SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL

MPA Expert Workgroup

Mighty Eighth Air Force Museum
Pooler, GA

May 16-17, 2012

SUMMARY MINUTES

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The MPA Expert Workgroup of the South Atlantic Fishery Management Council convened in the Mighty Eighth Air Force Museum, Pooler, Georgia, Wednesday afternoon, May 16, 2012, and was called to order at 1:00 o'clock p.m. by Ms. Myra Brouwer

MS. BROUWER: Welcome, everybody. Thank you for taking time out of your busy schedules to come and meet with us and talk about MPAs. It's going to be a very short meeting, unfortunately, but I think we have a lot of things to talk about and a lot of expertise at the table, scientists and fishermen. There are other folks who have come to listen in on the discussions and participate in the workshop that we're holding this evening.

What I am going to do first is just give a very brief introduction. This is a few slides that I have prepared to guide the public when we open up the workshop at six o'clock today, to give the public a little bit of background. I figured I will use this to give everybody here the background of why we are here and what it is we expect to accomplish.

Amendment 17B to the Snapper Grouper Plan implemented a measure to close fishing for six deepwater species seaward of 240 feet. This was done specifically to address bycatch of speckled hind and Warsaw grouper. Later on this past year Regulatory Amendment 11 was submitted to remove the 240 closure.

There were some pretty significant socio-economic impacts particularly in North Carolina and Florida. Folks that were fishing and targeting blueline tilefish were no longer able to do so. In going back and looking at the available information, it was apparent that these two species, speckled hind and Warsaw grouper, occur more commonly along the mid-shelf region, not quite as deep as we had originally thought.

Regulatory Amendment 11 was implemented and approved last week. On Thursday of this past week that 240 foot closure was officially removed. Folks can now go out there and fish for things like queen snapper, snowy grouper, the six deepwater prohibited species. That is just a little bit of background.

The council is now considering the use of MPAs to address the bycatch of speckled hind and Warsaw grouper. Now for some of you who maybe have not been following what the South Atlantic Council has been up to in recent years, there is a series of eight deepwater MPAs that were established to protect populations of deepwater snapper grouper species.
Those are already in place. We also have the Oculina Experimental Closed Area, which was put in place a while back. There is an area within the HAPC, the experimental closed area, where bottom fishing for snapper grouper species is prohibited. There are already some spatial closures that are designed to protect deepwater snapper grouper species.

At the March council meeting the council instructed us to hold a series of workshops. We've held one in Charleston, the same week that the Snapper Grouper Advisory Panel met. We're going to hold a second one this evening, as I said. Then this is the expert workgroup. What we would like to get from the group is a written report, eventually.

This will be the deliverable from this meeting that the council can use during their discussion at

the June meeting to determine whether they still want to move forward with establishment of MPAs. This evening I'm just going to give the same introduction, tell them about what the council asked. The timing is such that this is moving rather quickly.

The council is looking at having public hearings for potential actions to designate MPAs in August of this year. There is not a whole lot of time. What we'll do this afternoon is after we all introduce ourselves and spend some time talking at the table, we'll go into breakout groups – however, it looks like maybe we'll have three – and talk about observed occurrences of speckled hind and Warsaw grouper in our region, their habitat, anything that you guys can bring to the discussion in order to assist the council in determining where would be the best place to site these MPAs.

What we're asking from the public and from you are locations where speckled hind and Warsaw grouper have been caught, locations where there is evidence of spawning, and essential habitat. Another thing we are going to do actually in the same amendment that would have these actions is also establish Habitat Areas of Particular Concern for these two species. This evening when we hold the workshop we are going to do the same sort of thing with the public with breakout groups.

There are several of us here, if you notice, which is quite an entourage of council staff here. The intent is to talk with the public in small groups and try to get folks to share their information on speckled hind and Warsaw grouper. We have a comment period that is currently open. We're excepting comments until May 21. We've already received quite a few.

These will be passed along to the council. They will all be sent along with the briefing book. The council will have recommendations from the Scientific and Statistical Committee to consider. They'll have recommendations from the Snapper Grouper AP. They'll have the input from the two public workshops, and they will have the input from the Expert Workgroup.

These are all the tools that they are going to use to decide how to proceed at their June meeting in Orlando. That is just background. I think I've met everybody, but if I haven't I'm Myra Brouwer and I help the council with snapper grouper issues. My expertise and my background I guess is in fisheries biology. I worked with Charlie Winner at the South Carolina DNR for five years doing research in estuarine fishes, reproductive biology of spotted seatrout and that sort of thing. I've been with the council for about nine years now. Let's go ahead and start introducing ourselves around the table, and then we'll go into recommendations that the council has received so far.

MS. HARTER: I'm Stacey Harter; I'm with the NOAA Fisheries in Panama City, and myself and Andy David have been working together to study this network of MPAs since about 2004.

DR. LINDEMAN: Ken Lindeman, Florida Tech, Melbourne, Florida; former South Atlantic Council Snapper Grouper AP member, former Habitat AP member, former Caribbean Habitat AP member; very focused on using fisher expertise to guide management.

DR. SEDBERRY: I'm George Sedberry. I'm with NOAA's Office of National Marine

Sanctuaries. I'm located at Grays Reef National Marine Sanctuary. Our office is here in Savannah, so welcome to Savannah, those of you from out of town. Prior to working for Sanctuaries, I worked for the South Carolina Department of Natural Resources for 27 years and headed up the MARMAP and offshore research programs there.

MR. BALLINGER: I'm Joey Ballinger; I'm with the South Carolina Department of Natural Resources, specifically the MARMAP Program. I'm a current employee there with a background of the snapper grouper fisheries in the South Atlantic.

MR. ZISKIN: Gabe Ziskin currently with Wisconsin, DNR, formally a grad student with SC DNR. I published a life history study on speckled hind with Marcel Reichert, Dave Wyanski and Pat Harris.

MR. COX: My name is Jack Cox. I have been snapper grouper fishing since 1980. I now have three snapper grouper vessels; two of them are deepwater boats and one of them shallow water. I buy and sell most of our seafood locally and am now a dealer.

DR. HEYMAN: Will Heyman. I'm presently a professor of marine geography at Texas A&M University. I've been interested in marine protected areas as a fisheries management tool for a long time. The bulk of my work has been international, mostly in Belize, but other places as well. As Ken said also, I'm very, very interested in working directly with fishermen to implement smart management. I'm particularly interested in where and when spawning aggregations occur.

MR. DeMARIA: Don DeMaria; I'm a member of the Snapper Grouper Advisory Panel. Most of my experience has been in the commercial fishing industry, and I'm also a very strong proponent of the MPA idea.

MR. HUDSON: Rusty Hudson, President of Directed Sustainable Fisheries, and also representing the Southeastern Fisheries Association, East Coast Fisheries Section today. I come from five generations of watermen out of the Daytona Beach Area, dating back into the 1800s, and personally have fished out of the Daytona area since the 1950s. I have a background in the for-hire as well as recreational and as well as commercial. I have fished speckled hind and Warsaw grouper, as well as almost any of the other normally encountered snapper grouper species, mackerel species and shark species throughout my career.

MR. FREEMAN: I'm Robert Freeman. I operate Sunrise Charters since 1983 out of Morehead City, or Atlantic Beach, North Carolina. I deepwater bottom fished since 1972 off of Morehead, northeast and southwest of the Big Rock area, about 20 miles in each direction. For basically 40 years we've targeted the deepwater grouper, specifically the snowies. I am just trying to stay involved and keep from being put out of business.

MR. MARHEFKA: I'm Mark Marhefka, Charleston, South Carolina, commercial fisherman since 1977. I've been involved in the Snapper Grouper AP for, gosh, I can't even remember, 20 something years. I was in the very beginning of the original MPAs that were put here on the east coast.

I was one of the first fishermen to come up here and bring my charts and draw some lines, feeling that we did a really good job doing what we wanted to do. Hopefully, we are going to find out that we have. I also own Abundant Seafood and sell a lot of the local seafood in the state of South Carolina. Hopefully we'll come up with some good resolution here.

MR. DELPH: Captain Ralph Delph out of Key West, Florida. I have spent more than 20 years fishing the giant bluefins off of Cape Cod during the summer months. I fished the deepwater species groundfish up in that area as well, down through the south coast of Florida all the way around into the Gulf of Mexico.

I've commercial fished the snowy grouper, tilefish, Warsaw grouper, speckled hind and all of that during the past 50 years. My real expertise is in the paleoshorelines, the reefs, deepwater reefs, especially from the Miami area south around and west out to the far side of the Tortugas up through Pulley's Ridge and the Middle Grounds and so on. I fish all species of fish, everything from the flats to swords and marlin and bottom fish to pelagics. I've covered it all in my years of fishing. I hope I can be off some help to you. Thank you.

MR. HARTIG: My name is Ben Hartig; I'm currently Vice-Chairman of the South Atlantic Council. I also still continue to make my living commercial fishing. That is where most of my living continues to come from. I have extensive deepwater experience. I started fishing in the deepwater in about the mid-seventies and continue to at some level today. That's it.

DR. GRIMES: My name is Church Grimes. I'm retired about six months ago as the Director of the National Marine Fisheries Service Lab in Santa Cruz, California. We did a lot of work on marine protected areas. In particular we had a working group that went on for about two or three years on how to integrate MPAs with traditional fisheries science and management.

Before that I was at the National Marine Fisheries Service Lab in Panama City for about 15 years and we worked on grouper snapper in the Gulf, especially, and with Chris and people like that. Before that I was on the faculty of Rutgers University for about ten years and we did a lot of work on tilefish, a lot of submersible work, habitat and behavior that sort of thing.

I was a graduate student getting fish off of Captain Stacy in Beaufort, North Carolina, and Morehead City down there on the waterfront. I did my dissertation on vermilion snapper and we worked on the deepwater grouper snapper complex for quite a long time in Beaufort. I think that is it.

DR. KOENIG: My name is Chris Koenig; I'm a retired faculty member of Florida State University. Most of my research has been on groupers habitat, juvenile habitat, spawning habitat. I'm presently working on Goliath grouper recovery in Florida. I have for the past seven years worked on Madison-Swanson Marine Protected Area looking at abundance age structure inside relative to outside, including spillover. I have a report if any of you would like to see it of that work. I have continued to work in Madison-Swanson and also on other shelf edge habitats like Pulley's Ridge. Presently we're working off DeSoto Canyon in response to the Deepwater Horizon Oil Spill.

MS. BROUWER: Okay, in order to facilitate discussions and the putting together of a written report, we would like to suggest that we select a Chair and a Vice-Chair for this group who would be the folks responsible for coordinating and putting the written report together. We would suggest that the Chair perhaps be one of the scientists and the Vice-Chair one of the fishermen who are present. If there are no volunteers, I am just going to have to pick. Okay, I guess, Ken, would you be willing to be our Chair?

DR. LINDEMAN: Thank you very much for that, Myra. I have eight trips in the next seven weeks and that includes Europe, and I have multiple deadlines. I believe this report is due in?

MS. BROUWER: We're hoping to have the report available to the council by June 1.

DR. LINDEMAN: It's not possible for me; I will be an active assistant.

MS. BROUWER: Okay, so I'm going to ask again for a volunteer. Don.

MR. DeMARIA: Can I volunteer George Sedberry?

MS. BROUWER: Oh, sure.

DR. SEDBERRY: And I appreciate that. I'll do it.

MS. BROUWER: Thank you, George. Now you may volunteer Don for Vice-Chair if you would like.

DR. SEDBERRY: That's right; I could do that, couldn't I? I think I will. We've worked pretty well together over the years.

MR. DeMARIA: Okay, I'll do it but you are going to take the lead on it.

MS. BROUWER: All right, great? Thank you very much for that. Next we would like to go over the recommendations that the Scientific and Statistical Committee made. They met here in Savannah, actually, at the beginning of April. They had a very lengthy discussion about MPAs and speckled hind and Warsaw and whether MPAs were the right approach and where they should be placed.

I'm going to invite George and Churchill, perhaps, to give us a little synopsis. The SSC report was included in your briefing materials. There are some hard copies in the back. I don't want to go through and read from the report. Since we have two SSC members in the audience, perhaps they can fill us in.

DR. GRIMES: Since George got roped into another job, maybe I'll – is that all right with you, and you can correct me on anything I leave out, all right?

DR. SEDBERRY: That sounds good.

DR. GRIMES: This will be a little bit rambling. What I'm doing is just going from the overview document that was produced, George. I think it reflects the sort of long and rambling discussion that the SSC had about this and their frustration about sort of a lack of good information to base any really distinct recommendations upon about sighting or size or need or otherwise for MPAs.

Just in starting off, early on we were sort of in conclusion I guess that it was still really early in the process. The SSC wanted to wait for the advice of the APs and the results of this workshop and so on, get other people to weigh in on what they thought before we provided any definitive comments.

Although one of the few things they did say early was that however we set these MPAs up, it would be easier for the fishermen to keep track of the areas if we made them with depth contours instead of long straight lines on a map. I think probably the law enforcement people will probably say the opposite. The Coast Guard will probably say the opposite. I think they like straight lines so they can look and see what your location is, what your geo location is and whether you are where you are supposed to be or not.

Another suggestion that was made by the SSC was to consider approaching the creation of these MPAs along ecosystem lines or think about it as an ecosystem-based approach in addition to just thinking about the single species aspect of it. That is certainly a reasonable thing. We had presentations by two different people, Nick Farmer from the Southeast Regional Office and Roger from the council here.

They were complementary in nature and they were a bit different. I presume we've got all that same information available to us here, right. Nick's was mostly looking at fisheries dependent and I guess some fishery-independent distribution and abundance data. Roger's was more based on getting more input from the fishermen.

One of the things – I think this was me, I get the blame for this – suggested that habitat modeling would be a way to approach that; just what is discussed in that third paragraph there, Nick's analysis included incorporation of temporal analysis. I talked about we should encourage a new sensitivity analysis as a way of determining the importance of different data sets, maybe talk about weighting different data that would go into that analysis for determining where to put them.

Something I think we will probably talk about later is habitat modeling. This is a potential approach to doing that and incorporating a lot of different information into determining where the best places might be to site these things. Given all the current regulations that affect the other snapper grouper species, we said in this paragraph – and I notice this was quoted in one of the position papers that were distributed to us earlier – that it is possible that overfishing for speckled hind and Warsaw is not occurring and data analysis for co-occurring species and a reduction in landings and effort of those species might provide some data to show what the impact on the two species of interest was concerned.

The SSC recommended again going back to the habitat modeling exercise. I won't say anymore

about that because I think we'll talk about that probably in more detail later on. The SSC said that we felt that we didn't have sufficient information to comment on the amount of area that would need to be closed, the numbers of areas that would need to be closed, how you relate the percentage of closed area to the biological reference points, the 30 percent SPR.

There is insufficient information for us to make a rational recommendation based on that. You need some sort of a population model to do that; at least using current biological reference points in management, and so far we didn't think we had that. We talked about how currently they are managed using the traditional means, using the traditional biological reference points of, for example, the 30 percent SPR as I said.

Given the current information that is available, it is just about impossible for us to make some kind of an intelligent statement about whether they are considered overfished or undergoing overfishing currently. We are more or less obliged legally to abide by the system as it currently operates, and the best available data I guess is maybe not very good in a lot of people's minds, but that is what there is.

We are badly in need of monitoring to help determine where we do better and move forward. We said that given the difficulty in managing these – and Ben and I were just talking about this – using traditional biological reference points, traditional population modeling that MPAs probably represent a really good alternative and a simpler way of doing it than trying to develop population models for species that are relatively rare.

It may be hard, if impossible, to ever get the information they need to do a decent age-based population dynamics assessment. We made some recommendations in the end that we needed to expand the fishery-independent data collection, increase observer coverage. Generally, I guess the statement was to increase the amount of information available to us to make these kinds of decisions; stress the need for an assessment of speckled hind and Warsaw grouper, and the necessary data to do it.

We came together to make some consensus statement in the end there, which I don't know how substantive it was or is. I'll just read that; "It is possible that speckled hind and Warsaw grouper are not undergoing overfishing given all the regulations for associated species in a current analysis from the Regional Office. However, there is not sufficient evidence to indicate overfishing is ended.

"Additional closed areas further decreased bycatch mortality beyond current levels. Based on the current information, the SSC could not determine what benefits an additional closure would provide to the stocks of speckled hind and Warsaw grouper; what amount of area should be closed or is necessary to be closed to reduce bycatch mortality, or if additional closed areas are necessary and recommending additional monitoring and data that needs to be collected in order to be able to conduct a formal stock assessment for these species." George, what did I leave out?

DR. SEDBERRY: I think you got it all. There was I think generally just a general frustration at the lack of information available, lack of data. These are rare fish, anyway, and probably always have been rarer than other snapper grouper species. The traditional management that the SSC is

generally charged with just doesn't work too well for these two species.

MR. COX: I'm kind of wondering what got us here and where the interest on these two species come from and those kind of things, if somebody could explain that a little bit.

MS. BROUWER: Okay, I'll give you my take on things. I haven't been around long enough to really understand from the beginning how things happened. Speckled hind and Warsaw grouper have not undergone a stock assessment. There is not enough information to conduct the sort of assessments that we do through the SEDAR process, for example.

Something called a catch curve analysis was done back in the nineties by folks up in the Beaufort Lab, the Southeast Fisheries Science Center. Those analyses indicated that the stocks were possibly overfished and undergoing overfishing. That was based, like I said, on a catch curve analysis. That status has remained.

If you go to the status of stocks report that is put out by NOAA every year, both species are listed as undergoing overfishing and in an overfished condition. They have also been petitioned, both of them, for listing under the Endangered Species Act, because they are so rare and because of the concern that they are continuing to be exploited.

They are already listed as critically endangered, I believe, by the IUCN. They are listed as endangered by the American Fishery Society. The stocks are definitely in bad shape. When Amendment 17B was being put together, the SSC recommended that there be no directed catch of these two species, but at that time it was thought that would not be enough to protect them, because they would still be subject to regulatory discard mortality. In a nutshell that is pretty much my understanding of why we are here.

MR. MARHEFKA: Explain to me how can they be considered endangered if you don't have any information on them to the point where we are going to go and make an information – I'm lost here. If you have no information to go and even do a stock assessment on it, how can you go and actually say that they are considered endangered? We've already moved the cart before the horse.

MS. BROUWER: I'm going to let Church answer that.

DR. GRIMES: That is a legitimate question. At least in the federal process for listing things under ESA, it isn't initiated by the government, and it wasn't initiated by the government. Someone outside the government, most likely an NGO – I don't really know the ins and outs of this – would have petitioned the agency to list a species under the Endangered Species Act.

When the Regional Office gets petitioned, they have a 90-day finding. I think 90 days it is to look at the petition and the information that they give in this petition and determine whether or not there is sufficient reason, more or less, to take it seriously and that they constitute a biological review of the status of stock or status of the species and whether or not – then make a listing determination.

I think in this particular case when it was – a short time ago I think the Southeast Region said there was not sufficient information and the 90-day finding was to not go beyond that. As far as the feds are concerned, there is not sufficient information to show that it ought to be considered endangered or even that the process should be go forward to evaluate it more thoroughly. Does that answer your question?

MR. MARHEFKA: Then, in other words, the NGOs know what we don't know, because we can go and pick a number of species out in the ocean right now that we have no information and no data on, and we can go and just sort of go down this willy-nilly trail, is what I'm seeing here. I want to go and sort of be able to take this back to my other AP members and be able to explain this to them. I hear what you are charged with, and I understand that. I want to see some black and white here and not gray.

