Summary of 2016 scallop survey results for FY2017

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Scallop AP and Committee
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New England
Fishery Management Council

Summary of presentation

Part 1: Summary of 2016 survey results (NGOM, VIMS, SMAST, WHOI, HabCam)

Part II: Summary of PDT discussions to date

See Doc.5 – Draft PDT Meeting Summary (Aug. 30/31)

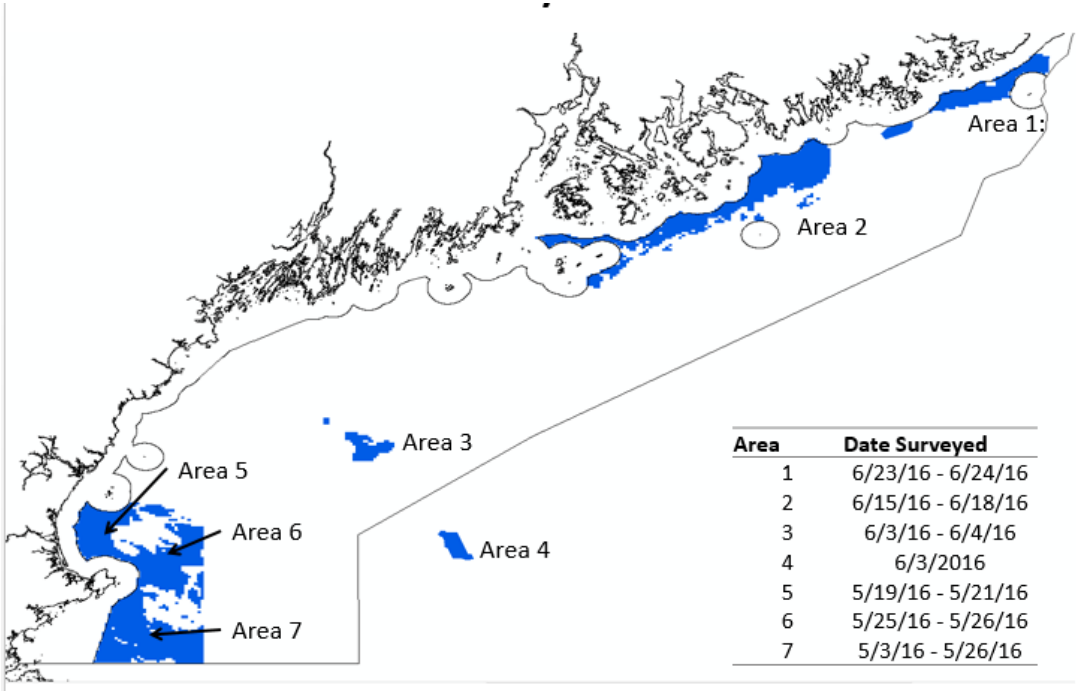
Survey Presentations are also available on the NEFMC scallop page under the Aug. 30/31 meeting link.

Part I – Summary of 2016 survey results

- Very successful survey season – 6 separate surveys of resource
  1. VIMS dredge survey of MA, NLS, and CA II
  2. SMAST intensive survey of CA I and NLS
  3. WHOI HabCam v4 survey of the Northern Edge
  4. Habcam group v3 survey of ET
  5. NEFSC dredge of GB and Habcam v4 of MA and GB
  6. ME DMR/Umaine survey of the NGOM
- Slides will give a brief overview of all surveys and major take home messages from each research group
- Very high level findings:
  1. Total biomass expected to increase.
  2. Overall lack of incoming recruitment observed throughout the resource.

Northern Gulf of Maine

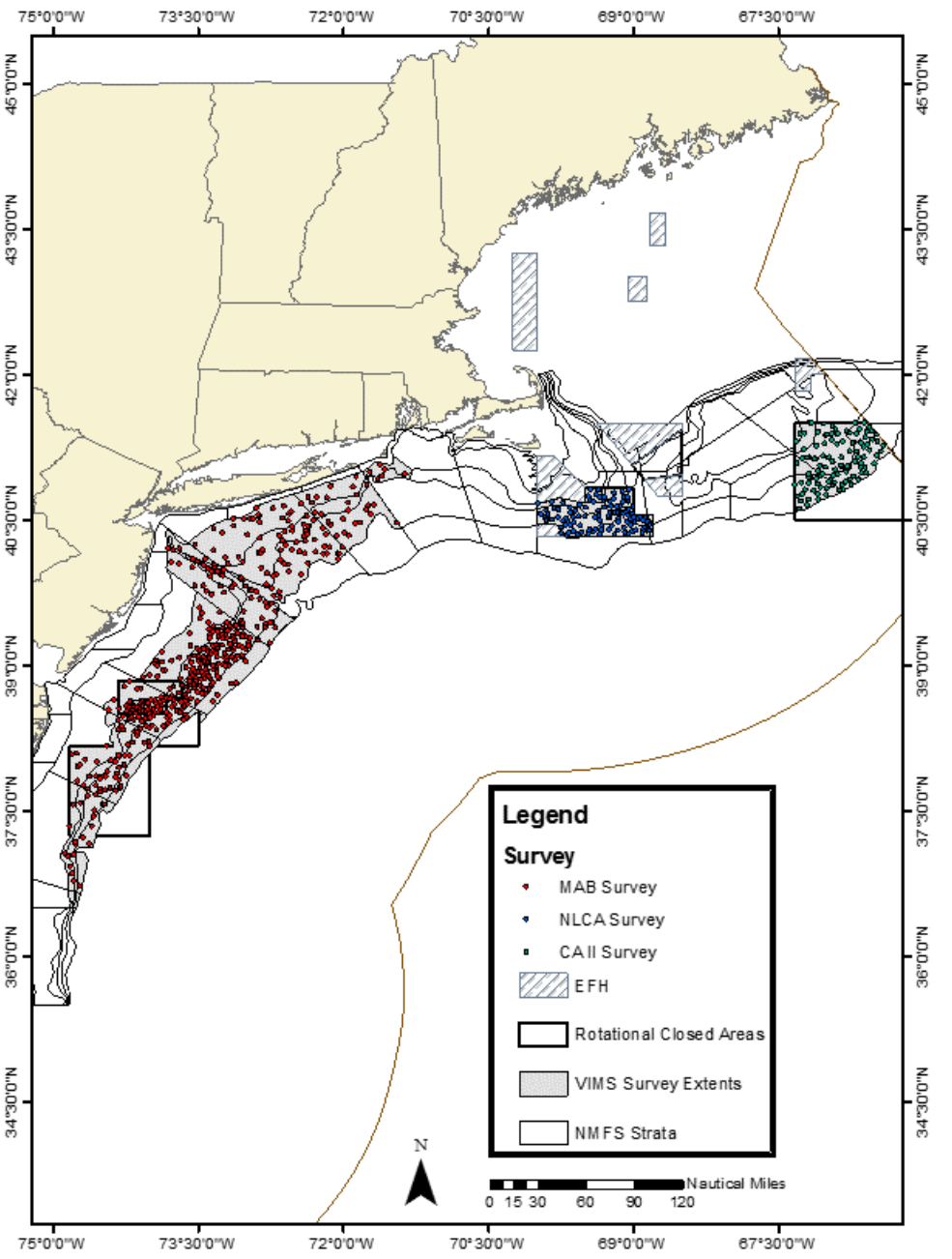
- ME DMR dredge survey
- 238 stations in 7 areas throughout the Gulf of Maine (Cape Ann to Machias Seal Island).
- Biomass in area has increased since 2012 (last surveyed)
- Majority of biomass in southern portion of management area



