

New England Fishery Management Council Groundfish Oversight Committee

Draft Meeting Summary

April 16 - 17, 2013

The Groundfish Oversight Committee (Committee) met in Mansfield, MA. The Committee, discussed recent work on the Omnibus Habitat Amendment, potential modifications to year round closed areas and Closed Area Technical Team (CATT) progress. Committee members present were Mr. Terry Stockwell (Chair), Mr. Tom Dempsey (Vice-Chair), Mr. Terry Alexander, Mr. Erling Berg, Mr. Frank Blount, Mr. David Goethel, Mr. Peter Kendall, Mr. Howard King, Ms. Sue Murphy, Dr. David Pierce and Ms. Laura Ramsden. They were supported by Council Chairman Mr. Rip Cunningham, staff members Mr. Tom Nies, Ms. Rachel Feeney, and Fiona Hogan (NEFMC), Mr. Mark Grant, Gene Martin, and Mr. Michael Ruccio, (NMFS NERO).

Discussions were guided by a Groundfish PDT memo to the Committee dated April 9, 2013, a Draft Groundfish PDT memo to the Committee dated April 11, 2013, a Groundfish PDT memo to the Committee dated April 7, 2013, a copy of a NEFSC GOM Cod presentation, a letter from David Goethel to NEFMC dated March 3, 2013, a Draft March 6, 2013 Committee Meeting Summary, February 15, 2013 Recreational Advisory Panel meeting summary and a series of correspondence received by the New England Fishery Management Council.

Day 1

Amendment 18

Staff provided a brief recap on the Committee's discussion of Amendment 18 (A18) at their previous meeting. At the March 6, 2013 meeting, the Committee provided some guidance on potential goal components and identified some potential data analyses for the PDT. On March 13, 2013, the PDT discussed the feasibility of each potential data analysis. The PDT considered this to be a multi-faceted analysis and was cautious about drawing any conclusions based on any single factor. The PDT went through the entire list and identified strategies to address the analyses. A number of items would be addressed by ongoing work by the NEFSC Social Sciences Branch (NEFSC SSB) that is expected to be completed by June 2013. These included a number of the fishery performance analyses regarding ownership, harvesting and operations, however, analysis of permits and economic rents required further consideration. For legal considerations, The PDT can complete an excessive shares analysis and can investigate anti-trust laws further. For hypothetical measures, analysis could include market power analysis and pros and cons of options for accumulation caps; PSC and ACE holding trends from the NEFSC SSB could also be utilized.

The Committee Chair informed the Committee that the next meeting was scheduled for June 12, 2013 to discuss A18 and requested clarification regarding a letter sent to the Council from the Regional Administrator suggesting A18 focus on accumulation caps. A Committee member informed the Committee that the Regional Administrator strongly supported A18 and suggested focusing the intent on accumulation caps in order to implement the action quickly. The Regional Administrator held public hearings and heard the need for accumulation caps during these meetings. A Committee member wondered if anyone on the PDT had a legal background and was able to address the Multispecies FMP complied with National Standard 4 (NS4) or whether the answer would have to come from NERO.

NOAA General Counsel would provide legal advice and guidance on these questions; formal guidance could be provided once measures were fine-tuned.

The Committee Chair requested a timeline be outlined at the June 12, 2013 Committee meeting and asked if all the analyses were retrospective or if they could be predictive considering fleet diversity was expected to change starting May 1, 2013 because of Framework 50. Staff explained that the analyses were retrospective but projections could be requested. A Committee member wanted to know what the caps would entail, e.g. a set maximum number of permits allowed. A control date was set in 2011; the Council can use that date or revise it accordingly. NOAA General Counsel informed the Committee that there would be no segmentation issues if A18 focused only on accumulation caps despite the Notice of Intent including both accumulation caps and fleet diversity because they were not splitting up two actions to avoid an EIS.

A Committee member suggested targeting the business entity that owns the permits because numerous sectors could be made if an individual sector appeared too large. The need for transparency was highlighted because this is a public resource. There was anecdotal evidence that the quality of records for lease trades varied greatly; permit banks should also become fully transparent. A Committee member thought it was inappropriate to require detailed business information and thought the only way to help fishermen stay in business was to give them more ACE and not by capping accumulation; a breakeven analysis was required. Without access to quota, the competitiveness of the fleet was questioned; most boats are thirty five to forty years old and need updating. By the time the analyses are completed, it will be after May 1, 2013 and it is suspected that some smaller vessels will be forced to sell or lease their quota. A Committee member questioned whether the PDT would be able to provide some indication as to which factors should be focused on within A18. If lease prices are controlled and set too low, fishermen have to use or lease their quota; otherwise they lose it because they can't carry it over. Another Committee member didn't think a price cap would be acceptable because the smaller inshore boats paid the most for lease prices; they were clearly able to make it while paying those prices.

Some public comment included:

- Dick Allen, Fishery Consultant: It seems to be worth the Council and PDT looking at how an entity with market power would exercise that power in this particular situation. Monopolists can't just say I have all the product so I'm going to raise the price because they do face a demand curve. It's the combination of supply and demand that sets the market price. People tend to think that if somebody's got all the product they're just going to get whatever they can for it and there's no limit that exists and they can charge whatever they want. But people will pay only what they can afford to pay. Just by increasing the price you're not going to make more money. I think that really needs to be looked at because the Council is making a lot of important decisions based on things that are poorly understood. Along the same line I think economic rent was defined as a price that is higher than it would be with a competitive market; I've never heard economic rent defined that way. Economic rent is the difference between cost and revenue. It's what we think of as true profits. Economists generally look at economic rent as a good thing. In most fisheries, the classic problem is all the economic rent is dissipated; no one is making any money, the fishery is not contributing to society and it's all because of overcapitalization and excessive costs in the fishery and then the government has to step in and subsidize the fishery because there is no profit or economic rent. Seeing economic rent looked at as kind of a bad thing is kind of shocking to somebody who's been trained to think of it as a good thing. Most of the time that I've been involved in fishery management the problem has been excess capacity, overcapitalization of the fisheries. We had the big boom in the fisheries from 1975 – 1985 with the fleet doubling at the same time that our fishing grounds were shrinking with the 200 mile limit and the World Court decision so we ended up with a much bigger, sophisticated fleet and a lot smaller fishing grounds

and that just wasn't going to work because a lot of the stocks were under a lot of pressure even before that. For most of the time, the emphasis has been on how do we get rid of overcapitalization. We had buyouts, we had an industry meeting just before A16 that had an industry vote in favor of having another buyout and then the people who were putting it together decided things were too much in flux and they held back and didn't ask for that. Somehow all of a sudden things kind of shifted both in the industry and in the Council as though getting rid of boats was a bad thing. We're trying to put in place a system that will rationalize this fishery, get people making money bring the fleet into balance with the resources and now we're trying to keep all the boats in business. There were statements made we could breakeven analysis, what's a breakeven analysis tell you? Some boats are not going to make it. We kind of knew that and set up a system so they could have something to sell and get out and people could consolidate or they could lease and get through the bad times. The official world hasn't seemed to be able to give us any real good information on whether consolidation is really happening. I did my own simple analysis using the permits database that NMFS has (you can't really go back before 2004 because the permits changed with A13) and since 2004 looked at permits per address because even if an entity has two different corporations they probably have the same address, most of them anyway. I didn't find any rampant consolidation of ownership and actually see where the rate of concentration has slowed since 2010. It was concentrating at about 4-7% from 2004 – 2009 after that it decreased to 2% to negative numbers. It seems clear that there is no rampant concentration of ownership if permits by address is a reasonable way to look at it. It's important to separate consolidation of ownership from concentration of fishing effort.

