PROCEEDINGS OF THE

ATLANTIC STATES MARINE FISHERIES COMMISSION

ATLANTIC HERRING MANAGEMENT BOARD

The Westin Crystal City
Arlington, Virginia
Hybrid Meeting

August 4, 2026

Approved November 9, 2026

TABLE OF CONTENTS

Call to Order 1

Approval of Agenda 1

Approval of Proceedings from October 27, 2025 1

Public Comment 1

Consider 2025 Research Track and 2026 Management Track Stock Assessment 1
- Presentation of Stock Assessment Reports 1
- Presentation of Peer Review Panel Reports 2
- Consider Acceptance of NEFS Research Track Stock Assmt. and Peer Review Report for Management Use 10

Update from New England Fishery Management Council on Atlantic Herring Activity 11

Adjournment 13

INDEX OF MOTIONS

1. **Approval of agenda** by consent (Page 1).

2. **Approval of Proceedings of October 27, 2025** by consent (Page 1).

3. **Move to accept the 2025 Research Track Stock Assessment and Peer Review Report for management use** (Page 10). Motion by Ray Kane; second by Dennis Abbott. Motion passes by unanimous consent (Page 10).

4. **Move to adjourn** by consent (Page 13).

ATTENDANCE

Board Members

Megan Ware, ME, proxy for C. Wilson (AA)
Rep. Allison Hepler, ME (LA)
Renee Zobel, NH (AA)
Doug Grout, NH (GA)
Dennis Abbott, NH, proxy for Sen. Watters (LA)
Melanie Griffin, MA, proxy for D. McKiernan (AA)
Raymond Kane, ME (GA)
Rep. Sarah Peake, MA (LA)
Nicole Lengyel Costa, RI, proxy for J. McNamee (AA)
Eric Reid, RI, proxy for Sen. Sosnowski (LA)
Matt Gates, CT, proxy for S. Madsen (AA)
Robert LaFrance, CT, proxy for B. Hyatt (GA)
Rep. Joesph Gresko, CT (LA)
John Maniscalco, NY, proxy for M. Gary (AA)
Scott Curatolo-Wagemann, (NY), proxy for E. Hasbrouck (GA)
Sen. Monica Martinez, NY (LA)
Joe Cimino, NJ (AA)
Adam Nowalsky, NJ, proxy for Sen. Gopal (LA)
Allison Murphy, NMFS

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

Ex-Officio Members

Staff

Bob Beal
Toni Kerns
Tina Berger
Madeline Musante
Alexander Law
Caitlin Starks
Emilie Franke
Tracey Bauer
James Boyle
Chelsea Tuohy
Katie Drew
Jeff Kipp
Samara Nehemiah
Jainita Patel

The Atlantic Herring Management Board of the Atlantic States Marine Fisheries Commission convened in the Jefferson Ballroom of the Westin Crystal City Hotel, Arlington, Virginia, via hybrid meeting, in-person and webinar; Tuesday, August 4, 2026, and was called to order at 10:00 a.m. by Chair Douglas E. Grout.

CALL TO ORDER

CHAIR DOUGLAS E. GROUT: Good morning, everybody. If everybody could take their seats and we'll get this Atlantic Herring Board meeting going. My name is Doug Grout; I am the Chair. We have a couple of agenda items here, one to consider the Research Track and Management Track Stock Assessments, and then we'll have an update on Fishery's Management Council on herring activities.

APPROVAL OF AGENDA

CHAIR GROUT: To begin with, I would like to see if there is an approval of the agenda here. Are there any objections to the agenda, any additions to the agenda, I should ask first. Seeing none; is there any objection to approving the agenda? It's approved by unanimous consent.

APPROVAL OF PROCEEDINGS

CHAIR GROUT: We also in our meeting materials we have proceedings from the October 2025 meeting. Are there any changes or edits that people would like to make? Seeing none; is there any objection to approving the minutes? Approved by unanimous consent. We now have public comment. Is there anybody out in the audience that would like to public comment? Yes, come on up.

PUBLIC COMMENT

MR. JASON JOYCE: Thank you, Mr. Chair and Commissioners. My name is Jason Joyce; I am a Maine lobsterman and Director of Advocacy at the New England Fishermen's Stewardship Association. NEFSA does not object to accepting the 2025 Research Track as an ecological foundation for the '26 Management Track.

We appreciate the additional data and revisions made since the Research Track. However, several important uncertainties remain. The assessment still lacks an independent Age 1 recruitment index. State survey information has not been incorporated and questions remain regarding the independent biological evidence supporting the model's estimate of current stock abundance.

The assessment also acknowledges unresolved numbers at age patterns, and continued uncertainty in the projections. We respectfully ask the Board to clarify that acceptance for management use does not mean these issues have been resolved, but that the Research Track should independently determine stock status or catch levels. These uncertainties should remain clearly documented and be fully considered when future management measures and catch limits are established. Thank you.

