Upcoming Meetings:

- Scallop PDT conference call – TBD – Flatfish AM focus
- Scallop PDT meeting – Boston, MA on July 18th
- Scallop PDT meeting – 2 days – Falmouth, MA on Aug 29/30
- AP and Committee Sept. 19th and 20th – New Bedford, MA

Scallop RSA Program and Recent Priorities

Jonathon Peros

Scallop Plan Coordinator

Scallop AP and Committee Meetings
May 31, 2017 & June 1, 2017

New England
Fishery Management Council

Meeting Materials

- Doc #3 – RSA Share Day meeting summary
- Doc #4 – PDT meeting summary (May 22, 2017)
- Doc #5 – PDT's RSA recommendations
- Doc #6 – Summary of RSA Awards

- **Goal of Meeting Today**

1. Develop Recommendations for 2018/2019 RSA priorities
2. Discuss FY 2017 fishery data

Background

- Scallop RSA program began in 1999
- Evolved over time but overall 1.25 million pounds set-aside each year to fund research projects (over $10mil)
- About 10-15 projects are funded annually
- At least biennially the Council recommends the research priorities that are used in the funding announcement

Scallop RSA Process – Explained in FFO

- Process coordinated by NEFSC and NEFMC
- No federal funds – awards in pounds of scallop – allocated through competitive grants process
- Council identifies research priorities every 1-2 years – usually June meeting for summer announcement
- Applications submitted through internet based system
- NMFS convenes a management review panel meeting with Council members and technical experts to discuss relevance of each project. Reviewers submit individual comments; no consensus recommendations are made.

Scallop RSA - Technical Review Process

- Technical Review Process: each proposal reviewed by three subject matter experts that score technical merits (importance/relevance, technical merit, qualifications, costs, outreach)
- Separate technical panel convened to review survey proposals
  - Technical experts review all survey proposals (NMFS and non-federal scientists)
  - Two meetings: one about process and review of survey methods peer review and a second to discuss each proposal
- No consensus – individual comments are submitted by each reviewer

Scallop RSA Process (cont.)

- Successful applicants may be asked to refine/modify project to better fit priorities/management needs.
- Priority given to higher technically ranked proposals, although additional factors such as management relevance, project needs, and cost effectiveness may be considered.
- Common scallop price determined by NMFS based on best and most recent data to determine set aside allocation.
  - $12 for 2017/2018. Recent auction prices below this value.
- Awards in pounds, can be harvested from any area open to fishery unless FMP prohibits it.
  - FW28 limits where RSA lbs can be fished.

Scallop RSA Process (cont.)

- Recipients required to submit financial reports as well as technical performance or progress reports every six months.
- Final reports due no later than 90 days after award expires, but researchers can apply for extensions for both progress and final reports.
- Data collected under all NOAA grants/cooperative agreements must be made visible, accessible, and independently understandable.

2017/2018 - Scallop RSA Timeline

- April 7, 2016: Awards Announced (2016/2017)
- May 4, 2016 RSA Share Day
- May 25, 2016 – PDT develops recommendations
- June 6/7, 2016 – AP, Committee recommendations
- June 22, 2016 – Council makes research recommendations
- August 8, 2016 – FFO published
- October 7, 2016 – Proposals Due
- Nov. – Dec. 2016: Technical and Management Reviews
- March 17, 2017: Awards Announced

Awards: 2010 - 2017

- ~$97 million awarded over 8 year period
  - (Average scallop price) x (set-aside lbs) = Total funding
  - Total funding includes *compensation fishing* and *research*

Priority	Number of Projects		Funding	
Survey	47	(42%)	$36,584,185	(38%)
Bycatch	28	(25%)	$29,182,167	(30%)
Turtle	9	(8%)	$7,226,437	(7%)
Non-harvest mortality	8	(7%)	$6,643,424	(7%)
Ecosystem/ Habitat	7	(6%)	$6,412,691	(7%)
Biology	6	(5%)	$4,974,064	(5%)
Meat Quality	5	(4%)	$2,965,334	(3%)
LPUE	1	(1%)	$270,199	(>1%)
Survey/Habitat	1	(1%)	$2,665,944	(3%)
Grand Total	112		$96,924,445	

Recipients: 2010 - 2017

- 12 groups received funding through 112 successful proposals
- Table shows groups that have had at least 3 projects funded
  - Funding includes compensation fishing and research

Group	Projects Funded	Count of Primary Project Category	Funding	
Coonamessett Farm	33	29%	$33,847,236	(35%)
SMAST	29	26%	$21,037,762	(22%)
VIMS	26	23%	$19,527,898	(20%)
Arnie's Fisheries	9	8%	$8,811,958	(9%)
U of Deleware	3	3%	$3,883,335	(4%)
Maine DMR	3	3%	$1,520,173	(2%)
Northeastern University	3	3%	$2,828,190	3%
Grand Total	112	100.00%	$96,924,445	100.00%

Two year projects & allocated lbs

- Several projects funded for 2 years in 2016 and 2017.
- NGOM Surveys will be funded through 2018 RSA

Award years	2016 lbs	2017 lbs	2018 lbs	Total lbs
2016/2017	1,250,000	92,118	-	1,342,118
2017/2018	-	1,157,882	118,636	1,276,518

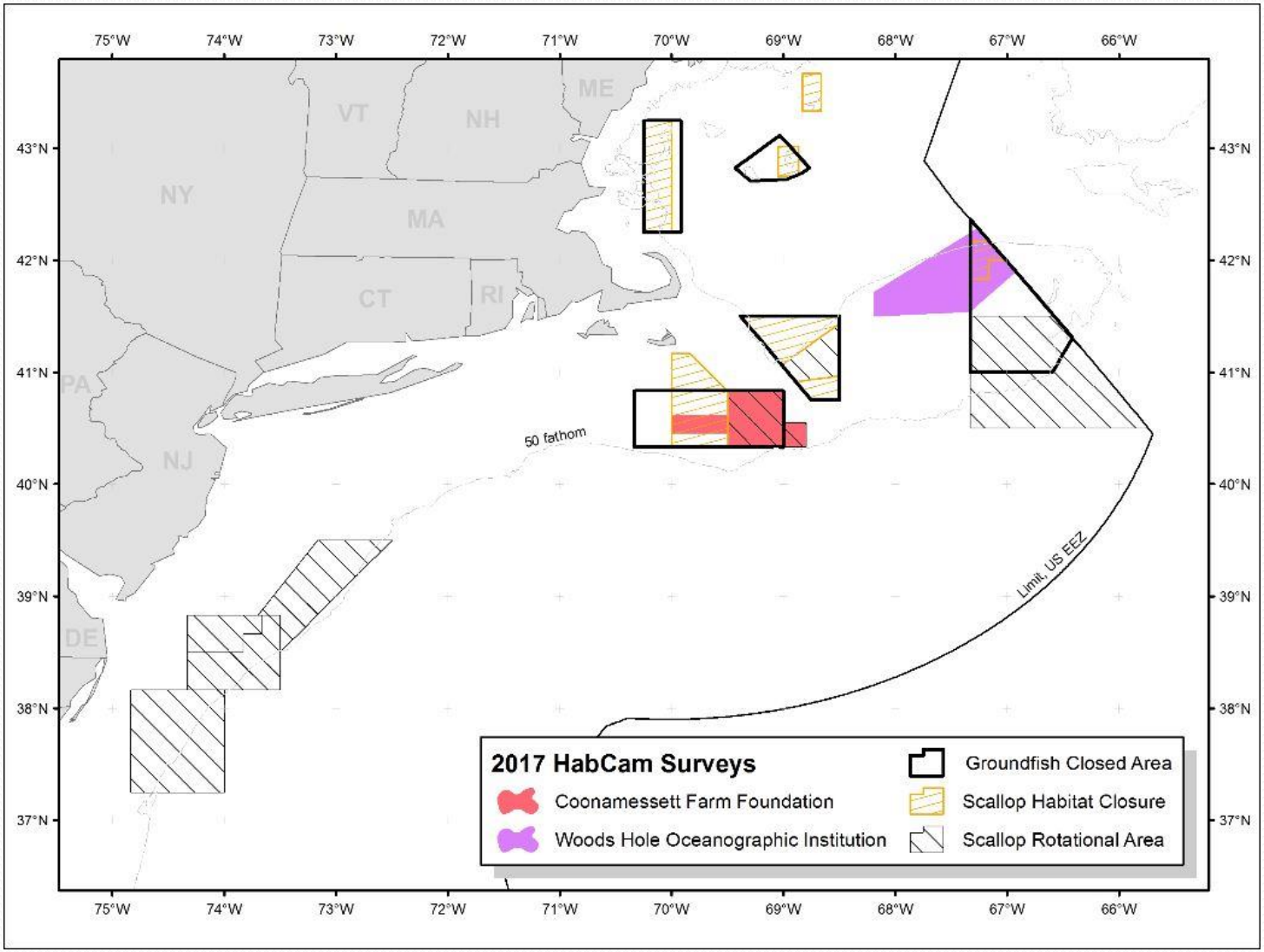
2017/2018 RSA Awards

- RSA Awards Announced on March 17, 2017
- 17 projects recommended for funding, over 30 researchers from 15 organizations (Doc. 3)
  - Surveys (dredge, drop camera, HabCam)
- 1.25+ mil. lb set-aside expected to generate more than $15 million dollars - $3.8 to fund research, $11.5 in compensation fishing
- 3 projects funded for 2017/2018, 1 for 2018 only
- Multiple survey projects funded in 2016/2017 that will be on the water this year