- Jim Odlin – A lot of people, two years ago, advised a simple approach. Ms. Murphy described doing something relatively simple. I would remove some of these things that aren't simple to lessen the load on the staff and then I would clarify concentration or cap on what, is it on PSC or number of permits. I'd narrow it down to which one you wanted and then go around and pick out, you know you're not talking about vessel activity. You shouldn't talk landing ports because we're going to have a massive change in how the fishery operates on May 1. To think you can take that sea change and keep it static is just not going to happen. If you cap it then the person doesn't have enough to fish with profitably. You have 3 choices you can lease it, fish it or leave it in the water. You can't make money if you don't have fish. If you're going to lose money fishing it then you can't fish it. You really only have 2 choices leave it in the water or lease it if you're going to start controlling leasing. You're going to cap ACE or quota and you have to be careful because this isn't an ITQ. If you cap ACE, and someone has a permit that causes them to be over that cap or they acquire a permit to get more cod but the permit comes with other fish that put it over the accumulative cap that you've established arbitrarily and you can't split the permit, you've just made that permit worthless. The simplest way is you're going to cap ownership on permits. As far as someone controlling leasing, every single year to me it seems like the price of leasing is going down and by the end of the year it collapses. That to me says no one has control so it's not something to worry about. For example, GOM cod, there isn't enough fish for anyone to have a directed fishery but say 1000 lbs. of cod could be used to catch 200,000 lbs. of other stocks, it becomes more valuable than it would be for someone to lease the cod and directly fish on it. Be careful not to control leasing on a stock that isn't for a directed fishery but would allow fishing on other stocks that could continue to support the infrastructure. I would cut this back and simplify and move something forward. I say control permits because on the surface if we picked a maximum number that any entity could own if someone could get the very best 50 permits and control the fishery well first of all that's impossible to do, you'd have to get 50 people with the best permits to sell to one person that won't happen. A lot of those 50 permits are in permit banks or something else that would prevent that and then it's a moving target. We know stock assessments go up and down radically so how could anybody ever thing that they have the 50 best permits in the fleet. So pick a maximum number, e.g. 5 more permits than current maximum or

go lower and grandfather people in, but do that and allow some consolidation, which you need to have.

- Aaron Dority – I was glad to hear Ms. Ramsden’s comment expressing surprise and frustration that the Council didn’t adequately wrestle with these issues prior to or concurrent with A16. However, hearing the discussion today, it seems like we continue to get wrapped up in the same situation where we want to put off something or have various reasons why it should be done. Thinking back to A16 there was this sense of urgency that we had to rush it through. I just want to make sure we don’t put ourselves in the same situation and recognize that we can put ourselves in a better situation in future if we plan now and implement fleet diversity protections now.

A Committee member didn’t think consolidation was a current issue; no permits were bought since 2010. Regarding pulse fishing, it was suggested that the pattern of fishing in Middle Bank be examined because some vessels tow briefly there at the beginning or end of a trip but some vessels will complete an entire trip here. Another Committee member considered the lack of ACE to be the problem; the lack of permit sales suggests a permit cap wouldn’t be very effective but caution should be taken not to put everyone out of business.

Eastern Georges Bank cod misreporting

Staff presented the numerous analyses the PDT completed (in PDT memo to the Committee dated April 11, 2013) to determine whether misreporting is occurring on Eastern Georges Bank (EGB) after concerns were raised by NERO. There was incentive for misreporting EGB cod as Western Georges Bank (WGB) cod but the PDT had difficulties finding conclusive evidence that it was occurring. The PDT considered the results to be inconclusive. The PDT completed twelve different analyses using VMS, VTR, NEFOP/ASM and leasing data and found there was an increased difference between VTR and VMS data between 2010 and 2012. The PDT was concerned by this but there was little evidence that the presence of an observer affected accuracy of catch locations. Some of the evidence would suggest that misreporting is occurring but it wasn’t simply a case of EGB cod reported as WGB and it was difficult to attribute differences to one particular cause and it didn’t mean that misreporting was definitely occurring. Some of the differences in behavior are consistent with the misreporting hypothesis, but when haddock was examined a similar trend was observed but there was no incentive to misreport that species.

A Committee member thought some of this change could be due to the implementation of sectors; sectors were getting better at avoiding choke stocks. The PDT, in one of the analyses, noted that the differences could be because of sector implementation. The PDT Chair described work done on cod and haddock ratios that was not yet completed; there are differences in this ratio by area. A Committee member thought the Committee frequently saw discrepancies but attributed them to other causes instead of the most obvious one. The large increase in differences between VTR and VMS since 2011 was particularly concerning; the Committee member thought there was a strong enough signal to follow up this issue. Staff explained that the PDT, if asked, would inform the TMGC that differences in behavior were detected and some were consistent with misreporting and some were not; the extent of misreporting could not be quantified. The PDT was assisted by NEFSC staff to complete part of the analysis and it may not be possible to continue to utilize this resource if the Committee decided to pursue the issue. NEFSC staff was interested in pursuing alternative methods, e.g. straight line method, to the allocation methodology but it has some weaknesses and time might not be available to establish it; the new method may not be successful. A Committee member suggested accepting the PDT report and not pursuing the matter further because there was no smoking gun and it could jeopardize an international agreement. Another Committee member informed the Committee that a permit letter was in review to correct the misunderstanding regarding how fishermen were supposed to report tows; they are supposed to chart based on proportion of catch. The Council sent a letter to NMFS NERO to clarify the intent from A16

regarding to how EGB cod catch should be accounted for in season. A Committee member encouraged the use of simple administrative tools to apportion catch instead of having to guess how many fish were caught on either side of a line.

Some public comment included:

- Jim Odlin –Trying to compare catch rates on one side of the line to the other side of the line over a period of time is just crazy especially out there. That is so dynamic that it changes within a half hour. This year we're having terrible catch rates in the eastern area, there's nothing there. One of the arguments was the lease price and it's cheaper to the west but our experience is at the beginning of the year we were hoping we'd be in EGB catching a lot of haddock because of the large year class, so we decided as a company that we needed to lease in EGB cod for insurance. We paid too much, only to find out the haddock weren't there so we didn't go there because you can't go there for a handful of cod. In addition to that at the beginning of the year we tell our guys to be cautious because we don't have a lot of cod so we avoid them as best we can. We use selective gear a lot; we talk to our fellow fishermen. After catch shares, we talk to guys if someone is getting cod at 35 fathoms so others avoid that for that day. This is what we designed catch shares to do, which we couldn't do before. Before we were always shutting that area down early or starting it late. There was a race to catch the cod before someone else got them. This may be an indication that what we designed to do is working. I read this that there's no concrete evidence, I agree with that based on what we see when people fish. How did so many boats get so many EGB cod that never went there? We didn't use history to award people quota on EGB cod we just gave everyone a percent based on their WGB cod whether they'd even gone there or not. So people without the ability or intent to get out to EGB and they're trying to get revenue out of it. It's behooving them to create some havoc to try to get the lease price high, that's not fair. We talked about trying to fish in more than 1 stock area during a trip, when we did this before we had to report daily. During the development of A16, I wanted daily reporting but the Service said we didn't need it. If you had daily reporting on VMS that would be an administrative tool. If there is misreporting, that's against the law. People have gone to jail for that. There's a penalty for misreporting. If you stagger on two sides of the line you report your catch where you haul back. The observers do that throughout the country. When catch shares started we couldn't get discards to line up. We were following the VTR directions so it's our job under sectors to make sure that lines up so we contacted the Service and said we can't do this any further so they instructed us to count the fish where we haul back. We have to do that unless you change how the observers do it because otherwise we have a huge discrepancy.