Area	Date Surveyed
1	6/23/16 - 6/24/16
2	6/15/16 - 6/18/16
3	6/3/16 - 6/4/16
4	6/3/2016
5	5/19/16 - 5/21/16
6	5/25/16 - 5/26/16
7	5/3/16 - 5/26/16

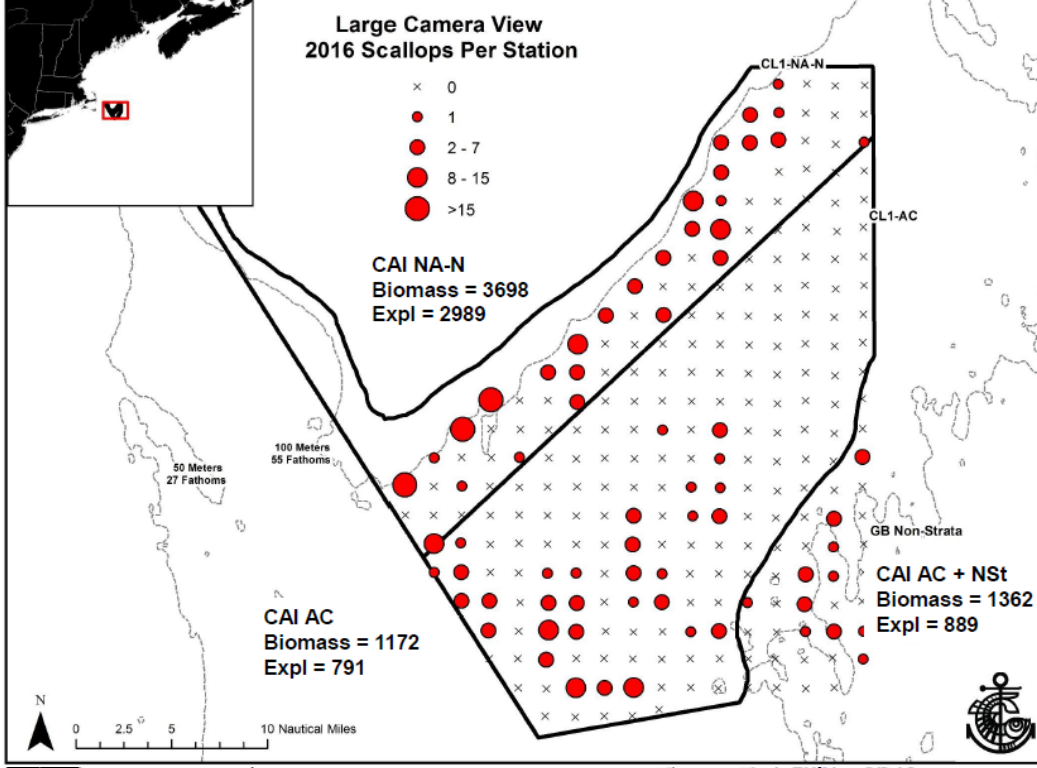
VIMS surveys

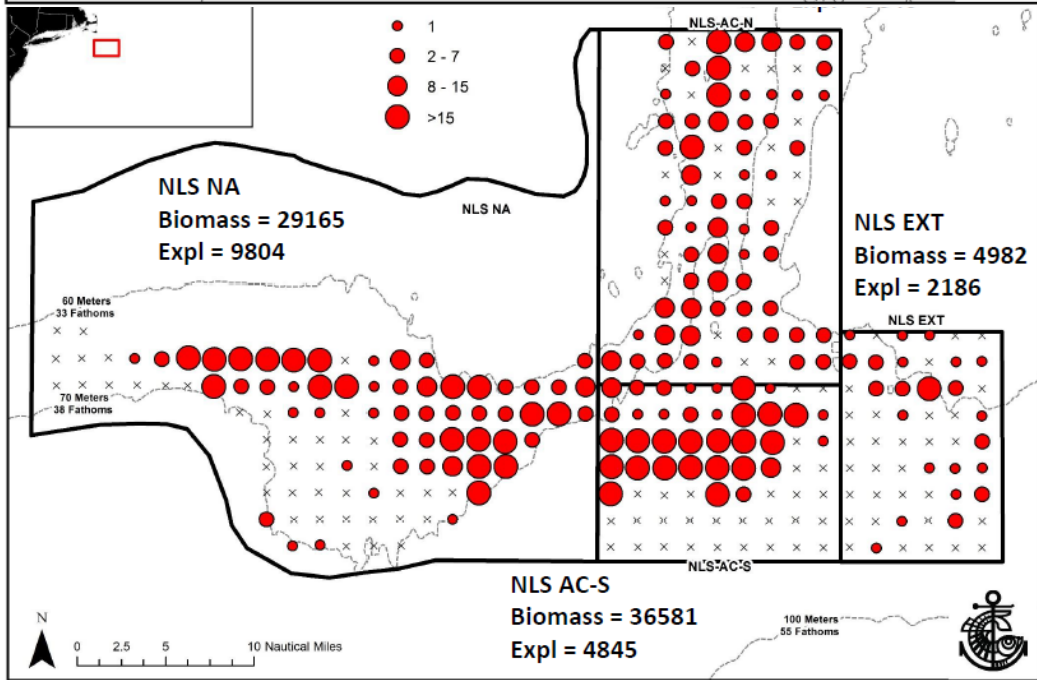
- 3 Surveys conducted from early-May to late June (MA, NLS, CA II)
- Continued use of stratified random sampling design to increase precision
- 659 dredge tows (450 MAB, 109 in NLCA and 100 in CA II)
- Sampling intensity of SH:MW ~5,000 samples in MA and ~1,000 samples for both the NLS and CA
- Slower growth rates in ET Closed and southern portion of NLS
- No strong signals of incoming recruitment.



