SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL

GOLDEN CRAB ADVISORY PANEL MEETING

Radisson Resort at the Port
Cape Canaveral, FL

January 27-28, 2008

SUMMARY MINUTES

Golden Crab AP:

Gary Graves, Vice Chair
Chip Bethell
Robert Palma
Howard Rau, Jr.
William Whipple

Council Members:

George Geiger, Chairman
Duane Harris, Vice Chair
David Cupka
John Wallace

Council Staff:

Gregg Waugh
Myra Brouwer
Julie O'Dell

Observers/Participants:

Nuno Almeida
Denny St. Amand
Randy Manchester
Catherine Stolk
John Williams
Buffy Baumann
Margot Stiles
Richard Vendetti
Bob Jones
David Gautier
Warren Gautier
Dr. Tom Jamir

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The Golden Crab Advisory Panel of the South Atlantic Fishery Management Council convened in Salon 3 of the Radisson Resort at the Port, Cape Canaveral, Florida, Sunday afternoon, January 27, 2008, and was called to order at 2:35 o'clock p.m. by Mr. Gregg Waugh.

Mr. Waugh: We have just a couple of ground rules. You hit the talk button and the red band lights up and you want it on when you're talking and press it again and it goes off. Joe or Julie will jump on you pretty fast if you don't turn it on, but we've got a combination of Golden Crab AP members and golden crab fishermen here and we want all of you all to participate in the discussions.

When there is any voting or a position developed, that needs to be put forward by people who are on the AP and that's Chip Bethel; Gary Graves; Robert Palma; Howard Rau; Charles Renier, who isn't here; and Bill Whipple. Everybody else, we've invited others and we need to get you guys, the others, to fill out applications for getting on the advisory panel, but we want everybody to join in. I think what we should do is go around the room and identify everybody and we've got several council members here as well. Duane, do you want to start and we'll go around the table, please?

Mr. Harris: I'm Duane Harris and I'm a South Atlantic Council member from Georgia.

Mr. Cupka: David Cupka and I'm a South Atlantic Council member also from South Carolina.

Ms. Brouwer: Myra Brouwer and I'm council staff and I deal with habitat and coral issues for the council.

Mr. Waugh: Gregg Waugh, council staff, and I'm the staff person helping with the Golden Crab FMP now.

Mr. Graves: Gary Graves, Vice Chair of the AP Panel, golden crab.

Mr. Whipple: Bill Whipple, golden crab fisherman.

Mr. Rau: Howard Rau, golden crab fisherman.

Mr. Almeida: Nuno Almeida, owner of the Fishing Vessel Lady Helena.

Mr. St. Amand: I'm Denny St. Amand and I work on the Lady Helena.

Mr. Palma: Robert Palma, golden crab fisherman.

Mr. Bethel: Chip Bethel, golden crab fisherman.

Mr. Manchester: Randy Manchester, golden crab fisherman.

Ms. Stalk: Catherine Stalk and I'm here for moral support.

Mr. Geiger: George Geiger, council member, Florida.

Mr. Wallace: John Wallace, council member, Georgia.

Mr. Williams: John Williams, Southern Shrimp Alliance.

Mr. Waugh: Gary is -- Something you all should talk about is Gary is Vice Chair of the AP now and he's going to act as Chairman, but maybe talk about it and come up with a Chair and Vice Chair tomorrow and what we've got here is the agenda laid out and as I told you all today, we'll go over the FEP and the Comprehensive Amendment and then we want to get into a description of fishing practices, area of operation, then we talk about the proposed deepwater coral areas and then tomorrow, just continued discussion.

We are going to try and get John Reed to get here. We've left a message with him and we'll try and get him here as early as possible tomorrow to talk with you all. Then tomorrow afternoon, from 1:30 to 3:00, have you all meeting jointly with the Deepwater Shrimp AP.

Again, there, we had planned on having John give that presentation to both groups together, but we'll get him here as soon as we can and then to discuss the recommendation of the Habitat and Coral AP and then to give you all time -- The main issue is to give you all some time to talk about potential interactions between golden crab traps, areas fished, and the deepwater shrimp fisheries. Is there anything else you all want to add to the agenda or is that okay as we've gone over it? Okay.

Then the first thing we'll do is Myra is just going to go over briefly the Fishery Ecosystem Plan. What we're passing out now are individual packets of charts that show some of this information, as well as the catch by area that we have from the database, the Atlantic Coast Cooperative Statistics Program.

This is a database that any of you can access and get this information, but you can see that these grids are large. They look small on the plots you have here, but all you've got to do is go to one of the big charts and see how large those areas are. Obviously you all are interested in the golden crab information and that shows the areas that we have overlapped and so we'll talk about that more with you all. Feel free to ask questions as either Myra is going through this or I'm going over the FEP Comprehensive Amendment.

Ms. Brouwer: I'm not going to do a very formal overview of the FEP, because it is a very large document. Basically, it's a document that compiles all of the information on the South Atlantic ecosystem and so it's composed of several volumes.

Volume 1 is an overview of the ecosystem. It presents general information on the hydrology, the geology, the biological characteristics, the types of management, of course focusing on the types

of management that the council does, and some background information on what ecosystem management is all about.

Then Volume 2 has a very detailed description of the various types of habitats that are essential for managed species in the South Atlantic and then it goes on to have a very comprehensive overview of the species that are of importance in this area and it describes their biology, their distribution, all kinds of biological information on that.

Another volume, Volume 3 of the Fishery Ecosystem Plan, deals with the human environment in the region and so it describes the various fisheries in detail and it gives social information, economic information, it talks about different regulations, including what the states have in place for management of resources.

Volume 4 deals with various threats to the ecosystem. It includes the different policies that the council has in place to address any habitat impacts that may come about through non-fishing activities and it talks about things like alternative energy development and it gives all kind of information on that.

The FEP goes on to Volume 5, which comprises all the different needs, information needs, that the resource managers in the region are going to have to obtain in order to proceed with ecosystem-based management. It's a very large, very comprehensive document and what I had sent to you in your briefing materials is the draft description of the golden crab fishery.

This was taken directly out of the Golden Crab FMP and the description that was in there was based on a trip that Gregg Waugh took with Richard and it describes everything on the fishery, how the traps are deployed and all that. That's where that information came from and I wanted to ask you guys to, when you have some time, look through it and give me any feedback on it, so I can refine it and correct anything, if there's any mistakes, on that.

There's some information on economics of the golden crab fishery and that came out of a document that the National Marine Fisheries Service put out. I think they had one in 1999 and one in 2004. It's called a Stock Assessment and Fishery Evaluation Report, or SAFE Report.

That's information that's probably a little bit dated, but it's all we have and so if you all could just take a look at that and any comments or any ideas that you have to share as to where we could go to get better information on the fishery, it would be very much appreciated. If you have any questions, I'll be happy to answer them.

Mr. Waugh: No questions so far? Okay. What we'll do then is go into just a quick overview of what's in the Comprehensive Amendment and this is basically the material we discussed earlier. We are amending the coral plan to establish these deepwater coral HAPCs: the Cape Lookout Lophelia Banks, the Cape Fear Lophelia Banks, the Stetson Reef, Savannah, and East Florida Lithoherms and the Miami Terrace HAPC, the Pourtales Terrace HAPC, and then this new methane seep that was recently discovered.

Within those areas, use of bottom longline trawls, mid-water and bottom trawls, dredges, pots or

traps would be prohibited. If aboard a fishing vessel, anchoring or use of anchor and chain or use of a grapple and chain would be prohibited. Possession of any species regulated by the Coral FMP would be prohibited and fish for golden crab in designated areas without an approved VMS.

This obviously, if we don't go forward with a VMS, that provision would be removed. The meat of this amendment right now is to establish these areas. As I mentioned to you all before, we had a provision to create an allowable trawl area and we'll talk about that with the Deepwater Coral AP. That's not in this amendment right now. At the last council meeting, the council deferred those actions to the second comprehensive amendment.

The other part of it was an allowable fishing area for the golden crab fishery and the use of VMS and so that's something you all need to talk about, whether that should be in this amendment or it's okay in the next one.

Then, as far as modifying existing or designating new EFH and EFH HAPCs, we are going to designate additional EFH, essential fish habitat, HAPCs, the hard bottoms in state waters off of North Carolina: Bogue Banks, New River Inlet, South Topsail Island, Masonborough Island and Fort Fisher Coquina Rock Outcrops.

The chart of these areas, we'll go through these in a little more detail, but these are the same areas we've been looking at and so that's what's in the amendment right now, is proposing these coral HAPC areas, some further refinement of our EFH descriptions, but the main impact on you all is obviously the areas that we're proposing for coral HAPCs. Gary, I don't know if we've got any discussion or questions at this stage.

Mr. Graves: I think by looking at the charts, when we had our informal meeting, everybody quite well understands what's at hand here. I guess we'll probably open it up for discussion now and --

Mr. Waugh: We can do that or we can go through this description of the fishing practices. Myra, are you going to cover that in a little more detail? Okay. You've got that material there and that's Agenda Item Number 3 and then I think what would be good is for us to walk through the charts that we have.

What we're going to be projecting are basically the charts that we have here and so we want to run through this with you and describe what we've got. At any point, we can take a break and we can look at the detailed charts. We've got markers that we can mark on them and basically, what we hope to show here is to walk you through the information that we have, the data from observations, either through dives -- Then work up the data that we have as we go forward. Between Myra and myself, we'll describe this.

You all tell us if it's useful going through this again or whether we've covered it sufficiently well, but I will touch on it again. This is the Pourtales Terrace area and that box is what's being proposed as the area. The green stars are dives from 2004 onward and that's a dive there, showing that there's coral.

Part of the question we had before was how do we know what they saw? We can pursue getting the observational data, but I think from the video we showed, you can see what type of bottom they're seeing down there. The square blocks are showing that there's hard bottom in that area and you can see that we've got observational data showing hard bottom and corals here and a star there and there and there.

You can see the reason they've drawn the box like this, and, Myra, chime in to help with some explanation, is this high-relief area is where you're seeing the coral. That's a type of habitat that this coral occurs in and so what they've done is drawn these boxes to try to encompass as much of that area as possible.

You can see that there are some hard bottom areas outside of this USGS seabed data, showing that there's hard bottom outside of this area, too. There's hard bottom even outside of this, but this is the area that the Coral and Habitat APs are recommending that we protect down in this area.

From the plot showing the fishing information, we've got fishing going on down in this area and I don't know if that's current fishing or more historical fishing. Do you all want to discuss these as we go through one-by-one or do you want us to run through them first and then we can come back?

Mr. Graves: Gregg, do we have the overlay with the chart you showed us earlier with the fishing? Do we have that also?

Mr. Waugh: Yes, we should. That's showing where we've had fishing there and, Gary, you're probably asking do we have one where we can show this on top of the other one and I don't think we have that right now. We can produce those, but, again, that's something by looking at the actual charts and laying them next to each other on the table that we can look and see what level of interaction we have there, but maybe we can talk about each of these as we go through. I don't think we have any more detailed information. Do we have more detailed information of that area?

Ms. Brouwer: Pourtales? There's a lot of descriptive information. We have limited information on these areas. There's a lot of descriptive information, fathometer maps. I don't believe there's any multibeam data for this area and multibeam is what the scientists like to rely their maps on, because it's a lot more accurate, but we don't have any more detail, other than the bathymetry in this area seems to be very distinct and of a type that would support a lot of deepwater coral growth.

Mr. Waugh: That's the information we've got for that particular area.

Mr. Graves: Let me ask a question. Does everybody agree that that's a pretty broad fishing area or is that just a part of that area that encompasses where we're showing fishing now?

Mr. Palma: Down in the Keys? That's just a part of it.

Mr. Graves: You're saying there's more fishing in that area that's defined that's showed --

Mr. Palma: A little bit further east, yes.

Mr. Waugh: You're saying that there's more fishing within this box than we're showing here?

Mr. Palma: A little bit further east than what it is there.

Mr. Rau: When you say shallow, how shallow?

Mr. Palma: About 1,500 feet or 1,300 feet.

Ms. Brouwer: I just wanted to make sure that it was stated for the record that the information that's up on the screen right now represents fishing activity for four vessels.

Mr. Waugh: Robert, I think what you were saying is down in this box, this green depth contour that's running across there is 400 meters or 1,200 feet, you're saying that there's fishing in between where these dots are and what would be almost northwards here towards that 1,200-foot line?

Mr. Palma: Correct.

Mr. Waugh: What depth are you fishing in?

Mr. Palma: From 1,200 to 1,700, which is just north of those dots and a little bit east of the center of it. It's right on that edge.

Mr. Waugh: That's the 81 line there and so you're talking about west of the 81 line?

Mr. Palma: Correct.

Mr. Waugh: In terms of better mapping where there has been historical fishing, we should show this area going northwards here and west of the 81 line and in here from 1,200 feet deeper?

Mr. Palma: Correct.

Mr. Waugh: Let me just go and mark that on the chart before we forget.

Mr. Whipple: I'm trying to clarify exactly where that is relative to -- I did a lot of fishing for about four years very close to that area and I'm pretty confident that a lot of it was in it and I'm trying to find out exactly where the boundaries are, but there's a general hook in the bottom contour, from slightly north of east to pretty much north-northeast, going up to twenty-five degrees of latitude.

I fished all the way from where the dots are on the map now and following anywhere from 250

to 370 fathoms and going from those dots east and then north, up to the twenty-five latitude. It would be about 250 fathoms to about 370. There was four years of activity there with quite a bit of fishing time. Not all of that is within this zone and that's why I waited a few seconds before I made the comment. I can't tell you exactly where, but some of it is in that zone, no question.

Mr. Wallace: I would like to ask a question, really of the staff. Do you have the numbers, the latitude/longitude readings on this box, to where these guys can get a little more definition as to where they are -- Whether they are actually fishing in the bottom or not or -- On the scale that you've got this now, it's kind of tough to tell whether they're fishing in there or not.

Mr. Waugh: Roger is pulling that together, trying to get that out of the exact corners. Some of these are going to be easier to get than others, obviously, but yes, we don't have that right now, but we can get that.

Mr. Wallace: Will we have it during the meetings or how long before we'll have it?

Mr. Waugh: I don't think we'll have it for this meeting here, no.

Mr. Wallace: One more question. In looking at the scale, this box is approximately, at the widest point, maybe twenty miles wide and a hundred miles long and is that about right, down to ten miles wide, at the northern end?

Ms. Brouwer: I would say that's about right.

Mr. Whipple: You asked whether there's any input as to where that gear was and I think at the original meeting, Gregg, I mentioned it to you in casual comment, but there was no bearing submitted for it, but there was a lot of activity there and there's no reason there couldn't be again. There's very good fishing there.

Mr. Waugh: That's within this southernmost box?

Mr. Whipple: That's why I've been a little hesitant here. Some of it clearly is not, but I'm sure a lot is. I'm not quite sure where the 250-fathom line would come. I began right about where his most western dot might be and then followed around the depth contour, going east and then north, in 250 to about 400 fathoms. I wasn't the only one there. There were a couple of people from the west coast who fished there as well and so there was I would say at least three of us who have been in that area for a fair amount of time.

Mr. Wallace: On your second page, with your landings scales, these 700 numbers, what is the size of these boxes?

Mr. Waugh: They're one-degree-by-one-degree boxes, sixty miles by sixty miles. These same numbers are reproduced on the charts and the grids are as well.

Mr. Wallace: These boxes represent the grids, the latitude/longitude grids, as you see on the average chart.

Mr. Waugh: That's correct.

Mr. Whipple: We just had about a twenty-minute discussion, in which we could not get the precision that we wanted, because we don't have the tools to do it, relative to the interaction of designated coral areas and the position of traps.

What we had hoped for, from previous discussions, was that there would be available to us the exact GPS locations of the dive sites where coral was found, have it expressed in latitude and longitude with the minutes, than that hundredths of a minute, or hundredths of a mile, rather, and a chart in which we could plot, or have plotted for us, the location of our gears.

Then we come up fairly rapidly with some useful information in which we could try to have some kind of mutual understanding and support for concerns about the coral and the concerns about keeping the fishery going. At this point, that seems difficult to do, but, Gregg, you had mentioned earlier this -- Gregg, I don't know how much of what I said you heard, but would it be possible to accommodate us on that and have, if you thought possible, maybe another AP meeting, in which we could come up with some really good recommendations that might be useful?

Mr. Waugh: We can certainly take that request back and what you want is a chart with the latitude and longitude of all of these proposed areas?

Mr. Whipple: You expressed that, I think, that in my letter of a year ago you were -- A large element of the process described was yours, because it was related to what you could do so far as your tools with the computers and so forth. What we had hoped to have was a printed coordinate of each of the dive sites, of the stars, a copy of the charts, and the expression of the locations was to be in a GPS given in minutes, rather than hundredths of a mile or whatever, so that we wouldn't be running a decoding system on that.

Then you would utilize, I'm quoting from the letter now, you would utilize our individual comments about space requirements as a guide to keep us out of trouble and out of that, as I recall, we were to get a CD so that we could plot our own information. Without those tools, it's awfully hard for either of us to understand and take hard positions about various things, I think. If the recommendation process is really going to take place, hopefully we can have those tools and a meeting of the AP and submit some solid information to you for where we come.

Mr. Waugh: We may be able to get the latitude and longitude points by tomorrow. Part of the problem we face is that you all don't have the GPS software that all of our data are in. That's part of the issue here and I'm not quite sure how we resolve that, how we can output our data so that you all can read it with you all's capabilities.

Mr. Whipple: Is it possible for us to work, either individually or collectively, with somebody that does, from your group?

Mr. Waugh: I'm wondering if the best thing wouldn't be just to have you all up in our office and

you all bring all your data and we go through this over a period of a couple of days and get it all plotted, so that you can see it.

Mr. Whipple: Is that feasible for you?

Mr. Waugh: Is that something everybody wants to do and is willing to do?

Mr. Graves: A show of hands or something, gentlemen? It looks unanimous.

Mr. St. Amand: Is this something each of us will -- It will be a big group session or individual sessions?

Mr. Waugh: That's up to you all. What we've got plotted now is the information from four different vessels and it depends on you all, how much information you all are willing to share with each other, whether it needs to be individual. At some point, we're going to have to be able to produce charts that show where vessels are fishing. We won't name them, but I mean you all know where everybody is fishing now anyway and so -- It's sort of up to you all.

Mr. Almeida: Like I had said earlier, there are still a few northern permits and not to mention any names, but people still have interest in coming down and fishing on the northern area and if this is going to be like pretty much information that is in access to them, I would be a little more skeptical as far as giving my bearings.

Mr. Waugh: These don't have to be too exact. For instance, the chart that shows where the four existing vessels fish, is that giving too much detailed information? That's not right now to the exact location.

Mr. Rau: Gregg, would you want all the positions that we've fished? Like in the previous one, when I gave you those, it was one position and from that position, we would work in and out. Would you want all the positions?

Mr. Waugh: It seems to me what we need to be able to map is where you all fish and if what we got from you before is sort of a center point and then you're going in and out from there, if you can tell us how far you go in and out, then we can depict that. We don't need every exact area, but what we need to know is where within these boxes do you all fish. I think now, with that clarification and if you can tell us how far you go in and out, then we should be able to show that with the data you have already given us.

I think what we're going to do is get back together and you all have a recommendation on what we need to put together so that you all can give us your fishing areas and better describe where there is overlap. We need to get that on the record and then if we could talk about the fishing gear and the description and I've got a call in to Roger, who put these charts together, to see if we can get latitude and longitude down here for tomorrow morning.

That may help a little more in giving us a little more input, but I think it would be good for you all to go ahead and get on the record your recommendation as to what exactly we need to put

together so that we can sit down together and go over this.

Mr. Whipple: What we seem to be lacking is a common platform, in the sense of the way in which information is presented, and overlays of the existing data of the gear with the coral locations. What we think is necessary in order to have a productive set of recommendations and turn the best situation into reality is for the council to put together the stars, meaning the locations of coral, and the plots of the fishermen's information, so that one is on top of each other and not two separate charts, which you have to correlate somehow.

We also need, on the part of the fishermen, to add more data to our fishing information, in part from us who are currently fishing and in part from those who have a precedent that's meaningful in fishing in the past. That would be our responsibility to create that information and be prepared to present it.

We would submit that to the council and hopefully the council could circulate finished charts, which would include a printout of numbers and areas, so that it's more than visual and we aren't working with a microscope to try to see just how close a piece of gear is to an identified piece of coral, but we have independently, but adjacent to the chart, a physical printout of the latitude and longitude, the GPS information.

Once the fishermen have this in hand, we can meet on our own, or in conjunction with the council, if need be, or with Gregg and people, to look at this information and to freewheel on our ideas about how to develop useful recommendations and get a good start on any recommendations that are beginning to form or procedures that would help to avoid the deadlocked positions, as to each side wants everything, try to find some meaningful way to allow a productive fishery and still protect the coral, to the greatest extent reasonable.

Then it would be up to us as fishermen to meet with members of the council who have the software, hopefully with zoom capability, so that we can manipulate the information and see relationships more clearly and talk about possible ways of getting useful recommendations together with the council people.

Given that opportunity, we should, as an advisory group, be able to submit our recommendations in a reasonably brief time after that has taken place. I invite anybody else to comment on that procedure, but that appears to be what's emerging from the discussions that have been taking place today.

Mr. Geiger: Thanks, Bill. I understand what you're saying and I just have a couple of questions and I want to make sure that we understand and it's on the record exactly what you guys need, because what I think I heard you need was a little bit different than what I understood you to say.

You talked about the stars that are on the chart and given the latitude/longitude, degrees, minutes, and seconds of those locations. Do you also need the box defined in the same degrees, minutes, and seconds?

Mr. Whipple: That's correct and a very important item that you mentioned that I neglected is I

think at the previous meeting, a year or so ago, the GPS was in decimals, hundredths of a mile, rather than in minutes. We're all adjusted to minutes in terms of our information and so if possible, we can do it that way.