Discussion of Correspondence Regarding Multispecies Reference Points

A Committee member outlined a proposal to establish multispecies reference points in order to replace the single species targets that cannot be met because of a regime shift. The fleet was considered to be at overcapacity in the past but with the exit of a number of boats that was no longer an issue. Stocks rebuild in ecological time without fisheries management. The Committee member conducted a literature review and found a number of papers to support the hypothesis of a regime shift in New England waters. Water temperatures have been above average since 2000. High water temperatures in the 1950s coincided with a decline in stock size. New England waters are the southern extent of range for a number of species; if temperatures rise by even 2 or 3 degrees Celsius, it may not be possible to rebuild within ten years. Cod in other areas have been found in unexpected areas and temperature is assumed to be causing this. Accordingly, it was considered necessary for biological reference points to be recalculated based on a warm water regime. The literature showed that single species reference points are higher than multispecies reference points; multispecies reference points were considered necessary when there was a multispecies fishery. A series of motions will be made at the April 2013 Council meeting. A response

from the NEFSC was received and Committee members were advised to read it prior to the Council meeting.

It was unclear if the law would still require single species management but the Committee member thought a group of fish could be interpreted as a group of species. It was hoped that if this was completed then the SSC could set ABCs based on the new reference points for FY 2013 – 2015. If the reference points were lower, it was assumed the amount of catch would also be lower but this would be a more realistic situation. Another Committee member questioned why SNE/MA yellowtail flounder could be deemed less productive and therefore rebuilt based on reference points that account for the reduced productivity and the same couldn't apply to other stocks.

Overview of SARC 56 White Hake

Staff provided a brief overview of the SARC 56 on white hake that took place in February 2013 in Woods Hole, MA. This assessment showed a change in stock status for the stock; it is not overfished and overfishing is not occurring. A new statistical catch at age model, the ASAP, was used for this assessment but the change in model wasn't the cause of the change in stock status. The assessment utilized updated data including updated catch and survey indices. The reference points were based on the whole time series of 1963 – 2009 (2010 and 2011 were omitted because of higher variance in recruitment estimates). Fishing mortality (F) has varied over time and was above the F_{MSY} for a number of years but fell below the proxy in 2006. This trend continued in 2011 when F was 0.13. The F_{MSY} proxy is based on F40% and is estimated to be 0.20. The spawning stock biomass in 2011 was estimated to be 26,877 mt, which is 83% of the SSB_{MSY} proxy of 32,400 mt. The SARC favored the recent recruitment period (1995 and 2009) for the short term projections, which is what I have included here. These are the projected catches until 2016 that came from the SARC. This has yet to be reviewed by the PDT. The assessment shows an increase in catch in 2013. The final SARC report was not available at the time of the Committee meeting.

Some public comment included:

- Jackie Odell, Northeast Seafood Coalition – Regarding the change, we've participated in the SAW process and there was a clear consensus document that left the SAW that looked at FMSY proxy of F35% and it appears that during the peer review on the last day that changed to an F of 40% after the working group had already gone through a deliberation to go to an F35%. There's been a lot of discussion about the appropriate FMSY proxy over the last couple of meetings they've had and the Committee has discussed whether it's a policy decision or whether it's a scientific recommendation. I think this is just another example of how that appears to be the policy decision being made at the science level and it's also changing from a working group decision to a peer review decision so has there been any sort of discussion about that or if maybe Dr. Weinberg will explain that next week but I wanted to flag that as being yet again a continuing problem in the overall assessment and we were happy to hear the results of white hake we had some good news but we're still gravely concerned over the process of who's deciding these FMSY proxies.

A Committee member was opposed to the SARC making decisions on the FMSY proxy without any Council discussion. This assessment would be used to set ABCs for FY 2014 and 2015 for white hake. A Committee member indicated that the final rule for FW 50 could include a revised ABC for white hake. NERO staff clarified that the results from the peer review would be used including F40%. A Committee member decided to make a motion to support the NERO taking emergency action to update the FY 2013 white hake ABC based on the assessment results.

Motion: To recommend the Council request an emergency action to incorporate the most recent assessment of white hake from SARC 56 and implement the 2013 ACL as soon as possible during the fishing year to provide additional opportunities to the groundfish fleet (Mr. Dempsey/Ms. Ramsden).

Another Committee member was interested in distribution change over time; white hake used to be in the Nantucket Lightship Area in the 1990s but were no longer there. A Committee member was concerned that the motion would prevent them from choosing different F_{MSY} proxies. The maker of the motion intended this to allow the updated assessment numbers to be implemented as quickly as possible. A Committee member was willing to support the motion on incomplete information but was frustrated that the final assessment report wasn't available yet. A Committee member had to oppose the motion to reserve the Secretary's discretion.

The motion **carried** on a show of hands (9/1/1).

A Committee member summarized the SARC review panel comments for the Committee. Another Committee member preferred to address the issue of an appropriate level of risk in a comprehensive way as opposed to a stock by stock approach. A Committee member was opposed to losing fifteen percent of white hake that they could catch in the next year; a holistic approach to risk policy was preferred but white hake is an important stock. Another Committee member was alarmed by how the decision to use F40% was made after F35% was consistently supported during the meeting. Staff pointed out that the decision to use F40% wasn't mysterious; the summary document explains why the change was made – late in the meeting it was discovered that there were larger differences between F35% and F40% than previously thought and they decided that F40% should be used. Without the final report it was unclear whether the SARC calculated an FMSY value for white hake; if they did, a Committee member suggested using that value instead of a proxy.

PDT Memo

The Council requested the PDT to determine the ABC that would result from F40% and a natural mortality (M) of 0.4 for GOM cod. The SARC 55 provided two models, with different M values but used an M of 0.2 for the reference points for both models. The PDT did the calculation but wasn't sure if it was the correct reference point under those conditions; the PDT did not argue that the calculations provided were the correct ones to use. The PDT memo dated April 7, 2013 included a consequence table and estimates of ABCs and catches. In the short term the Mramp model provides higher catches but after four or five years they are lower because the stock isn't growing as fast because M is higher. The assessment didn't attribute the increased M to any particular cause. Staff explained that the revised recreational sub-ACL is close to what they have been catching; accordingly, their measures didn't change much in the Framework. A Committee member said there were above average temperatures for the last twelve years and no indication that a cold water regime would return next year.

Other Business

A Committee member was concerned that changes to minimum fish sizes in FW48 could impact the fishery and suggested the fishery be watched closely for transparency.

Motion: Move to recommend the Council send a letter to NMFS requesting monthly public reports on the size composition of landings for all groundfish stocks which have reduced minimum size limits following the implementation of F48. These monthly reports would be sent to the Council and published on the NERO website and compare proportional landings by size

class to this information from FY2011 landings for all specified stocks. (Mr. Dempsey/Mr. Kendall).

A Committee member would prefer to see the landings and catch composition in order to determine discards composition and whether discards were being reduced but was concerned monthly reports were not feasible. The Committee member informed the Committee that the state of MA would not support reducing minimum sizes and this could have negative consequences on federal vessels landing fish below the state of MA minimum sizes. Another Committee member considered this to be immature until the final rule was published; the understanding was that federal law trumps state laws but this needed to be resolved. The maker of the motion wanted to send a strong signal; this motion only asks for information on stocks whose minimum fish sizes were change in FW48. NERO would be consulted to determine whether monthly reports were feasible. A Committee member requested some compromise from the state of MA so a MA processor wasn't at a disadvantage from boats being forced to offload in other states.