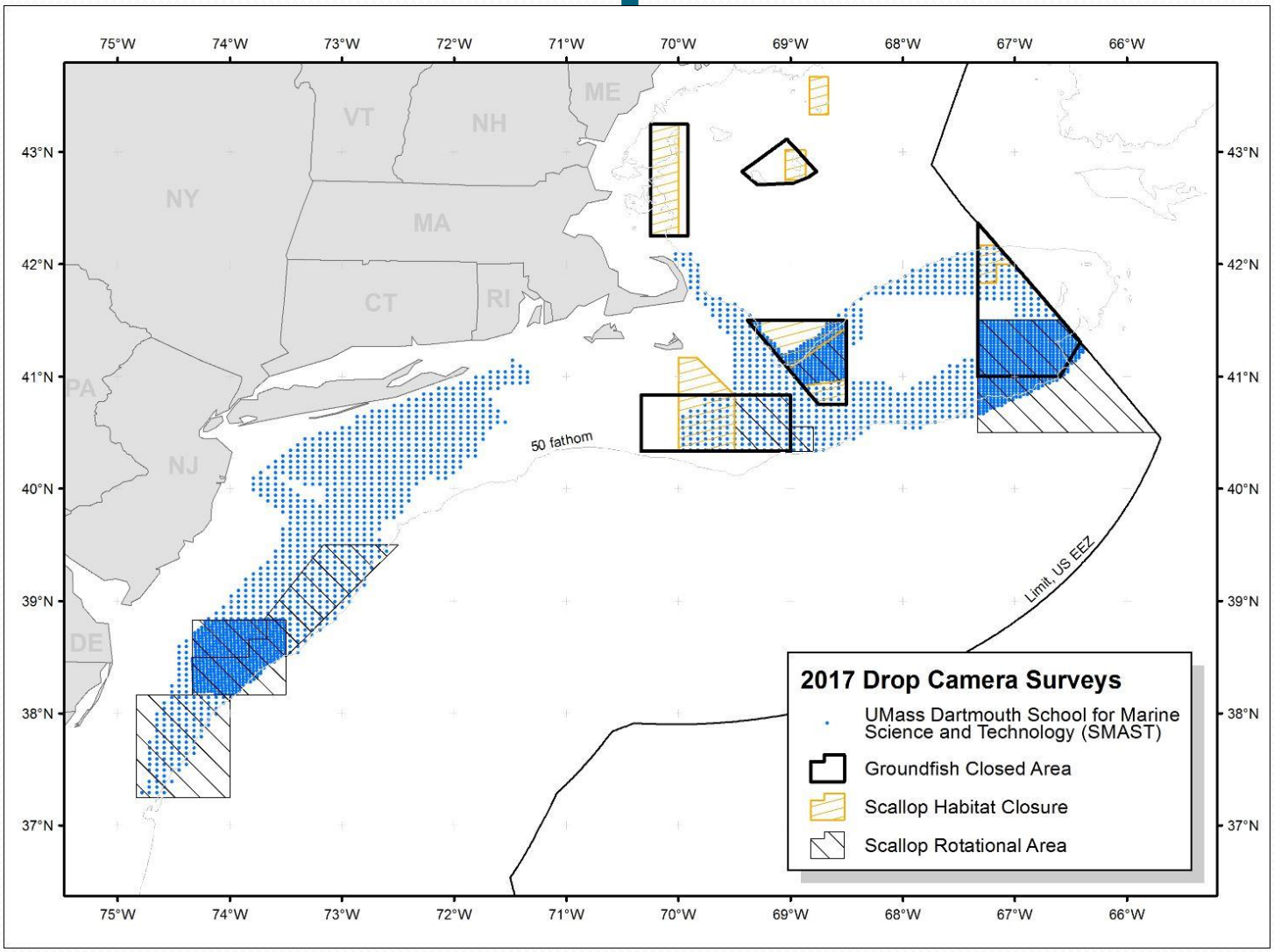
2017/2018 Awards

RSA Priority	Priority Rank	Projects Funded	Funding
Survey	Highest	7	$4,619,425
Bycatch	High	5	$5,518,181
Non-harvest mortality	Medium	1	$2,226,996
Environmental	Other	1	$1,356,260
Turtles	Medium	1	$899,000
Meat Quality	High	1	$428,160
LPUE	Other	1	$270,199

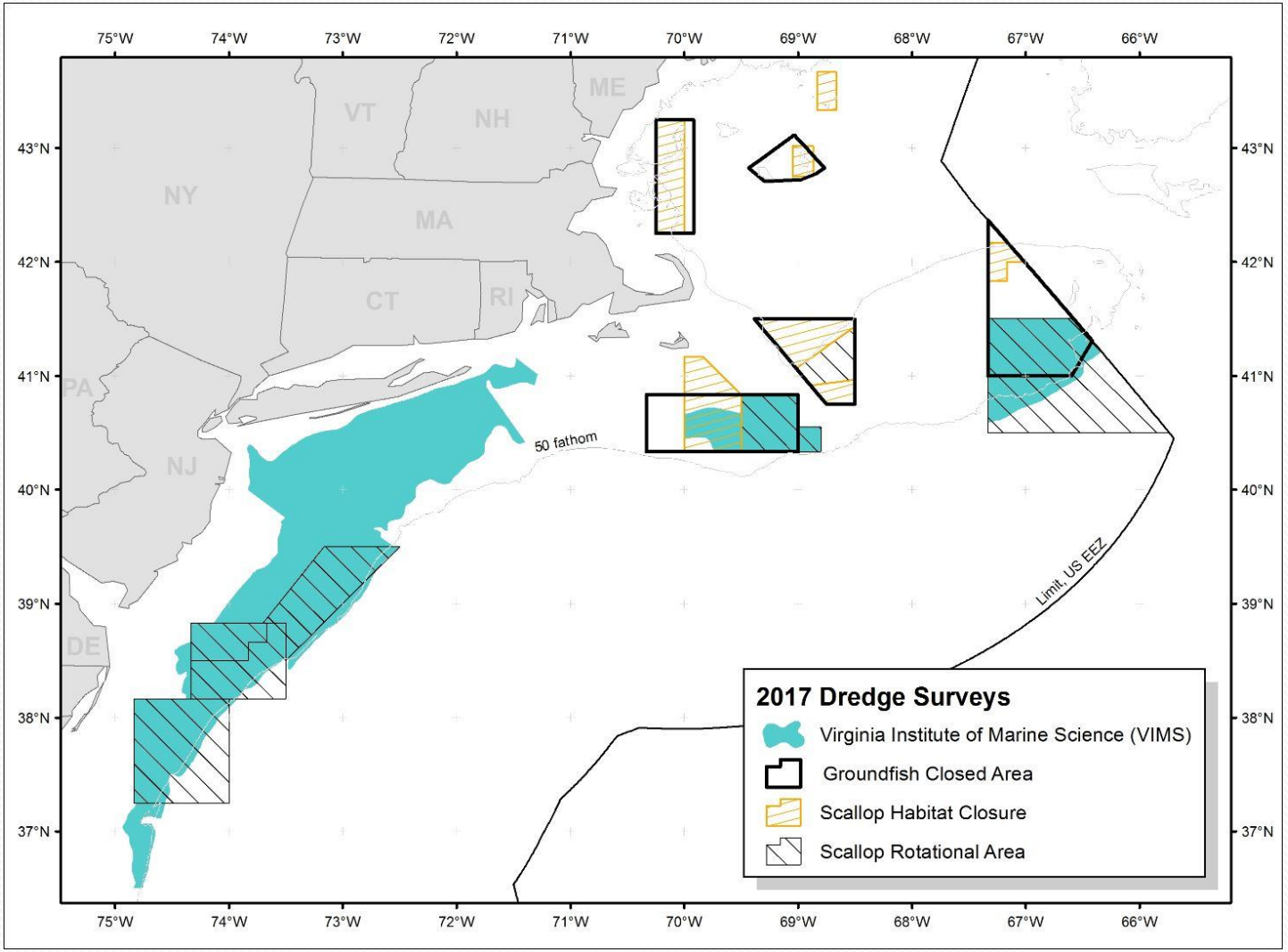
2017 RSA HabCam Surveys



2017 RSA Drop Cam Surveys



2017 RSA Dredge Surveys



Current Scallop RSA research priorities (2017/2018)

- **Highest** – Surveys: intensive for access areas, intensive for candidate access areas, broad resource wide (equal importance)
- **High** – Bycatch, scallop meat quality (equal importance)
- **Medium** – non-harvest mortality, turtles, spat and seeding projects (in order of importance)
- **Other** – habitat characterizations, environmental stressors/biology projects, LPUE, other surveys (equal importance)

PDT RSA Recommendations
(Documents 4 and 5)

- **Highest** – Surveys (Doc.5, page 2)
  - 1a: Expand list to include entire MAAA (ET and 'flex', HC, DMV), keep Closed Area II and extension, Nantucket Lightship
  - 1b: Replace "candidate access areas" with "areas of importance"
  - 1b: Include HMA areas in NLS and CA I, HAPC in CA II