SMAST survey

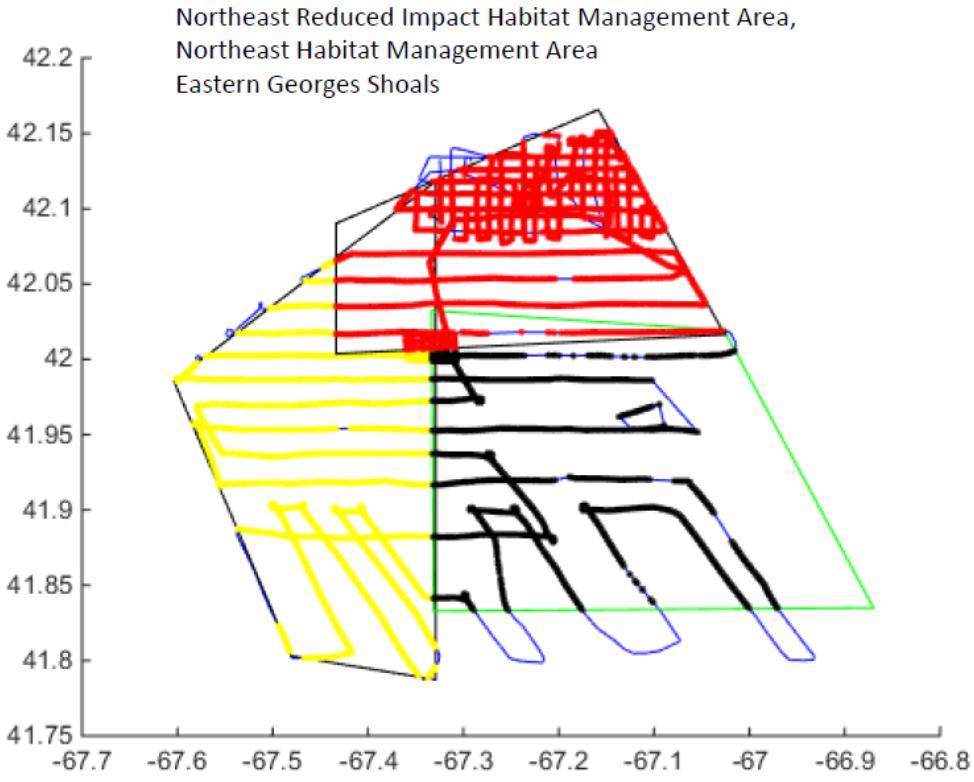
- 2 industry funded intensive surveys at 1.5 nm grid (CA I and NLS)
- Surveys covered 549 stations during two cruises in June
- Large, Small, and DSC cameras
- NLS – average shell height, total average biomass, and exploitable average biomass all increased from 2015. Slower growth rates in the southern portion.
- CA I – Majority of biomass in survey (including exploitable biomass) in the no access "sliver" area.





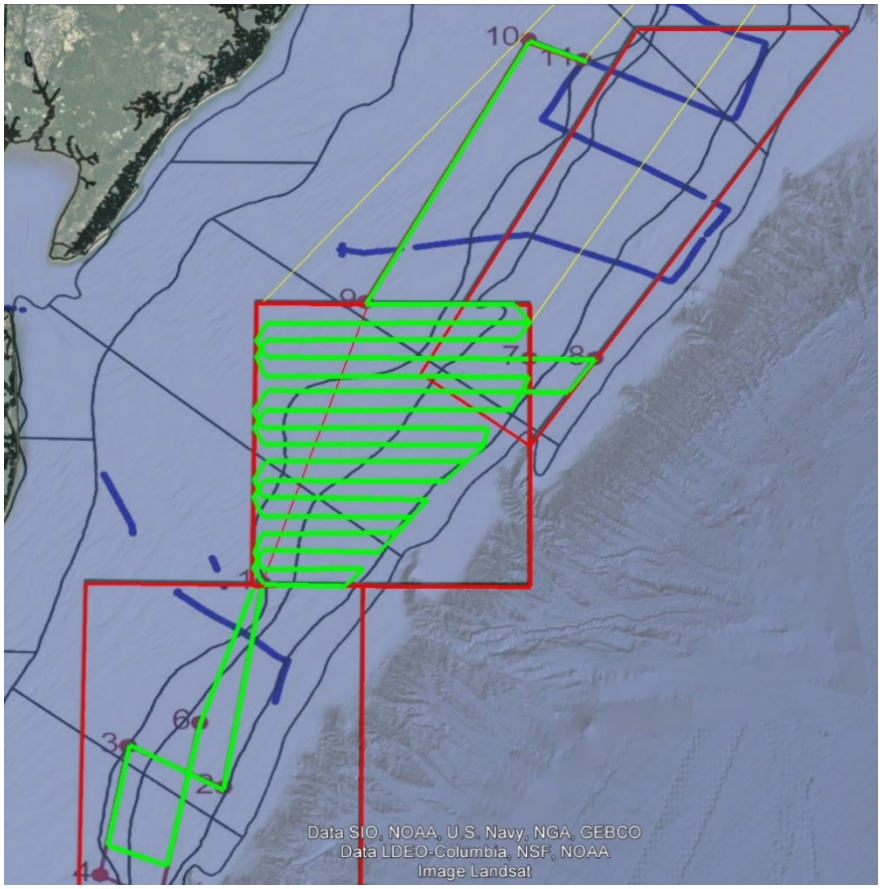
WHOI

- HabCam v4 survey of the Northern Edge in partnership with Lund's Fisheries
- Area included Northeast Reduced Impact Habitat Management Area, the Northeast Habitat Management Area, and eastern Georges Shoal.
- Data suggests up to five cohorts of scallops within the footprint of the survey.
- The majority of the biomass in the eastern Georges Shoal area was considered to be exploitable.



Habcam Group

- Survey of ET AA using HabCam v3.
- July 9 – July 15 F/V Kathy Marie
- ~720 miles of transects, ~10,000 annotated images (1/200)
- Highest concentrations of animals were observed in the southern portion of the ET closed area.
- The majority of potential recruitment in the 51-75mm range.
- Mean length frequency in the area was 79mm.



Part II

1. Summary of PDT discussion to date

Doc.5, page 5 (table)

