

SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL

HABITAT ADVISORY PANEL MEETING

**Charleston Marriott Hotel
Charleston, South Carolina**

November 16-17, 2010

Summary Minutes

Habitat AP:

Sera Drevenak
John Ellis
Anne Deaton
Steve Trowell
Jenkins Mikell
Priscilla Wendt
Patrick Geer
Dr. David Palandro
Pace Wilber
Todd Kellison

Dr. Christopher Elkins
Terry Pratt
Anne Deaton
Susan Hilfer
Cameron Sebastian
John Duren
Alice Lawrence
Kurtis Gregg
Dr. Patrick Halpin
Mike Street

Council Members:

Dr. Wilson Laney

Council Staff:

Roger Pugliese
Julie O'Dell

Anna Martin

Observers/Participants:

Dr. Marcel Reichart

Jesse Cleary

Additional Attendees Attached

The Habitat and Environmental Protection Advisory Panel of the South Atlantic Fishery Management Council convened in the Charleston Marriott Hotel, Charleston, South Carolina, Tuesday morning, November 16, 2010, and was called to order at 9:00 o'clock a.m. by Mr. Roger Pugliese.

MR. PUGLIESE: I'll open up the meeting of the Habitat and Environmental Protection Advisory Panel of the South Atlantic Council. I appreciate everybody's willingness to participate and the ability to work around schedules in a busy time of the year. A lot of things to balance and a lot of trading offs had to be made to be able to participate in this meeting.

I would like acknowledge that right now we still actually do not have a formal chair. Pace Wilber will be acting as the chair to help coordinate running the meeting at this time. What I'd like to do is get the advisory panel members to talk between themselves during today and look at possibly electing the chair.

The chair has been a vital person that I coordinate directly with so that we can keep all the actions of the advisory panel moving forward and continue through the year on collaboration outside of not just this meeting. It's a pretty key individual to work with, so be thinking about who all potentially could step into that position.

With that said, again, I'd like to thank you for being here. Everybody should have received the flash drive with the briefing package and the agenda. I would like to just note the way this is structured for this meeting, a little different than the last time. We don't have nearly as many presentations.

The idea here is to really have opportunity for us to be able to discuss either some of the major issues that we have on the table or a lot of connected issues. We didn't cover every single one on this, but they're still connected to many of the activities at state, federal and other levels that we will be able to get in those and either develop comments or recommendations or be able to provide the council with additional guidance on how to coordinate more effectively on habitat conservation and on the move toward ecosystem management and on some of the bigger, newer buzzwords like marine spatial planning and other activities.

The advisory panel has been the key membership to provide the technical guidance for the long-term conservation on habitat and on the move toward ecosystem-based management. All the work done by this group I think is greatly appreciated and will help us forge forward. With that said, I think what I'd like to highlight in my opening comment is that we are at a very unique point of time in the South Atlantic Region.

There are so many converging activities in the area – and we will get into some of those in either a presentation or open discussion – with everything from the development of a South Atlantic Governors Alliance to the Landscape Conservation Cooperative for the South Atlantic Region to the Ocean Observing System, through SECOORA, which is that regional partnership that is far ahead of really kind of any other one in the country; as well as individual state activities and state planning efforts that are really moving in directions that really can provide a synergy of efforts to take advantage of the technology, take advantage of investment of capability.

Other activities in our region include the efforts through the National Habitat Plan and two subgroups that are partnerships, the South Atlantic Resource Partnership, with the Southeast Resource Partnership, SARP, as well as the Atlantic States Coastal Fish Habitat Partnership that is moving forward.

Those have opportunities again to really focus effort and provide capability and opportunity in the South Atlantic Region. This all really builds on the council's opportunity to address their mandates under essential fish habitat as well as really kind of the next-step implementation of the fishery ecosystem plans set the stage for and looking into the future.

That's what brings here today. Right now we have the three tiers that are set up, our Essential Fish Habitat Session, our Regional Research Coordination and then moving into the Regional Coordination and Ecosystem Coordination. I would think that we're probably going to be able to move through most of Session I and Session II today and probably have a lot of focus on the ecosystem coordination in Session III tomorrow. We'll see how it unfolds. I'll pass it over to Pace for an additional perspective on what we can accomplish with this meeting.

MR. WILBER: Well, Wilson Laney, as the representative of the Habitat Committee to the Habitat and Ecosystem Protection Advisory Panel, has asked that we do a round of introductions; because while many of us know each other and have worked together for many years, there are new faces here on the panel as well as in the audience. If we could do a quick sort of round robin of why you are, who you work for and your interest in serving on the committee, that would be a great way to begin.

DR. ELKINS: I am Chris Elkins, a retired microbiologist from UNC-Chapel Hill, and I now live within sight of the Cape Lookout Lighthouse in Gloucester, near Harkers Island in North Carolina. I'm here as a recreational representative to this body.

MR. PRATT: Terry Pratt; I'm a commercial fisherman from northeast North Carolina and have been for 50 years, and have been one of them damned little environmentalist, too, Chris. I travel both sides.

MR. ELLIS: I'm John Ellis. I'm with the U.S. Fish and Wildlife Service in Raleigh, North Carolina.

MS. HILFER: I'm Susan Hilfer from Beaufort, South Carolina. I'm a recreational fisherman.

MR. MIKELL: I'm Jenks Mikell from Edisto Island. I'm a recreational fisherman.

MR. SEBASTIAN: Cameron Sebastian, operations manager, Coastal Scuba and Little River Fishing Fleet. We do commercial fishing as well.

MS. WENDT: Priscilla Wendt with the South Carolina Department of Natural Resources.

MS. LAWRENCE: Alice Lawrence; I'm with the U.S. Fish and Wildlife Service in Georgia, the Athens Field Office there.

MR. DUREN: John Duren and I live in Savannah, Georgia, and I am a recreational fisherman.

MR. GEER: I'm Pat Geer, Chief of Marine Fisheries, Georgia Department of Natural Resources.

MS. MARTIN: I'm Anna Martin; I'm part of the council staff; and along with Roger, I help to coordinate Ecosystem-Based Amendment.

MR. PUGLIESE: I'm Roger Pugliese, senior fishery biologist with the South Atlantic Council. I coordinate efforts with our Habitat Advisory Panel as well as our habitat activities, ecosystem and move toward ecosystem management in the South Atlantic Region.

MR. WILBER: I'm Pace Wilber. I work for the Habitat Conservation Division of NOAA Fisheries, Southeast Regional Office. The office itself is located in St. Petersburg, Florida, although my group is headquartered here in Charleston, South Carolina, and we have responsibilities from North Carolina down to Florida and then out into the Virgin Islands and Puerto Rico.

DR. LANEY: I'm Wilson Laney. I am here representing the council's Habitat and Environmental Protection Committee, which is one of six committees on which I serve for the council. I'm the South Atlantic Fisheries Coordinator for the U.S. Fish and Wildlife Service also based in Raleigh, North Carolina.

MR. STREET: Mike Street; I'm retired from the North Carolina Division of Marine Fisheries. I'm an at-large member for research.

MR. CARTER: Mark Carter; professionally I'm chief scientist for Dearborn Electronics, manufacturer of high-power components for aircraft. On my side, I'm the recreational representative out of Florida. I live in Winter Park, Florida.

MS. DEATON: I'm Anne Deaton. I with the North Carolina Division of Marine Fisheries, and I'm the Chief of the Habitat Protection Section.