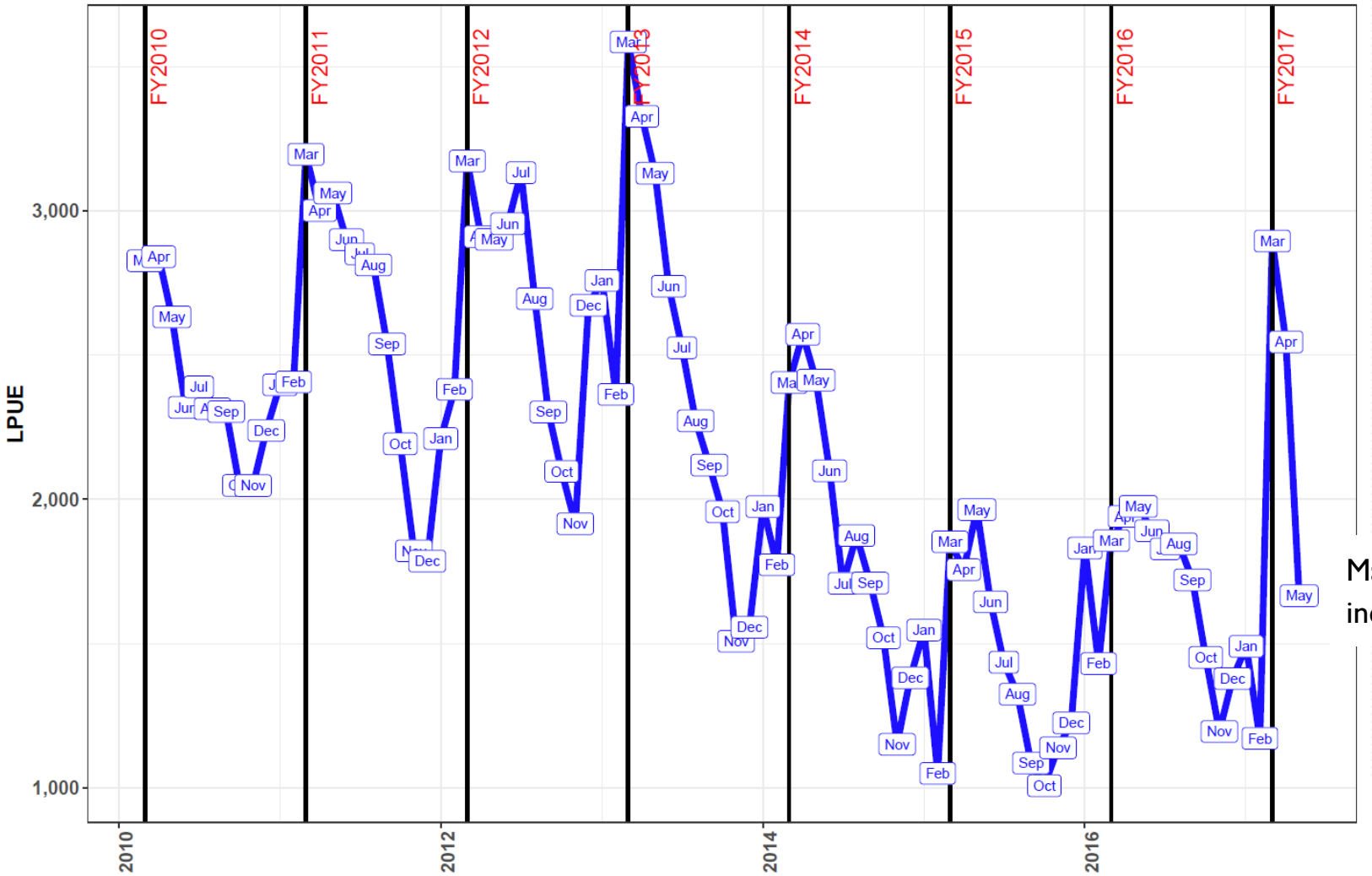
- The PDT did not reach consensus on how to position GOM/NGOM survey work as a highest priority
  - General agreement that surveying some places there should be elevated
  - Added language to 1b and 1c for Committee to consider:
  - 1b: Include portions of NGOM management area: Stellwagen Bank, southern Jeffreys Ledge, Platts Bank.
  - 1c: Add "Gulf of Maine" to candidate broad-scale areas (GB & MA)

PDT RSA Recommendations (cont.)
(Documents 4 and 5)

- **High** – Bycatch, scallop meat quality (Doc.5, page 2-3)
  - 2. Bycatch: Add language around the enforceability and feasibility of gear modifications as a consideration.
  - 3. Scallop Meat Quality: added reference to sea turtles, focus on distribution and "transmission"
- **Medium** – (page 3)
  - 4. Non-harvest mortality: Keep as is, strike reference to upcoming benchmark assessment.
  - 5. Turtles: Broaden priority beyond just loggerhead turtles, but link priority to the potential impacts on fishery. Expand the geographic area of interest to include Georges Bank.

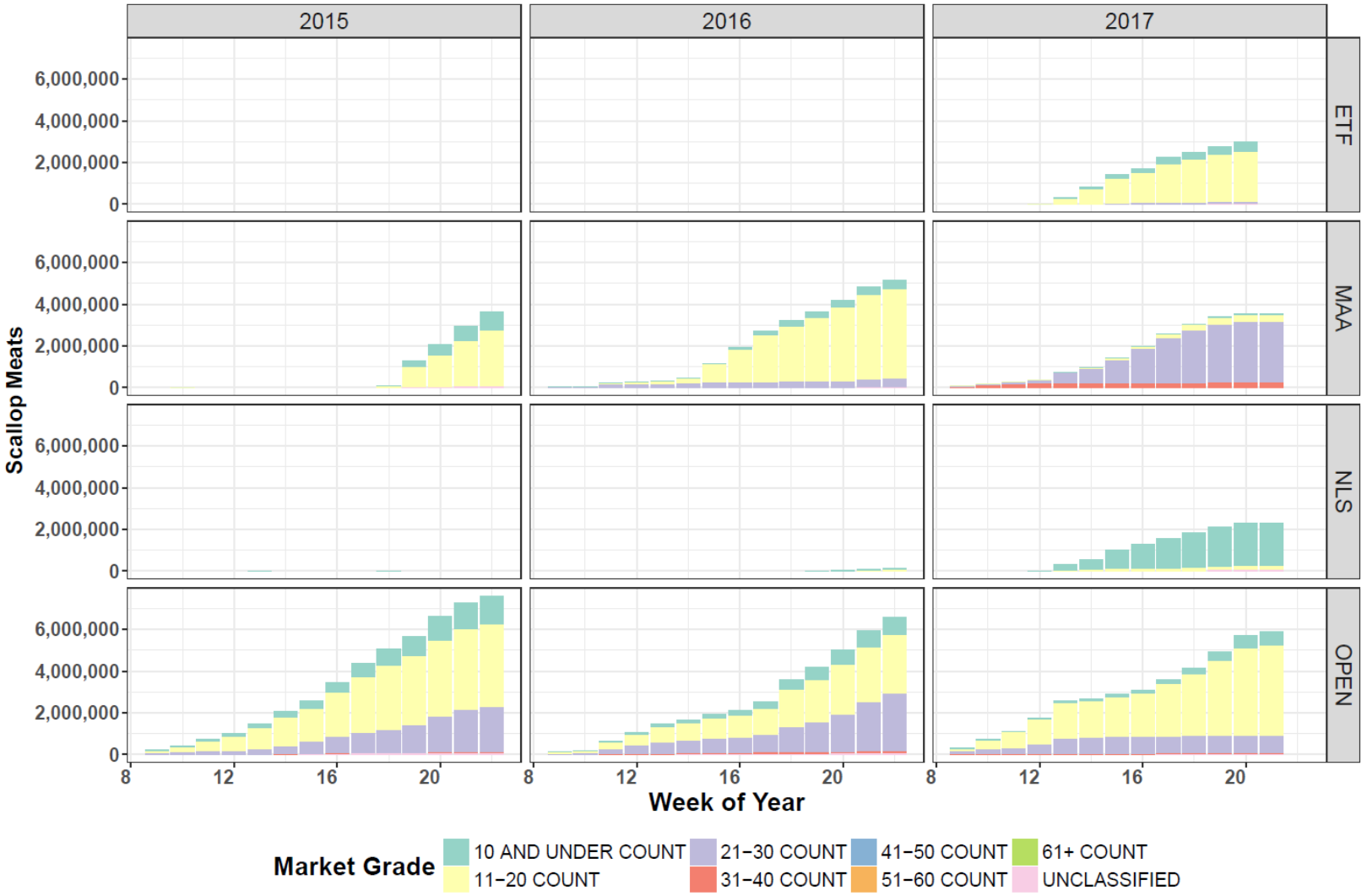
PDT RSA Recommendations (cont.)
(Documents 4 and 5)

- **Medium** – (Doc.5, page 3)
  - 6. Elevate scallop biology research (recruitment processes, growth) from "OTHER" to "Medium" and combine with seeding and spat collection.
- **Other** – (page 3 & 4)
  - 7. Make investigation of dredge efficiency to *improve survey estimates* its own category (w/ caveat)
  - 8. Habitat characterization and 9. Environmental factors: no change to language, moved text to other priority areas.
  - 10. Add text to LPUE priority to address identifying major sources of management uncertainty. (From Council's draft research priorities)
  - 12. Add priority to evaluate the social and economic impacts of the area rotation program. (From Council's draft research priorities)



May data is incomplete.

- LPUE by month for open area LA fishing. LPUE calculated by dividing monthly scallop meat total landings by DAS charged.



