

**PROCEEDINGS OF THE  
ATLANTIC STATES MARINE FISHERIES COMMISSION  
SPINY DOGFISH AND COASTAL SHARKS MANAGEMENT BOARD**

Doubletree Hotel Crystal City  
Arlington, Virginia  
August 15, 2006

## ATTENDANCE

### Board Members

Terry Stockwell, ME DMR  
Patten White, ME Gov. Apte.  
John Nelson, NH F&G  
G. Ritchie White, NH Gov. Apte.  
Rep. Dennis F. Abbot, NH Leg. proxy  
Paul Diodati, MA DMF  
Dr. David Pierce, MA DMF  
William Adler, MA Gov. Apte.  
Vito Calomo, proxy, MA Leg. Apte.  
Mark Gibson, Rhode Island DEM  
Gil Pope, proxy, RI Leg. Apte.  
Everett Petronio, RI Gov. Apte.  
Eric Smith, CT DEP  
Dr. Lance Stewart, CT Gov. Apte.  
Gordon Colvin, NY DEC  
Pat Augustine, **CHAIR**, NY Gov. Apte.  
Peter Himchak, NJ F&W  
Erling Berg, NJ Gov. Apte.  
Roy Miller, DE F&W

Bernie Pankowski, proxy, DE Leg. Apte.  
Bruno Vasta, MD Gov. Apte.  
Howard King, Maryland DNR  
Jack Travelstead, VA MRC  
Catherine Davenport, VA Gov. Apte.  
Kelly Place, proxy, VA Leg. Apte.  
Louis Daniel, NC DMF  
Red Munden, NC DMF  
Luiz Barbieri, proxy, FL FWRI  
Dr. Malcolm Rhodes, SC Gov. Apte.  
Robert Boyles, SC DNR  
John Frampton, SC Gov. Apte.  
Spud Woodward, GA DNR  
April Price, FL Gov. Apte.  
Bill Johnson, proxy, FL Leg. Apte.  
Harold Mears, NMFS  
Karyl Brewster-Geisz, NMFS HMS  
Wilson Laney, USFWS

### Ex-Officio Members

Dr. Julie Neer, TC Representative  
Russell Hudson, AP Chair

### Staff

Ruth Christiansen  
Brad Spear  
Bob Beal  
Vince O'Shea

### Guests

Keith Taniguchi, USFWS  
Kate Barnes, Oceana  
Beth Lowell, Oceana  
Elizabeth Griffin, Oceana  
Eric Brazer, CCCHFA  
Peter Weiss, General Category Tuna  
Rich Ruai, ECTA

Megan Caldwell, NMFS HMS  
Peter Burns, NMFS  
Paul Caruso, MA DMF  
Forbes Darby, NOAA Fisheries  
Tom DePersia, Stellwagen Bank Charter  
Boat Assoc.  
Janice Plante, Commercial Fisheries News

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## SUMMARY OF MOTIONS

**Move that the spiny dogfish commercial coastwide quota be increased this year from 4 million pounds to 6 million pounds.**

Motion made by Dr. Pierce, second by Mr. Pope. Motion postponed.

**Move that the trip limit for the spiny dogfish commercial fishery be increased this year from 600 pounds to 2000-5000 pounds.**

Motion made by Dr. Pierce, second by Mr. Pope. Motion postponed.

**Move to postpone the motions until after Technical Committee review of the Massachusetts proposal to see whether it will have a negligible effect on F and report back to the Board in October.**

Motion made by Mr. R. White, second by Mr. Boyles. Motion passes (13 in favor, 3 opposed, 0 null and 0 abstain).

**ATLANTIC STATES MARINE  
FISHERIES COMMISSION**

**SPINY DOGFISH AND COASTAL  
SHARKS MANAGEMENT BOARD**

**Doubletree Hotel Crystal City  
Arlington, Virginia**

**AUGUST 15, 2006**

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The Spiny Dogfish and Coastal Sharks Management Board of the Atlantic States Marine Fisheries Commission convened in the Washington Ballroom of the Doubletree Hotel Crystal City, Arlington, Virginia, and was called to order at 8:30 o'clock a.m., August 15, 2006, by Chairman Patrick Augustine.

***WELCOME AND CALL TO ORDER***

**CHAIRMAN PATRICK AUGUSTINE:** Good morning, everyone. We have got a lot of reports to cover this morning, so let's move on. Welcome to the Spiny Dogfish and Coastal Sharks Management Board meeting. As you see, we have quite an aggressive agenda, and there are not too many action items.

When we do ask for discussions, please be very articulate on the subject. If we do get a motion on the table, try to focus on the motion. Anything off the main motion, if you want to bring it up under other business, please do so.

So, if you quickly review the agenda, we had to revise it. Are there any corrections or changes to the revised meeting agenda? Seeing none, the agenda is approved.

***PUBLIC COMMENT***

I would like to have an opportunity for the public to speak now, if they would. The first subject we will be covering will be coastal sharks, and that's what we are going to discuss first. If you do have any comments, I wish you would address just that issue. Are there any comments from the public on this? Thank you, that was easy.

Okay, here we go to Item Number 3. We will put Ruth Christiansen on the table, and she is going to be here on the table for many hours. She has got several reports, as you can see.

She will start out with the public comments on Coastal Sharks PID. So, Ruth, if I may turn it over to you, please give us an update on the summary.

***SUMMARY OF PUBLIC HEARINGS  
AND COMMENT ON COASTAL  
SHARKS PID***

**MS. RUTH CHRISTIANSEN:** Thank you, Mr. Chairman. Right now staff is passing out a copy of the public information document that went out for public comment. Since you have a reference, when I go through the summary of public comment, you'll have something to go back and look at.

The way I have organized the presentation, I have combined all the public comment that I received during the public hearings that were held and the written comments that I received during the open period, and I have organized it according to the five issues that were outlined in the PID, which is why we are passing that out for you to reference as I go through my talk.

Issue Number 1 asked what are the appropriate management goals and objectives to be included in the Interstate FMP? As these were listed in the PID, I

received no major objections. However, it was suggested by one commenter that one of the objectives should be to rebuild overfished populations and not overfished fisheries.

It was also suggested by two separate commenters that priorities in the FMP should be made clear and specific on how those goals and objectives will be reached should be included. So from the list of objectives in the PID, I took out three of those objectives and highlighted them here because they were three of the objectives that I received numerous comments on.

The first one has to do with fisheries data, and that's the data necessary for effectively managing shark fisheries. The majority of public commenters felt that capturing of state fisheries data is a very important issue to be addressed. Proper shark identification is extremely important.

The majority of public commenters felt that consideration should be given to providing ID training for fishery participants or consideration should be given to the development of some kind of identification guide, with the major species on that identification guide. Species-specific management is only effective with proper identification by fishery participants and enforcement personnel.

The second objective focused on by the majority of commenters had to do with the protection of areas identified as important coastal shark habitat. They felt that this was an extremely important issue.

The impacts of the habitat loss from human impact are detrimental to juvenile sharks and may limit recruitment to adult stocks. Areas identified as critical nursery habitat should receive special protection from fishing pressure and habitat alteration.

It was suggested by one commenter that federally permitted vessels be prohibited from fishing in state waters in order to avoid potentially exploiting nursery habitat areas. It was also suggested by another commenter that the distinction be made between the use of an area for fishing purposes versus other uses, and he specifically mentioned dive shark tour operations.

The third objective consistently focused on by the public had to do with the minimization of bycatch. It was suggested by one commenter that the listed objectives should read, "To minimize, to the extent practicable, bycatch of Atlantic coastal sharks; and to the extent bycatch cannot be avoided, minimize the mortality of such bycatch."

It was also suggested by one commenter that stricter commercial harvest quota limitations may directly reduce the large bycatch numbers of small non-commercial viable species, which she felt were primarily dumped at sea with no record. With this stricter commercial harvest quota, the species used for display or educational purposes should not be restricted.

**CHAIRMAN AUGUSTINE:** Board, are there any comments on Issue 1? Okay, continue on Issue 2.

**MS. CHRISTIANSEN:** All right, Issue Number 2 in the PID asked whether federal shark regulations should be duplicated in state waters or whether states should be required to have complementary measures only.

The majority of the public comment believes that state regulations should be at least as restrictive as federal measures. Complementary measures should only be required especially if it can be proven that a state has an adequate monitoring program, and states should be allowed to have more

restrictive measures, if they deem that appropriate.

Continuing on with Issue 2, the majority of public comment that the current federal bag and size limit regulations are good restrictions and easy to abide by, and they do not want to see any further restrictive measures or anymore restrictive measures required by states.

The majority of public comment felt that standardized regulations should be applied coastwide. Consistency among states and with the federal and international regulations is key for managing species throughout their range.

I'll take questions on Issue 2, if anybody has any. Moving on to Issue 3, then, Issue 3 in the PID asked what shark species and/or groups should be included in the Interstate FMP.

Currently, federally managed shark species are divided into four categories, and the majority of public comment feels that all of the federally managed shark species and groups should be a part of the ASMFC Fishery Management Plan.

By not including any particular management group, this has the potential to create loopholes in state waters that may undermine federal regulations. It was noted at one of the public hearings that the potential for distinct sub-populations along the coast may make interstate management on a species level somewhat inappropriate.

Continuing on with Issue 3, it was suggested by one commenter that given the popularity of mako sharks, this species should be taken out of the proposed Interstate FMP and treated as a separate species.

It was suggested by another commenter that nurse sharks be removed from the large

coastal management group because this species does not comprise any significant portion of the commercial harvest for shark meat.

Regarding the list of federally prohibited shark species, it was suggested by one commenter that zero retention of prohibited species be continued, but it should be clarified whether catch or release of these species will be allowed.

One commenter stated that no species should be removed from the list and consideration be given to adding hammerhead sharks, tiger sharks, and sandbar sharks to the list of prohibited species. But on the flip side of that, it was suggested by another person that some species on the prohibited list needs to be removed from that list.

Any comments on Issue 3 or any questions on Issue 3? Okay, moving on to Issue 4 in the PID; Issue 4 asks what other issues should be addressed through the Interstate FMP. I pulled out what I felt to be the major highlights in all the public comment relating to this issue.

It was suggested and it was mentioned on two or three separate occasions that the Gulf States Marine Fisheries Commission should be encouraged to adopt comparable and consistent management measures as ASMFC.

The division of Southern Florida between the South Atlantic Fishery Management Council and the Gulf of Mexico Fishery Management Council causes landings' confusion with recordkeeping.

It was also mentioned on two or three separate occasions that smooth dogfish should not be overlooked by management. It was highlighted that this is the only Atlantic shark species subject to a directed

fishery but yet lacks a management framework.

Regarding size limits and gear restrictions, I received a comment each suggesting that consideration should be given to upper size limits in addition to minimum size limits. The use of circle hooks should be investigated.

Safe and effective removal of hooks and gear and approved careful handling and release protocols should be consistent with NMFS standard. Regulations should be written to avoid unforeseen harvest or unforeseen over-harvest by land-based anglers.

One individual made specific mention that regulations that allow for recreational anglers and commercial fishermen to attain an increase in shark species should definitely not be allowed. Regarding public aquariums, one commenter felt that states should match federal requirements for writing collection permits.

Another individual placed special emphasis on either establishing minimum size or prohibiting the sale of nurse and lemon sharks into the home aquarium captivity. He felt that these small sharks quickly outgrow the confines of home aquariums and often end up with no place to be kept when public aquariums do not have the space to keep individual fish.

Finally, for Issue 4 it was mentioned that enforcement provisions at all levels of management should be emphasized and that the Interstate FMP should include specific regulations for shark diving eco-tours. I'll take any questions on Issue 4.

Okay, the fifth and final issue contained in the PID asked what are the appropriate recommendations to make to the Secretary of Commerce.

There were two different schools of thought regarding the recommendation to allow NMFS to permit more restrictive measures to be extended into federal waters; the first stating that extending state regulations into federal waters is likely not a feasible recommendation.

The other thought was that states should be allowed to have more restrictive measures extend into federal waters, especially if there is scientific proof that this is beneficial or precautionary in nature. That is the summary of public comment.

**CHAIRMAN AUGUSTINE:** Very good job, thank you very much, Ruth. Go ahead, Dr. Pierce.

**DR. DAVID PIERCE:** Regarding Issue 5 and public comment pertaining to the specific appropriate recommendations to the Secretary of Commerce, there is one recommendation in the PID, Page 22, that I didn't see reflected in your presentation, Ruth, and maybe I just wasn't paying attention.

That is recommend NMFS readdress the current harvest reduction strategies to more equitably distribute the impacts of reductions on affected states and fisheries. Did you mention that, and were there any comments from the public regarding that specific issue. For example, was there any identification of where there might be some inequitable distribution?

**MS. CHRISTIANSEN:** I did not mention that. I only received one comment relating to that issue, and the person basically said that, yes, being fair is a good idea. I didn't feel that it was necessary to include in the presentation.

**CHAIRMAN AUGUSTINE:** Any other comments? We're doing great. It's not even nine o'clock and you're done with that



report already. Well, then, let's move on to the next item. We have an update on the 2006 LCS assessment. Welcome, Julie. Julie Neer is joining us today, and she will make this presentation.

### ***UPDATE ON 2006 LCS ASSESSMENT***

**DR. JULIE NEER:** Good morning. I'm Dr. Julie Neer from the Panama City NMFS Lab, part of the Southeast Fishery Science Center. I work for the Shark Population Assessment Group located in that facility. I am the Shark SEDAR Coordinator.

I am here today to present the results of the latest LCS Assessment that was just completed. This year, for the first time we have decided, through a variety of reasons, to go ahead and run the Large Coastal Shark LCS Assessment Process following the SEDAR process, which is done in the Southeast.

SEDAR stands for Southeast Data Assessment and Review. It consists of three workshops, a data workshop where people come together and go over all the data that's available and produce recommendations, what that consider the best available life history data, catch series information, as well as catch history series.

Those recommendations are put forward and passed on to the assessment workshop, which is the second step in the process. The assessment analysts come together and look at the recommendations and address any additional data issues that may have arisen between the data workshop and the assessment workshop.

The analysts produce preliminary runs, using a variety of models, and at the workshop they get together and we discuss and decide what we believe would be the most representative model and the most appropriate models, given the data that we have to work with.

Finally, after that is completed, we have a review workshop, which is an independent peer review. This year our review panel had five members on it, three people selected from the Center for Independent Experts and two additional scientists that were selected due to their expertise in shark population dynamics and shark assessment work in particular.

What I am going to present for you guys here today is a brief summary. I know you were all provided the consensus summary report from the review panel, and I am going to just briefly go over things. This could take hours.

I know we don't have a lot of time, so I am going to start with the summary; and if you guys have specific questions afterwards, I'll do my best to answer those for you.

I am going to start off first with the large coastal shark assessment, and that's a complex assessment. The way this assessment was done, we are at 22 species that currently reside within the large coastal shark complex.

There were three groupings that were put together for this particular analysis. There was the complete LCS, 22 species, which is the original 22 species that were on that list since the beginning of management in 1993.

We also ran an assessment where we pulled out the 11 prohibited species, just looking at the ones that they are currently allowed to land, so there is an LCS with 11 species. And, finally, at the request of HMS, the analysts also produced a complex assessment, removing the prohibited species, as well as blacktip and sandbar, which make up between 80 and 90 percent of the fishery, to see what those remaining nine species contributed and where they fell out in the assessment.

Now, what you see here is the phased plot for the LCS, all 22 species, assessment. What you can see here is that the majority of these scenarios, the baseline as well as all the sensitivities currently, the majority of them fell within the not overfished/no overfishing quadrant of the phase plot.

You can see the top two left-hand points. Those represent the 2002 assessment values from the 2002 assessment. The top two represent the two points from the 2002 assessment, what was determined the baseline of values' model runs for the 2002 assessment.

One of them is with equal rating; the other is with inverse rating. That's those two upper left-hand points. What we can determine was the baseline scenario, which was with equal rating for this current assessment, is this pink triangle in the bottom right-hand quadrant, right where those dashed lines are.

And then all these other points around them are various scenarios, sensitivity analyses, as well as the two bottom – the most two bottom right points, where over there, that triangle and circle, represent the LCS minus -- for every species in the LCS minus prohibited blacktip and sandbar.

So, all three of the complexes come up with a not overfished/ not overfishing status from the analysts. Now, when it comes to the review panel, what the review panel thought from this, the review panel felt that given the complex nature of the complex as a whole, that the data that was used was the most scientifically sound, best available at the time; that the modeling methods that we used, which was the Basian Surplus Production Model, was appropriate, given the fact that we were analyzing 22 species at once.

However, they had very little confidence in the actual value of where these points lay on this phase plot; that is to say, they think that we used the best available data and the best available methods given the data. However, they are not sure that they necessarily believe that the status is not overfished/ no overfishing.

Their biggest issue was that we are trying to run an assessment model with 22 species crammed in together with very different life history parameters, and that somewhat may affect this, and they don't believe that this sort of assessment in a complex level is really appropriate for these species.

The review panel did not recommend using these values as not overfished/no overfishing status as a basis for management. This is the baseline, all 22 species of the LCS, and then this was the one LCS minus prohibited and LCS minus prohibited blacktip and sandbar.

They are all firmly in the not overfished/no overfishing; however due to the issues involved with the way this assessment was run with all these species, the review panel was not confident that this is actually where the status of stock lies, and they suggest to try to go to species-specific or at least more similar species groupings than this 22 group of species.

Are there any questions on LCS before I go on, the complex as a whole?

Next I'm going to talk about the sandbar shark assessment. This was a state-based age-structured production model. It was constructed – the final model was actually run by Liz Brooks of the Southeast Fisheries Science Center. The previous model was conducted by Enrique Cortes, also the Southeast Fisheries Science Center, but he is based in Panama City.

In addition to the complex for the past two assessments, we have also run species-specific assessments for blacktip and sandbar sharks, given that those are the most valuable. They have the highest catch within the fishery, as well as we have the best data available for them and allows us to do species-specific assessments.

What you see here is the phase plots. We have spawning stock biomass will be X, fishing along the Y, and what you see for sandbar is that all of the points from this time fall within the overfished/overfishing quadrant of the graph, the phase plots.

The baseline is right here. This point right here represents where we were in 2002. The results of the 2002 assessment had the status slightly below overfishing. So, as far as the review panel for sandbar sharks, the review panel believed that it was the best available data that was being used for this current assessment.

They also felt that the methods were appropriate, given the data. They also believed that given all the variety of sensitivities that were run and looking at a variety of issues that were brought up at the review workshop and additional analyses that were run by the analysts, that they believed that they have confidence in the status of the stock is overfished and overfishing and believe that management should use that information to do whatever is necessary to reverse this situation.

Next, we also did a blacktip stock assessment. Blacktip previously, 2002 and in the past, has been assessed as a single stock. Since the 2002 assessment, two genetics papers have come out, and the data workshop believed it was important to go ahead and break these out into blacktip Gulf and blacktip Atlantic.

I know you're more concerned about the Atlantic, but I am going to talk about the Gulf anyway. Blacktip Gulf accounts for the majority. About 80 percent of the catch of blacktips actually takes place in the Gulf.

But what you can see here is that the majority – this was also an age-structured state-based production model for blacktip in the Gulf. You can see that it said that blacktips were not overfished/no overfishing.

In terms of the review panel, the review panel felt that the best available data was used and that the modeling approach was appropriate, given the data. They also believed in the not overfished/no overfishing status. However, they didn't believe in the exact numbers of animals available that were coming out of the assessment.

Their recommendation was that they believed it's not overfished/no overfishing, but they don't believe there is information available that would indicate that the quota should be increased at any point. That's blacktip Gulf.

Let's move on to blacktip Atlantic. Blacktip Atlantic used a similar model, actually the exact same model as blacktip Gulf. We had a lot less information for the blacktip Atlantic. The base model for 2002 indicated not overfished/not overfishing.

However, when we looked at all the models that were investigated for blacktip Atlantic, they fell anywhere from overfished/overfishing to not overfished/no overfishing. We had splits within age-structured production models in both quadrants, as well as the surplus production models falling in both quadrants.

