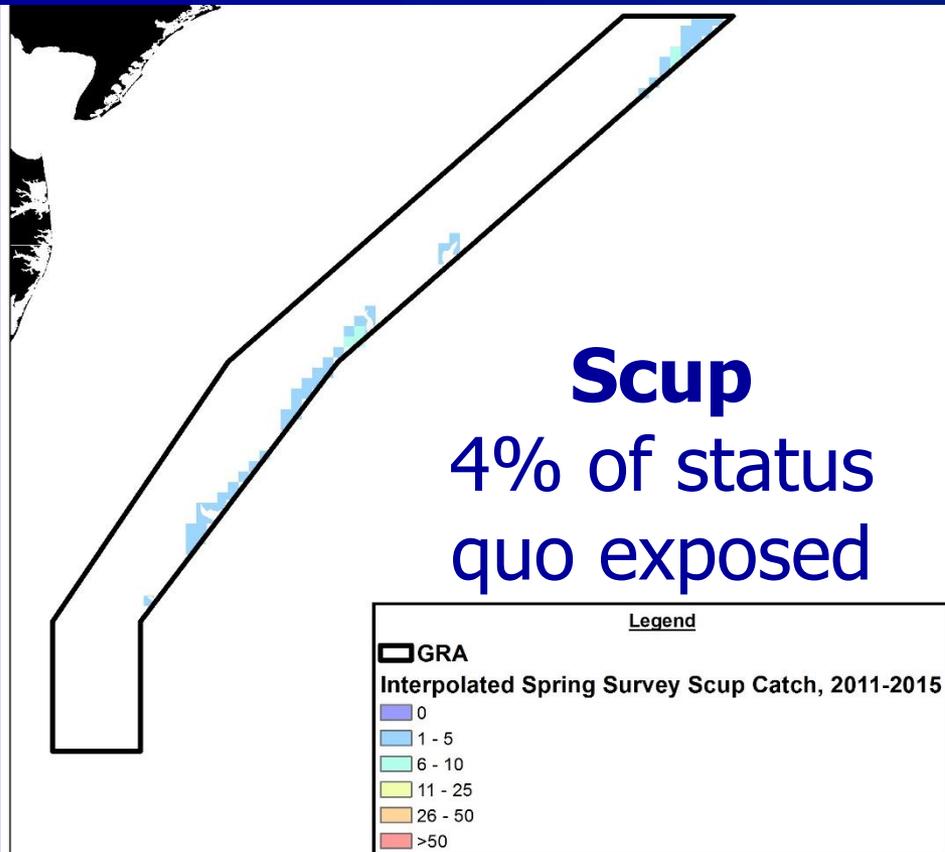
Hank Lackner proposal with and without modifications for coral areas

AP comments:

15 of 16 advisors present supported Alt. 3A/B in combination with 3c, but preferred new AP proposal

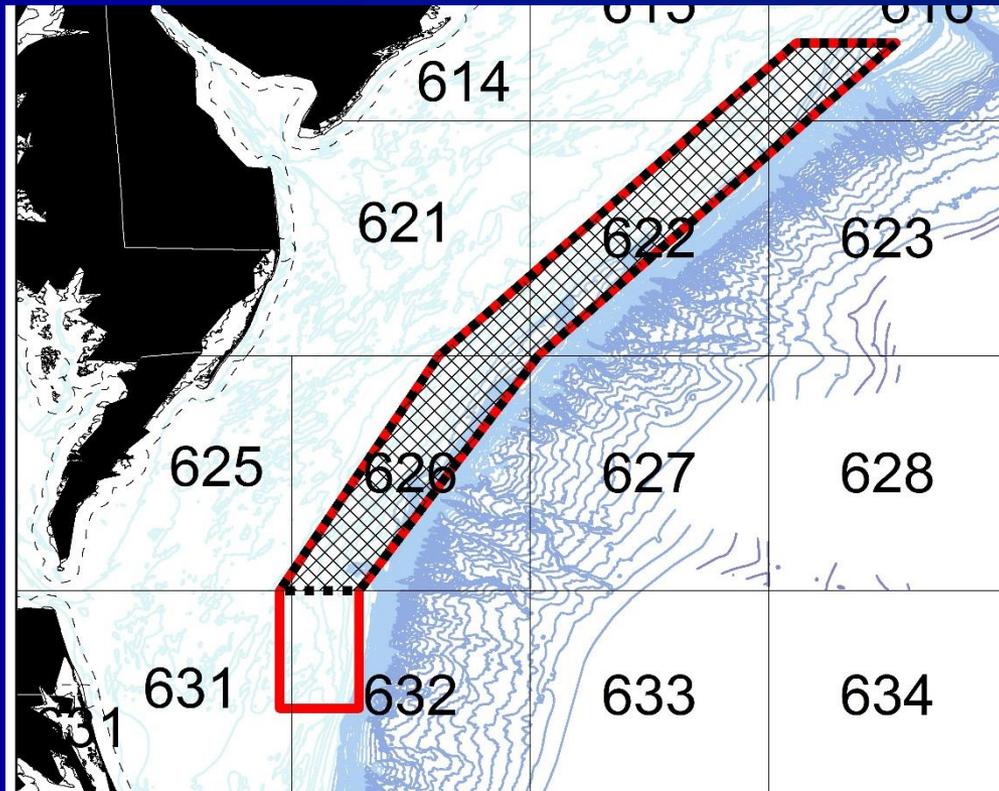
Biological Impacts

Alt. 3A and 3B (with coral areas accounted for)