MR. KELLISON: I'm Todd Kellison, and I'm with NOAA Fisheries based in Beaufort, North Carolina.

DR. HALPIN: I'm Pat Halpin from Duke University. I direct the Marine Geospatial and Ecology Lab at Duke.

MR. TROWELL: I'm Steve Trowell and I work with the Division of Coastal Management in Washington, North Carolina.

MS. DREVENAK: I'm Sera Drevenak. I'm with the Pew Charitable Trust.

MR. GREGG: I'm Kurtis Gregg with the South Florida Water Management District.

DR. PALANDRO: I'm David Palandro, Florida Fish and Wildlife Conservation Commission.

MR. PUGLIESE: Those who are not on the AP, if you could sign the sign-in list to just make sure you're on the record as a participant.

MR. WILBER: We'll just dive right into the first presentation. One thing that always kind of strikes me about these Habitat AP meetings is that they are considerably less formal than they appear with the microphones and the name plates and things like that; so if anyone feels the need to ask a question or make a comment during my presentations, in particular, feel free to do so. I'm happy to kind of structure this a little bit as a discussion more than a presentation itself.

You guys should have a copy of my presentation. It was handed out a few minutes ago. I apologize for it not being on the data stick that Roger sent out. If anyone would like the presentation in electronic format, feel free to e-mail me and let me know, and I'd be happy to provide it.

This presentation, we titled it Refinement of Essential Fish Habitat with refinement kind of in quotes here because we certainly are doing something to the existing essential fish habitat designations. Whether that really constitutes a refinement or guidelines or alterations of edits is really a matter of perspective.

Certain words have certain context in certain situations like talking with lawyers about what you can do outside of a rule-making process or something like that. What we're really going to kind of present here are some fairly informal changes or discussion about the EFH designations that we feel are necessary to have the program move forward in an efficient way.

Why are we doing this? Well, there are sort of three activities that are going on. In various times they've been fairly disparate but running in parallel and other times they've been braided and integrated around each other. We're going to try and pull those three disparate efforts together today so we can move forward with a comprehensive ecosystem-based amendment in the coming year that Roger will discuss at the end of my presentation.

The three basic parts that we're going to try and pull together are the EFH five-year review process that's mandated by the Magnuson-Stevens Act and for the council to go through. We're going to discuss these adjustments or refinements to EFH interpretations, and that's the interpretations of the existing designations. Then we're going to identify the actions that really need to be kind of dealt with in a more formal process; namely, CE-BA 2 or Comprehensive Ecosystem-Based Amendment 2.

Now, we've given bits and pieces of this presentation at each of the last two or three Habitat AP meetings, and so some of this might be kind of old hat to some of you because you've heard it before. Some of it might be pretty new. I figured probably the best way to begin this is to start with just a couple of slides just reviewing what essential fish habitat is and how it plays out in the regulatory process.

If you go into the Essential Fish Habitat Regulations, it identifies essential fish habitat as all waters and substrates necessary for the spawning, reproduction, feeding and growth to maturity of the federally managed fishery species. It requires the council to identify the habitats that fit that definition by life history stage for the species that they manage.

In the regulations it talks about that identification process as existing in four levels; and to be strictly speaking, they call it four levels of information and not necessarily four levels of importance. At Level 1 they talk about designating EFH simply based upon the presence or the absence of the species or life history stage in a particular habitat.

At Level 2 they talk about the relative concentration of the species, so species and life history stage is more concentrated or more abundant per unit area in a certain habitat than it is in another. That would be an example of a Level 2 EFH designation. Level 3 talks about superior rates of growth, reproduction or survival; so species found in certain habitats exhibit higher rates of growth, higher rates of reproduction or higher rates of survival.

Level 4 addresses habitats that can be shown to be directly supplying recruits into the fishery; a fairly difficult thing to do, but it is the higher level in that four-level process. Now, intuitively, to me, anyway, if you look at these four levels, you start with something that's really broad and you end up with something that's fairly restricted or focused geographically.

If you kind of identified the footprint of the area based upon the presence or absence of a species, you're talking about a really big area. As you get to a relative concentration, it's a little smaller; as you get to superior rates of growth, reproduction and survival, it might get a little bit smaller from there; and finally you get up to recruitment into the fishery and even smaller area of habitat.

The other implied sort of continuum here is that in talking about essential fish habitat from an environmental standpoint, you also go from areas that are fairly high importance; because we always want to say that even the presence of species in a particular area might make that area highly important to even higher levels up until you get to areas that supply the recruits to the fishery.

I always usually draw this EFH level thing as a pyramid or a triangle with the width of the layers representing the geographic extent and the height of the triangle representing the importance of the habitat. When I show this to groups that are actually regulated by the essential fish habitat rules, a lot of this starts to make sense because it starts to explain our behavior and our comment letters and why we sort of no staff or no comments to certain types of projects, but we're willing to go even to the President's Council of Environmental Quality to deal with a dispute on other areas because they're just extremely important to us and we know that particular plot is extremely important.

The council then starts identifying certain species-habitat combinations, and you can sort of map those species and habitat combinations into this triangle pretty simply. Just to give a couple of examples, the Mid-Atlantic Council, as many of you probably know, actually designates EFH for some of its species here in South Atlantic waters; and for the example of summer flounder and

bluefish they designate all estuarine waters as EFH for bluefish or summer flounder, so that just an example of a presence/absence kind of designation.

Many other folks are also aware of the many studies done by the Southeast Fisheries Science Center and the Beaufort Laboratory and other groups that actually measure growth rates of shrimp in different types of seagrass habitats or inner-tidal marsh habitats. That's another example of a fairly quantitative definition of EFH based upon a superior rate of growth or reproduction or survival.

In a nutshell that is essentially how EFH works. We use this information to provide comment letters to the Corps of Engineers and other federal action agencies on what we think the effect of that action might be on essential fish habitat and federally managed species; and depending on the receptivity of that comment letter as well as the importance of the EFH involved in that particular project, there are various levels of negotiation and even dispute resolution that can be invoked. Now, the information to deal with all this originally –

MR. STREET: Excuse me, I do have a question. In the level, fishery recruitment, that is recruitment to the fishery, so that is an area where fishing occurs; is that not correct? Harvest would occur where they recruit to the harvesting?

MR. WILBER: I think the example you're giving, Mike, certainly is true. I'm not sure if that's all the cases. The way I personally envision this is that if you know there is a particular area that produces, say, juveniles that recruit as adults into the fishery, then that's the link there.

MR. STREET: I see a difference there. Since you used the word "fishery", what about species for which there is no fishery, corals, sargassum?

MR. WILBER: Okay, this triangle is the basic plan. The Level 4 is in the regulation, and I'm only aware of one Level 4 EFH designation in the entire National Marine Fisheries Service and the councils. There might be more but I'm only aware of one. Then you have the complicating factor that in the South Atlantic Council we do have fishery management plans for coral and hard bottom and sargassum and things like that don't neatly fit into this concept.

(Questioned off the record)

MR. WILBER: Red drum in the surf zone; again, that is technically not a great example because we repealed the Red Drums Federal Fishery Management Plan last year; only for the Atlantic, yes.

MR. PUGLIESE: I think one thing that would probably clarify this instead of having "fishery recruitment", just have "recruitment" and then it's clear that you're talking about a population where habitat is an affecting level of population, and I think that's what you're really trying to get to on where you can see that kind of – if you get to that level of information, that's pretty significant and you can weigh in a lot stronger.

