

Atlantic States Marine Fisheries Commission

American Lobster Management Board

January 23, 2024

12:30 – 2:30 p.m.

Hybrid Meeting

Draft Agenda

The times listed are approximate; the order in which these items will be taken is subject to change; other items may be added as necessary.

1. Welcome/Call to Order (*J. McNamee*) 12:30 p.m.
2. Board Consent 12:30 p.m.
 - Approval of Agenda
 - Approval of Proceedings from October 2023
3. Public Comment 12:35 p.m.
4. American Lobster Technical Committee Report (*T. Pugh*) 12:45 p.m.
 - Information on Lobster Resource and Fishery Near the Northern Edge of Georges Bank
5. Jonah Crab Technical Committee Report (*C. Truesdale*) 1:00 p.m.
 - Jonah Crab Stock Indicators
 - Discuss Future Management Tools
6. Consider Pursuing a Management Strategy Evaluation for American Lobster (*J. McNamee*) **Possible Action** 1:25 p.m.
7. Discuss Inconsistencies in Federal and Commission Rules for Lobster Conservation Management Areas 2 and 3 (*C. Starks, A. Murphy*) 1:45 p.m.
8. Progress Update on State Implementation of Addendum XXIX on Federal Vessel Trackers (*J. McNamee*) 2:10 p.m.
9. Progress Update on American Lobster Benchmark Stock Assessment (*J. Kipp*) 2:20 p.m.
10. Review and Populate Jonah Crab Advisory Panel Membership (*T. Berger*) **Action** 2:25 p.m.
11. Other Business/Adjourn 2:30 p.m.

The meeting will be held at The Westin Crystal City, 1800 Richmond Highway, Arlington, VA; 703.486.1111, and via webinar; click [here](#) for details.

MEETING OVERVIEW

American Lobster Management Board

January 23, 2024

12:30 – 2:30 p.m.

Hybrid Meeting

Chair: Dr. Jason McNamee (RI) Assumed Chairmanship: 02/22	Technical Committee Chair: Tracy Pugh (MA)	Law Enforcement Committee Representative: Rob Beal (ME)
Vice Chair: Pat Keliher (ME)	Lobster Advisory Panel Chair: Grant Moore (MA) Jonah Crab Advisory Panel Chair: Sonny Gwin	Previous Board Meeting: October 16, 2023
Voting Members: ME, NH, MA, RI, CT, NY, NJ, DE, MD, VA, NMFS, NEFMC (12 votes)		

2. Board Consent

- Approval of Agenda
- Approval of Proceedings from October 2023

3. Public Comment – At the beginning of the meeting public comment will be taken on items not on the agenda. Individuals that wish to speak at this time must sign-in at the beginning of the meeting. For agenda items that have already gone out for public hearing and/or have had a public comment period that has closed, the Board Chair may determine that additional public comment will not provide additional information. In this circumstance the Chair will not allow additional public comment on an issue. For agenda items that the public has not had a chance to provide input, the Board Chair may allow limited opportunity for comment. The Board Chair has the discretion to limit the number of speakers and/or the length of each comment.

4. American Lobster Technical Committee Report (12:45-1:00 p.m.)

Background

- In October the Board tasked the lobster Technical Committee (TC) with compiling information on the lobster resource and fishery in and around the Northern Edge of Georges Bank in relation to a potential action at the New England Fishery Management Council (NEFMC) considering scallop fishery access on the Northern Edge.
- The TC developed a report responding to the Board Task (**Supplemental Materials**).

Presentations

- TC Report on Lobster Resource and Fishery around the Northern Edge by T. Pugh

5. Jonah Crab Technical Committee Report (1:00-1:25 p.m.)

Background

- The 2023 Jonah Crab Benchmark Stock Assessment indicated that the Jonah crab stock has not been depleted to historical lows. However, the Peer Review noted substantial uncertainty about stock status, and recommended monitoring the stock closely.
- In October the Board tasked the Jonah Crab TC with making recommendations regarding stock indicators and potential future management measures. The TC developed a report responding to the Board task (**Briefing Materials**).
- The TC also requested feedback from the Jonah Crab AP on potential market and economic factors driving trends in the fishery. The AP met on December 14, 2023 to review the benchmark stock assessment for Jonah crab and provide input to the TC (**Briefing Materials**).

Presentations

- Jonah Crab TC Report by C. Truesdale

6. Consider Pursuing a Management Strategy Evaluation for American Lobster (1:25-1:45 p.m.) Possible Action

Background

- In May 2021 the Board reviewed TC recommendations on a Management Strategy Evaluation (MSE) for the lobster fishery. The TC recommended the Board pursue a two-phase MSE focused on the GOM/GBK stock, with the goal of providing short-term management guidance at the stock-wide scale while concurrently building the framework to expand the MSE to provide long-term, spatially-explicit management advice. As next steps, the TC recommended a formal process to develop management goals and objectives for the future of the lobster fishery, and forming a steering committee for additional scoping and work plan development (**Briefing Materials**).
- The Board expressed interest in pursuing an MSE but postponed any action on development of an MSE in order to prioritize work on Draft Addendum XXVII. This issue was last discussed by the Board in August 2021.

Presentations

- Overview of Management Strategy Evaluation by J. McNamee

Board Actions for Consideration at the Meeting

- Consider initiating an MSE for American Lobster

7. Discuss Inconsistencies in Federal and Commission Rules for Lobster Conservation Management Areas 2 and 3 (1:45-2:10 p.m.)

Background

- NOAA fisheries has published an [interim rule](#) that responds to the Commission's 2013 recommendations to NOAA to adopt the measures in Addenda XXI and XXII in federal waters. The Addenda aimed to scale the capacity of the Southern New England (SNE) fishery to the diminished size of the SNE resource. However, over a decade has passed since the date when the Commission intended for these federal measures to be implemented.

- Due to the delay between the Commission’s adoption of the Addenda and federal implementation, there have been significant changes in the fishery. Also, some aspects of the federal rulemaking differ from the measures included in Addenda XXI and XXII.

Presentations

- Overview of Federal and Commission Rules for LCMAs 2 and 3 by C. Starks and A. Murphy

8. Progress Update on State Implementation of Addendum XXIX on Federal Vessel Trackers (2:10-2:20 p.m.)

Background

- Addendum XXIX was approved in 2022 and established electronic tracking requirements for federally-permitted vessels in the American lobster and Jonah crab fisheries.
- The Addendum is effective as of December 15, 2023, though there have been some delays in state regulations.

9. Progress Update on American Lobster Benchmark Stock Assessment (2:20-2:25 p.m.)

Background

- A benchmark stock assessment for American Lobster is scheduled for completion in 2025.

Presentations

- Progress on American Lobster Benchmark Stock Assessment by J. Kipp

10. Review and Populate Jonah Crab Advisory Panel Membership (2:25-2:30 p.m.) Action

Background

- Denny Colbert, a commercial offshore tarp fisherman from Massachusetts, has been nominated to serve on the Advisory Panel (**Briefing Materials**).

Board Actions for Consideration at the Meeting

- Approve Advisory Panel nomination

11. Other Business/ Adjourn

American Lobster and Jonah Crab TC Task List

Activity level: High

Committee Overlap Score: Medium

Committee Task List

Lobster TC

- August 1, 2024: Annual Compliance Reports Due
- Fall 2024: Annual data update of lobster abundance indices
- Spring-Summer 2024: Development of lobster stock assessment

Jonah Crab TC

- August 1, 2024: Annual Compliance Reports Due
- Fall 2024: Annual data update of Jonah crab abundance indices

TC Members

American Lobster: Kathleen Reardon (ME), Joshua Carloni (NH), Jeff Kipp (ASMFC), Catherine Fede (NY), Conor McManus (RI), Chad Power (NJ), Tracy Pugh (MA, Chair), Burton Shank (NOAA), Craig Weedon (MD), Somers Smott (VA), Renee St. Amand (CT)

Jonah Crab: Corinne Truesdale (RI, Chair), Derek Perry (MA), Joshua Carloni (NH), Chad Power (NJ), Jeff Kipp (ASMFC), Conor McManus (RI), Allison Murphy (NOAA), Kathleen Reardon (ME), Chris Scott (NY), Burton Shank (NOAA), Somers Smott (VA), Craig Weedon (MD)

Lobster Stock Assessment Subcommittee (SAS) Members

Jonah Crab: Tracy Pugh (MA, TC Chair), Conor McManus (RI), Joshua Carloni (NH), Kathleen Reardon (ME), Burton Shank (NOAA), Jeff Kipp (ASMFC)

**DRAFT PROCEEDINGS OF THE
ATLANTIC STATES MARINE FISHERIES COMMISSION
AMERICAN LOBSTER MANAGEMENT BOARD**

**Beaufort Hotel
Beaufort, North Carolina
Hybrid Meeting**

October 16, 2023

These minutes are draft and subject to approval by the American Lobster Management Board.
The Board will review the minutes during its next meeting.

TABLE OF CONTENTS

Call to Order1

Approval of Agenda1

Approval of Proceedings1

Public Comment1

Consider 2023 Jonah Crab Benchmark Stock Assessment and Peer Review Report2

 Presentation of Stock Assessment Report.....2

 Presentation of Peer Review Panel Report.....7

 Consider Acceptance of Benchmark Stock Assessment and Peer Review Report for Management Use14

 Consider Management Response16

Consider Annual Data Update of American Lobster Indices17

Update on Addendum XXVII Trigger Index.....19

Consider Terms of Reference and Timeline for the American Lobster Benchmark Stock Assessment26

Other Business.....28

 Consider Potential Action by NEFMC regarding Scallop Fishery Access on Northern Edge of Georges Bank.....28

 Consider NOAA Interim Final Rule in Relation to Lobster Board actions in Addenda XXI, XXII, and XXVI.....29

Adjournment31

INDEX OF MOTIONS

1. **Approval of agenda** by consent (Page 1).
2. **Approval of Proceedings of May 1, 2023** by consent (Page 1).
3. **Move to accept the Jonah Crab Benchmark Stock Assessment and Peer Review Report for management use** (Page 15). Motion by Mr. Dan McKiernan; second by Mr. Steve Train. Motion passes (11 in favor) (Page 16).
4. **Motion to task the Technical Committee to recommend possible management measures or other options to correct what appear to be deficiencies in the stock.** (Page 16). Motion by Mr. Steve Train; second by Mr. Doug Grout. Motion passes by unanimous consent (Page 17).
5. **Motion to amend the approval of Addendum XXVII to change the implementation date. The implementation date for all management measures shall be January 1, 2025, including those measures triggered under Section 3.2. Year 2 and year 3 measures would be implemented by January 1 of the following calendar years for which they are required** (Page 20). Motion by Mr. Pat Keliher; second by Mr. David Borden. Motion passes (Roll Call: In Favor – NH, ME, MD, DE, VA, NJ, NY, CT, MA, RI; Opposed – NOAA; Abstentions – None; Null – None) (Page 26).
6. **Move to modify terms of reference 4 to identify, describe, and, if possible, quantify the effect of environmental/climatic drivers on stock abundance considering annual to decadal scales** (Page 28). Motion by Mr. Pat Keliher; second by Mr. Doug Grout. Motion approved by unanimous consent (Page 28).
7. **Move to task the Lobster Technical Committee (TC) to compile information on the lobster resource and fishery in and around the Northern Edge on Georges Bank. This is in relation to a potential action at the New England Fishery Management Council (NEFMC) which is considering scallop fishery access on the Northern Edge. A starting place for this tasking could be reviewing information that the Lobster TC compiled when ASMFC commented on the NEFMC's Omnibus Habitat Amendment 2. Areas of interest include:**
 - **Information on the presence and abundance of lobsters, including ovigerous lobsters, in and around the Northern Edge by month/season**
 - **Lobster fishery effort in and around the Northern Edge by month/season**
 - **Potential impacts of mobile gear on the lobster population in the area**
 - **Information on the habitat type and depth preference of lobsters which could inform our understanding of lobsters on the northern edge if there are limitations in the data**
 - **Whether current reporting by Area 3 vessels is representative, or an underestimate, of lobster effort in the Northern Edge area and how future requirements (i.e., federal eVTR requirement, vessel tracking) will impact the data available**(Page 29). Motion by Mr. Pat Keliher; second by Mr. Doug Grout. Motion passes by unanimous consent (Page 30).
8. **Move to adjourn** by consent (Page 31).

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ATTENDANCE

Board Members

Pat Keliher, ME (AA)	William Hyatt, CT (GA)
Stephen Train, ME (GA)	Craig Miner, CT, proxy for Rep. Gresko (LA)
Rep. Allison Hepler, ME (LA)	Marty Gary, NY (AA)
Renee Zobel, NH, proxy for C. Patterson (AA)	Emerson Hasbrouck, NY (GA)
Doug Grout, NH (GA)	Joe Cimino, NJ (AA)
Dennis Abbott, NH, proxy for Sen. Watters (LA)	Jeff Kaelin, NJ (GA)
Dan McKiernan, MA (AA)	Adam Nowalsky, NJ, proxy for Sen. Gopal (LA)
Raymond Kane, MA (GA)	John Clark, DE (AA)
Sarah Ferrara, MA, proxy for Rep. Peake (LA)	Roy Miller, DE (GA)
Jason McNamee, RI (AA)	Craig Pugh, DE, proxy for Rep. Carson (LA)
David Borden, RI (GA)	Mike Luisi, MD, proxy for L. Fegley (AA, Acting)
Eric Reid, RI, proxy for Sen. Sosnowski (LA)	Shanna Madsen, VA, proxy for J. Green (AA)
Colleen Bouffard, CT, proxy for J. Davis (AA)	Allison Murphy, NOAA

(AA = Administrative Appointee; GA = Governor Appointee; LA = Legislative Appointee)

Ex-Officio Members

Kathleen Reardon, Technical Committee Chair	Richard Wong, Stock Assessment Peer Review Chair
Derek Perry, Technical Committee Chair	Rob Beal, Law Enforcement Committee Rep.

Staff

Bob Beal	Tracy Bauer	James Boyle
Toni Kerns	Emilie Franke	Mike Rinaldi
Tina Berger	Caitlin Starks	Jeff Kipp
Madeline Musante	Chelsea Tuohy	Katie Drew

Guests

Max Appelman, NOAA	Heather Corbett, NJ DEP	Deirdre Gilbert, ME DMR
Mike Armstrong, MA DMF	Jamie Cournane, NEFMC	Heather Glon, ME DMR
Pat Augustine	Jennifer Couture, NEFMC	Jennifer Goebel, NOAA
Michelle Bachman, NEFMC	Caitlin Craig, NYSDEC	Joe Gresko, CT (LA)
Alan Bianchi, NC DMF	Scott Curatolo-Wagemann,	Olin Hartkopf
Alex Boeri, MA DMF	Cornell Cooperative Extension of	Heidi Henninger, NOAA
Colleen Bouffard, CT DEEP	Suffolk County	Jesse Hornstein, NYS DEC
Michael Brown, ME DMR	Dustin Delano, NEFSA	Jon Hurdle, NJ Spotlight
Jeffrey Brust, NJ DEP	Bill DeSteph, Senate of VA	Denise Kaminski, NYS DEC
Allen Burgenson, Lonza	Wes Eakin, NYS DEC	Gregg Kenney, NYS DEC
Joshua Carloni, NH FGD	Julie Evans	Blaik Keppler, SC DNR
Beth Casoni, MA Lobstermen's Assn.	Paula Farnell, NC DMF	Jennifer Lander, NYS DEC
Haley Clinton	F Joel Fodrie, Institute of Marine Sciences (UNC-CH)	Loren Lustig, PA (GA)
Dennis Colbert	Christine Ford, NOAA	Chip Lynch, NOAA
		John Maniscalco, NYS DEC

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Guests (continued)

Kim McKown	Justin Pellegrino, NYS DEC	Kevin Sullivan, NH FGD
Conor McManus, RI DEM	Jonathon Peros, NEFMC	Rachel Sysak, NYS DEC
Meredith Mendelson, ME DMR	Michael Pierdinock	Mike Tambone
Guest (continued)	Will Poston	Laura Tomlinson, MA DMF
Nichola Meserve, MA DMF	Tracy Pugh, MA DMF	Corinne Truesdale, RI DEM
Steve Meyers	Paul Rago	Andrew Valmassoi, NC DMF
Lorraine Morris, ME DMR	Marianne Randall, NOAA	Beth Versak, MD DNR
Brandon Muffley, MAFMC	Kathleen Reardon, ME DMR	Jesica Waller, ME DMR
Thomas Newman	Story Reed, MA DMF	Megan Ware, ME DMR
Jeff Nichols, ME DMR	Tajrian Sarwar, NYS DEC	Craig Weedon, MD DNR
Rebecca Nuzzi, Maine	Christopher Scott, NYS DEC	Ritchie White
Lobstermen's Assn.	Burton Shank, NOAA	Shelby White, NC DDMF
Conor O'Donnell, NH FGD	Jared Silva, MA DMF	Kelly Whitmore, MA DMF
George O'Donnell, MD DNR	Jennifer Slovinski, Gugifilm Wako	Erin Wilkinson, ME DMR
Virginia Olsen, District 4 IAMAW	Chemicals	Chris Wright, NOAA
Scott Olszewski, RI DEM	Melissa Smith, MA DMR	Daniel Zapf, NC DEQ
Cheri Patterson, NH (AA)	Somers Smott, VMRC	Erik Zlokovitz, MD DNR
Sarah Peake, MA (LA)	Renee St. Amand, CT DEEP	

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The American Lobster Management Board of the Atlantic States Marine Fisheries Commission convened in the Rachel Carson Ballroom via hybrid meeting, in-person and webinar; Monday, October 16, 2023, and was called to order at 9:35 a.m. by Chair Jason McNamee.

CALL TO ORDER

CHAIR JASON McNAMEE: All right, it's 9:35. We're going to call the American Lobster Management Board meeting to order. Welcome everyone, we are here for the American Lobster Management Board, have a number of things to get through. We got an extra ten minutes, so hoping to end up on time.

APPROVAL OF AGENDA

CHAIR McNAMEE: Let's start off with Approval of the Agenda. Are there any modifications to the agenda? Pat.

MR. PATRICK C. KELIHER: Under Other Business, I would like to bring up an issue with the Northern Edge that the New England Council is dealing with.

CHAIR McNAMEE: Very good, thanks, Pat. We will add that under Other Business. Any other edits, modifications, David.

MR. DAVID V. BORDEN: Not an edit on the agenda, Mr. Chairman. Are you ready for a comment on that? Under Other Business, I would like to have a brief discussion on the NOAA Proposed Rule.

CHAIR McNAMEE: Great, thanks, David, we will add that under Other Business as well. Okay, so we've had two modifications, two additions to Other Business. Anything else from any other board members on the agenda?

MS. TONI KERNS: Jason, Alli Murphy had her hand up, wanting to ask for something under Other Business.

CHAIR McNAMEE: Go ahead, Caitlin.

MS. CAITLIN STARKS: Toni, we don't see her hand up, but I see Alli, you are unmuted now. Okay.

MS. ALLISON MURPHY: Mr. Borden beat me to the punch. Wanted to quickly discuss the Interim Final Rule that we published.

CHAIR McNAMEE: Alli, we were having, at least I was having a really hard time hearing you, could you try that again?

MS. MURPHY: Mr. Borden beat me to the punch. My intention was just to quickly mention the Interim Final Rule that NOAA Fisheries published a few weeks ago.

CHAIR McNAMEE: Excellent, thanks, Alli. We've got that under Other Business, and I'll make sure that we come to you for comment as well there, thank you. Okay, one more time around, is everybody okay? Anything else for the agenda? Not seeing anything; no other hands online. Are there any objections to approving the agenda as modified?