CHAIR GROUT: Thank you, Mr. Joyce. Is there any other public comment here? Any online? Okay, Toni has an announcement.

MS. TONI KERNS: My favorite part of the meeting, to mess up who is online. This morning, we have Sarah Peake, Melanie Griffen, Scott Curatolo Wagemann and Alli Murphy online.

CHAIR GROUT: Thank you.

CONSIDER 2025 RESEARCH TRACK AND 2026 MANAGEMENT TRACK STOCK ASSESSMENT

CHAIR GROUT: Item 4 on the agenda is to Consider the 2025 Research Track and 2026 Management Track Assessments, and we have John Deroba, who will be giving a presentation on that, I assume remotely. John, are you ready?

DR. JOHN DEROBA: I'm ready. We can just dive right in.

PRESENTATION OF STOCK ASSESSMENT REPORTS

DR. JOHN DEROBA: I'm going to start with a summary of the Research Track. This will be brief, because it's almost two years old now, and it's I

think a bit more impactful to talk about the Management Track. There is the Research Track Working Group and all the folks that contributed.

I just wanted to acknowledge them, because it was really a great working group with a lot of great people pitching in some good stuff. Thanks to everybody that was involved in the Research Track.

PRESENTATION OF PEER REVIEW PANEL REPORTS

DR. DEROBA: The Peer Review was completed in March of '25. There is the Review Panel with Conor McManus as the Chair, Henrik Sparholt, Gary Melvin and Florian Berg.

They concluded that all the Terms of Reference were met and the methods were accepted. I'll quickly go over Terms of Reference 1 through 3, and then jump into a little more detail on the modeling. Term of Reference 1 is considered ecosystem and climate. This was a really massive undertaking.

The place where it contributed the most was it identified likely covariates for us to evaluate, particularly covariates affecting recruitment we tested in the assessment later. The covariates identified were temperature, planktonic food sources, and haddock acting as predators on herring eggs that might be limiting recruitment.

Term of Reference 2 was, get the catch data together. We didn't make a whole lot of changes here, because you can make changes to data in management tracks in the future, so we didn't really focus much on making data changes. We did switch to the Catch Accounting Monitoring System, CAMS, that is close for what it stands for, and that begins in 2020.

Term of Reference 3 was, get the survey data together. Like catch we didn't make a whole lot of changes here. The survey inputs were similar to previous assessments, used the NMFS Spring, Fall and Summer Bottom Trawl Surveys, and an acoustic index that is collected during the Fall Bottom Trawl Survey.

We did examine the Maine/New Hampshire and Massachusetts Bottom Trawl Survey. The trends were generally consistent with assessment outcomes, but due to their small spatial footprint they weren't included in the assessment model. But we are working on trying to combine the state surveys with the federal surveys. As the gentleman mentioned, lacking Age 1 observations is a weakness, and the state surveys do catch some Age 1 fish. We are hoping to resolve that issue by combining the Federal and State surveys moving forward in the future. We did try to use an index of recruitment based on sea bird diet.

There is a publication out about that now that describes in great detail why it's not ready for prime time and some of the challenges associated with that. We gave that a shot but it needs some more follow up. Term of Reference 4, which I like to call, do a stock assessment. Our major priority here was move from the ASAP platform to the Woods Hole Assessment Model WHAM platform.

We used a broad range of model selection criteria, evaluated nearly everything under the sun, statistical properties, start year, time varying selectivity, natural mortality, all sorts of random effects. As I mentioned, recruitment covariates, and I'm sure some other things that I'm not remembering any longer.

Wd did well over 300 model variants. On the recruitment covariate topic, we didn't find any single recruitment covariate was a main driver, although all the ones we evaluated probably to some extent, are having some minor effect, but none of them made it into the final model as a main driver.

Ultimately, we ended up with a preferred model that had two fishing fleets. If you followed the herring assessment it has a mobile fleet, which is trawls and purse seines and a fixed gear fleet, which is largely Canadian weir catches. The model began in 1987; it used to begin in 1965. Beginning in 1987 was a necessity, because that is when age data begins in the surveys.

To evaluate all the bells and whistles available in WHAM, age data is kind of imperative, so we had to start in '87. M ended up being constant at 0.35, which was the status quo approach. We tried all sorts of things with natural mortality, and either the models didn't behave, they had diagnostic problems, or there was just not enough support in the data to estimate anything different.

Selectivity does not change through time. Recruitment is an independent and identically distributed random effect, that means there is no correlation to years, just each year recruitment can go wherever it would like, with no relationship to previous years or future years. The numbers at age random effects were correlated among ages.

I'll get into more detail about this when I get to the Management Track, but it's an interesting pattern, like I said, I'll talk more about that. What you're seeing here in the top graph is the recruitment time series and the spawning stock biomass time series in the bottom panel. The purple line is the 2024 Management Track using the ASAP Platform.