Closed to RSA comp fishing

Open to RSA comp fishing

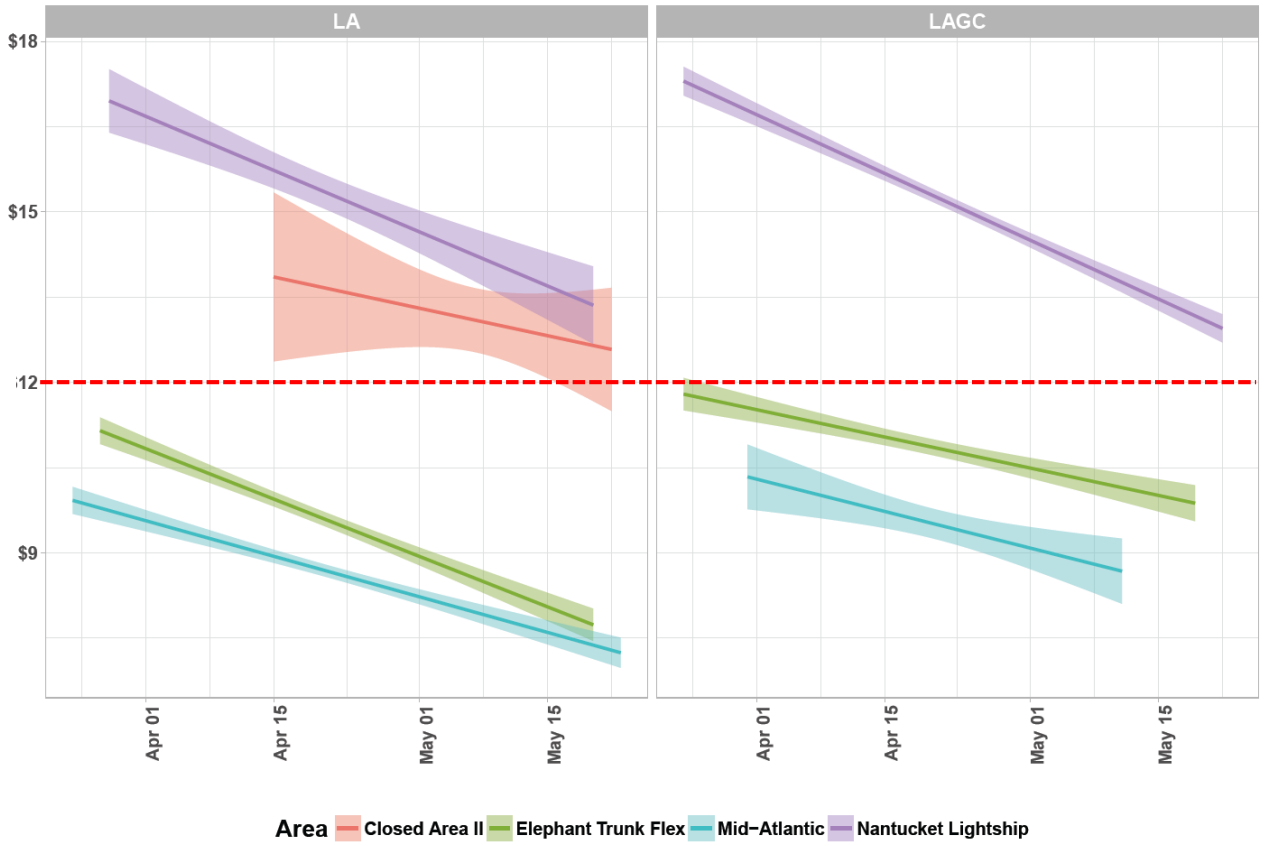
Closed to RSA comp fishing

Open to RSA comp fishing, NGOM closed

- Cumulative landings, by week and grade, in the first three months of fishing years 2015 – 2017 (to date) for access and open areas.

2017 Ex-vessel Price by Access Area

2017/2018 RSA Common Scallop Price: $12



- Average scallop price per trip by fleet and access area for FY2017.
- Linear model of prices with 95% confidence intervals.
- Report run on May 30, 2017.

AP/Committee Agenda Item

- **Develop recommendations for 2018/2019 RSA Research priorities**

- **Preliminary discussion on FY 2017 performance to date. What should we be tracking now and considering during the specifications process this fall? (EX: Size of scallops in areas open to RSA comp fishing?)**

Follow-up to Scallop Survey Review

- Several issues identified for follow-up, two track approach
  - PDT sub-group, 2018 scallop benchmark assessment
- First sub-group meeting held on April 13, 2017 (Doc. 7)
- Planning for additional analyses in specs process, SSC
  - Comparison of paired tows between HabCam and dredge
  - Generate biomass estimates using geostatistical methods that incorporate data from all surveys
  - Sensitivity analyses around dredge efficiency in high density areas
  - Continue to track growth parameters in NLS
  - Focus on documenting PDT work and process for upcoming SSC and benchmark assessment meetings

Framework 29

- FW29 initiated at April Council Meeting
- Likely range of alternatives:
  - Specifications
  - Northern Gulf of Maine TAC, management measures
  - Flatfish Accountability Measures
  - OHA2 – Modify Closed Area I Access Area boundary
- **Simple → Increased likelihood FW in place for April 1.**
- Input in June, range of alternatives developed for Sept.

Flatfish AMs

- Committee tasking motion:
  - Focus on the gear modifications (5-row apron), can consider seasonal closures
  - Consider options for using multi-year average when determining the triggering of an AM
- Focus on three stocks:
  - Georges Bank yellowtail
  - SNE/MA yellowtail
  - Northern windowpane (regulatory requirement)

Flatfish AMs & FY 2017

- Fishery performance in 2017 could trigger AMs in FW29
- Projected catch for GB YT and NWP > sub-ACL > SNE YT

- Assuming ~6 million lbs of harvest from CA II this year…
- GB YT d:K that would equal scallop sub-ACL is 0.012, or 12 lbs of yellowtail catch per 1,000 lbs of scallop meats.
  - GB YT d:K that would equal the fishery ACL is 0.74.
  - CAII 2014 Observer Data: GB YT d:K ~0.035.

Flatfish AMs & FY 2017 (cont.)

- Assuming ~6 million lbs of harvest from CA II this year…
- N. windowpane d:K that would equal scallop sub-ACL is 0.014, or 14 lbs of windowpane catch per 1,000 lbs of scallop meats.
  - N. windowpane d:K that would equal the fishery ACL is 0.063.
  - CAII 2014 Observer Data: N. windowpane d:K ~0.047.

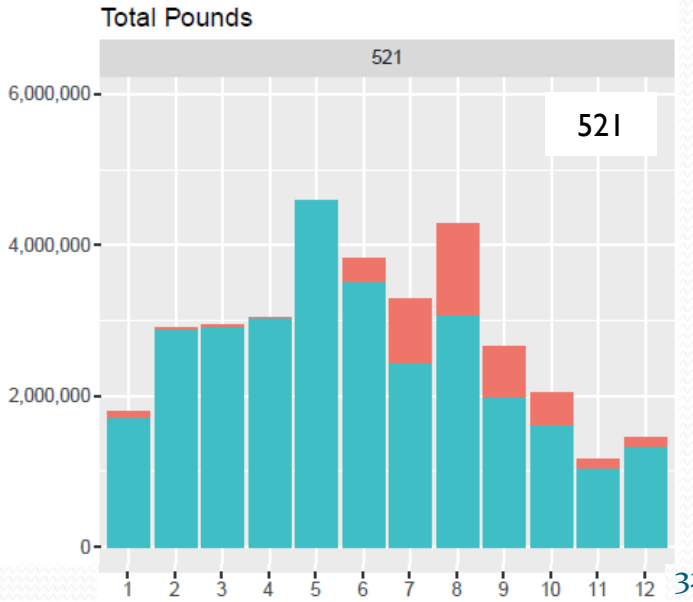
- SNE YT – Bycatch projection: 31% of scallop sub-ACL for 2017

Gear Modification Considerations

- AM requirement for SNE/MA Windowpane is 5-row apron with 1.5:1 hanging ratio.
- PDT used comparisons between 8-row and 5-row apron and modified hanging ratios.
- Current regulations limit apron to 7 row maximum.
- Data suggests that the fishery was transitioning to 7 row maximum in 2014. Number of rows in the apron varied greatly before then.
- Observer data available in CA II up to 2014.
- Bycatch reduction estimates from gear modifications will likely be a range.