MR. WAUGH: Yes, not to comment to the determination that Church was just talking about, because the petition was asked for, it was evaluated and it was denied. That is not why we're here. We are here because it is listed as undergoing overfishing. That is based on the best available science.

That determination, NMFS has a policy that they will not change that status determination until there is another stock assessment. Well, speckled hind and Warsaw are not on the SEDAR stock assessment schedule. There is a conference call Friday. The SEDAR Steering Committee is meeting and they are talking about scheduling, so we may be able to raise it as an issue there.

But if speckled hind and Warsaw go on the schedule, then something else has to come off, because the Southeast Fisheries Science Center has said they can only do two to four species a year in terms of assessing the stock status. There is sufficient information to do a stock assessment.

Now whether there is sufficient information to do these high-powered age models that is being done through SEDAR, that is yet to be determined, but there is sufficient information to do a stock assessment. There was sufficient information when these were a part of the stock assessment when snowy grouper and golden tile was done, but they didn't move these two species forward because of workload issues at that time.

We are here because they are undergoing overfishing. Some of the rationale, as Myra pointed out, associated with 17B and now with the removal of the 240 Closure, we have to address the issue of what is the expected level of discards; and is that mortality sufficient such that overfishing is still ongoing? What the SSC has said is we need to have some information about stock status. This is why the council is going to raise this on the SEDAR call and try and get a stock assessment on the schedule.

MR. MARHEFKA: I hear you, Gregg, but I'm trying to go and figure out how are we determining that they are overfished when there is no harvest even being done on these particular species?

MR. WAUGH: The overfished status is unknown; isn't that correct, Myra? The way it is listed

is overfished is unknown?

MS. BROUWER: I believe that is correct.

MR. WAUGH: And it is currently undergoing overfishing. We have to end the overfishing and the determination has been made – well, the question is a total prohibition, is that enough to end overfishing? Some have argued that it isn't and that we need to have more regulations. The council argued in 17B that 240 Closure was necessary in order to reduce the level of discards to end overfishing.

Now that deepwater closure has been removed, so the council has to reevaluate this based on information from the SSC, from you, from these workshops to determine, well, do we need to have some additional regulations in order to end overfishing or do we just ask for a stock assessment and wait until we get a stock assessment to determine what the status is before we move forward? Those are decisions that the council will be addressing in June.

MS. BROUWER: Okay, next on the agenda are recommendations from the Snapper Grouper AP, and Don and Mark are both on the AP, so I'll pass it to Don and Mark to talk about what the AP had to say.

MR. DeMARIA: Well, first before I get into that, at our last meeting I heard people in the audience talking about the SSC Chairman, Luiz Barbieri, and certain comments he made about Warsaw and speckled hind. I heard comments ranging from there is no problem at all to they are not undergoing overfishing and all kinds of different comments, which I don't like to see anybody misquoted, and I'm sure Luiz didn't either.

I sent an e-mail to Luiz and said exactly what did you say and what did you mean so we can get it on record? He wrote me back and maybe I can hand this into the public record so everybody has a comment on it. But the gist of it is he says, "I do not believe Warsaw grouper and speckled hind are undergoing overfishing. However, I do believe both species are not just overfished, current biomass is below sustainable levels, but severely overfished," and then he goes on.

But I think it is important to get his exact comments down so that he is not misquoted by anybody anymore, and I'll hand this into Myra or whoever. As far as the AP's recommendations, maybe I can just go through some of the older recommendations and Mark can talk about what we did at our last meeting.

I've got a little bit of history of recommendations that the AP has made on area closures and spawning. I think it is pretty safe to say that the AP has always been in favor of protecting spawning fish. We kind of differ on how we want to do it, but I think it has got a pretty good history of doing it.

In November of 2010 we recommended that the council consider seasonal closures for fish that are undergoing overfishing. Then in November, again in 2010, we addressed the mutton snapper issue and felt that some type of closure during May and June would be appropriate for them. Then again in November of 2010, we should reassess 17A and take into account historical

knowledge of spawning aggregations.

Again in 2010, in November, don't consider catch shares for red snapper, but instead maybe some spawning season closures. In April of 2011, recommend that the council revisit the deepwater closure established through 17B and consider closures of spawning aggregations. Again in April 2011, recommend that the council do additional research on spawning times for snapper grouper species between North Carolina and Florida by region.

In October of 2011, consider spawning seasons by closures for black sea bass by regions until the stock is rebuilt. I think we've got a history of showing concern for protecting the spawning fish. It's just we differ on how to do it. Maybe Mark can summarize the last meeting. Do you want to do that?

MR. MARHEFKA: Basically we all have the summary report from the AP here. I think the general consensus of the AP is sort of kind of where I was earlier here already. We are trying to go and figure out how in the world we are going to go and do a stock assessment on fish that have not had any pressure or any kind of fishing done whatsoever on them for several years.

We have existing MPAs that are already in place that we sort of grabbed this whole eco-based managing already and what percentage more do we need to go and sort of do to go and sort of get where we need to be and where is that get where we need to be? It is really hard for us to grapple with all that.

One of the things that we did go and talk about is some of the enforcement of the MPAs that we have in place already and being able to go and have the mandatory VMS on the vessels to go and sort of make sure that what we do have in place is keeping some of the vessels out of it. Some of the other ideas were to have some experimental LOAs pulled together so commercial fishermen could actually go and sort of harvest some of these speckled hind.

As commercial fishermen we stay away from these fish. There is no reason for us to even get into a place where we want to go and even interact with them. I could take you today and we can go and sort of catch speckled hind all day long. It is sick; we will catch more speckled hind than we'll catch of the other fish. But we don't fish it; why?

We are out there to make money and not sit there and catch fish we've got to throw back. The other part of that is I think the SSC really needs to look at all of the cumulative impacts and put a percentage on there of what we've already done with the outside of 50 fathom or inside of 50 fathom.

Longlines have been taken out; you know, zero retention on the speckled hind and Warsaw. The hundred pound trip limit on the snowy grouper has curtailed a lot of people from actually getting into the areas where they are. But basically I think as far as the AP, that is sort of kind of what we've come up with.

MR. HUDSON: I attended the Snapper Grouper AP as an observer and the entire AP approved a motion that reads, and I quote, "AP requests an analysis to determine the cumulative impacts of

existing regulations such as the four-month closure on grouper for spawning, longline closures, the SMZs, the snowy grouper rebuilding plan" – that Mark just referred to – "existing MPAs, both the ones from 2009 in the deepwater, all eight of them, as well as the Oculina Bank."

It has been no take and no bottom fishing since June of '94 when Amendment 6 was allowed to be implemented and that also is when our no sale basically went into place. Going on it also says on the incidental take of speckled hind and Warsaw grouper, well, all take ended on January 31, 2011, for both recreational and commercial in the South Atlantic region. Now one of the things that I learned recently from the NGOs is that they have filed a request to be discussed this Friday on the webinar for this SEDAR Steering Committee to do a stock assessment in the Gulf of Mexico for the speckled hind and the Warsaw grouper.

If there is ever a chance to piggyback some of the work over here, particularly since they have a take over there, they are allowed to be able to still sell over there in the recreational. I always think of things like the highly migratory species, sharks, all within the range of the animals. The range of the animals is pretty spread out. We even have Belize in the picture. We have Cuba in the picture and stuff like that with some of the knowledge that has come to the table.

Ben had said something to me a while back that sometimes he doesn't believe that we may have enough information just in the South Atlantic Region, but we may have some information. They did a catch curve analysis using the NMFS staff from '91, the Huntsman et al document from '92; and then when they used the speckled hind, Potts and Brennan, that was a trends analysis. I was told by the authors that shouldn't be viewed as an assessment.

With SEDAR 4, when all of that took place, of course, there were the same issues about not enough information, but still in the 2007 report to Congress in 2008 they say the same thing, overfishing is unknown, overfishing may still be occurring based on these old analyses. We need to at least do something to update that analysis, because I don't believe using 18-year-old, 20-year-old data is the right way to go without having stuck something in between.

I know that we've got three years under the MPAs now, the eight deepwater ones. I know Roger has done some work with trying to deal with the polygons and stuff, and at the same time law enforcement in '98 wanted everything to be lat and long, straight and narrow. But I believe just like when I'm having discussions over the coral stuff with regards to the shrimp boats, they have VMS.

I was approached eight years ago by NMFS wanting to not only have the VMS on our boats, but to couple it with the cameras. I don't believe Big Brother is that far behind us, so VMS is probably going to be coming. It is going to be one way at least to deal with the professional fisherman. Ask the commercial guys and the for-hire guys; they are not going to be the problem.

In the recreational, of course, they are going to have to learn how to be conservation-minded and not just go out there like Mark said and go into places where you are hitting fish that you don't have anything to do but throw them back. That is kind of an education outreach I guess in a way. I say that NMFS Science Center needs to do some of this work. There is a lot of work that was supposed to be done with the Oculina and not been done.

That is something that I would say that some of the surveys that they did to try to expand this Oculina Bank from that 60 meters to 100 meters, from Cape Canaveral all the way to St. Augustine, that is in the works under CE-BA 3, too. That is going to have a bang for the buck, because there will be no anchoring.

That will prohibit a lot of the bottom fishing in our area, because we have a very strong Gulf Stream Current that effects stuff, and sometimes you need to anchor. Other times you need to do a slow drift. There are different ways to make that methodology work. Because of the snowy constraints, because Regulatory Amendment 11 just took place, getting the relief from 17B, the minority report from 17B that Ben and Brian, I believe is in the room, and some others; some great information in there. I think it all needs to be soaked in, and I think the Science Center needs to get to work. I don't know where they are going to get the money, but they need to get some money and get the work done.

MS. BROUWER: Thank you, Rusty. Moving along with the agenda, I don't really think I need to go over the recommendations that the Law Enforcement AP has made. It has been mentioned already several times during this discussion. The Law Enforcement AP has provided their input to the council since 1998 on area closures.

Ever since then their recommendations have been pretty much the same thing. They would like to see boxes with straight lines. They don't want transit through any closed areas because that makes it harder to enforce. They don't want that only some types of fishing be allowed, because, of course, that makes it harder to enforce. They would prefer not to have corridors.

We've talked about potentially having corridors through some of the long and narrow closed areas like the Oculina Bank if it were to be expanded to a no transit. They would not want to see that sort of thing. As Rusty mentioned, the VMS is something that law enforcement, of course, keeps bringing up. It would make their jobs a lot easier. That is in a nutshell where the law enforcement guys are coming from as far as MPAs in general are concerned. Any other questions?

MR. HUDSON: To that affect, Myra, in the March 2012 Law Enforcement AP Meeting, they did say if transit through the Habitat Areas of Particular Concerns are allowed; request the industry increase ping rate for VMS. That means they are already assuming the VMS is going to be a tool that they are going to need to have to use to monitor everybody.

MS. BROUWER: Yes, I think that was probably made in regards to the rock shrimp fishery. That is the only fishery in our region where VMS is required. We were discussing the potential – the Coral AP has brought to the council a recommendation to expand the Oculina Bank closed area, and that is what the Law Enforcement AP was referring to. Those guys already have VMS on their vessels.

MR. HARTIG: Yes, let me get Gregg back up here. While he's coming up, I'll just give you a little perspective. I've been bottom fishing out there since the seventies. Basically I started out fishing the guppy rigs for vermilions and red porgies and sea bass, and I never really interacted very much with Warsaw.

We caught a few, but mostly on that type of rig they'll grab a porgy or a vermilion you've got on your line readily, but we're fishing relatively small hooks; and if the fish is over about 60 or 80 pounds, you usually don't catch them on that type of rig, so you will catch some of the smaller ones. When we started jack fishing in the eighties, that changed the whole dynamic.

I never caught a Warsaw over 100 pounds until I started jack fishing; and then once we started jack fishing, I probably caught 10 over 300 on a couple of spots; and then had days where we caught 8 or 10, sometimes 12 Warsaw, where I never saw that before. What really changed the dynamic interaction with Warsaw was the jack fishery and putting big baits down there. That was the difference. There were some charter guys who had fished the area that I fished. They had put some big bait down and they caught some big Warsaw occasionally

But really commercially where I was, and that is off the southeastern Florida from Juno up through Stuart area, and I haven't chased fish; I've stayed there my whole time. I just learned how to fish every depth of water for the various species that I fish for and learned how to target different things. I haven't had to move around much, I've stayed within about a 25 mile area, but in that 25 mile area I know it very well.

I fished every rock in that area in the deepwater complex from stem to stern, from inside to outside. When it comes to knowing where these animals live, I can pretty much tell you where they are and where we interact with them. Speckled hind in our area has never been very important. I was in on the same kind of MPA considerations early with Don and with Mark when we were tasked to come up with some areas.

I mapped out the St. Lucie Humps area. It was a perfect area; it came up out of the sand right between two inlets, so you are not impacting either inlet disproportionately. There are a lot of different kinds of fish in there. There are some Warsaw, not as many as some other spots, but there are some Warsaw.

Juvenile speckled hind, like I said, we didn't interact much with speckled hind. I've never caught an adult. The biggest one I ever caught was eight pounds since the seventies. Most of them were in the four to five pound range on these areas where I fish. In this particular area, Sea Bass Lumps did have a number of those smaller speckled hind.

What we see with other species, scamp and so on, we see scamp in that area but they pretty much move on; even red grouper when they reach a size – right about the size limit they tend to move to the north and out of our area. We've got these different animals that settle in and then have ontogenetic movements. As they grow they move and go to different areas.

Although it wasn't a big adult area that we closed there, it was important for the juveniles. We did catch quite a few of those juveniles in that area. The question I have for Gregg; how are we going to deal with the bycatch? That is the question in my mind now. We never had a bycatch limit, or we don't know that because we haven't had an assessment. Without having an assessment, can we ever deal with the bycatch on speckled hind and Warsaw? Can the SSC ever come up and say you are going to have X amount of bycatch?

MR. WAUGH: What is that saying, the no known's and the unknowns unknown? Seriously, to me, until you quantify what the discards are, we are going to be stuck in this position. When Roger gives his presentation, you will see what percentage of the occurrence of speckled hind in particular that has already been protected through our existing closed areas.

My training is as a marine scientist. It would be nice to know what our current levels of discards are. I think Luiz made the point during the SSC meeting. There are problems with the overfished status. Even though it is listed as unknown, I think probably everybody would agree they are overfished. But the question is overfishing, so we're stuck with an overfishing determination from a catch curve from, I don't know, 18 or 20 years ago?

We've got some level of ongoing discard mortality. Well, the previous reauthorization of the Magnuson Act required the councils to put in place a bycatch monitoring program. We did that. It's a combination of ACCSP, the Atlantic Coast Cooperative Statistics Program, an ongoing program. We don't get SAFE reports.

We are supposed to get a SAFE report every year from the National Marine Fishery Service; it is required in their guidelines that they provide this to us. We've never gotten it. We should know on an annual basis what our levels of discards are. We've asked for that for red snapper, and this will be – if we get that in June, this will be the first year we get that.

We should be getting that information for every species that we manage. To me the best way to answer your question, Ben, if I was in your position I would want to know what the current status is and what is the current level of discards and what benefits have accrued from existing management that has already been put in place before you can determine what else needs to be done.

MR. HARTIG: I appreciate that. Even if you knew the level of discards, without an assessment you wouldn't know how many you could have. My whole fear in this – and one reason why I've kind of gotten behind this, I've seen what has happened with Warsaw. We caught the biggest animals – at least the area where I fish, we caught them all. We caught all those giant ones.

But the level of fish that we see every year hasn't changed. We still see the same number of Warsaw. Where I am that is probably one of the most abundant groupers that we have, to be honest with you, because we see the gag migration that occurs in the wintertime, but we don't get to participate in that any longer because it is closed while they are there.

We catch some gag in the deep. The males in particular seem to stay in that deeper water and we catch some of those. The size decrease is what has been alarming to me. One of the other things we used to see a lot when we first started jack fishing, we fished 400 pound leaders and the biggest circle hook you can get and 10 feet of leader for jacks.

As that population crashed in the late nineties and has come back since based on the regulations we've had; now if you catch jacks you've got to be shy. You can't catch jacks on 400 pound test and a big old circle hook anymore, with a blue runner for bait. You've got to use a mainline of 200 and then go down – on your end of it 125 or 150 pound test.

Those big animals that we used to catch, we probably aren't going to catch anymore. You are not going to be able to catch them on 125 pound or 150 pound piece of leader on the end. It is just not going to happen. You needed that 400 pound test to catch those great big fish. Now there will be a rare occasion when you might possibly catch one. I'm sure Ralph especially; I've seen a lot of his videos over time, and all his experience in the deepwater.

You get a fish away from the structure, you may be able to catch a fish on occasion. Most of the fish, the larger ones we are going to interact with now we are not going to catch, but we're still going to interact with some of the smaller ones. We've been doing some of the stuff to try and minimize this. As I watch this come along, how do we minimize our bycatch of Warsaw? What we've done is when we are jack fishing – if the tide is 2 knots or less, I'll anchor up in that deepwater.

The jacks are usually, not all the time, when the tide runs real hard, they want to be right on the bottom, but usually they are up about 100 feet off the bottom. We're fishing two reels and one guy gets the first jack on and he gets it up maybe 30 or 40 feet from where he hooked it and the other guys drops down and you keep your stuff up 100 to 150 feet off the bottom. We've been able to dramatically reduce our impact and our catch of Warsaws.

Now on the days when the tide is flying, you are still going to have a problem with those 40 to probably 80 pound fish that you are still going to interact with. We used to see when we first started fishing; they would come up and bite our jacks. Some of you have seen videos where a spear fisherman feeds an almaco to a Warsaw grouper, and that was pretty cool.

Yes, they come up and grab, just like Jewfish do on anything. They'll grab them and you see the telltale teeth marks from about half the jack on down to the tail. Those kinds of interactions don't happen where I am anymore, and I'm pretty convinced that the biggest fish where I am aren't there.

But then I talked to Jimmy Hull and Rusty and Paul Nelson there coming up here, and they still see those kinds of interactions where they fish. That's a great sign that some of those big animals are still out in the areas where they are way offshore where they are jack fishing. That is good. How to protect these fish – to some extent we can protect them ourselves by changing our fishing habits.

I'm looking down the line on trying to get a real answer, and why I asked you without an assessment we're not going to get it. I've talked to Erik about what – and he's the assessment scientist from Beaufort who does the assessments on reef fish. He is pretty confident we can do one with speckled hind, not so much with Warsaw.

We may get some answers with speckled hind. Even though speckled hind has never been a major part of my catch, I read Gabe's thesis. I look at that information and I talked to Marcel about what is happing in MARMAP with speckled hind over time and it is not a pretty picture. It's pretty significant; it is scary as hell to me.

I know NMFS has been able to ward off ESA designations on both of these species, but from a

fisherman's standpoint you don't ever want to be in that position where you get so bad on a fish where it becomes listed, because then you are done. You won't be able to fish in those depths where those animals live.

You'll have a bycatch allowance; and when that is caught, you are done, and that is what is scary to me. Now, some of this can be mitigated where they occur, because you are going to have differential bycatch mortality as you go from shallow to deep. You are going to have pretty stringent bycatch mortalities in your deepest places where you catch them and less as you come in.

Some of the more exciting research – and I don't know if Ralph has done any of this – is this recompression stuff that they are doing on the west coast. I can't think of the guy's name, but he had a red snapper where they have this pressure release device they put in the fish's lower jaw and you can set it and you send the fish right back down to depth and you release them. Now they've had rockfish on the west coast that have survived 700 feet and that is pretty significant. What we need to do over here is develop a CRP with Warsaw and speckled hind and start to do that kind of research here by tagging them and see what we get. I've had these arguments – I won't say arguments – we had these talks with Chris in the past about gag. He has seen some of them that were blind in aquaria from depth and things of that nature.