Therefore, the analysts felt that there wasn't enough information in the data to really come up with a decent answer on where we

thought the status of the stock of blacktip Atlantic fell. The analysts, therefore, did not recommend any sort of stock status and didn't put one forward for the review panel.

The review panel, after reviewing what was done by the analysts, agreed, and believed that we currently don't know what the status of the stock is for blacktips in the Atlantic, given the spread of information, and that we really need a lot more data to try and redefine this. That would be blacktip Atlantic.

So are the four main assessments, and if there are specific details – I just want to note that everything that was used, all the papers, the working documents, reports, everything is publicly available on the SEDAR Website. You're welcome to download anything you want – all of it is available – or I can send you anything you might be specifically interested in. It is a lot of paper.

**CHAIRMAN AUGUSTINE:** Dr. Pierce.

**DR. PIERCE:** All right, let's back up a little to the Large Coastal Shark Complex, which is the sandbar, the silky, the tiger, the blacktip, the bull, the spinner, the lemon, the nurse, the smooth hammerhead, the scalloped hammerhead, and the great hammerhead sharks.

I have to go through the list to remind myself what they are. Anyway, it's a pretty big shark complex, and you did a good job explaining how the assessment scientists attempted to deal with that.

I just need to make sure that I understand exactly where we stand with that particular part of the shark complex for which we are proposing some specific state management strategies. My understanding is, from your presentation and from the document, that the population, condition and the status of these particular sharks is very uncertain and that

this Board will not be in a position to have any useful advice regarding status of the stocks in the future as we move forward.

I am just making sure I'm stating this correctly, because it says very specifically in the document, among many things that is said, that results of the assessment – okay, "Recommendations for appropriate levels of future stock status are impossible at the current time."

Okay, "impossible at the current time", I assume that, indeed, is the central finding regarding this complex of sharks. What are the prospects for our improving that situation, meaning when might we be in a position to have some information we can use regarding our assessing stock status?

**CHAIRMAN AUGUSTINE:** Dr. Neer.

**DR. NEER:** Well, one of the big issues is the fact that it is a large complex of all these different species. The analysts have been in favor of trying to get more species-specific information.

The biggest way to do that is through like some of the stuff that was already in the public information document, species identification, better information at the dealer level, going back through logbooks and trying to recover species composition in the catch back through time.

These are all things that are being investigated at the time; however, I don't know how rapidly that is going to come to light to provide information right now. It's going to take some time with stuff they're working on.

There are several proposals that we have in right now that will look at some of these things specifically if we get the funding. As far as terms of trying to go forward with information, there is some information – you

know, we have information on historic catch, such that it is.

We have information on CPU landings, such that it is. We might be forced to have to use what information is available to get to that. Now, how this information is actually going to be translated into management, I can't speak to. That would be HMS.

I can only tell you that we would like to see better data and more species-specific information to help us try and resolve some of these complex issues.

**DR. PIERCE:** Okay, so that suggests to me, then, that, certainly, not in the near future – okay, so nothing in the near future and maybe long term something might appear. As a consequence, we will be obliged, I suspect, to move forward with management measures that would pertain to the large coastal shark complex itself, all the species combined, and we will be obliged to be guided by the sort of advice that's provided up on the screen right now? Okay.

**CHAIRMAN AUGUSTINE:** Dr. Daniel.

**DR. LOUIS DANIEL:** Yes, kind of following up on Dr. Pierce's comments a little bit, one of the concerns, I guess, that some of us have is the significant change from the last assessment to this assessment.

When NMFS last promulgated shark regulations, the large coastal complex was overfished and overfishing. Sandbars were not overfished, slightly overfishing. Blacktips were nearly rebuilt, if not rebuilt. I can't remember if it was exactly classified as that.

So, with sharks, with the longevity, the age at maturity, the reproductive capacity, three years later every complex is shifted and flip-flopped, to where now sandbars are apparently in pretty deep trouble, according

to the assessment, blacktips are unknown now, and the large coastal complex is fine.

So, what comfort level should we have with any of this and the overall question? Then, a couple of other questions are what is – the sandbar life history information was changed, significantly lowering the productivity of sandbars, based on some series of data, and I would be curious to know where that data came from and the soundness of those data and the peer review that information went through.

Secondly, the information should contain the best available data, and I understand that there is significant aging information that is available that wasn't used. Can you help me on those three points?

**CHAIRMAN AUGUSTINE:** Dr. Neer.

**DR. NEER:** Okay, first, to address the issue of comfort level, yes, the status of the stock has changed, but the way we do the entire assessments has changed. The analysts and the review panel spent quite a bit of time trying to get at that issue of why things have changed from one time to the other.

Two things happened. This time around, all levels of the assessment were given much greater scrutiny than they have ever received in the past. The prior assessments were run where we had three or four days, and we had ten people in a room, and we talked to people who brought some datasets in, and we took them at face value.

The analysts went back and conducted the assessments on their own. That was three or four people working on stuff, and that's how the assessments were done.

Now that we're following the SEDAR process, every step of the way gets much more scrutiny. The data was much more scrutinized this time, the life history

information. Everything was taken a much greater look.

Any questions that arose at the analysts' perspective were handled again in a format where we had a lot more input from a variety of people to come up with the decisions. Nobody was making decisions on their own, which sometimes used to happen.

So overall in comfort level, we actually feel the most comfortable, of any of the assessments prior, in this one, due to the scrutiny that was given at each step of the process, the input that we received throughout the process from a lot of people involved.

In terms of comfort we're pretty confident that what was done, and the review panel agreed, that what was done, using the best available data at the time.

Now, that said, two of the things that have changed significantly between the 2002 assessment and this one, which came out of this process, was, one thing, an additional three years' worth of data, which does have some effect in the sandbar assessment specifically, because there was a downturn in many of the series from 2001 was the terminal year and the 2002 assessment to now.

But, even more overriding is that many of the data series changed; that is, they were standardized, they were combined, or they were excluded. So, even though we ran a continuity analysis, it wasn't a true continuity because a lot of the data received different treatment.

Much of the data – when the previous assessments came through, they were raw datasets, nominal series, and that is all we used. This year all the data were standardized, using a similar standardization method, tried to take out some of the

vagaries and uncertainty involved in the variety of the series that we had, to try and really see if we truly looking at the indices over time and the trends over time.

So, that was one of the main overriding differences between that and now, which we believe contributed significantly to the changing of the status of the stock.

The sandbar life history question that you had, the maturity ojive that was used in 2002 and the one that was used now are different. The one that was used in 2006, we were unaware of it in 2002, which is why it was not used.

It was available, but we didn't know about it. It was brought to light. The maturity ojive is based off of Rebecca Merson's PhD dissertation work in 1998. She was at Woods Hole, I believe, but I am not 100 percent sure on that.

She did a directed reproductive study on sandbar sharks from – I believe here data was '95 to '98, but I could check on those dates for you. It was a three-year directed reproductive study where she produced an age-specific maturity ojive. We never had one of those.

In 2002 the maturity ojive was sort of cobbled together from information on sharks between this size and this size were 50 percent mature, and sharks between this size and this size were 75 percent mature.

They were text statements. In a publication, they were not age-specific maturity ojive. The one we used in 2002, the analysts sort of put together themselves. This one was felt to be a much more rigorous directed reproductive study and contained better information, and that's what the life history group decided on.

That's where the maturity ojive came – her dissertation, that particular chapter is not

currently published yet, but it is available. She also reanalyzed the data for us. There was a question that – there was a combination of samples from the NMFS Reproductive Data Base, which was taken over 20 years, and then her three-year directed study.

There was an issue that might be skewing the maturity schedule, so after the data workshop, prior to the assessment workshop, she reanalyzed that data and separated those two series out for us. One of them produced a 50 percent maturity at 18; one of them produced a 50 percent maturity at 19. So we don't believe that was the issue.

**CHAIRMAN AUGUSTINE:** Wow, what an answer! Don't ask anymore question, Dr. Daniel. Back to you if you have another one. Go ahead, Dr. Daniel, one more follow up.

**DR. DANIEL:** And I appreciate that. Are those documents available on the SEDAR Website?

**DR. NEER:** Yes, it's Data Workshop Document 47. It was the original stuff that was used – the maturity ojive that was used initially and then her reanalysis was, I believe, Assessment Workshop Number 10. The original one was the thesis, and then the second one was when she broke those two series out and was also presented at the assessment workshop. Those are available online.

**DR. DANIEL:** All right, and about Jack's aging data?

**DR. NEER:** Yes, this aging data that people keep referring to, there is no actual aging data. What Jack had in the past provided us at the previous 2002 assessment was size classes, life stages, essentially,

juvenile, maturing, mature adults. They weren't age-specific.

Those animals were never aged directly. They were based on information he had, size to age. We did ask for that size class information this time. We just didn't get it.

**CHAIRMAN AUGUSTINE:** Thank you very much. Any questions to all of that? Mr. Calomo, please.

**MR. VITO CALOMO:** It's not really a question. I wanted to commend her on the fine presentation she made. It was precise and to the point. I didn't realize how many sharks there were, but she left out four sharks that I consider prevalent from Maine all the way to Florida that she didn't mention. They are used car salesmen, lawyers, bankers and insurance personnel.

**CHAIRMAN AUGUSTINE:** Does anyone in the room care to address those three or four species? Thank you, Mr. Calomo, that was a very light moment that we needed. Dr. Pierce is going to respond to that.

**DR. PIERCE:** On Page 16 of the report, again regarding the sandbars, there is some information regarding how long it will take to rebuild, and my question is this information regarding rebuilding; that is, rebuilding will occur in 2070; is that a new finding or has that been the general consensus for a while now?

Is this all new information that we need to digest as to rebuilding, fishing mortality levels that must be in place in order for us to get there in 2070? I note that the F value is 0.009, so it is obviously very low. And even with that very low F, I think my grandchildren might be pretty old by then.

**DR. NEER:** Yes, that is a new rebuilding schedule. I honestly can't remember – and Rusty could probably answer – whether

there was a rebuilding schedule put out in 2002 because of the overfishing but not overfished status.

I don't know if we even did projections in 2002 for sandbar. I don't believe we did, so this is all new information. Because of the status last time, we didn't do any projections forward, so obviously the status has changed according to this analysis, so we produced projections.

**CHAIRMAN AUGUSTINE:** Thank you, excellent presentation, by the way. Any further comments or questions from the Board? If not, we not we will move on to the next line item, which is Coastal Shark Advisory Panel Meeting Report.

#### ***COASTAL SHARKS ADVISORY PANEL MEETING REPORT***

And before I turn it over to Ruth on that, I would like to introduce you to our new chairman, Russell Hudson, who has taken over this group. He has been around in this area for an awful long time, and I won't say any more than that, Russell.

**MS. CHRISTIANSEN:** Thank you, Mr. Chairman. The first meeting of the new Coastal Sharks Advisory Panel was held July 19<sup>th</sup> in Baltimore and ten members of the AP were present at this meeting.

I am going to present a brief summary of some of the major issues that were discussed during this meeting, and then I will conclude my presentation with some finite recommendations that did come out of this AP meeting.

First, when discussing which sharks and/or species groups should be included in the Interstate FMP, the advisory panel could not reach agreement regarding which species or groups should be included. Some felt pelagic species, smooth dogfish, and deep

water sharks should not be included for management purposes, but for only for increased identification purposes.

It was felt that managing pelagic species only caught in state waters on rare occasions would be a waste of time. The other line of thought was that pelagic species and smooth dogfish should be included in the Interstate FMP for consistency. Including pelagic species now at this time avoids having to begin another brand new FMP at some point in the future.

There was broad agreement among the AP that critical nursery habitat areas should receive special protection. Non-consumptive activities, like shark dive tours, can be addressed on a case-by-case basis.

Some members of the AP felt that prohibiting federally permitted vessels from fishing in state waters in order to protect critical habitat areas discriminates against that user group. As you will recall, that was a suggestion from the public comment.

The AP identified three primary areas of concern regarding bycatch. This was the bycatch of prohibited species, the bycatch of sharks in other fisheries, and the bycatch of small-toothed sawfish.

Some members of the AP expressed concern over the credibility of the 2006 large coastal shark stock assessment results, but on the other hand, there were some other members of the AP that expressed confidence in that credibility and the credibility of the technical skills of the assessors and the reviewers.

So, at the end of the meeting, as Pat mentioned, Rusty Hudson was elected to Chair, and he is here to answer any questions that you may have. Claude Bain from Virginia was elected as the vice-chair.



The recommendations that came out of this meeting:

The Interstate FMP should contain commercial and recreational management measures at least as stringent as federal regulations. It was felt that simply duplicating measures removes the degree of authority and autonomy from the states.

States can always be more restrictive in their management measures if they feel that is the way to go. It was also brought up that the management board can give consideration to conservation equivalency, if a state requests that.

As a compliance requirement of the Interstate FMP, states should have mandatory reporting involving breaking out catch by species. It was felt among the AP members that proper identification is key to successful management.

It was felt that states should strive for a goal of 95 percent identification of all shark species. Again, the AP, in line with the public comment, felt that the development of an identification shark guide with the most common species caught, consideration should be given to its development.

The AP felt that encouraging each of the Gulf states to participate in the ASFMC Advisory Panel, technical committee and plan development team process would be a good idea. Encouraging such cooperation and adoption of complementary management measures could serve to greatly improve management of shark species throughout their range.

The AP has specific tasks for either the technical committee and/or the plan development team in the next steps of this FMP process.

They would like to be investigated the difference in dress weight conversion rates, the available information on bycatch of shark species in state waters, shark landings from each state over the last five years, and pounds of sharks caught by state vessels versus that caught by federal vessels.

The AP believes the Board should give consideration to requesting NMFS allocate a portion of the annual quota specifically to the states.

A few final recommendations coming out of the AP meeting: The Interstate FMP should adopt fork lengths for all its regulations, investigating the use of species-specific stock assessments for both permitted and prohibited species should be done. The AP felt that allowing states to extend regulations into federal waters is an unreasonable request. Thank you.

**CHAIRMAN AUGUSTINE:** Any questions? Mr. Himchak.

**MR. PETER HIMCHAK:** Mr. Chairman, perhaps this meeting is progressing too quickly for me. When was the advisory panel meeting date?

**MS. CHRISTIANSEN:** It was July 19<sup>th</sup>.

**MR. HIMCHAK:** July 19<sup>th</sup>. Did we get that report on the CD-Rom?

**MS. CHRISTIANSEN:** Yes.

**MR. HIMCHAK:** Okay. I had just one correction to be made. Going back to the February Proceedings, which I thought would be on the agenda for approval, our advisor to the Shark Advisory Panel is incorrectly stated in the Proceedings.

On Page 13 – and I talked to Tina about this earlier this morning, and it has been corrected in subsequent paperwork. But for

the record, Marty Buzas is the New Jersey commercial advisory panel member. It's a small point, but just to keep the record clear.

**CHAIRMAN AUGUSTINE:** We have noted that, thank you, Peter. Mr. Hudson would like to make a few comments.

**MR. RUSSELL HUDSON:** I'm Rusty Hudson with the directed shark fisheries. I represent the commercial fishermen that direct for sharks from Maine to Texas, probably for the last 15 years. I've been part of the SAW Shark Evaluation Workshop processes since 1996.

We did have, in the consensus statement of this latest assessment, a stakeholders' opinion. Having participated in the process, I saw some of the strengths and weaknesses. What we see with our sandbar fishery, since management started in '93, is a benefit for management for the stock.

But the way this model resulted with the sandbar output, they noted that approximately 100,000 of the animals are mature left in the population from Maine to Texas and shared with Mexico. Now, that doesn't mean that there's not animals of that size that aren't maturing.

That's the argument that NMFS is wanting to make. They're saying that roughly five out of six of our sandbar sharks that are adult sized are immature, and yet we don't see that. We see roughly five out of six on the boat that mature, and that is mostly what we target are adults.

With the sandbar assessment, we also felt by the age of maturity we had a little bit of problems with the Merson paper, the thesis from 1998, and its reliance on the data from '95.

Likewise, we felt that with the sandbar assessment, that the age to maturity could

have been kept at the 13 years that had been used previous, but there is a thing called the "selectivity curve" that is involved with the commercial catch.

That apparently is wrong, and that needs to be investigated. We feel that the observer data that came out in February, after the assessment workshop, indicated both in the Gulf of Mexico and the Atlantic side, that the sandbars that we're catching are averaging over 150 centimeters fork length across the board for the thousand, approximately, that they measured.

The reality is that if you go into the EFH stuff of NMFS' latest FMP, they used 150 centimeter total length as marking adult animals, roughly 20,000 of them that they have in their data base.

We feel that the assessment, even though they think it's better than 2002, isn't exactly showing the continuity, isn't showing the reality that we know. So, NMFS is proffering a quota, species-specific, on sandbar that will take shape over the next year or so, about the time this FMP will be constructed, which will essentially kill the directed shark fishery, particularly on the east coast of Florida – I mean, Florida as well as all the way up to North Carolina.

That is a problem, because we are already overrunning the quota because the catch rates got changed on the Atlantic side and was given to the Gulf side. The Gulf side isn't quite catching their quota, and we're overrunning ours.

We just seem to be catching a lot of big sandbars, and we catch them pretty regular. If we're able to, we would like to get NMFS to re-examine the sandbar assessment, and we're hoping that Dr. Thompson down in Southeast Fisheries will do that for us in time.

Otherwise, NMFS is wanting to engage on a three-to-four year assessment process, so that the next time that we're going to deal with any of this will be 2009 or 2010.

Likewise, Dr. Pierce brought up about the large coastals, there's nine species besides the blacktip and sandbar that are legally able to be caught, and I feel that most of those can be species-specific analyzed by that next workshop, but that will be too late for this FMP, also.

The fact is, is that those animals only account for roughly 10 percent of the annual quota that's taken. With the blacktip Atlantic side, I found a big problem with the fact that they did not have any of the gillnet landings, which were very much into the millions of pounds off the east coast of Florida back in the eighties. It just didn't, somehow, make it into the data base.

Likewise, we have this problem with this idea that this virgin population that existed in the seventies for sandbars is unrealistic when we know that the fishery for sandbars existed as far back as the 1930's and was detailed by Dr. Stewart Springer in some fantastic work that he did in the fifties and sixties.

So, in that sense of things, just like they caution about don't read too much into the large coastal shark rosy scenario or the Gulf of Mexico rosy scenario, but yet they want to just run with that sandbar thing, and the fact is that it accounts for a million-plus pounds, mostly adults, every year under management, and particularly since '97.

It was more than that before they cut the quota in half in '97 to be able to accelerate the population growth. We do have documents that indicate huge populations of juvenile sandbars, particular from Virginia up to Delaware Bay. That's the main area of nursery ground.

There are a lot of "sand sharks" that gets mixed in with smooth dogfish, and back to our big issue about landings and identification.

We are not asking you ought to manage, like, pelagics and stuff like that, but when it gets to the beach, and it is landed, we want to make sure that the spinys, the smooths, whatever, aren't mixed in with large coastals or small coastals or pelagics, and that the identification gets somehow cleaned up.

We believe that the Atlantic States can influence that. So, those are my comments.

**CHAIRMAN AUGUSTINE:** From the Board, are there any comments relative to Rusty's comments? Dr. Pierce.

**DR. PIERCE:** Thanks, Rusty. It's important for you to note that which I think we overlooked, and that is the stakeholder opinion that is provided in the consensus summary report that we reviewed a little while ago. So, thanks for that.

My question is regarding the sandbar sharks and some of the points that you made, is the technical report, in its report that it's going to provide next on the agenda, going to address one of the central issues that Rusty made, and that is the one shown on Page 29 – that's the second paragraph – that provides the directed shark fishery's perspective as to the accuracy of the assessments and some inconsistencies that they say exists?

I would greatly appreciate some comment from the assessment community regarding that particular point, since these are very important comments made by the stakeholders, and I would like to see them addressed in some way.

**CHAIRMAN AUGUSTINE:** Dr. Pierce, I think some of that is addressed, and Rusty's

concerns are addressed in the technical committee report, which is going to be following this, but, Dr. Neer, will you respond to that as briefly as you can.

**DR. NEER:** I could go point by point, but I won't. I'm just going to say that every comment that was brought up today by Rusty was also brought up at the review panel. Many of them were brought at the data workshop, as well as the assessment workshop.

