

# Atlantic States Marine Fisheries Commission

## Winter Flounder Management Board

August 7, 2012  
5:00 p.m. – 6:00 p.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, ( <i>D. Simpson</i> )                             | 5:00 p.m. |
| 2. Board Consent  | 5:05 p.m. |
| • Approval of Agenda  |           |
| • Approval of Proceedings from November 10, 2011                            |           |
| 3. Public Comment   | 5:10 p.m. |
| 4. Review Addendum I Management Measures                                    | 5:15 p.m. |
| 5. Review SARC 52 Gulf of Maine Results and TC Recommendations              | 5:25 p.m. |
| 6. Massachusetts Gulf of Maine Winter Flounder Request ( <i>D. Pierce</i> ) | 5:35 p.m. |
| 7. Other Business/Adjourn   | 6:00 p.m. |

The meeting will be held at the Crowne Plaza Hotel Old Town, 901 N. Fairfax St, Alexandria, VA;  
(703)-683-6000

# MEETING OVERVIEW

## Winter Flounder Management Board Meeting

**Tuesday, August 7, 2012**

**5:00 p.m.–6:00 p.m.**

**Alexandria, Virginia**

Chair: David Simpson (NY) Assumed Chairmanship: 12/09	Vice Chair: Ritchie White (NH)	Law Enforcement Committee Representative: Blanchard/Overturff
Winter Flounder Technical Committee Chair: Steve Correia	Winter Flounder Advisory Panel Chair: Bud Brown	Previous Board Meeting: November 10, 2011
Voting Members: ME, NH, MA, RI, CT, NY, NJ, DE, NMFS, USFWS (10 votes)		

### Board Consent

- Approval of Agenda
- Approval of Proceeding from November 10, 2011

**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.

<b>4. Review Addendum I GOM Management Measures (5:15 -5:25 p.m.)</b>
<b>Background</b> <ul style="list-style-type: none"> <li>• The ASMFC implemented Addendum I to Amendment 1 in response to the 2008 GARM III assessment results. Addendum I implemented a 250 pound commercial possession limit (estimated to reduce state harvest by 31%) and 11% recreational F reduction for the GOM. <b>(Briefing CD).</b></li> </ul>
<b>Presentations</b> <ul style="list-style-type: none"> <li>• Overview of Management Measures.</li> </ul>

<b>5. Review SARC 52 GOM Results (5:25 p.m. – 5:35 p.m.) Action</b>
<p><b>Background</b></p> <ul style="list-style-type: none"> <li>• The 2011 SARC benchmark assessment was completed in July 2011 (<b>Briefing CD</b>).</li> <li>• In the GOM, overfishing is not occurring and overfished status remains unknown because the analytical assessment model was not accepted.</li> <li>• The Technical Committee reviewed the assessment in September 2011 (<b>Briefing CD</b>).</li> </ul>
<p><b>Presentations</b></p> <ul style="list-style-type: none"> <li>• Assessment Overview.</li> <li>• Technical Committee Report.</li> </ul>

<b>6. Massachusetts Gulf of Maine Winter Flounder Request (5:35 -6:00 p.m.)</b>
<p><b>Background</b></p> <ul style="list-style-type: none"> <li>• Massachusetts has requested adjusting the GOM Addendum I measures because the federal GOM state waters ACL-subcomponent was increased by 450% (<b>Briefing CD</b>).</li> <li>• Proposed adjustments for the GOM management area include removal of the Addendum I 11% recreational harvest reduction measures; increase the state waters commercial possession limit from 250 to 500 lbs; and establish an annual specification process to modify the commercial trip limit.</li> </ul>
<p><b>Presentations</b></p> <ul style="list-style-type: none"> <li>• Massachusetts proposal by D. Pierce</li> </ul>
<p><b>Board actions for consideration at this meeting</b></p> <ul style="list-style-type: none"> <li>• Initiate addendum to implement proposed measures.</li> </ul>

**7. Other Business/Adjourn**

**DRAFT**

**DRAFT**

**DRAFT**

**DRAFT PROCEEDINGS OF THE  
ATLANTIC STATES MARINE FISHERIES COMMISSION  
WINTER FLOUNDER MANAGEMENT BOARD**

**The Langham Hotel  
Boston, Massachusetts  
November 10, 2011**

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



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## INDEX OF MOTIONS

1. **Approval of agenda by consent** (Page 1).
2. **Approval of proceedings of November 9, 2009 by consent** (Page 1).
3. **Move to accept the SARC 52 results for management use contingent upon the New England Council's acceptance of the new reference points** (Page 12). Motion by Pat White; second by Bill McElroy. Motion carried (Page 13).
4. **Move to nominate G. Ritchie White as Vice-Chair of the Winter Flounder Management Board** (Page 13). Motion by Terry Stockwell; second by Doug Grout. Motion approved by consent (Page 13).
5. **Motion to adjourn by consent** (Page 14).





**ATTENDANCE****Board Members**

Terry Stockwell, ME, proxy for P. Keliher (AA)  
 Dennis Damon, ME, proxy for P. White (GA)  
 Doug Grout, NH (AA)  
 G. Ritchie White, NH (GA)  
 David Pierce, MA, proxy for P. Diodati (AA)  
 Bill Adler, MA (GA)  
 Jocelyn Cary, MA, proxy for Rep. S. Peake (LA)  
 Mark Gibson, RI, proxy for R. Ballou (AA)  
 Bill McElroy, RI (GA)  
 Rep. Peter Martin, RI (LA)  
 David Simpson, CT (AA)  
 Dr. Lance Stewart, CT (GA)

James Gilmore, NY (AA)  
 Pat Augustine, NY (GA)  
 Byron Young, NY, proxy for Sen. Johnson (LA)  
 Russ Allen, NJ, proxy for D. Chanda (AA)  
 Tom Fote, NJ (GA)  
 Adam Nowalsky, NJ, proxy for Asm. Albano (LA)  
 David Saveikis, DE (AA)  
 Roy Miller, DE (GA)  
 Bernie Pankowski, DE, proxy for Sen. Venables (LA)  
 Bob Ross, NMFS  
 Jaime Geiger, USFWS

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

**Ex-Officio Members**

Steve Correia, Technical Committee Chair

Harold Brown, Advisory Panel Chair

**Staff**

Vince O'Shea  
 Robert Beal  
 Chris Vonderweidt  
 Danielle Chesky

Katie Drew  
 Melissa Paine  
 Mike Waine

**Guests**

Wilson Laney, USFWS  
 Steve Meyers, NOAA  
 Chip Lynch, NOAA  
 Tom McCloy, NJ DFW  
 Dan McKiernan, MA DMF  
 Nichola Meserve, MA DMF

Vincent Manfredi, MA DMF  
 Paul Rago, NMFS  
 Peter Burns, NMFS  
 Paul Nitschke, NMFS  
 Malcolm Rhodes, SC



The Winter Flounder Management Board of the Atlantic States Marine Fisheries Commission convened in the Wilson Ballroom of the Langham Hotel, Boston, Massachusetts, November 10, 2011, and was called to order at 11:00 o'clock a.m. by Chairman David Simpson.

### CALL TO ORDER

CHAIRMAN DAVID SIMPSON: Let's get started with the Winter Flounder Board. My name is Dave Simpson.

### APPROVAL OF AGENDA

CHAIRMAN DAVID SIMPSON: Are there any issues with the agenda? The one thing I think we're going to do is we're going to move the presentation of the SARC 52 results under Item 5 to immediately following public comment if there is not any objection to that. We thought things would flow a little bit better.

### APPROVAL OF PROCEEDINGS

CHAIRMAN DAVID SIMPSON: Are there any questions or issues with the proceedings of the previous meeting? Seeing none, we will consider those approved.

### PUBLIC COMMENT

CHAIRMAN DAVID SIMPSON: Any public comment on items not on the agenda? There doesn't appear to be, so we'll get started with Paul Nitschke and the presentation on SARC 52 results.

### 2011 WINTER FLOUNDER STOCK ASSESSMENT

#### PRESENTATION OF SARC 52 RESULTS

MR. PAUL NITSCHKE: Okay, I'm going to go through a quick overview of the Southern New England and Mid-Atlantic Complex on the Gulf of Maine Winter Flounder Assessments, which were reviewed at SARC 52 last June. Actually, all three winter flounder stocks were assessed at SARC 52, and I'm just going to go over the two inshore stocks.

Historically, the Southern New England Stock was the largest of the three winter flounder stocks. However, more recently the Georges Bank is the largest of the three. For the Gulf of Maine stock it appears the stock is concentrated in inshore

Massachusetts, Cape Cod Bay Area. Historically, we did catch fish in the surveys along the Maine coast. However, we don't see as many fish along the coast of Maine.

In Southern New England most of the stock seems to be concentrated in 521 and south of Rhode Island. I'm going to go over the Southern New England assessment. These are the major changes that occurred for the SARC 52 assessment. The strata set was changed in the NMFS survey to produce a consistent series since the Bigelow no longer samples the shallowest strata, so that entire time series was re-estimated.

Length-based conversions were done for each stock to convert the Bigelow series to Albatross units. There has been a change in the assumed natural mortality rate from 0.2 to 0.3. This was done basically looking at historical data, age data, past tagging studies. This went from a VPA assessment to an ASAP assessment, which is a forward-projecting age-based model.

In doing so we went from a split survey series to a non-split series, which was an improvement from the GARM. This also went from a flattop fishery selectivity to a dome-shaped – the other change was changing from a flattop fishery selectivity to a dome-shaped pattern. At GARM III, F 40 was used for the Fmsy proxy, and we have changed over to a stock-recruit based biological reference points.

Here is a plot of the catch. There has been a large reduction in the catch over the entire time series. In the early eighties we were around 15,000 metric tons, and more recently in the terminal year it was only 365 metric tons, so there has been a large change in the catch. Here is a picture of the catch at age. There has been a truncation in the age structure from the early eighties.

There are some changes in the selectivity on the left-hand side to older fish. However, you don't see too much evidence of rebuilding of the older fish in the catch at age, and you see this general lack of fish in the catch more recently. Now, the survey for the Southern New England stock is pretty consistent. There are lots of different surveys that go into this assessment. They all show similar trends, basically a decline in the stock from the early eighties.

The one survey that perhaps is a little bit different is the NMFS Fall Survey. The NMFS Fall Survey

does show more of an increase in the late nineties. We did do some sensitivity analysis with the model and taking this survey index out. It didn't have too much of an effect on the results.

Here is Massachusetts Spring, Rhode Island Spring and Connecticut Spring Surveys all showing this decline over time. There is the New Jersey Ocean and New Jersey River Survey. The URIG Soil Survey was also added at this assessment. They all showed a decline over time. The Massachusetts Young of the Year and the Connecticut Young of the Year also showed a decline. There is a consistent trend coming out of the survey information.

However, the model still had the retrospective pattern in the ASAP Model. The model tends to underestimate F from 13 to 38 percent, overestimate SSB from 12 to 42 percent. Recruitment was a little more variable, from negative 11 to positive 78 percent. There is still retrospective in the model.

Here is a picture of the catch and the F coming out of the model. Basically as the catch comes down, the fishing mortality rate has also come down, which makes sense, I guess. The recruitment over time shows a large decline. Over the last decade or so, we're at very low recruitment levels coming out of the model.

The spawning stock biomass seems to have stabilized since the early nineties, so that seems to have flattened out more. Here is a picture of the updated assessment, which is the black line, and then the past VPA assessments. Keep in mind the updated assessment assumes a natural mortality rate of 0.3 so that's a change from the 0.2 in the other assessments. The GARM III Assessment was this line right here.

There was lots of discussion at the working group meeting about biological reference points. The working group meeting couldn't come to a consensus on whether to go forward with Fmsy proxies such as F 40 or stock-recruit based biological points. Both sets of reference points were brought to the SARC, and the SARC actually put their own spin how to use the stock-recruit reference points.

The SARC didn't really like the priors that were needed for the stock-recruit based reference points. The SARC felt that the Georges Bank and Southern New England stock-recruit relationship should be somewhat similar, and they fixed the steepness to bring the two assessments closer to each other. They did this by fixing the steepness two AIC units closer to each other. For example, here is a table of

the biological reference points, and the steepness of the model estimates a steepness of 0.53, which produces very high Bmsy and MSY values. The SARC decided to fix the steepness two AIC units away, which is at 0.61, which brings down the biological reference points. They did the opposite for the Georges Bank Stock, which estimated a very high steepness.

Here is a profile on steepness between the Georges Bank and the Southern New England Stock. Basically the steepness was fixed at two AIC units bringing them closer together, bringing the two together more. Here is a comparison between the Fmsy out of the stock-recruit biological reference points and the F 40, and you can see they're actually not too far apart. The Fmsy is actually lower than the F 40. Fmsy was at 0.29 and F 40 was at 0.33.

However, in terms of Bmsy there was a greater difference between the two. The stock-recruit estimate was higher at 43,600 and the F 40 came out to around 29,000, so there was a bigger difference in the Bmsy values. Here is a picture of the stock-recruit data, and you can see it is pretty much a linear relationship between spawning stock and recruitment, so this is why we have issues in trying to fit a curve to this data set.

The other issue with the stock-recruit estimates is over the last decade the recruits per spawner tend to be below what is predicted out of the stock-recruit relationship, so this might suggest that the projections are overly optimistic.

These are numbers coming out of the Southern New England assessment. The fishing mortality rate in 2010 was very low at 0.051. The fishing mortality rate in 2010 relative to Fmsy was low at only 18 percent. However, the spawning stock biomass in 2010 relative to the Bmsy values was also very low at only 16 percent. The stock was determined as not overfishing but was overfished.

Here is a picture of the time series of a fishing mortality rate relative to the reference points actually plotted at both F 40 and the Fmsy estimates. They're very close to each other. The last three years they're below the reference points. In terms of SSB, the entire time series as below the estimated Bmsy values. Here you can see the big difference in the estimated Bmsy between the two methods.

At GARM III the stock status was determined to be up in this upper left-hand box. More recently we have dropped the fishing mortality rate so we're no longer overfishing. However, the stock is still that very low biomass and still overfished. I can go through the Gulf of Maine assessment or I can take questions on Southern New England now if you want.

CHAIRMAN SIMPSON: Yes, it looks like there is some interest in doing that. Bill.

MR. WILLIAM A. ADLER: On Southern New England, I brought this up at the last flounder meeting. On the chart that shows the biomass target threshold and where it seems like we've always been is way, way down – yes, that one – and I think I brought up the last time why were those two bars put that high when as far back as 1981 we never were even close to that. I don't know why those bars are that high and I brought that up I think at the last meeting. Of course, I can't remember what the answer was, but it still strikes me every time I see that, that everything just seems to be an impossible situation. Thank you.

MR. NITSCHKE: Well, at the beginning of the model – and I think it was 1981 – there is still a lot of history that occurred before this model starts. Actually, if you considered the F 40 reference points, it wouldn't be overfished at this point. It's below the Bmsy value, but it wouldn't be considered overfished. If you went with the stock-recruit reference points, I guess it would be considered overfished.

MR. MARK GIBSON: Did I hear you say that the stock-recruit properties were assumed to be similar between Georges Bank and Southern New England; that is the steepness parameter?

MR. NITSCHKE: The SARC felt that the dynamics should be more similar between the same species but different stock.

MR. GIBSON: I find that astounding given that one stock lives on a bank not exposed to the amount of climate change that the inshore populations are, and the inshore populations have a plethora of inshore predators on the early life stages. I'm finding that difficult to understand, so I would ask for some more understanding as to how that conclusion or consensus came about.

MR. NITSCHKE: I tend to agree with you. This is just something that came out of the SARC. They

would rather have done this than assume the priors that came out of the Meyers et al. They had some issues with using those.

MR. GIBSON: You showed the stock-recruit fit to the Southern New England area and then you showed the predicted – there was a massive shift in the residuals from positive to negatives, so the most recent points have fallen well below the predictions and the early points fell well above the prediction suggest to me that the stock-recruit relationship has changed, so I'm trying to understand again how you could calculate reference points from the entire body of data when they would be wrong for both phases.

MR. NITSCHKE: This is a good point. This was why the working group had spent a lot of time arguing about which reference points to go with. There were basically two camps; one that decided we didn't have the information to do stock-recruit based reference points and another that thought this was the way to go. We couldn't come to a consensus at the working group meetings. We had to bring both to the SARC and the SARC basically made the call on which ones to go with.

MR. GIBSON: Thank you. I'll stop now, Mr. Chairman, and let somebody else take a whack.

CHAIRMAN SIMPSON: All right, I think those are good points and I think the one thing I take some relief in is that I think we all recognize the stock is still in pretty bad shape and hopefully by the time it becomes more important in management we will have another assessment or two and maybe a different look at what is really going on with winter flounder now. Tom, you had your hand up.

MR. THOMAS FOTE: Yes, just a followup on Mark; I mean, when we look at the habitat issues, just the environmental issues on the Georges Bank and in the bays and estuaries where they're trying to survive it's a whole different ballgame. I mean, some of the studies that come out like Jamaica Bay where they basically look at winter flounder and the male-to-female relationship as 17 to 1, 13 to 1, and 14 to 1, and the males had female genes in them.

I mean, you don't find that on the Georges Bank because they're not suffering the effects of endocrine disrupters and other things in the system. I don't see how you can look at these as the same. It blows my mind when I have to look at something like that.

MR. NITSCHKE: Yes, I mean they were so far off that the SARC just felt they should be a little bit closer together. They didn't really bring them exactly the same, but that was the thought process at the SARC. But I agree, there are big differences between the two.

CHAIRMAN SIMPSON: Okay, thanks, Paul. It sound like the SARC itself and the assessment folks are acknowledging we're struggling a little bit with assessing this stock and the changes that have happened. If there aren't anymore questions, I suggest we move on the New England Council Amendment 16 Update; is that right?

### **REVIEW OF NEFMC AMENDMENT 16 AND ASMFC MANAGEMENT**

MR. NITSCHKE: I have the Gulf of Maine. Okay, I'm going to go through the Gulf of Maine assessment. This is just a plot from the observer data, which also shows that most of the fishery for the Gulf of Maine stock occurs in Massachusetts Bay and Cape Cod Bay. Stellwagen Bank also seems to be important for the stock.

The Gulf of Maine stock turns out to be the model-resistant stock. At the GARM III, the analytical model was not accepted. This time around I tried to do some more work on the modeling. I looked at the VPA scale model and the ASAP model. I did a lot of work in trying to get an acceptable ASAP model.

However, not surprisingly, conflicting signals in the data still exists. Specifically this is a large decrease in the catch over the time series with little change in the indices or the age structure over time. There is a basic conflict within the time series. This time around, also, it was not accepted and analytical model was not accepted for the Gulf of Maine.

What ended up happening is we went to Plan B. Plan B was basically looking at some work that the PDT started last year. This was simply estimating a 30-plus area-swept estimate directly out of the surveys. The thought process here was since we have a Bigelow – the catchability on the Bigelow is much higher and we should have some better data coming out of the surveys to estimate biomass directly.

To give you a little more background on why we have such trouble with the modeling of this stock, on the top here you can see the four surveys that go into the assessment. You can see the survey trends are fairly flat over time. Actually the ASAP model didn't do too bad in fitting this data. On the bottom

is the change in catch over time. Like Southern New England, there has been a large reduction in the catch over the time series.

The terminal year only had 195 metric tons. There is a large change in the catch and flat surveys. However, there is very little change in the catch at age. You do see some truncation from the early eighties. However, you don't see much rebuilding of the age structure at the end of the time series when the catch is low. This is what the model had trouble in fitting. You can fit the flat survey indices but it's difficult to fit the catch-at-age composition.

So using the residual pattern, the model tends to overestimate the plus group especially at the end of the time series. The weighting on fitting that catch-at-age composition had a big effect on the model results. Just changing how closely you want to fit the catch-at-age compositions scales the biomass dramatically from one model to the other.

So basically the model was deemed to unstable for stock status determination. The SARC decided to base the assessment on the 30-plus area-swept biomass estimates, which were updated from the previous work. Basically, this is just a very simple calculation basically taking the 30-plus biomass index per tow times the total survey area divided by the footprint times one over Q.

Now you can think of Q here as the efficiency of the survey gear; just basically the probability of a fish being caught when it's in front of the net. You can get some exploitation rates just by taking the catch divided by this 30-plus biomass estimate. Now, one of the issues in the Gulf of Maine is we don't have a survey that covers the entire stock, so I ended up using all three surveys to come up with this estimate.

We used the NMFS survey which covers most of the area. The Maine/New Hampshire survey was used for inshore areas north of Massachusetts, and the Massachusetts DMF survey was used for the shallowest strata that the Bigelow can't sample. These are some of the changes done for the SARC for the update.

One of the issues was in the fall of 2010 the NMFS survey wasn't able to cover Cape Cod Bay so we actually ended up using the Massachusetts DMF survey to fill in that area for that year, the

fall of 2010. We ended up using the TOGA criteria instead of the old SHG values. TOGA is basically the new criteria to determine a good tow from a bad tow using the sensor data that is used now on the Bigelow.

We also looked at the sensitivity analysis of using door spread instead of the wingspread. This came out of some suggestions that they were herding between the doors from the industry meeting before the working group meeting. We wanted to see how sensitive the estimates were to this.

I looked at the sensitivity of including the deeper offshore strata. However, this didn't have much of an effect since there are few fish out there. We estimated Fmsy proxies using F 40 from the length-based yield per recruit, using an M of 0.3 and the knife-edge selectivity of 30 centimeters.

Here is the estimated biomass from the four Bigelow surveys; actually all three surveys but four different years. The spring estimates were lower than the fall estimates and there was reasoning to this since the data showed that it was a proportion of the stock that's available to any survey since the fish are in the estuaries spawning, or a proportion of the fish are in the estuaries spawning at that time, so we ended up concentrating on the fall survey estimates. One of the assumptions you have to make is the efficiency of the gear. The SARC basically concluded that the efficient of 0.6 was the most appropriate assumption. This was also based on looking at the Georges Bank VPA assessment and the Qs coming out of that assessment.

Here are some plots including the different survey uncertainty estimates from all three surveys and also uncertainty in the footprint values. This was done by Paul Rago who had some code which combines all the different uncertainties. Here you can see the affect of the assumed Q on the estimates. The first boxed block is the Q of 0.6, 0.8 and then assuming a hundred percent efficiency.

The fall of '09 and the fall of 2010 actually produced very similar estimates of biomass. In terms of exploitation rates the catch of the terminal year was 195 metric tons, which is this first box plot, which is below the estimated reference points. The fishing mortality was very low in the terminal year of the model.

Here is another way of looking at this data using cumulative distribution. This is something that was shown to the SSC to help decide on the ABCs for the

stock. This basically shows the probability of being over Fmsy assuming the different efficiencies in the surveys. We also did a plot at the probability of exceeding 75 percent Fmsy.

In terms of status, overfishing was not occurring. The exploitation rate was far below the Fmsy threshold. The overfished status however cannot be determined using this method since we don't have a Bmsy value coming out of this, so that remains as unknown. Some of the assumptions that go into this estimation is that there is no herding between the doors in the survey and that had distributed similar between habitat types, specifically between towable and non-towable bottom.

These first two assumptions are probably the biggest assumptions that go into the estimates. We also assumed similar efficiencies between the surveys and that there is little movement of fish between the surveys when the surveys are conducted. I'll take any questions on the Gulf of Maine assessment.

MR. DOUGLAS GROUT: Thank you, Paul. I'm glad to see you're not using the Seabrook Survey anymore and we've got a nice inshore trawl survey that works a little bit better. The first thing that comes to my mind when I heard about the conflict between the fisheries-independent indices and where the catch is going down and the fisheries independent is these are flat is that you have less effort, and so if you have less effort that could be one of the reasons that your catch is going down in there. I was wondering if that's something that had been discussed at all at the stock assessment or if there is something that is accounted for in the assessment.

MR. NITSCHKE: There have been significant regulations on the Gulf of Maine and the ABC in the last few years was very low, so it's not surprising that the fishing mortality has gone down. The issue in the modeling is really why the older fish aren't coming back and why we don't see the age structure changing or the size structure changing.