In real time if you can get that fish down within the first minute, back to depth – he'll probably discount what I'm saying, because he has done a lot of work with recompression, more than anybody else that I know, but we should be able to try and find out this kind of information, as a directed avenue to find out more information. I know I've rambled.

MS. BROUWER: Don, did you want to say something?

MR. DeMARIA: Just one short comment; keep in mind that Warsaws are not really completely protected in the South Atlantic and there is a directed fishery for them in Florida. They are open in Florida state waters. In the West Palm Beach area you can catch them within three miles of the coast. It also opens up a loophole for people to catch them in federal waters to come in and say, well, I caught them in state waters.

There are a few people that do spear them off West Palm Beach and that area. It's not completely closed and there is still a small directed fishery for these fish and a loophole to allow them to even catch them in federal waters. That was one of the things that we discussed at our AP meeting is that loophole should be closed and Florida should be encouraged to just prohibit the retention of Warsaw.

MS. BROUWER: Thank you, Don. Okay, in the interest of moving along, what I am going to do is basically just give you a very brief update of what was done with the workshop that we did in Charleston and then I'm going to pass it to Roger, so he can show you the kind of information that we obtained from those folks.

Basically we invited the public to come; we started at six o'clock. There were several of us. We had the charts that you see over there available. We basically just said to them if you are willing

to share information where you have encountered Warsaw or speckled hind in your experience, basically where you would put a box on this map?

Based on that information, Roger has developed some maps that he is going to show you here in a minute. That is sort of the same approach that we are going to take this evening, again invite participation, and folks can provide coordinates, whatever GIS coordinates or simply just draw a box on a map that we then translate to your reference so it can go on a GIS. I'm going to try to pass this off to Roger and then he can show you what we came with. Chris, do you want to go ahead while Roger is registering. You had something you wanted to say?

DR. KOENIG: Yes, about what Ben was just talking about; we did a lot of work with capture release mortality in the Gulf primarily with gag and red snapper, but also vermilion snapper. We got very similar results with gag and red snapper in terms of mortality relative to depth of capture.

What we did was we just brought them up, put them in cages and put them straight down; very similar what Ben was talking about with this hooking device on their mouth. I think it was about 40 meters you get 50 percent mortality. There is a broad band of uncertainty about that and that has to do I think with where the fish are caught in the water column and how inflated the swim bladder is.

What happens to these fish is not just expand the body cavity but it is hemorrhage. What you get is a rate of hemorrhaging that occurs at those rates. In other words, a lot of the fish that died were hemorrhaged. Regardless of what you do, when they get to the surface, the damage is extensive. You can imagine catching a fish in 200 or 300 feet of water.

The gases expand 8 to 10 times that of the bottom. It is more than just simply getting rid of the gas at the surface. What we would do to keep these fish alive and tag them at those shelf edge depths was to actually bring them up to a level in which the swim bladder volume doubled over that from the bottom. Then we'd dive down and vent them at that depth.

That was very effective. Then we could bring them up and none of this hemorrhaging would occur, because we would have gotten rid of the gas on the way up. We would provide an opening for that gas to move out of the fish. But I don't think there is any question about these fish dying from barotrauma at shelf edge depth captures. That is not an issue.

These fish behave very similarly in their terms of responding to that. The other issue I'd like to address is that of uncertainty, uncertainty about setting aside these marine protected areas. There is always going to be uncertainty. I don't care if you do ten stock assessments in a row, there is going to be uncertainty.

I'll bet the uncertainty is not going to be any less than we have right now, because what you are dealing with is a very small population for both of these species. These small populations, they are virtually impossible to assess to any high degree of certainty. We could be here five years from now doing the same thing that we are doing right now; gee, I don't really think they are undergoing overfishing; the stock assessment wasn't very clear on that and their population is

half of what it is today. We can go on and on and on.

The uncertainty is not going to be reduced. We know the populations are overfished. They are a fraction of what they were. Churchill has got a paper that he did in 1982 on the Onslow Bay, the work he did off North Carolina. Speckled hind was the most abundant grouper they caught. It was the fourth most abundant fish. Can you match that kind of a catch today?

I'd like to see it; no, you can't. It is way, way, way reduced. They are way overfished. That is not a question anymore. That is obvious, it is beyond obvious; and that they are being overfished has to do with this capture-release mortality. And Ben is inserting doubt into your minds that, gee, they might survive if you bring them up from 300 feet, bullshit, they are not going to.

They are dead. They are dead fish, and this is the issue, right? This is not a, gee, I don't think we really have enough information. You can't get enough information on endangered species or a threatened species. It is impossible. My point is we should act, and we should act now, because we are still going to go through this process over and over and over again.

We are going to come up with the same answer, gee, are they really overfished? Yes, they are overfished and, yes, they are undergoing overfishing, because there are a lot of them caught incidentally. What you see that is caught incidentally is just the tip of the iceberg. A whole lot goes unreported, because it is easy to not report something. Yes, I think these MPAs should be put in place and they should be put in places that are important to put them, where we know these fish existed in the past and we know where the habitat is. These are important issues. Don't let's go wandering off into the world of uncertainty, because that is not effective, not at all. It ends up being a waste of time and a waste of money.

MS. BROUWER: Ken, very briefly.

DR. LINDEMAN: I think we're all in agreement that we are not going to get it figured out by tomorrow at lunch. I think we can serve the process very effectively if we recognize we are stuck here. In a situation like this I'm often looking for common ground. I'd like to go back to the issue of spawning. I wish we could drop this MPA term, because it highjacks the conversation and we'll come back to it.

But perhaps we can identify that there is agreement that we need to protect spawning sites. If we can identify habitats that have a high probability of supporting spawning of these species based on a lot of information from this region and elsewhere, these are habitats that very possibly also hold spawning for other species, including red snapper.

I would suggest that if we could identify, using fisher data, because we are not going to do it with a cruise on a research vessel; if fishers can provide some spawning information, which is, by the way, happening in over a hundred countries around the world now in terms of aggregation protection. This is not a unique process. This is happening all over this hemisphere, this is happening all over Africa and the Indo-Pacific.

If we can identify the places where the organisms are spawning and we can protect those places,

there are multiple benefits that will reduce the rigmarole we are going around, the tail chasing we are always doing on very complicated things like catch allocation, et cetera. There are many, many dark alleys we can go down.

I'm hopeful that there is some consensus that we need to be looking at spawning aggregation sites or spawning sites. Perhaps we can find some. They weren't all covered by Amendment 14 MPAs. The Amendment 14 MPAs were a first step, but there is a hell of a lot of good habitat out there for a lot of species. A subset of those species is spawning on that habitat. We don't want to close it all. We don't want to put anyone out of work, but there is a middle ground here. Between one and ten, there is a three to seven. Thank you.

MR. PUGLIESE: I'm Roger Pugliese' for those of you who know me or have worked with me, welcome. I'm with the South Atlantic Council staff, senior fishery biologist. For those new to the process or stepping to the table for this specific reason, welcome. I have been working on a variety of things over the many years I've been with the council, from the original marine protected areas in support of the spatial and habitat and other information we have built over the years, and doing it, and the hands-on process we did originally in Amendment 14, but way back all the way to Amendment 1 of snapper grouper, so I've got a perspective on all of our spatial activities, habitat ecosystem directives, and have been tasked and working with trying to facilitate this discussion.

It is a very difficult issue because of what everybody has said, the positive information. In order to move down the road past this discussion of where we are, we had initiated discussion on what we can do with the information available. In order to move this forward, we had looked at data that was included in Regulatory Amendment 11 and began compiling the information, collecting information on occurrence and on habitat; beginning to understand what this meant for the species, and then how this potentially could provide the council with some capability to guide a process that may involve designation of new areas or establishment of areas that will protect these and address the issue of bycatch in speckled hind and Warsaw.

In order to do that we combined information, again as I mentioned, from some of the original work that had been accomplished and combined information from the MARMAP/SEAMAP data system, from the reef fish observer program, the NOAA MPA surveys that were held over the areas, the marine protected areas, and some information directly from fishermen involved directly in the process now.

This is material that was brought forward for scoping and was presented actually at our Habitat Advisory Panel, a very strong support of looking at occurrence and habitat in spawning. One of the points on that, the council under the essential fish habitat designation have also designated any spawning areas for snapper grouper as Essential Fish Habitat Areas of Particular Concern, but that is essentially tied to as you can identify and protect those.

What we have in the information that was brought forward, as I mentioned, the SEAMAP/ MARMAP data; that original data was in the first analysis through 2009, went back and worked with the MARMAP representative, Marcel and group, and updated that through 2011. This is still showing 9, but the data set itself was through 2011, and the reef fish observer.

So that data was from the original – the beginning of the MARMAP system all the way through 2011; the reef fish observer from 2006 through 2009; the MPA survey that was sampling on the existing MPA areas through 2010 and the fishermen data. What you see has been captured in two footprints, essentially a northern footprint and a southern identifying the MPAs and the occurrence of speckled hind and Warsaw grouper.

You have the northern and then the southern area identifying the distribution. Now as mentioned earlier, in this process we were looking at how we would proceed; identification of occurrences, identification of habitat relative to these species. One of the other information that supported or at least identified – and if you really look at the fishery-independent data and then look back to some of the historic catch information on, say, the headboat surveys; if you look at the survey systems, they overlap pretty closely with a lot of the occurrence information, the point occurrence information that we have.

The highest catch rates in these grid areas coincide directly with the highest number of occurrences that at least are in this initial data set so at least the verification that the information, the base information being used on occurrence is to a great degree validated by some of the historic fishery catch information. This information then was compiled.

We provided it on charts, and as Myra had indicated earlier, moved forward with the opportunity to how do we expand this knowledge data base; how do we go beyond what the baseline information is? In order to do that, we took it to the workshop in Charleston and provided the charts that you had seen; provided the opportunity for individuals to provide point information, general location information, possible reorientation of marine protected areas or new areas as identified in possible increases.

This is the first chart that shows – it is a mirror of what I had shown you earlier on, and I'll just kind of walk through some of the areas. What I'm going to do is step back to the occurrences as they relate to the existing MPAs and then how they relate to these newer areas potentially, so you can kind of get a gauge of what this potential process is; engaging fishermen, engaging the opportunity to expand the information and how we can move forward with this.

What you are seeing here is the northern chart identifying the distribution of the species, but it is also showing a core habitat. What we used was the SEAMAP bottom mapping habitat information. It is the only comprehensive data set that we have for our region right now. The opportunity to refine and expand is there, but that was even validated by Nick Farmer at the last SSC meeting indicating that this is at least for the distribution.

One thing that we did is in addition to – I mentioned the species distribution, we also kind of cored down on the habitat distribution. This is showing the distribution of the SEAMAP data between 40 and 100 meters. It is kind of getting that core adult habitat of mainly speckled hind is what you are capturing in this core adult habitat area in this.

What you see that was provided – as I mentioned these were provided, discussions incurred and individuals began going to the charts, either identifying locations or beginning to craft preliminary recommendations for options or alternatives. One of the first ones in the northern

area off of North Carolina was an area closely associated with Big Rock.

As you see, the individual were capturing or validating a fairly significant number of speckled hind that were caught right on that edge area. This one area was one of the first areas identified. As you move south – and I mentioned it is a combination of a number of different things that were provided in this process.

You are seeing general distributions that were, say, this area south of the snowy grouper area, general distributions of species; to then recommendations on potential reorientation of individual MPAs; in this case a recommendation of reorientation of the northern South Carolina MPA. Now again you have got to remember everybody is stepping to the table looking specifically at speckled hind and Warsaw.

As you recall, the ones involved in this process, some of the orientations of these original MPAs had to do with the fact that you were also capturing tilefish bottoms, bottoms beyond hard bottom structure and capture those species, so it is tilefish and the edge for snowy grouper. The reorientation may have one effect, but that is also being kept in.

One of the areas that were identified, at least a general location right now was Devil's Hole as a possible spawning location for Warsaw off South Carolina. Additional areas identified were the possible reorientation of the Edisto MPA. Now, both the Edisto and the northern South Carolina MPA have the most occurrences at least in this data set that we've seen. There was again opportunities that have been identified for a reorientation of the MPA area, as well as a reorientation and moving the entire area further north to try to capture more habitats and then maybe other distributions of those species.

The last one in the northern area was a concentration of speckled hind that were inshore of the Georgia MPA and south. What you see is it is moving it into the shelf – more up on the shelf edge area. This actually is fairly logical, because the Georgia MPA, out of all of them, really did get refocused, absolutely, totally towards snowy grouper and tilefish.

That was realigned very specifically to capture those concentrations that we knew at that time. What I'll move to then quickly is the southern area and then ultimately go back to kind of the calculations to what we were looking at, at least information on existing MPAs. I pulled up two of the same in the background just to have everything. I'm just trying to locate this southern one right now. We've been going full throttle for a little bit, if you would like to take a ten-minute break, I'll jump back in with that southern and then finish up.

WG MEMBER: Can you help us with just clarifying, when we see a colored box that indicates presence/absence, or abundance; can you help us understand that?

MR. PUGLIESE: Yes, that's fine, too, because sometimes this projection system changes the colors even on here or as it dimmed up, but I'll jump into there and identify the habitat, what it means, because what I wanted to do is actually get into the guts. I'll hands on and be touching some of these things in terms of the way the tool looks at the habitat, so I can verify the colors, what the specific areas mean. With that, we'll take a break, and then I'll get back, jump right

into it and we can finish.

(Whereupon, a recess was taken.)

MR. PUGLIESE: Okay, if you want to get back together, let's move forward. What I would like to show is the southern area that was looked at. These are again what was brought forward were the maps showing distribution of the species, and let me just touch on what we are looking at. What you see on these maps is distribution of speckled hind based on those different data sets.

The distribution of speckled hind is represented in the blue circles that are distributed along the mid-shelf area we see here. The green are Warsaw grouper; you'll see some that they are showing in this northern area. The red is the SEAMAP bottom mapping. That is hard bottom areas that have been identified in the SEAMAP program. Then the yellow; these are one by one minute grids. The yellow is actually sand or shell, non-hard bottom areas.

WG MEMBER: Roger, I'm going to ask my question one more time; so that's a one minute by one minute grid; and if you say occurrence of speckled hind, what does that mean? One person caught one speckled hind there or it is a big concentration?

MR. PUGLIESE: No, those are occurrences. It is actual individual fish or a sample location where speckled hind was caught.

WG MEMBER: One speckled hind could redden a one minute by one minute box?

MR. PUGLIESE: No, those are two different data sets we are looking at. The blue points are speckled hind distribution. The habitat is the SEAMAP habitat. That was generated a number of years ago based on species and video, a combination of a lot of data to give you hard bottom habitat and not just specifically speckled hind habitat.

When I identified it as speckled hind, what I was saying is we cropped off that information to show the distribution between 40 and 100 meters of hard bottom habitat that came out of the SEAMAP program. Those are the one-minute grids that you are looking at here. Speckled hind data set is separate; those individual points are speckled hind occurrences. Those are the blue ones, and the green are Warsaw grouper.

What I wanted to do is touch on what was looked at. In this case the first area that we moved to was the North Florida MPA. There was a recommendation of possibly reorientation as well as an expansion to capture more habitat; and even move up toward some of the Warsaw grouper areas. The other alternative was a reorientation and compression to move it toward right on the shelf edge area and just focus on the speckled hind and habitat only.

MR. BALLINGER: What are the empty boxes?

MR. PUGLIESE: When you are saying empty boxes, the small ones? Those are sand. See the projection is not showing, they kind of are yellow, but they are not showing up well on here.

Those empty areas are sand, mud, non-hard bottom habitats that occur. The reason it is patched like that is that is where data occurs. As you see hard bottom areas, there is hard bottom in between those or sand in between these areas. Those are the mapped or identified in the process.

MR. HARTIG: Anything that doesn't have a box, we don't know what that is telling us?

MR. PUGLIESE: Yes, there is no information between that – and this is the original. I actually talked with Marcel Reichert and others about potentially going back and giving some of the verification opportunities or the way we did the original SEAMAP data, a lot of what you are seeing with species distribution here would actually backfill and add those as habitat layers into this original habitat data set. Right now the answer to you, yes, there are areas along this area that do not have a sampling that provided us any opportunity to identify bottom habitat.

MR. MARHEFKA: Roger, I'm just curious on those; is there any other species that are being harvested within those boxes, because I'm just sort of – what you were just indicating is just speckled hind and Warsaw.

MR. PUGLIESE: Yes, and these are not harvest – there again these points essentially are the fishery-independent MARMAP/SEAMAP data, the reef fish observer, and those types of data. Of course, there is within these areas other species being harvested, because it is benthic hard bottom habitat, snapper grouper complex occurring through all these different areas.

In terms of harvest, this is just looking at the occurrence information down to where we could actually get down to point information of these species occurring in that area. There is other information. We can look at the other information down the road of other species that have been caught at the same time or in the MARMAP systems through here, also. But this is focusing very specifically on these two species.

DR. SEDBERRY: Yes, I was just going to add to that; that existing North Florida MPA right now includes golden tilefish habitat, which is not hard bottom and wouldn't show up in SEAMAP as being important, but, of course, it is. If you move it up on the shelf to incorporate more reef habitat, then you are losing some golden tilefish habitat.

MR. PUGLIESE: Right, and that was a point I made earlier on is that the focus was to look at this and that needed to be kept in context, because many of these areas were including – they were for deepwater species, and the most significant habitats that went into the areas were capturing those tilefish, and the only areas that captured those tilefish bottoms.

That is an important thing I think everybody understands; but if you move it away from it, you essentially lose the intent of the original MPA. We need to keep that in mind as you are moving forward. However, recommendations are being made based on an individual's either preference to move it away from an area or look of the original habitat or species information they have.

MR. HARTIG: You've got another question there, Roger.

MR. BALLINGER: I think you mentioned earlier that you could string this to a 40 to 100 meter

depth range; I was just curious where that came from exactly.

MR. PUGLIESE: Well, that was looking at combinations of information and some of the reports on adult habitat, plus on the actual – if you look at the array of catch of both these species and all these different data sets, their occurrence is in that core habitat area. It is really looking at – there has been definitely, as many of the people involved here know that the occurrences inshore – now this is mainly for speckled hind for that core area, but it is trying to get to at least the most significant area where the occurrence is within that. It is getting to original habitat species occurrence and using the MARMAP/SEAMAP and other data to kind of validate where they had caught them.

Because if you look – and we had this discussion at the SSC and then at the AP I think, and what I did is I went back and Marcel got me to look at and show you the distribution of the MARMAP sampling. The sampling regime covers a far greater inshore area, and you really see the focus on where the captures fall within this core area. At least it is just a first attempt to try to build that.

MR. BALLINGER: Just a quick follow-up on that, yes, I understand where the data is coming from; I think the inshore is very well captured. I'm more concerned if possibly the offshore extent – I'm not sure how many samples are coming from that further offshore extent; for instance, less people fishing out there so to less opportunity to observe them in those areas.

MR. PUGLIESE: Definitely for Warsaw I think those areas occur in the deeper water, anyway. There have been samples that do occur on some of these and definitely is not represented nearly as well as the inshore, and that has been stated I think many times in some of these. However, there are sampling regimes where there weren't any caught in the ones that – especially when you go south – I think some of the areas to the north did not occur, but as you went south there were ones that were getting deeper and there were no samples that came out of those areas. Again, we are working at a very focused, limited data set to begin to open this process, and that is why we are here to expand the information that we can work with.