Some public comment on the motion included:

- Jim Odlin, Associated Fisheries of Maine – I don't understand what you're trying to accomplish with this motion. We already know that we're seeing discards increase dramatically because there are some year classes coming into the fishery. The last time we saw a year class come into the fishery we'd fish 30 or 40% discard rates. What is this going to tell you? Yes more fish are going to be coming to the dock that are smaller than the present size of 18" but the idea of this was to change those discards to landings so you will see smaller fish coming in. I know we have boats on GB that are fishing with 60-70% discard rates. There's a huge year class coming. The Canadians will be fishing on them June 1, so anything you get out of this will be predictable. The difference is are you going to land them or discard them. No one else has minimum fish sizes. It doesn't work. It hasn't worked for us.
- Jackie Odell – I want to talk in general about the concept of the minimum fish sizes we've been one of the more vocal groups for them to be reexamined and reduced in some cases. We went with a higher number for some stocks than the PDT said we could go with. On May 1, we all have to remember we have a very serious situation occurring. The reductions are profound. We need to get to a place where we're thinking about the best utilization of sector ACE for guys; the vast majority of the fleet is in the groundfish sector system right now. We had mentioned the reason why we supported the minimum size reductions because one of our sectors was getting a 20% discard rate based on CC/GOM yellowtail flounder based on a fish that was just under the minimum size of 13" so we want to be able to take those discards and convert them into landings. It's more important when the fishery is looking at a huge reduction in the ACL for CC/GOM yellowtail flounder next year and from what I'm hearing from reports now they're having huge catches of CC/GOM yellowtail flounder right now in the GOM. We have a lot going on and figuring out a way that we can utilize the very few fish that we're putting on the table for the fishery next year is extremely important and I would hate to see us be in a situation where the industry can't go fishing on May 1 because they don't know whether to violate a federal law or a state law whether they land the fish or they discard them at sea but at the same time where they're looking at additional reporting requirements or whatever may be entailed I think we're just missing the point that the fishery is changing and we need to be thinking about how to get them to a place where we're better utilizing the fish and not putting the fishery in another crisis situation.
- Doug Grout, Council member from NH – I wanted to make the public and the rest of the Committee aware of some of the potential problems we might be having here with these potential reductions in minimum sizes and that is when will the states be able to implement compatible sizes. Regardless of obviously the state of MA being opposed to this, I've talked with Mr.

Stockwell with how fast ME could do it, and RI also. I've started my rule making process but until I get the final rule I can't proceed. I thought I could get them in fairly quickly through an interim rule making process, however, unless we get the final rule by next week that nimble process will not have the minimum fish sizes going into place until the middle of June at the earliest. The regular rule making process isn't until the end of the summer. We're going to have a situation where, the states, no matter what are going to have the old size limits in place and that's going to put fishermen in a damned if you do damned if you don't situation because you have the federal rules which are going to say you can't discard legal sized fish and if in the federal waters a legal sized fish for cod is 19". They're going to have to retain that legal sized fish but when they come into shore the states are going to have a legal sized fish of 21" so they might be in violation of states laws so this is something that the states and the NERO and law enforcement officers are going to have to work out in this interim.

- Geoff Smith, Nature Conservancy in ME – I appreciate Mr. Grout's comments about challenges implementing new minimum fish sizes and Ms. Odell talking about why this was done. I don't think the motion is trying to re-debate the issue on whether the minimum fish sizes should be lowered or not. I think it's clear to say that if we do reduce minimum fish sizes let's take a look at what the implications are for the productivity of the stocks and composition of the catch. Before it goes back to the Committee and you take up the motion again, I hope we don't get lost in some of the other issues around it and focus on the purpose of the motion that would monitor it if the changes go through. I don't know if NMFS can do this on a monthly basis but I do think that something more frequent than what we have now would be better to detect potential impacts.

A Committee member thought reports providing size composition of catch would be more useful as it would provide some information on discarding. Another Committee member disagreed and considered length frequencies to be necessary.

Motion to substitute: Move to recommend the Council send a letter to NMFS requesting monthly public reports on size composition of catch for all groundfish stocks which have reduced minimum size limits following the implementation of F48. These monthly reports would be sent to the Council and published on the NERO website and compare proportional landings by size class to this information from FY2011 landings for all specified stocks. (Dr. Pierce/Mr. Dempsey)

There was some concern that huge changes in discards would be seen when compared to FY2012 and it was unclear how that would be quantified from this information. However, another Committee member considered this information necessary to detect any negative impacts on severely depleted stocks that might not have spawned yet. It was reiterated that there was no intent to change mesh sizes.

The motion to substitute **carried** on a show of hands 8/0/2.

The main motion as substituted **carried** on a show of hands 9/0/1.

Motion – To recommend the Council request NMFS implement by emergency action a measure that will attribute 10% of GB haddock quota to the GOM haddock quota and 10% of the GOM haddock quota to GB haddock quota. (Mr. Alexander/Ms. Ramsden).

The motion was made in response to a public problem statement that laid out the argument that the large GB haddock stock is likely to spillover into the GOM. Evidence supporting the spillover hypothesis was provided from a NEFSC scientist and tagging research. According to the maker of the motion, the GOM haddock fishery in the 1980s was completely supported by spillover from GB and there was no reason to suspect this would not happen again. Based on the tagging data indicating a return rate of ten percent, that

value was proposed to transfer ten percent of GB haddock quota to the GOM and vice versa. Some Committee members were confused by the transfer of quota between stocks. The maker of the motion thought if the stocks were truly mixing then the quota should go both ways. Based on the relative size difference between the two stocks there was support for this concept; one Committee member considered the two stocks were really one stock that never should have been split. The NEFSC thought spillover was occurring but the PDT struggled with determining an exact number. Another Committee member thought mixing was likely across a number of stocks but could not support putting an exact number on spillover without the PDT and SSC examining the data. A Committee member did not think the Agency would accept this as an emergency action especially as one percent spillover would double the GOM haddock stock and didn't think the ten percent had much basis. The impacts on allocations remained unresolved; allocations have already been made and this may require taking allocation from one fisherman to give to another. The maker of the motion said the ten percent was based on the only scientific evidence available that could put a number on it.

Some public comment on the motion included:

- Jim Odlin, Associated Fisheries of Maine – We support this motion. Has anyone ever looked at the line that delineates between GOM and GB? There are no barriers for that line. I'll submit that line was set up arbitrarily; in fact it's been moved one or two times ad hoc. It goes 150 miles from Cape Cod to the Canadian border. There's no physical barriers, they claim they can document that the fish are different but how could we move that line and oh by the way how can that line just coincidentally be applied to two or three different stocks? Do they all have the same biology exactly? You keep driving us into boxes, by us I mean collectively the whole system, is driving us into these boxes all the time. Here you're just recognizing the reality that the line is soft at best. Reality that we know we have one record year class coming and the reality that in history those stocks spilled over and mixed. It's just a reality check and I support the motion and I suspect in the course of trying to come up with the emergency action justification science will get involved.

The motion **carried** on a show of hands 5/4/1.

The meeting adjourned at 17:24 pm.

Day 2

Discussions were guided by a presentation of Juvenile Groundfish Habitat and Groundfish Spawning Area Recommendations for Omnibus Habitat Amendment 2, a Spatial management Case Study Summary, a table of groundfish spawning information found in the literature, juvenile and spawner weightings and size thresholds, an estimation of spatial management impacts on net fishery revenue, a presentation on generalized additive model analysis: summary of approach and highlights of results, a report on seasonal variation in groundfish habitat associations in the Gulf of Maine – Georges Bank region, initial groupings according to Methratta & Link (2006), hot spots analysis parameters and statistics, seasonal variation in groundfish habitat associations in the Gulf of Maine – Georges Bank region, generalized additive model analysis report and a series of correspondence received by the New England Fishery Management Council.

Closed Area Technical Team Report

Staff presented the Closed Area Technical Team (CATT) report and advised the Committee that the CATT hoped to have this work completed for the June 2013 Council meeting. The CATT completed analyses designed to address the objectives approved by the Committee and Council. The CATT reviewed a number of case studies of closed areas around the world for any information that could be applied in New England. A literature review was also completed to identify groundfish spawning in New England waters.