MR. GROUT: I thought that was a secondary because the first sentence you said was, well, there is a mismatch between landings going down and the survey staying flat, and then you came in and you said, well, we also don't have an age expansion, which I understand.



MR. NITSCHKE: Yes, it's a combination of both age structure and you don't see a big increase in the index at the end of the time series, I guess.

MR. GIBSON: My question relates to that and my thoughts on it were that if your indices are flat while the catch is declining and your not realizing an expansion of the age structure, one explanation might be that there has been an additional source of mortality which has entered the dynamics, and I wondered if you explored a change in the mortality rate model here?

I know that there was change in M from 0.2 to 0.3 across the entire time series, and that's fine, that's just a scale in population sizes up and down. It's the change in M models that really get at in my view some of these unexplainable dynamics. To go back to the Southern New England discussion, an increase in M model seems to me could raise some of those recruitment points up out of the low residual pattern because they would be elevated in magnitude relative to their early counterparts. I'm wondering if change in M models were explored here or for the Southern New England stock area.

MR. NITSCHKE: A change in M model wasn't looked at for the Gulf of Maine. We did look at it for the Southern New England stock trying to see if it could help the retrospective pattern by employing like a ramp in M over time. Of course, there are a lot of questions then what should the ramp actually look like, where should the ramp start, how much of a ramp in M do you put in. We didn't have any data really to base anything on in terms of what the change in M should be. In both stocks the change in M would have to be more on the older larger fish, so there would have to be an increase in the M on the biggest fish.

CHAIRMAN SIMPSON: Any other questions for Paul? Okay, thanks, Paul, it's a great update on the assessment. Steve.

MR. STEVE CORREIRA: My talk today is going to give an update on the federal and ASMFC winter flounder management. As everyone is probably aware, there have been substantial changes in the management from 2009 to 2010 up in New England. I'll give you a little bit of the ABCs of the federal groundfish management and how we set OFLs and all this other alphabet soup, give you a little bit of an Amendment 16 update and Framework 44 update, which was implemented in 2010.

I'll talk a little about some of the future New England Fishery Management Council actions, which are Framework 47, and I believe the council is taking a final review of that next week. I'll give you the technical committee's recommendations. After the technical committee met, we had an accounting on the 2010 catch and I will provide that information to you.

In 2005 ASMFC did Amendment 1 for the Gulf of Maine and instituted a 12-inch minimum size limit, an eight-fish creel limit; the commercial 12-inch minimum size; and then the mesh was required to be consistent with the mesh that was used in the EEZ, which is 6-1/2 inch mesh in the cod end of the net. The states were required to maintain existing seasonal closures.

In Southern New England there was a 12-inch limit coastwide; a ten-fish creel limit; a 60-day open season with 20 days closed in March and April; and you couldn't split the season into more than two blocks the open season; 12-inch commercial up and down the coast; the same thing, 6-1/2 square diamond mesh in the cod end; a hundred pound limit if were using mesh that was smaller than that; and any existing seasonal closures had to be maintained.

In 2008 the GARM III assessments came out. The Gulf of Maine assessment was not accepted, but the SARC said that the stock was likely overfished and overfishing was probably occurring. For Southern New England/Mid-Atlantic, the spawning stock biomass was at a very low level, 9 percent, and the fishing mortality rates were much higher than the fishing mortality target.

That led ASMFC to draft Addendum I and for the Gulf of Maine they were looking at an 11 percent reduction in F, and that was sort of matching what they were trying to get on the federal level. They put 250-pound commercial possession limit in the Gulf of Maine. There was not a possession limit in the EEZ, but they were doing their reductions via days at sea and closed areas.

For Southern New England there was a two-fish recreational bag limit, which was trying to achieve a 46 percent reduction in harvest and a 50-pound commercial limit which was just for bycatch to try to get you some information on the winter flounder population in the catch. That's where we stood.

At that point federal management was using input controls. They were controlling mortality through days at sea, trip limits, seasonal closures, differential days-at-sea counting. In 2010 they moved into output type controls, and for the national guidelines they were required to set OFLs and so forth, so I would like to go through that a little bit because it will impact management on the ASMFC level.

The first acronym we have here is OFL, which stands for overfishing level and it's the catch that is associated with the overfishing level, which is Fmsy times the exploitable stock size. They have the second concept, which is the allowable biological catch, the ABC, and it's supposed to be the OFL adjusted for scientific uncertainty, and this value is recommended by the Statistical and Science Committees of the councils.

Then they have another level lower than that; it's the ACL, the annual catch limit, and it's the ABC adjusted for management uncertainty, and these values are generally recommended by the council's plan development team. In Amendment 16 they have a total ACL and the ACL is broken down into various components. They have a groundfish ACL subcomponent, and that is what is caught in the EEZ.

Under Amendment 16 there are basically two sets of fleets. One is a sector fleet and they work under the ACL quota. When they run out of it, then they can't fish in that area. They also have the common pool, which I refer to as the government sector, and they remain fishing under days at sea, closed areas and things like that.

There is also the state waters ACL, and this is catch that is allocated to the state waters. It's called the subcomponent because there is no accountability measure that goes with it. For state waters this includes the recreational catch and any landings that occur from non-federally permitted vessels fishing in state waters. Then they have this grab bag of other ACL subcomponents, which are all these fleets that just catch a little bit of winter flounder, not enough to really worry about to split off with a separate unit.

In this case this may be scallopers and fluke and so forth. So you go through this accounting of the catch and see how the sectors did, the common pool, the state-wide ACL. Now, along with this you get accountability measures. Like everything else they abbreviated it down to AM, and there are a couple of types that they have.

One is a predetermined management action if your catch exceeds total ACL and something happens. Sometimes you can do it in an in-season accountability measure. For the common pool they have reductions in trip limits that occur. I'm not sure if there are any seasonal closures that happen.

Then they have the other type, which is the post season; so after the fishing year is done, you look to see if you exceeded the total ACL, and then you do something to try to prevent it from happening in the next year. One of the things is the state water ACL subcomponent. Because it's not occurring in the EEZ, there are no accountability measures that go for it.

What you may do is if you find that the state waters subcomponent is being exceeded, you could allocate more ACL from the other components and bring it into the state waters or you could go to a body like this and ask them to control the catch in the state waters. Here is the cartoon that comes in the national guidelines trying to explain where these are.

We have the overfishing limit here and the catch associated with that; the ABC, which is the scientific uncertainty like you get from a retrospective pattern or uncertainty about recruitment in the projections, the change in weights in the projections. Below that is the ACL for the management uncertainty, which might be how well can you control the recreational catch, how well can you account for quota and discards.

Then up here they have this annual catch target, which is not being used in the groundfish plan, but something that says you put this here and then something happens so that you don't go over the ACL. In New England they have an ABC Control Rule. This was derived by the S&S Committee and what they decided to do up here – and each council SSC does it a little bit different – is the ABC is going to be the catch associated with fishing at 75 percent of Fmsy if the stock is not in a rebuilding plan.

If the stock is in a rebuilding plan, then the ABC is going to be at the F rebuild or 75 percent of Fmsy if F rebuild is greater than Fmsy. For stocks that can't rebuild to Bmsy in the specified rebuilding period even with no fishing, they say the ABC should be based on incidental bycatch, included a reduction in the bycatch rate as the stock increases, and that would apply for

something like Southern New England winter flounder.

Then they have interim ABCs for stocks with unknown stock status, which is the category that Gulf of Maine winter flounder was in the 2008 GARM, and they're going to do that with a case-by-case recommendation looking at all the information that's available. There are some consequences.

If the catch exceeds OFL for one year and overfishing is occurring, then you have to implement measures to prevent overfishing. If the catch exceeds the ACL, then that triggers accountability measures. If the catch exceeds the ACL more than 25 percent of the time, then you have to re-evaluate your ACL and your AMs.

The OFLs and the ABCs were implemented in Framework 44 for the calendar years 2010-2012. I guess you can't see the colors up here, but 2012 is here in dark blue. Those values are proposed to be updated. The red are the values that were for 2010 and 2011. If you look at Southern New England/Mid-Atlantic, you'll notice that there is a big difference between the OFL and the OFL and the ABC.

The ABCs were set by using the closed area model under a no possession limit and estimating what the F would be. Then they would take that F, put it into the projections, and that's how they derive the ABCs here. You can see in this case that the OFLs are increasing because the stock was projected to increase, and along with that the ABCs are increasing.

For Gulf of Maine, winter flounder was kind of an odd thing because the assessment was rejected, and so what they did is they took a projection from the rejected assessment and derived the OFL for that. You can see that is going up a little bit in each of the years. But for the ABCs, what they did is they set the ABCs at 75 percent of the average over the last three years' catch and kept it there, so you can see the ABCs are being set up at about 238 tons. That's how the ABCs were set for Framework 44.

This gives you some sense of how the ACLs were allocated. In this column here we Gulf of Maine and Southern New England. We start with the total ACL. We break it down into a groundfish sub-ACL; the common pool ACL; the sector subcomponent ACL; the state waters component here, about 60 tons for Gulf of Maine and 53 tons for Southern New

England; and then this other subcomponent, which is a grab bag.

If you notice that for the sub ACL for sectors, the number is zero because there was no possession limit, and really this 520 for Southern New England is just based on the discards because there is no possession for the common pool either. This 2010; this is 2011 here. Again, inside the state waters component is the recreational landings.

The management uncertainty that was used to derive the ABCs from the ACL, they took 7 percent from Southern New England/Mid-Atlantic, and part of that was because there is no possession, so it was basically a discard fishery, plus a recreational component in there. For Gulf of Maine winter flounder they felt there was a little more management certainty with it, and so they set it at 5 percent.

Under Amendment 16 they have sector management, and I'll go through some of the acronyms. We have all these little three-letter things that you have to remember. You put them together; I don't even know what they spell. But we have a potential sector contribution, which is the PSC, and it's a vessel's permit share of available ACL if it joins a sector, and that is based on the landings history.

Once you're in a sector, that percent share applied to the ACL gives you your ACE for the sector summed up on all permits, and so that's what the sector – it becomes like the sector's total allowable catch, and it's based on all the members in the sector's PSCs. It should be noted that these ACLs include discards.

Under sector management you can transfer ACE to another sector or you can transfer among the various vessels within the sector, pieces of it. There is an ACL buffer so at the beginning of the fishing year they hold back 20 percent of the ACE for the first two months so they can do some reconciliation. Then there is an ACE carryover so if a sector doesn't use all its ACE, it can carry up to 10 percent of the original ACE allocation into the next fishing year.

For discards, sectors have to submit operational plans that they can use discard estimates if there is sufficient data for estimating the discards. If they don't have that, then they can default to discards that assume sector-specific rates based on

observed rates in the most recent year from sea sampling.

There are accountability measures. Members of a sector cannot fish in specified areas unless the sectors have ACE or they acquire new ACE, and any overages in ACE one year gets taken out of the next year's ACE for that sector. The common pool accountability measures, they have differential days at-sea counting for 2010 and 2011, but starting next year they're going to have a hard TAC for 2012, and that TAC is going to be divided up into trimesters with adjustments of trip limits before the sub-ACL is reached and also some implementation of closed areas.

There is some potential future actions in Framework 47. One is to allow a limited amount of landings of Southern New England/Mid-Atlantic winter flounder. The second one is to update the ABCs and ACLs for both Southern New England/Mid-Atlantic and Gulf of Maine winter flounder stocks to represent the update of the assessments.

You should know that the increase for Gulf of Maine winter flounder is substantial. We can see that the ACL was 238 in both 2010 and 2011, and it is going up to about 1,100 tons in 2012-2014. We can see the ABC increasing somewhat in the Southern New England area. As usual there is a lot of stuff in the framework.

I've tried to boil it down to the actions that would affect the ASMFC. Their first option is to continue the current OFL and ABC, and for the state waters subcomponent that would mean you would have about 60 tons for the Gulf of Maine and 96 tons for Southern New England/Mid-Atlantic.

The other option is to update the OFL and ABCs, which is consistent with those set by the SSC, and so that would give you about 272 tons for Gulf of Maine winter flounder and you see a small amount of 175 going up to about 255 for Southern New England winter flounder. Part of the state waters subcomponent, as we'll see a little bit later, the allocation has actually increased a little bit because for Southern New England winter flounder we actually went over substantially the state waters subcomponent, and on Gulf of Maine winter flounder we came in at about a hundred percent of it.

The other parts of the framework allow limited landings of Southern New England winter flounder and an allocated ACL to the sectors. The ACL will be allocated to sectors and we create a sub-ACL for

common pool vessels; and again exceeding the ACL would trigger accountability measures.

Recreational vessels would not be allowed to land Southern New England winter flounder; and that's in the EEZ or if you're federally permitted, you wouldn't be allowed to land them in state waters. We have the updated reference points, as Paul had explained earlier. We have a couple. One, we're going to be moving from the F 40 proxies to an SSBmsy method.

For Gulf of Maine they're going to be using the 40 percent MSP as the target. You can see the values down in this area. Bmsy remains undefined for Gulf of Maine. For Southern New England/Mid-Atlantic it goes to about 43,000 tons. The Fmsy proxy becomes 0.31 for Gulf of Maine; 0.29 for Southern New England. The MSY for Southern New England is about 12,000 tons and remains undefined for Gulf of Maine. That's Part 1. I'll take some questions if they have them.

CHAIRMAN SIMPSON: Any questions at this point? Bob.

MR. BOB ROSS: Just a clarification on when one sub-sector exceeds the ACL; does that trigger accountability measures; or is it the total Southern New England overall ACL, if that is exceeded, that triggers accountability measures?

MR. CORREIRA: It is really both. There is a set of accountability measures that occur if you exceed the total ACL. If the sectors exceed their ACL, they get accountability measures. For the common pool there would be accountability measures that would kick in during the next year, but in 2012 they're going to have a hard quota and some things that try kick in in-season. It's a little bit of both. If you exceed the total ACL, then you're going to put in accountability measures to try to look at the thing fishery-wide, but the other ones, they would just happen within those groups.

MR. ROSS: So if in this case you have a state waters subcomponent ACL in Southern New England that according to Table 1 exceeded its state waters subcomponent significantly, what would be the response there?

MR. CORREIRA: Well, there are some really tricky language that got used in there, and so you have these sub-ACLs, like the sector sub-ACL and the common. They get accountability

measures. The state waters subcomponent doesn't have an accountability measure. You would have a couple of choices that you could do if that was exceeded.

One thing you could do is when you go do the allocations again, you could say, well, we'll take something from the total ACL and stick it into the state waters component. That's one thing. The other thing you could do is you can come up to a body like ASMFC and say can you do something to try and keep the state waters catches under control?

MR. GIBSON: Steve, you noted that there is an element in Framework 47 where Southern New England winter flounder might be allocated to sectors and then a sub-ACL for the common pool. I noted in the technical committee report when you noted that there wasn't a technical committee recommendation on that; did the technical committee have any thoughts that, the tradeoffs between providing some limited catch for sampling versus converting discards into landed catch and things like that?

MR. CORREIRA: We didn't make a recommendation at this meeting on that. I believe the reason why is because the technical committee had raised that issue the last time when we were looking at no possession, and we sort of had – looking at the tradeoffs between setting a trip limit or something so people wouldn't target winter flounder but allow some level of landings so you get information on the catch, and that's what resulted in that 50-pound trip limit. I think the general feeling was there wasn't a need for the technical committee to comment on that because we had raised the issue to this body in the addendum.

DR. DAVID PIERCE: Steve, since the value or the amount of state waters catch of Gulf of Maine, Southern New England and – well, Gulf of Maine and Southern England is of great significance in terms of the big picture of what is happening inside state waters; could you just very briefly describe how the percentages were derived regarding the share of the overall amount of our states' waters? Was it based on good information or was it pretty much pulling a number out of a hat and hoping that the states would live within those particular percentages?

MR. CORREIRA: Not quite pulling out of a hat –

DR. PIERCE: Not quite but how close?

MR. CORREIRA: – not quite based on a lot of data. My recollection – and I don't have that information

in front of me – was I believe it was based on single year's data where we had the information for all the stocks. We weren't quite sure how well those numbers were going to translate relative to the state. They did it for all the species. They said, well, we'll get this accounting and see how well that works. So it was based on actual data, but I think it was done based on one year's worth of data.

DR. PIERCE: So, in other words, as we move forward with groundfish management and we looks at states' waters catch, it will basically be a learning experience regarding what sorts of catches might actually come from state waters even with the restrictive state regulations in place to constraint catch like regulations that the states have implemented over the years in response to ASMFC.

I just wanted to make that point that we should all realize that these particular numbers that have been created for us – and I participated in those discussions – were best guesses, using some information but for all practical purposes best guesses and not based on many years of information that we could hang our hat on.

MR. CORREIRA: I think the other issue, if you look at the fishery, there has really not been a lot of stability in the regulations, so you have this moving target of changes in days at sea, changes in closed areas, changes in recreational bag limits and seasons and so forth, and so it's even difficult even if you could get some of this information to try and find a period where you had some stability where you might think that fraction coming out of the state waters would sort of like be a constant estimate. As you know, you make changes in the federal waters and then you could drive effort into the state waters and likely a lot of that has been happening over the past ten years.

CHAIRMAN SIMPSON: We have a couple of more people I have recognized, and I'll just note we've got about 20 minutes left. Terry.

MR. TERRY STOCKWELL: I just want to give a followup to Steve's report. Just recently the council's groundfish committee met to pick preferred alternatives for Framework 47 and notably, particularly after reviewing the data that Steve just presented, the committee's recommendation is to not allocate any winter flounder to the Southern New England flounder sectors primarily because they didn't want to

provide any incentive for any fish to come ashore. There's a huge concern about state waters landings and a lot of discussion about what the proper vehicle should be to address it. I suspect that following next week's council meeting that Paul will be in contact with Vince to move ahead a council request for help to help for measures to reduce winter flounder landings.

MR. GROUT: Steve, could hop back a couple of slides where you're showing what the work is Framework – that one right there. Option 2, update the OFL, ABC, ACL; are you saying that the Gulf of Maine, the OFL, ABC and ACL are the same?

MR. CORREIRA: No.

MR. GROUT: Oh, that's the state waters subcomponent.

MR. CORREIRA: Yes, I didn't want to put all the tables there, so I thought the part that would interest this body would be the state waters component.

CHAIRMAN SIMPSON: All right, I didn't see anymore questions, so you can continue on.

#### TECHNICAL COMMITTEE REVIEW

MR. CORREIRA: So the technical committee met and I think we only had two recommendations. The first one, the technical committee urged some caution in setting of the ABC for Gulf of Maine winter flounder. We didn't think it was reasonable to have the catch jump up by 452 percent. Given that this was an area-swept type of analysis, that the biomass estimates you get are contingent upon the swept depth of the net, that the catchability is 0.6.

We also are somewhat concerned because much of that stock is in the southwest part of the Gulf of Maine. We know that there used to be a substantial fishery in Downeast Maine in the early eighties and that fishery is not there. We were concerned about having such a large increase in the catch.

The second one – and you've seen these recommendations before – we recommend that you adopt these reference points. They have been technically reviewed. They will be adopted by the New England Fishery Management Council. I'd be willing to bet on that. In order to have effective joint management of the stocks, both bodies are going to have to have similar goals and objectives. That's the technical committee's recommendations. If you look in your packet, there should be a technical committee

report. We've tried to give the rationale for those recommendations in a little more detail.

CHAIRMAN SIMPSON: That's great, Steve. One question, if you could address it off the top of your head, the removals from the population in federal waters versus state waters; do you recall the – I mean, there is no possession in Southern New England. This is a Southern New England specific question. What proportion of the mortality is occurring in terms of dead discards in federal waters versus landings or discards in state waters?

MR. CORREIRA: That's my next set of slides. This information came out after the technical committee had met. I think some of it is still preliminary. This is accounting for Gulf of Maine winter flounder. Here is the ACL, so overall the catch came under the target TAC at 76 percent. You can see some of the values for the different sector sub-ACLs and the common pool sub-ACL.

You can see from the common pool they came in at about a hundred percent of the catch. If we look at the state waters subcomponent, which again includes commercial landings from state waters, permitted vessels only and recreational landings and discards, and that came fairly close for government work at 107 percent, and we can see that you're about half of the other ACL.

Here we can see the breakdown of the landings in that row there, so we did a pretty good job on Gulf of Maine winter flounder. For Southern New England winter flounder, again we don't have the ACLs being spread out to the common pool. The overall catch was a little more than half of the target TAC, but if you look at the state waters subcomponent you can see that we really went over that. The ACL was 53; we took 181 metric tons for that.

Then you also notice that the other subcomponent group was also way over the ACL. Some of these numbers I think are still preliminary and may be subject to some change as they reconcile some of the VTR estimates, but that's how we did in 2010. It came close for Gulf of Maine winter flounder. For Southern New England/Mid-Atlantic winter flounder we exceeded it.

The interesting thing you should look at, you've got about 47 tons coming out of the commercial groundfish ACL with a zero possession limit, so there were actually people landing winter flounder

– some people with a permit. I'm not quite sure why that happened, whether it was vessels that didn't get the message across fishing years that you couldn't possess winter flounder or whether was some misreporting of stock area where you were fishing in the VTR.

Again, I think that's something that needs a little more analysis. Most of that commercial sub-ACL is discard. You can see 36 versus whatever it is, 10.5, but it is kind of interesting under no possession limit that there were some landings of Southern New England winter flounder. That's the end of my slides.

### **CONSIDERATION OF ACCEPTANCE OF SARC 52 RESULTS FOR MANAGEMENT**

CHAIRMAN SIMPSON: The 144 tons of landings from state waters is a bit of a surprise at a 50-pound trip limit and a two-fish recreational limit. Is there a sense of are there boats still targeting on 50 pounds or 38 fish or is there actually an incentive to move into state waters to land 50 pounds of winter flounder or how do we explain that?

MR. CORREIRA: Well, I don't know. I'm still trying to look at – I didn't do these estimates. These were provided by the Northeast Regional Office. I'm trying to get a little bit more detail as to what has happened. Some preliminary stuff I've seen, it seems like a lot of the state waters subcomponent is coming out of the recreational catch.

I'm having a little – is the two-fish limit in some areas where you don't have a lot of winter flounder, whether or not that's an aberration. I'm not quite sure why you're getting that kind of result. I do know that you can run into an issue for Massachusetts because the MRFSS design is based on state, and we have to take Massachusetts and whack it up between Gulf of Maine; and if that proration doesn't work so well, you could actually take some Gulf of Maine catch and stick it into Southern New England, but I don't have the details on that information at this time.

CHAIRMAN SIMPSON: I'll just say in the last year or so Connecticut recreational landing estimates have gone up from either an estimate of zero or 2 or 3,000 fish to 14 or 15,000 fish, and that's going from a ten-fish to a two-fish limit. It's either a reflection of a lot more availability or maybe just – you know, it used to be they put an asterisk; anything under 20,000 was who knows, but, anyway, just an observation.

MR. PATRICK AUGUSTINE: Two points, Mr. Chairman; we are going to be short on time in a few minutes but **I would like to make a motion to accept the SARC 52 Report to be used for management purposes**, and then I'd like to ask the technical committee about one of the charts that they put up there where the technical committee recommendation was to not allow the harvest to go up to a certain number, **but most important move that we accept the SARC 52 Report for management purposes**.

CHAIRMAN SIMPSON: Okay, thanks, Pat; do we have a second? Bill McElroy seconds. I'll hold that for a second so I can get David's question or comment and then we'll take that up.

DR. PIERCE: If you would, Mr. Chairman, I'd like to ask the question after we get to the next issue regarding the technical committee recommendations.

CHAIRMAN SIMPSON: Okay, we have the motion to accept the SARC 52. Doug.

MR. GROUT: So by accepting SARC 52, is the intent of that to accept the new reference points; is that what we're trying to get at here and include them in our – that's one of the recommendations from the technical committee is for the board to adopt the new reference points, and so I'm trying to see do we need to accept SARC 52 and then adopt the new reference points or is that included in that motion?

CHAIRMAN SIMPSON: Well, the motion is to – yes, the intent of the motion is to accept not only the assessment results but as the agenda item indicates it would include even the updated reference points for management use, so we're buying it all. Steve.