Please, raise your hand if you have an objection. Okay, seeing none; we will consider the agenda, with its modifications approved by consent. Good.

APPROVAL OF PROCEEDINGS

CHAIR McNAMEE: Next up is the approval of the proceedings from our May meeting. Any edits, additions, deletions to those proceedings? Not seeing any hands around the table, any hands online? Okay, no hands online, so try this again.

Are there any objections to approving the May, 2023 proceedings of the American Lobster Board as submitted? Please, raise your hand if you have an objection. Not seeing any in the room, any online? Okay, no hands online, we will consider those proceedings approved. Thanks everybody.

PUBLIC COMMENT

CHAIR McNAMEE: Next up on the agenda is some time to take some Public Comment.

These minutes are draft and subject to approval by the American Lobster Management Board. The Board will review the minutes during its next meeting.

This would be public comment for things not being covered on today's agenda. I'll look around the room here. Please, raise your hand if there is anybody in the room that would like to make public comment. Okay, not seeing anybody in the room with a hand raised, anybody online? Okay, no hands online either, so that is the Public Comment portion.

We will keep trucking along here.

CONSIDER 2023 JONAH CRAB BENCHMARK STOCK ASSESSMENT AND PEER REVIEW REPORT

CHAIR McNAMEE: Next up is Consideration of the 2023 Jonah Crab Benchmark Stock Assessment, and the Peer Review Report. We're going to start off with a couple of informational presentations, and to kick us off here is Josh Carloni from New Hampshire, so Josh, whenever you are ready, please feel free to take it away.

PRESENTATION OF STOCK ASSESSMENT REPORT

MR. JOSH CARLONI: I'm just going to get started here. Just wanted to acknowledge everybody that has been working on this assessment. What seems like over the last five years, but I think more realistically, in earnest it's been probably three years. The Technical Committee has provided all the data that we've needed.

They've been great, and the Stock Assessment Subcommittee has been working very hard at this. It's the first time this species has been assessed, so it's been a lot of work. We tried to leave no stone left unturned, and I think we did a really good job with the data we had in hand. I would like to give a shout out to Jeff Kipp, who did a ton of work on this, and deserves some acknowledgement for sure. He is here as well, to answer any questions as we move forward.

The outline for today's presentation is just going to go over the stock structure that we came up with, get into a bit of the fisheries characterization, some of the available data sources we looked at, and finally stock status. For

stock structure, we looked at a number of different aspects. We looked at biological aspects, which was kind of the size at maturity, which increased from inshore to offshore at the similar latitude, and then the L50 also increased from south to north as you moved from south to north. We also looked at Mass DMF did a large-scale tagging study, and there is no real broadscale movement associated with these guys, a couple outlier large movements, but generally they did not move very much, unlike lobster, where you'll see some pretty large movements throughout the range.

That was not the case, at least with this passive type that use a T-bar tag study. The other thing we looked at was management considerations. This fishery is tightly coupled to American lobster, as everybody knows. Making these splits along these lobster management areas seemed to make a lot of sense, the best we could do with that, to keep them tied together, as it's largely a bycatch fishery within the Gulf of Maine.

As you move to Southern New England, I'll talk about this more as we move forward, there is a targeted fishery. That kind of brings us to the fisheries characterization. I spoke about that just briefly already, that it's a bycatch fishery in the Gulf of Maine, and then I'll point your eye to Stat Area 525, 526 and 537. That is where there is a directed fishery in southern New England, and I'll get into that a bit in the next slide a bit more.

Data availability, basically the finest resolution we had was by stat area, so that is what we used for this assessment. Most things were done by stat area, and that is where some of these splits are. You see this split between offshore Gulf of Maine and offshore Southern New England is along those stat areas.

Fisheries characterization, this becomes a bit difficult, because first I'll draw your eye to this plot on the right. This is 2018, and what it's showing is the percentage of landings from each stat area. You'll notice that some of those stat areas are

grayed out, and that is because they are confidential.

But kind of the take home message here is, in the Gulf of Maine if you looked at those stat areas in the Gulf of Maine from Maine down through northern Massachusetts, it's characterized by a low percentage of the total makeup of the coastwide landings, as it's a bycatch fishery. With a bycatch fishery there is a high number of participants in this area, but low catch per trip.

That is kind of how that is characterized. But it's worth pointing out that with that you have a high number of participants, so if anything changes with the abundance of lobster, and they start to target Jonah crabs more, there is the potential for quite a bit of growth. If you look down to the stat areas that I spoke about before in southern New England, 525, 526, 537.

In this case in 2018, about 70 percent of the coastwide landings are concentrated in just those three stat areas. In some years that is as high as 83 percent. This is where there is a targeted fishery. This is where a lot of discussion was based throughout this assessment, so that is just kind of setting the stage there.

With the last point here is just that with a bycatch fishery, and even a targeted fishery, there is some confounding factors when you're looking at landings, because the abundance of lobster is going to drive that. If you have high catch rates of lobster, they are less apt to take Jonah crabs, as well as market. If there is a high price for Jonah crabs, they may be more apt to, and if there is just generally a market, they may be more apt to land them as well. That made our job a bit more difficult as well. The available data sources were fisheries dependent data and fisheries independent data.

What we looked at for fisheries dependent data were landings, participation, so that is number of trips and permits. I'm not going to present that today, but it is within the report, catch rates and size structure. These are the landings, and we only

went back to 2010, because that was when Massachusetts had available data, and they were a pretty integral part of some of these landings.

This is back to 2010, you can see in the upper panel it's inshore Gulf of Maine to offshore Gulf of Maine in the top. Then inshore Southern New England to offshore Southern New England. A couple things to point out here. Again, those top panels, this is largely a bycatch fishery here. You can see the trends for yourself.

But there are a lot of market driven reasons likely for some of these fluctuations. Then in inshore southern New England, you see that kind of oscillating trend, and it has gone up a touch in the end, but a lot of our discussion was focused around this offshore southern New England area. As you can see, the lobster population declined in this area, and then they started targeting Jonah crabs. You can see that increase in landings.

Notice the magnitude too on the Y axis is quite larger here. But offshore southern New England it stays high through about 2019, and then if you looked at '20 and '21 in this case, you see a pretty dramatic decrease in that time period. There will be more on that in a little bit. We also looked at catch rates.

We looked at the CFRF, that's Commercial Fisheries Research Foundation, they are harvesters volunteering to put ventless traps on some of the trawls that they're fishing commercially. What you're looking at in that top panel is the offshore in yellow, and it shows kind of a similar trend to those landings, with that decline '20.

We don't have '21 in this case, but you see that decline in those later years, kind of in agreement with what we see with the landings there as well. Then the DRM is a modeled CPUE that is trying to get at kind of teasing apart the difference between targeted trips and nontargeted trips, and standardizing that catch per unit effort over time.

The top panel is the offshore Southern New England, and you see that kind of is pretty stable, a

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little bit of decline in the end, and the inshore Southern New England included a general decline throughout. The reference fleet is not pictured here. That was a group of Area 3 Gulf of Maine, we looked at catch per trap haul over time, and compared that to some of our fishery's independent surveys, and found at least some agreement there.

That was another thing that is not shown here due to confidentiality, but that we did look at. The size structure, we looked at size structure from biosampling data from the states and organizations that you see above. The data were pretty limited, but we were able to do it by state area, and we looked at the mean size of males over time, to look for any indication of exploitation, as well as we looked at the mean size of the 5 percent largest males to again, look for any signs of exploitation. With this the size structure was generally stable over time. We kind of were a little, it was a bit of a head scratcher whether this was a reliable way to measure exploitation, and it may be due to our short time series here.

It's something we're going to continue to monitor, but this size structure was stable over time. It's worth noting that Canada did an assessment, and they had a pretty stable size structure over time, even as they were seeing declines in abundance, so that is worth noting, and the peer review report will have more on that.

The fisheries independent, we looked at the Settlement Survey, which was created for lobster young of the year, but we also have tracked crab abundance over time, and then the trawl survey with recruit abundance, exploitable abundance, and spawning abundance. This is the Settlement Survey, and this is all crabs less than 13 millimeters carapace width.

This is for the inshore Gulf of Maine. This was the only reliable area where we had these data for. But you can see these trends over time are generally low in the 2000s, increased in the 2010s, and then you're seeing a bit of a decline generally

with most of these in the most recent years. This is the recruit abundance indices, so this is males in 90 to 119, and these will molt into legal size with their following molt.

We'll see when we look at the indicators some of these trends in a bit more detail, but a couple things I'll point out here. The top two panels, we did look at this on a coastwide basis, and also a Gulf of Maine level basis, as well as by each stock. Ultimately, we decided to move forward by stocks and not the Gulf of Maine or coastwide.

That was because the coastwide index was driven largely by the Gulf of Maine Index, whereas landings come largely from Southern New England, so it created a bit of a mismatch there. I wanted to point that out. You can see some of these trends for yourself. Another thing I think worth pointing out, what you can see to some degree here is that in the Gulf of Maine, our trawl surveys showed some correlation seasonally.

The spring and fall generally were showing some similar trends over time, which gave us a certain level of confidence. If those were largely out of whack, it would kind of decrease that confidence. But I think that's worth noting, and then coming to the bottom panel here, that is the inshore Southern New England.

You can see that those catch rates there, bottom left, are quite sporadic. The inshore Southern New England is defined by low catch rates, low encounter rates, high CV. We did not recommend moving forward with this as an indicator, and you can see there, there are some wild swings where there is 0 catch or close to 0, and then a high catch and it goes back down.

Then in offshore Southern New England bottom right, we'll see these trends in more detail. But we didn't see that spring and fall correlation in the trawl survey indices in that region. That is worth noting. This is exploitable abundance; I'm not going to go into the level of details I just did. We'll see some of these trends later on. But this is males 120 plus. This is spawning abundance, so

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this is females over 80 millimeters, which is inclusive of the maturity estimates for all the regions. Again, this is coastwide in the first two panels, and then you can see that it's inshore Gulf of Maine and offshore Gulf of Maine, and moving to Southern New England after that. Stock status, the methods we looked at were an index-based method.

Jeff did a lot of work with this. Ultimately, we decided that this was not appropriate for the data we had. There is a defined relationship between catch and abundance, which is an essential element when using this type of method. We opted for a rather simple stock indicators, which I'll explain.

The stock indicators, the abundance indicators, were young of the year settlement that we ended up using, recruit abundance, exploitable abundance, spawning abundance, and you can see the sizes associated with those. You'll see it's grayed out there. Fisheries performance indicators, we did use those, they are in the report. They are available. I am not reporting on those today.

Then the way that we looked at these were, we took the time series, calculated the 75th percentile of the time series and the 25th percentile of the time series, and we compared the terminal indicator to those percentiles. The terminal indicator was the average of 2019 through 2021. That will be shown here as we move forward.

Again, this is just a recap of what we're looking at. The inshore Gulf of Maine, the terminal indicators, you can see the red dot is the terminal indicator, and the 25th percentile, I know it's hard to see, but is a solid line, and the dotted line is the 75th percentile. For the inshore Gulf of Maine, they were all neutral, in the neutral range, which would be between the 25th and 75th, except for Maine 512, which was in the positive.

Again, you do see some declines over time, but this is an average of three years, and that is where they are landing at this time. This is the inshore

Gulf of Maine recruit abundance, and at the top is the Mass spring and fall, the Maine/New Hampshire spring and fall, and then the Science Center spring and fall.

You'll notice, and this comes into play in a minute, that the Maine/New Hampshire started in 2000, 2001, so it's a shorter time series. It kind of begins during these pulses of abundance that you may have noticed, and that we've kind of pointed out in this report. The trawl surveys seem to kind of track these pulses of abundance.

Not so great at kind of interannual variability, but kind of a coarse tracking of an abundance signal, which they seem to be picking up on these pulses over time. This is neutral for Mass, both spring and fall. It's negative for Maine/New Hampshire, both spring and fall, and positive for the trawl survey, the Science Center.

For the Maine/New Hampshire, I just pointed this out, but this being in the negative is likely due to this shorter time series. There is no context of the historical values, which is pulling the 25th percentile up. That's just at least worth noting. This is inshore Gulf of Maine exploitable abundance, and this is positive for a spring Mass, neutral for fall Mass, negative for Maine/New Hampshire, again same shorter time series there, and positive for the Science Center. You can see the trends are trending downward in recent years for Maine/New Hampshire, also for the Mass, not so much for the Science Center. This is spawning abundance, and this is positive for spring Mass, neutral for fall Mass, negative for spring Maine/New Hampshire, positive for fall Maine/New Hampshire, and positive for the Science Center, both seasons.

This is the offshore Gulf of Maine spring and fall, and this is neutral for both. You can see kind of that peak abundance in the mid-2010s in the spring comes down quite a bit, still in the neutral zone, and the same is showing for the fall, a fairly similar trend. This is offshore Gulf of Maine, exploitable abundance, and this is positive for both.

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Again, you do see those declines, the abundance levels went up pretty substantially, and it looks like around 2015 and has been declining. But both still are in the positive values. This is spawning abundance, and this is neutral in the spring, positive in the fall. You can see kind of a similar dynamic there.

This brings us to the offshore Southern New England. Again, where a bulk of the coastwide landings are coming from. You can see from the spring and fall, these kind of are showing, there is no correlation between spring and fall, as I mentioned. Right now, the spring is in the neutral zone, and the fall is in the positive zone.

You can see the spring is kind of generally showing a downward decline since the 2000s, whereas the fall is showing more of a positive trend since that time period. There is a lot of variability here. One of the issues with these trawl surveys, there are low catch rates. We don't fully understand the catchability associated with them, but it's kind of the best we have.

This is offshore Southern New England exploitable abundance, and you can see that this is neutral in the spring, positive in the fall, kind of a similar picture to what I just showed. You do see that in the fall that most recent year has shown quite a bit of decline. That is something that you do see earlier in the time series with these rather large swings.

Spawning abundance, these are both neutral. You see the trends there. Stock status, this was, as you can see from those trawl surveys, they are defined by generally low catch rates, a lot of variability. Again, we felt like they were picking up on these pulses of abundance in kind of this coarse level of an abundance signal over time.

Certainly not perfect, and a lot we still do not understand about them, catchability in different substrates, how temperature affects their movement, and how susceptible they may be to these gears at different seasons. There is still a lot

of questions. That first bullet there is kind of the statement we made, is that abundance conditions have not declined to historical lows for inshore Gulf of Maine, offshore Gulf of Maine, or offshore Southern New England.

The conditions are unknown for inshore Southern New England. As far as settlement goes, settlement condition is neutral, and do not indicate recruitment to Gulf of Maine will decline to historical lows in the near future. Again, that is based upon that terminal indicator, and some of the high values received around that time period. We do acknowledge that there are declines in the Settlement Survey in recent years, and certainly something to keep an eye on. Settlement conditions are unknown for southern New England. We'll get into this a little bit, but that is one of the big mysteries with southern New England, we are unsure of where recruitment is coming from for this stock. But inshore southern New England they do a Settlement Survey, just as we do in the Gulf of Maine, but they get very few to 0 Jonah crab, so it's likely happening in deeper water, but we're unclear of where that is.

Then the last bullet, there is insufficient information to make statements about exploitation. Landings have declined, which is a concerning trend in offshore Southern New England stock, but we also realize with a bycatch fishery and with this fishery, that there are a lot of confounding factors that go into, such as markets, while crabs, or folks are seeking out Jonah crabs is typically lower on the desirability standard for that.

There are lots of different factors that are going into this, but we acknowledge that landings are declining, the CFRF ventless trap is declining, and the peer review, which Rich will get into, picked up on this and really did a good job, and asked us for some additional analyses. Rich will talk about that, but they were really good, you know kind of bringing some of this into focus. I think I'm going to wait on this, Caitlin. I don't know if we jump right into that or we go to Rich's.

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MS. STARKS: You can go through them, and then we can just discuss them again afterwards, or we can go right.

MR. CARLONI: Okay, so we had a lot of research recommendations that came out of this assessment. I don't know the number, but we're not going to bore you with all 45 of them, or whatever it was. But we were able to kind of pick our top ones, and some of the ones that we think could help us to better assess this stock right now.

You know there are so many unknowns that it makes it very difficult to say a whole lot, other than kind of monitor these trends, monitor landings. The first one is to collect growth data, particularly for adult crabs in offshore southern New England stock. We do have some growth data that Corinne Truesdale from Rhode Island has collected, also in New Hampshire, and myself and some colleagues have collected some here. But one of the big issues is that when you get to legal size there is very little molt information.

We didn't get any to molt in the legal-size range, and I know Corinne had some luck, but still not once you get into that larger size range. We don't know the growth increment, or the time period between the frequency of how often they molt, which is a big unknown and would really help us to better be able to assess this stock, growth is very important. Conduct video surveys for a snapshot of total stock size, and improved understanding of catchability.

Again, I mentioned some of that, the issues with catchability in different substrates temperatures, how that relates to what is actually going on, on the bottom. The third one, research spatio-temporal settlement dynamics and recruitment source for offshore southern New England. I think I mentioned that as well, where a bulk of these landings are coming up from, up to 83 percent in some years. We have really no idea where recruitment for those individuals or that portion of the stock is coming from, so that is a big unknown. Then what environmental drivers, ecosystem drivers are kind of driving the recruitment process.

Then lastly, determine how to interpret fisheries dependent data, considering drivers of these data streams, and that gets back to some of these confounding factors we talked about better understanding, how these maybe catch rates work over time, and what factors are really driving this market value, things of that nature to better understand these landings. That's all I have.

CHAIR McNAMEE: Awesome, great job getting a lot of information. It's always easier when you have like a single model that you can report out on. A little more challenging when you have to cover a bunch of things. We are going to hold questions for now and go right into the peer review. I hear that as well; I'm just going to power through it.

We're going to go right to Rich's presentation, they are very closely related, so please hold your questions for now, and we'll circle back, hopefully Josh will hang out with us for a little while, and we'll come back to all of your questions for both Rich and Josh. Rich, whenever you're ready.

PRESENTATION OF PEER REVIEW PANEL REPORT

MR. RICH WONG: Good morning, and a pleasure to meet you. The Review Workshop was conducted in late August, and we focused on all aspects of the assessment, including data methods and overall judgment of the assessment and quality for management use. The Review Panel consisted of Dr. Paul Rago, former Chief of the Population Dynamics Branch of the Northeast Fisheries Science Center. Dr. Chris Siddon, shellfish biometrician from Alaska Fish and Game, and myself, Rich Wong, another biometrician from Delaware Division of Fish and Wildlife.

These panel members have extensive experience with stock assessments, most importantly, they have personal expertise in data poor methods, trawl and trap surveys, invertebrate stock assessments and crab population dynamics and ecology. As outlined in the Commission's framework, the panel has no affiliation with the Jonah crab assessment or management.

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As such, we were tasked with obtaining an unbiased judgment of the quality and appropriateness of the assessment for use in management, and to provide recommendation for research and improvements to the assessment. Overall, the stock assessment was well done. This was a data limited assessment, and as such it had associated challenges.

These challenges made ascertaining stock status extremely difficult. Despite this uncertainty, there was some clear declining signals evident in the fishery. Given this uncertainty and recent concerning signals, the panel felt that it was essential for the Commission to closely monitor stock indicators on an annual basis for the next few years, to better understand the nature of these recent declines, rather than waiting for the next assessment cycle.

In reviewing this assessment, a pretty compelling story emerged for the panel. We see a fishery that has grown tremendously in a relatively short period of time. Landings rose 30-fold in the span of about two decades. The fishery is based on a fairly long-lived crab, which is a common bycatch species in an immense lobster fishery.