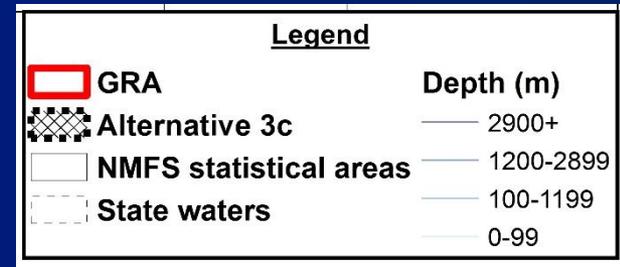


Alternative 3c

Remove statistical area 632 from Southern GRA



**15% decrease
in the size of
the Southern
GRA**

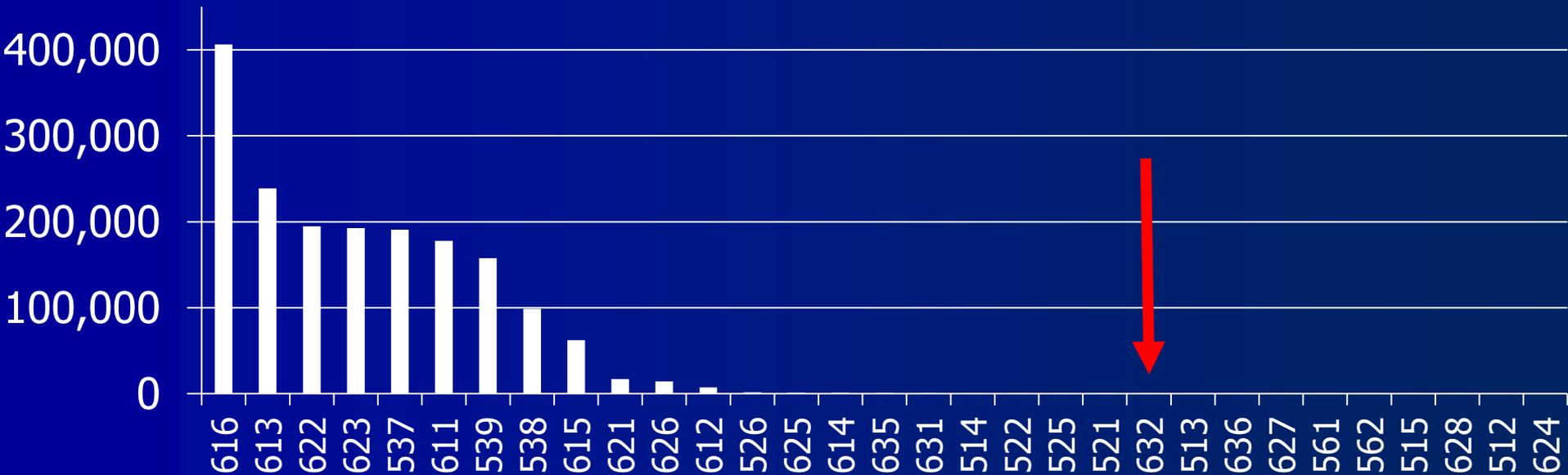


Alternative 3c

Remove statistical area 632

90 lbs of observed scup discards in area 632, 1989-2013

Observed Scup Discards by Area 1989-2013



Alternative 3c

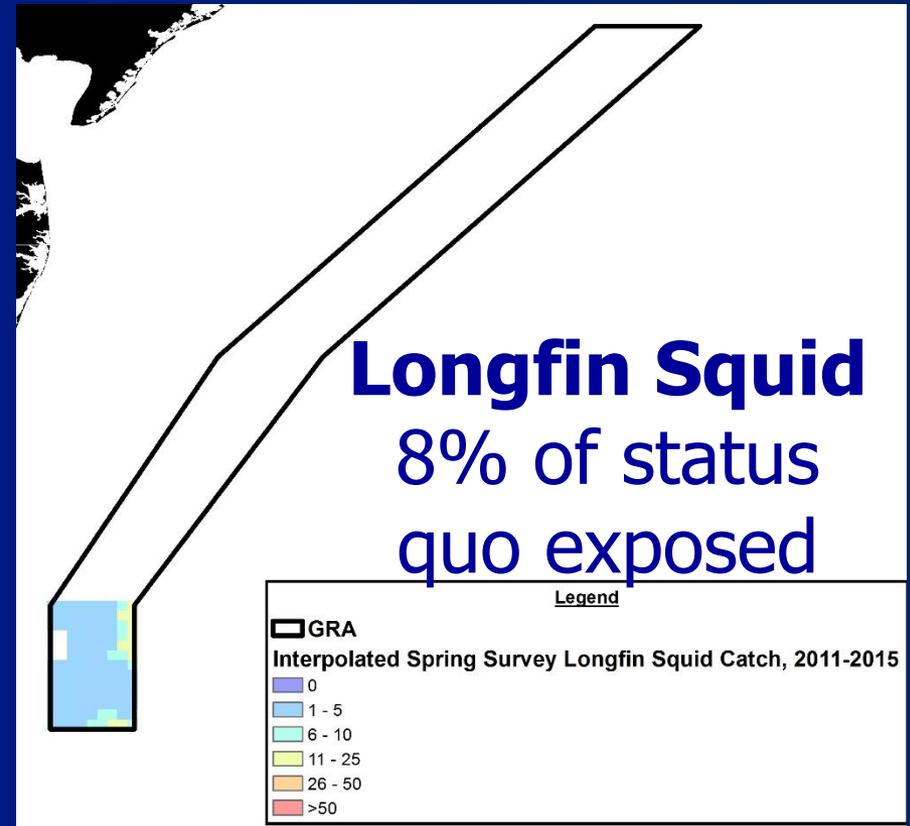
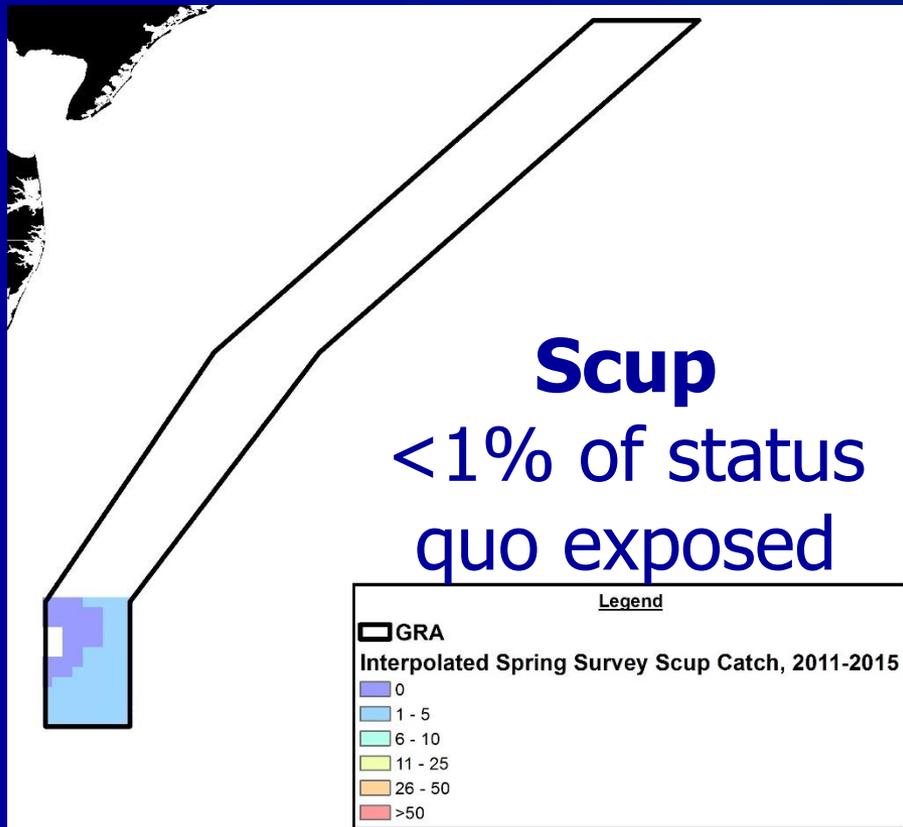
Remove statistical area 632

AP comments:

15 of 16 advisors present supported 3C, especially in combination with alts. 3A/B or new AP proposal. Several supported removal of 632 and 626.

