Atlantic States Marine Fisheries Commission

Winter Flounder Management Board

February 4, 2016
9:15 – 10:15 a.m.
Alexandria, Virginia

Draft Agenda

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

1.	Welcome/Call to Order *(M. Gibson)*	9:15 a.m.
2.	Board Consent • Approval of Agenda • Approval of Proceedings from November 2015	9:15 a.m.
3.	Public Comment	9:20 a.m.
4.	Technical Committee Report on the SNE/MA Winter Flounder Fishery and Management Program Under Zero Possession Limits (*P. Nitschke*)	9:30 a.m.
5.	Overview of Federal Management Measures (*J. Cournane*)	9:45 a.m.
6.	Discuss Future Management of Winter Flounder *(M. Gibson)*	9:55 a.m.
7.	Review and Set 2016-2018 Specifications *(A. Harp*) **Final Action**	10:05 a.m.
8.	Other Business/Adjourn	10:15 a.m.

The meeting will be held at the Westin Alexandria; 400 Courthouse Square; Alexandria, VA; 703.253.8600

MEETING OVERVIEW

Winter Flounder Management Board
February 4, 2016
9:15 – 10:15 a.m.
Alexandria, Virginia

Chair: Mark Gibson	Technical Committee Chair: Paul Nitschke	Law Enforcement Committee Kurt Blanchard
Vice Chair: David Pierce	Advisory Panel Chair: Bud Brown	Previous Board Meeting: November 3, 2015
Voting Members: ME, NH, MA, RI, CT, NY, NJ, DE, NMFS, USFWS (10 votes)		

2. Board Consent

- Approval of Agenda
- Approval of Proceedings from November 2015

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. Technical Committee Report on the SNE/MA Winter Flounder Fishery and Management Measures Under Zero Possession Limits (9:30 – 9:45 a.m.)

Background

- The Northeast Fisheries Science Center conducted a 2015 groundfish operational stock assessment, which indicates:
  - Gulf of Maine stock biomass is unknown, and overfishing is not occurring
  - SNE stock biomass is overfished, and overfishing is not occurring
- The Technical Committee developed a report based on the following Board-assigned tasks:
  - Review 2015 stock assessment updates for SNE/MA and GOM: The Board asks that the TC review the current management measures and suggest alternatives, if necessary.
  - Investigate the effects on biomass during heightened federal restrictions (2009-2013): At present the stocks are not responding to lower exploitation rates, the Board is interested in understanding if the stocks were beginning to see modest improvement while restrictions were in place. For example, when looking at data from 2009-2013, what was the effect of low fishing mortality on the GOM and SNE/MA biomass?

  (Technical Committee Report in Briefing Materials,

ASMFC Letter of Concern to NEFMC and GARFO in Briefing Materials)
Presentation • Winter Flounder Technical Committee Tasks by P. Nitschke.

5. Overview of Federal Management Measures (9:45 – 9:55 a.m.)
Presentation • Presentation by Jaime Cournane, NEMFC **(Presentation in Supplemental Materials)**
6. Discuss Future Management of SNE Winter Flounder Stock (9:55 – 10:05 a.m.)

7. Review and set 2016-2018 Specifications (10:05 – 10:15 a.m.)
• Board can adjust the following:
  • Recreational (size limit, bag limit, season)
  • Commercial (size limit, season, trip limit, trigger trip limit, and area closures)
(Overview of Historical Catch in Briefing Materials;
NEFMC Motions by Council and Committee in Briefing Materials)

Presentation • Winter Flounder Specification Overview by A. Harp.

8. Other Business/Adjourn

DRAFT PROCEEDINGS OF THE

ATLANTIC STATES MARINE FISHERIES COMMISSION

WINTER FLOUNDER MANAGEMENT BOARD

World Golf Village Renaissance
St. Augustine, Florida
November 3, 2015

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ATTENDANCE

Board Members

Terry Stockwell, ME, proxy for P. Keliher (AA)
Sen. Brian Langley, ME (LA)
Doug Grout, NH (AA)
G. Ritchie White, NH (GA)
Dennis Abbott, NH, proxy for Sen. Watters (LA)
Bill Adler, MA (GA)
Jocelyn Cary, MA, proxy for Rep. Peake (LA)
David Pierce, MA (AA)
Mark Gibson, RI, proxy for B. Ballou (AA)
David Borden, RI (GA)
Eric Reid, RI, proxy for Sen. Sosnowski (LA)
David Simpson, CT (AA)
Rep. Craig Miner, CT (LA)
Lance Stewart, CT (GA)
Steve Heins, NY, proxy for J. Gilmore (AA)
Pat Augustine, NY, proxy for Sen. Boyle (LA)
Emerson Hasbrouck, NY (GA)
Tom Baum, NJ, proxy for D. Chanda (AA)
Tom Fote, NJ (GA)
Adam Nowalsky, NJ, proxy for Asm. Andrzejczak (LA)
Roy Miller, DE (GA)
John Clark, DE, proxy for D. Saveikis (AA)
Allison Murphy, NMFS
Mike Millard, USFWS

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

Ex-Officio Members

Paul Nitschke, Technical Committee Chair
Harold Brown, Advisory Panel Chair

Staff

Robert Beal
Toni Kerns
Megan Ware
Ashton Harp

Guests

The Winter Flounder Management Board of the Atlantic States Marine Fisheries Commission convened in the St. Augustine Ballroom of the World Golf Village Renaissance, St. Augustine, Florida, November 3, 2015, and was called to order at 1:30 o'clock p.m. by Chairman Mark Gibson.

CALL TO ORDER

CHAIRMAN MARK GIBSON: I'd like to welcome everyone to the Winter Flounder Management Board. My name is Mark Gibson and I'm from the state of Rhode Island Fish and Wildlife Division. We have a relatively short agenda today, so we'll try to steam right through that because I'm sure menhaden will need all the time that they can get.

APPROVAL OF AGENDA

CHAIRMAN GIBSON: The first order of business is the agenda. Are there any requests or consideration for additional items added to the agenda? Seeing none; I'll consider the agenda approved as presented.

APPROVAL OF PROCEEDINGS

CHAIRMAN GIBSON: Approval of the proceedings from our November 2014 meeting; are there any requests for edits or changes to those proceedings? Seeing none; I'll consider those approved as presented.

PUBLIC COMMENT

CHAIRMAN GIBSON: The next item is for public comment and I don't believe anyone has signed up nor requested public comment; so we don't have any public comment at this time for items not on the agenda.

REVIEW OF GROUNDFISH ASSESSMENT UPDATES FOR THE GULF OF MAINE AND SOUTHERN NEW ENGLAND STOCKS

CHAIRMAN GIBSON: We'll launch right into Paul's presentation on the review of the groundfish assessment updates for the Gulf of Maine and Southern New England winter flounder.

MR. PAUL NITSCHKE: My name is Paul Nitschke. I work at the Center in Woods Hole, Population Dynamics Branch. I'm also the representative on the Groundfish PDT. Since Steve Correia retired, I'm going to be Chair of the Winter Flounder Technical Committee. I'm going to do a summary of the Gulf of Maine and Southern New England Winter Flounder Assessments, which were done at the operational update in September.

Actually all 20 groundfish stocks were updated at this meeting. Just to give you an overview of what we mean operational assessments, this is a more streamlined process where we are able to do all the stocks in the limited amount of time that we have. There are some rules that we follow in doing these updates.

Basically you want to try update the models with the most recent data and update the biological reference points with the most recent data. However, we don't really go into whether we should change a natural mortality rate, selectivity or the weightings in the model. There are some limitations on what kind of changes we can make. This is simply just so we can get to all the assessments.

The other changes that were done at this operational update was in some of the ASAP models there was an issue with likelihood constants; and there were changed for some of those models. In most cases it didn't have a large effect. For the NMFS surveys, we also changed the two criteria to the TOGA criteria, which is now used on the Bigelow survey for determining a bad tow versus a good tow. This is using the sensor data on the Bigelow. This also didn't have a large effect on the survey indices.

The big rule I guess was this last one, which is applying a retrospective adjustment if the T-plus 1 abundance from the Mohn's Rho seven-year peel was outside of the 90 percent confidence interval on the model. If that occurs, retrospective adjustments are applied to the numbers at age for the projections.

For the 20 groundfish stocks, the number of the stocks that needed adjustments increased I think from two in the past to seven. We have now seven of them that need adjustments. However, winter flounder doesn't apply for that adjustment. Last year the Center initiated this Efficiency Initiative. This was basically trying to get at a more streamlined process.

A lot of this is behind the scenes with the databases and trying to make a more streamlined process for estimating the catch at age and being able to do assessments more often. One of the things you will see is in this update we also used this automatic process for the actual reports. It is a more streamlined report format, more consistent between the stocks and more straight to the point.

On the website you will see these reports in the agenda. The presentations that went to the review are also in that agenda link. This is on the SAW/SARC Webpage. What is also on there is the data portal. In the data portal are the updates of the tables and figures from past assessments. There is also the model input and output diagnostics, so everything is available from the model inputs to the projections to the yield-per-recruit analysis.

Everything is available to the public on the website. There is also maps from the different stocks. All of this can be downloaded. If you want it all, it can all be downloaded in a simple zip drive. It just gives you a little background on this Efficiency Initiative. The idea here is to be able to update the assessments more often.

Right now I'm going to go into the Gulf of Maine Winter Flounder Overview. I had the lead on this assessment. As you recall, this assessment was just updated last year at the operational updates. The benchmark was in 2011 at SARC 52. This is now a 30-plus area-swept estimate directly from the surveys. Back at SARC 52, the analytical models did not survive that review. All analytical models have difficulty with retrospective issues.

Basically this is apparent lack of a relationship between the large decline in the catch and little change in the survey indices or size-and-age structure over time. This is what is really causing this retrospective problem in this assessment; and it wasn't accepted. Basically at that benchmark assessment, the model went to a 30-plus area-swept estimate directly from the surveys. This is a much more simple method that relies entirely on the survey estimate.

Just to remind everyone, the Gulf of Maine stock is defined as areas north of Cape Cod. Historically it was the smallest of the three winter flounder stocks. I updated the survey indices for NMFS, Maine, New Hampshire and Massachusetts DMF surveys even though these survey trends aren't really used in the stock assessment. For this assessment, they updated the 2015 catch, commercial and recreational landings and discards. This is the time series of the landings. There has been a large decline in the landings over time.

More recently almost all the landings are coming from the state of Massachusetts. In terms of the gear types, it is mostly from the trawl fishery. About 20 percent or so is from the gillnet fishery. Here is the total catch trends. There has been a large reduction in the total catch. Part of this is also due to the decline in the recreational fishery. This was a significant component of the removals in the early eighties, but that has pretty much disappeared.

Presently the total catches are a few hundred tons. In terms of the commercial discards, we assume a 50 percent mortality rate on the discards; and on the recreational side we assume a 15 percent mortality rate. This is also true for the Southern New England stock. Here are the survey trends. You can see that most of the trends are fairly flat over the time series.

Perhaps more recently the Massachusetts Spring Survey is showing a little more of a declining trend. Now that the assessment is based on this 30-plus biomass estimate from the surveys and since we don't have a single survey that covers the entire Gulf of Maine stock, we basically combined three different surveys using non-overlapping strata.

For the NMFS Survey we used the offshore strata and some of the Cape Cod Bay and Massachusetts strata. The Massachusetts DMF Survey we used the reel inshore strata where the Bigelow can't get into. For inshore strata north of Massachusetts, we used the Maine/New Hampshire Survey.

Now, the Maine/New Hampshire Survey covers a large area and catches a lot of fish. However, from these length frequency plots you can see that most of those fish are underneath the 30 centimeter limit. This table just summarizes the expansion factors that go into the area-swept estimates, the total survey area for each survey, the footprint for each survey and then that expansion factor.

We used a 30-plus biomass as a proxy for exploitable biomass; so this is the basic equation, which is the 30-plus biomass index multiplied by the total survey area divided by the footprint times Q; so Q here is the efficiency of the survey gear. Back at SARC 52 we assumed a Q of 0.6 on the wingspreads. This came from information from the Georges Bank assessment at that time.

However, the exploitable biomass estimate is sensitive to the assumption of their efficiency. Then exploitable biomass is simply calculated as the catch over the 30-plus biomass. In terms of the biological reference points, we used a length-based yield-per-recruit analysis to estimate F-40. This was not updated at this assessment because there wasn't any real new information to inform these estimates. Fmsy was based on F-40, which came to an exploitation rate of 0.23.

This method also uses the same 30-plus knife-edge selectivity as the estimate from the surveys. As a diagnostic, we can look at the overlapping strata between the Massachusetts DMF Survey and the NMFS Survey to compare the two. In the spring survey they line up fairly close. The fall survey did a little bit of a divergence with the Massachusetts DMF Survey showing slightly higher estimates, perhaps a little bit closer in 2014.

Here are the total 30-plus area-swept estimates from the spring on the top and for the fall on the bottom, assuming a Q of 0.6 on the wingspread. You will notice that in the spring survey a greater proportion of the total is coming from the inshore strata. This makes sense because much of the stock is within the shallow water spawning at that time of the year.

Back at SARC 52, the thought at that time was that the fall survey should be a better estimate of the total biomass because we're probably missing fish in the spring survey because they're inside the estuary. However, as we updated the fall survey that index has dropped and got pretty much cut in half in 2013 and now is more on par with the spring survey.

Relative to last year, which we used the fall 2013 estimate, the updated estimate now increased relative last year. Looking at the individual components, this is mostly due to the Center Survey Index going up in that

bottom plot. To get at the certainty around the total estimate, we used this Latin Hypercube Approach.

Since we have three different indices and three different footprints going into the total estimate, this method basically chunks each of those distributions into equal probability distributions and picks all possible combinations to get at the total uncertainty of the estimate, which at that point you can produce these box plots of the estimate.

On the left here is the fall 2014 survey. The different box plots are assuming different Qs on the estimate. You can see that the Q assumption has a significant effect on the results. Comparing 2014 and 2015, you can see the estimates are fairly close now between the two surveys. These plots just show the relationship between the exploitation rate and the quotas relative to the biological reference points, which are the lines – right now I plotted Fmsy and 75 percent Fmsy. On the left is assuming a Q of 1 and on the right assuming a Q of 0.6.

These are more the deterministic lines. Assuming different Qs for the fall survey, the most recent estimate for the fall 2014 survey line basically falls right in the middle since that biomass estimate has increased. Another way to look at it, on the Y-axis here is the probability of F being greater than Fmsy and plotting these as cumulative frequency distributions; and the different lines represent different Q assumptions in the estimate.

In this one here where the line crosses the 50 percent probability mark, it could be considered the OFL for the stock. The same can be done for 75 percent Fmsy for ABC determination. Here is the stock status plot. Last year, when we looked at this assessment, the biomass decreased, the exploitation rate increased; however, all the exploitation rates are below the overfishing threshold.

More recently the biomass increased and now the point falls right in the middle, basically. However, all exploitation rates using this method are below the overfishing threshold. This plot just compares the spring and fall surveys in terms of the exploitation rate. There is some similar trends between the two surveys.