MR. STREET: One reason I asked that is because in our discussions of the deepwater coral areas over the last two or three years and some other habitats that are important to managed species, we had long discussions over looking at habitats from the point of view of utilization of the resources that are within those habitats or the habitats themselves, and we focused in the end on the habitats themselves. We did that consciously; so seeing the word “fishery” there to me steps back from that approach.

MR. WILBER: I agree with you. In putting this table together, I’m quoting the regulations. We can strike the word “fishery” for own purpose here, but that is the word that’s in the regulations. Go ahead, John.

MR. DUREN: Pace, I think the triangle is a good way to explain the different kinds of habitat, but it seems that importance is not a constant. It varies species by species. An endangered species even present becomes extremely important; or as an abundance species, only the higher levels would be extremely important. You have some way to deal with that I guess in your letters or recommendations?

MR. WILBER: Yes, we do. If something is endangered, it’s dealt with under the Endangered Species Act. We don’t have any essential fish habitat designated in the South Atlantic for species protected under the Endangered Species Act. On the west coast they have a lot because of salmonids being covered under federal fishery management plans, but in the South Atlantic none of the endangered species are covered under a council fishery management plan. We do have the out from using the Endangered Species Act.

Okay, much of these issues that Mike and others have raised are discussed a great deal in a document that is called the “The Habitat Plan”. It’s got actually a big, long title there, but it was produced in October of ’98, and it summarizes a whole lot of information about the life history of species and the habitats that they utilize and makes recommendations for what should be designated as essential fish habitat.

The actual designation document itself in this document that is over on the right up on the screen. That is an amendment to nine different or seven different fishery management plans identifying EFH for the species within those plans. Essentially it was all bundled together into one massive amendment that actually affects multiple fishery management plans. It’s often called the Comprehensive Amendment in the way we normally talk about things.

Now, we’re going to kind of grab the thread about the EFH review process that needs to be done every five years and kind of bundle that around what had been done previously through the habitat plan and the comprehensive amendment. The Magnuson-Stevens Act does direct the councils and the fishery service to review the EFH designations no less often then every five years I think is the exact term in the statute.

There is a whole bunch of stuff that the councils and the fishery service are supposed to do during this EFH five-year reviews, and much of that is related to administration and documentation of how the EFH program works. I pulled out several of the bullets here that focused more on the EFH designation in fishery management plans.

Essentially what they're supposed to do during the designation process is identify EFH that needs to be added because new species are covered under federal fishery management plans, identify the habitats that can be deleted from the EFH list because those species have been deleted from federal fishery management plans; also reflect new information and new research results about the ties and importance of various habitats to the life history of different species; as well as reflect upon changes in mapping technology and other ways for distributing maps to see if they can also be integrated more tightly into the EFH designations.

In a nutshell that's really what a five-year review is sort of all about. In the South Atlantic Council the document that reviews the science and updates the science and replaces the habitat plan is the fishery ecosystem plan of the South Atlantic Region. Specifically I think it's Volume 4 that covers that territory.

That is what the council is reviewing as the document, and many of the folks in this room, as well others, participated in various committees and subcommittees that contributed to the development of the fishery ecosystem plan; and they all basically, as far as I know at least in the habitat sections, began with the habitat plan itself and began editing and adding material to it.

Now, the recommendations that need to be carried out to adjust EFH are going to be done in two places. One is the Comprehensive Ecosystem-Based Amendment 2, which hopefully is going to pass in 2011 – at least that's the plan – and that's for the changes to EFH designations that really require a formal review process, a formal vetting process.

The informal route that we're going to take is a document that we tentatively called on the data stick, "Guidelines for Essential Fish Habitat Implementation", and that is really just sort of identifying parts of the EFH designation language that have led to some questions not freakishly rare but occasionally as we've implemented the program over the last ten years and just seeing if can we clarify what was meant by the language and does that clarification kind of cross the line to actually having to go through the CE-BA process or can we just sort of put that in writing someplace on a council website or fishery service website.

Now, that document, as I said, is on your data stick and we're actually going to walk through bits and pieces of that; and then when I'm done with everyone and kind of walk you through those bits and pieces, then we'll pass it to Roger and Anna who will walk you through CE-BA 2. All right, I intend to go through these EFH designations in the order that they're presented in the Habitat Plan.

It doesn't really represent any kind of taxonomic order or importance order or anything like that. I've just gotten used to covering things in the particular order. We'll begin with penaeid shrimp. These two paragraphs here identify the areas designated as essential fish habitat for penaeid shrimp. The bottom paragraph is the habitat areas of particular concern.

We haven't really touched on HAPCs yet, but HAPCs are a subset of essential fish habitat that deserve special importance, and there is several criteria for identifying that subset that deserves special importance, but in a nutshell it comes down to ecological importance, susceptibility to development pressure and rarity are the basic points there.

Now, as we've implemented the EFH program for a few years here, there have been some requests for clarification, and those requests for clarification for the penaeid shrimp designation apply only to the HAPC part of the designation. We haven't had any issues with the EFH portion of the designation.

The first request for clarification that we've had is that the text for the state-designated nursery habitats uses as an example in North Carolina this would be the primary nursery areas and all secondary nursery areas. The key part there is the word "for example". So they said, okay, those are the examples from North Carolina, let's put together a more complete list, one that was all of the state-designated nursery habitats in North Carolina as well as those in South Carolina, Georgia and Florida, so we don't have to kind of leave it up to people to try and guess what they might be.

To do that, we went into the regulations to identify the areas that are given special importance in each state and looked at the source documentation to see the extent to which nursery habitat plays in those particular designations, and this table was produced here. Now, if anyone sees any errors in this table, something missing in particular, this is something really valuable to us to have pointed out, so don't be bashful. If you just even think there might be an error here, we need to kind of get that out so we can hunt it down and try to put together as complete a list as possible.

MALE VOICE: Pace, what is the difference between resource water and national resource water?

MR. WILBER: There is an EPA program that requires states to designate outstanding national resource waters. There is some criteria that EPA puts forth for that designation and then the states are directed to kind of tailor those criteria to their particular situation. Some states have, in addition to accepting that charge from the EPA which comes through Clean Water Act, have said that, well, there are some other areas that don't quite meet that high standard but come close, and they designated outstanding resource waters.

You do have to watch for that word "national" when people talk about those things. The national thing means something a little different than when you have just the phrase "outstanding resource waters". Now, each state actually defines outstanding resource waters a little different. You have to go into the knits of their regulations. Sure, Anne.

MS. DEATON: One other question; then this isn't part of the amendment, these designations; like it could be added to or modified, or this is something that has to be finalized before that rule is final?

MR. WILBER: Yes, I should have addressed that. Our intent is that the existing designation already says state-designated nursery habitats, and we're not changing that designation. We're just providing a complete list of what there are; so to us this is something that can be provided in an informal document, posted on a website. It does not have to go through the CE-BA 2 process.

MS. DEATON: Because I do think some things on this list like, for example, anadromous fish spawning areas were recently put into rule and there designated spawning areas. That's not in there. And, also, our primary nursery area designation really is not inclusive of all nursery areas, and I think that's a little misleading with the name.

Really, the only areas they designated were those winter offshore spawn estuarine species. We also have anadromous nursery areas, but those aren't really designated yet. Also, the SAV beds aren't really covered in any of those classifications; yet they're a very important nursery area for the snapper grouper and the shrimp. They'll be taken into account through SAV those strategic habit areas, but it might also – looking at that list, I feel like we probably ought to have an SAV nursery designation in North Carolina that relates to protection, because that is what drives our HAPCs.