He has participated in every single workshop throughout the process. The concerns were noted; they were discussed and taken into account as much as we thought reasonable and available with the given data.

**CHAIRMAN AUGUSTINE:** That's fair, thank you very much. Dr. Daniel.

**DR. DANIEL:** Thank you, Mr. Chairman. I guess a lot of this may be covered in the technical committee's report coming up. I mean, I'm not as comfortable with this as Dr. Neer is in terms of the concerns and the issues that are raised not only by the scientific community but by the stakeholders.

I think we all have concerns with the data, though, and certainly the high degree of unclassified sharks in many of the landings. I mean, in some states, 85 percent of the sharks are unclassified, so they are unknown.

That tends to relay a large degree of uncertainty in any of these results. NMFS, in the consolidated FMP, is making steps towards trying to deal with some of these identification problems by having dealers attend workshop to learn how to deal with them.

I think this is an opportunity for the Atlantic States to complement those measures in the consolidated FMP to try to help improve the identification problem that does exist, and I don't there is any question about that.

One of the things I think we need to be particularly cognizant of is the fact that the majority of the state waters is where the juveniles occur.

So when we start talking about a directed shark fishery, most of that occurs in federal waters in most jurisdictions, and that is, as I think Rusty or Julie pointed out, the Chesapeake/Delaware Bay areas, the areas where juvenile sharks are so important and the need to protect those. That was sort of the impetus behind putting together this Coastal Shark FMP, anyway.

I think what our task is – and I think Rusty would agree with me. I hope he does – that one of the opportunities we have here is this dress weight conversion is a big issue for the shark fishermen.

The fin ratio issue is a huge issue. The data quality and the identifications are huge issues that this Board has an opportunity to address, and so I think we need to take those into consideration as we move forward.

**CHAIRMAN AUGUSTINE:** Thank you, Dr. Daniel. Dr. Laney.

**DR. WILSON LANEY:** Thank you, Mr. Chairman. I just wanted to let the Board know, for the record, that the Cooperative Winter Tagging Cruise has been collecting data on all the Elasmobranchs that we encounter for about the last four or five years now.

We get, of course, mostly spiny dogfish, but we do encounter smooth dogfish. We have also caught a couple of juvenile thresher sharks. Those are about the only species

that we find out there during the wintertime. We do have those data, and they will be available to the National Marine Fisheries Service or anybody else that wants them.

**CHAIRMAN AUGUSTINE:** Thank you, Dr. Laney. I guess we will move on unless there are any other questions. Seeing no hands, thank you very much. On to Item 6, Coastal Shark Technical Committee Meeting Report, and we're going to give Ruth a break and Bob Beal is going to do that for us.

### ***COASTAL SHARKS TECHNICAL COMMITTEE MEETING REPORT***

**MR. ROBERT E. BEAL:** Thank you, Mr. Chairman. Due to a traveling glitch, Ruth was unable to attend the Coastal Shark Technical Committee Meeting, so I provided the staff support for that meeting.

Dr. Daniel and Dr. Pierce raised a couple of questions regarding or asking whether the technical committee looked into some of the technical issues associated with the stock assessment and data quality.

Well, this is the first time the group got together, and this is the first time a number of the folks on the technical committee heard the presentation on the status of large coastal sharks, so they didn't dive too far into that stock assessment.

I think if this Board wants to formalize some questions or tasks for that technical committee, we can get them back together and provide more detailed answers on the questions. This meeting was just essentially to get them up to speed on what the status of the science is and get them to know each other a little bit.

They also provided some comments on the public information document that was out. With that, I will go ahead and go through the

committee's comments on the public information document.

They heard the presentation similar to what the Board just heard from Julie Neer. The technical committee got a little bit more in depth into some of the technical details, but they didn't really provide comment.

They were mostly asking questions to kind of educate themselves and get them up to speed on the status of the science on coastal sharks. With that, I will go ahead and jump into their comments on the public information document.

The meeting was held July 25<sup>th</sup>. Eleven members of the committee were there, so it was a pretty good turnout of the group. They opted not to elect a chair or vice-chair at this time. They wanted to get to know each other a little bit better before they did that.

I facilitated the meeting and I am going to give this report. Hopefully, when they get back together the next time, they will elect a chair so you guys can have technical representation at this meeting and provide the feedback from the group.

Going into the public information document comments, Issue 1, which is associated with the goals and objectives of the Coastal Shark FMP, they felt very comfortable with the goals and objectives as they were listed there.

They did suggest one additional comment to the bycatch objective, which I think is the third objective in the document. They felt language should be added, which is up on the screen, which is "and to the extent bycatch cannot be avoided, minimize the mortality of such bycatch".

I think that was similar to some public comment that was received during the public hearings or as written comment, as well.

The second issue, which is how should the state regulations complement or relate to the federal regulations that are in place, the technical committee made a couple of comments on that.

They felt that the state regulations should not be identical to the federal regulations. They felt that they should be complementary in nature. They felt that some of the issues that were brought up by the group a few minutes ago, such as juveniles and nursery area and habitat issues, they felt those issues are unique to state waters, and the states have a lot more control and authority over the nursery areas and the important areas than the federal waters.

They felt the state regulations would have to differ somewhat from the federal regulations, but hopefully they would be complementary. The technical committee did urge that the states put in regulations that are as consistent as possible up and down the coast.

They felt it better to have a fairly consistent set of regulations rather than a patchwork of regulations up and down the coast. That lends in the consistency for fishermen and the stock assessment folks and seems to just kind of make sense.

The second bullet up there is the habitat delineation issue, which they felt was probably one of the most important components of the Interstate Fishery Management Plan.

They felt that the regulations we can mirror or complement what the federal regulations currently are or what they will be in the Comprehensive Fishery Management Plan, but they felt that the habitat issues are

something that the Commission really needed to take the lead on and deal with nursery areas.

The third comment was provided by one of the members of the technical committee. They felt there are some opportunities where states may actually be allowed to be less restrictive if there is sufficient biological information within that state to show that the population of the species of sharks is in an okay condition within their state waters.

The third issue is dealing with what shark species or groups of species should be included in the Interstate Fishery Management Plan. The technical committee felt that all the shark species and groups should be included in the interstate plan -- all the groups that are included in the federal fishery management plan.

They did bring up the idea of smooth dogfish, which is not included in the list that went out in the public information document. The technical committee felt that the Commission is going to need to deal with smooth dogfish sooner or later, was kind of the bottom line.

They did have some concerns that if it was lumped into this Interstate Fishery Management Plan, that that may consume all the energy of the fishermen and public during public comment periods, and we may dilute the effectiveness of the overall Interstate Coastal Shark Plan if we included smooth dogfish in this plan.

They felt it is a politically charged issue and something that is very important to some of the states, but they said maybe a sequential process would be best, where the Board handles the coastal sharks through this current FMP that they are discussing right now, and then initiate a Smooth Dogfish Plan once this Coastal Shark Plan has been finalized.

The technical committee also commented that consideration should be made for regrouping the coastal shark species. They felt that there are some life history issues that may create a common ground where we can create new groupings of sharks.

We would probably end up with more groupings of sharks, but the groupings would have similar life histories; and in their opinion it made more sense to manage them together, given the ability or the fishing pressure that those groups of animals could handle.

There was also some discussion about adding some of the large coastal species to the prohibited species list. They felt that just the life history of those animals was such that some of the species couldn't take very much fishing pressure.

They felt we may want to put them on the prohibited species, given their current status and the fact their life history is that they don't reproduce quickly and they are unable to rebuild stocks very fast with any fishing pressure at all.

Issue 4 is what other issues should be included in the document. They commented that finning should be included in the Interstate Fishery Management Plan, or language prohibiting finning should be included, as well as language on protected species interaction.

They felt that the state scientific and public display permitting issue should match the federal regulations. It is a state and federal issue. They felt that one of the things we're really missing, which is clear in the stock assessment information, are detailed landings' information, and that should be required, that the states collect that within the Interstate Fishery Management Plan.

Tournaments should also match the federal regulations that are in place right now. They felt that is a big issue, and a number of sharks are landed there, so we should track the state tournaments by matching the federal regulations on tournaments. They felt that the state waters should close when federal waters close due to quota being landed.

Issue Number 5 is what recommendations should be made to the Secretary of Commerce included in the Interstate Fishery Management Plan. They felt it was kind of premature for them to comment on this. They wanted to see how the language unfolded in the interstate plan before they did anything, so they had no comment on Issue 5.

The other issue that was brought up by the technical committee was that the ideal arrangement for coastal sharks would be species-specific stock assessments.

They realized that there are data issues; there are life history issues, there are identification issues, and a number of things that prevent this from happening, but this should be the goal that all the shark managers are working towards in their data collection programs, which is kind of species-specific stock assessments for all these animals and creating specific management programs for the animals as time goes on.

That is a brief summary of what the technical committee came up with as far as recommendations relating to the public information document.

Again, if there are specific questions this Board feels they would like some advice from the technical committee on, such as the issues that Dr. Daniel and Dr. Pierce brought up about the quality of the data or the status of the stock assessment information or even

discussions of when we could expect the large coastal shark assessment and those sorts of things, that's the responsibility of this Board to task that technical committee with doing. We have funding to get them back together this year, if that's the course this Board chooses to take.

**CHAIRMAN AUGUSTINE:** Thank you, Mr. Beal. Any questions from the Board? Dr. Daniel.

**DR. DANIEL:** Thank you for that report, Bob. I guess three things I would like to see the technical committee look at that I think would be very helpful for us. Part of it is from the advisory panel's recommendations.

The dress weight conversion – I think it's 1.39 or 2. That's the debate, and I have no clue which is right and which one to recommend. The fin weight ratio has created a lot of real problems, and the historical information I think was sparse, to put it kindly.

North Carolina is in the process of working on a fishery resources grant with one of our directed shark fishermen and working with the Division of Marine Fisheries, and we will be developing that information over the next – I'm not sure when that will be available, but I'd love for the technical committee to take a look at that and make a recommendation to us.

Most importantly, though, because of the influence on the sandbar shark assessment, the changes to the maturity ojive – and I appreciate Julie's explanation of the difference between the '02 and the '06 assessments, but I'm still a little bit nervous about how high that has been raised and the impacts that had on our opinion of the status of sandbar sharks.

**CHAIRMAN AUGUSTINE:** Respond to that, please, Dr. Neer.

**DR. NEER:** I have no problem with the technical committee looking up any of these questions. I just wanted to make one brief comment about that, is that we did run a sensitivity analysis where we used the old maturity ojive for sandbar, and it still came up overfished/overfishing.

**CHAIRMAN AUGUSTINE:** Good, and your third? That was it?

**DR. DANIEL:** The dress weight conversion, the fin ratio and the sandbar maturity ojive would be three things I would like to hear from the technical committee on, if the Board agrees with those recommendations.

**CHAIRMAN AUGUSTINE:** Any questions from the Board on those three issues? Seeing nodding of heads, we will have the technical committee review those. Any further questions or comments from the Board? Dr. Daniel, that's all you wanted to add at this particular point in time?

**DR. DANIEL:** On the technical report, I have some recommendations for the Secretary that I think we need to consider in the actual plan.

**CHAIRMAN AUGUSTINE:** Okay, seeing no further comments, if the Board doesn't mind, Dr. Daniel why don't you go forward with that and try to make it as clear as you can so we know exactly what the action is that we're being asked to do.

**DR. DANIEL:** I'll do my absolute best, Mr. Chairman. I think we need to have a recommendation to the Secretary on how they manage the quotas. The problem that we're facing right now with all the HMS-managed species, but sharks in particular, is the date is set to open the fishery and a date is set to close the fishery.



In the current time we're overrunning the quota every time. What that is resulting in is no fisheries in subsequent years. If this Board and the ASMFC doesn't take this opportunity to try to ask the Secretary to start implementing real-time reporting requirements for HMS species, we're not going to have any fishery, and the point of this Board will be moot.

To give you an example, in the first trimester in the South Atlantic, the quota was approximately 300,000 pounds. The fishery opening January 1; it closed some time in March, I think.

We found out a month or so later that the landings were 700,000 pounds, so 240 percent of the quota had been retained. Now, NMFS is looking into those numbers to see if there are some problems. There don't appear to be, but there may be some adjustments to that, but that means no fish trimester in January of '07.

In September, we open the fishery on September 1 with 100,000 pounds and it closes October 3<sup>rd</sup>. With a 4,000 pound trip limit, if one trip is landed per day, the quota will be exceeded, and we will again have no season in the third trimester of '07.

I think it is critical for this plan to have a recommendation to the Secretary to begin real-time quota monitoring, so that we can adequately monitor the quotas not only for large coastals but small coastals as well.

The only other issue I had, Mr. Chairman, for our amendment is to develop some recommendations for the states to consider to try to improve the species identification problem in complementing the federal requirement in the consolidated FMP for federal dealers.

It doesn't deal with the state dealers; it doesn't deal with the fishermen. To respond

to the AP, NMFS has put out a very nice identification guide for sharks in the HMS species that we may be able to get and use as well, but I don't think we need to reinvent the wheel on that end.

So, that's my major point, Mr. Chairman, and would be glad to answer any questions that anybody may have.

**CHAIRMAN AUGUSTINE:** That was very clearly stated, Dr. Daniel. There is no question we have concern about what you – at least I have concern about what you have identified as a major problem. Are there any comments from the Board relative to what Dr. Daniel's comments were?

**MS. KARYL K. BREWSTER-GEISZ:** Thank you, Mr. Chairman. I don't have a name tag, but I'm Karyl Brewster-Geisz from HMS. I do want to state that we would love to have real-time quota monitoring in the shark fishery. I don't think NMFS is against that.

I do want to clarify one thing that Louis said. He said that the quota has gone over since we have set the date and closed the date ahead of time, and that is incorrect. Since we have started this system, except for this one time, we've pretty much been under.

There have been other times that we have gone over by one or two metric tons, but nothing major. Before this system, we were going over every single time by a lot of metric tons.

This latest overage worries us a lot, and we are concerned about, and we are looking into it and trying to come up with a plan. But I did want to say we do want real-time quota monitoring. We support that.

**CHAIRMAN AUGUSTINE:** Thank you, would you need a letter from us to assist you

along those lines, to give you support; or, just us having stated it on the record, is that adequate to let you folks know that we are interested in moving in that direction?

**MS. BREWSTER-GEISZ:** I think having it stated right now is adequate. Certainly, a letter would help us.

**CHAIRMAN AUGUSTINE:** Okay, fine. Mr. Beal, could we form up a letter? I am not sure it has to be approved by the Board, but if we have a consensus from the Board as to the theme of what we're trying to do in terms of supporting what Dr. Daniel put on the record and NMFS has responded to that they would appreciate that kind of support, I don't think we would have to have the Board approve it other than if you say, "Okay, we'll do it", we will move it to the ISFMP to get approval from them and then forward it on to NMFS accordingly.

**MR. BEAL:** Yes, obviously, we can draft a letter. I think if this Board feels comfortable with the drafting of that letter and either Vince or Pres, as the leadership of the Commission, signing that letter and sending it off to the National Marine Fisheries Service, that's fine.

I don't think it has to move forward to the Policy Board. The reality is this group is more or less the Policy Board, anyway. If the Coastal Board is comfortable with it, we'll send it on.

**CHAIRMAN AUGUSTINE:** It appears everybody is comfortable with that? They all said, "Yes". Thank you. We're going to turn it back over to Ruth. She has more ideas to put on the agenda.

**MS. CHRISTIANSEN:** No, I don't have anymore ideas. What I am looking for now -- in the development of this FMP process, what I need now from the Board is some kind of direction for the plan development

team, so we can get moving on the initial stages of the first draft of the Interstate FMP. If there is anything specific that you want the PDT to include, I just need some direction from the Board for our next step.

**CHAIRMAN AUGUSTINE:** Any comments from the Board? Dr. Pierce.

**DR. PIERCE:** It's a reasonable request from Ruth. She needs some guidance as to how to proceed. As I recall correctly -- and I hope I do -- I didn't have any objections to the recommendations that the technical committee offered up regarding the issues that we brought to public hearing, as described very well in the PID.

I would think, at a minimum, that the plan development team should move forward with the development of a draft document for us to review that would reflect those specific recommendations.

**CHAIRMAN AUGUSTINE:** Thank you. Mr. Smith.

**MR. ERIC SMITH:** Thanks. Dr. Pierce, obviously, took the easy one, but I had much the same kind of thought. It's really impossible for the detail of those kind of reports to sit here and say, well, Number 4, 7, 15, and 18.

What would be helpful, but we don't have time to do it on the fly here, is to have a matrix, which is the technical committee recommendations, the advisory panel recommendations, and you map them.

When there is consistency between the two, obviously, that one ought to be in there; and when there is an inconsistency, that's the ones we ought to be debating and deciding is there a good reason to do the technical recommendation versus not do an advisory panel recommendation or vice versa.

Again, that means we have to delay, to some extent, moving forward, but, clearly, as David points out – and as I’m embellishing, I guess – if there is a consistency between the technical committee’s recommendation and advisory panel, that could be in bound, and that should, obviously, be a starting point.

Then how the Board deals with differences may have to wait – it may need some justification, some writing or a matrix that says, “Here is the reason for this one; here is the reason for that one. There is an inconsistency; what does the Board want to do?” Then we take that up at the annual meeting.

**CHAIRMAN AUGUSTINE:** Mr. Beal.

**MR. BEAL:** I think, based on what David and Eric have said, we can work with the plan development team and start moving forward with developing two things; the matrix that Eric asked about, as well as start putting some meat on the bones of the outline of an Interstate FMP.

We will get that back to this Board at the annual meeting. I think the other thing that has come up in the past, and I am not sure what the status of it is, is the timing of the approval of this Interstate Fishery Management Plan.

At one point, I think a Board member brought up the fact that the small coastal shark assessment isn’t going to be done until – Julie, I am not sure if you know – the middle of 2007, I believe.

**DR. NEER:** Yes, the review will be completed in August of ’07. February, May and August are the three workshops.

**MR. BEAL:** Okay, so a year from now we’ll have more information on small coastal sharks. At one point, one Board

member brought up the notion of waiting until we get that small coastal shark information, and then we can put the final touches on the draft document to go out to public hearing more than a year from now.

The other idea is to go ahead and move forward with the information that we do have, addressing some of the issues that have been brought up today, developing sort of the basis for complementary action in state waters relative to what is going on in federal waters.

Then, as more scientific information becomes available, through the addendum process or some streamlined process implement or modify our Interstate FMP to react to that information. It is up to this group as to what speed they want to move forward.

**CHAIRMAN AUGUSTINE:** Dr. Pierce.

**DR. PIERCE:** I agree with the suggestion made by Eric about the comparison. When there is difference, let’s flesh that out so we can have more in-depth discussion about it. I also agree with the approach that Bob Beal suggested.

What I would like the technical committee to do, in concert with the plan development team, is also to put more effort into – and this, I think, was reflected in the recommendation – into the habitat considerations. It seemed to me that there was an emphasis on habitat in at least one of those recommendations.

In light of my knowledge of Tampa Bay, which came about in a rather strange way, knowledge that Tampa Bay is a phenomenal nursery area for juvenile sharks – or for sharks; juveniles specifically – I’ve gained a greater appreciation for the importance of habitat.

I need to have a better understanding, as does the Board, a better understanding of where we might have on the east coast, Florida up through wherever, where we do have these specific, very important estuarine areas or bays that would require some special attention for protection of habitat and habitat areas of particular concern. So, I would like that focus.

**CHAIRMAN AUGUSTINE:** Thank you, Dr. Pierce. Mr. Adler.

**MR. WILLIAM A. ADLER:** Thank you, Mr. Chairman. In the public hearings that we had on this thing, I noticed that there was some comments about some type of an identification process to educate everybody on all these sharks, including the used car salesman.

I don't know if that's the type of thing that would go into a fishery management plan or whether it would just be done outside of the process. I think that was an excellent suggestion, because there is just so much of this.

Trying to figure out which one is which, I think some effort has to be put into that particular thing, but I don't know if that is the type of thing that goes into a plan or is that done outside; I'm not sure.