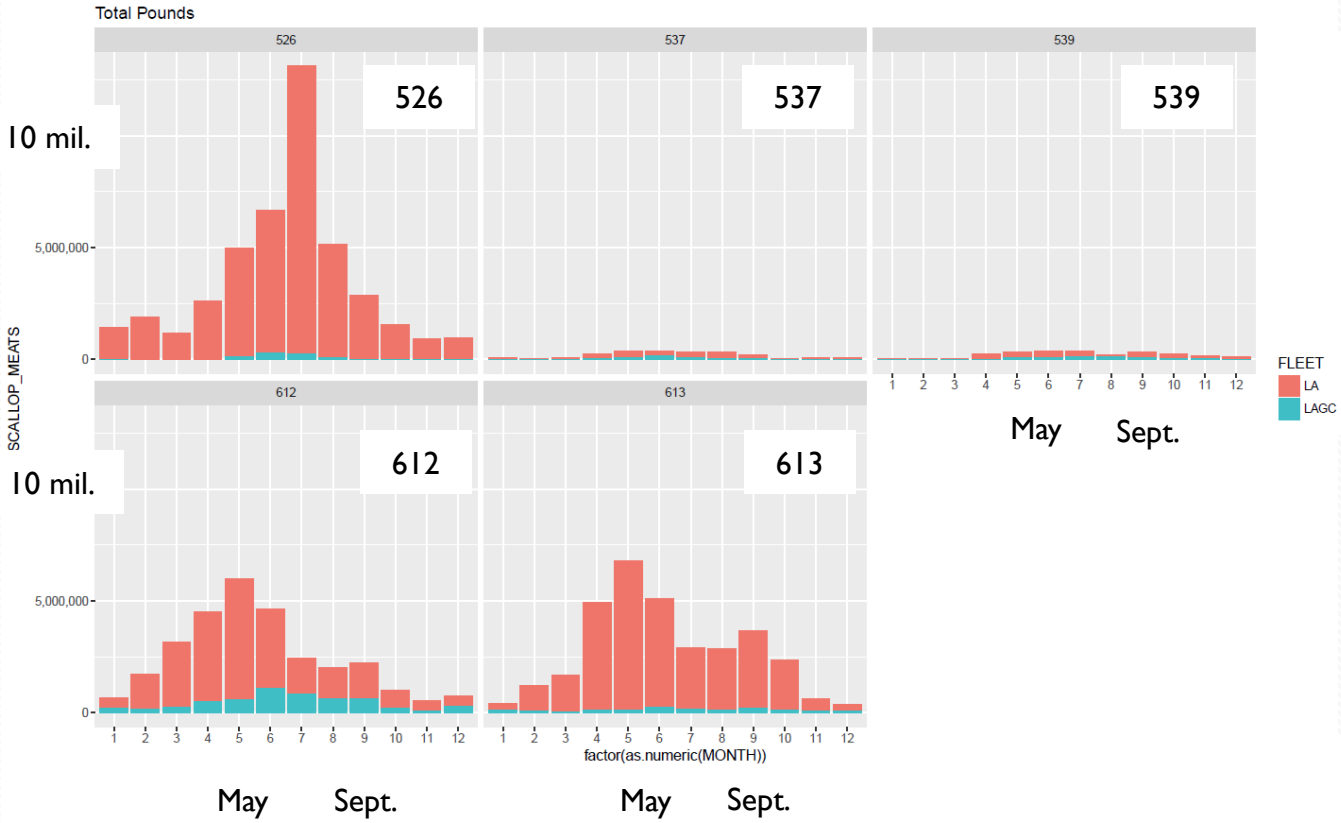
Monthly Scallop Landings: GB

- Data: Dealer landings matched with VTR for FY 2008 – FY 2017



- Scallop landings highest on Georges Bank: May – Sept.
- Landings from Channel higher than GB from Oct. – April.

Monthly Scallop Landings: SNE



Data: Dealer landings matched with VTR for FY 2008 – FY 2016
Red: LA; Green: LAGC

- Scallop landings peak in May/June in 526 (includes NLS AA) , 612, and 613.
- Effort/removals in 537 and 539 are low relative to other areas.

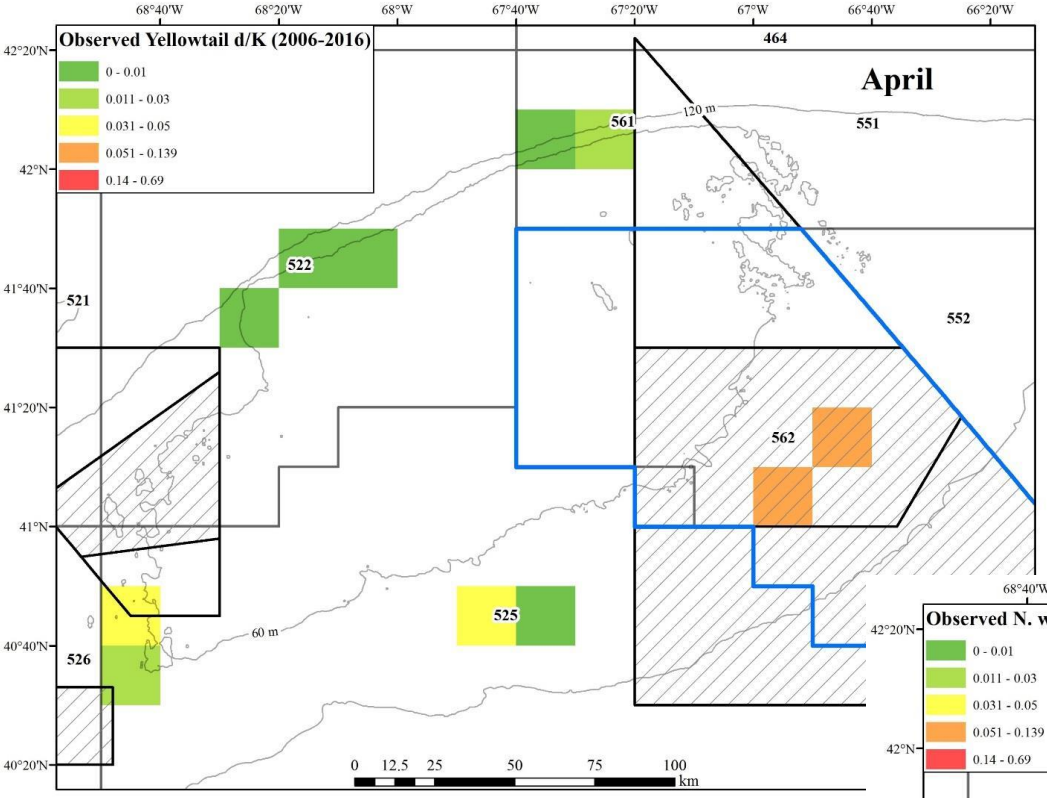
Flatfish Bycatch (Doc. #10)

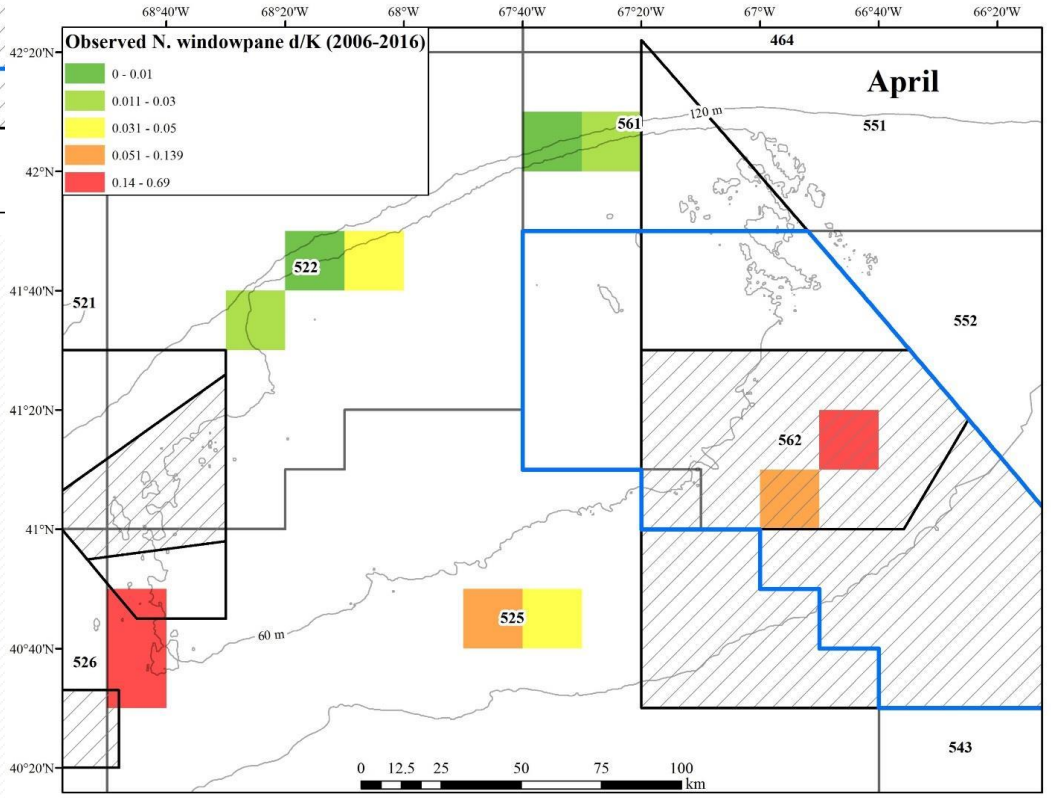
- Flatfish discard to kept ratios by 10-minute square
- Observer Data: 2006 – 2016, end haul location, ≥3 vessels per cell, ≥ 10 hauls per cell.
- Georges Bank, and Southern New England
- Current AM areas outlined in blue. 71°W shown in red.
- Color ramp: Standardized. Green lowest d:k, Red highest.
  - Orange: YT or windowpane discards 5%-13% of kept catch
  - Red: YT or windowpane discards ≥14% of kept catch
- Credits: Sam Asci (Council), Chad Keith and Tyler Staples (NOAA)

2017 CA II d/K scenarios

	GB YT	N. Windowpane
Expected CAII Landings	~6,000,000	~6,000,000
2017 Scallop sub-ACL (lbs)	70,548	83,776
d/K that would equal sub-ACL	0.012	0.014
d/K that would equal ACL	0.074	0.063