WG MEMBER: To that effect, Joey, with regards to the MARMAP stuff. I know the Cheuvront traps don't work very well in our deeper water down our way, like right there. But you were using a 20-hook vertical and 100-hook longline on the horizontal, but what kind of size leader and hooks were you using with those gear, because what Ben was bringing up is a very valid point about the big Warsaw. The second half of the question is do you ever make any sets on known wrecks, because there is a certain amount of Warsaw that seems to like those places?

MR. BALLINGER: Yes, I'll address that real quick. I believe our longline leader is made of a 200 – our gangions are 200 pound test gangens, so not quite up to that 400 pound test that Ben was mentioning earlier. As far as the wrecks are concerned, no, MARMAP does not sample any artificial reef habitat, which would be considered a wreck habitat. We actually avoid that if at all possible. If it is a known wreck, we tend to try to avoid it.

DR. LINDEHAN: Very briefly, I'm slow, but could you explain again what the golden tilted rectangle is?

MR. PUGLIESE: Okay, that was one of the options that were laid on the table at the last Charleston workshop as an opportunity to look at expansion or reorientation.

DR. LINDEHAN: I didn't know if that was recent. Could you blow that up a little bit; go right in to the letter N; go to the letter N and just blow it up on North Florida. I just wanted to see a little detail briefly here. For this area, that yellow box, the existing North Florida MPA, which came from Amendment 14 in 2009, is 10 by 10 miles. On this scale you have got two records of Warsaw. What is the other rectangle? Was that one of the other original alternatives?

MR. PUGLIESE: These are just ones that have been laid on the table at the last workshop.

DR. LINDEHAN: Oh, at the last workshop.

MR. PUGLIESE: These are not original MPA alternatives. These were literally someone saying the occurrence – either I've encountered or habitat and in an attempt to try to provide –

DR. LINDEHAN: These are recent from this process?

MR. PUGLIESE: These are a month ago.

DR. LINDEHAN: From fishers?

MR. PUGLIESE: Yes. Let me quickly go through the rest of this and then I'm going to actually go into some of the numbers that have been generated from this to at least give a point. One thing that will identify that in the original data set here right now, we do not have point information in the Oculina Bank.

Now as we move into this area, we do not have specific recommendations for areas, but we did have acknowledgement of distribution of speckled hind within that depth contour. What this is, is essentially the Oculina Bank and then the combination is the Oculina Bank is essentially what you are capturing with this pre-1994 speckled hind identification, and then north in the area around St. Lucie, exist in the St. Lucie Hump MPA.

This wasn't giving specific recommendations but acknowledging distribution of these species in the area. I recently talked with Grant Gilmore, who had done most all the historic work, a lot of it in this area. There were approximately 80 dives of the JSL indicated that almost all those dives have occurrences of speckled hind; many different morph colorations and all types of things, and he will be putting together a detailed species profile for both species for the council as part of our ecospecies process and to support this process in the future.

He is going to get into historic information and other in that process. What I wanted to do was highlight that this came out of this meeting about reaffirming that there is occurrence and use and originally spawning within the Oculina Bank area and then a newer area to the south. What I would do is jump quickly from there to then actually what this all potentially can mean.

As Gregg indicated earlier, we looked at this so that we could begin to look at where we are with

regard to the MPAs and relate it to at least the occurrence information we have and then begin to use this as a process to be able to look at the existing occurrence; and then any of these new areas with additional information, additional occurrence information or reorientation capturing more areas, or less areas; what this ultimately means.

What we've got here is a view of, first of all, the information we have relative to the existing MPAs. If you look, when you do it in total on occurrences, about 14.6 percent of the occurrence information for speckled hind comes out of the existing MPA areas that we have now. I will indicate the one thing while significant impacts on the species and the state, some of the more recent data from the MARMAP actually increased – up through 2011 started to increase some of those points that occurred within those MPAs.

At least that was some good news in terms of some of the existing MPA areas beyond just the fact that we already see some in here. What this does is gives us the ability then to look at any of the reorientations and what those can mean, or additions. If you look to the second area I've got here, it is looking at those alternatives and then what that means. Say the one that had Big Rock, you had an increase of about 1.5 percent of the occurrences. It raised that overall percentage up to 15.9 percent.

It both increased the total number of occurrences, but it also then added it to the entire – and if you go to the most extreme, which is that really large reorientation of the Edisto MPA; it brought it all the way up to 177 occurrences and increased it all the way over 30 percent. If you draw these and capture large enough areas, it is pretty obvious that you are going to be getting areas.

Now I will qualify all this with the fact that we really didn't get a whole lot of guidance on how far we would need to go in terms of percentages for targets, but at least it is providing the core concept of these are known occurrences of this species, these are known habitat distributions, and begin to at least put it on the table of how much we know and then how can we expand that with the knowledge base we have with the fishermen, with the researchers, and take this and go to the level.

Essentially doing this, what we have done is created a hands-on capability to walk through that type of action. Using the software, what we can do is take the existing information, this is a zoom in, directly in ArcGIS of the Edisto MPA. It is identifying the distribution of speckled hind; distribution of speckled hind relative to the entire area; distribution of Warsaw grouper.
Now that is not showing up a lot because there are a few here, a few south; but then you look at this and if you want to create something, say, take a reorientation – now this is just to show it. It is not an attempt to do anything with it, just to show what this can do. We go in, look at that, we identify. Now the thing we want to know is what exactly that means in terms of species.

What we've done is it highlights the species or the catch within that area. It provides information on the actual distribution; it's origin from MARMAP or from the reef fish observer, et cetera, and identifies the entire suite of point areas. You can go in and look at the individual areas that have been selected. It provides you that base as well as it provides the ability to look at carving out the habitat also that occurs within that area.

DR. SEDBERRY: Roger, just before you lead that slide, just a little historical perspective, that is the way the original Edisto MPA was originally proposed to the MPA Advisory Panel back in '06 or whenever we did that, before then. Somewhere along the line, I can't remember how or when, it got rotated to its present configuration.

MR. PUGLIESE: Yes, and some of it – if you remember, some of them actually kept that way because we absolutely had species like the Georgia MPA. But then law enforcement came in hard on we need to reorient some of these where we can. They pushed to shift from some of these areas, so we kind of had a balance between law enforcement.

But also the other consideration is that in the reorientation you captured some deeper and some shallower areas, so you captured some juvenile habitat as well as some deeper habitats. It's a balance of I think all three of those as that moved forward. But it does pretty much coincide with some of the original proposals that were in this.

That provides you the clip that shows you the actual habitats that occur within the area; and again you can identify what they are, their origin. It also shows you how much of it was no hard bottom within the area and hard bottom area, so you can capture and understand how that is in context to the rest of the entire data system.

Now that provides that capability on the fly to be able to work in here and understand it, and we can refine any of these parts as we go. The other thing that we've done to make it even more functional is we have gone to create an online system that mirrors this. Through our mapping and GIS system at the council, working closely with FWRI who actually is serving our services, we have created under this managed area layers, jump into this system and it provides the manager reviewer, eventually.

I moved faster than the technology; it is still two steps behind this time, but it essentially has the data that we are looking at right now. What you are looking at is the viewer online. It is a flex viewer; it has even a lot more other information here other than the speckled hind and Warsaw information; all the managed areas, some habitat, even the NEXRAD Real-Time Radar Activities.

But the thing I wanted to show was really what you can do zooming into this area. What you do is you can see as it steps down you can go in and see the same type of area. You can identify the hard bottom distribution throughout the area, what has been identified is that preferred habitat, that layer that kind of shows you the core. It drops in and it will show you that core distribution. Then the real key is that it provides you the ability to create alternatives or you can draw the images similar to what I had shown earlier on and come up with base information of those different types of images. For example, what I've done is just identified instead of an area; it is providing you a circle.

If you established something that would be in that format, it will give you the actual dimensions, the areas, and what you can do is extract and identify some of the occurrence information and habitat that identify within this area. It will provide it in whatever formats, square miles, and give you calculations of the different areas.

We're refining it and trying to get something that would actually query and come up with percentages of occurrence, et cetera. But this is giving you at least a baseline hands-on capability to do what I just did in ArcGIS online. You can format this; and then it also provides the ability to save it. You could save it and either print it or essentially e-mail something like that.

What it will do is it will open right directly in the flex viewer exactly as presented in the online system. But what all these different things do or essentially are trying to do what I had indicated earlier, is taking what we have as a baseline of information, expand that with input from researchers and individuals in the field, fishermen and others, to try to provide a context of what we know about the species and how to expand and potentially expand the MPAs or add new areas or adjust those based on this input.

These are new tools or capabilities that we have and are going to be refining as we go. It is for this process, but it is going to provide a lot as we go down any of these spatial areas that the council is involved with. That is the introduction of what we have and where we are going and sets the stage for our work later on today.

MS. BROUWER: Thanks, Roger. We are running a little bit behind schedule so I wanted to sort of orient you to what we are going to do next, which is break out into groups. There are two round tables in the corners that we are going to set up with flip charts. Each breakout group will have to have a rapporteur, who is going to be responsible for taking notes.

It will be up to you when you end up in your respective group to select a person to be responsible to do that. Then we will reconvene and hopefully we will have time to do that and go over the input that the breakout groups have put together. Are there any questions perhaps for Roger before we break, or anything else?

MR. HARTIG: Yes, Roger, define where the habitat information comes from. Does that come from hydro-acoustic surveys, camera surveys, ROV; how is that done?

MR. PUGLIESE: The original SEAMAP data set that we are working with is a combination of virtually all the different data that is available when we first worked on it. I worked on the original data system. I chaired the SEAMAP committee over time as this was evolving. What you do is everything from video surveys that were there; you do actually have some trawl information where species are caught. A lot of this was tied to directly either occurrence of habitat, visual occurrence of habitat or benthic species associated with these habitats. It was using some species-based designation as a hard bottom or possible hard bottom component, based on it occurring within a number of the different species, reef fish, snapper grouper species that we know.

It was everything from actual location or video observation to, say, trawls, so you kind of get the whole broad spectrum of what we knew that went into this. One thing I will say that it did not have when we originally did it, and I kind of fought some of it, is that there was a real desire to keep the scientific integrity in terms of actual only research-associated data went into the system.

One of the things that I really wanted to see, especially for Florida, was diver observation information. The comprehensive diver information that exists was not integrated in some of this first round of the SEAMAP data that was done years ago. I think that is still something that can really expand and refine this as we go.

Plus a lot of new work on multibeam as well as the historic or the more recent information on SEAMAP and MARMAP would expand this even further in terms of kind of filling the rest of the blocks up and getting more refined designation of what these habitats are, as well as characterizing, because it is really core kind of a baseline distribution.

MR. DeMARIA: Yes, there is a whole 'nother world below where these charts cut off at, the Florida Keys. That one particular area off of Cosgrove Marquesas, which both Ralph and I have given you the coordinates on it, called the Warsaw Hole, I think it is very important. The old Conchs tell me that they swear the Warsaw spawn there. That is from like 260, 320, somewhere in that depth range. But the way the currents flow from north to south, that could be a very, very important area and I don't see it on any of these charts.

MR. PUGLIESE: Yes, and that wasn't really intended, because we do have that in the data sets. Actually those points are in the overall occurrence set. We do have those charts here today. I did generate that whole southern section, and even high-resolution bathymetry is on those, too. That was not intended to cut that area out.

It was really as we focused in that one area we were thinking, well, we are going to have a sequence of different workshops and we may be getting more. That truthfully was just kind of an oversight on that. We really didn't intent not to have that and we do have those available. As I indicated, your information provided for the Warsaw Hole are actually integrated into the data system and are presented on the more recent charts that we have. Yes, it is a critical component.

MS. BROUWER: Okay, we are going to attempt to do this breakout group thing somewhat in an orderly fashion, but I don't have a way to do that, so we are going to break here and then if you could just convene at one of our two tables, perhaps we'll set a third one so the breakout groups can have maybe five to six individuals; hopefully a combination of the scientists and the fishermen; and then like I said one person who could take notes and then we'll go from there.

(Whereupon, the Expert Workgroup convened into breakout groups.)

PUBLIC COMMENT SESSION

Wednesday, May 16, 2012

MR. HULL: My name is Jimmy Hull; I'm from Ponce Inlet, Florida. I am a member of the Southeastern Fisheries Association, East Coast Fishery Section. I am also in the seafood business, and I own and operate two commercial vessels. I just wanted to state that I have been fishing off of Ponce Inlet all my life. Currently we are seeing at the side of the boat as many Warsaw grouper as I've seen in my career of fishing. Anytime to the depth of 200 to 300 feet, when fishing for amberjack, if you drop your bait to the bottom you are going to hook a Warsaw

grouper. It is just inevitable. We avoid, obviously, hooking Warsaw groupers because they are of no value to us.

They take up our time away from our target species, which is amberjack. To us, to state that Warsaw are endangered or should have been petitioned as an endangered species was absurd. The fact that you haven't collected data, you haven't monitored these fish is another absurdity. To the point of stating that the area where we fish needs to have a marine protected area, a no fishing zone, we have the Gulf Stream current at those depths, which makes it almost impossible to rod-and-reel, hook-and-line fish these areas. You basically have a natural marine protected area because of the Gulf Stream current in those conditions. I believe that the discussions today that I heard about picking spawning aggregation sites, where these fish aggregate in large numbers to spawn has good merit. I mean no one is opposed to protecting spawning fish. We have always stated that these areas should be protected as long as we have studied the areas and provided the scientific data to back up these areas so that we know what we are doing.

You already have the Oculina area and these other marine protected areas. Again, we don't have any studies that I've seen to quantify the results of these areas and what they are doing and to show the value of them. I believe they are valuable. I agree; common sense tells you that they have got to be valuable. I'm not opposed and most of the fishermen – every fisherman that I know is not opposed to protecting spawning fish and especially doing it through areas that are known spawning sites. We need to collect the data. You need to slow down. You need to spend the time and collect the data on these sites so that we can make good judgments and do the right thing. I think everyone will benefit from that.

But to just immediately declare that these fish are on the endangered species, almost endangered and everything is overfished and overfishing is occurring, when you really have no scientific data to back that up other than obviously there are some things that people have stated that they are, I disagree with. If we are concerned about these species, we need to study them. We need to make smart decisions, slow down, do the right thing, and get the people that are interacting with these species onboard with you. And instead of being the villain in all of these issues to where we are shutting down these areas and people don't understand why, study it, understand it, do the right things.

Then you won't be the villain in these things with the general public. People will agree with you and say, hey, this needs to be done; we agree with you. You've shown us the reason why you are doing this and it agrees with what we are seeing. But it is going to take a lot of effort and, of course, you have a lot of constraints with budgets and manpower and trying to get things done. I heard complaints that you're not getting the reports, what is it called, the SAFE report? You are not getting the things that you need from the Science Center to analyze where you are at. Well, you need to speak up and say we need this; we can't work without it. Force them to give you what you need. Something has got to change there. You need to get the tools to do this proper management. As I say, the general public, from what I can see, will back you up if you do provide the evidence that you need to do these things. I thank you.

MR. NELSON: I'm Paul Nelson, Ponce Inlet, commercial fisherman. I've been commercial fishing all my life. I was part of the longline fishery back in the early eighties when we did

target Kitty Mitchell's and we did catch Warsaws. I know that they are probably going by landings on why they are extinct, and the reason the landings are down is because nobody is fishing for them who are out there all the time. Nobody targets Warsaw or Kitty Mitchells while we are fishing. We try to stay away from them. We do have Oculina Bank closure.

I don't see it on any of your maps over there that we were looking at, and I was just curious on why. It has been a closure for a long time and it is not even mentioned on the maps. You have a natural habitat protected area out there with the Gulf Stream to where it is unable to fish with rod and reel and bandit fishery. When they did away with the longline fishery, they basically have made that 240 to 300 foot level of bottom pretty much unfishable for the rod and reel and the bandit fishery. I think it is already protected. I think we need to get a stock assessment before anything is done. Thank you.

MR. HARTIG: When you guys were doing your longline; did you fish with Dixon?

MR. NELSON: Yes.

MR. HARTIG: Fished with Dixon Harper. I know Dixon, before he passed away; he came to the council and showed us some pictures of Warsaws floating away on that gear. When you guys fished that longline; did you catch adult speckled hind on that gear?

MR. NELSON: Yes, sir.

MR. HARTIG: Okay, and in your fishing recently, in your recent past, have you caught adult speckled hind at all in any of your fishing?

MR. NELSON: Not as many as back then. I mean, definitely on the longline fishery, definitely you would catch bigger fish on the longline fishery.

MR. HARTIG: Okay, but you still are seeing adult speckled hind?

MR. NELSON: Oh yes. I consider adult 20 pounds or bigger. We are catching a few of those, yes, still.

MPA EXPERT WORKGROUP
Part I
MAY 17, 2012

MS. BROUWER: The way we are going to kick things off this morning is with reports from each of the breakout groups from the discussions that took place yesterday afternoon. We'll go around the table and a person from each breakout group can go over the group's recommendations. After we do that, we will break out again. There has been a suggestion that perhaps for the next round of breakout groups we should divide ourselves up according to geographical expertise.

I'm not sure how else to put it, but for folks that have expertise in a particular area, then you go to that breakout group to make sure that we capture everybody's input. I thought that was a good suggestion, but it is up to you guys how to proceed. We can discuss it when we get to it. Why don't we go around the table, so there would be three folks that are going to present from each breakout group, and who would like to go first?

MS. HARTER: The first area that we discussed as a new MPA was Georgetown Hole, putting a small concise closed area around that productive area. Then we moved on to the northern South Carolina MPA, and we suggested not rotating that at all or moving that; because based on our ROV surveys in the southeastern quadrant of that MPA, there is actually some really nice low-relief habitat for the snowy grouper and blueline tilefish. We would say don't move that one at all.

Our group suggested rotating the Edisto MPA. I think you are going to get more of the shelf edge habitat and more of the speckled hind area for that one, and I don't think you are going to miss out on any tilefish habitat. We suggested expanding the Snowy Wreck MPA to cover a little bit more of the shelf edge habitat that is located to the south, so you get more of the speckled hind habitat there.

We also suggested possibly rotating the North Florida MPA to also cover more of the shelf edge habitat. The deeper portions of that; I guess there are some golden tilefish out there, but apparently they are not being overfished anymore. If we don't need that deeper area, then it would be nice to have more of the shelf edge habitat. The last area that we recommended as possibly a new MPA is around the Warsaw Hole, down near the Keys, a small area around there. I think that covers everything our group discussed.

MS. BROUWER: Thanks, Stacey. Okay, can we hear from the group over there?

DR. GRIMES: Well, we had a start with a list of some generic recommendations. One was that there should be an extensive exercise to map the seafloor. We wanted to recommend that and that this data be assembled and used to refine MPA site recommendations, collecting additional data necessary; and not just seafloor mapping, but also habitat coral to use in seafloor mapping to get the necessary data on temperatures and depths and circulation and so on.

We also recommended that as a follow-on exercise that we ought to conduct quantitative habitat modeling to develop a decision support tool to further refine the use and siting and so on of MPAs. A recommendation to use whatever MPA sites you choose was to use depth contours to outline these MPAs that made it more convenient to enforce them and for the fishermen to recognize where they were and maybe not to enforce them.