**CHAIRMAN AUGUSTINE:** Thank you. Bob, do you want to respond to that?

**MR. BEAL:** I think we can definitely detail the need for identification or improving the identification within our fishery management plan. I think the National Marine Fisheries Service has conducted workshops in the past and those sorts of things.

If those need to occur at the state level, they're not really part of a fishery

management plan. They're more of a public outreach and educational process.

**CHAIRMAN AUGUSTINE:** Thank you. The book that they have put out is absolutely great, if any of you have seen it. It sells for about twenty dollars. It has I have no idea how many species of fish in it, but it is quite a nice, bound book, with flip pages and so on.

The only problem I have with it is it jumps all over the place. Unless you know specifically what you're looking for, they use the Latin terms that I have a difficult time with English, let alone the language of Latin.

But, if you have a chance to look at that book, it's a very good document. The National Marine Fisheries Service may make one available to you if you ask them or bend their arm. Let's go on to Mr. Miller.

**MR. ROY MILLER:** Thank you, Mr. Chairman. I would just urge that in the preparation of the FMP some consideration be given to a topic that Dr. Pierce touched on. Specifically concerning habitat, it's well known, for instance, that Delaware Bay is a pupping ground for sandbar sharks.

If we accept the sandbar shark assessment at face value that they are overfished and overfishing is occurring, I have to look at the management of sandbar sharks in our area, Chesapeake Bay, too, probably, and conclude that most of the mortality prosecuted on sandbar sharks is on immature sandbar sharks as opposed to -- I believe I heard the statement today from Mr. Hudson about mature sandbar sharks comprising the bulk of the catch.

Well, in our area, it's primarily immature sharks. So the FMP, I think, should take that into consideration and ultimately may want to consider different recommendations

for immature sandbar sharks and perhaps other species as well that are subject to overfishing. I think that has been kind of overlooked in our discussion today. Thank you.

**CHAIRMAN AUGUSTINE:** Good point, Mr. Miller. Dr. Daniel.

**DR. DANIEL:** And just following up David and Roy's points, I agree with Roy. The concerns that we really have in state waters are with the sandbars, the blacktips, and I think with dusky's. NMFS is particularly concerned with dusky's.

But if you will look at Steve Branstetter, for about a ten-year period there did some observer work all the way up to – I think he went all the way up to Delaware or Chesapeake Bay, at least. There is a lot of very good habitat information contained in those observer reports from the Gulf and South Atlantic Foundation that the technical committee -- I'm sure some of them are probably aware of that information, but it would be very helpful the EFH discussion.

Mr. Chairman, real quickly, I would like to ask a question just to clarify the record, because I understood that last year, in the third trimester we went over. The South Atlantic went over the quota, and so this upcoming third trimester is a lowered quota because we did go over last third trimester. Is that true?

**CHAIRMAN AUGUSTINE:** Karyl.

**MS. BREWSTER-GEISZ:** I will check and get right back to you.

**CHAIRMAN AUGUSTINE:** Does that answer your question, Dr. Daniel?

**DR. DANIEL:** It will, thank you.

**CHAIRMAN AUGUSTINE:** Okay, thank you very much. Any further comments or questions around the table? Dr. Laney.

**DR. LANEY:** Thank you, Mr. Chairman. I wanted to ask Mr. Smith if he would object to adding a third column to the recommendation comparison matrix, to just add a column for public comments that we received during the public review process?

**CHAIRMAN AUGUSTINE:** Mr. Smith.

**MR. SMITH:** I didn't realize I had such an awesome power here, but it was not my matrix. It's the Board's matrix and my general comment is, yes, sure. My more detailed comment, thinking about it for another couple of seconds, is they seem to be a little bit broader afield from the kinds of recommendations we had in the technical committee and the AP, and it might make for a very complicated list.

I was kind of hoping that the advisory panel report was the first filter on the public comments, and maybe the technical committee report was, too; and if we got a synchrony between those two groups that we have empowered, that would cull through the broad range of the public comments.

If there was a good public comment, it probably was endorsed by the two groups. However, if we stand to miss something, maybe we ought to look at it in that way, too.

I just don't want to complicate things so badly that we make – in effect, we could come back with a matrix that sounded like the three reports we heard today, and we're still trying to figure out what to really put in there.

**CHAIRMAN AUGUSTINE:** I don't think we're going to do that, Mr. Smith. I think what we're going to do is we'll look at the

two lists that you suggested. I think we're very fortunate that we do have Rusty amongst us, and he has a very strong viewpoint and is well versed on the commercial side and impacts that we're having on the fishery from his point of view.

So, if it looks like it's going to be too complicated, I think it will smoke and fog up the water, we're going to go back to ground zero, and it doesn't make sense to do that. Dr. Laney, do you have a follow-on to that?

**DR. LANEY:** Yes, sir. Eric, I certainly agree with what you just said. It wasn't my intent that every single issue raised by the public be included in the matrix. What I was thinking was you've got a column for AP and a column for TC, and then we add a third column for public.

And if there was public comment on the particular recommendations that the AP or TC made, what was their position on it, which way did they fall on it, just to give us some sense of how the public felt on those issues as well.

**CHAIRMAN AUGUSTINE:** Thank you for that clarification. Ruth says she can do that, so she will keep it as unfoggy as possible, and I think we will move along with that. Any further comments from the Board? Yes, Karyl.

**MS. BREWSTER-GEISZ:** I did look up what Louis said, and he is correct. The second season last year, the South Atlantic went under the quota by 13 metric tons; and in the third trimester, which is what Louis asked about, we did go over by almost 83 metric tons.

I also want to clarify that this is one of the first times we're open during that time of the year, so we weren't sure how many sharks would be caught at that time.

I also had a couple of comments on what the Board is discussing. I want to thank all the positive comments I've heard about the Shark ID Guide or the HMS ID Guide we put together. We can certainly provide copies to members of the Board, if you would like to see them. I don't have them now, but we can send them to you.

Regarding habitat in the FMP, we just released the FEIS about a month ago, and we're working on the rule. We are working on Shark Identification Workshops for dealers. I appreciate the support from Louis and others on that.

We also worked on the first stage of looking at essential fish habitat, relooking at essential fish habitat, and we are going to be working on completing that second stage, which would be modifying any EFH-Habitat Area of Particular Concerns, for all the shark species in another rulemaking coming right up.

And, also in regard to timing of what ASMFC is working on, I do want to note that NMFS does not have the luxury of waiting another year until the small coastals comes out. We need to work now. We have the results for the large coastals.

We also have a dusky shark assessment that came out recently, which showed dusky sharks are overfished with overfishing, despite the fact that dusky sharks have been prohibited since 1999.

We're also looking the Canadian Porbeagle Stock Assessment, and we have not yet made a determination on that. If you look at the Canadian Stock Assessment, it looks like Porbeagle sharks will be overfished, not overfishing but overfished.

NMFS needs to work now on large coastal, and we really appreciate the support, because as you have all noted, habitat is

really important and habitat is mostly within state waters. Thank you.

**CHAIRMAN AUGUSTINE:** Thank you. Any further comments or questions at this particular point in time? Seeing none, we're going to take a ten-minute break.

(Whereupon, a recess was taken.)

**CHAIRMAN AUGUSTINE:** All right, I'd like to call the Board back to order. We are going to add a line item. Peter Himchak noted that there was a correction to the Proceedings, and we did not put the Proceedings on the agenda for action to approve the Proceedings of our February 20<sup>th</sup> meeting.

Are there any objections to the Proceedings, with the corrected change that Mr. Himchak made? Are there any other corrections or additions to the Proceedings of the February 20<sup>th</sup> meeting? Seeing none, the Proceedings are approved.

We will move forward to Item 7, Update on the 2006 Spiny Dogfish Assessment, SARC 43, so, Dr. Rago, with no further ado, please.

#### ***UPDATE ON 2006 SPINY DOGFISH ASSESSMENT***

**DR. PAUL RAGO:** Thank you, Mr. Chairman. It's always nice to be here. It's good to see some old friends and hopefully not too many old enemies and so forth. Peter Himchak, an old friend, mentioned that we were running way ahead of schedule and it was going very fast.

One thing about dogfish is that it almost certainly will slow things down. I noted in the newspaper this morning that Dell is recalling 4.1 million laptops between 2004 and 2006. This is one of them, so in case this thing bursts into flames spontaneously, I

don't want anybody to attribute that to the actions of Dave Pierce.

The dogfish assessment, this is an update on the report for 2006. It represents the work of the SAW. The documents are listed on the front page here and are available on the web in terms of the report of the Center report, the Center reference document, as well as the report of the CIE Panel.

As was noted with the SEDAR process, there's kind of a greater emphasis on external peer reviews through the Center of Independent Experts, and this emphasis is more focused on the science and not necessarily on the management advice.

It consists of a consensus summary from the Chair, as well as a set of individual reports. This management advice is then to be developed by the technical committees, working through the various working groups and plan development teams and so forth.

The SARC was reviewed this time by Dr. Robin Cook from Scotland, Mark Maunder who is with the Tuna Commission out in La Hoya, and Mike Armstrong who is with the Lowestoft Labs.

I have noted on all of these items here a star at the bottom, so these are elements that have been presented previously, both to the New England and to the Mid-Atlantic Councils and so forth, so I just wanted to say these are using the same pieces of information.

I did reorder the presentation a bit and while everybody else was talking, I was expanding it because I realized that the fonts may be too small for some in the back there. At any rate, that's what that little red star means in the bottom and nothing else.

So, what's new in SARC 43? One of the big things was we took a much more thorough

look at the discards. We revised the estimation method that was consistent with the SBRM, the standardized bycatch reporting methodology. That's the topic for next week if anybody wants to come.

The SSC will be reviewing the methodology for these approaches and so forth. We incorporated the size and the sex-specific information. Over the years, about 250,000 dogfish lengths have been taken over time.

These were fully incorporated in terms of estimating not only the landings but also the total discards. These had major effects on the selectivity patterns for the resource in terms of how the force of mortality is distributed across length categories. Then the mortality rates have been updated and so forth.

We updated the reference points, and I'll tell you a little bit about both the biomass and the fishing mortality reference points and so forth. The big news, of course, was the 2006 survey, which was very high.

The concentration raised the three-year average, which is the metric used to measure the resource status, to 106,000 metric tons, which is just above the 100,000 threshold for this resource. We used more Canadian data. We didn't use all the Canadian data.

We don't have a coordinated Canadian assessment at this point, but some of the information, which we did have, was very useful. Then, of course, one of the issues that is of extremely strong interest to ASMFC and others is the changes in the nearshore abundance and the change in the sex ratio of males and females.

So, here's the bottom line. Is it overfished? No, the stock, as I said, just increased over the 100,000 metric ton threshold on the basis of the three-year average. There is

considerable uncertainty in that estimate, and we will talk about that.

Is overfishing occurring? No, the management measures that have reduced the directed landings or the landing themselves, as well as those measures in terms of effort reduction, which have reduced discards, resulted in a fishing mortality rate that's below the threshold.

There are number of CIE review comments, and I highlight these first because these are more or less the bottom-line conclusions and the comments by external panel on the veracity, the validity of the data.

The main concerns in this stock are, first, the reduction in female abundance, the imbalance of the sex ratio and perhaps the longer-term problem is the low estimates of recent recruitment. Discards are an important factor, and as I said, we've incorporated them much more fully in this assessment than we have in the past.

The current biomass estimates are strongly influenced – and this is, again, quoting from the report of the CIE – by the very large survey estimate in 2006. They consider it unlikely to be reliable and it's probably optimistic on the status of the resource.

As many of you who have participated or had periodic reviews on the status of spiny dogfish have known in the past, one of the major concerns about the dynamics of this resource, in terms of its long-term perspective, has been the contraction of the length range of the stock.

This is reflecting two factors; one being the reduction in the average length of females from the result of the directed fishery in the nearshore areas, and the second is the reduction in recruitment that has occurred.

This is one that is sort of a propagating problem as a result of roughly ten years of



very low recruitment. Immature spiny dogfish do not recruit to the bottom; that is, they are not available to the bottom gear immediately after birth, so we always get an imperfect estimate of this.

However, what we have seen over time is that there is a progressive contraction of the size range, particularly in the 60 centimeter range right now, where those fish that would have been contributing to that size range that were born roughly eight to ten years ago are just not as abundant in the present.

So, the CIE felt that we did a reasonable job in terms of characterizing the commercial and recreational catch discards; and the uncertainty of those landings, the discards are important in terms of they comprise a large proportion of the total removals.

There was relatively little effect of the recreational catch on the overall assessment results. As you know, we use a swept-area biomass method to estimate the biomass and relate that to landings in terms of a fishing mortality rate.

They reviewed that information, ran a couple of models that they proposed, and one of the reviewers, Mark Maunder, did a fair amount of analysis on those and concluded that the approach we're using is appropriate for making an assessment on the resource.

With respect to stock status, they gave some indications of some problems. These CIE reports are a lot like reports Bernanke might give from the Federal Reserve Board. There is a little bit of something for everybody in them.

There are some issues with the threshold and the target. The estimate of the fishing mortality right now of 0.13 is close to the threshold level of 0.11. However, it's important – and this is a major change in

this assessment, is that we do incorporate the size-specific selectivity that changes fairly rapidly or dramatically over time.

I'll give you a few examples of how that occurs. It occurs not only through the differential pattern of landings but also through differential encounters with various types of fisheries where they are discarded, which is everywhere, I guess.

It's not clear if the reference points are appropriate to provide scientifically credible advice. They thought that the threshold was adequate, but there was substantial uncertainty about the reliability of the target.

The reference point for mortality is very sensitive, as I mentioned, to the selectivity pattern, and so the usual "interpret with considerable care".

Then the working group – here's the ying and the yang of the projections – they recommended the approach we used in SAW 37, using a length-based projection model, and there was consistent – and they urged that the model be consistent with other models used in the reference point taken.

Then they made a conclusion that the projections do not provide a quantitative basis for management, so that was the report of the CIE reviewers. So, what I'd like to do is just give a little background in terms of how they arrived at those conclusions, and, Pat, pull the plug on me if I start to talk too long.

**CHAIRMAN AUGUSTINE:** Well, if you get too close to the timeline, I will, but, no, go right ahead, please. They need this background information.

**DR. RAGO:** Okay. Dogfish, everyone knows that they're sexually dimorphic, that males are about 20 to 25 centimeters smaller

than females, that they're as mitotic lengths, that they live a long time, they have low production and long gestation and so forth.

The sexual dimorphism, though, is really an important factor because the fact that they mature at about 60 centimeters for males has important implications for the long-term sex ratio, and I'll talk about how that has changed over time and how that change is coincident with the directed fishery.

As I mentioned, one of the important factors in terms of assessing or looking at fishing mortality rates is the selectivity pattern and the size range of animals over which the mortality applies.

As in most fisheries, if you fish larger animals, you can fish at a higher rate on those animals because you have obtained their reproductive value prior to them being vulnerable to fishing.

For spiny dogfish, these are just two examples, we use a metric called "pups per recruit". In this case we're looking at two different scenarios where we have a minimum size of entry in the population. If the minimum size is at 80 centimeters, which is roughly the minimum size at – or median size at maturity for females, you can fish at replacement at a rate of about 0.2.

If that size range drops; that is, you spread the force of mortality over a much broader range beginning at, say, 60 centimeters, then the fishing mortality that you can apply to the population is on the order of about 0.1.

So this is roughly where the reference point comes into play. The original value that's in the plan is the 0.1, which is related to the force of mortality being knife edge, and then everything above a certain size range is vulnerable to the force of mortality.

So, you can take this concept and make it a whole lot more complicated by looking at a whole size range of values, and that's what is basically done here. The only reason for presenting this information is simply to show that as the size range at which they enter the fishery increases, the fishing mortality rate that is allowable; that is, that which can be applied to the large population, it can increase very rapidly.

As you can see, if it's above 80, it rapidly goes from about, say, 0.2 up to, say, 0.6 in terms of fishing mortality rates on the population, and that is a function of the size at entry.

We bring that into selectivity patterns, it gets a little more complicated because it's not simply a knife edge because it applies not only – you know, you don't get a free ride if you're below 80 centimeters because there is some mortality that occurs due to discarding and so forth.

This is the basis for these floating reference points that you may have seen in the document. I am sure everyone has read the reports and committed them to memory by this point, but there is a difference here, which is associated with this selectivity pattern.

Now, just a little bit on the fishery itself. The fishery, in 2005, in total was well below 5,000 metric tons. A lot of it was taken as recreational. This is unadjusted for what we think the mortality rate is on these. This is not including the losses due to discards or the survival of the animal.

The directed fishery, which is this bottom line here, was under a thousand metric tons. Presuming everyone in the past is familiar with the changes that have occurred, where this large-scale fishing began in 1989 was primarily on -- well over 99 percent of the

fishing in the early years was on mature females.

Most of the landings historically have been from – that area is 514 and 521, the Mecca of dogfish abundance. In 2005, I believe it was well over 90 percent of the reported landings came from Massachusetts.

During the period of the fishery, as I said, the average size of the spiny dogfish declined from about 95 centimeters in the landings down to about 82 centimeters and has stayed about the same overall level with some slight tendency towards increases over time. So this is in terms of length

In terms of weight, the important change being it's about half – there's about a four kilo animal in the early part of the time series with about a two-and-a-half kilo animal since then.

The discards, as I mentioned, we did an update on the approach, incorporating revised estimates. These incorporated a lot of estimates from North Carolina, from research that was done in Massachusetts.

Maryann Ferrington and John Mandelman; John Chisolm, his work at the University of Massachusetts and Dartmouth; and then Roger Rulifson's work in North Carolina was incorporated in this. The combination of the new estimator, as well as the update on both the size composition and the average size of the animals, the biomass estimates in terms of dead discards did not change appreciably between them.

With the exception of the early years, these 45,000 metric ton estimates were biased, and our new estimates show a decrease in about 15,000 metric tons to about 5,000 metric tons of dead discards.

The mortality rates, this has always been a very sore point in terms of these

assessments, and, again, we have reviewed them. In gillnets, the previous estimate was about 75 percent mortality in gillnets. Per the assessment of Rulifson, this was dropped to about 30 percent mortality.

When you do discard mortality estimates on fishing, it's always difficult to have realistic experiments. The International Committee on the Care and Use of Experimental Animals influenced the Mandelman results, making it difficult to do the effective on-deck time in terms of mortality because it was inhumane treatment of fish that would be ultimately killed.

The discard mortality rate for trawls was about 50 percent. Now, we felt that this one was a combination of both the fact -- if you get these big sausage rolls of dogfish that are on the deck for a long time, most of them are likely to die.

When you have lighter loads, where the total catch is not as high, that the mortality rate was relatively low, maybe 10 percent, so we sort of split the difference in terms of how it was applied.

The hook and line, although recognizing the higher esteem in which they are currently being held, we dropped it down to 10 percent in terms of the hook-and-line mortality rate.

And, finally, recreational mortality previously had been assumed to be a hundred percent; and consistent with other estimates of teleosts, this was dropped to 20 percent. All of this is in the report.

So, here is just a quick snapshot of the size-frequency distribution of both landings and discards over time. This is '91, '93, just skipped a few years to kind of show the general pattern.

Again, the large component on the right is mostly the landings. The component on the left is the discards. What we see in the more recent years, particularly since the directed fishery has stopped, has been sort of a uni-modal kind of pattern, reflecting not only the pattern of the fishery, but also the pattern in the population itself.

I don't want to go into great detail on this, but we use selectivity curves to look at the spring survey data function, which results in correspondence between the predicted values and that which is observed in the total of the landings plus the discards, so this is kind of giving you a degree of fit.

This is for 1998, and it was about -- median size at entry was about 77. In 2005, that same curve results in mostly fish that are almost 90 centimeters in terms of median size. That's right about here. The degree of fit is reasonably good in terms of matching up what we predict from the survey and what we see in terms of the composite.

But this change in selectivity, this change in the force of mortality, as that curve sloshes back and forth across the size spectrum of the population, is the primary factor which changes not only the reference points but the estimates of the full  $F$  that applied to the population.

To give you some idea on how that sloshing occurs, this is the set of reference points that you get when you take into account all of those changing year-by-year selectivity patterns. As you can see, the reference point ranges from about 0.1 -- at the lowest level about 0.9 and varies up to about 0.55.

