

Atlantic States Marine Fisheries Commission

American Lobster Management Board

*October 27, 2016
12:30 – 4:00 p.m.
Bar Harbor, Maine*

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.

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|--|------------|
| 1. Welcome/Call to Order (<i>D. Borden</i>) | 12:30 p.m. |
| 2. Board Consent | 12:30 p.m. |
| • Approval of Agenda | |
| • Approval of Proceedings from August 2016 | |
| 3. Public Comment | 12:35 p.m. |
| 4. Consider American Lobster Draft Addendum XXV for Public Comment (<i>M. Ware</i>) Action | 12:45 p.m. |
| 5. Discussion on Trap Caps Included in Addenda XXI and XXII (<i>M. Ware</i>) | 1:45 p.m. |
| 6. American Lobster Reporting Work Group Report (<i>M. Ware</i>)
Possible Action | 2:00 p.m. |
| 7. Consider Jonah Crab Draft Addendum II for Public Comment Action | 2:45 p.m. |
| • Jonah Crab Working Group Report (<i>M. Ware</i>) | |
| 8. Consider Approval of 2016 American Lobster FMP Review and State Compliance (<i>M. Ware</i>) Action | 3:40 p.m. |
| 9. Update on the Atlantic Marine Monument Designation (<i>M. Ware</i>) | 3:45 p.m. |
| 10. Update on New England Fishery Management Council Deep-Sea Coral Amendment (<i>M. Ware</i>) | 3:55 p.m. |
| 11. Other Business/Adjourn | 4:00 p.m. |

The meeting will be held at the Harborside Hotel, 55 West Street, Bar Harbor, Maine; 207.288.5033

MEETING OVERVIEW

American Lobster Management Board Meeting
Thursday, October 27, 2016
12:30 – 4:00 p.m.
Bar Harbor, Maine

Chair: David Borden (RI) Assumed Chairmanship: 02/16	Technical Committee Chair: Kathleen Reardon (ME)	Law Enforcement Committee Representative: John Cornish (ME)
Vice Chair: Stephen Train (ME)	Advisory Panel Chair: Grant Moore (MA)	Previous Board Meeting: August 4, 2016
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 August 2016

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 Draft Addendum XXV (12:45-1:45 p.m.) Action

Background

- The 2015 Stock Assessment concluded the SNE lobster stock is at record low abundance and is experiencing recruitment failure.
- In response, the Board initiated Addendum XXV to increase egg production and decrease fishing pressure in the SNE stock.
- At the August 2016 meeting, the Board instructed the PDT to develop options that consider a 0%, 20%, 40%, and 60% increase in egg production.

Presentations

- Overview of draft Addendum XXV for public comment by M. Ware (**Supplemental Materials**)

Board actions for consideration at this meeting

- Approve draft Addendum XXV for public comment.

5. Discussion on Trap Caps Included in Addenda XXI and XXII (1:45-2:00 p.m.)

Background

- In a letter to the Board, GARFO stated that it is suspending its rule-making for Addenda XXI and XXII until there is more clarity on the management action that will be taken in SNE.

<ul style="list-style-type: none"> On a September 7th conference call, the Trap Cap Working Group discussed the individual ownership caps and active trap caps prescribed in Addendum XXI and XXII. There may be an option to move forward with active trap caps in federal waters.
Presentations <ul style="list-style-type: none"> Overview of discussion by Trap Cap Working Group by M. Ware (Briefing Materials)

6. American Lobster Reporting Work Group Report (2:00-2:45 p.m.) Possible Action
Background <ul style="list-style-type: none"> Currently, Addendum X requires 100% dealer reporting and at least 10% active harvester reporting in the lobster fishery. There is concern that the current reporting requirements do not provide enough information to accurately characterize the lobster fishery. The Lobster Reporting Work Group met on September 26th to discuss ways to improve reporting in the fishery.
Presentations <ul style="list-style-type: none"> Lobster Reporting Work Group Report by M. Ware (Briefing Materials)
Board actions for consideration at this meeting <ul style="list-style-type: none"> Initiate an addendum to improve reporting in the lobster fishery.

7. Jonah Crab Draft Addendum II (2:45-3:40 p.m.) Action
Background <ul style="list-style-type: none"> There is concern about the equity of the current claw provision as some claw fishermen can continue this practice while others must land whole crabs. NOAA Fisheries also stated it may prove challenging to implement the current claw provision due to National Standard 4. The Board initiated Addendum II to consider a coastwide standard for claw harvest in the Jonah crab fishery. The Jonah Crab Working Group met via conference call on September 12th to discuss options in the Addendum. The group is also proposing that a second issue be added to the addendum to consider creating a definition of bycatch in the Jonah crab fishery.
Presentations <ul style="list-style-type: none"> Overview of draft Addendum II for public comment by M. Ware (Briefing Materials) Jonah Crab Working Group Report by M. Ware (Briefing Materials)
Board actions for consideration at this meeting <ul style="list-style-type: none"> Approve draft Addendum II for public comment.

8. Fishery Management Plan Review (3:40-3:45 p.m.) Action
Background <ul style="list-style-type: none"> State Compliance Reports for the lobster fishery are due on August 1 The Plan Review Team reviewed each state report and compiled the annual FMP Review. Delaware, Maryland, and Virginia have requested <i>de minimis</i> status.
Presentations <ul style="list-style-type: none"> Overview of the FMP Review Report by M. Ware. (Supplemental Materials)
Board actions for consideration at this meeting <ul style="list-style-type: none"> Accept 2016 FMP Review and State Compliance Report. Approve <i>de minimis</i> requests

9. Update on Monument Designation in the Atlantic Ocean (3:45-3:55)

Background

- On September 15th, a Marine Monument was declared in the Atlantic Ocean which encompasses Oceanographer, Lydonia, and Gilbert canyons as well as seamounts. Lobster fishing is permitted for 7 more years within the monument boundaries.

Presentations

- Update on Marine Monument by M. Ware

10. Update on NEFMC Omnibus Deep-Sea Coral Amendment (3:55-4:00)

Background

- The NEFMC is currently drafting an Omnibus Deep-Sea Coral Amendment that may consider restrictions to lobster gear. The Amendment currently includes proposed discrete zones as well as broad regions based on a series of depths.
- NEFMC is tentatively targeting public hearings on this document for the late spring or early summer of 2017.

Presentations

- Update on NEFMC Omnibus Deep-Sea Coral Amendment by M. Ware

11. Other Business/Adjourn

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

The Westin Alexandria
Alexandria, Virginia
August 4, 2016

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

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INDEX OF MOTIONS

1. **Approval of Agenda by Consent** (Page 1).
2. **Approval of Proceedings of May, 2016 by Consent** (Page 1).
3. **Recognizing the impact of climate change on the stock, move to make the goal of Addendum XXV to respond to the decline of the SNE stock and its decline in recruitment while preserving a functional portion of the lobster fishery in this area. This Addendum is intended to be an initial response to the most recent stock assessment. Options for the PDT to develop include:**
 - **Status quo (0% increase in egg production)**
 - **20% increase in egg production**
 - **40% increase in egg production**
 - **60% increase in egg production**

The PDT is tasked with developing specific management options that meet these goals. These options should be phased in over 2 years and reviewed periodically to determine progress (Page 17). Motion by Dan McKiernan; second by Jason McNamee. Motion carried (Page 23).
4. **Move to add an alternative to Draft Addendum II, including a delineation line at 41 degrees north latitude for a Jonah crab claw-only fishery**(Page35). Motion by Michael Luisi; second by Brandon Muffley. Motion fails (Page 36).
5. **Move to approve Draft Addendum II to the Jonah Crab FMP for public comment** (Page 36). Motion by Steve Heins; second by Pat Keliher. Motion postponed until next meeting (Page 39).
6. **Move to include in Option C a range of small volumetric claw harvest from 5 gallons to the bycatch limit of 2,000 claws** (Page 37). Motion made by Michael Luisi; second by John Clark. Motion postponed until next meeting (Page 39).
7. **Move to postpone approval of Draft Addendum II and consideration of above motion regarding option C until the next meeting** (Page 38). Motion by Steve Train; second by Steve Heins. Motion carried without objection (Page 39).
8. **Move to approve Maine’s conservation equivalency proposal on trap tags** (Page 40). Motion by Bill Adler; second by Pat Keliher. Motion carried without objection (Page 40).
9. **Move to recommend that the ISFMP Policy Board have the ASMFC send a letter to NOAA’s Office of Law Enforcement asking for lobster to become a higher priority through their Joint Enforcement Agreements Program** (Page 42). Motion by Pat Keliher; second by Dan McKiernan. Motion carried without objection and an abstention from NOAA Fisheries (Page 42).
10. **Motion to adjourn by Consent** (Page 44).

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ATTENDANCE

Board Members

Pat Keliher, ME (AA)	Arnold Leo, NY, proxy for E. Hasbrouck (GA)
Stephen Train, ME (GA)	Adam Nowalsky, NJ, proxy for Asm. Andrzejczak (LA)
Rep. Jeffrey Pierce, ME, proxy for Sen. Langley (LA)	Tom Fote, NJ (GA)
Douglas Grout, NH (AA)	Brandon Muffley, NJ, proxy for D. Chanda (AA)
Dennis Abbott, NH, proxy for Sen. Watters (LA)	Roy Miller, DE (GA)
G. Ritchie White, NH (GA)	John Clark, DE, proxy for D. Saveikis (AA)
William Adler, MA (GA)	Ed O'Brien, DE, proxy for Del. Stein (LA)
Dan McKiernan, MA, proxy for D. Pierce (AA)	Rachel Dean, MD (GA)
Jason McNamee, RI, proxy for J. Coit (AA)	Mike Luisi, MD, proxy for D. Blazer (AA)
David Borden, RI (GA)	Joe Cimino, VA, proxy for J. Bull (AA)
Eric Reid, RI, proxy for Sen. Sosnowski (LA)	Allison Murphy, NMFS
Rep. Craig Miner, CT (LA)	Peter Burns, NMFS
David Simpson, CT (AA)	Terry Stockwell, NEFMC
Steve Heins, NY, proxy for J. Gilmore (AA)	

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

Ex-Officio Members

Bob Glenn, Technical Committee Chair

Staff

Megan Ware	Mark Robson
Toni Kerns	Ashton Harp
Robert Beal	Amy Hirrlinger

Guests

Jim Dodson, Virginia
Dick Allen, Little Bay Lobster Co.

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The American Lobster Management Board of the Atlantic States Marine Fisheries Commission convened in the Edison Ballroom of the Westin Hotel, Alexandria, Virginia, August 4, 2016, and was called to order at 10:10 o'clock a.m. by Chairman Dave Borden.

CALL TO ORDER

CHAIRMAN DAVID V.D. BORDEN: I call the meeting to order at 10:10. My name is David Borden; I'm the Chairman of the Lobster Board. We have a rather full agenda today, and I've already been contacted by a number of board representatives that have to catch flights. Anything we can do today to expedite the deliberations, I think, will be useful and serve in the best interest of everyone here.

APPROVAL OF AGENDA

CHAIRMAN BORDEN: As far as the agenda that has been distributed, the only additions or changes that have been brought to my attention so far have been Pat Keliher asked to move a couple of the issues up that relate to Maine, so that he can catch a flight. But I think that we can do that if we expeditiously handle the Jonah Crab addendum, which is nothing more than putting that out to public hearing. My question is, are there any additions, deletions or changes to the agenda; and if not, we'll deal with the agenda as it stands. Yes, Terry.

MR. TERRY STOCKWELL: Just for the record, I haven't moved to South Carolina; but I'm here in my New England Fishery Management Council seat. I will not be voting on any non-council motions and will abstain, but I will also be requesting that the deep sea coral discussion be moved ahead so I can catch the same flight as Pat.

CHAIRMAN BORDEN: Any other additions or comments on the agenda; if not then the agenda stands approved as distributed.

APPROVAL OF PROCEEDINGS

CHAIRMAN BORDEN: Proceedings were distributed. Are there any comments or changes on the proceedings; no hands up, any objections to approving them by consensus? They stand approved.

PUBLIC COMMENT

CHAIRMAN BORDEN: Public comments, we have one individual, Jim Dodson, from Virginia who would like to address the board. I've already spoken to Jim and emphasized the fact that I would like him to keep his comments fairly straightforward. He's been very organized. He prepared written comments so the board can take those; so Jim, if you would like to address the board. This is for items that are not on the agenda. Welcome!

MR. JIM DODSON: Thanks, everybody. I know everybody pretty well knows who I am. I've been back and forth with NOAA Fisheries in regards to what has gone and seems to be a problem in the fish pot fishery, to where NOAA Fisheries has permitted us to use fish pots since the beginning of time; and there seems to be inconsistencies that I, myself, and I believe my state behind me felt as though ASMFC in 2.2 classified all sea bass pots, which should be any fish pot as non-trap gear. It seems as though there is an inconsistency where those certain pots that are classified as being in nowhere, which is where I am. I would like to request the board to have NOAA Fisheries place a pot into one fishery and allow a permit to be received for one or the other. If they gave you a fish pot license back in the beginning of time, they can use the beginning of time as a reference; so that we can have a license to do things legally.

I believe that there is a process that we're here. You guys are council members. I believe ASMFC has done their job, and if we follow 2.2, it should put all pots that are from a lobster standpoint -- the trap fishery was 200 pots or more, a certain amount of landings. That was supposed to be in

the trap fishery and everybody else should be in the non-trap fishery.

I handed in what I had; it is just a request that we can get a license to be able to fish legally and fairly and not discriminate and say that one gear type can be allowed bycatch and a hundred lobsters, and then say to others that no, you're not allowed to bycatch and you have to alter your gear or you have to do anything.

I have been fishing since the decades that they said, and this has been an ongoing problem that has not been corrected. If anybody is allowed a hundred lobsters per day, everybody should be allowed. That is the extent, and you guys can read my letter and I won't keep you. I appreciate it. I came all the way up here. I know you guys are busy, but I believe in your process, and I would appreciate it.

CHAIRMAN BORDEN: Thank you, Jim; why don't you stay right there. Anyone have questions for Jim? I'll take a couple of questions. If not, no hands up; thank you. Oh, excuse me, yes.

MR. JOSEPH CIMINO: As Mr. Dodson mentioned, NOAA has explained quite a bit about the differences in the two plans that exist right now. I was wondering if maybe they could go through that a little bit. As you said, we've got a very intense agenda here. We're going to be considering a lot of hard decisions, and hopefully, there will be a lot of options involved. I think maybe potentially there is a way forward for Mr. Dodson if we can hear a little bit about the differences on the federal plan; compared to the ASMFC plan.

CHAIRMAN BORDEN: Any other points that anyone wants to make, if not thank you very much, Jim for coming, and we'll factor in your suggestions as people read through the document.

MR. DODSON: Thank you for your time, and again just look at the fairness and allow fishermen to be able to get a legal permit. Again,

I can't see putting me into the trap fishery just because I use bait. I think every pot is baited and that is the strict issue. If ASMFC says it is a non-trap, then I think that we should move on and allow me to get that permit. Thank you.

UPDATE ON STATUS OF FEDERAL RULEMAKING FOR LOBSTER

CHAIRMAN BORDEN: Next item on the agenda is federal rule making. Just by way of background, we had submitted a letter to NOAA. NOAA has responded. Peter, would you like to comment on the letter please?

MR. PETER BURNS: Yes, we submitted a letter to the board just to give an update on where we are with respect to lobster rule making; and particularly, as it relates to what is happening with southern New England and the trap transfer program. We implemented the trap transfer program last year, along with the scheduled trap reductions that are in place for Area 2 and 3. Now we're in our second year of that trap reduction program and our trap transfer program. We intend to continue going on with that. Things changed a little bit when we received the 2015 stock assessment. We started looking at Addenda XXI and XXII measures, which look at the aggregate trap caps for Areas 2 and 3, along with the decrease in the overall cap for Area 3 and the trap banking provisions for Area 2 and 3. We were looking at the commission's recommendations to implement those, sort of as the second version of our trap transfer program.

Then we got the last stock assessment that showed that the southern New England stock was even in worse shape than we had thought before. At that time we couldn't really justify going forward with implementing a banking program and some of these other measures, because we didn't feel that it was responsible to potentially allow fishermen to buy more traps than they could fish when the commission was deliberating measures that could severely restrict the catch in the fishery.

Part of what that letter does is it notifies the commission that we're still moving forward with the trap transfer program, to allow fishermen to still be able to optimize their businesses in the wake of the trap cuts that are already in place. But we're suspending our rulemaking on Addenda XXI and XXII pending the outcome of what happens with our southern New England management program.

I think where the commission wants to go with those two Addenda may become more evident as we move forward with southern New England management, and we're going to have a lot more discussion about that at this meeting and probably many more meetings to come.

I think at some point it would be good to just take a harder look at that in whatever way is appropriate; whether it's a working group or within the context of our addenda moving forward for southern New England to see if and whether those components of the plan fit in with our future management.

CHAIRMAN BORDEN: Questions for Peter, anyone? Any questions? Bill Adler.

MR. WILLIAM ADLER: Peter, so basically, you're allowing the transfers to continue. What you're basically suspending here is the part about banking of the trap? Is that what I'm understanding here?

MR. BURNS: If I may, Mr. Chairman. Yes. Addenda XXI and XXII looked at trap banking. Right now, any federally permitted lobster fisherman can only -- once they have the trap reductions every year, they can buy back up to that fishable trap limit for the area. What the banking would allow in Addendum XXI would allow a fisherman to purchase an additional number of traps above and beyond what they could fish.

It could facilitate the number of transactions they would need to get enough traps to be able to keep their limit up to the fishable limit

throughout the whole course of the trap reductions. Given the fact that the commission could be looking at some significant reductions in catch or restrictions in the fishery, we didn't think it was appropriate to go forward with something like that right now. Because it could cause people to maybe make some business decisions on investments in the fishery in the wake of potential further cuts. What we decided to do was just keep the trap transfer program in place, because we still have those trap reductions on the board. It still allows them to build up or scale down their businesses as needed.

CHAIRMAN BORDEN: Other questions for him? Basically, a suggestion I've discussed with Peter is the desirability of putting together a workgroup; depending on what the commission does on some of these other issues. What I would suggest is after we deal with some of the issues on the agenda today, we'll have a better sense of where the board is going to go, and I'll raise that at the end of the meeting.

If people think that a working group is an appropriate way to go then I'll make a suggestion on how to do that. Are there any objections to handling it that way? If not, then we're going to move on with the next issue, which is the Lobster Technical Report. Just by way of background, at the last board meeting we agreed to initiate an addendum to address the decline of southern New England stock by lowering the fishing mortality and increasing the egg production.

The board also set preliminary targets or goals, if you will, of 20 to 60 percent egg production and tasked the TC with preparing some examples. I want to emphasize the word "example" so that board members could actually see what the impacts might be at different levels. The TC has done that. I would just like to -- before I introduce Bob Glenn to give the report, I would just like to complement Bob and the Technical staff on the work they've done.

I think the final group of tables that they circulate is really excellent. They are easy for not only the board to use, but the industry to use. In other words, you can look at different measures, you can look at what the impact is on egg production, and you can look on how that affects the spawning stock biomass and how it affects the catch. It is kind of a useful matrix that I think we'll all benefit from. It will accelerate the discussions on the issues; with that as background, Bob Glenn.

TECHNICAL COMMITTEE REPORT

MR. ROBERT GLENN: As David just said, we were tasked at the last meeting to conduct an analysis on management strategies that would achieve a 20 to 60 percent increase in egg production in the southern New England lobster stock. The primary tools we were asked to evaluate were changing the minimum size, changes in the maximum size, and also an evaluation of how trap reductions would increase egg production in southern New England.

First, I'll go over what we did, the analysis we conducted for changes in the minimum and maximum size. We used the same projection model to do this evaluation as we have presented to you in the past. In this particular case, what we did was we carried the terminal year population structure, so the abundance in the size structure of the stock from 2013; as a baseline to gauge how changing the minimum size and the maximum size would affect or how that would reduce exploitation and increase egg production.

What the projection allows us to do is it allows us to change different parameters and evaluate how the population structure in subsequent years looked. Previous presentations that we've given we've looked at how varying growth, how varying fishing pressure, or varying natural mortality impacts the stock.

In this particular analysis, all of those parameters are held constant, and what we simply did was change the minimum and the maximum sizes. As

I said, the model parameters that we kept constant were a natural mortality at 0.285. For fishing mortality was the mean rate from 2008 to 2012, and then for recruitment, we used mean recruitment rates from 2012 to 2014. Then once we ran the projections and we get an estimate of the female abundance after a minimum/maximum size, we then converted that into egg production by multiplying the female abundance times the probability of the female carrying a clutch in that given year at that length, times the fecundity at that length.

Basically, it is just converting the unit of measure from females to number of potential eggs. The egg production estimates are based on projection scenarios when the population reaches equilibrium. In this case that was roughly ten years. We did this because the initial size composition for projection runs is based on the size composition from the terminal year of the assessment model; which typically are fairly unstable.