Biological Impacts

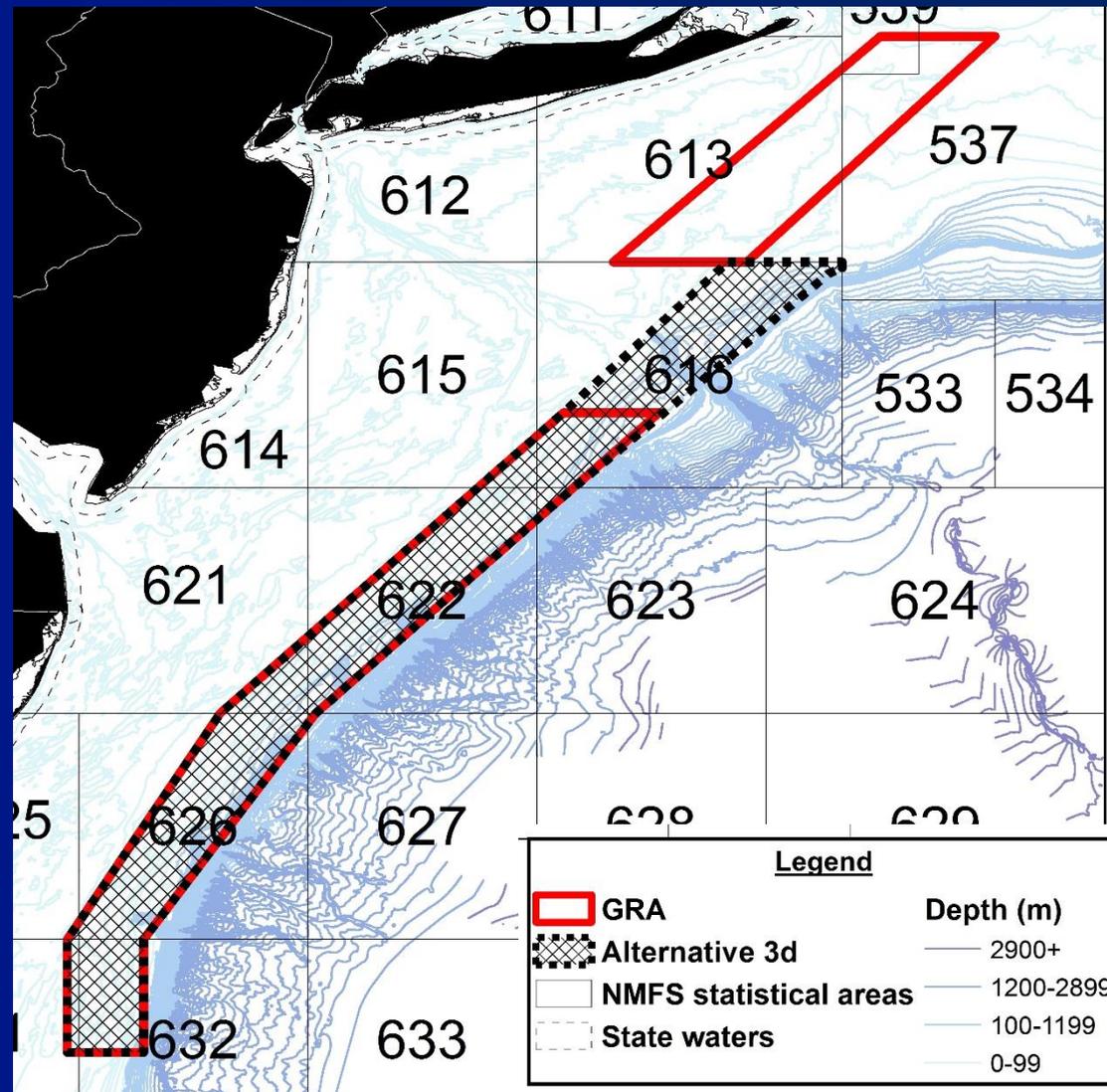
Alt. 3C



Alternative 3d

**Expand
Southern
GRA into
statistical
area 616**

**28% increase in
the size of the
Southern GRA,
as shown**



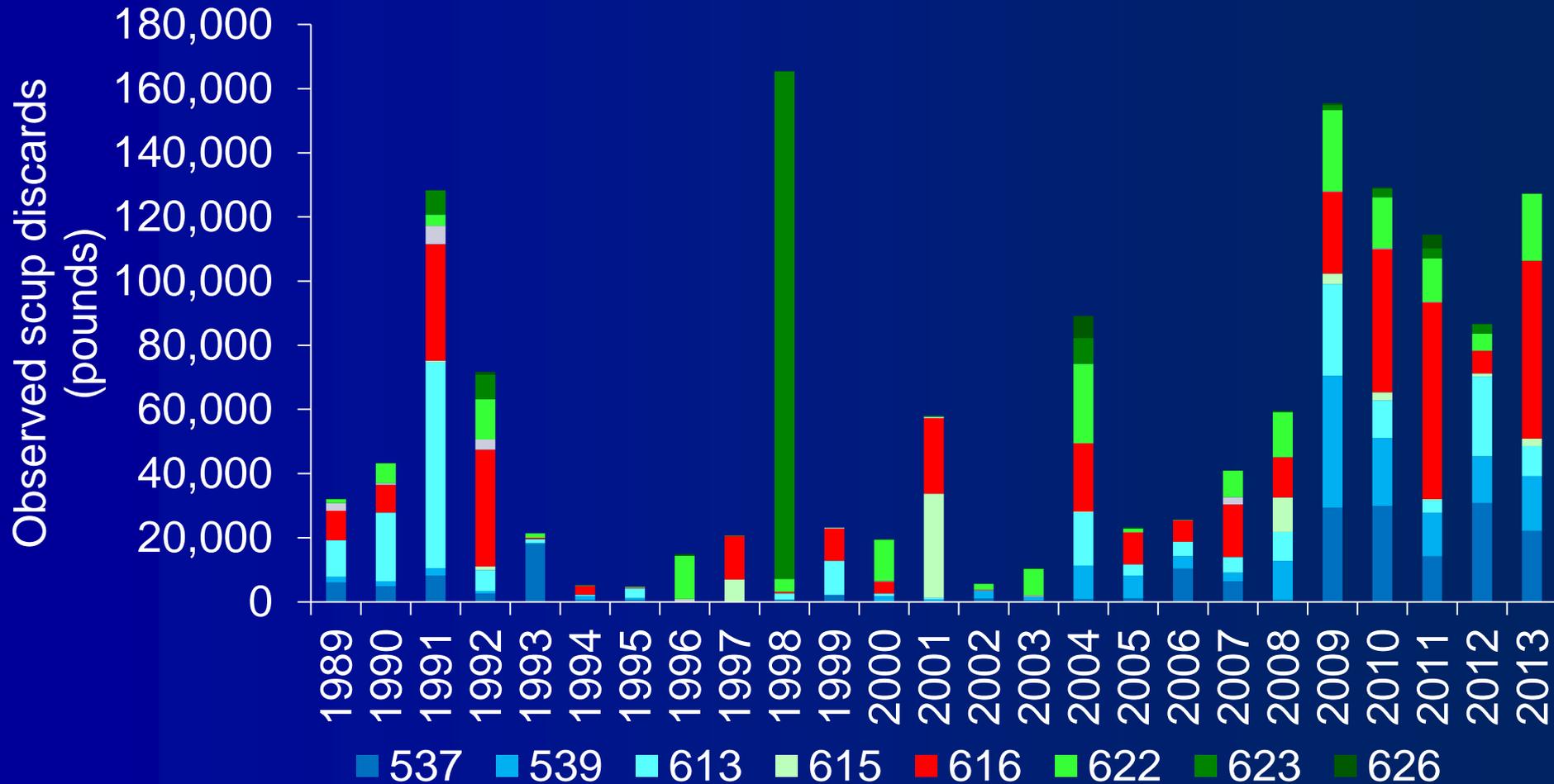
Alternative 3d

Expand Southern GRA into statistical area 616

- Area 616 continues to have relatively high scup discards