The yellow line is the preferred model coming out of the 2025 Research Track using the WHAM Platform. You can see in the Recruitment Time Series there are broad similarity. There are some peaks and valleys that don't quite jive, but broad similarity and spawning stock biomass is very similar as well. Reference Points, we could not estimate a stock recruitment curve, so we continued the use of proxies F40% and B40%. F40% only for the mobile fleet, which is the U.S. Fleet is used for official status. A truncated recruitment time series, which was supported in the old ASAP Platform Assessments was no longer supported using the WHAM Platform. We used a measure of long term mean recruitment is what that sub-bullet really says.

Using the WHAM Platform approach there is the reference points that resulted and the terminal year estimates. Research Tracks don't report stock status. But if you were to do the math, the stock is overfished, overfishing is not occurring.

Retrospective pattern adjustments were unnecessary.

Projections, the recruitment random effect process continues into the projection period. That is different from what was happening in the ASAP Platform, where the recruitment was autocorrelated two years. Numbers at age random effects do not continue into the projection period. That became a bit of a sticking point in the Management Track.

Life history traits equaled five-year averages. Mobile fleet catches were projected using the New England Council's hockey stick control rule, and the fixed fleet, which again is largely Canadian is not quota controlled, and so typically we set that equal to a ten-year average in the projection period. That is considered a management uncertainty that can be tweaked by the New England Council.

Spawning stock biomass increased very quickly into the projection period, with a great deal of uncertainty. The Working Group and Review Panel had concerns that these were overly optimistic. That concern also carried over into the Management Track. Here is the spawning stock biomass time series, although somehow the year labels went missing.

But the vertical line is the delineation point between the estimation period and the projection period, and you can see the SSB increased quite rapidly. Those are 95% confidence intervals that range from nearly 0 to something astronomical. The quantitative and measurable uncertainty is pretty substantial, especially in the projection period.

Here is another example of basically the same thing, so the yellow line is the spawning stock biomass time series, and the purplish bars are recruitment. You can see into the projection period, which is again denoted by the vertical dash line, SSB increases very rapidly and recruitment in the projection period is basically reversed to a long-term mean. Term of Reference 7 and 8.

Seven was research recommendations from the 2024 Management Track. I'm not going to review those in detail here. Many of the recommendations were addressed during the Research Track, things like evaluate natural mortality, selectivity, move to WHAM, so on and so for. TOR 8 was the backup approach, which was not needed in this case. That is what I had on the Research Track, would you like me to pause there or just carry on into the Management Track?

CHAIR GROUT: Go ahead and carry on into the Management Track, and then we'll take questions after that on both.

DR. DEROBA: Okay, on to the Management Track then. Sorry, I didn't know I had animations in here, I often don't. I like having boring slides. Management Track summary assessed using the Woods Hole Assessment Model as I mentioned. We made no structural changes since the Research Track timeframe is 1987 to 2025.

Still using two fleets, same indices of abundance and surveys, as I mentioned, constant natural mortality, proxy reference points, and we'll get into the strong correlation among ages and the numbers at age random effects in a moment. Term of Reference 1, which is get your catch data together.

Again, we used CAMS since 2020 and there is a plot of the fixed fleet catches, which is the reddish line, and the greenish blue line is the mobile fleet. You can see catch has declined substantially as the stock has declined, and the Councils have ratcheted down quotas. As I mentioned, Canada is responsible for nearly all of the fixed-fleet catches, and they revised some of their methodologies.

What you are seeing here in the red line is their old catch time series, and that run by bluish green line is the updated time series that we used. This had almost no effect on the assessment, so they are still broadly similar. This is the age composition data for the mobile fleet. These are proportions not numbers, so if you could see the data behind this.

If you summed these values across ages within a year they would sum to 1. What you are seeing here, if you tack the bubbles sort of from high left to low right, you are seeing a cohort tracking. That is where the model gets information about recruitment and cohort size. This is a similar plot but for the fixed fleet.

You can see the fixed fleet catches almost exclusively Age 2 fish. Because of that there is no ability to track cohorts. On to Term of Reference 2 and the indices. Here is the Spring NMFS Bottom Trawl Survey time series, at least since the Bigelow came online in 2009.

No matter how you slice it, recent observations are much lower than they use to be. There is the NMFS Fall Bottom Trawl Survey. I am trying to remember if 2025 wasn't the lowest in the time series it was the second lowest. Again, no matter how you slice it, recent observations are lower than they were. This is the Summer Bottom Trawl Survey.

This survey has been paused or suspended, I'm not sure what kind of word they are using, but it hasn't been done since 2023, so there is really no new data here that we didn't already have during the Research Track. One nice thing about this survey is that there are no vessel changes, so it spans the transition from the Albatross to the Bigelow, which makes it a nice addition to the model.