You want to let that ramp up for a little while and hit stability before you choose your answer. Also, because lobsters grow slowly, it takes several years for the changes in the gauge size to take effect; especially for larger lobsters who have longer intermolt durations. Then finally, we wish to analyze separate scenarios for inshore and offshore southern New England, which have different legal sizes and fishing pressures.

The length composition for subsets of the stock is difficult to parameterize. Moving into the results, these two figures here, the one on the left is the results for inshore. The one on the right is results from offshore. We present them differently, as I indicated, because we're starting at the baseline with a starting different minimum sizes and maximum sizes and inshore and offshore of southern New England.

In this particular figure, the Y axis, the vertical axis on the left is the maximum size; and then the X axis on the bottom is the minimum size, and

then each square represents percent increase in egg production; the darker the color, the lower the percentage of egg production, the lighter the color the higher the percentage of egg production.

This just kind of shows the relationship that as minimum size increases and maximum size decreases, egg production will increase. The three lines that you see in these graphs, the contour lines, the solid white line is a contour line that follows the minimum or maximum size at which you would get a 10 percent increase in egg production.

The dashed white line is 20 percent, and the small dotted line is 30 percent. If you follow that line over and choose the minimum and maximum size, in that case, you're following that 10, 20, or 30 percent contour. We also wanted to look at separately the impact of either changing the minimum size while keeping the max size constant, or conversely changing the maximum size while keeping the minimum size constant.

We did this again for both inshore and offshore scenarios, and also to give you a range from 20 to 60 percent. For inshore, in this particular case, if you look at the top left square in this table, you'll see that the minimum size at which you would achieve 20 percent increase in egg production if you did not change the maximum size, is 92 millimeters. Also, at 60 percent it would be 101 millimeters.

For maximum gauge changes, you can achieve a 20 percent increase in egg production by keeping the minimum size constant and lowering the maximum size to 103 millimeters. There were no scenarios by which you could keep minimum size constant and lower the maximum size enough to achieve a 60 percent.

For offshore, to achieve a 20 percent increase in egg production at the current maximum size of 171 millimeters, which I believe is six and three-quarter inches, you would have to increase the

minimum size to 95 millimeters; and to achieve a 60 percent increase, you would have to increase it to 103.

Then finally, if you wanted to hold the offshore minimum size constant at 89 millimeters, you would have to reduce the maximum size to 103 millimeters to achieve a 20 percent. Again, there were no scenarios by which you could reduce the maximum gauge sufficiently to achieve a 60 percent increase while leaving the minimum size constant.

Basically, one of the things that this demonstrates, and you can see this in those figures I showed as well, is that you get more bang for your buck from the minimum size increase. This may be a little counter intuitive, because everyone thinks of a large female who carries a very large clutch. But part of the dynamics is that in the population there are far more smaller animals than there are large animals.

Then over time both fishing mortality and natural mortality act on those animals, so a smaller and smaller proportion are given the opportunity to make it to that size. You don't get as much bang by reducing the maximum size as you do the minimum size. This table here, Table 2 in the document, is just a number of different scenarios for inshore and offshore that shows you the minimum and maximum; some different options for minimum and maximum size that would achieve either a 20 or a 60 percent.

Then a table which I think is a little more informative is this one, which was the first table in the supplemental material. We apologize for not getting this out in the document. It was kind of an afterthought. We thought it would be good to show in addition to egg production, how changing the minimum and maximum size also affects exploitation, spawning stock biomass, reference abundance and also the catch.

In these scenarios, I picked a number of different options, just to give you a range to show you the

minimum and maximum sizes that would achieve say a 20 percent reduction. We also put them in English units. I know I certainly think better in English units than metric units; so it is easier to visualize what say a 4.5 inch lobster looks like as opposed to what 115 millimeter lobster looks like, at least in my head.

But anyways, you can see a number of scenarios here. I don't think I will read each of the options here, but I certainly can answer any questions about these tables. Mr. Chair, would you like me to continue through the next part or would you want me to take questions on the minimum/maximum size first?

CHAIRMAN BORDEN: I think it would be clearer if we just took the questions now, if that's all right with you. Are there any questions for Bob on this section?

MR. ADLER: Just a question. Bob, down there lobsters are sexually mature at the current minimum size right now, I think, aren't they?

MR. GLENN: Yes, at the current minimum size, roughly 90 plus, 95 percent are sexually mature at minimum size.

MR. ADLER: Yes, that is three and three-eighths down there, right?

MR. GLENN: Correct.

MR. STEPHEN TRAIN: Bob, when we're looking at these percentage increases on egg production, I'm trying to – I'm not a scientist, I'll figure it out some day – when a female lobster is carrying eggs, they get impregnated after they shed, and the smaller lobsters shed more often. As we increase the size of the lobster they shed less often.

Even though they've got a greater egg production, the success of the eggs or whatever is going to happen less often. Then I look at the water temperatures down there and the size of the lobsters at sexual maturity, and I wonder if

we moved this size up are we going to increase our risk of shell disease and other things when they are not shedding as often; and what is the real benefit on egg production when we get up there and maybe hurt our markets?

MR. GLENN: Not to dodge the question, but I mean these analyses assume that natural mortality remains constant at 0.28. It is hard for us to predict if there would be differential mortality with larger egg bearing females that shed less frequently. Certainly, if we look at the demographics of shell disease in southern New England, the portion of the stock that has the highest incidence of shell disease are egg-bearing females.

That is directly related to the fact that they have the longest intermoult duration, meaning that they carry their shell for the longest time period in between moults, because they are carrying a clutch and also developing eggs internally. During that process they tend to accumulate fairly high rates of disease. But at this point it would be difficult for us to project size specific natural mortality related to shell disease on that. It is not something that we're able to do.

MR. MICHAEL LUISI: Bob, I'm in your same camp regarding the English unit conversions. As a suggestion, any time we can make conversions in the documents that we're looking at, I think it would be helpful. It is much easier to think in terms of inches than millimeters, as far as I'm concerned.

My question is related to the analysis that you performed looking at the inshore and offshore and keeping those two areas separate from one another. Did the TC discuss at all any type of standardization, or was there any consideration as to blending those two areas together and having one constant standardized unit of measure for both the inshore/offshore component?

MR. GLENN: Yes, we did discuss it. One of the challenges is we're starting out at different

minimum or maximum sizes, so for conducting this analysis the effect of a different minimum or maximum size is going to be different inshore and offshore; primarily right out of the gate, because you're starting at a different goal line or different baseline. Moving forward, if you were to standardize those regulations among the two, over time when the stock hits equilibrium status, we should be able to evaluate that. Actually, if you look at some of the scenarios that I presented in the table, there are a few where you could pick a similar maximum size; and there is only one or two millimeters difference in the minimum size. I think anyone on the TC would tell you that is probably well within the margin of error in these projections, in that a millimeter or two is not going to – the difference between 17 or 21 percent is probably close enough.

My recommendation, if you're interested in moving forward with standardization, is that if you look at some of these size ranges, you'll see that the differences in percent increase in egg production are fairly small; only by a few millimeters difference. There would be an opportunity to standardize in that situation.

MR. LUISI: Thanks for that, just so I make sure I understand it correctly. Maybe for the long term it is something to consider, but given the fact that the inshore and offshore areas have different units to begin with, I would assume that one area would be impacted on the short term more so than, let's say, we shoot for a 20 or 30 percent increase in egg production. If we went standardized, would one area face more of a challenge than another?

MR. GLENN: The answer to that is yes, depending on the area and whether you choose to implement minimum or maximum sizes. The size structure offshore is typically larger than inshore. In situations like that, typically, the maximum size is going to have more immediate impact on their catch than a minimum size. Conversely, we tend to be a smaller size distributional lobster inshore, so changes in the

minimum size will have a higher degree of impact on fishermen inshore.

CHAIRMAN BORDEN: Other questions? Adam.

MR. ADAM NOWALSKY: Does the work on egg production increases account for potential additional harvest that may occur by going up in gauge size? What I mean by that; I jumped ahead one table in the supplemental materials, which show that once you get above 125 millimeters as a maximum gauge size, you have no realized gain in egg production at that time, nor do you necessarily have a loss in egg production. In my mind, if you increase the maximum gauge size, it would allow for harvest of larger lobsters.

I understand your comments about the fact that it may not be the expected relationship that a larger lobster carries more eggs; therefore, there is a larger gain. I understand that. But if you increase the gauge size, in my mind, more lobsters could be harvested; which would, in my mind, result in a lower overall production of eggs. Do these gauge sizes accommodate that multiplier effect that may occur, or is this just looking at it in one dimension? I hope I am explaining that.

MR. GLENN: In these projections, what they're looking at is the current stock structure from the last assessment. That would be the total abundance and the size structure of that abundance; and from there, projecting forward given constant natural mortality, constant levels of fishing mortality. Then, basically, you would tweak the selectivity in the model, which is the minimum and maximum size of what animals are allowed to be harvested, and what animals are protected.

You run that forward in a projection out through 25 years, it hits equilibrium about 10, and if that is the point at which we kind of gauge what the impact would be. It takes into account the number of animals in the stock from where you're starting, and where you were expecting to

go, given all those assumptions; and it would take into account the fact that the fecundity at size, meaning that bigger animals produce more eggs. It does incorporate all that. I should say, I hope I am answering your question.

CHAIRMAN BORDEN: Adam, do you want to follow up?

MR. NOWALSKY: Is there an incorporation of the fact that a larger gauge size, without a corresponding change to the minimum gauge size, would result likely in larger harvest?

MR. GLENN: When you say larger, do you mean in the total amount of lobsters or in a larger size distribution?

MR. NOWALSKY: Total amount, numbers.

MR. GLENN: The model doesn't project that. In scenarios where we hold minimum size constant and dramatically reduce the maximum size, it doesn't predict that catch would increase. It predicts that catch would decrease.

MR. NOWALSKY: Does it do the same in the other direction? If you increase maximum gauge size, does it predict increase in harvest?

MR. GLENN: We didn't run any scenarios where we increased the maximum size from its current baseline.

CHAIRMAN BORDEN: I would finish that sentence by saying, but that could be done. In other words, that type of analysis could be done if the board wanted it done.

MR. DAVID G. SIMPSON: Bob, how do you treat males in all of this, in terms of response to the stock? Is that why, the catch column, the much smaller reduction in catch, relative to apparent benefits of egg production exploitation. Is that related to the males? How do we manage males? I'm anticipating that if we go down this route we're going to hear sooner or later that

something about a male only fishery; you know where I'm going.

MR. GLENN: I understand. That is a great question. In this analysis, because the board asked us to specifically look at egg production, the entire analysis is based on females only. We didn't incorporate. In this table that shows the percent reduction in catch, this would only apply to the female portion of the stock.

CHAIRMAN BORDEN: Other questions? I just follow up on Adam's point and just to emphasize this. It is all part of the Technical Committee report that moult frequency declines with age, and that is one of the tricky parts that everybody should keep in mind. But the other aspect of it is that egg viability probably goes up with size.

There is no way to quantify that. For most marine populations that is the case, and it is also probably the case with lobsters. There are some benefits out of that strategy. Are there any other questions on this section? If not, Bob, do you want to continue?

MR. GLENN: Now I'll move into our second task, which was to provide advice on how the currently planned trap reductions would affect the southern New England lobster stock; particularly in regards to egg production. We assessed a 25 percent reduction in actively fished traps from the terminal year estimate in the assessment.

A couple things to note, this is a fairly difficult task for us to do; because the relationship between traps fished and fishing mortality is extremely complex. Multiple factors besides a number of actively fished traps affect catch rates; things like latent effort, how often the traps are hulled, soak time, trap efficiency, the spatial distribution of the resource and the potential for changing fleet characteristics, make it very difficult to quantify a trap as a unit of effort.

Despite these issues, the TC attempted to model the relationship between the number of actively fished traps and the fishing mortality; using data and exploitation estimates from the southern New England stock assessment. To do this, this analysis makes the following assumptions that the 25 percent reduction will actually result in a 25 percent decrease in actively fished traps.

This assumes that there is no latent effort. It also assumes that fishers do not try to compensate for the decrease in traps, such as changing the soak time by hauling more frequently, fishing more, baiting more heavily or do anything that would try to improve catch rates would not be included in this analysis. This assumes that the catchability of the trap is going to stay constant.

To be able to do this analysis we took the time series of actively fished traps, and the corresponding exploitation rate from the length structured model in the stock assessment for southern New England from 1981 to 2013. When we look at this relationship between exploitation and traps fished from the assessment, it is pretty apparent that we see two different regimes.

If you look in this particular figure, exploitation rate is the Y axis and total traps fished in thousands are on the X axis. You can see, in the earlier years in the eighties, all of those points are kind of in blue above, and then in green below. If you look at this, you can try to model one relationship through the middle of it.

But in our case, it seemed pretty obvious to us that there were two separate regimes going on here, one that happened in the past and one that happened more recently. We decided to try to give insight under a long term scenario and also a more short term scenario; depending on how you expect that relationship to play out.

Based on that, we looked at all years from 1981 to 2013 for one scenario, and then the second one was from 1999 to 2013. We bootstrapped a thousand model runs with replacement for the

all scenario and the recent year scenario, and then recorded the model predicted exploitation rates at the current trap levels after, and also after a 25 percent reduction.

The difference between the baseline and what would happen after a thousand model estimates at a 25 percent trap reduction, is how we were able to get those results. If you look at this, this is a representation of those bootstrapped estimates. The green points are the actual data. The dark green line is the bootstrap mean, and then each individual line is each individual bootstrap run. You can see there is a fairly broad degree of scatter around the mean. This one that I'm showing here is when we modeled it for all years. When we look at it for the recent years, you can see there is fairly different. It is a much shallower slope, and it is actually a little bit more of an optimistic scenario; where you get a higher decrease in exploitation, relative to the trap reductions in this case. We summarized those results; 25 percent reduction in active traps fished under the all year scenario resulted in that exploitation rates were reduced from 0.27 to 0.23, which is about 11.6 percent reduction.

But you also notice, and this shows up in the scatter, as well; the confidence intervals around that estimate is fairly broad. Then this also would result in a 9.6 percent increase in egg production. When we break this down for just using that relationship based on the recent years, exploitation rates were reduced from 0.207 to 0.176, or about a 14.3 percent reduction; which would also result in about a 13 percent increase in egg production.

However, the TC had several concerns about this analysis. One of the primary assumptions that soak time is constant is not valid. If we look at empirical data from the jurisdictions that we have soak time data from, namely Massachusetts and Connecticut, we see that there are definite trends in soak time. Soak time hasn't remained constant.

Fishermen change their soak time in response to a number of different variables, including market conditions, bait prices, catch rates, lobster density; there is a whole host of reasons why soak time changes, but it does change. The thing to remember is that as the average annual soak time decreases, the number of times a trap is hauled increases and vice versa.

In this case the total amount of effort exerted by a trap is directly proportional to one, how often it is hauled and also the trap efficiency at the point at which it was hauled. Both of these parameters are directly influenced by soak time. We look at some of the empirical data that I was referencing. This is the trend in soak time for Massachusetts and Connecticut portions of southern New England in recent years.

You can see that there are definite trends. In Connecticut, we've seen just a continued increase. This is probably indicative of extraordinarily low stock densities that make it such that it is not financially beneficial to haul the traps very frequently at all. In Massachusetts, which would be in Area 2, the lobster density is a little bit higher; and I think what you're seeing is the decrease in soak time is probably a response to the large declines in traps fished that we've seen in this area.

To compensate for having fewer traps, or the fact that there is less competition now, there is financial incentive for fishermen to haul them more frequently on a shorter soak time. This trend is also kind of backed up by what we see for both Connecticut and Massachusetts in the catch-per-unit effort.

If you look at catch-per-unit effort as pounds per trap haul, and if you look in the top right graph that is in Massachusetts, so 537 would be the offshore portion; which is the blue line, and the red line 538. That would be the inshore portion of Massachusetts Area 2. What we see, especially in the inshore portion, is that catch-per-unit effort is at an all-time high.

As more traps are removed from the system, the catch rates in the remaining traps tend to jump up; despite overall what we see. We've seen declining trends in abundance and declining trends in catch. We still see rapid increases in catch-per-unit effort. The bottom right graph is similar information for Connecticut. In Long Island Sound, where lobster density is probably lower than anywhere else, they are seeing higher catch-per-unit effort than they ever have. This demonstrates that the traps in southern New England are fishing nowhere near their saturation level, so they are at max efficiency. A lobster trap can easily catch six, seven, eight, ten pounds per pot; but over time we've seen that they've been fishing well below that max efficiency, and as you remove adjacent pots, those catch rates increase.

Other things to consider about trap efficiency is they are complicated by interactions with population density, trap saturation, interspecific competition, bait type and quantity, trap size, spacing, trap design, water temperature, the list goes on and on. What we're trying to demonstrate is that it is not a simple relationship.

Quantifying a standard unit of effort in trap fisheries is extremely complex. It is notoriously illusive. It's been looked at in the past for American lobster on several occasions in the eighties and nineties, and no one was able to really crack the code. Similarly, if you look at other trap fisheries for other crustaceans and crabs and lobsters, or anything that really deals with a trap that is a passive gear, it is difficult to characterize.

As a result, the number of traps fished is a very poor metric of fishing effort. The number of traps hauled standardized to soak time is the only true measure of effort in a trap fishery. Finally, the number of trap hauls is not universally available for southern New England. Only a few of the jurisdiction, including Massachusetts and Connecticut, monitor the

number of trap hauls; so it is not universally available for all fishers in that area.

Other conclusions were that the assumption of constant soak time in this analysis was not valid. However, the best case scenario from the analysis, and this would be using the recent year scenario, was a 14.3 percent reduction in exploitation; with a corresponding 13.1 percent increase in egg production.

However, as I mentioned, for all the reasons that I've tried to explain, the TC strongly cautions the board against using these analysis to quantify or predict current or future reductions in exploitation related to trap reductions. Then a few final thoughts about the task or the goal of a 20 to 60 percent increase in egg production, one thing we wanted to remind the board was that the recruitment appears to be decoupled from spawning stock biomass.

I flashed this chart up before. I'm sorry it is a little hard to see up here, I should have increased the size. But what we're seeing right now in southern New England is that the spawning stock biomass is similar to what we were seeing in the early 1980s. However, for the size of the spawning stock biomass, we're getting about 20 times less the recruitment out of a similar level of biomass.

What that shows us is that there is a problem with recruitment. There is a problem with lobster settlement. As a result, increasing egg production may not have the same response that it once did. Perspective increases in egg production will only benefit the stock if recruitment rates remain constant or improve.

The TC also would like to warn that increasing egg production by 20 to 60 percent is unlikely to be sufficient to prevent further declines in the southern New England lobster stock. Then finally, the projection analysis originally presented by the TC, indicated that an 85 percent reduction in exploitation would be necessary to stabilize the stock. That's it.

CHAIRMAN BORDEN: Before I take questions, I would just like to thank the TC members, Burton Shank and Conor McManus for the work that they did on this. It was a difficult task and they've been slaving at this for some time, and they did a fabulous job, I think. It's really innovative work. Questions for Bob, any questions? Jason.

MR. JASON McNAMEE: It is not a question, but an opportunity to offer a different perspective on the trap reduction analysis; and so I'm not sure if that is appropriate.

CHAIRMAN BORDEN: I would just as soon take questions right now, and then I'll make a note and come back to you after the questions.

MR. LUISI: Bob, can you give me an indication. As you mentioned latent effort, and the fact that in your analysis there would be no latent effort advancing into the fishery. What is the percentage of potential versus active pots being fished? Do you have some sense; some ratio of what is out there that could potentially become a part of the fishery that hasn't been?

MR. GLENN: I wouldn't speak to that right now. I know that is information that we can look at the traps allocated versus those that are actively fished, and I know we haven't in the past. But I don't have that with me right now, so I wouldn't speak on to that. But it is something I could report back to the board on later.

MR. JOHN CLARK: Thanks for the very good, but depressing presentation, Bob. Just curious of your last statements there, and you've probably gone over this before that recruitments decouple from spawning stock biomass, 85 percent reduction to stabilize the stock. What do you mean by stabilize the stock? If it has this lack of a link to the recruitment, we wouldn't see a further decrease in the number of spawners out there, but assuming natural mortality would continue, and that we wouldn't see necessarily any increase in the biomass out there.

MR. GLENN: That statement is based on the initial projections that we presented to the board that make assumptions about what the current rate of growth is, what the current natural mortality rate is, and then project that forward. Understand that projections like this are wide goal posts. There is a high degree of uncertainty in them.

But from the analysis that we conducted, given all those caveats about that recruitment levels would stay static at their current levels; that natural mortality would remain high, and we would project that it would require an 85 percent reduction in exploitation just to stop the stock from future declines based on those projections.

CHAIRMAN BORDEN: John, do you want to follow up on that?

MR. CLARK: Well, I figured that is what they were getting at there, but it seems that there are some pretty grim options there based on that to expect any recovery from the stock. It seems like whatever we do, there is no guarantee that the stock will recover.