A Committee member asked if any of the case studies had isolated the impacts of the closed areas or were they confounded by other factors, e.g. one hundred percent at-sea monitoring. Staff explained that the response to a closed area is also dependent on how quickly fishing effort ends in the closed area and how quickly benefits are realized through greater spawning production in the region or export to other areas. The CATT was not able to know if the closed areas in the case studies were effectively enforced but did recognize the important role of monitoring. The CATT did not examine the case studies to a high level of detail that would have identified the role of mesh size but they did note that other factors were involved in how the resource responded to closures. Based on the presentation, a Committee member thought the wrong areas were closed for cod spawning. Another Committee member thought people looked at closed areas in a vacuum and were not also considering other factors such as temperature and stock productivity. The CATT has developed an adaptive framework with continual evaluation built in to assess reopening of the closed areas. The CATT considered all gear catching groundfish but did not examine lobster or scallop gear but could examine gears capable of catching groundfish in the future.

Some public comment included:

- Jim Odlin – I wanted to start with Iceland. I read the slide on Iceland and you mention an area that was reopened in 1997 and was quickly reversed to pre-closure state. Did they reclose it? I don't think they did. That needed to be pointed out. You talked about Emerald Bank. Is that still closed? Even though it remains closed, most of the stocks in the Canadian zone on GB, their weight at ages have gone down. I don't think the closed areas are helping; it's something else. I look at Figure 1 (slide 26 of the presentation) on the sub-populations of the spawning stocks along the coast of Maine. I'm not against closing spawning areas because I was one of the dragging people that actually closed the inshore waters of the GOM inside three miles many years ago and when we closed them there were still populations of cod in there. There was good production around Wood Island and Casco Bay; we closed it to protect big biomasses of spawning cod. Since they were closed the fish are no longer there. The dragging industry, with a big fight from lobster industry, forced that closure and I can't see where that has done anything. They pile traps on there so deep maybe that's why the fish won't go there and spawn. That's

another issue you need to look at if you're going to close something for spawning it has to be closed for fishing gear. If your theory is that you're interrupting spawning then hauling traps and having the bottom completely blanketed with traps obviously does not assist in that goal of not disturbing fish that are trying to spawn it just doesn't make any sense.

- Drew Minkiewicz, Fishery Survival Fund – Did the CATT do a case study of the existing closures in the U.S.? We've looked around the world but we have plenty of examples here. Did you do a case study of the effectiveness of what we do currently? I think it would be helpful to include FW48 findings in this.
- Geoff Smith, Nature Conservancy in ME –Did the CATT look at the Rock Creek conservation area in Pacific GF fishery? My understanding on that was that area was set up in mid-90s to protect rock fish. It was a time before they had gone to a quota managed fishery. A few years ago the Pacific moved to quota management in that area and the Rock Creek Conservation area that was established prior to the quota management system has been retained as part of their management approach. To the extent we're looking at case studies closer to home, it might be worth taking a look at that one.

Staff explained that with the existing closures most of the positive effects were for haddock and winter flounder. The CATT tried to use tagging data in the analyses; however, that data needed to be effort adjusted and there was insufficient time to complete that but it could be an important tool for monitoring. To identify juvenile habitat associations the CATT took two approaches, Generalized Additive Models (GAMs) and presence/absence analysis. The GAMs focused on GOM cod, GB cod and GB yellowtail flounder. The GAM identified physical features associated with above average survey catches. A Committee member suggested the CATT look at a two research papers; one showed cod aggregations in spawning areas and the highest mean vector traveled in and out of the areas to help predict where cod go after spawning and the other showed nocturnal movements off the bottom by yellowtail flounder to investigate changes in catchability. Another Committee member was surprised at the number of age zero and one cod in Nantucket Sound

Some public comment included:

- Drew Minkiewicz – I wanted clarification that all the presence/absence data in the presentation is based solely on the spring and fall surveys of NEFSC and MADMF? Which industry based survey for yellowtail flounder was used, was that the seasonal work done over the last two years for scallops? So there was a mix of surveys used, but the majority of the data come from the federal surveys in the spring and fall. They're snapshots here and there. How many years do you have all seasons covered? So it's fair to say that for the last six years there's only good data from spring and fall and then the summer only selective throughout because the scallop dredge survey in the summer only selects certain groundfish so that's biased in a way and then we don't have anything on winter after 2007.
- Jim Odlin – I'm looking at slide 38 from the presentation. This slide happened to be a time when I was actually fishing on GB and one thing I've learned is after twenty five years out there is that you can't predict anything. You can be towing along and have a tow of small fish then turn right around and set back out and have a tow of big fish and you might not see the small fish again the rest of that year. I think back that for a while we had on the books that if someone finds a lot of juveniles in a spot for a long period of time that we used to have it that we would close that area but we could never institute it. It never happened. The Canadians never did it because it's so volatile. You can have a juvenile here today and gone tomorrow. In our assessments I believe

they determined that data prior to 1982 was not being used. You're trying to use data that we can't use in the assessments but you're using it in this presentation. There's something in 1982 that happened that we're not using data from 1982 back in the assessments. I don't know if it was catchability or reliability or something. I've sat in on quite a few assessments and I'm not a scientist but I know there was a fairly robust debate about using data prior to 1982.

Staff explained that a number of surveys contributed to the presence/absence analysis that included approximately 60,000 tows; the individual surveys covered different areas providing a large scale picture. A Committee member was surprised by the presented distributions from the various surveys based on personal experience.

The CATT also conducted a hotspot analysis to identify important juvenile habitat areas and spawning areas. The analysis identified significant clusters of tows and areas that have above average catch compared to the survey mean for the time series. A Committee member pointed out that this analysis was very data dependent; if it was not possible to complete a tow in an area then it would not be identified as a hot spot. Staff explained that the hotspots were clusters of significant catches above the average catch and that doesn't mean there are no catches elsewhere; this is a conservative analysis. The hotspots were weighted by importance factors developed by the CATT, and the results were filtered based on the weightings, e.g. juveniles with a substrate score of one were not included in the final gridding result; only strong substrate associations were included. Only seven species were included in the juvenile hot spot results because they had a habitat rating of two and three. Witch flounder was not included because it doesn't have a high habitat association number. The way the weighting was applied, different stocks of the same species could have different weighted values. The Council Chair considered these weightings to be a scientific decision, not a policy one, and discouraged the Committee from altering the weighting scheme. The current weightings were the best recommendation from the CATT and were developed after extensive discussion. The vulnerability component of the weighting was based on overfished status and that could change in the future; the CATT designed it to be flexible. A Habitat Committee member questioned whether the magnitude of subpopulation residence and weighting could be a policy call. The weighting was a conscious choice of the CATT. A Committee member found the weighting formula difficult to interpret and the vulnerability score greatly influences the final weighting; staff explained that the values would only change if new science came forward. The SASI model showed vulnerability of substrate to mobile tending gear; the vulnerability score in the CATT analysis is the ratio of biomass to the target.

A Committee member asked for clarification on why the CATT focused on juveniles when they were protected by mesh size. The CATT did not identify areas that would reduce juvenile catch but instead identified areas with a strong juvenile/habitat association. A Committee member considered edges of hard substrate associated with juvenile cod to be untowable. It was suggested that the CATT use the top five or ten percent of the hotspots to identify areas to be closed.