Again, generally speaking, recent observations are lower than they use to be. This is the acoustic index that is collected during the Fall Bottom Trawl Survey. There is no 2025 data point here, because some calibration, I'm not an acoustician, so I don't know the details. Some piece of equipment wasn't calibrated correctly, so there are no 2025 data. The 2024 data point, which is the last one in the time series you see in front of you is the lowest in the time series. Term of Reference 3 is fit the stock assessment. We made a few minor changes, none of which had any significant impact on the assessment or reference points. Switch to a new version of WHAM, which was completely irrelevant, had no effect.

Added two years of data. I showed you the revised Canadian catch time series. We changed input effective sample sizes, which the model uses to sort of weight age composition matrices relative to each other. I was using year specific effective sample sizes, but we're now using a self-weighting likelihood that made that unnecessary, so I just simplified it.

The joy of it, at least from a statistical stock assessment standpoint is you can now compare parameters from the self-weighting likelihoods and directly infer which age composition matrices the model is treating as relatively precise and fitting well versus ones that it maybe thinks is more uncertain.

I made a correction to how I was calculating spawning stock biomass weights at age. I won't get into the details, but long story short it had a relatively minor effect on reference points, but was generally an improvement for what I was doing. This is the spawning stock biomass time series as a stacked bar plot.

You can see the contributions from each age. I just make a note there that 9 of the 10 lowest spawning stock biomass estimates have occurred since 2017, and 2025 is the second lowest in the time series. Here are the fleet-specific fully selected fishing mortality rates. The purple line is the mobile fleet; the yellow line is the fixed fleet.

You can see other than that anomalous year; F has generally come down for the mobile fleet. It has varied, but been relatively stable for the fixed fleet. This is the estimated recruitment time series. Seven of the 10 lowest have occurred since 2015, and 2024 was the second lowest in the time series.

You can see the horizontal dash line, I believe it is actually the geometric mean, it's essentially a measure of the long term mean of the recruitment. You can see most recent recruitments are well below it. Okay, numbers at age random effects. I'll spend a little bit of time on this. Each row here is an age.

The bottom row is Age 1, so that is basically a colored depiction of the recruitment time series. For example, I just mentioned most of the recent recruitments are below average, and you can see that in recent years they are all dark blue, which is indicative of a poor recruitment. The lighter yellow shades would be indicative of good recruitment.

For ages 2 through 8, the numbers at age random effects are essentially either killing fish faster than fishing and natural mortality alone, or actually causing fish to survive better and overcome some of the mortality being caused by fishing and natural mortality. You can see all the colors in a given year for all the ages are broadly similar.

I report the estimated correlation coefficient is 0.84. Perfect correlation would be a value of 1, so 0.84 is quite high. There was no support for correlation among years, although if you're looking at this and your eye tells you that there are more dark colors in recent years than there was early in the time series. You would be correct. But WHAM doesn't have features available to model and estimate sort of longer-term trends in these numbers at age random effects. One consequence of what you're seeing on screen, especially in recent years is you see a lot more darker blues across all ages for ages 2 through 8, meaning fish at older ages are disappearing faster than just fishing and natural mortality alone.

Not only has recruitment been poor, you can call it survival. We don't know what is causing these movements, no idea. But long story short, not only is recruitment terrible, but survival of older ages has also been rather poor, how we ended up in the state we are in. I mentioned the sort of longer-term trend that WHAM isn't capable of modeling at the moment.

That is one of the reasons when I get to projections you will hear more talk about them being overly optimistic, because these numbers at age random effects don't carry forward into the projection period. There are the updated reference points. The B40% is a bit lower than what came out of the Research Track.

That is partially because of the change I made to spawning stock biomass weights at age. But the bigger contributor is actually, as recruitment remains poor, the long-term mean recruitment is systematically shifting lower and lower. The mean recruitment is also quite a bit lower in this Management Track than it was even just two years ago in the Research Track.

There is F40% MSY. You can go to the next slide and it will have the status plot, I think. Stock is overfished; overfishing is not occurring. Retrospective adjustments were unnecessary. I think most folks are used to seeing this type of plot, F/ Fmsy proxy on the vertical, SSB/SSBmsy proxy on the horizontal, 90% confidence intervals with the black dot and the lines.

Then the red dot would be what happens if you do account for the retrospective pattern, but you can see the red dot is well within the confidence intervals and so generally we don't adjust. Projections, we didn't make any changes to the research track methods. Recruitment effectively goes back to a long-term mean.

As I had talked about those random effects do not continue into the projection period. Mobile fleet is going to use the control rule. Fixed fleet is set to a ten-year average. As with the Research Track, what you are seeing here is a 10-year projection, which I kind of did by default, because herring are in a rebuilding plan, so I just defaulted to providing 10-year projections. The vertical dash line is again the delineation point between the estimation period and the projection period.

You can see recruitment returns to a long-term mean, immediately another projection period, and SSB immediately sky rockets. SSB is the yellow line. We compared this to what came out of the Research Track. Even though this is believed to be optimistic, it is actually far more pessimistic than what came out of the Research Track. But since we're using the same methods, the concern remains that these are overly optimistic projections. Again, mostly because of the NAA random effects not continuing into the projection period, and also there is still no strong support in this model for correlation and recruitment through years, so we are still assuming recruitment immediately lives to a long-term mean. Future management tracks, I'm definitely going to have to just keep reevaluating that and reconsider what we're doing here, because staying on this treadmill of overly optimistic, overly optimistic is probably not a wise way forward. Here are the projected catches for the fixed fleet, which is red.