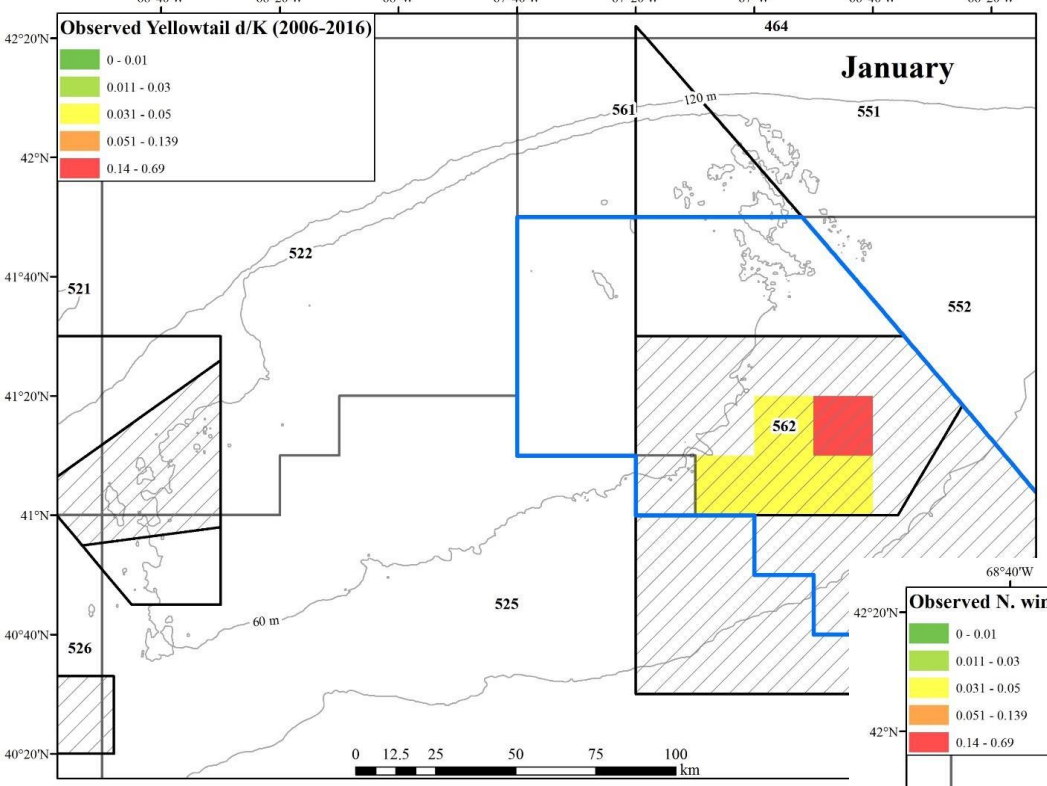
Flatfish d:K: April

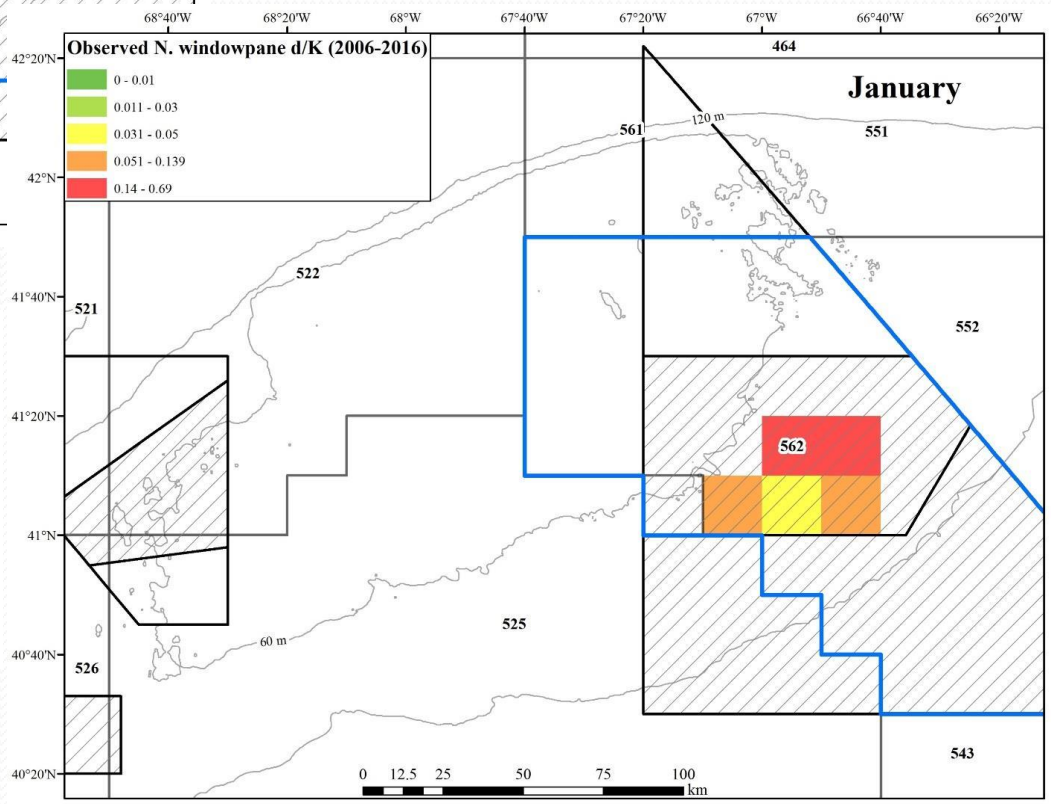




- High d:K in CA II for YT & Windowpane.
- Low relative effort/scallop landings in April on GB

Flatfish d:K January

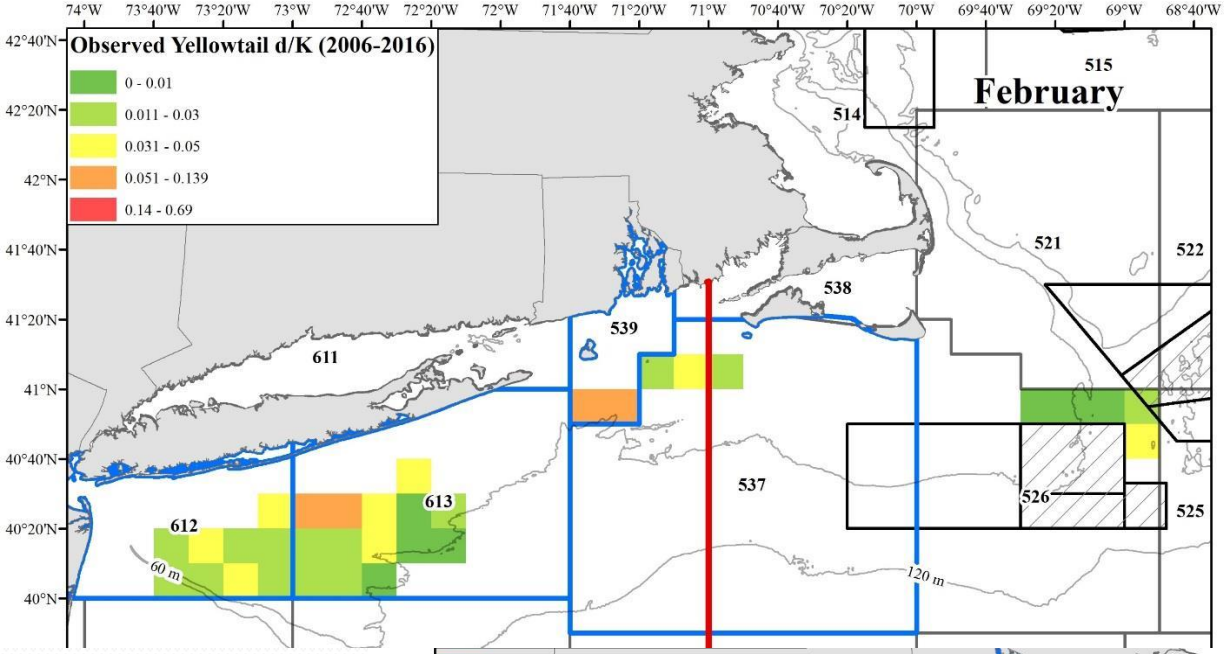


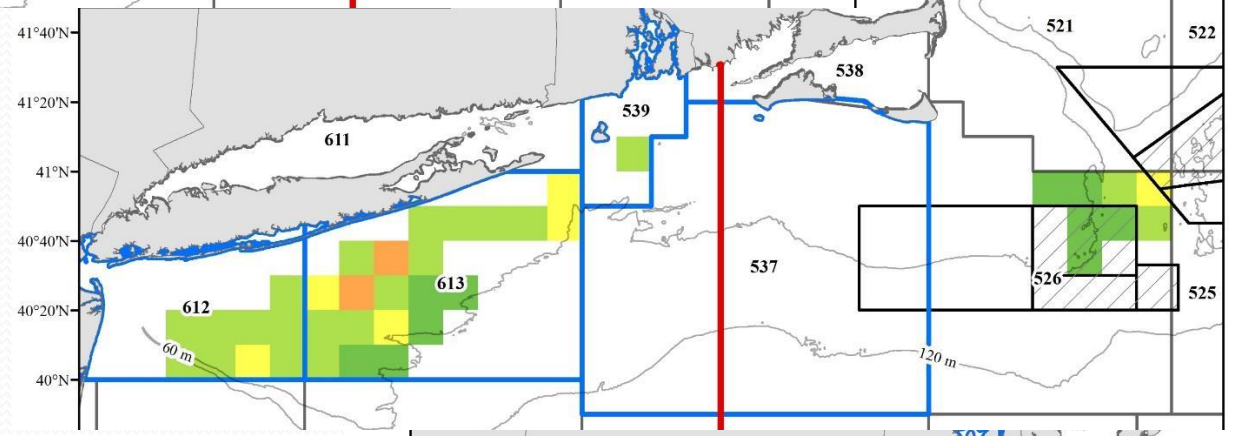


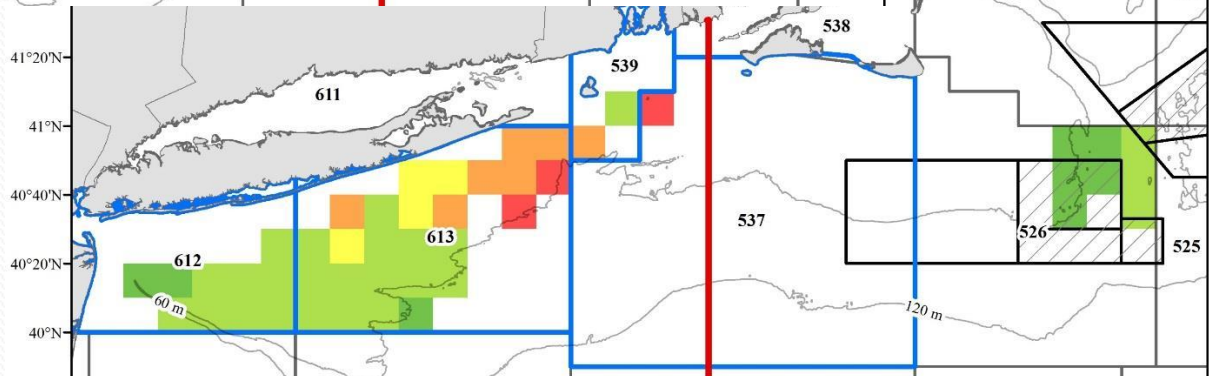
- High d:K in CA II for YT & Windowpane.
- Low relative effort/scallop landings in January on GB

Flatfish d:K

Feb, March, April







Flatfish AM considerations: Input?