MR. WILBER: Two comments on that; first off, if North Carolina wants to designate an SAV nursery area, that would be a welcome addition to this process. What we're trying to do at this point is take the existing state designations and not identify holes in the state designations but identify their existing designations and see what the original designation process for EFH back in '98 kind of now completely folds in an automatic kind of basis.

This is just what we think it spits out of that process. If there is some other hole that really does need to be addressed, then that hold would have to go through the CE-BA process. At this point it's probably too late to put that into CE-BA 2, but CE-BA is supposed to be an annual thing, and it could be put into CE-BA 3 the following the year.

There also are some other less intrusive or burdensome ways to designate EFH and HAPCs that the council has access to besides CE-BA, so that process that could be invoked as well. The last point is if it's seagrass, it already is an HAPC in North Carolina so it gets covered. But, again, if you guys want to designate additional primary or secondary nursery areas, that would be wonderful.

MS. DEATON: It just struck me, looking at that, but it's really not covered in those designations.

MR. GREGG: On the table that you presented up here, it lists outstanding Florida waters, and then the comments that limit it only to the state aquatic preserves, those are two separate designations. All the aquatic preserves are OFW but not all OFWs are aquatic preserves.

MR. WILBER: Correct.

MR. GREGG: I'm wondering why it was limited to just APs because there is a lot of important habitats that are left out.

MR. WILBER: I have a slide on that in a couple of slides, so I'll get to that point, but that's the question that we had. Go ahead, Wilson.

DR. LANEY: Anne brought up what I was going to bring up, which is we do have designated anadromous fish spawning areas now, right, under the CHIP, so those probably should be added to the table because they are nursery areas. If that's where the fish are spawning, certainly the eggs and larvae are being nurtured there.

MR. WILBER: Well, forgive me for interrupting, but the question is keep in mind this is in the context of penaeid shrimp, so are those anadromous fish spawning areas EFH for penaeid shrimp?

(Remarks off the record)

MR. WILBER: Yes, at this point in the presentation this list is about penaeid shrimp.

DR. LANEY: Okay, good clarification. The other point I was going to make was asking Anne and Mike and Steve if North Carolina wished to do so, they could designate SAV, give it some sort of special designation under the Coastal Habitat Protection Plan, could they not?

MS. DEATON: I think we could go through Marine Fisheries Commission Rules. Last year we did an aerial imagery for the whole coast. I think the holdback is how do you delineate those areas; and so once the whole coast is mapped you have specific boundaries on things, but, again, the demographics have changed with time, so that's a concern.

MR. PUGLIESE: Yes, there are so many connected and overlapping components here and when you look down – and some of these were raised with regard to snapper grouper. When you look at snapper grouper, seagrass submerged aquatic is an HAPC in here. What we're trying to do is shore up where some of these were not as defined like specifically that nursery area designation within shrimp and refine that to make sure that we cover the broader scope.

A lot of these were laid on the table as potential new ones at a number of our AP meetings over the years, and this is to ensure that we're not letting slip through the cracks. It's tough. As we look at them, we're looking at species-based or complex-based; and when you really look at all of them, there are so many that are already connected in here that we're filling a lot of the ones and clarifying for the operational use of EFH. I knew that we had an HAPC designation, but it's tied to snapper grouper, which is a pretty appropriate one with gag and species like that.

MR. WILBER: Okay, these are the seven or so North Carolina regulations that identify nursery areas that are germane to penaeid shrimp. They also happen to germane to snapper grouper species as well. Now, the one that I'm always the most skittish about and talking about in front of North Carolina folks is the strategic habitat areas. I've looked and called and talked to people, and as far as I know there still has yet to be one of those areas designated. Is that the case?

MS. DEATON: No, the Albemarle Sound Region, that analysis was done and the Marine Fisheries Commission approved of those areas, but they're not designated in rules because there were no rules introduced associated with those areas. They're there and we have a map that we could provide, but there are no rules right now. They're being used more as a conservation tool. They have been used by different organizations as like areas to protect and potential restoration.

MR. WILBER: So I need to get with you to get the documentation that North Carolina has to back that up. The intent would be that those areas would sort of automatically fold into this list of state-designated nursery areas. Everything you just said sounds like it would, so we just need the documentation in our files for that. All right, that's the basic story for North Carolina.

The nice thing about North Carolina is that, again, much of this stuff is in rules, and the rules specify locations to very high levels of precision both in the text-based description of the locations as well as citing latitudes and longitudes and things like that. The North Carolina GIS Office has much of this stuff available on the GIS.

While the council, through another part of the Magnuson-Stevens Act, is encouraged to map this stuff or make maps available to the maximum extent possible, North Carolina is a really tight program in that all the stuff is pretty well defined geographically and they are producing the GIS data layers to actually implement, so it works pretty well there.

Now, to kind of move down the coast to South Carolina, the question is what does South Carolina have in its regulations that might be equivalent here. As Priscilla Wendt knows, I've been kind of talking to her in the hallways of our office about this ever since I showed up working for NOAA Fisheries.

The outstanding resource waters is a designation by the South Carolina Department of Health and Environmental Control, specifically Regulation 61-69, that identifies ORWs, or outstanding resource waters. There occurs throughout the state, although there is definitely clearly clusters of them, so after discussing the issue with DHEC and examining some of the administrative record they had behind each of the individual designations, we decided that basically all of the ORWs in coastal counties meet the criteria for being state-designated nursery habitats.

Outstanding national resource waters again is a category that keeps coming up in discussion, well, what about those; do any of those meet the criteria for state-designated nursery habitats, and in South Carolina there is only one outstanding national resource water and it is up on the Congaree River, so it is well, well away from the coastal zone and not germane to these EFH discussions.

Now, just to give you a quick kind of look at what these look like in South Carolina, these little yellow pins here this particular stretches of rivers and tidal creek systems and bays that are described in the DHEC regulation as being an outstanding resource water. You can see that they pretty much occur in a couple of clusters, in areas that are well recognized by the residents of South Carolina as having particular value and being particularly important to maintain our fisheries.

If you kind of open up and zoom in one of these clusters, this one is on the western side of ACE Basin, and this is what you basically get. If you go through that DHEC regulations, it's about 65 or so coastal waters that are identified as ORWs, and we have adopted that whole group as basically being state-designated nursery habitat.

Now, while it's reasonably well defined geographically – you know, it says like such and such a creek between Highway Blank and the mouth of the Edisto River or something like that – you can put some geographic precision on these, they're not nearly as precise as the ones in North Carolina. As far as we can tell inside South Carolina there is yet to be any kind of GIS coverage developed for these, but it is something that would not be terribly difficult to do and we might put our heads together with the council and see if we can actually do that. Go ahead, Priscilla.

MS. WENDT: I just wanted to note that ORW designation has more to do with water quality and the undeveloped pristine nature of the water body more so than it being a nursery area, per se. I don't think that even enters into the definition of ORW water necessarily, unless I missed something the state regulations.

MR. WILBER: On this one here is the quote that defines the outstanding resource waters. I shouldn't have "national" here. Basically, it does speak to ecological value. I did talk with DHEC to get a list of the criteria that they consider when developing the ORW list, and they did indicate that nursery value was an important part of their consideration particularly in the coastal zone. They have an administrative record that demonstrates the value of each of the designations for nursery habitat.