Mr. Geiger: I understand that and so really, we need all the definitions on the chart in degrees, minutes, and seconds. Zoom capability, you said that we could get together and meet at some point with these charts and have the overlays with a zoom capability and what did you mean by a zoom capability?

Mr. Whipple: There's been a fair amount of discussion as to whether the protection of the habitat will allow for gear in areas other than -- An exclusion from big blocks. For example, in part of the southern part of the middle zone, there's been fishing taking place for twenty years that includes just about all of the activity right smack in the middle of this what would be protected area.

Now, the thought has been presented many times that we don't want to fish on coral anyway. We do our best to avoid it. It's harmful to our gear and getting into it is against our own self interest, let alone any high-minded idea of protecting the coral. Now, if we can have the ability to enlarge a chart to the point where we can relate identified coral locations to where this gear is actually placed, habitually, that could be meaningful.

Here we've got a historical fishery still going on and it may be that any damage that could be done has been done, but maybe there isn't much damage. If we're avoiding the coral anyway, as we say we're certainly trying to do, that may lead to an opportunity where people will be more comfortable with leaving that area alone, so far as if they can give us the historical rights to fish in that area, maybe with the transponders aboard to verify that we're really not doing what we say we aren't doing.

If at this meeting we do have the ability to zoom out and see how close the fishermen's bearings come to the starred locations, it may be helpful, but that's just one example of why that could be a useful ability.

Mr. Geiger: I would phrase that a little differently. I would say you want a scale on the map that provides you large enough scale that enables you to better and more accurately pinpoint, in degrees, minutes, and seconds, the location of the coral, as opposed to where your fishing locations would be.

Mr. Whipple: You can't do what I'm talking about with the scale that's on these charts. What the procedure is for getting the enlargement is wide open, but we need to be able to do that.

Mr. Graves: Anybody else have any comments?

Mr. St. Amand: Bill pretty much wrapped it up.

Mr. Graves: I think we want to put some information on record about fishing gear. Howard, why don't you go through how you golden crab and the gear used for us?

Mr. Rau: That's an easy thing. How long do you want to be here? Basically, I fish fifty-trap trawls and use a five-eighths-inch polypropylene line. The traps are 400 feet apart and usually with a concrete on the south end. Now, these are set south to north with the current, with the stream, and then when we go back to get them, we grapple up the south end and then we proceed to work the gear to the north, pulling with the stream.

To find the gear, we use a GPS and a sounding system, which we can actually see the line on the bottom. This gives us the ability to get to within probably the third tarp, anywhere from the third trap to probably the fifth trap. We haul the gear. The gear comes up and we grapple the gear up and unhook the grapple and then we start putting the traps and taking the crabs out.

The crabs are taken out and they're boxed in totes, about eighty-pound totes, and then the crabs are put down the hole. What else do we do? They're baited, yes. You've got to bait them. We use racks, fish heads, pigs feet, chicken, whatever is available at a decent price. A decent catch is probably twenty pounds or thirty pounds a trap and sometime in the season, this will go up to seventy or a hundred pounds a trap.

Mr. Graves: Howard, let me ask you a question. Does the line float? You see the line and it floats?

Mr. Rau: That's correct. The line does float. It's a floating line and traps are on gangions, from a gangion to a becket. Any questions?

Mr. Geiger: I've got a couple. The season is when?

Mr. Rau: There is no season. It's all year long.

Mr. Geiger: Okay. You mentioned a season in your --

Mr. Rau: When I said seasons, the crabs run sometimes different strengths and so it's better catch, like in the wintertime.

Mr. Geiger: How much do the traps weigh, on average? I know everybody is using a little bit different trap.

Mr. Rau: The little ones, about thirty pounds apiece.

Mr. Geiger: You say you fish fifty traps.

Mr. Rau: Fifty traps.

Mr. Geiger: When you deploy the fifty traps, how much soak time do you have?

Mr. Rau: I work on a two-week soak time.

Mr. Geiger: The traps sit out for two weeks?

Mr. Rau: That's correct.

Mr. Geiger: Then when you retrieve them, do you redeploy them the same day that you retrieve them?

Mr. Rau: That's correct.

Ms. Brouwer: On the screen is a description that Mr. Nielson had provided to the council a long time ago on what a golden crab trap -- How it's constructed and what it's made of. I have no idea how current this is and so if you could take a look at that and let me know what needs to be corrected from that description.

Mr. Rau: No, these are the first ones, the six-by-four. He changed those. We all changed those. No, the trap is four feet long and that's correct. We still have those, in fact. Those traps are still fishable.

Mr. Graves: Nuno says they're six feet long --

Mr. Rau: These were the first traps he used and then he switched down to these four foot by thirty by eighteen. Then he went to some bigger ones, but they were usually fished on the ends of the traps. They were forty-eight by twenty-four inches high.

Mr. Geiger: What kinds of boats are you all fishing out, what size, on average?

Mr. Rau: Mine is a sixty-three foot.

Mr. Almeida: The Lady Helena is sixty-eight-and-a-half.

Mr. Whipple: Fifty-one feet.

Mr. Palma: Fifty-seven.

Mr. Manchester: Forty-six.

Mr. Wallace: You said you bait them with fish, chicken, all that stuff, but you only retrieve them every two weeks. Does the crab self bait or -- I know a fish or a chicken is not lasting two weeks.

Mr. Rau: No, it depends, because it's so cold down there. It can keep the bait for a long time, sometimes, but then you have the bugs, which will go in and eat it fast, so it's gone. I'm saying two weeks is a -- Sometimes we haul a week, if they're running, but on a general deal, it's two weeks. Does that answer your question?

Mr. Wallace: I guess what you're saying is you know how long your bait is going to last and

that's how long you're going to --

Mr. Rau: I can't say I know. I hope it lasts.

Mr. Wallace: You've got pretty good experience as to how long it's going to last.

Mr. Rau: Right.

Mr. Graves: I have a question for any of the fishermen. I know bycatch is mentioned in the report and it says we have no data on it. In my experience -- I've been out on several occasions with different fishermen, including we owned a boat once at the fish house and the bycatch was minimal, a starfish once and I think a six-gilled shark I saw. Are there any comments on bycatch?

Mr. Rau: About the only bycatch, the only significant, and that really isn't significant, is the isopod, which usually in a fifty-trap trawl, you probably do maybe six to twelve isopods and usually about -- I usually gauge them at about a pound apiece.

Mr. St. Amand: Yes, that's pretty much the bycatch on our boat, is isopods, about a pound.

Mr. Palma: I third that, too.

Mr. Wallace: Can you give me a fisherman slang of an isopod? I don't know what you're talking about. Is it a shellfish or like a cucumber?

Mr. Rau: Have you ever seen a seawall bug?

Mr. Geiger: Similar to what we saw in the video?

Mr. Rau: It's got a shell. It's like a lobster. What's the word I'm thinking of? It's segmented and it's completely surrounded in its armor, but the Japanese -- They didn't even want to buy them to eat, they were that bad. Every so often, an aquarium will call one of us and ask us to bring some in for an aquarium, but it's a cold water animal and so you have to keep it at like thirty-eight to forty degrees.

Mr. Wallace: To that then, I guess they are alive when you throw them back overboard. You're not having a mortality rate based on the bycatch? There's no mortality?

Mr. Rau: No, no mortality. They're a real tough cookie anyway. You could put them in a refrigerator and they're still alive. I'm sure they're making it to the bottom.

Ms. Brouwer: Another question I had, going back to the gear, is this description of a condo trap was extracted from a website. I went online and I just typed "golden crab fishery and gear" and this is what kept coming up. Is this something that you all use? Is this something that is -- How recent is this information and do you know anything about it?

Mr. Whipple: I think I've seen the website you're talking about and I was very surprised at what I didn't think was so was presented as so. I think a lot of that information -- In the first place, I think it's quite old and secondly, it may very well have been part of a development process that was being presented there, but what these fellas have described is what's used now. The word "isopod" I'm pretty sure is Greek and refers to many legs. They have maybe twenty legs or so to work with, a coordination process.

I might add a couple of things about what happens with the gear. Howard mentioned that we set from the south to the north. If you set too far across the Gulf Stream, you're going to be in trouble and if you try to set against it, you're going to have a disaster.

Fundamentally, you're limited to going with the stream, wherever it wants to go and the result of that is that the drift of the traps, from the point at which you set the first trap, is predictably approximately a mile to a mile-and-a-quarter to the north. It's not necessarily under your control as to where it will land, but you know pretty well where it will land, in that respect.

What you cannot know for sure is the excursion east and west. There are subsurface currents that we aren't aware of. Typically, the gear will land very close to the coordinates that you punch in as you go along for where you set the gear. It's not uncommon for it to be 0.05 miles either side of that line. Typically, it may go toward the shore, to the west, maybe a tenth of a mile, and occasionally somewhat more than that, but typically a tenth to at the most 0.15. Outside, what would you say, Howard? It's less than that, usually.

Mr. Rau: Yes, less than that usually, right, just a few occasions.

Mr. Whipple: The range of predictability relative to where it's going to land, thinking, again, of am I going to be in coral or going down a precipice or what have you, is about within those parameters of maybe typically a tenth of a mile or less.

Mr. Wallace: To that, once it lands, it does not move? There's no traveling with the current dragging it along the bottom? Once it hits the bottom, it stays there?

Mr. Whipple: It stays there unless it's interrupted by somebody working with a -- Unless a submarine comes through or a cable ship or whatever. That's an interesting point, too. People say you've had a hurricane and you'll never find your gear. One of the benefits of being in deep water is the crabs don't know anything about a hurricane, except that they might have better fishing after a hurricane, if it's a real one and goes close.

Mr. Wallace: One more question. We don't have a regulation on size of traps and is that correct? We do have a regulation?

Mr. Whipple: We have a management plan, if that's what you mean, yes.

Mr. Wallace: There is a regulation on size and there's no regulation on number, the amount of traps you have?

Mr. Whipple: No, the size is regulated to forty-eight cubic feet in the middle and the southern zone and sixty-four in the northern zone.

Mr. Wallace: That condo trap is a legal trap in the northern zone, but maybe not in the southern zone?

Mr. Whipple: It would be, yes. The traps that we typically use that Howard described are about half of the forty-eight cubic feet that we're allowed. We could use a much bigger trap if we wanted to, even in the middle and southern zones.

Mr. Graves: I think a condo trap refers to a style and not a size.

Mr. Harris: Do you not mark an end of the line because of the length of the soak time and you don't want people to know where the line of traps is? Is that why have to grapple up the traps at the end of the soak? Put a buoy out at the end of the line?

Mr. Whipple: You can't fish with a buoy. We're fishing in the Gulf Stream. Three one-hundred-inch buoys, you won't even find them when the current is running and if you could buoy -- We've all tried it and if you can buoy, you have ships. You're in the shipping lane and so you have to grapple. Once it's down, it doesn't move.

Mr. Rau: He speaks about our all having tried it. One of the other fishermen and I thought we had conquered the question and I had about seven months of great enthusiasm for buoys. I had finally worked out how to keep it going and yes, you're right that it would have some shipping that would occasionally disrupt something, but not anything serious.

You do occasionally get surges of very, very strong Gulf Stream current. Typically, it would be a low of about two-knots and three-and-a-half to four is pretty high, but at this particular time, we had a blast that went up to a little over five-knots and every buoy disappeared and there's no idea where they went exactly and didn't have the sounder at that time that spotted the line and I finally got all the gear back, but it took, conservatively, two months of search time, which far offset any advantage that I got for having the buoy in the seven months when it did work.

Mr. Williams: Do you ever have an occasion where you have interaction or conflict with shrimp trawlers?

Mr. Whipple: No, I've never really had a problem. I have seen them working inside me. That was a few years ago, but there's never been any conflict.

Mr. Williams: One more question. I heard you say you used I believe it was five-eighths poly on your ropes and I assume that they float up off the bottom. Is there ever an occasion where your grappling hooks drag along the bottom to catch that rope or does it drag just off the bottom?

Mr. Whipple: The grappler will drag across the bottom to get the rope. It will bounce, but it will hit the bottom, yes.

Mr. Wallace: You were talking about -- I know this is a hard thing to speculate, but what is the farthest your trap has ever landed from time of deployment? You said it may move a half-mile o a mile, but have you got records of it moving farther than that? Has anybody experienced one moving three miles or --

Mr. Whipple: I certainly haven't. I don't know about anybody else. It's really quite predictable. The Gulf Stream does not go to the bottom, as far as I can tell anyway. It's strong only about the first 500 feet and we're talking about a minimum of 1,200 to the bottom and in some cases, 2,500, which means there's a high percentage when it's not in the stream, while it's going down.

I think the surface speed is not necessarily what it is down a little farther, so that if you have say a four-knot current at the surface one day and two knots another day, that doesn't mean on the four-knot day it went twice as far. It doesn't work that way. It's really quite predictable, within I would say no more than half a mile.

Mr. Rau: What did you say your furthest --

Mr. Whipple: I said a mile-and-a-quarter to a mile-and-a-half.

Mr. Rau: I would agree with that. A mile-and-a-half would be the furthest.

Mr. Cupka: I was curious about the marketing. I think Richard Nielson, when he was fishing, was getting rid of a lot of his crabs himself, locally and all. Is that still pretty much the case? Is it a pretty localized market for your crabs?

Mr. Whipple: Marketing is a problem.

Mr. Rau: I'll answer that question. Marketing is a problem. Because of the golden crab color and the membrane, it's a difficult item to sell. Rustic Inn, where we're talking about, where a couple of fishermen here and Dick Nielson sold product, developed a market on them and probably uses 2,000 or 3,000 pounds a week.

Most of it stays in the State of Florida. We do some casinos in Vegas and in New Jersey. We've tried it overseas a little bit and it's always a price issue. If other crabs are abundant, they don't know your name and when other crabs get expensive and scarce, they call you, but most of it is in the State of Florida.

Mr. Wallace: To the pricing thing, in relationship to snow crab, which is probably about the most similar thing to it, what's your price relationship to snow crab, do you know?

Mr. Rau: I think snow crab now is in the middle fours. Four-and-a-quarter or four-fifty is the last I've heard and golden crab is three-and-a-quarter or three-fifty. There's usually a seventy-five-cent to a dollar to entice somebody, is kind of what it's been over the years. That's sections. We're not talking about live product. We're talking about cleaned sections.

Mr. Wallace: These prices on the board is live product prices or --

Mr. Rau: These are live prices.

Mr. Wallace: They're live prices and not just old prices? I saw it was 2003.

Mr. Rau: These are live vessel prices. The yield in a section is about 50 percent.

Mr. Waugh: I think that's about it as far as the description of the fishery. What I would suggest is you all look this material over that you have and if there's anything further that you can add tomorrow morning -- Let's try to get back together tomorrow morning. I talked with Roger and we're going to try and have the latitude and longitude points and an overlay of your fishing area on top of the coral information. He's going to work that up and see if he can email it. Hopefully it's not going to be too large that we can't email it.

I would suggest -- We were scheduled to get back together here at eight and I would suggest we do that. If we've got that information, then we maybe can get a little farther along in the discussion.

Mr. Geiger: Gregg, just for clarification, you were back there, I think, talking to Roger when I was talking to Bill about this, but that longitude/latitude information with degrees, minutes, and seconds was for the boxes and for the star locations, the fishing locations, correct?

Mr. Waugh: What we're going to try and get right now are going to be the corner points, wherever there's a definite corner point of these boxes, to get that latitude and longitude.

Mr. Geiger: What about the star locations?

Mr. Waugh: I don't know that we'll have that for tomorrow.

Mr. Geiger: Just so everybody is on the same expectation sheet as to what you're going to get tomorrow.

Mr. Waugh: In talking with Roger, he said the plots of the decimal give you more accurate location, but it's not what you guys are using and so it's hard to make that conversion.

Mr. Geiger: Is there a computerized conversion that could be readily applied to those numbers?

Mr. Waugh: Yes and that's one of Roger's comments, was that the computer should be able to translate this. We can produce them in degrees, minutes, and seconds, but he produced them in the decimal equivalent because it's more accurate, it gives you more accurate location information.

Mr. Whipple: I would like to give one very important element of description that hasn't been made and that is the need to move traps, particularly in and out, variations of depth. If you kept a trawl in one place, you think you've landed in heaven if you can leave it there twelve months of a year and there are a few places where that is possible, but typically, as the water

temperatures change and feed patterns do and so forth and so on, it's necessary to move up and down the slope and this is, I know, a very important thing that Howard has mentioned and it somehow gets lost. You might want to elaborate a little bit, Howard, as to how important that is.

Mr. Rau: It's just that on the chart I was putting my numbers together and all I did was give -- I told Gregg that I gave him a basic number, but I actually would -- From those numbers, I would move in and out and so I would maybe start in 1,200 feet and I would move out maybe a hundred feet and keep going offshore or whatever, wherever the crabs would be, up to like 2,200 or 2,300 feet. Pretty much when you see those things for my gear, the way I fish is I may keep the same set, the number, keep the latitude the same, but I would move out or move in on longitude.

Mr. Waugh: Howard, can you give us an idea of how far in and out you would move from those points, because that might be the easiest way to change that representation on there, is to stretch that out as a bar as far in and out that you fish.

Mr. Rau: It varies, because there's some hard bottom, which I can't fish inside. Some places, it's close, it's only five miles. Then there's other spots where it's ten to probably fifteen miles, where I'm moving back and forth.

Mr. Geiger: You're moving within a ten-mile range?

Mr. Rau: Certain places, yes, ten to fifteen, east and west.

Mr. Waugh: I think that's about everything we can do now.

Mr. Bethel: Gregg, I have one question for you. Is there any documented evidence that the golden crab fishery has damaged or harmed deepwater coral in any way?

Mr. Waugh: None that I know of. Then I suggest if you all want to look at these charts anymore tonight that we do that, but we recess until eight o'clock tomorrow morning and we'll be able to hopefully project that latitude and longitude information and the overlay chart, the fishing area on top of the coral areas.

(Whereupon, the meeting recessed at 5:05 o'clock p.m., January 27, 2008.)

The Golden Crab Advisory Panel of the South Atlantic Fishery Management Council reconvened in Salon 3 of the Radisson Resort at the Port, Cape Canaveral, Florida, Monday morning, January 28, 2008, and was called to order at 8:25 o'clock a.m. by Chairman Gary Graves.

Mr. Graves: Good morning, everybody. First of all, I want to thank Gregg and his staff for getting these numbers for us. This is going to make life a little bit easier and so I guess we'll continue the discussions that we left off with yesterday. Did anybody have any brainstorms last night or any awakenings that you would like to bring up this morning?

Mr. Waugh: What we would like to do is Myra can run through some of the information that we

got. She worked with Tina Udouj from FMRI, who has helped us put together this interactive system. What we've got now is, I think, much closer to what you all were asking for. We can go into these areas and zoom in and look at the latitude and longitude of where the dives occurred and where, at least thus far, you all have given us information on your fishing location.

What I would suggest is let's run through that and what you have handed out, and we're making some more copies, so everybody has a copy, is the printout of the decimal points of these boxes and what Myra will do -- As we're going through, we'll show you where one of those points are on the chart, so you can indicate which point, corner point.

This should allow you to take these latitude and longitude figures and plug it into whatever sort of system you all are using and you should be able to plot these boxes on your system and see where you are relative to this and we will certainly continue working with you all to get all this information on one set of interactive charts and this may be a good platform to use, so that you all have all of this information as well. I would suggest let's let Myra walk through this and show you.

Mr. Wallace: Can you all's equipment convert to decimal degrees? I've never tried it on my equipment and so I don't know that it is convertible with the equipment they've got, Gregg.

Mr. Waugh: What we've got here is both decimal and the latitude and longitude, the degrees and minutes, and then the seconds are decimal of a minute, but here on this sheet, they've got both decimal and degrees and minutes. They should be able to plot the degrees and minutes.

Mr. Wallace: You may be able to get close with it, but it may not be the same, but if you can convert it to your degrees and minutes, you can put your degrees and minutes and then probably put a double-zero down for your seconds and it's going to put you within a half-mile, maybe. I would have to go in and figure what the seconds -- Is the seconds every -- Help me. It's been a couple of years since I've been fishing. How many feet is a second?

Mr. Whipple: Latitude minute is going to be a mile and so you're taking roughly a hundred feet, I believe. You have 6,000 feet, roughly, 6,080, in a nautical mile and you have sixty-seconds to a minute and so you divide the 6,080 by sixty and it would be about a hundred feet.

Mr. Waugh: We'll work with Tina to try to see if before you all leave today we can have this converted, so that it shows degrees, minutes, and seconds, instead of degrees, minutes, and then a decimal of seconds.

Ms. Brouwer: The map that I'm showing right now on the screen has the dive locations that John Reed provided, as well as the plotted locations of the four vessels that you guys supplied. We can zoom in to any area that you would like to see more closely and this will show you -- You can point to the numbers, to the corners of the box, or you can point to the stars, or the vessel symbols, and you will get a table showing the information that's associated with that symbol.

This program is not as complete as the software ArcGIS, but it's an interactive program that's

portable, so you can create projects and make it be interactive enough and you have some of the same capabilities of the full-blown software.

If I click on this point, for example, this is Vessel 1. It gives me the location of that point, in decimal degrees, and any other information associated with that point in this table. Again, you've got the latitudes and longitudes in decimal degrees and then broken down in degrees and then decimal, minute, second figures.

Mr. Waugh: What I asked Myra to do is let's go in and look and see this one fishing location and how close it is relative to where this dive occurred and then I don't know that we can do it, but it would be helpful, I would think, to you all to see how far that star is from the boundary area. I don't know if we can do that after you show them the --

Ms. Brouwer: We've got this little measuring tool, but the units that it displays are not very useful. You still get it in decimal degrees. You get the length of the segment that I just drew and so you would have to convert that to a meaningful distance from those numbers.