- Initial GRAs included much of area 616, removed in Dec. 2000 because of expected severe negative economic impacts
- Area 616 includes Hudson Canyon – a productive fishing area

Alternative 3d

Expand Southern GRA into area 616



Alternative 3d

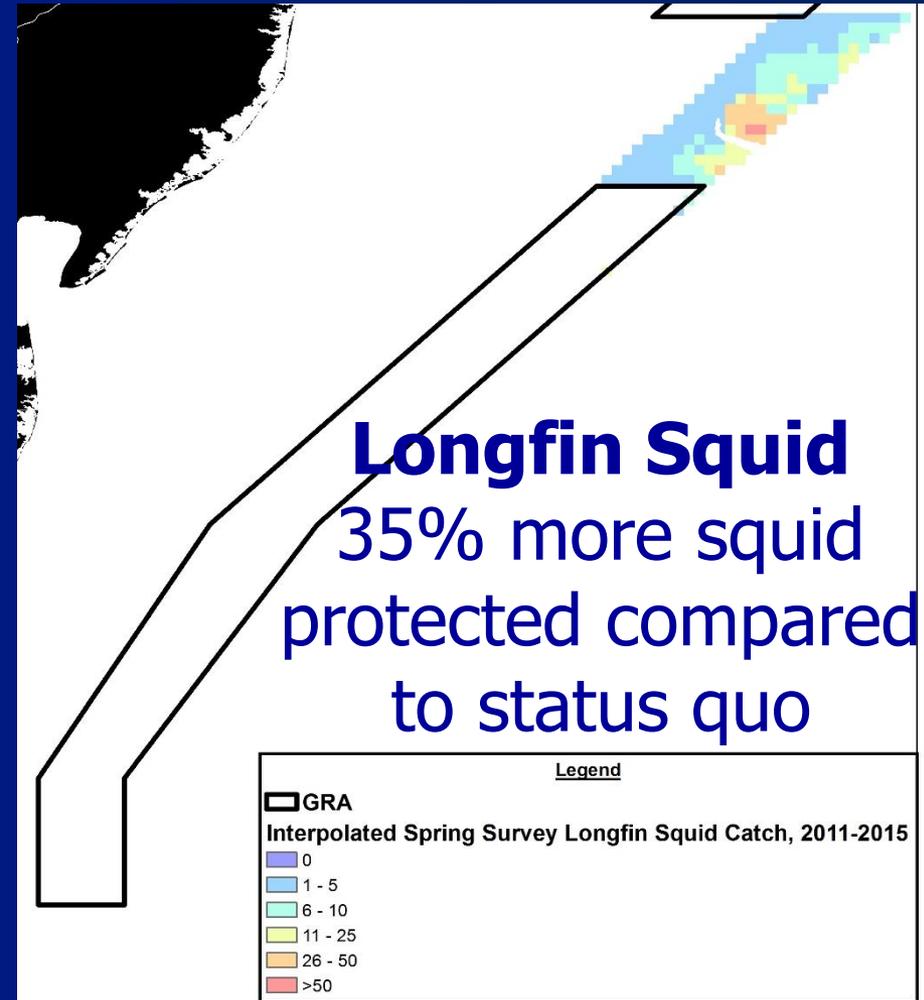
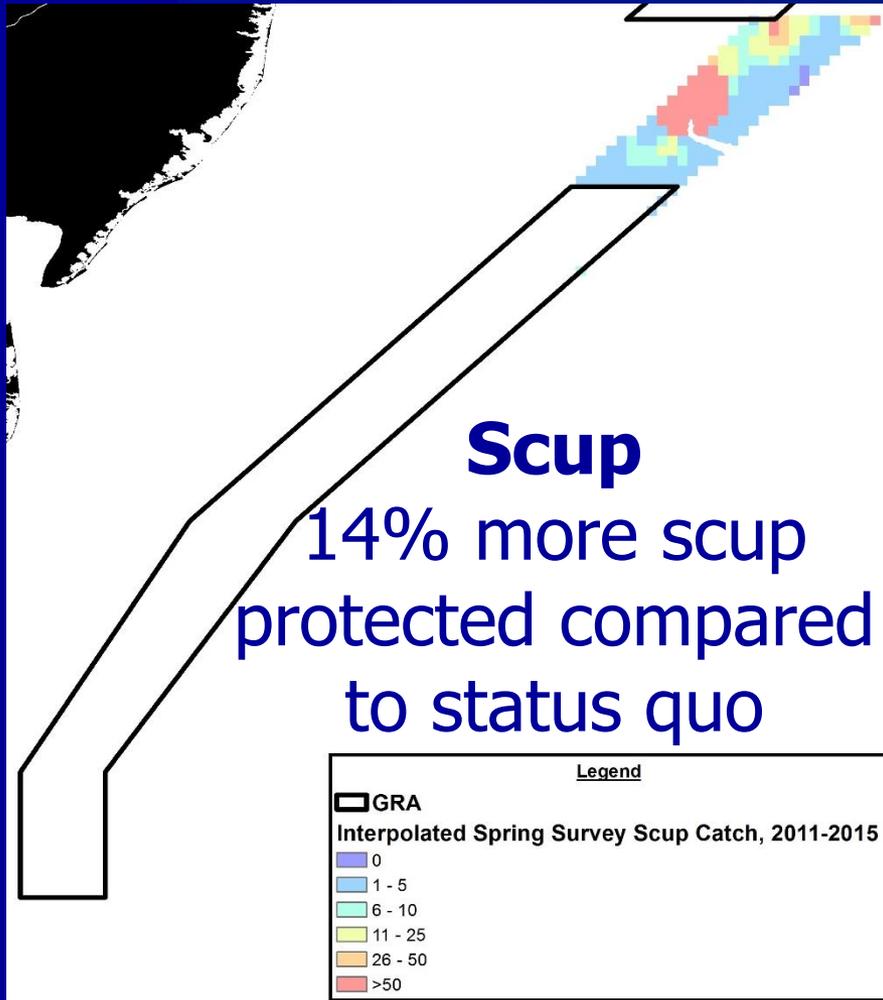
Expand Southern GRA into statistical area 616