Here is the biomass estimate from the fall survey and the exploitation rate on the right. The big question now is the biomass estimate is declining; however, exploitation rates are low and below the overfishing threshold. The question is why isn't the stock responding to low exploitation rates? In terms of the stock status, the Bmsy and overfished status cannot be determined using this simple method since we don't have a Bmsy estimate.

In terms of overfishing, that has not changed and overfishing is not occurring. The biggest question in terms of uncertainty is using this method is what the Q assumption is. There are questions with regards to herding from the ground cables and escapement below the footrope or above the headrope in the surveys; and the estimates are very sensitive to this Q assumption.

The Georges Bank Yellowtail Assessment also became an area-swept assessment and that assessment uses a Q of 0.37 on the doors, which came from an estimate from the literature. To compare that Q with the one used in this assessment, that would roughly translate into a Q of 1 on the wings.

However, the question now is, well, what if you used that Q assumption in the past; would that have changed anything? I don't think it would because the catch advice coming out of that Q assumption would still have been higher than the catches that were taken in the past. It not likely that would have really changed anything.

As I mentioned, the concern basically is why isn't the stock responding to low exploitation rates? These plots were brought forward from the PDT to the SSC, which the SSC meeting occurred a few weeks ago for ABC determination. The brown line here is the most recent catch time series, total catch. The black line represents the ABCs that were put in place since 2010.

You can see that increase in 2011 in the ABCs and that was basically due to the area-swept assessment coming into play. The decline there in 2015 was that decline in the survey index from last year's assessment. When we update the assessment this year; that line increases to basically that blue line there.

The green line was a sensitivity run that I did using both surveys, an average of both the spring and fall survey. One of the issues I think with this method is the estimates bounce around a lot just simply due to inter-annual variability in the surveys. I can take questions on the Gulf of Maine stock or we can wait until I go through Southern New England.

CHAIRMAN GIBSON: Why don't we take questions on the Gulf of Maine Assessment now while it is fresh in people's minds? Bill Adler.

MR. WILLIAM A. ADLER: Thank you very much for that report. I had a question with regard to back where you had discard mortality at 50 percent. Where do you get that 50 percent mortality discard?

MR. NITSCHKE: That was based on several fairly old studies at this point. Honestly, I can't even recall what the studies; it was so long ago. We always used the 15 percent mortality rate on winter flounder.

MR. ADLER: You said 15 or 50?

MR. NITSCHKE: Fifteen.

MR. ADLER: Fifteen?

MR. NITSCHKE: For the recreational side, yes.

MR. ADLER: Okay, you said 50 on something; was that the commercial?

MR. NITSCHKE: That was for the commercial. Commercial discards, we assume 50 percent.

MR. ADLER: And you told me where you got it from.

CHAIRMAN GIBSON: Any further questions for Paul? Ritchie.

MR. G. RITCHIE WHITE: Could you go back to the last slide that you had up? Is the takeaway from that slide that fishing mortality is not having a big impact on the stock? In other words, we increased the ABC –

MR. NITSCHKE: According to the assessment, we're not overfishing the stock. However, if the fishing mortality is really that low, we should expect some sort of response in the biomass. We don't really see that. Even when we increased the ABCs, the fleet also didn't really catch the fish. I've heard there are limitations on what the fleet can catch due to lobster gear interactions; but the recreational fishery has also not really increased much.

MR. ADLER: Do you have a rate of predator mortality on these fish like the cormorants and the seals? Do you take into consideration – and this is perhaps why the fishing isn't doing it; but they're still not increasing. I'm thinking in terms of more or less the predator on these small winter flounders when you said they come in close, anyway. Do you have a figure on that or do they count something in?

MR. NITSCHKE: I'm not really aware of any data on cormorant abundance changes over time or if there is any data on that.

MR. ADLER: Well, cormorants I know gobble up little things and they're all over the place; seals probably, too. In general predators, regardless of whether they're birds or fish, and they don't have a figure to go into the stock assessment that says, you know, the fishermen didn't take them but this group took them? You don't have anything like that?

MR. NITSCHKE: Right now that's assumed in the natural mortality rate in the stock assessment, which is simply a static M of 0.3 in the winter flounder assessments.

MR. ADLER: Okay, so it is under natural mortality, I guess, in the project; but I was just wondering whether you're raising that at all or is it just static and staying – and maybe that's the reason the stock isn't responding.

MR. NITSCHKE: It could be. It would be nice if we had some information on trend changes in the predators, like cormorant abundance changes over time. That's what we would really need to look at that.

MR. HAROLD "BUD" BROWN: Yes, Bill, I was going to ask that same kind of question; so it is a static M for all age classes?

MR. NITSCHKE: Yes.

MR. BROWN: Because when you looked at that Maine/New Hampshire survey –

MR. NITSCHKE: Well, there are no age classes in this assessment anymore.

MR. BROWN: Right, but still a lot of things I learned in school was about biotic potential and that sort of thing; and I just wonder if the M is so high on those small fish; that they don't recruit. When you look at the distribution on Maine/New Hampshire's survey, you're seeing the small fish, but they never get out to 30 centimeter or practically not. That seems like it is a big issue.

MR. NITSCHKE: That would suggest that the mortality is on the larger fish and not the smaller fish, right? We don't see them beyond 30 centimeters; we see them smaller.

MR. BROWN: No; just the reverse, if you see a lot of small fish in the spring survey and they never recruit to those larger sizes, it would seem to me that indicates that they aren't getting past mortality to recruit.

DR. DAVID PIERCE: The Center is going more and more into swept-area biomass estimates, and understandably so because of retrospective errors and the like. I'm trying to look forward in terms of the nature of advice we're going to be getting on Gulf of Maine winter flounder and Southern New England winter flounder as we move forward.

Looking at the presentation you've given and the assessment itself, I believe you've indicated and those working with you have indicated that with swept-area biomass estimates we're not going to be in the position to determine biomass reference points. Henceforth, I guess ASMFC as well as the council, of course, will not be able to determine biomass reference points; so henceforth we will never be able to know whether we are overfished or not. Is that a conclusion that's safe to draw?

MR. NITSCHKE: From this method we can't determine that overfished status. Now, if there truly was a response in the stock, I think we would start seeing evidence of that in the fishery and in the surveys.

CHAIRMAN GIBSON: Anyone before we move on to the Southern New England

Report? Seeing none; Paul, why don't you go ahead with that.

MR. NITSCHKE: Okay, the Southern New England stock, Tony Wood had the lead on this assessment. This is an ASAP Model. This assessment is done with the ASAP Model, which is a forward-projecting, age-structured assessment model. This one was last assessed in 2011 at SARC 52; so this one has been a while since it has been looked at.

Like the Gulf of Maine stock, there has been a large reduction in the total removals over time. Also, like the Gulf of Maine stock, the recreational component has declined faster than perhaps the commercial fishery. Perhaps the decline in this assessment is actually more dramatic than the Gulf of Maine in terms of where we are now more recently compared to the 1980's.

This is just looking at that same plot on a proportion basis. Back in 2010, remember this stock went to a no-possession management when sectors came on board. That's why you see the discard estimates increasing in those years. In 2013 it went back to an allocated stock and the discards declined. Here is the catch at age that went into the stock assessment.

You do notice the ages of fish are getting older that are being caught; and there is perhaps some indication of older fish in the catch at age more recently. This plot is the mean weights at age over time. Unlike some of the other groundfish stocks where we see dramatic declines in the mean weights at age with time, we don't really see that with the Southern New England winter flounder stock. It appears that condition factors aren't changing much for this stock.

This assessment many different survey indices incorporated into the model. We have the Center spring and fall and winter indices; the Massachusetts VMS Spring Survey; Rhode Island, spring; Connecticut, spring; New Jersey; and also several different recruitment indices go into the model. Back in SARC 52, the NEAMAP and Rhode Island GSO Survey were also added.

Here is a plot of the Center and Massachusetts VMS Spring Surveys. You can see in general there is a long decline in the indices. More recently the indices are near time-series lows. This plot compares all the different state surveys. Perhaps more dramatically in the state indices we see more of a dramatic decline in the index and very low levels in 2014.

Here are the recruitment age zero indices. Of course, these are more noisy; but overall there is a general decline in the young-of-the-year indices. The final model configuration basically uses a single fleet, fourteen different indices, natural mortality of 0.3. The model has two selectivity blocks with the second block starting in 1994.

In the commercial fishery the model is allowed to produce a dome-shaped selectivity. I believe in this update the second block actually became more domed than the previous assessment. The survey indices also are allowed to have dome-shaped selectivity. Some of the surveys, of course, have more dramatic domes than others.

This plot shows the SSB on the left and the fishing mortality on the right. The solid line represents the new updated model and the dashed line is the last assessment from SARC 52. The gray bars represent the 90 percent confidence intervals around the estimates. The red dot at the end of the time series represents what a Rho adjustment would look like.

For this assessment, that Rho adjustment was just on the inside of the 90 percent confidence intervals. Therefore, a Rho

adjustment was not used in this assessment. However, it is getting near that limit of where you would use one. Overall, in terms of the biomass, the stock has been at a low level with not much indication of increases for several decades now and remains below the overfished threshold.

In terms of overfishing, the fishing mortality has come down and has been below the overfishing threshold. The real concern now with this assessment is the recruitment trend. Recruitment continues to decline. It appears every time we update this assessment the recruitment just continues to decline and we don't see a response in recruitment.

The fishing mortality rate appears to have declined; however, we don't really see the production coming out of the stock. We don't see any improvements in recruitment. Here is the SSB breakdown over time. You'll notice that more recently from the assessment it indicates that a greater proportion of the age distribution is coming from older fish, from the plus group.

Here is the breakdown in terms of numbers at age on the proportion basis. You can also see that the plus group in the older fish are increasing at the end of the time series. However, when we look at the trend in the total numbers at age, even though we have this increasing proportion in the plus group, the real issue is this declining trend in recruitment coming in, which is causing the total numbers at age to decline.

This is the retrospective pattern; so there is a significant retrospective issue. However, it didn't qualify as needed a Rho adjustment according to the criteria, but it is still concern for the assessment. In terms of stock status, the stock status has not changed since the last assessment. Overfishing is not occurring and the stock remains as overfished.

The SSBmsy has declined since the last assessment and Fmsy has increased. Here is the stock status plot. Basically the stock has now declined to a low biomass but has now also fallen into the lower left-hand box where we're not overfishing the stock. We don't really see any evidence of increases, which is what you would expect when the fishing mortality rate is low.

Some sources of uncertainty with this assessment is there are questions about the natural mortality rate. There is also some uncertainty with the length distributions coming out of the recreational fishery. Part of that is just simply because the recreational fishery is so small now and, of course, this retrospective issue in the model.

The rebuilding plan now for this assessment was to 2023. According to projections coming off this assessment, the model cannot rebuild to that date or it can rebuild to that date with an F equals zero with a 40 percent probability. The requirement now is to have a 50 percent probability to get to that date, so the conclusion is that it can't get to that rebuilding end date with a 50 percent probability.

Here is that same catch plot we saw for the Gulf of Maine stock. The ABCs are is the black line. In 2010, '11, and '12 those ABCs were based off the no-possession management, which was based off a slightly different assumption. It was based off a bycatch assumption coming out the last assessment because the stock couldn't rebuild by the end date at that time.

Since then the ABC has increased because the rebuilding plan was updated and projections were used. That's what produced those three high ABCs. Now more recently when we update the assessment this year, the Fmsy and Fmsy projections declined and basically the 75 percent Fmsy line, which is that blue line, is very close to what recent catches have been. The purple dot there is basically the catch assumption

that goes into the bridge year for the projections. That's all I have for Southern New England.

CHAIRMAN GIBSON: Thank you, Paul. Bill Adler and then Dave Simpson.

MR. ADLER: First of all, I think I've said this before that I think the bar is too high that is being set. Now this won't change your report on the stock; but I think that when we keep looking at the targets and thresholds and they're up in the stratosphere somewhere – and I've asked before, I said, "Well, who set it that high because it hasn't been anywhere near that in spite of what we've done?"

They said, "Well, it was set back in the eighties" when for some reason – I guess the stock was up there and now maybe – I don't know how they were counting them back then or whatever; but I do think that for this Southern New England stock, I think we should look at lowering the bar a little down; not that you're going to do away with overfished but getting closer to where we are traditionally being lined up as.

That was one thing and I still think that's a necessity just so when we look at things, we go this is hopeless. Well, maybe it is not if you get more realistic with the target and threshold lines. The natural mortality you said is 0.03, but you also just said that there is some uncertainty here as to whether that's correct, which once again I go back to what did in the Gulf of Maine one of the other factors that are keeping this stock from rebuilding.

Obviously, it is not the fishing pressure that's keeping it down, so something else is. I think the uncertainty – it is very upsetting when it says there is no improvement in the stock after all the stuff we've done and you want to go, well, why? I think that's a question you're saying, too, why? I'll stop there for now. Thank you.

MR. NITSCHKE: Yes; it is frustrating for me also because I don't have the answers to why, right. All I see is what is going on. We don't have a lot of the data sources like you said with the predators. We don't have a smoking gun on what is really causing it. All we know from the assessment is that recruitment is declining – the production is declining out of the stock. Why that's occurring is not completely clear.

MR. DAVID SIMPSON: Thanks, Paul; two good presentations. You have a figure, don't you, of biomass over time? What I'm interested in for Southern New England is that period where we had the moratorium on harvest in federal waters and what, if any, kind of response we saw in the population when we were doing as much as we could to preserve biomass. That occurred in 2010. What years were the moratorium; can you help me?

MR. NITSCHKE: '10, '11, '12, I think.

MR. SIMPSON: Okay, so those were the three years where we saw a very rapid increase in biomass. 2010 was the low spot and it seems to me we saw a response – when we stopped harvesting fish and killing them on purpose, we were seeing a response; and I think some of our inshore surveys saw the same thing.

That gives me some hope that there is something we can do to try to rebuild biomass, rebuild spawning stock biomass and improve the prospects for improved recruitment. I'm sure you're aware there has been a very long time series, a very intensive study of the Niantic River winter flounder population at the Millstone Power Station done by the Environmental Lab there.

We've gone from 80,000 adult spawners in that river system to like a couple hundred. I think we're really at an egg deficit. It is hard

to understand where even they find larvae; but we just don't have any spawning biomass. I think that's an important part of this recruitment failure. There are environmental factors, too.

I think with the work they've done they've shown that from one cause or another warmer winters tend to produce weaker year classes, and it probably has to do with timing of predators and eggs and larvae. Seeing that in the assessment kind of bears out that we can – there is still some responsiveness in the stock. Would you agree with that or do you think there is something else going on there?

MR. NITSCHKE: You can see on here this is the total removals. The moratorium went in 2010. Assuming this is the result of that moratorium on the catch, right; it converted some of landings to discards. The estimated discards – the overall catch was a bit lower, too, compared to more recently. There you can see what we're talking about. In terms of differences in catch, it is not really that different compared to the recent catches. It is a little bit higher, but we're really near the low of the whole time series here.

MR. SIMPSON: Yes; I agree, there isn't enough left to catch that you could change it dramatically; but it looks to me like we cut it by two-thirds or three-quarters from 2008 and then we allowed it to double or triple. Yes; in that absolute magnitude, it is a little because there is only so many fish left in the ocean; but in terms of percentage of what we left in the ocean, it was a vast improvement. It seems like we were beginning to see some response; and I think we're slipping again.