Mr. Whipple: Can I ask a question? Are these points paired, in the sense -- Talking about the yellow gear dots, are they the beginning and ends of trawls or are they -- At least I did and I think everybody else probably submitted, beginning and end of particular trawls, and is that what is displayed or is there a center point? In other words, do you have an even number of dots there and are they all connected in pairs somewhere somehow?

Ms. Brouwer: I understand what you're saying. I have a table showing the numbers that were provided to us as they were entered into the GIS software, but I was not the person doing that and so I didn't plot these numbers, these points, and so I'm not sure how to answer that question.

Mr. Waugh: The point you're raising, Bill, is that we need to figure out how to show the beginning and end point of the trawl lines, or the areas fished. I think this is something we need to get back with you all on and figure out exactly what we've got plotted here, which is probably the midpoint, and then figure out where the extent east and west or north and south that you all fish in these areas.

Mr. Whipple: I think that may be the problem. The trawls, as we explained yesterday, are sometimes as much as five miles in length and so there's a fair amount of real estate involved. We virtually have to set in line with the Gulf Stream. These points are all east/west and the Gulf Stream has a more northerly track. This is well to the south and it does run somewhat east down there, but it led me to wonder what was really here.

Mr. Waugh: It seems to me the most useful units for when we measure in these things would be miles and is that how you all would like to see that when you draw these distances?

Mr. Rau: Yes, I think miles would be the way to go.

Mr. Whipple: If I'm seeing that right, I think there are eleven dots there, which would mean they're not paired.

Mr. Cupka: It looks to me like it's a point too, because when Myra measured that distance to the dive site before, it was 0.04 degrees, which would be roughly a little over two miles. If the trawls are as much as five miles, then that point is not going to denote a beginning and an end area. It's going to be a single point. I don't know if it's the midpoint, but I don't think it does show the beginning and the end. I think it's showing a point within that distance.

Ms. Brouwer: I'm going to go ahead and project the numbers. Vessel 1 is Bill's vessel and so we can see how the numbers were initially provided to us and maybe we can figure out how it was plotted.

This table has the latitude and degrees, minutes, and seconds, how it was provided to us, and then over here, the green columns are the converted decimal degrees and these are the ones that have been plotted. As Bill was explaining, there's a south and a north point to each of the trawls. However, some of these also have a middle point and so I'm wondering if maybe what was plotted is the midpoint of those trawls.

Mr. Waugh: We will certainly go back and plot those beginning and end points, because I think that's a lot more informative of where you all are fishing and, Howard, we'll need to get with you on your points, because I think you just gave us one point.

Mr. Rau: No, Gregg, I believe I gave you a north and a south. I don't have it with me, but -- I gave you some after the twelfth trap and so it will be three numbers, three positions, where I would run a different -- First south to north and then to the east, but I believe there should be two positions on each one.

Mr. Waugh: For all of you that have provided this data so far, where we have south, middle, and north, that's the beginning, the middle, and the endpoint of a trawl.

Mr. Graves: Is that how everybody submitted or did you submit three numbers per trawl, two numbers per trawl, or one number per trawl?

Mr. Almeida: I haven't submitted anything.

Mr. Graves: Robert, you haven't either?

Mr. Palma: No, I haven't. Tardy's numbers are not on there neither. That's all up in the --

Mr. Graves: We still need to go back then, I think, Gregg, and really get these numbers from everybody and plug them in and still, I think we can work in that timeframe, by March. We talked about that this morning. That's critical. I know they're trying to fast-track this and I'm not sure why.

They list in their proposed coral recommendations that they need to get this done, but we still don't even have information that we're hurting anything right now or we're fishing on hard bottom. As we said yesterday, we fish soft bottom and so if we can just take a little bit of time

and get these correct numbers, I think we can come to some sort of an agreement or conclusion that we're not doing as much damage as people think.

Mr. Waugh: This is a comment for Robert and Nuno. Can you all get your numbers to us relatively quickly and who can work with Charlie to try to get his numbers?

Mr. Palma: I could get mine quick, real quick, just copy them.

Mr. Almeida: I could do that as well, within a day's time or whatever, but I do -- I have to agree with Mr. Graves. We don't know if we're in it and we don't know if we're doing any damage. I think we would have some indication if the gear was hung up or brought some of the coral in it. Yesterday, we saw the video. In the beginning of the video, it said that there was 24,000 square miles of coral. I don't think we're moving around enough to cause any damage, if we are causing any damage.

This all is kind of like overwhelming, for me. I don't know about the other guys here, but again, we can give our numbers and if there's nothing there, it's going to bring us a more fine measurement. I think they ought to continue to let us do what we do.

Ms. Brouwer: Just a point of clarification. The 24,000 square miles refers to the area, the approximate area, of the HAPCs as proposed. In fact, I believe the approximation for the largest of the four is 23,000 square miles. That doesn't mean that there are 23,000 square miles of deepwater corals in that area.

Mr. Graves: Thank you. As far as Charlie, I think I can get the numbers for Charlie, Gregg.

Mr. Bethel: Gregg, I'm still not clear on this. I understand the stars represent dive spots. Was coral found on every dive?

Mr. Waugh: Yes. The data we have show where those dives occur on those stars and they saw coral on every dive.

Mr. Bethel: The stars also represent coral as well as the dive?

Mr. Waugh: Correct.

Mr. Graves: Then I have to ask the question, were there dives made that they didn't find coral?

Mr. Waugh: No. The way it's been explained to me is on these sites, everywhere they have gone down, they have found coral.

Mr. Almeida: On any site or any dive, has there been any identified golden crab gear, traps or rope or what have you?

Mr. Waugh: None that we know of and we can ask John Reed when he gets here. He's done a lot of these dives, but I suspect his answer is going to be the same. You have to keep in mind

that there's two approaches. One is that you could turn management by dead body, where you have a dead body and you have damage and then you do something about it, or you can take precautionary actions to prevent damage and that's what the council is considering here, is to protect these corals, because we don't want to happen here what happened with Oculina, where we lost a lot of the Oculina.

That doesn't mean that right now you all are fishing on top of coral. We have to still resolve that and I think we talked yesterday that we're trying to get to prioritize the bottom mapping and I think Gary was the one who made a suggestion too that we need to get some of these tows going over the direct areas where you all are fishing, so that we can see what the gear looks like relative to the bottom topography around where you're fishing.

I think when we look at this data some more, you'll see that there's a lot -- There's some separation between where you all are fishing and where the known coral distribution is right now. It may be, as you all have said, that there are these areas of mud bottom within these areas where there isn't coral where you all are fishing.

I think we can see some of that as we go through the data here, but -- You all can certainly push and suggest that this work be done, but I think you have to understand that the council is being precautionary here in trying to protect this before there's damage and so just because we can't demonstrate that there's been damage to the coral from golden crab gear, it doesn't mean that we don't want to take action to protect that coral.

Mr. Whipple: How were these dive sites selected? Was it random or on the basis of suspected coral or something else?

Ms. Brouwer: John Reed, the way he explains it, is he has had whatever bathymetric maps, fathometer readings, and very few multibeam, which gives you the most accurate relief, and so once he looks at the topography of the bottom and based on where the coral is usually found, the type of bottom that the coral is usually found, he has selected the most likely places that would have deepwater coral habitat and that's where he has chosen to dive.

What I have up on the screen now is Vessels, I believe, 2 and 3 that are on this map. This is just one of the portions where we have this bathymetry that is a little bit more specific, more distinct, than in other areas of the map. Here, you actually have the point superimposed on the bathymetry that shows the relief a lot better than other portions of this map.

There are some dives that have occurred very close to the areas where fishing is taking place and there's also an obvious separation over here, where it looks like a lot of the coral is located on this side, on the eastern side, and the fishing is happening over on the western end of things, where it looks like the topography is not as -- The relief is not as distinct. This is the area near the Miami Terrace.

Mr. Rau: What are the gold stars and the red ones or the orange ones?

Ms. Brouwer: The red stars represent dives that were made since 2004 and the orange, or

golden, stars are the ones that were done before 2004.

Mr. Almeida: Are they still continuing to do these dives? How often are they doing them? Last year, we went to the meeting in Fort Lauderdale and if I'm not mistaken, the paperwork I have at home shows there was, I think, three stars that were potentially in the northern zone, in the area where I fish, and today, I see there's probably double that now. I'm hoping that the next time that we get together that it doesn't double.

Ms. Brouwer: The research depends on the cycles of funding and a lot of the research that's been done in the South Atlantic has happened in the last few years, it's been done under the Ocean Exploration Program of NOAA. From what I understand, NOAA is now going to start funding projects elsewhere, because they have funded a lot of research in this area.

I anticipate that there is going to be a decrease in the amount of funding available to conduct any more research as far as the very expensive multibeam mapping and submersible dives. There's going to be less of that going on from now, because so much of it has already been funded. I don't know at this moment if there are any cruises, any research cruises, planned using submersibles to any deepwater coral areas in the South Atlantic this year. I know there's one coming up for Oculina, but that's the only one that I'm aware of.

Mr. Waugh: You all see the need we have for this mapping and anything you can do -- You've got representatives of a very influential environmental group sitting in the audience. Talk with them. Work like this gets done because of pressure brought on the bodies who are doing the funding and -- It puts the council in a very awkward position, where they have to go forward with this level of information without the necessary level of detail. Anything you all can do to point out the importance of getting this work done and getting the work done soon would be helpful to us all.

Mr. Cupka: Can I ask Myra just a couple of questions for some clarification there? You denote two series of dives, before and after 2004. When we say coral was found on all dives, does that include the ones before and after or --

Ms. Brouwer: If I understand correctly, you're asking whether the dives that were done prior to 2004 indicated the presence of deepwater corals and is that --

Mr. Cupka: I heard earlier that every dive site produced coral and does that include the ones before, the gold stars as well as the red stars?

Ms. Brouwer: The answer is yes. John Reed used a lot of his data prior to 2004 to present to the Coral and Habitat APs the distribution of the coral and it was based on that information at that time that the APs proposed to the council the initial six coral HAPCs and then subsequent to that, John Reed and Steve Ross conducted more research, which is represented by the dives since 2004, and that information prompted the APs to revise the recommendations and consolidate the original six proposed areas into the four that you see now and it was this past November that the last methane seep HAPC was proposed.

Mr. Cupka: Approximately how many dives total throughout those HAPC areas? Do you have any idea? Is it thirty or 300? It doesn't have to be exact, but --

Ms. Brouwer: I'm sorry. I don't have a good idea and I hesitate to guess. That would be a question for John Reed when he gets here later today.

Mr. Cupka: It just looks like, scanning it, that it was a fair number. It wasn't just a couple and if every one showed coral, it seems to me that either he has got a very good method for predicting where these things are going to be, because he's hit it every time, or there is an awful lot of coral down there, one or the other or both, but I'll talk to John later. I'm just curious.

Ms. Brouwer: That's an important question I think that needs to be brought up to discussion and like I said, it would be up to John, who is the expert, to explain exactly how many of these dives have found coral and how many have not, if that's the case.

Mr. Wallace: To that, at the Coral and Habitat AP, there was a suggestion to connect all the boxes all the way down and John said then that the science did not support connecting this with the Pourtales Terrace. You're seeing dive sites in there and then on another chart, they were dive sites that was indicated as hard bottom and then there was dive sites that was not indicated as hard bottom. From that, I assumed that there was some of his sites that he did not find coral on, based on those two things.

Mr. Waugh: John, I think that where the hard bottom was indicated, I think that came from bottom grab samples and then they used that to go down and dive and found coral. Again, we can ask John when he gets here today.

Mr. Bethel: Is there any information on the area covered by the dives in relation to the 24,000 square miles that we're dealing with?

Mr. Waugh: We can develop that. What you want to know is what proportion of the proposed closed area has been surveyed by --

Mr. Bethel: Exactly.

Mr. Waugh: We can get that. I don't know that we can produce that very easily here today, but we can get that for you.

Mr. Bethel: Do we know how many dives have been made?

Mr. Waugh: That information isn't plotted here, but yes, we do and I've asked for that to be sent to us.

Mr. Wallace: To that area, Gregg -- John could probably tell us this real easily, but when he goes down, does he circle at a mile radius, half-mile radius, of the dive? That's basically what you were asking and that's what I would like to know, is does he do a mile radius or does he do a half-mile radius or does he go to one particular spot and only look at that bottom?

Mr. Waugh: We need to ask him when he gets here. That information is available from their reports and I'm sure that there's a statistical grid that they are following, but we can ask him when he gets here.

Ms. Brouwer: I'm showing on the screen now an area further north, still in the large HAPC, the Stetson Reefs and East Florida Lithoherm area. Again, several of the dives have occurred in an area of high relief and it looks like this vessel is conducting fishing operations to the west of that, in areas where the topography, just by looking at it and interpreting what I see on the map, does not look to be as high relief as where the dives have occurred that have documented the presence of deepwater corals.

Mr. Rau: Can you go south of that a little bit?

Mr. Graves: It appears that most of the activity here is to the east, to the east and a little bit deeper.

Mr. Rau: As you can see, that's my vessel. I fish that area and that's hard stuff inside and I can't possibly fish that area to the inside of that. It looks pretty obvious there. You can see how close the lines are together and you can see where I am. It's flat, it's fairly flat.

Ms. Brouwer: I'm continuing to show the area north, in the same HAPC. This area does not have the background bathymetry as detailed as the previous area that I was showing and again, we see that there is a clear separation between where the fishing is taking place and the areas where the research has shown deepwater corals.

Mr. Wallace: Does it get too deep when you go -- You're looking at the dive site that's east of some of your sets and are you basically in a valley and there's no set of -- What I'm asking is, based on the dive sites there, that evidently is some more hard bottom where there's some coral. You're between -- Your sets are between the hard bottom on the eastern side and this dive site right here.

Are you basically in a valley of smooth bottom and have you went that far offshore in order to see what is out there? Have you tried fishing further offshore, in order to see if that is un-fishable bottom, again, or -- Do you understand what I'm trying to say?

Mr. Whipple: Yes, I understand your question better now. I have two sets of gear and this is the northern, I judge. What latitude are we on, roughly? I think this is the northern part, but I'm not positive. 27? Okay, that is the northern part of it.

The answer is basically that you're correct. On the eastern side, there's -- We're in the process of development, all of us, in terms of finding gear and crabs and the movements and the activities and so forth of the golden crabs change from not only month to month, from year to year. They may not duplicate what happened before, but right now, the more shallow water to the east is not particularly productive.

If you get up above 1,500 feet or so, typically it's not as productive for you as if you're deeper than that. Also, there's a concern in this area, which we hope to get resolved, as to whether this potential conflict with royal red fishermen -- We're trying to find out when they go where and how deep and so forth, because that would be a serious situation for both of us as far as destroying gear.

Insofar as going deeper, it's harder to fish, just because of the depth. It's also harder to fish because the curves of the depth profile are a lot steeper, until you get way down, and then they level off again, but the extreme edges, as you get from 2,000 feet, on out into 2,400 or 2,500, are pretty steep before they level off again. That makes it more difficult.

I don't think it's necessarily true that we're trying to avoid hard bottom, as it's true of trying to find crabs and trying to make the process as conservative as possible in terms of risk to the gear for loss and because the depth contours are so steep and strains on the gear are harder and so forth. Does that help or confuse?

Mr. Rau: I think it might be helpful to get a bathymetric on this, in these areas that don't have it, for next time.

Mr. Whipple: I have some bathymetric charts. They obviously don't have the stars on it and what have you, but you can demonstrate pretty clearly what I'm talking about. Howard mentioned earlier the steepness of the profile to the south inhibited him on the east side and that's the case in certain areas and the reverse is the case in certain other areas, but if anybody wants to look at one of those bathymetric charts, I have them here.

Mr. Wallace: You're getting farther north than what we have any tracks on. Have you all explored up there to see if there's any crab there or is it just that economically you don't go that far?

Mr. Almeida: What was the question?

Mr. Wallace: It looks like you all are staying basically south of the Cape in finding the golden crab. Have you all looked north of the Cape in order to find golden crab or is just that you all -- What is the reason that you don't go farther north?

Mr. Almeida: It just involves a lot more in recovering the gear the deeper you go. You're talking north? I fish out of Fort Pierce and so it's already quite a steam north as it is. I'm just north of the 28 line and I see a couple of bearings here that may affect the area where I fish.

Mr. Wallace: It's economic reasons that you're not going and not that there's not crab up there, but it's just -- Has anyone ever explored up there to even see if there is crab up there?

Mr. Almeida: Not to my knowledge, no.

Mr. Cupka: I can tell you back in the early 1990s I think it was, or late 1980s, that our organization, DNR up in South Carolina, we got a grant to look at that and we did quite a bit of

work and Betty Wenner and Glen Aldrich have a paper out describing that. Yes, there are crabs up there. They even estimated the size of the population and whatnot, but I think historically most of the people that fish for it have been in the south Florida area and didn't want to go all the way up there.

I think there's some indications too that maybe there aren't quite as many of them up that way, but they're definitely there and we've tried to encourage people to apply for permits to fish that area, because we know they're up there, but we haven't been very successful in getting anybody to try up there, but there are definitely crabs there. Like I say, the original work was done off of South Carolina, where we found them, and we had a project where we went out and fished them for over a year. There was crabs up there.

Mr. Wallace: There's an economically viable resource even as far as South Carolina, based on the study of population?

Mr. Cupka: Even above us, up into North Carolina. I don't know how economical it is, because we haven't ever had anybody to go up there and fish. The other thing is you've got a lot longer run up there, to get the depth that you've got down in south Florida. There's a lot involved there in terms of the economic feasibility of the thing, but there's definitely crabs up there.

Mr. Whipple: Could I amplify some of this? There's quite a bit of history that goes in with this. You're absolutely right, from my understanding, that the initial interest and activity and people that were ready and capable of going after the golden crabs were pretty much in the southern area, up as far as Lauderdale and -- You know far more about that than I do.

The primary reason, I think, is that we all recognize it's bigger boats that are needed. If you see the shape of the topography, it requires going much farther offshore to get to the depths that you need in order to find the crabs. You have questions of ports and markets and the ability to make a boat function so far as the business logistics of it.

The council, as you indicated, did -- In fact, I think it was my motion to make two more northern permits available and that passes and as you suggest, not much has happened, but I do know, in addition to that, that there was, in the late 1980s and early 1990s, I think a sweeping assessment made by one individual from the west coast about the potential for this fishery.

He even had a processing plant built in Tallahassee and the reason that he did this was that his primary results indicated that if you went offshore to the southeast of approximately the South Carolina/Georgia border, that was where the abundance of the crabs were, from his experiments with a large vessel over a fair amount of time.

He was trying to promote establishing a small fleet there, in order to supply his plant. He thought there was more potential there than anywhere else and he also had the skills to know this. He was an extremely capable fisherman and had developed a lot of other fisheries before. His evidence was probably reliable, not only on the nature of his mindset to understand where these things were supposed to be, but also his practical results of fishing.

In that case, it was a 180-footer and he could go anywhere and he carried all the gear that everybody was afraid was going to come down here and wipe everything out. He had the equipment to go at it big time and it wasn't just a plot here or there. There was a lot of effort and that was his very clear conclusion, as I understand it.

Mr. Cupka: I remember there was a lot of concern back then on the council about these boats, these Alaska boats, coming down, because as somebody indicated yesterday, the market for golden crab is impacted or affected somewhat by what's going on in other crab fisheries.

Back during one period, there was not -- The crabbing off of Alaska was not very good and so there was a concern that all these big boats from Alaska, these 140 or 180-foot steel-hull vessels, was going to come down and start fishing off our area and we had a lot of concern about that, but it never panned out that way. Again, I think the crab fishery picked up again in Alaska and just the economics of the thing probably prevented a lot of that from happening.

Mr. Graves: There was two or three boats that came down and did some exploratory work in the late 1980s and early 1990s, some of the bigger boats from Alaska. A few of them did okay, but most of them were used to a much bigger biomass and needed huge numbers to make it profitable and this fishery down here is not that fishery. It's totally different.

I think I saw some videos that were done off of Georgia in the late 1980s, where they put some bait down and had a submersible and took some pictures. There's crabs all up the coast. We don't know the extent of it, because the further you go north, the further you go offshore and a bigger vessel is required.

I think Nuno is probably doing as much experimenting now into the north and trying to find out and learning what's going on up there. I believe if you even go deeper that we get into the red crab. We know in the Keys and in the Gulf that if you get into 2,500 or 2,600 feet, you get the red crab, the same one you catch up north. It's the cousin. It's a little bit smaller, but it's bright red. We haven't even tried to fish that crab, really, down here, because that's a meat crab more so than anything.

Should we talk about a chairman and elections? Does anybody want to volunteer? No hands? While we're taking a break and Myra is doing some work with Gregg, we would like to go ahead and talk about maybe electing a chairman and a vice chairman and so nominations are open for chairman.

Mr. Rau: I would like to nominate Bill Whipple.

Mr. Graves: Any other?

Mr. Bethel: I'll second the nomination.

Mr. Graves: Hearing none, I think Bill Whipple is now the chairman.

Mr. Waugh: I think Gary said that their consensus is to keep him as vice chair.

Mr. Graves: We'll take a ten-minute break right now, if it's okay with everybody.

(Whereupon, a brief recess was taken.)

Mr. Graves: We're going to go ahead and call the meeting back to order and go back on record. If any of the advisory panel members here have any recommendations or further discussions that we want to talk about, please let us have them now.

Mr. Bethel: Gregg, this question is for you and please correct me if I've been misled by what I read, but according to the Magnuson Act, any fishery management plan which is prepared by any council with respect to any fishery shall assess and specify the nature and extent of scientific data which is needed for effective implementation of the plan.

Given the fact that the research dives within the proposed area represent only a small fraction of that area, how did the council determine that they have satisfied this requirement of the Magnuson Act?