CHAIRMAN BORDEN: I would just add to your observation just now that I think the Technical Committee has put that in numerous reports. Unless the environmental conditions change, if you look at the figure up on the board, I think the Technical Committee estimated that the number of recruits is declining by approximately 15 percent a year over the recent years. This is not a fishing mortality issue; it is an environmental issue is what we're trying to deal with.

If we don't get some kind of change in the environmental conditions, and this continues, it is only going to continue for just so long. The other issue is if you look at some of the NOAA weather forecast climate prediction models that have come out in the last few years. They are predicting very sizeable water temperature increases throughout southern New England, and that is a complication. That has not been

factored into this analysis. I've got Ritchie White and David and Dan McKiernan.

MR. G. RITCHIE WHITE: Bob, if we pass an action today and increase egg production to a certain level and decrease exploitation, would you then have any ability to predict, since those would probably be substantially less than the 85 percent that we're talking about to stabilize. For substantially less than that, would you be able to have some prediction on how long the present population would last? In other words, how fast would the spawning stock biomass and overall population be declining? Any sense in how many years before it is gone?

MR. GLENN: That's an analysis that we could conduct, but it is not something you necessarily would want to put a high degree of confidence in. Right now, given the current environmental conditions and the current trends that we're seeing in recruitment, the best that you can hope to do is maintain spawning stock biomass; so that in any given year, if conditions are positive for recruitment, then we can take advantage of that.

It is hard to project forward. Is natural mortality going to stay the same, increase or decrease; and the same thing with recruitment, the same thing with water temperature, so it would be tough to do. We could do it, but it would have a long laundry list of assumptions of which you would have to hold your nose a fair amount.

MR. SIMPSON: Again, this is a great report, a lot of great work; and I said to you, Bob, yesterday, extremely well written. It has answered a lot of the questions that I asked in May that couldn't be answered, and coming out pretty much as I expected it might; frankly. You helped me with the last statement, because as I said in May, I kind of lost my bearings with this new direction of egg production.

I have been looking at those projections. Our goal for the last year plus has been talking along the lines of, let's stabilize the stock; what would

be required? You are reminding us it would take about an 85 percent reduction in exploitation to achieve that. These scenarios we're considering fall well short of that.

I appreciate your spelling that out for us. In terms of the trap reductions, it's very much what I was anticipating. I just note, I think it was Mike who asked the question, you know in Connecticut in 2015 we had about a 235,000 trap allocation total for Connecticut. This year we issued about 70,000 tags, and probably half of those may be active; 30, 35,000 tags. When you talk about reduction in active traps, for us, it wouldn't be cutting from 235, it would be cutting from maybe 30 or 35, so we would be down in the order of 20,000 traps allocated, which would turn us upside down in terms of who gets to fish and how many traps they would get to fish.

CHAIRMAN BORDEN: Follow up. I've got Dan on the list.

MR. DAN MCKIERNAN: Bob, one of the challenges that we have with the industry is they allege to see small lobsters offshore and that somewhat in denial, but they claim to have some different views. I know the work that you did about five years ago was really considered excellent; a landmark piece of science where you actually demonstrated larvae being shifted offshore, instead of into the nearshore areas where traditionally lobster settle.

I think you've established the point that; don't expect great settlement, great survival for lobsters if you're trying to settle in those areas offshore, because it is deeper water. It is probably less optimal habitat. But I guess I'm just trying to understand when we describe recruitments, and on that graph, it is showing the number approaching zero levels of recruitment, yet we still have people fishing in all of our nearshore areas.

I guess I am trying to understand where the really low numbers come from. Do they come from the juvenile surveys that are done by scuba

divers in the traditional areas, or are they done by say, the offshore trawl survey where they might be able to pick up lobsters in the 50, 60 millimeter range as pre-recruits? Then what role does the ventless trap survey have in giving you the ability to connect these dots?

MR. GLENN: In this relationship or in the model in general, recruits are the recruit abundance coming into the model from the trawl survey indices, which they come into the model at 53 millimeters. If you look at that relationship over time, what we've seen is that the number of lobsters that we're seeing in that first recruit to the trawl survey has declined pretty dramatically relative to the spawning stock biomass.

We also consider trends in the ventless trap survey, but that is only a short time series at this point, so we don't have good historical perspective. Ventless trap survey started in 2006, which is long after the decline in southern New England. It is hard for us to reconcile that with what ventless trap indices may have looked like back in say 1995 when abundance was very high.

Then the other thing that we look at, and it is not explicitly in this model, but another thing to consider is we look at the young-of-the-year indices that those would settle to the bottom four or five years, or roughly four years before they would hit that size where they would recruit to the trawl survey. The trends in that are down substantially, especially in the last four or five years where settlement is near record lows. If you look at like the Rhode Island Index, and those haven't even entered this yet.

CHAIRMAN BORDEN: Anyone else, any other questions?

MR. BRANDON MUFFLEY: Bob, I can't really tell, because the numbers get pretty condensed down at the bottom of this stock recruit graph here, but has this been updated since the stock assessment? I ask, and I think you've mentioned this in previous meetings, I mean it shows

generally that SSB has been somewhat stable recently. Now recruitment has not been stable, because it continues to drop off. But SSB has been in a pretty tight, narrow sort of window in recent years. But I was just looking to see if that has been updated to see if we are starting to see a decline in SSB, because I think you had said we're kind of riding the last sort of relatively good recruit events that happened a number of years ago when we should start to see a further decline in SSB. Like I said, it looks here like it is generally stable, but I wanted to know if we had any updated information.

MR. GLENN: At this point, no. We have not updated that since the assessment. It is something we would have to rerun the models with all the updated survey indices and catch to do that. But it is something we could do.

CHAIRMAN BORDEN: Any other questions?

MR. McNAMEE: I've been thinking about this plot a little bit. Bob, there is a static assumption that goes into this plot, the lag between SSB and recruits. Isn't there a static year assumption between the two? He said yes, and so my question is; based on how the model works, if growth has changed through this time period in either direction that would change the look of this plot, correct?

MR. GLENN: Absolutely. It assumes a constant growth lag in between recruitment and SSB. In this case if growth rates have either increased or decreased over time this would change dramatically. As you know, the difficulty is we don't have updated estimates of growth in southern New England. It is extremely hard to do studies to look at lobster growth. You either have to do it in a laboratory or through tagging studies, or get enough recaptures to be able to model that. We don't have the information to do that.

We have looked at, more recently, stuff from Millstone, with the tagging study that they have. The work that they've shown is that in recent

years the moult probability, how often they moult has stayed about the same, but they're growing slower. They are having a smaller increment; the percent increase in their carapace size has declined some. The other complex factor to this is that changes over time. We wouldn't have the information, I don't think, to be able to demonstrate that change in growth over time and incorporate into this. It is an important caveat for sure.

CHAIRMAN BORDEN: I would just like to follow up on that just so everyone is clear. The Technical Committee in their recommendations to us of October 2nd, I think it was 2015, identified a number of different sources of uncertainty. On this particular question, I'll just read it to you. It is only a couple of sentences.

Increases in water temperature over the past several decades have likely resulted in changes to size at maturity and growth parameters. Maturity data currently used are more than 20 years old. The changes in size at maturity will subsequently affect growth rates. Then they go on and basically say that it is critical to collect updated information on maturity and growth, in order to appropriately assign moult probability for the lobsters.

The TC has already noted this as a problem. I would note that in that same document, if you go back and look at the document that they sent us, there are like ten different issues that require research that affect all of this type of analysis. One of the things, I think, the board has to do and the commission has to do is figure out ways to fund this; because it is all uncertainty that we're trying to deal with. Okay further questions?

MR. SIMPSON: Just on that. You say profoundly, or whatever term you used, affects this curve. I'm not quite sure how it would affect it, but I'm thinking that we may be substantially overestimating SSB then currently, if the growth increment, they are not growing as quickly, then maybe we are overestimating SSB. This curve

would be closer to the origin than it appears right now?

MR. GLENN: I would have to think more about that. I wouldn't want to answer off the cuff. It certainly -- the difference in the lag would change the nature of the relationship, but it wouldn't change the fact that the recruit indices are extraordinarily low.

CHAIRMAN BORDEN: Anyone else?

MR. ADLER: In reading the memo that was in our packet, I get the result that the trap reductions are not good. The gauge increase will help, but I just look at more food for the predators. What they said in the memo is; what is done, success will only be if environmental conditions are favorable.

Another thing that you had mentioned in your report about trap hauls, or hauling soak times. You showed that the soak times were going so they hauled them more often. Usually, if you're not catching a lot, as you saw in the Connecticut one, you let them sit longer; I know this.

Apparently, what is happening is, if people are hauling more often it is because there are more lobsters around, which you indicated probably there are, because there are less people fishing for them. I think I am getting it that way, because normally, soak time would be lengthened if they're not catching anything, as you saw in Connecticut. You were right about the soak time in Connecticut. I just wanted to make that a fact in your report.

MR. BURNS: I just want to reiterate what a great job that the TC did on this analysis and all the analyses that we've asked for on this. It has been very helpful information. I think some of the information -- yes it is very sobering. I heard John say that it was kind of depressing. We know that we can't rebuild the stock, given the current environmental conditions that we have.

We know that it is a really high bar to even stabilize it. But I think that we need to do what we can. We have a responsibility to try to act to do the best we can to try to improve stock conditions as much as we can. Even though the environmental conditions make it look very sort of a high bar, I think there are still some things that we can do, and we should keep those in mind as we move forward looking at our management in southern New England.

REPRESENTATIVE CRAIG A. MINER: If we were going to try and make a change, and protect as many females as possible, is it conceivable that we could consider an increase in gauge size to protect the egg production, and still provide an opportunity in the fishery for the males, and not hurt the scenario that you've presented?

MR. GLENN: One of the assumptions with this increase in egg production is that every egg that is produced is actually viable. Research conducted on lobsters indicates that females need a similar size male to successfully reproduce. The problem with, if you were to have a differential size limit on males and females, you would really jack the exploitation rates up on males; probably drive the size structure down, and the egg production you were hoping to get would not be realized, because you wouldn't have successful mating.

REP. MINER: In terms of Long Island Sound, if there is a recruitment, a migration from offshore to inshore occurring at some level; that wouldn't be sufficient to make up for that imbalance that might occur if you had to different gauge sizes?

MR. GLENN: That would be tough to speculate. I don't think we have an exact sense of the magnitude of what portion of mating success or the total reproduction comes from inshore males and females basically finding each other. I do know, though, that we would be really concerned in any scenario whereby you really skewed the sex ratio or the size distribution of one sex versus the other. It could cause problems with the mating system.

CHAIRMAN BORDEN: Okay, on my list I have Pat Keliher. Does anyone else want to ask a question before I go back and afford Jason an opportunity to make whatever statement he was going to make: No hands up, so Pat, you've got the last question and then Jason you're up.

MR. PATRICK C. KELIHER: I am going to throw a little bit of a curve ball just to make sure we don't lose the fact that – first of all, Bob, it was a great presentation and it just continues to instill in me the concept of getting ahead of this curve for the Gulf of Maine is so critically important, so we don't have this conversation again.

As we continue to talk about increasing the minimum gauge size, I just want to raise for the board that it may further create a disincentive or a conflict frankly, with the lobster market; because you are going to impact market availability in southern New England from lobsters from the north. I just want to raise that issue as something that should be considered if we move forward with gauge increases, and how that might come into play.

MR. McNAMEE: I just wanted to offer a perspective, and particularly because I heard the notion of trap reductions come up amongst the commissioners, as well. I'll be brief. I just wanted to offer another perspective that I don't necessarily think is inconsistent with what the Technical Committee has offered.

I both understand and respect the opinion and the comments of the Technical Committee, and appreciate the itemization that they did of all of the potential uncertainties that are involved with that analysis. I guess what I wanted to offer is that those biases are not necessarily all unidirectional, the biases can go in either direction above or below that median; as far as how they influence.

But at its core, I think there has to be a relationship between the number of traps that are put in the water and the number of lobsters that can come out of the water. I think we all

sort of logically understand that. I think we can also appreciate that it is nonlinear, for a lot of the reasons that both Bob and the Technical Committee have offered.

Just to illustrate an example, the soak time aspect, Bob mentioned that the Technical Committee discussed that as an important aspect with regard to the effort. You saw a divergence between what's going on in Connecticut, what is going on in Massachusetts. There are arguments that can be made, other reasons for decreasing soak time; my pots are filled with predators like black sea bass, so I have to kind of turn them over quicker. That reason for decreasing soak time would have the opposite effect. The point of all that is there is certainly uncertainty in the analysis.

That was why I really appreciated the extension that Burton made to that analysis, adding in the bootstrapping and giving the board a sense of the uncertainty bounds that exist in the analysis. For me, I think the extensions that the Technical Committee made with that analysis improved it greatly.

Now we can judge, depending on which of those things that the Technical Committee itemized out. We can judge, well, are we towards the lower bounds of uncertainty, are we towards the upper bound of uncertainty, and so we have more information with which to make a judgment on. I just wanted to offer those thoughts.

CHAIRMAN BORDEN: Okay, any other questions? Bob, do you have anything else to report or does that pretty much complete it? Okay, so we're finished with that agenda item.

DISCUSS MANAGEMENT OPTIONS TO BE INCLUDED IN LOBSTER DRAFT ADDENDUM XXV

CHAIRMAN BORDEN: Everyone knows where we're going next. Discuss Management Options to be Included in Lobster Draft Addendum XXV We're going to move into the next agenda item. Now, everyone is clear, I think a little history.

We've had three different meetings; one was a subcommittee meeting at David Simpson's office, which went on all day. There were very extensive minutes that were completed from that effort, and then we've had two board meetings where the board just recently agreed to move forward with an addendum; and at the last meeting, basically what we agreed to is to move forward with the selection of goals and objectives with an egg production objective of somewhere between 20 and 60 percent.

The thing that to me is most useful, because there are a number of questions that came up about the appropriateness of egg production. But the conversion that the Technical Committee did in Appendix 1, or Table 1 in the supplemental, where they converted the egg production into SSB and declines in catch.

I thought that was really a useful document, and it was done as an example per the request of the board. You can actually look; if you pick an egg production target you can transfer that into a decline in catch and a decline in exploitation. I would hope that everyone would look at that as we get into this next item.

Now as far as the format here, I think what we need to do is to establish a clear and quantifiable goal for the addendum. I think we need to specify a timeline for action, and I personally would urge us to pick a narrow window and not drag this out; a few years would be my preference. Then I think we need to have a discussion on a range of management measures that we want, without getting into all the minutia of the analysis that will come out.

The process that I would envision on that is once we pick a clear goal that is quantifiable, and once we have a clear timeframe, then what we would do is provide the PDT with a range of management strategies that we want to see them develop. Now, I would note for the record that a number of those analyses have already been done. If you pick, for instance, a 60 percent egg production target, and then decide on a

specific timeframe; with those tables you can look at what the impacts are. That is fairly easy to do, particularly if you want to achieve it with a minimum and maximum size. That analysis has already been done. Let's start with a goal. Rather than just having a discussion, I'll open the floor. I think this should be done by motion, and I'll open the floor to anyone that wants to make a motion on a goal for this addendum.

MR. McKIERNAN: Recognizing that this clearly is an environmentally driven problem with a fair amount of uncertainty, although the Technical Committee certainly does project a depressing level of certainty at times. But there are some other signs in the fishery that at least the participants are holding on to that things could improve.

I would make a motion to the following; recognizing the impact of climate change on the stock, the goal of Addendum XXV is to arrest the decline of the southern New England stock while preserving a functional portion of the lobster fishery in this area. This addendum is intended to be an initial response to the southern New England stock condition.

I would recommend that the PDT develop options with status quo 20 percent, 40 percent and 60 percent as various egg production targets. The PDT should be tasked with developing specific management options that meet these goals, using the tools as developed by the TC over two years, and reviewed periodically to determine the progress.

CHAIRMAN BORDEN: All right, we have a motion on the table, is there a second; Jason McNamee. Ritchie White, discussion.

MR. WHITE: I don't think when you are using the words "arrest the decline", that can't be accomplished with a 60 percent increase in egg production; from what the Technical Committee just told us. I guess I would want to see different wording in there than that, or you have to include something that accounts for an 85

percent reduction in harvest, from what the Technical Committee reported to us.

CHAIRMAN BORDEN: Dan, do you want to respond to that?

MR. McKIERNAN: It's a fair argument, Ritchie. I can't imagine us being able to successfully implement, short of a moratorium throughout southern New England, a set of rules that creates something as extreme as that. But I take your point.

MR. WHITE: I'm not suggesting that that is the course of action, but I think we need to be honest with our course of action, and that is why I have a problem with "arrest the decline"; that that needs to be reworded if we're going to do something that is less than 85 percent reduction in harvest.

MR. SIMPSON: Yes, I was just going to concur with Ritchie's comment that if we reworded that to be clearer about what expectations of this action might be; to preserve additional spawning stock or something more general like that. But I don't think we should create false expectations for this addendum. I don't have specific words to offer, but along the lines of saving a little more spawning biomass in hopes of preserving, you know, enough stock to take advantage of improved recruitment should it ever occur. That is too long for this, but that is how I'm thinking.

MR. MUFFLEY: I support the motion, but I asked this question of Bob, I think at the last meeting; that the 85 percent reduction is under current size limits and current regulatory measures. If you were to change the size limit structures, those projections in terms of what would be required to stabilize the stock would then get changed.

Is that correct? My understanding was 85 percent reduction to stabilize the stock under current conditions, and by modifying current conditions through a size limit change

potentially, that it is not necessarily an 85 percent reduction required to stabilize the stock.

MR. GLENN: Yes, I mean that is correct. The projections are based on, as you indicated, constant recruitment levels, constant rates of natural mortality and the current minimum and maximum sizes that we have in the fishery. If all those things stay constant, the projections would indicate that you would have to reduce the stock by 85 percent to stabilize it. If any of those parameters change that analysis would change.

CHAIRMAN BORDEN: Brandon, do you want to follow up? No, okay, so on my list I've got Adam and then Peter.

MR. NOWALSKY: I was going to propose that we change arrest to respond to the decline, and also include respond to the decline of the southern New England stock and its recruitment; because I think that that is really what we're doing by trying to increase egg production. We're trying to help recruitment. That is the goal here, in my opinion. That would be my proposal would be to change it to; to respond to the decline of southern New England stock and its recruitment, while preserving a functional portion.

MR. MUFFLEY: I'll accept that as a friendly amendment.

CHAIRMAN BORDEN: I actually prefer to deal with this in a motion, but let me ask Dan and Jason if you would agree to that perfection, and then let me ask the board, does anyone object to that perfection? If somebody objects, I am going to ask for a motion to do this.

MR. DENNIS ABBOTT: Would he repeat his suggestion.

CHAIRMAN BORDEN: Okay, Adam, if you would, would you read slowly into the record so we can modify this so everybody can look at it. If somebody objects I am going to ask for a motion.

MR. ADAM NOWALSKY: After Addendum XXV; to respond to the decline of the southern New England stock, and its decline in recruitment, while preserving – yes that is my proposal.

CHAIRMAN BORDEN: All right, let me ask again. Is there an objection to this perfection? David Simpson.

MR. SIMPSON: Not an objection, but we can't put everything in a motion and then the goal statement, but as long as in the document we're clear about what would be required to stabilize the population; what we would expect to happen under these various scenarios. I think this will be fine.

CHAIRMAN BORDEN: All right, one more time. Any objection to this; if not the motion has been perfected by the consensus of the board. That is the motion as it appears now. Further discussion on the motion; yes, Roy.

MR. ROY W. MILLER: Mr. Chairman, it seems to me, based on what I've heard this morning, that this particular motion alone is not going to get us to where we need to be; that some other measures will be necessary, in addition to the modeled increases in egg production, from what I understand from Bob Glenn's excellent presentation.

Is this just the first step, or are there more actions that others are contemplating taking in order to restore this stock and arrest the stock decline? The reason I say this, Mr. Chairman, just to remind you. You well remember and others in this room, a few of you will remember. We were in this position seemingly with striped bass in the early 1980s.

At the time there was a perceived decline in reproductive success of the Chesapeake stocks and other stocks, and we had to make some very, very difficult choices in the early 1980s, sacrificing fishermen, which caused grave economic repercussions up and down the coast.

I wonder if we're not in a similar position with this entirely different animal.

CHAIRMAN BORDEN: Roy, I think you've raised a good point. If this motion were to pass I think we need some discussion on the range of approaches that we want to consider. I would hope that we could do that without motions. I actually have a list of the alternatives that have been recommended by both the Technical Committee and the industry to date, and we can put those up on the board and everybody could look at them. I'm glad you raised that point; further discussion on the motion, Peter Burns, and then Jason.

MR BURNS: I certainly understand Roy's point, because we are in a dire situation here with the condition of the stock. We know that it is going to take 85 percent just to stabilize it. But I think the goal is very clear here that we're really responding to this and this is just a first step moving forward. We've taken several steps in the past, and I think that this is one more step.