This crab has become so valuable, it supports a substantial fishery in its own right, peaking at nearly 20-million-dollars in ex-vessel value. However, we see steeply declining landings occurring over the past four years of this assessment. In fact, landings have declined 51 percent in the main producer region, the offshore southern New England, over this period. We are now at a pivotal part of the story. Where does the story go from here? What lies ahead? Are we at the beginning of a bust phase in a classic boom and bust arc, or is this decline caused by factors unrelated to stock decline?

What makes the story particularly worrisome, is that we've seen an almost identical set up in the early stages of the collapse of the Canada Jonah crab fishery in the early 2000s. In the first four years of this crash, landings have fallen 59 percent.

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By year 7, landings had declined 97 percent, and the stock no longer supported a fishery.

In retrospect, Canada DFO concluded that Jonah crab biomass was severely depleted, despite relatively low fishing pressure, and on a male-only fishery. To evaluate the appropriateness of this assessment, the panel was tasked to formally address nine terms of reference. The following slides will state each term of reference, and summarize the panel's main conclusions.

Term of Reference 1, evaluate the thoroughness of data collection in the presentation and treatment of fishery dependent and fishery independent data in the assessment. The data collection in the assessment was comprehensive and thorough, and the SAS did an exemplary job of justifying whether they included or removed data sources.

Data source variances and caveats were clearly presented. The panel agreed with the SAS's decision to summarize and report data for four distinct regions, given different fishery dynamics and potentially different stock dynamics between these regions. Throughout the review workshop, there was considerable discussion on how effective trawl surveys are for capturing stock signals for Jonah crab.

As an illustration, one out of every five annual index values was a 0. This indicates very low catchability success in these trawl surveys. For the future and the success of any future assessment, will depend on identifying and developing a synoptic index of abundance. TOR 2, evaluate empirical indicators of stock abundance, stock characteristics, and fishery characteristics for their appropriateness to monitor the stock between assessments.

The SAS presented a large number of stock indicators that Josh went over earlier. It consisted of 53 fishery independent surveys and 4 fishery dependent indices. Its fishery independent indicators in bulk, did show positive long-term trends across time series of greater than 40 years.

Here is a stoplight diagram, courtesy of Dr. Rago, showing all 53 fishery independent indicators.

As you can see, really want to just focus on the green, the colors of the values, the green being positive. As you can see, most of the positive values in green are seen in the later years of the time series. However, the panel also recommends to interpret these indicators over a more recent timeframe. This is because of a potential regime shift at the beginning and around 2010.

Pictured here the young of the year indices, and we see much higher recruitment and higher stock productivity, beginning in 2010. To better evaluate current stock status, it might be more appropriate to view the indicator as relative to 2010 to current. As you can see here, there are very few green lights in the past couple years of the assessment. We have somewhat conflicting long term versus short term signals from fisheries independent indicators. However, the indicators that were most worrisome were fishery dependent. The most conspicuous is the 51 percent decline in landings in the OSNE over the past four years.

But the more concerning indicator is the decline in fishery dependent CPUE in Rhode Island. That is the top panel. The bottom panel shows this preliminary analysis of fishery catch per unit effort, based on directed Jonah crab trips only. When we prepared this presentation, we revisited the fishery independent indices, but this time it's focusing especially on the last three to four years. We did see sharp declines in recent years in almost all of the fishery independent indicators in the most recent years of the surveys.

These are the young of the year indices. This is inshore Gulf of Maine recruit indices. Here are the inshore Gulf of Maine exploitable crab indices, the inshore Gulf of Maine spawner indices, the offshore Gulf of Maine recruit indices, offshore Gulf of Maine exploitable crab indices, offshore Gulf of Maine spawner indices, offshore southern New England recruit indices, offshore southern

New England exploitable crab indices, and the offshore southern New England spawner indices.

The panel does want to be careful, to not overstate these very recent fishery independent declines. However, the consistency in these declines in the most recent years was notable, and is a source of anxiety. Given the steep drop in landings and declining fishery dependent CPUE, and the very recent drop in the fishery independent indices, again, the panel recommends to continue monitoring indicators on an annual basis.

TOR 3, evaluate the methods and models used to estimate population parameters by less reference points. Data limitations precluded any methods to estimate population parameters by population size and fishing mortality rates. Other methods were employed, these include trend analyses, correlation analyses, construction of traditional and model generated abundance indices as indicators, and using reference-based quantile thresholds to evaluate these indicators and indexed based methods.

The SAS did a good job of stating any assumptions and caveats contained in these methods. TOR 4, evaluate the diagnostic analysis reform. This is a rather generic term of reference that is usually intended to explore the stability in models that are used to estimate population size and fishing mortality rates.

In this assessment, a large array of correlations was conducted, which could be considered diagnostic analyses. These correlations were used to investigate the cohesion in indices across life stages and regions. Another diagnostic analysis was the exploration of potential climate impacts and survey catchability.

Overall, diagnostic analyses were appropriate, and the SAS was transparent in decisions methods, and was critical and objective in evaluating their analytical results. TOR 5, evaluate the methods used to characterize uncertainty in estimated parameters. Again, this is a term of reference that

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is more applicable to assessments that estimate biomass and fishing mortality rates, Fmsy or quotas. But in this assessment, uncertainty was quantified when appropriate, and otherwise was stated, and acknowledged by the SAS in the report. TOR 6, recommend best estimates of stock biomass abundance and exploitation. Although the SAS was unable to generate estimates of abundance and exploitation, the panel did provide guidance towards future modeling efforts.

Obviously, a high priority is to develop and identify a synoptic index of abundance. With a synoptic index, catch survey analysis, depletion models or surplus production models will be logical models to pursue. More complex models, length-based models are possible, but require more substantial length sampling, and growth information.

If ageing is possible this would be a complete game changer, and would open up tremendous assessment possibilities. TOR 7, evaluate reference points and stock status determination. The panel considers stock status to be highly uncertain, owing largely to the fact that population estimates and biological reference points were not available.

The SAS did present other status determining criteria that we discussed earlier, that Josh discussed in his previous presentation. In general, these criteria portrayed positive long-term trends, plus more recent signals. Other favorable factors do exist. One, it is unlikely that recruitment overfishing or overfishing on juveniles is occurring, since the minimum size limit appears to be adequately specified.

The fishery also appears to select crabs larger than this minimum size limit. Female harvest is minimal in this fishery. This provides a significant moat around the potential depletion of female spawning biomass. Again, long term trends in fishery independent indices are positive. The concerns are sharply dropping landings, declining fishery dependent CPUE, and some very recent drops in fishery independent indices.

These somewhat conflicting signals in the fishery independent indices are not necessarily surprising for Jonah crab. In the Canada Jonah crab stock collapse, fishery independent trawl surveys were not very effective at detecting the decline in stock. However, the declining fishery dependent catch per unit effort was observable, preceding and during stock crash, as you can see in the top figure.

Again, you see the Rhode Island fishery dependent CPUE on the bottom figure. TOR 8, review and prioritize research recommendations. These were discussed at the review workshop, and the panel supports the SAS's prioritized research recommendations. In addition, the panel put forward these specific recommendations.

One, to continue to develop and refine fishery dependent indicators, including an examination of the Massachusetts directed fishery CPUE, and formally incorporate, if possible, local knowledge when interpreting this fishery dependent data. Two, to continue and possibly expand the CFRF ventless trap research.

Three, investigate surveys with higher catchabilities, such as the defunct winter bottom trawl survey, as potential directed Jonah crab surveys. Four, increase monitoring of female metrics, such as operational sex ratios in surveys and sea sampling, spawning potential ratios, and potential sperm limitation. TOR 9, recommend timing of the next stock assessment. It was difficult to recommend a precise timing for the next assessment. However, what is clear is that the Commission should not wait until the next assessment cycle to monitor indicators.

It is imperative to understand the nature of these recent declines. That being said, five, possibly ten years are probably needed to attempt population modeling. The panel recommends convening in five years, to summarize ongoing work and progress towards the next assessment. Furthermore, the panel felt that implementing a decision process might be helpful in identifying and preventing potential collapse of the stock.

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To conclude, the Jonah crab stock is highly uncertain because of data limitations that prevent traditional population estimates, as well, it is also uncertain due to the concerning recent fishery signals. Annual monitoring is critical in the near term to determine where the Jonah crab story is heading.

In light of these conclusions, the panel felt it was important to one, identify and prioritize candidate indicators, to conduct a formal annual review of these indicators, and to develop a methodology for making decisions in response to indicator pattern. Lastly, the panel would like to thank the SAS, the Stock Assessment Team and the Commission staff for highly productive and collegial workshop, and for the timeliness in the reports and additional requests for analyses.

CHAIR McNAMEE: Great, thanks so much, Rich. Okay, excellent reports from the stock assessment team and the peer review team. Why don't we clear up any questions that folks might have for Josh or Rich. Anyone with questions, please raise your hand. I saw Bill Hyatt first, so go ahead, Bill.

MR. WILLIAM HYATT: Yes, just a quick question regarding the collapse of the Canadian fishery. Is there any evidence that since that collapse there has been any kind of recovery in those geographical areas involved?

MR. WONG: That's a good question. To my knowledge, the fishery has never recovered from that collapse that had occurred. But the assessment was conducted, I think it was in 2009, more than 10 years ago, the Canadian assessment. That is a recommendation that we gave to the Stock Assessment team is to do a post mortem investigation into that, a deeper post mortem investigation into that Canadian stock collapse.

MR. HYATT: There is no post collapse monitoring taking place at all?

MR. WONG: Not to my knowledge, I haven't seen anything published about that.

CHAIR McNAMEE: Good, Bill, next up I have Mike Luisi. Go ahead, Mike.

MR. MICHAEL LUISI: I'm not sure who this question is for, but maybe somebody can help me out. I certainly appreciate the presentation, and it is concerning to see declines that we're looking at. I just wonder, as far as prosecuting the fishery, I know that we had discussions in the past about whole body versus claws, and things like that. Is there any information about the distribution of the catch, whether it's whole body, the whole crab harvest versus the claw harvest? You know the idea behind the claw harvest is that the crab will actually survive. I know the fishermen in the south, many of them just use the claws. But if there is any additional information about whole body harvest, I would be curious to see what that looks like.

MR CARLONI: I can take a stab at that to start, and if anyone wants to jump in, they can. The last estimate, I think that we saw is less than 1 percent is just claw harvest. There are states that do not allow it at this time. Myself and some others actually did some research on mortality rates associated with declawing Jonah crabs, and it was as high as 70 percent when removing by hand both claws. That information is in the assessment. I don't know if that answers your question or not.
MR. LUISI: Yes, it helped, thank you.

CHAIR McNAMEE: Next up I have Doug Grout. Go ahead, Doug.

MR. DOUGLAS E. GROUT: My question is, I noticed in some of the different areas the degree of the decline was different. Clearly to me, it showed that in the offshore southern New England it seemed like that's where it was the most dramatic declines that are occurring. My question is, is the best available science right now that this is a single stock of Jonah crab?

CHAIR McNAMEE: That might be one for Joshua or Jeff. Josh, do you want to jump in on that one?

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MR. CARLONI: Yes, so I guess are you saying is it one coastwide stock, Doug? Is that where your question is leading?

MR. GROUT: Yes, Josh.

MR. CARLONI: Yes, so the information that we had, we did split it into these four different stocks. Some of it, of course, was based on management, and it was tied tightly to the lobster fishery. But some of it was on biological data, where we're seeing differences in size at maturity, as well as a lack of movement of these crabs, large-scale movement.

There is obviously still a lot to learn with larval dispersal. We don't fully understand that yet. But as currently constituted it is four stocks, and this southern New England area is its own stock, as we assessed it in this assessment. Of course, there is still a lot to learn, but that is how it is now.

MR. WONG: I'll just add to that. In the report there is a comparison of indices from the Science Center's Trawl Survey in adjacent stat areas that are in that offshore southern New England and Gulf of Maine stocks, and the trends are pretty different in those two areas, so it does seem that there are also some differences in trends in abundance going on between those areas.

CHAIR McNAMEE: Good, thanks, good info. Next up I have Steve Train.

MR. STEPHEN TRAIN: I'm not sure who might be able to answer this. You know when we took this species on, I wonder if we may have actually created a derby for a while, and these fishermen aren't the same as we used to be. Somebody starts talking about limiting something, we go as hard as we can to make sure we don't get something else taken away from us. If that happened, we would land a lot more of anything for a while, then they would be bound to see a decline.

I wonder if the effort on this could have been taken into account, because of when we started

managing it and there was a worry. I know we're dropping below pre-management levels, but even that I think could be taken into account. There were some things in this that didn't look as bad as others. There is a lot of neutral there. I wonder how much of that could be attributed to management more than what the traditional fishery and the stock would look like.

CHAIR McNAMEE: Good question, Steve. Maybe Josh, take a crack at that one. I think you guys talked a lot about these external factors, so maybe you have a comment on that.

MR. CARLONI: I'm not sure I fully understood his exact question, but I think one way that I look at it is, when we're just talking about southern New England, which is where I think the concern seems to be generally right now, due to the high exploitation rate there. When we're talking about that southern New England stock, the reason that started to be fished so heavily was due to the decline in the lobster fishery in southern New England.

As their lobster fishery declined, they started to target these Jonah crabs in these specific areas, and that's when the landings just skyrocketed, and stayed high for a period of time. Only in the last two or three years, looking at the landings, has it been declining quite a bit. That does also coincide with a higher price per pound, which adds to some of that concern level, as to why those landings are declining.

But at least in southern New England, I think it's highly tied to what is going on with the lobster population there, and that I guess would be the concern in the Gulf of Maine, with a high number of participants. You know we're seeing some declines in the lobster population in the Gulf of Maine, but compared to historic values, at a very high level.

You know that would be the concern if the lobster population continues to decline, are these guys going to shift to Jonah crabs, and then you have a pretty high exploitation rate, and you could

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deplete the resource fairly quickly, at least according to what we saw in Canada.

CHAIR McNAMEE: Thanks, Josh, follow up, Steve?

MR. TRAIN: I think you got the concept of what I was saying, but I'm wondering if this peak effort, of course may have caught a larger crab for a while, as more people went and went harder. But has this effort peak dropped off, so that maybe if you take into account that that peak in effort for a while may be leveling off, that the stock may level off on its own.

I mean essentially this is a male-only fishery. There are females, but the size alone has made this almost a male only fishery. How we put more broodstock on bottom is beyond me, and that is one of our general tools. I'm not saying I don't want to manage something, but I'm wondering if this might level off on its own.

CHAIR McNAMEE: Thanks, Steve, appreciate that. Roy, you are up next.

MR. ROY W. MILLER: I was wondering from either Joshua or Rich, if the troubling recent declines in fishery dependent and fishery independent indices, we're admitting that those are troubling. Are they responsible for what we're seeing, or is exploitation responsible for what we're seeing, or is it a climate change affect? I'm just curious which of those two might be more important, or is it too difficult to say?

CHAIR McNAMEE: Actually, I think that one was directed to Rich, if you want to take a crack at it, but I think we could lateral that one as well over to Josh or Jeff.

MR. WONG: Roy, you are correct, it is very difficult to answer that question. You know the conclusion was that almost everything was uncertain. The stock status was uncertain for the stock, and that is because we know so little about its biology, its life history and the appropriate years as indicators. I guess I would probably pass this off to Josh.

CHAIR McNAMEE: Yes, either Josh or Jeff, feel free to chime in.

MR. JEFF J. KIPP: Hey, Josh, I was just going to offer a comment. You might have to add to it. But one of the things that we saw, particularly in the Gulf of Maine indicators, was that there appeared to be this boom-and-bust type population dynamic going on, and we saw an increase in abundance in the early 2000s across trawl surveys.

It was very clearly picked up in the indicators that we had, and that was at a time when there was really no Jonah crab fishery, even in southern New England. That pulse went away within a couple of years. We saw that again in the mid-2000s, but it was considerably larger. There was a significant increase in abundance. We saw it across trawl surveys, and that's what we're seeing in the most recent years of this assessment is the decline from that all-time high.

It seems like there is another boom in abundance, and we don't know the drivers behind that, what is causing these boom-and-bust type dynamics. But that was one of the things that we grappled with in this assessment, that we did see across indicators, that we don't know what the declines are in those boom periods.

CHAIR McNAMEE: Anything to add, Josh?

MR. CARLONI: No, I think that covers it pretty well. There is just a lot of uncertainty still, and it's hard to answer questions sometimes, when we just simply don't know.

CHAIR McNAMEE: Great, thank you, is there any follow up, Roy?

MR. MILLER: Well, the reason I posed the question is, I'm just wondering if we need to take action to avoid the collapse that happened in Canada, happening in offshore southern New England stocks. Do we need to do anything, or is it out of our control, basically?

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CHAIR McNAMEE: Thanks, Roy, that was an excellent segue for transitioning on the agenda here, so thank you for that. Not seeing any more hands around the table, not seeing any online either. Certainly, if folks have additional questions, we can address those.

CONSIDER ACCEPTANCE OF BENCHMARK STOCK ASSESSMENT AND PEER REVIEW REPORT FOR MANAGEMENT USE

CHAIR McNAMEE: But let's move forward. We have a couple of options for how we can proceed today per what Roy was just wondering.

Maybe at the highest level, just sort of let folks know what I was thinking, kind of looking at the agenda. We could do nothing, that is always an option. We could potentially approve the assessment for management use, and then develop some tasking for the Technical Committee to look at some things that you're interested in, that will help you to kind of understand a little better, whether we should take action. That is kind of like the middle road, and then we also could approve the assessment for management use, and if somebody is ready to go, wants to offer something, you know you could do that as well. I have a favorite amongst those three, but I'll let you all discuss, so that is kind of how I see the conversation going here. I'm going to start off with Dan McKiernan. Go ahead, Dan.

MR. DANIEL MCKIERNAN: Is it possible to accept the assessment and stop short of new management, but actually put more efforts into monitoring?

CHAIR McNAMEE: Sorry, Dan, just to make sure I'm clear. You would recommend, you would approve the assessment and then you would make some research recommendations. Is that your idea?

MR. MCKIERNAN: Yes, thank you, something in that realm. I'm thinking of raise this particular species up, in terms of priority species for future research and for attention, in terms of funding

priorities, because it seems like even if it's just at a minimum, making sure that the states continue to do what we've been doing to maintain that.

We already know that we've got some challenges with trawl surveys, for example. If we need to continue to study the fishery dependent data, make sure that states are providing that data and those analyses. I'm wondering if we can stop short of management, but ramp up the monitoring attention.

CHAIR McNAMEE: Okay, got you, absolutely that's an option. The first part is straightforward. The second part, the way I'm kind of interpreting, one way we could approach that is we could ask the Technical Committee to kind of look at the research recommendations, and offer which subset of them we think they would, or which ones they would recommend that would meet the goal that you just offered, of raising this species up. The subset that would give us the most information to kind of begin more robust monitoring of this stock. That could absolutely be a way to go. We'll take a few more comments here. Dave Borden.

MR. BORDEN: To me that sounds like a logical way to move forward, but I guess my suggestion on part of this, I'm a little uncomfortable with is the marketing aspect of it. I realize that is not an issue that we traditionally get involved in. But right now, the average fisherman could literally catch tens of thousands of pounds of Jonah crabs, but there is no market for them right now.

You can't sell the product. I would be comfortable approving the assessment for management, or just approving the assessment, and asking for technical advice on some of the elements you outlined. But I think one of those should be to try to get some more information on why the market is in the condition that it's in, because that may lead us to very different management conclusions than we would ordinarily take otherwise.

CHAIR McNAMEE: Really good point, David, I think that is aligned with what Steve Train was offering

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earlier as well. Okay, let me just check around the table. Doug Grout, go ahead.