Mr. Waugh: One of the provisions of the Act is that the council has to use the best available science and we have a certain amount of information that's available. The dives -- Pre-2004, there were a total of thirty-two dives. From 2004 on, there have been a total of thirty-five dives and so certainly there are still data gaps and we're still working to get more of these areas mapped, but the available information indicates that there is coral scattered throughout these areas.

Within certain depth ranges, there's a higher probability that you're going to find coral in those high-relief areas and the recommendation from the scientific advisors to the council on our Habitat Advisory Panel and our Coral Advisory Panel -- Those individuals have a lot of expertise in this area and they've done a lot of the dives and a lot of the work and their recommendations to the council thus far is to be most precautionary is to take these areas and protect that habitat now.

That's their scientific recommendation and the council has considered that thus far. They will be considering whether or not we're ready to approve the document for public hearing at the March meeting, but they certainly acknowledge that there are still data gaps, but the council is required to take action based on the available science and there, the judgment thus far has been that there's sufficient information to move forward.

Mr. Bethel: I've asked in the past why the box is so big. Obviously we know the box encompasses mud, soft bottom, bottom that coral does not grow on. Obviously the dive sites targeted the areas of higher relief, where they suspected coral would grow.

Ironically, the dive sites did not correspond directly with the fishing sites and so obviously the fishing is being done on the soft bottom and they're targeting the hard bottom for their observations of coral. Yet, they've enclosed whatever it was, 24,000 square miles of bottom, including mud and the bottom that's not coral grows on.

When I've asked how come such a large area, the basic answer is well, we just don't know what we're going to find everywhere else. The reason for drawing such a large box, is that based on scientific knowledge or is it based on scientific ignorance?

Mr. Waugh: That reflects the scientific knowledge of the individuals on our Habitat Advisory Panel and Coral Advisory Panel and based on the available science before them. What they are doing is recommending a precautionary approach and in the absence of knowledge, you would act to protect that area and if there are zones within that area that are found later to just consist of mud, where fishing could be allowed, that's probably something those advisors would go along with. It's a change in approach to, as I mentioned earlier, instead of waiting to see damage, to be precautionary. Their recommendation is to protect this now, before any damage occurs.

Mr. Whipple: Surprise, I've got something to say and I hope I can get it out properly. One of the key words that emerges that Gregg used is "precautionary". The work and the coral discoveries that have come from it are new and they're exciting and they're important.

The coral needs protection that's adequate to preserve its vital ecological contributions, whatever they are. We agree, as participants in the golden crab fishery, with these approaches to the coral and we support the objectives. The risk of our discussions here, in part, is that they're going to turn into an adversarial forum.

The reason we were afraid of that is because of the all-inclusive and sweeping nature of some of the approaches here. It appears to us that there's a one-size-fits-all, in the sense that the kind of damage that might be caused let's say by a scalloper towing a 2,000-pound drag through an area is equivalent to that that the golden crab fishery people might do with their method of operation. It clearly is not that way.

The sweeping nature of these proposals, we all agree, including those who promote them, are based on some early and incomplete assessments, in line with what Chip just asked, is the best scientific evidence available adequate justification for shutting down such a huge area?

It's not, in our opinion, justification for shutting every kind of activity -- It's not justification for sweeping down legitimate, established operations. It is certainly justification for taking measures to protect the coral, in whatever form is clearly necessary at a given time. You think about the facts, that we understand them anyway, that there's not yet sufficient knowledge to have complete clarity about where these corals are, how many there are, and maybe most important of all, what their specific contributions are in terms of ecological contributions.

Do they support fish that are even there? It would appear that the answer to some of that may be no and so far, we haven't heard anyway of any clear evidence of the destructive nature of our fishery. The jury is out on that, I think.

It's also abundantly clear, from a historical perspective, that the good, sound science of one year is shown to be seriously flawed a few years later. That doesn't mean the people are flawed. In fact, just the opposite. It means that people have the capability to grow and develop and get a

better understanding of things.

Our concern, in part, is that it's very difficult to roll back legislation once it goes into effect, to undo what may turn out to have been a mistake. When you consider the nature of this fishery that we're in and the magnitude of its possible damage-inflicting capability, it's really very small. It's a small number of participants, four at this time, and there's absolutely no evidence of a great explosion of effort.

They couldn't anyway, because the number of permits is not much larger than the number of participants right now and so my guess is that if you take a hard look at what we're doing, we must be at or near the bottom of the threats to the coral, at least on the basis of evidence at this point.

The council has put significant effort in into establishing this fishery in the first place and trying to support its development in the early years. There's no evidence of stress or overfishing in what we've done. It's one of the very few fisheries in which that can be said and agreed to by everybody involved.

We're producing a commercially useful product that's of value to society and we're still in the process of trying to be born. It's important to make that distinction, because most other fisheries have been in operation and developed to a fairly mature level for years. They've got their grounds and they've got their boats and they've reached some kind of equilibrium. That can't be said about our fishery, yet.

There's been an awful lot of effort to realize the potential that's available with nowhere near complete success in that effort. It's an extremely difficult fishery to be commercially viable. There's been a lot of people who have tried and given up. In talking about the relationship to any legislation that would come down relative to coral, I think it's important to compare the low level of development that we have versus the anticipated potential.

Specifically, there's been a lot of difficulty in developing the northern portion. I think my numbers are pretty close, if not totally accurate. North and south, there's roughly 120 miles of area that's under the jurisdiction of the council in what's called the southern zone, which runs from the southern extreme of our fishery zone to the 24th. There's 180, I believe, that runs from the 25th to the 28th parallel of latitude, but there's 480 miles from north of that 28th parallel.

If you do the simple numbers, there's over 70 percent of the fishery that has not yet been developed, but which would be prohibited if the actions that are being proposed are fulfilled completely.

Doing this when the number and location of the corals is relatively uncertain, their specific function and contribution to the ecosystem in those deepwater locations is not clearly understood -- The number of animals that are dependent on the coral for their development and survival is unknown and may be low and the question of the actual threat of this fishery to the coral is not yet clearly established, if there is any.

Is it reasonable to shut down the 70 percent on the basis of what we've just been discussing? I think the answer is no. The point is looking for perfection doesn't really work very well in the practical world. The effort that you save every piece of coral that's in the ocean is planning for perfection, in one area of activity in this world that, unfortunately, is destructive of others.

The sum effect is negative, when you save the coral, when you're not quite sure of how important saving every little piece is, but in the process the cost is quite possibly the destruction of this fishery. I would urge the uncertainty and anxiety about the value and survival of the coral shouldn't overrun the use of creative and positive thinking to find other ways to protect the coral.

We've said we all agree -- Everybody in the fishery agrees that the coral needs to be protected to the degree that it's vital to the ecological system and there's no argument about that. The issue is what's the sensible way to try to do this? I don't mean to be nasty by saying "sensible". They're very intelligent and well meaning people involved here.

What I hope we can do, as whatever time is left available to do it, is to use the goodwill that's available and the intelligent minds to use their energies to find solutions that give net positive outcomes for everyone. Getting this common platform that we've been talking about in the last day is a great start. It facilitates getting some solid information together, on the basis of which some good thinking can come out, to find out what those solutions might be.

In the meantime, hopefully we can avoid shutting down this huge amount of real estate when some less destructive measures can protect the coral without radical restrictions on the established and legitimate interests, of which golden crab fishing is one.

That's where I would hope that we could go, given whatever time is available, a few weeks or six weeks or whatever it is, to find some way to serve both interests, to protect the coral as completely as anybody knows how to do it without putting some really very, very severe and harmful restrictions on this fishery.

I certainly request any comments on what I've just said, as to whether it makes sense. I don't think we can make recommendations at this point, because we don't have the information to do it with, but hopefully there are ways that we can accomplish both objectives, protect us and protect the coral.

Mr. Bethel: I would like to expand on one of the points that Bill just made and that is that given the fact that most of the golden crab fishery falls within this proposed area, it's obvious that if the proposed management plan is put into effect that it will effectively either cripple or destroy the golden crab fishery. That's pretty much our conclusion there.

My question is how does this plan satisfy the first standard of the Magnuson Act, that is to minimize overfishing while achieving, on a continuing basis, the optimum yield from each fishery for the U.S. fishing industry?

Mr. Waugh: I think it's too early to presume that the council is going to prohibit golden crab fishing in this whole area. I think that type of question would be appropriate to ask once they

make their position clear, when they approve the document to go out to public hearing, but I think what you said and part of what Bill was getting at was if these areas are adopted in their entirety and golden crab is prohibited within that area, that that would cripple the industry.

I think that's one clear recommendation and we should hear from the other members of the advisory panel, and from those golden crab fishermen not on the AP, if everybody agrees with that. To me, then a second step would be to provide some guidance at this stage as to whether you want to see some allowable areas developed within those proposed coral HAPCs.

As Bill indicated, we don't have all the information on a common platform yet to come up with the specific recommendations, but if you all can agree that what you want is either access to some allowable areas within these proposed sites or that golden crab fishing be allowed in all of the sites, I think that's some guidance that you all could potentially give us here today.

I think, Chip, the type of questions you're asking there, we need to wait until we see what the council is going to do, based on you all's recommendations here. We would have to make all those determinations at some point.

Mr. Rau: I think if they allow us certain areas and we're not going to be allowed to move around that that would pretty much put me out of business. I can't see any way to produce enough crab, given one particular area. In looking at these, especially from the Jupiter north, under those preliminary charts with the coral observations and trap locations grouped together, it seems that a real pattern is starting to emerge.

Then when you superimpose the bathymetric chart over these, you're starting to see that the areas of the high relief show the majority of the coral areas and -- Now, this is just from Jupiter north that I was looking. They could almost be -- You could almost draw a straight line through those stars. I'm just saying this is a possibility that maybe a corridor could be set up there between these coral areas and as I said before, about a year ago, the golden crab fishery is self-regulating in regards to the coral, in that we do not fish on hard bottom and we stay away from it.

Mr. Harris: I want to understand a little bit better how you all fish when you fish those traps for golden crab. I heard yesterday someone said that you fish -- You put out an array of traps and they soak for two weeks and then you recover them and re-bait them and redeploy them. How close to the same area that you pulled those traps do you redeploy those traps?

What I'm trying to get at is how large of an area are you trying to move around in, Howard? You said if we limited you to just certain areas that it would kill your fishery and so what I'm trying to understand is how large of an area are you typically, during a fishing season, moving around?

Mr. Rau: Typically, if you look -- Gosh, I wish we had that zone up there off of Lauderdale that we were looking at before, but if you -- I think it's like fifteen miles there. Now, the coral is located inside of me and I've got about five miles off that coral that I'll work in and out, as I said. That's pretty much what I'll do in that particular area and it changes.

I'll move sometimes north or south, but never -- Here you see my gear and I will move from here and I will move out this way. Where I am right here is probably as close as I will go to the west, but I will work out this way, but I cannot -- I can't do it here. It's impossible. Does that answer?

Mr. Waugh: Myra, measure the distance between where one of those dots for the gear and then when you come in -- Not to the dive site, but to where those bathymetry lines start to get tight. Howard, what you're saying is you can't fish farther to the west. That's probably west than you fish.

Mr. Rau: That is probably the westernmost.

Mr. Waugh: Come more east and tell us roughly where --

Mr. Rau: Out to the EEZ.

Mr. Waugh: Yes, but to the west. What's the farthest --

Mr. Rau: The furthest west?

Mr. Waugh: Yes.

Mr. Rau: Probably where you are. It's 1,500 feet there is as close as I can get, if that helps.

Mr. Waugh: We're looking at 2.8 miles.

Mr. Harris: The other question I had, Howard, is you all are finding your rope based on what you see on your fathometer.

Mr. Rau: That's correct.

Mr. Harris: It seems to me if you can see the rope that you can see coral. What do you see when you're looking at a bottom where you're going to deploy those traps? What are you looking for, depth, or are you looking for some other feature?

Mr. Rau: I'm looking for a feature, an easy feature. You don't see much hard or too much activity going on it. You're looking at a lot of smooth area when you're reading it. You wouldn't see a lot of bumps, of course.

Mr. Harris: I guess that also begs the question then of what kind of habitat are these crabs living in? Are they living on this smooth bottom habitat or are they coming out there to forage? What is it about that habitat that attracts those crabs to that area?

Mr. Rau: That's a good question. There's never been enough research on that. That's why we fish there, because the only place we can fish is in the soft bottom. Down south, it's very muddy and very flat where I fish, and that's down in Key Largo to Miami, and that's a different type of bottom than to the north. Once you get way out offshore of this, you come to a white sand,

which there isn't many crabs in. It's very limited.

Mr. Harris: What I'm hearing you say is that the crabs are in the deeper water with smoother bottom to the east of these real high profile coral atolls, if you will, or lithoherms. They're out in that area for whatever reason they're there, but that's what I think I'm hearing you say.

Mr. Rau: I'm sure they're in the hard bottom too, but you can't go into the hard bottom, but yes, they are out in the soft bottom off of that, too. Whether they move in and out, which I'm sure they do, and maybe they go out to feed. Who knows? Who knows what it is?

Mr. Harris: When you talk about hard bottom, describe what you think that bottom looks like for me.

Mr. Rau: You mean on a fathometer?

Mr. Harris: Yes, on a fathometer. Is it ledges or what is it that depicts the hard bottom to you all?

Mr. Rau: You see a lot of activity on this. You can even have a flat and it can be hard bottom, but you see a greater distance in the trail, in the line. It's broken up. The color is broken up more on hard bottom than it is on the softer bottom. I'm not explaining this too well.

Mr. Harris: A lot of these fathometers now, they've -- The thickness of a color depicts how hard the bottom is under it.

Mr. Rau: Underneath it, correct, how far that trail runs.

Mr. Harris: Right. Is that what you're trying to say?

Mr. Rau: Yes.

Mr. Graves: Given the technology we have today, as you've heard from everybody, first, we don't want to fish on hard bottom, because we can't retrieve our gear and it's very hard to fish when it's not level, and so we're looking for soft, flat bottom. The crabs come and go, we all agree.

If the dive sites or the coral sites were identified with technology, we can fish around anything. We can move in and out and so we don't have to fish and we don't want to fish on coral sites. If we had VMS on the boat -- These are all possibilities that we can certainly live with to be able to fish.

Another thing that we've all talked about at one time or another is we welcome any council member, staff member, scientist that would like to go aboard, anytime we have a trip, to actually see what we do and see what's brought up. We welcome that. We're just taking the State of Idaho and kind of saying we want to block it off, but yet there's a lot of good bottom that we can fish on that I don't think will affect or I don't think there's coral on, at least not that we see it,

because we don't want it and we don't pull it up in our gear.

Mr. Bethel: I'll just read a couple of quotes from information that we have here from the South Atlantic Council and this is in regard to a trip that Gregg made with one of the golden crab fishermen in Miami: On the observed trip, the grapple did not appear to have disturbed the bottom. Sometimes, however, the grapple or trap itself may have mud adhered to it when it is pulled out of the water.

Here's another quote: Information on sediment composition suggests that golden crab abundance is influenced by sediment type, with the highest catches on substrates containing a mixture of silt and clay.

Mr. Harris: Another question. Gregg, have any grab samples been done in the areas, to your knowledge, where they're actually deploying their traps?

Mr. Waugh: I don't think so, looking at the overlays. I'll double check, but I don't believe there have been, no.

Mr. Harris: Can you deploy a grab at that depth and retrieve it successfully?

Mr. Waugh: I don't know. We'll ask John Reed, but I would think you could.

Mr. Harris: It would be a lot cheaper than the sub-bottom profiler and if you're trying to get to what they're saying is areas where they're deploying their traps and not on coral, then that might be a quick and dirty way of demonstrating that. What I would like to do is be able to demonstrate what they're saying is true, so that the council has a high degree of confidence in that information.

Gregg did describe what the council's approach is at this point in time and that's a precautionary approach to protecting these deepwater corals. We don't want to put you all out of business. We want you all to be able to continue to fish, but we just don't want the coral to be destroyed in the process.

What you're telling me suggests to me that you're not deploying on coral resources, because that's a good way to lose gear, but we need to demonstrate that, so that we can either establish golden crab trap gear areas or move the lines of the HAPCs in some way that it doesn't affect you in some way to protect the corals, as well as allow you all to continue to fish. That's what our goal is. We've got to get some more information here, I agree, but I'm trying to figure out an easier way to get that information.

Mr. Cupka: I was going to ask Gregg, have you gone back and looked at the report that Glen and Betty did? It seems to me they did some sediment analysis when they were trying to figure out where these things were. There may be some information in that report that would be available, because I believe that is -- I don't remember all the details, but it seems to me that's one of the things that they looked at, looking at the habitat type, and they did some sediment analysis. Maybe we ought to check that and see.

Mr. Waugh: We can definitely do that. I think that would only be up in the northern zone though. I think that's where they did all the work, but we'll certainly check that. I've asked Myra to pull up the chart we got this morning and it's overlaying the fishing location with the hard bottom information and so forth and we've got some areas, and we already talked about this, particularly in what would be the southwest corner, where we've got obviously some overlap. The tilefish habitat would be gray circles with a dot in it.

Mr. Wallace: Gregg, I saw you had classification of special habitat and what was that classification?

Mr. Waugh: I asked Roger about that and he said that -- I believe that included hard bottom and coral.

Ms. Brouwer: These teal-colored shapes are indicating the tilefish habitat and soft bottom is indicated by these brownish circles with the dot in the middle. The stars, again, are John Reed's dive sites and the larger dots are the vessels, the golden crab fishing vessels. This is a static chart and so I can't zoom in and out very easily and I can't display the legend at the same time.

Mr. Wallace: This is for the fishermen. Do you all have plotters onboard and you just don't always plot your tracks or do you just strictly go by GPS readings? Based on what Duane was talking about with your areas, you've also got to allow a buffer zone, based on the VMS and the enforcement factors and all those things on it.

If you have plotters, do you have tracks of where you actually are working a specific area, maybe your five-mile area that you're talking about and how far do you drift while you're tending your traps, to where we could kind of get an area, a complete area, and groundtruthing it with your plotter tracks or is strictly your information -- Do you not turn your lines and use just readings? Do you understand what I'm asking?

Mr. Whipple: Somewhat and I hope enough. It would vary, of course, with the equipment that you have what you can do, but the particular plotter that I have does give a track, but I can't make it permanent unless I use the save button. That's where these coordinates have come from.

My particular boat track lasts for I think it's something like a thousand intervals and then it starts to erase itself, but the plotter is -- Again, there's a thousand waypoints that it has room for, in my particular unit, and I'm constantly at the 97 or 98 percent full status, because I retain the information of previous sets for as long as I can.

I use up maybe six or seven waypoints each time I make a set, to plot it exactly, so that I -- In case of breaking it off or some other accident, I can tell pretty closely to where I am on an east/west, and north/south for that matter, basis. Am I getting anywhere near what you want to know?

Mr. Wallace: Yes. What you're telling me is you're saving your tracks based on your line, but you're not necessarily saving your tracks on any traveling or drifting or -- You're saving your

tracks specific to the set.

Mr. Whipple: It has a short lifespan. Within six months or less, everything fades out, but every time I make a set, I have to go -- I have written records that should be in a computer, but they aren't. I have written records of every set I've made and I go through to find out what's of least value to me in the future and erase that, so that I've got room for the new information. I have notebooks that go back forever.

Mr. Wallace: What I was really trying to come up with is, based on what Duane was kind of asking, is if you put a zone in there that is allowable for you to fish, how much of a buffer have we got to put in there in order to accommodate any drifting or anything that goes along to keep law enforcement from writing you a ticket anytime that you drift over into the closed area?

It gets real complicated when you've got a narrow strip like you've got that you all are fishing in, because if you allow five miles of fishing ground and considering a four-knot tide, you could essentially drift into a closed area while you're working on a piece of equipment in less than an hour.

Mr. Whipple: Sure.

Mr. Wallace: If we expand the distance, then we've enclosed the entire narrow leg of that HAPC and so it gets complicated all the way around, but we've got to consider the protection of you all as far as law enforcement. Law enforcement is going to be asking these same questions, too.

Mr. Whipple: You opened and alarmed a lot of minds yesterday afterwards, when you were talking about some of these problems with the tracking devices. We've got to pay attention to that. I don't know that any of us can answer it too quickly, as to how the speed that you go is going to indicate what you're doing.

When you're setting basically up that speed, probably when you're hauling or you're not, you have questions of what you're doing running from one trawl to another, you may very well go where you're not allowed to fish and presumably you're traveling, but suppose there's a twenty-five-knot wind and you can't make six knots, but you're making two-and-a-half, and what happens in that kind of situation?

One thing, if I can help fill in some blanks before, this southern area where -- I guess I'm not supposed to say who fishes where, but anyway, this area where the -- It's the next to the bottom one that you have plotted, if that helps. It's off Miami, primarily, where we have the highly irregular features and so many stars are located.

You're asking where are these crabs coming from and where do they live and how do you relate to that and this is a good example. That area was where Richard Nielson fished almost exclusively after he got fairly well developed in his practice. He was successful in part because, as we've said, you don't want to be in the hard bottom and you find the crabs on the softer bottom, but as they said from the beginning, these crabs are never going to run out, because we can't fish where they're hiding.

In that particular area, the crabs are -- Part of the reason they're so abundant is because you can fish near some of harder areas, where they can hide and do whatever it is they do. There's another area down off of Key West, known as the wall, where it's almost a precipice and literally nobody that can retrieve gear that lands up in there, but at the bottom of the wall, it levels out with some very soft bottom, which is very, very productive.

The closer you get to the wall at some times of the year, the better you're going to do and the smart fisherman is going to be able to get fairly close, maybe a quarter-of-a-mile or so, to the bottom of that wall, but not get in it, because he's going to lose a trawl if he does, but the closer he can get without doing that, the better his catch is going to be.