We recommended a ten-year sunset removal, I don't know if you want to call it a sunset, but revisiting the location size, et cetera. We recommended that rigorous monitoring and research programs be implemented on any sites that were designated. Then our list of sites were we supported the reorientation of the Edisto MPA. We put an additional one at the Snowy Edge Site southeast of Cape Lookout, North Carolina, along the 50 fathom contour.

I could give you the coordinates of it, but Chris used a piece of software. We put a box around it so that could be shown exactly where that is. We supported or thought we should reorient the northern South Carolina MPA, like the Edisto one, long access along the depth contour, which I guess is the opposite of what you guys said.

We put an additional one at the Devil's Hole off of South Carolina. Again, Chris has indicated that on the chart using the software. This is kind of where we ran out – one off St Simons, Georgia, and that is as far as we got.

DR. KOENIG: That is pretty much the lower limit of the dominant catches of speckled hind through that area, but we haven't gotten into Florida yet. We also recommended the Warsaw Hole as you all did. The only thing that we decided that we have to go on is where these catches have been.

It would be nice to have some sort of a – and there is such a thing in certain areas – high-resolution bathymetry, but it is only in certain areas; it is not in the whole area. That is why we are recommending that at some point USGS or some other agency get involved and do this. The shelf edge, of course, is extremely important for reef fish spawning.

Therefore, this area should be mapped with high-resolution bathymetry as well as interpretation. We talked about that. There are some model papers that show the quality that we need to be able to determine these kinds of habitats. That gives us a whole lot better basis with which to select these MPAs. Again, if that is done within this ten-year timeframe, when we revisit it we could possibly make changes or whatever based upon those patterns.

The other thing that we want to make clear is that this is only step one. We know basically nothing about the ecology of these two species. We need to know where they spawn. We don't have that. We have one or two specimens that were in reproductive condition. The timeframe of that is pretty spotty.

There are high tech ways of evaluating that question, using pingers, using pop-up satellite tags, things like that. If we do that, then we will have a much firmer basis with which to select these sites; and that is the whole point of this is to select what is necessary to select and not do broad scale, like deepwater closures. You have to select habitat, and there is spawning habitat and there is nursery habitat. That is our goal here. I guess that's about it for our group.

MS. HARTER: I just wanted to make one more comment about the Northern South Carolina MPA, because we recommended not rotating it and you guys did. If you are looking at just speckled hind, I would say definitely rotate it and get more of that shelf edge habitat; but if you do that you are losing some of the blueline tilefish and snowy grouper habitat that are deeper. That is the only reason we recommended not rotating it, because those are two other species that these were designed to protect.

DR. SEDBERRY: I have a comment, too. In regards to the Georgetown Hole and Devil's Hole, we may be talking about the same place. We need to make sure we are on the same page on that.

MS. BROUWER: Okay, and can we hear from the third breakout group?

WG MEMBER: I'll report on the third group. Most of the stuff that we talked about has been brought up at one time or another between the other two groups, but we can reiterate and just show that there is a pretty wide consensus. One of the first things that was mentioned in our group is that we do need an effective way to monitor or enforce these MPAs.

It was suggested once again that VMS or something like that would possibly alleviate some of the law enforcement concerns as well, especially with that shifting of boxes that we are talking about. That is one strong recommendation that our group would like to make. Another thing we want to point out are some of the limitations potentially of these charts that have been pointed out so far, is this is just species-occurrence data combined over across all years from 1979 through 2011.

A single dot represents one individual fish and doesn't necessary take into account thus far how much effort was expended in that effort to catch that one fish. It could be different weighting as far as the dots are concerned on these graphs. As far as our specific recommendations, as far as the MPAs are concerned; I think it has come up in both groups that we do support that extension of the Snowy Wreck MPA off of North Carolina, inshore to the shelf edge to include some of that speckled hind habitat. It is just inshore of that MPA.

In alignment with the second group, we also said that we need to concentrate on areas where – if we could identify them, where spawning aggregations are forming, if these guys are forming large spawning aggregations, once again leading to the idea that we don't know how much of that ecological background information we need to really answer that question at this point in time.

That would be a major step forward in trying to scientifically implement and site these MPAs in the most appropriate places. We were in support of turning both the Edisto and the Northern South Carolina MPAs to more be in line with that shelf edge habitat. From our understanding, talking with some of the people that are involved with the original siting, that that was sort of the orientation they were originally planned for. That would be hopefully not that controversial.

Also, Devil's Hole and Georgetown Hole came up in our talks a good bit, and we recommend that possibly investigating forming an MPA in this region as it seems to be an important location at least for high abundances of these mid-shelf grouper species. Whether we can say it's a spawning aggregation area or not, it is a little hard to say at this point in time. Although we didn't have a whole lot – most of our expertise was from Georgia north.

We did discuss briefly some of the East Florida shelf habitats. There was a feeling that due to the restrictions already placed on the Oculina Banks MPA, I think it is a no anchoring restriction, and the currents that occur in that region because of the Gulf Stream; although it is not a true no fishing MPA, it does offer some protection for that speckled hind and Warsaw grouper at this point in time.

We didn't really say that this should be sited as an MPA or anything, but it was a bit of a

discussion about some of the wrecks off of Georgia, World War II; possibly hold some pretty high concentrations of speckled hind, and we also got into red snapper a little bit. This might be another area to investigate. It is more of an artificial reef habitat.

In general we made a comment that maybe we need to consider some of these artificial reef type habitats when designing these MPAs as well. That some of these are underrepresented; we have been focusing mainly on natural reef. But talking to the fishermen that were participating in our group, they suggested it seems to be in the wide expanse of sandy bottom is where you have this one wreck or one artificial reef will tend to give a pretty high concentration of Warsaw and speckled hind. Did I leave anything out from our group?

MR. HARTIG: One comment, if I may, I appreciate all that thought that went into what you have done so far, but we do have the Oculina HAPC; and within that we have the experimental closed areas, so that has been closed to fishing since '94. The first question I asked in this process is what has that done? We don't have an answer to that.

WG MEMBER: I was just going to reiterate that was something that was discussed pretty extensively in our group that we do need better monitoring to see what the effects of some of the combined effects the management regulations has been on the speckled hind. I think we're all pretty much in agreement around this table that we do need that at this point in time.

MR. HARTIG: We've got Chris here. He worked extensively there, and he hasn't said too much about Oculina since we've got here or in the presentation he gave to the AP. I'm not going to speak for him. He could give an overview of the research he did and the problems he found when he did it. I think that would help us to try and figure out what we need for the future.

DR. KOENIG: Right, I worked in the Oculina Banks from about 1995 to around 2002, I think. Basically there is extensive habitat destruction. There are reef fish there. The extensive scamp and gag spawning aggregations that were recorded in 1980 and the late seventies by Grant Gilmore and others, and the speckled hind had just about disappeared.

We saw a total of eight immature scamp, and I think there was one gag. These are spawning aggregations and we were there at the spawning aggregation time. This was intact habitat. This was not the damaged habitat. Clearly, fishing had gone on. Even though the Coast Guard maintained that they had done surveillance of the area, some of the information that I got from inside the Coast Guard from friends of mine said that there wasn't.

Before we go and launch off on these evaluation trips with ROVs or other tools that we use, we need to have verification of the surveillance that was done in that area. In other words, we don't want to end up with the wrong conclusion. What we want is we want to find out if these things are working. That is absolutely important, absolutely. If they are not doing what they are supposed to do, what they are designed to do, they shouldn't be there. But, we can't be misled by the effects of continuous poaching. That is misleading. I experienced it in Madison-Swanson in the northeastern Gulf. Things were recovering dramatically over three or four years, dramatically in that reserve.

Then when those hurricanes hit in the Gulf, Ivan, Katrina and Rita, the Coast Guard completely ignored their surveillance and their enforcement efforts in that reserve and went to elsewhere to take care of the victims of the storm. Now that's fine, but they should have kept a presence there and they didn't.

Everything went back down to what it was some historical level of depletion, and we have that on record, because I was continuously sampling in there. That is the same kind of thing that can happen in any one of these MPAs if the enforcement is not strict enough. Getting back to Oculina Banks, I know FWC has some enforcement vessel to work in that area, too, but we need to know how often they are out there.

We need to know the techniques that they are using. What I finally had to do in Madison-Swanson because of the Coast Guard's cavalier attitude about enforcing these areas was I had to put my own receivers that listened to boat traffic down on the spawning sites. What I found was that two to three times a week there were boats going in there at night and fishing.

With the density of fish that was in there. you could get – the fishermen told me you could easily get a thousand pounds a night, so that is two to three thousand pounds a week were being removed from those spawning sites. I was trying to do a certain thing, telemetric mortality study, which was completely undermined by that activity.

It took the Coast Guard two weeks to catch all three guys that were doing that; three different boats. These are the kinds of things that have to be done. I strongly encourage that some sort of check on the Coast Guard or any other enforcement agency be done, like these receivers that listen to boat traffic.

You can block all the sounds within a kilometer of that site and just take those sounds and you can track that type of activity in there. You can identify the individual boats by the characteristic of those sounds that it makes. If there are those devices in the Oculina Banks or anywhere else that we close, then we can verify, we can get an idea about what kind of impact is occurring in those areas.

I'm a little bit on a soapbox here, but these areas are for the fishermen. They are not for the crooks. What we want these areas to do, actually, is to do what Madison-Swanson did, and that is to provide spillover so that fishing around the reserve can recover. The densities of the fish populations can recover.

Number two, because these shelf edge areas are spawning areas, they are clearly spawning areas for the major species; maybe not for speckled hind or Warsaw, because we don't have any strong evidence of that, but for the other species like gag, scamp and red snapper they are spawning areas. That has been verified. To put a reserve in a non-spawning area or let's say a non-critical area, whether it is nursery or spawning, is actually anti-productive.

To put it in a reproductive area is extremely productive, because you are getting the recruitment from the increase in reproductive output from these areas. That is what we experienced in the Gulf, and that is what I would like to give you. I gave a presentation in April to the AP, and I

made a major case for that. I tried to, anyway, from my experience in Madison-Swanson over the past 12 years. Basically these are for the fishermen. I know they don't perceive it that way. They perceive it as bottom being taken away, but that is not the case.

There were fishermen who strongly opposed it in the Gulf and have turned around 180 degrees and strongly support it now. I know I'm getting a little bit off subject here. Well, it is directly related to what we were talking about. Enforcement is absolutely necessary, absolutely. Without it we have nothing, nothing. You might as well open them up.

I hate to say it, but it is actually worse being closed because the guys who are making the money off of it are the people that are cheaters. The guys who are honest, conservation-minded fishermen are losing out. It is more destructive if there is no enforcement in there, so we have to verify absolutely that there is enforcement, and I couldn't emphasize that any more.

Getting back to Oculina Banks, there had not been enforcement in the Oculina Banks from 1984, when it was closed to trawling, to 1995 when Churchill and I went in there in submersibles and saw all the damage. Now John Reed and I published a paper on that showing the extensive trawl damage from his earlier studies. As I said earlier, setting aside a reserve is only step one. All of these other things have to be put into place, they have to be and verified. I hope that answered it.

MR. COX: Can I ask a question here then? Is there a group or anybody in the group that does not think that we need VMS at this time, because I think it is pretty unanimous that is what it is going to take to make these MPAs work?

DR. KOENIG: That is true. Now VMS was instated in the Gulf since 2007. The data that I had from the poaching was 2008 or 2009. VMS was in place. There is a way to get around it. Two of the boats that were caught were high-end recreational boats. They were going in there and then selling their catch to restaurants. One was an unlicensed commercial boat.

He would go in and fish, so VMS was blind to him. If you don't have a license, you don't need a VMS. Then he's go outside and transfer his catch to a licensed vessel and then they would split the profits. There are ways around here. The problem is apparently the Coast Guard in the Gulf of Mexico became complacent after VMS was put into place. But I agree with you totally, VMS is a very, very strong way of doing surveillance on these areas, monitoring their movements. I think it should be done, yes.

MR. COX: It seems to me that as hard as it is to find the spawning areas for the Warsaws and speckled hind, it is going to be just as hard to enforce it. We've got a challenge ahead of us.

DR. KOENIG: It's a real challenge, it is. But, again, it is for the fishermen; it is not taking away from the fishermen. If you want your populations of reef fish recovered, this is a very important way of doing it. I even got a letter from one of the high-end fishermen that fished around Madison-Swanson. It was read at the AP. He admitted he was opposed to it. When it first started; he was strongly opposed to it, as I recall. Now he is strongly in favor of it. In fact, he wants more of them.

MS. BROUWER: Along those same lines, just an observation that I've heard among folks discussing MPAs is the term MPA and what response that elicits. If we are going to consider closed areas specifically for spawning, to protect spawning grounds or aggregations or what have you, calling them spawning closed areas or spawning sanctuaries or something like that might be better received.

What I've heard from fishermen themselves is that none of them are going to be opposed to protecting spawning fish. That is just something to think about. The other thing is we've been talking about MPAs, and I haven't heard discussion about whether we're recommending Type 2 MPAs where some fishing is allowed, which is currently what the case is for the deepwater MPAs. You can go in there; you can't bottom fish, but you can troll. Are we talking about that type of closure or are we talking about no fishing? Of course, we know that enforcement would prefer no fishing whatsoever because otherwise it gets complicated to enforce.

DR. KOENIG: I can also speak to that because of my experience in the Madison-Swanson reserve. They are open to pelagic fishing from May through October. It is along Madison Ridge, which is that very productive spawning area for gag and red snapper that is along this southern part of the reserve.

The Panama City National Marine Fisheries Service Lab demonstrated clearly that if a boat was moving 4 knots or less, they by using downriggers could get to the bottom and catch reef fish. They demonstrated that. They also demonstrated – and this is Andy David's work. They also demonstrated that an observer from the surface could not tell whether they were trolling deep or shallow.

Now those are shelf edge depths. They could get down to 300 feet. In fact, they caught a Warsaw on one of these trips. Those data are all in the record and you can get this from Andy David, this report. Instead of keeping the recreational pelagic fishery out of the reserve, they said that the Coast Guard could stop them if they were moving slower than 4 knots.

Now do you know how hard that is to enforce? It's impossible. Every time I went out there, I saw two or three trolling boats moving less than 4 knots, every single time, because it is impossible to enforce. The only way you can enforce it – and this is the way it is enforced – is to stop the vessel and see if they've got reef fish on board, and that's it; that's it.

That is the only way you can, because obviously when they see the Coast Guard they pick up speed, and obviously the Coast Guard can't tell with any great degree of certainty how fast the boat is moving. This is a problem. Poaching is continuing because of that. I would recommend that all fishing be stopped within these closed areas.

Now you've got two issues going on. You said spawning reserves. What we are dealing with here are two species that are heavily overfished, and I'll just leave it at that. I won't call them endangered or threatened or anything like that. But everybody will admit, I would think that they are heavily overfished.

Because there are so many juveniles – and in Gabe's paper he showed that three quarters of the

individuals that caught recently within the 2000s, three quarters of them were juveniles. This appears to be an important juvenile habitat for those two species. It definitely appears – in the Gulf too, because I've got mostly juveniles in Madison-Swanson. Now that doesn't mean it was always that way, but that is what it looks like. Now the two types of habitat you want to protect for reef fish are spawning and juvenile habitat.

For example, the reason Goliath grouper recovered is because Mangrove habitat in the Ten Thousand Islands was still very much a healthy habitat, and the water quality was very good. That is where they initially – their population exploded out of that area, not in Florida Bay, not anywhere else, but in the Ten Thousand Islands. That is in a published document that we published the end of last year.

What I'm saying is that if you want to get these populations back in shape, closing these areas that we are closing is step one, and this is what I said earlier. Step two is finding out where they are spawning and then closing specific areas where they're spawning. These are traditional spawning sites.

They will be in the collective memory of that fish, because Madison-Swanson was completely annihilated in terms of fish populations when we started working in there in 2000, completely depleted, and that is why we got it. It was a default reserve that we got. Not only did the populations of gag and red snapper and scamp start to recover over a period of three or four years, but speckled hind and Warsaw grouper started appearing in there again.

We have early records where they were once abundant in there, so we know that. These areas, it is all place based. We close these areas once we find out where they are spawning and can verify that for those two species, then that is a good thing. But the point of these areas being closed on the shelf edge is that you get a biggest bang for your buck for a closed area.

You get these shallow water species, their major spawning areas are there. That is red grouper, scamp – red grouper is incredibly dominant out there – it is exclusive for gag, they don't spawn anywhere else except on the shelf edge. Scamp appears to be similar to that. You are getting the juvenile habitat for speckled hind and Warsaw. You are getting the spawning habitat for the other species. It just couldn't be any better. This fishery will benefit from that, tremendous benefit from it.

MR. HARTIG: One of the things about enforcement – and we do the VMS across the board on commercial. I don't think there is any doubt that there is probably where we'll go with these MPAs now. For the recreational fishery, one of the ideas that I've had over time, and I've broached it to the Law Enforcement Panel on several occasions, is for the recreational fishery, when you leave the dock and you make a conscious decision that you are going to troll through an MPA, my take on that was that if you are in an MPA at any time during that trip, you cannot have any of those species on board from that MPA. You can't have those on your boat.

The reason for that is that the Coast Guard, their assets are air – I mean, if you want to cover some area, cover it in the air. I see them flying over almost every morning. If you can identify the numbers of a boat and then just have inside resources at the different inlets checking the

boats with those numbers and have that law in place, I think you could still have pelagic fishing without significantly impacting – having those people in there and not impacting that resource. I think that's a way we could do it. The other thing is people are telling me with radar now, I can't even see the boat and they've got my number. They can get the number where I am right there. They can get my number where I'm fishing and I can't even see them. If they can do that, why can't law enforcement get the numbers on those boats? If they had a number and that boat was in there and you had that law that if you were in there and you had those species, that's a violation. That we could shore up.

We could still have the pelagic fisheries and then we could have that rule that would take care of that. On our side, the pelagic fishery, the sailfishing tournaments during the wintertime, that shelf edge is where they fish. To start eliminating those areas, you are going to have a real significant economic problem. Any way we can think outside the box to try and deal with this issue would help.

MR. DeMARIA: I just wanted to say one thing. I think we get carried away with the whole compliance thing. We're never going to have 100 percent compliance. Some people are going to poach no matter what. It's like having – I always use the analogy it's like having banks. We are always going to have bank robbers but we still have banks and they seem to work.

We are going to have these reserves and there are going to be people that poach. It is just keeping it at an acceptable level. It's like the bank robber. If they're caught, then they are prosecuted, and that is really all you can do. But to think that we're going to have 100 percent compliance and keep everybody out of them is not realistic.

But I think even with a low level of poaching, these things do seem to work. Riley's is constantly poached and it is remarkable. A lot of the other reserves I've been in around the world from Papua, New Guinea, to South Africa – I just got back from St. Thomas Monday and flew up here – there is a bit of poaching going on in every one of these reserves, but yet they seem to work.

Just like banks, they are robbed but, yes, they work. I think that is how we have to look at this and be realistic. People are going to want to troll through them. I'd like to see them no fishing. It would be a lot easier to enforce, but is it realistic? I'm not sure that it is. I'm not sure it will pass the public if you try to get something like Devil's Hole completely closed, no transit, no fishing. It's just not going to pass; but some type of compromise where you can troll, but if you call it bottom fish you're arrested will probably work.

DR. SEDBERRY: There have been some studies by Peter Oster and others published recently showing that at least on reefs as deep as 70 feet there is a connection between pelagic predators and benthic predators; that the jacks and mackerels and sharks chase schools of bait to the bottom where snappers and groupers feed on them.