AP comments:

No advisors supported an increase in the size of the GRAs. A few advisors said alt. 3d would have especially severe negative economic impacts.

Biological Impacts

Alt. 3D (with coral areas accounted for)



Alternative 4

4a: Eliminate the N GRA

4b: Eliminate the S GRA

Biological Impacts

NEFSC analysis: "...the GRAs have likely reduced the discard mortality of small scup, and are responsible for the improved post-recruitment survival of these small scup"

Alternative 4

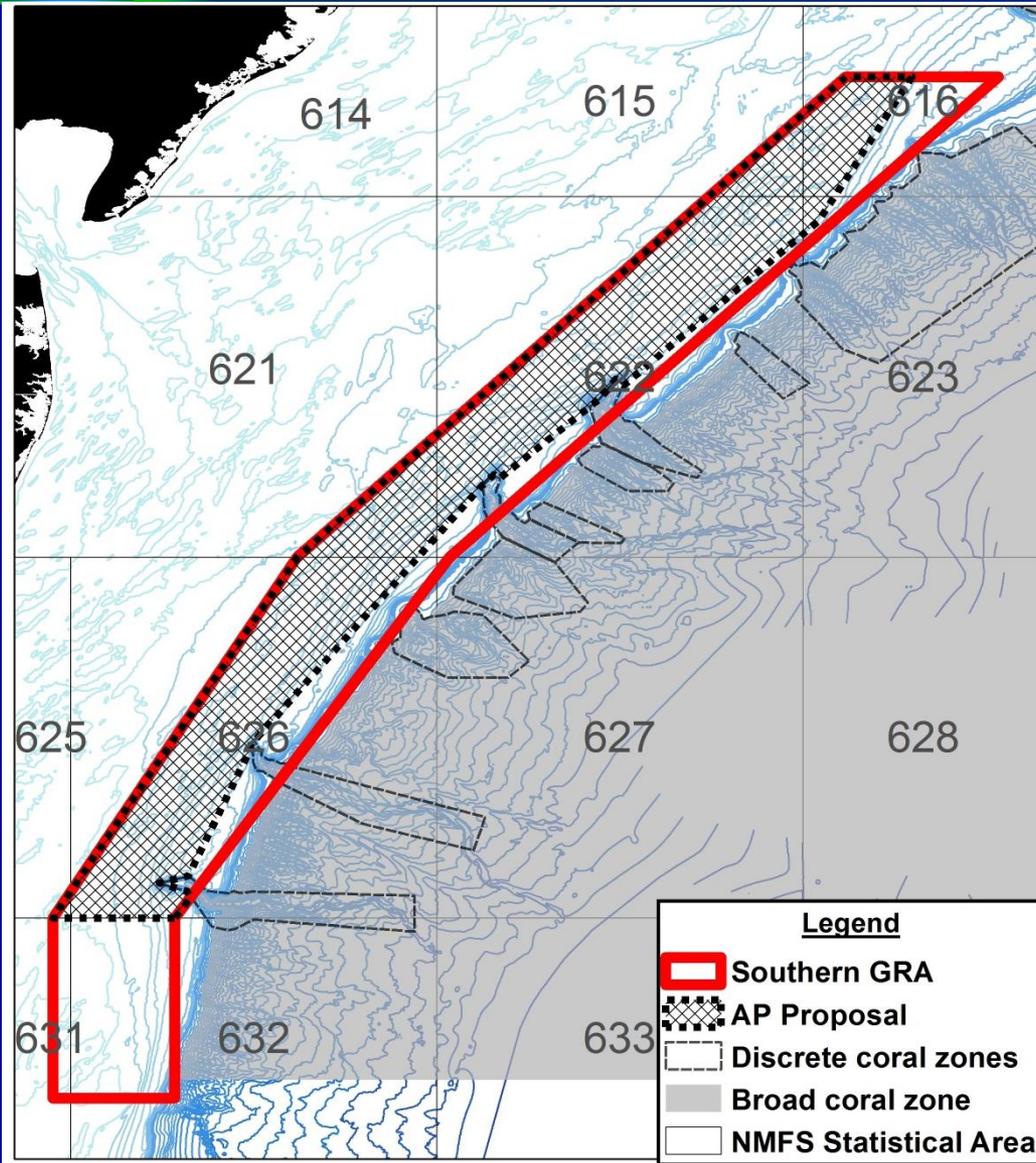
4a: Eliminate the N GRA

4b: Eliminate the S GRA

AP comments:

4 advisors recommended suspension of the GRAs for one or two years to allow for data collection.