MR. CORREIRA: Yes, one thing to keep in mind, I'm pretty certain that New England is going to adopt those reference points at the next council. If by some rare occurrence they didn't, I think it's probably more important for us is to make sure that our reference points match whatever has happened in the EEZ. Otherwise, a lot of different goals and I don't know how you manage something like that.

CHAIRMAN SIMPSON: Right, with that observation, are you interested in qualifying your motion that contingent on the New England Council acceptance of this.

MR. AUGUSTINE: If that is what is required, yes.

CHAIRMAN SIMPSON: Is that okay with the seconder, so this would be contingent on the New England Council next week accepting these results as well for management. Okay, I think that's a good perfection. Any further discussion on the motion?

Do you need a second to caucus? Okay, for the record move to accept the SARC 52 results for management use contingent upon the New England Council's acceptance of the new reference points. Motion by Mr. Augustine; second by Mr. McElroy. Are you ready for the question? All those in favor; any opposed; any abstentions; null votes. The **motion passes 10-0**. The next agenda item is discussion of potential management changes. Is there any discussion on that? David.

#### **DISCUSSION OF POTENTIAL MANAGEMENT CHANGES**

DR. PIERCE: Well, I wanted to go back to the technical committee recommendation number one, if that's appropriate. It's just to seek clarification because it is a very important recommendation. We haven't acted on it yet and, frankly, I don't know how to act on it. I look at you, Steve, first and I say you're in a unique position in that you're a member of the New England Council SSC who participated in the development of the recommendations for ABCs shown in Table 1 of the technical committee report, which shows for 2012, 2013 and 2014 much higher OFLs and the ABCs relative to 2011.

So, you were part of the SSC and now as the chairman of our technical committee you are, along with the committee, providing us with some different advice, and here is where I become confused. Since you're now saying – representing the technical committee – that we should not support – I think you're saying we should not support those SSC recommendations that are being made to the New England Fishery Management Council for good reasons.

The good reasons are described in the technical committee. You say that the technical committee recommends the Gulf of Maine winter flounder catch should not be allowed to increase to 452 percent from 2011 to 2012. My first question is do you have a different perspective from the one you offered up at the SSC?

In addition, I'm not sure whether the technical committee is telling us not to abide by and not to

support the ABCs or whether you're saying when the council discusses the SSC advice we should support a lower ACL; that is the actual quota – we should support a lower ACL than what we see before us as the current ABCs to be recommended. It is confusing, I know, but do you see where I'm coming from here.

I don't know what the nature of the advice is from the technical committee plus you don't give us – the technical committee, you don't give us any numbers to chew on. You just say basically don't accept the SSC advice.

MR. CORREIRA: Yes, it's tough having split personalities. This issue is particularly difficult because of the timing where this body is meeting right up against where the council is in terms of developing their stuff. To go back a little bit more, the New England Fishery Management Council's plan development team, when they made their SSC report, had said we ought to be cautious in terms of increasing this catch by that amount.

That was the advice. We didn't put an amount, but the plan development team said they were concerned about that and we listened to a bunch of reasons why. When we were at the SSC meeting – and they have a lot of ABCs to go through – the consensus from the SSC was, okay, this is how we should do that, but there were members on the SSC who also happened to be members of the PDT that brought an unsuccessful argument forward that maybe you shouldn't think – you should be a little bit more cautious in terms of jumping up the ABCs by 452 percent.

When we got to the technical committee, they looked at that and for the same reason that the plan development team did, they didn't think that was a wise thing to really let the thing go the way that it did; but again not looking at the advice. There are several ways you could adjust this. One is you could write a letter to the council and if the mail is fast, you might say, hey, we're concerned about this.

Some of it could be that if you looked at the ACL, you might say, well, maybe you should build in more management uncertainty at that level because you shouldn't jump up the catch that much if you agree with the argument that the plan development team and the TC made. When you're at different bodies, you might get different



perspectives, and so those bodies might reach a different consensus.

So, for instance, if we look at the technical committee for winter flounder, even though I'm the ancient member of it, they have been through it enough that they'll have concerns because they really know that fishery and the history of the stock; whereas if you get the SSC you get people coming from all over and they're looking at it in the broad context of how do we set ABCs for a wide range of stocks. They have different assessments and conditions. I think that's why you're getting a little bit different viewpoints from the committees.

DR. PIERCE: Mr. Chairman, I am not prepared to make a motion relative to this recommendation except to say that as a New England Council member and obviously having great concerns about the status of the resource and the need to be cautious on this particular issue, I'm going to be supporting the SSC ABC that has been provided because it's the SSC recommendation.

However, when we discuss what the actual quotas will be, the ACLs, and then the state component of the ACLs, I'll be guided by the advice of our state technical people relative to our need to be very careful with the setting of the ACLs and to be cautious in the setting of those ACLs. That is the way I'm going to move forward unless there is a specific charge from this board to do something different.

CHAIRMAN SIMPSON: Well, I think that makes sense, David. This is a species where commission interests are fully represented on the council that has the lead, so I think that makes sense. I'm not seeing any different action in the Gulf of Maine states. That's what you had, right, Steve?

MR. CORREIRA: Yes, the one other part, in the original presentation, in the technical committee document that went out, there was an error where the OFL in 2011 for Gulf of Maine winter flounder was listed as 441, and it should be 570. It's a minor change, but all those documents will be corrected.

### **ELECTION OF VICE-CHAIR**

CHAIRMAN SIMPSON: All right, thanks. Our next agenda item is the election of a vice-chair. Are there any nominations? Terry Stockwell.

MR. STOCKWELL: Mr. Chair, I'd like to nominate Ritchie White.

CHAIRMAN SIMPSON: Second by Doug Grout. Any discussion on the motion? Pat.

MR. AUGUSTINE: Mr. Chairman, **we move to close the nominations and cast one vote for our new vice-chair.**

CHAIRMAN SIMPSON: Okay, any objection to that? Great, good job, Ritchie. We have a quick review of the population of the technical committee membership by Chris.

### **TECHNICAL COMMITTEE MEMBERSHIP UPDATE**

MR. CHRISTOPHER VONDERWEIDT: Mr. Chairman, just a quick update. New Jersey has replaced their previous technical committee member, Jeff Brust, with Linda Berry on the Winter Flounder Technical Committee.

### **OTHER BUSINESS**

CHAIRMAN SIMPSON: Very good. It doesn't require any action so an FYI. Anything else before the board? I want to thank Paul and Steve for all the information. Terry.

MR. STOCKWELL: Just a quick question probably to you and Chris; with the council action coming up, when is the next Winter Flounder Board meeting going to be scheduled?

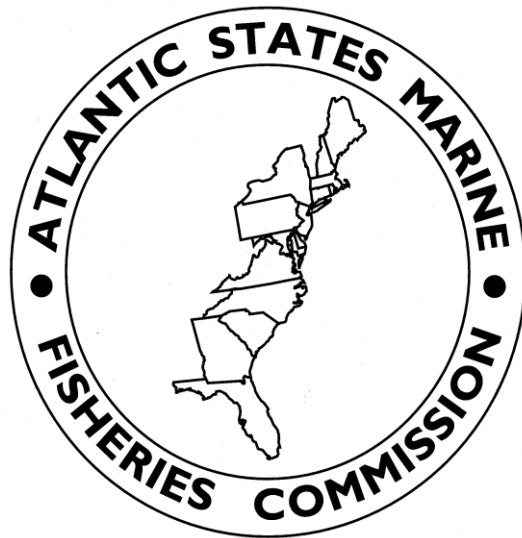
### **ADJOURNMENT**

CHAIRMAN SIMPSON: It looks like we're scheduled for February. All right, with that, we're adjourned.

(Whereupon, the meeting was adjourned at 12:35 o'clock p.m., November 10, 2011.)

*Atlantic States Marine Fisheries Commission*

**ADDENDUM I TO AMENDMENT 1 TO THE INTERSTATE  
FISHERY MANAGEMENT PLAN FOR INSHORE STOCKS OF  
WINTER FLOUNDER**



**May 2009**

*ASMFC Vision Statement:  
Healthy, self-sustaining populations for all Atlantic coast fish species or successful  
restoration well in progress by the year 2015*

## **1.0 Introduction**

On May 4, 2009, the Winter Flounder Management Board (Board) approved Addendum I to the Interstate Fishery Management Plan (FMP) for Inshore Stocks of Winter Flounder. This Addendum includes measures to achieve  $F_{msy}$  for the Gulf of Maine (GOM) stock, rebuild the overfished Southern New England/Mid-Atlantic (SNE/MA) stocks, and prevent excessive fishing effort from shifting to state waters in response to federal management measures.

This Addendum does not rescind any prior regulations from Amendment 1. States are required to implement all measures in this Addendum in addition to continuing those contained in Amendment 1<sup>1</sup>.

## **2.0 Statement of the Problem**

The SNE/MA winter flounder stock is severely depleted and the GOM stock is experiencing overfishing. Results of the August 2008 Groundfish Assessment Review Meeting (GARM III) estimated that the SNE/MA spawning stock biomass (SSB) is at only 9% of the target biomass with fishing mortality (F) at 260% of the target and GOM winter flounder stock to be likely overfished with overfishing probably occurring. The new stock determination in the GOM and record low levels in the SNE/MA stock were not anticipated by managers because the previous management measures were projected to reduce F to a level that would rebuild/maintain the SSB of winter flounder stocks.

The unexpected low SSB and high F estimates were due to retrospective patterns from the previous two winter flounder assessments. The retrospective pattern significantly overestimated biomass which led managers to believe that the stock was in a healthier condition than the assessments had concluded. GARM III addressed this retrospective pattern for the first time.

## **3.0 Background**

The Atlantic States Marine Fisheries Commission (Commission) and New England Fishery Management Council (Council) have had complementary management plans for winter flounder since 1992. Cooperative management between state and federal waters is necessary because of the unique migration patterns and spawning site fidelity of this species. When winter flounder migrate to inshore state water spawning grounds, they become concentrated in certain areas, making it easy for anglers to locate and remove a substantial portion of them. Concentrated fishing effort on spawning females, which are the most productive part of the population, can result in a larger net loss to the population than the landings may suggest. These nearshore grounds are also vulnerable to water pollution and habitat loss. Recent tagging studies have shown spawning-site fidelity in winter flounder, meaning that individuals will often return to the location where they were hatched, or close by. This suggests that subpopulations of winter flounder may be vulnerable to localized depletion.

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<sup>1</sup> Amendment 1 to the Interstate FMP for Inshore Stocks of Winter Flounder completely replaced all previous ASMFC management plans for inshore stocks of winter flounder.

The Council manages winter flounder under Amendment 13 and Framework 42 to the Northeast Multispecies FMP which focuses on offshore commercial fisheries and aims to rebuild overfished stocks by reducing fishing mortality and minimizing adverse effects on all essential fish habitat. Winter flounder are managed as part of the large-mesh Northeast multispecies group employing seasonal closures, gear restrictions, minimum size limits, trip limits, limited access, and days-at-sea restrictions to reduce fishing pressure on the stocks.

The Commission's Amendment 1, passed in November 2005, focuses on complementary management between the Commission and the Council. It is intended to rebuild and then maintain SSB at or near target biomass levels by controlling fishing pressure on spawning fish. In addition, Amendment 1 prioritizes restoration and maintenance of essential winter flounder habitat. Management measures of Amendment 1 are as follows:

***Recreational Management Measures (4.1)***

*Southern New England/Mid-Atlantic Stock*

*States in the Southern New England/Mid-Atlantic stock area must implement a 12" minimum size limit and a 10-fish creel limit. Each state in the SNE/MA stock area may have a 60-day open season for recreational winter flounder fishing. In addition, 20 days must be closed to recreational winter flounder fishing during March and April. The 60-day open season can be split into no more than two blocks.*

*Gulf of Maine Stock*

*States within the GOM stock must maintain the existing 12" minimum size and adopt an 8-fish creel limit. There are no required recreational closed seasons in the GOM stock area.*

***Commercial Management Measures (4.2)***

*Southern New England/Mid-Atlantic Stock*

*States within the Southern New England/Mid-Atlantic stock area must implement a 12" minimum size limit, a minimum 6.5" square or diamond mesh in the cod-end, and maintain any existing seasonal closures.*

*The mesh size regulation includes a 100 lb. trip limit for winter flounder if smaller mesh is being used. This 100 lb. "mesh trigger" provides for the landing of a small amount of winter flounder as bycatch in smaller-mesh fisheries.*

*Gulf of Maine Stock*

*States within the Gulf of Maine stock area must maintain the existing 12" minimum size limit and remain consistent with the adjacent EEZ mesh size regulations. The current mesh size in the EEZ adjacent to the states in the GOM stock area is a 6.5" diamond or square mesh in the cod-end.*

*States must maintain existing season closures, including any Federal rolling closures that affect state waters in the GOM stock area.*

2008 state regulations, which meet the requirements in Addendum I, are listed in Tables 1 and 2.

**Table 1. 2008 state recreational regulations for winter flounder.**

	<b>Stock Unit</b>	<b>Creel Limit</b>	<b>Size Limit</b>	<b>Season</b>
<b>Maine</b>	GOM	8	12"	N/A
<b>New Hampshire</b>	GOM	8	12"	N/A
<b>Massachusetts</b>	GOM; SNE/MA	8, 4	12", 12"	N/A; April 22 - May 22, and Sept. 23 - Oct. 22
<b>Rhode Island</b>	SNE/MA	4	12"	April 22 - May 22, and Sept. 23 - Oct. 22
<b>Connecticut</b>	SNE/MA	10	12"	April 1 - May 30
<b>New York</b>	SNE/MA	10	12"	April 1 - May 30
<b>New Jersey</b>	SNE/MA	10	12"	March 23 - May 21
<b>Delaware</b>	SNE/MA	10	12"	Feb. 11 - Apr. 10

**Table 2. 2008 state commercial regulations for winter flounder.**

	<b>Stock Unit</b>	<b>Size Limit</b>	<b>Mesh Size (in cod end of net)</b>	<b>Trip limit if mesh &lt; 6.5"</b>
<b>Maine</b>	GOM	12"	6.5"	N/A
<b>New Hampshire</b>	GOM	12"	6.5"	N/A
<b>Massachusetts</b>	GOM SNE/MA	12", 12"	6.5", 6.5"	N/A, 100 lb.
<b>Rhode Island</b>	SNE/MA	12"	6.5"	No
<b>Connecticut</b>	SNE/MA	12"	6.5"	100 lb.
<b>New York</b>	SNE/MA	12"	6.5"	100 lb.
<b>New Jersey</b>	SNE/MA	12"	6.5"	100 lb.
<b>Delaware</b>	SNE/MA	12"	Trawling Prohibited	Trawling Prohibited

NOAA Fisheries Service published the Final Temporary Groundfish Interim Rule (interim rule) on April 13, 2009. The interim rule extends the 2:1 days at sea counting from Framework 42 in the GOM and prohibits possession of winter flounder in the SNE/MA stock unit. These measures apply only to the 2009 fishing year (May 1, 2009 – April 30, 2010) and were intended to reduce overfishing while the Council continues its work on Amendment 16 to the Northeast Multispecies FMP. Amendment 16 is expected to be completed and implemented by the beginning of the 2010 groundfish fishing season on May 1, 2010. The interim measures are estimated to reduce the F by 16% in the GOM and 62% in the SNE/MA. The GOM stock requires an 11% reduction in F to reach  $F_{msy}$  while the SNE/MA stock requires a 100% reduction in F to reach  $F_{rebuild}$  (Table 3). See Appendix A for a summary of the rule or visit <http://www.nero.noaa.gov/nero/hotnews/multipir/> to download a full copy.

**Table 3. Fishing mortality reduction objectives and estimated reductions for the interim action.**

	2008 F	Fishing Mortality Rate Goal	Value Associated With Fishing Mortality Rate Goal	Fishing Mortality Rate Reduction Objective	Estimated Reduction in Fishing Mortality
<b>GOM</b>	0.317	Fmsy	0.283	-11%	16%
<b>SNE/MA</b>	0.265	Frebuild	0	-100%	62%

## 4.0 Management Program

### 4.1 Gulf of Maine

Management measures for the GOM stock are designed to reduce fishing mortality to  $F_{msy}$  or below. An 11% reduction in fishing mortality rate will achieve  $F_{msy}$  for the GOM stock.

#### 4.1.1 GULF OF MAINE RECREATIONAL MEASURES

This Addendum requires states to implement regulations to reduce the F in the recreational fishery by 11% from the average of 2006 – 2007 levels. 2006 – 2007 were selected as the base years because they reflect F after states had implemented measures required by Amendment 1 and before the GARM III assessment. Taking the average of multiple years helps to smooth out annual variability in the recreational data.

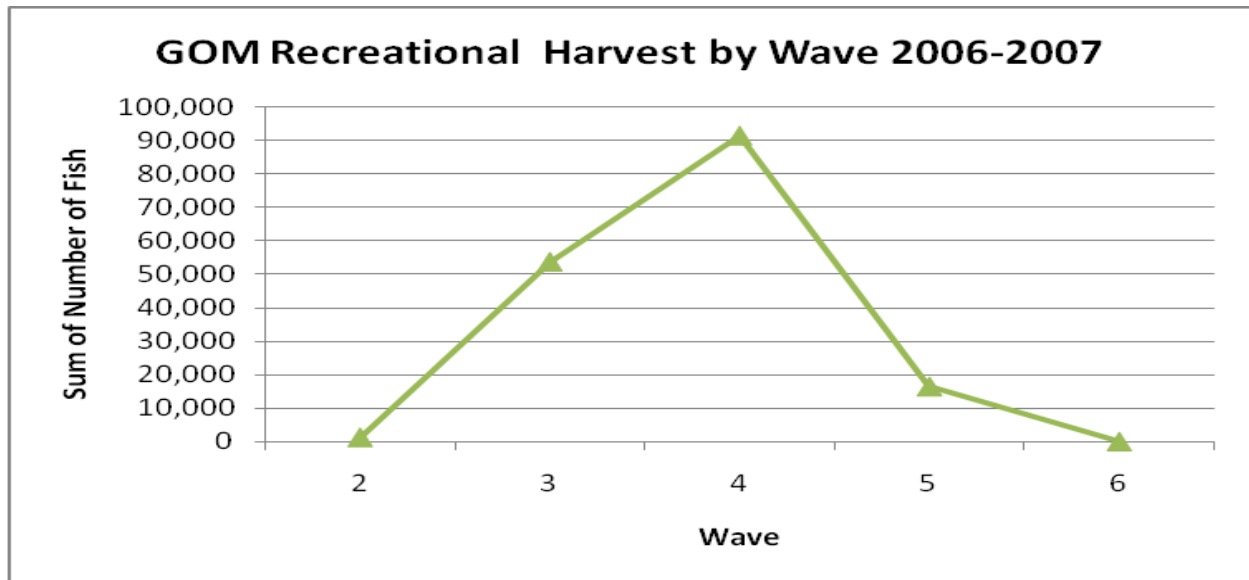
Reductions in F may be achieved through possession limits, seasons, or a combination of both. States may submit conservation equivalency proposals to achieve the necessary reduction using alternative management measures. All management proposals are subject to Board approval.

Table 4 shows estimated reductions in harvest for the GOM stock based on a recreational trip analysis using Marine Recreational Fishery Statistics Survey (MRFSS) data from 2006 and 2007. Amendment 1 established an 8 fish bag limit for recreational fishermen in the GOM beginning July 2005.

**Table 4. Estimated reductions for GOM stock for reduced bag limits. General PSE's for this data can be found in the appendix.**

Number of fish caught during trip	% Reduction Achieved at or Below Trip limit
1	62.14
2	36.27
3	19.17
4	5.81
5	3.16
6	0.94
7	0.25
8	0

Currently there are no recreational seasons for the GOM. Figure 2 and Table 5 show recreational harvest in the GOM for 2006 & 2007.



**Figure 2. Gulf of Maine recreational landings by wave, sum for 2006 and 2007. Applies a 15% discard mortality rate to B2 fish.**

**Table 5. GOM sum of total harvest (A + B1 + 0.15\*B2) from 2006 – 2007 in numbers of fish and percent of catch. Applies a 15% discard mortality rate to B2 fish. General PSE’s for this data can be found in the appendix.**

WAVE	MAINE		NEW HAMPSHIRE		MASS GOM		GOM Total	
	Harvest	%	Harvest	%	Harvest	%	Harvest	%
2	0	0.0%	0	0.0%	193	0.4%	193	0.3%
3	173	100.0%	9,804	40.1%	10,759	21.3%	20,736	27.6%
4	0	0.0%	13,702	56.0%	32,181	63.6%	45,883	61.0%
5	0	0.0%	962	3.9%	7,453	14.7%	8,415	11.2%
6	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total Harvest or % of Stock Catch	173	0%	24,468	32.5%	50,586	67.2%	75,227	

To calculate potential seasonal reduction that could be achieved for each state, divide total percent harvest for a wave by the number of days that the state’s season is open during that wave. Reduction per day = % harvest in wave/number of days open in that wave. The values in Table 4 & 5 are not additive.

#### **4.1.2 GOM COMMERCIAL POSSESSION LIMITS**

Commercial vessels that have not been assigned a federal groundfish permit may possess a maximum of 250 lbs of winter flounder per vessel. Commercial vessels that have been assigned a federal groundfish permit are not restricted to the 250 lb possession limit. This possession limit is estimated to reduce 2006 – 2007 harvest levels by 31% for state water fishing vessels that do not hold a federal permit.

### ***4.2 Southern New England / Mid Atlantic***

The measures for the SNE/MA stock are designed to achieve the lowest possible F rate while minimizing economic and social impacts and dead discards, and prevent an influx of effort into state waters. Zero possession limits were considered by the Board, but are problematic for two main reasons—discarding may increase with zero possession limits and fisheries-dependent data beneficial to the assessment would not get collected. Under zero possession limits, the catch-at-age data used in the assessment would be solely based on estimation from at-sea samples. Unless at-sea sample coverage is adequate for estimating discards, the quality of the assessment is likely to degrade creating problems when trying to bridge GARM III with future assessments.

#### **4.2.1 SNE/MA RECREATIONAL BAG LIMITS**

Recreational anglers may possess a maximum of 2 winter flounder that were taken in state waters of the SNE/MA stock area. All winter flounder must be a minimum of 12” in length in accordance with Section 4.1 of Amendment 1. This bag limit is estimated to reduce harvest by approximately 46%.



#### **4.2.2 COMMERCIAL POSSESSION LIMITS**

Commercial vessels that have not been assigned a federal groundfish permit may possess a maximum of 50 lbs of winter flounder. Commercial vessels that have been assigned a federal groundfish permit are not restricted to the 50 lb possession limit. This possession limit is estimated to reduce harvest by approximately 65%.

This provision is more restrictive than the 100 lb “mesh trigger” allowance for commercial fishermen using nets smaller than 6.5” square or diamond mesh in the cod-end from Section 4.2 of Amendment 1. The 50 lb possession limit is intended solely to allow for bycatch and is the maximum amount that any commercial fishermen, who does not hold a federal groundfish permit, may possess.

#### **5. 0 Compliance Schedule**

State must implement Addendum I according to the following schedule in order to be in compliance.

June 15, 2009: Due date for states to submit proposals to meet fishing mortality target.

August 17, 2009: Management Board will review and take action on final state proposals.

November 1, 2009: States implement regulations to meet fishing mortality targets.

## ***Appendix:***

The following is a summary<sup>2</sup> of the Temporary Final Interim Rule for the Northeast Multispecies Fishery as they pertain to regulation of Gulf of Maine and Southern New England-Mid Atlantic winter flounder stocks. They do not apply to non-federally permitted vessels that fish for winter flounder within state waters.

- I. Commercial Gulf of Maine
  - a. Proposed regulations are estimated to reduce fishing mortality on GOM stock by 16%
  - b. Maintains existing differential DAS counting area in GOM, as established in FMP.
  - c. A DAS cut 18% for federally permitted groundfish vessels.
  - d. Differential DAS counted 2:1 within entire stock area for federally permitted groundfish vessels.
  - e. Incidental TAC set at 19 tons with 100% allocated to regular B DAS program.
  - f. Stock classified as stock of concern and is no longer allowed as a target in B DAS program.
  