They have quantified that with numbers of fish, numbers of observations and it has been published. Of course, we've always suspected that was true in shallow reefs, like 60 or 70 feet. We just don't know about these shelf edge reefs yet, I think. We do need to consider that those

pelagic predators are an important part of the ecosystem.

WG MEMBER: I'd like to comment on that. As far as what you're saying, it does occur clear on out over 200 feet. We catch blackfin tunas, kingfish, right slap on the bottom. You do get predation by the pelagic species along the deeper area. However, when you're talking about trolling, anybody trolling through that habitat you are not going to even put a dent in the population of the pelagic predators as opposed to that predation on the bottom and herding of bait fish and so on. It is going to continue to happen.

DR. SEDBERRY: But we have had overfishing on mackerel and greater amberjack and sharks and some of these predators as well. It is possible to overfish them by trolling.

MS. BROUWER: Okay, let's try to get back into the breakout groups. It sounds like a couple of the groups didn't have enough time to get through everything they wanted to get through. Like I said, I was going to suggest that the groups get shuffled a bit. Perhaps that would be the northern region, the middle region and the southern region over here.

You all can divide yourselves up accordingly. That would be my suggestion, but, of course, you can do whatever you want. Then we'll reconvene for a plenary discussion at about eleven or sooner. Does that seem reasonable? For those groups that don't feel like – maybe you've exhausted your recommendation; this would be a good time to maybe transfer some of those notes so that they can start being passed along to the report writers.

MR. HARTIG: I'd just keep it fluid on when the plenary is. We may just do it after lunch. We'll just see how far everybody gets.

MS. BROUWER: That's fine.

(Whereupon, breakout groups were held.)

MPA EXPERT WORKGROUP

MAY 17, 2012

PART II

MR. MARHEFKA: I have a real hard time here, sitting here and being able to go and invert boxes and increase lines and doing these things without the proper NOAA charts, with the overlay of these boxes on the charts. This is what we asked for at the AP meeting in Charleston. I'm not seeing it here today. I can't go forward until you can go and give me that.

I'm not trying to go and – but if you were to go and give me the boxes on the NOAA charts with the TD lines that are on the charts that we work with, that we go by so we can go and sort of help you tweak these out, I'll be more than happy to. The only other way I'm going to be able to help you is I am going to have to go to my boat, go to my computer, pull my stuff up and give you points of reference; then call them in to you and say this is where it should be or where we

should go and sort of increase or decrease. I'm at a loss here.

MR. PUGLIESE: One thing we did do is we had the base NOAA charts in the online system, and we have just updated to include the historic charts on the managed area system as well as actually try to integrate some of the multibeam. That is in what we were looking at yesterday. We just loaded that back into the backside. We had the original ones you saw, but now you've got the coastal charts and the multiple layers.

MR. MARHEFKA: Roger, do you have what I just asked for? I want the NOAA charts with TD lines and the boxes of the MPAs on top of that NOAA chart.

MR. PUGLIESE: Yes, that's online.

MR. MARHEFKA: Okay, if we can pull that up, then we can work.

MR. HARTIG: That is a fair criticism from my perspective. In that small area where I fish off Jupiter, where the Continental Shelf is so compressed, you have to have the larger scale chart to show you the detail of where you fish. I've got one in my car.

MR. MARHEFKA: If we want to go and look at small areas that are spawning areas and not these big huge boxes that we supposedly didn't do a good job on, then we need to have this narrowed down. If you want to look at the Devil's Hole or any other small areas, because that is what you are looking to go and do, then that is what we need to go and have that is available.

MS. BROUWER: What I would suggest at this point is Roger can float around for the breakout groups and show you this online tool; and perhaps when we reconvene back in plenary, we can project the charts. Then we can all talk about your suggestions while everybody is looking at that. Would that work? Okay.

WG MEMBER: Just towards that, too, I think it's superb that we've got these charts, but at the same time I don't want to have the charts or the data stand in our way. If you know a place called Noah's Hole or wherever it is, you know what it is called in your terms and you know where it is at; if we say, okay, this person knows such and such a site and it's about here, and it's called this locally, we can get to that detail as well.

I don't want to go backwards. If we've got the detail, we don't need to go backwards. As we're jotting down a series of sites, locally used names and the general position is valuable, and then we can narrow in – like you say, we are talking about tiny little places. Anyway, to scope it down, use common names.

MR. HUDSON: I guess I have kind of a question. We just convened this meeting of experts yesterday at one o'clock, roughly speaking, and we're going to be finishing up by lunch today. I know that there are three more public outreach workshops that you have planned eventually, but you have had two already that I don't believe have been very successful for the public.

I'm wondering are you going to reconvene the experts at some point so that the decision-making

process can be more hands on. I feel like if we had had a whole full day working and a half a day, we would have been better off than what we are right now. Now I don't know how we'll be at eleven or twelve o'clock today, but I woke up at two this morning and couldn't get back to sleep until five and kept pondering a lot of the different things.

There is a lot of information. I don't know how many of the seven documents, for instance, that I had asked for that goes back to what underpins the overfishing definition, but there is a lot that we have to try to digest. I know that I have participated with Roger and NOAA and other folks here in the past year and a half, educating them not only on speckled hind and Warsaw.

We have like a short list of things that we want to see happen so that we can go forward and be able to make proper decisions; because something that Will had in his document about a technical, ecological knowledge, that is what we're bringing to the table and have already brought in some cases.

We just don't get the feeling or I don't get the feeling where are we going to be three months from now when you are trying to do three more public hearing workshops and trying to get people to get people to bring stuff to the table that we're already bringing to the table. I believe that somehow if you are going to be trying to rapidly pursue CE-BA 3 on this line; and then I have this problem with CE-BA 3 also with regards to the Oculina Bank Expansion, because I think those multibeam pictures and stuff only stop down in the southern range of this planned Oculina Expansion and that is going to affect us with no more anchoring in those ranges that we've just opened back up with Regulatory Amendment 11.

I just want to know that they are not overreaching, because that corridor, from what I understand the shrimp guys wanted to see a little different kind of 70 meters on the inshore side and maybe 90 on the offshore side; instead the coral guys last week when they met – I was down in Miami so I couldn't listen to it – but they want the 60/100.

In doing that you just write off the big break, the Big Ledge as we call it, all the way to St. Augustine, something that the law enforcement said 98 was don't go and try to stick these things in highly populated areas. Something that Ben said yesterday about St. Lucie Humps was in between two inlets, and now we are going to be going from Cape Canaveral past Ponce Inlet all the way to St. Augustine Inlet.

What kind of bang for the buck are we going to be getting out of that when we can't even, as we say, understand what we've gotten with the Experimental Closed Area Oculina and the expanded area in 2000? That is 12 years ago for the expansion. That is where my brain is at. I'm troubled by the process right now.

I really believe that the follow-up meeting of the experts needs to be something that ain't a webinar. It needs to be a little more time on our hands. I'm just going to leave it at that at the moment. One final thought; it was suggested that the Shrimp AP, the Coral AP, and the Snapper Grouper AP should all meet together and discuss this Oculina Bank Expansion at some point before CE-BA 3 goes forward.

MS. BROUWER: Thank you, Rusty. Those are good suggestions and very valid questions that unfortunately I have no answers for, because it is going to be up to the council to decide how they are going to proceed. We are doing what they asked us to do in March, and then we are going to bring the information back to them in June and ask them how we should proceed from then on. Sorry, but that is all I know.

MR. HARTIG: The concerns are evident to us, Rusty. We'll see what happens at the council meeting.

MS. HARTER: I just wanted to say one more thing about the Oculina Bank. I started studying there probably when Chris stopped around 2002. I just wanted to mention, unless you all know, that I do have a paper out with John Reed and Andy Shepherd based on ROV surveys that we did inside and outside the MPA. It does show some small positive effects of the MPA. We saw higher biodiversity of grouper inside and higher densities of grouper inside versus outside. I just wanted to let you all know that there are small positive effects of that MPA.

MR. HARTIG: Yes, that is a critical paper, Stacey; I'd love to see that.

MS. HARTER: Yes, it is published in Fishery Bulletin, and I can send out a copy, also.

MR. HUDSON: I guess in that thought; that gets to something that Chris presented at the AP was that spillover effect, because I think that we've already seen that with the golden tile in our recent assessment for the closed areas that were near there. I'd like to see that stuff, too. To that point on the Oculina stuff, there is a picture from 1983 showing an aggregation of speckled hind and scamp groupers, and then, of course, in '84 you made the closed area.

They referred to some acoustic signatures of these particular groupers and stuff and some of that work that was being done, I think you had some pictures of the acoustic equipment on your presentation. The thought was that the MPAs could benefit from a lot more of that acoustic stuff, but then I think I heard some other thoughts that maybe the verdict is not in on the ability to pick out these spawning aggregations.

In my mind I'd like to see this 2005 document. I read it on the Oculina Website the other day, and it indicated that they don't know if, for instance, speckled hind really has a spawning aggregation in the Oculina. Yet early on it was sort of speculated that they did. I guess it is still up in the air, and that is what I'd like to – I guess we all would like to get to the bottom of where these speckled hind are.

When I was looking at Gabriel's paper from 2008 this morning, I see that not only is there the one ripe female in the MARMAP stuff, but there were three ripe males also in that same region up there off like Edisto and all that. With the 1,346 samples that they got in there, you have a kind of a snapshot, as you say, of particularly juvenile females, which I would believe you would really want to protect somehow.

With the no-take that has been in effect now since January 31, 2011, there is going to be less inclination of professional fishermen and for-hire people to even want to be around those kinds

of situations because of having to throw them back. We already experienced that stuff with red snapper and sea bass and stuff like that.

It changes our whole effort as a for-hire or a professional commercial fisherman. It really does affect us. You talk about poachers; I don't see a lot of poachers want to go trying to hide a 2 or 300 pound Warsaw in the boat, particularly if he is not designed for that boat. Anyway, just some thoughts.

DR. LINDEHAN: Thanks, Rusty, for mentioning TEK. It's an acronym; it has been in the literature for a couple decades. That is traditional ecological knowledge. It is important because you and Mark and many other fishers here are walking examples of TEK. For the fishermen here, there is a phrase in the literature that has been around for a couple decades called traditional ecological knowledge. I think it arose from an anthropologist who started to work in this realm.

What some of us have been working on for a long time is indeed trying to merge the science with the fishing, because a lot of the spawning aggregations that have been identified and protected around the world, perhaps the majority, I would guess the majority, were not identified by science and research vessels. They were identified by scientists who talked to fishers or fishers who came to scientists.

This TEK, this harvesting of traditional ecological knowledge from the guys on the water every day, and very few scientists are, is a huge part of modern 21st Century fishery management when it is working. It is hard to do right. It is hard to integrate it into the process, things as fundamental as charts for example. Just FYI, if you want to, Rusty, I know you are really enjoying the literature on this, Google traditional ecological knowledge, and you are going to find a ton of very interesting stuff.

In the Caribbean there is an institution known as the Gliding Memorial Award, which was instituted in 2004 by the Gulf and Caribbean Fisheries Institute, which actually recognizes patriarch and matriarch fisher folk around the Caribbean who are engaged in promoting sustainable fishing practices so that their children and grandchildren will have fisheries to harvest as well. The Gladding Memorial Award, if you Google that, might be of interest to some of you folks. It's all about TEK.

MR. HUDSON: I thank you about that, because I didn't encounter it until I was reading Will's 2011 paper. My familiarity with the acronym and the definition isn't as thorough as it needs to be. But yesterday I saw where you brought in Captain Paul at a situation where I know my cousin, Mark Brown, couldn't be here to bring his knowledge, and we were just trying to input information. I believe it was useful. I thought you saw that yesterday, and I commend you for trying to bring his expertise to the table, because he is able to fish these animals to Carolinas, back to Florida and stuff.

MR. LINDEMAN: Fisher folk, you might want to Google traditional ecological knowledge with the word "fisheries". There is a really interesting literature building on this. If we don't bring TDK deep into the administrative processes, our fish ain't going to be here decades out.

DR. HEYMAN: I think that is a really valuable point and I'd like to add on to it a little bit, having really tapped into that kind of information, Ken, and I like to think about traditional ecological knowledge as one way of thinking about the world, whereas kind of scientific is kind of a different way to look about the world. The fact is that they don't need to be totally separate.

But they do bring complementary pieces of information to the table. I spent a decade in Belize working with local fishermen there. Basically we, together, with their knowledge and with what I could bring to the table with regards to some bathymetric mapping and charts and things like that, we were able to identify the kinds of places that Chris was talking about that are very, very important as multiple species spawning sites.

I think that is what we're getting at here. To me, if we could find the places where lots of these species aggregate and spawn, they are going to be small; they are going to be in places that have geomorphological signatures. Anybody that fishes, if I gave you a bathymetric chart of somewhere you've never been before, I would argue that you would all choose – you know, give me the top three sites you want to fish first, I bet they would all be the same, and they would be shelf edges and they would be lumps and they would be bumps and they would be – particularly where those two came together, if you had a shelf edge and a bump or a shelf edge and a curve, that is where I would suggest you guys would go to fish, because they hang up a lot of fish.

They also typically – the most pronounced of those we are seeing in Belize and in the Cayman Islands and in Mexico, and in Indonesia, and in the Gulf, they seem to hang up these multiple species aggregations. Again, you can call them what you want, you can call them MPAs, or you can call them no-take zones and politically maybe those terms don't have as much cache; in Mexico the fishermen are calling them banco pesquero, it's a fish bank.

The analogy is a good one. You leave those there and you harvest the interest. You don't draw down on the principal, and that is these small multispecies spawning aggregations have very specific places. Going back to what Ken said about traditional ecological knowledge, what we realized is going through this process, which we involve not only a lot of fishermen but also a lot of scientists and a lot of government people; we just try to bring anybody that had information to the table to participate.

What I kind of realized is that everybody likes their own information but they don't necessarily trust the other guy's information, right? The scientific report, boom, here this is what is supposed to happen because we're the scientists and we say – well, the fisherman is like, first of all, I'm not even going to read it; and second of all, I saw you guys sampling on the sand when you should have been on the rocks, anyway, so I don't have; you know.

Then similarly a lot of the fisheries managers are saying these guys are just jacking us around again. Yet here we have probably a thousand years of cumulative ecological knowledge of the bottom and what is where in this very room and that doesn't happen every day. We have got a critical mass here that I've rarely seen anywhere in any one given time.

I applaud Rusty for saying, geez, we need more time, but at the same time I don't think we need a whole lot more time. I think we need some focus, because with this kind of resource in the

room and with the right charts, we should be able to nail these places down like that. It's just not that complex.

If we decide that our grandchildren's grandchildren ought to have access to fish, we can make that happen today. I think this kind of thinking can spread. We're not going to have guys that – what, am I supposed to stop talking? Okay, all right, it's the umbrella, I've seen it before. Anyway, it can happen.

There's a place called Cabo Pulmo; does anybody know this place down near Cabo San Lucas? These guys, fishing communities kind of out of the way off of Cabo San Lucas, watching Cabo explode into this huge tourism deal; and these guys are sitting around watching their resources kind of go down and go down. It's a small town, a bunch of family, basically. They said, you know what, this is crazy, we are killing our future ourselves.

They said all right, here is what we are going to do; we are going to make a no-take zone for four miles everywhere around our little village. It happens that the village is on a point where the shelf comes real close to the coast, and there are some spurs that go out right to that shelf edge. It's phenomenal habitat, anyway, which they realized and knew.

They said, you know what; we're going to close this down. We'll fish as much as we want outside of there, but our front yard; we're going to close it down. When you see the underwater footage of the kind of densities and diversity of fish that are hung up in there now; I mean, it is scary, there is hardly enough room to swim around.

I think that we look at – I was scared when I first got into this aggregation stuff, because when I got into the literature, everybody said if you fish these things down, that's it, they are disappearing and you are nipping that life cycle and you'll never see any reproduction again. That really was a sense of urgency for me. It was like, well, we've got to get these protected instantly.

But at the same time now I'm starting to see evidence to the contrary, some positive evidence. You close down a place like Riley's Hump, which has the same shape as all these other things, right, it's a big bend in the reef near the shelf edge, with some lumps near the edge, some knuckles sticking up there; it was known as a mutton snapper spawning aggregation.

These guys, Don and Peter explained to the council how important this place was not just for mutton snapper but for all these different groupers and snappers that spawn there. It got eventually closed and I'm telling a story that everybody knows, but the Florida Keys National Marine Sanctuary closed it off. Well, what's there now?

MR. DeMARIA: It's remarkable. Every year I dive on it, it is just more and more fish. Towards the end when it was fished, it was beat down to – I don't want to say nothing, but it was beat down pretty low, pretty low. You go there now and there is just thousands of mutton. We've actually seen them spawn, we got it on video.

Not only muttons but the Cubera are starting to aggregate with them, the dog snappers, there is

big black groupers there. It is multiple species that use these same sites. Like Will said, you could pick them out on the chart. Even this chart, as primitive as it is, you can look at it and see that there is something probably going on around Devil's Hole.

Then down in the Keys where what we call the Warsaw Hole is, if you look at a more detailed chart, you can tell something has got to be going on there with the bottom. I think if we picked these areas out, general areas, we can fine tune them down the road. This is what they kind of did in St. Thomas. I just got back. I was impressed.

I was under the impression that the U.S. Virgin Islands just were over with, nothing there. But I dove on two shelf edge reserves south of St. Thomas, Red Hind Bank and the Gramarit Bank and then there was another one that is not a reserve yet. It was impressive. One of the reserves; we swam through a school of probably 500 Cubera snapper. If there was one, there were 500, and it's not even the peak of the spawn.

I saw a school of about 100 dog snapper all balled up, ready to spawn. There were Nassau groupers, tiger groupers, and yellow fins. If you had of blindfolded me and dropped me in the water, I would never have guessed it was St. Thomas. But these areas have been protected for a while and they put a great deal of thought in it. They got the general locations from the fishermen. Sean Kadison and Rick Nemeth spent a lot of time diving on them and finding the exact location of these fish, and they did.

I have to think if two people can do it down there and find the exact location in the small boats they're working with in rough conditions – it never really stops blowing there – we ought to be able to do it here. We could pick out the general locations now – we've got a lot of information in this room – and then fine tune it later on down the road. I don't think we should miss this opportunity. Like Will is saying, we've got a golden opportunity with everybody here and let's get something out of it today.

MR. FREEMAN: I'd like to make a comment. I worked in the industry one time and we would get orders from corporate that, hey, we are going to do so and so. Try to convince my boss you don't want to make a rule that doesn't make sense to somebody in the group, and you don't want to make a rule that you don't intend to enforce.

All right, we've got marine protected areas, as was commented this morning, has become somebody's honey hole. If we can't significantly enforce these restricted areas with penalties sufficient to keep people out of there, then it is a pipe dream to think you are going to continue to create marine protected areas. They are semi-protected.

One of the commercial fishermen I spoke to in trying to get information to bring some value to my presence here; he admitted he still goes to the Snowy Grouper Wreck, sneak in there, get his hundred pounds, and comes out, whatever. He also commented, you know, hey, there are lots of Kitty Mitchells inshore there down to the 200 line.

I've not tried to interpolate exactly where that is at in lat/long, but these guys have a lot of knowledge, but they also know how to cheat, whatever. They are trying to make a living. The

more difficult we make it for them by creating additional areas that he cannot fish, we keep requiring them to focus more and more on a species, we go protect something like the dogfish and those things are eating us alive.

Those buggers are eating the fish that we would like to grow up and make mature something for high-value products to sell to the markets or me to get customers to drive from New York to go fishing for a few hours. The effort we put in this needs to make sense to the guys that are making their living working this bottom.