MR. GROUT: Yes, I liked Dan's suggestion, but I have concerns that if we ask the TC, and they give us suggestions about things we could do to improve the monitoring here. That is going to take a while to develop, and if we continue to see these declines, it's not going to be as valuable two years from now as it will be five, ten years from now.

I personally like the suggestion of the peer review panel that we increase the frequency of the updates on what we have right now. Now whether it is annual or every two years, it depends on what our capacity of our stock assessment committee is, with all the other things that they are involved in.

But I certainly would support Dan's suggestion for one or two things that can improve things for the long term, but I think right now we're at a point where we need to keep a close track of the stocks with the data that we have at hand. If you would like a motion on that sometime, I would be glad to put it forward, if you give me a minute.

CHAIR McNAMEE: Just to offer a thought. Excellent comments, and I wonder again, to sort of understand the optimal frequency of how often we should be looking, and what of the things we already have we should be looking at could be a task to the Technical Committee as well, just to get a little advice back on that. I'll just offer that thought, so you can think on that a little bit. Dan McKiernan, go ahead.

MR. MCKIERNAN: I would be happy to make a **motion to accept the peer review and the stock assessment for management use**, if that would move the discussion forward.

CHAIR McNAMEE: Yes, thanks for that. We've got a motion on the table, is there a second? I see everybody in Maine and New Hampshire wants to second, so I'll go with Steve Train, I saw his hand first. Motion from Dan McKiernan, seconded by

Steve Train. It looks like that is making its way up there, great.

The motion is made by Dan, anything further you want to say about that? Okay, you're good. Anything, Steve, from you on the motion? Okay, any other discussion folks want to have before we take action on this motion? Any hands online? Okay, I'm going to give folks maybe one minute to chat, because of the hybrid, so if you need to connect with anyone online, to make sure things are okay. Let's do one-minute caucus, and then we'll call the question. Does anybody need more time? You can raise your hand if you do.

Not seeing any hands, no hands online. We have a motion before us to accept the Jonah crab benchmark stock assessment and peer review report for management use. Motion made by Dan McKiernan, seconded by Steve Train. Let's go ahead and call the question on that. **All those in favor of the motion, please raise your hand, including folks online with a virtual hand. Okay, so that was 10 in favor, all those opposed to the motion. It looks like 0.**

MS. KERNS: Mr. Chair, you have a hand up from NOAA Fisheries, Alli Murphy, and I don't know if that's opposed or if she's trying to do something else. She's put it down.

MS. MURPHY: Mr. Chair, I meant to vote yes.

MS. STARKS: It was hard to hear you, but I think you said you meant to vote yes.

MS. MURPHY: Correct.

MS. STARKS: Thank you.

CHAIR McNAMEE: Sorry, so we missed a hand online. There are **11 yesses, there were 0 noes, any abstentions? Oh, that is everybody, so no abstentions, no null votes. Great, so the motion passes.** Thanks for that, Dan. We got that part settled.

CONSIDER MANAGEMENT RESPONSE

CHAIR McNAMEE: Now we can get into some of the other comments that were made about potential tasking to the Technical Committee, or otherwise. I see a hand from Steve Train first, go ahead, Steve.

MR. TRAIN: Just trying to move this along. I would like to make a **motion to task the Technical Committee with the possible management options to correct what appear to be deficiencies in the health of the stock**, whether they be seasonal closures, increased vent size or other options.

CHAIR McNAMEE: We'll just get that up on the board, hang on a second. We're just pausing to get the motion up on the board. Okay, how does that look, Steve?

MR. TRAIN: Oh, that's fine, I don't need examples, I just gave them when I was giving the motion.

CHAIR McNAMEE: Okay, so looking for a second to the motion. Doug Grout seconds the motion. Discussion on the motion. I think this is starting to create the tasking list for the Technical Committee here. Steve, I'll hand it over to you first, if you want to offer anything.

MS. TRAIN: I spoke earlier to it, I'm not sure what more we can do. But I'm not a technical expert, and I'm hoping that there might be some advice on how we might be able to correct this. If we're already leaving the females on bottom, maybe they need more males down there, I don't know. But it seems like that is the tool that we go to on most things, and we're there already. Hopefully they've got some advice for us.

CHAIR McKIERNAN: Doug, anything to add? Nothing from Doug. David.

MR. BORDEN: I'm fine with the motion, but I kind of view this as a two-step process, and the first step being that some of the technical folks would at least talk to the processing industry, and try to

figure out the dynamic of what's going on, in terms of the market implications. Then bring that back, hopefully by our winter meeting.

Then we could decide whether or not we wanted them to target specific management action. If it's all right with Steve, it would be kind of a two-step process. I just don't want to waste a lot of technical time on this, if it's not going to be placed in the right arena.

CHAIR McNAMEE: I saw Dan McKiernan's hand.

MR. McKIERNAN: I have a question for the motion maker. It says deficiencies in the stock. Was it meant to be deficiencies in the stock assessment?

MR. TRAIN: Actually no, I think most stock assessments might have flaws, but I think as a whole they are accurate or close to accurate, and this one says that the stock may have issues.

CHAIR McNAMEE: Just to offer an interpretation, and Steve, you can absolutely correct me if I'm off. But the stock deficiencies I think he was talking about are the declines that we're seeing in some areas. Okay, Roy.

MR. MILLER: I was wondering if I might tack on to David Borden's suggestion. While the Technical Committee considers the task before us there in Steve's motion, if they could also examine if the market is potentially very important, in terms of effort, then they need to let us know whether effort, in fact directed effort, has declined or is it staying fairly constant? I would add effort to that examination as well.

CHAIR McNAMEE: I'm going to try and round, okay, I'm going to see if I can try something first. I think we've gotten some good feedback on the motion. The motion is pretty broad, but what I'm hoping is we can kind of keep this, rather than getting into a series of amendments, and just define that, you know the tail end of the motion; what folks are interested in seeing are some economic indicators that we can sort of pull into the analysis. We heard things about market, Roy

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offered changes in effort, what might be driving that. We have this kind of broad motion of tasking to the Technical Committee.

We've had some discussion that I think defines that a little bit more for them. If it's okay with the Board, I'm hoping we can kind of stick with that as we task the Technical Committee, they will have a little more detailed information from the discussion. Is everybody okay? How about the ASMFC folks. Am I okay with the logistics?

MS. STARKS: **Yes, I think as long as we're clear on the record what the Board is looking for from the Technical Committee, we don't need to add everything into a motion. We just want to make sure on our end we are going to be having the Technical Committee look into market factors that could be affecting this, recommending any monitoring improvements, and looking into effort in the fishery, as well as other factors.**

CHAIR McNAMEE: That sounds right to me, anyone want to add anything in addition to what Caitlin just summarized? Doug.

MR. GROUT: Maybe you indicated this, but just to get a feel for how frequently we could have that update, is it two years or one year? It would be great if it would be annual, but I'm not sure they could do it.

CHAIR McNAMEE: That's awesome, Doug, so yes, that is an important one. Getting some feedback from the Technical Committee on the frequency of the informational updates that we get, is also an important one to get feedback on. Okay, does anybody need time? Can you raise your hand if you need time to caucus with folks who are online? I'm not seeing any hands around the table. We have a motion before us that has been seconded. Are there any objections to the motion? Please, raise your hand if you object to the motion. Dan, go ahead.

MR. McKIERNAN: A question just came up in our delegation. When would we get a report back from the TC?

MS. STARKS: I believe we can have a report back by the winter meeting with recommendations.

MR. McKIERNAN: Next meeting in January?

MS. STARKS: Jeff, does that sound all right to you? Yes.

CHAIR McNAMEE: Try again. That wasn't an objection, just to be clear. **Any objections to the motion, please, raise your hand. Looking around the table, no hands, looking online, no hands. The motion passes by consent.** Great, thanks everybody, good discussion.

CONSIDER ANNUAL DATA UPDATE OF AMERICAN LOBSTER INDICES

CHAIR McNAMEE: Let's move on to our next agenda item, this is Consideration of the Annual Data Update of American Lobster Indices. Kathleen, I believe is online. If you're ready, Kathleen, we've got your presentation up, so please take it away whenever you're ready.

MS. KATHLEEN REARDON: Coming out of the 2020 American lobster stock assessment, it was recommended to provide data updates to the Board between assessments to allow for evaluation of potential changing trends in stock abundance. The objective of this process is to present information that could support additional research or consideration of changes to management between assessments.

The datasets that I will present, are those that may indicate the exploitable lobster stock abundance conditions in the future. Those datasets are the trawl survey indicators, including recruit abundance and survey encounter rates, ventless trap survey, sex-specific indices by statistical area, and young of year settlement indicators.

The updated data since the assessment include 2019, 2020, 2021, and 2022. This is the third update provided to the Board since the 2020

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assessment. To show relative status, we use a baseline from the assessment time series to understand potential changes in condition. For each assessment time series, below the 25th percentile is considered negative conditions.

Between the 25th and 75th is considered neutral, and above 75th percentile is a positive condition. The terminal indicator status for each index is a five-year mean. To determine the status, we compare that five-year terminal indicator status or mean, from the assessment including 2014 to 2018, to the most recent and updated five-year status mean of years, 2018 to 2022.

We do have some notes to consider. COVID 19 had impacts on trawl survey sampling efforts in 2020, and will continue to impact our updated five-year mean in this period of 2018 to 2022. Any data or past errors that lead to changes from previously documented values, are described in your meeting material memo appendix.

The figures shown on the slides only display the annual values as a time series, but the memo in your meeting materials includes tables with the assessment and updated five-year mean value. The red dots and lines in all of the figures represent the updated data since the last assessment, or the black dots and bold lines are the data time series considered in the assessment, and data determining the 25th and 75th percentiles.

The solid line is the 25th, below which is negative, and the dotted gray line is the 75th, above which is positive. Between the horizontal lines represents neutral conditions. We will start with the Gulf of Maine young-of-year indices. All updated five-year means were neutral, which is an improvement from the assessment, because both southwest areas were negative during the assessment.

When looking at individual years, the 2022 young of year indices increased from '21 in all areas except 514 in the bottom figure, and all 2022 values were in neutral status except 511 at the

top. The Gulf of Maine trawl survey recruit indices, the indicators were showing signs of decline since the assessment.

The Maine/New Hampshire fall trawl survey updated five-year mean, changed from positive in the assessment to neutral in the update, while the others remained positive since the assessment. Looking at individual years, the 2022 values for three of the four inshore indicators were neutral. The offshore indicators from the Science Center trawl survey remained positive. It is important to note that five of the six indicators were not available in the 2020 year, due to COVID sampling restrictions.

For encounter rates in the Gulf of Maine, the rates remain high, but are showing deteriorating conditions since the assessment. All four of the inshore indicators were neutral, whereas only one was neutral in the assessment, showing relative declines in index condition. The updated five-year mean for the two offshore indicators remained positive. Again, five of six indicators did not collect data in 2020.

For the Gulf of Maine ventless trap survey indicators, the surveys have shown decline since the stock assessment. For the updated means, six of eight updated means were neutral, and two were negative, compared to four positive and four neutral, and no negative means during the assessment. The 2022 values for both sectors in 512 and 514 were among the lowest observed in the time series. Switching to Georges Bank recruit abundance from the Science Center Trawl Survey, conditions exhibited a slight improvement since the stock assessment, where one mean moved from neutral to positive, and the other remained neutral.

Both the 2022 annual values were both positive, and relatively high. These indicators tend to be noisier than some of the other abundance indicators, with high interannual variability and lack of discernable trends. No indicators were available for Georges Bank in 2020. For encounter rate in Georges Bank since the assessment, both

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means were positive and similar to the assessment.

Moving to southern New England. The updated five-year means for young of year were all negative, while only two of three were negative in the assessment. There has been only one nonnegative annual indicator observed since the assessment, and no young of year have been observed in Massachusetts for the past eight years.

For recruit abundance from trawl surveys in southern New England, conditions have declined since the assessment, with all updated five-year means negative. In the assessment, three of the eight indicators were neutral. All annual values for 2022 were negative, and marks the first year that values have been negative across all the true indicators for southern New England. Six of the eight indicators were unavailable in 2020.

Southern New England encounter rates, the conditions have deteriorated since the assessment, with all updated means and negative condition, with two changing from neutral to negative since the assessment. All encounter rate indicators were negative in 2022 for the second year.

For southern New England ventless trap survey, there has also been a relative decline. In the assessment all four indicators were neutral, while the update shows that two have changed to negative and two remain neutral. All 2022 values were negative, the second year where the annual values have been negative, across all ventless indicators.

It is important to note that ventless traps have only taken place in southern New England during depleted stock conditions, coinciding with an adverse environmental regime, so interannual variability can be misleading without the context of a longer time series encompassing varying stock conditions. In summary, the Gulf of Maine

indicators show declines from the time series highs observed in the assessment.

Georges Bank shows slight improvement, while southern New England shows continued unfavorable conditions, with further signs of decline.

UPDATE ON ADDENDUM XXVII TRIGGER INDEX

MS. REARDON: At the May 2023 meeting, the Board voted to approve Addendum XXVII, so we have added the calculated trigger index to the data update memo and presentation.

Just as a reminder, the trigger index is based on three recruit abundance indices, including the Maine/New Hampshire and Massachusetts trawl surveys, fall and spring, and the model based ventless trap survey index. Only the size range of 71 to 80 millimeters are considered as part of these three recruit indices. The addendum determined a 35 percent trigger, defined by the decline in the combined recruit indices from the reference period of 2016 to 2018. The assessment found the trend from the indices correlates with overall abundance.

The annual index is calculated as a three-year rolling average. One year cannot trigger action. This is the trigger index calculated through 2022, and the combined index is in the yellow square. The combined index showed a 39.1 percent decline from the reference period, and has crossed the trigger. I will now hand it off to Caitlin, to address the management implement.

MS. STARKS: Just as a reminder, Addendum XXVII established that the management measures triggered under Section 3.2 would be implemented by June 1st of the calendar year following meeting the trigger. This means in Year 1, which would be 2024, the LCMA1 minimum gauge size would increase to 3 and 5/16 of an inch for 84 millimeters.

In Year 3, which would be 2026, the LCMA1 minimum gauge would increase again to 3 and 3/8

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of an inch, and in Year 4, the LCMA escape vent size would change to 2 by 5 and 3/4 inches rectangular, or 2 and 5/8 circular. Then finally, in Year 5, 2028, the LCMA3 and Outer Cape Cod maximum gauge size would decrease to 6 and 1/2 inches. Kathleen and I can both take questions.

CHAIR McNAMEE: Thank you very much, Kathleen, nice job getting through the data update and thanks for helping out there at the end, Caitlin, with the management response to the trigger. We have a set of data in front of us, and I'll just open it up here to the Board for discussion, sorry, questions to start.

Any questions for Kathleen or Caitlin? No hands around the table, any hands online? No hands online. Okay, we have a set of information, this is a possible action item, so I'll look around the table, and I think I see someone already with their hand up, so Pat, go ahead.

MR. KELIHER: I don't think when we were sitting here in May that we expected to be hitting the trigger as quickly as we did. Certainly, the presentation from our TC Chair shows some troubling trends. If you all recall, at the May meeting there was also a lot of discussion as it pertains to Canada and the differing gauge sizes between the U.S. and Canada, and how problematic that could be. The Board did, with the approval of the Policy Board, develop a committee to work with Canada, try to address some of those issues.

We have in good faith, had two meetings. We've got another one coming up. We've got a Town Hall meeting with industry in Canada scheduled in January. What I'm worried about is the fact that we could have some really negative trade connotation associated with our early action, and I would like to, with the approval of the Chair, put a motion on the board to kick this conversation off, and if I get a second, I'll be happy to give some rationale.

CHAIR McNAMEE: Yes, let's get that motion up, so that we have something to focus the discussion.

While they are sort of consulting, let me check one more time, just to make sure there aren't any questions around the table. Okay, not seeing any hands. Looks like we might be ready to go here, Pat, so whenever you're ready, please go ahead.

MR. KELIHER: This has gone through several iterations, so hopefully staff has the correct one. **A motion to amend the approval of Addendum XXVII to change the implementation date. The implementation date for all management measures shall be January 1, 2025, including those measures triggered under Section 3.2. Year 2 and Year 3 measures would be implemented by January 1 of the following calendar years for which they are required.**

CHAIR McNAMEE: Thanks, it looked like we had an older version that flashed up on the screen, so hang on a second.

MR. KELIHER: I would just say, Mr. Chairman, and I appreciate the time that many Board members have given me over the past week, to try to perfect this. I just want to make sure that it's clear for the record. I was the original maker of the motion that developed that started this whole process to be proactive instead of reactive, and I don't like the idea of these delays with the trends that we have in place. But I do think it is critical that we do have time to play out the issues that we have started with Canada, to try to solve some of these problems.

CHAIR McNAMEE: It looks like we've got the right version up on the board. We've got a motion up on the board, is there a second? Seconded by David Borden. Pat, I'll turn it back to you for anything further you want to say on the motion.

MR. KELIHER: Yes, the U.S./Canadian issue is certainly the one driver here. I've already spoken to that. There is the ongoing issue we do have in our Board packet to the supplemental material, the issue of whether gauges can be put together or constructed in time for the potential June 1 trigger. You know David Borden and I have talked about that. There are probably some other ways

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around that particular issue, but it's still one of those things that needs to be addressed.

Maine has a very unique problem, as it pertains to differing size gauges with Canada, which is the gray zone issue. Certainly, it's not the problem of everybody around the table here, but it is a serious issue when boats fishing right beside each other from two different countries, one is having to throw that back, and the other is retaining that product. Having some additional time to see if that could be worked on as well would be beneficial.

CHAIR McNAMEE: David, do you wish to speak to the motion as well?

MR. BORDEN: I basically agree with the points that Pat has made. I seconded this, because I think it's a good compromise, in terms of the timing. I've always been a little uncomfortable with a rule change for a fishery that affects 5,000 license holders. If you do it in June, or July, in other words, the time period will link up better with kind of a down period.

My only reservation about this is I'm still a little bit concerned about the aspect of state regulations and how they will follow. I would like to have some discussion of that. We could include that in this discussion, or we can do it separately, whatever your preference is. But my point is very simple, that I think that the states should start their regulatory process now, as soon as possible, and I would particularly emphasize that I think the federal government needs to start its regulatory process soon, given the fact that at this meeting we're going to be discussing federal compliance with regulations that were approved ten years ago.

NOAA needs to step up to the plate and start their own regulations, and have this be seamless, so that when the gauge changes take place, all of the areas have their regulations in place. I think that is critical for our enforcement agencies collectively.

CHAIR McNAMEE: Yes, it's a really good point, kind of keeping with the philosophy of Addendum XXVII, being proactive, and to have folks' kind of thinking out ahead of the regulatory processes, so you're not kind of stuck at the last minute. Please, folks, feel free to comment on that as you're going around the table as well. Other discussion? Dennis Abbott, go ahead.

MR. DENNIS ABBOTT: Could we ask Pat to elaborate a little further on the issues with Canada, beyond the gray zone, the economic issues that we're dealing with and whatever might be informative to the Board.

CHAIR McNAMEE: Yes, please feel free, Pat.

MR. KELIHER: Thanks for that question, Dennis. The Subcommittee has had two meetings, the first one was kind of a more informal meet and greet, to understand, also understand the management processes from each country. The second one was to understand both the science and the assessment work that is ongoing between the two. It was very interesting conversation, where Kathleen Reardon presented for the U.S., talked about high level from our assessment in that things looked good from an assessment standpoint, but we're seeing some troubling trends. Canada's presentation was strictly their assessment, and painted a very rosy picture.