This is something we're going to have to keep a close eye on. I am happy that there is some wording in here that says that we're going to be monitoring this periodically over time to make sure that we know the effectiveness of any of these measures that come from this, and will be able to respond accordingly to that.

I am also glad that there is a clear goal here, and there is also a wide range of options that are in this document for public hearing, because I think that is going to give the public a lot more opportunity to comment on the different ranges that are available here, and it is going to allow the commission to provide a real full analysis of these options. I support it.

CHAIRMAN BORDEN: All right, on my list I have Jason and then I've got Ritchie, and there was one other hand up. Michael.

MR. McNAMEE: I just wanted to offer some thoughts on why I support the motion. I think

with the range in there as Peter just mentioned, it sort of bounds the issue. You go all the way from status quo up to 60 percent increase, and as the board had indicated in the past, it wasn't inclined to do anything and it wasn't inclined to completely shut the fishery down. I think we've kind of bounded that here. The important parts are those ones in the middle, and I think this provides an opportunity for the board to get some feedback from the LCMTs from the public to help us determine where that tipping point is, where the economics kind of kick in and create that situation where you are in a de facto sense shutting down the fishery.

I just wanted to make one final comment to emphasize the importance of the PDT coming up with specific options to review, because I think it would be very difficult to provide the tools as they currently exist out to the public; and have them cobble together specific options that would meet these goals, because they are important interactions.

You can't simply take a trap reduction and a gauge increase and add them together. They interact, and so those interactions need to be accounted for, which I think would be difficult to do in a public forum. I think it will be important for the PDT to think through those and develop very specific options.

MR. LUISI: Following up on Mr. Miller's comments, and speaking in support of the motion. Difficult decisions are definitely going to be a factor here. But when I look at the range of alternatives, and I look at the table that was provided by the Technical Committee, and understanding how our fishery in the DELMARVA Region operates.

I'll speak for Maryland, but I assume that Delaware and Southern New Jersey and potentially even Virginia both operate very similarly, given the nature of the fishery. Anything more than a 0 to 25 to maybe a 30 percent increase in egg production as it relates

to catch reductions, is going to essentially be a moratorium for our region.

Our fishermen operate, they travel too far and the conditions are such that anything more than a 20 to 30 percent cut in catch is going to be it. The Technical Committee might as well even assume that anything more than that -- just take Delaware, Maryland and Virginia out of the picture; as far as what we're taking from the stock.

I know this is kind of going in the wrong direction as to what I've spoken with Megan about, about trying to focus. But I wonder if the makers of the motion would consider something between 20 and 40, perhaps a 30 percent egg production scenario; which might be at the tipping point, but at least it gives us something more than just 20 percent, because I feel like 40 percent and on is it for us.

CHAIRMAN BORDEN: Mike, to just comment, from my perspective I would just like to emphasize that this is a range of options for a public hearing document. The process here will basically lead us to having the PDT develop these options. Then at our fall meeting we'll review those options and further refine those options, see what the actual analysis is.

I think that would be the point where if we wanted to change some of the elements of the motion, that would be appropriate, because then it would be based on whatever the analysis is. The second point here is that at least having served on the council for a long period of time, NOAA always gives us the advice.

No matter what the species is they have a full range of options in order to garner public input on it, even if it's negative. In other words you want that to be a part of the record. I don't know whether Peter wants to comment on that; but I would imagine they would provide us with the same advice on this.

MR. BURNS: Yes, I agree, and I think that certainly this is a public information document. We want to be able to just provide the widest array of measures that we can, so that we can allow the Technical Committee to come back and the PDT to come back with some measures so that we can see how those fit into place.

I could certainly see where that we could see the difference between a 20 and 40; if you needed to pare it down that way. I think that that possibly could come from that. But as far as the analysis goes, I think this is a positive step and a good approach, because if these objectives were narrowed down any more and the commission was to make a recommendation to us for complementary federal action; we would have to really look at that broad scope anyway.

It is better, I think, to have the public and the commission involved in the whole process of the development of the addendum up front, to get that analysis. Within the Lobster Board and the commission's own process before it comes to us; rather than having a more narrow range of options and then having NOAA Fisheries have to expand that. Then the commission would only be in a situation where they could only just comment on it. It wouldn't be necessarily involved in the analysis. I think this is a good approach.

CHAIRMAN BORDEN: Mike, you want to follow up?

MR. LUISI: Yes, real quickly, please. I just wanted to make sure I was clear and that I wasn't looking to remove 40 and the 60 percent option. I was only looking at the options and thinking that we might be able to survive some way in between 20 and 40. I think, going forward, as long as there is an option in the future to potentially add another level of egg production to the addendum; then I'm happy moving forward as is.

CHAIRMAN BORDEN: Okay, I have Ritchie White, does anyone else have a question they want to raise or a point they want to make? Doug Grout.

MR. WHITE: The line preserving a functional portion of the lobster fishery in this motion allows me to support it. But I would like to see wording in there that describes the results to the fishery for each of these; or in general to the bunch, because none of them are going to create what we were first talking about.

I think some wording showing the continued decline of the stock; no matter which one of these we pick, should be in there for the public to understand. Then a question for Bob as to the review where it says, review periodically what does that mean? What do you think you're going to be able to tell us as to the success of any of these?

MR. GLENN: I mean as far as review is concerned, it would really be up to the discretion of the board to task the TCs how often they would want us to review it. You could do that at each benchmark assessment. If tasked, we could do specifically for southern New England on a shorter timeframe. There are multiple options.

CHAIRMAN BORDEN: To that point, and I'm glad you raised this, Ritchie. To me, one of the keys here is you take action, it is a short action, and then I think it is a responsible action for the commission. If the technical people can do it as part of the annual review, basically comment on how this is going. They can't obviously redo the whole assessment. But to the extent that they can evaluate the impacts of the management measures and provide annual advice; I think that would be desirable, would be my own.

MR. GLENN: I should have spoken the first time when I had the opportunity. One thing to keep in mind is that lobsters are a long-lived species, so any responses to any changes in the management regime are going to take a while to take effect. That is why for example in the projections that we gave for the minimum size increases, the answers that you're getting are when the stock hits equilibrium condition; which for this analysis was ten years.

The board needs to also keep in mind that to put in a gauge increase and expecting to see immediate results in two years is not a likely scenario. Any changes you make to the minimum size, improvements in recruitment are going to take a long time to be recognized.

CHAIRMAN BORDEN: When I was referring to annual, I'm thinking more in the context of if we want this measurable and quantifiable, and we want to make sure that all the states have met that standard. I think that is something that you can actually do. You may not be able to measure the effects of the change, as you point out; that may require years to do that. But at least we know that we're meeting the objectives we're setting forth. I think that is an important step in the process. I've got Doug Grout.

DOUGLAS E. GROUT: Again, thanks to the commissioners that worked to try and put this kind of motion together. You know it is a good first step. My main comments were going to be a little bit of a follow up on what Ritchie was saying, and what we have to communicate to the public here in the information document that is going to be developed here. That is first and foremost that none of these options is going to stabilize the stock, the best thing it is going to do is slow the decline in the stock.

The reason that the commission is going this route is one, to try and slow it so that if we do have, by some miracle, environmental conditions that we try to maximize to the extent practicable the amount of spawning stock we have to produce a good recruitment, if environmental conditions occur. But clearly I think we have to be straightforward with the public about what we are trying to accomplish here, and what we can do.

CHAIRMAN BORDEN: Anyone else on the motion? Adam and then Dan.

MR. MCKIERNAN: Yes, David.

CHAIRMAN BORDEN: Adam first.

MR. NOWALSKY: I would defer to Mr. McKiernan if he would like, but it appears you would like me to speak first, so I will. I was just giving additional thought to Mr. Luisi's comments and had a question about that if we go forward with the 20, 40, 60 increments right now, we look at those measures and decide there is just too great of a jump in between those; and want to change them to say 15, 30, 45, 60 in the final document that we decide to send out as the draft addendum. How much work would that entail at that point? Would the PDT come back to us and say, boy we wish you would have told us this then, or is that going to be minor recalculations when we actually send the document out?

CHAIRMAN BORDEN: Megan, to that point.

MS. MEGAN WARE: That's a good question. I think I would have a better answer for you once I started working on this with the PDT and how much effort it is going to take to draft some of these. But I think if we come back in annual meeting and the board is interested in other options, we'll make it work to get that document out for public comment as quick as we can. I think it is an important issue, so we'll do our best.

MR. MCKIERNAN: Yes, I just want to point out to the board that I think the message we need to send to the public is how we're going to manage what I would describe as the remnant of the southern New England fishery. We already embarked ten years ago in the Massachusetts, Rhode Island portion of southern New England to scale the fishery to the size of the available resource; and we still have five more trap cuts coming.

People are going to be making those changes. There are already transactions being made. People are leaving the industry now. But it is also important that the PDT, many of whom are knowledgeable administrators of fishery and permitting rules, need to really sort of reveal how we're going to manage this fishery in its totality.

This board a year and a half ago created the Jonah Crab Plan, and the Jonah Crab Plan allows directed fishing with lobster traps for Jonah crabs, and that is what is happening in the Area 3 portion of southern New England. Bob has got a great analysis on trap hauls, et cetera, but what we know from practical experience and from the insights of the industry, a lot of those traps are being set specifically for Jonah crabs.

We have to allow the industry to transition to that fishery, and so that is really the message I want to get across to the public is; this stock is low, it is likely to decline, and as fishery managers we need to point the way to how the fishery infrastructure and fishery participants survive the decline of this environmentally driven stock.

MR. LUISI: Thank you for the second opportunity, I'll be very brief. Tapping into what Dan was just talking about, about the message to the public, and looking at the wording in the motion; preserving a functional portion of the lobster fishery in this area. Based on my previous comments, there are certain options here which will not allow for a functional proportion of the fishery in our area.

I think we need to be clear that s all the different LCMA's that fall within southern New England, it doesn't necessarily mean that the selection in the end to meet the goal, will allow all those LCMA's to continue the functional operation of a lobster fishery. I think that we just need to be clear that southern New England is being looked at as the larger area rather than the different LCMA's.

CHAIRMAN BORDEN: That's part of the balancing act that the board is going to have to meet the challenge of. I'm sure there will be significant debates about how we do that. I have no doubt that the industry will come forward and point out some of the implications of these larger cuts, in terms of, and we haven't talked about this, infrastructure loss. In other words,

you've got an industry that exists. If you eliminate 50 percent of the catch and the boats go out of business, then the infrastructure gets used by some other gear type and it's gone at that point.

Those types of points I'm sure will be made by the industry. Any other discussion on this? May I suggest that we've had a good discussion? It seems like we've got a consensus on this. I give you a one minute caucus, and then I would like to call the question. Are you ready to vote? Everyone ready to vote?

If somebody needs another few seconds, I am happy to accommodate you. If not, I would like to see a show of hands; put your hands up. **All those in favor of the motion, put your hand up; leave it up so we can get a count, please. I've got 11 in favor, opposed, any opposition; no opposition, any abstentions? One abstention, any null votes; motion carries unanimously.**

Okay, we're going to break for lunch. I'm going to ask the staff, this goes back to the question that Roy Miller raised, and ask the staff to put up some language which identifies the range of management measures that have been suggested by either the Technical Committee or the PDT, or the industry; and this is the range. What I would like to do is avoid trying to deal with these in a motion, but as you eat lunch, you can all caucus among yourself and see whether or not this is an appropriate range of issues.

In other words, if people agree with this, then the PDT would look at this range and basically use this to start to formulate analyses on minimum size, maximum sizes, standardizing regulations; just the whole gamut of the suggestions that various PDTs and Technical Committees have made. Please discuss this among your group. We'll take a 20 minute break for lunch and then we're going to convene. We have to stay on our timeline.

(Whereupon a recess was taken.)

CHAIRMAN BORDEN: We're going to start again. I encourage everyone to keep eating; and there is dessert out there. Before we broke, I put this list of items up on the board. My preference would be to just provide the PDT with a little bit of guidance on some of the types of issues we would like them to look at; in terms of changing the management measures.

As I indicated before, a number of these items have actually been analyzed. In other words, you've got a document where minimum and maximum size changes and some of the tradeoffs have been made. Is there anything that is not on this list that somebody thinks should be on the list?

MR. McKIERNAN: Closed seasons.

CHAIRMAN BORDEN: Okay, closed seasons. David, anything else?

MR. SIMPSON: No, that is what I had in mind.

MR. LUISI: I just want to ask the question whether or not it is even applicable here, but we've talked during the course of the week about the habitat work that is being done at the New England Council and the coral amendment at the Mid-Atlantic Council, and the fact that there are these areas that have been designated for protection of corals. At this time lobster fishing is still permitted. But I wonder what the impacts might be if those areas were to be considered some sort of sanctuary for lobster fishing.

I know the monument discussion came up a few times as well this week. If at the end of the year, there is a designation for a national monument, what impact might that have; if lobster can't take place in those areas? I don't know if that is something that the Technical Committee or PDT can look into as a possible alternative.

CHAIRMAN BORDEN: I guess my own response would be, I'm glad you raised the question. I think that will be an important question for the

board to review; once we figure out what is actually going to take place in federal waters. One of the congressmen, and Eric Reid can comment on this better than I can.

But one of the congressmen from Connecticut sponsored a bill either today or yesterday; to basically close all of the canyons from Oceanographer all the way to the Hague Line. There are probably 20 or 25 offshore lobster boats that seasonally fish in that area. Now depending upon the depth range, I think they're talking about a total closure of all fishing all the way up to 100 meters; but Eric, have you got any more details on that?

MR. ERIC REID: There is actually what the senator refers to as a map, I would call it a chart because I'm in the fish business; it's a chart. You have to go to his website and look at his press release, and you can analyze for yourself what kind of damage that thing will do. The inshore boundary of his proposal is inside of 100 meters.

Of course, the ASMFC has presented a proposal for a process, which the senator from the great state of Connecticut has seemed to totally ignore. As far as displacing of effort, Mike, if this proposal from Senator Blumenthal were to move forward, there would be a tremendous displacement of effort into other areas.

What is it going to do for the lobster population offshore? They are probably pretty happy about it, which I suppose is maybe why that box is the way it is. But the reality of it is that lobster business offshore will cease to exist, and the trawling effort and all the other effort that is offshore right now will come inshore.

You can all imagine what kind of consequences that is going to be. But if you want to see what it looks like, you go to his website and you just kind of have to chase it down. It will certainly have a negative impact on the fish business. Is that enough comment about it? I can go on for another while; but I will not.

CHAIRMAN BORDEN: My own take on this, once we get further details on this, I think we'll have to factor that into any considerations. I would also encourage you as the Vice Chairman of the Mid-Atlantic Council, the Mid-Atlantic Council has all sorts of major fisheries; particularly for squid and a number of other species that are taking place in that same area. You've got a council meeting coming up next week. I would encourage you to look at it and provide your input on it. Bob Beal.

MR. ROBERT E. BEAL: We'll forward you the press release and the map out to this board right now; so folks don't have to chase it down on the website and spend their valuable Lobster Board time digging around on the internet. We'll send that to you in a minute.

PUBLIC COMMENT

CHAIRMAN BORDEN: On this list we will add to it; closed seasons. Dick Allen.

MR. DICK ALLEN: My name is Dick Allen; I am representing the Little Bay Lobster Company. I note that you don't have anything on v-notching up there; which not too long ago was a pretty important part of all the talks about recovery from oil spills and things like that and seemed to enjoy some success, and of course is in effect.

But we get reports that the enforcement of the v-notch law is pretty variable throughout the region. I would suggest that you add v-notching to one of those potential things. I'm sure it will come up in the discussions, and particularly uniform enforcement of the v-notch regulations. You're trying to leave lobsters in the water; that is probably one of the most effective things that you can definitely say you're leaving a lobster in the water with the v-notching requirement. Thank you.

CHAIRMAN BORDEN: Thanks, Dick. At least it was my intent under standardizing regulations. If you look at the figure that is in a whole series of technical documents about the regulations in a lot of the LMAs we have a range of v-notch

definitions. That would be one of the items that would be considered under standardizing; and unless we have objection, this issue of enforcement, standardized enforcement procedures could be added. Anybody object to that?

MR. SIMPSON: I'm not sure when you say standardized enforcement. I think frankly, from Addendum XVII, the v-notch regulation in Area 2 is wholly unenforceable and not monitorable. I would be very concerned unless there were some mechanism -- to provide an enforcement mechanism -- that we not include v-notching.

Frankly, since I have the microphone, if I were going to take something off that list it would be standardized regulations, because it is fundamental to lobster management to recognize the differences in fisheries geographically; and I don't see at all where something that would fit for Area 2 in a 60 or 80 foot lobster boat would be equitably applicable to a 20 or 30 foot boat in Long Island Sound. That one even being up there troubles me.

REPRESENTATIVE SARAH K. PEAKE: I join in that concern about standardized regulations. I guess for me it raises the broader question of, what is the role of the LMAs. Yes, we have different regulations regarding v-notch, gauge size, all of that as we look from area to area. But those were developed as part of a collaborative process by each one of those LMAs.

I think if we're going to look at standardizing regulations, we have to have a bigger conversation about what the ongoing role is. Are they still going to have a role? Are we going to pay attention to their input, or is the ASMFC just going to take all of that over and we'll make all the decisions about what gauge size is and v-notching and all of that?

CHAIRMAN BORDEN: I would just offer my own perspective on that. I kind of look at this laundry list as the LMAs, the Lobster Conservation Management Teams, I think have an important

role to play in the process. In my view, the sequence here would be that the PDT would take this kind of laundry list and develop some options. The board would review it at the fall meeting, and then at that point if the board is comfortable with the options and they've been analyzed and vetted technically. I think that is the point where we go to the LCMTs and ask them; and at that point they can come back to us with any recommendations they want.

In other words, they can say for instance, we like this option we don't like that option. We like standardizing, we don't like standardizing. It is really up to them to kind of formalize their own recommendations. My own interpretation of this is they have the ability to do that; and I think we want to encourage them to do that; which I think is what you're saying. Anyone else on this point? Yes, Joe.

MR. CIMINO: I just want to make a couple quick points. One, well I truly support where we're going with our first motion and the way we were headed with this when we first tasked the Technical Committee. But I think for the PDT, it will really help the public if they have that other form of currency to compare.

That would be having some of these measures put into what that means, as far as either harvest or exploitation reductions; because I think that is a little easier to understand from their perspective, and I think even we as managers have struggled a little bit on what these measures mean for egg production, as opposed to what it is going to mean kind of for the bottom line.

CHAIRMAN BORDEN: I agree with that. That is the reason I said, I think twice already today that I think the table that the Technical Team put together that Table 1 that does that. We're going to need that same type of evaluation to guide the board decisions when they come back. I think to a large extent the industry is going to want that. They're going to want to see the

technical implications of the decisions right up front. I agree with that.

MR. GROUT: I think we've got a good list here, particularly if we add the one that Dan put up there, closed seasons. At least, at this point, I think having each of those as an option to be able to look at and put in the PID, and come back with some options including standardized regulations; obviously minimum and maximum sizes. I think it's important to keep that kind of flexibility in there with our options. I would support the list that we've come up with so far.

MR. ADLER: A couple of things. First of all, on the list, and I know the biologists indicate that culls don't produce as well. But the thought that was on the table at some point, it got thrown off and it may, was the fact of not allowing female culls to be landed. Now what this does is -- it would for one thing -- a low priced lobster is a cull.

They get the lowest price. It also would protect on the treatment of the lobsters; if they're moved around on the boat, because if they drop a claw they can't take it in. It was just an idea of leaving more females on the bottom, and I know Bob would say that they don't do a good job, and they may not, of reproducing.

But you've cut exploitation rate, you've kept a creature that isn't a good market product anyway, and you have protected perhaps better treatment of handling of the lobster. It was just one of those things that was put on the list and might be thrown off; but it was just an idea of a way to put more females back down in the water for better or worse, and do another couple of things. It was just one of those things on the laundry list that might get displaced. Another point while I have the microphone. It is very important that the LCMTs remain a factor, because that was one of the factors when lobster was moved from the federal council to the ASMFC; and I remember this. That when we were dealing, and at the time the federal

councils were dealing with lobster, and they weren't really listening to the fishermen.

We had advisory panels and they would go off, and then they would come back and the council would say, thank you very much for your information; now we're going to do what we want to do. It was the lobster industry that stood up and said, no. When the whole process was basically changed over to the Atlantic States the Atlantic States Marine Fisheries Commission said, "Yes, we will listen to you."

"Yes, we will get you into the process"; which you did, and it has always been a positive part out there in the world, in the industry when they said, "Well, yes, they did listen to us." They sat us down; they told us what the problem was. They said, you figure it out, and then we came back to the boards and basically the board said, well did they fix the problem?

Science said yes that they fixed it, and this commission pretty much adopted what those fishermen; it made them feel good. I think the LCMT and of course, it is better for getting compliance too, because it was their idea. The LCMT issue is a positive thing. The other reason for different rules in different areas had to do when it went back to the fact of the biologist had indicated that the stock of lobster in different areas along the coast were in different states of either overfished or not, or whatever.