Thank goodness we're able to do that. I think that's the important thing with the electronics that we have and the information. We can avoid those spots and that's why this area off of Miami works so well, because you can get on to the soft bottom that's near these places, where for whatever reason the crabs seem to come from, at least at certain times of the year.

That's basically what we're trying to do all the time and why this is so difficult, relative to the coral issue, because as we've said over and over and over again, we don't want to be on the coral and we don't want to be on the hard bottom, but that doesn't mean we don't want to be close to it and hopefully we can find out some way to be allowed near this stuff without doing -- We can be proven to be innocent, so to speak, as you're suggesting, so far as getting into this stuff.

If we could find some mechanism to do that, it would be enormously helpful, where we had trust on both sides, so that yes, we really are avoiding this stuff intentionally and we're capable of doing it and so let us in there. That's where we're trying to head.

Mr. Cupka: Bill, if I could ask you a question. When you all come back at the end of a soak period and start pulling your trawl, or your traps, if you've got crabs in there, will you reset in that area or do you go ahead and pick them up and move to an entirely different area or do you try and reset in the same general area or do you move out of that area? If you're catching crabs there, do you just -- Do you move or do you try and stay in that general area?

Mr. Rau: I move a lot, but not too far off it. If I hit crabs pretty good, I may move off a hundred feet, maybe, from where I was. You may be a quarter of a mile or an eighth of a mile of where I was, the same set, but sometimes that's not necessary to do that, because you'll come right back. I meant in distance, distance from the trawl.

Now, I have one spot south of here, which is not in the box, and it's mud bottom, totally mud bottom, but it's the most productive spot I've ever had. There's crabs there all the time and I fish pretty much that same area, moving off a little bit here and there, but there's always crabs. Every month of the year, I have crabs there. Why? I cannot tell you that.

Mr. Harris: How close are you when you're fishing that area to where you know coral resources are?

Mr. Rau: In that particular area, there is no coral, where I am down south.

Mr. Harris: None even within ten miles?

Mr. Rau: No, beyond that box, south of that box. I fish down there, too. That's not in right now. I guess they want to do that, but -- Those marks down in there. No, I have not found any coral and I've been out to 2,300 feet and there's nothing inside of that either.

Mr. Wallace: This is just to try to understand the fishery a little more. Do you pull a line this week and then another line next week or do you come in to the -- Have you got a set that you pull to where you're working every week on a different set or do you put it over and wait two weeks to go back to this one set and you do it all at one time and you basically have a two-week vacation until the next pull?

Mr. Rau: With the currents and the weather and having such a small boat, I pull four trawls a week, which is 200 traps. That takes me approximately three days, maybe four days, to haul that gear and then I'll go back. I have a total of 400 traps and so I'll pull 200 one week and I'll pull 200 the next week and so that gives you the two-week set.

Mr. Harris: Your trawl would regularly consist of more than five traps or is it always only five traps in a trawl?

Mr. Rau: No, fifty traps in a trawl.

Mr. Harris: Am I the only one that messed that up? I thought there were five traps in a trawl and it was always fifty?

Mr. Graves: Maybe it was five miles. Some of the trawls are five miles long, but they consist of forty or fifty traps, which is standard. One thing, just to comment, that's interesting is the whole fishery is here, basically. We're not sure how many permits are out. We think there's thirteen or eleven. We're not sure, because they've been traded back and forth, but you've got the whole fishery right here, which is a good thing, because there's not a lot of outside pressure or more comments. It's relatively small, but these gentlemen make a living and it's a good fishery. It's nice to be able to address the whole fishery.

Mr. Wallace: To that, I'm looking at -- I know the shrimp fishery and I can look at the ages of you guys and say that you've got a better fishery than the shrimp fishery, because our guys are much older than you all are. It's something that you're willing to develop, just based on your ages, while the shrimp fishery is getting much older.

Mr. Almeida: The reason why I haven't been doing much of any talking is because we're all pretty much the same method, same type of traps. I've got fifty traps per trawl. I have, I think, a total of five trawls, 250 pots, and our method is pretty much the same. We'll move five miles east and west, seasonal. We don't move every trip, but it's all pretty much the same.

Mr. Whipple: I picked up on the do we take a vacation after we haul a certain number of -- I've

got to address that. There are no vacations in this business. When we talk about -- It's very pertinent to this whole issue. It isn't going to take much in the way of disruption to put us in big trouble financially and don't get the idea that we're just having fun out there and it doesn't really matter what areas we have or how much of it we can deal with, because it sure does.

Also, I can't underscore too much that it's a developing fishery and we're all learning things everyday that we didn't know before. Some of these areas in the northern area -- You've been there how long, Howard, five years?

Anyway, I've been there only about two-and-a-half years, but that is relatively new. You say the fishery started when, 1995 maybe. You've got close to thirteen years or so and so that -- We haven't been fishing there all the time and I think all of us have been looking at the possibilities of doing better or whatever and the potential that's in the northern area.

That's why I think it's so important for everyone to understand that this isn't a fishery that's been established for fifty years and all the grounds are known and it's all taken up and people are working against each other to try to take best advantage of it. This is a different situation and it's particularly troublesome to me, as I've hopefully made clear, that there's a possibility that 71 percent of this area, where they're pretty well established there are crabs, may be shut down unless we have some creative solution to this, because nobody has established a precedent for being there.

It just seems to me inherently wrong to shut that down for that reason and I don't think that's the intent of anybody to make that kind of trouble and I hope that we can find some way to provide for the development of this fishery to continue.

Mr. Wallace: To me, as one of the newer council members, which I've been there four or five years, I guess, I've got a great education out of this. I'm sure with all the other council members that's onboard there's a lot of misconceptions about your fishery and the different things and I appreciate you all educating me on how you fish and where you fish and everything. It's been a good education, for me anyway.

Mr. Rau: Getting to the northern zone, it kind of bothers me, because recently I purchased a permit for the northern zone, with the plan on moving up to the Charleston area and running an operation out of there. I guess that was a bad call as it looks now. Anyway, Chip was going to run this operation down here, but if things go through the way they are, it doesn't look like this can go, because you're going to be closing all this area up there, according to what goes down.

Mr. Whipple: I have a northern permit, too, if you're wondering where some of them are, with exactly the same idea. Here we are.

Mr. Harris: When you say northern permit, what are we talking? Are we talking off Georgia and South Carolina or are we talking --

Mr. Whipple: 28 degrees latitude north, to the jurisdiction of the council.

Mr. Graves: At this time, there's nobody fishing in the southern zone. Robert, you're not fishing currently, are you? There's really no one deploying traps in the southern zone at all right now.

Mr. Palma: No.

Mr. Waugh: In terms of the discussions here as far as any recommendations, what the council did at the last meeting was tell us to defer any discussion of allowable fishing areas and VMS to the next FEP Comprehensive Amendment. From what you all are suggesting here, I can see where you all are leaning towards some allowable fishing within these areas.

The question I have is what about VMS? We've got a small number of vessels, on the order of three or four active vessels now, maybe a few more than that. A possible alternative would be to require 100 percent use of VMS and allow the golden crab fishery to fish within this area, these proposed areas.

That's not to say that that would be acceptable to everybody, but in terms of our analysis, if that's something that you all are interested in having looked at, it would be helpful to hear what you all's thoughts are at this time, so that we could work that into material that we would present to the council at March.

Mr. Rau: Would this be a study or -- This would be an observation that you would observe us, through this period, and then come back with findings?

Mr. Waugh: To me, a case could be built that the potential impacts from the golden crab fishery are relatively small, but there would be this concern that some fishermen would fish on the hard bottom and so if you required 100 percent use of VMS, we would monitor this fishery and collect better data on the habitat in these areas and perhaps down the road, further limit areas that you all could fish in or create areas where you could fish in, but the initial step would be to allow fishing within all of these areas, but with the VMS onboard, so that we would monitor and know where you're fishing.

Mr. Whipple: The only problem I have are the woes that were related to us yesterday about getting arrested if you twitch your eyebrow in the wrong place, but do they work, in the sense of can you distinguish between transit and drifting and what have you?

Mr. Wallace: To what Gregg was saying, basically the entire habitat is going to be open grounds to you all anyway. Correct me if I'm wrong, Gregg.

Mr. Waugh: That's the idea. Again, I'm saying this is an alternative that could be worked up. I'm not suggesting that it would be acceptable to the council, but that's an alternative, given that you have so few vessels and other than some historical fishing on hard bottom, what we're hearing now is that the industry no longer fishes on hard bottom.

A case could be made to initially allow golden crab to continue within all of these areas and monitor it very closely and then determine whether or not we need to further restrict it. Whether

that's acceptable to everybody in the long run, that's a whole other issue, but if that's something you all are interested in looking at, it would be helpful to know that now, so that we could work that up and present it to the council in March, for it to be included to go out to public hearing.

Mr. Wallace: To that, what he's -- Just because you have VMS onboard, there would be no legal action that could be taken against you, because you've got open access. All this VMS, at this point, would just be a monitoring tool to better understand your fishing grounds. There would be no legal action that could be taken against you, because everything is still open to you.

Mr. Waugh: The only one would be if you're -- When you leave the dock, you have to have that VMS operational. That's the one issue.

Mr. Whipple: On the face of it, it sounds fantastic. I just have a high level of ignorance about that process ad that's the only reservation I have, is ignorance on my part. He's obviously very informed, to say the least, and maybe I should ask you whether we should do this, but the idea that Gregg is talking about, in principle I think it's absolutely great.

Mr. Harris: If it's an open access fishery, it's simply a data collection tool. That's what VMS would be. There is another alternative too that the council may consider and that is that there would be some restrictions. There would be these HAPCs established and you would be carved out areas within HAPCs where you could deploy your gear. That's another option and the council has to look at a variety of different options when we're dealing with a fishery management plan.

Just to throw it on the table, you may be asked to show, in some kind of a box, where you're fishing and the rest of the HAPC may not be open access for the golden crab fishery or it could be. It's just another option that the council would probably consider.

Mr. Wallace: To that option, then there would be enforcement things that could happen to you that we had talked about. You would have to be careful as to where you were at any particular time, because the guy that's looking at you in the enforcement office cannot tell whether you're disabled or running against a twenty-five-knot wind. That's when the enforcement implications and hazards and complications all come into place, is if you are restricted to a certain area.

If it is complete open access, like Gregg had mentioned, then there would be no enforcement. It would strictly be a data collection, but when the allowable gear area zones come into play, then there's enforcement implications.

Mr. Whipple: What you gentlemen have contributed are exactly the kind of thing that I'm hoping to be alternatives to the original idea. I presume we don't have a huge amount of time. One of the things that I would want to do would be a very simple form to make sure -- I understand what you're saying and don't try to put it in legal words. I hear you, but I've learned over the years that a mutual understanding may not be quite as complete as people think.

I think if we can get fifteen, twenty, twenty-five words on paper expressing what you're suggesting as an option, it would be very helpful to us. Does that make any sense to you people?

There may be others, hopefully.

Mr. Waugh: We can do that. We can do that and have something to hand to you this afternoon, after lunch. We've also got some folks here who are going to make a presentation to the Deepwater Shrimp AP later this afternoon and we'll talk with them and see if we can get them to give a portion of that presentation so that you all have a chance to see what can be done with VMS, but we'll have this wording worked up and give to you after lunch.

The two alternatives would be that all the HAPC areas are open with required use of VMS and the second would be all HAPC areas with some allowable areas within those for golden crab fishing and required use of VMS. Of course, then another alternative that will be analyzed is no fishing in any of the HAPC areas.

Mr. Wallace: Gregg, you brought up the part of moving it to Amendment 2 and that essentially means that you are closed until Amendment 2 is finalized, if that's the purview of the council. That's one thing that you've got to make sure, that moving this to Amendment 2 does not close these fishermen out of that. What I'm trying to get is while you all may agree that this needs to be moved to another amendment, you've got to make sure that you've got the right to fish until the amendment is finalized.

Mr. Waugh: That's why we made it very clear what the council did at the last meeting. In my mind, what's happened here is that the advisory panel has pointed out that they need some consideration when this action is taken to establish the HAPCs and not in a future amendment and now that recommendation will be presented to the council in March and it's up to the committee and council to figure out how they're going to respond to that.

What we've heard is that if we go forward in the first FEP Comprehensive Amendment and just establish these areas, then that's going to put you guys out of business. It's up to the council now to decide whether we continue on that line or whether we consider the allowable area and VMS in the first FEP Comprehensive Amendment and not the second. This is new information, a response coming back from the AP to the committee and council.

Mr. Bethel: We can't help but be aware of the council's urgency and intent to protect the deepwater coral. I regret that we have not been able to hear from the coral people about their findings. However, from the video we saw yesterday, I did not see any obvious destruction or damage to the deepwater coral. My question is are there any documented threats that are actually occurring right now that are damaging this coral?

Mr. Waugh: Not to be facetious, but if you take a trap line and set it on top of the coral, you're going to damage it. I think we can all agree to that. That's the concern. Has that happened thus far? We don't have any documentation that it has, but again, what the council is trying to do is take action to protect these areas so that doesn't happen.

Mr. Bethel: I'm not being specific to the golden crab fishery, but I'm talking about any fishery. Have the coral people come back, the research scientists, and said this is happening to the coral right now and this guy is doing it?

Mr. Waugh: For Oculina, for the Oculina HAPC, yes.

Mr. Bethel: No, the deepwater coral. Is there an actual threat at this time to the deepwater coral?

Mr. Waugh: There's two things. Is there a threat? Yes, because you guys could damage the gear. Rock shrimp trawling in this area --

Mr. Bethel: Not possible threats, but I mean is there something going on that's damaging the deepwater coral?

Mr. Waugh: Have we documented anything yet?

Mr. Bethel: Yes.

Mr. Waugh: No. Again, the definition of precautionary management is you take action before something happens.

Mr. Whipple: I want to pick up for a minute on this going out of business line, which I'm sure you've all heard many times before. The history of this fishery will indicate that that's not idle talk. As I mentioned before, there have probably been as many as --

I would say probably, almost certainly, there have been as many as seventy-five different people over the period of fifteen or twenty years that have thought that they were going to do great things in this fishery and that includes some very capable fishermen from the Pacific Northwest, who everybody was worried about, properly, but how many of us are there? They're all sitting in this room. The mortality rate in this fishery is ninety-some percent and so it doesn't take much to give us big trouble is the point and that's actually fact and not fear.

Mr. Graves: Do we have any other recommendations from the panel or any other comments?

Mr. Bethel: I think that's what's happened here is the Coral Advisory Panel has presented both the council and the fishermen with a real dilemma with respect to this large area they are designating for protection. Here we have the golden crab fishery that is doing little or no harm to deepwater coral, yet faces virtual extinction if the proposed management plan is put into effect.

I feel the problem here lies totally with the method of management being proposed. I think the council should seriously question the Coral Advisory Panel's recommendations for such a large area of protection.

I think the council should be suspicious of a panel that strongly supports the designation of the entire C-HAPC as proposed and does not support designating portions of the whole. I think the council should be suspicious of a panel that tells them the proposed deepwater coral habitat should be adopted and implemented as soon as possible, due to solely speculative threats, such as potential energy development and imaginary emerging deepwater fisheries.

I think the council should be suspicious of a panel that recommends shifting other measures that may delay C-HAPC implementation into FEP Amendment 2. I think the council should realize that the Coral Advisory Panel's recommendations do not have enough scientific data basis. I recommend that the council totally reject the Coral Advisory Panel's recommendations to manage the deepwater coral with a 24,000-square-mile box that basically prohibits all fishing activity within the area.

I recommend the council take immediate action to protect the deepwater coral by the same method that they protect the shallow-water corals, that is to make it illegal to damage or possess all species of deepwater coral, and further, that all destructive activities be banned from areas of known coral findings. That's it and thank you.

Mr. Almeida: Five, six vessels that we have in the fishery, the council should consider it's a lot of money that we put in the economy and it's a people employed and it's a lot of fuel we burn and dockage and what have you. In two years, almost two years that I've been in it, I think I've just started to see the light. If I'm going to be forced to move, not knowing where to go and pretty much start over, looking for new ground, I don't think I'll stay in it anymore. It will probably be one less vessel in the fleet.

Mr. Graves: Gregg, let me ask you, we are going to try and reconvene in a couple of weeks? Do we want to pick a date now or --

Mr. Waugh: I think if we get you all's information within a week that we'll put this together and once we determine that we've got all the information and then we can contact you all -- I need to touch base with Bob Mahood, who is our Executive Director, and figure out how we handle this cost-wise, whether several of us come down and meet with you all, but we need to get this information refined before the March meeting and we will certainly do that.

The sooner we get these additional detailed information from you all and what we're going to do too is pursue getting -- We've got some information from scientists that we have not been provided yet and so we will have to get that from them and get clearance from the information that we have that we can release it.

I think it would be better to wait until we are sure we have that common platform that we're talking about and probably the easiest thing would be for several of us to come down and meet with you all prior to the March meeting, but I think it's best for us to get back with you once we have that common platform, but just know that we will do that prior to the March meeting.

Mr. Graves: It would be most important, I think, if we could get the data just prior to the meeting, instead of coming into the meeting and then looking at it. If we had a couple of days to kind of digest it, it would be helpful for everybody.

Mr. Waugh: Our intent, and I was discussing this with Myra earlier, is the same software capabilities that she's projecting this. It will have all you all's information in there and you will be able to cursor around and see what the latitude and longitude is and measure distance in miles. We will try to get all of that capability on a CD and get that CD to you all and you'll be able to

access it on a computer and get that to you prior to the meeting.

Mr. Whipple: That would be great. Remember we do go fishing and so just two or three days may not do it.

Mr. Waugh: That was part of the reason too for meeting in part over a weekend. From our perspective, we would certainly be willing to do that with you all. It will be at your convenience, but I think the pressure is on both of us, you all to get the information to us and then us to flip it around and then for us to meet prior to March.

Even though it seems like this is on a very fast track, it has been under development for quite a while and there's a lot of pressure on the council to move forward and so it won't be any fault of ours that we don't have this ready before the March meeting, because I know with the council members here that it would be unfortunate if we were to come to the March meeting without this issue resolved.

Maybe that's all we can do now. I will work on this wording of the alternatives, so you all have something to take away in your hand, but when we come back at 1:30 this afternoon -- We've got a session from 1:30 to 3:00 and we will talk with Tom Jamir, from the Southeast Fisheries Science Center, to try and get him to talk about the VMS information this afternoon and maybe not in the level of detail that he's going to do later with the Deepwater Shrimp, but at least give you all an idea of how that system works and then this afternoon, we've got John Reed.

He will be here and he's the one that's made a lot of these dives. We may rearrange this agenda some to just focus on those two individuals. We can cover a lot of this other stuff that's on here with the Deepwater Shrimp AP.

The other thing you all want to talk about then, when you all are around the table, is any potential gear overlap in the areas. I would think those are the three things to make sure and address while you all are still here, is see what VMS information we can get, have John Reed talk to both of you all and share that information, and then you all talk about any gear overlap. I'll have that wording to hand out when you all come back from lunch. We'll also have that table showing the latitude and longitude in degrees, minutes, and seconds.

Mr. Graves: No more comments or questions? If not, we're going to go ahead and adjourn.

(Whereupon, the meeting adjourned at 11:45 o'clock a.m., January 28, 2008.)

Certified By: _____ Date: _____

Transcribed By:
Graham Transcriptions, Inc.
February 26, 2008

The Council staff consists of seventeen full-time employees who work at Council headquarters in Charleston, South Carolina. Staff provides support to the Council through administrative services, as well as the review and preparation of fishery management plans and documents. Staff members also provide information and education services to the public.

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PLEASE SIGN IN

So that we will have a record of your attendance at each meeting and so that your name may be included in the minutes, we ask that you sign this sheet for the meeting shown below.

Golden Crab Advisory Panel Meeting
Cape Canaveral, FL
Sunday, January 27, 2008

NAME & ORGANIZATION	AREA CODE & PHONE NUMBER	P.O. BOX/STREET CITY, STATE & ZIP
Nuno Almeida (F.V. Lady Helena)	401-641-5616	West Palm Beach FL 33413
Donny St. Amand (Lady Helena)	772-233-2465	Port Saint Lucie Fl 34952
Gary Graves Keys Fisheries	305-743-6727	3390 Coconut A - Marathon FL
UNION BETHEL	954 9649181	4671 S.W. 35th AVE FT. LAUD. FL 33312
HOWARD [illegible]	954-612-3176	1673 NE 36th ST OAKLAND PK FL 33334
Russell Manchester	9546329492	640 SW. 8th TERR Ft Laud Fl 33315
Catherine Stolk	954 931-5317	820 SW 13 St Ft. Laud. 33315
John Williams SSA	727 934-5096	PO Box 1577, Tarpon Springs, FL 34688
Bill Whipple Nelson Golden Crab	954-850-5330	4301 SW 44th Ave, Fort Lauderdale, FL 33314

South Atlantic Fishery Management Council
4055 Faber Place Drive, Suite 201
North Charleston, SC 29405
843-571-4366 or Toll Free 866/SAFMC-10

PLEASE SIGN IN

So that we will have a record of your attendance at each meeting and so that your name may be included in the minutes, we ask that you sign this sheet for the meeting shown below.