MR. NITSCHKE: This is something we could look maybe a little closer into the surveys if we see a response in the surveys. Right now part of that response is just simply because the catch is lower in the model; so was there really evidence in the surveys at that particular time that the biomass has increased is something we could look into a little bit more.

DR. PIERCE: Paul, you were able to do ASAP with the Southern New England stock but you did swept-area for the Gulf of Maine. I can't recall; why couldn't you do ASAP for the Gulf of Maine to calculate biomass targets?

MR. NITSCHKE: In the Gulf of Maine the retrospective was one of the worse retrospectives we have had with the Gulf of Maine stock. Part of that I think comes from when we look at the recruitment indices, they're fairly flat. You don't really see much evidence of a decline in recruitment or you don't really see any big changes in the indices over time in the Gulf of Maine.

In the Southern New England stock you do see more of a change. You see declining trends in recruitment and declining trends in the indices. All the indices are kind of showing the same thing. The trends in the indices line up with what we're seeing on the catch side. The issue now is it appears it is no longer fishing; it is recruitment is not coming in. The production is not coming in.

DR. PIERCE: One final thing; you were able to do ASAP for the Southern New England stock. Did anyone do a swept-area biomass for the Southern New England stock to compare the results of both approaches? That might be revealing. Especially since again we're relying more and more on swept-area estimates, I really would like to see the comparison between the two. Perhaps if you did the comparison, you might get some insights into the Q value.

MR. NITSCHKE: We have not done that, but I think that's a good idea.

MR. DAVID V.D. BORDEN: Paul, I'm just curious and I may have missed it, but was

the NEAMAP Survey used in the Southern New England area? Is that part of the –

MR. NITSCHKE: Yes.

MR. BORDEN: It was; and do you have a figure for that that you could put up? I'm just curious.

MR. NITSCHKE: I'm not sure if it was in my plots. I can probably dig that out if you're interested.

MR. BORDEN: Okay, I'd just be curious because the last time the board discussed this – if my recollection is correct, there was an upturn in that indices the last time we discussed it. I've had some conversations with individuals that seem to indicate that survey has gone the other way; and I'd just be curious. The other question is I attended the SSC meeting, but I can't recall what was the final biological advice from the SSC on this stock?

MR. NITSCHKE: The SSC Report is not out yet from that meeting; but when we look at the catch plots, we brought forward to the SSC two scenarios; the 75 percent Fmsy projection, which is that blue line; and a constant projection, which is using the lowest value and keeping that constant, which was that 2017 estimate. I believe that was 780 metric tons. I believe the SSC is going to bring that forward for consideration for ABCs.

CHAIRMAN GIBSON: Any other questions for Paul on the Southern New England stock status?

MR. GIBSON: Well, just on that; I wonder how does that recommendation fit with the finding you mentioned earlier that there is only a 40 percent probability of achieving the target biomass by 2023; how do those things fit together?

MR. NITSCHKE: These estimates don't consider the fact that you can't rebuild the stock, basically, by that end date.

MR. PATRICK AUGUSTINE: I had to gather my thoughts after my mess this morning. Pretty good presentation. We keep skirting around the area of predation. I think Bill Adler brought up the cormorant thing. It has always been out there, and we never seem to be able to get a count on the numbers of cormorants and what the actual effect is; the same way with seals.

I'm wondering when are we going to get to that point in time where we dedicate some effort in looking at what the seal count has been for back as far as we can – maybe it is 1970 – and lay on the chart the number of seals estimated or otherwise seen through the years and where we are now. Visually when you look at the number of cormorants we have around Long Island – I did talk with Audubon and they were willing to make some numbers available to me if I wanted to do it. We were talking about trying to put together a depredation plan.

CHAIRMAN GIBSON: Pat, I think we're drifting into the next agenda item. I was just trying to conclude the questions on the stock assessment at this point.

MR. AUGUSTINE: Okay. Well, I think those are the things that keep popping up in my mind, Mark, and thank you very much. I'll wait for the next agenda item.

DISCUSS POTENTIAL MANAGEMENT RESPONSE TO THE OPERATIONAL ASSESSMENT

CHAIRMAN GIBSON: Any other questions on the stock assessment for Southern New England and then we'll get into the next agenda item on management response? Seeing none; we can move on. Where I think we are is we have the stock assessments have been done and peer reviewed. The PDT and SSC have deliberated on them and the reports haven't come out yet.

It is my understanding that the Groundfish Committee is going to meet in the next couple of weeks. The Counsel Chair is here and members of the Groundfish Committee to receive that advice and then pass it on to the council for the first week in December in Framework 55 specification-setting. This board can set commission specifications by board action; but it seems to me our information basis to inform us on that is incomplete at this point.

It would seem to me that we want to let that process play out and perhaps do some tasking for the technical committee to review the stock assessments, keep track of what is going on in terms of SSC advice and council action and be prepared to advise us on specifications at the December meeting. That is where I think we are. If the board disagrees or if my council colleagues have other things to add, I'm happy to hear that. Dave Borden.

MR. BORDEN: I don't disagree with postponing a decision until a subsequent meeting; but I think it would be a good idea to at least have a discussion of the direction that the commission would like this issue to go. At least in my own view I think David Simpson's point was dead-on. The information in the SSC Report is very clear and this presentation is very clear even if you reduce fishing mortality to zero, there is only a 40 percent probability of rebuilding by the end of the rebuilding period.

I would just emphasize this isn't the first rebuilding period; this is the second rebuilding period. I'd also make the point that I think we should be fairly direct with the council – and we've got a lot of council members here – that under their previous regulations things were improving and now they're going the other way as far as I'm concerned. I think to the extent we can give them advice without getting into the specifics, that would be useful. Thank you.

CHAIRMAN GIBSON: Are there any other thoughts on the management response? I certainly agree that I think – and I supported the council action under the rationale of continuing the data stream to allocate to the sectors and the common pool sub-ACL, minimize discards and turn them into landings; but it doesn't look to me as though that has been correct strategy at this point.

The total catch removals have gone up against a reduced biomass; so we've done more than turn discards into landed catch. The fishing mortality was at an all-time low. I actually think 2009 was the first year because that was an interim action by the agency ahead of council's Amendment 16. We had a number of years at fairly low fishing mortality rates; and there seemed to be some response in terms of biomass increase in the number of older fish and now it looks like we're going in the other direction.

I guess I've had to eat some of my words on what I said a couple of years ago and credit the ASMFC and the board for anticipating an unfortunate circumstance. We're not suggesting we not have a discussion on possible management response. I was just shying away from any specification discussion. Any board discussions on your perception of where we need to go on tasking to the technical committee or signals to the council. I think we've got a half hour to deal with that if you'd like to.

MR. SIMPSON: I think as David said and as this board agreed to a couple of meetings ago, we actually I thought had agreed to send a letter to the council and to the service urging the most conservative action that they could muster to try to give the stock a chance to rebuild. I haven't changed my view that is I think the most prudent thing we could do.

We have to remember this stock is really a complex of smaller stocks. We see this on a very fine scale in local state waters, and it is felt very much at that local level and is

evident at that local level. I'll keep going back to Niantic River Study because there is so much detail there and just the absence of reproductive biomass out there. Any fish we can leave to swim back from federal waters into state and reproduce I think we need to make that effort to do that and to give the stock a chance.

It is fighting against I think climate change and all that comes with that, a change in the suite of predators. There are masses of summer flounder in rivers eating up summer flounder and every other thing. Our winter flounder young-of-the-year survey – that is what we used to call it – now catches a hundred times more black sea bass than it does winter flounder.

There are lots of changes out there. They catch more scup than winter flounder, something we never would have imagined in the 1980's, but that's what our survey looks like in 2015. It is an uphill battle but I think that just means we need to work harder to try to preserve what we can of this stock when it has to leave state waters to find cooler waters; and that means in federal waters and exposure to a federal waters' fishery.

CHAIRMAN GIBSON: Toni, what is the status of our communications with the council; and is there an opportunity to communicate with them on behalf of this board prior to their December meeting?

MS. KERNS: Yes; I believe the council meeting is that first week in December. I don't know when the groundfish meeting is and I would turn to Doug or Terry – two weeks from now. I think I passed the letter back to the states to draft some language changes to it. Even at that last meeting that we had, we had a little bit of different direction from some board members; so we put into place what we could and then we were looking for a response back for final edits.

We can wrangle you guys a little harder. The other question that I have for the board is Bob and I will be at the Northeast Regional Coordinating Council Meeting. Guessing that this would be an important topic at this board meeting, I asked for time on the NRCC Agenda for a winter flounder discussion.

If there is anything that you would like Bob or me to bring forward to the NRCC for collaboration either on studies or just to continue urging of proactive conservative management in particular for Southern New England, please let us know or continue this discussion of what we can bring to the NRCC on behalf of the commission.

CHAIRMAN GIBSON: It seems based on what we've heard today in board discussion, we probably have more of a convergence of view on the letter and a request to the agency. I would be happy to work with you on that if the board is okay with that and get it into the council's hand before they meet in December. Terry.

MR. TERRY STOCKWELL: Mr. Chairman, I was just wondering about the timeline, whether or not it would be possible to have it in hand before the Groundfish Committee Meeting, which I believe is two weeks from today.

MS. KERNS: Yes; we can do that and we can even work on the letter while we're here and get you while you're here.

CHAIRMAN GIBSON: It sounds like the answer is yes on that. Bud.

MR. BROWN: Toni, is that going to apply to the Gulf of Maine stock as well?

MS. KERNS: That's at the direction of the board. I would just need to know what the board would like to do.

CHAIRMAN GIBSON: What is the board's pleasure on that? It seems like Southern

New England is more serious than the Gulf of Maine is, so I don't know if you want to comingle those issues in a discussion with the council or not. I think up to this point we've been talking about communication on the Southern New England resource and our concerns about that. I see a bunch of heads nodding on that. David.

MR. SIMPSON: Yes; that has been the discussion and the much clearer stock condition and history. The Gulf of Maine; they may separately want to couch slightly differently for their conditions make some kind of statement ahead of the groundfish meeting; but the Gulf of Maine assessment, it only seemed to go back six, eight, ten years. There is not a lot of perspective. I don't want to lose the focus and the impact of the clearly urgent condition of Southern New England.

MR. ROY MILLER: Mr. Chairman, I confess that I find it hard to be optimistic when I listen to statements like it can be rebuilt by 2023 if F is zero at a 40 percent probability. I'm wondering from the perspective of the southern states, which once had a recreational fishery for winter flounder at least within my memory – but I'm old enough to remember back that far. Younger folks don't remember ever having a recreational fishery for winter flounder down our way.

The capture of a juvenile winter flounder in one of our shoreline seine surveys is now a rare event and a notable event when it happens. What on earth can we do, Mr. Chairman? The frustration I feel on this board mirrors the frustration I feel to a certain extent in the Weakfish Board. Really, is there any hope of rebuilding this stock; and if so, how do we proceed?

CHAIRMAN GIBSON: I think my response to that is I think that is one of our taskings to the technical committee is to take a look at the stock assessment and see if they concur with some of the board's evaluation that in fact we were making some progress under a very low fishing mortality; and that when reallocation occurred and the catches doubled, it is hard to see on that small scale, but in fact there was in terms of a proportional increase a fairly significant increase – see if our technical committee concurs with that; that we were making some inroads during a few years of prohibition and a federal prohibition on retention and very low state possession limits.

If they come back and say we concur with what the board has discussed on that, then I think we have a stronger hand to play than perhaps we think. I think where I'm trying to get to now is tasking for the technical committee. I think we need both the report from the technical committee and the advisory panel on specifications for the next meeting that would take account of the information Paul has presented and what transpires at the Groundfish Committee two weeks from today. That would be what I think we need to task the technical committee with. Terry.

MR. STOCKWELL: Roy raises an issue that strikes home with me. It is much like with Northern Shrimp where we had to have the technical committee rescale the X-axis so we could even see what the abundance of shrimp was. We've worked hard; we've cranked the cod fishery down by almost 80 percent. We've failed to see any really positive results from that. But to address the issue of the Gulf of Maine, I think the letter could be generic enough to reflect both the Gulf of Maine and the Southern New England, but to highlight the particular critical needs of Southern New England at this point. I think it would cover both bases.

MR. THOMAS FOTE: I think depressing is we've had strict dredging requirements in New Jersey for many years that you could not dredge when the winter flounder spawn.

Cape May has made a big push because it really restricts a lot of the marinas to what they want to do with maintenance dredging. The only time they can dredge is during the summertime when the docks are basically – and New Jersey is going to lift some of those restrictions now so they can start dredging because they can't find any real juveniles.

I think Great Egg Harbor they actually found a couple this year that were juvenile. There is going to be push from these other areas in New Jersey to do the same thing by this closure. I fought against it but I lost that battle. When you get more depressed stocks, things are going to happen that will affect maybe to come back in the Delaware Bay. Did your state still keep the winter flounder closures for dredging?

DR. PIERCE: Folks from the Gulf of Maine; yes, the technical committee has to look at this assessment information and provide us with some advice. I would suggest that advice could be done in the context of what this board did back at the end of 2012. As you recall, the ACL, the catch limit went up for Gulf of Maine cod and that resulted in an increase in the state waters' subcomponent; that is, that amount of the ABC that was set aside for non-federal permit holders.

As a consequence of that, we increased our possession limit. Collectively we increased our possession limit for the commercial fishermen from 200 to 500, I think – it went up to 500 pounds in response to that. The question now becomes what does this new assessment information reveal to us relative to that non-federal permit holder component?

Do we have to go back and look at the trip limit that we implemented back in 2012, early 2013, bring it back down to some lower level; does that make sense? Also, the recreational fishery, recall I think we went with a year-round recreational fishery; low catch limit, but still it was year round. All that has to be looked at again, I suspect, in light of this new information and the state waters' subcomponent for the commercial fishery, which also involves our taking a look at the recreational fishery as well.

I can't speak to the Southern New England situation except it is not good. I still think it has got a lot to do with seals from my perspective at the eastern entrance to Nantucket Sound, the southern entrance of Nantucket Sound, Muskeget Island, Monomoy Island in the area. I think it is Muskeget Island that has got a phenomenal population of horsehead seals.

When I saw the photograph of winter flounder up on the screen, it looked like easy pickings for very hungry seals as the flounder leave the estuaries and salt ponds in the spring going to Nantucket Sound and Vineyard Sound because of warming waters, just normal warming waters come late spring and summer, and they exit to the east and they exit to the south and kind of a funnel effect with potentially the horsehead seals waiting to chow down. Obviously, we'll never get a handle on that unless there is more examination of scat on the beach.

I know the Center does a lot of work with scat. Somebody has to look at the scat so hopefully that continues and we get a better handle on what this burgeoning population horsehead seals is consuming with winter flounder likely being a major component of what they eat, sea herring and the like, but I can't but believe that these flounders are easy pickings. That is what I suspect the technical committee is going to have to look at relative to the Gulf of Maine assessment picture.

MR. TOM BAUM: Just to bring up what Tom Fote had brought up earlier and as Roy Miller was talking about the absence of occurrence of any winter flounder in its previous southern range; actually it was the Essential Fish Habitat Branch of NOAA

basically is redesignating the Winter Flounder Egg Essential Fish Habitat – redesignating the south of Absecon Inlet, which is basically at Atlantic City.