But it wasn't until they looked at our very proactive approach to management that it felt like there was some really positive comments around, okay, we are starting, probably not positive from their standpoint, but seeing some negative trends in Canada as well. The market implications are such that when you have that small product that is potentially going to come back into the U.S. to fill that chick market, that live chick market.

That can be very problematic when you're selling, you know, everybody is seeing the twin lobster special, you know when it's two chicks, and we're not going to be able to sell into that market. I heard loud and clear from the industry, in fact we heard loud and clear from the industry in our own

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public hearing process from the Commission that industry was very concerned about this from a market standpoint.

You have both that market component from a harvester perspective, and then on the dealer/processor side, there is a lot of concern being expressed to me from the processors about not being able to bring that product in. Now, the document does give some flexibility to each state to allow that to happen. But I think what we would run into probably state by state is quite a conflict between harvesters and the processors. I think trying to rectify that with a consistent gauge would help alleviate any of that consternation between the two user groups.

CHAIR McNAMEE: Okay, Dennis, good? Because of the nature of the motion here, I'm going to look to Bob Beal to kind of clarify what exactly needs to take place here. Go ahead, Bob.

EXECUTIVE DIRECTOR ROBERT E. BEAL: Yes, this is a little bit outside the normal Robert's Rules of Order. It falls under the special provision that the Commission has developed for amending or rescinding a previous final action. This motion will require a two-thirds vote of all the members of the Board.

Usually, you can't go back and sort of just vote to change a final action that has already been approved, but the Commission has set up a special rule where that is allowed. This falls under that and it's in the rules and regulations. The only unique thing here is it's a two-thirds vote, and if this is approved, or any other similar motion, it will, in effect, modify the Amendment XXVII document. It's actually changing the approval of that Addendum. Happy to answer questions on that.

CHAIR McNAMEE: Any questions for Bob? Go ahead, Dan.

MR. MCKIERNAN: Yes, thanks, Bob, for that explanation. You said in effect it changes the final rule. Would it in fact change the printed

document on the web? Like would it be an amended Addendum XXVII, so in historical record we would know going forward this change was made? Has it captured that?

EXECUTIVE DIRECTOR BEAL: Yes, we would update the actual Addendum on the website, with a notation of, you know to capture the changes and the actions the Board took.

CHAIR McNAMEE: Dennis.

MR. ABBOTT: For Bob clarification, I think we've been through this before. It's two-thirds vote of those present and those who abstain, are they counted as part of the two-thirds? I remember that with the Service voting and not voting.

CHAIR McNAMEE: Go ahead, Bob.

EXECUTIVE DIRECTOR BEAL: It's two-thirds majority of all the members of the Board. However, if the federal agency were to abstain, that abstention doesn't count against it, and the math changes a little bit. This Board has a total of, I think 12 votes, and depending on what happens with the federal service it may be 11 or 12 votes.

Eleven, okay, great. The New England Fishery Management Council technically has a vote on this Board for Jonah crab issues, but this is not a Jonah crab issue, so there are 11 votes. If the National Marine Fisheries Service were to abstain, sort of the denominator of our math would be 10. It's a little confusing.

CHAIR McNAMEE: That's how we like it here in the fisheries world. Okay, thanks for all that. Really good discussion on the logistical elements of this, important to know. Yes, Ray Kane, go ahead.

MR. RAYMOND W. KANE: I support this motion to amend, but I would like to go back to the Director of Maine, I support this motion, Pat. Can you give us a percentage on certainty dealing with Canada? In January '25 at that winter meeting, we're not coming back and saying well, we didn't strike a

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deal with Canada yet. I think I'm asking for a time-certain date.

MR. KELIHER: Thanks for that, Ray. My seatmate was going to flip a coin. I mean that's the certainty we have, right? I mean we don't know how we're going to end up in these conversations. But I can tell you clearly on the record, it is not my intent to come back to this Board and ask for further delay. I think we have to, in good faith, negotiate with Canada to see if there is any room for change, and if there is not then we have to figure it out on our own, on how we're going to implement the gauge change. Sustainability needs to rule the day.

CHAIR McNAMEE: Thanks for that, thanks, Ray. Mike Luisi.

MR. LUISI: Just for the record I wanted to say that the state of Maryland will support the motion delaying the implementation until January, 2025. I understand why that could be necessary, and don't see very many concerns with that. What I'm mostly concerned with, and I don't know if anyone else caught it, but there was a y'all that came out of Pat Keliher during that motion. That was the most concerning thing I've heard all day, and we're in the midst of watching stocks fall apart in our hands. I just wanted to point that out.

MR. KELIHER: I'm going to fully admit, and Jeff Kaelin and the Chairman and Steve Train witnessed me eating grits this morning, and that's the only thing I can contribute it to.

MR. LUISI: They're not going to let you back in when you drive north.

CHAIR McNAMEE: David, go ahead.

MR. BORDEN: A quick point. On this issue of dealing with Canada. If we pass this motion, it becomes much more of a certainty that we're going to take action on a specific date, and if the states start their regulatory process, that will be backed up by that. Then when we get into the next discussion with Canada, we're going to be saying, it's definitely taking place and this is the

date, and the committee that Pat chairs will be in a much stronger position to get into resolving that issue.

CHAIR McNAMEE: I've got Alli Murphy online, go ahead, Alli.

MS. MURPHY: I just wanted to let the Board know that I don't support this motion. Looking back at the meeting notes from the May Board meeting, when Addendum XXVII was approved, Regional Administrator Pentony urged the Board to be as aggressive and proactive as possible in setting these resiliency measures. Those were difficult decisions, but I think it's important that they be adhered to, especially as it is going to be several years before we see any results from any action that is taken. Again, I would urge the Board not to change course from what was originally approved in the Addendum, and I'll be voting no on this motion.

CHAIR McNAMEE: Dan McKiernan.

MR. McKIERNAN: To follow David Borden's point about timing. If we can get a lot of these rules implemented soon, then the gauge manufacturers will know it's time to produce the gauges. I think the manufacturers are nervous about producing a bunch of gauges that if this Board were to change courses again or delay again, they would be left holding with a lot of inventory that they can't sell. I do have a question on the Year 2 and 3 measures. I don't know if this is the type, or I'm trying to remember what was supposed to happen in Year 2 and 3.

But weren't there also some measures going forward in Years 4 and 5 maybe? I wonder if it's clear that all future measures would be kicking in on January 1st, and this would include the maximum gauges that are supposed to come down. I'm not sure that Year and 2, and I just noticed this. I'm not sure that we've got that nailed down. I'm totally supportive of the January 1st start, I just want to make sure this motion isn't confounded in some way.

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CHAIR McNAMEE: It is a good question, Dan. Caitlin, go ahead.

MS. STARKS: I think as long as it's clear on the record I can work with it, but if you would like to modify your own motion. If you were going to do that, I would just add that all additional measures would be implemented by January 1st of the following calendar years for which they are required.

MS. KERNS: Caitlin, I took this directly from the implementation of Addendum XXVII, so implementation of Addendum XXVII does not indicate anything beyond Year 3, if that is helpful at all. But this is a direct quote from XXVII.

MS. STARKS: Yes, understood. I think the Addendum states that measures would occur a certain number of years after other measures, so it doesn't actually say the year for each one.

CHAIR McNAMEE: Go ahead, Pat.

MR. KELIHER: We look at this stuff and it becomes too clear to us as we're looking at it. But I mean the intent is to stay on the exact same schedule, only we're moving it out starting January 1, and then the schedule would continue from there for Year 2 and 3, and then I think Doug made the motion that was finally on the vent change, pushing it out a year, which I believe was Year 4. Everything would remain the same, and think we bluntly, clearly state that on the record.

CHAIR McNAMEE: David.

MR. BORDEN: Quick point, Mr. Chairman, if you wanted to consider a five-minute break, I'm sure the staff could amend that schedule and put it up on the board. That way it would be totally clear to everybody.

CHAIR McNAMEE: Okay, good suggestion, David. I think we will take maybe two minutes, two or three minutes here. What we're going to do is we're going to put up a table that clearly identifies the timeline here, so everyone can look at it, agree

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to it, and then we can move forward from there, so three-minute break and then I'll call you back to order.

(Whereupon a recess was taken.)

CHAIR McNAMEE: Let's have everybody come back to the table. We are back. What we have going on here is, we have the original motion made by, I don't have a very loud voice, so I'm not going to try and talk over people. That was my stern finger wagging. What we have is the original motion made by Pat Keliher.

Then we inserted below the motion an updated table that identifies all of the exact dates, when all of these measures would become implemented. Hopefully that clarifies the intent for everybody, this is how it will be documented. I'm getting a thumbs up from Pat with that, and David, are you also okay with the way we have this laid out? Okay, any further discussion needed on the motion? Steve, go ahead.

MR. TRAIN: I figured if I'm the only one in the room that is actually directly impacted by these actions, I should say something. I support them. I didn't want to delay it, but if we don't get it right it could be even worse, so if we need to delay six months to make sure we get this right the first time, great.

CHAIR McNAMEE: Thank you, Steve, appreciate that. Not seeing any hands around the table, before I call the question, there is a hand in the back that I missed, and thank you to Marty for flagging that for me. We're going to have some public comment. There is a public microphone up here to my left, your right, please come on up, state your name and make your comment. Thanks, sorry I missed your hand before.

MR. DUSTIN DELANO: I appreciate the time to speak. My name is Dustin Delano, from the New England Fishermen's Stewardship Association. NEFSA supports Commissioner Keliher's motion. We take Addendum XXVII extremely seriously, and as a lobster fisherman myself, I'm proud to be a

part of one of the most sustainable fisheries in the world.

While we prefer a one-year postponement, seven months would certainly be better than the alternative. Just to reiterate a couple of things. You know back in May, no one expected that this trigger would be met this year in just a few months. You know a couple other things with the datasets that we're using, as Kathleen Reardon stated, the 2020 data is missing quite a bit of information from the surveys from that year.

I think it's real important for us to also realize how much of a contributing factor climate change has been with our fishery. As someone who has fished for over 20 years, and most of my fishery was in federal waters. We have seen a huge increase in small lobsters off there. A lot of us don't even come inshore anymore, and haven't for many years. When you're fishing and hauling a trawl out of 70, 80 pounds of water, and you're catching lobsters that are two inches long, and Jonah crab the size of your thumbnail, there is definitely something going on in that deeper water. Aside from my comments, I really have advocated and tried to encourage for increased surveys and science in that deeper water, because there are definitely some big changes happening offshore. You know just again to reiterate. We've heard the same concerns about the ability to get gauges in time, in a timely manner for the June 1st implementation in 2024, so the seven-month delay would be extremely beneficial for that.

I think it's important for us to remember as well that a 35 percent decline, if I read the graphics correctly, would still keep us above the 2000 to 2010 survey numbers. When I look at it, I of course had trouble for a long time at using 2016 to 2018 as sort of the reference period, because that is sort of at the ceiling, and so I just think that these measures are certainly proactive rather than reactive, which is a very new technique for our fisheries.

I also just want to add to the Canadian inequity issue as well, being a Maine fisherman. While I

don't fish the gray zone, I know many guys who do. It would be incredibly difficult to be trying to conserve a resource and throw back lobsters that would just be caught up by other boats that you're fishing around. As a harvester, when I look at this gauge increase, I see that the harvesters are going to take the brunt of the impact.

But what I could see as a positive thing would have been possibly an increase in demand for our product, where there would be less surprise on a market. But with the inequity, with the Canadians having dealers just go by us and bring that same product across the border into the markets, would take away the one advantage that we would possibly have. I would just appreciate it if you guys would consider this motion, and I definitely learned one thing this morning that I won't be eating grits this week, because I'm not changing my New England vocabulary.

CHAIR McNAMEE: Thank you very much, really appreciate those comments. We have one other public comment that we're going to take from someone online, Virginia Olsen, please feel free to unmute your microphone when you're able, and make your comment, and hope you will be as succinct as our last speaker.

MS. VIRGINIA OLSEN: Thank you. I wholeheartedly agree with Dustin, and appreciate Commissioner Keliher's comments as well that it's a good motion. We were hoping for at least a full year to be able to delay this before we start. I know I'll just in closing highlight some of the things that our membership saw, and that is the same, the inequities be addressed on conservation measures between Maine and Canada before instituting a gauge change.

A new rule for no importing products that are not harvestable in Maine waters, and the federal rules must be adjusted for current and future gauge measures to be implemented federally, so we have consistency there. We also had two members suggest that two ventless traps go to every license holder, and those traps be hauled

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twice a week during their season, and everything recorded out of those traps.

It would be nice to have some of that information implemented before we have to go to our gauge change. That is why our membership voted, and asked for a two-year delay. But anything would be better than June, so we really appreciate that you're looking at an extended timeline. That's it, thank you.

CHAIR McNAMEE: Thank you, Virginia, appreciate your comments. Okay, so back to the Board here. We are now officially three minutes over time, so I think we need to get to business here. Does anybody need time to caucus? There has been a fair amount of time to chat as we were getting organized here.

Not seeing any hands around the table, so I'm going to go ahead and call the question on this motion. Please keep in mind what Bob mentioned earlier about the logistics. Okay, and Caitlin is going to call out the states as we go along here, so **all those in favor of the motion, please raise your hand.**

MS. STARKS: Keep them high, please. New Hampshire, Maine, Maryland, Delaware, Virginia, New Jersey, New York, Connecticut, Massachusetts, Rhode Island.

CHAIR McNAMEE: All those opposed, raise your virtual hand, or anyone at the table also raise your hand.

MS. STARKS: I don't see any hands up for opposition.

MS. KERNS: You have NOAA Fisheries.

CHAIR McNAMEE: Thank you, Alli. That's everybody, right. Okay, so no abstentions, no null votes. By my math we have 10 in favor, 1 opposed, and I think we've met our threshold, so the motion passes. Thanks everybody. All right, so we're over time, so Jeff and I consulted, and

we're both going to go super-fast on our agenda items here, and I bet Caitlin will too. Go ahead.

MS. STARKS: We can take up the FMP reviews by e-mail vote.

CHAIR McNAMEE: Caitlin is going to be faster than both Jeff and I with that.

CONSIDER TERMS OF REFERENCE AND TIMELINE FOR THE AMERICAN LOBSTER BENCHMARK STOCK ASSESSMENT

CHAIR McNAMEE: With that, Jeff, next up is the Terms of Reference and the timeline for the Lobster Benchmark Stock Assessment. Go ahead whenever you're ready.

MR. KIPP: A memo was provided in meeting materials with three components to consider for this agenda item. The first component is the terms of reference for the assessment, these are terms of reference to be addressed by the TC and SAS during the stock assessment, which I'll present here in a slightly abbreviated format.

The second component is the terms of reference for the peer review, these are TORs to be addressed by the peer review that reviews the stock assessment, upon completion by the TC and SAS. These are essentially the same as the assessment TORs, but directing the review panel to evaluate the TC and SAS's fulfillment of the stock assessment TOR.

I won't go into detail on those. The final component is the timeline of the assessment, and I'll present this with select milestones following the assessment TORs. The objective of this agenda item is to consider the TORs and timeline for approval, so the Committee can begin to work on these TORs. Jumping into the TORs. TOR 1 is to estimate catch and catch at length from all appropriate fishery dependent data sources, including commercial and potential discard data. TOR 2 is to present the abundance data being considered and/or used in the assessment.

TOR 3 is to evaluate new information on the life history, such as growth rates, size at maturation, natural mortality rates and migrations. We do have a sub-TOR here to consider any new information on growth, for potential to update the growth transition matrices, using the assessment model.

TOR 4 is to identify, describe, and if possible, quantify environmental climatic drivers. TOR 5 is to use length-based models to estimate population parameters for each stock unit, and analyze model performance. Sub bullet here of interest is to conduct projections assuming uncertainty in current and future conditions for all stocks, and compare projections retrospectively with model estimates.

TOR 6 is to update simple empirical indicator-based trend analyses of abundance, exploitation, fishery performance, and environmental stress for stock or sub stock areas. Modify or develop new indicators if warranted. TOR 7 is to evaluate the current regime-based exploitation and abundance reference points, recommend modifications to these reference points if necessary.

TOR 8 is to characterize uncertainty of model estimates, reference points and stock status. TOR 9 is to perform retrospective analyses, assess the magnitude and direction of retrospective patterns detected, and discuss implications of any observed retrospective patterns for uncertainty in population parameters and reference points.

TOR 10 is to report stock status as related to overfishing and depleted reference points, include simple description of the historical and current condition of the stock in layman's terms. TOR 11 is to address and incorporate to the extent possible, recommendations from the 2020 benchmark peer review.

TOR 12 is to develop detailed short- and long-term prioritized lists of recommendations for future research, data collection, and assessment methodology. Highlight improvements to be made by next benchmark review. TOR 13 is to

recommend timing of the next benchmark assessment and intermediate updates, if necessary, relative to the biology and current management of the species.

Those are our assessment TORs, so now jumping into the proposed assessment timeline. This slide shows the major milestones coming up with assessment. We have a data deadline for early 2024, we will then meet as a Technical Committee and Stock Assessment Subcommittee at a data workshop in February of 2024.

We have two assessment workshops scheduled, one in June of 2024, and one in October of 2024, to develop models and finalize those models, stock status reference points for the assessment. We'll finalize the assessment report from the SAS in January of 2025, and then have that assessment reviewed by the Technical Committee in February of 2025. We'll have our Peer Review Workshop in May of 2025, and then we'll present the assessment and review reports to the Lobster Management Board in August, 2025. Just a note here, the Stock Assessment Subcommittee was approved by this Board in July via e-mail. I did just want to note that we have the same Stock Assessment Subcommittee as our last assessment in 2020. We did lose one member, however, Kim McKown from New York DEC retired.

She was also our SAS Chair. I would just note that if anyone knows of additional folks out there that would be interested in collaborating on the assessment and supporting it in any way, we would have open ears to that. With that I will conclude my presentation, and take any questions on the TORs.

CHAIR McNAMEE: Excellent, thank you, Jeff, and thanks for spinning through that so rapidly. Questions, or you can offer anything on the terms of reference or the timeline. Pat Keliher.

MR. KELIHER: I don't want to stand in the way of you all's lunch here. TOR 4, could you put that back up, Jeff? I do have a motion to change it, but I don't know if it can simply be done with an

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agreement, if everybody is there. This TOR 4 deals with, you know the climactic side of the issues with the assessment, and we did look at temperature issues the last time around. We had a lot of conversations with staff at DMR, and one of the thoughts was to include environmental and climactic drivers on stock abundance, considering annual to decadal scales. I've got a motion to recognize that.

CHAIR McNAMEE: Yes, let's get right to that, Pat. There will be a motion, go ahead.

MR. KELIHER: Yes, **to identify, describe, and if possible, quantify the effect of environmental and climactic drivers on stock abundance considering annual to decadal scales.**

CHAIR McNAMEE: Okay, so there is a **motion on the board** from Pat Keliher, to **modify Term of Reference 4**, as presented up here or on the webinar or up on the screens here. Is there a second to that motion? Doug Grout seconds the motion. It's got a motion, it's been seconded, anything else, Pat that you want to add to the discussion here?

MR. KELIHER: Just obviously we've heard it, and we heard it from even Dustin Delano, and the fishermen are starting to recognize that climate change is becoming a driver. I think we need to maybe put a little bit more emphasis within the terms of reference.

CHAIR McNAMEE: Thanks, Pat, Doug, anything to add? Nothing from Doug. Any other discussion on the motion? This is a modification to one of the terms of reference. Seeing no hands around the table, any online? No hands online. We've got a motion, it's been seconded. **Are there any objections to the motion that is on the board? Please, raise your hand if so. No hands in the room, no hands online, so the motion passes by consent.** Thanks for that, Pat.