So the effect of this is that you have to think not only in terms of just one number in terms of the reference points, but in fact the number times the selectivity curve that occurs for that population over time. I'm

sure there will be some questions on this aspect.

This is the full  $F$  on the population and its comparison with the reference points. The dashed lines represent the uncertainty of the values. The boxes represent the reference points. You can see they do move in concert over time.

This is the current estimate of fishing mortality. It's about 0.13, and reference point is about 0.39. It is well below the fishing mortality rate for replacement. The same type of approach which is used to estimate the spawning stock biomass is shown here.

This is the increase which has occurred as a result of the 2006 year class. It is just above 100,000; it's still below the 200,000, but it has made a nice upturn. This is the reference point in terms of pups per recruit, and this is the full  $F$ ; again, with the low value in the most recent years.

Now, one point that needs to be point here is that all of these estimates of the reference points are assuming sort of a static, unchanging first-year survival rate. They are using the values that we've used in the past and do not take into account any of the new information, which suggests that the pups per recruit has declined in recent years; that is, the recruitment to the population.

Now, I'll come back to that for a second in a moment here. This is the total population size. We're estimating that we're just under 400,000 metric tons. The point estimate for 2006 is just over 800,000 metric tons.

So, again, this is not a biologically plausible rate of change in the population status, which is why, through this assessment -- throughout the years this thing has been done, we have always emphasized that you use the moving average. You don't place

too much stock in any one value and simply over-interpret that particular change.

This is the same thing for the spawning stock. This is 106,000; this is the estimate for 2006 from the spring survey. This is what think is maybe one of the more useful summaries of the resource status. This is the size frequency of the males and females in three-year blocks over time.

Note the progressive truncation on the right-side as a result of the fishery; the truncation on the left which is the result of the removals associated with the lack of reproduction, which is the lack of recruitment here.

The other thing that is important is there has been almost no change in the male population, so pretty much all the males that were alive in 1990 are pretty much alive today. One other thing, you know, this change in average size shows up in a number of surveys.

This is the length of mature animals or mature females over time. My apologies to Wilson, I don't have the SEAMAP data on here at this point, but they are completely coincident with the dataset in the lower right-hand corner of this, at about 83 to 84 centimeters for the average size of females above 80 centimeters as mature females.

So, a drop from about 95 centimeters to 83 centimeters is consistent in not only the NMFS surveys but also the Massachusetts spring and autumn survey and also the ASMFC shrimp survey, which is done in inshore waters, and the Gulf of Maine just recently completed.

So, this is the pattern of recruitment. The issue of the lack of recruitment since roughly 1997 is one that we've mentioned before. This is just a repeat from SARC 37. The important thing here is that the average

of pups produced by smaller females is about 30 smaller.

A female of 80 centimeters produces a 40-gram pup. A female of 80 centimeters produces on the average one of about 60 grams. It's about a 30 percent decline in average size. Female pup length has declined. This is shown in blue.

It has gone from about 30 centimeters down to about 27. Female length, as I've mentioned before, has dropped about 10 centimeters. One of the consequences, though, of this sort of mortality on the males has been a huge change in the sex ratio.

This is looking at the ratio of males to females. These are mature animals. The historic rate seems to be on the order of about two to one over the time period we have information on sex. With the onset of the fishery, that rate has gone up and has pretty much capped at about seven to one here.

That value has pretty much stayed constant since the cessation of the directed fishery. In some species of sharks and dogfish in particular, it is hypothesized that there may be some reproductive consequence of this kind of interaction, so there are some major problems with the sex ratio.

We did refit the stock recruitment relationship. This is the historical one; this one is the one that used to derive the 200,000 metric ton target. When you add in all of the new values since 1996; that is, 1968 to 2006, all of the new points are down here, down in that lower left-hand corner of the graph.

So all of the negative residuals, all of the failure to recruit is occurring with stock sizes and that side of the equation. When you do the fits on it, you get basically some nonsense. The target rate, which is 215,000

or 200,000 metric tons -- when you do the shortened series between 1968 and 1986, it gives 215.

When you add in the new data, the equation rocks on its side and you get a maximum estimate of 304,000 metric tons, which neither the working group nor the peer review panel thought was realistic.

Then one final point on this topic is if you look at the residuals in terms of taking -- the residuals here generally fall into a negative range on the bottom here. The bottom line is that when the average size of the females is below median of about 87 centimeters, that it's about four times more likely to have lower than expected recruitment.

The scenarios here are the stochastic projections on stock status. This is the status quo F; a rebuilt scenario which was using the very low fishing mortality rate of 0.03; and then the so-called improbable but necessary one to look at the zero F scenario.

So, if we take a look at these projections on the stock, it suggests that the population will continue to grow over the next several years. That's a result of somatic growth of the animals that are alive at this point.

When the feedback occurs; that is, the absence of animals that are below 60 centimeters, which we have seen in the population, as that begins to move forward, the population is expected to drop over that period of time.

The magnitude of that drop depends on the fishing mortality that's applied under the rebuild one, and it will drop but not quite as great as in the top panel.

Now, the issue for management is that during this period of recovery, the perception of abundance and the actual abundance and particularly its influence

inshore is going to be quite high. It has some implications that way.

I have some additional stuff on what has changed in terms of the population, in terms of changes of inshore abundance, and it's fairly dramatic.

And then just in the aspect of shameless self-promotion here, this is only that the projected numbers based in 2003, SARC 37 suggested that the population should have increased over this period of time. That's just showing what we projected in 2003, which was above the 100,000 metric ton target.

So, dogfish size composition and so forth, I'll forego this part here. But I did want to show just briefly, here is the change in the proportion of dogfish that are inshore.

I know that Tom is in the back there, and I that a lot of commercial fishermen and a lot of recreational fishermen on charter boats and so forth are having huge problems fishing because of the abundance of dogfish inshore.

That pattern is consistent with what has been going on in terms of our survey, in terms of the fraction of biomass that's presently inshore. This top one is the fall survey, and in the fall survey nearly 40 percent of the dogfish population, total biomass, is inshore.

In the spring, generally the population is offshore. This is about 2 to 3 percent historically, but in 2001 and continuing since then, it's been about 5 or 6 percent, so it is evidence that the fraction of the resource, which is inshore, has changed over time.

Then two last slides, if I may. We estimated the average distance to shore; that is, we took our sample points and took a catch-weighted average distance; that is, if you

think of the population center of the United States, if you balanced everybody out, it's probably like in Omaha, Nebraska or something like that; and if you look at the changes over time, that has shifted generally southward and westward, so it might be moving towards Phoenix or something like that.

If you take that same kind of principle in terms of looking at our survey and say how close to shore have they been, in the past, in the fall survey, the average distance from shore for males is on the order of about 120 kilometers offshore.

Since 1990, that has changed to about 40 kilometers offshore. In the spring there has been a slight change, but nearly as much, on the order of about 20 kilometers difference.

And in the female population in the fall, generally they are distinct from the males – and I have data to show the sex-related differences – that has also changed. The females have gone from about 60 kilometers offshore on the average to about 40 to 45 kilometers offshore.

So, recognizing that the verbal chloroform is setting in here and I'm running out of time, I'll stop at that point and have questions or comments and so forth. Thank you.

**CHAIRMAN AUGUSTINE:** Thank you for that very complete and thorough review, Dr. Rago. We appreciate it. Mr. White.

**MR. G. RITCHIE WHITE:** Thank you, Mr. Chairman. On the methods of release mortality, you show the commercial hook fishery at 10 percent and the recreational at 20 percent. Could you comment on that difference?

And, on the total mortality slide, you broke that down to commercial and recreational. Does that slide reflect the change in

recreational mortality rate from 100 percent down to 10 percent?

**DR. RAGO:** To answer the second question first, it does not incorporate that change. The change associated with the commercial hook fishermen is based on some of the results that Mandelman and Ferrington developed.

In fact, it fact it appears that there may be more a cage effect than a directly mortality effect because a lot of the fish that were in cage studies, the 48-hour post mortem caging, had in fact gilled themselves in a corner of the cage, so it's very difficult to get it.

It was low, so that was the reason we used the much lower value. The value for the recreational at 20 percent was based on analogy with other recreationally caught fish.

**CHAIRMAN AUGUSTINE:** Thank you, Dr. Rago. Does that answer your question okay? Now we have the other White, Mr. Pat White.

**MR. PATTEN D. WHITE:** Paul, do dogfish eat their young?

**DR. RAGO:** We don't have direct evidence of cannibalism.

**CHAIRMAN AUGUSTINE:** I'm glad to hear that. Does that answer your question?

**DR. RAGO:** I don't know. I mean, they could. The presence of juvenile dogfish, the less than 36 centimeter fish are located primarily along the shelf break. In terms of looking for a particular set of samples that might confirm that would be something we'd have to do a lot more data analysis.

But, very few, if any, Elasmobranchs have shown up in the stomachs of dogfish. I

suspect that the spine even for juveniles would show up.

**CHAIRMAN AUGUSTINE:** Does that answer your question? Dr. Laney.

**DR. LANEY:** Paul, do we have any idea of why there has been such a pronounced shift inshore?

**DR. RAGO:** No. The changes with respect to temperature did not seem to provide the sort of conclusive evidence that it might be a temperature-related effect. It could be a behavioral effect, but I would defer to other more experienced shark biologists to verify that.

In the North Sea or the Irish Sea there was a study showing that as the change in male-female ratios occurred, there was a tendency for male to females to get closer together. Maybe the females are trying to get farther apart. You have got a seven-to-one sex ratio right now, which can't be too good.

**CHAIRMAN AUGUSTINE:** Dr. Pierce.

**DR. PIERCE:** Thank you. Again, Mr. Chairman, I remind you it's almost quarter after eleven.

**CHAIRMAN AUGUSTINE:** Yes, we're running late in my meeting.

**DR. PIERCE:** I'm hoping we can extend this meeting a little bit since we do have an item on the agenda that is specific to the Massachusetts request. As always, I appreciate the presentation from Paul.

A lot of this is repeat, of course, because not much changes with dogfish except, of course, for the recent assessment where we got the very optimistic news and change in the reference points, specifically the F target.

Paul, you've made a point – actually, you made it a number of times – regarding this inshore distribution of dogfish. You seem to be indicating that this change, inshore versus offshore, is responsible for what the fishermen are seeing; that is, many dogfish interfering with their fishing operations.

I know you put a lot of work into this, as did those at the SARC/SAW, but, frankly, when this information was provided, inshore versus offshore, at the Mid-Atlantic Council as part of the SARC/SAW presentation, there was one particular figure that you also showed earlier on, inshore versus offshore fall survey/spring survey, and I look at those figures, and I really see nothing convincing that would indicate to me that there has been a shift inshore.

I look at 1995 through the year 2006, specifically, it's up and down, up and down, as you might expect from bottom trawl survey data. There is no real trend. It goes from 20 percent, 30, then it goes down to 10 percent. It's up and down all over the place.

So, there is no trend, no discernible trend. I am not convinced that there has been a distribution of fish or change inshore. Yes, if you look at 1975 through 1980, thereabouts, you'll see lower numbers, and I am not sure exactly how to interpret that.

But, for our time period of dogfish management, from the directed fishery onset to its conclusion, to where we are right now, there is no discernable change. I am being guided again by what was presented at the SARC/SAW primarily.

In the spring survey data, it has actually gone down. There are more offshore than inshore. So, again, I'm not asking you to respond. I'm just saying it's not convincing. I'm more convinced that the abundance of dogfish just has gone up, and rather dramatically, in the trend line that we finally



have detected through the bottom trawl survey data.

And we're also, of course, finding this out from the fishermen themselves, recreational fishermen, commercial fishermen, tuna fishermen, everyone and their brother, it seems. So that's just really a comment regarding inshore and offshore, and I am not going to use that information as a way to try to downplay what we've seen regarding the abundance of dogfish.

Now, my other point, which is a question, actually, is why is it a concern for us to have more males than females? If we had more females than males, I would say, yes, there is a concern, but we have an abundance of females.

It's growing, mature females over 80 centimeters, and that's extremely encouraging. There are a lot of small males, many males that are mature. To me, that should pose no problem biologically. There is no shortage of females, which really is what we've always focused on, mature females. So, why should be concerned about this change in sex ratio?

**DR. RAGO:** Thank you, David. I think the primary concern with the abundance of males may be related to whether there is any kind of – if this is a source or impact on reproductive success. Now, whether it's a direct impact through cannibalism, as Pat suggested, or whether it's an indirect one through aggression or displacement of females and so forth is open to question.

I think the bottom line is that we are still not seeing the recruitment that we would expect to see with populations at the size that they are at present.

**CHAIRMAN AUGUSTINE:** Thank you for that. Mr. King.

**MR. HOWARD KING, III:** If the inshore trend is uncertain, then that negates my question. Paul, do you feel that trend is not one of certainty?

**DR. RAGO:** Thanks, Howard. I would disagree with David. I think the trend in terms of the proportion of the resource which is inshore, as shown in the top panel of this graph being displayed, is in fact showing a relatively high rate, going from, say, 10 percent up to at least in the mid-30 percent in terms of total stock size.

What, also, I think is important is that the biomass has in fact shifted, particularly in the male biomass, has shifted inshore on the order of about 45 to 50 kilometers, which I think is an enormous change in the center of the population here. This is the historic level of about 100 kilometers offshore; now it's on the order of about 50 kilometers offshore.

**MR. KING:** As a follow-up, then, just quickly; how would that compare with lower fractions inshore at a higher stock biomass that we saw in the past? Are there more dogfish in terms of biomass inshore than we saw in the high periods?

**DR. RAGO:** Well, yes, I think there are. I think you have a population that is increasing. I mean, this is a species, in terms of biomass, that we trying to recover, that is under a recovery program, and has increased.

If you have an increasing trend in abundance and an increasing proportion inshore, it would suggest that we are seeing more inshore than in the past.

**CHAIRMAN AUGUSTINE:** Okay, I would like to cut the questions now from the Board, unless you have something that is different or new to ask of Dr. Rago. As you

know, you all received the 43<sup>rd</sup> SAW assessment summary report.

If it's a particular question you might want to ask Dr. Rago, ask him after the meeting. I would like to ask if there are any comments from the audience? You have been very attentive. Yes, Mr. Ruais, would you come up, please.

**MR. RICH RUAIS:** Rich Ruais with the East Coast Tuna Association. I would like to second the chairman's view that the presentation was excellent, and my eyes didn't get glazed over. It's the first time I've heard it, and I thought it was fascinating.

I also noticed that Dr. Cook was on the review panel, and I know that name from his work at ICCAT with Dr. Doug Butterworth, so I know this is a really high-quality document, which baffles me even more about where the disconnect is coming in terms of the explosion of dogfish, and big female dogfish that we're seeing throughout New England waters.

You commented on the anomalous 2006 point that showed a very high abundance, but you also said the review panel thought it was biologically unrealistic. When I looked at that, I thought I also saw that there were a whole bunch of other anomalous points in past history.

I am wondering what is driving that? Why is it occasionally you see an abundance of dogfish in the trawl surveys and other years you don't, and you conclude that it's impossible that anomalous abundance is in reality out there?

**DR. RAGO:** Well, thank you, Rich. It wasn't concluded that it was impossible. They did use the word "improbable", and it did have a high amount of variability associated with it. I have a couple of graphs

that I could go into in terms – I know, no one wants to see them – but, anyhow, that do show that as the average abundance level goes up, the variability is also likely to go up.

This problem is likely one to continue forward as look and try to account for the increasing densities and increasing variability. You're absolutely right that in the past we had swings equally challenging in terms of their interpretation because they are not biologically possible in terms of the dynamics or life history of this species.

That is why, as I said, we try to use a moving average to interpret the trend in population and not over-interpret any single point.

**CHAIRMAN AUGUSTINE:** Any follow-on questions to that, Mr. Ruais? Thank you for that. Yes, please come up and announce who you are, please.

**MR. PETER WEISS:** My name is Peter Weiss. I am president of the General Category Tuna Association. This is the first meeting I've attended of your group, and I appreciate you letting me speak for a second.

The General Category this year has 1,400 metric tons of tuna available to catch. As of yesterday or the day before, we've caught 28 metric tons. One of the reasons, but not the only reason, but one of the main reasons for this is the abundance of dogfish in the waters of Massachusetts and Maine, which is unbelievable and is ruining a fishery.

I am going to try to keep my comments short, because I know you're running short of time. There is nobody in this room in their life who hasn't made a mistake, except there is no organization that I know that hasn't made a mistake, except for NMFS,

probably, or at least that's willing to admit a mistake.

I am not a scientist. As a matter of fact, I'm a businessman who has gotten involved with fishing throughout the years. There was a mistake somewhere along the way here, and this organization better begin the process of correcting that mistake.

Director Diodati's letter and its proposal is only the first step in getting the dogfish fishing population under control. You have no idea, I don't think, or many of you don't what this is doing not only to the current fisheries, but to the future of codfish, haddock, lobsters.

These creatures are in the water for no apparent reason to me, and I don't understand why we're spending this amount of time and this amount of money saving this population and ruining other populations.

I would really like you to think about it in a very simplistic manner. Somewhere along the way here, there has been a mistake made, and I think the process here at this meeting should be to begin to correct that. Thank you, sir.

**CHAIRMAN AUGUSTINE:** Thank you for your comments. Any further comments from the audience?

**MR. SEAN R. MCKEON:** Sean McKeon, president of North Carolina Fisheries Association. I would concur with the comments of the folks who just spoke before me.

I sat through this in Manteo. I sat through Dr. Rago's presentation in Manteo, North Carolina, last week, and I didn't fall asleep either time. I think there is a lot of interesting material there.

One thing that I will say is I know you made the statement that it is seven-to-one male to female. I know that in your presentation in Manteo most of the commercial fishermen there were expressing the view what they're seeing is the opposite.

In fact, your own presentation, I believe, along our coast anyway, the inshore was predominately female, and that was backed up, I believe, by research that Dewey Hemilright did with some scientists. They actually found eleven-to-one or twelve-to-one female to male inside.

One quick question and then a final comment. I was outside so I don't know if you did this already. You had a certain number of sample trawls that you did, and then there was an average catch that you mentioned in Manteo. If you could just tell me what figure was, the samples that you did, and the average catch.

**DR. RAGO:** The average catch, when taken over all the samples over the entire survey area, is about 350 samples typically taken in a year, and I believe the total catch is over, like, a hundred kilos in the 2006 survey. I could check that in a moment in terms of that. It's on the order of that. It's summarized in the report to the SARC.

**MR. MCKEON:** I realize those are random that you did. I think it was 182 or something, I think you said.

**CHAIRMAN AUGUSTINE:** Gentlemen, I think this is one that I am not sure the rest of the Board wants to take the time to review it. It's an important question, Sean, but I –

**MR. MCKEON:** I don't need an answer. That was a good enough answer, but my comment, Mr. Chairman, is that I really think that when we're emphasizing the sound science, that's it's very important that we emphasize sound economics.

This fish is destroying and preventing other very important fisheries from being maintained and from reaching their levels that need to be fished. I think that from every place, whether it's recreational or commercial, up and down the coast, I think the feeling is the same, that something needs to be done.

I think that David's comments I saw in the Commercial Fishing News are very good, and we would concur with what Massachusetts is trying to do, provided that we are in agreement here in North Carolina. Thank you.

**CHAIRMAN AUGUSTINE:** Thank you for your comments. We have about two more comments or three more comments, and then we've got to move on. I hope it's new information. If you agree with some of the previous commenters, please say you agree and we will so note it. Thank you very much.

**MR. ERIC FRASER:** Thank you, Mr. Chairman. My name is Eric Fraser. I represent the Cape Cod Commercial Hook Fishermen's Association and the Cape Cod Gilnetters Association, in the addition to the Georges Bank Hook and Fixed Gear Sector.

I will make this very brief. I do echo the concerns of the speakers before me. We fully support the Commonwealth of Massachusetts in their proposal for a small-scale directed fishery.

We do believe that the dogfish are undermining the rebuilding of Gulf of Maine and Georges Bank codfish, and as a result they are affecting our traditional resource, our traditional fishing communities and our traditional way of life. We urge you today to move forward and take this opportunity to push a more viable short-term plan. Thank you for your time.