They're redesignating that as it no longer is essential winter flounder habitat for eggs, thus allowing dredging to occur in the marinas and elsewhere. That is a concern because it is more of an issue of the status of the stock and probably its reduced range. I believe New Jersey will still be able to comment on if there is any aggravation of spawning winter flounder. We will still be able to recommend a winter flounder spawning window, dredging window, but where that goes is up to the administration.

CHAIRMAN GIBSON: I'm down to my last few minutes here and we've still got to elect a vice-chair. I had Ritchie White and then I'd like to make sure we have given Toni the advice she needs on tasking the technical committee, AP, and the letter and contact to the council. Ritchie White.

MR. WHITE: I'll try to be quick. One more example as we had in Southern New England lobster and as we have in Northern Shrimp where we're starting to deal with a population that is not responding and you lower fishing mortality to about as low as you can lower it; what do you do and what do you say? I think this is an issue – and it sounds like weakfish – so I think this is something that Policy Board, Management and Science; that from a commission standpoint I think we're going to have to start looking at how do we handle these species going forward?

MS. KERNS: I think I'll repeat back a little bit what we want to have done just so Ashton and I are clear on what is going on to make sure we didn't miss anything. The technical committee tasking; we want them to review the results of the assessment and report back to the board on ways that we can react to the assessment to see if there are things that we can do to rebuild, in particular looking at the moratorium years in federal waters to see if that did have any positive impacts on the stock; also looking at the specifications that are currently in place and whether or not those should be altered both for the Gulf of Maine and Southern New England/Mid-Atlantic. Did I miss anything there?

CHAIRMAN GIBSON: It sounds good to me. Bud just handed me note that said we need AP members, so I don't know if we have a functional AP at this point to give us advice on specifications as well.

MS. KERNS: We can look at that and let the individual states know who – we'll send a note to the individual states on your AP attendance for the calls that we have had in the past and see if you want to appoint new members and also gauge the interest of those that are currently on the AP as well. In terms of the letter, Ashton and I will work on that while we're here this week and get back to a couple of folks for your input there.

That letter is to express our concerns for the condition of both stocks, but highlight the critical need in Southern New England. Then for the Northeast Regional Coordinating Council, again I think we'll reiterate what is in the letter.

Are there any collaborative projects or research that we think that we should stress that needs to be done or do we need to ask the technical committee if there is any additional research that can be done for priorities that would help enhance the assessment or enhance our understanding or knowledge of why the stock is not responding. I don't know, Paul, if you think that there is anything out there. These can be long-term or short-term projects.

MR. NITSCHKE: I think gear work and determining the efficiency would be useful. I know some work is already underway in doing that, but it is not the easiest thing to

get at. I think we do need more work on that.

MR. ADLER: Would it be possible that if you're giving a little list to the technical committee look at whether they can do something or not; that what I brought up before about could they look at perhaps reducing that target threshold level from where it is now down a little. Now, I know this isn't going to bring the flounder back, but it makes it a little bit more realistic as to, well, if we can get up to that next notch whereas you'll never get up to the notch you're at now; and I don't know whether it is the technical committee that sort – or would they consider asking us, however we have to do it, to change that level.

The second thing goes back to that natural mortality. Is there anything they can look at and get – I think I heard somebody around here saying that they could get some information to let us better assess the natural – I'm going to call it natural mortality, which will include the predation just so we'll start to get some picture. I'm just throwing that out as maybe you could tack that on to the list of things that you want the technical committee to at least look at. Thank you.

CHAIRMAN GIBSON: Thanks for that, Bill. The natural mortality assumption and the rebuilding targets, Bmsy, they come right out of the stock assessment and peer-review process. The technical committee and this body is not going to be able to change that; but I think that could be on the list of technical committee tasking is what is their opinion on the appropriateness of a constant M through time and the feasibility of obtaining the Bmsy level that currently exists. Would you be comfortable with that, Paul, as being tacked onto your list?

MR. NITSCHKE: I guess I'm a little pessimistic on what we can pick apart from the stock assessment. To me nothing is going to change in the stock; we're not going to hit rebuilding targets unless we change that recruitment trend. If recruitment continues to decline, the biomass targets don't mean anything.

The projections for that biomass target in 2014 basically just assumes that recruitment comes back and we're going to get there. Any projection is going to do that. Right now I'm not convinced we can turn recruitment around. Until we see evidence of being able to see if production comes back in, I don't know what we can do.

MR. SIMPSON: Just to that and I guess for the point of the letter, it seems clear to me that recruitment is suffering both from probably changing natural mortality rates in the first year of life and beyond but also a lack of spawning biomass. I think you're deeply into the density-dependent recruitment; and there is just not enough adult winter flounder out there reproducing to produce a strong year class despite the last two winters, which should have been great, nice cold winters, protracted cold into the spring that keeps predators at those early life stages like sand shrimp from eating up all the newly recruited juveniles, bottom-tending juveniles.

I think that is something and it is a long road back; but, yes, it is facing other challenges. Penny Howell has been doing – kind of revisited some work she did 20 or 30 years ago with our seine survey, which we used to do through the summer.

We're doing it in September for a final count; and she can see, having done it for a few years, again from June through September, that settlement looks pretty decent in June and looks worse in July and worse in August and looks terrible by September. There is that first year of life mortality that seems to be elevated from previous, but it just makes it all the more critical that if we can leave adults in the water to reproduce; that we need to try to do that.

CHAIRMAN GIBSON: I'll just briefly let the board know that John McCauley at URIG has a Sea Grant award to look at life stage bottlenecks in winter flounder with the large database that's available on different life stages and try to see where in fact which life stage things have broken down.

I think there is going to be some good work done on that that might give us some insight of where the life history is broken down and not necessarily a cure for it but I think that is going to be coming. It is my sense that we have a pretty good idea, Toni, of what we need to ask of the technical committee and what we're going to do with the contact with the council.

ELECTION OF VICE-CHAIR

Is there anything else on that before I move to the last agenda item, which is election of the vice-chair?

MR. SIMPSON: I would like to nominate Dr. Pierce for vice-chair.

CHAIRMAN GIBSON: Dave Pierce has been nominated. Are there any other nominations? Seeing none; I'll close nominations and congratulate Dr. Piece. He has studied winter flounder for a long time; welcome back.

ADJOURNMENT

Is there any other business to come before this board? Seeing none; is there a motion to adjourn? Yes, moved by everyone and seconded by everyone. We are adjourned.

(Whereupon, the meeting was adjourned at 3:05 o'clock p.m., November 3, 2015.)

Atlantic States Marine Fisheries Commission

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Douglas E. Grout (NH), Chair *James J. Gilmore, Jr., (NY), Vice-Chair* *Robert E. Beal, Executive Director*

Vision: Sustainably Managing Atlantic Coastal Fisheries

November 16, 2015

John Bullard
NOAA Fisheries Service
Greater Atlantic Regional Fisheries Office
55 Great Republic Drive
Gloucester, Massachusetts 01930-2276

Tom Nies
New England Fisheries Management Council
50 water Street
Newburyport, Massachusetts 01950

Dear ~~Mr. Bullard~~ John and ~~Mr. Nies~~ Tom,

I am writing on behalf of the Atlantic States Marine Fisheries Commission's Winter Flounder Management Board (Board). The Board is concerned about the status of winter flounder stocks, particularly the critical condition of the Southern New England/Mid-Atlantic (SNE/MA) population. Information from the 2015 stock assessment indicates the stock is overfished and biomass estimates are at 23% of the target. While there have been some modest increases over the last decade, the stock has remained at approximately a quarter of the target since the early 2000s. Since 1981 recruitment has been declining, 2013 is the lowest in the time series which is approximately 4% of the estimated recruitment in 1981(the highest in the time series). While the 2014 recruitment estimate increased slightly, the overall stock productivity continues to decline.

The 2015 assessment biomass estimates and the states' fishery independent indices show a downward trend in the most recent years, reversing what appeared to be some modest recovery during the four-year harvest moratorium period in federal waters. Stock projections indicate the stock can not rebuild by 2023 with fishing mortality at zero (50% probability). Based on the updated assessment and state survey's, the Board urges the New England Fishery Management Council (NEFMC) and NOAA Fisheries to implement increased conservation measures, including reductions in the ABC and set possession limits to unavoidable bycatch levels in federal waters. The Commission has maintained a very restrictive commercial bycatch limit of 50 pounds or 38 fish per trip and a recreation bag limit of two fish in state waters.

The Board is also seeking ways to collaborate more closely with the NEFMC and NOAA Fisheries on management of winter flounder. The Commission is willing to send representatives to the NEFMC meetings or invite Council representative to our meetings to facilitate better coordination. Thank you for your consideration and please contact me with any questions.

Sincerely,

Robert E. Beal

cc: ASMFC Winter Flounder Board

ATLANTIC STATES MARINE FISHERIES COMMISSION

Winter Flounder Decision Document

The following document contains a summary of motions specific to Winter Flounder leading up to (and at) the NEFMC December 2015 Council Meeting.

NEFMC Council Meeting
December 1, 2015
Portland, Maine

Mr. Blount moved and Ms. Goethel seconded: that the Council selects as preferred the OFLs and ABCs for FY 2016 - 2018 as recommended by the SSC for all groundfish stocks, with the exception of witch flounder ABC, described in Table 10, Option 2 (revised ACLs)/Section 4.1 (Annual Catch Limits), shown below.

The motion carried on a show of hands (14/1/1/1) with one recusal.

Table 10. Option 2 Revised OFLs, ABC, and ACLs.

Stock	Year	OFL	US ABC	State Water Sub-Component	Other Sub-Component	Groundfish Sub-ACL	Comm Groundfish Sub-ACL	Preliminary Sectors Sub-ACL	Preliminary Non-Sector Groundfish Sub-ACL	Total ACL
GOM	2016	1080	810	122	16	639	639	604	35	776
	2017	1080	810	122	16	639	639	604	35	776
	2018	1080	810	122	16	639	639	604	35	776
SNE	2016	1041	780	70	94	585	585	514	71	749
	2017	1021	780	70	94	585	585	514	71	749
	2018	1587	780	70	94	585	585	514	71	749

Recreational Advisory Panel Meeting
Danvers, MA
November 17, 2015

Meeting Motions for Framework Adjustment 55 (specific to Winter Flounder)

Motion 2: Colby/Swanson

The RAP recommends to the Groundfish Committee that the GOM winter flounder FY 2016- FY 2018 ABCs remain at the quota specified for FY 2015 which is 510 mt.

Rationale: The RAP feels that there are no compelling reasons to increase to the quota, especially given that the overfished status of the stock is unknown and low quota utilization. Given the experience in the recreational fleet, especially around the Boston area, there was been a lack of increase in the availability of GOM winter flounder. The stock appeared to be increasing a few years prior, but the RAP feels that recent declines are evident. This stock is important to the recreational fleet and the RAP is concerned about this stock, as it is one of the few available to recreational anglers in the Gulf of Maine. The RAP notes that total catches have been well below the quota in recent years (see Fig 13 in Doc 3d- PDT memo to SSC and CC the Groundfish Committee re Groundfish ABCs and OFLs for FY 2016- FY 2018, October 9, 2015).

Motion 2 carried 11/0/0.

Groundfish Advisory Panel Meeting
Portland, ME
November 12, 2105

Meeting Motions for Framework Adjustment 55 (specific to Winter Flounder)

Motion 5: Raymond/Parker

The GAP recommends that the Groundfish Committee develop Scallop fishery sub-ACLs (and associated AMs to be developed by the Scallop Committee) for Southern New England/MidAtlantic winter flounder and Northern Windowpane for inclusion in FW 55.

Rationale: The current PDT recommendation is that 60% of the Northern windowpane flounder ABC would go to the other-component catch, which is mostly scallop fishery catches.. Recent SNE/MA winter flounder catches by the Scallop fishery are also high. During the development of FW 53, work for the sub-ACL for Northern windowpane flounder was started. This information/approach could be used to develop the sub-ACLs.

Motion 5 carried 8/0/0.

Groundfish Committee Meeting
Warwick, RI
November 18, 2015

Meeting motions

Motion 2c as further friendly amended: Goethel/Etrie

The Groundfish Committee expressed continued and growing concerns (i.e., volatility in highs and lows, lack of stability) in the latest round of groundfish stock assessments. 1) The Groundfish Committee recommends that the current assessment process be modified to enhance the AP's role in the assessment process. 2) The Groundfish Committee strongly emphasizes the need for improved assessments rather than more assessments, which is being followed under the Operational Assessment ("turning of the crank") process.

Rationale: The Committee is not rejecting the recommendations from the SSC by the motion. Rather, the results of the latest round of stock assessments are not only divorced from the reality of what fishermen are seeing on the water, they are now increasingly at odds with prior assessments and show decreasing predictive ability. The Committee raised concerns about the retrospective issues in the assessments as well. The Advisory Panels would convene prior to the SSC meeting to provide information for the SSC to consider when recommending OFLs/ABCs. The example of the SSC's discussion in 2014 of the GOM cod ABC was identified as a time when the GAP was asked for additional input. Another example was the MAFMC fishery Page 3 of 8 performance report and AP vetting process. The Committee provided examples of what improved assessments means to them: better model diagnostics, improved model residuals, less retrospective concerns, using improved data such as industry-based information (CPUE, surveys, industry observations and experience), and incorporating ecosystem dynamics. For many stocks, their last benchmark was years ago.

Motion 2c carried 8/1/2.

Motion 3: Alexander/Goethel

Move that the Groundfish Committee recommend that the Council accept the OFLs and ABCs for FY 2016- FY 2018 recommended by the SSC for all groundfish stocks.

Motion 3 carried 10/0/1.

Winter Flounder Fishery (GOM and SNE/MA)

This document provides an overview of the historical annual catch limits and the proposed catch limits for the 2016-2018 GOM and SNE/MA fisheries. In addition, a summary of the catch relative to the allocated annual catch limit or state sub-component for FY14 (May 1, 2014-April 30, 2015) is included.

Table 1. Annual Catch Limits for Winter Flounder, in metric tons, by fishing year

GULF OF MAINE					
	Total ACL	**Sector Sub-ACL**	**Common Pool Sub-ACL***	**State Waters ACL Subcomponent**	**Other ACL Subcomponents**
2010	231	133	25	60	12
2011	231	150	8	60	12
2011 Emergency Revision	524	313	16	163	32
2012	1040	690	25	272	54
2013	1040	688	26	272	54
2014	1040	683	32	272	54
2015	489	375	18	87	10
2016-18**	776	604	35	122	16

SNE/MA					
	Total ACL	**Sector Sub-ACL**	**Common Pool Sub-ACL***	**State Waters ACL Subcomponent**	**Other ACL Subcomponents**
2010	605	NA	NA	53	32
2011	842	NA	726	72	45
2012	603	NA	303	175	125
2013	1612	1074	136	235	168
2014	1612	1063	147	235	168
2015	1607	1149	157	117	184
2016-18**	749	514	71	70	94

*The GOM common pool catch limit for each stock is divided into trimester total allowable catches (TACs): Trimester 1 (May 1-August 31); Trimester 2 (September 1-December 31); and Trimester 3 (January 1- April 30). SNE/MA is not managed under a trimester quota.