Now, the question is do we need to go in and get copies of that administrative record for all 70 of these or not. We probably should at some point just to have a complete file. There is definitely a water quality component to it and it's probably even the lead component to this, but they do tell me, anyway, that nursery habitat is part of their designation process.

MS. WENDT: Okay, wouldn't then our shellfish harvesting waters also be included?

MR. WILBER: We thought about that. Shellfish harvesting waters may not – the link from that to nursery habitat, I'm not so sure I want to make that link. If the group thinks that's a good link to make, we can certainly do that. Oyster beds are already an HAPC under the Snapper Grouper Plan, so it's not like if there is an oyster thing there it wouldn't be an HAPC. I don't know; that's the kind of thing we need feedback on.

MR. MIKELL: If you put oyster beds in there, I think a lot of those yellow pins would disappear. Edisto Island is what he is showing and that is my home, and we're quite proud of all those yellow pins; but every place there is a yellow pin, there is a yellow sign that says you can't eat the oysters, which concerns me greatly. I might add also that a little over 50 percent of Edisto Island is now a preserve either by fee simple title or conservation easements; something that we've done in the last ten years.

DR. LANEY: Well, one quick question to the South Carolina delegation; is the Congaree above dams? I think it is; isn't it. Yes, but I'll still make the point, anyway, in that if the – most of you know this is a pet peeve of mine. Right now the Magnuson Act stipulates that the councils are supposed to comment on any significant adverse action that might affect anadromous species EFH. Anadromous species EFH has never been designated because there is no federal play for any of the anadromous species on the east coast.

However, as John Duren and I heard last week the Mid-Atlantic Fishery Management Council is thinking about a possible allosine fishery management plan for federal waters; so I just wanted to make the point that if in fact that comes to pass, then I presume that would lead to EFH designations for allosine species. To the extent that a state had either anadromous fish spawning areas designated or outstanding national resource waters or outstanding resource waters in inland areas that were used by those species, I presume they would then fall under EFH categorization.

FEMALE VOICE: I was just going that on the shellfish harvest issue, if you wanted to look at the open ones as the shellfish harvest areas that have still better water quality, you could see them as a subset of areas to protect. The research or literature has shown that if they're closed, that is based fecal but the fecal is an indicator and there are usually other contaminants involved. Your water quality is going to be better for your federally managed shrimp and snapper grouper in open shellfish areas if the salinity is right.

MR. PUGLIESE: I guess to that, one of the things even in some of those areas where they may be closed, their function for a species like gag and whatnot may not be nearly as affected because if it's tied mainly to human consumption, so I think that's to some degree why you blanketed like all of them right now. But you're right, you could get the subset that showed the most significant ones, the most high-quality component. We've got virtually all that integrated into our EFH mapping components based on state GIS right now. I'm not sure if we can separate those out, but that's something I think that could be pretty easily done to understand that difference between the two components of that habitat.

MALE VOICE: I was just going to reiterate what Roger said. I don't think you want weaken any protection of oyster habitat. Whether it's even in an open or closed shellfish area, I don't see the effect on fisheries habitat.

MR. WILBER: Well, I'll work with the South Carolina delegates to see if we can get a concise list of the shellfish harvesting areas and fold that into the list. Yes, Mike.

MR. STREET: I'm trying to think of which federally managed species make significant use of oyster habitat. Red drum could have fit the bill, but they're not a federally managed species anymore. The way I think North Carolina looks at shellfish habitat is it has the habitat function. Whether or not it's open to harvest, it's still a three dimensional structure that provides habitat for various species. I'm not sure of the significance of federally managed species using it.

MR. PUGLIESE: I think the most significant one that we could talk about is gag. Oysters in certain areas, seagrass and other states, the combination, but where you don't have the seagrass in South Carolina and Georgia, oysters become the primary nursery – at least one of the most significant nursery habitat areas for gag.

DR. LANEY: And Roger just reminded me that to mention that in some areas of South Carolina I understand seagrass is re-establishing itself, specifically off Prescott's Dock with lots of rupea out there, and he attributes it, rightly or wrongly, to changes in the float regime in Charleston Harbor which have apparently allowed reduction in turbidity and allowed the seagrass to re-establish itself.

I still haven't heard, Pat, of any in Georgia anywhere because of the high tidal range of turbidity, but at least there is some in South Carolina now. I'm heartened by that fact. I don't know how much it is, but we still should probably at least mention the fact that there is some in some areas of South Carolina.

MR. MIKELL: Is it just my old age or am I having trouble – is anybody else having trouble hearing? I can hear Mike and I'm sure you can hear me, but I can't hear anybody else. Could we turn it up a little bit?

MR. WILBER: So basically we've covered South Carolina and ready to move south to Georgia. Georgia is easy to do because Georgia has no state-designated outstanding resource waters or outstanding national resource waters, but I do believe there is one area up in the mountains that is a candidate to be an outstanding national resource water, but the process itself actually hasn't cranked. Pat agrees.

Now we get to Florida and the question that was posed earlier. This quote here is from State Aquatic Preserve Program, and it makes a reference both to the statute that designates aquatic preserves in Florida as well as their implementation of that statute. As noted earlier, there are many outstanding Florida waters and a subset of those outstanding Florida waters are aquatic preserves, and the Aquatic Preserve Program actually predated the Outstanding Florida Water Program.

When OFWs were first created, they then sucked in the Aquatic Preserve Program and they probably sucked in some existing programs besides that at the time, and then they've continued to add to the OFW designations ever since. The outstanding Florida water designations my understanding is a mishmash of recreational importance, aesthetics and ecological value.

Without going into the knits of each OFW to determine what the relative importance of the nursery habitat was and ecological value component of the designation, we took sort of the easy way out and focused on the subset of OFWs are state aquatic preserves because the State Aquatic Preserve Act as well as all the discussions related to that Act clearly identify nursery areas and support nursery areas that support fisheries as a major driver in those aquatic preserve designations. That is why we subsetting the OFW list, which has got to be like 90 OFWs or something for the state down into this relatively concise list for state aquatic preserves along the Atlantic coast.

MALE VOICE: My colleague with FWC, David, brought up I think DEP website, the Florida Department of Environmental Protection. There are a couple of water bodies or areas that are OFW but are not AP selected like the Pennekamp State Park that might be relevant. My recommendation would be to look at the OFW list with the focus on the habitats that are managed by the council – the species that are managed by the council and pull out the ones that are applicable, because that's a big one to miss, frankly, the John Pennekamp State Park.

It has got everything from the estuarine mangrove systems to the reef habitat. There are other state parks similar to that that has those components. They're just not APs. I just didn't want to

pass the opportunity to recommend that you be a little more selective and not paint with quite the broad brush of none of the OFWs other than AP.

MR. WILBER: Sure, we'll go through the non-aquatic preserve list of OFWs to identify those additional areas. The balance we're going to weigh is can we tie it back to the state-designated nursery habitat designation; how comfortable that tie is; again, recognizing, too, that most of these areas do have mangroves and seagrass and hard bottom and other habitats inside them that are already HAPCs under other designations. But, we'll go back and go to the bigger list and kind of wade through it.

MALE VOICE: And I would offer to assist with that. I can call out the ones that I've got experience with and we can circulate it at some of the other Florida staff just to make sure that if an area is going to get a special designation, that most of them that warrant that level of designation would be included.