**CHAIRMAN AUGUSTINE:** Thank you, two more comments. And just for those folks who have talked about this proposal that we have Massachusetts on here, although our times have said 10:50, if it takes us until noon or a little longer, it is going to take us until noon or a little longer, but we're going to vet that issue.

It's important that you folks in the audience, if you are going to talk to that issue, we will be spending considerable time on that. So, if you agree with the previous speakers, please come to the mike, state your name and tell us you agree, and any additional comments you might have.

**MR. TOM DEPERSIA:** I am a charterboat captain in Massachusetts. I run three charterboats. I am also president of Stelwagon Bank Charterboat Association.

My experience has been just the opposite of what you found, Paul. We're probably catching 90 to 95 percent big, fat, pregnant females in our catch. We're catching five to ten dogfish per cod or haddock that we catch.

We're not only catching them inshore where we historically have caught them. We're being pushed out to 350 to 500 feet of water to try to catch our cod and haddock, and it's loaded with big, fat, pregnant females out there, too.

My comment is when all these females finally reach maturity, we're going to have a real problem bigger than the one we have right now. We all support Paul Diodati's proposal for an open access to the fishery. Thank you.

**CHAIRMAN AUGUSTINE:** Thank you for your comments.

**MR. JEFF KAELIN:** Thank you, Mr. Chairman. I am Jeff Kaelin from Winterport, Maine, representing the fishing vessel Providian and A.J. and the Atlantic Frost.

First of all, I wanted to apologize to the group for my sharp remarks yesterday on herring. Sometime in the heat of the battle, I'm not as constructive as I'd like to be. I came to the microphone today to be constructive again or attempt to be constructive, and explain to you that we're having the same situation in the herring fishery again this summer.

It's nice to be on the same side of an issue as Mr. Ruais and Dr. Pierce here, and we are because we can't seem to get away from the dogfish either. Whether you're trawling or seining, it's the same problem.

We had the federal fisheries enforcement people on a wharf in Portland a couple of weeks ago informing us if we had one dogfish in our tens of thousands of tons of herring that we were going to have to forfeit our catch.

That got shifted around over a couple of days, but we are working with grates to try to get rid of the dogs and so forth, but I just simply wanted to say that we're having a significant issue in the herring fishery with dogfish bycatch, too. Thank you for the opportunity to be able to do that this morning.

**CHAIRMAN AUGUSTINE:** Thank you for your comments. Any further comments from the Board? Dr. Rago.

**DR. RAGO:** I just wanted to close the loop with Sean. The winter survey took an average of 185 kilos per tow. The spring survey had an average of 130 kilos per tow. Thank you.

**CHAIRMAN AUGUSTINE:** Thank you. Mr. Stockwell.

**MR. TERRY STOCKWELL:** One quick question, Paul. Do you have any NMFS observer data in your survey. I mean, between the herring boats and gillnet boats, with the observer coverage that they have, have you gotten any of their data?

**DR. RAGO:** We have a considerable amount of data from the gillnet vessels, must less coverage typically on the herring vessels.

**MR. STOCKWELL:** Does the data from the observed trips correspond to the trawl survey data that you've shown us?

**DR. RAGO:** The correspondence is primarily with respect to the size composition as opposed to the density estimates, but there is a broad-scale consistency in terms of what we see in our survey size composition and our observer datasets.

**CHAIRMAN AUGUSTINE:** Thank you. You've all just received a whole bunch of handouts, and I think we want you to then look at them as quickly as you can. We're going to add them to our testimony.

There is a resolution regarding the Atlantic States Shark Management from the American Elasmobranch Society, dated July 2006, New Orleans, Louisiana. I want to get the names into the record. There is another one dated August 11<sup>th</sup> from Mrs. Michelle Frey from Washington, D.C.

**MS. CHRISTIANSEN:** All right, I just wanted to point out that the letter dated August 11<sup>th</sup>, it does have Michelle Frey's name on the bottom of it, but it is a form letter that I received from people belonging to the Ocean Conservancy. As of yesterday

morning, I had received 950 of these same exact letters. I just wanted to point that out.

**CHAIRMAN AUGUSTINE:** Thank you. You also have one from the Recreational Fishing Alliance dated August 15<sup>th</sup> to Mr. Preston Pate, our chairman of ASMFC, submitted by that organization, speaking to the issue of spiny dogfish.

There is a letter from “The Fisherman,” the New England edition, dated August 13<sup>th</sup>, signed by the managing editor, Zach Harvey, specifically talking about spiny dogfish and their concerns.

There is one from the Northeast Seafood Coalition dated August 11<sup>th</sup>, addressed to Mr. Preston Pate, Chairman of the ASMFC, signed by Jacqueline Odell of the Northeast Seafood Coalition; also suggesting the Board support the Massachusetts Division proposal.

There is a letter dated August 11<sup>th</sup> from The Ocean Conservancy; Environmental Defense Natural Resource Defense Council; Greenpeace Defenders of Wildlife; Shark Research Institute; Florida Program for Shark Research; and Wildaid, addressed to Mr. Vince O’Shea, our executive director, relative the issues we’re dealing with on spiny dogfish.

We submit those to the record, and you have them for your perusal. Any Board discussion on any of that? Seeing none, we’re going to move into the next major agenda item, which is the discussion of the Massachusetts Dogfish Fishery Proposal. I would like to call on Dr. Pierce, and would you tell us where we are going with this.

**DR. PIERCE:** First of all, Mr. Chairman, I need to make it very clear from the get-go that this is an issue that is of great concern to the Commonwealth of Massachusetts, as evidenced in the document that you have

before you. I wish we had more time to devote to this issue here today, but obviously we don’t.

I will attempt to be as brief as possible, describing our specific proposal and the reasons why. Frankly, we feel it’s a very responsible proposal in light of our specific concerns that have been detailed in the letter.

Before I note those particular points, I should emphasize that I still disagree with Paul Rago’s characterization of inshore versus offshore biomass. However, if he’s right and they are inshore, it heightens our specific concern in Massachusetts regarding dogfish abundance and its effect on our initiatives to rebuild codfish specifically.

Everyone has that letter. It describes what we would like to accomplish today. Specifically, we would like to increase the landing limits for dogfish this fishing year, and also increase the quota in a modest way, from 4 million up to 6 million pounds.

The basis for our request really is the encouraging results from the recent assessment, very encouraging, and these results mirrored what we have been seeing ourselves through our surveys. It mirrors what has been reported to us from fishermen, commercial as well as recreational, tuna fishermen.

You have before you now a number of letters from fisheries organizations, recreational and commercial, that make their point that they are in a very difficult situation relative to their ability to prosecute their fisheries due to this huge abundance of dogfish.

More importantly; that is, regarding the basis for this specific request, are the effects of dogfish on the Commonwealth of Massachusetts and the New England Fishery

Management Council efforts to rebuild Gulf of Maine codfish and the impacts of dogfish on fishermen's already limited opportunities to fish for groundfish in the Gulf of Maine, notably, and elsewhere, but the focus here is the Gulf of Maine.

There are a number of rules in place right now, federal rules regarding groundfish, the emergency regulations implemented by the National Marine Fisheries Service. We have Framework 42 Rules that will be implemented some time soon, after the public comment period is over.

So, these opportunities for groundfishing are already severely limited through regulation, and dogfish is making the situation much worse for those groundfish fishermen.

You have already Paul Rago give some of the highlights of the assessment, and I'm certainly not to get into that. Paul knows this inside and out, and he has been a wealth of information over the years, and he continues to be that fountain of wisdom regarding dogfish.

I did not in any way tinker with his computer as evidenced from the lack of flames. I would never do that; I have too much respect for Paul.

**CHAIRMAN AUGUSTINE:** Dr. Pierce, may I make a suggestion? I think it would be most important to get a motion on the table, and then let's go into your follow-on dissertation and your support for it. I think the background you're giving is very important. They've all had a copy of this, so if we can get a motion on it, we can focus right on the issue that you want to make happen.

**DR. PIERCE:** I don't mind doing that as long as I can finish my presentation, which I'm trying to keep short, but there are some points that I really have to highlight because

many people around the table here don't know those specific points.

**CHAIRMAN AUGUSTINE:** Well, make your motion and get a second and then follow on with your presentation.

**DR. PIERCE:** Sure. I'll make a motion that the trip limits for the spiny dogfish commercial fishery be increased this fishing year within a range of 2,000 to 5,000 pounds; and the quota for this fishing year be increased from 4 million pounds to 6 million pounds.

**CHAIRMAN AUGUSTINE:** I have a second by Mr. Ritchie White. Would you please follow on with your presentation now.

**DR. PIERCE:** All right, again, this is a modest increase in the quota, and the trip limits span a range that we consider to be reasonable and the amounts that would enable fishermen to prosecute small-scale fisheries that would be established by the individual states.

I must highlight, as well, that our particular proposal, as evidenced in the letter provided by Paul Diodati, we're sensitive to the concerns of other states, and in particular we're very sensitive to the concerns of states in the mid-Atlantic area, New Jersey, of course, and North Carolina, first on the list.

In light of some of our past history in dealing with North Carolina fisheries' concerns, we need to make sure that we're on board with them, that they, indeed, understand what we're attempting to do.

All right, biomass target, mature females, 253,000 metric tons – yes, it's spiked way up. Is it reasonable? We think it probably is reasonable. Is it that high? Nobody really knows, so we live with a three-year moving average.

The three-year moving average brings us up over the 100,000 metric ton figure to 106,000 metric tons, so we are no longer overfished. And as indicated by Paul, we have a new reference point, a fishing mortality rate that is much higher than it was before, and this clearly indicates that we are not overfishing.

Frankly, we would have to go a lot farther in terms of landings, in terms of catch and landings to get us anywhere near an overfishing situation. So, those are the important points. Paul did mention it, but I'll highlight it, the total biomass of both sexes is now 850,000 metric tons.

That's the third highest in the time series, 1968 through 2006. I think that's the point estimates, so, again, it's all very good news and is supported by fishermen's observations and other survey results.

All right, what is our focus; what is our principal focus? It's not to put money in the pockets of fishermen. It's not to create small-scale fishery that would then benefit commercial fishermen.

Certainly, that's an important consequence, and fishermen know that to be the case, especially groundfish fishermen who do feel a small-scale fishery is highly desirable and of great economic benefit to them.

Our focus, the Division of Marine Fisheries and our Marine Fisheries Advisory Commission – and I have on either side of me two members of our Commission, Bill Adler and Vito Calomo, so they can certainly emphasize support what I am about to say – our focus is on very important and dramatic steps to foster Gulf of Maine cod rebuilding.

Specifically, in Massachusetts last year, we implemented a three-month closure of very

important inshore fishing grounds. It had a major effect on inshore fishermen, cod fishermen specifically.

The purpose of this closure was to protect pre-spawning and spawning fish. It extended in Massachusetts Bay from December 1 through the end of February; again, to protect pre-spawning and spawning fish.

Now we have discovered, through our own resource assessment project, a bottom trawl survey, and through the federal survey itself, that in 2006, this spring specifically, we have excellent signs of recruitment. The numbers of juvenile fish in Massachusetts Bay have been very high; actually as high as we have ever seen in our bottom trawl survey in state waters, or as high as we've ever seen it.

The bottom trawl survey in our waters, that part of it by the federal government, actually had one interesting observation that was highlighted in The Fishermen's Report that is put out by the Service – they noted it and I'll cite it – “a high catch of juvenile codfish, a catch of 890 juvenile cod measuring two inches or less in Cape Cod Bay just south of Plymouth Harbor. Observing large numbers of young individuals provide some hope that cod reproduction may be improving in this area.”

Well, obviously, we, in our state, have put a lot of investment into rebuilding codfish through our own efforts and working with the New England Fishery Management Council.

Our concerns specifically, with dogfish being very abundant in our inshore waters this summer, Cape Cod Bay, Massachusetts Bay, the backside of the Cape, and we know that it's an abundance that will continue to be there through the fall and into early winter, like last year, but this year even



more so, we have every good reason to believe that very high numbers of large dogfish – and they are large as evidenced from the assessment itself; 85 centimeters and up, 90 centimeters and up – we have reason to believe that these large dogfish will have a very significant impact on our cod rebuilding initiatives.

Dogfish predation likely will be very significant on juvenile codfish that are resident in Massachusetts and Cape Cod Bay, including Stelwagon Bank.

Now, do dogfish eat cod? Many of you around this table have heard Pat's presentations regarding the predation of dogfish on groundfish, and it's been minimized. Well, that's information that we have in hand.

However, there is new information that's not really new, but it actually now is published information by Northeast Fisheries Science Center scientists, specifically, Jason Link Garrison and Frank Almeda, where they provide information that relates to ecological interactions between Elasmobranchs and groundfish, Northeastern U.S. Continental Shelf.

I have copies of a very important table I can make available to everyone if you care to look at it. But it makes the very important point that, indeed, as many people have suspected and many people have known, that codfish are eaten by dogfish. Dogfish eat phenomenal amounts of Atlantic cod, haddock, silver hake, Atlantic herring, Atlantic mackerel, summer flounder – I highlight fluke summer founder.

For those of you who may not necessarily be too interested in codfish, fluke, I'm sure, would command your attention, especially since these predation rates are on juveniles, age zero and age one fish.

This is just to give you a little bit more insight into the extent of this predation and why we feel this is an ecosystem-based management problem that we can address and should address.

This particular paper published in the North American Journal of Fisheries Management, 2002, a paper that really hasn't captured too much attention, but now we're bring it to your attention, makes the point that even though the predation considered by NMFS is to be minimal, they say, when compared to predation on other species such as herring, an annual amount of predation of 2.2 million age one codfish – that's juvenile fish – we feel it is consequential, especially when that predation will occur in areas where the juvenile fish tend to be in abundance.

I note the fact that Massachusetts Bay, Cape Cod Bay, along the coast of Maine and New Hampshire, those are areas considered to be habitat areas of particular concern for juvenile codfish. That's where you find juvenile codfish and other juvenile groundfish in very large abundance.

Again, highlighting this paper, I want to make the point that the virtual population analysis that was done back in 1998, because that's the data base that they're using here, 1998, showed that age one cod, the abundance was 5.8 million fish – okay, 5.8 million.

So think about that, 5.8 million fish age one, and the consumption was 2.2 million age one consumed by dogfish alone. The upper bound consumption was 4.7 million juvenile cod, so 5.8 abundance versus 4.7 consumption. That's pretty significant as far as we're concerned.

So, that is playing a major role in influencing our thinking. Fluke, to highlight that once more, again, in 1998, age zero and age one fluke, the 19.9 million fish – that's

the average consumed by dogfish – 19.9 million fish with a 43.1 million maximum, the VPA estimate of age one fish was 62.9 million; so, 43.1, 62.9, you can see here that there is a reason for us to really focus more so than ever before on ecosystem-based management.

We can't do it here today, of course, for all species, but you need to understand this important predator-prey relationship. Paul Rago, in a presentation given by him to scientific groups – he may have referenced this in previous meetings – showed some pie diagrams, spring versus fall, bottom trawl information, stomach contents, amount of consumption of a variety of species by dogfish, and you see very clearly finfish plays a major role.

And why not, because dogfish, when they get big, over 80 centimeters, they become major finfish eaters. No doubt about it, when they're smaller, less consumption of finfish, but when they get bigger, consumption rates are rather phenomenal.

Now, our attitude is that our request is very reasonable. It's very reasonable for a number of reasons. We feel that the re-establishment of a small-scale fishery is, frankly, a very precautionary and common sense approach for us dealing with cod rebuilding initiatives. One other point that I should mention regarding the impact –

**CHAIRMAN AUGUSTINE:** Before you make anymore, you've covered a lot of territory, and I think the most important is that you did tell us what the food consumption was of these spiny dogfish. We're taking away from comments and so on to the proposal.

I note a lot, I think, have changed their opinions when you noted what the consumption rates were of these spiny dogfish. But unless you want to continue on

and eat up the rest of the time, I sure would like to get a staff recommendation as to what the next step is in the process so we can forward with it one of another. Is that okay with you?

**DR. PIERCE:** Just two final quick points. The extent of damage to groundfish catches in gillnets and in other gears is rather significant, and I have a number of e-mails and number of letters and documents galore describing the specific concerns of fishermen who see 50 percent or more of their catch of groundfish ripped to shreds by dogfish.

I have a lot of photographs showing that. Fishermen have been sending me photographs. It has been, well, confirming what we have known for a long time.

And then, finally, I make one other point regarding the impact of dogfish on groundfish and have concerns about codfish rebuilding. One notable fisherman, one former New England Fishery Management Council member and a former member of our own state commission, Frank Meraki, a very insightful individual, has made a very important observation.

He said when he goes out to fish for codfish and other groundfish – he drags – he said that he can't get away from dogfish throughout the summer, going into the fall, early winter. Consequence of that – the consequence is that his net still plugs, even with short tows, plugs up with dogfish, mesh selectivity goes away, and he is forced to then catch large amounts – well, he catches large amounts of juvenile codfish and other juvenile groundfish because no longer does mesh selectivity work.

So, I could go on and I won't, because you're quite correct, Mr. Chairman, we're well out of time. That's our specific

recommendation, and we hope that the Board will support our position.

**CHAIRMAN AUGUSTINE:** Thank you. Before I call on the Board members, I need to get a clarification from the staff, Mr. O’Shea and Mr. Beal, as to what the process is for us to review and move forward with this.

**MR. BEAL:** Thank you, Mr. Chairman. In anticipating this vote was going to come up, we’ve gone back and looked at some of the Commission guidance documents. The Board will remember about 2-1/2 to three years ago we modified the Compact, rules and regulations of the Commission to reflect a decision of the Policy Board, which was to require a two-thirds vote to modify any final action of the management board.

There was a list of final actions included in the rules and regulations, and those include fishing quotas. They do not include trip limits, so I think this motion embodies some modifications that would take a two-thirds vote, which is the quota, and also embodies some changes that would only take a simple majority vote, which is the trip limit.

The content of this motion is part of the annual specification process. The rules and regulations didn’t speak to the fact whether annual specifications were or are not final actions, but it did specifically list fishing quotas as a final action that would need a two-thirds vote to be modified.

**CHAIRMAN AUGUSTINE:** Well, then, it sounds like the maker of the motion might want to divide the question into two parts. If that would make it a lot easier, let’s do that. Is that agreeable with the seconder of the motion, Mr. White?

Yes, so we could divide the motion into two separate parts, the first one meaning that we will need a two-thirds vote from the Board

on any final action taken on this today. Mr. Himchak.

**MR. HIMCHAK:** Thank you, Mr. Chairman. I’m looking at the history of ecosystem management and multi-species decisions in the Commission. I’m looking back on how we had a Horseshoe Crab FMP and four addenda to deal with this.

We spent considerable time on developing a menhaden cap through an addendum, which again followed on a multi-species decision-making process. I am just a little concerned – or maybe I have a question – maybe it’s a legitimate concern; maybe it’s not.

I mean, this decision on the dogfish, in relating to the ecosystem impacts on cod and other species, it seems a little hasty on my part to take new assessment data, which is the 2006, and take immediate action on reinstating a directed fishery, and I am wondering if there will be future repercussions for the Commission when making these decisions on multi-species issues that we can’t – I mean, here we’re just making one at this meeting.

I am not sure what the technical committee has to say on this particular proposal. Our past track history has taken a much more cautious approach. Menhaden, we had a three-day workshop, it took a year to come up with a draft addendum. I am offering a word of caution here. Thank you.

**CHAIRMAN AUGUSTINE:** Thank you. Dr. Laney.

**DR. LANEY:** Thank you, Mr. Chairman. I concur fully with what my former graduate school roommate, Mr. Himchak, had to say on that particular issue. Also, with respect to Dr. Pierce’s bringing up the 2002 paper on dogfish food habits, I haven’t seen that.

I do have in front of me Dr. Rago's pie charts to which Dr. Pierce referred and note that based on 40,000 stomachs examined, when you break it down to a somewhat finer scale, I guess, cod-like fishes in both spring and fall constituted less than 8 percent of the total diet of the spiny dogfish.