Some public comment included:

- Jud Crawford, Pew – There's a lot of science and technical work that's been done here. Because this is a scientific analysis that will be the basis of some important policy decisions that will have big impacts I'm wondering if this work has been reviewed by the SSC or whether there's a plan for the SSC to review this work.
- Dave Stephenson –The Habitat PDT and Committee, using the SASI model and some other information, have identified habitats that are more vulnerable to the effects of different gear types, so we didn't do it on a species by species basis. The CATT approach of looking first at where juvenile fish were caught in greater numbers in the surveys, comes at it from a different

direction. The first cut looked at where the juvenile fish are congregated, without considering habitat, but then once we know that we go back and look at what the habitat types are in those locations and if they are vulnerable based on the SASI model to the effects of fishing gear then I think that will supplement what the habitat PDT and Committee has come up with for candidate habitat management areas. I see the two things coming together nicely and not duplicative in terms of what they're doing. A good example is the southern part of CAII where we had hotspots for juvenile yellowtail flounder as you know they aggregate on sand and that's a fairly highly dynamic environment so it's not a very good candidate area for any kind of a closure to protect habitat for juvenile yellowtail flounder. One of the reasons we did the GAM analysis was to identify for cod and yellowtail at least, what kind of habitat variables were associated with higher catch rates in the surveys which is also going to help us fine tune these things.

- Vito Giacalone, Northeast Seafood Coalition – It seems as though more guidance needs to be given to the CATT to focus on areas that have already been identified and I feel like what this exercise ended up doing is first locating hotspots for juvenile fish then start out with the assumption that all the substrate that happens to overlap with that is vulnerable. I don't know how that or what science linked that together. I thought what the Habitat Committee was doing was identifying habitat that's vulnerable to gear. Then the Groundfish Committee was going to evaluate what species that was going to protect so you understand what those effects of the habitat closures were going to have on groundfish so I think leading off it puts the industry in the situation where it looks like now all of these areas are identified as vulnerable habitat and there's even one of the recommendations here closed to bottom tending gear so the assumption is to protect that habitat where juveniles happen to live but we already know that from a mortality standpoint that we're protecting juveniles from the mesh size by not catching those fish. It feels like a new exercise for effort control and not relying on the output control and the gears that we have. The one input control we have is mesh size which allows juveniles to move around and not be killed. The question is what made those determinations that every hotspot became a grid that is assumed with the recommendation to close to bottom tending mobile gear.
- Drew Minkiewicz – You've said these species have strong association with substrate. Is there any new information that in the habitat realm we call level 3 and level 4 that there's known increased productivity from this habitat to these species? To answer the question then, you only have presence/absence information you do not have any new information; it's the same that we have under habitat that says there's increased productivity. There's a jump in logic saying there's presence therefore it has to be productive and this presence is based on snapshots of spring and fall surveys because the summer survey for cod and haddock aren't picked up in the scallop dredge. I would assume the hotspots would want to be based on more recent information rather than decade's old information because of all the changes that have occurred. For the most recent information we only have snapshots of the spring and fall so we know these fish are seen in this area in the spring and this area in the fall and we know that they're there and not over there and that's what we know and then we can go back and say this habitat is here but we don't have any scientific link between why that habitat is increasing productivity or doing anything. They're just there. I'm concerned that we're outrunning our data. When you look at the grid I get concerned when we convert literature to numbers. Science is supposed to be objective and repeatable and I had the same concern about the SASI model for converting literature to a one to three scale, why can't it be one to five? You're making these calls and I understand somewhere you have to make these calls but science is supposed to be objective and repeatable and that's what gets concerning when we start jumping into this realm. Are we looking at spawning aggregations or juvenile habitat; we seem to be all over the map and picking a lot of things here. That's very concerning; I don't know what the focus is. I know you guys really struggled with it but it's not coming across. What are we trying to do here because we have a habitat process that didn't look at individual

species but it looked overall at a comprehensive review? Are we reinventing the wheel just for groundfish and on top of that we have spawning areas. We do protect juveniles with mesh.

The SSC is scheduled to begin a review of the CATT analysis at their May 16, 2013 meeting. The Committee Chair reminded the Committee that at the November Council meeting one of the approved goals was to enhance groundfish.

The Basin model is a well-developed model and was used in this analysis. Staff outlined the proposed juvenile habitat management options developed by the CATT. Staff showed numerous maps of grids overlaid on bottom types to help understand and visualize the areas the habitat associations by species. For example, cod were associated more with the high flat more sandy areas, e.g. off of Scituate part of Stellwagen, and not well associated with deep, mud, silty basins. A Committee member was unsure how to proceed because the CATT had already examined all available data but did not produce results that were expected based on personal experience. A Committee member considered the proposed closure for redfish and plaice to be very large for such healthy stocks.

Some public comment included:

- Jim Odlin – On slide 74 of the presentation, it shows windowpane flounder way up in the north of ME and up in the bays. I don't think they exist there. This has to be mislabeled. I've spent a lot of time in those bays years and years ago and they just don't exist there.
- Vito Giacalone – I don't know if it's the colors but it looks like the boxes that are identified as options for a closure almost miss all the existing closed areas completely, which if that's the case and so the areas that we closed originally because of the high mortality of groundfish in those areas are now lighting up here as the dead spots. If we haven't figured out that closing areas doesn't seem to be making them hotter and keeping them open seems to be the hotspots that's what's popping out at me and I'm just wondering, I know we still survey the closed areas so I'm wondering why that happens. I know the substrate in all of these areas is similar so the substrate in the areas proposed here in the closures is the same types of substrates and species exist in the closed areas but they didn't light up. Unless they're assumed that those are going to stay closed. I wasn't questioning the data it was the conclusion to close areas; it's not that it looked at existing closed areas and evaluated whether they should have been closed it's making a determination to close additional areas. The data shows those are hotspots but what makes the leap that shows the hotspots should be closed.
- Drew Minkiewicz – I have a question on the areas in EGB areas. Those two areas are there only for haddock. I want to make sure that's clear. The system you used has a value of five for haddock on the vulnerability score is a five and the mean is 10.5 so it is half of the mean so not a very vulnerable stock according to the analysis. We're only catching three percent of the TAC but the juvenile haddock is not very vulnerable; it's fifty percent of the mean and there are definite hotspots that you propose for juvenile haddock but for cod, a species that is vulnerable as juveniles but there isn't a single hotspot within these proposed areas. There's only two within the United States and they're off to the west of what's proposed so are you proposing these two closed areas for only juvenile haddock which is not very vulnerable? The best available science that we have in front of us shows no cod in those areas or no hotspots for cod in those areas and the whole idea was to analyze and identify hotspots and so if there are none there for cod they're only there for haddock so therefore you can only justify these areas based on haddock hotspots. By your analysis haddock is fifty percent less vulnerable than the mean.

The strength of the CATT analysis is that they didn't attempt to say the existing areas or other proposed areas were the appropriate areas for closures; it was done holistically and comprehensively to try to identify areas where clusters of above average catches occurred in the surveys. The CATT had some reservations that redfish was driving such a large closed area but knew that this area overlapped with areas identified in other studies for other species and decided to present it to the Committee. Staff moved on to describe the spawning alternatives; one of the options would involve modifying the timing of the rolling closures and would modify the blocks included in the closure. A Committee member was concerned that the Whaleback closure only formed a small portion of the proposed spawning closures because it was considered a hotspot; objections to the analysis were raised because the proposed areas were not lining up with personal experience. The spawning closures were based on the hotspot analysis but that area was not identified by the analysis. Staff explained that the areas within each option could be added or removed from any option at the Committee's discretion.