MR. WILBER: Thank you for your offer of assistance.

MALE VOICE: Actually I have a naïve question. How do the federally protected waters – how are they involved in this; how are they designated? Biscayne National Park, for example, how would that fit into this list?

MR. WILBER: Biscayne National Park is already an HAPC under the original – I can't remember exactly what fishery management plan, but it's designated under – it's already designated.

MALE VOICE: So it's simply listed someplace else?

MR. WILBER: Yes, along with like the Florida Keys National Marine Sanctuary and stuff like that. Okay, we're getting ready to kind of jump to the non-penaeid shrimp, but there was one more issue to talk about for clarification, if you go back to that gray box a couple of slides ago, and that was the definition for coastal inlet.

It's amazing to me if you go onto the web to reputable sources like international navigation commissions and things like that and see how many different definitions of inlet there actually are. In terms of geographic extent of an inlet that I've seen basically it's just the throat of the inlet or what I would call the throat drawing a line on one side of a barrier island and the other side and just having that small throat of the inlet being considered the inlet.

The biggest definition geographically I've seen of a coastal inlet is like anything that basically allows a ship that's offshore to come inshore and then to the maximum extent of navigable waters once you get inshore. That definition of inlet, you can go in off a river and you can go up the river's tributaries as long. As you have a navigable channel, that's considered an inlet under some definitions.

And sort of a more middle of the road kind of definition focuses on the throat of the inlet as well as the sandy shoal complexes associated with the inlet; and if they're offshore, they would be

considered ebb shoal complexes; and if they're inshore, those sandy shoals are often termed a flood shoal complex.

Where this has come up as an issue for us is that in some of the mapping of essential fish habitat, for some reason some of the EFH maps have lobbied on to that very broad definition of an inlet, so they go all the way through the estuary to the maximum extent of navigable waters. That in my mind is clearly not what the original designation kind of had in mind, and so we're kind of just clarifying as to what we are calling an inlet to include the throat of the inlet plus the associated sandy shoal complexes on either side of it.

Rock shrimp and royal red shrimp, these are the essential fish habitat designations for these groups, and we have not had any issues come up with the implementation of these designations in the EFH program, so we're not preparing any clarification documents or anything like that or proposing anything in the CE-BA 2.

If in the course of reading these or thinking about them as you get home and you think there is something in here that really needs to be kind of clarified or isn't all that clear, just let us know and we will research as much as we can on that point and pull the information together; and if it's a fairly simple, straightforward fix, then we can do it through an informal process. If it requires a more formal fix, then we'll be talking about CE-BA 3 or something later on for that.

Snapper grouper is a fairly large fishery management plan in terms of the number of species it manages, and so it has a fairly complicated or fairly lengthy list of habitats that are identified as EFH as well as HAPCs. Again, we haven't really had any issues with the EFH designations. Again, if somebody has a part of this that they feel is not clear, we can go back and research that some more. This next slide has the HAPC designations for the snapper grouper complex.

There have been a couple of requests for clarification indicated here in the gray box. One is just like with penaeid shrimp, they want a complete list of the state-designated nursery habitats. We don't need to kind of cycle through that whole discussion again. I think what we discussed for penaeid shrimp applies there as well as doing the additional work for South Carolina and Florida also is relevant; defining what a coastal inlet means.

Again, the same definition we're using for penaeid shrimp I think applies in this particular case. The third request for clarification refers to the known or likely periodic spawning aggregations and where those aggregations occur. We're working with Roger and the council to produce that list so that there is a little bit more clarity as to where exactly those areas are.

And fourth is this HAPC designation really does not deal with golden and blueline tilefish. Golden and blueline tilefish, while managed under the snapper grouper complex, have a fairly different set of life history characters. I was hoping George Sedberry would be here to maybe expound on that particular point.

The HAPC designation, which sort of focuses on a gestalt of the seventy or so species in the snapper grouper complex, really has kind of left the tilefish out. One thing that we have done is we've worked with George Sedberry to develop some HAPC definitions for golden and blueline

tilefish. Because this is really an introduction of whole new designation language and not making a clarification of existing designation language, this is going to have to go through some kind of formal approval process, and the council has elected to use CE-BA 2 as that venue for the formal approval.

DR. LANEY: Well, I guess mostly a question for Roger. The council is considering dropping a number of species from the snapper grouper –

MR. PUGLIESE: But not those.

DR. LANEY: Yes, I know not those but other species from the snapper grouper complex, so is there any need for this panel to consider any changes to EFH as a result of – I know that action is not completed yet, right. I can't remember which amendment that one is in, but I presume it would be possibly approved at some point in time. My thinking is probably the complex is big enough and there are still enough species that would be included on the list that we wouldn't need to make any substantive changes to EFH, but I just wanted to make sure I raised that issue and solicit any thoughts you and Pace might have on that.

MR. PUGLIESE: Yes, and I did want to take the time to go back and look at what is proposed right now; but you right, I think right now the designation is based on the complex, and this proposal now is more specifically on a very specific group. Wreckfish had a very specific designation, but it covers so many different habitats.

You're correct that even though we may not have one of that species that is essentially not a targeted species and is being pulled out but really kind of put into a mode of data collection or ecosystem component, that the rest of the complex in whatever habitat is probably going to cover those locations, but we're going to make sure that nothing kind of slips through the cracks on that. I'm pretty sure from my review before is that most of the designations will still stand as they are.

It's when you get down to a refined description of the habitat used by that species in the guts of, say, the ecosystem amendment that some of that type of – that still won't change and it really won't change the ultimate designation. My first look at that is that I can't see any significant change to existing designations. It's when you get into any more refined in the future that potentially you might see some things, but there is just so much connection between these species and those habitats.

MR. WILBER: The absence of an HAPC designation for tilefish has become an issue for us mostly off of Florida dealing with the deepwater LNG ports and also with various pipelines and cables between some part of Florida and the Bahamas or Puerto Rico or something like that. This has been a practical problem for us and having this designation will help us dealing with that.

MR. PUGLIESE: And, really, when you go look back at the original habitat plan, we had set the stage for everything and talked about the major distribution, the species use of the habitats and even alluded to it being EFH.

It's just that literally it just did not get put into it, and this really gives us the opportunity to get a very refined description of those habitats, which in the implementation of EFH and the use and the permitting is going to be really – I think it is going to be extremely useful for a lot of the actions we're working on because it did kind of come to a head especially with that LNG. The good thing is that in the description is one thing we actually have some fairly good mapping and more detailed species information that has been collected. I think it's going to reinforce this proposal.

MR. WILBER: All right, so we'll move on to golden crab. The golden crab is probably one of the simplest EFH designations in the comprehensive amendment. There is no HAPC designated for golden crab. They felt that there was insufficient information at the time, and the folks reviewing the golden crab habitat descriptions in the fishery ecosystem plan apparently came to the same conclusion.

The only real issue we've had in implementing the golden crab EFH designations is really kind of coming down to the designation itself just refers to the paper by Betty Wenner that identifies the seven habitats by depth and substrate. We actually just need to make this list more accessible, so that list appears there in the gray box. Once in a while we have an issue with that very first sentence.

Some people view that first sentence as saying that EFH for golden crab is the entire U.S. Continental Shelf. That was not the intention of the original designation. That's just sort of a setup kind of sentence kind of leading you to the specific designations later on, but again that's a fairly straightforward kind of fix to deal with golden crab.