- II. Recreational Gulf of Maine
  - a. No changes.
  
- III. Commercial SNE/MA area
  - a. Proposed regulations are estimated to reduce fishing mortality on SNE/MA stock by 62%.
  - b. No retention of winter flounder within entire SNE/MA area for all federally permitted vessels.
  - c. Interim Differential SNE DAS Area with A DAS charged at rate of 2:1. This area includes waters between 40° 30' and 41° 30' N. lat., and west of 68° 50' W. long. (i.e., west of the border of the Western U.S./Canada Area) to the shore, including all of Nantucket Sound and the Great South Channel (Figure 1).
  - d. Elimination of the SNE/MA Special Access Program (SAP). Disallows fluke vessels from landing 200 lb of winter flounder when not under a groundfish DAS.
  - e. Elimination of state waters winter flounder exemption. Disallows federally permitted groundfish vessels to land winter flounder when fishing within state waters with small mesh.
  - f. DAS conservation tax removed (allows permit stacking).
  
- IV. SNE/MA Recreational
  - a. No possession of winter flounder within EEZ portion of SNE/MA area for all party-charter boat and private recreational anglers.

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<sup>2</sup> For a full copy of the rule, go to <http://www.nero.noaa.gov/nero/regs/frdoc/09/09multiInterimirule.pdf>

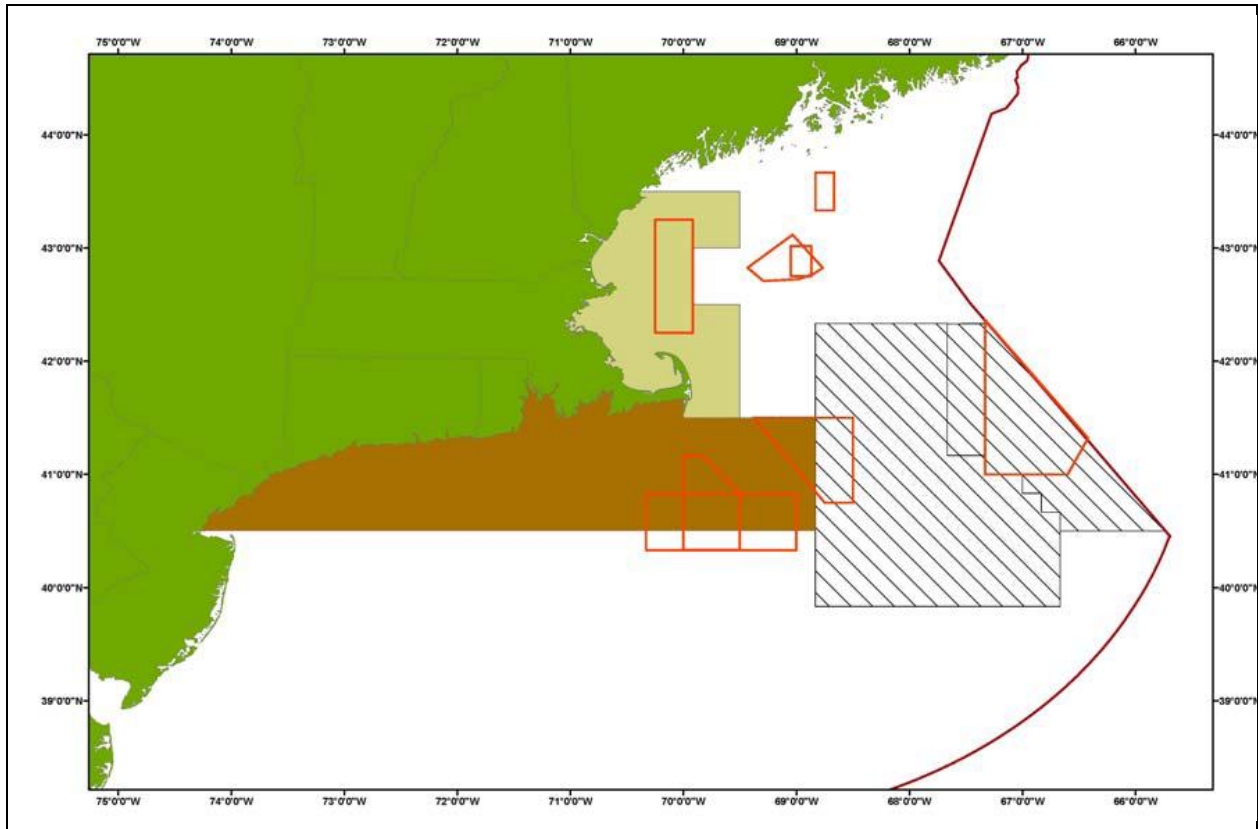


Figure 1. The Interim SNE Differential DAS Area. Brown area is SNE DAS Area. Source: Secretarial Interim Action Environmental Assessment.

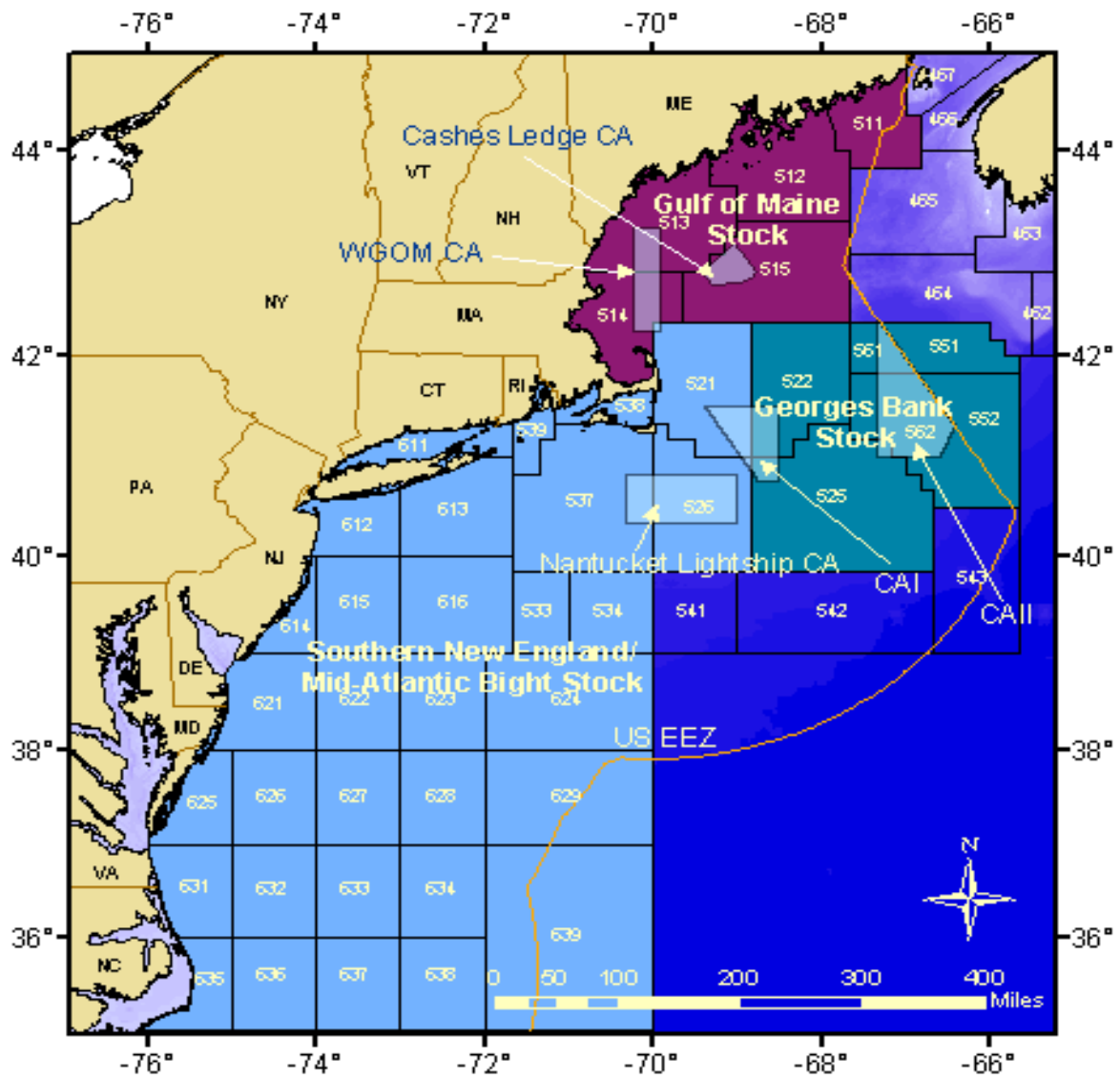


Figure 2. Statistical areas used to define the stock areas for the SNE\_MA, Georges Bank and Gulf of Maine winter flounder stocks.

**Table 11. Total catch in number (A+B1+B2) and proportional standard error (as percentage of mean) by state, wave, and year. Note that catch in the seasonal analysis used (A+B1) + 15% of the B2 to account for the assumed 85% survival rate of released fish. NA means no catch estimates. Massachusetts data are not disaggregated by stock unit.**

State	wave	Year 2006		Year 2007	
		Number	PSE	Number	PSE
DE	wave 4	660	100.1	NA	NA
DE	wave 6	681	72.6	449	100
NJ	wave 2	102,289	34.3	224,694	33.2
NJ	wave 3	3,641	100	9,003	82.9
NJ	wave 4	7,738	71.4	2,492	100
NJ	wave 6	121,216	48.3	NA	NA
NY	wave 2	137,869	31.9	16,740	41.2
NY	wave 3	161,594	35.4	12,883	39.4
CT	wave 2	10,721	74	8,000	41.7
CT	wave 3	17,453	38.9	9,019	47.3
CT	wave 4	3,582	75.3	1,238	100
RI	wave 3	NA	NA	2,858	53
RI	wave 4	NA	NA	581	100
RI	wave 5	561	99.9	NA	NA
RI	wave 6	45	57.2	NA	NA
MA	wave 2	3,856	100	NA	NA
MA	wave 3	29,547	36.7	4,085	72.4
MA	wave 4	23,587	67.5	43,471	34.4
MA	wave 5	21,491	52.9	5,616	58.3
NH	wave 3	8,060	49.8	6,004	34
NH	wave 4	6,027	51	14,896	34.6
NH	wave 5	106	78.5	1,731	42.5
ME	wave 3	1,154	100	NA	NA

***De minimis* fishery guidelines (4.3.3 of Amendment 1)**

States may apply for *de minimis* status if, for the preceding three years for which data are available, their average commercial landings or recreational landings (by weight) constitute less than 1% of the coastwide commercial or recreational landings for the same three year period. A state that qualifies for *de minimis* based on their commercial landings will qualify for exemptions in their commercial fishery only, and a state that qualifies for *de minimis* based on their recreational landings will qualify for exemptions in their recreational fishery only.

States that apply for and are granted *de minimis* status are exempted from biological monitoring/sub-sampling activities for the sector for which *de minimis* has been granted (i.e., commercial *de minimis* qualifies for a commercial monitoring exemption). States must still report annual landings, comply with recreational and commercial management measures, and apply for *de minimis* on an annual basis.

Description of Commercial landings of winter flounder for state permitted vessels only  
with strawman trip limit proposals.

by

Steven J. Correia<sup>1</sup>, Christopher Vonderweidt<sup>2</sup>, and Geoff White<sup>3</sup>

March 26, 2009

1. Massachusetts Division of Marine Fisheries.
2. Atlantic States Marine Fisheries Commission
3. Atlantic Coastal Cooperative Statistics Program

Commercial landings of winter flounder by state permitted only vessels were retrieved from the ACCSP for years 2005-2007. Several issues are involved with trying to isolate state only permitted vessels in the SAFIS system such as incomplete recording of vessels information on dealer data. We selected the criterion to select only vessels that never had a Federal permit (see Appendix 1 for query). Federally permitted vessels will be covered the Secretarial interim action and Amendment 16. Because of confidentiality requirements, results are presented in summary format only. Note that data are not assigned to stock units.

Total landings of winter flounder from 2005-2008 by non-federally permitted vessels are shown in Table 1. Landings from non-Federally permitted vessels average 162,000 lb, representing 2.6% of the total reported dealer landings. Over the 2005-2008 period, state landings by non-federally permitted vessels as a percentage of total yearly landings of winter flounder ranged from 2 to 3.8% of total landings (all three winter flounder stocks combined). State landings by non-Federally permitted vessels ranged from 2.8 to 5.6% of the total landings from Southern New England Mid-Atlantic stock and Gulf of Maine stock combined.

Year	2005	2006	2007	2008	Total
Non-Federal permits.	202,878	119,114	224,413	102,572	648,976
All landings GB, SNE-MA and GOM	8,078,142	6,017,422	5,884,048	5,142,511	25,122,122
Percent of total	2.5%	2.0%	3.8%	2.0%	2.6%

Year	2005	2006	2007	2008	Total 2005-2007
Non-Federal permits.	202,878	119,114	224,413	102,572	546,405
Landings from SNE-MA and GOM	3,648,651	423,0671	4,149,100	N/A	12,028,423
Percent of total	5.6	2.8	5.4		4.5

**Table 1. Winter flounder landings (lb.) by calendar year for non-Federally permitted vessels and all landings (all stocks combined). Landings by stock unit not available for 2008.**

Distributions of landings of winter flounder per trip were examined for these non-federally permitted vessels for 2005-2008 (Figure 1). Summary statistics are shown for each year for all states combined is shown in Table 2. Landings per trip are sufficiently homogeneous among states (except for states with no non-Federally permitted vessels) that a coastwide or stock wide approach may be applicable. For all years combined, landings per trip were relatively low with 75% of the trips at 50 lb or less and approximately 95% of trips at 250 lb or less.

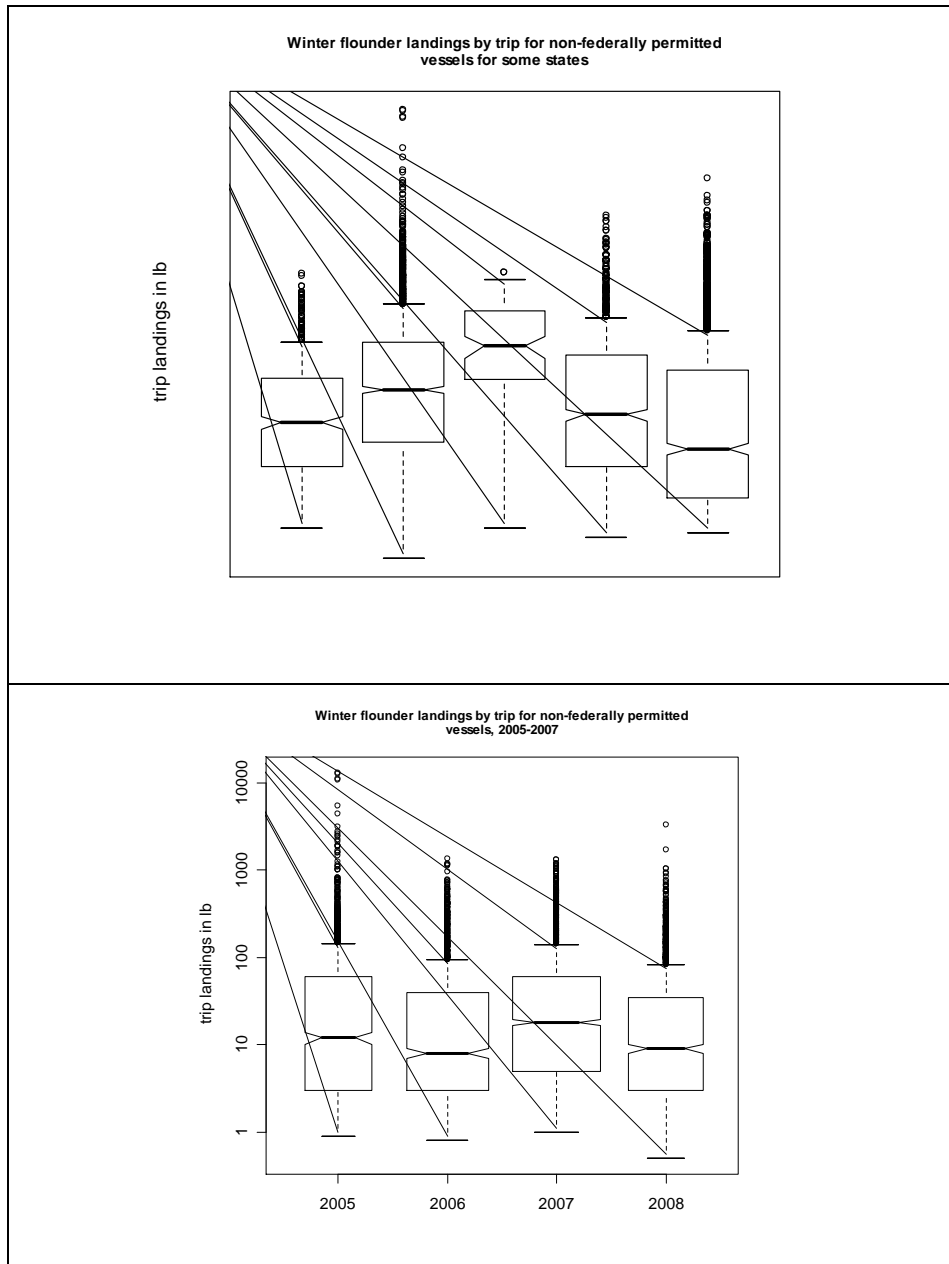
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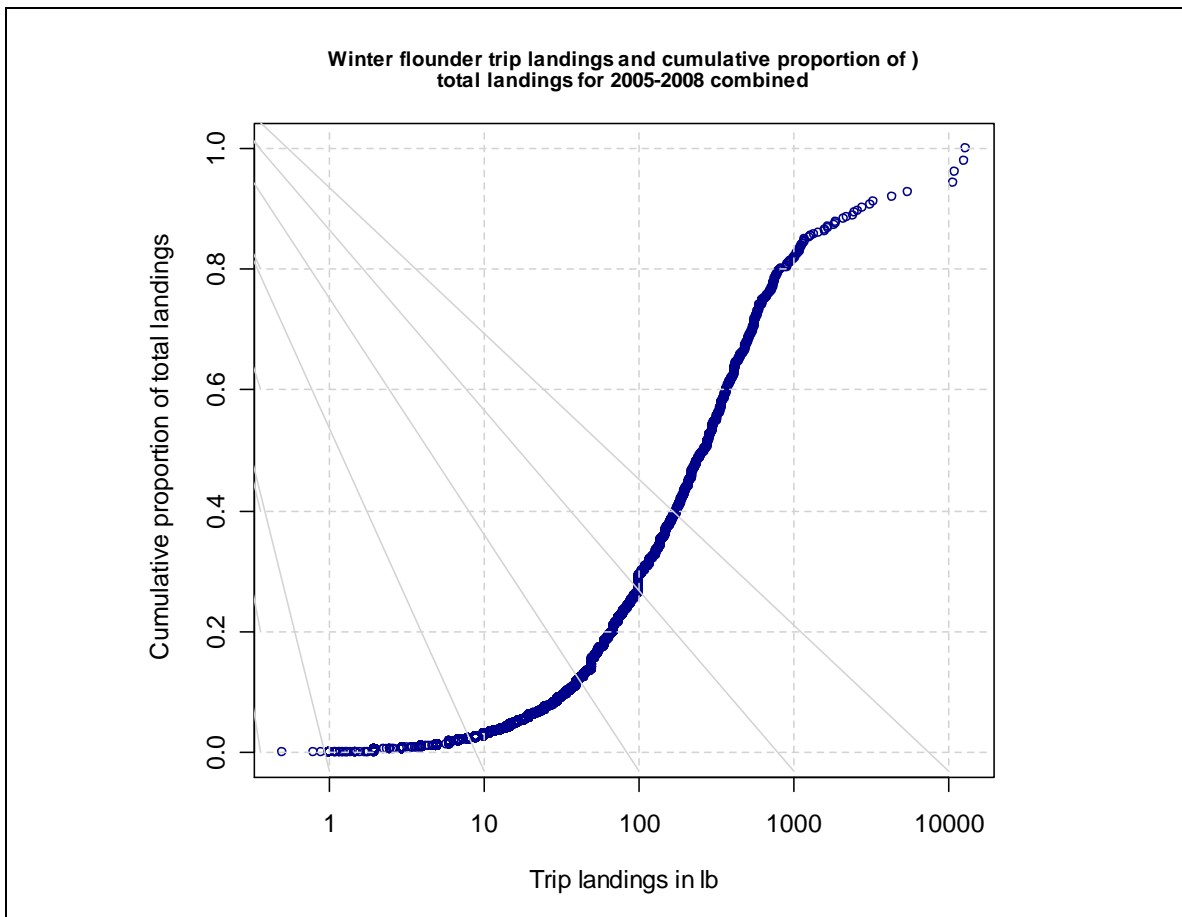
Year	minimum	25th quantile	50 <sup>th</sup> quantile	mean	75th quantile	95th quantile	maximum
2005	0.9	3	12	101.3	60	295.0	13,080
2006	0.8	3	8	40.7	39	190.3	1,350
2007	1.0	5	18	66.4	60	336.3	1,310
2008	0.5	3	9	41.9	35	182.8	3,300
All years combined	0.5	3	11	60.3	50	248.7	13,080

**Table 2. Summary statistics for winter flounder landings per trip (lb.) for non-Federally permitted vessels for 2005-2008.**

Most trips land small amounts of winter flounder, but a few large trips are substantial and contribute significantly to the total landings. The low amount of winter flounder landed per trip suggests that most trips are not targeting winter flounder (75% of trips land 50 lb or less) and only land winter flounder as a bycatch in other fisheries. Although less than 5% of the trip landed 250 lb or more, they accounted for approximately 51% of the total catch.