Golden Crab Advisory Panel Meeting
Cape Canaveral, FL
Monday, January 28, 2008

NAME & ORGANIZATION	AREA CODE & PHONE NUMBER	P.O. BOX/STREET CITY, STATE & ZIP
SUFFY BAUMANN, OCEANA	202-467-1938	2501 M ST. NW, SUITE 300 WASHINGTON, DC 20001
Margot Stiles, Oceana	202-833-3900	
Danny Skinard (Lady Helena)	772-233-2465	
Nuno Almeida (Lady Helena FV)	401 641 5616	W PB FL
UNION BETHEL	954 9649181	4671 S.W 35 AVE FT. LAUD FL 33312
Nielsen Golden Crab	954 850 5330	4301 SW [illegible] FT Lauderdale FL 33314
HOWARD RAU	954 612-3176	1673 NE 36 St Oakland P 33334
RICHARD VENDETTI	912 222 8796	PO Box 1781 Brunswick GA 31520
ROBERT Palma	305 481 0235	FL Keys

South Atlantic Fishery Management Council
4055 Faber Place Drive, Suite 201
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Golden Crab Advisory Panel Meeting
Cape Canaveral, FL
Monday, January 28, 2008

NAME & ORGANIZATION	AREA CODE & PHONE NUMBER	P.O. BOX/STREET CITY, STATE & ZIP
Bob Jones - SFA	850/224-0612	Tallahassee, FL
David Gautier	228-497-6655	P.O. Box 1090 Pascagoula MS
Warren Gautier	228-623-2543	" " " " "
Tom Jamir	SEFSC	

South Atlantic Fishery Management Council
4055 Faber Place Drive, Suite 201
North Charleston, SC 29405
843-571-4366 or Toll Free 866/SAFMC-10

lat_DD	lon_DD	lat_DEG	Lat_DM	lon_DEG	lon_DM
Cape Lookout					
34.17389	-75.97891	34	10.43310	-75	58.73442
34.41030	-75.75295	34	24.61812	-75	45.17706
34.35068	-75.69019	34	21.04050	-75	41.41116
34.09648	-75.91510	34	5.78850	-75	54.90576
Cape Fear					
33.53929	-76.54396	33	32.35764	-76	32.63730
33.64693	-76.49212	33	38.81550	-76	29.52720
33.60251	-76.39357	33	36.15030	-76	23.61390
33.49705	-76.43856	33	29.82276	-76	26.31366
Savannah/Stetson and East Florida Lithoherms					
25.35119	-79.70463	25	21.07140	-79	42.27780
25.35319	-80.02679	25	21.19140	-80	1.60740
26.72004	-79.80998	26	43.20240	-79	48.59880
28.20689	-79.79853	28	12.41340	-79	47.91180
29.69600	-80.14226	29	1781.76000	-80	8.53560
30.60020	-79.98676	30	36.01200	-79	59.20560
31.46714	-79.54985	31	28.02840	-79	32.99100
32.13322	-78.93395	32	7.99320	-78	56.03700
32.64175	-77.56829	32	38.50500	-77	34.09740
32.64201	-77.27093	32	38.52060	-77	16.25580
31.39274	-77.27415	31	23.56440	-77	16.44900
31.39254	-78.99668	31	23.55240	-78	59.80080
30.05358	-78.99687	30	3.21480	-78	59.81220
28.28730	-79.00284	28	497.23800	-79	0.17040
27.88286	-79.47667	27	52.97160	-79	28.60020
Pourtales Terrace					
24.25098	-81.13125	24	15.05856	-81	7.87470
24.49557	-80.82925	24	29.73444	-80	49.75506
24.71445	-80.59756	24	42.86724	-80	35.85348
24.85219	-80.46623	24	51.13128	-80	27.97380
24.78838	-80.38554	24	47.30268	-80	23.13246
24.62929	-80.52212	24	37.75734	-80	31.32708
24.56175	-80.57315	24	33.70506	-80	34.38876
24.34286	-80.72696	24	20.57154	-80	43.61760
24.18272	-80.97111	24	10.96320	-80	58.26636

Alternatives resulting from the Golden Crab AP meeting that are to be developed for the March Council meeting:

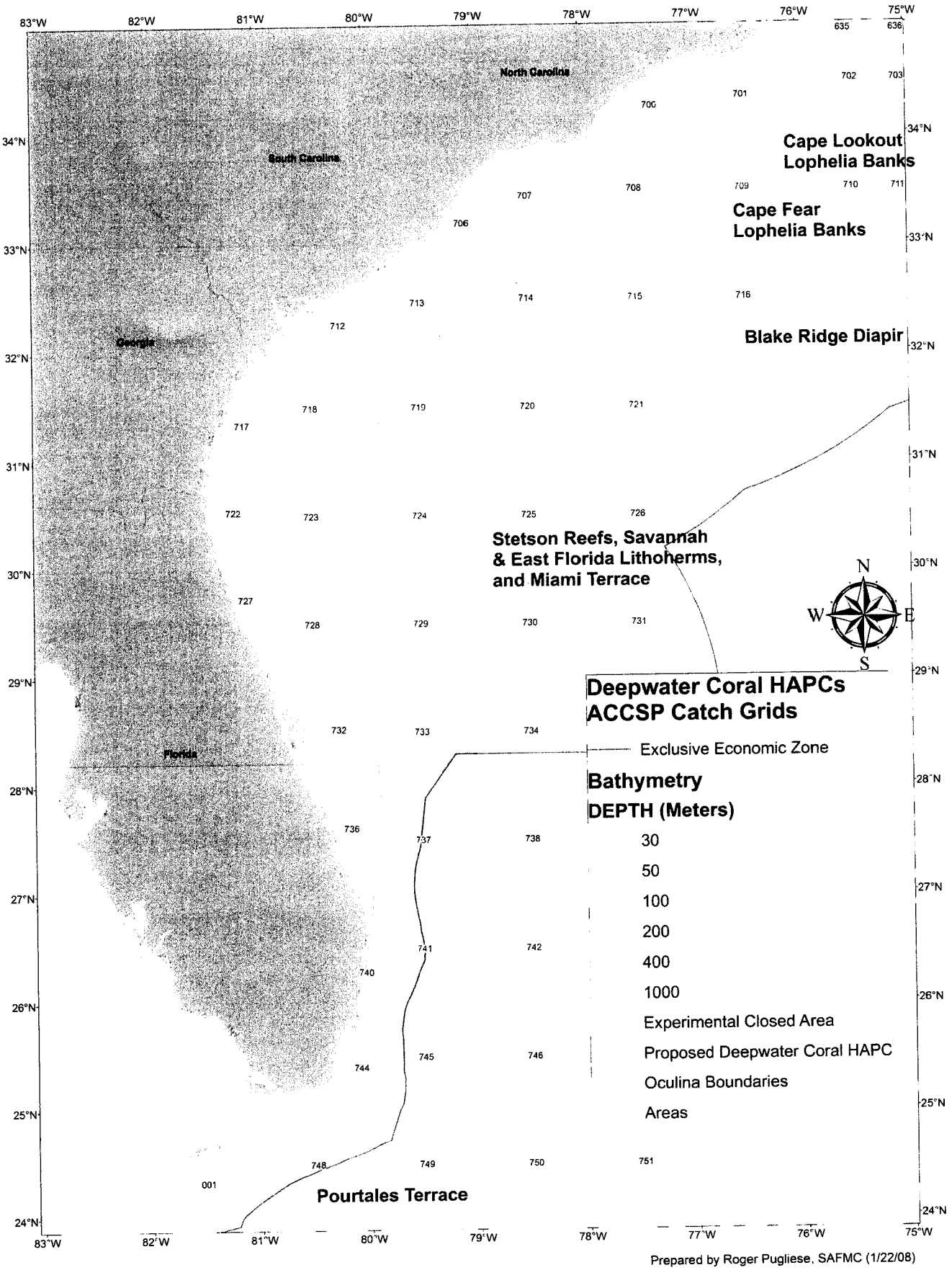
1. No golden crab fishing within all the Coral HAPC areas. This alternative would prohibit any fishing for golden crab within the proposed Coral HAPC areas. The Golden Crab AP has indicated that this alternative would eliminate the golden crab industry.

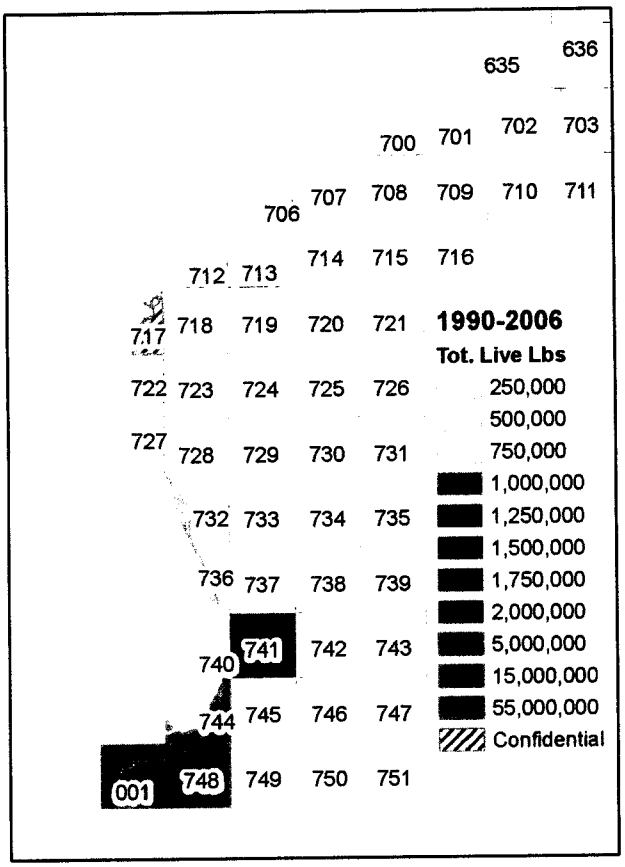
- Establish a network of deepwater coral Habitat Areas of Particular Concern (C-HAPC). In the deepwater coral HAPCs, no person may:
    a) Use a bottom longline, trawls (mid-water and bottom), dredge, pot or trap;
    b) If aboard a fishing vessel, anchor, use of an anchor and chain, or use a grapple and chain;
    c) Possess any species regulated by the coral FMP; and
    d) Fish for golden crab in designated areas without an approved VMS.

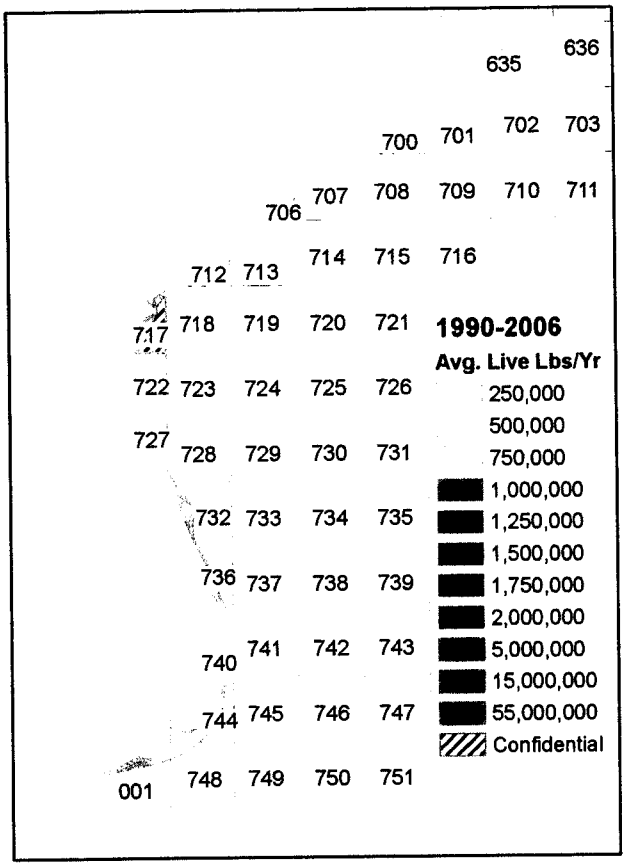
2. Create some allowable areas for golden crab fishing within the HAPCs with required use of VMS. This alternative would establish the proposed C-HAPCs but would create a number of areas within these areas where golden crab fishing would be allowed. All golden crab vessels would be required to use VMS on all trips. The remaining fishermen that have not provided fishing location information will provide this data to Myra Brouwer, SAFMC Staff. Council staff will plot all the fishing location information on the charts showing detail bathymetric data, all habitat/coral data, all dive locations, etc. Council staff will provide this information on a CD to golden crab fishermen prior to meeting with them to assist in identifying allowable golden crab areas. This information is to be completed in time to provide to the Council by their March 3-7, 2008 meeting.

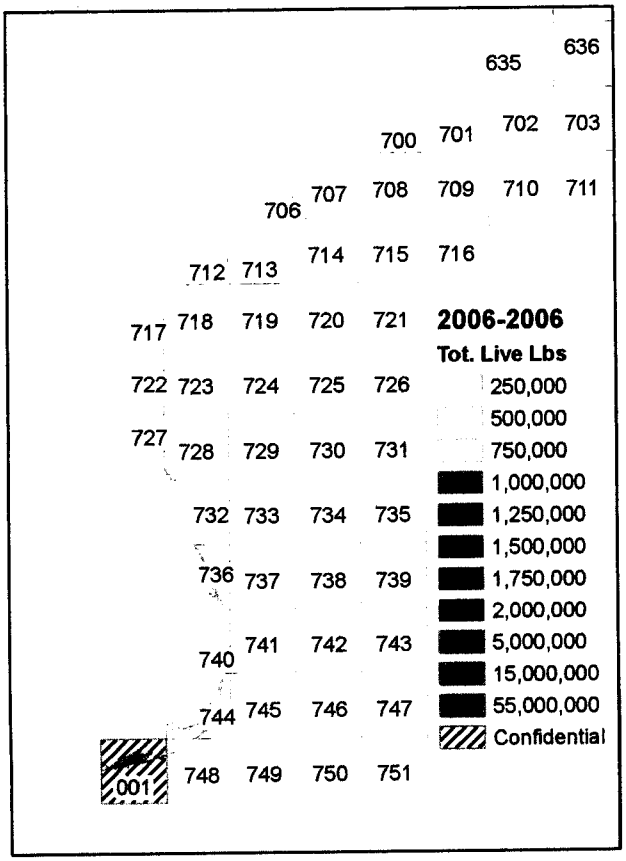
   VMS would be required and enforcement actions could be taken if the vessel is fishing outside of the allowable areas.

3. All HAPC areas open with required use of VMS. This alternative would allow golden crab fishing within all the proposed C-HAPC areas. VMS would be required on all trips and enforcement actions could be taken if the vessel is fishing without the VMS being operational.


North Carolina
South Carolina
Georgia
Florida
Cape Lookout
Lophelia Banks
Cape Fear
Lophelia Banks
Blake Ridge Diapir
Stetson Reefs, Savannah
& East Florida Lithoherms,
and Miami Terrace
Pourtales Terrace
N
W
E
S
Deepwater Coral HAPCs
ACCSP Catch Grids
Exclusive Economic Zone
Bathymetry
DEPTH (Meters)
30
50
100
200
400
1000
Experimental Closed Area
Proposed Deepwater Coral HAPC
Oculina Boundaries
Areas
Prepared by Roger Pugliese, SAFMC (1/22/08)



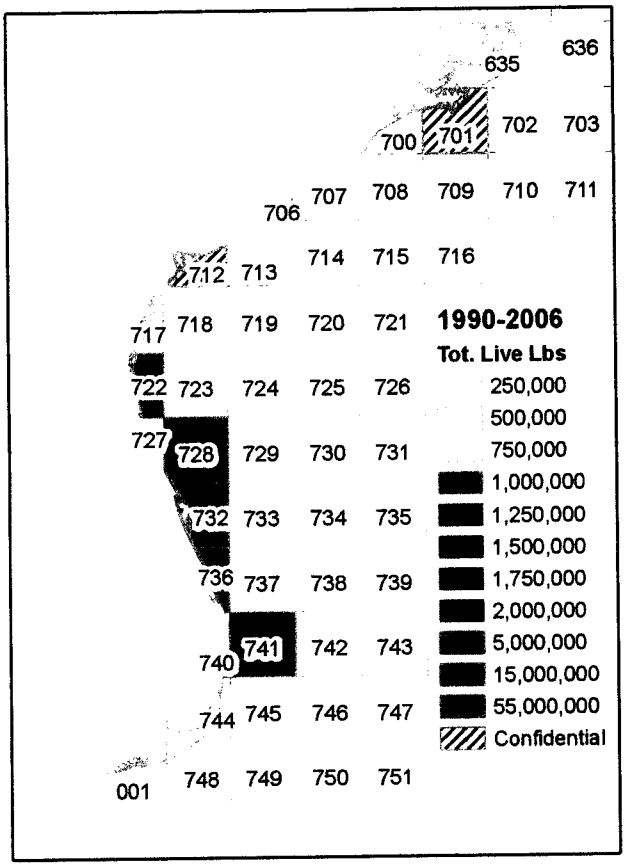


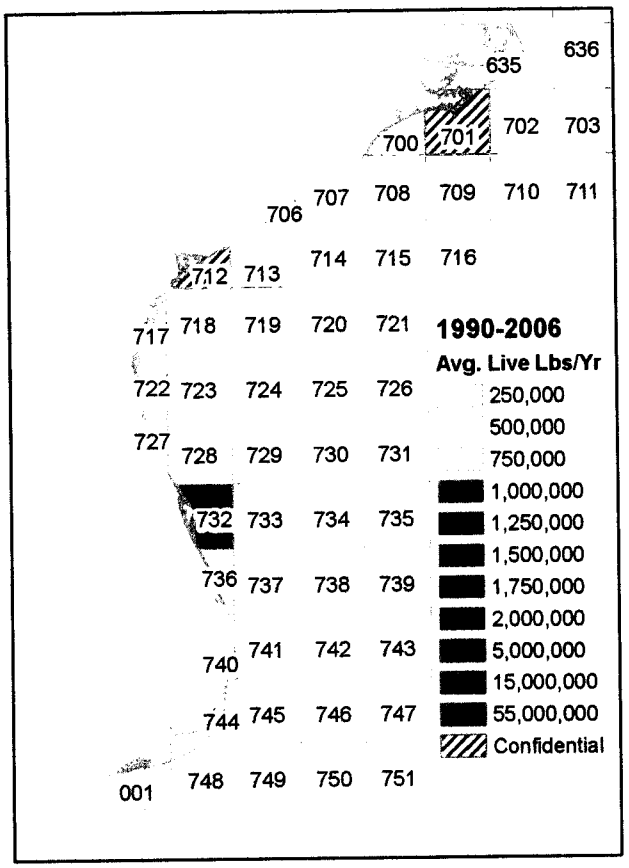


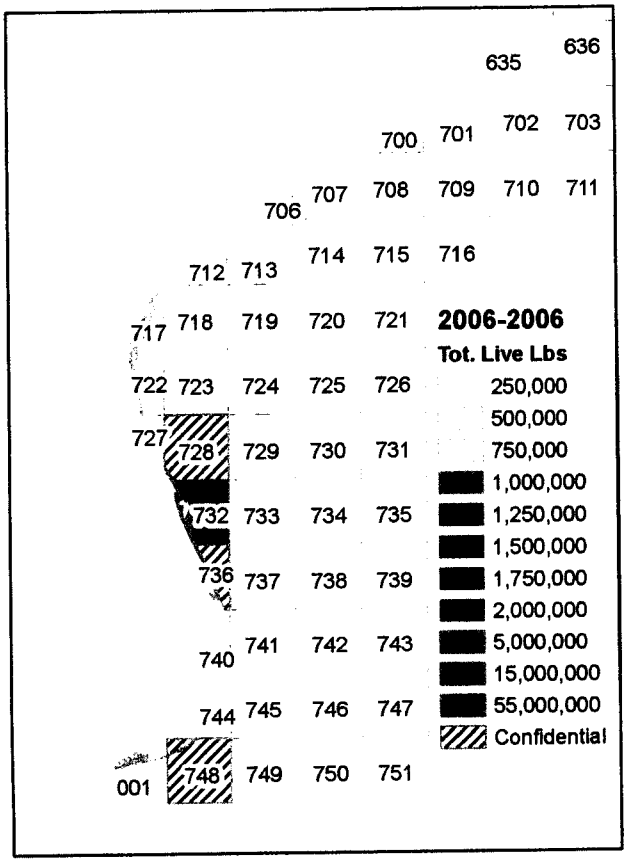
Golden Crab Logbook Catch
1990-2006
Pounds in Thousands

Area	Tot. 1990-2006	Avg. 1990-2006	Tot. 2006
001	957.21	56.31	Conf.
717	Conf.	Conf.	0.00
728	36.81	2.17	5.15
732	74.75	4.40	0.00
736	21.08	1.24	21.08
741	1,178.92	69.35	259.31
744	3,164.60	186.15	212.75
748	945.07	55.59	0.00