Spiny lobster has been a bit of a problem for us in implementing the EFH program. The habitats that are important to spiny lobster are clearly identified in the HAPC designation. Also, I think it's fairly clear not only identifying the kinds of habitat but the locations of those habitat on the map.

The problem we've had with the designation particularly for EFH is that it's not specific about what the northern extent of the EFH is for spiny lobster. For the other fishery management plans and EFH designations, you might not have noticed that I kind of rushed through them fairly quickly, but for most the others the EFH designation has a specific sentence about the geography to which the designation applies or the designation refers to the fishery management unit back in the real fishery management plan.

For spiny lobster the EFH designation does not do that. It's silent on that point. Presuming it to be silent, the default answer is, well, it must apply through the entire grounds of the South Atlantic Fishery Council. That kind of leads you into talking about Albemarle Sound as EFH for spiny lobster. It's not something really you want to do, right, Mike?

In fact you can find maps from NOAA that identify big parts of Pamlico Sound and Albemarle Sound as EFH for spiny lobster because you've have some GIS people kind of just sort of moving forward with the designation and doing what they do with the shape file. It comes down to what in practical purposes really is the northern limit for that.

After discussing this point with several of my colleagues at the Florida Fish and Wildlife Commission and others, the bottom line is that the inshore designation seemed to make sense as far north as Sebastian Inlet, and the offshore designations seemed to make sense as far north as the mouth of the St. Johns River.

We're basically going to use our clarification document to indicated that as such; and then hopefully all the folks making maps and GIS files and stuff with EFH will eventually catch up on that particular point. Go ahead, Anne.

MS. DEATON: I was just going to add that our biologists found a couple of little small spiny lobster this year in – actually, they were doing gag juvenile count surveys inside.

MR. WILBER: I took a summer class at the Duke Marine Lab back when I was in my 20s, and we actually drug an otter trawl, and in that one single otter trawl we caught both a homarid and a spiny lobster. I think that has got to be one of the very rare occasions of that, so they definitely do occur up there, but it's not the part that's really kind of feeding the fishery.

I did talk to the Florida Marine Fisheries Commission to see if they had, by regulation or policy, a northern limit for their management of the fishery in state waters, and surprisingly they did. They said they manage right up to the Georgia border. Now, they don't expend any effort doing compliance kind of stuff up there, but that they could go up to the Georgia border under their regulations.

DR. LANEY: Well, again, I'll defer to my North Carolina colleagues on this point, but it seems to me that cutting off the offshore benthic habitats at the St. Johns is cutting it a little short. I know we have divers routinely off southeastern North Carolina that are harvesting spiny lobster. I see nods around the table. Obviously, the population density is not going to be what it is off the east coast of Florida, for sure, but just a question. If we have harvestable quantities of a species population occurring that far north, shouldn't we push it as far as at least as we have a fishery present? Just a question.

MALE VOICE: We actually see a lot of them all the way up in depths of a hundred – usually deeper depths, a hundred to 200 feet. You have sometimes what I consider pretty strong qualities and groupings of the spinys up there now. Does anybody really do it commercially? They're too spread out to really do a commercial worthwhile harvest of them, but they're there in pretty strong numbers in those depth ranges.

MR. WILBER: How far north?

MALE VOICE: Going well past Frying Pan Shoals up to – I mean, me, personally, I've only gone up into central North Carolina.

MR. WILBER: Any of my North Carolina colleagues want to chime in on that?

MS. DEATON: I've always heard of the wreck guys, the wreck divers, and they get a lot of really large lobster. I don't know, it could be a secondary nursery. I just don't know enough about where they're starting. You do see them inside but not in huge numbers.

(Off the record discussion)

MS. DEATON: No, we have no limits.

MR. WILBER: Do you guys relate the recreational fishery at all?

MS. DEATON: I don't even know if there is a limit on spiny lobster. I don't think there is.

MR. STREET: I know spiny lobster have been discussed more than once. I know that North Carolina has rules for the homarus lobster because there was a directed fishery at one time. I don't think there are any North Carolina rules for the spiny lobster, though, other than there have been a rule on landings or something in support of the council recommendations and the NMFS rules in support of the council.

MS. DEATON: If you want that to cover everywhere they occur, which is essential fish habitat, then you might go further north, but the abundance is less than Florida.

MR. WILBER: It doesn't have to cover everywhere they occur. It's a judgment call by the folks doing the designation as to enough basically to matter. The way I kind of think about it sometimes as EFH and dealing with fishermen and dealing with coastal developers and things like that is really a negotiation process, and so the first words out of your mouth kind of sets the stage for the negotiations.

If we're talking about, say, a beach nourishment project that wants to use a sandy area near some of these habitats where lobsters occur off of Frying Pan Shoal and the first words out of my mouth with the Corps of Engineers are, well, that's essential fish habitat for spiny lobster; are they going to snicker or are they going to go, yes, you're right, and so it kind of comes down to that kind of a test. If we're going to go that far north, then I think we need to just sort of try to do our best to pull together what information there actually is on it.

DR. LANEY: Yes, Roger just looked it up and there is a federal regulation. There is a bag limit; a two-possession bag limit in federal waters all the way up, so it would include that area, for sure. I think what you just said seems to me to be the appropriate course of action. If we can document that there are sufficient numbers for a recreational harvest, it seems to me that's part of the fisheries clearly within the council's jurisdiction.

Looking back to your pyramid, if we could come up with some sort of a density criterion maybe that said it's designated EFH as long as you have this kind of density – I don't know; that would be one argument you could make, but to me the fact that you've a recreational fishery there is sufficient justification.

MALE VOICE: Well, my comment is very close to Wilson's, and I was just going to sort of pile on that that looking back at the pyramid where you had presence and absence and then relative concentration, I think you've got to consider including that.

MALE VOICE: Wilson, is there any commercial regulation there? I know there is – I mean the two per limit; is that recreational and commercial?

MR. PUGLIESE: Yes, there is both commercial and recreational limit. Both are two per person. It ties into the trap certificate program for Florida; a carapace 3 inch and has a 5.5 with a tailing permit, so there is a whole suite. The closed season off of Florida I guess tracks April through August Florida season.

Night diving is restricted to six lobsters; no spear-hook piercing, explosives or poisons; and if any traps are used, they have to have degradable panels. There is a suite of – it's essentially trying to track. We've got a lot of debate at the council level about kind of that peripheral fishery that exists north of Florida, but that's the only thing that does control that harvest in that area.

DR. LANEY: The other point I wanted to make, too, is with things warming up, the likelihood is that we're going to be moving EFH north, anyway, so we may be getting kind of ahead of the curve here if in fact, as Anne pointed out, there are little guys showing inshore further north. I think we can stop short of designating the inshore areas as EFH, but certainly I think we ought to think about the offshore areas.

MALE VOICE: I have a question. I'm just wondering are they successfully spawning up there or is it just they're getting recruitment from Florida? I think that's the big question right there. Adding them, if it's going to be a problem, but they're there, we're regulating them, but is it an ancillary population in a sense that just being recruited from Florida?

MR. STREET: There are a lot of tropical and subtropical that come and end up in the estuaries of North Carolina. Our peak catch of juveniles on all those species is September, and they probably are dead by January. It's just like Kemps Ridley, they go to Long Island Sound and they're dead by November 15th probably.

They're stragglers; they're there and a few may survive once in a while in the estuarine waters; not in the ocean where the temperatures – near the bottom where the temperatures don't vary as much, there may be some that can make it and grow. I would suggest that some research be done in the various data bases that are available both for harvest, commercial and recreational, and sampling the programs in the various states, particularly nursery area sampling.