They were also given a range of where they had to get to be back. Naturally, one area would have to do more work than another area, given what the biology and the stock size conditions were in that area. This is why it had evolved into having different rules for different areas; because somebody had to do a little bit more than somebody else. That is the history behind why the LCMTs should be there, and why the Atlantic States Lobster Board has actually done a good job.

CHAIRMAN BORDEN: Brandon, you're next. Anyone else? Okay, Peter, you're going to be the

last one, and then we're going to have to move on.

MR. MUFFLEY: Two points, I guess. One, I support the addition of adding seasonal closures as an option to consider. But I think we should ask the PDT to also evaluate those seasonal closures in relationship to the Jonah crab fishery and the impacts that it may have there, because if we are going to have seasonal closures and gear needs to be removed from the water, we're going to impact the fishery that these lobstermen have begun to transition to.

I think they need to evaluate seasonal closures, not just for lobsters but impacts that it may have. My other point is, I just have a question. I am just trying to understand the difference, or what you're thinking of. You have effort reduction, and then there's an application of effort reduction. I am just trying to find the nuances between just the general effort reduction and then the application of effort reductions. Are you thinking in terms of effort reductions just trap reductions or are you thinking something beyond that to decrease effort?

CHAIRMAN BORDEN: Well, this isn't my list. It's just a list of ideas that have been put forth by both the industry and by the PDT and actually the TC. Effort reductions I think can be similar to what the effort reductions that have taken place in Area 3 and Area 2. Acceleration of trap cuts is an idea that came up.

The LCMT-3 group met before our last board meeting, and one of their recommendations was to the existing trap cuts that are being implemented, which require a 25 percent reduction in traps going ahead. They actually recommended a schedule that would accelerate those trap cuts. For instance, next year you do I think a 5 percent trap cut, and then that would be followed by say, a 10 percent trap cut instead of a 5 percent.

I mean there are kind of two ways of looking at it. They also recommended additional trap cuts

in the years that followed that; which I think amounted to 10 percent. Take a year off and then do two 5 percent increases in trap cuts. All this is, is basically allowing some flexibility, I think, for the PDT to consider the types of things that the industry has recommended or that the PDT is recommending.

MR. SIMPSON: Again, on trap reductions, given all that we heard from the Technical Committee on how they, frankly, don't recommend that. I am wondering beyond that if we actually know the number of traps that are actively fished in each LMA, because that would be the number we would have to cut by to achieve the reduction theoretically in exportation.

Do we even know that number, and if we do and that is what should be going into the addendum, then that just needs to be clear to the public and fishermen; that we're not talking about for Connecticut the 235,000 traps. We're talking about maybe 20,000 traps, and we're cutting from there.

CHAIRMAN BORDEN: Yes, if I'm not mistaken, at one point didn't Connecticut and Long Island have a million traps in Long Island Sound, if you went back 15 years? I mean, the numbers I think were astronomical.

MR. SIMPSON: I think it falls into the area of folklore. But we have an allocation of 235,000 traps in Connecticut. It is history based. Some of it is calculated number of traps fished. But another way to qualify this, is to answer your question, which was how many traps do you put on your application? Clearly, there were some people who were forward thinking in the number of traps they indicated. Even the 235 is a probably a bit on the high side.

CHAIRMAN BORDEN: My answer to your question, David, is yes. You would start from the lower number, not the higher number. I've got Peter Burns.

MR. BURNS: While we're looking at a whole list of options here, what about the concept of trip limits? Is that something that maybe the board might want the PDT to consider? I know that that opens a new door in how we've managed lobster; especially with respect to the trap fishery. But we're entering a new chapter now in lobster management in southern New England.

In some cases that kind of approach may even be more palatable for businesses than maybe a change in the minimum size, for instance. That may be something to think about, and I know that along with that comes a whole host of issues that have to do with administration and record keeping and reporting and things like that. Because we're going to be talking about that later, maybe this is a good time to talk about that. But if we're going to include something like that in there now, we could also address that in our discussion about what we need for record keeping and reporting requirements moving forward.

CHAIRMAN BORDEN: Okay, so anyone else on this list? I don't think we need a motion.

MR. SIMPSON: Yes, just so I can feel better. That looks like a Word document and not a power point or anything. Could you add closed season, trip limits; whatever else has been suggested, so that we know that it has been captured?

CHAIRMAN BORDEN: Good point. Anything else? Bill Adler. I'm having difficulty getting off this item.

MR. ADLER: I keep pushing culls just to talk about it.

CHAIRMAN BORDEN: Does anyone object to adding culls to the list? We have no objections, so culls are on the list, Bill; v-notching is part of it, Dennis, standardizing the regulations is part of the v-notch issue. Steve Train.

MR. TRAIN: I have one other suggestion that could be vent size increases. It makes the traps a little less efficient.

CHAIRMAN BORDEN: Any objections to adding that to the list? Okay, so Steve got the last word.

**RESPONSE TO THE NOAA LETTER ON
INCREASED REPORTING IN THE
LOBSTER FISHERY**

CHAIRMAN BORDEN: We're going to move on to the next issue here. The next issue is Discussion of the Response to the NOAA Letter. I'm going to let Megan comment on this, and then we'll get into a discussion on how we should respond.

I just point out that we've had this advice before about the need to improve reporting. The TC has, I think, given us at least two, if not three, memos that included various types of advice on the need to improve reporting, in order to improve the stock assessment. We've had a response from NOAA on the issue. Let's get into a discussion and decide how we want to handle this.

My take from the NOAA letter is that if, in fact, we want to make changes in terms of the federal requirements for reporting, we're going to have to include those requirements as part of the commission FMP. Megan, do you want to follow up and provide a little bit more background, please?

TECHNICAL COMMITTEE RECOMMENDATIONS

MS. WARE: Yes, just for some context on this discussion. In February, the TC presented a report, and it was one of the first reports that they've done in response to a request from the board. It was asked to look at a section of a previous addendum that highlighted data limitations or biological data limitations in the lobster fishery.

Basically, the TC said that many of these limitations are still there. In response, the board sent a letter to NOAA Fisheries requesting 100 percent reporting in the federal lobster fishery.

As David alluded, they replied and said, if you would like that we should probably go through the ASMFC process so that can be vetted through the public. We should really stick to the ASMFC process, which would be an addendum. That is one of the things that have led us to this discussion. I think the second thing is in your meeting materials there was a letter on the Atlantic Large Whale Take Reduction Team. They've started to talk about their co-occurrence model, and updating that in terms of the lobster data that is included there. I am not really sure where that is going, but it is just an issue on the horizon that we might want to be aware of.

It's always better to be ahead of issues than behind them. I think, since we were just talking about the monument issue, the Habitat New England Council Deep Sea Coral Amendment, all of these issues are kind of bringing to light some of the data limitations we have; specifically in harvester reporting and where that catch is coming from. That is just kind of setting the stage for this discussion. I think we need to think about where we want to go with this.

CHAIRMAN BORDEN: All right, so I think we've got a couple of options here. We do have time limits. This type of issue could take extensive amounts of time if we want to get into all the issues that Megan just itemized. The other way to deal with data reporting, and I would just add that there is a lot going on here.

NOAA has a -- and Peter can explain this better than I can -- NOAA has an internal working group that is looking at this whole issue of data reporting. I think the conclusion of that will probably be reached in another year. One of the alternatives for us would be to form a subcommittee from this group, I think to meet, get briefings on what is taking place in terms of the NOAA internal actions on this; and kind of go through this list of data deficiencies that the technical people have raised.

Then bring a formal recommendation back to the board at a subsequent meeting. That would be

These minutes are draft and subject to approval by the American Lobster Management Board.

The Board will review the minutes during its next meeting.

a way for a smaller group to take this on as opposed to all of us trying to deal with it at this stage. I'll open the floor to discussion. As you speak on the issue, please tell us what your preference is. Anyone? Pat.

MR. KELIHER: Mr. Chairman, I think the idea of a smaller subset discussing this in more detail is appropriate. I do want to, just for the record, make it known, because at the Executive Committee the other day, I incorrectly stated a number after I reviewed a spreadsheet that my staff prepared for me last night and found a mistake.

I just want to be clear, 100 percent reporting for the state of Maine means going from 30,000 trips that we would look at and audit on an annual basis to 300,000 trips. The cost associated with that would be an increase of well over \$300,000.00 over \$350,000.00 to the state of Maine. I just want to make sure that is clear and on the record, and is taken into account as we're talking about increasing data needs and what it would mean to the state of Maine.

CHAIRMAN BORDEN: Thanks, Pat, for that. I just make the observation that I think if we follow the path of having a subcommittee, they can consider that and actually get into some of the details. In other words, there may be other alternatives that we can use, other technologies that we can bring to bear on this type of issue. I think that if we get a smaller group to actually focus on the details of this, we'll be better served; so other comments?

MR. BURNS: Yes, real briefly. I think that this is a good approach, to get a working group together to try to look at what it is that the TC needs to better manage the stocks. In our response, I think it is important to note that we're willing to work with the commission and we want to work collaboratively, in order to improve reporting so that we have the resolution and the data elements in there that the TC can use to better manage the stock. Maybe it isn't 100 percent reporting that we really need, or the

vessel trip report may not be the exact tool for that. I think that would be a good opportunity if we have a working group, to kind of think a little bit more closely about what exactly is needed and how to get that.

CHAIRMAN BORDEN: All right, so let me ask, is there any objection to doing that? Then I'll work with the Executive Director and put together a subcommittee on this. If you're interested, either talk to myself, or Megan, or Bob Beal, or Toni, and we'll try to keep it small and functional.

I think the goal for the subcommittee is to look at all of these different data needs that have basically been identified in various technical reports, and then bring recommendations back that solve the problem. In other words, these data deficiencies are going to continue to hurt lobster management, the assessment process, if we don't fix them; so we've got to figure out how to fix them.

I would point out we have the same types of issues going on in terms of the assessment needs and the biology and the technical people are going to review a motion from the last meeting that Pat Keliher made that tasks them with doing that. There is a lot of this type of activity that we simply need to improve our state of knowledge and improve the way we perform, in order to make this FMP work.

MR. KELIHER: I just think, as part of the working group or subcommittee, Mr. Chairman, there are some key staff that have been working on some of these alternative programs that we should bring to bear. My staff has been working with ACCSP on the swipe card technology. There may be some applicability there, as well, so we would be happy to participate in this process.

CHAIRMAN BORDEN: We'll move on. Please, if you want to be considered for the subcommittee, please talk to one of the people that I identified. The next issue on the agenda, and I think this will be fairly short; at least I hope it is going to be fairly short, is the Jonah Crab

Addendum II. I'm going to start and let Megan give a presentation. Then what I would envision is that the board will need to make a motion to authorize some form of this document for public hearing at the end of that.

JONAH CRAB DRAFT ADDENDUM II FOR PUBLIC COMMENT

MS. WARE: I'll be going through Draft Addendum II today for Jonah Crab. Again, this is in regards to claw harvest. This is a reminder of our timeline for the addendum. Last May the board initiated this addendum to consider a coastwide standard for claw harvest, and then we're here today to review a draft of that and potentially approve it for public comment.

If it is approved for public comment, we'll hold that between August and October, and then at the annual meeting we would potentially consider final action, after reviewing the public comments we've received. Just as a reminder for how the FMP currently establishes a claw fishery, it's a whole crab fishery; however, individuals from New Jersey, Delaware, Maryland and Virginia who can prove a history of claw harvest before the control date, are allowed to continue that practice. This was included in a way to accommodate the DELMARVA claw fishery, which are usually small boat fishermen that have practiced this harvest for a long time. There are two issues we're trying to address in this addendum. The first is that following approval of the Jonah crab FMP, we found that there are claw fishermen in New York and Maine. These fishermen are currently only allowed to land whole crabs.

Right now, we have some fishermen who used to land claws and can still land claws, and then we have some fishermen who used to land claws who can only land whole crabs. There is an issue of equitability right now. The second challenge is that in a letter from NOAA Fisheries, we've heard that it might be challenging for them to implement the current claw provision due to National Standard 4, which says that

management measures cannot discriminate between residents of different states.

I think this is particularly an issue considering that the Jonah crab fishery is primarily executed in federal waters. One of the biggest challenges for the Jonah crab fishery is that our data is quite limited, and there are a couple of reasons for this. The first is that trip level harvester reporting has not been required in all jurisdictions.

Prior to the FMP, dealer reports were not required to delineate between whole crabs and claws. Then another issue is that a lot of the landings are for personal consumption, so those are not being well documented. Overall, it is unclear how many fishermen are harvesting claws and the number of pounds that are being landed.

In the effort to try and get some idea of the size and magnitude of the claw fishery, I did pull some data from the ACCSP data warehouse, and this is what came up. It would suggest that claw harvest between 2010 and 2015 was just under 150,000 pounds; but I think this is probably an underestimate, given the reasons I just stated that personal consumption landings are not included in this.

We don't have dealer reports that have always differentiated between the market grades. Harvester reports aren't required to say if it is claw or whole crab. This is the data we have, but it is likely an underestimate. I think what is important to see is there are a variety of gears that are landing claws.

It is primarily pots, and lobster pots could be from 45 to 95 percent. One of the issues in the data is that there is a significant portion of pots that aren't characterized as either lobster pots or fish pots. We're unclear exactly what percentage that lobster pot harvest is. However, there are also gillnets and otter trawls that are landing claws.

What I've heard is that for these fishermen, they end up harvesting the claws, because that is how they detach the crab from the net, so they actually have to break the claw off to get the crab out of the net; so that is why they're harvesting claws. Just like our landings data, our biological data is also limited.

However, there have been numerous studies that have been started, and we're starting to get preliminary data from that. I'll be presenting some of that today. This shows some of the morphometric data that we have. We have carapace width on the X axis, and claw length on the Y axis. This is from an SK grant that was funded in 2015, where they collected information on carapace width, claw length and different sorts of biological data in the Jonah crab fishery. We're able to plot that relationship. What this shows is that for the minimum carapace width of 4.75 inches, we would expect a claw length of around 2.5 inches. The crabs here are only male crabs, and they were taken from southern New England; both inshore/offshore and Georges Bank. But this is one of the relationships we have right now.

We also have some data on claw mortality. There is an ongoing small scale lab study that is taking place that is looking at the relationship between claw removal and survivorship in the Jonah crab fishery. What they did is they subjected the crabs to one of three treatments. You either had one claw removed, two claws removed, or both claws remained intact.

These crabs were monitored for four weeks. What they found was that 19 percent of crabs died when no claws were removed, 56 percent of crabs died when one claw was removed, and 74 percent of crabs died when both claws were removed. Clearly, mortality is increasing as we remove more claws. But this is some of the mortality data that we have thus far.

Just to kind of summarize where we're at. We know that there are claw fishermen in many states along the coast that are using a variety of

gears. The current regulation does not provide equal opportunity to like participants across the fishery, and federal implementation of the current provision may prove challenging due to National Standard 4.

I am going to go into the options now in the addendum. There are four options. Again, our goal here is to create some sort of coastwide standard, and that is what Options B, C, and D will provide options for. But we also have status quo, so that would maintain a whole crab fishery. Individuals from New Jersey, Delaware, Maryland and Virginia, who have that history of landing, would be allowed to continue to land claws. Option B would create a coastwide whole crab fishery, so no claws would be able to be retained or sold.

Option C would create a coastwide whole crab fishery. However, there would be a five gallon coastwide tolerance of detached crab claws per vessel per trip, which may be retained and sold. The idea here is we've heard that some people are just harvesting claws for personal consumption; some just want to be able to harvest a small amount. This option would allow for that to happen.

In the addendum we do say that the claws must be the 2.5 inch minimum length, and that is because we have that 4.75 inch minimum carapace width, so we would want to make sure that the claws are being harvested from legal crabs; and two claws may be harvested from the same crab. Option D would establish a claw fishery coastwide, so fishermen could either land claws or whole crabs. We do say that the detached claws must meet a minimum size of 2.5 inches; and two claws may be harvested from the same crab.

In relation to bycatch limits, what we've suggested is that the bycatch limits remain so that fishermen, who currently are under the thousand crab limit, would be allowed to land up to 2,000 claws. The idea being there are two claws per crab, so that is how we got to that

number. At this point, I would take any questions or comments on the addendum, and then we can talk about public comment.

CHAIRMAN BORDEN: Questions, Dan and then Bill.

MR. McKIERNAN: Megan, when you did the query from the data warehouse, do you know if some of those Massachusetts trips that we uncovered as being miscoded were corrected?

MS. WARE: I don't know. I would have to go back and check.

MR. McKIERNAN: Yes, because I am nervous about that. I know there were a few trips in the tens of thousands of pounds that were recorded by the dealer as claws; and when we called the dealer, they apologized, because their key punch person pulled down the wrong code. In fact, what is interesting is with the SAFIS reporting, you can repopulate or you can call up the same codes time and time again; so they were reporting claws all the time, but they weren't landing claws.

These numbers seem really high to me, so before this document goes out, I would ask that you give us a chance to sort of ground truth or test the validity of those figures; because that is a concern. My second question has to do with the option that allows the fishermen from certain states to retain crabs.

Maybe the only folks in the room who can answer my question are NMFS, but I still think there is a problem, because you're talking about possession of claws in federal waters, which is where this fishery takes place predominantly; and you're creating kind of an unequal opportunity for fishermen from four states. I don't know if Option A is approvable by NMFS, and I would just want them to comment.

CHAIRMAN BORDEN: Let me just ask somebody, Alli or Chip, do you want to respond to that? If you don't that's fine, don't feel an obligation.

MS. ALLISON MURPHY: I think our concerns definitely remain with the status quo option, but I think it is viable to keep that in the document to have a broad range of alternatives for public consideration.

CHAIRMAN BORDEN: I mean, just to follow up on that. My assumption is that once it actually is incorporated into a public hearing document, if NMFS has legal concerns they will provide written guidance on that. Anything further on this? Bill.

MR. ADLER: I just have concerns. Nothing against going out with all these options and stuff, but I do want to just voice concerns over if we do whatever we choose to do, and we run into the Federal Standard-4, how do we handle that dilemma; that is one thing. I am concerned about the mortality when they take claw1s off, based on what we just heard about the expected mortality of these crabs.

I don't know what to do about it, but I think that this is a concern about this whole idea of the claws, and then we have another gauge we have to get. We have to get a gauge for the claw, in addition to the size of the crab and the lobster. Now we have a gauge of 2.5, which is a good idea because otherwise they'll be bringing in claws from small crabs, true. But I can just see, we have to have gauges and v-notch machines and things like that. I just wanted to point out that these are the pitfalls that we might be running into with this.

CHAIRMAN BORDEN: I think all of those points are good points, and I think once we take this document to hearing there will be a record, and then once we get the record from the hearing, if there are legal issues or there are administrative problems that come up, then we have to consider those when we get to the point where we have to make a final decision on it. Thank you for raising those. Anyone else?

MR. LUISI: To Bill's concern over the mortality and the information that is going to be presented

to the public. I think by suggesting that there are different levels of mortality associated with the removal of one or more claws, I think to complete the graph or to complete the table, and there should be a mortality associated with the whole crab being landed.

It kinds of paints a bad picture of the claw fishery without explaining to the public that if you bring the whole crab in there is obviously 100 percent mortality there. That was one thing. The second point I wanted to make had to do with the National Standard issue. I wonder if, I don't know how to articulate the question, but if there were some delineation made where either north or south of a particular area, rather than identifying the states; but a line that would delineate a claw harvestable area or a non-claw harvestable area, or a whole crab area.

Would that open the door for opportunity without specifying whether or not particular states have an advantage over other states? That would displace some effort, I would assume, in the areas, but I just wondered if that was something that could be a potential here; and then my third point has to do with the Option C, which is a whole crab fishery with a small volumetric claw harvest.

I just -- five gallons -- I understand how that was developed and why there would be some consideration for somebody who may want to enjoy the claws for personal consumption. But I just wonder if that small volumetric claw harvest, there could be multiple levels there to look at, maybe up to and including the bycatch allowance; so that under the bycatch limits you would have to land whole crabs if you exceeded that bycatch allowance of 2,000 claws. Just some points to throw out there to see if anybody has any thoughts about it.

CHAIRMAN BORDEN: Any other comments or reaction? Bill Adler and then Brandon. Then I am going to ask for a motion on this.

MR. ADLER: I am curious about Standard 4 again, and if this is the crab fishery, what law is it under; Atlantic Coastal or Magnuson, and do we have a Standard 4 in the Atlantic Coastal Act like Magnuson has? I'm not sure how that works.

CHAIRMAN BORDEN: Ali or Chip, do you want to respond to that?

MS. MURPHY: I'm a little new to the Atlantic Coastal side of things, so I may call in support if I get this wrong; but my understanding is that any regulations we issue under the Atlantic Coastal Act also have to comply with the Magnuson National Standards. That is where the National Standards enter in.

CHAIRMAN BORDEN: Thank you, Alli. Chip, do you want to follow up on that or add something to it?