Any other modifications, comments on the terms of reference? Looking around the room, not seeing any. Now actually looking in the back of

the room, not seeing any back there either. Any online? Okay, good, so with that, Jeff, I think you have your modifications to the terms of reference, and there were no comments on the timeline. Great, the next agenda item here was something I was going to give a quick presentation on, Management Strategy Evaluation. We are going to punt that to January, so I'm going to skip that agenda item. Caitlin already offered that she is going to handle the FMP reviews, I think you said online by e-mail. We all skip over that agenda item as well.

OTHER BUSINESS

CHAIR McNAMEE: Which brings us to our Other Business. Pat, I will start with the item that you offered, so go ahead, Pat.

MR. KELIHER: Just to help expedite, I do have a motion, maybe if we could put that up on the board, and then I can speak to that.

CHAIR McNAMEE: I love it. Let's get that up on the board.

CONSIDER POTENTIAL ACTION BY NEW ENGLAND FISHERY MANAGEMENT COUNCIL REGARDING SCALLOP FISHERY ACCESS ON NORTHERN EDGE OF GEORGES BANK

MR. KELIHER: Just so everybody is aware, the New England Council has begun efforts to reopen the Northern Edge to the scallop fishery.

I know this is a Pierce-esque type motion, but I'll read it into the record, and if I get a second, I'll dig into the rationale.

Move to task the Lobster Technical Committee (TC) to compile information on the lobster resources and fishery in and around the Northern Edge of Georges Bank. This is in relation to a potential action at the New England Fishery Management Council (NEMC) which is considering scallop fishery access on the Northern Edge. A starting place for this tasking could be reviewing information that the Lobster

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TC compiled when ASMFC commented on the NEFMC’s Omnibus Habitat Amendment 2. Areas of interest include:

- **Information on the presence and abundance of lobsters, including ovigerous lobsters, in and around the Northern Edge by month/season**
- **Lobster fishery effort in and around the Northern Edge by month/season**
- **Potential impacts of mobile gear on the lobster population in this area.**
- **Information on the habitat type and depth preference of lobsters which could inform our understanding of lobsters on the Northern Edge if there are limitations in the data.**
- **Whether current reporting by Area 3 vessels is representative, or an underestimate, of lobster effort in the Northern Edge area and how future requirements (i.e., federal eVTR requirements or vessel tracking) will impact the data availability.**

CHAIR McNAMEE: We have a motion by Pat Keliher. Is there a second to that motion? Doug Grout seconds the motion, thanks, Doug. Pat, anything to add?

MR. KELIHER: I mean a lot of the rationale is really built into the motion, but I would say that the fact that this has been an area that has been closed for a long time to scallop fishing, it’s a very rich lobstering grounds. We’re certainly going to see a lot of gear conflict there, when 200 plus boats become actively engaged in looking for scallops in the area. I think we need to have a closer look at this, and we need to start with the TC.

CHAIR McNAMEE: Doug, anything to add? Nothing from Doug. David Borden, go ahead.

MR. BORDEN: I’m glad Pat raised this; I appreciate that. I think the motion does a good job with describing what the technical people need to look at. I just remind everybody that we went through this about seven or eight years ago, as you’ll recall,

and the Commission basically took a position at my urging, to oppose it. There are times in this fishery where 80 percent of the lobsters are ovigerous females. The damage rate at certain times a year for dredges is up to 60 percent. It’s a real concern, given the fact that we just finished the section talking about the indices of abundance in lobster going down. We have to be really careful on this one.

CHAIR McNAMEE: Dan McKiernan, go ahead.

MR. McKIERNAN: I have good news. Because Massachusetts raced out and required trackers as of May 1, we might have most of a year worth of data that we could share for the Massachusetts-based Area 3 fleet.

CHAIR McNAMEE: Great, thank you for that, Dan. Okay, any further discussion around the table? Any hands online? No hands online, so I’m going to go ahead and call the question here. We’ve got a motion that’s been seconded, are there **any objections to the motion tasking the TC? Please, raise your hand if you object. Are you objecting, Ray? Okay, no objections, no hands around the table, no hands online, so the motion passes by consent.** Thanks, Pat.

We had a second Other Business item, and so, David, I will turn it over to you, and Alli, I’ll be sure to come to you as well.

CONSIDER NOAA INTERIM FINAL RULE IN RELATION TO LOBSTER BOARD ACTIONS IN ADDENDA XXI, XXII, AND XXVI

MR. BORDEN: I will try and make this brief, Mr. Chairman. We had this issue of a proposed rule that NOAA sent out, and we commented on it and asked for additional time, and I very much appreciate the fact that NOAA accommodated us, and send my thanks. I’m sure the Commission thanks. There are three components to the rule.

You’ve got mandatory reporting. I think everyone is in concurrence that that should go into effect immediately. Then on the Area 2 and the Area 3

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portions of it, I've talked to Pat and Dan McKiernan, in particular, and you, Mr. Chairman, and your staff. I think there is a need for us to kind of follow the protocol that we have established in previous discussions on this.

These recommendations were formalized by the industry for both Area 2 and Area 3, by the respective LCMTs, and that was ten years ago, over ten years ago. I think there is a responsibility on our part to take the proposed rule in conjunction with the NOAA staff, back to the LCMTs, and ask them to review it and formulate comments.

Then I think the appropriate action then, that could take place over the next month or two, and then we could put it on the agenda and formalize a recommendation for NOAA. The main reason I'm saying that is the situation, and I'll give you just a short example. The situation is so dramatically changed from when the regulation was originally put in place when we, we meaning the Commission, adopted the Addendum. There was one entity that owned six boats.

Now we're in a situation where basically, 70 percent of the fishing effort in Area 3 is owned by five companies, so it's completely changed. It's a reverse. Part of the objective of us doing what we did was to kind of slow down the consolidation. But it took place anyways. Then there are other reasons, I think, if we hold an industry discussion issue, like the Area 2 indices that we just reviewed, are falling like a stone. I think we may get very different recommendations out of the industry, if we hold discussions in them.

Dan, at least, has volunteered to work with Rhode Island, and any other states, to put together a virtual LCMT meeting, I think, and then bring recommendations back. I would hope that would be the course of action we would follow, and if we need to, we could send a letter to NOAA, basically summarizing that from the staff, staff to staff letter, saying this is the way we intend to handle them. That's my recommendation.

CHAIR McNAMEE: Alli, I'll offer you some space to make a comment or two, if you would like.

MS. MURPHY: Yes, thank you, Mr. Chair. David talked a little bit about this, but I just wanted to summarize for the Board what was in our Interim Final Rule. Three things that complemented Lobster Board actions in Addenda XXI, XXII, and XXVI. First is mandatory electronic harvester reporting, using the federal electronic vessel trip report.

That would be implemented on April 1st, 2024. For Area 2, we're implementing an ownership cap that would restrict most entities to 800 traps, but allow those who are over as of May 1st, 2023, to keep those traps but not purchase additional traps. Then for Area 3, we're implementing maximum trap cap reductions over three years and associated ownership caps that will reduce over three years.

Again, an entity that exceeded those limits as of May 1, 2022, could keep their current trap allocation. Based on the comments that we received, including from the Commission, we're accepting some additional comments on that. I would be happy to discuss the rule in additional detail at an upcoming meeting, and I'm happy to work with the states, if they are going to host LCMT meetings, to provide additional information.

CHAIR McNAMEE: Great, thanks, Alli. I'm just going to consult here for a second, to see what we need to do to implement this, so hang on one second. Okay, so we don't need a motion, but what can happen is the states can convene the LCMTs on their own, they don't need guidance from the Board or the Commission to do that.

If you are able to successfully convene those LCMT meetings, you can report back and then we'll add it to a future agenda. I think we can move forward with what you suggested, David, and if we're successful in that, we can meet back here with the Commission at a future meeting. All right, any discussion on that? Anyone want to add anything to that discussion?

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Not seeing any hands, so I'm just going to keep rolling forward.

ADJOURNMENT

CHAIR McNAMEE: That brings us to the end of our agenda, so I'm just kind of looking around the

table to see if anybody is looking antsy to offer anything else, they are not. I will entertain a motion to adjourn. Moved by Pat Keliher, seconded by everyone. Any objection to the motion? Seeing none; we are adjourned, thanks everybody.

(Whereupon the meeting adjourned at 12:01 p.m. on October 16, 2023)



Atlantic States Marine Fisheries Commission

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MEMORANDUM

TO: American Lobster Management Board
FROM: Jonah Crab Technical Committee
DATE: January 8, 2024
SUBJECT: Response to Board Task Following 2023 Stock Assessment

The 2023 Jonah Crab Benchmark Stock Assessment determined that the abundance of three of four Jonah crab stocks (Offshore Southern New England or OSNE, Inshore Gulf of Maine or IGOM, and Offshore Gulf of Maine or OGOM) has not been depleted to historical lows observed in the 1980s and 1990s. Data were insufficient to make determinations about abundance for the Inshore Southern New England stock (ISNE) or fishing mortality rates for any of the four stocks. The Peer Review of the assessment noted substantial uncertainty about stock status and expressed concern due to similarities between some trends in data for the US stocks and a Canadian stock assessed in the late 2000s that appeared sensitive to fishing pressure and experienced a rapid decline in abundance.

Following review and acceptance of the assessment in October 2023, the American Lobster Management Board tasked the Jonah Crab Technical Committee (TC) to “recommend possible management measures or other options to correct what appear to be deficiencies in the stock”. The Board requested several components of information including (1) current information on management and stock conditions for the Canadian Jonah crab stock to better understand this stock’s response following its apparent decline, (2) recommendations on additional indicators from existing data to monitor the stocks, (3) recommendations on the appropriate frequency of indicator updates following the assessment, (4) recommendations on management measures that could be used for a potential management response, and (5) recommendations to improve monitoring in the short term.

The TC met on November 16, 2023 and January 2, 2024 to gather and review information requested and make recommendations in response to the Board task. Additionally, the TC requested input on several questions from the Jonah Crab Advisory Panel (AP) during its December 14, 2023 meeting to review the stock assessment. Input from the AP was provided in a memo and was considered in the TC’s recommendations.

Canadian Stock Post-Mortem Analysis

The Peer Review Report for the assessment highlighted similarities between the period just prior to the apparent decline of the Canadian Jonah crab stock in the 2000s and the current US Jonah crab population. To provide more context on the Canadian stock and fishery before and after its decline, information was gathered on management through time and the structure of the fishery. The Canadian stock has not been assessed or formally monitored since the 2009 stock assessment that found a decline in abundance, so the recovery status is unknown.

At the time of the 2009 stock assessment, there was a sole license holder in the Jonah crab fishery, Clearwater Seafoods, which operated several boats. The fishery has largely been inactive for Jonah crab since 2009, with landings reported only in 2013 and 2016. The stock has historically been managed with

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a 130mm minimum carapace width, a prohibition on female harvest, and a catch limit (Table 1). The only management measures to change through time have been decreasing catch limits, once following the stock assessment in 2010 and again in 2017. The decrease in 2017 was a precautionary measure due to the fishery expressing interest again in retention of Jonah crab and the conclusion from the stock assessment that the resource appeared very sensitive to fishing pressure.

Table 1. Management measures for the Canadian Lobster Fishing Area (LFA) 41 Jonah crab stock.

Year	Prohibition of Females?	Min. Carapace Width	Season	Catch Limit
1995-2005	Yes	130 mm	October 16 - October 15	720 t
2006-2009	Yes	130 mm	January 1 - December 31	720 t
2010-2016	Yes	130 mm	January 1 - December 31	540 t
2017-2023	Yes	130 mm	January 1 - December 31	270 t

Additional Indicators

The TC considered potential new indicators to include with those selected during the stock assessment to update on a periodic basis. Additional indicators considered included fishery-dependent CPUE from Rhode Island, fishery-dependent effort from Massachusetts, sex ratios from fishery-dependent biosampling and fishery-independent trawl surveys, price per pound data for landings of Jonah crab and other crustacean species, and mean size from fishery-dependent biosampling.

Fishery-Dependent Effort Indicators

Following a preliminary analysis of fishery-dependent RI CPUE data during the stock assessment peer review workshop, the TC considered this dataset as a potential indicator. These data were calculated as Jonah crab landings per trip from a select fleet of “high liners” that have consistently targeted Jonah crab through time. In addition to these data, the TC also considered the number of trips landing Jonah crab in Massachusetts. These data were provided as an alternative to the CPUE data calculated from RI because the MA data do not include number of days fished for most years and vessel participation has been more inconsistent, complicating selection of a “high liner” fleet. Both data sets are for the OSNE stock and include the states that account for the majority of landings from this stock and coastwide.

The RI CPUE declined markedly in 2021 and remained at this lower level in the updated data since the assessment (2022; Figure 1). The MA effort data showed similar declines for these years as well as 2020 (Figure 2). The cause of these declines is not known. Given data limitations for Jonah crab, the TC believes reviewing these data on a regular basis would be useful for identifying changes in the fishery that may indicate concern. Considered along with the AP input from its December 14, 2023 meeting, the TC also believes market factors are impacting these fishery-dependent indicators, adding uncertainty to using these indicators for inference on stock status.

The TC recommends these datasets be added as indicators to be updated alongside those selected during the assessment, but stresses these indicators should not be viewed in a vacuum without important context from market indicators such as price per pound (see below).

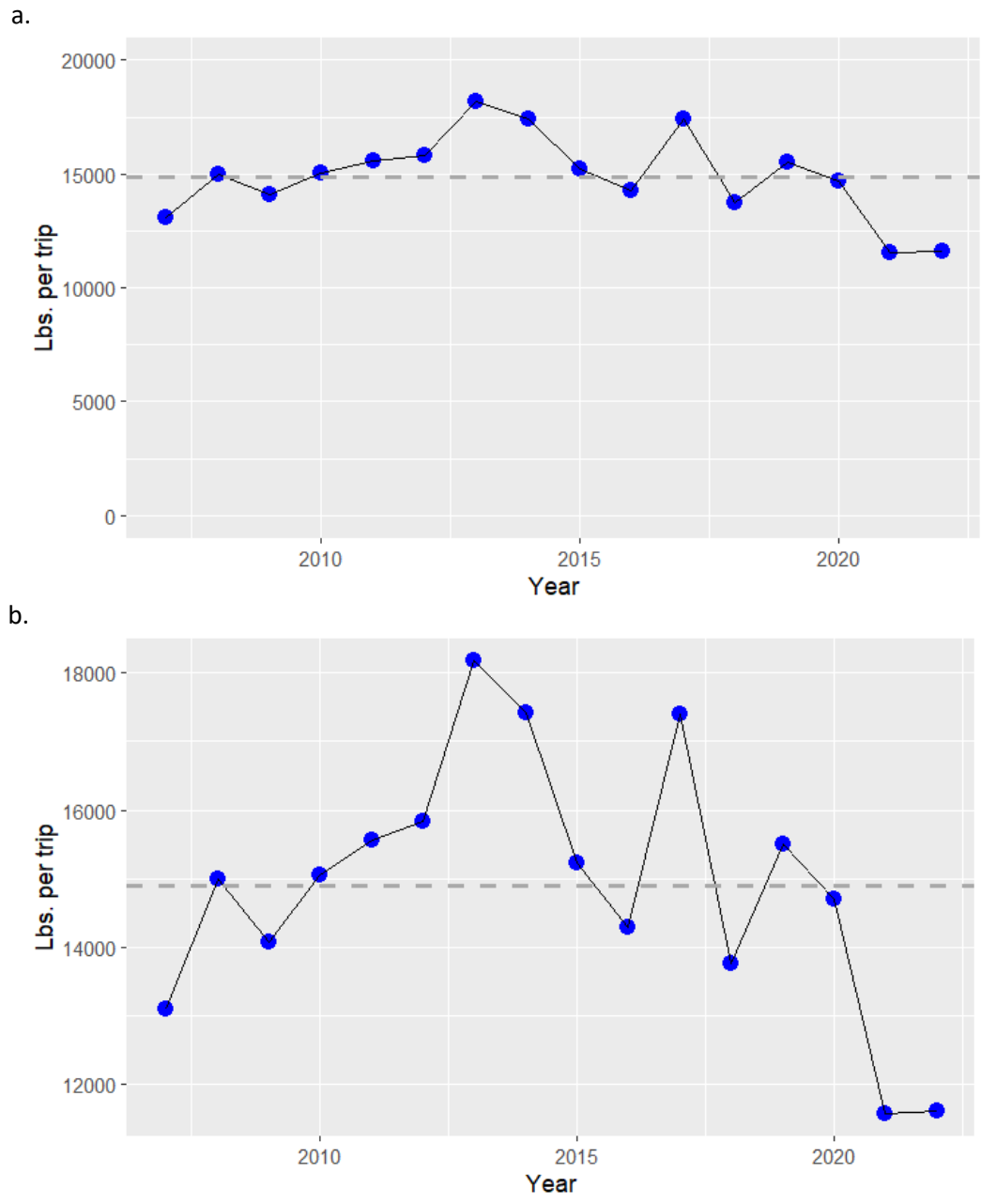


Figure 1. Rhode Island commercial Jonah crab CPUE of a “high liner” fleet targeting Jonah Crab with the y-axis extended to zero to show scale (a.) and zoomed in to the observed range to show contrast (b.).

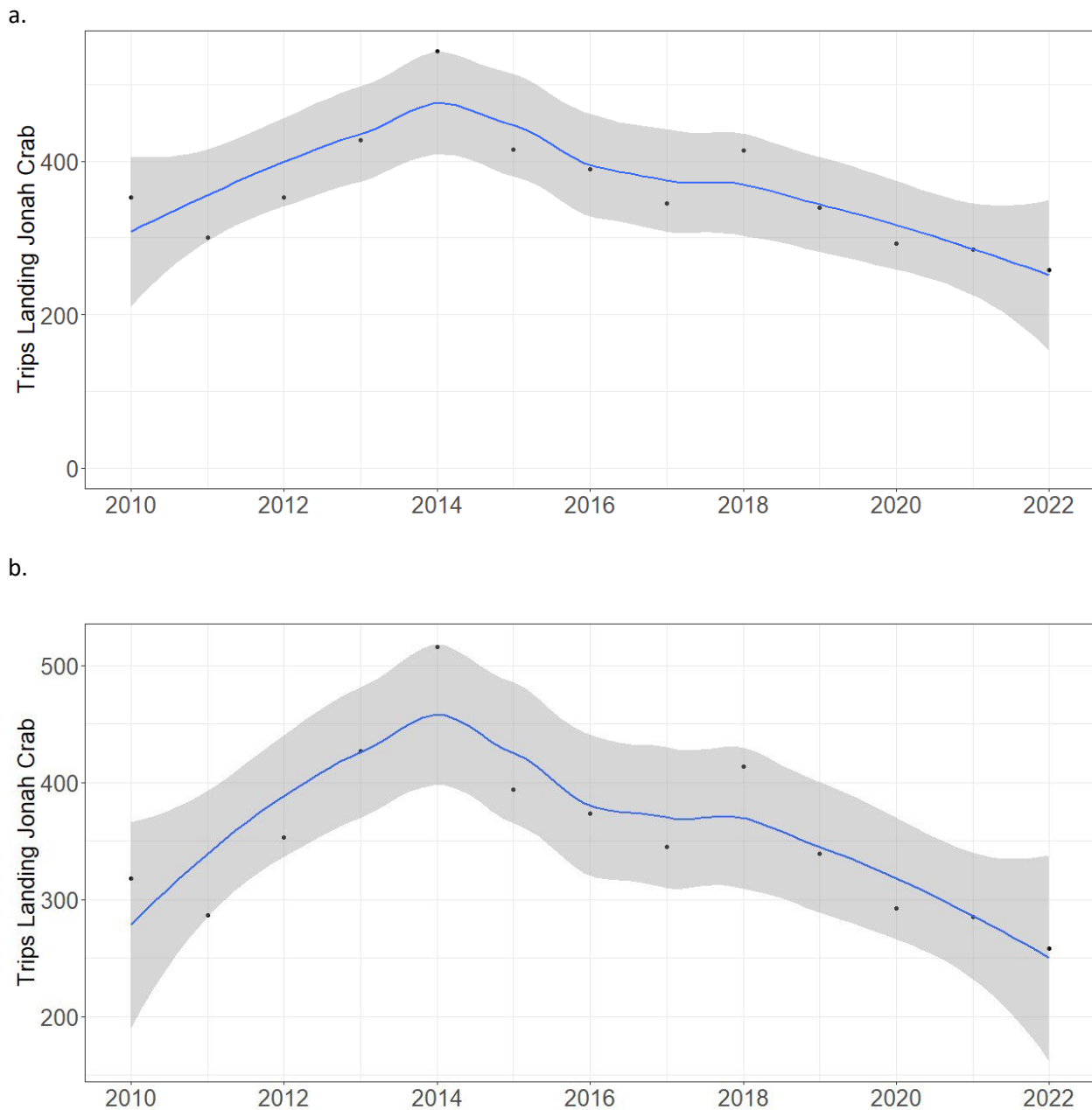


Figure 2. Number of trips landing Jonah crab in Massachusetts from statistical area 526 and the LMA3 portion of statistical area 537 with the y-axis extended to zero to show scale (a.) and zoomed in to the observed range to show contrast (b.). Data source: state and federal trip reports.