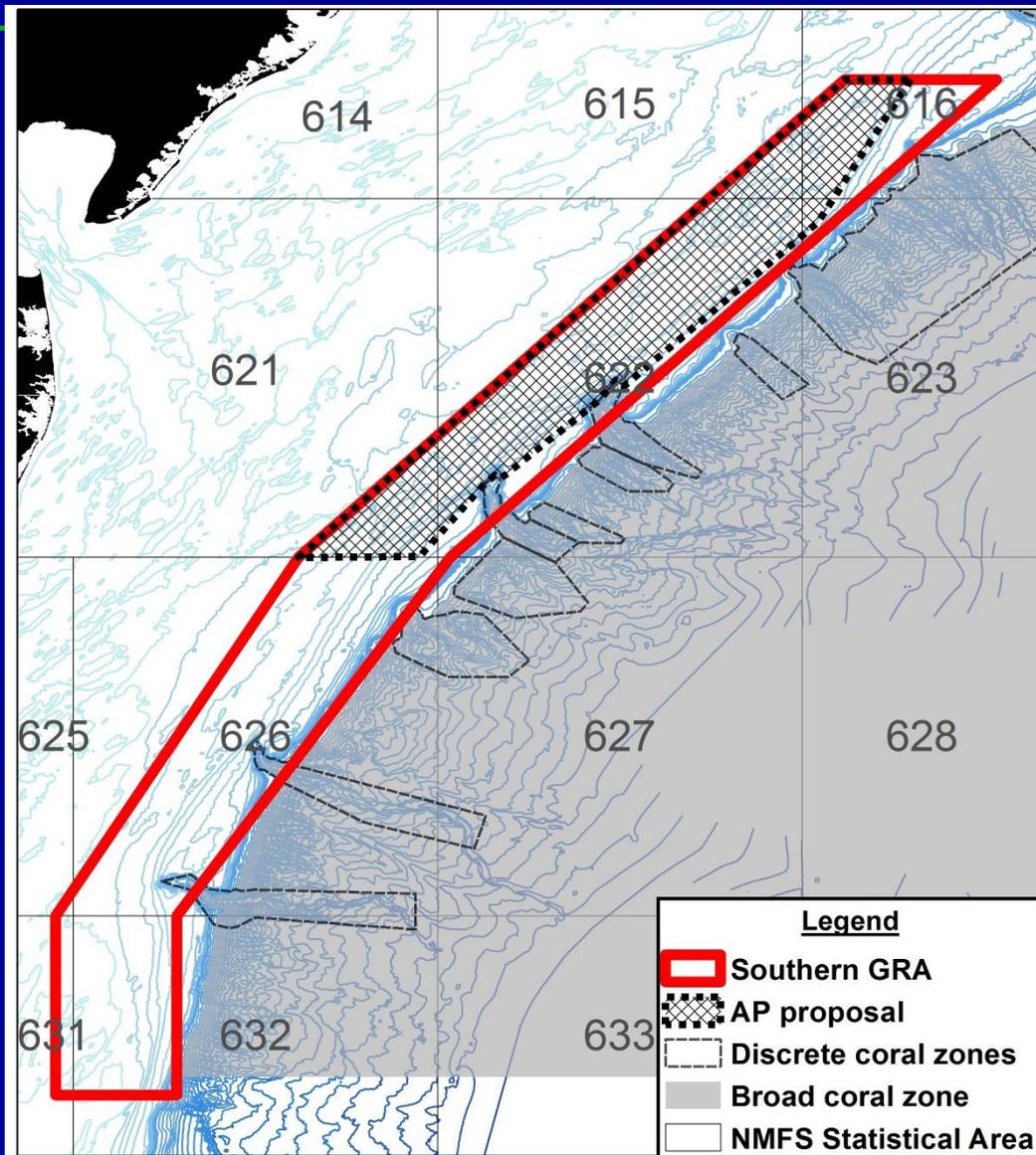
AP Proposal 1



**Proposal drawn
at Jan. 2016 AP
meeting**

**Reduces size of
S GRA by 36%**

AP Proposal 2

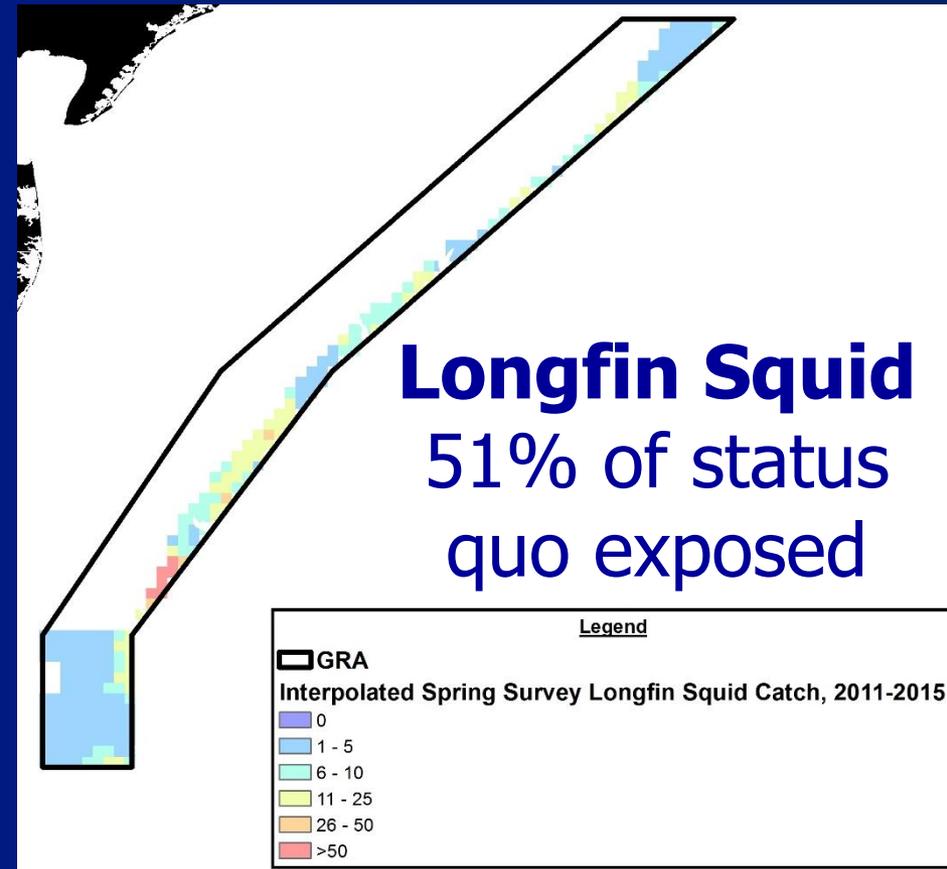
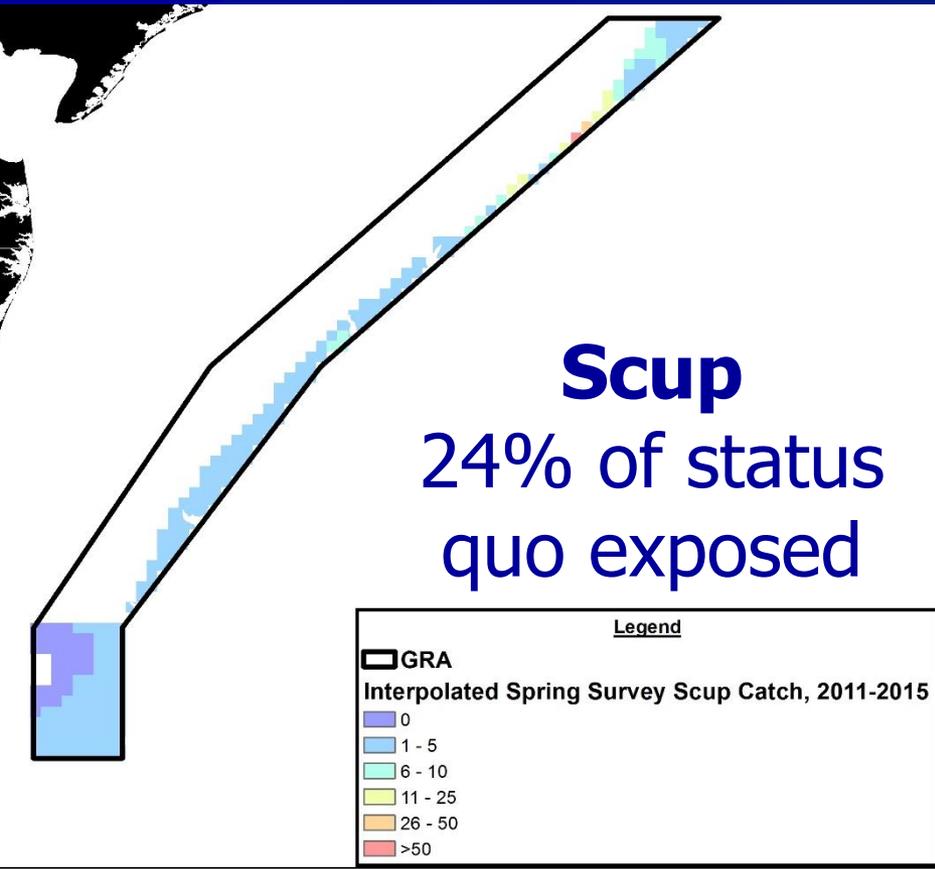