- GRA design considerations: How might the size of a GRA impact fishing behavior? For example, if the GRA is for stat area (or smaller), would effort redistribute to other areas?
- Hot-spot "zones" concept: What would work for the fishery?
  - Size of areas? Length of time? Closures? GRA?
- Design SNE Yellowtail trawl AM like SNE Windowpane (EX: No trawl fishing while dredge modification is in place)?
- Impact of spatial management on wide swings in bycatch.
  - Scallop PDT made statements about this in last year.
  - Transferred the majority of GB YT sub-ACL to groundfish in 2016.

Northern Gulf of Maine

- Doc. #9
- Following slides are for discussion purposes – no final decisions today
- Looking for input to guide FW29 alternative development this summer
- Potential management measures presented to AP/Committee in September

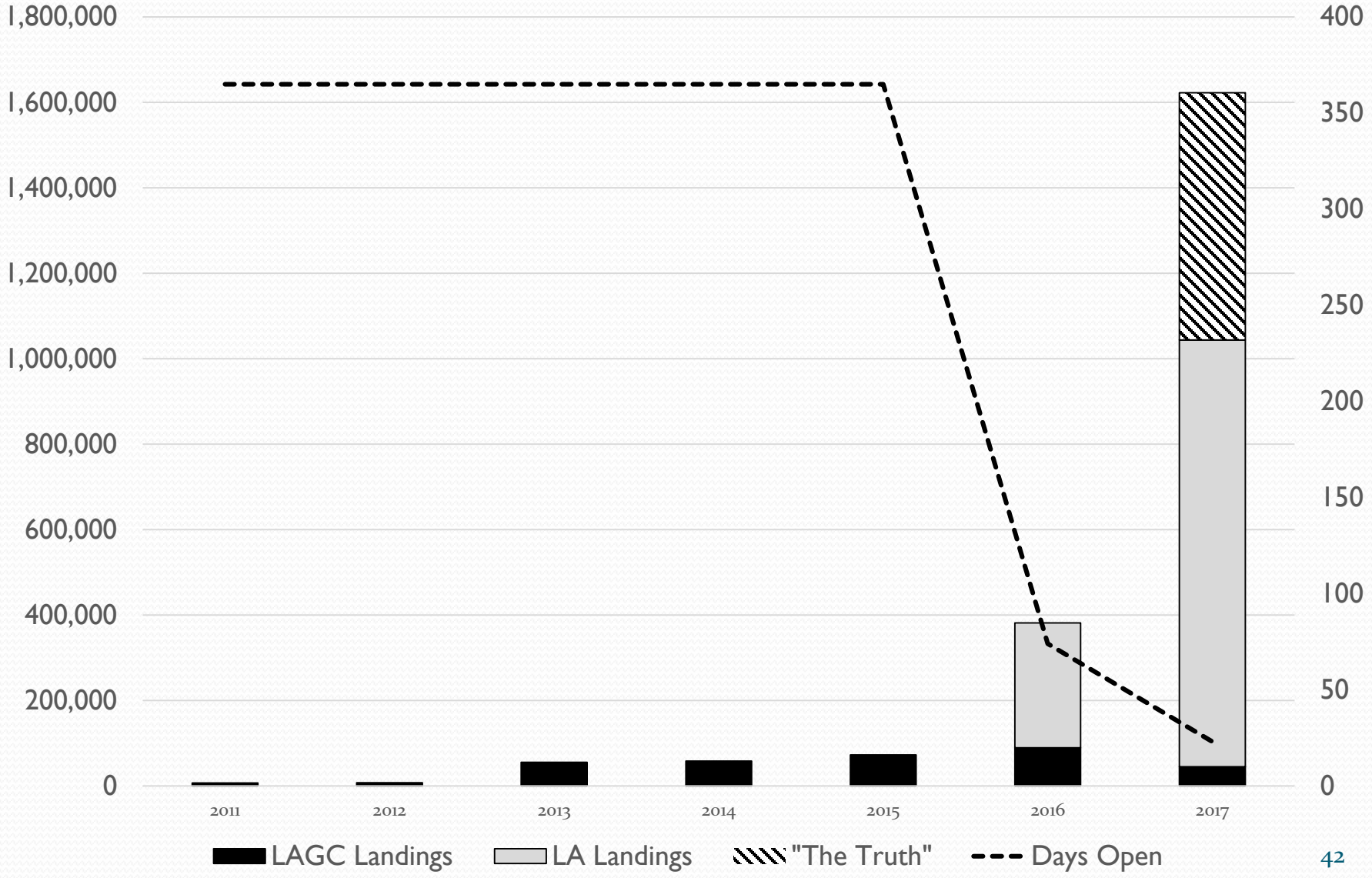
- **<u>Simple → Increased likelihood FW in place for April 1.</u>**

Updated 2017 LA Landings Estimate

- Initial LA estimate used daily VMS catch reports.
- Updated estimate: VMS data and dealer records.
  - LA trips that fished inside and outside of NGOM.

Lower Bound VMS catch reports	"The Truth"	Upper Bound VMS data, dealer records
~1,000,000		1,578,020

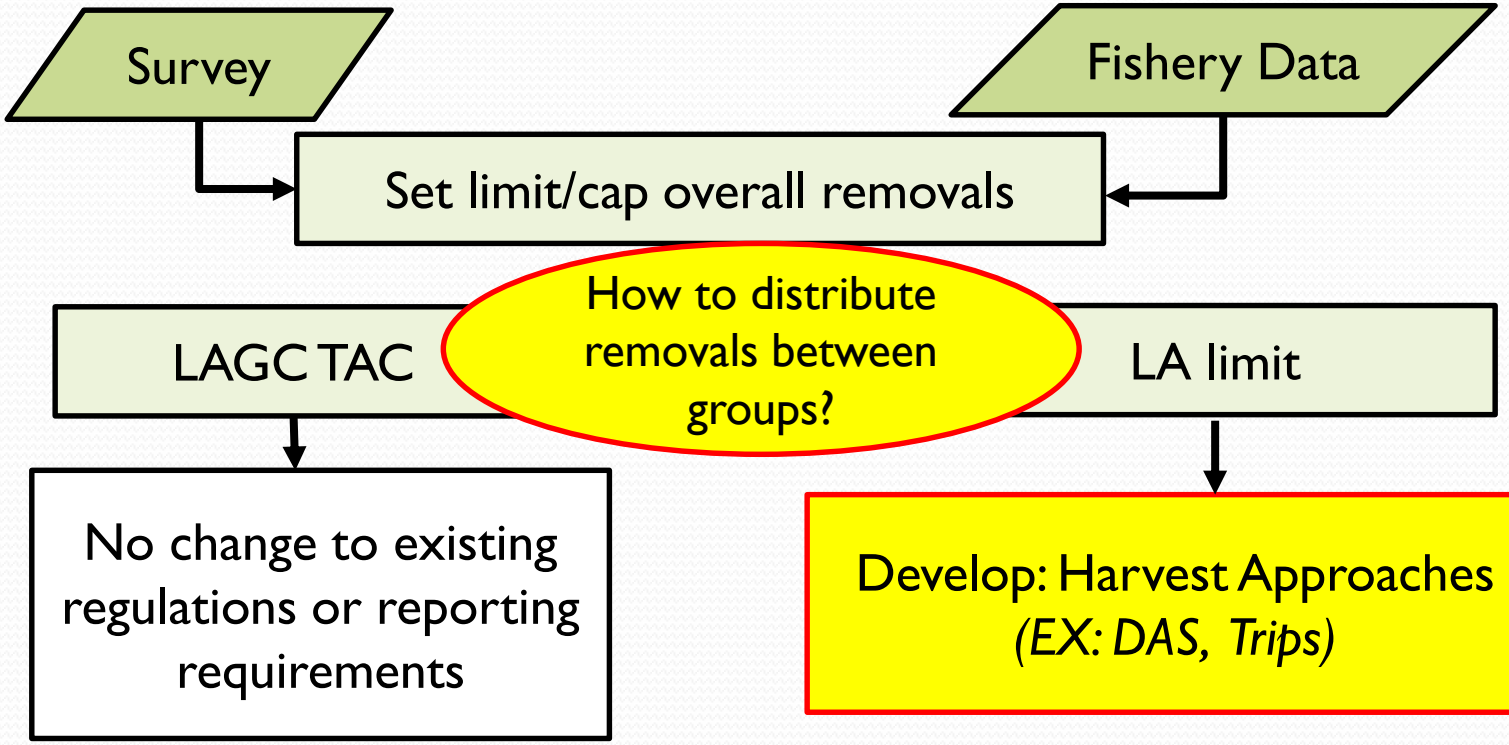
LA Landings Estimate



Council's NGOM Problem Statement

Problem: Unknown biomass and recent high landings

Tools and Process:

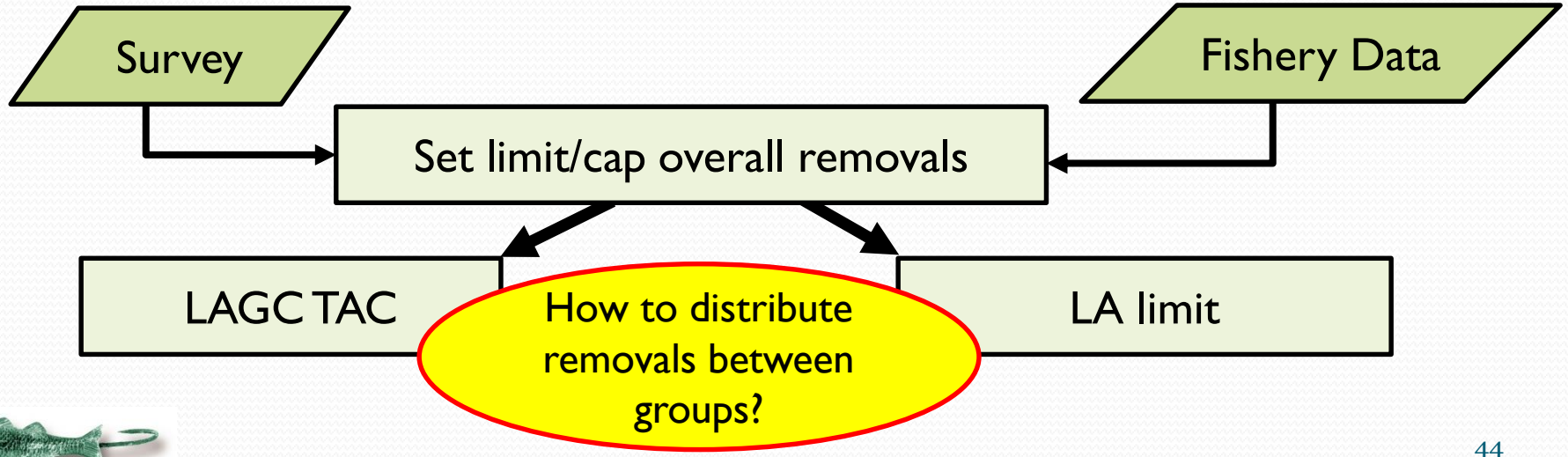


Goal: Understand total removals + improve management

NGOM TAC Consideration #1:

1. How to distribute removals between groups?

- NGOM TAC is not part of annual projected landings
  - This decision does not change how we allocate APL



NGOM TAC Consideration #1: How to split the NGOM TAC

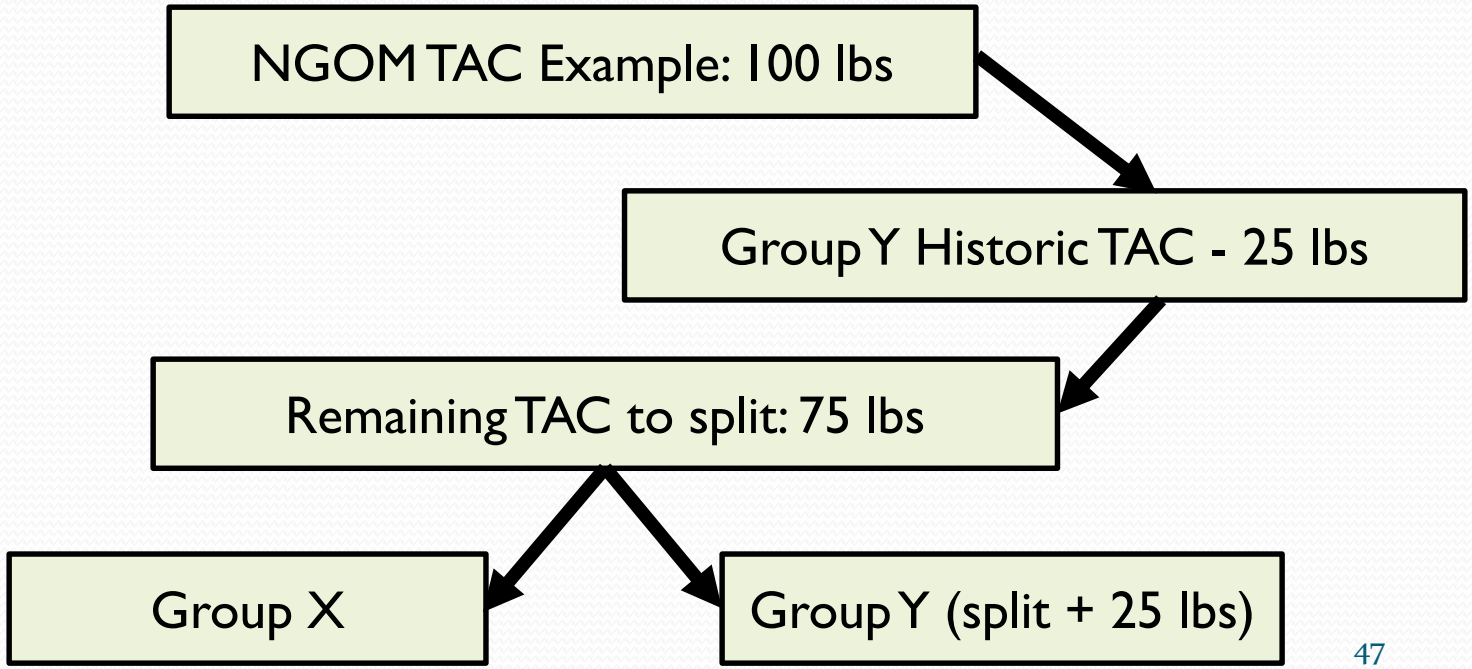
- Potential Approaches to TAC split:
  1. Historic TAC in the management area
  2. Harvest by fishery components
  3. Hybrid approach of historic TAC and landings by fishery component
  4. Sunset provision – set time limit for above approach
- This list is not exhaustive – intended to generate discussion.

NGOM TAC Consideration #1:
#1 Historic TAC and #2 Landings

1. Historic TAC in management area:
   - Two LAGC TAC values since start of NGOM program (below).
   - 70,000 lb for first 8 years. Based on VTR landings 2000 – 2006.
   - 95,000 lb TAC in 2016 based on survey data.
2. Harvest by fishery components in NGOM:
   - LAGC landings in all years, LA activity in 2016 and 2017 (VTR)
   - Tracking landings from NGOM by LA component is challenging because there is no declaration when fishing in the area.

NGOM TAC Consideration #1: #3 Hybrid Approach

1. Council sets TAC to be split between groups (X and Y)
2. Historic catch value applied to TAC for group Y
3. Remainder of TAC split between group X and group Y



Final TAC

NGOM TAC Consideration #1:
#4 Sunset Provision

- The Council may wish to consider applying a sunset provision on how the NGOM TAC is split between fishery components
  - The Council has signaled that it will consider prioritizing an amendment that may consider further changes to the NGOM management program as part of 2018 priorities.

NGOM TAC Consideration #1: VTR Data

1. How to distribute removals between groups?

- VTR Data: Caveats and limitations
  - 1996 – present, not matched to dealer data for all years
  - Self reported catch and lat/lon locations (fishery dependent)
  - Lat/lon position is an average of where fishing occurred
  - NGOM management area bisects SRA 514 – majority if scallop landings in Gulf of Maine come from 514

NGOM TAC Consideration #1: Data from NGOM (2008 – present)

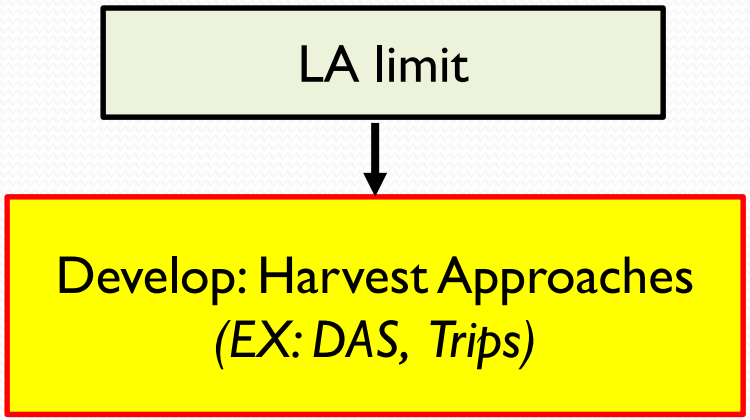
1. How to distribute removals between groups?

- Recent Fishery Data (2008 – present):
  - Using VTR, VMS, and dealer data to track fishing in NGOM for both LA and LAGC components
  - VTR and dealer data records matched
  - LAGC declarations into NGOM management area (via VMS)
  - VMS records of LA activity in NGOM

NGOM TAC Consideration #2:

2. Develop harvest approach for LA component.
   - Council motion calls for status quo regs for LAGC.
   - Overall TAC may inform what approaches are feasible.

- Existing approaches used in Scallop FMP:
  - DAS
  - Trips



NGOM TAC Timeline

- April – Council letter recommending a survey
- May – Determine if area will be surveyed in 2017
- August – Results of any 2017 survey efforts
- Fall, with Final Action in December: Council develop range of alternatives for:
  1. Overall TAC
  2. Distribution of TAC between fishery components
     1. Input from AP/CTE in May/June to inform range of measures that will be considered in September
  3. LA harvest approaches

Control Date

- Could be used to address movement between LAGC NGOM and LAGC incidental permits.
- Permit holders can elect NGOM or Inc. cat. annually.
- Motion will be taken up is at June Council meeting.
- Control date can be used to establish eligibility criteria for determining levels of future access.
- Establishing a control date does not commit the Council to taking future action.
- Some correspondence received on this issue.
- Currently ~100 NGOM permits, and ~240+ Incidental permits held by LAGC and LA components.