Some public comment included:

- Drew Minkiewicz – Yellowtail flounder has obviously been an area of intense interest for the scallop fishery and did you use the recent Research Set Aside (RSA) funded survey that took year round samples of yellowtail flounder? That's the best available information on hotspots for yellowtail flounder that was used to overturn the latest scallop framework and groundfish framework but what you're proposing here doesn't use the year round data, instead uses snapshots in the fall and spring. The RSA project took samples year round every month for over a year and came up with recommendations that the Council passed, recommending completely different closure times to avoid yellowtail flounder. This would undo all that good work, based on inferior science. That's troubling. I don't know why other outside sources were used but not the RSA funded survey that was an integral part of Council discussion last year. I have a question on your recommendation to close these areas seasonally to gear that's capable of catching groundfish and that's a very loosely defined term in the regulations; it has many caveats. Scallop gear does not catch adult cod or haddock. If it does it's an extremely rare event. The proposed spring closures are actually at the height of when you'd want to be harvesting scallops. The RSA project was a grid survey of the entire area that went out every month and did standardized tows of all those spots and measured the yellowtail flounder weights. From that data, they said that if you want to reduce yellowtail flounder bycatch and impacts on yellowtail flounder then close in the fall and fish in the spring. We've been closed in the spring recently based on data that went back to the 1950s and then we as an industry funded a survey that for over a year, every month we went out there and put that information out there. Now we have a proposed closure based on less of a standard. This would take us backwards from where we already moved to. The Council has approved this and the Agency is about to put into regulation opening that area in the spring and closing in the fall based on a comprehensive study. This completely contradicts that.

Staff explained that the CATT did not intentionally exclude the RSA results; they didn't come up for analysis with the CATT. The CATT didn't specifically look at the overlap between the scallop fishery and yellowtail flounder. A Committee member thought there was some inconsistency regarding the rolling closures because there were no late fall or winter spawning considerations in the options presented. If that was the case then the database should be reexamined because it would be inconsistent with MA state spawning closures.

Staff outlined the potential monitoring programs that could be implemented in the closed areas if fishing is allowed to evaluate the closed area. Some examples included sentinel fisheries with one hundred percent observer coverage, SBRM bycatch sampling, intensive survey sampling (add non-random stations and increase biological data collection), alternative survey types such as habcam and the SMAST drop

camera survey and targeted tagging programs. Staff outlined comparative metrics that could be used to evaluate the benefits and costs of the various areas.

The Council Chair suggested the Committee identify additional information that might inform the decision on where closed areas should be implemented based on personal fishing history; the alternatives were not fully developed and the Committee needed to help the CATT finalize them. A Committee member suggested using catch data in addition to survey data or a comparison of the two. The CATT did not use catch data because of how the effort is distributed; because of management actions there were large areas with no catch data available. A Committee member reiterated that the Whaleback area should be examined because it should remain closed because of known spawning aggregations. Another Committee member thought the proposed habitat areas were important for fish species and didn't have issues with the spawning closures but had major problems with the juvenile habitat closures; analysis of the proposed habitat areas was suggested. Another Committee member didn't think the Bigelow Bight closures were warranted based on the species driving the closure. It was suggested that focus shift to critical stocks to narrow the focus but this approach would assume that stock status would remain constant. The CATT designed a flexible system in the weightings design; the Committee could include a fixed term after which a review could be conducted. A Committee member was surprised that the high part of Jeffreys was not identified as a hotspot for juvenile cod and generally was disappointed that the analysis did not line up with areas that fishermen would identify as having juveniles. A Habitat Committee member requested that the CATT provide a description of the objective criteria used to create the weighting scheme to help understand the substrate associations. The Committee Chair requested the CATT consider closures in state waters. A Committee member didn't think towing mobile gear in narrow ribbons across a naturally dynamic zone was damaging habitat.

Some public comment included:

- Vito Giacalone – The big topic is what we're trying to achieve. We're trying to understand what's the scientific link between closing an area that's known to contain juvenile fish and protecting that habitat from mobile gear, in other words, that if there happens to be juvenile fish in the area and we're not worried about killing the juvenile fish because our gear allows them to escape, where is the scientific information that shows that you need to protect the bottom from mobile gear in order to have a positive benefit for juvenile fish if the juvenile fish aren't the ones in trouble. What scientific work is the CATT doing, it sounds like purely Habitat Committee work, what models are being used to determine this? It's one thing about the data or concern if it's correct but let's assume it's correct but why is the management response already determined that once you determine the high score areas it should be closed to bottom tending mobile gear if there's no scientific information that specifically says that when there's juvenile fish in the area then no matter what the substrate is, in a sense, you should be off of it. I feel like that's sort of the leap that we're making which to me sort of makes the whole habitat effort irrelevant. If not, you have two totally independent disconnected efforts trying to do the same thing with different metrics, we're never going to do this in June. I think it makes more sense for one Committee to lead, these are the alternatives, what impact does that have. A motion would focus it so that at least the poor CATT, which is doing a lot of work trying to guess at what you want, what impacts would be on the habitat using a SASI model to determine areas to be protected and what positive impacts do those have on groundfish productivity. That's what I thought the Groundfish Committee was looking for.
- Jim Odlin – I'm not quite sure where we're going because if you look at the habitat areas identified on Georges Bank, they don't light up on this and I don't understand. I thought we were trying to protect habitat that was important to something not just for protecting it to be there but for something. If I was just to look at this as a layperson I would say those two habitat areas

identified by the Habitat Committee seem to be in the wrong place. I think if you take redfish, for example, the stock has been growing for 23 years straight. Why would you take that off the table, it's been doing fine without that kind of stuff. I would take a few of the stocks out to narrow down the scope of what you're trying to accomplish and make it not only feasible but make it to something you can get your arms around. Someone said that this isn't forever and it can change, well you can always come back and add another closed area. Jeffrey's ledge doesn't light up. I fished a lot on Jeffrey's Ledge many years ago with fifty Gloucester boats, big Gloucester boats with seven to ten men and one of the boats was named Captain Scrod because that's all we ever caught on Jeffrey's Ledge was scrod fish. It's been closed for twenty years and it appears there's no scrod there. When that was closed fishermen were behind that closure, they really were because we all thought that if we closed the incubator then we would get some benefit from it. Obviously that didn't happen because the stocks are where they are and it doesn't light up here so those are the kinds of things I'm struggling with so I would recommend that you narrow the scope by species to at least get to the ones that really matter to you at this current time. I need to figure out why the habitat areas that are identified by Habitat Committee don't line up with this. Why the areas identified there as habitat don't light up in this and are we trying to close habitat because it's habitat or are we trying to close habitat to accomplish something?

- Drew Minkiewicz – In an effort to try and move things forward in a constructive fashion, if on the first option for juvenile groundfish habitat, the goal is to protect habitat for stocks of fish that are vulnerable and so if you go back to the grid you want to look at what has an affinity, so anything that's three and anything that's vulnerable, and the numbers are what we have, the mean is 10.5 so if you look at anything above the average on the vulnerability scale, that's the vulnerable stock and if it has a three then it has an affinity to the spot and that can narrow your search down. If you do that then the only stocks with a three and above average are Georges Bank cod, Gulf of Maine cod and ocean pout. Those are the stocks of fish according to this document that have an affinity to a habitat and are vulnerable or more vulnerable than the average stock. That should be the universe we're looking at. A five on the vulnerability score is a five plus one for the sub-population, one for residency and three for substrate and this actual B_{MSY} is 0.75, which means it's above B_{MSY} for Georges Bank haddock for example. According to the key here two says no affinity so it can only really be a three if that's the rationale you're using. For the large spawners you have your final weighting sum and you have an average of 8.8 and you want to look at residency too so you want to look at stocks that are less migratory so a two and then have a final weighting sum that is above the average of 8.8 so you're looking at GB cod, GOM cod, GB YTF, GOM winter flounder, SNE winter flounder, halibut (but we pretend that doesn't exist) and ocean pout. You put a lot of time and effort into these charts and we can all take our shots at them but they give us at least some kind of metric that we can say OK let's narrow down to what the species that we should target our efforts on. It's a way forward that has a rational basis; it's not arbitrary.
- Dave Stephenson – I see what Mr. Minkiewicz is talking about. That was something the CATT thought about doing. But we backed away from it because the information that we're relying on to categorize species as having no strong affinity for any habitat type, which is a two versus one that don't have a strong affinity for more vulnerable habitat types, which is a three, the information that we're using and relying on is pretty crude. I issue a caution here; it is a way forward but the danger in doing this is we're making too much of the information; that quality of the information may not support that kind of approach. We looked at the source of the EFH documents. When the NEFSC does a trawl survey, they get a bottom temperature, a depth, a location but they don't get a substrate type. That's a critical piece of missing information and particularly in the GOM the quality of our substrate information is poor; it's much better on Georges Bank. Various people, in the EFH source documents, have made general statements like