Additional areas; you won't find a wreck in the area that I fish. I've spent 40 years fishing a 40-mile long section of the coast off of Cape Lookout; 20 miles to the northeast and maybe 20, 25 miles to the southwest. I'm no expert, but I've spent 35,000 plus hours out there. I know a little bit.

Kind of like the farmer: I don't know as much, but what I knows I knows real good. I can't identify a single spawning area in my region for speckled hind. In a given year where we catch thousands of fish, we'll catch four or five speckled hind. To my knowledge in 40 years of fishing out there, we caught one Warsaw.

Well, you can create all the marine protected areas you want to off of that area, and I don't know what you're protecting other than giving yourself a "feel good" that, hey, we did the best we could. You're not protecting those fish by closing areas where they don't exist. I couldn't take any one of you today within the area that I typically fish and say we're going to go catch us a speckled hind. We caught two this year in 14 trips.

It was because we were trying to stay out of the 40 fathom area and work places that we know we could typically catch red porgy. Well, these fish inhabit areas with multiple species, the B-liners, red porgy, tilefish, whatever. It is an admirable effort, but let's do it right. Closing down more and more of the bottom out there with no results is foolish.

There is not a wreck in the area I fish that you won't go there and there are multiple species of quality fish. Maybe what we need to be putting our effort in is a manageable created marine protected area, artificial reefs. They have a tremendous benefit to regions that I don't think they are nothing more than a temporary removal of fish from the natural habitat. It creates a new area. It would be like me selling a guy a bull and a cow and he wants to start his own herd. It's a slow start, but eventually it pays big dividends. That's an effort that I think is underestimated in the value to our regions. Thanks.

DR. HEYMAN: I want to bounce back on that a little bit. One is that I agree; enforcement is absolutely crucial. I just want to tell you about one of the tricks that we use, and that is we recognize that the guys who could poach were the same guys that could run at night at 28 knots and not hit reef. Most of them got their skills running drugs out of Honduras.

Well, we realized that these were the best guys on the water and we hired them as the enforcement guards. Nobody gets by them. That is one thing we can do. Again, traditional ecological knowledge; let's not underplay the value that you guys have earned through the hard

days on the water. That is one thing.

The other thing is that I hear you talking about these B-liners and red porgies and the snowies all mashed up together in these single places. That seems to be consistent with what we've been talking about in some of these other places, maybe not the same suite of species, but the same kind of thing.

I guess one of the things that we recognized also is that there are a lot of ways to make a dollar from a fish. You can sell it commercially, you can sell it recreationally. Even recreationally you can sell it as catch and release if it's not too deep. But then you can also dive on it. Some of these aggregations, if you can get to them – I mean obviously we are not going down 600 feet anytime soon, but a lot of these places are in 90, 100 feet of water.

If you can take a diver into a place with 500 Cubera snappers and balls of dog snappers and spawning this and that; they are hooked. It becomes an economic alternative and a viable way to have an enforcement presence, because it's like you can't go and drop a bandit rig knowing the place is protected, if there is a dive shop right over there. These places are small.

You start to create some economic alternatives and economic uses that I certainly would hope that fishermen that know these areas and are potentially volunteering sites get involved with as captains and guides to places like that. Maybe that is not possible. Maybe that is farfetched or is relevant to my region and not others.

But I think we need to think outside the box here and the whole manage species-by-species thing, it ain't working. If we can get together with both some of this knowledge of how these bottoms work, and with the idea that small places, if we protect them and use them smart, can be a huge benefit for a long time for a lot of people.

MS. BROUWER: Okay, folks, we're about a half an hour into our breakout group time, so I would suggest that we take a quick break and then we reconvene in your breakout groups.

MPA EXPERT WORKGROUP

MAY 17, 2012

PART III

MS. BROUWER: Why don't we start with the northern portion of the area and get a report from that breakout group.

WG MEMBER: All right, anybody else can jump in if there is a conversation that I missed some time throughout the discussion. We had several discussions throughout this and we sort of broke off into an Onslow Bay sort of group as far as expertise as far as fishermen are concerned and then Long Bay, South Carolina; northern Georgia coast for mainly Mark Marhefka there.

We wanted to reiterate that our group strongly is in favor of stronger enforcement. I think that

was pushed a lot this morning, especially VMS. We also like some of Chris' ideas as far as maybe a hydro-acoustic array or something like that to track vessel traffic coming in and out of the areas for those who are trying to circumvent the VMS.

That it would be something we would like to see be moved forward into the future. There was also a general consensus at least for the fishermen that were – from what we can discuss and from what information we have there is a general feeling that speckled hind and Warsaw at least in recent years have been fairly low abundance in the Onslow Bay area.

There is some feeling that occurrences or interactions have decreased somewhat through time, but even going back to the eighties we don't have much data prior to that, and correct me if I'm wrong. It doesn't ever appear to be that common especially north of Snowy Grouper MPA. However, there was a feeling that if we were trying to protect speckled hind and Warsaw habitat in the Onslow Bay area, probably that inshore extension of the Snowy Grouper MPA, maybe going about 50 meter, 40 meter isobaths, that would probably be the most logical route to take.

I think Chris and you guys had some maybe possible extensions of south from last time and I wasn't a party to that discussion. You guys might talk about that later. Beyond that, there was a general feeling that – we were looking at this particular habitat that seems to hold speckled hind and Warsaw grouper. We had a little bit of discussion concerning that.

It seems to be those high vertical relief areas as wall structures with, say, 40 feet or more vertical relief seems to be the areas that are generally associated particularly with speckled hind and Warsaw grouper, which is, of course, our shelf break area. But we're not seeing them very commonly inshore of that on this more flat bottom, lower relief 10 foot ledge areas. Go ahead, Churchill.

DR. GRIMES: Well, I would add, as I said this morning, that our group earlier had suggested a couple of sites, what we used to call in those days Snowy Edge, which is southeast of Cape Lookout, along the 50 fathom contour. A little bit at variance of what you were saying; from 1972 to 1977 the Beaufort Lab conducted extensive sampling there from the Onslow Bay vessel we had there in Beaufort. Speckled hind were like the fourth or fifth most common species. They were there long ago and as you say went away fast. By the eighties were infrequently seen. Anyway, I just thought I'd add that.

WG MEMBER: Yes, just to add upon that, we did discuss that, whether it's a problem that they never were there or just that from the known knowledge at this point in time we haven't seen them in high abundance since then. I don't know, some data since has suggested they were there in the past; some data is a little contradictory to that. We broadly recognize the knowledge gaps as far as we don't necessarily know the full distribution of these species or full ecology of these species and so forth.

DR. GRIMES: Jeff Buckel and a graduate student of his I think at NC State published a paper a few years ago comparing the 1970's data to their recent collections in the 2004, I think. They caught a few speckled hind, but their abundance was nothing like it was in comparing it to the 1970's data. Apparently they were there in abundance at one point and they greatly diminished.

MR. MARHEFKA: Back there back in the late seventies, that was a virgin stock that nobody had tapped back in the late seventies. Nobody even went out there to go and do a drop. That was considered extreme deep-drop back in those days. Now it's even further out.

DR. GRIMES: We were fishing with sometimes bandit rigs and electric reels and it was all experimental stuff. I don't think that Captain Stacey even fishes out there anymore. They did some in those days.

WG MEMBER: Beyond that, we did try to work with Roger a good bit to actually put some of these ideas and concepts onto his program here to sort of show what we were proposing might possibly move forward with when we present this at the council. I guess I'll pass it over to Roger now.

MR. PUGLIESE: What I'm going to do is I've got two sets of alternatives that were developed through the group. I'm going to walk through the first one that Churchill and Chris had put together and then Mark and some others for the second tier. We've got a couple different sets of alternatives. I'll walk through the first ones now.

DR. KOENIG: Well, as with our other sites that we chose, we primarily chose it on the basis of where the specs were caught, but in addition to that there is the 1982 paper that Churchill authored that he is familiar with these two places. This is the northernmost. These are major rocky outcroppings in this area, right along the shelf edge there.

We thought that these would be good for protection, because the numbers that he said that he got – that the Beaufort Lab got from sampling from '72 through '76 showed that specs were the most abundant grouper in these two areas. From our experience those numbers should return, so it could be an excellent site for protection for that species.

I don't know about Warsaw; did you get Warsaw there? Yes, Warsaws were rare, but specs were the most common grouper and the fourth most abundant reef fish in general, as Churchill said. These are those two sites. There is knowledge of the bottom type in addition to the catch records for specs. You can orient those rectangles any way you want. I don't know which way, but tried to get the core of the habitat with those. Do you have the square area on both of those? I think this one is like 60 or 70 square miles. We've got good habitat data and we've got good catch data, so those seem a reasonable selection.

MR. MARHEFKA: Why did you choose a square instead of a rectangle box to go and cover? It seems like you're grabbing a lot more than what needs – is there a reason for that for the record?

DR. KOENIG: No, just because we were told that enforcement wants that. There is no really good reason for that. It could be a longer rectangle following the isobaths. No, that doesn't matter.

MR. FREEMAN: Chris, I think I saw a 14 Buoy, which suggests that box would incorporate the Big Rock area off of Cape Lookout; is that correct? What I could gather that is the area incorporated there, and I'm troubled by we are citing 40-year-old catch data as justification for

that being a site that we're going to put in an MPA. I just cannot buy into that.

DR. KOENIG: It is so rare to have historical data from the seventies as to the catch of these species, and it seems to me that those data are valuable, because it showed what had been there and what could be there in the future if you close it. That is the kind of thing we are trying to get back to.

For example, in the Gulf, Madison Ridge it had – and I sent a picture in the sixties fishing on that ridge produced in one-half a day eight big Warsaws and a bunch of speckled hinds and all these other species. That is the advantage of that site, getting those old data and showing that it is a productive site for those species that are now depleted is the advantage of closing that. If this operates the same as Madison-Swanson does, then what you will see is that abundance reoccurs in those areas. But again, as we've always said, enforcement and monitoring are crucial to see if that occurs, and you will see a spillover effect around it.

MR. FREEMAN: You think about the Big Rock; I don't know how much history you have living there. The political clout of the folks that run the marlin tournaments and things that go on around that area is going to be an absolute management nightmare if we ever get to the point everybody has got to have a vessel monitoring system.

Does that mean I'm going to be flagged as a violator? We're out there fighting the marlin and we've got it knocked out of gear and we're doing less than 4 knots or whatever the magic number is on designating a boat as possibly bottom fishing. You would create an absolute unmanageable situation by saying the Big Rock, which I think is what you flagged there as the spot.

Yes, it has very dramatic ledges and drop-offs and it is a tough area to fish. My history goes back 40 years. The first 10 years we didn't have navigation instruments other than a compass to know where we were, but we managed to fish it and get back home, and we were fishing those areas.

I can't concur that the Kitty Mitchell or the speckled hind was ever the number five species or whatever. It was purely an incidental, lucky catch for that to be one-tenth of the number of fish that we would catch, and that is true right on until today. I'm running 100 to 130 trips a year out there, and it just amazes me that I keep hearing the scientists say the fish are there and I'm not catching them.

DR. KOENIG: No, we're not saying that they are there. We are saying that they were there. That is very different. That has been published in a scientific article. It is so rare to get those kinds of data, that it is incredible that we have it, but we do. Again, I'm going back to what I know, the northeastern Gulf, as with Madison-Swanson, which was completely depleted of those two species and all the other shallow water groupers and snappers; it came back, and it is still rebuilding.

Even in the face of poaching it is still rebuilding. That is exactly the kind of habitat that we want, but we are not saying that they are there now. But the records that Churchill has and

published says that they were there at one time. If they were, they will be again. I think we can be fairly confident in that, as confident as we are in anything.

MR. HARTIG: One additional thing, Chris; if you look at this – and I looked at that current pattern stuff that they showed and there are some retention areas off of South Carolina and things of that nature so you may get some retention, but in terms of looking at sources and syncs on the northern end of the range of the species, how much bang for your buck are you getting? If you rank these things in some kind of ranking way, what would be the most important ones to have? How do you get at that type of a situation?

DR. KOENIG: Well, I know that George did some work out of the Oculina Banks, and they – correct me if I'm wrong – went up through Hatteras and then turned around and came all the way back down; is that correct?

DR. SEDBERRY: Not as far as Hatteras, but to Onslow Bay, just the southern part of Onslow Bay; yes, deployed in the Oculina Bank, made it up to North Carolina, kicked out of the Gulf Stream there at the gyre and drifted all the way back down to Florida.

DR. KOENIG: Well, if that's the case, then what we've got is the perfect spot for spawning, because species through evolution pick spots to spawn that maximizes distribution and survival. If you get that kind of a gyre and that movement south, then it seems to me that is a very good spot for that species.

MR. MARHEFKA: With that being said, when we first started doing our MPA stuff years ago, we put a lot of boxes on the chart before we even actually nailed everything down, and then we started talking about different types of the spots to be and no take, what type of MPA it would actually go and be. If it is an option and it needs to be put up there, but it also needs to be voiced why we wouldn't want it or whatnot, but I think we should go and continue to move on.

MR. HARTIG: To Bobby's question about marlin fishing, I don't think we're going to prohibit pelagic fishing in those areas.

MR. FREEMAN: Well, what we were discussing this morning about the potential that in order to manage this you get to the point every vessel has to have vessel monitoring systems. The Big Rock tournament typically has 170 boats and they pound that area as prime marlin fishing territory, so it becomes an unmanageable situation. As I said this morning, don't create rules or set up protected areas that you really can't protect. The only people you keep out of there are those that are conscientious and are going to play by the rules whether you're watching them or not.

So now you have created a honey hole for somebody else to sneak in there and fish when they really should not be. That is one of very, very significant fishing locations because of the distance from inlets and that sort of thing. Some of the other previously designated MPAs were far enough away from inlets and things like that that they weren't or did not have the significant impact of shutting down something like marlin tournaments or significant fishing areas that most of the boats could reach and take advantage of.

MR. MARHEFKA: Bobby, we can have that same discussion when we start going to the Devil's Hole, too, because that is a huge place. This Snowy Grouper Wreck off of Cape Fear is another place that they go and run for the marlin area, also. I hear what you're saying about the VMS and stuff.

MR. HUDSON: Churchill, is it possible we can get a PDF version of your two documents that detail that headboat stuff?

MS. BROUWER: I do have a lot of the documents you sent. I believe I distributed most of them, but we'll get it sent out, whatever it is you need. I can send it out to everyone. Is there anything else that particular breakout group is going to add? I'm not quite sure if you've gone through all your recommendations. No, okay.

DR. KOENIG: Keep in mind that we made all of our boxes that shape, because we were instructed to do so. What we did was expand this box to include where the 40 fathom break falls. It includes Devil's Hole, is that what you call it, Devil's Hole or Georgetown Hole, either one, to include most of the habitat in that area.

That is significant for the speckled hind and probably for some other species and probably for spawning habitat, but the fishermen would know more about spawning habitat in this area than I would. How big is that box? Madison-Swanson is about 112 or something like that and this is 101. It includes Devil's Hole and that line of habitat that takes that southerly dip.

MS. BROUWER: I think we're going to go ahead and switch the wiring directly from the projector to Roger's computer, because otherwise we'll be here until five o'clock because of the delay. Give me a couple of minutes to do that and then I think that will make the discussion a little bit more productive.

DR. KOENIG: Okay, we'll go quickly now. This is off St. Simons based purely on catch of speckled hind. It is just one that we thought should be in this area because the density of catch is fairly great there. If anybody knows about it directly or has direct experience with the habitat here, I would like to hear it. But, clearly, the contour lines are very close there so it must be some kind of steep structure, steep drop-off, and so that's why we chose that.

MR. MARHEFKA: That area is called the Triple Break. Yes, it is like a step down three steps of depth in that area. It holds a lot of species, many, many, many different species in that area. It would impact the Georgia and North Florida fishermen a lot. It is a very well-known area.

DR. SEDBERRY: Yes, Chris that was one of the sites studied back in the early 1980's as part of the environmental impact studies for offshore drilling off the coast of Georgia and South Carolina. That was one of the sites that was characterized with underwater television observations and habitat descriptions as well. It is kind of old stuff, but it is still out there. I mean the technology was old but the information is still good.

DR. KOENIG: Then this one is off of the Jacksonville/St. Augustine area. It is an equal opportunity reserve for Florida. We've got that in an area – I believe Warsaws were caught in

there as well as speckled hind. Again, based upon the compact nature of those lines, that whole area through there looks like it might be good bottom, rough bottom, rocky. Basically that is the last one that we've selected. The Warsaw Hole in the Keys other folks have selected, but we didn't get the number to go ahead and put a box around it.

DR. SEDBERRY: I think this site off of St. Augustine was one that had been considered by the South Atlantic Council during the last round of MPA considerations but was not chosen.

DR. KOENIG: This particular area?

DR. SEDBERRY: Yes, that is right off of St. Augustine and south of the existing North Florida MPA.

MR. HUDSON: George, is that going to be on the north end of what they are proposing for the Oculina expansion?

DR. SEDBERRY: I don't know the answer to that. I don't think so, though. It seems too far north. Yes, I think it is too far north for Oculina.

DR. KOENIG: Roger said it was north of the proposed area.

MR. MARHEFKA: We have some proposed area that is already getting ready to go and they are looking at adding more? I think it should be up on the screen so we can go and sort of get an idea of the proposal and the Oculina up there also.

MR. PUGLIESE: Yes, this is the area that is under consideration through the Coral Advisory Panel as a Coral HAPC. It is not a marine protected area. This is with regard to the bottom tending gear and essentially addressing the HAPC regulations, not the regulations that are like in the experimental closed area. It is addressing shrimp trawls and bottom longlines and bottom tending gear.

MR. HUDSON: To that effect, Roger, bottom longline is already contained outside of 300 foot by law; does it also preclude any anchoring?

MR. PUGLIESE: Yes, and the way the proposal – right now it is just going forward to the council for consideration of public hearings, but in line with the other HAPC designations it has an anchor and a grapple and chain prohibition. At least that would be comparable or similar to the existing regulations in the Coral HAPC.

MR. MARHEFKA: Basically, I'm just looking over these. This is the North Carolina Snowy Grouper Wreck area, which is a huge area that is being taken. It really doesn't go and do much more than – I mean, it does a lot, don't get me wrong; it takes up the Snowy Wreck; it also takes a huge shelf break inshore of the Snowy Wreck that holds speckled hind, possibly Warsaw.

I've never caught any there, but anywhere in my historical catches and catching speckled hind, the shelf break needs to be very dramatic for that to hold them along with snowy grouper, also.

They seem to be the same kind of eating kind of fish. They are easy takers. My thought was to go and come in and increase the area down along the shelf break there on the upper side to the southwest a little bit; and then sort of dropping it back over just to go and close in the box, so to speak.

But I feel that this particular area, the bigger the area is it really is one of those kinds of things where you can go and enhance it with some other artificial reef structures and whatnot because of the area. If you are going to go and grab that much and you're only once again just grabbing the shelf break again where those fish are, the speckled hind, it would be great to go and put something down there also.

My original plan was just to go and do the shelf break where the bathymetric part of that just sort of cuts down. Then on the northern South Carolina one, the same way; if you look at the way the break is right there where those incidences are; and within that area right there, those are true telling, and they are there still today to great amounts.

Also to the southern end of that shelf break, if you follow that down, they're all scattered up in through there with a lot of other species, also, from your red porgy to vermilion snapper, jacks, all the fishes within the complex hanging on that edge. Then offshore there where you see that little "s" in the center of the new area right there; there are some pinnacle areas out that way that actually hold the same species.