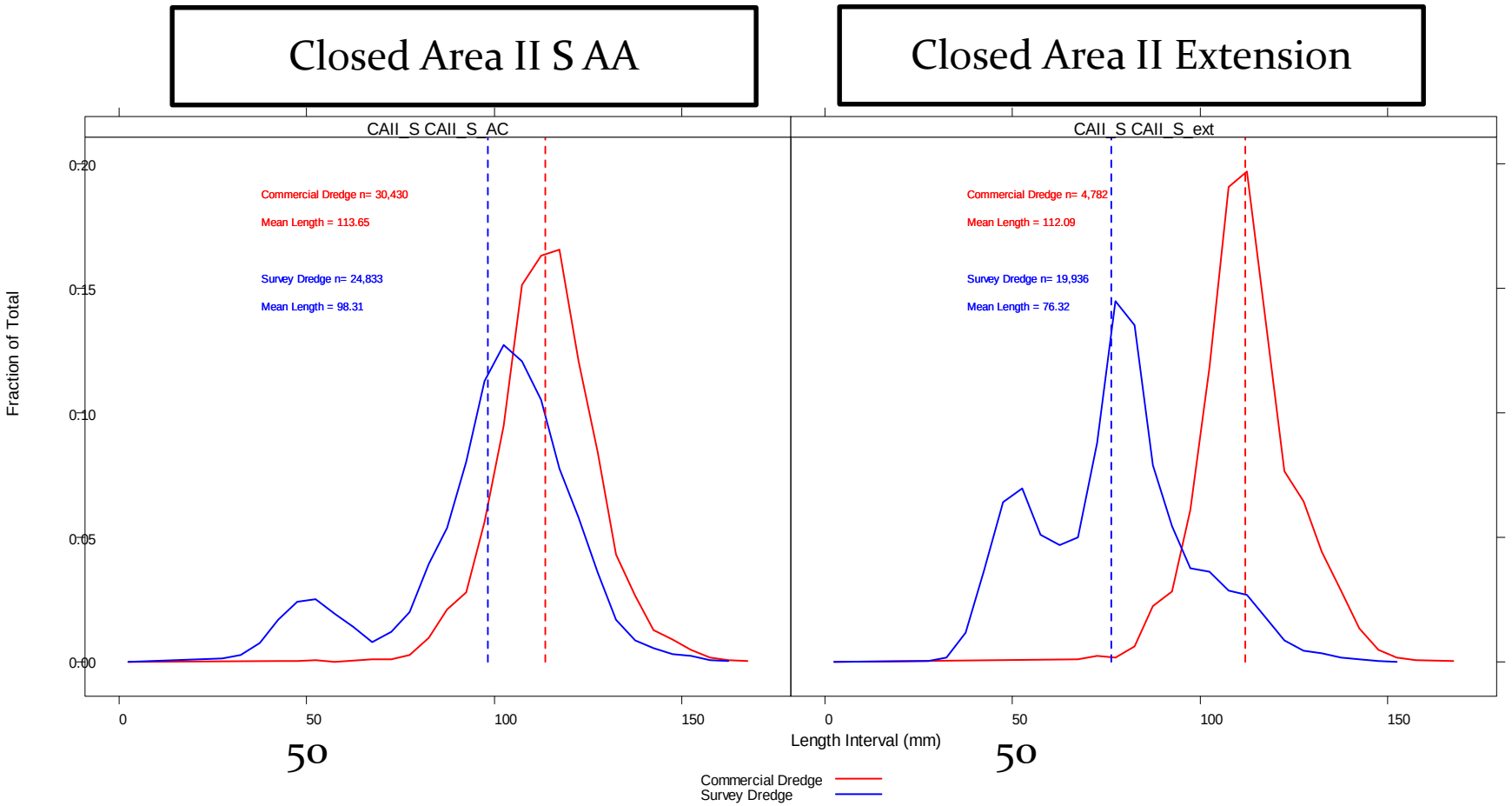
AP/CTE – Provide initial input based on preliminary survey results

Closed Area II and Extension

- Potential **access to CA II south. Leave CA II south extension closed?** – boundary ideas?

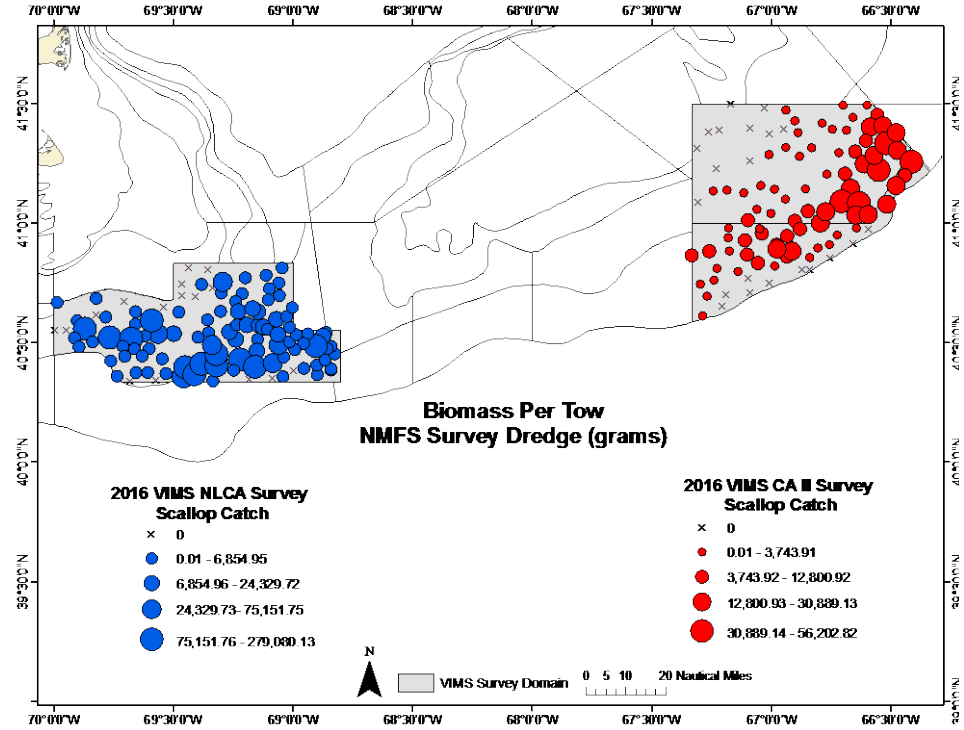
- Majority of pre-recruits (<75mm) observed in the extension (see next two slides)
- PDT supports considering CA II south access
- PDT does not support reopening CA II S Extension
  - Meat weights were lower in this area than CA II AA S, and that 2, 3, and 4 year old animals were observed in the survey this year.