**Figure 1. Top panel. Boxplots of landings per trip (lb.) for winter flounder for five states. State labels and amounts not shown to maintain confidentiality. Bottom panel: boxplots of landings per trip (lb.) for 2005-2008. Note that y-scale is semi-logarithmic.**



**Figure 2. Distribution of winter flounder landings per trip against cumulative proportion of total landings (2005-2008 combined). Note that x-scale is semi-logarithmic.**

**Trip limits**

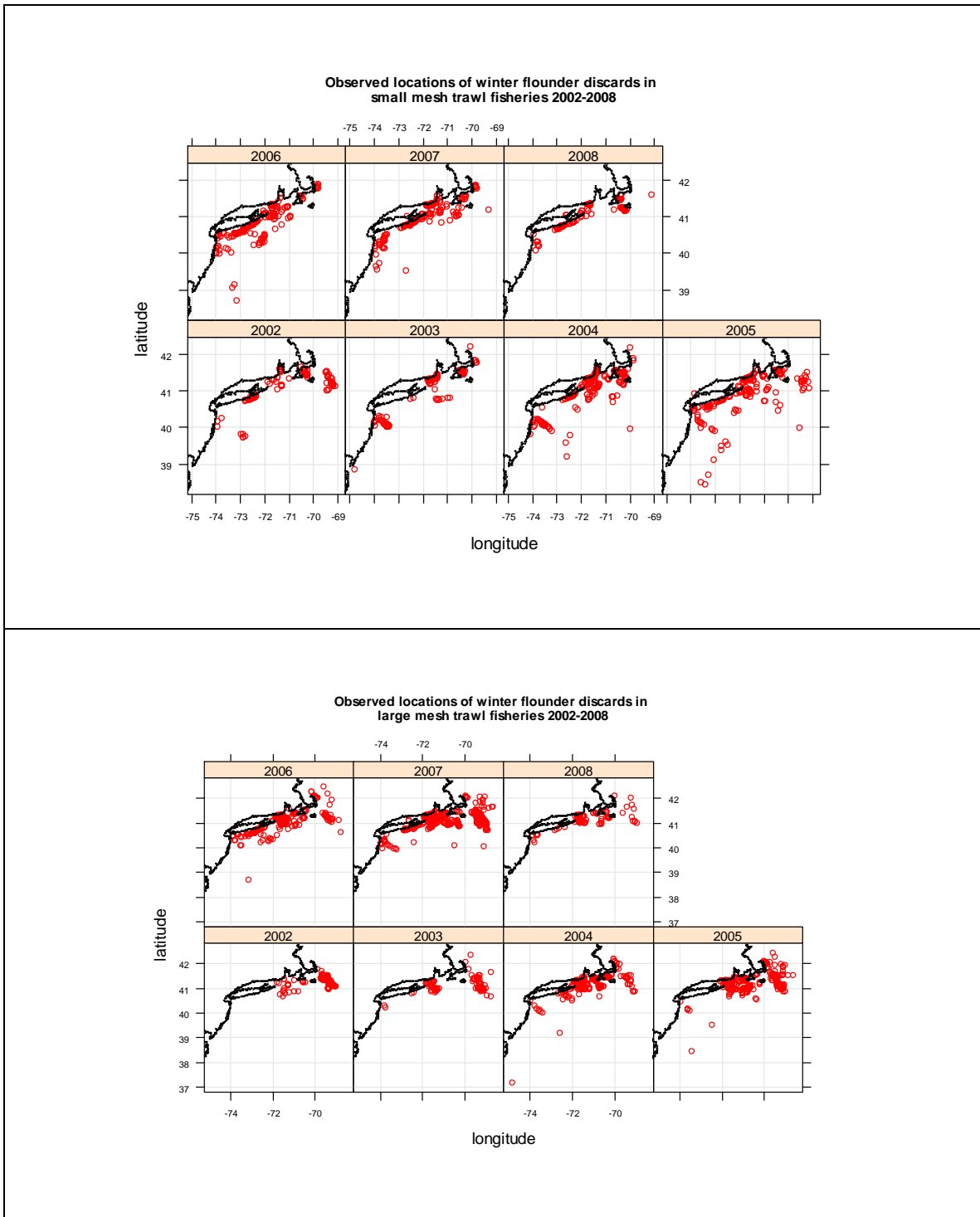
Several strawman trip limits are shown in Table 3. These trip limits were based on select quantiles of landings per trip. The trip limit analysis assumes that the number of trips fishing above the trip limit, continue to fish but catch is limited to the trip limit. To the extent that these large trips (>250 lb) may target winter flounder, a moderate trip limit may reduce winter flounder catch by shifting this effort onto other species. However, low trip limits often generate little to no conservation benefits if fishers continue to catch and discard winter flounder while targeting other species. An appropriate trip limit would be small enough to prevent targeting of winter flounder without encouraging discarding. A thorough trip limit analysis requires information on the species composition of trips and basic economic cost data, which are either currently not available or are difficult to obtain for the state water’s fleet.

Winter flounder landings per trip (lb.)	Percentage of total trips at or above landings per trip	Percentage of total landings from trips at or above landings per trip	Percent reduction
250 or greater	5.0%	51%	31%
100 or greater	12.5%	72%	50%
50 or greater	25.0%	85%	65%
0	100.0%	100%	100%

**Table 3. Strawman trip limits for state waters vessels. These are based on selected quantiles of landings per trip from non-Federally permitted vessels for 2005-2008 combined.**

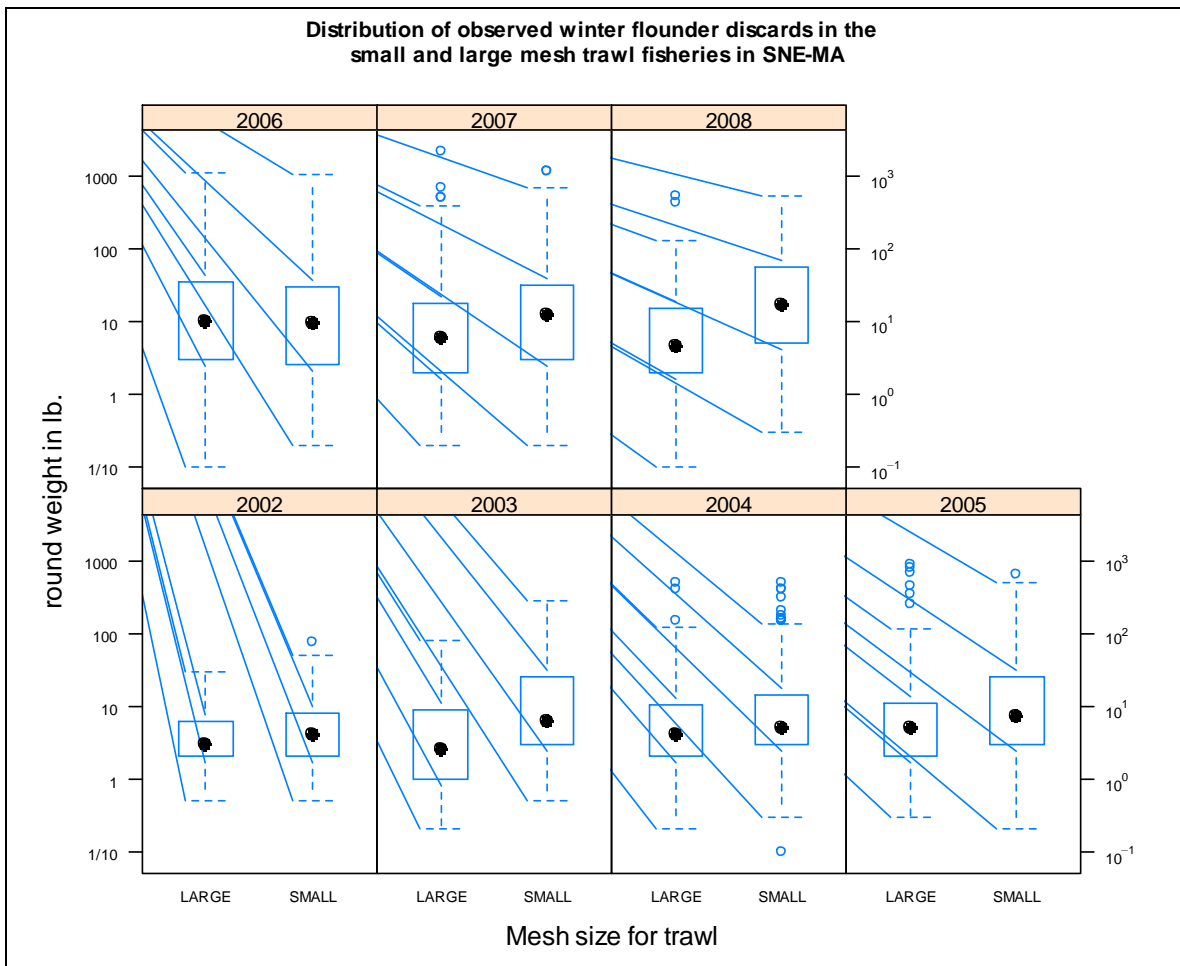
### **Discards**

The location of hauls with winter flounder discards in the small (<140mm) and large mesh ( $\geq 140$  mm) trawl fishery observed by the Northeast Fishery Observer Program are shown in Figure 3. A comparison of the amount of winter flounder discards per haul in the small mesh and large mesh fishery is shown in Figure 4. The distribution of winter flounder discards in both the small mesh and large mesh fisheries tends to occur either in or adjacent to state waters (and along the Southeast Channel Area). The distribution of discards appears similar for the small mesh and large mesh across years (Figure 4). Most of the discards are under 100 lb. per haul, with the median discard approximately 10 lb. per haul. For Southern New England-Mid-Atlantic stock, commercial discards are approximately 4-7% of the total catch in weight for 2004-2007 and are taken in scallop and trawl gear. For Gulf of Maine stock, discards range from 4-5% of the total catch in weight from 2004-2007 and are taken in large mesh trawl fisheries.



**Figure 3. Distribution of observed hauls with winter flounder discard within SNE-MA winter flounder stock area. Top panel: Discards in the small mesh (<140mm) trawl fisheries. Bottom panel: Discards in the large mesh (≥ 140 mm) trawl fisheries. Data from Northeast Fishery Observer Program database as provided by Tom Nies, NEFMC.**

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**Figure 4. Boxplots of observed winter flounder (lb) discarded per haul in the small mesh (<140mm) and large mesh ( $\geq 140$  mm) fishery. Note y-scale is semi-logarithmic. Data from Northeast Fishery Observer Program database as provided by Tom Nies, NEFMC.**

### Seasonal Closures

The Winter Flounder Technical Committee did not have sufficient time to analyze and review seasonal closures for the commercial sector. Seasonal closures can have two meanings: 1) a time-varying no-possession limit or 2) area-seasonal closure to gear capable of capturing winter flounder. The effectiveness of the time-varying no possession limit depends on whether the winter flounder catch is predominately from directed trips or on trips targeting other species. The no-possession limit would only be effective if fishing behavior changed so that effort was re-directed to areas without winter flounder. If the no-possession limit does not alter behavior of trips not targeting winter flounder, then the seasonal closure will result in discards.

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Seasonal area closures to all gear capable of taking winter flounder will be effective. The technical committee suggests that having the seasonal-Area closure coincide with spawning season may reduce effort on spawning aggregations, preventing localized depletion. Spawning times vary somewhat from geographically, with spawning period generally delayed as latitude increases. Peak spawning in general occurs from February to May.

Monthly landings by non-Federally permitted vessels are summarized in Tables 5-7. Confidentiality rules do not allow presentation of Monthly landings by state. Monthly landings (2005-2008 combined) from non-Federally permitted vessels is shown in Table 5. Landings by states landing in Southern New England Mid-Atlantic stock are shown in Table 6 and landings in Massachusetts are shown in Table 7.

Month	1	2	3	4	5	6	7	8	9	10	11	12
lb	21,902	7,339	12,244	77,597	126,043	106,926	85,997	59,921	32,478	11,871	49,641	56,444
	3.4	1.1	1.9	12.0	19.4	16.5	13.3	9.2	5.0	1.8	7.7	8.7

**Table 5. Monthly landings for 2005-2008 combined from non-Federally permitted vessels for all states combined.**

Month	1	2	3	4	5	6	7	8	9	10	11	12
lb	17,748	6,841	6,197	63,322	91,070	30,660	19,047	20,169	6,052	5,196	42,635	48,326
Percent of total	5.0	1.9	1.7	17.7	25.5	8.6	5.3	5.6	1.7	1.4	11.9	13.5

**Table 6. Monthly commercial landings from non-Federally permitted vessels for New Jersey, New York, Connecticut, and Rhode Island for 2005-2008 combined. These states harvest exclusively from Southern New England/ Mid-Atlantic.**

Month	1	2	3	4	5	6	7	8	9	10	11	12
lb	4,154	498	6,047	14,275	34,973	76,266	66,950	39,752	26,426	6,675	7,006	8,118
Percent of total	1.4	0.2	2.1	4.9	12.0	26.2	23.0	13.7	9.1	2.3	2.4	2.8

**Table 7. Monthly landings for 2005-2008 combined from non-Federally permitted vessels for Massachusetts. Landings are from both stock units, but are likely to predominated by Gulf of Maine landings.**

Generally, peak landings for Southern New England-Mid-Atlantic are in April-May and November-December, although one state's landings peak in November-January. For Gulf of Maine, peak landings occur in May-August.

### Discussion

Landings from state water's permitted vessels is a small fraction of total removals. The generally low amount of landings suggests that most winter flounder are landed as bycatch in other fisheries (small mesh, fluke, etc). A moderate trip limit may eliminate the directed fishery, but very low trip limits are unlikely to effectively reduce catch because discarding will occur.

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For low trip limits, other actions such as seasonal closures of state waters to fisheries that take winter flounder as bycatch may be needed to achieve the targeted reductions in catch. These fisheries have not been identified, but the potential seasonal closures could include the winter-spring and late fall when adult winter flounder are either spawning or aggregating for spawning. This would also provide added protection to local spawning populations.

These actions are targeting two stocks: Southern New England-Mid-Atlantic (very poor condition and not likely to rebuild by the 2014 rebuilding date) and Gulf of Maine (Overfished and Overfishing). These stocks are separately managed by Northeast Multispecies Fishery Plan and ASMFC, although plan objectives and control rules are the same. The Georges Bank stock is managed in the Northeast Multispecies Plan. For Gulf of Maine winter flounder (2009 Target TAC=329 metric tonnes) and Georges Bank stock (2009 Target TAC=2,004 metric tonnes), low trip limits or moratorium may not be consistent with measures developed by either the interim plan or Amendment 16. A low trip limit may prevent landing (but not discarding) of Georges Bank or Gulf of Maine winter flounder harvested in the EEZ. The proposed interim action proposes to remove the current 5,000 lb per trip limit for Georges Bank winter flounder.

A moratorium on landing winter flounder will mean that the catch and age, length samples for characterizing the catch will need to come from at sea observers (since all the catch will be discarded). Loss of catch information will likely degrade the assessment (unless sea sampling coverage is increased across the various fisheries that catch winter flounder as a bycatch).



Appendix 1. Queries used to get all winter flounder landings and all landings from vessels that never had a federal permit.

#### Summary of Total Landings

```
1      select unload_year, state_postal, count(*), sum(reported_quantity)
      from audit_dealer_reports a, audit_landings al, vessel_permits vp, state s
      where a.dealer_rpt_id = al.dealer_rpt_id
            and a.state_code = s.state_code
            and (a.vessel_id = vp.vessel_id (+)
            and a.unload_year = vp.permit_year(+) )
            and al.species_itis = 172905
            and unload_year between 2005 and 2008
            and a.audit_state > 0 and a.deleted is null
      group by unload_year, state_postal
      order by unload_year, state_postal
```

#### Summary of non-federally permitted vessel landings

```
3      select unload_year, state_postal, count(*), sum(reported_quantity)
      from audit_dealer_reports adr, audit_landings al, vessel_permits vp, state s
      where adr.dealer_rpt_id = al.dealer_rpt_id
            and adr.state_code = s.state_code
            and adr.vessel_id = vp.vessel_id (+)
            and al.species_itis = 172905 and unload_year >= 2005
            and vp.permit_id is null
      group by unload_year, s.state_postal
      order by unload_year, s.state_postal
```

#### Trip level records for analysis (results confidential)

```
      select s.state_postal, adr.unload_year, adr.unload_month, adr.unload_day,
            adr.dealer_rpt_id, al.landing_seq, al.species_itis, al.grade_code,
            al.reported_quantity, al.unit_measure, adr.dealer_id, adr.cf_id
      from audit_dealer_reports adr, audit_landings al, vessel_permits vp, state s
      where adr.dealer_rpt_id = al.dealer_rpt_id and adr.state_code = s.state_code
            and adr.vessel_id = vp.vessel_id (+)
            and al.species_itis = 172905 and unload_year between 2005 and 2008
            and vp.permit_id is null
            and s.state_postal not in ('MD','NH')
      order by unload_year, s.state_postal
```

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## Introduction

The Winter Flounder Management Board tasked the Technical Committee to explore recreational season reductions for inclusion in Draft Addendum I for Public Comment. Current recreational seasons are as follows. States were required to implement these measures on July 31, 2005 under Amendment 1 to the FMP.

### *SNE/MA Recreational Seasons:*

Each state in the SNE/MA stock area may have a 60-day open season for recreational winter flounder fishing. In addition, 20 days must be closed to recreational winter flounder fishing during March and April. The 60-day open season can be split into no more than two blocks.

### *Gulf of Maine (GOM) Recreational Seasons:*

None

Current state regulations are listed in Table 1.

**Table 1. Current state regulations for winter flounder.**

	<b>Stock Unit</b>	<b>Creel Limit</b>	<b>Size Limit</b>	<b>Season</b>
<b>Maine</b>	GOM	8	12"	N/A
<b>New Hampshire</b>	GOM	8	12"	N/A
<b>Massachusetts</b>	GOM; SNE/MA	8, 4	12", 12"	N/A; April 22 - May 22, and Sept. 23 - Oct. 22
<b>Rhode Island</b>	SNE/MA	4	12"	April 22 - May 22, and Sept. 23 - Oct. 22
<b>Connecticut</b>	SNE/MA	10	12"	April 1 - May 30
<b>New York</b>	SNE/MA	10	12"	April 1 - May 30
<b>New Jersey</b>	SNE/MA	10	12"	March 23 - May 21
<b>Delaware</b>	SNE/MA	10	12"	Feb. 11 - Apr. 10

## Analysis

MRFSS landings by wave from 2006 and 2007 were totaled for each state and stock unit (Table 2, 3, 6 and 7). Only data from 2006 – 2007 was used for the analysis because recreational seasons were significantly reduced under Amendment 1. Harvest is A + B1 data and Catch is A + B1 + B2 data. Percent landings in each wave are based on the sum of harvest or catch from 2006 – 2007 (Table 4, 5, 8, and 9).

**Table 2. SNE/MA sum of total harvest (A + B1) from 2006 – 2007 in numbers of fish.**

<b>Wave</b>	<b>Mass SNE/MA</b>	<b>RHODE ISLAND</b>	<b>CONNECTICUT</b>	<b>NEW YORK</b>	<b>NEW JERSEY</b>	<b>DELAWARE</b>	<b>SNE/MA Total</b>
<b>2</b>	0		1,158	72,039	235,087	0	308,284
<b>3</b>	794	521	10,810	147,574	1,753		161,452
<b>4</b>	0	0	0		0	660	660
<b>5</b>	0	561					561

<b>6</b>	0	45			0	0	45
<b>Total</b>	794	1,127	11,968	219,613	236,840	660	471,002

**Table 3. SNE/MA sum of total catch (A + B1 +B2) from 2006 – 2007 in number of fish.**

WAVE	MASS SNE/MA	RHODE ISLAND	CONNECTICUT	NEW YORK	NEW JERSEY	DELAWARE	SNE/MA Total
<b>2</b>	0		18,721	154,609	326,983		500,313
<b>3</b>	794	2,858	26,472	174,477	12,644		217,245
<b>4</b>	0	581	4,820		10,230	660	16,291
<b>5</b>	0	561					561
<b>6</b>	0					1,130	1,130
<b>Total</b>	794	4,000	50,013	329,086	349,857	1,790	735,540

**Table 4. SNE/MA percent harvest (A + B1) from 2006 – 2007.**

Wave	Mass SNE/MA	RHODE ISLAND	CONNECTICUT	NEW YORK	NEW JERSEY	DELAWARE	SNE/MA Total
<b>2</b>	0.0%	0.0%	9.7%	32.8%	99.3%	0.0%	65.5%
<b>3</b>	100.0%	46.2%	90.3%	67.2%	0.7%	0.0%	34.3%
<b>4</b>	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.1%
<b>5</b>	0.0%	49.8%	0.0%	0.0%	0.0%	0.0%	0.1%
<b>6</b>	0.0%	4.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>% of Total Landings</b>	0.2%	0.2%	2.5%	46.6%	50.3%	0.1%	

**Table 5. SNE/MA percent catch (A + B1 + B2) from 2006 – 2007.**

WAVE	MASS SNE/MA	RHODE ISLAND	CONNECTICUT	NEW YORK	NEW JERSEY	DELAWARE	SNE/MA Total
<b>2</b>	0.0%	0.0%	37.4%	47.0%	93.5%	0.0%	68.0%
<b>3</b>	100.0%	71.5%	52.9%	53.0%	3.6%	0.0%	29.5%
<b>4</b>	0.0%	14.5%	9.6%	0.0%	2.9%	36.9%	2.2%
<b>5</b>	0.0%	14.0%	0.0%	0.0%	0.0%	0.0%	0.1%
<b>6</b>	0.0%	0.0%	0.0%	0.0%	0.0%	63.1%	0.2%
<b>Percent of total landings</b>	0.1%	0.5%	6.8%	44.7%	47.6%	0.2%	

Table 6. GOM sum of total harvest (A + B1) from 2006 – 2007 in numbers of fish.

Wave	MAINE	NEW HAMPSHIRE	Mass GOM	GOM Total
2			0	0
3	0	9,052	6,271	15,323
4	0	12,428	26,458	38,886
5		807	6,378	7,185
6			0	0
<b>Total</b>	<b>0</b>	<b>22,287</b>	<b>39,106</b>	<b>61,393</b>

Table 7. GOM sum of total catch (A + B1 + B2) from 2006 – 2007 in numbers of fish.

WAVE	MAINE	NEW HAMPSHIRE	MASS GOM	GOM Total
2			1,285	1,285
3	1,154	14,064	36,191	51,409
4		20,923	64,615	85,538
5		1,837	13,547	15,384
6			0	0
<b>Total</b>	<b>1,154</b>	<b>36,824</b>	<b>115,637</b>	<b>153,615</b>

Table 8. GOM percent harvest (A + B1) from 2006 – 2007.

Wave	MAINE	NEW HAMPSHIRE	Mass GOM	GOM Total
2	0.0%	0.0%	0.0%	0.0%
3	0.0%	40.6%	16.0%	25.0%
4	0.0%	55.8%	67.7%	63.3%
5	0.0%	3.6%	16.3%	11.7%
6	0.0%	0.0%	0.0%	0.0%
<b>% of Total Landings</b>	<b>0.0%</b>	<b>36.3%</b>	<b>63.7%</b>	

Table 9. GOM percent catch (A + B1 + B2) from 2006 – 2007.

WAVE	MAINE	NEW HAMPSHIRE	MASS GOM	GOM Total
2	0.0%	0.0%	1.1%	0.8%
3	100.0%	38.2%	31.3%	33.5%
4	0.0%	56.8%	55.9%	55.7%
5	0.0%	5.0%	11.7%	10.0%
6	0.0%	0.0%	0.0%	0.0%
<b>Percent of</b>	<b>0.8%</b>	<b>24.0%</b>	<b>75.3%</b>	

total landings				
----------------	--	--	--	--

**Results**

Roughly two-thirds of harvest and catch in the SNE/MA area from 2006 - 2007 is from wave 2. About one-third of harvest and catch come from wave 3. New York and New Jersey account are the largest recreational catch and harvest for the SNE/MA stock each accounting for between 44 and 50% of catch and harvest (Table 4 and 5). The only other state that lands a significant amount in the recreational fishery is Connecticut who harvested 2.5% and caught 6.8% of the stock total from 2006 – 2007.

Between half and two-two thirds of the catch and harvest from 2006 & 2007 came from wave 4 in the GOM. The majority of this is from Massachusetts (63% harvest, 75% catch) with the rest from New Hampshire (36 % harvest, 24% catch).

**Discussion**

Winter Flounder Recreational Trip Analysis and Description of Recreational Harvest and Catch by  
Wave.

by

Steven J. Correia<sup>1</sup>, Christopher Vonderweidt<sup>2</sup>, and Scott Steinback<sup>3</sup>

March 27, 2009

1. Massachusetts Division of Marine Fisheries.
2. Atlantic States Marine Fisheries Commission
3. Northeast Fisheries Science Center

## **Introduction**

The Winter Flounder Management Board tasked the Technical Committee to explore recreational bag limit and seasonal reductions for inclusion in Draft Addendum I for Public Comment. Current recreational seasons are as follows. States were required to implement these measures on July 31, 2005 under Amendment 1 to the FMP.

### *Southern New England/Mid-Atlantic Stock*

States in the Southern New England/Mid-Atlantic stock area must implement a 12" minimum size limit and a 10-fish creel limit. Each state in the SNE/MA stock area may have a 60-day open season for recreational winter flounder fishing. In addition, 20 days must be closed to recreational winter flounder fishing during March and April. The 60-day open season can be split into no more than two blocks.

### *Gulf of Maine Stock*

States within the GOM stock must maintain the existing 12" minimum size and adopt an 8-fish creel limit. There are no required recreational closed seasons in the GOM stock area.

Current recreational state regulations are listed in Table 1.