** The numbers are based on SSC ABC recommendations, which were subsequently approved by NEFMC in December 2015

Table 2. FY14 (May 1, 2014-April 30, 2015) Catch for the Federal and State Fishery (Source: GARFO)

	Stock	Cumulative Catch (mt)	Sub-ACL (mt)	% Caught
GOM	Sector	123.7	682.8	18.1
	Common Pool	0.6	31.9	1.9
	Commercial Fishery Total (Sector + Common Pool Allocations)	**124.3**	**714.7**	**17.4**
	State sub-component	113.3*	272	42

	Stock	Cumulative Catch (mt)	Sub-ACL (mt)	% Caught
SNE/MA	Sector	489.9	1062.6	46.1
	Common Pool	55.9	147.4	37.9
	Commercial Fishery Total (Sector + Common Pool Allocations)	**545.8**	**1,210.0**	**45.1**
	State sub-component	71.1**	235	30

*The GOM state water catch in FY14 was 113.3 mt, which was comprised of 62.8 mt (commercial) and 50.4 (recreational)

**The SNE/MA state water catch in FY14 was 71.1 mt, which was comprised of 46.6 mt (commercial) and 24.5 mt (recreational)

Atlantic States Marine Fisheries Commission

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A Review of the Southern New England/Mid-Atlantic Winter Flounder Fishery and Management Program Under Zero Possession Limits

Winter Flounder Technical Committee
January 2016

Statement of the Problem

The Winter Flounder Management Board (Board) met on November 3, 2015 to review the most recent stock assessment updates for Southern New England/Mid-Atlantic (SNE/MA) and the Gulf of Maine (GOM), and discuss potential management responses. Based on the Northeast Fisheries Science Center (NEFSC) operational (update) stock assessment for GOM, the stock biomass status is unknown and overfishing is not occurring. The SNE/MA winter flounder stock is overfished but overfishing is not occurring.

The Board is concerned about the status of winter flounder stocks, particularly the critical condition of the SNE/MA population. Information from the 2015 stock assessment indicates the SNE/MA stock is overfished and biomass estimates are at 23% of the target. While there have been some modest increases over the last decade, the stock has remained at approximately a quarter of the target since the early 2000s. Since 1981 recruitment has been declining, 2013 is the lowest in the time series which is approximately 4% of the estimated recruitment in 1981 (the highest in the time series). While the 2014 recruitment estimate increased slightly, the overall SNE/MA stock productivity continues to decline.

Board Tasks

The Board requested the Technical Committee (TC) further investigate the impacts of the zero possession limit on the SNE/MA stock, effective May 1, 2009 through April 30, 2013. Specific tasks include:

1. *Review 2015 stock assessment update for SNE/MA*: The Board asks that the TC review the current management measures and suggest alternatives, if necessary.

2. *Investigate the effects on SNE/MA biomass during heightened federal restrictions (2009-2013):* At present the stocks are not responding to lower exploitation rates, the Board is interested in understanding if the stocks were beginning to see modest improvement while restrictions were in place. For example, when looking at data from 2009-2013, what was the effect of low fishing mortality on the SNE/MA biomass?

Background—Management Overview

Zero Possession Limit in Federal Waters

In 2008, the Groundfish Assessment Review Meeting (GARM III) estimated that the SNE/MA spawning stock biomass (SSB) was at 9% of the target biomass with fishing mortality (F) at 260% of the target.

NMFS implemented an interim rule, effective May 1, 2009, to immediately address and reduce overfishing in the SNE/MA winter flounder fishery (among others). A zero possession limit for the commercial and recreational fishery in federal waters was implemented from May 1, 2009 through April 30, 2013.

Beginning May 1, 2013, SNE/MA winter flounder was allocated (lifting the zero possession limit) via Framework 50. Sector vessels were given an allocation of the stock and required to land all legal-sized SNE/MA winter flounder (Figure 10). Common pool vessels were allowed to land legal-sized fish within the trip limit and quota (Figure 11). If the common pool winter flounder quota is caught then the SNE/MA winter flounder stock area is closed to all fishing for common pool vessels. The minimum fish size for SNE/MA winter flounder for both commercial and recreational vessels was (and remains) 12 inches.

ASMFC Management Measures and Rationale

In 2009, the Board approved Addendum I to Amendment 1 of the Interstate Fishery Management Plan (FMP) for Winter Flounder. Commercial trip limits for SNE/MA were reduced to 50 pounds or 38 fish per vessels, per day (Figure 12). The trip limit, which remains in place, was intended to solely allow for bycatch. The recreational possession limit was set at two winter flounder. Zero possession limits were considered by the Board, however there was concern it would increase discards and the Board felt fisheries dependent data would be beneficial for future stock assessments.

In 2014, the Board extended the recreational fishing season from 60 days to ten months (March 1 through December 31), while maintaining the existing two fish creel limit (Figure 12). The intent was to increase fishing opportunities in the southern range where other species' availability may be limited later in the year.

TC Methodology

Trend Examination

The TC grouped state indices into three time periods 1) 2005-2008 (before the moratorium), 2) 2009-2012 (during the moratorium) and 3) 2013-2015 (after the moratorium). Condensing each time period into an average helped make overall comparisons over multiple state and federal indices easier to interpret. The total winter flounder catch and model estimates for SSB and Jan-1 abundance were also treated in a similar fashion for this comparison.

Age Structure Examination

The TC reviewed numbers per tow at age for three state indices from 2008 to 2015 (New Jersey ocean trawl survey, CT trawl survey, RI trawl survey). Time constraints prevented a more thorough examination of all the surveys. However, the recently updated assessment models results should be an overall reflection of combined inputs from all survey indices.

Commercial Trip Species Composition

The TC also examined commercial trawl trip species composition data to help determine possible management effects under the present output control management system in the federal fishery and the effort control system in state fisheries. Catch information from observer and at sea monitor (ASM) data was examined for the federal fishery and landings data was examined for Massachusetts state vessels.

TC Analysis (Task 2)

Trend Examination

Further investigation into model results appears to show less improvement in stock status from the moratorium than previously thought. Increases in SSB at the end of the time series came from an expansion of the population age structure. The increase was not due to a strong young year class. Therefore a greater proportion of the biomass is now comprised of cryptic biomass for older ages (plus group) since a dome shape selectivity is estimated in the model (Figure 1). There is no evidence in the surveys indices to suggest that biomass has increased recently. However, estimated abundance from the model also shows a declining trend over this time period (Figure 2). If future recruitment continues to decline then SSB will also decline in the long term. It is uncertain whether recruitment will increase in the future since the model suggests overfishing is no longer a concern. Productivity of this stock appears to have declined and factors which are causing reductions in recruitment are not well understood. It is unclear whether further reductions in catch will result in improvements of recruitment. However further conservation measures could perhaps increase the probability of improvements in recruitment.

Average catch during the moratorium years (2009-2012) was estimated at 519 mt which increase to an average of 914 mt (2013-2014) when the stock became allocated with the increases in the ABCs. The fishery did not catch their full allocation of SNE winter flounder when the stock was allocated in 2013 (Figure 3). Updated ABC's from 2016-2018 will be reduced significantly (53%) and are now similar to the ABCs that were put in place during the moratorium (Figure 3).

Most of the surveys indicate a declining trend in abundance which would suggest the moratorium did not result in an increase in the stock (Figure 4). This is consistent with state indices from New Jersey, Connecticut, Rhode Island, two of the three New York indices and the NEFSC indices (Figure 4).

Age Structure Examination

The Massachusetts young of year (YOY) index, the Little Neck Bay, New York YOY index, and the NJ age composition data show some indication of increased recruitment after the moratorium (Figure 5). However, if recruitment has improved recently then it was produced from SSB after the moratorium was lifted. During the moratorium recruitment appears to be have been low in the indices. The relative increases shown in these select indices may indicate some localized improvement in recruitment within the stock complex.

During the moratorium, the New Jersey and Rhode Island survey's indicates that there was some expansion in the age structure during a time when the abundance indices were declining (Figure 6 – 2009-2012). Declines in the indices at age over this time period can be seen in Figure 7. However, there is less evidence of an expansion in the age structure in the CT survey. Unlike the CT and RI survey, after the moratorium the NJ survey suggests improvements in the age-1 index with further declines in the older/larger fish (Figure 6 – 2014-2015). The survey suggests some regions may have benefited from the lower catch during the moratorium, and perhaps stock improvements would have been realized if catch was kept lower for a longer period of time.

The TC cautions there is a high degree of variability across the indices. Overall, the TC believes the length of the moratorium may not have been long enough for concrete results to be determined.

Commercial Trip Species Composition

The trip composition analysis suggests that targeting behavior has decreased in MA state water fisheries with the implementation of the 50 pound trip limit. However some targeting behavior still appears to exist on a small number of trips. There also doesn't seem to be strong evidence of winter flounder targeting behavior in the federal fishery. However some targeting behavior can be seen when comparing distributions of trip catch composition before and after the moratorium (Figure 9). Elimination of all targeting behavior is likely very difficult when trips limits are above zero. This is evident in both the federal and state fisheries. Though with the quota based system in the federal fishery there is an incentive to avoid a particular stock when the quota becomes limiting.

TC Consensus Statement (Task 1)

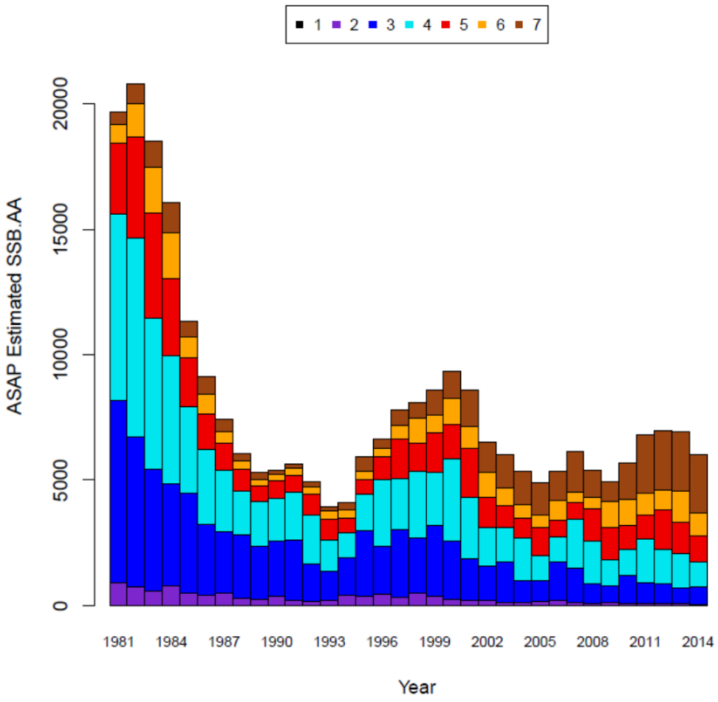
The TC remains concerned about the SNE/MA stock due to a declining trend in recruitment over the time series. Any reduction to the ASMFC commercial trip limit of 50 pounds (intended for bycatch purposes) could perhaps further reduce the targeting behavior on a limited number of trips. However, further reductions in the trip limit will likely result in increases in discards on trips targeting other species. This would likely result in additional uncertainty with estimated removals and fishing mortality. The TC feels the trip limit controls are near their effective limits for controlling mortality. Further reduction in the trip limits may not result in a significant reduction in fishing mortality. The TC does not recommend further reduction in the trip limits at this time. If further conservation measures are required in order to increase the probability of

improvements in recruitment then other management controls should be considered. However these additional controls (closed areas, seasonal closures, days at sea, quotas) will also result in reductions in catch and revenue from other fisheries. It is also no longer clear if these additional controls will result in improved SNE winter flounder stock productivity.

The TC encourages the Board to choose management actions that continue to reduce targeting and fishing morality, in an effort for SNE/MA winter flounder to remain a bycatch fishery in state waters. If possible, it is believed similar actions in federal waters could have a positive effect on the resource. The TC acknowledges that the 2016-2018 approved specifications include reduced ABCs (from 1,676 mt in 2015 to 708 mt in 2016, Figure 10), which are based on the 2015 groundfish stock assessment update. However whether further reductions in the ABCs would result in improvements in recruitment is unknown. Regardless further reductions in the actual catch of winter flounder may already occur through a reduction in the updated SNE yellowtail ABC. Further reductions in the 2016 SNE winter flounder ABC will also likely start to reduce catch/revenue from other fisheries since this ACL may begin to limit the landings of other stocks. This is something that could perhaps be explored further but is difficult to determine presently without knowing what effect the new reductions in groundfish ACLs will have on the fishery.

Lastly, the TC acknowledges there are divergent management approaches among the state and federal SNE/MA winter flounder fisheries. The state fishery is managed through input controls (effort controls, trip limits, seasons, etc.) and the federal fishery is managed through output controls (quotas). While different in approach, complimentary management moving forward could achieve a unified outcome that is beneficial to the resource and ultimately the fishery.

Figure 1. SNE winter flounder ASAP model estimates of SSB by age (top) and proportion SSB (bottom) from 1981 to 2014.



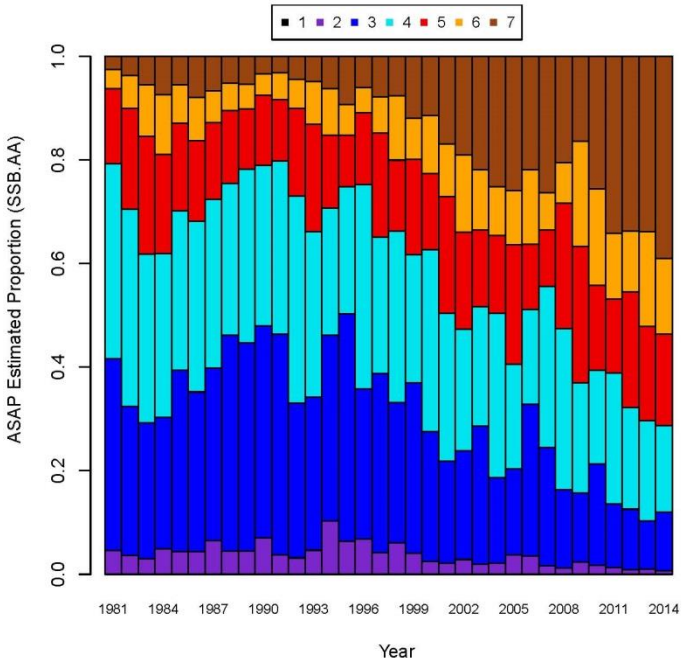
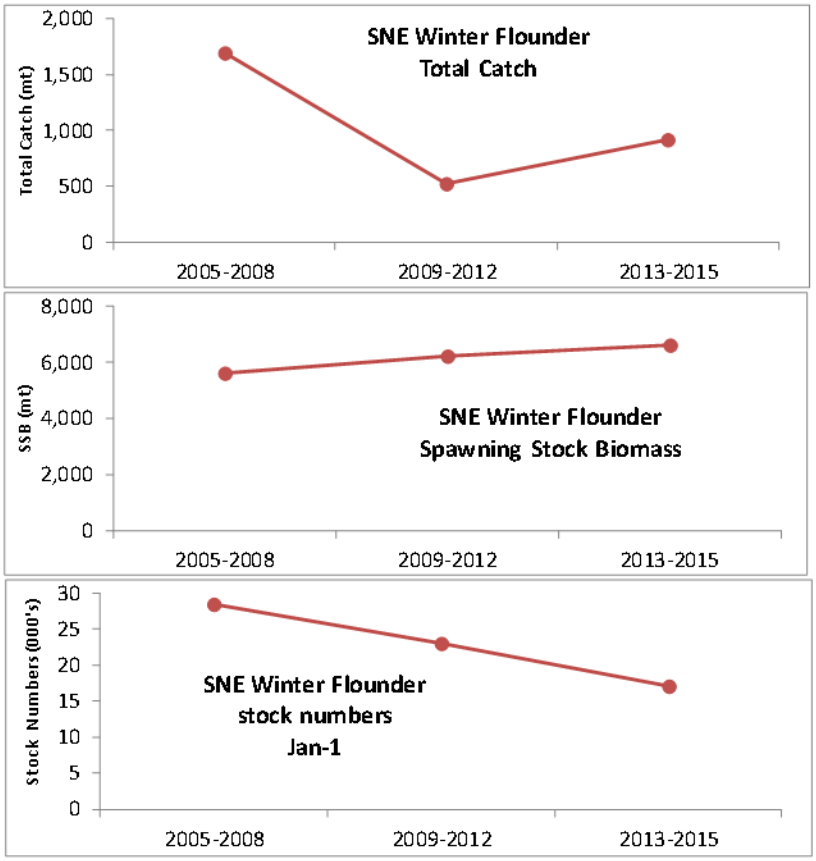


Figure 2. Trend analysis on total catch, SSB and Jan-1 abundance.