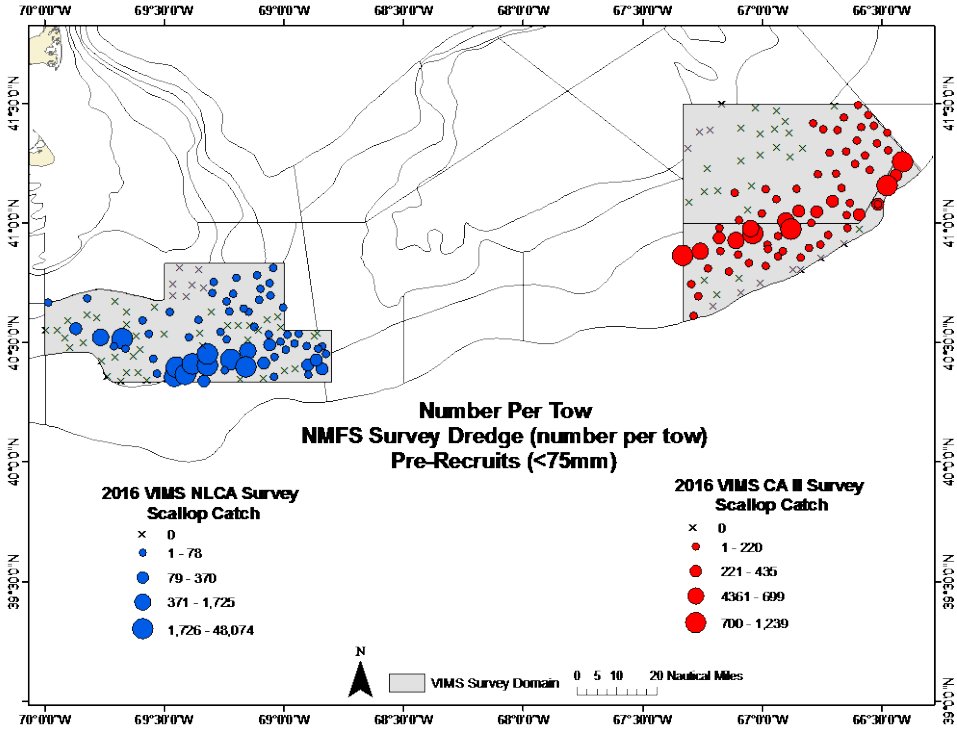
Closed Area II and Extension



2016 VIMS-Industry Cooperative NLCA & CA II Surveys

Scallop Distribution





Nantucket Lightship

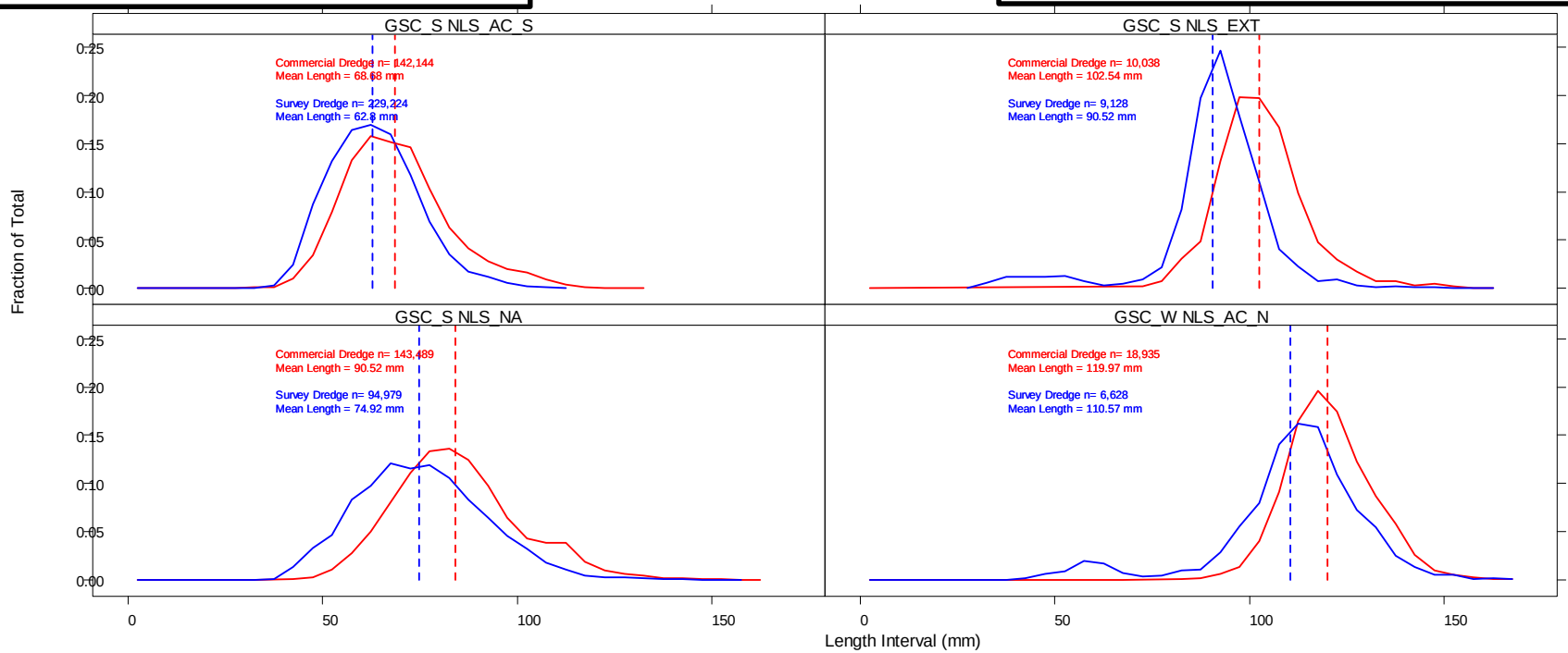
- Potential for AA trips – how to configure harvest? Split the area (north/south)? How to approach animals with slower growth rates, and lower growth potential in NLS S?

- The 2016 surveys (NEFSC, SMAST, VIMS) observed larger animals in the north (average SH of 110mm), and smaller animals in the south.
- The PDT noted that there is limited growth potential for animals in the southern portion of the NLS (factors include density dependence and depth).
- The PDT recommended using the VIMS SH/MW curve for the NLS south and NLS ext. closure.