Alternative proposal drawn at Jan. 2016 AP meeting

Reduces size of S GRA by 50%

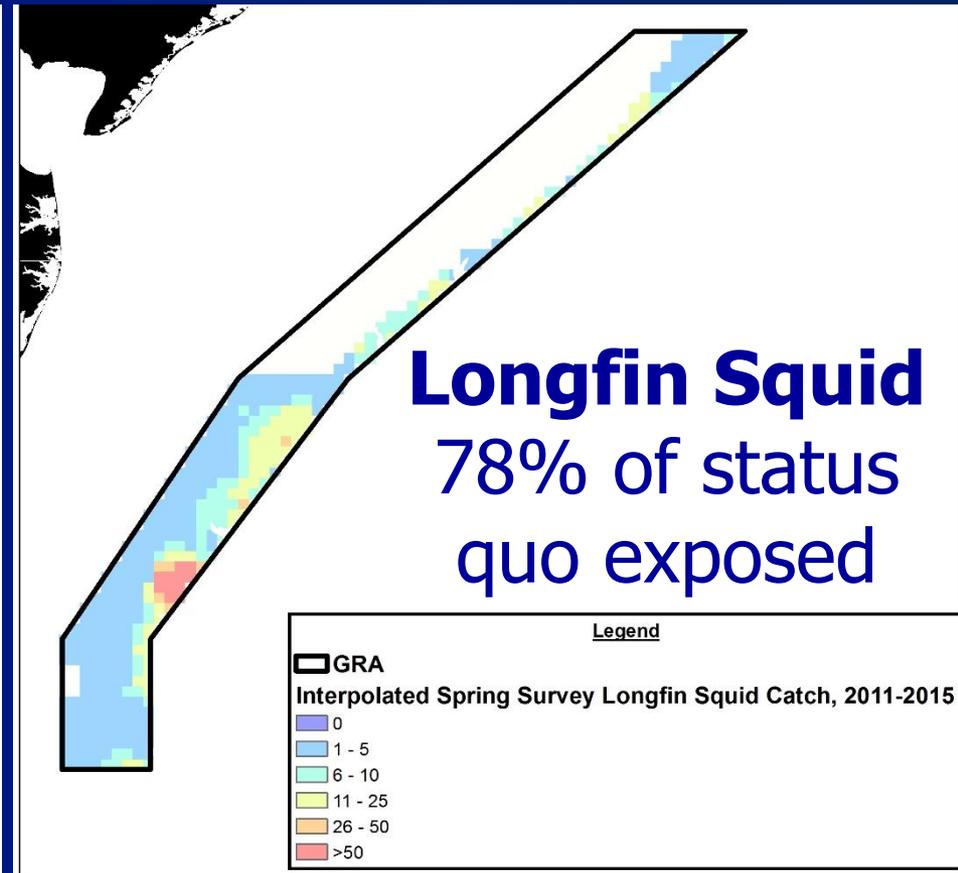
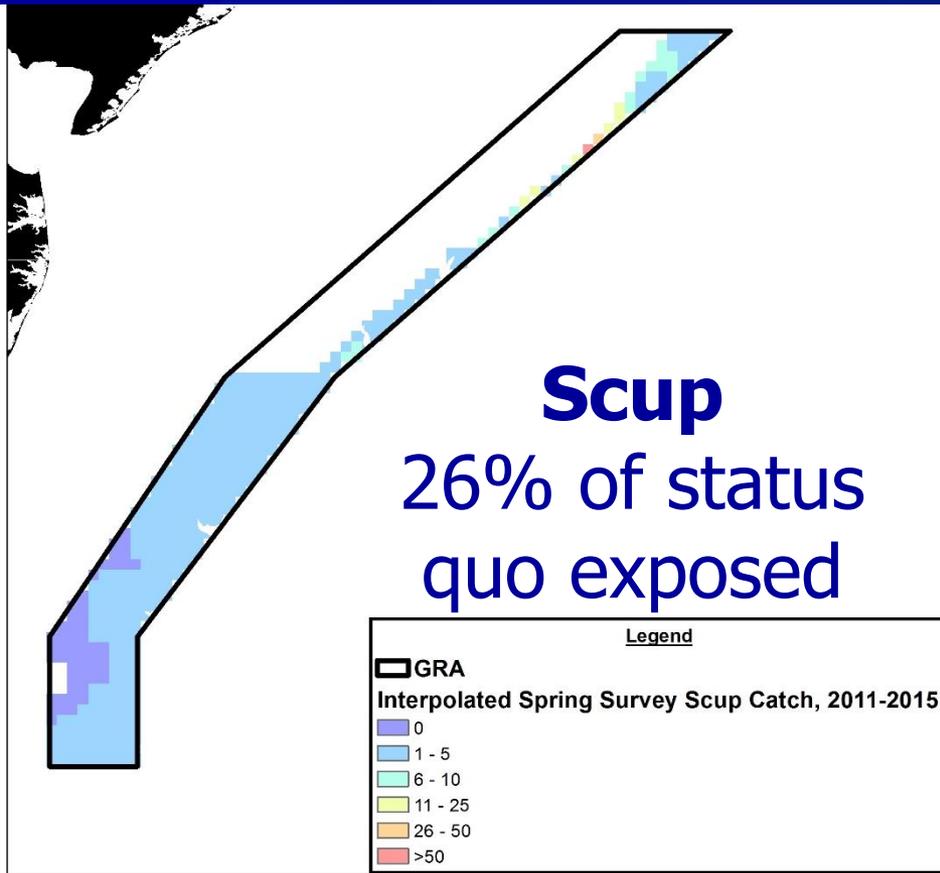
Biological Impacts