Source: ACCSP



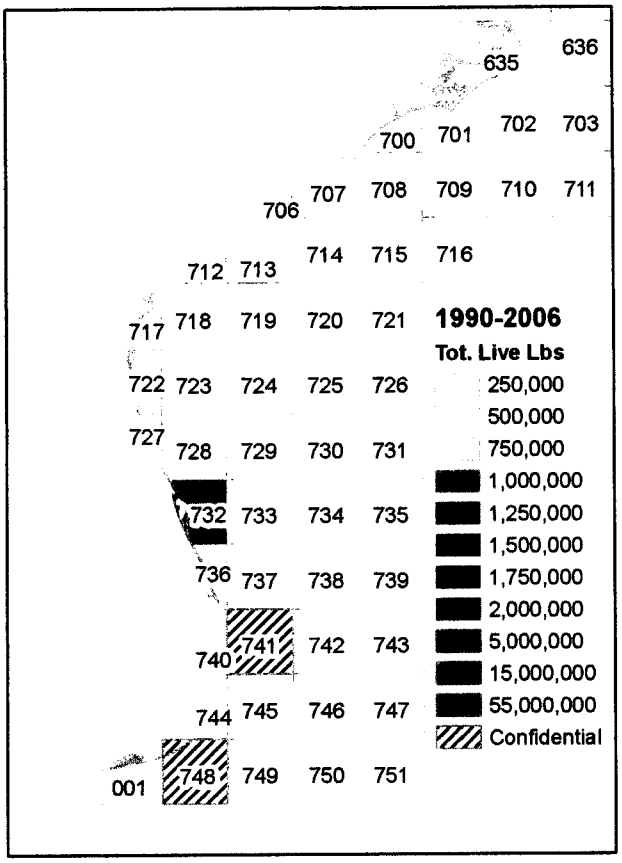


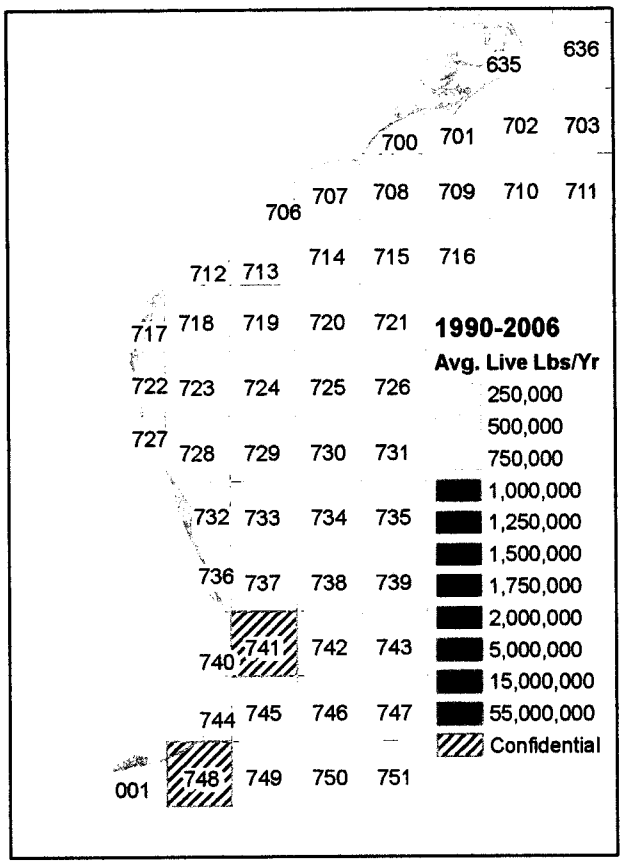


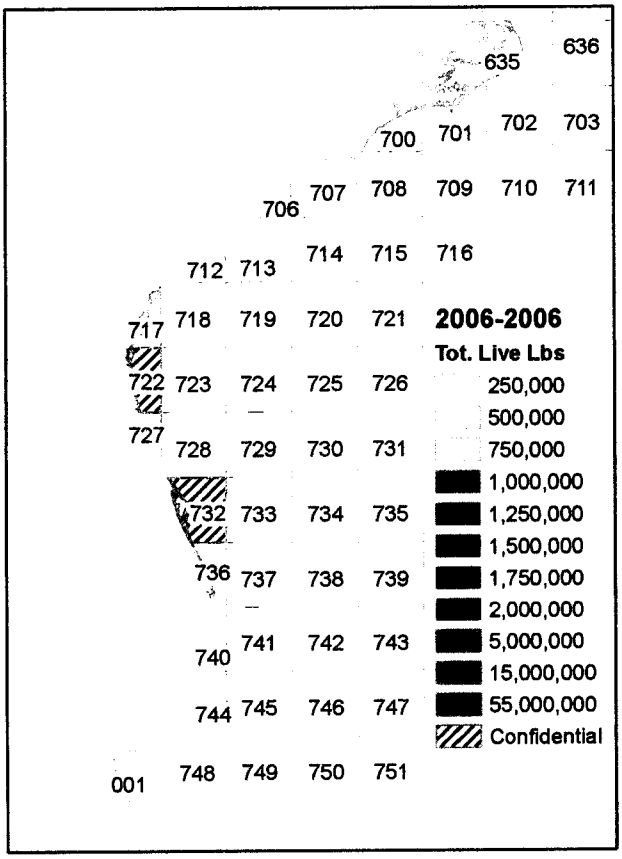
Rock Shrimp Logbook Catch
1990-2006
Pounds in Thousands

Area	Tot. 1990-2006	Avg. 1990-2006	Tot. 2006
001	360.75	21.22	13.12
635	9.89	0.58	0.00
700	0.11	0.01	0.00
701	Conf.	Conf.	0.00
712	Conf.	Conf.	0.00
717	293.92	17.29	155.34
722	2,427.36	142.79	445.66
728	2,143.15	126.07	Conf.
732	50,289.93	2,958.23	2,307.82
736	11,121.82	654.22	Conf.
741	2,776.69	163.33	0.00
744	10.89	0.64	0.00
748	76.84	4.52	Conf.

Source: ACCSP



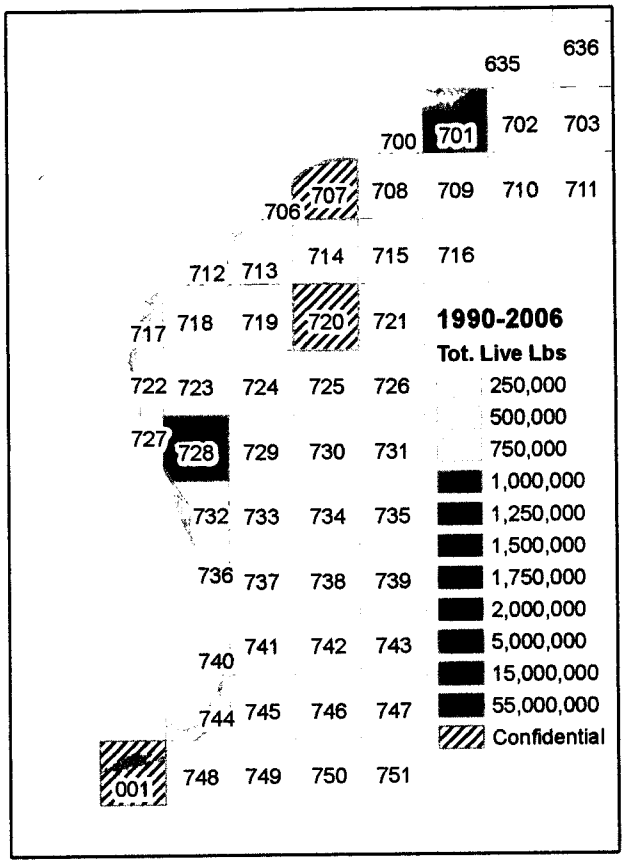


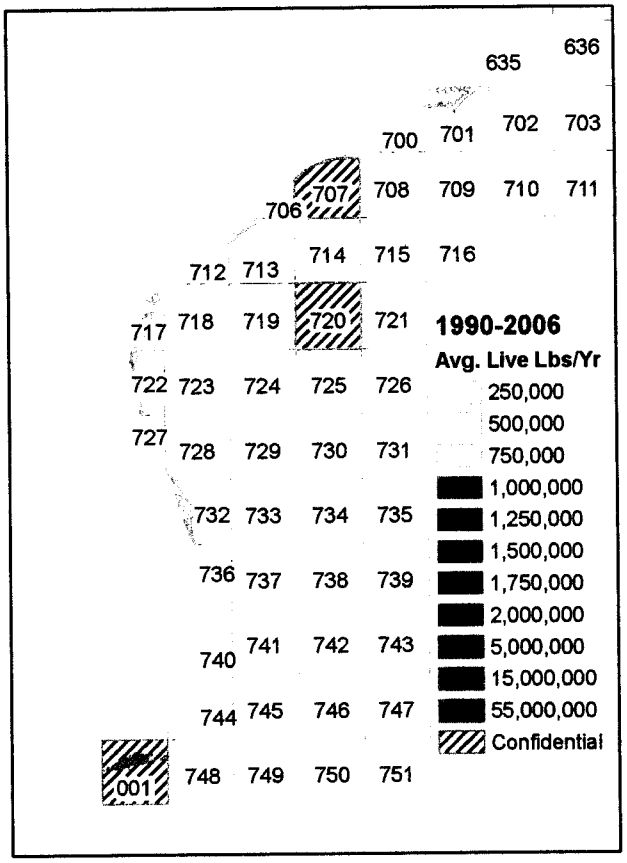


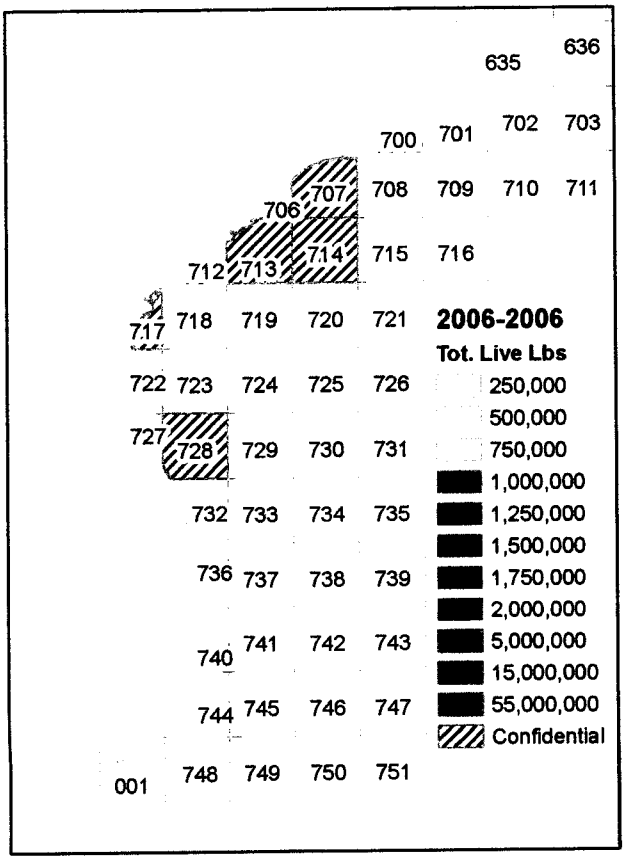
Royal Red Shrimp Logbook Catch
1990-2006
Pounds in Thousands

Area	Tot. 1990-2006	Avg. 1990-2006	Tot. 2006
001	211.48	12.44	0.00
635	66.30	3.90	65.48
700	2.68	0.16	2.68
701	17.19	1.01	17.19
707	0.57	0.03	0.57
717	8.75	0.51	1.32
722	611.27	35.96	Conf.
728	301.52	17.74	0.00
732	1,188.18	69.89	Conf.
736	504.13	29.65	62.96
741	Conf.	Conf.	0.00
748	Conf.	Conf.	0.00

Source: ACCSP







Wreckfish Logbook Catch
1990-2006
Pounds in Thousands

Area	Tot. 1990-2006	Avg. 1990-2006	Tot. 2006
001	Conf.	Conf.	0.00
701	926.54	54.50	0.00
707	Conf.	Conf.	Conf.
713	100.41	5.91	Conf.
714	122.07	7.18	Conf.
717	96.52	5.68	Conf.
720	Conf.	Conf.	0.00
722	241.88	14.23	0.00
728	2,295.81	135.05	Conf.
732	33.00	1.94	0.00
741	0.22	0.01	0.00
744	0.03	0.00	0.00

Source: ACCSP

Lat_deg	lat_min	lat_sec	lon_deg	lon_min	lon_sec
Cape Lookout					
34	10	25.98	-75	58	44.04
34	24	37.08	-75	45	10.62
34	21	2.46	-75	41	24.66
34	5	47.34	-75	54	54.36
Cape Fear					
33	32	21.48	-76	32	38.22
33	38	48.96	-76	29	31.62
33	36	9.00	-76	23	36.84
33	29	49.38	-76	26	18.84
Savannah/Stetson and East Florida Lithoherms					
25	21	4.26	-79	42	16.68
25	21	11.46	-80	1	36.42
26	43	12.12	-79	48	35.94
28	12	24.78	-79	47	54.72
29	17	49.08	-80	8	32.16
30	36	0.72	-79	59	12.36
31	28	1.68	-79	32	59.46
32	7	59.58	-78	56	2.22
32	38	30.30	-77	34	5.82
32	38	31.26	-77	16	15.36
31	23	33.84	-77	16	26.94
31	23	33.12	-78	59	48.06
30	3	12.90	-78	59	48.72
28	49	43.44	-79	0	10.20
27	52	58.32	-79	28	36.00
Pourtales Terrace					
24	15	3.54	-81	7	52.50
24	29	44.04	-80	49	45.30
24	42	52.02	-80	35	51.18
24	51	7.86	-80	27	58.44
24	47	18.18	-80	23	7.92
24	37	45.42	-80	31	19.62
24	33	42.30	-80	34	23.34
24	20	34.32	-80	43	37.08
24	10	57.78	-80	58	15.96

Golden Crab AP (1/27-28/08)

Chip Bethel – is the science sufficient to move forward? Given that most of golden crab fishery falls within these areas, adoption of the proposed areas would cripple the golden crab fishery. Problem with method of management – Council should question the size of the area. Potential threats are not sufficient for such large actions. Consider not deferring action to FEP Amendment 2 due to impacts on golden crab fishery. Recommend reject the Habitat & Coral APs recommendation. Recommend making it illegal to harvest/possess deepwater corals; ban all destructive gear in areas of known coral abundance.

Bill Whipple – adoption of the proposed HAPC areas could possibly result in the destruction of the golden crab industry. Agree need to protect coral but what is sensible way to do this? We need the common platform for sharing information that will lead to solutions. Find a way to not close the entire area and still protect the coral.

Howard Rau – if allow certain areas within the proposed HAPCs and not allow them to move around, then put me out of business. Jupiter north, pattern starting to emerge with areas of high relieve showing the majority of coral areas. Maybe a corridor could be set up between the coral areas for golden crab fishing. Don't fish on hard bottom, stay away from that type of bottom.

Gary Graves – fishermen look for soft bottom not hard bottom. The industry is willing to carry scientists, Council members, etc. so document how/where fishing.

Nuno Almeida – just getting feet under him and if need to move, then he will probably not continue in the fishery.

Alternatives resulting from the Golden Crab AP meeting that are to be developed for the March Council meeting:

1. No golden crab fishing within all the Coral HAPC areas. This alternative would prohibit any fishing for golden crab within the proposed Coral HAPC areas. The Golden Crab AP has indicated that this alternative would eliminate the golden crab industry.

- Establish a network of deepwater coral Habitat Areas of Particular Concern (C-HAPC). In the deepwater coral HAPCs, no person may:
    a) Use a bottom longline, trawls (mid-water and bottom), dredge, pot or trap;
    b) If aboard a fishing vessel, anchor, use of an anchor and chain, or use a grapple and chain;
    c) Possess any species regulated by the coral FMP; and
    d) Fish for golden crab in designated areas without an approved VMS.

2. Create some allowable areas for golden crab fishing within the HAPCs with required use of VMS. This alternative would establish the proposed C-HAPCs but would create a number of areas within these areas where golden crab fishing would be allowed. All golden crab vessels would be required to use VMS on all trips. The remaining fishermen that have not provided fishing location information will provide this data to Myra Brouwer, SAFMC Staff. Council staff will plot all the fishing location information on the charts showing detail bathymetric data, all habitat/coral data, all dive locations, etc. Council staff will provide this information on a CD to golden crab fishermen prior to meeting with them to assist in identifying allowable golden crab areas. This information is to be completed in time to provide to the Council by their March 3-7, 2008 meeting.

   VMS would be required and enforcement actions could be taken if the vessel is fishing outside of the allowable areas.

3. All HAPC areas open with required use of VMS. This alternative would allow golden crab fishing within all the proposed C-HAPC areas. VMS would be required on all trips and enforcement actions could be taken if the vessel is fishing without the VMS being operational.

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National Marine Fisheries Service
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VMS Analysis of South Atlantic Shrimp Vessels in Relation to Proposed HAPC

Joint Deepwater Shrimp & Golden Crab AP Meeting
South Atlantic Fishery Management Council
Radisson Resort at the Port
Cape Canaveral, FL 32920

January 2008

Dr. Tom Jamir and Carlos Rivero

VMS Tracks for All Vessels

Key Deficiencies:

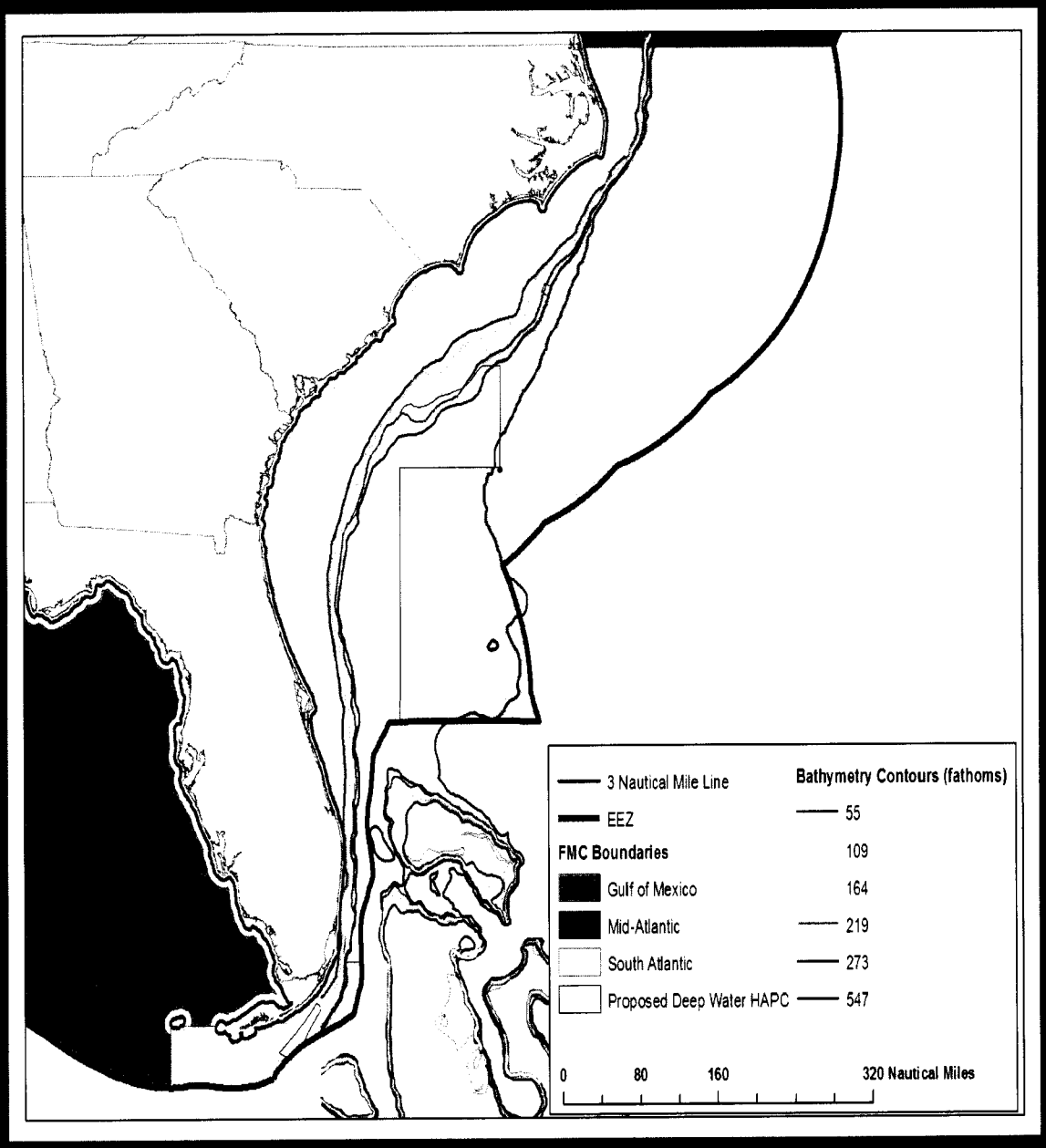
- VMS tracks overlap, muddling useful information
- Cannot discriminate fishing from non-fishing activities (e.g., transit, gear adjustments, drifting, etc.)
- Does not provide information useful to decision makers

What the Science Center Delivered:

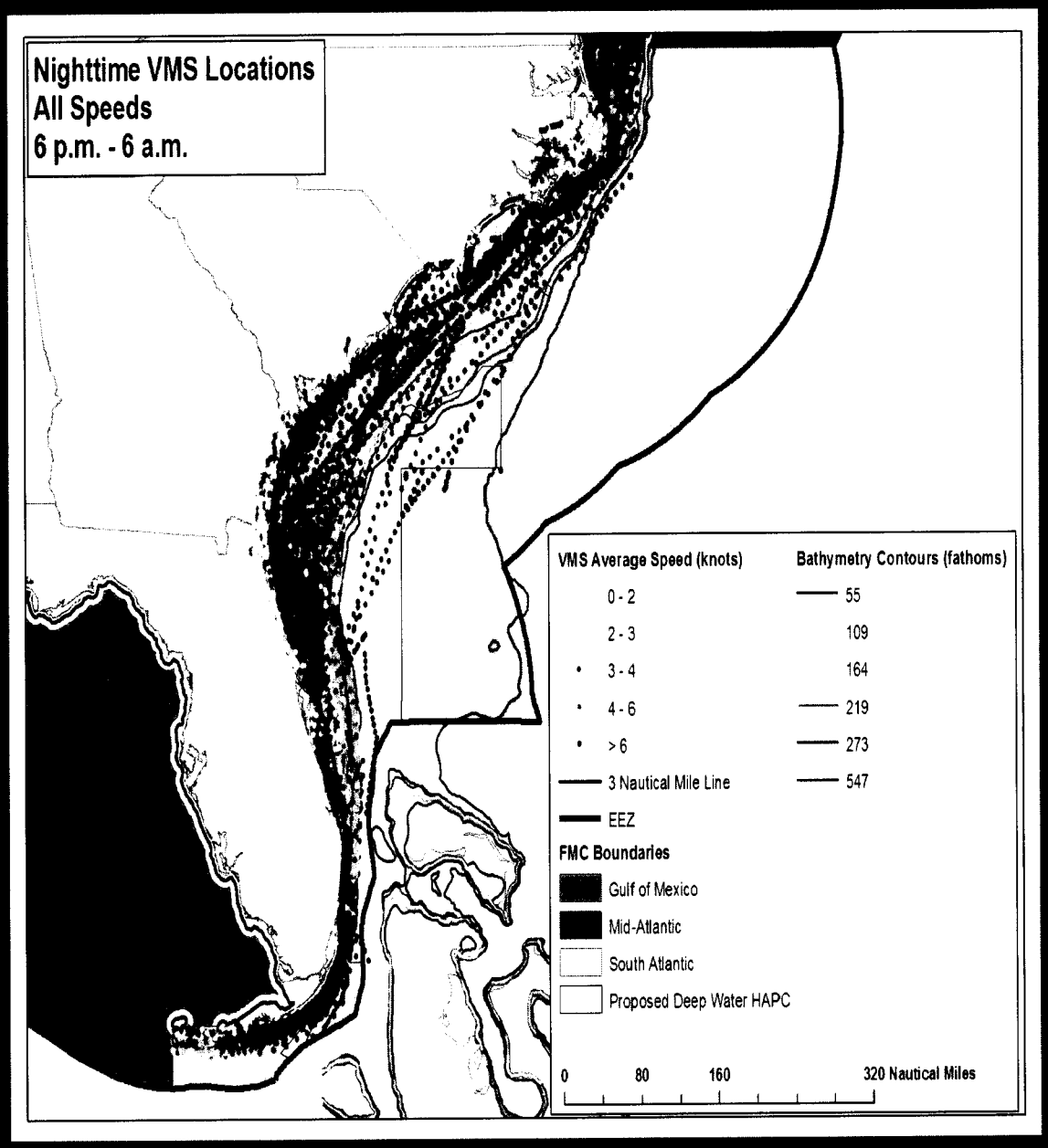
Developed Base Map & Templates:

- Screened for data errors & transferred into Microsoft Access Database format for ease & speed of querying.
- Compared & geo-synchronized base map with SAFMC & independent industry GIS maps.
- Incorporated bathymetric data & extracted best estimate of depth for each VMS point.
- Sorted probable fishing vs. other non-fishing activities based on vessel speed statistics.
- Incorporated boundaries of proposed HAPCs, EEZ/SAFMC & State waters.