Average for three different time periods

Figure 3. SNE winter flounder recent catch, historical and future ABCs, 2015 catch assumption using in projections, and the F_{MSY} projected catch.

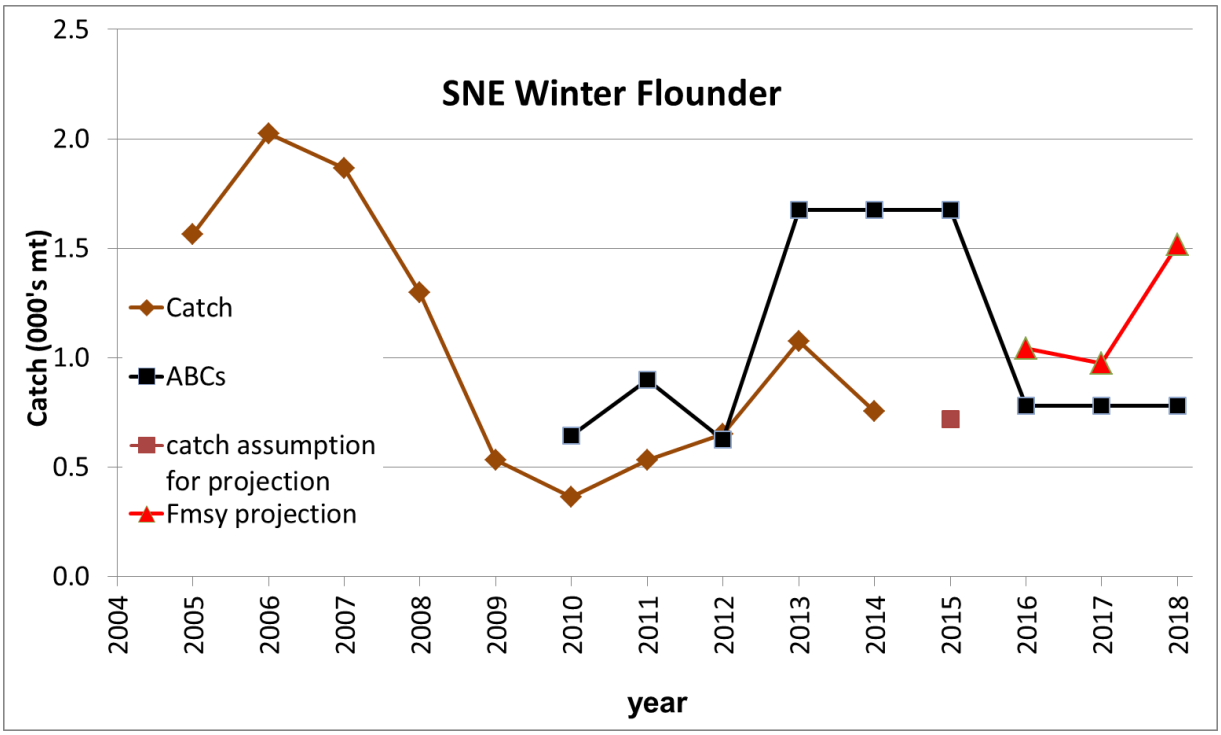
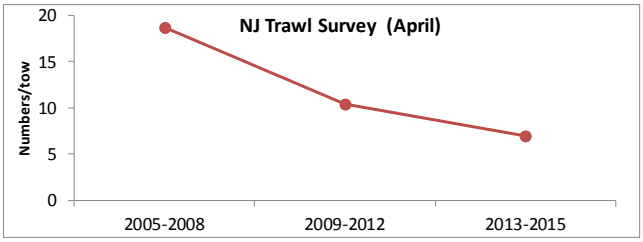
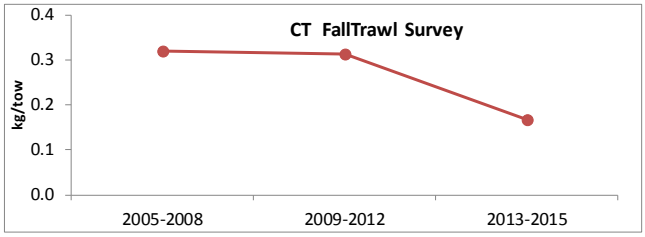
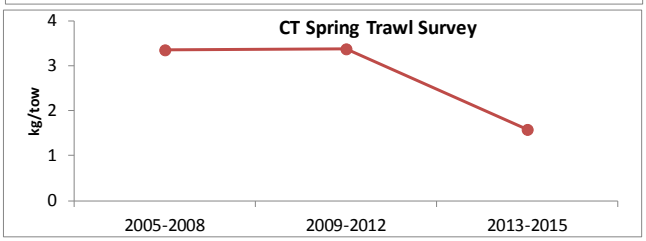


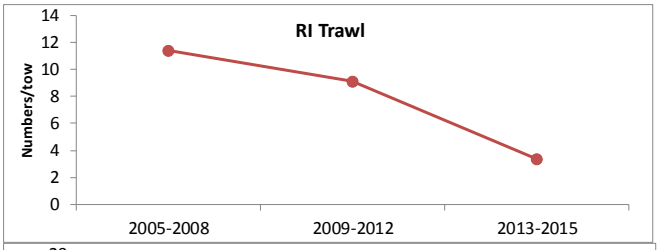
Figure 4. Trend analysis on survey indices.

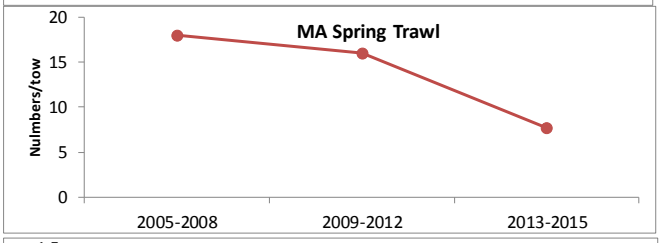


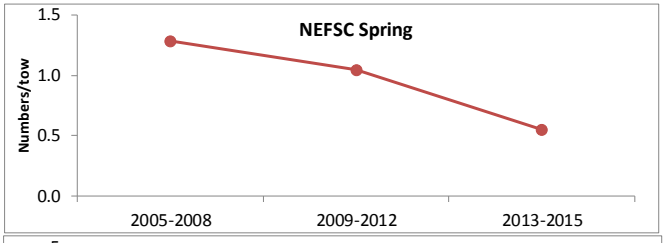


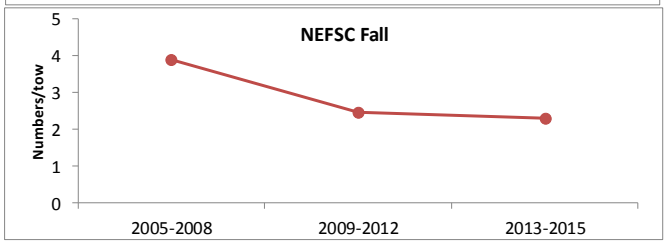


Average for three different time periods









Average for three different time periods

Figure 5. Trend analysis on young of the year indices.

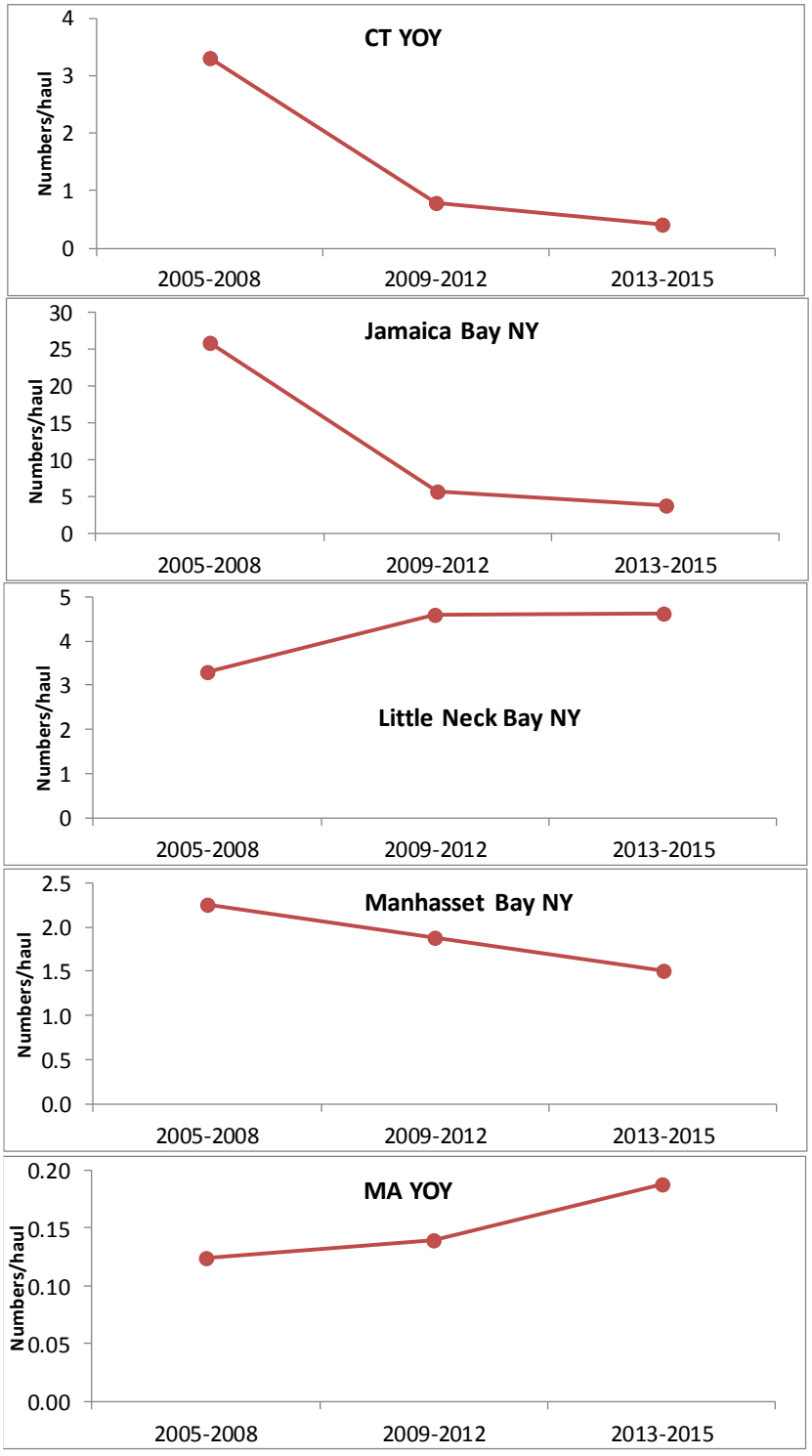


Figure 6. Age structure plots for the NJ, CT, and RI surveys in numbers per tow at age from 2008 to 2015 (when available).