Again, they are going to be constant in a projection period, because it is assumed to be equal to a 10-year average. The mobile fleet is the bluish line, that is calculated using the New England Council's Harvest Control Rule. You can see given that SSB rapidly increases, stock status improves into the projection period and catches also quickly increase in the projection period.

With the exception of the second year. The vertical dash line is at 2025, the point immediately to the right of that would be 2026, which is set equal to the ACL. Then 2027 you can see catch goes down with a mobile fleet catch based on the Control Rule of somewhere in the neighborhood of 1,000 tons.

Really, really bad news in the short term, but again that overly optimistic projection allows that to recover very rapidly. Research recommendations. Term of Reference 6. There were lots of recommendations from the Research Track, but given the short turnaround time we didn't really make a whole lot of progress on them.

There was enough that going through three slides of research recommendations is not very interesting. During this Management Track, this Review Panel had 10 recommendations. I highlight the two that they chose as the most important. First was continue work on development of a VAST model.

VAST is just the fancy statistical approach that we would use to combine the State and Federal Surveys, and hopefully get some more information in this assessment on Age 1 fish. Then secondly, investigate the potential for auto correlation and

recruitment, which I just mentioned, and also see if we can come up with reasons that the numbers at age random effects look as they do.
I honestly do not have a whole lot of hope for that one, if I may speak freely. You know for years this assessment and many assessments in the region had retrospective patterns that for 20 to 30 years nobody has really been able to explain very well. What the numbers at age random effects are doing are implicitly accounting for whatever was causing the retrospective patterns that we couldn't explain.

Asking to explain why they look the way they do is akin to asking, please explain retrospective patterns, which we have failed to do for 30 years. I do think the pattern is interesting, and worth some thought. I do fear that it is a bit of a fool's errand though, but anyway. That's all I had.

CHAIR GROUT: Thank you, John, I appreciate that. It was great seeing both the Research Track and Management Track assessments and some of the things that you did in between them. I am going to go out to the Board here to see if there are any questions you might have. Melanie Griffen, I hear you have a question.

MS. MELANIE GRIFFIN: I do, Doug, thank you. Thanks, John, for the presentations. My questions are kind of next step questions. You know with the assessments going into management advice. My understanding is there is going to be some sensitivity information. I don't know if you or the member of the PDT or if Dr. Cournane is on, could speak a little bit more to what is anticipated with that. Then I do just have a follow up. I do find the research recommendations interesting, so I do have just a question on those after this question.

DR. DEROBA: I can speak to that. One thing I neglected to tell you all, and I probably should have, is that the projection term of reference was only deemed partially met, which leaves the Herring PDT at the moment with no clear path forward. What I did, and the PDT is doing, I think we have a meeting Friday to follow up on this.

We did the standard projection, which everyone believes is overly optimistic. I did another projection where I do continue the numbers at age random effects into the projection period, which gives as you would expect, a more pessimistic view of the future. The reason that wasn't our preferred way forward in this Management Track is that we're kind of on the cutting edge here.

Nobody has really figured out what to do with those numbers at age random effects in the projection periods. In the ISIS world they have had numbers at age random effects in assessment models for 15 or more years now, and still just ignore them in their projection methodologies. That doesn't seem to be the best way forward to me, but long story short, I'll quit rambling.

Basically, nobody has figured out how to do it best yet. There is very little evaluations on what to do with those numbers at age random effects int the projection period. What I did for a sensitivity was just ad hoc sort of willy nilly, let's let them persist into the future. But I don't have a good justification for putting it forward as a preferred approach.

We also did another projection, where the numbers at age random effects continue into the projection period and recruitment uses a recent 10-year average, rather than reverting back to a long-term mean. As you can expect, that was also sort of doubly pessimistic. I think we did one more tweaking catch in the bridge or something.

But that is what is out there right now. When we do continue the members at age random effects into the projection period, it does lead to fishery closures based on the New England Council's Control Rule. The conversations I expect to be quite interesting. I don't think I've been formally asked to do any other sensitivities yet.

I know industry at one point was asking for sort of averaging over the projection years, so sort of soften the blow of the hockey stick control rule really, really ratcheting down catch early in the projection period. But yet to be seen where that is going to go

MS. GRIFFIN: Thanks, John, yes, I think, I mean the takeaway for me is that these assessments are the best information we can use. I know it's a little awkward with the Commission right now, but actually wanting to understand how it is going to flow into the management discussion with the SSC. That all sounds good to me. Recognizing the concern that was expressed by both views about the projection uncertainty. It's not being ignored, you are trying to do what you can with sensitivity analyses, and that information will come before the SSC. That is what I'm getting from what you just provided us. My other question to you, on the research recommendations.