MR. CHIP LYNCH: Chip Lynch; with NOAA General Counsel. No, what Alli says is essentially correct. The issue is that although the board, the commission would have a plan. The plan nevertheless makes recommendations to the states and the federal government.

The federal government would take those recommendations and turn them into regulations according to its statutes; and the Atlantic Coastal Act is the statute we would use here. That statute requires NMFS to issue regulations that are both compatible with the plan, but it is also consistent with the National Standards Bill. That is how it ties in.

MR. MUFFLEY: Two comments -- one from National Marine Fisheries perspective -- what about an idea that Mr. Luisi had presented. Would something like that, where you're not specifically identifying states, be an alternative to that which we could consider? That is one question, and then two, I'm trying to understand the nuances a little bit between status quo and Option D.

Status quo, those states that have the claw allowance now, they do not need to retain the entire crab, correct? They are allowed to just bring the claws back. But under status quo or under Option D, the entire crab still needs to be landed under that option; correct? Because it says here that the crabs need to meet the minimum carapace length of 4.75 inches, and the detached claws need to meet the 2.5 inches. To me, in order to prove that, you have to have the entire crab aboard, you couldn't just land claws under Option D.

MS. WARE: Yes, sorry for some confusion on that. What the PDT and I were trying to get at is that you don't just have to land claws; you could land claws and whole crabs. Under Option D, you could land just claws, you don't have to bring the whole crab back. But a fisherman could decide that he wants to land 1,000 whole crabs and 1,000 claws; and that is also allowed, as long as the whole crabs meet the minimum carapace width, and the claws meet the minimum claw size. Is that clear?

MR. MUFFLEY: That's clear. I don't know if the language is in here. To me, it reads that you need to bring the whole crab back. I don't know if additional language needs to be in there to say that you can bring either/or back, as long as they meet those standards.

MS. WARE: I can work on that.

CHAIRMAN BORDEN: The one issue that I don't think we're totally clear on is this issue that both Mike and Brandon have raised about casting the option with the line in there as an alternative to singling out the states. If the board wishes to include that as an alternative to identifying the specific state exemptions, just to allow the public to comment on that. I think that is probably fairly easy to incorporate into the document. Steve Heins.

MR. STEVE HEINS: I'm just wondering what the justification would be, what kind of rationale we would provide in the amendment for drawing a

line. I mean, I understand that the purpose is here is to avoid some legal issue. But is that what you take to the public, yes, we're trying to avoid a legal issue?

CHAIRMAN BORDEN: My own view and one of the Mid-Atlantic members can correct this if I mischaracterize it. I think the rationale would be the same rationale for identifying the states originally. In other words, the practice was almost a geographical change in behavior; although since that time we've had information come forward from Maine and other states that the practice actually is more widespread than we anticipated. Let's get a couple of comments on this line. If somebody wants to include that as an alternative, I suggest you do it as a motion. Then I'll entertain a motion on the entire package. Does somebody care to make a motion on this? Mike.

MR. LUISI: Sure, I'll put a motion out there for discussion. **I would move to add an alternative to Addendum II which includes a delineation line at 41 degrees, which I believe, is about where Montauk is.** It comes across right, so Long Island and New York would be included south of that. I'm pretty sure I'm correct on that. To include a delineation line at 41 degrees for a Jonah crab claw-only fishery.

CHAIRMAN BORDEN: All right, is there a second? Any seconds, Brandon. Discussion. Any discussion on this?

MR. McKIERNAN: I'm having heartburn over this, because I think our entire Jonah crab fishery is south of 41 from Massachusetts. This basically creates a claw fishery throughout the range. I think this is a premature motion, and maybe we can dispense with this addendum until the next meeting and create a committee to look at this a little closer. I really don't want to see this done on the fly. I think this is premature and needs more work.

CHAIRMAN BORDEN: Other comments. Does anyone else want to comment on this? Eric.

MR. REID: I guess, in order to avoid problems with National Standard 4, if you want to have a claw fishery, you are going to have to do something like this, because a state-specific claw fishery will not fly. If the commission decides it wants to advance a claw-only fishery, something like this has to be put in this document.

Whether it is as specific as saying a line delineated by 41 degrees north; its 41 north, is one thing. If it says to develop a delineation line to separate a claw-only fishery from a whole crab fishery that might be a better way to go, because 41 degrees north, everybody fishes south of that; the entire fishery is there. But I think if it was less specific, it is only a public document for analyzation by the public.

If it had some much broader thing to include the development of a line delineating claw-only fishery versus whole crab-only fishery; that might be something that we would get some feedback on, and it would solve a lot of problems. But without something like this, you are not going to get a claw-only fishery, it is not going to happen.

CHAIRMAN BORDEN: Other comments, anyone else? Alli.

MS. MURPHY: I just wanted to say that I am going to abstain on this vote. I think, if this does go forward, we're going to have to take this back and shop it around and think through whether this has National Standard 4 implications or not, so I just don't want to prejudge that right now.

CHAIRMAN BORDEN: All right, so we have a motion to add this alternative to the document. Does anyone need me to read the motion? Seeing no hands up; are you ready for the question? All those in favor of the motion, raise your right hand. Leave it up, please. **We've got four in favor; opposed, seven opposed, any null votes, abstentions – one abstention, any nulls? Motion fails.** Okay, so on the document, I think we need a motion to take this document out to public hearing. Steve, you had requested.

MR. HEINS: **I am going to move that we approve Addendum II to the Jonah crab fishery management plan for public comment.**

CHAIRMAN BORDEN: All right, so we have a motion, is there a second? Second Pat Keliher. Dan, did you have your hand up before? Do you still want to speak? Anyone care to speak on this? Mike.

MR. LUISI: I was waving my hand trying to get your attention before this motion went up on the board, because I was hoping, in the interest of trying to secure some form of a claw fishery in our region, and maybe my comment earlier could be incorporated without a motion, but when I referred to Option C earlier and the small volumetric claw harvest, I was hoping to make a motion that would allow for a range of small volumetric claw harvests to be included in the document from five gallons to what the bycatch allowance would be.

That could be a way for us in our region to secure some form of a claw fishery; if in the end National Standard 4 doesn't allow the continuation of our status quo that we have currently. It is hard for me to approve this or support this motion just based on my hope that I was going to be able to maybe modify Option C; so I guess I'll seek your advice on that.

CHAIRMAN BORDEN: Well, Megan wants to comment, and then I'll provide my input.

MS. WARE: I just have a question, Mike, for clarification. Option D does allow for a coastwide claw fishery. Maybe you can elaborate more on what you're looking for in another option, because I feel like there is an option that gives your state a claw fishery.

CHAIRMAN BORDEN: I was going to comment almost similarly, but within the document there is an option that allows you to comment on the whole concept. I think, rather than change the document at this point, you can actually submit comments and make those suggestions; then the

board can consider it as part of the public comments. Toni.

MS. TONI KERNS: Just a point of clarification of what will be within the realm of the board is allowed to vote on come final action. It would have to be within the range of options that went out for comments, so if the state did ask for a higher volume in Option C, as it is written right now that would not be within the parameters of the board; even if they ask for it in their public comment, just as a qualifier.

CHAIRMAN BORDEN: Okay, so you've got a couple of options here. Mike and any of the supporters of this concept are free to make a motion to amend to include that; if you would like to do that. Absent that, I am probably going to call the question.

MR. LUISI: The way I read it, based on Megan's interpretation, it is of my opinion that I don't envision at the end of the day when this addendum is finalized; that the board is going to be all that supportive of a claw harvest permitted coastwide. If we're able to go forward with a coastwide whole crab fishery with an allowance for claws greater than five gallons, I think that that might be where we find the compromise. **Given that, I guess I would move to amend to include in Option C a range of small volumetric claw harvest from five gallons to the bycatch limit of 2,000 claws.**

CHAIRMAN BORDEN: I'm going to ask for a second, and then I'm going to go to Dennis Abbott, probably on a point of order. John seconded. Dennis.

MR. ABBOTT: It seems to me it would be better, I don't think this should be part of the final motion. I would have suggested that we temporarily table the motion by Mr. Heins and go back to the discussion and either pass or reject this motion so we can get back to the middle. I just don't think it fits with our final motion.

CHAIRMAN BORDEN: Yes, I also share that same concern, but you are quicker on the draw. In the interest of time, because I know a bunch of you want to get out of here by three o'clock. Does anyone have an objection to temporarily tabling the first part of the motion? Is there any objection? If there is an objection, I am going to ask for a motion.

We're temporarily laying the first part of this motion on the table to come up immediately after we deal with Michael's motion. Is everyone clear? Okay, so Mike, do you want to say anything further or anyone else wants to comment on this issue? Ritchie.

MR. RITCHIE WHITE: I guess I need to understand it. I guess I don't understand if you're allowed a 2,000 claw bycatch, you can always take less than that. I guess I don't understand why we need something five gallons to 2,000 claws. If you can do 2,000 claws, isn't it already covered?

MS. WARE: I think right now for that bycatch provision it would be whole crab only, so you wouldn't be allowed to put that into claws. That is why they're asking for this. In Option D it refers to the bycatch, and that is where that 2,000 claws came from.

CHAIRMAN BORDEN: I've got Steve Heins, anyone else? Steve and then Dan.

MR. HEINS: I was just trying to get your attention about, I was planning to move to table the first motion if that's okay; that's all. It's all good now.

MR. McKIERNAN: Yes, again, my feeling about this is I would really like to see us postpone action on this addendum until the next meeting, because I am seeing things coming up that haven't been well thought out. In looking at this motion, it talks about a bycatch limit of 2,000 claws, which suggests that we're going to have boats going out and taking their thousand crabs so called bycatch limit.

I thought this was designed to accommodate the legitimate crab fishermen/lobstermen who have been taking Jonah crabs forever and routinely bringing in claws because of warm water issues. Now, I'm looking at this up to 2,000 claws, I'm starting to sense that we're trying to accommodate a different user group; and I don't have a clue if it is true or not. I'm just really concerned that I don't think the subcommittee or the board itself or staff has really been consulted on where this is going. I really think that we should postpone this addendum until we do more work on it.

CHAIRMAN BORDEN: I've got Tom Fote, does anyone else want to comment? I'll make a suggestion after this.

MR. THOMAS P. FOTE: I think we've postponed this long enough. It talks about a whole bunch of Jonah crab fisheries; not just for the lobstermen, for other lobstermen. It is going out to public hearing, the comments will come in. We can rehash it there. But I think postponing this anymore just gets kind of pushing the can down the road; and we've been doing that long enough.

CHAIRMAN BORDEN: All right, anyone who has not had an opportunity to comment on this? Toni.

MS. KERNS: Not a comment, but I think it would be helpful if we were able to translate claws into a volumetric quantity; because for enforcement purposes it will be easier for the public to understand how those two numbers compare, as well as I think enforcement has told us they would like to have volumetric quantities in order to enforce this type of regulation. That would be helpful to have the liberty to change those 2,000 claws into some sort of volume, if this motion does pass.

CHAIRMAN BORDEN: Does anyone object to following Toni's suggestion? I mean, there is no reason you can't do both; in other words have a volumetric standard and the count.

MR. LUISI: Some of these new things that have come up. I do feel that in a way a little bit of what Dan is feeling here about some of these considerations given National Standard 4 and I think there is certain interest in certain regions of the range of the species. I would be okay with postponing until the next meeting. I am discussing that with my neighboring states. I think we would be okay with that.

I don't know the procedure at this point on whether or not a motion needs to be made to postpone any further action until the following meeting; but I just wanted to put that on the record that I would prefer to postpone and give this some thought and come back again and discuss it, rather than have an option that may eliminate a claw fishery for our region not be voted through, just because people haven't had an opportunity to think about it.

CHAIRMAN BORDEN: Does anyone disagree with the concept that Michael and Dan are suggesting here that we postpone all of this and have a small group try to look at the details and bring a recommendation back at the next board meeting? Does anyone object to it? There is no objection to that.

So the record is clear process-wise, Dennis, do we need a motion to postpone at this point? **All right, does someone want to make a motion to postpone until the next meeting? Steve Train. Is there a second to it? Seconded by Steve Heins.** Are you ready for the question? All in favor signify by saying aye.

MR. ADLER: **Mr. Chairman, are we voting on the Option C; five gallon to 2,000 or are we voting on the whole addendum to be postponed?**

CHAIRMAN BORDEN: The whole thing. **Postpone everything, including the tabled motion.** Everything is postponed. We'll sort through all this at the next meeting where we will have loads of time to get into the minutia. Okay, does anyone disagree with postponing?

Then postponing has been adopted by a consensus of the committee.

MAINE'S CONSERVATION EQUIVALENCY PROPOSAL

CHAIRMAN BORDEN: The motion is postponed, so we're going to move on to the next item, which is Maine's Conservation Equivalency Proposal. I'm going to introduce -- Pat, do you want to introduce this item?

MR. KELIHER: Megan, were you going to go through that or did you want me to?

MS. WARE: I was going to have you take the lead on the first slide and the pictures, and then I'll do the AP and PRT report.

REVIEW OF MAINE'S CONSERVATION EQUIVALENCY PROPOSAL

MR. KELIHER: Okay, great. While we're waiting to bring the Power Point up, just some background. In the spring of 2015, DMR was given approval by the board to put together a pilot program dealing with trap tags and our replacement tags. If you would go right to the next slide, we request approval of a conservation equivalency now to continue that trap tag pilot program.

Currently, harvesters are allowed to bring traps back to shore and cut the existing tags and reattach those same tags with a hog ring to the new gear. This has eliminated the issuance of 20,000 exchange tags within our fishery. We firmly believe that we've removed a lot of illegal gear from the water.

It was clearly shown last year patrol hauled over 13,000 traps and inspected thousands of traps dockside; and we saw very, very few tags that had actually been hog ringed back in; leading us to believe that these exchange tags were used in a way, probably to expand the fishery within the state. It is tough to see, but here is a trap tag that has been reattached on the bridge of the trap. You can see on each end of where those small stainless hog rings are. Here is another one

where they've just wrapped it around and then re-hog ring it.

PLAN REVIEW TEAM REPORT

MS. WARE: I'll quickly go through the PRT report. We had a conference call with the PRT and the PRT supports Maine's proposal. Some of the comments were that it will reduce the number of potential counterfeit tags in the water. It will alleviate burden on the Marine Patrol to trace the extra tags, and given reports of malfunctioning tags in Maine this year, hog rings have provided another viable way to attach the tags to the trap.

ADVISORY PANEL REPORT

MS. WARE: We also had an AP call on this proposal, and the AP supports Maine's proposal. Some of the comments were; the ability to transfer tags between traps is a time and money saver. It relieves burden on Marine Patrol to enforce exchange tags, and it allows fishermen to use tags for the duration of the year.

CHAIRMAN BORDEN: Any comments on that report? Bill, and then I'm going to call on Mark to give the enforcement report.

MR. ADLER: Okay, because I was going to make a motion to accept this. I read all the stuff. I didn't understand the conservation equivalency. Why are we using that word? Is it one of those things, conservation equivalency?

MS. WARE: I think that that is the best category that this fits into right now, and so that is why we're doing that, Bill.

CHAIRMAN BORDEN: We've been fairly creative today, so this is in the spirit of being creative. Any further questions for Megan? If not I am going to turn it over to Mark and give the enforcement report.

LAW ENFORCEMENT REPORT

MR. MARK ROBSON: The Law Enforcement Committee heard a detailed presentation on the

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

pilot project from the folks in Maine at our May meeting of the ASMFC here in Alexandria. We've also provided a written summary of our comments and recommendations available to you in a memo form.

But briefly, after hearing the report from Maine and having some discussion about how the program was working there, the LEC recognized that this was providing a significant advantage by eliminating these exchange tags; which tend to be very generic in nature and subject to counterfeiting and other problems.

We agreed that it had improved the accountability in the fishery, and the only other discussion point and sort of caveat was that it was recognized by LEC members that there may be differences in other states as to how tags are distributed or redistributed or replaced. We wanted to acknowledge that there ought to be flexibility among the states to either utilize exchange tags, or some other form of trap-to-trap exchange program; as they deem necessary or as it fits in with their existing trap tag distribution process. That's my comment, Mr. Chairman.

CHAIRMAN BORDEN: Questions for Mark? Any questions on the Enforcement Committee Report? Seeing none; I think the next order of business here is for someone to make a motion.

MR. ADLER: So move. I make a motion to approve Maine's request for conservation equivalency on trap tags.

CHAIRMAN BORDEN: Is there a second? Seconded by Pat Keliher. Discussion on the motion. Ritchie White.

MR. WHITE: If this is approved, I would assume another state that wanted to adopt this would just apply under conservation equivalency.

CHAIRMAN BORDEN: Any other questions? Do we have any objection to this? **No objection,**

then it is adopted with the concurrence of the board by consensus.

UPDATE ON THE OFFSHORE LOBSTER ENFORCEMENT COMMITTEE

CHAIRMAN BORDEN: Next item on the agenda is the update on the offshore Lobster Enforcement Committee by Mark. Just as an introduction, this board has discussed the need to improve and raise the priority of law enforcement; trap enforcement, specifically, in all areas including the offshore areas.

The Enforcement Committee, much to its credit, formed a subcommittee and Mark is going to report on the results of that.

MR. ROBSON: Yes, the Law Enforcement Subcommittee to look at particularly offshore enforcement needs and areas for moving forward in the future, has met a couple of times and will continue to work through a variety of issues. At the last meeting there was quite a bit of discussion about the fact that, of course, we were talking about offshore fishing issues.

Dealing primarily in federal waters, and some of the practical and logistical problems of enforcing trap activities out in those deep far offshore waters, particularly with regard to the ability for enforcement vessels to haul and check traps out on the water, and to conduct boardings and other various activities that are necessary for good enforcement.

During the discussions, which have included also our Law Enforcement Committee representative from NOAA Office of Law Enforcement, it became pretty obvious that there is a strong sense that if NOAA Office of Law Enforcement could somehow increase their level of priority given to this lobster offshore enforcement work through the NOAA Office of Law Enforcement prioritization process; that that would be a good first step.

That currently, it doesn't necessarily receive the highest rating from an enforcement perspective;

at least in their prioritization process. By extension, this would also include hopefully making it a greater or higher priority in that process, and then also allowing a higher funding priority through the joint enforcement agreements for offshore enforcement work that needs to be done.

This might include additional vessel capabilities, or other funding mechanisms that would allow the states to do more offshore enforcement work through their own resources and capabilities. It was felt that a letter would be appropriate to be sent to the NOAA Office of Law Enforcement, requesting that NOAA make this offshore enforcement issue a high priority in their prioritization process, and to make it also a funding priority through the joint enforcement agreements with the states.

Megan, I believe has -- we've provided a draft letter for the board's consideration that makes that request. I would also like to point out that we have again tried to involve this discussion with our NOAA Office of Law Enforcement partner on the Law Enforcement Committee; and we've gotten some good feedback and input from them as to how to proceed on this issue.

CHAIRMAN BORDEN: All right, so any questions for Mark on his report?

MR. KELIHER: Mark, thank you very much for that report. The state of Maine has been having many conversations over the last two years with the office of OLE in regard to prioritization; in particular to the work that we're doing with our large offshore boats. I would fully support having the commission sending a letter; and Mr. Chairman, I would be happy to make a motion to that point.

CHAIRMAN BORDEN: Are there any further questions or statements? Toni, did you have your hand up?

MS. KERNS: Not a question. I just wanted to update the board on some discussions or

conversations that I've had with enforcement or through from NOAA staff. The priorities for NOAA Law Enforcement have been set through 2017. There is no harm in us sending a letter about priorities, but they have already set those priorities through their 2017 year. I am not sure we'll be able to influence on paper what those priorities have been set at. But states, themselves, can work through their JEA agreements on those priorities, and how they work through those to try to get some more enforcement going in the offshore areas.

But one of the questions that came back is; what does offshore mean? I think that we would need to be quite specific in our letter about what we mean by offshore, and exactly what we are looking for, in terms of increased enforcement. It would be great if we could get some clarification here today in what we mean by that; because I'm not sure staff has that information.

CHAIRMAN BORDEN: I think that is a good point. I listened to and actually participated in a couple of the conference calls with the subcommittee. Actually, they've discussed this, and Mark can correct this if I mischaracterize this. They've discussed this in the context of improving enforcement.

It is not just offshore enforcement, they want to improve enforcement, raise the priority of trap enforcement; and that would apply to any areas that the enforcement officers are engaged in a practice. The discussion really evolved around the need for different strategies in different areas. In other words, some of the states, and I'll single out Maine as an example, have excellent enforcement capabilities and do a really active job of enforcing in the nearshore areas.

Then it may require other techniques to do that; and the Mid-Shelf may even require different size vessels, because the gear changes. The size of the rope that runs through the haulers is all different in those areas. Then when you get into offshore, what I consider offshore, which is like

Area 3 boats that are fishing 100 miles off the coast.

It is a completely different type of capability that you need. Maybe a way to address this is to remove offshore from the letter, so it is generic. It's we want to improve trap enforcement and compliance. But I'll defer to Pat and some of the other members of the board. Pat, do you want to speak?