Dr. Rago may want to comment and enlighten us a little bit more on how those studies were done in comparison with the work Dr. Pierce cited, which I haven't seen. Also, I would, like Peter, like to hear from Ruth.

I know that Ruth did circulate the proposal to the technical committee, and I think it would behoove the Board to hear what the technical committee's comments were on the proposal. Thank you, Mr. Chairman.

**CHAIRMAN AUGUSTINE:** Thank you. Before we call on anymore Board members, we are going to have Ruth respond.

**MS. CHRISTIANSEN:** I did circulate Massachusetts' proposal to the technical committee. Given the timing of the proposal, however, I did not receive a lot of feedback from the technical committee.

The little feedback that I did get indicated that the proposal is sound enough for technical committee review. The few members that I did hear from would like to investigate and look at Massachusetts' proposal more in depth to come up with some kind of recommendation or what have you.

**CHAIRMAN AUGUSTINE:** Thank you, Ruth. Before we go to other Board members, Mr. Beal.

**MR. BEAL:** Just to quickly clarify, Pete Himchak brought up the notion of why we went through the addendum process on menhaden and the addendum process

multiple times to adjust the quota for horseshoe crabs, for example.

I think the differentiation here is that the quotas and trip limits are set each year through an annual specification's process. The 4 million pounds that's mentioned in the motion is not part of our fishery management plan. It's part of the annual specification package.

The quota for menhaden and the quotas for horseshoe crabs are both kind of hard-wired, for lack of a better term, into the management plans or subsequent addenda.

There is a substantial difference the way the management programs for those species are set up. One of the differences is the annual specification process versus the ongoing quotas through an addendum.

**CHAIRMAN AUGUSTINE:** Thank you for that. Before we get too far afield, what we are going to try to do is we're going to be in favor of comment and opposed to the recommendations. Mr. Nelson.

**MR. JOHN I. NELSON, JR.:** Thank, Mr. Chairman. I would like to speak in favor of the overall concept of what Massachusetts has proposed. Clearly, all the points that have been made about the concerns of dogfish on the local populations is valid up in our area.

The only problem that I have is a problem that we have experienced in the past, and that is providing information like this and then asking the Board to vote on it has been done in the past.

It has created a problem that we tried to rectify by saying that anything that comes before the Board that is of a technical nature needs to go to the technical committee for consideration.

I would recommend that this go to the technical committee for review, and specifically the request would be to have the technical committee confirm what Massachusetts has proposed, and that is that it will have a negligible effect on F, which I think it would, but nevertheless I think we need to have the technical folks provide that.

Then if that's the case, then we can move ahead with a proposed fishery, a very limited proposed fishery, as proposed by Massachusetts. Whether we want to try to do this on a parallel track or wait for the technical committee, I think is up to the Board's discussion.

I would point out that this is what we have set up as a process to follow; and while I'm fully supportive of what Massachusetts is trying to do, for the reasons I've already stated, I think we need to make sure that our process is complete.

**CHAIRMAN AUGUSTINE:** Thank you for that, Mr. Nelson. Mr. Munden.

**MR. RED MUNDEN:** Thank you, Mr. Chairman. I have a procedural question for the executive director. My recollection is that when we faced a similar situation with spiny dogfish several years ago, his advice was it took a two-thirds majority vote of all of the board members and not just those sitting around the table. Am I correct on that, Vince?

**CHAIRMAN AUGUSTINE:** He nods his head, yes, you are correct. Dr. Pierce.

**DR. PIERCE:** I have another point on the motion. I am in favor of it, of course, but I wanted to highlight a couple of points. John Nelson said technical committee review; I understand why some people might want to have that, but in our particular case in Massachusetts the fall is critical.

September, October, November, juvenile codfish, they are right inshore. They are very vulnerable. Dogfish are right inshore. They are very vulnerable, so that needs to be factored into any consideration as to whether or not a delay is warranted.

It's a small increase; it's 2 million pounds for the overall quota that I guess would require the two-thirds vote, a very small increase. Fishing mortality, I think, in 2005 was 0.13 or thereabouts.

My simple calculation, using the procedure that the SARC/SAW had, gets us to around, like, 0.07-0.09, far below where we were in 2005, and certainly well below the new F target for determining whether we're overfishing or not. So, please focus on that as well, the target F.

In addition, with the first motion, 2,000 to 5,000 pounds, please recall that we're coming close to the end of the fishing year – September, October, two more months left to the first part of the fishing year, that is.

The quota that has been set for that particular part of the year has been 33 percent obtained. There is a lot left, so that, at least, at a minimum would enable us to take the quota for that particular seasonal period.

So, those are some of the points we would encourage you to focus on since they are very germane to what we're trying to accomplish.

**CHAIRMAN AUGUSTINE:** Mr. Rhodes.

**DR. MALCOLM RHODES:** Thank you. First of all, if Dr. Nelson is making that motion, I would love to second it, because I agree completely with what he said about referring it to the technical committee.

Second of all, I just had a question. We were given informational packet from NMFS about the allocation for this upcoming year that becomes effective tomorrow, August 16<sup>th</sup> through April 30<sup>th</sup> of 2009, for the 4 million pound annual allocation.

It says it's for vessels issued with a federal permit to comply with measures whether fishing in state or federal waters. I was wondering if changing this limit, how that would affect the NMFS statement and allocation, which becomes effective tomorrow?

**CHAIRMAN AUGUSTINE:** That's a good question; who would have the answer? Harry, please.

**MR. HARRY MEARS:** Thank you, Mr. Chairman. In response to that question, anyone who would have a federal permit would be obligated to abide by the more restrictive of either state or federal. If there were less restrictive state regulations, they nevertheless would have to abide, by virtue of having the permit, to abide by the more restrictive.

**CHAIRMAN AUGUSTINE:** Thank you, Mr. Mears. Mr. Stockwell.

**MR. STOCKWELL:** Thank you, Mr. Chairman, a question for Dr. Pierce; is that all right? Okay, I appreciate your motion here. We've had a number of similar reports and observations, but has the Commonwealth analyzed any of the bycatch on other fisheries that this motion might prevent, particularly the herring fishery?

**CHAIRMAN AUGUSTINE:** Dr. Pierce.

**DR. PIERCE:** We understand that there is bycatch in the herring fishery. It's unavoidable. We have no numbers to look

at that would describe the extent to which bycatch occurs in that fishery.

You might know better than me, Terry, since the fleet that works out of the state of Maine, I'm sure, has been keeping you apprised as to the problems that they are having. I believe we had one commenter cite that, too.

**MR. STOCKWELL:** My concern would be that any change in the landings would not impact the bycatch ratios that they are fishing under right now. I don't know the answer to the question; I'm just raising it.

**CHAIRMAN AUGUSTINE:** Thank you. Mr. Ritchie White.

**MR. R. WHITE:** Thank you, Mr. Chairman. Even though I strongly support this motion, it now is obvious to me that the proper process is that it go to the technical committee. Therefore, I am going to withdraw my second.

**CHAIRMAN AUGUSTINE:** The second has been withdrawn from both sections or just from the one?

**MR. R. WHITE:** Both.

**CHAIRMAN AUGUSTINE:** I assume it applies to both, okay. The second having been withdrawn, we do not have a valid motion. Is there a second? Mr. Pope seconds both motions. Mr. Ritchie White.

**MR. R. WHITE:** I'm not going to withdraw my second now and I would like to table –

**CHAIRMAN AUGUSTINE:** Boy, are you fickle.

**MR. R. WHITE:** I'm sorry. I would like to table this motion until it has been sent to the technical committee; and if that takes a

motion, I'll make a motion to send it. I would like to table this motion until the technical committee has responded.

**CHAIRMAN AUGUSTINE:** I need a second to that motion. Mr. Boyles seconds. It's been moved to table completely or both?

**MR. R. WHITE:** Both.

**CHAIRMAN AUGUSTINE:** Both, because we want to keep them separate, I think. They're two separate issues. Okay, it's been moved to table both motions; seconded by Mr. Boyles. Comments on the motion to table? Mr. Dennis Abbott.

**REPRESENTATIVE DENNIS ABBOTT:** Representative Dennis Abbott. I couldn't help myself there. I believe a tabling motion is non-debatable, so I think we should vote on that right now.

**CHAIRMAN AUGUSTINE:** I think you're right, and that's why you're here. Mr. O'Shea.

**EXECUTIVE DIRECTOR JOHN V. O'SHEA:** I'm sorry, Mr. Chairman, we tried to get your attention before. The issue is to delay action on this until a time in the future. The terminology would be to postpone the motion to the specific time.

If the intent here is to temporarily suspend discussion of this during this meeting until some other business is taken care of and then bringing it up later during this meeting, the motion would be to table, and that has implications on what is debatable and what is not debatable.

Based on what the boards have done in the past, my sense here is that the intent of Mr. White's motion is to postpone action on this until you get a report from the technical committee. You don't have the specific date

to that yet, but it could be defined. Thank you, Mr. Chairman.

**CHAIRMAN AUGUSTINE:** Thank you for that clarification. Mr. Ritchie White wants to give us a date on that.

**MR. R. WHITE:** Well, the date would be as soon as possible, and I guess that would have to be up to the staff and technical committee.

**CHAIRMAN AUGUSTINE:** Well, the question is would you want to try to get it on the October meeting --

**MR. R. WHITE:** Yes.

**CHAIRMAN AUGUSTINE:** -- and that's the earliest unless we have to call a special --

**MR. R. WHITE:** Or earlier if we can.

**CHAIRMAN AUGUSTINE:** -- meeting, so I think that's up to your suggestion, but let's ask the staff if they can do it any earlier, if it's feasible, to get that report, and if that would require either a telephone conversation by the Board or whether or not we would have to wait until the October meeting.

It will not address the concern that the Commonwealth of Massachusetts has raised relative to the importance of getting this in place for the fall. So, Mr. Beal, could you help us with that.

**MR. BEAL:** I was having a small sidebar on process, but I believe the question is can we get the technical committee together prior to the October meeting, provide a report to the management board, and have the management board make a decision on this proposal prior to getting together in October; is that your question?

**CHAIRMAN AUGUSTINE:** That would probably be the most expeditious way to do it, if it's possible. Mr. Diodati.

**MR. PAUL DIODATI:** First of all, I think there are two separate motions that were made and seconded. I think if you want to table a motion, you have to table them individually. You can't do a suite.

Second of all, staff has indicated that the proposal was sent to the technical committee. The technical committee, for whatever reason, failed to respond in the time that was allowed them. I don't think it's appropriate for the Board to be held hostage in making an important management decision that has time constraints.

We shouldn't be held hostage by our technical committees, who all work for people that are sitting in one way or another somewhere in this room. I think the Board has an obligation to look at the information that's been provided to them today and in the weeks prior to this meeting, to have discussed this with their technical staff, and be prepared to make a responsible decision.

The question here is what is the difference between a 6 million pound fishery versus a 4 million pound fishery. That is not a drastic change, given the assessment information that we've seen today. A drastic change would be if we went to a 15 million pound fishery.

We're not tripling or anything of that order, not even doubling the existing quota. I think that this particular motion, as it stands, is inappropriate.

**CHAIRMAN AUGUSTINE:** In answer to that question, I asked if it was possible for the seconder of the motion and the person making this motion to combine it; and the

answer was, yes. If you want to split that to clarify it, we can do that.

I think it's a process. I don't think we're aliens sitting around this table, and we understand the process. If that's one step and we need to clarify that, that's one issue. As far as the rest of it is concerned, your letter was sent out to the technical committee at the combined – it concerned both of us.

As soon we received it, we got it out to the technical committee. They were asked to evaluate it in their own way. The committee was not asked to be brought back together again, just evaluate what the letter had to say. Ruth can talk to that.

**MS. CHRISTIANSEN:** I did not specifically ask the technical committee to evaluate the proposal itself. What I asked the technical committee to do was evaluate the merit of the proposal to see if it needed to be addressed further.

That's all that I indicated to the technical committee to feed back to me. So, as I indicated, the few responses that I did get indicated that they would like to further review your proposal.

**CHAIRMAN AUGUSTINE:** Thank you. Mr. Colvin, you are next.

**MR. GORDON C. COLVIN:** Thank you, Mr. Chairman. This is a very difficult issue that the Commonwealth has posed before us today, and I find myself conflicted with exactly the comments I've heard many of the other commissioners put forward.

I am very intrigued and interested in the merits of what has been put on the table and the underlying reasoning, and I think that it's incredibly important that we pursue all that.



At the same time, my experience tells me that in the past, when we have reacted quickly, one might say hastily, to the most recent, new assessment information that has been put forward to us without a lot of thought, consideration, debate and particularly scientific deliberation within our own Body, we've never really made wise decisions.

In fact, in many cases, we have regretted the decisions that we've made. So as much as I'd like to see us pursue this proposal, I think we need to do it carefully and only after very thorough review by our own advisors.

We can talk a long time about dogfish issues, and I think there are a lot of other issues that our advisors might also be engaged in. Under normal circumstances, our next opportunity to make substantive decisions would be consistent with the next quota-setting period, and that's how we would normally proceed, and the information from the assessment and any other advice that we got would be taken up that time.

So what is proposed here today is to accelerate that in-season by about six months and to do something quicker. I would rather take at least part of that time and begin what I think for the first time would be a very thorough inquiry into the whole body of underlying science and management advice on spiny dogfish by our ASMFC technical advisors and industry advisors.

I think in the past we have been very much connected to the Mid-Atlantic Council, New England Council and federal review processes, and perhaps we need to spend more of our own time and energy independently examining these issues.

I think the information that has been put forward today by the Commonwealth on predation issues, on issues of interference with other fisheries needs much more exploration and investigation than it has had in the past.

It needs to be accompanied, I think, by advice from our Committee on Economic and Social Science Advisors, so that we can look into those impacts much more thoroughly. We know that the dogfish issue is a flashpoint, that there are very different views between the fishing industries, the fishermen and the conservation organizations.

We are not going to make potential progress in solving the problems unless we take the time and effort to very thoroughly and objectively review as much of the information as we can and put it out there. Otherwise, we're just going to run into, I think, confrontation, and we will not resolve problems, we will not move forward progressively, we will encounter difficulties. So, with that background, I am going to support the motion to refer this to the technical committee, but I would like us to think harder about a more comprehensive charge to our technical committee, and perhaps the incorporation of other technical advisory bodies, to give us much more comprehensive technical advice, economic and social advice on the issue of where we should be going and where we might be going with dogfish than we have in the past.

Mr. Chairman, I thank you, and I regret that I'm saying this because, like so many others, I am very sympathetic particularly to this issue or the connection of this to the cod rebuilding that I understand is of enormous, incredible importance in New England and in the Gulf of Maine. Thank you.

**CHAIRMAN AUGUSTINE:** Thank you, Mr. Colvin, does that mean you're calling the question? Mr. Mears.

**MR. MEARS:** Thank you, Mr. Chairman. I am kind of confused right now on where we are in the process, but nevertheless I would favor a movement to direct this to the technical committee.

Unlike Mr. Colvin, I don't think we can divorce ourselves, however. I think we do need to look internally on how we deal with jointly managed species, but I do think it would be an error to do it in isolation of the Mid-Atlantic Council and the New England Fishery Management Council.

Like it or not, we have a process where we're jointly managing the same resource. We're talking about impacts upon groundfish. That is not a Commission species; that's a New England species. Again, maybe we have to talk in different ways; maybe we have to be more frank about the way we've communicated in the past amongst the parties. I would hope that we do move forward with some sort of intent to effectively communicate with those two other bodies.

One other comment I would like to make is I do understand all the pro arguments why those in favor of this motion would like to move forward. What bothers me most is that if I heard the information correctly from the stock assessment, that what is irrefutable is that we are seeing a consistent decline in the size of females and also in the number of pups, the size of pups per recruit.

I have also heard that when there was a directed fishery in the past, it's exactly on that part of the population we're trying to protect. I have some concern that some are categorizing this as a very safe, innocent way to increase the directed fishery, but yet

what concerns me is that we'd be potentially kicking the resource where it hurts most.

I would like that sort of dialogue, yes or no, to be heard as part of the technical committee review. And one final point, this is a conversation not unlike we've had five, six, seven years ago with the first advent of spiny dogfish management.

At that time it was recognized we were trying to protect very scarce, mature females. What I have not heard is whether or not there is continued merit to try to take the resource status into perspective, the need for a potential directed fishery into perspective, and can there be one that we can move forward to look at one potentially that would be a male-directed fishery that would have minimal or very, very low or negligible impact on mortality of females.

I have not heard that. I would like to hear that discussion as part of the review perhaps brought back to our next meeting. So, once again, I do support moving this proposal for review by the technical committee, and I do hope that we will discuss it in concert with the two councils. Thank you.

**CHAIRMAN AUGUSTINE:** Any further comments on the motion? Mr. Calomo, please.

**MR. CALOMO:** Thank you, Mr. Chairman. Before I say what I am going to say about the dogfish fishery, I want to applaud Gordon Colvin for saying something that I've say many times, not at this table, that the Atlantic States Marine Fisheries Commission should do their thing.

What I'm trying to say, I guess, and I will say it, is we need to come up with our survey and not depend on everybody else. I believe that this Commission does one heck of a job, and I want it to continue that way.

I don't us to lose sight to be a nursery for other commissions or councils. No disrespect to anybody, but we need to go forward on our own procedure, and I commend him again, Mr. Colvin, for saying that at this meeting.

I hear what is going around the table, and I hear everybody running for the hills, as they usually do on dogfish. It seems like the sentiment was right. It wasn't so long ago, Mr. Chairman – and I will make it as possible, Mr. Chairman – that I was on the New England Fisheries Management Council, and we had a fully rebuilt whiting fishery in the northern section and an almost rebuilt whiting fishery in the southern section, going down towards the Mid-Atlantic.

We also had weakfish making a comeback. We don't have a big fishery up into the north in whiting, a very small fishery, in fact, yet whiting are falling apart. Where they are going, we don't know. Why there isn't a lot of young, we don't know.

Weakfish seem to be going up the rivers to spawn there where they do. The young don't seem to be coming back to the ocean. Twice in my life I have seen, in the late 1950's and the early sixties, in 2005, 2006, dogfish on the beaches in Massachusetts, only twice in my life.

It seems that it goes with spikes. Mr. Chairman, we did close a very large area for codfish, which is not the Atlantic States Marine Fisheries Commission problem, but it is a problem of fisheries throughout the east coast.

We did see a lot of these small fry cod coming. We did sacrifice an inshore fishery where they could not venture beyond the areas that we closed. But today, Mr. Chairman, we're not seeing that small fry again. Where are they going?

We have a 6-1/2 inch mesh, the biggest in the world for that size fish, so, Mr. Chairman, something is happening. The last part I'll make, I heard Dr. Rago, with all due respect to you, Dr. Rago, you told me about the recreation and the commercial discards, 75 percent, 50 percent, 25 percent.

We had just turned 2 million of that into landings. That's all we're doing. You're still going to kill the same amount fish here. That's all you're doing. You're not increasing, Mr. Chairman.

I don't know why everybody is panic stricken. We are not increasing. We are just taking discards and turning them into landings. Thank you, Mr. Chairman.

**CHAIRMAN AUGUSTINE:** You're welcome, Mr. Calomo. Mr. O'Shea and then we're going to take a vote.

**EXECUTIVE DIRECTOR O'SHEA:** Thanks, Mr. Chairman. What I would like to offer depends on what the outcome of this vote is, so I would just seek recognition after the vote, please. Thank you.

**CHAIRMAN AUGUSTINE:** Mr. Diodati.

**MR. DIODATI:** I'm sorry, but I find this motion to be a bit too vague. It should have, at the very least, some terms of reference for the technical committee and a date for them to respond, given that it creates somewhat of a management crisis at least in some areas.

**CHAIRMAN AUGUSTINE:** I was going to ask the maker of the motion if he wanted to give further clarification. Mr. O'Shea.

**EXECUTIVE DIRECTOR O'SHEA:** That was going to be my point, Mr. Chairman, and I had some suggestions regarding that, but it seems to me that they're not relevant until or unless you take

the vote on this. That's why I was withholding what I was going to say.