Sex Ratios

Sex ratio data developed during the assessment do not show consistent trending through time (Figure 3 and Figure 4). The fall NEFSC trawl survey sex ratios for the stock considered the most exploited stock (OSNE) show increasing proportions of males through time, which is not an intuitive signal for a fishery executed almost exclusively on males. **The TC does not believe sex ratios are informative indicators at this time and does not recommend they be used for indicator updates.**

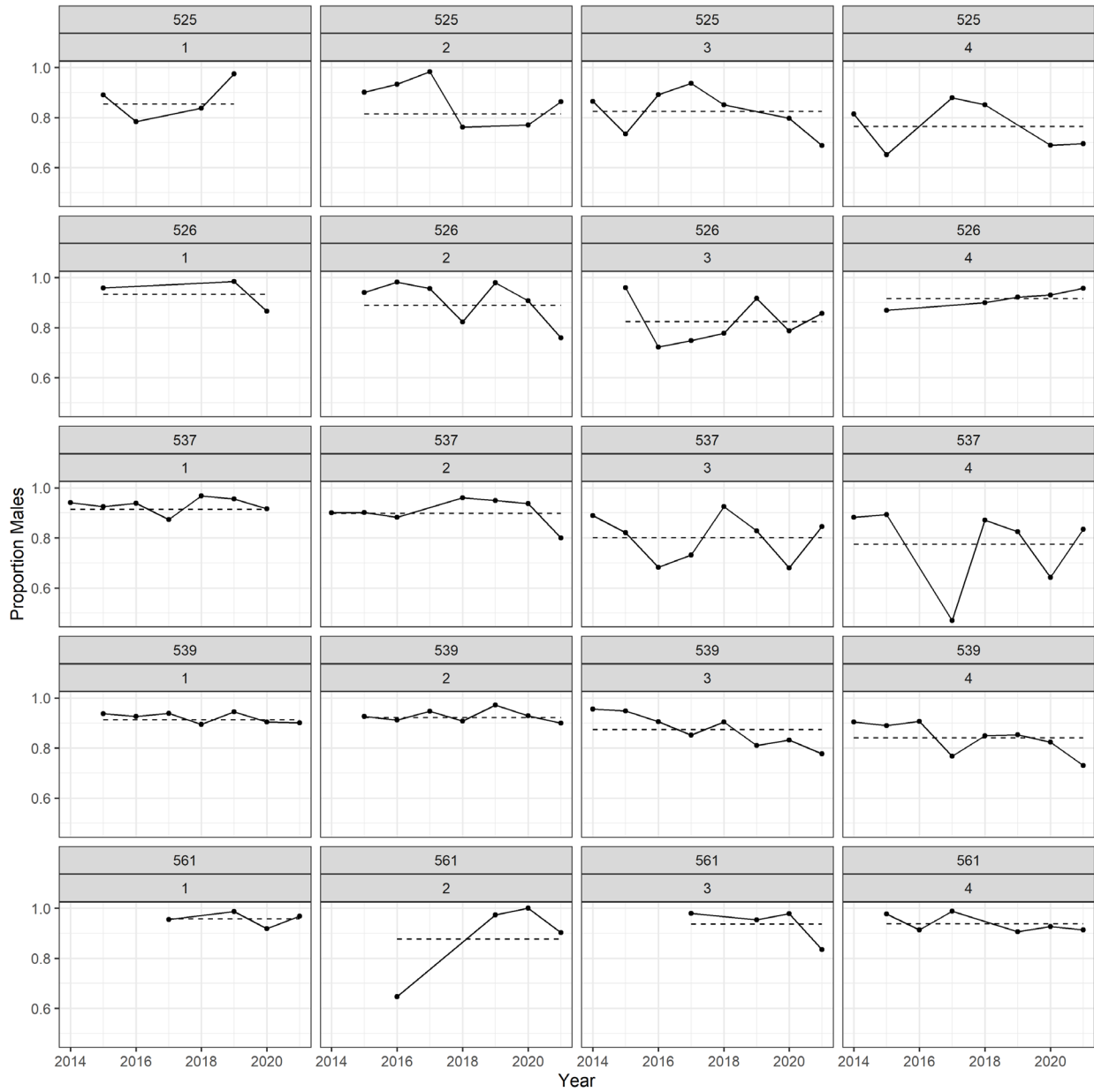


Figure 3. Proportion males from fishery-dependent sea sampling data in select, well-sampled statistical areas. Statistical areas 525 and 526 are part of the Offshore Southern New England stock, statistical area 539 is part of the Inshore Southern New England stock, and statistical area 561 is part of the Offshore Gulf of Maine stock. Statistical area 537 overlaps the Offshore and Inshore Southern New England stocks.

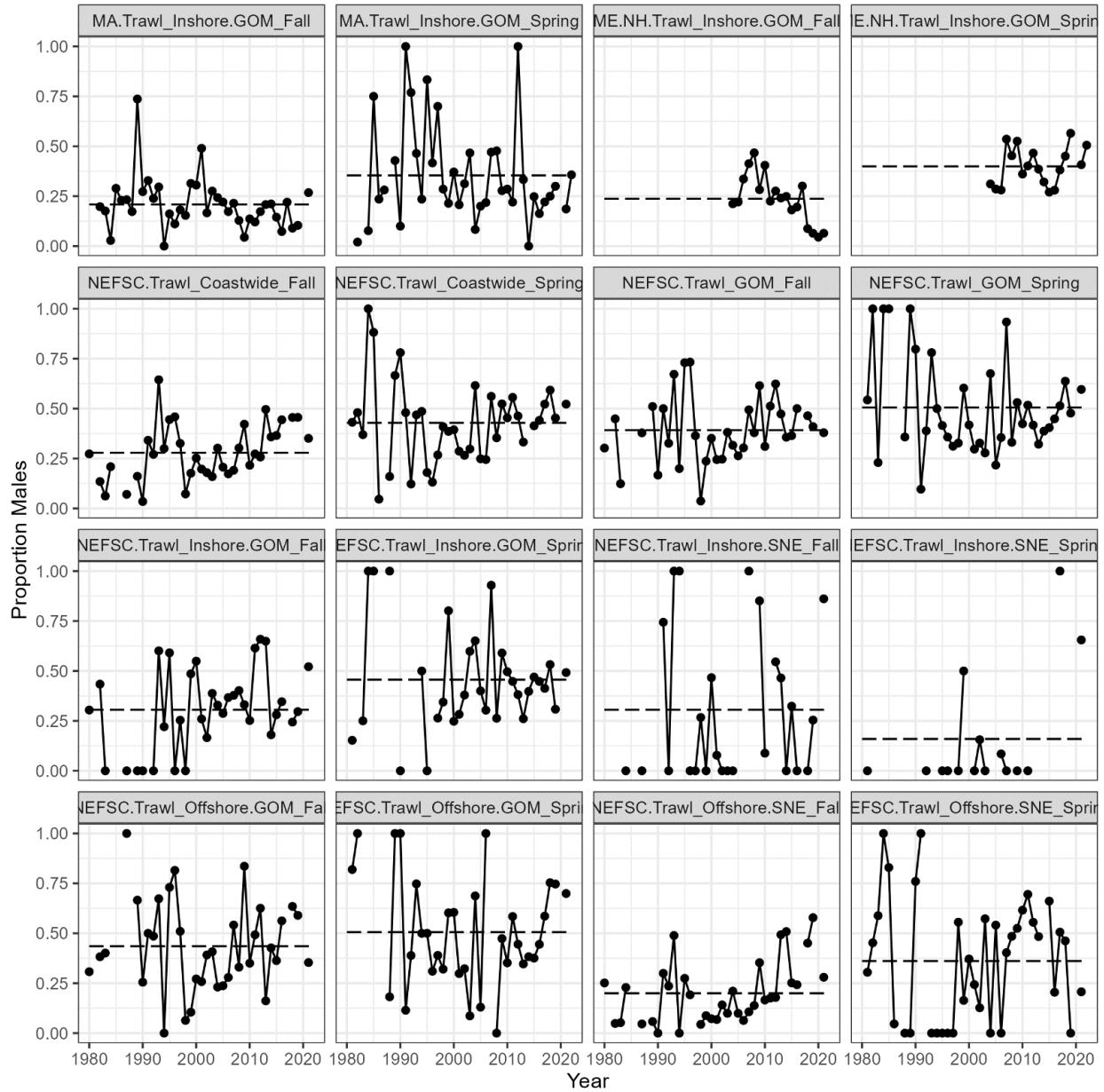


Figure 4. Proportion males from fishery-independent trawl surveys.

Price Per Pound

Price per pound data for landings of Jonah crab and American lobster were reviewed as potential indicators of market influence on Jonah crab fishery-dependent indicators. Jonah crab price steadily increased since 2010 to a high in 2022, but decreased in 2023 (Table 2). American lobster price also steadily increased (Table 3), but peaked a year earlier in 2021 which was the year when fishery-dependent Jonah crab CPUE and effort data showed marked decreases. American lobster price decreased in 2022, but remained relatively high in some states. These prices could be causing target shifting that would result in decreased Jonah crab CPUE. The TC believes these price data provide important context for changes in fishery-dependent indicators because of their direct link to each other in the mixed crustacean fisheries harvesting Jonah crab. The TC also reviewed price data for US Dungeness crabs and Canadian snow crabs as these species are considered competitors in the crab

2022	\$3.97	\$6.19	\$5.61	\$6.89	\$5.67	\$6.25
2023^			\$6.22			

Additional Length-Based Indicators

The TC considered several length-based indicators during the assessment, but ultimately recommended against using these indicators for inference on stock status due to lack of signal in the data available for US Jonah crab as well as data for the Canadian Jonah crab stock assessed in 2009. Here, the mean size of the 5% smallest crabs retained for harvest in port sampling was considered as an additional length-based indicator that would signal changes in harvester selectivity due to market preference. **However, the data remain too sparse to identify trends over time and the TC does not recommend using these data sets as indicators during indicator updates.**

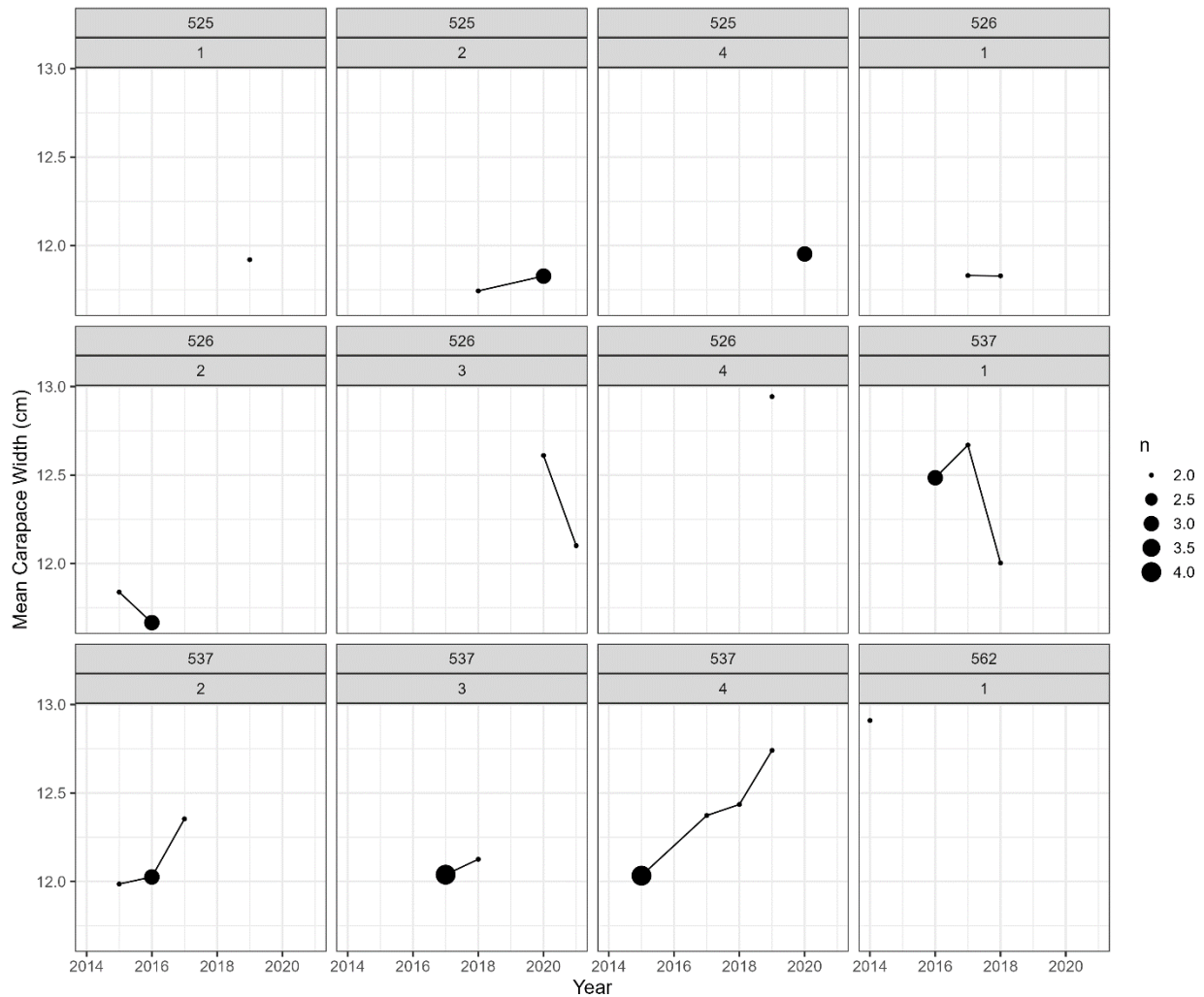


Figure 5. Mean carapace width of the smallest 5% male Jonah crabs sampled during port sampling in select, most frequently sampled Offshore Southern New England statistical areas.

Frequency of Indicator Updates

The TC recommends updating indicator time series for the OSNE stock on an annual basis. This stock supports the primary targeted Jonah crab fishery that accounts for the majority of annual coastwide

landings. Data from trawl surveys are processed intermittently, so trawl survey-based indicators selected during the stock assessment will most likely be available every other year for updates. Indicators for the three remaining stocks (ISNE, IGOM, and OGOM) that generally support bycatch fisheries with relatively low annual landings should be updated every five years unless monitoring data indicate development of a more targeted fishery in these stocks. The TC recommends providing data updates during the Commission's Annual Meeting to allow for data from the previous calendar year to be finalized. The TC also recommends involving the AP in all update processes to provide important feedback on market drivers that can be challenging to interpret from existing datasets. The AP should have representation from dealers that can describe what is driving the current prices and demand of Jonah crab including market interactions with competing crustacean species.

Potential Management Measures

The TC considered several potential management measures including seasonal closures, effort controls (i.e., trap limits), circular vent size changes, and minimum legal-size changes. The TC believes identifying a cause of population decline is necessary to determine which of these measures would be most effective. Given the current management measures in place, the two most likely causes of a decline would be sperm limitations due to overfishing of male crabs or increased mortality due to environmental conditions. However, data were insufficient to determine cause of abundance changes in the benchmark stock assessment. Data are also insufficient to quantify benefits to the stock from these management measures if they are implemented.

If the population is determined to be declining due to overfishing of male crabs, the TC recommends seasonal closures or effort controls. These measures would reduce male mortality allowing for increased reproductive capacity. Seasonal closures should focus on the time between molting and mating. Spatially-limited data indicate peak molting in June in Rhode Island Sound and mating through late fall in Cape Cod Bay, MA occurring from mid-October through mid-November. Sampling does not cover December through April and mating activity remains unknown during this timeframe and in other areas. This period between molting and observed mating does not align with the peak of the fishery (winter), so these measures may need to be coupled with other effort controls such as trap limits depending on the level of decline.

If the population is determined to be declining due to environmental changes, the TC recommends increasing minimum legal size and circular vent sizes to protect more females from processing-induced stress and mortality. Increased female abundance would provide the best buffer against adverse environmental conditions in the case that these adverse conditions yield to more favorable conditions. An anticipated challenge with circular vent size changes is impacts to lobster catch as well as crabs in mixed target fisheries.

The Peer Review Panel was particularly concerned about a decline in CPUE data from a preliminary analysis of RI data conducted during the peer review workshop, and that it may foreshadow declines similar to those observed in the 2009 Canadian Jonah crab stock assessment. With current data limitations and the lack of biological reference points the need for management action cannot be based solely on biological condition of the stocks (i.e., biological reference points). However, the TC does not believe management action is necessary at this time. Recent declines in US market demand have decreased Jonah crab fishing effort. The MA-RI mean annual price per pound declined by 31% from 2022 to 2023 (Table 2), based on preliminary 2023 data. As a result, harvesters have indicated they are conducting fewer trips targeting Jonah crab in 2023 and dealers are accepting catch from fewer vessels. One dealer reportedly had to dump thousands of pounds of Jonah crab in a New Bedford landfill due to a lack of market. A sudden shift in market conditions is said to be related to an increase in the availability of Canadian snow crab and the Monterey Bay Aquarium Seafood Watch Program "red-

listing” Jonah crab and rock crab (*Cancer irroratus*) in September of 2022. The red-listing has apparently caused some major retailers to stop purchasing Jonah crab. The Seafood Watch Program pointed to “the risk posed by these fisheries to North Atlantic right whale and the ineffectiveness of management measures to mitigate risk” as justification for red-listing.

Monitoring Recommendations

At the request of the Peer Review Panel during the stock assessment, the TC compiled a refined list of the five highest recommendations to improve the body of information for a future assessment. Below are those recommendations and the TC believes these should remain the focus for improvements to monitoring Jonah crab.