Nantucket Lightship

NLS Access - South

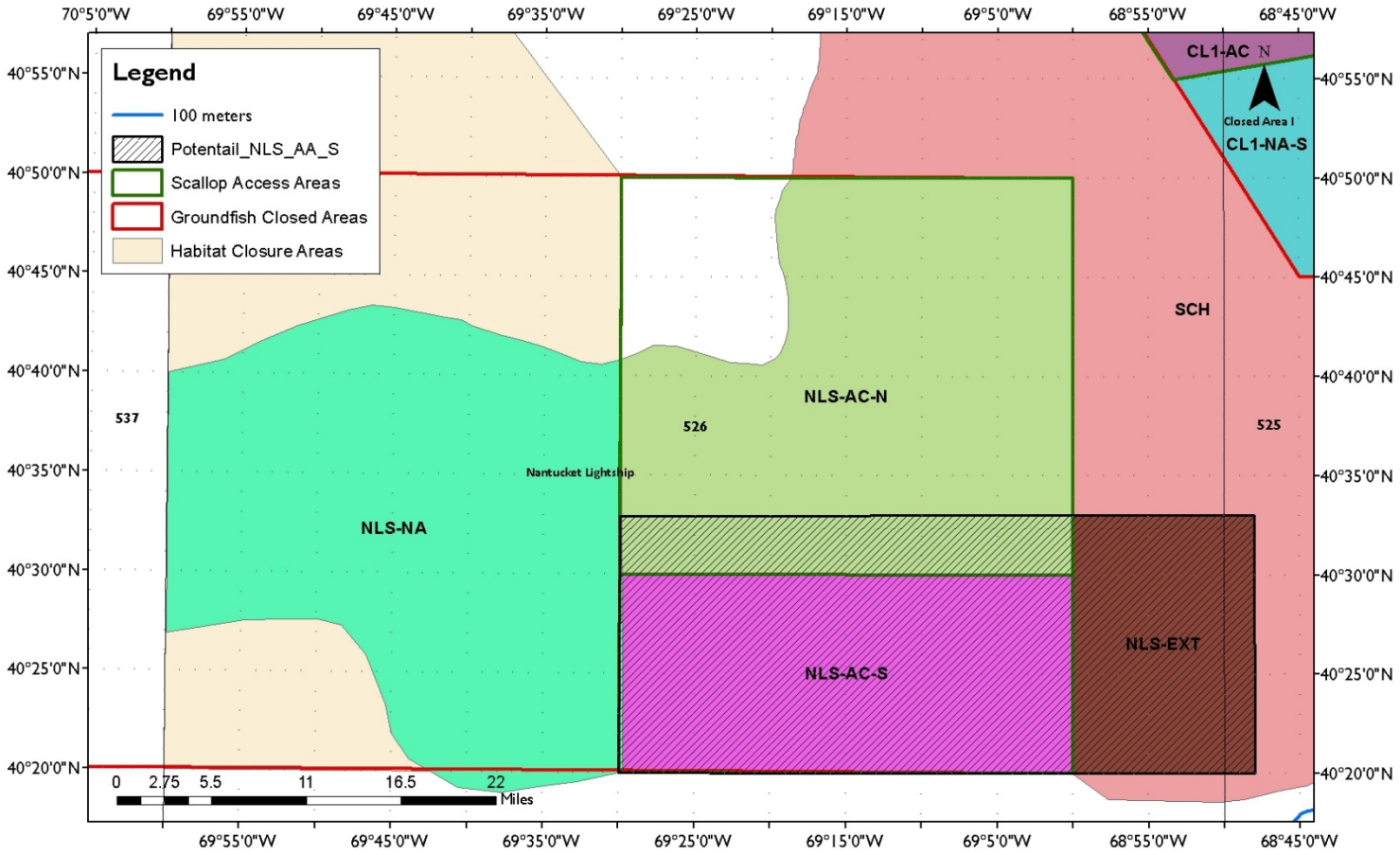
NLS Access - Extension



NLS No Access

NLS Access - North

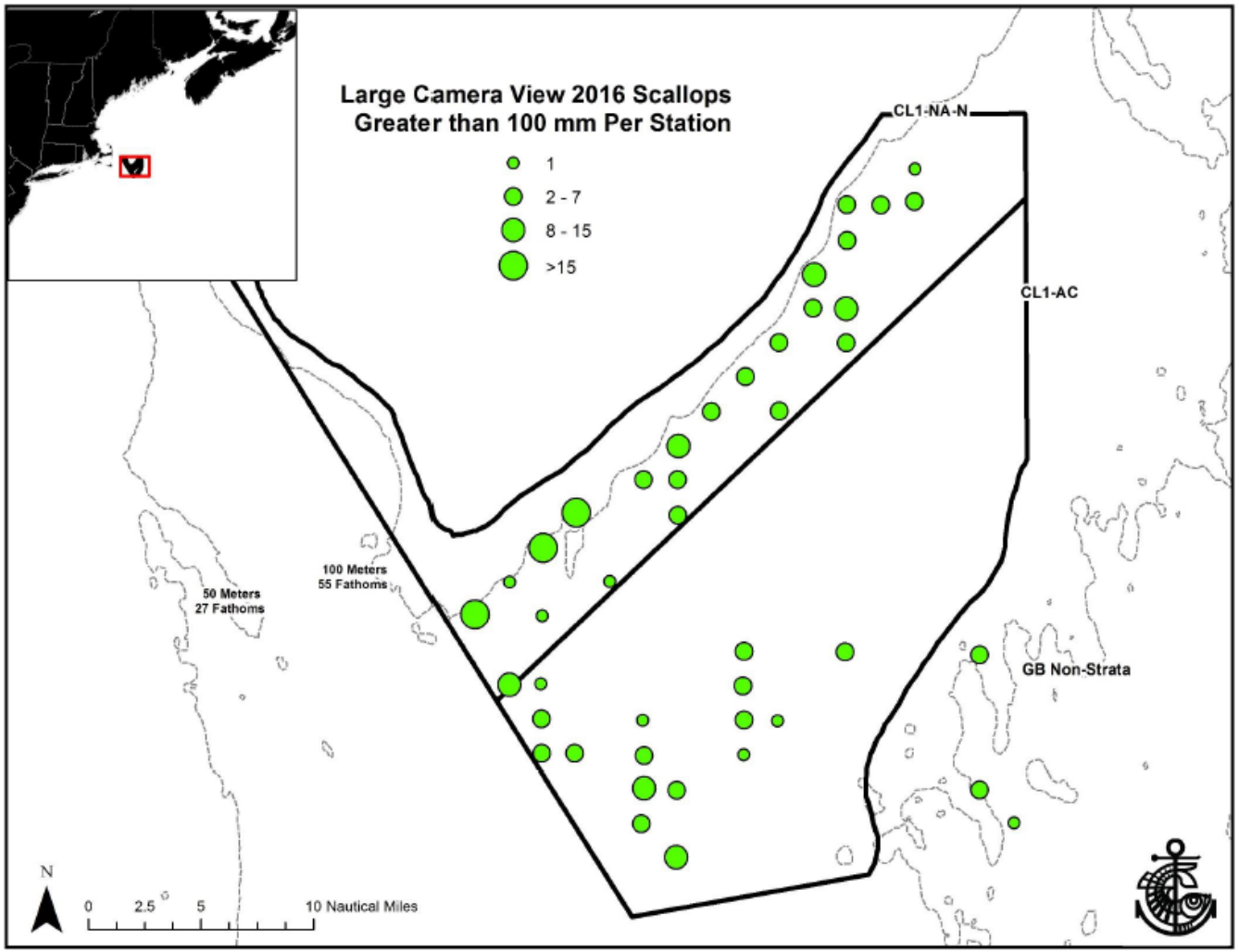
Nantucket Lightship



Closed Area I

- 6 year old animals were observed in the "sliver" area
- Meat samples appeared healthy (no gray meats).
- The PDT supports access to CA I if the AA boundary is expanded to include the biomass that has been observed in the "sliver" area.
- PDT recommends that the first opening of CA I AA should focus on addressing carryover trips which are already on the books (~1.5 million lbs.).
- Meat quality in the CA I area declines in the fall.