**Table 1. Current state regulations for winter flounder.**

	<b>Stock Unit</b>	<b>Creel Limit</b>	<b>Size Limit</b>	<b>Season</b>
<b>Maine</b>	GOM	8	12"	N/A
<b>New Hampshire</b>	GOM	8	12"	N/A
<b>Massachusetts</b>	GOM	8	12"	N/A
	SNE/MA	4	12"	April 22 - May 22, and Sept. 23 - Oct. 22
<b>Rhode Island</b>	SNE/MA	4	12"	April 22 - May 22, and Sept. 23 - Oct. 22
<b>Connecticut</b>	SNE/MA	10	12"	April 1 - May 30
<b>New York</b>	SNE/MA	10	12"	April 1 - May 30
<b>New Jersey</b>	SNE/MA	10	12"	March 23 - May 21
<b>Delaware</b>	SNE/MA	10	12"	Feb. 11 - Apr. 10

## **Bag Limits**

The Winter Flounder Management Board tasked the Technical Committee to explore recreational bag limit reductions that would achieve a 25%, 50%, 75% and 100% reduction in harvest. Current recreational bag (creel) limits under Amendment 1 are 10 fish for the SNE/MA stock and 8 fish for the GOM stock. Massachusetts and Rhode Island have a 4-fish bag limit for the SNE/MA stock which is more restrictive than is required under Amendment 1 (Table 1).

Trip level recreational harvest of winter flounder from party charter, private recreational, and shore fishermen from 2001 – 2007 were retrieved from the MRFSS database. In Massachusetts, however, the recreational fishery harvest of winter flounder is from two stocks, so post-stratification is necessary to obtain estimates for stock areas at the ate-specific data. The post-stratification procedure used to allocate state-level winter flounder catch estimates to the appropriate stock areas is outlined in the MRFSS User's

Manual (1994) and the post-stratification was completed by Scott Steinback of the Northeast Fisheries Science Center.

States implemented restricted open seasons and a recreational 10 fish bag limit for the Southern New England stock and 8 fish for the GOM stock in July 2005. Therefore, we confine our analysis to data from 2006-2007.

For both stocks, data indicate that some trips landed more than the legal bag limit. Using these data would give overestimate the reduction achieved for a bag limit. Catch for trips landing greater than the legal limit were truncated to what would have been caught with compliance to legal bag limit. For example there were 255 trips that landed 12 fish or more in the GOM. These trips were multiplied by the highest legal bag limit and added to the harvest for that limit (8 fish \* 255 trips = 2040).

### Analysis

#### *Gulf of Maine (GOM)*

Given the small sample sizes, harvest data were pooled across modes and waves. A summary of harvest per trip for SNE/MA is shown in Tables 2 and 3.

**Table 2. GOM total harvest and percent landings per bag limit 2006 – 2007.**

Number of Fish Caught During Trip	# of Trips	Total Harvest (Numbers of Fish) 2006 - 2007	Cumulative Sum of Harvest	Cumulative % of Harvest	Adjusted Total Harvest	Adjusted Cumulative Sum of Harvest	Percent of Total Harvest at or Below Trip Limit	% Reduction Achieved at or Below Trip limit
1	12,018	12,018	12,018	11.9%	12,018	12,018	12.00%	62.1%
2	8,783	17,567	29,585	29.2%	17,567	29,585	29.50%	36.3%
3	3,757	11,271	40,856	40.3%	11,271	40,856	40.80%	19.2%
4	10,743	42,974	83,830	82.8%	42,974	83,830	83.60%	5.8%
5	417	2,086	85,916	84.8%	2,086	85,916	85.70%	3.2%
6	1,547	9,282	95,198	94.0%	9,282	95,198	95.00%	0.9%
7	430	3,007	98,205	97.0%	3,007	98,205	98.00%	0.3%
8	0	0	98,205	97.0%	2,038	100,243	100.00%	0.0%
9	0	0	98,205	97.0%	0	0		
10	0	0	98,205	97.0%	0	0		
11	0	0	98,205	97.0%	0	0		
12	255	3,057	101,262	100.0%	0	0		



**Table 3. Reductions for GOM stock achieved for different bag limits based on data from 2006 – 2007.**

<b>Number of fish caught during trip</b>	<b>% Reduction Achieved at or Below Trip limit</b>
1	62.14
2	36.27
3	19.17
4	5.81
5	3.16
6	0.94
7	0.25
8	0

***Southern New England/Mid-Atlantic (SNE/MA) Stock***

Given the small sample sizes, harvest data were pooled across modes and waves. A summary of harvest per trip for SNE/MA is shown in Tables 4 & 5.

**Table 4. SNE/MA total harvest and percent landings per bag limit 2006 – 2007.**

<b>Number of fish caught during trip</b>	<b># of Trips</b>	<b>Total Harvest (Number of Fish) 2006 - 2007</b>	<b>Cumulative Sum of Harvest</b>	<b>Cumulative % of Harvest</b>	<b>Adjusted Total Harvest</b>	<b>Adjusted Cumulative Sum of Harvest</b>	<b>Percent of Total Harvest at or Below Trip Limit</b>	<b>% Reduction Achieved at or Below Trip limit</b>
<b>1</b>	61,521	61,521	61,521	13.6%	61,521	61,521	14.8%	65.8%
<b>2</b>	24,491	48,982	110,504	24.4%	48,982	110,503	26.6%	46.4%
<b>3</b>	27,527	82,580	193,083	42.7%	82,580	193,083	46.5%	32.9%
<b>4</b>	5,839	23,358	216,441	47.8%	23,358	216,441	52.1%	26.0%
<b>5</b>	1,992	9,958	226,399	50.0%	9,958	226,399	54.5%	20.5%
<b>6</b>	0	0	226,399	50.0%	0	226,399	54.5%	15.5%
<b>7</b>	0	0	226,399	50.0%	0	226,399	54.5%	10.5%
<b>8</b>	9,312	74,497	300,896	66.5%	74,497	300,896	72.4%	5.5%
<b>9</b>	0	0	300,896	66.5%	0	300,896	72.4%	2.8%
<b>10</b>	8,363	83,627	384,524	85.0%	114,783	415,679	100.0%	0.0%
<b>11</b>	0	0	384,524	85.0%	0			
<b>12</b>	1,656	19,868	404,392	89.4%	0			
<b>14</b>	0	0	404,392	89.4%	0			
<b>15</b>	0	0	404,392	89.4%	0			
<b>16</b>	0	0	404,392	89.4%	0			
<b>18</b>	0	0	404,392	89.4%	0			
<b>19</b>	0	0	404,392	89.4%	0			
<b>21</b>	0	0	404,392	89.4%	0			
<b>28</b>	0	0	404,392	89.4%	0			
<b>29</b>	0	0	404,392	89.4%	0			
<b>33</b>	1,460	48,175	452,567	100.0%	0			

**Table 5. Reductions for SNE/MA stock achieved for different bag limits based on data from 2006 – 2007.**

<b>Number of fish caught during trip</b>	<b>% Reduction Achieved at or Below Trip limit</b>
1	65.80
2	46.40
3	32.89
4	26.01
5	20.53
6	15.53
7	10.52
8	5.52
9	2.76
10	0.00

**Recommendations**

*GOM*

To achieve the reductions specified by the Board for the GOM stock, bag limits would need to be set as follows. These reductions are based on 2006 – 2007 data.

**25% reduction – 2 or 3 fish bag limit (36.3% or 19.2 %reduction)**

**50% reduction – 1 or 2 fish bag limit (62.1% or 36.27% reduction)**

**75% reduction – 1 fish bag limit (62.1% reduction)**

*SNE/MA*

To achieve the reductions specified by the Board for the SNE/MA stock, bag limits would need to be set as follows. These reductions are based on 2006 – 2007 data.

**25% reduction – 4 fish bag limit (26.0 % reduction)**

**50% reduction – 2 fish bag limit (46.40% reduction)**

**75% reduction – 1 fish bag limit (65.8% reduction)**

**Discussion**

The estimated reductions in catch associated with the bag limits are contingent on several factors: accuracy/precision of the recreational catch frequency (not addressed here), compliance with the bag limit, and how behavior of fishermen is altered by the bag limit for this species and regulatory changes for other species. The analysis assumes status quo effort. For example, low bag limits may discourage highly successful fishermen from targeting winter flounder, although success rates are already fairly low (e.g., 90% of GOM trips caught 5 fish or less).

## **Recreational Seasons**

The Winter Flounder Management Board tasked the Technical Committee to explore recreational season reductions that would achieve a 25%, 50%, 75% and 100% reduction in harvest. Current recreational seasons under Amendment 1 are a 60-day open season for recreational winter flounder fishing in the SNE/MA area. Twenty days must be closed to recreational winter flounder fishing during March and April and the 60-day open season can be split into no more than two blocks. There are no recreational seasons in the GOM.

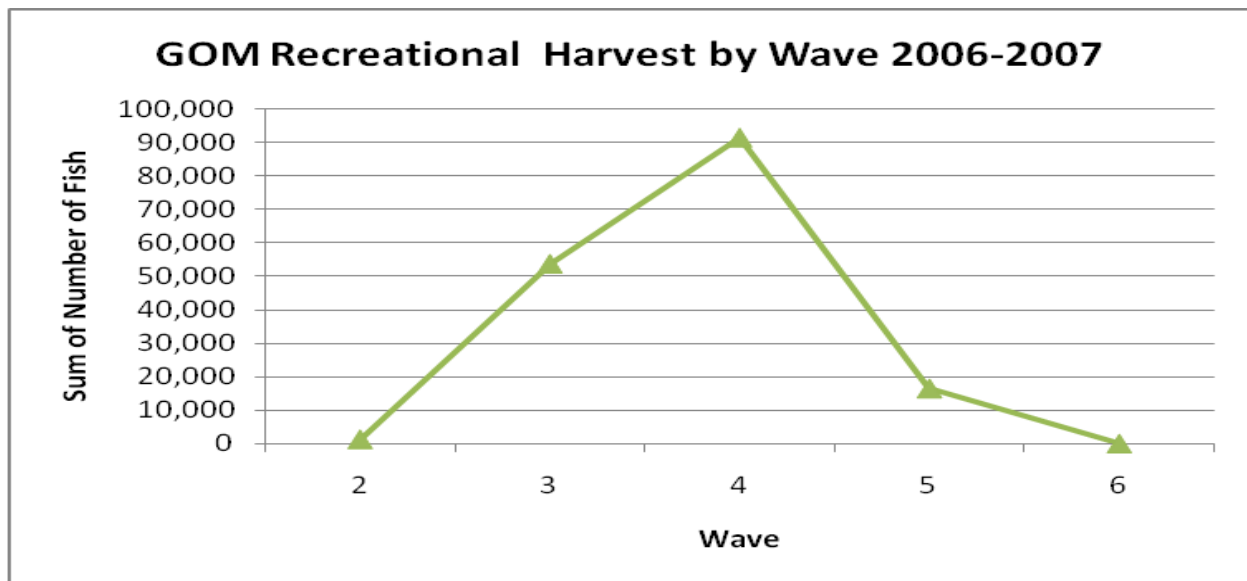
States implemented the SNE/MA season in July 2005. Therefore, we confine our analysis to data from 2006-2007.

MRFSS landings by wave from 2006 and 2007 were totaled for each state and stock unit (Table 7, 8, 9, and 10). Only data from 2006 – 2007 was used for the analysis because recreational seasons were significantly reduced under Amendment 1. Harvest is  $A + B1 + B2$  where a 15% discard mortality rate is applied to the B2 catch. Percent landings in each wave are based on the sum of harvest from 2006 – 2007 (Table 6, 7, 8, and 9).

## **Results**

### ***Gulf of Maine***

Between half and two-two thirds of the harvest from 2006 & 2007 came from wave 4 in the GOM (Figure 1). The majority of this is from Massachusetts (67%) with the rest from New Hampshire (36 % harvest, 24% catch) (Table 6).



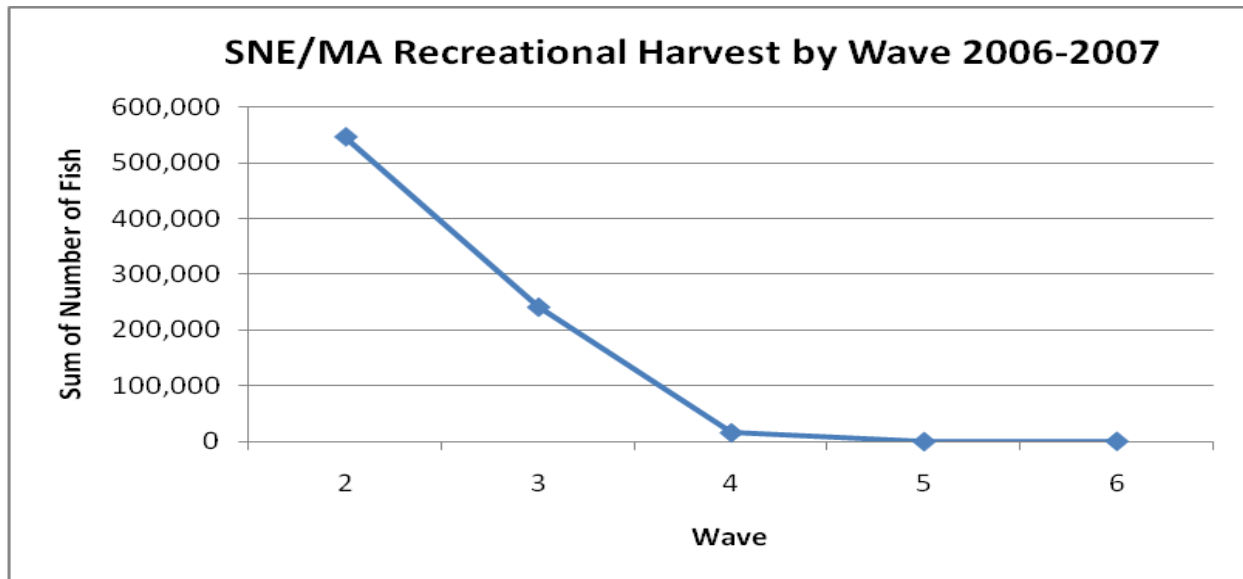
**Figure 1. Gulf of Maine recreational landings by wave 2006 – 2007. Applies a 15% discard mortality rate to B2 fish.**

**Table 6. GOM sum of total harvest (A + B1 + B2) from 2006 – 2007 in numbers of fish and percent of catch. Applies a 15% discard mortality rate to B2 fish.**

WAVE	MAINE		NEW HAMPSHIRE		MASS GOM		GOM Total	
	Harvest	%	Harvest	%	Harvest	%	Harvest	%
2	0	0.0%	0	0.0%	193	0.4%	193	0.3%
3	173	100.0%	9,804	40.1%	10,759	21.3%	20,736	27.6%
4	0	0.0%	13,702	56.0%	32,181	63.6%	45,883	61.0%
5	0	0.0%	962	3.9%	7,453	14.7%	8,415	11.2%
6	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total Harvest or % of Stock Catch	173	0%	24,468	32.5%	50,586	67.2%	75,227	

*Southern New England / Mid-Atlantic*

Roughly two-thirds of harvest in the SNE/MA area from 2006 - 2007 is from wave 2 (Figure 2). About one-third of the harvest is caught during wave 3. New York and New Jersey account for the largest recreational harvest for the SNE/MA stock each accounting for between 46 and 49% of harvest (Table 9). The only other state that lands a significant amount in the recreational fishery is Connecticut who harvested 3.5% of the stock total from 2006 – 2007.



**Figure 1. SNE/MA recreational landings by wave 2006 – 2007. Applies a 15% discard mortality rate to B2 fish.**

**Table 9. SNE/MA sum of total harvest (A + B1 + B2) from 2006 – 2007 in numbers of fish and percent of catch. Applies a 15% discard mortality rate to B2 fish.**

WAVE	MASS SNE/MA		RHODE ISLAND		CONNECTICUT		NEW YORK		NEW JERSEY		DELAWARE		SNE/MA Total	
	Harvest	%	Harvest	%	Harvest	%	Harvest	%	Harvest	%	Harvest	%	Harvest	%
2	0	0.0%	0	0.0%	3,792	21.5%	84,425	35.8%	248,871	98.1%	0	0.0%	337,088	66.0%
3	794	100.0%	872	55.9%	13,159	74.5%	151,609	64.2%	3,387	1.3%	0	0.0%	169,821	33.3%
4	0	0.0%	87	5.6%	723	4.1%	0	0.0%	1,535	0.6%	660	79.6%	3,005	0.6%
5	0	0.0%	561	36.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	561	0.1%
6	0	0.0%	38	2.5%	0	0.0%	0	0.0%	0	0.0%	170	20.4%	208	0.0%
Total Harvest or % of Stock Catch	794	0.2%	1,558	0.3%	17,675	3.5%	236,034	46.2%	253,793	49.7%	830	0.2%	510,683	

### **Recommendation and Discussion**

The Technical Committee recommends states specific reductions to the winter flounder seasons. Since states have unique seasons that often cross waves, the technical committee recommends reducing the number of days in the wave, beginning with the wave with the highest harvest. Estimated reductions are based on wave specific mean catch per day.

States must calculate recreational season reductions by estimate the mean catch per day for each wave by dividing total percent harvest for a wave by the number of days that the states season is open during that wave. In addition, states must reduce days in the wave with the largest harvest followed by the wave with the second largest harvest, etc, to achieve the necessary reductions.

Mean catch per day = harvest in wave/number of days open in that wave

Catch reduction = number of days removed from wave \* mean catch per day

## C. GULF OF MAINE (GOM) WINTER FLOUNDER ASSESSMENT SUMMARY FOR 2011

### State of Stock:

The assessment of GOM winter flounder stock is based on an empirical swept-area model utilizing data from the 2010 NEFSC fall survey, the MADMF fall survey, and the Maine-New Hampshire fall inshore survey. Using a survey trawl efficiency value of 0.6 the estimated stock biomass in 2010 of fish greater than 30 cm was 6,341 mt (80% CI 4,230 - 8,800 mt). The overfished status remains unknown because a biomass reference point or proxy could not be determined and an analytical assessment model was not accepted.

In 2010 overfishing was not occurring for the stock (Figure C1). A proxy BRP value of the overfishing threshold was derived from a length-based yield per recruit analysis that assumes all fish above 30 cm are fully recruited to the fishery and that natural mortality is 0.3. Using  $F_{40\%}$  (0.31) as a proxy for  $F_{MSY}$ , the corresponding threshold exploitation rate is 0.23. The overfishing status is based on the ratio of 2010 catch (195 mt) to survey based swept area estimate of biomass for winter flounder exceeding 30 cm in length (6,341 mt). Exploitation rate in 2010 was estimated at 0.03 (80% CI 0.02 - 0.05), which is less than the threshold exploitation rate (0.23). The conclusion that overfishing was not occurring in 2010 is robust to the range of uncertainty in the biomass estimate (Figures C7 and C8).

The biomass estimate for 2010 is 16% lower than that for 2009 using the same survey methods but this difference is not statistically significant (Figures C3 and C5).

The most recent biological reference points for this stock were  $F_{MSY}=0.43$  and  $B_{MSY}=4,100$  mt; these estimates came from the assessment at SARC 36 in 2003. It is not appropriate to compare the 2010 exploitation rate and stock size estimates to those earlier BRP values which should no longer be used.

**Projections:** Projections were not possible.

**Catch:** Commercial landings were near 1,000 mt from 1964 to the mid 1970s. Thereafter commercial landings increased to a peaked of 2,793 mt in 1982, and then steadily declined to 350 metric tons (mt) in 1999 (Figure C2). Landings have been near 650 mt from 2000 to 2004 and about 300 mt from 2005 to 2009. Landings have declined to a record low of 140 mt in 2010. Recreational landings reached a peak in 1981 with 2,554 mt but declined substantially thereafter. Recreational landings have generally been less than 100 mt since 1994, with exception of 2008 where the landings were estimated at 103 mt. A discard mortality of 15% was assumed for recreational discards. Discards were estimated for the large mesh trawl (1982-2010), gillnet (1986-2010), and northern shrimp fishery (1982-2010). A discard mortality of 50% was assumed for commercial fishery. In general the total discards are a small percentage (time series average 11%) of the total catch (Figure C2). There has been a substantial decline in the total catch compared to the early 1980s (recent catch is roughly 5% of the 1980s catch).



## Catch Table (weights in 000s mt.): GOM Winter Flounder

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Max <sup>1</sup>	Min <sup>1</sup>	Mean <sup>1</sup>
Commercial landings	0.7	0.7	0.8	0.6	0.3	0.2	0.3	0.3	0.3	0.1	2.8	0.1	0.9
Commercial discards	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.4	<0.1	0.1
Recreational landings	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.1	<0.1	3.0	<0.1	0.5
Recreational discards	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Catch used in assessment	0.8	0.7	0.8	0.7	0.4	0.2	0.3	0.4	0.4	0.2	6.2	0.2	1.3

1: Over the period 1982-2010

**Stock Distribution and Identification:** Winter flounder (*Pseudopleuronectes americanus*) is a demersal flatfish species commonly found in North Atlantic estuaries and on the continental shelf. The species is distributed between the Gulf of St. Lawrence, Canada and North Carolina, U.S., although it is not abundant south of Delaware Bay. Gulf of Maine winter flounder undergo annual migrations from estuaries and near shore areas, where spawning occurs in the late winter and early spring, to offshore shelf areas of less than 60 fathoms (110 meters). The current Gulf of Maine stock extends from the coastal shelf east of Provincetown, MA northward to the Bay of Fundy, including NEFSC statistical areas 511-515.

**Data and Assessment:** GOM winter flounder models developed in ADAPT VPA, SCALE, and ASAP (NFT 2011) were too unreliable for stock status determination. The population models have difficulty with the conflicting data trends within the assessment, specifically the large decrease in the catch over the time series with very little change in the indices or age structure in both the catch and surveys. A new value for natural mortality has been adopted, changing from  $M = 0.20$  to  $M = 0.30$  which was used in the estimation of the  $F_{40\%}$  reference point. A combined survey 30+ cm biomass area swept estimate using the NEFSC, MADMF and the Maine-New Hampshire surveys was used to estimate biomass. The fall surveys were selected over the spring surveys because some portion of the stock is located within estuaries, which are not surveyed during the spring.

Uncertainty in the individual estimates of survey abundance and swept area trawl footprints were characterized empirically and used to construct an overall estimate of uncertainty in the aggregate biomass estimate. The efficiency value of 0.6 was supported by comparison of VPA estimates of efficiency for the Georges Bank winter flounder while making the assumption that the same fraction of each stock is available to the respective surveys. The NEFSC fall survey (expressed in Albatross equivalents) had an efficiency estimate of 0.3. Calibration experiments between the FSV Bigelow and the R/V Albatross revealed a biomass conversion coefficient of  $\sim 2$ . Thus an efficiency estimate for the Bigelow survey estimate in 2010 of 0.6 was supported. An analysis of catch rates in overlapping areas by the NEFSC and MADMF surveys demonstrated similar catchabilities for winter flounder by the two surveys. Sensitivity analyses were conducted with efficiencies of 0.8 and 1.0. The sampling distributions of biomass and fishing mortality are approximated by integrating over the factors which constitute the primary sources of uncertainty. These factors include the sampling variability in the NEFSC, MADMF and the Maine-New Hampshire spring and fall bottom surveys for 2009 and 2010. The second major source of variability for the survey estimates is the variation in the size of the area swept by an average tow.

**Biological Reference Points (BRP):** Biological reference points for stock biomass are unknown.

A proxy value of the overfishing threshold was derived for the 2011 assessment from a length-based yield per recruit (NFT 2011) analysis that assumes all fish above 30 cm are fully recruited to the fishery and that natural mortality is 0.3 (Figure C4). Von Bertalanffy parameters were estimated from the spring and fall NEFSC survey age data ( $n = 2,035$ ) from 2006 to 2010. Maturity at length information is estimated from the spring MDMF survey ( $L_{50}=29\text{cm}$ ). The reference points were converted to exploitation rates to be consistent with the swept area biomass approach. Using  $F_{40\%}$  (0.31) as a proxy for  $F_{MSY}$ , the corresponding threshold exploitation rate is 0.23. This serves as a proxy for the overfishing threshold (Figure C1). Current practice is to set catch advice based on 75%  $F_{MSY}$ . 75% of the estimated  $F_{40\%}$  exploitation rate is 0.17. The previous estimates of  $F_{MSY}$  (from SARC 36 in 2003) used an  $M$  of 0.2 and observed average weights at age.

MSY could not be estimated.