MR. KELIHER: I was trying to craft a motion that did just that, Mr. Chairman. If you will bear my indulgence, I'll try to spit it out here and try to capture it. **I would move to have the ASMFC send a letter to NOAAs Office of OLE, asking for lobster to become a higher priority within their JEA program.**

CHAIRMAN BORDEN: All right, so we have a motion on the table. Is there a second to the motion? Anyone want to second it, Dan McKiernan. Discussion on it. Doug, did you have your hand up to discuss it?

MR. GROUT: Just for seconding.

CHAIRMAN BORDEN: Any discussion on it? Adam.

MR. NOWALSKY: I'm not sure, I'm assuming this is just an issue of ongoing importance and isn't a matter of great timeliness today. From a procedural perspective, generally, we do this through the Policy Board. Would we try to do a reconvening of that board here this afternoon, do this via e-mail, or would this get put off until the annual meeting at this point? I wanted to raise that point, because of the potential need for timeliness on this matter.

CHAIRMAN BORDEN: Doug, do you or Toni, do you want to comment on that? Doug.

MR. GROUT: Unless you folks think otherwise, I don't think there is timeliness. Toni just stated that they've already set their priorities for 2017. It potentially could come back to the Policy

Board at the annual meeting for final approval; that the commission sends this letter. Unless this board wants to try and push it, I know we're trying to reconvene the Policy Board for some other issues via a conference call sometime between now and October. We could add it on to that. But if it is not a hurry, I would just as soon put it off until our fall meeting.

CHAIRMAN BORDEN: All right, we've heard a suggestion from the Chairman that if this motion passes it will be a recommendation and it will go to the annual meeting.

MS. KERNS: Just a perfection of the motion then, it would be move to recommend to the ISFMP Policy Board that ASMFC send a letter.

CHAIRMAN BORDEN: Any further discussion on this? Let me ask if anyone objects to the motion. Peter, do you want to abstain?

MR. BURNS: Just abstaining as a NOAA representative. Thank you, Mr. Chairman.

CHAIRMAN BORDEN: **Okay, so there are no objections. The motion is adopted with the concurrence of the board.** I would ask the recorder to make a note that NOAA abstained from the vote. Further business on this item?

UPDATE ON THE NEFMC OMNIBUS DEEP-SEA CORAL AMENDMENT

CHAIRMAN BORDEN: If not, we're going to move right into Deep Sea Corals. I think that is the next.

MS. WARE: Just to provide a quick update. I was at the New England Council's Habitat PDT meeting last week, I believe it was. At that point I presented the results of the lobster survey, which are included in your briefing materials. There was discussion on how the council might move forward.

There is a Habitat meeting on August 18th, and I think at that point they will continue to review the data on lobster catch, especially in Gulf of

Maine, and at that point they might make a recommendation to the council. Any decision, from my understanding, on inclusion of lobster traps as a prohibited gear in that amendment would have to go through the full council. That is where the process is right now, and I'll keep the board updated as things progress.

CHAIRMAN BORDEN: Questions for Megan? Terry.

MR. STOCKWELL: Not a question so much as a request. At last week's PDT meeting the need was identified for some map page of the lobster catch, particularly in the Gulf of Maine; it is critical information for the PDT to provide more information to the council. I would be informally requesting the Lobster TC to add that to their work list; with yours and Megan's concurrence.

CHAIRMAN BORDEN: Any comments on that? Does anyone want to comment? Any objection to tasking the PDT; is what you're recommending this go to? TC, Terry.

MR. STOCKWELL: For our Lobster Technical Committee to provide the council's Habitat PDT that information.

MR. ADLER: Terry, what is the progress on this omnibus thing in timelines? Do you have any idea when something is going to actually start to bubble out?

MR. STOCKWELL: This action had been tabled while the council did a significant amount of work on the Habitat Omnibus. The final rules have still not been brought back to the council, so meanwhile the council Habitat Committee is working concurrently on measures that impact the clam fishery on Georges and renewing effort on the work on the krill amendment. That is all subject to whatever the council receives in terms of proposed action on the Habitat Committee. It is at the very beginning, but it is going to go quicker than slower.

MR. ADLER: If I may, are we talking a year?

MR. STOCKWELL: The Habitat Committee works at the will of the council, and just for everyone's reference the Habitat Amendment took, I don't know five years plus, Doug, maybe more. It could get derailed. It could happen as quickly as a year. I would tend to say probably a couple years.

MS. KERNS: Terry, do you know, is this a chart that the committee will need on the 18th, or is there a timeframe in which we have to get back to you? Just so we know how quickly we need to respond.

MR. STOCKWELL: Megan attended last week's meeting, so no this would be to the PDT. Next week's meeting is a committee meeting. My sense is that the TC has a time it needs to develop the quality of the data that is available.

CHAIRMAN BORDEN: Any further discussion on this issue? There is no action required, other than the fact that we're going to refer the issue to the TC. The next issue is update on status for the Jonah Crab FMP implementation schedule.

UPDATE ON STATUS OF THE JONAH CRAB FMP IMPLEMENTATION SCHEDULE

MS. WARE: I'll be very brief. States were required to implement the Jonah crab FMP by June 1st of this year. Most states have done that. We have three states that are still in that process; New York, Delaware and Maryland. But they are all well on their way. I don't have concerns about them getting too further delayed. But if there are concerns or questions from the board, now would be the time to ask.

OTHER BUSINESS

CHAIRMAN BORDEN: Questions for Megan. No questions. Okay, we're down to other business. Does anyone have anything to raise under other business? Dan.

MR. McKIERNAN: If we're going to convene the group to iron out the challenges of the Jonah crab claw details, I would like to also iron out the issue of what incidental bycatch is, and

specifically, I think if there is an incidental bycatch allowance for Jonah crabs, it ought to be the minority of the retained catch aboard, at least not more than 50 percent. I don't want this incidental catch to be like we see in some other fishery management plans; where it is simply just like an artisanal or low level allowance of catch. It needs to be incidental bycatch taken in gears targeting other species. If we could add that to the task of the committee or the group that we're going to convene to iron out that issue, that would be great.

ADJOURNMENT

CHAIRMAN BORDEN: Any objections to doing that? No objections. Any other business? Any objections to adjourning? Meeting is adjourned.

(Whereupon the meeting was adjourned at 2:04 o'clock p.m. on August 4, 2016)



Atlantic States Marine Fisheries Commission

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MEMORANDUM

TO: American Lobster Management Board
FROM: Megan Ware, FMP Coordinator
DATE: October 5, 2016
SUBJECT: Trap Cap Call Summary

On September 7th, members of the American Lobster Management Board (Board) and industry met via conference call to discuss trap caps in Lobster Conservation Management Areas (LCMAs) 2 and 3. Addenda XXI and XXII were developed to modify the trap transfer program to address latent effort and scale the Southern New England (SNE) lobster fishery to the diminished size of the resource. These addenda established individual ownership caps, also known as trap banking, which allow for the purchase and accumulation of traps above the active trap cap. Aggregate ownership caps were also established for entities or companies which hold multiple permits. In addition, Addendum XXI outlined a schedule of active trap cap reductions in LCMA 3 over a five year period (Table 1).

Table 1: Active trap caps and individual ownership caps for LCMAs 2 and 3 as established in Addenda XXI and XXII. LCMA's trap caps are reduced by 5% for five years while LCMA's 2 is held constant. The federal active trap cap in Area 3 is currently 1945.

		Active Trap Cap	Individual Ownership Cap
LCMA 2	All Years	800	1600
LCMA 3	Year 0	2000	2333
	Year 1	1900	2216
	Year 2	1805	2105
	Year 3	1715	2000
	Year 4	1629	1900
	Year 5	1548	1800

In their July 21st letter to the Board, NOAA Fisheries stated it was suspending its rule-making process for Federal trap caps and banking measures as recommended in Addenda XXI and XXII until there is a better understanding of future management action in SNE. Moreover, given the poor condition of the SNE stock and uncertainty surrounding the Board's management response, NOAA Fisheries stated it was imprudent to continue regulatory efforts on trap caps and banking because it could encourage fishermen to invest significant funds in a fishery which could be severely restricted in the near future.

The purpose of the September 7th conference call was to discuss trap caps and trap banking with members of the Board and industry. Participants on the call included Commissioners from Massachusetts and Rhode Island, representatives from NOAA Fisheries, Lobster Plan

Development Team members, and fishermen from LCMAs 2 and 3. Overall, industry members supported federal implementation of trap caps and banking in LCMAs 2 and 3. Participants from LCMA 3 noted that many fishermen have been purchasing traps to prepare for expected reductions in the active trap cap and the delay in implementation is affecting industry's ability to make future business decisions. Area 2 fishermen noted the conservation benefit of having 800 traps tied to a permit that cannot be fished. NOAA Fisheries reiterated its concern that trap banking encourages fishermen to invest in a fishery which the 2015 stock assessment concluded was collapsing. They expressed greater concern with implementing individual ownership caps, which could encourage industry investment, than with the annual reductions in the LCMA 3 active trap cap.

One of the major concerns highlighted on the call is the growing disconnect between state and federal regulations. Since Addenda XXI and XXII outline a 5 year reduction in the active trap cap and individual ownership cap for LCMA 3, each year of delay creates a greater difference between the trap caps specified by the Commission and those adopted by NOAA Fisheries.

Moving forward, there are a couple of options for the Board. Given the primary concern of NOAA Fisheries is the implementation of individual ownership caps, the Board could recommend that NOAA Fisheries implement the active trap cap for LCMA 3, as specified in Section 3.2.3 of Addendum XXI. This would align state and federal regulations for the active trap cap in LCMA 3 and provide a means of reducing fishing effort commensurate with the annual trap reductions already in place. Or, the Board could also revisit this issue in the spring of 2017 when further management action has been taken in response to the poor condition of the SNE stock.



Atlantic States Marine Fisheries Commission

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MEMORANDUM

TO: American Lobster Management Board
FROM: Lobster Reporting Work Group
DATE: September 27, 2016
SUBJECT: Reporting Recommendations in the Lobster Fishery

On September 26, 2016 the Lobster Reporting Work Group (Work Group) met to discuss data deficiencies in the lobster fishery and ways to improve them. The Work Group discussed several aspects of harvester and dealer reporting, including temporal and spatial data deficiencies, the prevalence of electronic reporting, and the percentage of trip level reporting by active harvesters. The Work Group also reviewed the collection of biological data in the lobster fishery, including port and sea sampling, and whether this meets the needs of the current stock assessment model.

As a part of their discussion, the Work Group came up with the following goals for reporting in the lobster fishery:

1. Improve the spatial resolution of harvester reporting.
2. Utilize the latest technology to improve and increase reporting.
3. Collect greater effort data in harvester reports.
4. Define inshore versus offshore areas in the lobster fishery.
5. Proactively address data concerns of the Atlantic Large Whale Take Reduction Team (ALWTRT).

In order to achieve these goals, the Work Group compiled a list of recommendations to improve reporting in the lobster fishery. The recommendations are categorized as short-term, intermediate, and long-term goals.

Short-Term (less than 1 year)

- Recommend that Maine's 10% active harvester reporting only include commercial license holders who have actively fished in the previous two years for which data is available. Currently, recreational license holders are included in the 10% of lobster harvesters selected to submit trip level reports in Maine. Removing non-commercial fishermen from the sampling pool will ensure that the greatest amount of harvester data is collected from the current reporting requirement.
- Define the inshore fishery as occurring from 0-3 miles offshore, the nearshore fishery as occurring between 3-12 miles from shore, and the offshore fishery as greater than 12 miles from shore. There is currently no definition of inshore versus offshore in the lobster fishery. As a result, when asked to analyze effort or catch in the offshore or inshore fishery, the Technical Committee assigns NMFS statistical areas to one of the two areas. This is an imperfect system as some statistical areas span large distances from shore and include both inshore and offshore fishermen.

Intermediate (1-2 years)

- Require 100% active harvester reporting for all state and federally permitted lobster license holders. For those jurisdictions which are resource limited and unable to

achieve 100% harvester reporting, at a minimum, states should require reporting from a statistically valid sample of harvesters. In a 2007 memo to the Board, the Technical Committee defined this as 30% active harvester reporting. The Work Group recommends the TC revisit this analysis to make sure 30% is still the minimum percentage of harvester reporting required for a statistically valid sample.

- Add the following data components to current harvester reporting coastwide: number of trap hauls, soak time, catch disposition, gear configuration, number of vertical lines, LCMA, and depth. Trap hauls and soak time are recommended as they are an important measure of effort in the fishery. Gear configuration and number of vertical lines directly address data concerns from the ALWTRT as this information helps determine potential interactions with protected resources. LCMA and depth will provide additional information on where the fishery is occurring.
- Further delineate NMFS statistical areas on harvester trip reports. While statistical areas are an important component of the current stock assessment model, these areas do not provide the spatial resolution needed to fully understand where the lobster fishery is taking place. This is a concern that more precise information on the location of the fishery is needed, especially as marine spatial planning and habitat protection continue in the Atlantic Ocean. At a minimum, NMFS statistical areas should delineate distance from shore (inshore, nearshore, offshore).

Long Term (greater than 2 years)

- Establish an electronic swipe-card system for harvester and dealer reports in the lobster fishery. A swipe-card system is currently used in the Maine elver and urchin fisheries and in the Massachusetts shellfish fishery. The system works by dealers swiping harvester cards during a transaction. Harvesters and dealers are unable to complete a transaction if reporting and/or permits are not current. Advantages of the swipe card system include ease of dealer reporting, quick linking of harvester and dealer reports, pre-programmed fishermen information which reduces data entry mistakes, and the ability ensure reporting compliance.
- Incorporate Vessel Monitoring Systems (VMS) or another locator beacon to all lobster vessels. As previously mentioned, spatial data in the lobster fishery is lacking and this hinders the ability to identify areas critical to the lobster fishery. By requiring a system like VMS, the fishery will be able to show not only where effort is taking place but also important transit routes for fishermen.
- Establish a fixed-gear Vessel Trip Report (VTR) for all federal permit holders. One of the major hurdles in lobster reporting is that current reporting forms are intended for a wide variety of gear types. This limits the detail of information which can be collected. A fixed-gear VTR would allow managers to address specific data needs in fixed gear fisheries such as the number of hauls, soak time, the number of sets (or panels for pound nets), and total gear in water. This VTR would only be offered in an electronic format and all federal lobster fishermen would be required to report electronically. A fixed-gear VTR would be applicable to pot gears, pound nets, and anchored gill nets.

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Atlantic States Marine Fisheries Commission

DRAFT ADDENDUM II TO THE INTERSTATE FISHERY MANAGEMENT PLAN FOR JONAH CRAB

Coastwide Standard for Claw Landings



Vision: Sustainably Managing Atlantic Coastal Fisheries

This draft document was developed for Management Board review and discussion at the August 2016 meeting week. This document is not intended to solicit public comment as part of the Commission/State formal public input process. However, comments on this draft document may be given at the appropriate time on the agenda during the scheduled meeting. Also, if approved, a public comment period will be established to solicit input on the issues contained in the document.

September 2016

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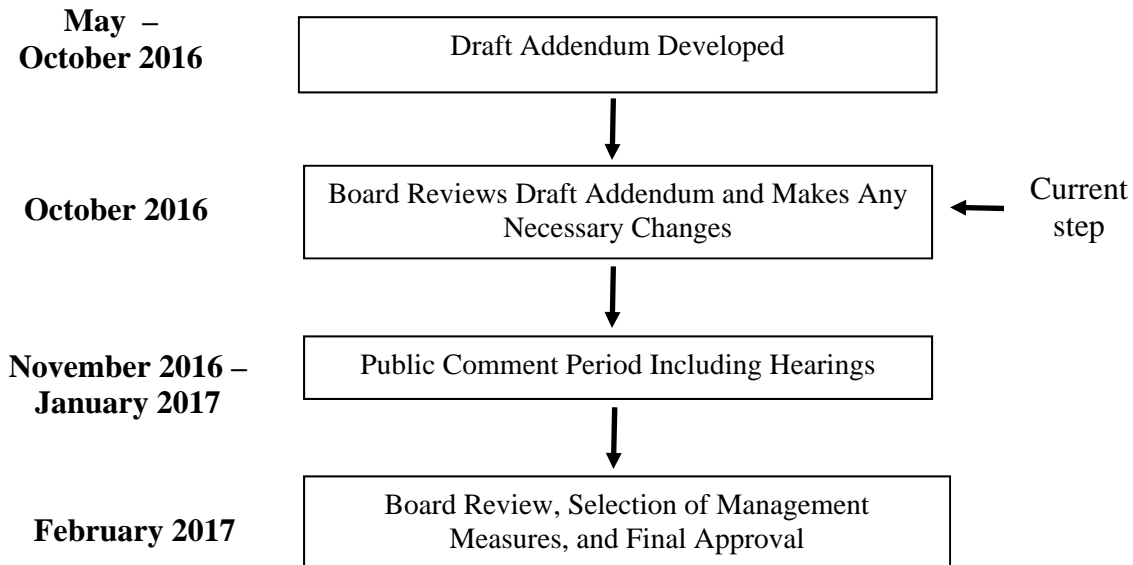
Public Comment Process and Proposed Timeline

At its May 2016 meeting, the American Lobster Management Board (Board) discussed concerns over the equity of the current claw provision in the Jonah Crab Fishery Management Plan (FMP). The Board initiated Draft Addendum II to consider establishing a coastwide standard for Jonah crab claw landings.

The public is encouraged to submit comments regarding the proposed management options in this document at any time during the addendum process. The final date comments will be accepted is **Month Day at 5:00 p.m. EST**. Comments may be submitted by mail, email, or fax. If you have any questions or would like to submit comments, please use the contact information below.

Mail: Megan Ware
Atlantic States Marine Fisheries Commission
1050 N. Highland St. Suite 200A-N
Arlington, VA 22201
Fax: (703) 842-0741

Email: mware@asmfc.org
(Subject line: Jonah Crab
Draft Addendum II)



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1.0 Introduction

The Atlantic States Marine Fisheries Commission (ASMFC) coordinates the interstate management of Jonah crab (*Cancer borealis*) in state waters (from 0-3 miles offshore). ASMFC manages Jonah crab through an Interstate Fishery Management Plan (FMP), which was approved in August 2015 under the authority of the Atlantic Coastal Fisheries Cooperative Management Act (1993). Management authority in the exclusive economic zone (EEZ), which extends from 3-200 miles offshore, lies with NOAA Fisheries. The management unit for Jonah crab includes the Atlantic states from Maine through Virginia. The biological range of the species is primarily from Newfoundland, Canada to Florida.

The American Lobster Management Board (Board) initiated Addendum II to the FMP to consider a coastwide standard for claw landings in the Jonah crab fishery. The FMP currently specifies a whole crab fishery with the exception of individuals from New Jersey, Delaware, Maryland and Virginia who can prove a history of claw landings before the June 2, 2015 control date. The FMP allows claw landings for these fishermen due to the historic practice of declawing Jonah crab in the Delmarva Peninsula. After final action was taken on the FMP, claw fishermen were identified in New York and Maine. In accordance with the FMP, these New York and Maine fishermen are required to land whole crabs.

Given concerns regarding the equity of the current claw provision (namely that some fishermen with a history of claw landings are allowed to continue this practice while others must land whole crabs) and the fact that the fishery is primarily executed in federal waters, the Board requested NOAA Fisheries provide regulatory guidance on the claw provision in the FMP. In a letter dated February 29, 2016, NOAA Fisheries highlighted potential challenges with implementing the current claw regulation since it does not provide equal opportunities to like participants across the fishery.

The purpose of this Draft Addendum is to consider modifications to the claw provision for Jonah crab. The Board is considering a range of options which would establish a coastwide standard for claw harvest in the Jonah crab fishery.

2.0 Overview

2.1 Statement of the Problem

The Jonah Crab FMP established a whole crab fishery with the exception of individuals from New Jersey, Delaware, Maryland, and Virginia, who can prove a history of claw landings before June 2, 2015. However, following approval of the FMP, fishermen from New York and Maine who were landing claws were identified. These individuals are currently only allowed to land whole crabs. Given concerns about the equity of the current claw provision, as well as potential challenges implementing the regulation in federal waters, the Board initiated this addendum to consider establishing a coastwide standard for claw harvest in the Jonah crab fishery.

2.2 Background

Jonah crab has long been considered a bycatch of the lobster fishery; however, in recent years there has been an increase in the targeted harvest of Jonah crab. Since the early 2000s, landings of Jonah crab have increased 650%, creating a mixed crustacean fishery which can target lobster or crab at different times of the year based on slight, legal gear modifications and small shifts in the areas in which traps are fished. This rapid increase in landings can be attributed to a number of factors include a decrease in the abundance of lobsters in Southern New England, causing fishermen to supplement their income with Jonah crab, and an increase in the price of other crab (such as Dungeness), creating a substitute market for Jonah crab. There is also speculation that the increase in landings reflects an increase in abundance of Jonah crab. While a stock assessment has not been completed for the species, data from the Rhode Island Fish Trawl Survey suggests that the abundance of cancer crabs has increased since 1959. As a result of the immense growth in this fishery, ASMFC approved a FMP for Jonah crab to support the implementation of a unified coastal management program which promotes the conservation and full utilization of the Jonah crab resource.