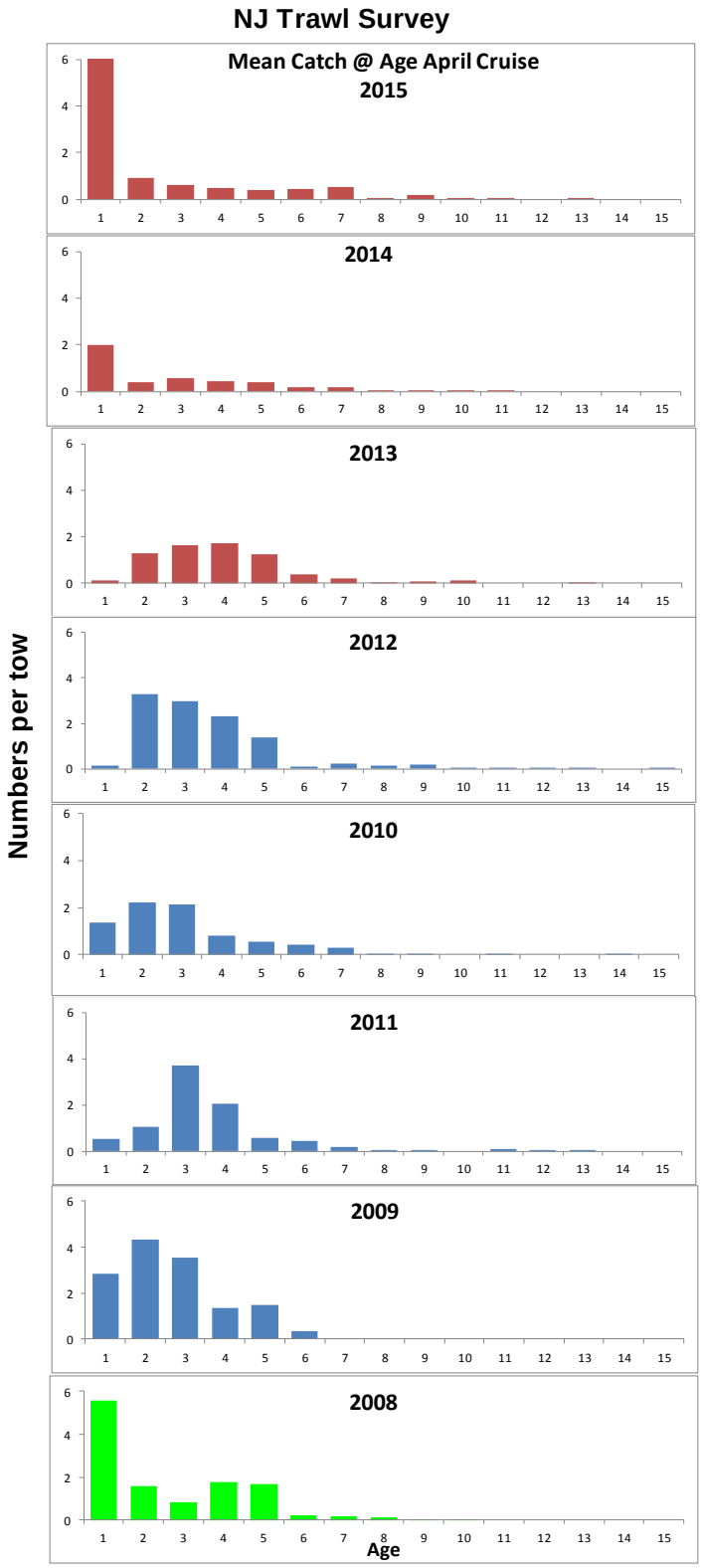
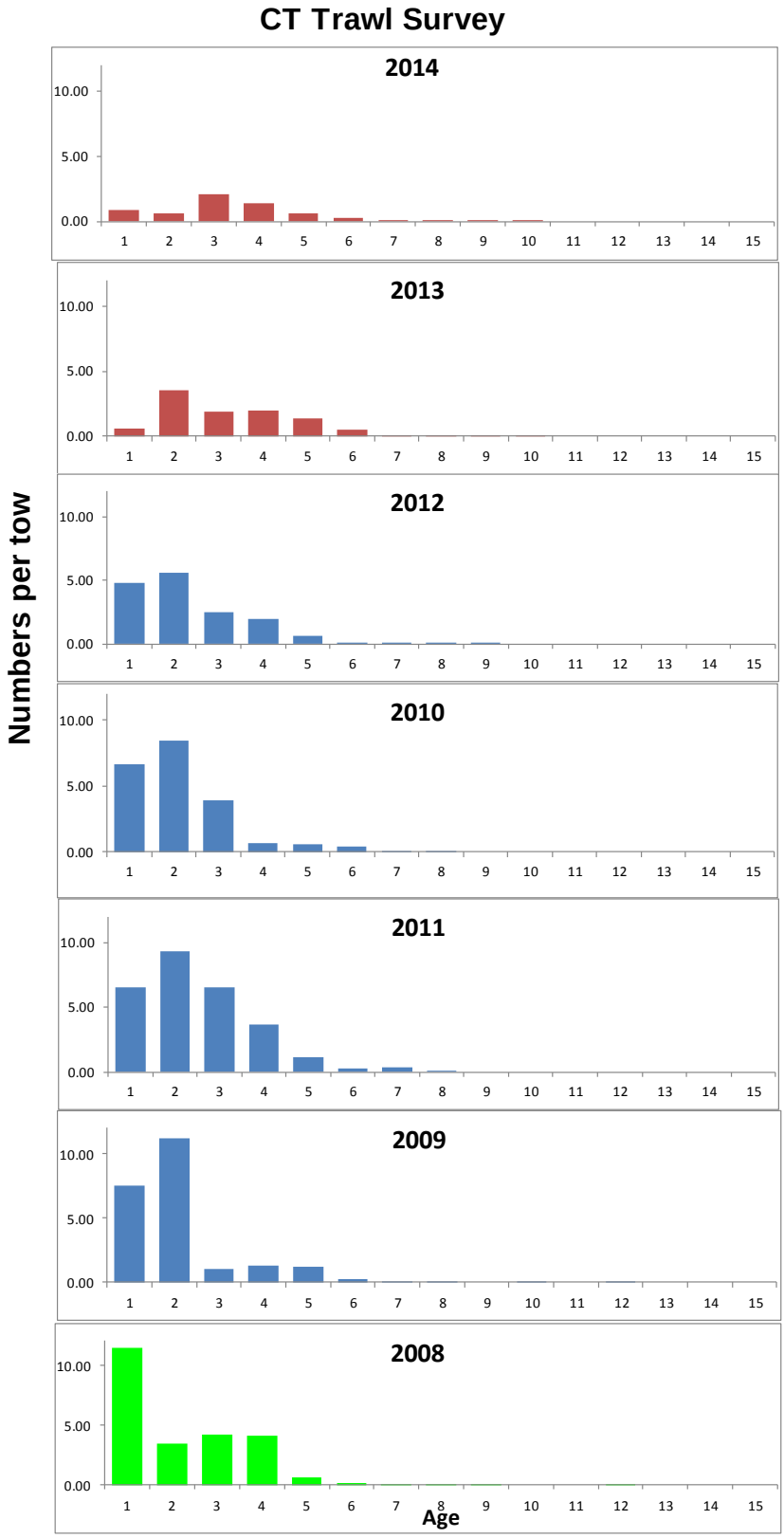


Figure 6. Cont.



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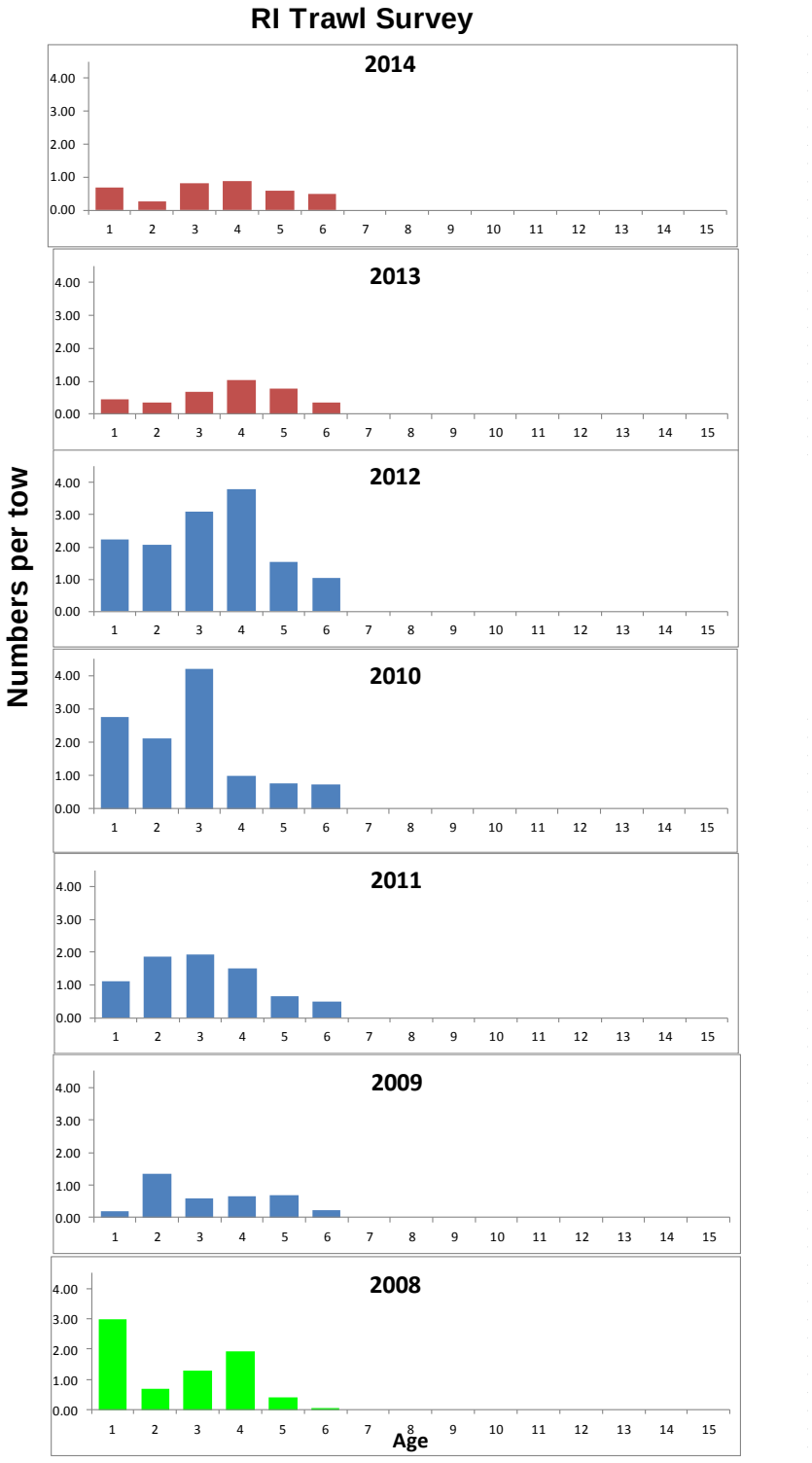
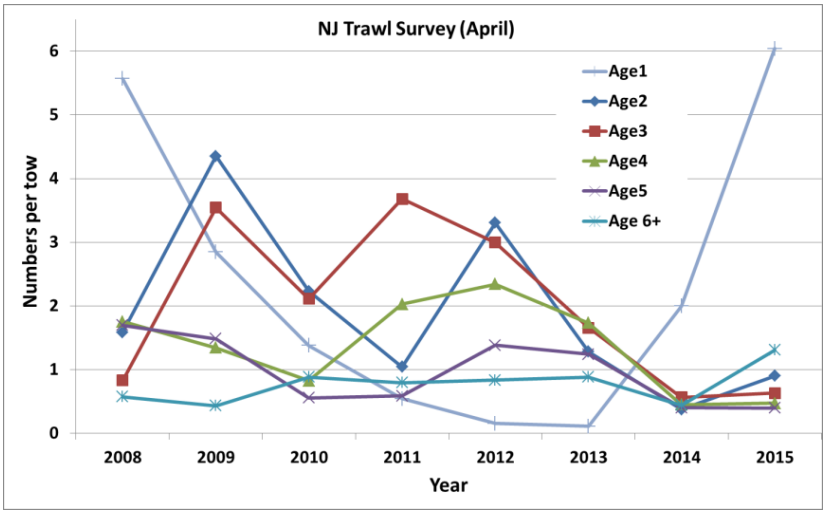
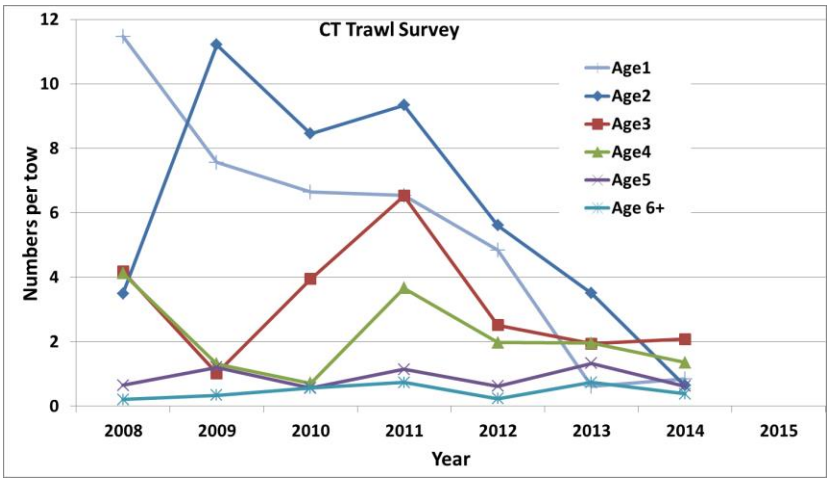


Figure 7. NJ, CT, and RI numbers per tow at age indices from 2008 to 2015 (when available).





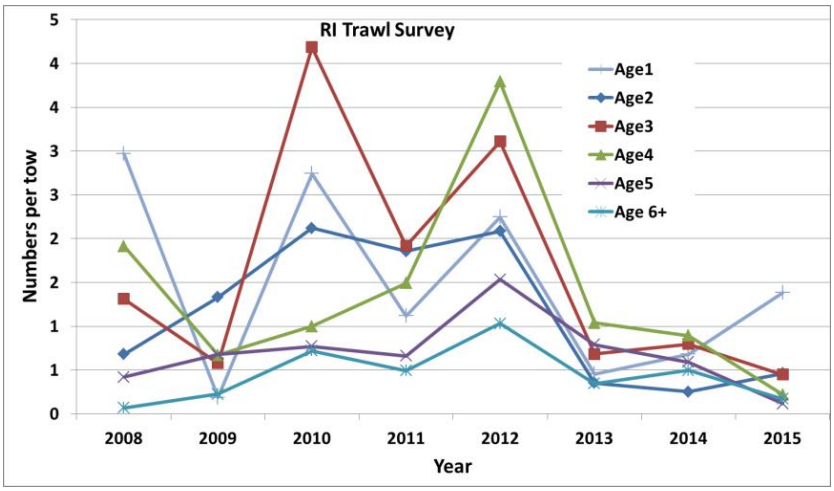


Figure 8. Massachusetts commercial annual dealer data (2006-2009, top) and trip level data (2010-2014, bottom) for SNE winter flounder stock area. Data represents multiple gear types from all trips that landed winter flounder. Number of trips are binned by percentages of winter flounder catch in the total reported catch.

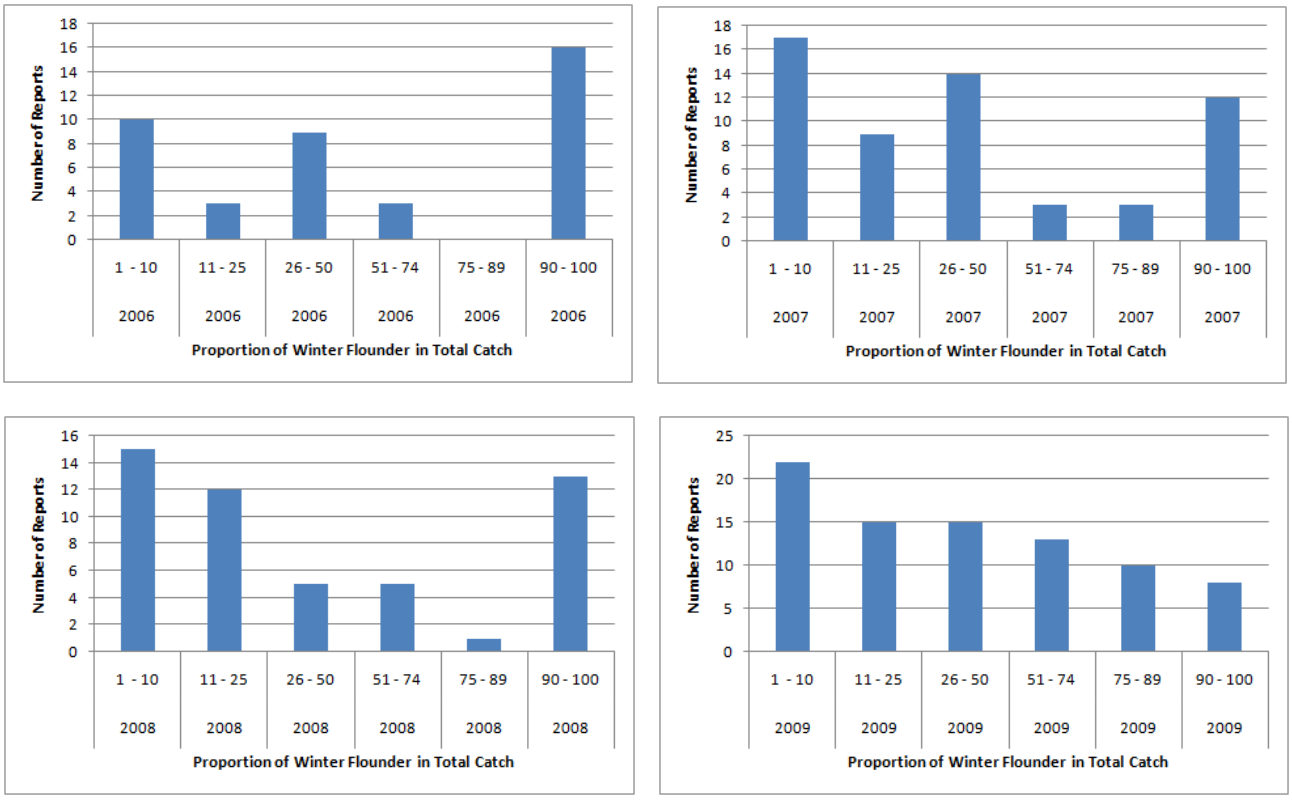


Figure 8 cont. Massachusetts commercial annual dealer data (2006-2009, top) and trip level data (2010-2014, bottom) for SNE winter flounder stock area. Data represents multiple gear types from all trips that landed winter flounder. Number of trips are binned by percentages of winter flounder catch in the total reported catch.