Because I think it is important for us again to keep an eye, we recognize, I mean there is always a need for improvement generally in assessments, with the very specific issues with this one. I know we don't know when our next assessment will be, but I think it's always good for us to understand, for the managers as well what is happening there.

As you say, the VAST modeling of the State Age 1 Index, that seems to be a consensus priority. There are the NAA random effects that sounds like you're going to continue looking at. I would say there is also some potentially actionable progress on the U.S./Canada catch uncertainty. Is there anything you can tell us kind of about any concrete steps, in terms of what the Science Center is? I mean are you committed to working on this?

Is there like, what roadblocks might there be to getting this information into whenever we do have the next assessment? I think this may be something, those assessment work sheets that have been going out, which are so great, I think, in terms of providing transparency, not just to managers but to the public.

Might the next steps on research recommendations be included in that. That was a lot, but just basically, what transparency and understanding you can give us on how these research recommendations might be acted upon.

DR. DEROBA: Yes, on the VAST model and to integrate the State and Federal Surveys. I am working with Conor McManus who is, what's the name of his branch? Advanced Technologies, because not only does he have an interest in one, integrating the state and federal surveys, but also folding in perhaps the acoustics as well.

He's got some thoughts as to how to maybe take better advantage of acoustics, and examine herring distribution and not just develop indices of abundance. That would also be happening. But long story short, myself and the Advanced Tech Branch have some similar interest in advancing these VAST models, again with an eye towards obviously improving the indices of abundance and getting Age 1 observations in there.

But from the Advance Tech standpoint, folding in some other data sources and making some better inference about herring distribution, and that work has already begun, although barely since the Management Track is still warm. That work has actually begun; we're committed to it. I don't have a timeline for it.

But I am hoping whenever the next assessment would be, certainly probably not before two years. I'm hoping to have something at least significant to report back on. I think the second recommendation there about numbers at age random effects. I think where more progress is likely to happen would be in evaluating how to do the projections better and treat the numbers at age and recruitment time series into the projection period better. As some of you may know, there was a Projections Research Track that has been paused. I think the NRCC voted not to resume that, which is all well and good. But the population dynamics branch has informally started to spin up in house some research plan, some evaluations on how to basically do projections better, because the optimism of projections isn't unique to herring. Typically, when the stock is in poor condition, we assume some reversion to a mean and all of our projections are probably optimistic.

That never seems to actually be what happens. The opposite is true as well. When things are in relatively good condition, we assume some reversion to a long-term mean and things decline pessimistically, think black sea bass. Anyway, internally but not formally, we are spinning up some research ideas and some sort of formal thinking on what we can do there.

CHAIR GROUT: Any other questions for the Board? Megan Ware.

MS. MEGAN WARE: Thanks, John, appreciate it and I appreciate all the PDTs work on the different sensitivity runs. I do think it is the right approach given the lack of confidence in the projection runs coming out of the Management Track. My question is on, I think you mentioned there was a bridge year catch sensitivity run, and I was wondering if you could speak to that a little bit. I know we did that last time, and that is what got implemented.

I think maybe what is different this year is we're in August and less than 10% of the total ACL has been caught, which I think is pretty unusual for this time of year. We can dig into why that is. But I think there is potential for real underages this year, and if those persist, I'm just curious kind of the range of bridge year catch that has been used in some of those projections.

DR. DEROBO: Even though I just did this recently, I'm still struggling to remember exactly what we did on bridge year catch. I don't know if Jamie is on, but I recall Jamie asking me. I think we did 75% of the ACL in the bridge year. We only did 1 sensitivity changing the bridge year catch. I think it was 75% of the ACL. I'm guessing we might have to sit on our hands for a little longer, before we figure out what that value might more realistically be. But that is all I've done thus far at the request of the PDT.

MS. WARE: Okay, thanks. I think we'll learn more rather quickly on the Area 1A situation. We'll see where that is. It might be helpful not to have you do more work, John, but understanding if there is a tipping point, in terms of if their bridge year is a certain percentage of the ACL that makes a meaningful difference versus 75 or 80% maybe doesn't make a difference, but good luck.

CHAIR GROUT: John, I might have a question for you. My name is Doug Grout. I wish we had Figure 2 from your Management Track Assessment. This is the one that gives the fishing mortality rate for Ages 7 to 8. Then also provided what the fishing mortality was on that ASAP with confidence intervals and then the current assessment.

Then it also has the current Fmsy proxy of 0.72. The thing that struck me, if you think a figure or picture is worth a thousand words is that this shows that we have been overfishing for a long time, which is not what the previous assessments had shown, at least wile I was the Herring Committee Chair on the Council. We had a period in the 1990s to the early teens where we brought fishing mortality right down. We weren't overfishing until the latter part of the teens. What I saw from this is that yes, looking back and comparing, the reference points had dropped the F40% MSY. The values had dropped from 0.5 or 0.48 down to the current 2.72.