- Inter-molt duration of adult crabs is currently unknown and growth increment data for mature crabs is limited. There are no growth data from OSNE where the bulk of the fishery occurs and differences in growth between regions are unknown. These data need to be collected.
- Video surveys should be conducted on existing survey platforms for snapshot estimates of total stock size (i.e., swept-area biomass) that could be used to gain a better understanding on exploitation levels. These data would also be useful for validating trends from existing gears (i.e., trawls) and understanding potential catchability effects, such as temperature.
- Research should be conducted to provide a more comprehensive understanding of recruitment dynamics, including tracking of spatio-temporal settlement dynamics and the source of recruitment to OSNE, to inform development of Jonah crab settlement surveys.
- Little is known about ecosystem/environmental drivers of Jonah crab population dynamics. Studies should be done to identify and understand these drivers, particularly of recruitment.
- Determine how to interpret fisheries-dependent data considering interactions between fishery response to abundance, economic drivers, and lobster fishery dynamics.



Atlantic States Marine Fisheries Commission

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MEMORANDUM

TO: Jonah Crab Technical Committee; American Lobster Management Board

FROM: Jonah Crab Advisory Panel

DATE: December 28, 2023

SUBJECT: Jonah Crab Advisory Panel Report

The Jonah Crab Advisory Panel (AP) met on Thursday, December 14 to review the recently completed benchmark stock assessment for Jonah crab, and provide input on possible market and economic indicators for the fishery.

AP Attendance: Sonny Gwin, Denny Colbert, Jon Williams, Brian Thibeault
Staff: Caitlin Starks, Jeff Kipp, Corinne Truesdale (RI DEM)

Staff presented a summary of the stock assessment and peer review reports. Additionally, the AP discussed market and economic factors that affect the fishery. This was in response to a request from the Technical Committee (TC). After accepting the benchmark assessment for management use, the Board tasked the TC with recommending possible management measures or other options to correct what appear to be deficiencies in the stock. To gather more information to help address this task, the TC requested input from the AP on market and economic factors that could help explain recent trends in catch and landings.

The AP provided some thoughts on why Jonah crab landings have been trending down in recent years, despite high market prices. Jon commented that before the decline, there was a fleet of vessels off Southern New England (SNE) landing huge amounts of Jonah crabs, but those boats now only target lobster. Denny commented that you can still catch the same poundage per pot and easily fill your boat, but the prices have gotten so high that the Jonah crab are not selling. Adding to the difficulty selling Jonah crab, they commented that the price of Canadian snow crab has gone down and taken over more of the market. Jon added that when prices are high, fishermen can catch less and make the same amount of money, so they may reduce their landings. He also stated that the prices are not solely driven by market demand, but also the processors. There has been a price war between processors, in which processors have had to raise the price they will pay for Jonah crab to keep the boats that are selling to them. The AP members indicated that all of these factors have created a perfect storm where despite the fishing being great, they are not able to sell the crab. Additionally, some processors have placed catch limits on the boats that sell to them because they can't sell large quantities, and this is also keeping landings lower. There are also fewer processors in New England now than in the 2010s.

M23-110

The AP members also indicated that catch-per-unit-effort (CPUE) can be driven by a combination of market factors including price and the availability of other crab species and lobster. They emphasized that the market is controlling everything in the fishery. They think the decline in landings is not indicative of a stock collapse, but rather just due to the Jonah crab market being shut down, primarily because of the Canadian snow crab market. Brian added that because they are focusing on catching larger, higher quality crabs that can be sold in the live market by modifying their traps, the decreased CPUE that has been observed is really because of intentional selectivity by the harvesters. It was also mentioned that it can be difficult to interpret the CPUE data from trip reports, because on multi-day trips some boats will focus on Jonah crab for specific days, and lobster for other days; on these trips the target species can change from day to day.

Another topic raised by the AP was the impact of acoustic surveys for wind development on Jonah crab. Two AP members observed a correlation between the decline in landings and the acoustic surveys for wind development. They said the surveys did not impact their access to bottom, but sometimes they were asked to move gear or not haul it to avoid interactions. During the time of the surveys, they said they observed that previously productive areas were not as productive. They suspect that the Jonah crabs were digging into the mud and not moving. Brian said in the inshore SNE area where some of the initial acoustic pounding was occurring, before the surveys he could catch fifteen pounds per trap, and then when the acoustic boats came in for the initial pass through, the crabs disappeared. He said he could hardly catch any crabs when the survey boats were there, but about an hour or two after they left, the catch per trap increased again. Additionally, the crabs caught after the surveys had mud stuck under their claw pocket, suggesting they had hunkered down in the mud. The AP agreed that this should be studied further to understand the impact of the acoustic surveys and wind farms on the crab behavior and catchability.

Commenting on the information provided in the assessment about the Canadian Jonah crab fishery collapse, two AP members mentioned that the fishery in Canada is strong right now, and they are selling Jonah crab for 40 cents a pound. In particular the fishery is concentrated just north of the Maine border in areas 34 and 35.



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MEMORANDUM

TO: American Lobster Management Board
FROM: American Lobster Technical Committee
DATE: April 16, 2021
SUBJECT: Lobster Management Strategy Evaluation Options

The Atlantic States Marine Fisheries Commission's Lobster Technical Committee (TC) was tasked by the American Lobster Management Board (Board) at the Commission's 2021 Winter Meeting to develop a set of prioritized options, timelines, and draft budgets to assist the Board in considering if management strategy evaluation (MSE) could be of use for management of the lobster fisheries. The TC met via webinar two times following the Winter Meeting to develop and prioritize these options. Options are outlined at the end of the memorandum, and include anticipated personnel needs, major budget line items, and timelines with milestones that would incur a substantial cost. However, the TC indicated that due to the highly interdisciplinary nature of MSE, additional perspectives are needed to provide a comprehensive work plan. Therefore, the TC has provided some recommendations for next steps for MSE development in addition to a recommended option to pursue. In addition to the line item cost estimates for each option, it is important to keep in mind that these costs do not include time and, consequently, indirect costs of several participants' time being allocated to participating in the MSE process (e.g., TC members); workloads would have to be prioritized and modified to accommodate the MSE workload. Competing workloads include the next lobster stock assessment (tentatively scheduled for 2025) and a potential Jonah crab stock assessment (tentatively scheduled for 2023), at a minimum. The details of the options provided at the end of the memorandum are considered preliminary and may change dependent on management goals and objectives (e.g., need to include anthropologists to address human dimensions objectives).

TC Recommendations on MSE Focus

The TC recommends the option for a two-phase MSE of the Gulf of Maine/Georges Bank (GOM/GBK) stock. The first phase of this option would provide an intermediate MSE at a coarser spatial resolution (i.e., stock level) that can be used to support a management framework in a relatively short timeframe, while also allowing time to build knowledge and tools to develop a subsequent, spatially-explicit MSE in phase two. This phased approach provides short term management guidance, while concurrently building the framework to expand to a spatially explicit approach in phase two. The extended timeframe may also allow several large-scale changes on the horizon for the lobster fishery to develop that could impact the lobster fishery and management goals, and thus better guide the cost and focus of incorporating spatial considerations explicitly into the MSE.

The TC believes MSE has potential for supporting a management framework for the Southern New England (SNE) stock, but believes a SNE-focused MSE is a lower priority option for several reasons. First, the scale of the fisheries in terms of fleet size and landings make the GOM/GBK stock a higher priority. Second, MSEs are generally focused on proactive management strategies for the future of the fishery, such as strategies intended to promote stock resilience, as opposed to reactive management strategies responding to stock conditions estimated in past stock assessments; the TC believes this further skews cost-benefit considerations of MSE in favor of the GOM/GBK stock. Third, the TC anticipates unique

M21-51

challenges that would require more complex tools to provide a successful SNE MSE. These challenges include the dominant mixed-crustacean nature of the fishery, and the degree and rate at which the lobster population and fishery have changed in response to climate change. These factors require modeling aspects of both Jonah crab and lobster population dynamics and distributions, as well as spatial dynamics of the fishery in any MSE option. There is also a high likelihood for an MSE to require customized model development and data collection by stock (e.g., socio-economic indicators), making MSE focused on one stock at a time most feasible.

TC Recommendations on Next Steps

The TC recommends two next steps for development of an MSE. First, a formal process is recommended to develop management goals and objectives for the future of the lobster fisheries. A good example is the process used by the Ecosystems Management Objectives Workshop conducted by the Commission to guide development of ecological reference points for Atlantic menhaden. Objectives developed from such a process would be used to further develop an MSE work plan for lobster. The second recommendation is to form a steering committee for additional scoping and development of a comprehensive work plan with a detailed timeline, including: outreach components that are not anticipated to incur a substantial cost but are imperative to the success of an MSE (e.g., outreach at regularly scheduled industry association meetings), identification of funding sources for the MSE costs, and identification of personnel. Representation recommended for the steering committee includes Board members, TC members, Commission staff, members of the Commission's Committee on Economics and Social Sciences, industry stakeholders (preferably those with past experience in MSE), and members of the Commission's Assessment and Science Committee or Management and Science Committee with past experience in MSE. To be effective, the number of people in the steering committee should be limited to approximately a dozen members.

The TC discussed two ongoing developments that will potentially streamline the development of a formal MSE approximately a year from now. First, University of Maine researchers have submitted a proposal to the current round of the Sea Grant's American Lobster Research Program funding; while funding is uncertain, the project is to evaluate population dynamics simulations that will incorporate environmental effects into the biological modeling framework likely to be used in a lobster MSE. Second, work towards the conceptualization of an economics model and economic data gathering is being funded by NOAA Fisheries; this will support development of an economic model within the MSE modeling framework. These developments support the TC recommendation for the formation of a steering committee, with a start date for the MSE to be determined pending the results of the steering committee's findings.

GOM/GBK MSE Option (high priority)

Phase One - Stockwide GOM/GBK MSE

Purpose: Evaluate performance of management strategies at the stock level for the GOM/GBK stock in response to changes in recruitment with biological, fishery, and other socio-economic performance metrics.

Timeline: Three years. One modeler workshop in the first year and one modeler and one stakeholder workshop in years two and three.

Personnel and responsibilities:

- ASMFCLobster TC – Stakeholder recruitment and engagement, data gathering, guidance on technical aspects of the MSE, report writing, and training for using the MSE tools in future updates

- ASMFC Staff – Project management, data gathering, workshop coordination, and report writing/publishing
- ASMFC Lobster Board Members – Define management goals and provide guidance on the direction of the MSE based on established goals, participate in stakeholder input gathering (webinars and workshops)
- Stakeholders – Identify desired objectives and outcomes of an MSE and provide guidance on the direction of the MSE, participate in stakeholder input gathering (surveys, webinars, and workshops)
- Biological modeler – Couple existing assessment model and operating model in a closed-loop model (six months to program, six months to modify based on workshop feedback and to provide training to TC members)
- Economics modeler – Develop an economics model guided by NOAA Fisheries’ economic model conceptualization and data gathering work and couple with the assessment model and operating model in a closed-loop model.
- Professional facilitator - Facilitate stakeholder webinars and workshops, assist with stakeholder input survey development and analysis

Costs:

- Facilitator - \$25,000
- Travel - \$37,500 for two in-person stakeholder workshops (30 people), \$22,500 for three in-person modeler workshops (12 people)
- Biological model development - \$85,000 (one year postdoc with ASMFC indirect cost cap)
- Economic model development - \$115,000 (one year full time or two six month full time contractors)
- Total - \$285,000

Phase Two - Spatially-Explicit GOM/GBK MSE

Purpose: Evaluate performance of spatially-directed management strategies for the GOM/GBK stock triggered by external forces (e.g., whale interactions, wind farm development and operation, climate change).

Costs: Estimates to be developed during phase one.

Spatially-Explicit SNE MSE Option (low priority)

Purpose: Evaluate performance of spatially-directed management strategies for the SNE stock in response to changes in recruitment and diversification of the fishery (targeting lobster and Jonah crab) with biological, fishery, and other socio-economic performance metrics.

Timeline: Five years. One modeler workshop in years one through five. One stakeholder workshop in years two, four, and five.

Personnel and responsibilities:

- ASMFC Lobster TC – Stakeholder recruitment and engagement, data gathering, guidance on technical aspects of the MSE, report writing, and training for using the MSE tools in future updates

- ASMFC Staff – Project management, data gathering, workshop coordination, and report writing/publishing
- ASMFC Lobster Board Members – Define management goals and provide guidance on the direction of the MSE based on those pre-defined goals, participate in stakeholder input gathering (webinars and workshops)
- Stakeholders – Identify desired objectives and outcomes of an MSE and provide guidance on the direction of the MSE, participate in stakeholder input gathering (surveys, webinars, and workshops)
- Biological modeler – Conceptualize modeling of the spatial dynamics necessary to address stakeholder objectives by integrating lobster population distribution models along with Jonah crab population distribution and the resulting fleet dynamics. Identify biological and fleet spatial dynamics and resolution of each that can and cannot be modeled with available data to guide configuration of operating and assessment model. Couple assessment model and operating model in a closed-loop model (eighteen months to program, eighteen months to modify based on workshop feedback and provide training to TC members).
- Economics modeler – Conceptualize modeling of the economic processes driven by lobster landings, and interactions between lobster and Jonah crab effort and landings. Identify processes that can and cannot be modeled with available data to guide configuration of model. Couple economics model with the assessment model and operating model in a closed-loop model.
- Professional facilitator – Facilitate stakeholder webinars and workshops, assist with stakeholder input survey development and analysis
- ***Potentially others dependent on management and stakeholder objectives (e.g., reduce whale interactions would require a whale biologist and protected resource personnel)***

Costs:

- Facilitator - \$42,000
- Travel - \$56,250 for three in-person stakeholder workshops (30 people), \$46,875 for five in-person modeler workshops (15 people)
- Spatially-explicit closed-loop model development: \$255,000 (three year postdoc with ASMFC indirect cost cap)
- Economic model development: \$345,000 (three year full time or two one and half year full time contractors)
- Total - \$745,125 (minimum with potential for additional costs dependent on stakeholder objectives)



Atlantic States Marine Fisheries Commission

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MEMORANDUM

December 5, 2023

To: American Lobster Management Board
From: Tina Berger, Director of Communications
RE: Advisory Panel Nomination

Please find attached a new nomination to the Jonah Crab Advisory Panel – Denny Colbert, a commercial offshore trap fisherman from Massachusetts. He replaces Marc Polumbo who is no longer active in the fishery. Please review this nomination for action at the next Board meeting.

If you have any questions, please feel free to contact me at (703) 842-0749 or tberger@asmfc.org.

Enc.

cc: Caitlin Starks

M23-106

JONAH CRAB ADVISORY PANEL

Bolded names await approval by the American Eel Management Board
Bolded and italicized name denotes Advisory Panel Chair

January 9, 2024

Maine ***Vacancy***

Earl Gwin (comm lobster trap/LCMA 5)
10448 Azalea Road
Berlin, MD 21811
Phone: 401.251.3709
jeanenegwin@verizon.net
Appt Confirmed 11/2/15

New Hampshire

Todd Richard Ellis (manager for offshore
lobster/crab boats)
4 Laurel Lane
Somersworth, NH 03878
Phone: 603.396.0993
tellis@littlebaylobster.com
Appt Confirmed 5/4/15

Massachusetts

Denny Colbert (comm traps/offshore)

32 Landfall Lane

Manomet, MA 02345

Phone: 781.831.4005

DennyColbert11@gmail.com

Captain Jan Horecky (comm traps/offshore SNE)
29 France Street
Middleboro, MA 02346
Phone: 774.766.8466
jhorecky@verizon.net
Appt. Confirmed 5/4/15; 8/18

Rhode Island

Jon Williams (comm trap/offshore)

132 Herman Melville Blvd.

New Bedford, MA

Phone: 508.951.4788

jwilliams@atlanticredcrab.com

Appt. Confirmed 2/2/21

Brian Thibeault (comm trap/inshore SNE)

40 lakeside Drive

Charleston, RI 02813

Phone: 401.932.8250

Kwe5tbos90@yahoo.com

Appt Confirmed 5/4/15

New York

Vacancy

Maryland



ATLANTIC STATES MARINE FISHERIES COMMISSION

Advisory Panel Nomination Form

This form is designed to help nominate Advisors to the Commission's Species Advisory Panels. The information on the returned form will be provided to the Commission's relevant species management board or section. Please answer the questions in the categories (All Nominees, Commercial Fisherman, Charter/Headboat Captain, Recreational Fisherman, Dealer/Processor, or Other Interested Parties) that pertain to the nominee's experience. If the nominee fits into more than one category, answer the questions for all categories that fit the situation. **Also, please fill in the sections which pertain to All Nominees (pages 1 and 2). In addition, nominee signatures are required to verify the provided information (page 4), and Commissioner signatures are requested to verify Commissioner consensus (page 4). Please print and use a black pen.**

Form submitted by: Daniel McKiernan State: MA
(your name)

Name of Nominee: Denny Colbert

Address: (Box 1049) 32 LONDFOUL LANE

City, State, Zip: MANIMET, MA 02345

Please provide the appropriate numbers where the nominee can be reached:

Phone (day): (781) 831-4005

Phone (evening): _____

FAX: _____

Email: DENNY COLBERT11@GMAIL.COM

FOR ALL NOMINEES:

1. Please list, in order of preference, the Advisory Panel for which you are nominating the above person.

1. Jonah Crab
2. _____
3. _____
4. _____

2. Has the nominee been found in violation of criminal or civil federal fishery law or regulation or convicted of any felony or crime over the last three years?

yes _____ no ✓

3. Is the nominee a member of any fishermen's organizations or clubs?

yes no

If "yes," please list them below by name.

NOLA
MLA
EBBCFA

4. What kinds (species) of fish and/or shellfish has the nominee fished for during the past year?

LOB
(NOB)
SCALLOPS

5. What kinds (species) of fish and/or shellfish has the nominee fished for in the past?

LOB
(NOB)
SCALLOPS / (GROUND FISH)

FOR COMMERCIAL FISHERMEN:

1. How many years has the nominee been the commercial fishing business? 40 years

2. Is the nominee employed only in commercial fishing? yes no

3. What is the predominant gear type used by the nominee? TRAPS

4. What is the predominant geographic area fished by the nominee (i.e., inshore, offshore)? OFFSHORE

FOR CHARTER/HEADBOAT CAPTAINS:

1. How long has the nominee been employed in the charter/headboat business? _____ years

2. Is the nominee employed only in the charter/headboat industry? yes _____ no _____

If "no," please list other type(s) of business(es) and/or occupation(s): _____

3. How many years has the nominee lived in the home port community? _____ years

If less than five years, please indicate the nominee's previous home port community.

FOR RECREATIONAL FISHERMEN:

1. How long has the nominee engaged in recreational fishing? _____ years

2. Is the nominee working, or has the nominee ever worked in any area related to the fishing industry? yes _____ no _____

If "yes," please explain.

FOR SEAFOOD PROCESSORS & DEALERS:

1. How long has the nominee been employed in the business of seafood processing/dealing?
_____ 40 _____ years

2. Is the nominee employed only in the business of seafood processing/dealing?

yes _____ no X If "no," please list other type(s) of business(es) and/or occupation(s):

RESTAURANT

3. How many years has the nominee lived in the home port community? 40 years

If less than five years, please indicate the nominee's previous home port community.

FOR OTHER INTERESTED PARTIES:


1. How long has the nominee been interested in fishing and/or fisheries management? 40 years

2. Is the nominee employed in the fishing business or the field of fisheries management?
yes no

If "no," please list other type(s) of business(es) and/or occupation(s):

FOR ALL NOMINEES:

In the space provided below, please provide the Commission with any additional information which you feel would assist us in making choosing new Advisors. You may use as many pages as needed.

Nominee Signature: 

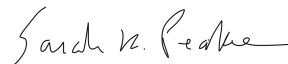
Date: 12/1/23

Name: DENNIS CULBERT
(please print)

COMMISSIONERS SIGN-OFF (not required for non-traditional stakeholders)



State Director



State Legislator



Governor's Appointee