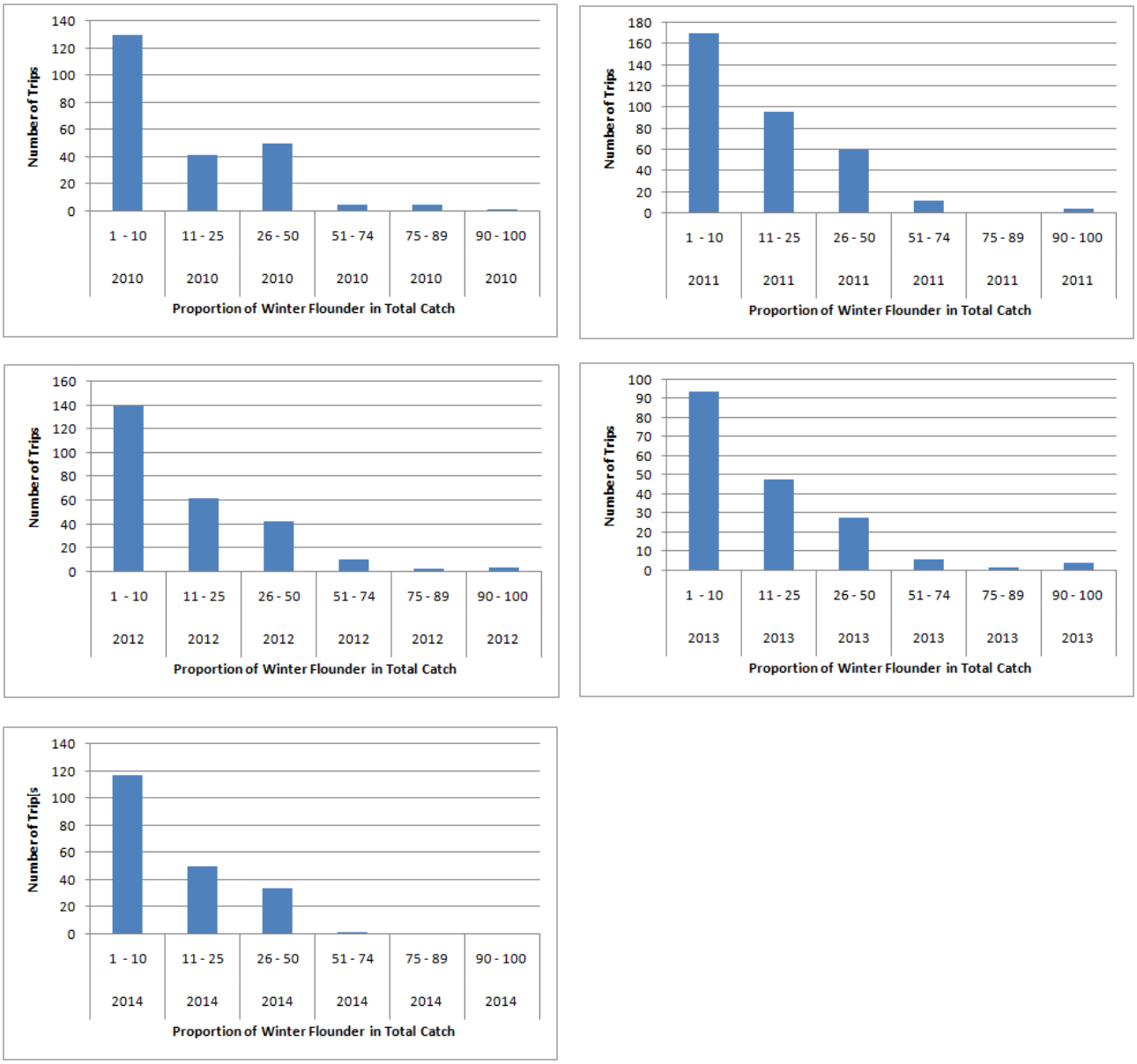
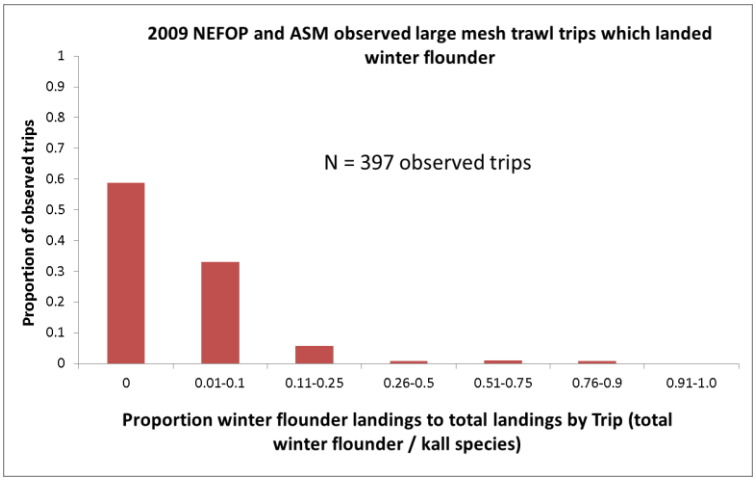
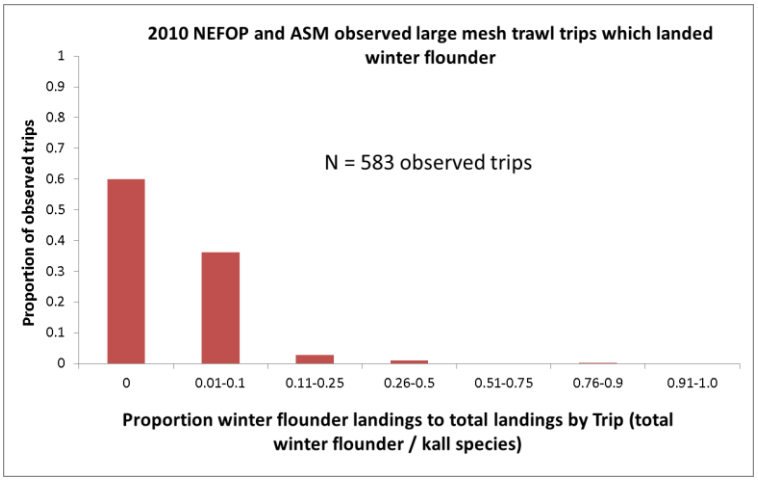


Figure 9. Trip catch composition plots using observer (NEFOP) and ASM data from 2009-20014 for large mesh trawl trips in the SNE stock area. X-axis is the total winter flounder catch to kept all species ratios. Total winter flounder catch is defined here as landings plus total discards. Discards are included in this analysis due to the moratorium that was in place from 2009-2012.





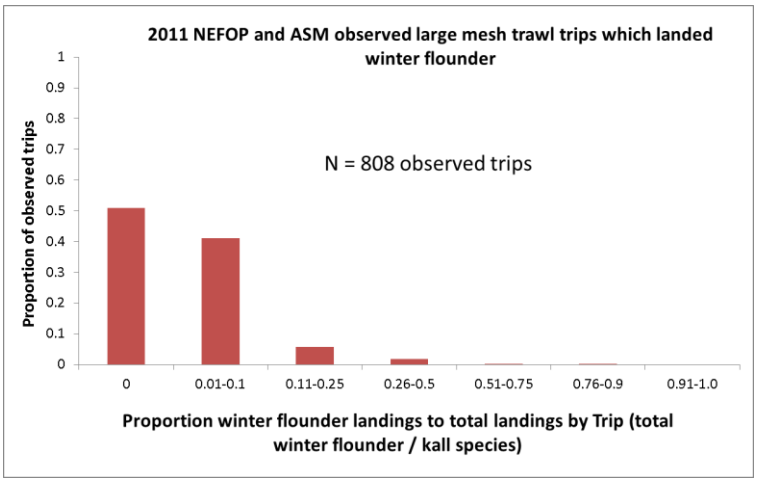
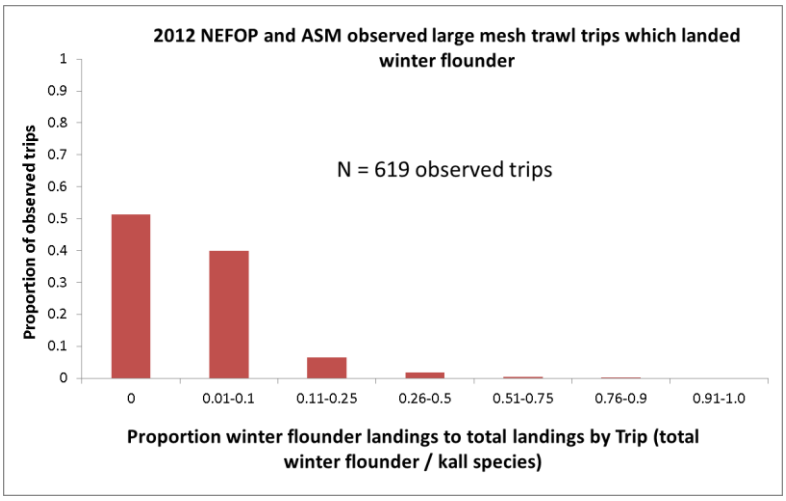
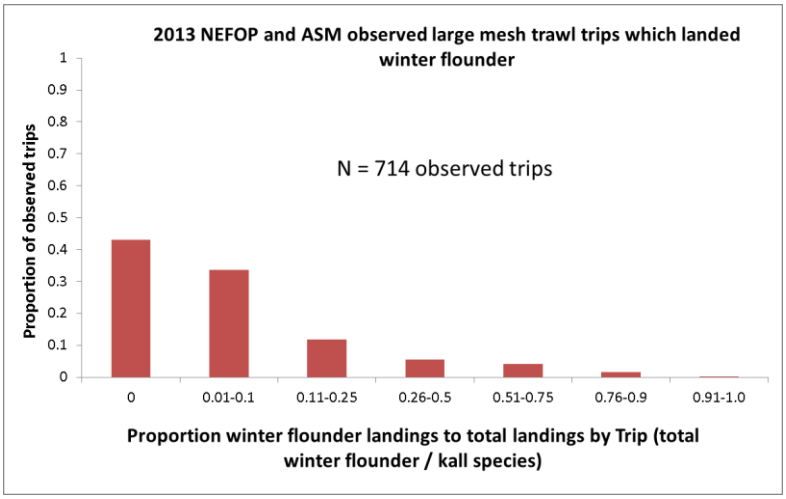


Figure 9. Cont.





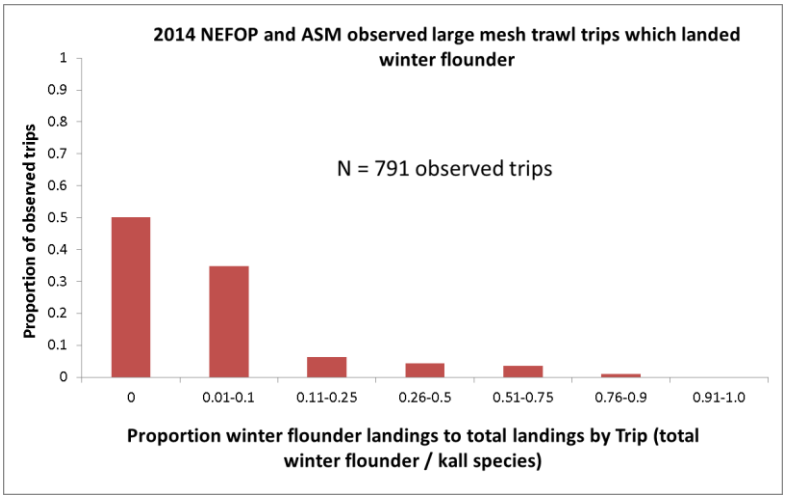


Figure 10. Annual Catch Limits for Winter Flounder, in metric tons, by fishing year (2010-2018)

SNE/MA					
	Total ACL	Sector Sub-ACL	Common Pool Sub-ACL*	State Waters ACL Subcomponent	Other ACL Subcomponents
2010	605	NA	NA	53	32
2011	842	NA	726	72	45
2012	603	NA	303	175	125
2013	1612	1074	136	235	168
2014	1612	1063	147	235	168
2015	1607	1149	157	117	184
2016-18**	749	514	71	70	94

* Unlike GOM, the SNE/MA stock is not managed under a trimester quota.

** The numbers are based on SSC ABC recommedations, which were subsequently approved by NEFMC in December 2015

Figure 11. Common Pool Trip Limits for Winter Flounder in Federal Waters

					2013				
	2009	**2010**	**2011**	**2012**	**2013a (May)**	**2013b (July)**	**2013c (Aug/Oct)**	**2014**	**2015**
GOM	Unlimited	250 lb/trip	100 lb/trip	250 lb/trip	500 lb/trip	500 lb/trip	2,000 lb/trip	1,000 lb/trip	1,000 lb/trip
SNE/MA	Zero	Zero	Zero	Zero	5,000 lb/DAS, up to 15,000 lb/trip	1,000 lb/trip	300 lb/trip	1,500 lb/DAS, up to 2,000 lb/trip	3,000 lb/DAS, up to 6,000 lb/trip

Figure 12. ASMFC Management Measures for Winter Flounder

Stock	Sector	Trip Limit/ Possession Limit	Size Limit	Season	Gear
GOM	Commerical	500 lbs per trip per day	12”	Maintain closures	Minimum 6.5” square or diamond mesh in cod-end
	Recreational	8 fish	12"	NA	
SNE/MA	Commerical	50 lbs/ 38 fish per trip per day	12”	Maintain closures	Minimum 6.5” square or diamond mesh in cod-end. 100-lb mesh trigger.
	Recreational	2 fish	12”	March 1 – December 31	

Implemented in Amendment 1 in 2005
Implemented in Addendum I in 2009
Implemented in Addendum II in 2012; GOM trip limit increased from 250 lbs (via Addendum I) to 500 lbs.
Varying closure dates were in place via Amendment 1, the new dates became effective through Board Action on Febuary 2014