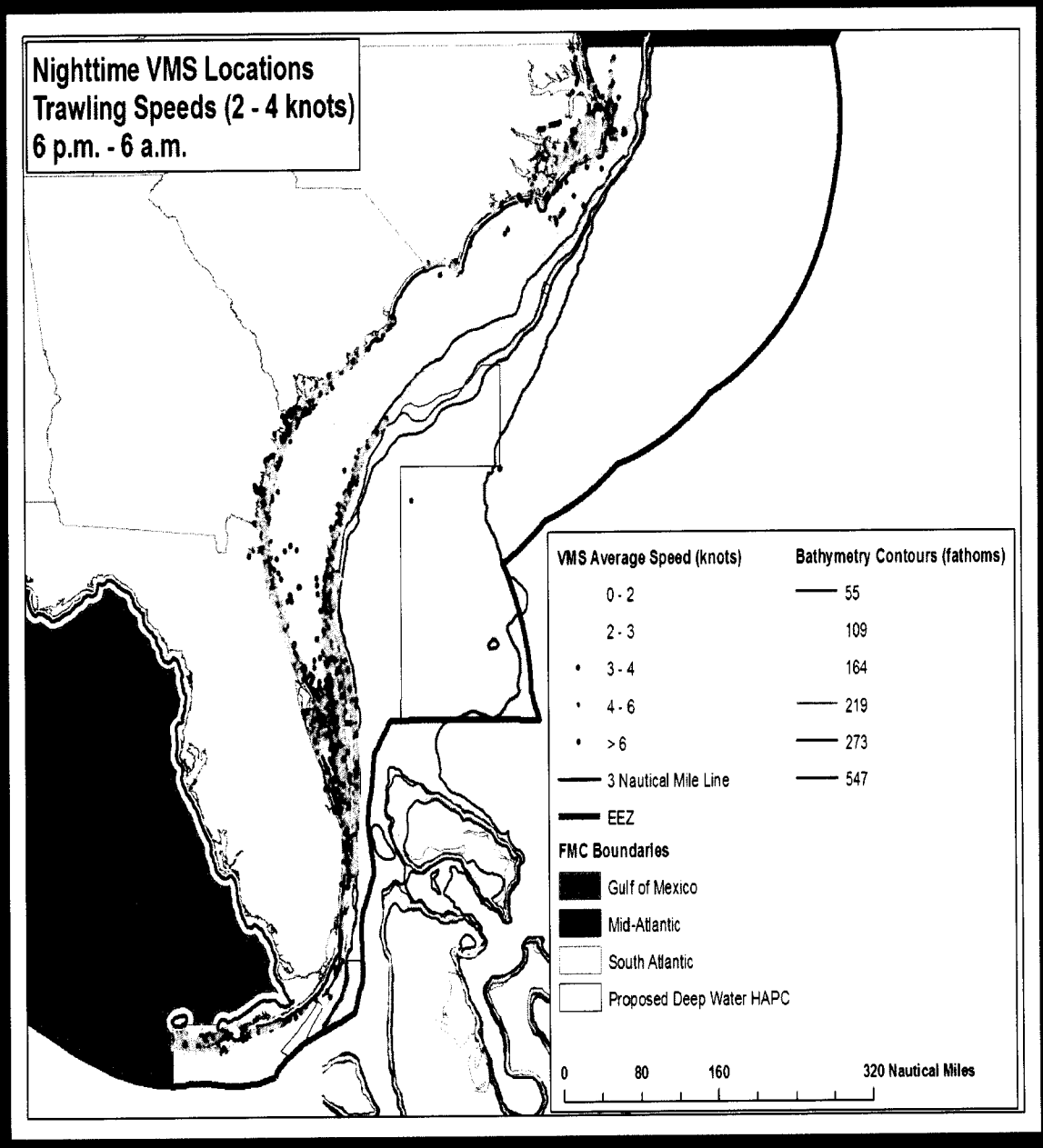
Base Map (with bathymetry & boundaries added)



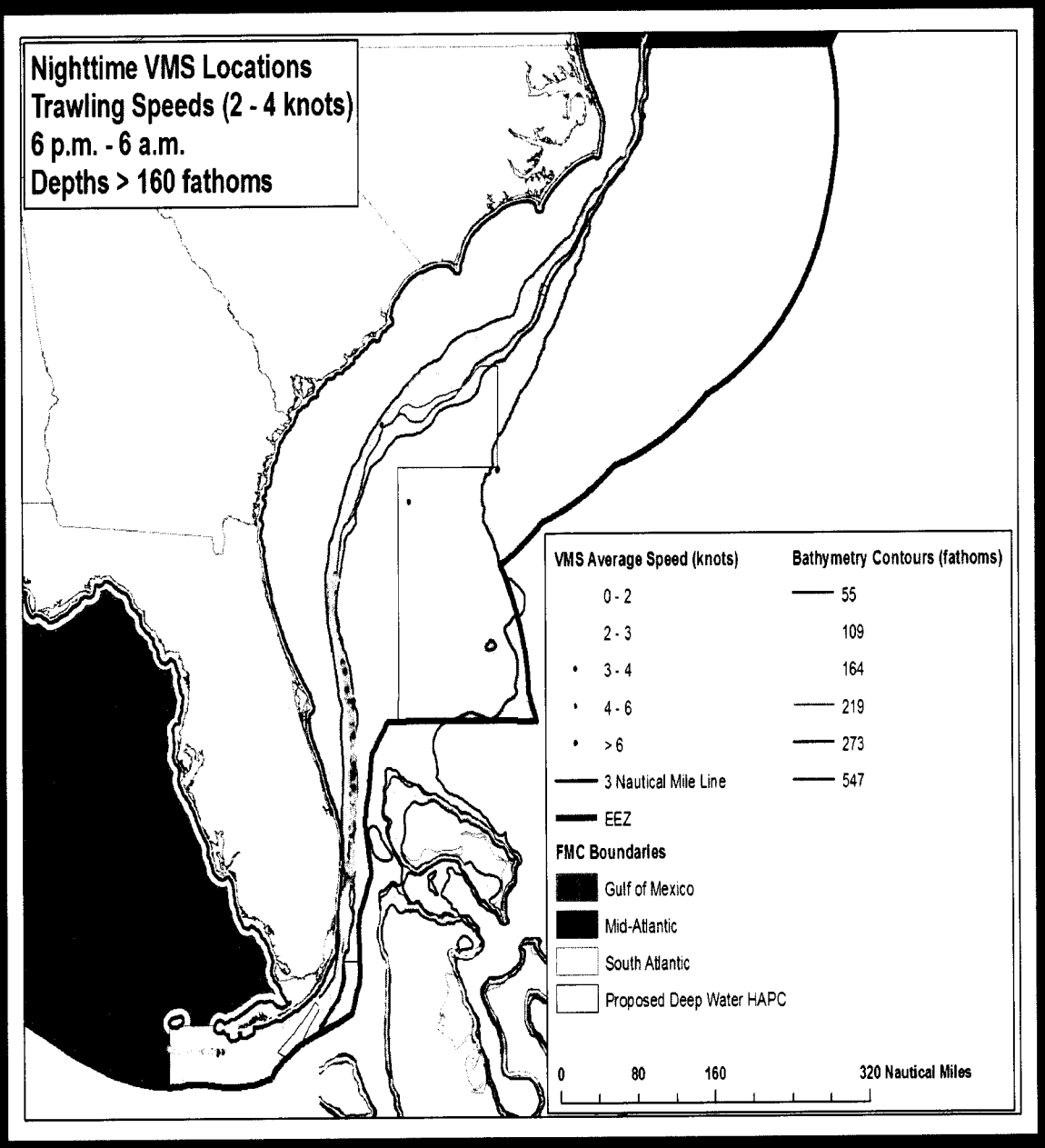
All Vessel VMS Tracks (nighttime, all speeds)



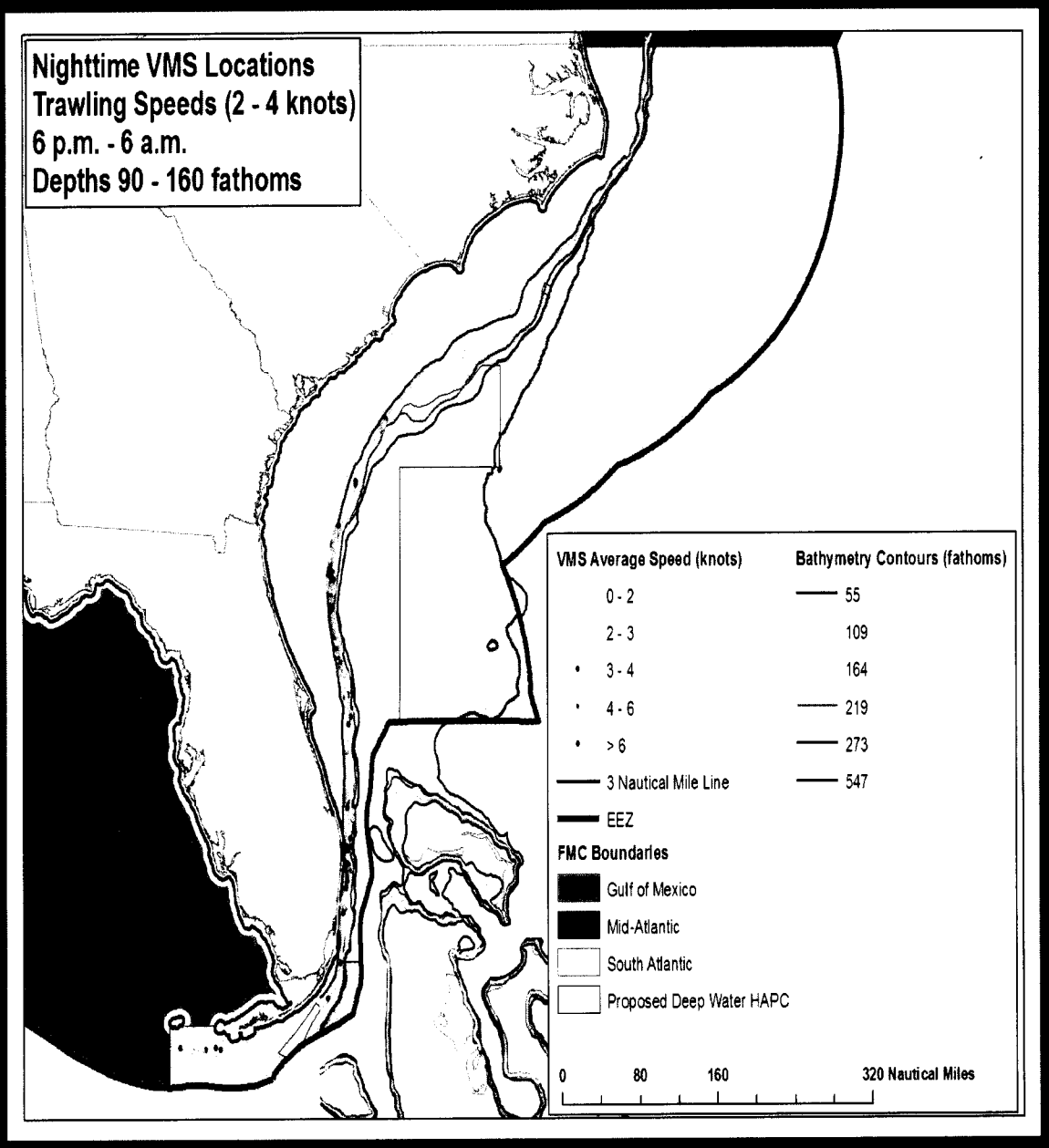
VMS Tracks (nighttime, 2-4 knot class, all depths)



VMS Tracks (nighttime, 2-4 knot class, >160 fms)

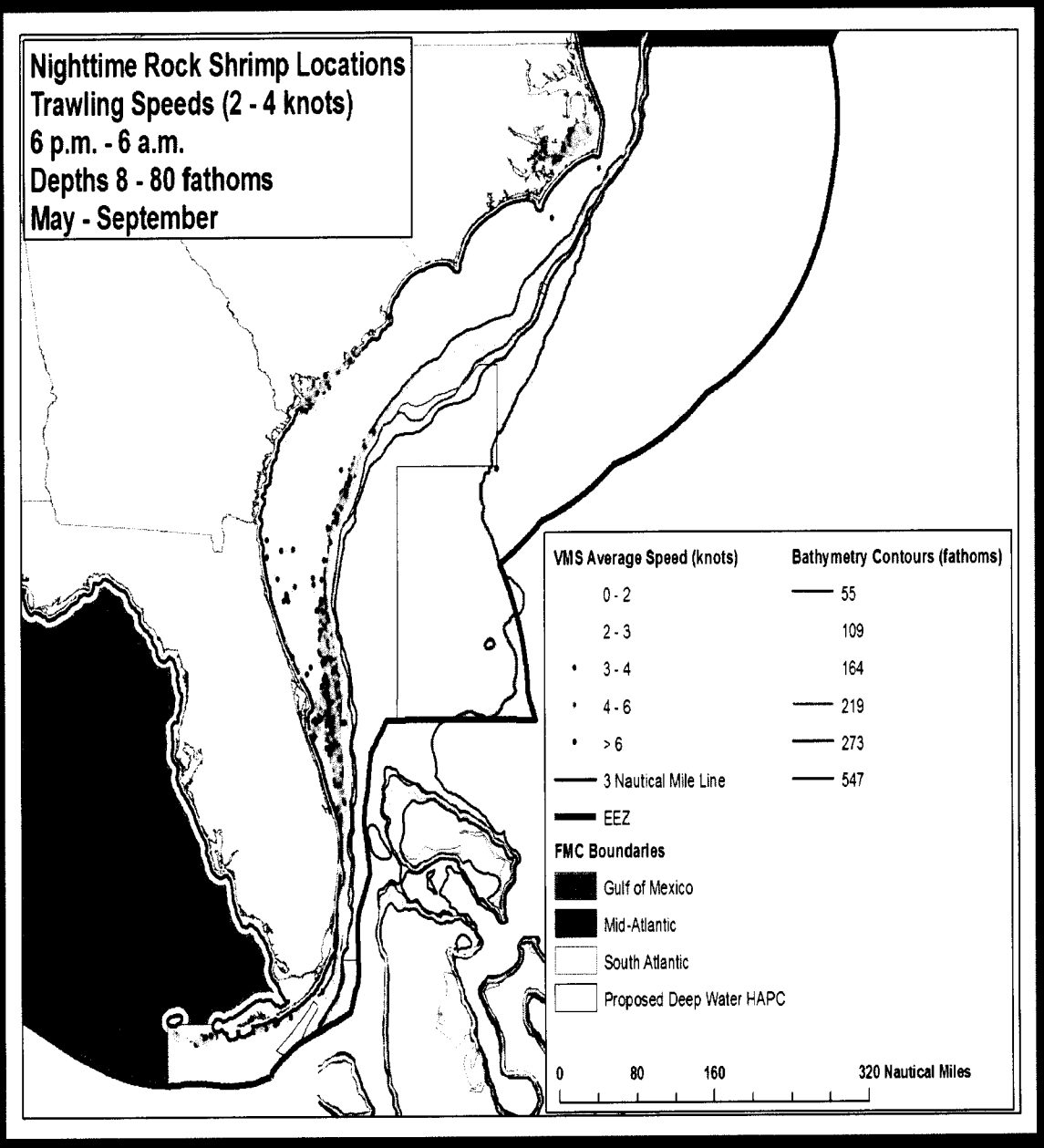


VMS Tracks (nighttime, 2-4 knot class, 90-160 fms)

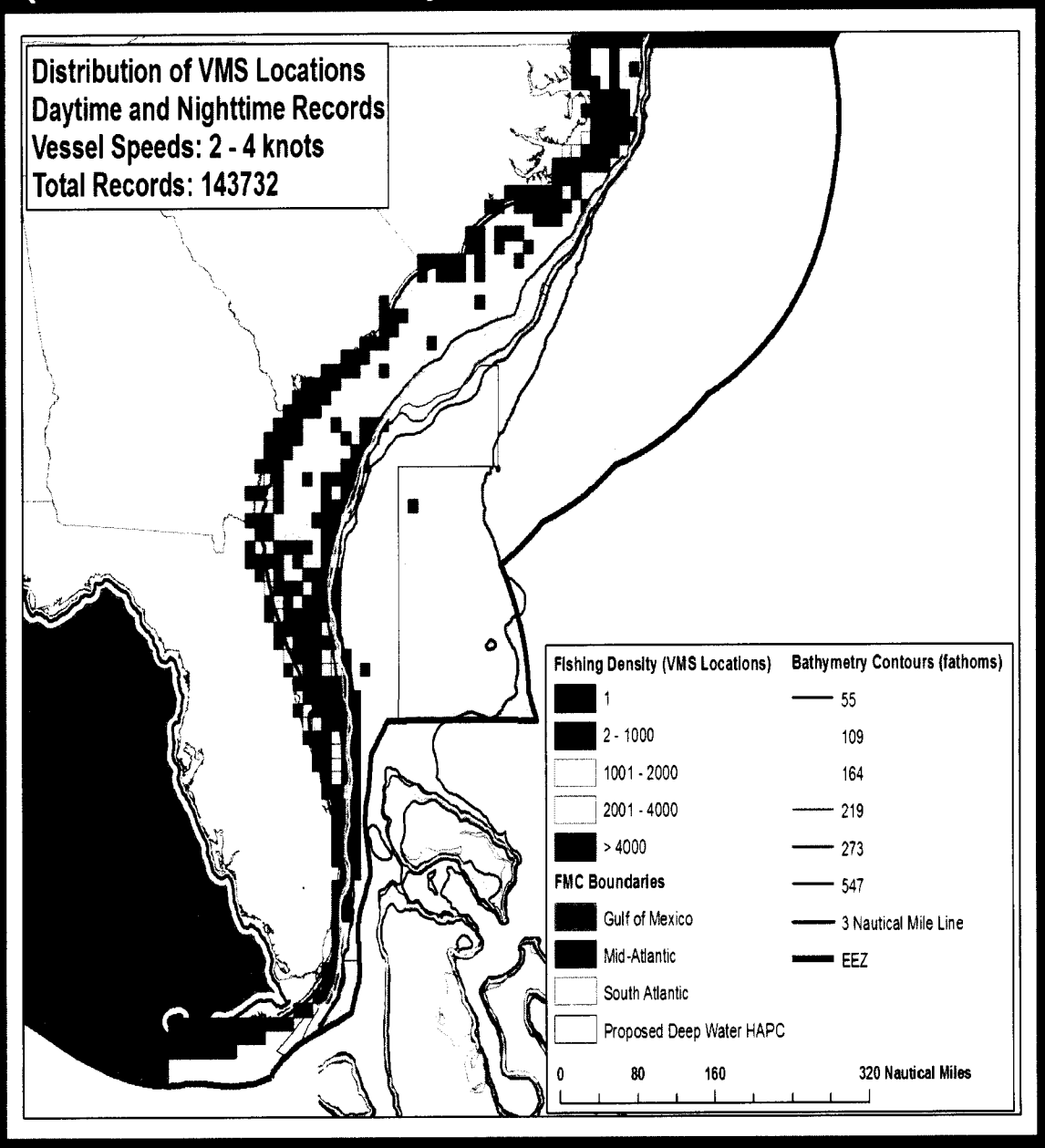


Probable Rock Shrimp VMS Tracks

(nighttime, 2-4 knot class, 8 - 80 fms, May-September season)



Shrimp Fishing Density Map
(2-4 knot class)



PLEASE SIGN IN

So that we will have a record of your attendance at each meeting and so that your name may be included in the minutes, we ask that you sign this sheet for the meeting shown below.

Joint Meeting Golden Crab and Deepwater Shrimp
Cape Canaveral, FL
Monday, January 28, 2008

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