AP Proposal 1



Biological Impacts

AP Proposal 2



Economic Impacts

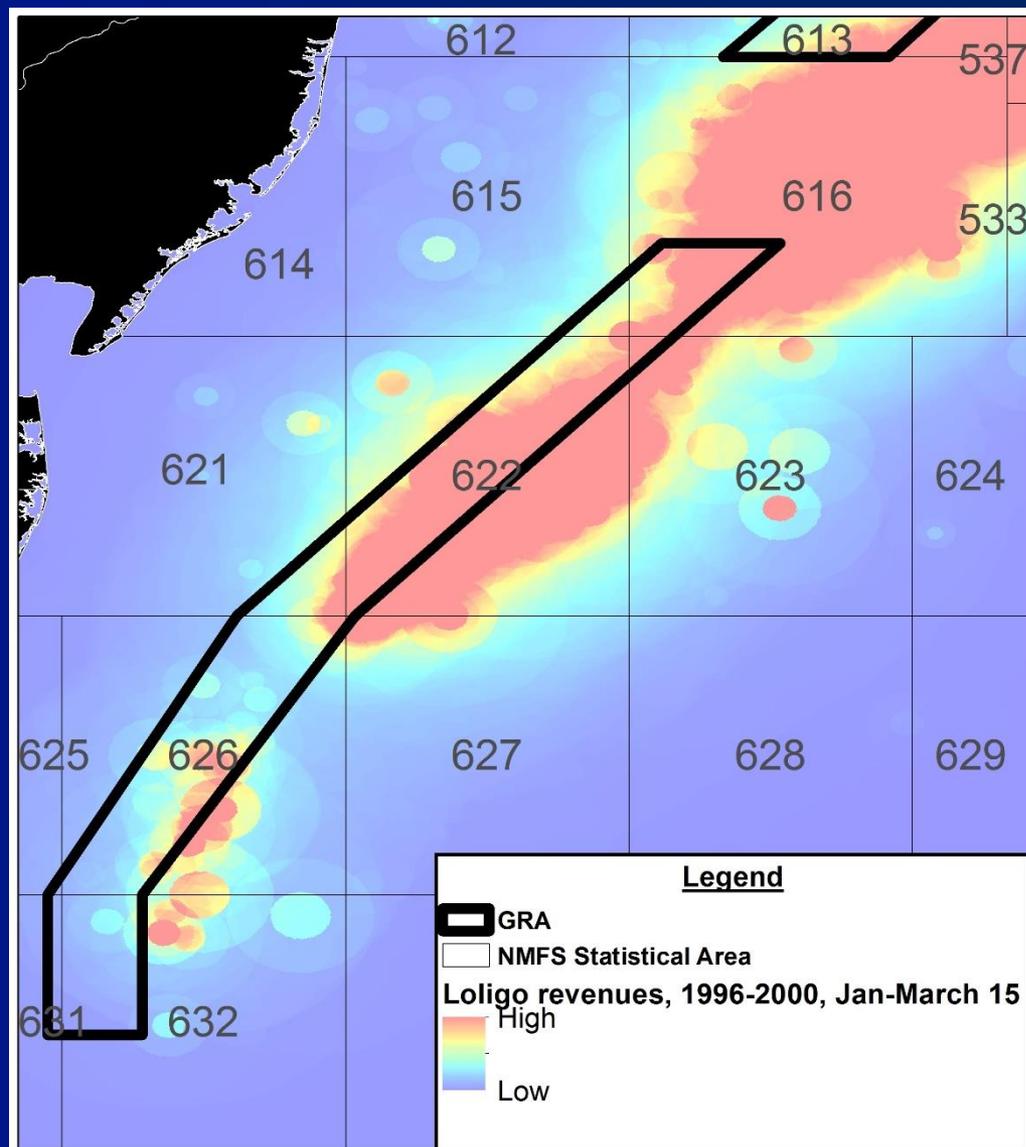
- Not yet analyzed
- **Scup price = \$0.59/lb** , Jan-Mar 2014 (total landed pounds /total value, dealer data)
- **Longfin squid price = \$0.99/lb**, Jan-March 2014

Economic Impacts

NEFSC SSB revenue
mapping model

Longfin squid
revenues, Jan 1-
March 15, 1996-
2000

Best used to
describe relative
intensity



Additional AP recommendations

- Updated NEFSC analysis
 - 2014 and 2015 data
 - Small mesh discards separated from large mesh
 - Consider reason for discards
- Alternative to modify timing of Southern GRA
 - Currently Jan 1 – March 15
 - Recommendation: Feb 1 – March 15
 - Scup distribution has changed, no longer in S GRA in January

Staff Recommendation

- **Alt. 3C** (remove statistical area 632)
 - Very low observed scup discards, 1989-2013
 - Exposes estimated <1% of scup and 8% of longfin squid (compared to current GRA)
- **Alt. 1A** (status quo Northern GRA)
- Use **EFPs** to allow limited small-mesh fishing in GRAs, collect data

Questions?