Closed Area I

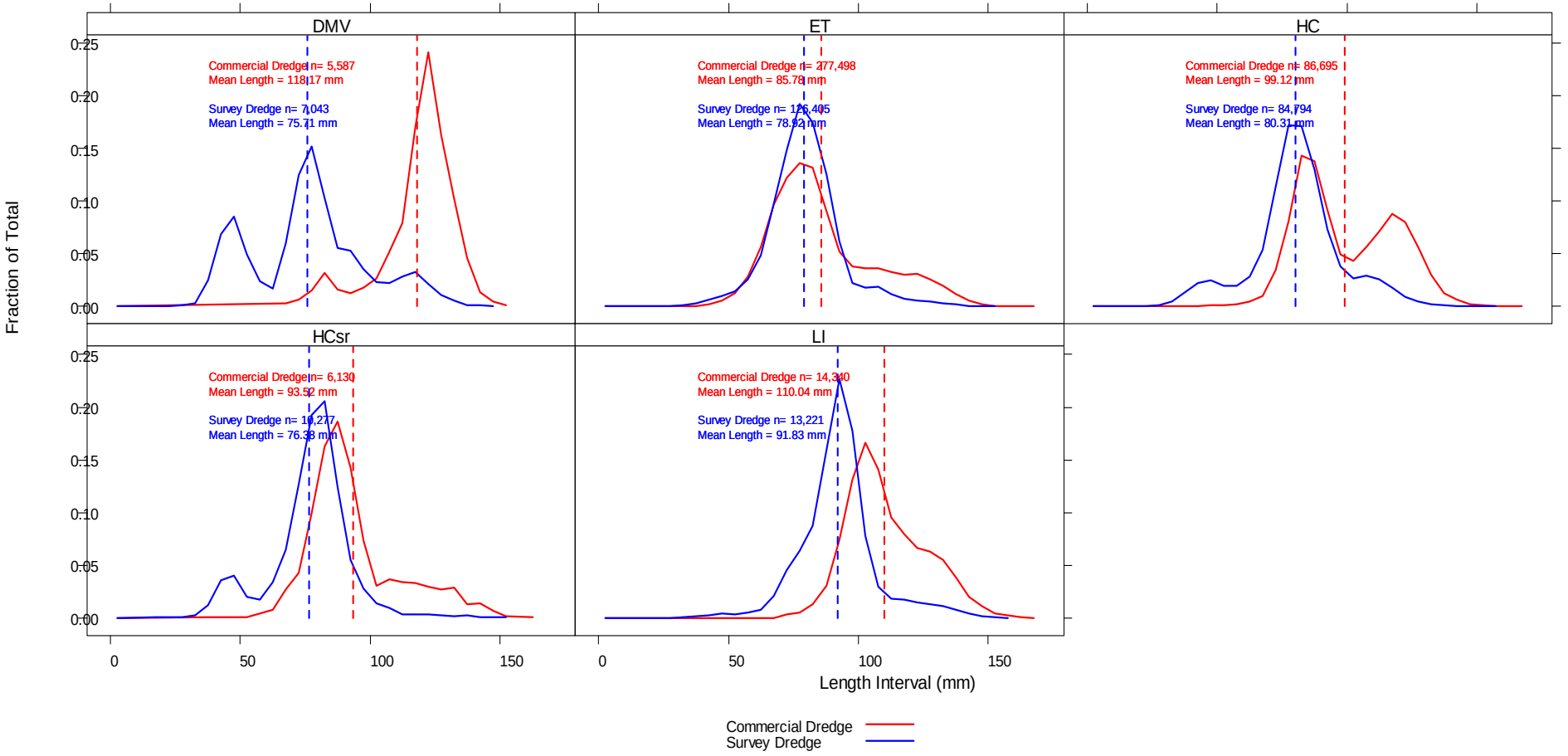


Mid-Atlantic Access Area

- Thoughts on access to MAAA (Megatron)?
- Continue current approach?

- PDT talked about 2 trips in the MAAA, not including ET Closed, supported the current approach (flexibility)
- Large YC in HC and ET will be 4yo this year

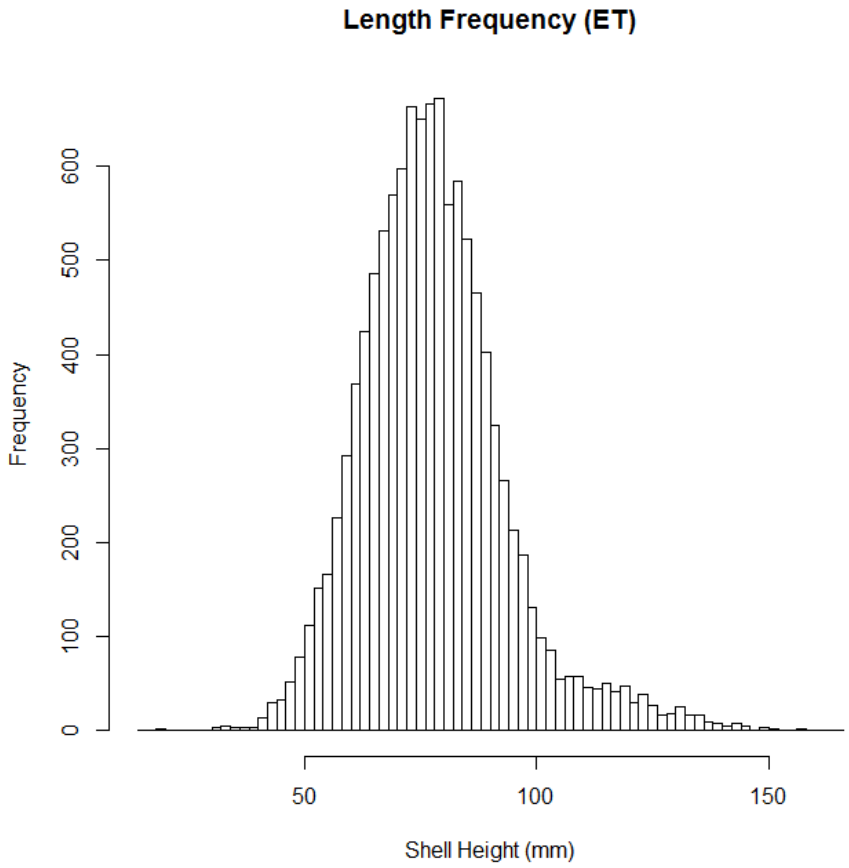
Length Frequencies in MA

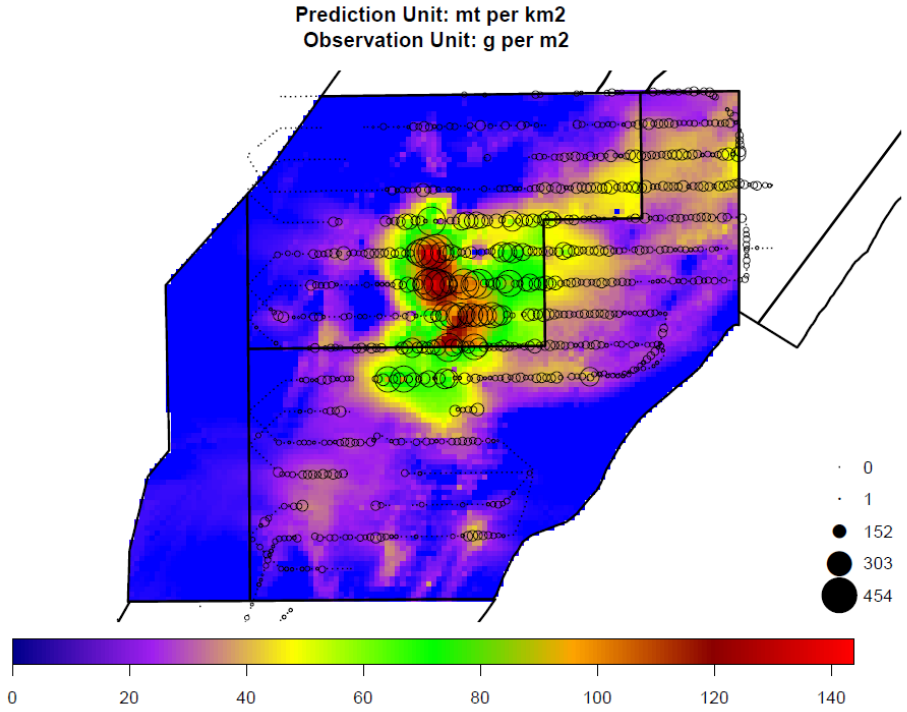


Elephant Trunk Closed

- Keep "ET Closed" closed? Consider for reopening as separate AA?
- The PDT does not support access to ET closed at this time.
- Densities of smaller scallops in the ET Closed (26-50mm, 51-75mm).
- The mean length of both surveys was less than 80mm.
- The PDT also discussed the overall lack of recruitment in other areas as a potential reason to keep this area closed for another year.