But I also noticed that fishing mortality under the WHAM model was generally higher than what it had been. I'm just trying to, is WHAM saying that we've been overfishing all along, or has it been a factor of the Fmsy 40% has been dropping that makes us looking like we've been overfishing all along?

DR. DEROBA: It's the latter. The way WHAM is calculating F40%, specifically for the mobile fleet is, it solves for a single value of F40% that then gets multiplied through selectivity curves for each fleet, and so on and so forth. You do some per recruit analyses. But what WHAM is calling selectivity for the purposes of the reference point, is it takes recent fishing mortalities at age for each fleet, and rescales them treating them as selectivity.

The implication there is that as the relative amount of catch from each fleet changes through time, the F40% will also change pretty dynamically through time. Let's say we go back 10, 15 years. The F40% would have been much, much higher for the mobile

fleet, because more catch was coming form the mobile fleet, so the F would have been much higher.

At the moment there is a great deal of catch coming from the Age 2 fixed fleet, which has the run on consequence of requiring a reduction in the mobile fleet F40%. That plot you are referencing, I think that actually came up during the review as well. It is not really fair to compare the current WHAM reference point to the F backwards in time.

Because if you were to say, start the model in 2012, the reference points would be completely different and there would be no evidence of overfishing. Yes, I don't like that plot, because that point gets missed. The reference points would also change because of life history traits being different backwards in time.

The long-term recruitment would be higher, which would have the effect of increasing the B40%. Long story short, that F reference point is going to be quite dynamic through time as the long-term recruitment changes, which is impacting the B40%. Then as the relative catch from each fleet changes that is also going to create quite a lot of a dynamic nature in the F40%.

CHAIR GROUT: Basically, this is appropriate reference points for this period of time, not so much for historically. Maybe, like you said, you didn't, I think like that graph in the future that we should say, F40% 272 is the reference point for now, but not for the dash line all the way back through the years with it.

DR. DEROBA: That is correct, yes. It is probably better to just go back 5, and certainly no more than 10 years. WHAM does produce plots of the dynamic reference points, but we don't use them. But I was going to try to just look up how dynamic the F reference point was, just to give you a sense of, I might not be able to find it in a sensible amount of time either.

CHAIR GROUT: Don't worry about it, I just offered a suggestion that in future assessments they put up a graph that makes that clear, as opposed to having a dotted line that goes back forever.

DR. DEROBA: Yes, that is a good suggestion, and just FYI. NOAA Fisheries Headquarters if pushing for a nationally standardized assessment reporting approach. Don't know what that is going to look like yet, but that will come online sometime in 2027. You might not ever see a plot that looks like that again, because we're working through a national assessment report sort of process. I don't know if that is good or bad, but we're doing it.

CHAIR GROUT: Thank you. Any other questions from the Board? Seeing none; thank you, John, very much for a very thorough and great explanations about how all these things work, and thank you again for your effort.

DR. DEROBA: Thanks, hopefully it wasn't too rambling or techy.

CHAIR GROUT: It was fine for me.

CONSIDER ACCEPTANCE OF NORTHEAST FISHERIES SCIENCE RESEARCH TRACK STOCK ASSESSMENT AND PEER REVIEW REPORT FOR MANAGEMENT USE

CHAIR GROUT: I believe we need to have a motion to accept the Management Track Stock Assessment and Peer Review Report for management use. Just the Research Track, okay. Is there anybody who would like to make that **motion to accept the Northeast Fisheries Science Center Research Track Stock Assessment and Peer Review for management use**?

MR. RAYMOND C. KANE: Ray Kane.

CHAIR GROUT: Makes the motion, is there a second? Dennis Abbott. Since I read it in, does Ray need to enter it? Okay. I'll try it the easy way first, **is there any objection to this motion? Seeing none; it passes by unanimous consent**.

CHAIR GROUT: Item 5, Update on the New England Fishery Management Council and Atlantic Herring activity. Emily, I believe you are on.

UPDATE FROM NEW ENGLAND FISHERY MANAGEMENT COUNCIL ON ATLANTIC HERRING ACTIVITY

MS. EMILY BODELL: Good morning, everyone, my name is Emily Bodell, I am on the New England Fishery Management Council staff and I support the Atlantic Herring Plan. I'm just here today to provide a few updates on what the Council has been working on with regards to Atlantic herring this year.

Just starting out with our Atlantic herring outlook by quarter. We have a few priorities that we are working on this year. The first is Atlantic herring specifications for 2027 to 2031. The next is an action which will include river herring and shad measures, as well as some additional management measures. I will elaborate on that in just a moment.

You also heard from Dr. Deroba about the Management Track Stock Assessment. The Council staff has been supporting that and following along. Then the Council will also establish 2027 priorities a little bit later in the year.