**Fishing Mortality:** Exploitation rate in 2010 was estimated at 0.03 (80% CI 0.02 - 0.05) using the 2010 ratio of catch (195 mt) to the 30+ area swept biomass (6,341 mt; 80% CI 4,230 - 8,800 mt) from the fall surveys (Figure C6). An assumed efficiency of 60% was used to construct this estimate from the NEFSC fall survey, the MADMF fall survey, and the Maine-New Hampshire fall inshore survey.

**Recruitment:** Recruitment is unknown.

**Spawning Stock Biomass:** Spawning stock biomass is unknown.

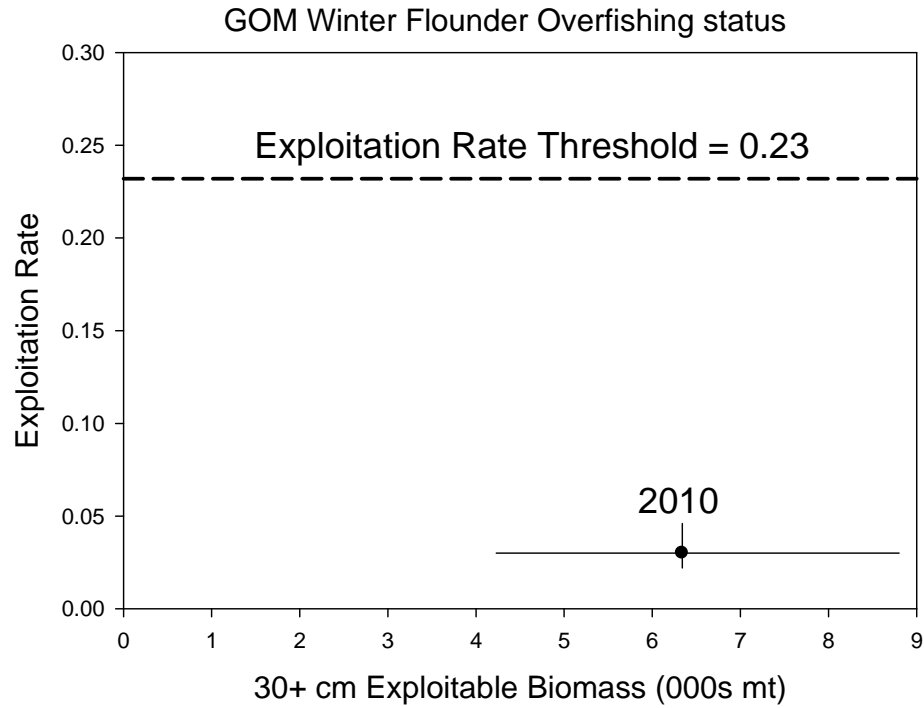
**Special Comments:** There is considerable uncertainty with the GOM winter flounder assessment. There was a major effort to develop an ASAP assessment model for GOM winter flounder; however, no version of the model was satisfactory. The attempted analytical models had difficulty estimating population scale due to the conflicting data trends within the assessment, specifically the large decrease in the catch over the time series with very little change in the indices or age structure in both the catch and surveys. The scaling of the population estimates was sensitive to the weighting imposed on the catch at age compositions. The ASAP model did allow errors in the fit to the catch at age and improved fit to the survey indices without the split in survey catchability (See GARM III). However this resulted in a lack of fit to the plus group in the catch at age composition. The stock assessment report will summarize the ASAP model application, but its results are not used for the determination of stock status.

An analytic assessment was not accepted in GARM III (NEFSC 2008) resulting in the status of the stock being unknown in 2008.

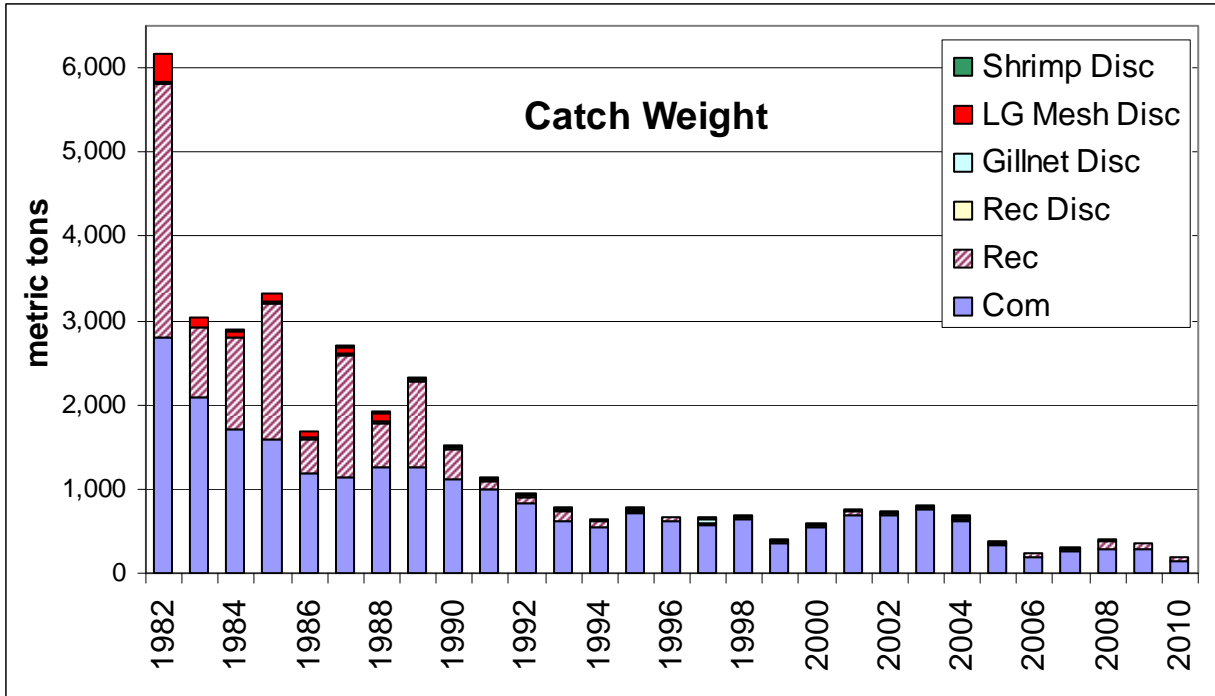
**References:**

NEFSC. 2008. Assessment of 19 Northeast groundfish stocks through 2007. Report of the 3<sup>rd</sup> Groundfish Assessment Review Meeting (GARM III), Northeast Fisheries Science Center, Woods Hole, Massachusetts. Aug. 4-8, 2008. NEFSC Ref Doc. 08-15. 884 p.

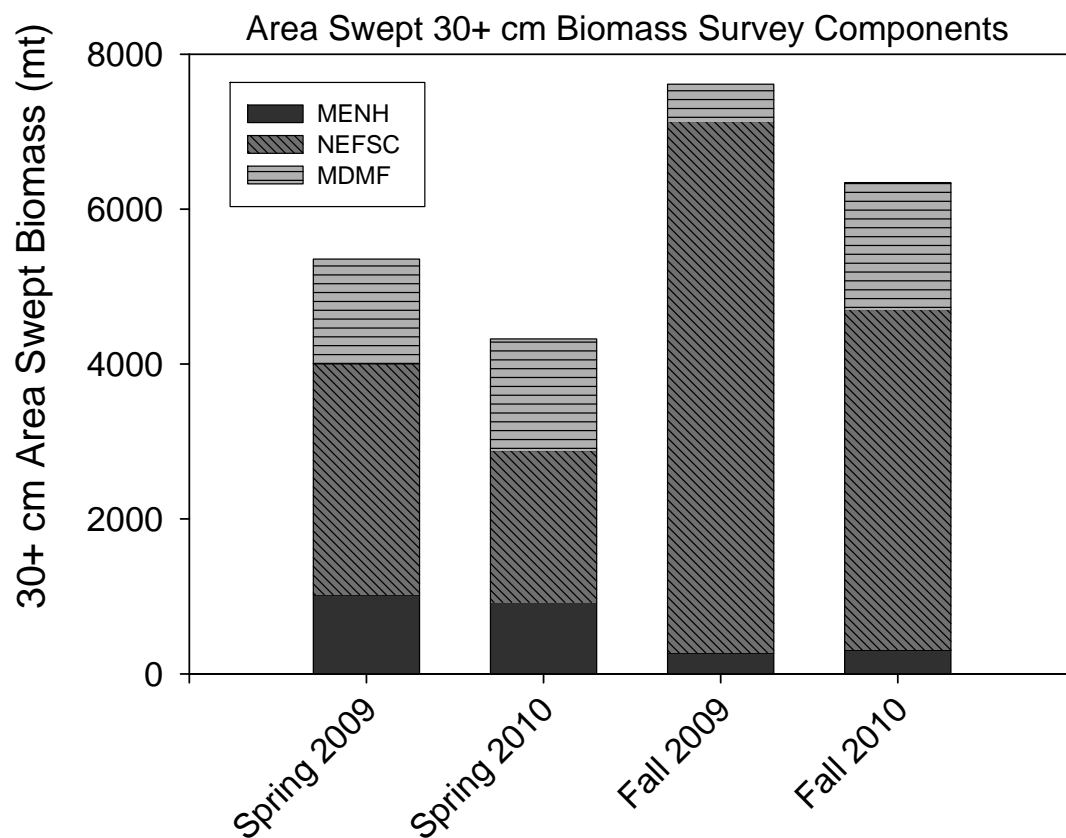
NOAA Fisheries Toolbox (NFT) 2011. [Internet address: <http://nft.nefsc.noaa.gov/>].



**C1.** Stock status for GOM winter flounder in 2010 with respect to a proxy for  $F_{MSY}$ . 80% confidence intervals are shown for biomass and exploitation rate.  $F_{40\%} = 0.31$ , which corresponds to an exploitation rate of 0.23.



C2. GOM winter flounder composition of the catch by weight in metric tons from 1982 to 2010.

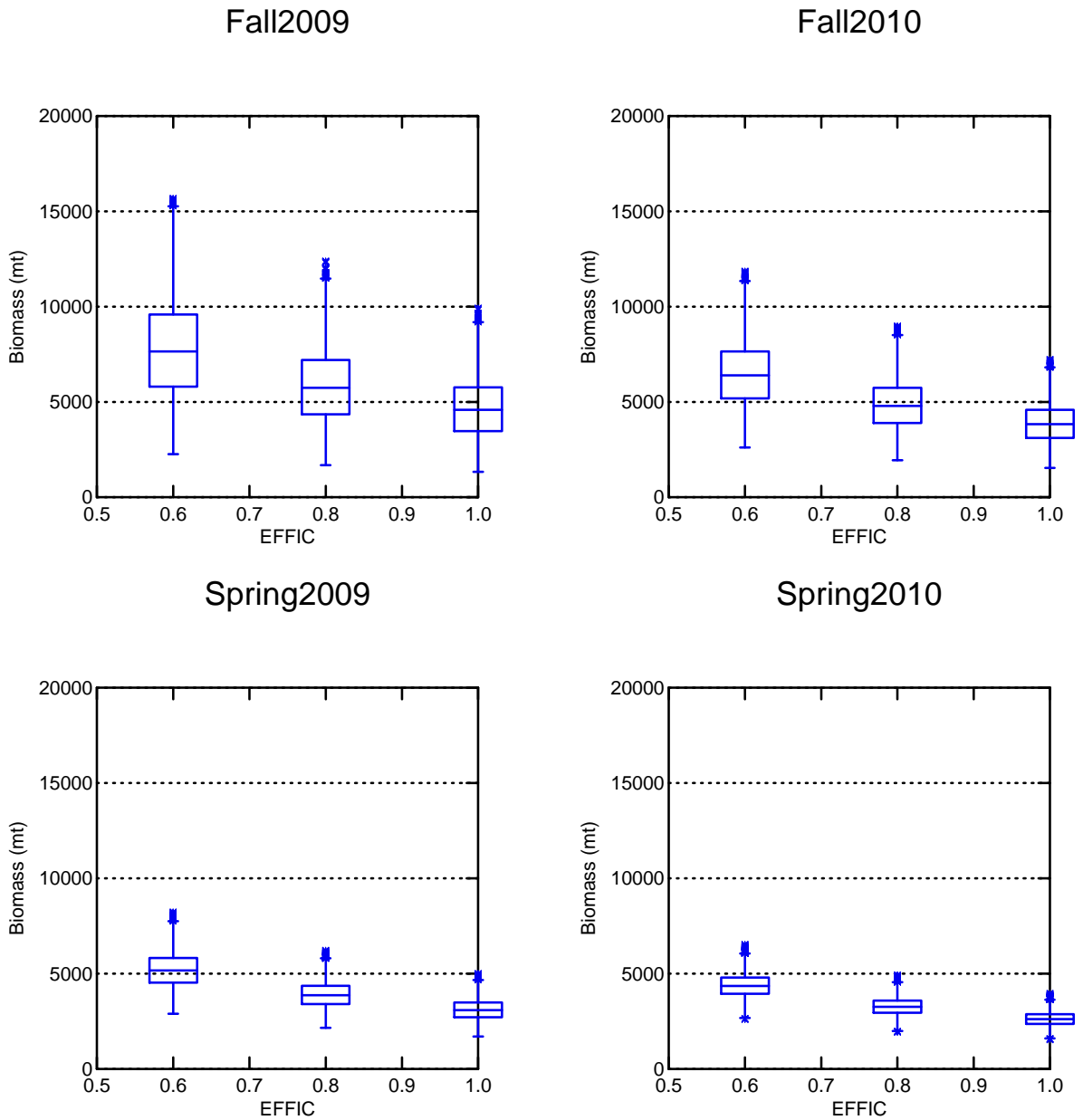


**C3.** 30+ cm area swept biomass estimates for the spring and fall surveys from 2009 to 2010 assuming efficiency is 0.6. The NEFSC survey used a TOGA tow criteria of 132x.



**C4.** Length-based yield per recruit analysis using von Bertalanffy parameters estimated from the spring and fall 2006-2010 NEFSC surveys, maturity at length from the MDMF survey and assuming a natural mortality of 0.3.  $F_{40\%}$  was estimated at 0.31. The SSB/R line (red) decreases as  $F$  increases.

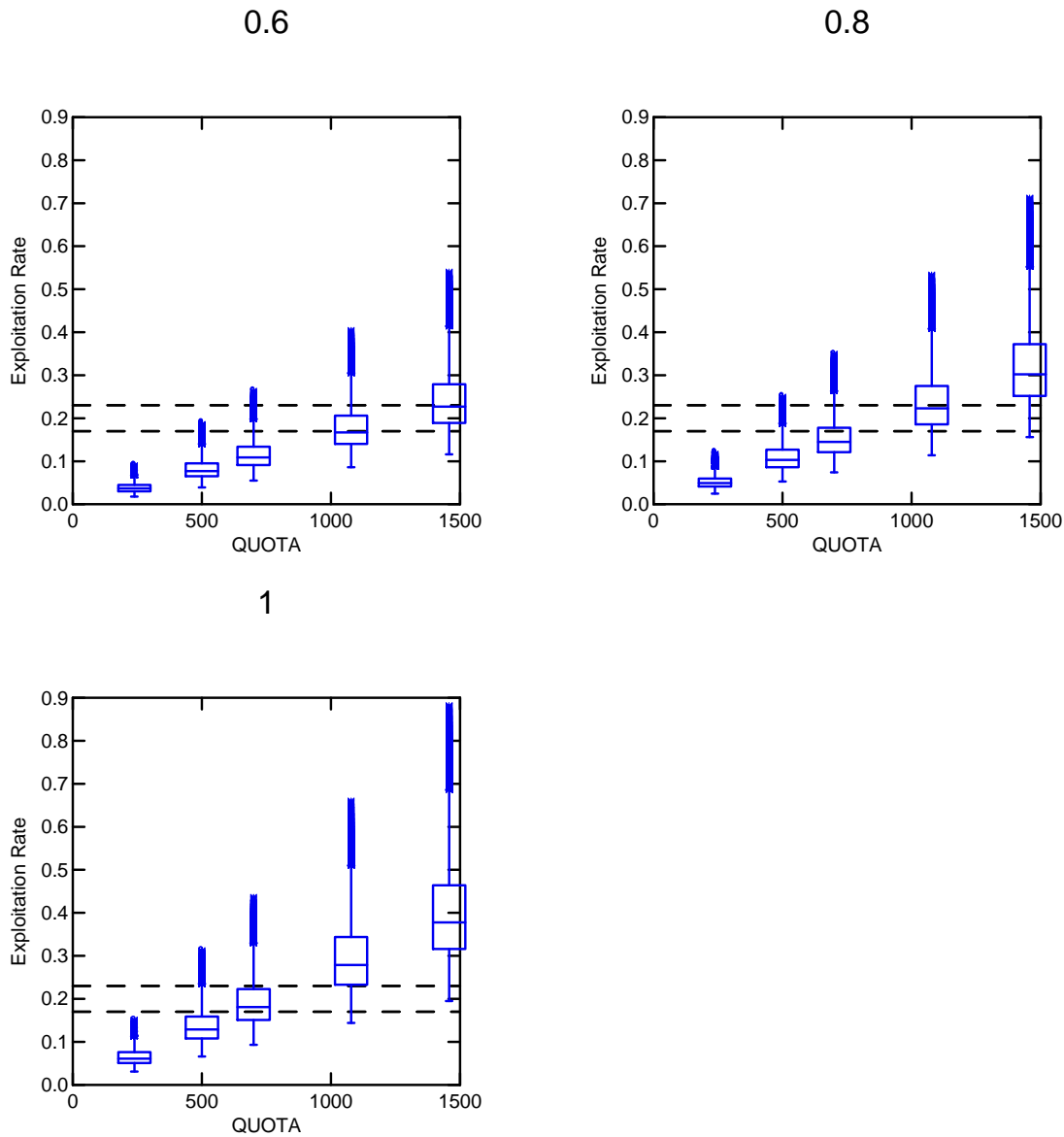
## B Estimates vs Assumed Efficiency



**C5.** Sensitivity of swept area 30+ cm biomass estimates for Gulf of Maine winter flounder for varying seasons and years under three alternative assumed values of trawl efficiency for all three surveys.

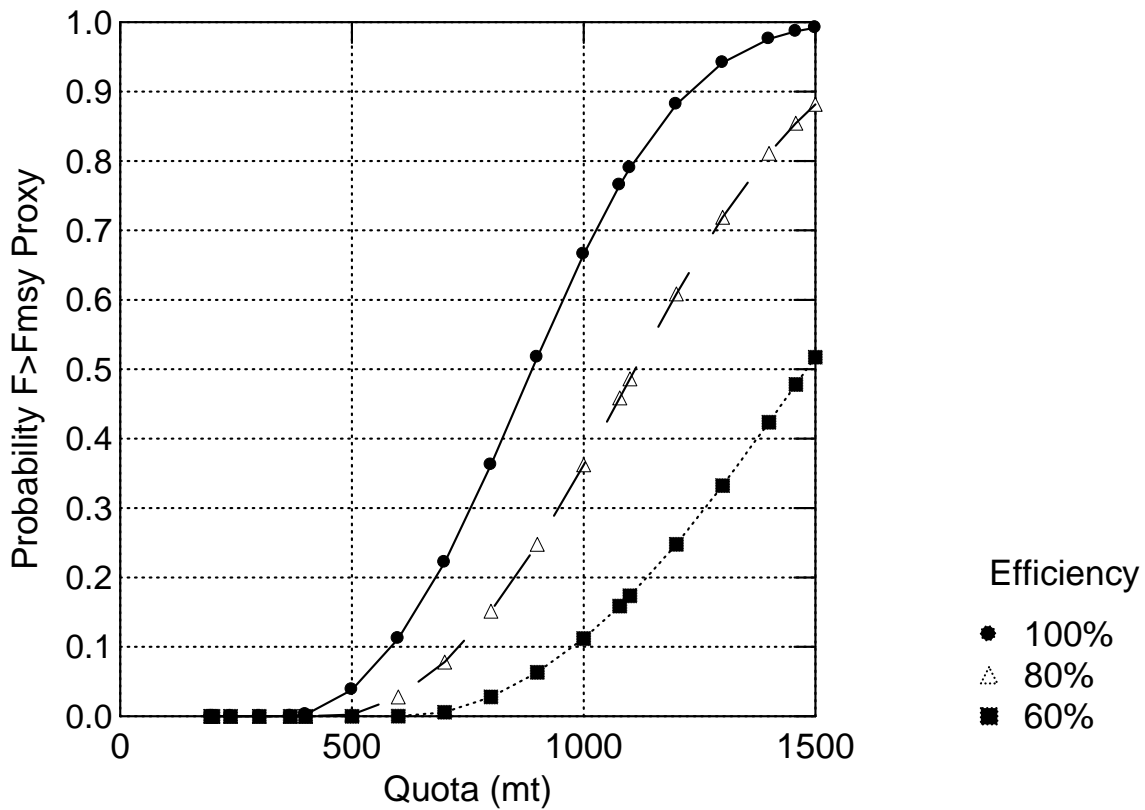


# Exploitation Estimates: Fall 2010



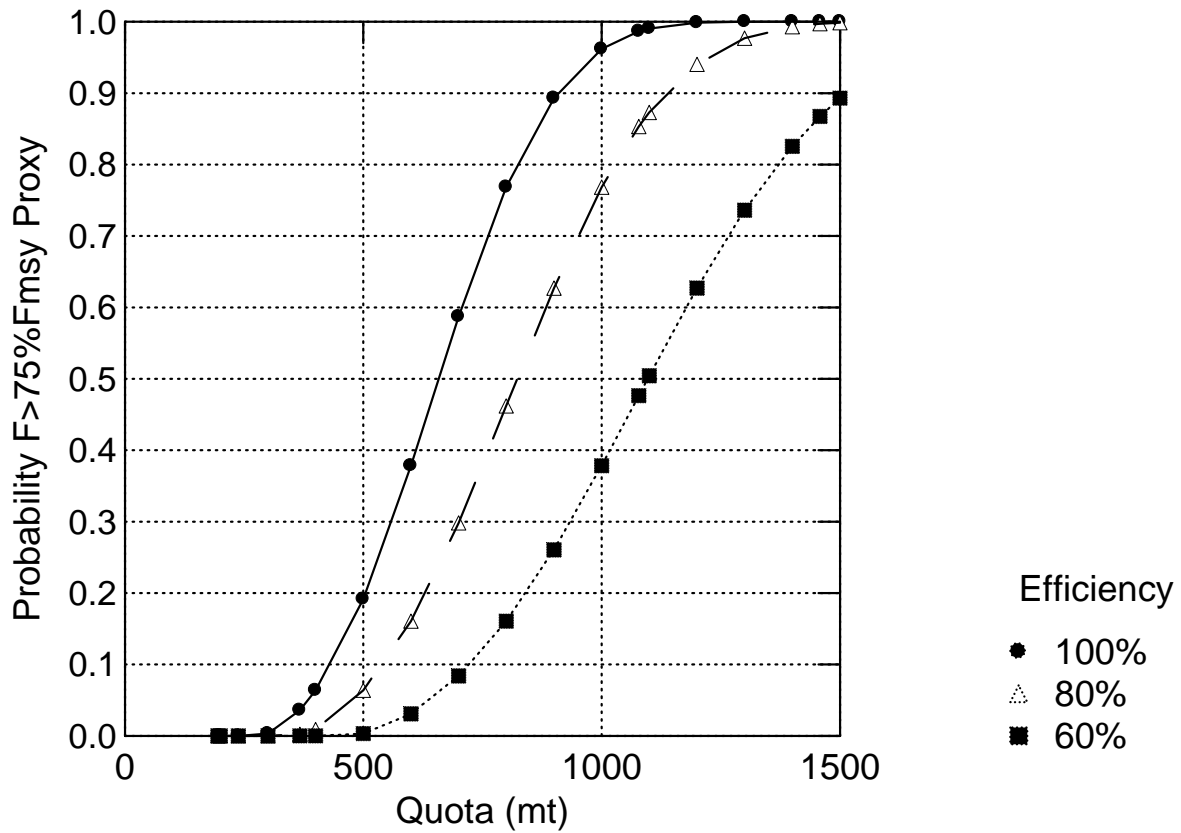
**C6.** Estimated exploitation rates for Gulf of Maine winter flounder for Fall 2010 based on three assumed gear efficiencies (0.6, 0.8, and 1.0) and 5 levels of catch (the 2010 catch of 195 mt, an assumed quota of 500 mt, assumed quota of 700 mt, 75% OFL of 1,078 mt and the OFL of 1,458 mt based on  $F_{40\%}$ ). Dashed lines represent length-based exploitation rate estimates of  $F_{40\%}$  (0.23) and 75% of  $F_{40\%}$  (0.17). SSB per recruit is derived using GOM winter flounder growth and maturation relationships and an assumed knife edge selection curve at 30 cm.