Elephant Trunk





Delmarva

- Ideas for Delmarva? Stay in MAAA? Open Bottom?

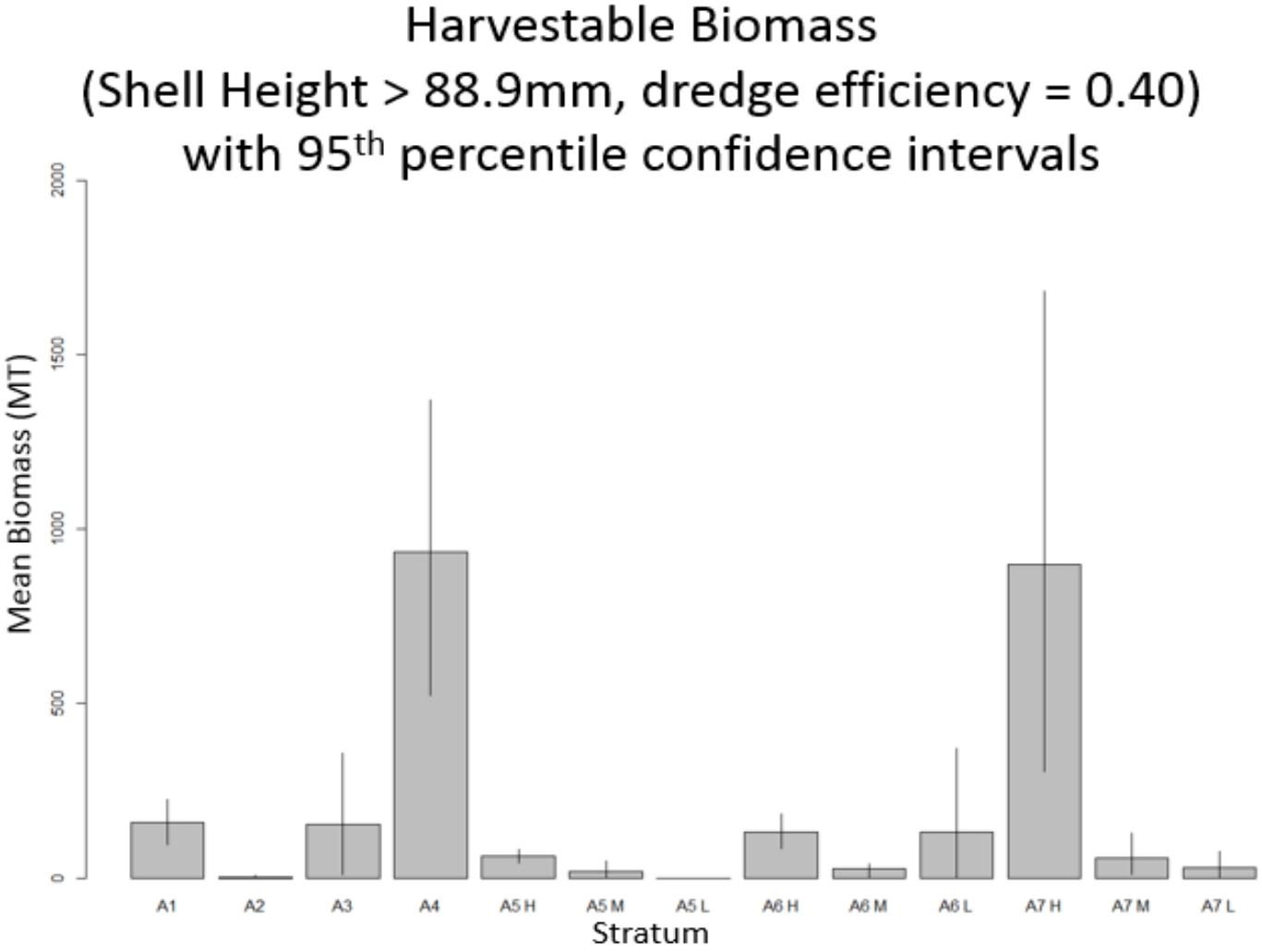
- Very low effort has been observed in the area so far this year. This may not hold true for the rest of the FY.
- PDT discussed applying low F to the SAMS run in this area.
- Continued prevalence of nematodes in the area.

Open Areas and RSA fishing

- Should the PDT consider runs with a lower F (F=0.4)? Status quo DAS?
- Any limits on RSA fishing in FY2017?

- Past actions used an F=0.48
- (Old) LPUE was overestimated in 2014 and 2015.
- PDT has discussed a run with an F=0.4 as potential alternative
- PDT discussed NLS N and ET Closed as places to consider limiting compensation fishing

Northern Gulf of Maine



NGOM

- Range of options for the FW28?
- PDT recommended exploring alternatives that set the TAC at a level that does not amount to a reduction for the GC fishery given the survey results.
- Any increase in TAC should be based on the survey
- PDT recommended using the ratio of the GC/LA 2016 landings, multiplied by the q.0.25 or q.10. value (next slide)
- The biomass estimates should be viewed as general estimates and not taken as point estimates.

NGOM (continued)

	LAGC IFQ/NGOM	LA	Total NGOM
2016 Landings	87,103	291,232	378,335
% 2016 Landings	23%	77%	100%

Exploitation Rate = 0.20 **Dredge Efficiency = 0.40**	**q0.05**	**q0.10**	**q0.15**	**q0.20**	**q0.25**	**Mean**
Biomass Estimate (MT)	657	795	932	1018	1090	1651
TAC(MT)	131	159	186	204	218	330
Biomass Estimate (lbs)	1,447,797	1,751,822	2,055,240	2,244,263	2,402,140	3,640,385
TAC(lbs)	289,559	350,364	411,048	448,853	480,428	728,077

2017 NGOM TAC Options			
	LAGC IFQ/NGOM	LA	Estimated Total NGOM
q 0.10	**63,560**	269,701	333,261
q 0.25	**93,505**	369,820	463,325

What's next?

- PDT will refine basic projection run and develop other alternatives based on AP input today
- PDT meetings scheduled in September/October to develop alternatives and complete analyses
- New this year: October 13 joint PDT/AP meeting in Boston
- Early-November AP and Cmte review and select preferred alternative – November 2 and 3
- Final Council Action – Nov. 15-17, Newport, Rhode Island
- FW28 implementation in April 2016