My personal feel on this is that when the currents are coming out of the east and headed to the west there, that that is all the upwellings. It is going to go and sort of give those fish a feed that they are going to go and need and stuff. That was my decision on that one. This area is actually the exact part of where the Devil's Hole is in that little center part there.

Then I'd also grab this little piece that is up to the north of it there just offshore of that 26 in that upper corner there. It is probably about a two-mile, two and a half mile swath there that is just loaded with speckled hind out there. There is absolutely really no way to go and actually fish that with a trap at all because of the breakdown that it has on it. You have to go and actually be able to use your bandit gear to go. It's amazing, this is just an incident here that there is absolutely no purple dots in there, but I can guarantee I'll go out there and I could probably catch 500 pounds in a couple hours real quick, no problem.

DR. LINDEMAN: I think we all understand the value of trying to grab multispecies aggregation sites as possible. In addition to speckled hind, what are some of the other managed species that are big in the council's perspective that may be occurring there?

MR. MARHEFKA: In that particular spot, gosh, anywhere from red porgy, scamp, grouper, a handful of gags, amberjacks, almaco jacks, lesser jacks, just the whole suite.

DR. LINDEMAN: Real quick, towards my bias, what snappers would you say would be the more abundant there?

MR. MARHEFKA: Calling a red porgy a snapper, because that is the fish?

DR. LINDEMAN: Any other things?

MR. MARHEFKA: American reds are not, so to speak, on top of that ridge, maybe a few every once in a while, but not really. It's not a predominant red snapper spot.

DR. LINDEMAN: That's important; thank you.

MR. MARHEFKA: Lots of vermilion snapper or B-liners. The only true snapper to me is a snapper or a lane or – calling a B-liner a snapper is not really the way to go, so I am getting confused there. Chris' box that he put in there grabbed a huge part of an area where fishermen out of Georgetown, Murrells Inlet area, they fish in there for triggerfish and other fishes like that that just sort of take away from an area that we fish a lot of.

The Edisto, this was one of the first ones when we came to the table years ago with MPAs. This is the way we put this box; because of enforcement they wanted to go and twist it up. But we served this up a long time ago and it would go and grab a lot more of the area and of the species that we're trying to go and protect, specked hind and whatnot, so that was my decision on that.

I'm not saying anything about that other one right below that. No, not that one, the other one, the Georgia MPA, yes; that area right there also is a huge hard bottom area in the 50 fathom area where there is a lot of snowy grouper. But there is some speckled hind; and then back on the southwest end there is a big lump down in there that sort of is the beginning of that whole breakup of hard bottom.

I haven't caught a huge amount of speckled hind in there I think because there is mostly a snowy area that we go to and the snowy is predominant in the area to the point where some speckled hind may not even be able to get to the bait. I'm just sort of curious at some point, Roger, if you could go and sort of give us some kind of idea of the areas off of the South Carolina coast, the square mile areas that we have that are proposed and that we have already for speckled hind.

You have a lot of information on hard bottom areas in that same shelf break, which I call that whole shelf break I-95 basically because that is what they are traveling up and down to fish in that area. But if there was some sort of idea of like what the percentage of hard bottom area is that you have from your SEAMAP and stuff to the percentage of what we've already taken and what we've proposed, I think it would be a good tool for me as a fisherman to try to figure this out.

MR. PUGLIESE: Mark, I did put some of that together when we looked at the MPAs the first time. I think an updated version of that, including the Oculina, and then potentially the extension; some of these other ones to kind of combine it all would be a good exercise to do. I know I walked through that and looked at that; and you are right, trying to capture it on a focused depth contour to capture that break is a pretty significant thing.

MS. BROUWER: Okay, I think we can go ahead and move on to the next breakout group that would be Stacy et al, no? Florida, the Florida people, all right.

MR. DELPH: We were interested in not just the speckled hind. The speckled hind is such a hit-and-miss proposition down our way. I can't really give you any really serious concentrations of it. There is one little wreck out off of Key West, just a tiny remnant of a wreck that you can consistently take small speckled hinds off of.

The areas down to the west, I have a couple of places where we have taken – where you can take a speckled hind this week, and then maybe 10 trips later you might catch another one; no real concentrations at all, no indication of spawning aggregations or anything like that. The main area, of course, is marked on one of the charts back there was the 50 Fathom Hump, which lies about eight and a half miles southwest of Cosgrove Light.

This area probably a – Don, correct me if I'm wrong – probably an area two miles wide and three miles long would be more than enough to take in this entire hump plus the ridge that extends down from it. It is definitely a Warsaw congregation. It happens primarily during the month of March. I have taken Warsaw in there with eggs not fully hydrated, but roes during that month of March. This is back when Warsaws were open, of course.

It is a consistent area that has produced Warsaws. As far as the area itself, a two mile by three mile area covers the hump and also gives you a relatively safe enforcement area. There is a current radar, a six-foot open radar that is used by the Coast Guard for drug and refugee interdiction at the current time, so enforcement of that area would be relatively easy, I think.

We were also concerned about the mutton spawns. The Riley's Hump has been closed and was the single primary mutton spawn area. Closer to Key West, the Western Dry Rocks spawning area was a secondary to the Riley's Hump, but it was a major area of abuse and is still a major spawning area for the mutton snapper.

There have been a large number of recreational fishermen that have recommended a smaller bag limit on mutton snappers even though there seems to be little or no concern about their populations. I'm somewhat concerned about it, but this has been over my lifetime down there in the Lower Keys area. I'd like to see it protected, totally closed off.

It's only in 110 feet of water. It lays about a mile or thereabouts, about a mile southwest of Western Dry Rocks, the stake on Western Dry Rocks, and just lies just off of the outside edge of the 10 fathom bar on live coral bottom. There are two areas of permit spawn; one again right near the mutton spawn off Western Dry Rocks; and another one that has been depleted by I think as much as probably 90 percent of the permit off of the Vestal Shoals, the north end of Vestal Shoals. That area is down now to probably no more.

At one time I think there might have been, who knows, a quarter of a million to a million permit that frequented that area. Today I don't think there is more than – if there are a thousand permits. The area definitely has been abused drastically over the years and within the past 15 years has been practically decimated. Do we have any other areas that we discussed?

MR. DeMARIA: I think you've pretty well covered it in our area. It's worth noting that those two areas, the Warsaw Hole and the Western Dry Rocks I suppose would qualify as shelf edge

reserves, and that is the edge of our reef or shelf down there. Yes, that would be the two most important areas in the Lower Keys other than Riley's, which is already protected and outside the South Atlantic.

MR. DELPH: Over the years we have had I think a greater population of Warsaw grouper on the sporadic wrecks around Key West. Key West is loaded with wrecks; there is well over 200 wrecks in the Key West area, everything from shrimp boats and small commercial boats up to quite a few ships, a lot of artificial reefs, and ships sunk during World War II, submarines for sonar detection, and it just goes on and on and one. Rusty, you had a question?

MR. HUDSON: Could you talk about the speckled hind and the depth range that you saw them in?

MR. DELPH: Without a doubt, the speckled hind is a 220 to 240 feet never – I would say never an inch outside of that throughout my entire area down in that area; and they occurred, like I said, that one little wreck area out in front of Key West at 240 feet. That's a deteriorating wreck. It was placed there as an artificial reef, part of the Ahern Artificial Reef Program about 15 years ago. It has dissipated, and I suspect that will not even exist in another five to ten years.

The other area is the Pebeo Shorelines to the west of Cosgrove, and I think we're talking about probably – they are so sporadic and yet there is some consistency to them. Outside of the one area, we don't catch the speckled hind at all;, but through this one area, like I say, you might catch one today, you might catch one next week, you might not catch any for a month. Ten, twelve or fifteen trips down there you will catch one.

I don't think there is enough information at least on my behalf to warrant any type of a closure in that area because of the rarity of the catches. That area where we have caught them with some regularity is probably almost – it is slightly east of due south of the Dry Tortugas.

MR. HUDSON: The other animals that you usually see around them?

MR. DELPH: All the groupers; the black groupers sporadic in that 240 depth, but they do occur there; red snapper certainly; and no muttons; gags occasionally; a lot of scamps. That Warsaw Hole they call it; it is actually the 50 Fathom Hump. That area is an area of critical concern, I believe, because of the diversity of fish on that; amberjacks, almaco jacks, greater amberjacks the lesser amberjack the yelloweye snapper, the Warsaw grouper, blacks occasionally, because the shallow end of that hump, the shallowest part of it is about 250 feet.

Then it goes down with the east end of it being a real rough ridge, which we call the Backbone, and that is just a big sow of red snappers, smaller red snappers as well. If we hold that area. we have given up – the pressure on it is far more than I would ever like to see, but the diversity of species that frequent it; I think if it ever makes a comeback to what it was 30 or 40 years ago, the whole area down there would be blessed.

MR. HUDSON: No snowy, no golden tile?

MR. DELPH: All of our snowies and golden tiles to us, we never get – there is a ridge at 365 feet for juvenile snowies. Nobody ever fishes those. Those fish are from 12 to 15, 18 inches. Once in a while you'll get a big blueline tile off there occasionally, 10 or 12 pounds sometimes, but no mature. This is one of those Pebeo Shorelines again, and that is the snowy population.

The juvenile snowies are primarily – there is no reason to protect it, I don't think, because there is just no pressure on it. Other than that, we don't even really start to catch snowies until you get out to beyond 500 feet. Then once you get out to 6, and 7, 8, 9, 10, that is where our snowies are at down there.

WG MEMBER: One of the other things that you brought up that I thought was really interesting was that you had found some sites that were not what you would have expected. They weren't interesting bottom, they weren't big shelf edge. Do you want to talk about that?

MR. DELPH: I think that what you are referring to is some grouper spawn; a grouper spawn in particular that was over pure flat – the type of bottom I don't know; I suspect probably sandy or marly bottom. You see a lot in shallower waters of what we call Swiss cheese, where the pinnacle rock is swept out and holes left in it and everything.

This grouper spawning aggregation; this particular one had red grouper, black grouper; primarily black grouper; and mutton snappers fairly heavy as well, but I think they were there because of the black grouper spawn. We eventually wiped it out and this has been 40 years ago. It never, ever made a comeback at all, but it was over pure, flat bottom.

We also had that same thing happen in snowy grouper where it was a plateau, and it was filled with snowy grouper. Here again we fished it until we wiped it out, again 40 plus years ago, and it never ever made any kind of a comeback at all. Ironically some of our better – I just took a 44 pound snowy grouper the other day off the flattest bottom, and I've had this happen a fair amount out in 720, 780 feet of water.

You have to have the electronics for it, and, of course, I'm sure everybody here would. But to find something like that is just – the only thing you mark is fish; no structure at all; whereas we have a lot of structure down there around throughout the South Florida area, the Keys area, a lot of ups and downs.

We've got some drops that drop from 540 feet to a thousand feet, just down like that, plus the Continental Shelf and we get the snowies right on the Continental Shelf as it rolls to a thousand feet and what have you. The interesting thing is some of our better places for the snowies is in just absolutely, totally, flat bottom; and why they are there I don't know.

WG MEMBER: The reason I bring it up I think it's really interesting. We talked about some places like Riley's that have some of these real hard structure bends and reefs and near sharp edges, and those are places once they are protected they are coming back; whereas these places up on the flats in the middle of nowhere seem to be wiped out right away. Like I say, just trying to learn and understand the biology of these things, and it sounds like back in the old days when there was a lot more fish they weren't as critical or they could get away with it in some of these

places.

MR. DELPH: In the older times, 40, 50 years ago and through there; we used to specifically target – what we would look for more than anything is the rudderfish up above. The rudderfish were an indication of a virgin grouper hole. We would look for extreme structure; pinnacles, the tops of pinnacles and the edges where that dropped off in extremes, and they are still there.

There are still snowy. We have a reasonable good population of the snowies down in our area. There doesn't seem to be a lot of targeting of the snowies anymore, though. It is too far to run for 100 pounds of fish. Out of Key West, you might go as little as 15 miles, but so much of it is 20, 25, 30 miles; and the price of gas, from a recreational standpoint it is hard to justify one fish.

MR. HARTIG: We didn't get as far as drawing all the maps and everything. What I'd like to do is sit down with Roger with his software and sit down from my perspective of what I've seen in the past. We sat down and we did get the numbers where probably several hundred Warsaws have been caught over time.

We've got the areas off of South Florida where I fish; Push Button Hill is one of them. The area where that pinnacle system starts right there off Juno Beach is another one in that 240 to 360. Also, we added some numbers in to the MPA where Warsaws have been caught and where speckled hind have been caught, although speckled hind are more scattered throughout that area.

The interesting thing I thought from Ralph's comments are similar to mine is that I have seen speckled hind where I fished down there but never an adult. Mine are always small animals. It looks to me that probably speckled hind has a distribution similar to red snapper. In that middle part of the range where we don't see many red snapper, it is probably similar to the speckled hind occurrence.

Then as you go to the north you start seeing more speckled hind as you start encountering red snappers. There are probably some similarities in their distribution based on that. I fished those areas since the seventies and haven't seen any adult speckled hind. I've caught a number of Warsaws over 300, so if adult speckled hind actually were in that area when I fished I would have seen them, I mean, in my history.

That really never occurred in that compression of the shelf where we are. There is a kind of a void there. But Warsaws are common; they have been and they still are. They are just not of the size that they were before we started jack fishing, before we removed most of those big animals. I can go catch Warsaws pretty much – if I had to go catch them, I can catch them.

In that regard also we try and avoid them when we're catching our jacks. The other thing is we don't spend near the time in the deepwater complex that we used to based on the snowy closure, ever since that rebuilding plan went into effect. Snowy is what drives off southeast Florida the fishery. If you don't have snowies you don't have a fishery.

All the species that have been protected along with that snowy closure, yellowedge, red porgies, blueline tiles; before we had this total closure of the 240, there was a couple jack trips when I

had actually gone out and tried snowy fishing again when we could have the hundred pounds and saw pretty significant rebuilding of the age structure – not the age, I'll say size structure of the population. I don't know how the animals were, but catching 20 pound snowies again was a big plus to see for me in my fishing history.

That is one area that has the most pressure of anywhere I fish; so good signs on snowies. But all those other fish in that complex have seen a lot less effort since the snowy rebuilding effort went into effect, so that is all good. I don't know that I've got much more to add. The thing about the spawning – and I pay attention to the spawning a lot.

I've looked at probably close to 200 Warsaws and I've never really seen any spawning activity, and I look for that because I did my thesis on muttons that I worked on in college was age, growth and reproduction. I did the histology, so I know the stages. I've worked on a number of CRPs where I've done the same thing. I've never witnessed it; it was interested to see that Ralph had. He had seen some actual – oh, one, that had eggs in it in March.

That is something we need to shore up somehow. Even my fishing the aggregations, some of that I may not be in the deepwater when that occurs. That could be a problem. My fishing portfolio in mackerels and things, I'm not in the deepwater during some of those months when they may be spawning. That may have precluded seeing the spawning animals; I'm not sure about that. I think from our perspective we've got some areas that we can draw; we just haven't done them yet.

WG MEMBER: I'm committed to getting those and kind of writing this stuff up a little clearer and I'll pass it by you guys to see if I get it right and then pass it on. We talked about a couple other sites as well. I don't know if you want to talk about these or not.

MR. DeMARIA: I just don't know that much about anything above like the West Palm Beach area. The only other place I know of where we caught Warsaws years ago was off of Daytona, somewhere in that area. These guys know it better than I do of this one particular wreck. I really don't know a whole lot about this so I couldn't make any recommendations there.

WG MEMBER: Just to remind everybody, we talked about Chinaman's Wreck and the Vitric Motorcycle Wreck.

WG MEMBER: That was for the Cubera.

WG MEMBER: Right; is that something you want to talk about also?

MR. DELPH: We didn't mention the Cubera. The area that he's referring to down off of Molasses Reef there are two areas down there; one is about 120 feet of water and that is a July spawn on the Cubera. It was an area, and there is a wreck outside of that that is commonly referred to as the Motorcycle Wreck. It is not motorcycles, but the Vitric is the name of the ship.

It was a marine casualty of the torpedoed – a German sub torpedoed it in World War II. It is still a very large wreck and still active for the Cubera. The size of the Cubera that we used to take

down there, now we're talking about in '60, '61, '62 in through there, we've taken Cubera over 100 pounds; 108 was our biggest, but 80, 90 pound Cuberas were common back at that time.

Nowadays a 60 pounder is a very, very large one there. You could go out and you would have bent rods all the time. I think that because there is a population still there every year in July and August, it would certainly be an area that we might see come back if it were a protected area. It could overlap and take – the preserve could take in the Vitric and right up to the reef line, that 120 foot within one spot. It is a small enough area.

MS. BROUWER: Okay, it is almost one o'clock. We can push through and finish up. What we have left is perhaps address some last-minute things, tie everything up, talk about timing; when the reports from each of the breakout groups are going to be due to the Chair and Vice-Chair, and how we are going to review and gather up everybody's edits and comments before the written report gets sent in on June 1. Should we go ahead and talk timing or did folks have any last minute comments or questions, Ken, that you wanted to bring up?

DR. LINDEMAN: Well, my questions involve the timing issue you just mentioned.

MS. BROUWER: Okay, then I think maybe we should move along and do that.

DR. SEDBERRY: Okay, I think what I am going to need is from each breakout group their flip chart sheets written up and some summary of what they put on the charts and any other notes that they have. I guess there was one spokesperson for each breakout group. If they could report that to me by the 23rd, yes, and then what can I expect from the council? What kind of notes do you have?

MS. BROUWER: We'll have all the audio files that can be made available. We will not have the transcripts turned around so quickly, but we'll have the audio and we can extract from the audio as needed to provide more rationale for some of the recommendations.

DR. SEDBERRY: I've taken some notes, but not extensive notes, because I was kind of busy thinking about things myself. I'll take the reports from the breakout groups and Don and I can look at that and put it in some kind of order and then send it out. When is this due, the first? The twenty-ninth, give everybody two days to look at it and make sure it has got everything that you wanted in it, incorporate those changes and then send it to you on the 1st.

MS. BROUWER: Does that sound reasonable to folks that are going to be providing information to George?

DR. SEDBERRY: Does everybody know who those people are? Do you know who you are? .

MS. BROUWER: All right, this would include what was done yesterday as well in the breakout group sessions. We had different rapporteurs and different spokespeople then. If we could just collate as much as you can, send it to George and we'll put it all together.

DR. SEDBERRY: Yes, each representative of each group can figure out within their group how

they are going to communicate amongst themselves. I'll just communicate with the spokespeople.

MS. BROUWER: Is everybody comfortable with that; to George by May 23rd. I have here David Cupka, Chairman of the council, that wanted to address the group. I'm going to hand it over to David.

MR. CUPKA: I did want to take this opportunity as Chairman of the South Atlantic Council and on behalf of the other council members to thank each one of you for your participation in this workshop and your willingness to share this information with us. I'm very encouraged by what I've seen the last couple of days. Again, on behalf of the council I wanted to thank each of you for being here and for your willingness to share your knowledge and information with us. Again thank you and I wish all of you a safe trip home and I look forward to seeing the report. Thank you very much.

MS. BROUWER: Well, thanks, everyone. I obviously echo what David said, so thank you very much for all the work you put in, in a very short time. I'll be sending around a couple more papers that were sent to me, probably sometime tomorrow. Thank you.

(Whereupon, the MPA Expert Workgroup was adjourned at 1:00 o'clock p.m., May 17, 2012.)

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