Originally, the Council set out to complete one action regarding Atlantic herring this year, which would have included the specifications as well as river herring and shad management measures and some additional measures. The Plan Development Team has been working on some analyses in support of this action. It's been presented to the Advisory Panel and the Committee, ultimately this information was brought to the Council, and they received a status update at our June 2026 Council meeting. It was decided at that point to split the action into two, which is why it is listed in two different categories on our work that I just reviewed.

The following motion was made in June, which was to set the Atlantic herring specifications for fishing years 2027 to 2031 as a standalone action for final action in September, and then in a separate action for April 2027, final action target date.

The Plan Development Team would continue working on modifying Atlantic herring management measures to avoid or minimize the catch of river herring and shad through time/area closures with and without the existing catch cap methodology, updating the Atlantic herring specifications process and modifying carryover provisions for unharvested catch.

I'll just go over the kind of two actions that we are developing, the first being the specifications action. We are anticipating this to be a really straightforward specifications action. It will include things like the overfishing limit, acceptable biological catch, management uncertainty, the ACL and subsequent management area sub-ACLs, river herring and shad catch caps, and there are some other components that are included in a typical herring specifications action.

I will note that the Council is considering making an adjustment to the fixed gear set-aside, which comes out of the Area 1A Sub-ACL. That will be discussed at upcoming meeting. Then on the right here we just have kind of a flow chart of how we reach our management area sub-ACLs. Just to go over some upcoming meetings.

As we discussed a little bit during John's presentation, the Scientific and Statistical Committee will be meeting August 11 and 12, so next Tuesday and Wednesday. That will be in New Beford, or you can attend via webinar. They will be discussing herring OFLs and ABCs. The documents should be posted for that meeting in the coming days, so if you're interested in reviewing what the Plan Development Team has proposed for that meeting, please feel free to take a look, also happy to point folks in that direction as needed.

This will be followed by a couple of herring AP and Committee meetings. They will first meet on August 18 via webinar, and then on September 2 we will be meeting in Boston as well as via webinar to discuss the specifications action. Then we are

anticipating final action at the New England Council meeting in September, that will be in Plymouth, and it's via webinar.

This is in support of a target implementation date for the specifications action of January 1, 2027, so the start of the fishing year for herring. I'll just go over a little bit more detail on river herring and shad and some of the other management measures. This will be in, again this other action anticipated for final action in 2027.

Right now, we're looking at this action including river herring and shad management measures, as well as updates to the Atlantic herring specifications process and carry over provisions for unharvested catch. At that June Council meeting the Council received an update on some recent activity, including that the Committee recommended developing two alternatives for carry over, as well as recommended continuing development on an alternative to update the specifications process.

The Herring Plan Development Team also completed some tasking that they received from the Council regarding river herring and shad, and the results of that were presented to the Council in June. Just briefly to go over these three main river herring and shad related tasks, and some of the PDT analyses that were competed.

The first was related to assessing data availability and analyzing and developing alternatives that would implement time and area closures, where aggregations of river herring and shad are overlapping with the Atlantic herring fishery. The Plan Development Team has been working to develop species distribution models for river herring, shad and Atlantic herring, as well as some hypothetical time and area closures.

This work is going to be peer reviewed by a sub panel of the New England Council's SSC. That will be coming up in the fall. The next task had to do with again, data availability and developing alternatives that would implement revisions to the basis of river herring and shad catch cap values.

The PDT worked to summarize some potential catch cap approaches, and we also discussed assembling some data using, as we're calling a CAMS modified approach. We can summarize river herring and shad catch data by kind of a series of qualifiers there. That data analysis is ongoing, so we're anticipating an update at a future meeting.

Then finally, the PDT also was tasked with analyzing and developing some recommendations for implementing improvements to the accuracy and precision of river herring and shad catch estimates in the directed Atlantic herring fishery. This task was completed, so the PDT developed four different analyses to compare some potential estimation methods.

Ultimately, they didn't recommend making any major change to the current estimation methods, but they did suggest using a gear specific global rate when that information is available. Just to wrap up finding a few upcoming meetings with regards to just river herring and shad in additional management measures action.

As I mentioned the SSC and an SSC Sub Panel will be reviewing the river herring and shad work. That will be occurring via webinar. We do not have a date for that peer review yet, but that information will be posted on the Council website when it is available. Then again, anticipating final action or targeting final action for April 2027.

The New England Council meeting, that will be in Mystic and held vis webinar. Then of course we'll be adding some additional meetings that will be scheduled as needed. We can definitely provide some of those updates, and those are always available on our Council website. That is about all I have for you this morning. Thank you so much for the time, and I am happy to take questions as time allows.

CHAIR GROUT: Any questions from the Board for Emily? Seeing none; thank you very much, Emily for that presentation, and we will be working with you folks over the next few months.

ADJOURNMENT

We are down to other business. Does anybody have any other business to bring up before the Board today? Seeing none; this meeting is adjourned. Thank you.

(Whereupon the meeting adjourned at 11:00 a.m. on Tuesday, August 4, 2026)