## Probability of Exceeding Fmsy Proxy=0.23



**C7.** Estimated probability of exceeding  $F_{MSY}$  proxy ( $F_{40\%}$ ), expressed as an exploitation rate of 0.23, and assuming efficiencies of 60%, 80% and 100% based of the fall 2010 survey across a range of quotas.

## Probability of Exceeding 75% Fmsy Proxy=0.17



**C8.** Estimated probability of exceeding 75% of  $F_{MSY}$  proxy ( $F_{40\%}$ ), expressed as an exploitation rate of 0.17, and assuming efficiencies of 60%, 80% and 100% based of the fall 2010 survey across a range of quotas.

# Atlantic States Marine Fisheries Commission

## Winter Flounder Technical Committee

### REVIEW OF SARC 52 AND RECOMMENDATIONS TO THE MANAGEMENT BOARD

October 2011

Present: Steve Correia (MA DMF), Paul Nitschke (NMFS), Linda Barry (NJ DEP), Sally Sherman (ME DMR), Kevin Sullivan (NH F&G), John M Maniscalco (NY DEC), John Lake (RI DEM), Penny Howell (CT DEP), and Chris Vonderweidt (ASMFC Staff).

The Winter Flounder Technical Committee (TC) met to review the SARC 52 Winter Flounder Assessment Results and make management recommendations to the Winter Flounder Management Board (Board). The meeting began with a review of current ASMFC and NEFMC regulations followed by an overview and discussion of the SARC 52 results and review of future NEFMC groundfish actions that may impact winter flounder. The TC developed the following recommendations during the meeting.

#### 1. Proposed specification of OFL and ABC for fishing years 2012-2014

Steven Correia presented a summary of current groundfish management measures that apply to winter flounder and several proposed measures that are part of Framework 47. This includes specification of Overfishing Level (OFL), Acceptable Biological Catch (ABC) and Annual Catch Limits (ACL) for winter flounder for fishing years 2012-2014

Table 1. Estimates of OFL and ABC in metric tons for fishing year 2010-2011 and Framework 47's proposed OFL and ABC for 2012 through 2014. Blue font indicates that OFL and ABC are proposed for fishing year 2012-2013.

Fishing year	SNE-MA		Fishing year	GOM	
	OFL mt	ABC mt		OFL mt	ABC mt
2010	1,568	644	2010	441	238
2011	2,117	897	2011	441	238
2012	2,336	626	2012	1,458	1,078
2013	2,637	697	2013	1,458	1,078
2014	3,471	912	2014	1,458	1,078

The proposed ABC's were recommended by the New England Fishery Management Council's Scientific and Statistical Committee. The OFL for SNE-MA winter flounder is based on a projection under the average observed F in 2009 and 2010 under no possession limit in the EEZ. The stock can not rebuild by 2014, so the management objective is to keep F as low as possible.

The Technical Committee is concerned about the large increase in the GOM winter flounder ABC given that the assessment is based on area-swept survey indices, ABC is conditional on the estimate of catchability and the spatial distribution of the stock is truncated relative to its former distribution.

**TC Recommendation 1. The Technical Committee recommends that GOM winter flounder catch should not be allowed to increase 452% from 2011 to 2012.**

The TC notes that the proposed ABC for GOM winter flounder is a large increase from ABC in 2010-2011 ABC. The technical committee has concerns about the large increase in ABC for Gulf of Maine stock given the large uncertainty in stock status, the quality of indexed assessments in general and the high influence on the poorly known catchability. The TC also notes that the spatial distribution is truncated relative to the distribution in the earlier portion of the assessment period. Given the uncertainties in this assessment, the TC recommends that the NEFMC take these uncertainties into account when setting the ABC or ACL.

**2. Proposed revisions to status determination criteria**

Framework 47 proposes a revision to status determination criteria for SNE/MA winter flounder and GOM winter flounder. The basis of status determination criteria (reference points) are shown in Table 2 and numerical estimates are shown in Table 3. The GOM winter flounder assessment is area swept survey indices and does not provide an estimate of Biomass target ( $SSB_{msy}$ ).

**TC recommendation 2. The TC recommends that the board adopt these reference points as they have been technically reviewed and will be adopted by the NEFMC in managing groundfish.**

A large portion of the catch is caught in the EEZ and is managed by the New England Fishery Management Council. Their management is based on achieving rebuilding targets and preventing overfishing from occurring based on the proposed status determination criteria. This is consistent with previous Technical Committee recommendations.

**Table 2. Status determination criteria for winter flounder stocks**

Stock	Biomass Target (SSB <sub>msy</sub> or proxy)	Minimum Biomass threshold	Maximum Fishing mortality threshold (F <sub>msy</sub> or proxy)
GOM winter flounder	Undefined	Undefined	F40% MSP
SNE-MA winter flounder	SSB <sub>msy</sub>	½ SSB <sub>msy</sub>	F <sub>msy</sub>

**Table 3. Numerical estimates of status determination criteria.**

Stock	Model	Biomass Target (SSB <sub>msy</sub> or proxy)	Minimum Biomass threshold	Maximum Fishing mortality threshold (F <sub>msy</sub> or proxy)	MSY
GOM winter flounder	Swept area biomass	Undefined	Undefined	0.31	Undefined
SNE-MA winter flounder	ASAP/SCAA	43,661 mt	21,830 mt	0.29	11,728 mt

### 3. Proposed management changes to SNE-MA winter flounder

Framework 47 has an option to allow limited landings of SNE-MA winter flounder and allocate ACL. ACL would be allocated to sectors and would create a sub-ACL for common pool vessels. Exceeding ACL would trigger Accountability Measures (AM). Recreational vessels would not be allowed to land SNE/MA winter flounder.

This measure would allow industry to modify behavior to control catches and would provide sampling information on the catch composition of the stock. The measure is not likely to increase targeting of the stock since the ACL is low.

NMFS is currently evaluating the catch relative to ACL and sub components. The state waters sub-components include landings from non-federally permitted vessels and recreational catch (landings and discards).

#### **4.0 Assessment update**

Benchmark assessments for all three winter flounder stocks were completed by the Southern Demersal Working Group in April and May and were reviewed at SARC 52 in June of 2011. The assumed natural mortality was changed from 0.2 to 0.3 based on a re-examination of the age data, past tagging studies, and the literature. Length based conversion for the new NEFSC research vessel and gear were developed by stock. The Southern New England/Mid Atlantic (SNE/MA) NEFSC indices were re-estimated using a consistent strata set since the new research vessel is no longer able to sample the shallowest strata.

##### **Southern New England/ Mid-Atlantic stock**

SNE/MA winter flounder is now assessed using a non-split forward projecting ASAP model. Dome shape fishery selectivity is also estimated within the SNE/MA ASAP model. Retrospective error in spawning stock biomass ranged from +42% in 2004 to +12% in 2009 and fishing mortality ranged from -38% in 2006 to -13% in 2009. Biological reference points were changed from maximum spawning potential based reference point in the GARM 3 assessment to stock- recruit based estimates. Stock recruit biological reference points were estimated by fixing steepness ( $h=0.61$ ). This was judged to be the best fit while providing feasible results. Fishing mortality in 2010 was estimated to be 0.051, below  $F_{MSY} = 0.290$  (18% of  $F_{MSY}$ ). Spawning stock biomass in 2010 was estimated to be 7,076 mt, about 16% of  $SSB_{MSY} = 43,661$  mt. The SNE/MA winter flounder complex was considered to be overfished but overfishing was not occurring in 2010.

##### **Gulf of Maine winter flounder**

An analytical model was not accepted for the Gulf of Maine (GOM) stock. As in GARM 3, the GOM assessment suffers from conflicting signals within the data. The decline in the catch over the time series did not seem to produce a response in the survey indices or a change in the age structure. The survey indices are relatively flat and the catch at age does not show an expansion in the age structure with declining catch. The accepted assessment of GOM winter flounder stock is based on an empirical 30+ cm area-swept calculation utilizing data from non overlapping strata in the 2010 NEFSC fall survey, the MADMF fall survey, and the Maine-New Hampshire fall surveys combined. Assuming an efficiency of 0.6 the estimated stock biomass in 2010 of fish greater than 30 cm was 6,341 mt (80% CI 4,230 - 8,800 mt). Exploitation rate in 2010 was estimated at 0.03 (80% CI 0.02 - 0.05) based on the ratio of 2010 catch (195 mt) to survey based swept area estimate of biomass for winter flounder exceeding 30 cm in length (6,341 mt). Using  $F_{40\%}$  (0.31) as a proxy for  $F_{msy}$ , the threshold exploitation rate is 0.23 and 75%  $F_{40\%}$  exploitation was 0.17 with  $M=0.3$  derived from a length-based yield per recruit analysis. The overfished status remains unknown since an analytical model was not accepted and a biomass reference point could not be estimated. The SARC concluded that overfishing was not occurring for this stock in 2010.



**Paul J. Diodati**  
Director

# Commonwealth of Massachusetts

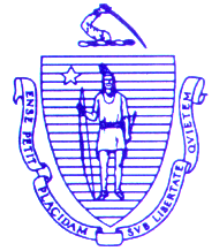
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Secretary

**Mary B. Griffin**  
Commissioner

### MEMORANDUM

TO: David Simpson, Chair, ASMFC Winter Flounder Management Board

FROM: David Pierce, Deputy Director

CC: Bob Beal, Acting Executive Director, ASMFC

DATE: July 3, 2012

SUBJECT: Request to Consider Initiating a Draft Addendum to the Interstate Fishery Management Plan for Inshore Stocks of Winter Flounder

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#### Overview

The Massachusetts Division of Marine Fisheries (*Marine Fisheries*) proposes that the Atlantic States Marine Fisheries Commission (ASMFC) Winter Flounder Management Board (Board) consider initiating a draft addendum to Amendment 1 to the Interstate Fishery Management Plan for Inshore Stocks of Winter Flounder. This addendum would be specific to the commercial and recreational management requirements for the Gulf of Maine (GOM) stock, in reaction to updated stock status information and federal action to dramatically increase the GOM winter flounder state waters annual catch limit subcomponent. Specifically, *Marine Fisheries* requests a reconsideration of the commercial and recreational requirements of Addendum I to Amendment 1.

In order to provide relief to fishery participants in time for the start of the 2013 groundfish fishing year, we request that a winter flounder meeting be added to the Summer Meeting agenda so that the Board may consider initiating an addendum to the management plan. This would provide for review of the draft addendum at the Annual Meeting, a public comment period during the winter, and consideration of final approval early in 2013.

#### Background

The ASMFC Interstate Fisheries Management Plan (FMP) for Inshore Stocks of Winter Flounder was last modified in 2009 through Addendum I to Amendment 1. The addendum responded to the results of the 2008 GARM III assessment; despite some uncertainty in the assessment, the review panel agreed that it was highly likely that the stock was overfished and subject to overfishing. Correcting this required an 11% reduction in fishing mortality (F) on GOM winter flounder to reach maximum sustainable yield. Pre-existing interstate measures for the stock included an eight fish recreational bag limit, 12" minimum size limit, a minimum mesh size consistent with adjacent federal waters, and maintenance of existing seasonal closures.



The Board selected 2006 – 2007 as the reference period to determine reductions for the stock. Addendum I required Maine, New Hampshire, and Massachusetts to implement a 250-lb commercial possession limit (estimated to reduce 2006 – 2007 commercial harvest levels by 31% for state water fishing vessels that did not hold a federal permit) and implement recreational regulations – specifically possession limits, seasons, or a combination of both – to reduce the fishery’s F by 11%. The three states selected state-specific closures to achieve the required recreational reduction: Maine - October 1 through June 30; New Hampshire - May 15 through May 24; and Massachusetts - September 1 through October 31.

Addendum I’s requirements were also intended to complement the federal reaction to the GARM III results. At the time, the New England Fishery Management Council (NEFMC) was occupied with the development of Amendment 16 to the Northeast Multispecies FMP, and requested that NOAA Fisheries intervene with interim measures for the groundfish complex for the May 1, 2009 – April 30, 2010 federal fishing year (FY). The final interim rule, including a scheduled 18% days-at-sea (DAS) reduction, was estimated to reduce F on GOM winter flounder by 16%<sup>1</sup>. The target total allowable catch (TAC) adopted for GOM winter flounder was 379 mt.

With the implementation of Amendment 16 for FY 2010, target TACs were replaced by “hard” annual catch limits (ACLs); and DAS management with its associated trip limits and seasons replaced by annual catch entitlements and sectors. As a species of concern (due to the GARM III findings), GOM winter flounder was placed under an ACL substantially less than recent catch levels (Table 1). Sixty metric tons of the ACL were apportioned to the state waters ACL-subcomponent.

Table 1. FY 2010 and FY 2011 (Initial) Gulf of Maine Winter Flounder ACL, Sub-ACLs, and ACL-Subcomponents

	Total ACL	Sector Sub-ACL	Common Pool Sub-ACL	State Waters ACL-Subcomponent	Other ACL-Subcomponents
FY 2010 <sup>2</sup>	231 mt	133 mt	25 mt	60 mt	12 mt
FY 2011 <sup>3</sup>	231 mt	150 mt	8 mt	60 mt	12 mt

Unlike state waters fishermen, federal waters fishermen were not subject to a recreational bag limit and season closure or commercial trip limit – with the exception of a 250-lb commercial trip limit for common pool fishermen that continue to operate under DAS management. This trip limit was implemented by the Northeast Regional Administer on May 27, 2010 in recognition of catch monitoring that indicated that over 33% of the common pool sub-ACL had been taken less than three weeks into the fishery.

A new peer reviewed stock assessment (SAW/SARC 52) of GOM winter flounder was completed in 2011, which changed the stock’s status to not experiencing overfishing, although the overfished status could not be determined. NOAA Fisheries took emergency action to more than double the ACL for the remainder of FY2011; and for FY 2012, the ACL was nearly doubled again (Table 2). The state waters ACL-subcomponent for FY 2012 has increased to 272 mt.

<sup>1</sup> 74 FR 17030, April 13, 2009.

<sup>2</sup> 75 FR 29459, May 26, 2010 (based on final sector membership).

<sup>3</sup> 76 FR 34903, June 15, 2011 (based on final sector membership).

Table 2. FY 2011 Emergency and FY 2012 Gulf of Maine Winter Flounder ACL, Sub-ACLs, and ACL-Subcomponents

	Total ACL	Sector Sub-ACL	Common Pool Sub-ACL	State Waters ACL-Subcomponent	Other ACL-Subcomponents
FY 2011, Emergency Revision <sup>4</sup>	524 mt	313 mt	16 mt	163 mt	32 mt
FY 2012 <sup>5</sup>	1,040 mt	690 mt	25 mt	272 mt	54 mt

### Proposal

The change in GOM winter flounder stock status and the substantial 450% increase (from 60 mt to 272 mt) in the state waters ACL-subcomponent warrants a correction to the commercial and recreational measures established by the Interstate FMP in 2009. The 11% reduction in F required by Addendum I is no longer necessary as evidenced by NOAA Fisheries’ quadrupling of the total ACL for GOM winter flounder.

We thus propose an addendum that would rescind the GOM winter flounder requirements in Addendum I to Amendment 1 (leaving in place the Southern New England/Mid-Atlantic requirements as the GARM III found this stock to be overfished with overfishing occurring). However, in recognition of 1) the migratory/spawning behavior of winter flounder that causes them to concentrate in certain inshore areas, and 2) the state waters ACL-subcomponent and that, while not a quota, its being exceeded can effect federal vessels, we propose that a 500-lb commercial trip limit, and an annual specification process that can modify that trip limit in response to future state waters ACL-subcomponents, be included as an option. Such an action would be consistent with the Amendment 1 objective for complementary interstate and federal management systems<sup>6</sup>.

Increasing the commercial trip limit would provide some relief to our state waters groundfish fishermen that continue to deal with groundfish rolling closures (lifted for sector fishermen) and who are bracing for an October – November gillnet closure in coastal GOM intended to protect harbor porpoise, and the potential for more restrictive GOM cod measures due to its now overfished status. Removing the recreational closures implemented by Maine, New Hampshire, and Massachusetts in response to Addendum I would reinstate consistent GOM measures between the states (12” minimum size, 8 fish bag, open year-round), and improve compatibility and fairness with federal measures (12” minimum size, unlimited retention, open year-round). While the state waters subcomponent is a set-aside for all northeast states, the Commonwealth appears to be the only state with appreciable non-federal groundfish landings. On the commercial side, Massachusetts GE landings of GOM winter flounder in 2010 and 2011 were roughly 45 mt

<sup>4</sup> 77 FR 7000, February 10, 2012.

<sup>5</sup> 77 FR 37816, June 25, 2012.

<sup>6</sup> A 500-lb state waters trip limit would differ from the 250-lb trip limit maintained for federal common pool fishermen for FY 2012. NOAA Fisheries indicated it kept this trip limit partly because it was unable to identify an appropriate trip limit. The common pool sub-ACL is a considerably smaller share of the total ACL than the state waters ACL-subcomponent, and it was not subject to such a large increase. The agency is able to modify the trip limit in-season based on the monitoring of harvest in comparison to the sub-ACL.

and 35 mt, respectively. NOAA Fisheries reports zero pounds of winter flounder from Maine and New Hampshire’s state waters in 2010. On the recreational side, NOAA Fisheries harvest estimates provide an average of 55 mt/year since 2006 (Table 3).

Table 3. State Waters Recreational Harvest of Winter Flounder (NOAA Fisheries, MRIP Data)

Year	Maine		New Hampshire		Massachusetts		Total	
	Harvest (mt)	PSE	Harvest (mt)	PSE	Harvest (mt)	PSE	Harvest (mt)	PSE
2006	0.00	0	4.22	62	30.51	55.6	34.73	117.6
2007			6.37	40.5	23.12	40.7	29.48	81.2
2008	0.00	0	7.83	35.3	124.69	57.8	132.52	93.1
2009	0.00	0	5.54	52.1	55.24	36.3	60.78	88.4
2010			0.83	52.8	32.95	44.3	33.79	97.1
2011			7.89	71.6	30.24	54.8	38.12	126.4

Were the 2010-2011 average commercial (40 mt) and recreational (36 mt) harvest to double (for example) under a 500-lb commercial trip limit and year-round open recreational fishery, the resulting landings of 152 mt would still be well below the 272 mt set-aside for state waters in FY 2012. Given the unexpected harbor porpoise closure in October and November, the commercial harvest of groundfish in FY 2012 should be lower than the 2010-2011 average. Note also that participation in Massachusetts’ commercial groundfish fishery cannot increase due to the limited entry nature of our groundfish permit endorsement. A doubling of the recreational catch is also unlikely given the expected reduction (11%) from implementing the closures.

Should landings be greater than anticipated or the ACL decreased in the future, we recommend that the addendum also consider an annual specification setting process.



**Paul J. Diodati**  
*Director*

## *Commonwealth of Massachusetts*

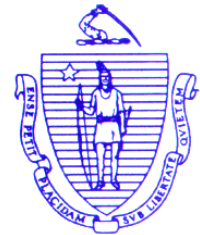
### **Division of Marine Fisheries**

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July 19, 2012

David G. Simpson, Director  
Marine Fisheries Division  
CT Dept of Energy and Environmental Protection  
PO Box 719  
333 Ferry Road  
Old Lyme, CT 06371

Dear David:

As you know, we formally requested in our July 3 letter to you as Chairman of the Atlantic States Marine Fisheries Commission (ASMFC) Winter Flounder Board that the Gulf of Maine (GOM) winter flounder requirements in Addendum I to Amendment 1 be realigned to federal management plan regulations with a conservative 500-pound commercial trip limit (currently 250 pounds). We also asked the Winter Flounder Board remove the recreational fishery closures (MA, NH, and ME) to provide for consistent GOM measures between the states (12" minimum size, 8-fish bag, and open year-round) and improve compatibility and fairness with federal measures (12" minimum size, unlimited retention, and open year-round).

Our logic/rationale was provided in our memo (see enclosed) with an emphasis on updated stock status information and consequent New England Fishery Management Council and National Marine Fisheries Service action to increase the FY2012 State Waters Annual Catch Limit (ACL) subcomponent by 450% (60 mt to 272 mt). This federal action made the 11% reduction in F required by Addendum I (May 2009) no longer necessary and inconsistent with Addendum I's objective for complementary federal and interstate plans. Overfishing is no longer occurring.

We appreciate your scheduling a Board meeting to address our request at the August ASMFC meeting. However, we must act sooner rather than later. Our state waters fishermen harvest about 95% of their annual take of GOM winter flounder between May and September. Delaying implementation of any revision would take away any advantage to our fishermen (and those in NH and ME) of the increased FY 2012 sub-

ACL with potential repercussions for federal re-allocation of any unused state waters sub-ACL in FY 2013.

We call your attention to Amendment 1 (November 2005) that was written and adopted in response to SARC 36 indicating that the GOM winter flounder was not overfished and overfishing was not occurring, but the Southern New England/Mid-Atlantic (SNE/MA) complex was overfished and overfishing was occurring. One of the Amendment's objectives was to "*establish an interstate management program that compliments the management system for federal waters.*"

Importantly, and for our 3-state purpose since NH and ME support our request, "*...states are required to obtain prior approval from the Board of any changes to their management program for which a compliance requirement is in effect...A state can request permission to implement an alternative to any mandatory compliance measure only if that state can show to the Board's satisfaction that its alternative proposal will have the same conservation value as the measure contained in this amendment or any addenda...States submitting alternative proposals must demonstrate that the proposed action will not contribute to overfishing of the resource (emphasis added)."*

Consider that Amendment 1 states in "4.3 Alternative State Management Regimes, 4.3.1. General Procedures" that "*A state may submit a proposal for a change to its regulatory program (emphasis added) or any mandatory compliance measure under this amendment to the Commission...The Winter Flounder Management Board will decide whether to approve the state proposal for an alternative management program if it determines that it is consistent with the 'target fishing mortality rate applicable' and the goals and objectives of this amendment (emphasis added).*"

It may be argued that Section 4.4 Adaptive Management should be used for any proposed change. However, consider that adaptive management is to be used if the change is "*to conserve the winter flounder resource*" and "*prevent overfishing of the stock complex or any spawning component.*" Our request is in response to the scientific findings that: (1) we are no longer overfishing, and (2) the State Waters ACL subcomponent has increased significantly (450%).

Addendum I to Amendment 1 was appropriately termed an Addendum because it adopted restrictions for GOM winter flounder "*to conserve the resource*" and to deal with an overfishing determination. Now that the situation is reversed, we make a justified request of the Board for a change in our management program that we hope will be welcomed especially since the change will lessen the economic impact being felt now by commercial groundfish fishermen and will provide additional opportunities for recreational fishing.

We anticipate the Board will appreciate the urgency of our request and support our approach. We remind the Board (noted in my July 3 memo to you) that Massachusetts is the only state with appreciable non-federal GOM winter flounder landings, i.e., about 45 mt in 2010 and 2011. The 2012 State Waters ACL subcomponent is 271 mt. In 2010

and 2011 recreational landings for MA, NH, and ME were 34 and 38 mt, respectively). With the GOM states supporting this change and with no other state being affected by this action, we suspect non-GOM states will appreciate the efficiency and effectiveness of this approach and rule changes complementing the management system in federal waters and responding in a timely way to new assessment information.

Sincerely,

A handwritten signature in cursive script that reads "David".

David E. Pierce, Ph.D.  
Deputy Director

cc  
Paul Diodati  
Mass Marine Fisheries Advisory Commission  
Terry Stockwell  
Douglas Grout  
Robert Beal

Encl: July 3 MA DMF letter to ASMFC Winter Flounder Management Board