Landings in the commercial fishery fluctuated between approximately 2 and 3 million pounds throughout the 1990's but steadily rose to over 17 million pounds in 2014. A similar increase occurred in the economic importance of the fishery as ex-vessel value rose from roughly \$1.5 million in the 1990's to an estimated \$13 million in 2014. Landings in 2014 predominately came from Massachusetts (70.4%), followed by Rhode Island (24.5%).

While the majority of Jonah crab is harvested as whole crabs, fishermen from numerous states, including Maine, New York, New Jersey, Delaware, Maryland and Virginia land claws. Jonah crab claws are relatively large and can be an inexpensive substitute for stone crab claws. As a result, they can provide an important source of income for fishermen. Claws can also be harvested for personal consumption; however, these landings are not well documented. A historic claw fishery takes place along the Delmarva Peninsula. These traditionally small boat fishermen harvest Jonah crab claws because they do not have a seawater storage tank on board to store whole crabs. As a result, landing claws avoids economic inefficiencies for this small fleet.

Jonah Crab Claw Landings

Information on the magnitude of the Jonah crab claw fishery is limited. As a result, it is unclear how many fishermen are landing claws or the magnitude of pounds being harvested. The primary obstacle in obtaining this information is that trip level harvester reporting has not been required in all jurisdictions. Furthermore, prior to the implementation of the Jonah Crab FMP, many states did not require trip-level dealer reporting to delineate between whole crabs and claws.¹ As a result, data on the Jonah

¹ As a part of the Jonah Crab FMP, states were required to implement Jonah crab dealer reporting which specifies market grade by June 1, 2016.

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crab claw fishery is incomplete. Refer to Appendix 1 for a summary of state reporting in the Jonah crab fishery prior to the implementation of the FMP.

Table 1 shows claw landings reported to the ACCSP Data Warehouse between 2010 and 2015. Total claw landings from 2010-2015 were just under 150,000 lbs; however, this is likely an underestimate given that Jonah crab dealer reporting has not always specified market category and claws harvested for personal consumption are often not reported. Claws are primarily landed by pots and traps, with lobster pots accounting for up to 95% of the claw landings (a majority of pots and traps are not specified in the data reports so it is unclear what percentage of these landings are from lobster pots versus fish pots). Gill net and otter trawl fishermen comprise 2.7% of claw landings. When these gears encounter Jonah crab, fishermen harvest the claws because they are often forced to detach the claws in order to remove the crab from the net.

Table 1: Jonah crab claw landings in the management unit (ME through VA) from 2010-2015. (Source: ACCSP Data Warehouse.) The unspecified ‘pots/traps’ category could include lobster pots, fish pots, conch pots, and crab traps.

Year	Pots/traps (Type not specified)	Lobster Pot	Fish Pot	Gill Net	Otter Trawl	Total
Jonah Crab Claw Landings from 2010 – 2015 (lbs)	75,847	66,296	3,081	2,115	1,958	149,297
Percent of Total	50.8%	44.4%	2.1%	1.4%	1.35%	100%

While prior to the FMP Maryland did not require reporting to differentiate between claws and whole crabs, efforts were made to determine the market category of Jonah crab landings from trip level reports. ACCSP confidential dealer reports and state fishing report data were analyzed. Available fishermen were interviewed and a Jonah Crab Advisory Panel member described the practices of the fleet over the time period. From these efforts, Maryland staff determined that between 2000 and 2015, only one fishing vessel predominately landed whole crabs while the remainder of the fleet (n=18) landed both claws and whole crabs. The information also showed that the number of trips landing claws has increased from approximately 19 trips in 2011 to 70 trips in 2015. The amount of claws landed on these trip ranged from just a few pounds to a couple thousand pounds. These vessels used a variety of gears including lobster pots, conch pots, otter trawls, and gill nets.

Jonah Crab Claw Morphometric and Mortality Data

To date, the life cycle of Jonah crab is poorly understood. Several studies have recently been conducted to better understand the biology of this species. As part of a Saltonstall-Kennedy Grant awarded in 2015 to collect biological data in the Jonah crab fishery, the

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Massachusetts Division of Marine Fisheries measured the carapace width and claw length of several hundred Jonah crabs from Southern New England (inshore and offshore) and Georges Bank. From this data, the relationship between carapace width and claw length was examined (Figure 1). The data suggests that, for a male crab whose carapace width meets the minimum size of 4.75" (120.65 mm), an average (expected) claw length would be 2.47" (62.84mm).

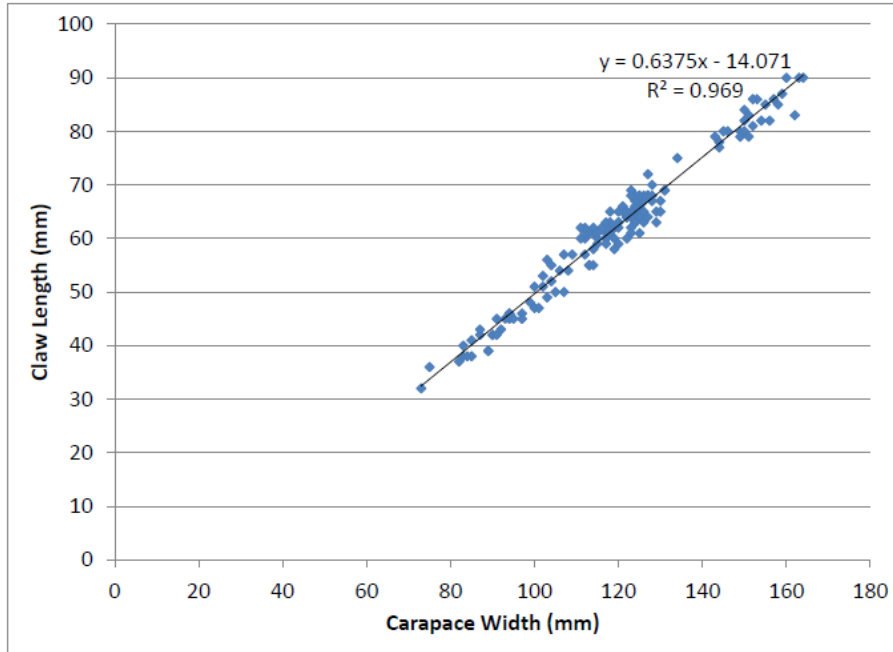


Figure 1: Linear regression between the carapace width and claw length of male Jonah crabs (n=153). Measurements from regenerated claws were removed using a least square method. Regional differences in claw length may be masked since crabs from Southern New England and Georges Bank are presented together (Source: MA DMF).

Morphometric data was also collected on female Jonah crabs in Georges Bank and Southern New England. Figure 2 shows that, for a female crab whose carapace width meets the minimum size of 4.75" (120.65mm), the expected claw length would be 2.06" (52.33mm). This is smaller than the expected claw length for males. Furthermore, 100% of female crabs sampled had claw lengths less than 2.75" (69.85mm).

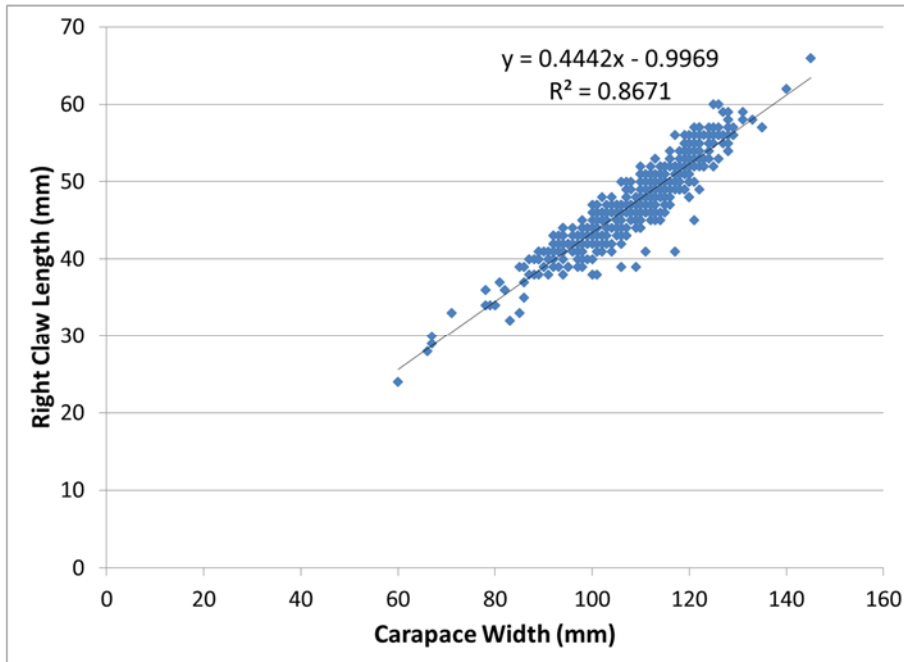


Figure 2: Linear regression between the carapace width and claw length of female Jonah crabs (n=480). Measurements from regenerated claws were removed using a least square method. Regional differences in claw length may be masked since crabs from Southern New England and Georges Bank are presented together (Source: MA DMF).

Preliminary data is also available from a small scale laboratory study which is investigating Jonah crab claw removal and its impacts on survivorship. The study, conducted by New Hampshire Fish & Game and the University of New Hampshire, looked at the biological implications of claw harvest by subjecting crabs to one of three treatments: one claw removed, two claws removed, and no claws removed. Crabs (n=232) were monitored in seawater trays over a four week period and their activity levels and survival were evaluated. Preliminary results suggest that 19% of crabs died when no claws were removed, 56% of crabs died when one claw was removed, and 74% died when both claws were removed. There is 100% mortality when whole crabs are harvested.

Federal Adoption of the Jonah Crab FMP

Given that the Jonah crab fishery is primarily executed in federal waters and there is a need for NOAA Fisheries to enact complementary measures in the EEZ, the Board sent a letter to NOAA Fisheries asking for preliminary guidance on the current claw provision. In a letter dated February 29, 2016, NOAA Fisheries responded to the Board's request, highlighting several concerns with a claw fishery in federal waters. Specifically, NOAA Fisheries reiterated the Law Enforcement Committee's position that a claw fishery could "complicate effective enforcement of a minimum-size standard, and introduce an opportunity to move undersized crabs through the system".² Additionally, NOAA

² John Bullard to Robert Beal. 29 February 2016. Re: Jonah Crab Claw Fishery.

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Fisheries stated that it “may prove challenging”³ to implement the current claw provision due to Magnuson-Stevens Fishery Conservation and Management Act’s National Standard 4, which requires that management measures “not discriminate between residents of different states”⁴. NOAA Fisheries noted their support of the Commission’s public process, encouraging the Board to consider changes to the Jonah Crab FMP through an addendum which encompasses a range of alternatives and is released for public comment. Refer to Appendix 2 for a copy of the NOAA Fisheries letter received by ASMFC.

Given that the current claw provision does not provide the same fishery opportunities to like participants, the Board initiated this addendum to the Jonah Crab FMP to consider establishing a coastwide standard for claw harvest. The Draft Addendum considers a range of options including a strictly whole crab fishery and the allowance of claw harvest coastwide.

3.0 Management Program

This section proposes to replace “Crab Part Retention” in *Section 4.1* of the Jonah Crab FMP.

Option A: Status Quo

Under this option, only whole crabs which meet the minimum size of 4.75” may be retained and sold with the exception of individuals who can prove a history of claw landings before the June 2, 2015 control date in the states of New Jersey, Delaware, Maryland, and Virginia.

The PDT notes that if the Board pursues this option, it may be necessary to specify the size and volume of claws which may be harvested.

Option B: Coastwide Whole Crab Fishery

Under this option, only whole crabs which meet the minimum size of 4.75” may be harvested and sold coastwide. Once landed, claws may be detached from the whole crab and sold. There is no minimum size for claws detached at the dock.

This option would eliminate the provision that those who can prove a history of claw landings before June 2, 2015 in the states of New Jersey, Delaware, Maryland, and Virginia can land detached claws.

Option C: Claw Harvest Permitted Coastwide

Under this option, claws may be detached and harvested at sea if they meet a minimum claw length of 2.75”. This minimum claw length is a more conservative length than the expected claw length of 2.5” for a Jonah crab at the 4.75” minimum carapace width.

³ John Bullard to Robert Beal. 29 February 2016.

⁴ Ibid.

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This was chosen to ensure claws are harvested from neither sublegal crabs nor berried females, as it is not possible to discern at the dock the size of the declawed crab or whether it is an egg-bearing female. Two claws may be harvested from the same crab. Bycatch limits will remain in effect per Addendum I such that a fisherman fishing under the bycatch allowance may land up to 2,000 claws (1,000 whole crabs = 2,000 detached claws). For reference, 2,000 claws is equivalent to approximately eight 5-gallon buckets. Lobster permit holders are not constrained by the bycatch limit and can land an unlimited number of claws.

Fishermen may also harvest whole crabs which meet the 4.75" minimum size under this option. Once landed, claws may be detached from whole crabs and sold. There is no minimum size for claws which are detached at the dock.

This option would eliminate the need for the provision that those who can prove a history of claw landings before June 2, 2015 in the states of New Jersey, Delaware, Maryland, and Virginia can land detached claws.

4.0 Compliance

If approved, states must implement the management measures in Addendum II by Month, 201X.

5.0 Recommendation for Federal Waters

The management of Jonah crab in the EEZ is the responsibility of the Secretary of Commerce through the National Marine Fisheries Service (NMFS). The Atlantic States Marine Fisheries Commission recommends that the federal government promulgate all necessary regulations in Section 3.0 to implement complementary measures to those approved in this addendum.

6.0 Literature Cited

ASMFC, 2015. [Interstate Fishery Management Plan for Jonah Crab](#). Atlantic States Marine Fisheries Commission, Arlington, VA. 73p.
The University of Rhode Island Graduate School of Oceanography. 2016. 2015 Annual Fish Trawl Survey Report. 6p.

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Appendix 1: States Jonah crab reporting prior to implementation of the Jonah Crab FMP.

	NMFS	ME	NH	MA	RI	CT	NY	NJ	DE	MD	VA
Is it lawful for harvesters to land Jonah crabs and NOT report?	No for most federal permit holders. Yes for federal lobster-only permit holders and Jonah crab-only harvesters with no other federal permits	Yes	No	No	No	No	No	Yes, only if the vessel does not have a federal permit and is fishing state waters.	No	No	No
Trip-level harvester data collected delineates landings as whole crab vs. claw	No	No	No	No	No	No	No	No	No	No	Yes (though not always done in the past)
Trip-level dealer data is collected that would capture Jonah crab transactions	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes, through SAFIS for vessels with federal permit.	No	Yes	Only for federal water harvest that is sold to a federal dealer and can be tied back to a VTR
Trip-level dealer data delineates transactions as whole crab vs. claws	No	Yes	No	Yes	Yes	Yes	Yes	No	No	No	No

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Appendix 2



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
GREATER ATLANTIC REGIONAL FISHERIES OFFICE
55 Great Republic Drive
Gloucester, MA 01930-2276

FEB 29 2016

Robert Beal
Executive Director
Atlantic States Marine Fisheries Commission
1050 N. Highland St, Suite A-N Arlington, VA 22201

Dear Bob:

Thank you for your February 17, 2016, letter requesting preliminary guidance on the development of a claw-only Jonah crab fishery under the Interstate Fishery Management Plan for Jonah Crab. As your letter points out, I cannot provide definitive, final guidance on this issue because the Lobster Board continues to discussion revisions to claw-only measures and my staff have not yet completed the rulemaking process to implement the management measures recommended in the Jonah Crab Plan. I can provide guidance on preliminary conservation, enforcement and legal issues associated with a claw-only fishery.

As you noted, I urged the Lobster Board in my July 16, 2016 letter to develop a whole-crab fishery, as the Jonah Crab Plan did "not contain information on the post-release survivability of Jonah crab after one or both claws has been removed." My staff echoed this concern at the August 2016, Lobster Board meeting. Since that time, the University of New Hampshire and New Hampshire Fish and Game have undertaken a small scale laboratory study to evaluate the impacts of claw removal on the health and behavior of Jonah crabs. Preliminary results from these trials indicate high levels of mortality (approximately 50 percent for crabs with one claw removed and approximately 75 percent for crabs with both claws removed). Unless additional information becomes available indicating that post-claw removal survival is higher than this preliminary study suggests, I believe the Lobster Board would have a difficult time justifying that a claw-only fishery is a sustainable practice and is consistent with the Jonah Crab Plan goals and objectives.

As you noted, the Law Enforcement Committee previously weighed in on the option for a claw-only fishery, stating "Introducing an option to retain parts or remove claws will complicate effective enforcement of a minimum-size standard, and introduces an opportunity to move undersized crabs through the system. Adding an additional measurement standard for claws, such as a count-per-pound or something similar, will greatly complicate enforcement requirements to monitor and inspect fishing." Staff from NOAA's Office of Law Enforcement participated in that discussion and concurred with the Committee's recommendation. In addition, the Office of Law Enforcement has indicated that implementing multiple sets of requirements, such as whole and claw-only provisions, in a single management area complicates and weakens enforcement. This is why we have historically supported one set of regulations that can be applied consistently across jurisdictions and areas. I believe the Lobster Board should



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discuss and closely evaluate the potential enforcement concerns associated with a claw-only fishery.

As you know, any regulation promulgated under the Atlantic Coastal Fisheries Cooperative Management Act must be in accordance with the Magnuson-Stevens Fishery Conservation and Management Act's National Standards. Your letter referenced National Standard 4, which states in part that "Conservation and management shall not discriminate between residents of different states..." During our rulemaking process, we would formally review whether the Commission-recommended Jonah crab measures comply with National Standard 4, including whether it is a conservation measure without discriminatory intent. It may prove challenging for us to implement the claw-only exemption, as constructed in the August 2015 Jonah Crab Plan because of National Standard 4. My recollection of the August claw-only discussion is that additional development of claw-only permitting requirements and management measures would be necessary prior to implementation. Once developed and recommended, these measures would be subject to a formal review under National Standard 4.

While I remain in favor of a whole-crab fishery, I am supportive of the Commission's public process. Changes to the Jonah Crab Plan should be considered by Lobster Board through an addendum that encompasses a range of alternatives and subsequently released for public comment.

Thank you for the opportunity to provide additional comments on this important issue. If you have any questions, please contact Allison Murphy at (978) 281-9122 or allison.murphy@noaa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read 'JKB', with a long horizontal line extending to the right.

John K. Bullard
Regional Administrator

cc: David Borden, American Lobster Board Chairman
Megan Ware, ASMFC Fishery Management Plan Coordinator



Atlantic States Marine Fisheries Commission

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MEMORANDUM

TO: American Lobster Management Board
FROM: Jonah Crab Working Group
DATE: September 21, 2016
SUBJECT: Bycatch Definition in the Jonah Crab Fishery

On their September 12th conference call, the Jonah Crab Working Group discussed the definition of bycatch in the Jonah crab fishery. The Jonah Crab Fishery Management Plan (FMP) established a 200 crab per day, 500 crab per trip incidental bycatch limit for non-trap gear. This bycatch limit was increased to 1,000 crab per trip under Addendum I to accommodate several mobile gear trips which were above the original allowance. Furthermore, Addendum I established a 1,000 crab per trip incidental bycatch limit for non-lobster traps, which include fish pots, whelk pots, and crab pots.

While the bycatch limits prescribed in Addendum I are intended to accommodate incidental catch, no definition of bycatch is provided in the Addendum. As a result, fishermen harvesting Jonah crab under the bycatch limit may, in fact, 'direct' on Jonah crab by landing 1,000 crabs per trip. Moreover, there is the potential for a small-scale fishery to develop in which fishermen can land 1,000 crabs per trip and nothing else. This does not reflect the intention of the bycatch limit: to account for Jonah crab caught while targeting another species.

To address this concern, the Jonah Crab Working Group is proposing that a second issue be added to Draft Addendum II. This issue would consider creating a coastwide definition of bycatch in the Jonah crab fishery such that incidental bycatch must remain under a percent composition of total catch. Language proposed for inclusion in Draft Addendum II is as follows:

Issue 2: Bycatch Definition

This section considers adding a definition of incidental bycatch in the Jonah crab fishery to Sections 3.1 and 3.2 of Addendum I.

Option A: Status Quo

Under this option, there would be no definition of bycatch in the Jonah crab fishery. Fishermen using non-trap gear and non-lobster trap gear could land Jonah crab up to the bycatch limit without having another species on board.

Option B: Bycatch Defined as Percent Composition

Under this option, Jonah crab caught under the incidental bycatch limit must comprise at all times during a fishing trip an amount lower, in pounds, than the target species the deployed gear is targeting.