**CHAIRMAN AUGUSTINE:** Does that answer your question, Mr. Diodati?

**MR. DIODATI:** Again, I would like to know specifically what the technical committee is going to review and when they will provide a response back to this Board.

**CHAIRMAN AUGUSTINE:** Okay, we'll try to answer that. Mr. Ritchie White.

**MR. R. WHITE:** I would like the technical committee to review the Massachusetts proposal to see that it will have a negligible effect on F and to report back to the Board at the October meeting.

**CHAIRMAN AUGUSTINE:** Is that all right with the seconder? Okay. All right, does the Board need to caucus? Caucus for a minute or so.

(Whereupon, a caucus was held.)

**CHAIRMAN AUGUSTINE:** All right, Ritchie, please read the motion.

**MR. R. WHITE:** Move to postpone the motions until after technical committee review of the Massachusetts proposal to see whether it will have a negligible effect on F and report back to the Board in October.

**CHAIRMAN AUGUSTINE:** Thank you. All in favor, show of hands, please; opposed; abstained; null votes. The motion passes 13 to 3, 0, 0. Thank you. Okay, any further business? Mr. Colvin.

**MR. COLVIN:** Well, I just thought another second on this issue of terms of reference for the technical committee review. I understand that the motion specifies an examination of the effect of the proposal on fishing mortality, but I would

suggest that there is a lot been said by Dr. Pierce today, there is a lot incorporated in the Massachusetts proposal in terms of a variety of different rationales in support of the proposal.

I think it would be useful for the technical committee to look at all of that. I think we should perhaps ask the staff to frame instructions or terms of reference to the technical committee that looks at -- asking them to examine the entire underpinnings of the proposal so that when we act on it, we have advice that encompasses everything.

**CHAIRMAN AUGUSTINE:** Thank you. Mr. O'Shea.

**EXECUTIVE DIRECTOR O'SHEA:** Thanks, Mr. Chairman. When I sought recognition before, the advice that I was going to suggest was that maybe the Board consider a motion that would include the expectations of what you wanted the technical committee to review.

Now we have a very narrow focus that was built into the motion that was just passed, and I think there is a time element and a work element. In regard to the suggestion that the staff sort of assemble terms of reference out of the Massachusetts proposal and send that to the technical committee, I'm not exactly sure that's really perhaps the best way of meeting everybody's expectations.

I've heard discussions about an economic analysis, about impacts on species that aren't even within the purview of this technical committee. And if you remember what we did on menhaden, for example, we actually had a -- our menhaden technical folks said you've got to bring in striped bass people, weakfish people, other people to get the prey-predator things.

So, I guess I would just like to express some concern about asking staff to sort through the Massachusetts proposal and draw up a set of terms of reference for the technical committee.

Also, I think there is a time element here that I am certainly hearing from Massachusetts. I am not sure if the intent here is to have this work done – some conversations I've heard, the intent is to have this work done before the October meeting so you can make a decision, and in other cases I'm thinking there is some work that I think would be very hard for them to complete by October. So, I am wondering if there is another strategy here to get at what has been suggested. Thank you.

**CHAIRMAN AUGUSTINE:** Thank you. Dr. Pierce, do you want to respond to that; could you clarify more specifically what we should get out of this?

**DR. PIERCE:** Well, I think Gordon's suggestion was a good one. The information we presented in support of our proposal will stand up on the merits. It's, again, based on published scientific information data; Northeast Fisheries Science Center scientists.

It may not necessarily be a Center position, but it's scientists from the Center expressing their point of view regarding these consumption rates. I have no problem with that. By the way, I can tell you right now they're going to come back and say, yes, it does have a negligible effect.

It's a simple calculation of catch divided by biomass. I have great confidence that we will find out that it is negligible. This is no major effort on the part of the technical committee, I'm sure.

Yes, October is late for us, bringing it back to the Board in October. We understand the

time constraints, and obviously the Board passed this motion, so this is the way it wants to proceed, but we're obviously very disappointed in this outcome.

It certainly works against our best interest in Massachusetts relative to what we're trying to do with codfish. I hope that after further consideration by the technical committee and after this information gets moved into other committees, that more attention will be focused on fluke, because one wonders where the last year class of fluke went since it's the second lowest in the time series.

We have been speculating about this, that and the other thing. I would speculate that perhaps one reason why we are missing that year class is the abundance of dogfish, which, by the way, when you look at the bottom trawl survey data and the spring data, you see that there is a rather interesting overlap between large dogfish and fluke, and other species, too. Again, speculation, but one is as good as the next.

**CHAIRMAN AUGUSTINE:** Dr. Gibson.

**DR. MARK GIBSON:** I agree with what Gordon has suggested, and it seems to me the important issues for the technical committee that bear on what Massachusetts has articulated in support of their proposal are this predation question in a multi-species context, and Dr. Pierce has cited a paper.

That should be on the short list of things to look at and comment on. I think another important issue is the influence and reliability of this 2006 biomass estimate. It is pretty clear to me that is not a reliable estimate of survey abundance.

It's doing the same thing that scup did and sea bass did, and we have already been snookered on those, so they should comment on that, how much that is influencing the current estimate of biomass.

Dr. Rago talks about the influence of the selectivity pattern on the F reference point, which has gone up quite a bit, and I think the technical committee ought to weigh in on that, how much fluctuation and uncertainty there is in this F reference point because it bears on the question of whether it will be a negligible F impact on F or not.

Well, the corollary to that is how high do we think the current reference point is? And then the other point I would suggest that they look into is what is the likelihood that this will result in a directed fishery on large females, exactly what Harry Mears warned us against.

That would be my short list of terms of reference that I just wrote down before this.

**CHAIRMAN AUGUSTINE:** Thank you very much. Mr. Colvin, would you add to that, please.

**MR. COLVIN:** Well, I think actually Mark pretty well captured it all. I just can't help but think we couldn't, before this four-day meeting is over, try to get all that written down and run by everybody so that we could all leave here pretty much on the same page. That would be my suggestion.

While I've got the microphone, let me thank Dr. Pierce for beating me about the head and shoulders where I live with fluke; and acknowledge Harry Mears' comment about an issue which may not be germane to this particular technical committee review but one which I did send a note out to folks about earlier.

That would be my interest in pursuing the questions that I think are raised by the Canadian's response to the National Marine Fisheries Service correspondence about finding a way to utilize parts of this resource, particularly the males, in a fashion

that may help address a lot of these issues as well.

For what it's worth, my suggestion is that we proceed informally to try to develop a written set of terms of reference before we all leave here on Thursday, and I think we can do that.

**CHAIRMAN AUGUSTINE:** Thank you, and if staff can do that for us, we would appreciate it; get it in our earliest convenience so we can review it. Mr. Diodati.

**MR. DIODATI:** I think that's all terrific, so is the Board, before we leave here this week, going to revote this motion? Are you going to revisit this motion, somehow? The motion is very specific with regards to the terms of reference that we didn't vote for, but you all voted for.

It was to review our proposal to see if it has a negligible effect on F. Now all these other things are terrific, but it's not in the motion that you just passed. I'm not sure how you get to where you want to be.

**CHAIRMAN AUGUSTINE:** We'll try to get an answer to that question. Mr. LaPointe.

**MR. GEORGE LAPOINTE:** Thank you, Mr. Chairman. In regard to Paul's question, the concern is if you answer those two simple questions and we come back in October and people ask ten more, this will be postponed longer.

So, if it takes a revote of this motion, that's fine, or just a concurrence of the Board, I think a reasonable suite of questions is the right way to go with the technical committee.

Terry asked the question before, and among the questions that I'd like to have on the list

that the technical committee look at, because I don't know the answer, is if the quota is increased, is there a potential for other fisheries to be shut down because of bycatch?

I'm thinking specifically of the herring fishery. If the answer is no, and it's simple, that's great, but that's among the questions that certainly are on my mind as this has been discussed. Thank you.

**CHAIRMAN AUGUSTINE:** Thank you, George. Ritchie White.

**MR. R. WHITE:** Thank you, Mr. Chairman. Doesn't the Chair have the ability to assign a task to the technical committee, so couldn't the Chair assign the task of looking at these other issues separate from the motion.

**CHAIRMAN AUGUSTINE:** I assume that's what we were doing. We were trying to get these technical issues that have just been put on the table for consideration, to take a look at that and see if, in fact, you can come back with answers for the Board or direction to the Board in response to what their request is before our four-day meeting is over.

Mr. O'Shea is nodding his head yes, so I assume that's where we are. In regard to the specific question that Mr. Diodati asked, they are not the technical review. They're not doing a technical review of this proposal.

Unfortunately, as Pierce said, we may come back with the same answers from them – I want to say this – a quasi-review that the technical committee had without having had the advantage of being together collectively to review that.

So, I would say, no, it wouldn't be a matter – my understanding is that we wouldn't go

back and address that motion during this next four-day period of time. Mr. Adler, and then I think we're just about ready to wind up unless there is something more specific.

**MR. ADLER:** Thank you, Mr. Chairman. Forgetting the quota and leaving the quota where it is, which is where it is already, is there a reason why the state of Massachusetts couldn't be allowed to go up at least on its trip limits until that quota is taken? We're not changing any quotas. We're just saying, "Okay, the quota hasn't been taken; can we in September, when we wanted to do this, adjust our trip limit."

**CHAIRMAN AUGUSTINE:** Quite frankly, it doesn't matter to me, Mr. Adler. I think it's up to the Board members if they want to try to take that position and go in that direction. I believe our quotas have been set in, locked in since we set them a year ago or thereabouts.

It's going to take a Board action to do that, but it will take something more than just an okay from this Board. Any Board members want to respond to that comment that Mr. Adler made? Staff, do we have a problem with that, just to concern Massachusetts changing their quota between now and the end of the year?

**MR. ADLER:** Just the trip limit.

**CHAIRMAN AUGUSTINE:** I'm sorry, the trip limit. I think we all agree they're locked in. The trip limits were set at what they are. Mr. O'Shea.

**EXECUTIVE DIRECTOR O'SHEA:** Well, I don't really think the issue is a question of staff. I think it's a question of the Board.

**CHAIRMAN AUGUSTINE:** Well, I asked the question and got no response, so I

assume there was no interest in changing that. Mr. Miller.

**MR. MILLER:** Mr. Chairman, does that mean that other states have that ability as well if we were to follow through with Mr. Adler's suggestion?

**CHAIRMAN AUGUSTINE:** The answer to your question is the size of this room; it's Pandora's Box. We're going down a very, very steep slope very quickly, and we're opening up a can of worms on another discussion that is being brought up an hour and fifteen minutes after the meeting should have been adjourned. Mr. Ritchie White.

**MR. R. WHITE:** I think we have already voted on that issue, to postpone a decision on increasing trip limits.

**CHAIRMAN AUGUSTINE:** Thank you for that clarification. Are there any further comments or information to be brought before this Board? Any other business at all?

#### ***OTHER BUSINESS/ADJOURN***

I thank you for your indulgence and your confidence in moving forward as a united group, and the action we actually took I think is a step in the right direction, although a little late for Massachusetts. Thanks, again.

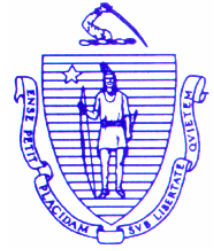
(Whereupon, the meeting was adjourned at 12:42 o'clock p.m., August 15, 2006.)





Paul J. Diodati  
Director

*Commonwealth of Massachusetts*  
**Division of Marine Fisheries**  
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July 28, 2006

Preston Pate Jr.  
Chairman, ASMFC  
c/o NC DMF  
PO Box 769  
Morehead City, NC 28557-0769

Re: Proposal for a small-scale directed fishery for spiny dogfish

Dear Pres:

There are new circumstances prompting me to conclude that *status quo* management of interstate dogfish fisheries for the next three years is very ill-advised. Specifically, there is new assessment information and growing alarm about effects of spiny dogfish on Gulf of Maine cod rebuilding efforts and the quality and viability of recreational and commercial fishing in areas where dogfish dominate. Therefore, I request the ASMFC take immediate action to re-instate a small-scale directed fishery in state waters this summer and fall by enacting a 6-million pound coastwide quota to be taken by state-specified trip limits (e.g., 2-3,000-pounds).

I find these circumstances to be compelling, and they call for a quick response – one that would set the Atlantic States Marine Fisheries Commission (ASMFC) on a different course than the one just selected by NOAA Fisheries for the next three years and perhaps longer. The federal government's three-year fishery prohibition is described in recently published annual specifications that were decided (1) prior to receipt of new assessment information including a new fishing mortality reference point indicating overfishing is no longer occurring and a conclusion that dogfish are no longer overfished, and (2) without concern for ecosystem effects of dogfish.

I understand my request will not be well received by those wishing to re-establish dogfish biomass and age structure witnessed during the late 1980s and early 1990s, but I'm convinced that ecosystem science supports my contention that a very high biomass of dogfish likely will negate our efforts to rebuild cod (and other species) to high biomass targets. The following are specific reasons for my request:

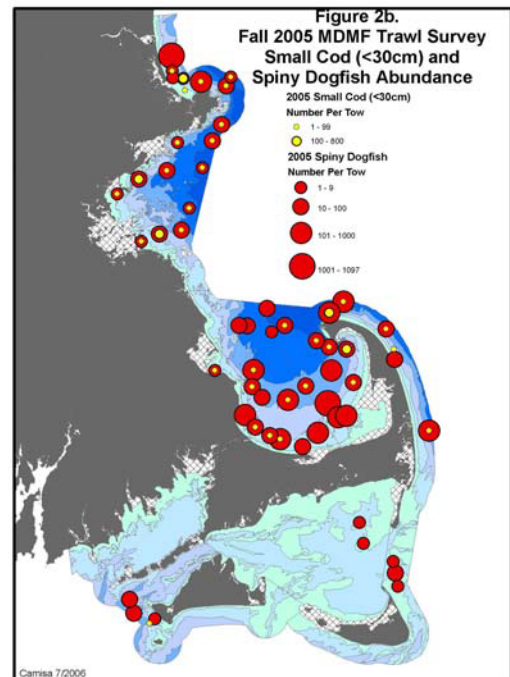
Spiny Dogfish Mortality and Biomass Estimates

- 1)  $F_{\text{threshold}}$  is now calculated to be 0.39. Mortality in 2005 was estimated by the SARC/SAW to have been 0.13 (average  $F$  on females; 0.02 on mature females); therefore, overfishing is not occurring.

- 2) The three-year moving average biomass for mature females is 106,000 mt, the overfished definition is 100,000 mt; therefore the stock is not overfished. Importantly, the 2006 point-estimate for mature females is 253,200 mt. Divide 2005 catch of 8,700 mt by the 3-year moving average of about 106,000 mt (just mature females), fishing mortality is about 0.08. Consider that we could add another 10,000 mt or 22 million pounds to total catch/landings and still prevent overfishing ( $F=18,700 \text{ mt}/106,000 \text{ mt} = 0.18$ ).
- 3) Recognizing the SARC/SAW concern that the 2006 point might be anomalously too high, I repeated this calculation with one-half the 2006 calculated biomass, resulting in  $F = 0.07$ . However, since all the wide swings in abundance that have been observed throughout the time-series have “counted” in 3-year averaging, the 2006 point should count as well.
- 4) Total biomass (all sizes and both sexes) has risen from 442,000 mt to 850,000 mt with much of the increase being intermediate-sized dogfish (36-79 cm). These numbers give us a very positive outlook that’s consistent with commercial and recreational fishermen’s observations.

### Cod Conservation

- 1) I implemented a Cod Conservation Zone (CCZ) last year (December 1<sup>st</sup> - February 28<sup>th</sup>) to protect pre-spawning and spawning cod in the Massachusetts Bay area. Now there are strong indications that our efforts have been successful. Specifically:
  - a. *Marine Fisheries’* Resource Assessment Project Spring 2006 bottom trawl survey showed very high numbers of cod young-of-the-year in the Cape Cod Bay area. Our scientists observed the 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> largest individual catches of young-of-the-year cod ever seen in the spring time-series (1978). Indices for 2004 and 2005 looked strong at age 0.
  - b. The federal bottom trawl spring 2006 survey report, in its field notes, emphasized high catch of juvenile cod in Cape Cod Bay, providing some hope that cod reproduction may be improving in this area.
- 2) I have every reason to believe that very high numbers of large dogfish will have an adverse impact on these cod rebuilding initiatives. Note the overlap of juvenile cod and dogfish distribution in Massachusetts and Cape Cod Bays in our fall 2005 bottom trawl survey (Figure 1).



**Figure 1.** Overlay of cod and spiny dogfish abundance sampled in waters under the jurisdiction of the Commonwealth during the *Marine Fisheries* Fall 2005 Trawl Survey.

In 2003 ASMFC approved a directed fishery for spiny dogfish in state waters under an 8.8-million pound quota with a trip limit up to 7,000 pounds. In addition, a regional agreement was reached to allocate 58% of the quota to Maine, New Hampshire, and Massachusetts and 42% to all of the states from Rhode Island south, especially to ensure that Mid-Atlantic States (e.g., North Carolina) would be able to continue a fishery targeting large concentrations of dogfish from November through spring. This plan was amended by reducing the quota to 4.4-million pounds to become more consistent with federal actions. The plan was then shelved in 2005 when updated assessment information and NOAA Fisheries convinced a majority of ASMFC Dogfish Board members that a 4-million pound bycatch quota with 600/300 pound daily trip limits was a

better approach. I did not agree; however, it being clear that very few states would continue to support the small-scale directed fishery, I conceded.

Given what's changed, I suggest we now move forward with an interstate strategy similar to the one ASMFC adopted in 2003, i.e., allocate a quota between regions based on dogfish availability and state interest (Table 1). Consistent with this approach I suggest the quota for state waters' fishing should be about 6-million pounds for the current fishing year with 42% being reserved for Rhode Island and south..

I propose a 6-million pound quota in 2006 with the previous regional sharing agreement (58%:42%). This proposal will have a negligible effect on F and clearly will prevent overfishing ( $F \geq 0.39$ ). I would consider 8-million pounds in 2007 after summary review of the 2006 fishing season. With this change for 2006, I intend to allow landings of 2,000 pounds per trip in September, and perhaps 3,000 pounds. per trip in October and November. If 3.48 million pounds is landed before dogfish leave our waters, the trip limit would be dropped to 600 pounds to allow continued amounts of bycatch. New Hampshire and Maine would share this allocation and establish their own landing strategies. As before, states to the west and south of the Commonwealth will determine their own strategies. I suggest any overage of the 6-million pounds be allowed with a 600 pound landing limit to account for federal rules and needed landings of federal waters' bycatch.

I respectfully request ASMFC to support, or at least not oppose, my plan of action to move forward with emergency procedures in Massachusetts. An ASMFC Addendum could be developed in time to directly benefit other states with fisheries, particularly those that don't begin until late fall and winter.

From the amount of time my staff and I have spent on this issue and from the length of this letter, the seriousness of my request and intent should be obvious. I have decided to promote higher ecological integrity of the Massachusetts Bay portion of the Gulf of Maine by favoring an ecosystem status with reduced dominance large-sized, piscivorous spiny dogfish. It has recently come to my attention that members of New Jersey's congressional delegation are imploring NOAA Fisheries to re-assess the management of spiny dogfish based on ecosystem considerations (July 6, 2006 letter enclosed). Considering that ASMFC also understands that the future of regional fisheries management will be ecosystem-based, I hope the Policy Board and Executive Committee agree with me that strong leadership of this issue is necessary now.

Sincerely,



Paul J. Diodati  
Director

Cc: ISFMP Policy Board

**Table 1.** Summary of Current and Proposed Spiny Dogfish Quotas and Possession Limits

	<b>Quota</b>		<b>Possession Limit</b>	
	<u>Current</u>	<u>Proposed</u>	<u>Current</u>	<u>Proposed</u>
<b>Coastwide</b>	4-million lbs.	6-million lbs		
<b>ME</b>	2.32-million lbs. shared	3.48-million lbs. shared	600-lbs.	State specified
<b>NH</b>			600-lbs.	State specified
<b>MA</b>			600-lbs.	2-3,000 lbs. 600-lb. bycatch limit when fishery closes
<b>RI and south</b>	1.68-million lbs. shared	2.52-million lbs. shared	600-lbs.	State specified