haddock are caught on hard sand, gravel, broken bottom, rocky reefs. Somebody else might have thrown in that in the GOM they're also found in deep basins over mud. What do you do with that, you have to give it a two? That's where that two score came from. Specific information to relate species to their substrate types is pretty poor plus the fact that fish swim around a lot and so it's kind of hard even if you were out on the survey and collecting substrate information on every tow you probably still would come up with something that's pretty general. We could limit the juvenile closed area analysis to just cod and ocean pout, if that's what the Committee would like but we did talk about that at the CATT and decided that we didn't feel comfortable making that step at this point. Another way to do it might be, for those more familiar with these fish, to look at some of the candidate closed areas and say this is mostly being proposed for plaice, is this what I know about plaice, is this the kind of bottom I expect to catch them on? If you don't catch them on the kind of vulnerable bottom habitats that we've identified in the SASI model by the habitat PDT then it's probably not a good candidate area for juvenile fish area closure.

A Committee member emphasized the causal relationship and how difficult it was to tease out what a closure should do; GOM cod has not rebuilt under the current closures so they must be poorly designed but GB haddock is now a robust stock.

A Committee member suggested combining the SASI and GAM models to see where fish overlap with sediment. The Council chair wasn't surprised that the output from the two models didn't overlap because they were two different methodologies but at least one of the habitat areas did light up in the CATT analysis. A Committee member considered progress had been made on the issue but the Committee was not in a place to make any recommendations at this meeting, in part because of the confusion as to why the previously proposed habitat areas did not overlap with the areas identified by the CATT. A Committee member agreed that the Habitat Committee identified areas and the CATT has done a similar exercise but came to different conclusions in some cases but there was an assumption that a link exists between habitat and fish productivity. It was suggested that the Habitat and Groundfish PDTs should look for overlaps between the areas and develop a set of closures that the Committee could move forward with. The Committee Chair informed the Committee that it was not possible to hold that meeting prior to the April Council meeting but suggested it be held before the next Committee meeting. A Committee member thought that if the areas identified by the Habitat Committee were compared with the CATT areas then they would probably be considered sufficient for juvenile habitat needs but a different approach was needed for spawners.

Staff requested further guidance on any closures based on redfish and plaice or whether closures for those stocks should not be considered; further guidance was sought on whether stocks that were at or near B_{MSY} should be removed from consideration for spatial management. A Committee member suggested removing redfish, plaice, hake and pollock from the proposed closures. Another Committee member suggested establishing tiers to create clear distinctions between stocks instead of ignoring stocks altogether so that there is the potential for some protection of these healthy stocks that are vital for the fleet but thought that most Committee members understood which stocks were most vulnerable as opposed to removing stocks that were at or near B_{MSY} . According to NERO staff, the weighting system incorporated that strategy and that would effectively double that weighting if pursued. A Committee member suggested looking at how ubiquitous a stock was and suggested using a different metric than overfished or overfishing because juvenile dabs could be caught throughout the GOM but higher concentrations might be found in certain areas.

The Committee was more comfortable with the spawning areas because they were a modification of the existing areas. With regard to the options for spawning closures, a Committee member proposed some modifications to the timing. The CATT was hesitant to set dates for the spawning rolling closures without some guidance from the Committee or Advisory Panel. In response for guidance by staff on an

appropriate approach such as running the CATT areas through the SASI grid to help narrow the focus, a Committee member noted that the Habitat PDT followed a similar method and after a series of iterations the areas were narrowed down; the CATT could do this and identify the most critical areas and revise the proposed areas in a similar way to the Habitat PDT. Staff requested a timeline for help on the spawning areas but the Committee Chair considered that there was general concurrence on the spawning closures with some minor tweaking to the timing of the areas. A Committee member offered an example of tweaking, the current Whaleback closure and other smaller closures should be included in lieu of larger areas around them and requested more information regarding the central GOM closures; the proposed areas were thought to be a function of the surveys used to develop them. More information on why they were different than the proposed habitat areas was requested on the central Gulf of Maine proposed areas and the northern edge, which was thought to be controversial. It was suggested that local fishermen should be consulted to identify spawning locations in their areas. A Committee member suggested making spawning areas smaller in CAII based on the hotspots analysis but measures for haddock would depend on whether they were considered for closures. Staff warned not to over interpret the hotspot results; spawning fish may be found throughout a region even if a hotspot was not identified. NERO staff suggested the Committee keep in mind enforceability when modifying the proposed closed areas. Staff were unsure why there were no cod spawning sites on the arm of Cape Cod from Provincetown to Chatham; a Committee member was very surprised by the lack of cod spawning in that region identified by this analysis.

Some public comment included:

- Drew Minkiewicz – On the spawning areas, as I pointed out earlier, the inconsistency between the Council’s recent action on yellowtail flounder and then this proposal has to be resolved. We have an intensive yellowtail flounder focused survey that’s still being conducted and that’s showing the optimal time to close that area is the fall and this proposal is for the spring. I would like further clarification on gear that can catch groundfish; while scallop dredge can catch flatfish they don’t catch the roundfish like cod and haddock. We fished in CAII in the non-habitat closure areas for years and have shown no detrimental impacts for haddock obviously; it’s flourished in that time. That’s something that needs to be clarified, what gear are we talking about and for what species. The area that is proposed is basically the access area for CAII for scallops. Under current law it is closed until June 15 and then opens. Under a change to the regulations the Council recommended to the Agency, assuming the Agency will approve and put into place in a couple of months, that same area will be open in the spring and then closed in the fall. I get the point we still have to resolve the fact that we’re saying this has to be open in the spring and closed in the fall and then a recommendation to close it in the spring when we just said no we shouldn’t be closing it in the spring.

Staff considered the issue to be whether fishing activity disrupts or adversely impacts spawning activity of yellowtail flounder; the analysis doesn’t determine the availability of yellowtail flounder catch to the scallop industry but instead it examines the time of year when yellowtail flounder are known to be spawning. There is no evidence that fishing activity interrupts yellowtail flounder spawning like there is for cod. If the hotspot analysis was rerun without spawning in mind, it may come to the same conclusion that based on yellowtail flounder aggregations the area should be closed in the fall but the CATT did not examine that and guidance from the Committee would be needed to pursue that kind of analysis. The extent to which fishing disrupts spawning behavior is unknown for many species; a Committee member suggested a literature search to develop some alternatives such as restricting fishing effort at night because haddock spawn in complete darkness but considering the stock size of GB haddock maybe fishing isn’t disrupting spawning. A number of Committee members were willing to develop measures for state and federal waters despite not having jurisdiction in state waters; the information would be passed onto states. With regards to monitoring, there was some concern on how to pay for it; another suggestion

was to use cooperative research and have sentinel fisheries enter the areas for research purposes. Staff suggested an RSA program where the catch would pay for the research. A Habitat Committee member suggested involving the observer program to see if the collection of additional biological data was feasible and to include tagging programs in recommendations.

The meeting adjourned at 15:52 pm.

DRAFT