North Carolina's nursery area data go back almost 40 years now and Georgia and South Carolina have some pretty long-term data bases. I'm not sure about Florida on the east coast. I don't that really matters too much, but let's look at Georgia, South Carolina and North Carolina if the issue is how far north do we look if this is something that needs to be locked down, particularly to look at long-term trends, long after most of us are gone, and in the eighth reiteration of the habitat plan for the warming trends, as Wilson said, but get a basis for it that is in the data because I'm

sure there will be lots of people who will heavily dispute moving something like that unless it's based on some kind of data.

MS. DEATON: I was just going to add the lobster are probably coming up in the Gulf stream current in the same mechanism that the gag come and many of our other tropical species and we're managing for those. Even though a lot of these species might spawn off North Carolina and their larvae is going north to a known fate, we've still managing for them, so it's worth considering.

MALE VOICE: And just to follow up on that, I think that there is considerable debate about whether any other spiny lobster stocks even in the Keys are coming from – are self-recruiting or whether they're all from spawning stock that's off of Central of South America. They have a larval period that's anywhere from six to nine months. If you think about the currents, that gives them a lot time for something spawned in the Keys to get way out in the middle of the Atlantic Ocean.

MR. WILBER: Okay, maybe put a bow on this and move on; the way I understand it, everyone is pretty comfortable with the idea that the inshore EFH designation really kind of loses much of its value north of Sebastian Inlet, but the offshore one we should say may really have some value up in the North Carolina, South Carolina and Georgia area and that we should mine the existing data bases to do some research on this question.

Whether we choose to sort of formally push the EFH issue for spiny lobsters in the offshore areas or not and just having that data base – the results of that data base available, that will help guide comment letters and fishery management actions and things like that, so we'll work on that.

MR. PUGLIESE: Yes, one last thing. Actually the Gulf Stream is, as with snapper grouper, is designated as EFH because of that mechanism for spiny lobster.

MR. WILBER: Okay, moving on to coastal migratory pelagic species; again not a particularly group of fish in this particular management plan, but one that seemed to have a whole lot of honey hole spots for the fishermen, so there was a lot of specific locations identified as an HAPC or EFH for these species. Again, we haven't really had any real issues with the implementation of this other than dealing with the ambiguity about the term coastal inlet and state-designated nursery habits. The fixes that we're proposing for penaeid shrimp and for the snapper grouper species we think would deal with the ambiguity here as well. Other than that, there is really no real proposal here.

DR. LANEY: Just one quick question on that; if I recall correctly we had a presentation and I think it was from the South Carolina folks about cobia spawning areas. Were we going to consider possibly putting some HAPC designations in to cover any of those spawning areas?

MR. WILBER: My recollection was that designation focused on the Broad River, and the Broad River is already an HAPC for cobia. Okay, moving on to one of the most misunderstood fishery

management plans in the council's portfolio for coral and coral reefs. Is it a fish or is it a habitat or is it both or what.

Anyway, the EFH designations for coral and HAPC designations for coral and hard bottom habitat are fairly straightforward. We haven't had any real issues with their implementation. The only real issue that has come up that's kind of tangentially related to this is one that seemed to be more of an issue a few weeks ago than I think it kind of is today, and that is the fact that many of the other EFH designations also refer to hard bottom and coral and coral reef habitat, and they do so with sort of a menagerie of different terminology.

There was a request at one of the past AP meetings to try and spruce up that terminology so that every EFH designation under the various fishery management plans would use the terms in exactly the same way. That issue I think is still there, but the severity of it has kind of lessened some because some of the proposed actions that came out of a previous AP meeting that focused on hard bottom habitat have kind of been deleted from the action list because of the overlapping with the existing designation, so I think that largely has kind of gone away. I'm just simply reporting on that because it came up in a past AP meeting, and I don't think we really need to do a whole lot on this cleanup now.

MALE VOICE: Just a quick question; how does this relate to the Endangered Species Act and the corals that are listed on it or does it?

MR. WILBER: Okay, the way I'll describe is they're separate but not in conflict with each other. Every bit of coral that is protected under the Endangered Species Act is already an HAPC either under the fishery management plan for a finfish or under the fishery management plan for coral and coral reef.

The Endangered Species Act provides an extra level and a separate mechanism for providing protection to that habitat, and that method through the Endangered Species Act in the end has got a lot more clout than the protections afforded under the Magnuson-Stevens Act. That is basically the difference.

The other issue, too, is that under the Endangered Species Act you can kind of draw some buffer areas around the individual coral so you're into sandy habitat; whereas, under the HAPC designation for coral you cannot do that unless you're in a water body that the whole water body has been designated an HAPC like the Florida Keys National Marine Sanctuary or something like that. That's really all I have to say about the corals. Are you getting ready to say something?

MR. PUGLIESE: Yes, the biggest significant differences we have in the federal coral plan, the federal coral plan actually does have rule-making authority and prohibits harvest of all but octocoral in it, so that's a pretty strong front end on the endangered species side the ability to affect directly non-fishing activities is probably a lot more.

Actually in the wording under Magnuson it does allude to anything that is endangered species essentially is identified as significant habitats and already almost would be identified as essential fish habitat, but it really does go back to the actual regulatory authority under ESA.

MR. WILBER: This is the last slide and this really meant to kind of kick off to the next set of presentations by Roger and Anna. In the past Habitat AP meetings, there was a list of potential HAPCs that came out of small group discussions and some e-mail that went back and forth within those small groups after the meeting.

This is a list of those actions and this is sort of what we're kind loosely proposing to do here. The ones in green are the ones that are proposed for CE-BA 2, and Roger will get into that. If I made a mistake in my green list, Roger will correct that. That's why he's doing the presentation on this part and not me.

The ones in white, with the exception of the Deepwater MPAs Roger has told me, those are the ones that in the end we've concluded no action was needed because once we kind of did our homework and focused more on the state-designated nursery habitats and kind of tidying up that loose end that has really been around for some time, much of those areas were actually already included under the designated, so really essentially no action was needed.

The other kind of oddball here was the Broward Staghorn Coral Stand, which is actually a fairly small area but it's protected under the Endangered Species Act. It's already an HAPC. It didn't really need any additional polygon drawn saying that whole polygon is an HAPC. We wouldn't really be adding to the regulatory toolbox for protecting that particular area. Are there any questions about this? Go ahead, Mark.

MR. CARTER: I want a little better definition of ORW and ONRW. I think Anne may have touched on it, but what distinguishes between the two? Is it metals in the water; is it fecal matter; is it salinity; is it all of the above?

MR. WILBER: I have my computer here and on my computer is the DHEC rule that defines both ORW and ONRW for the state of the South Carolina. We can turn it on and look at the definition that is in South Carolina regulations, but it does not get to that level of specificity that you're talking about.

MR. CARTER: But it's different in South Carolina than it is in North Carolina; is that correct?

MR. WILBER: Yes.

MR. CARTER: And different in Florida and Georgia?

MR. WILBER: Yes, I mean they're slightly different, but, yes, each state was required – I mean this is my understanding of it, but each state was required by EPA to designate ONRWs according to some general guidelines; and then in each state's water quality classification regulations, it provided a precise definition of an ONRW; and if it chose to, it also provided a definition or an ORW.

In some cases that definition is just a block/paste out of the EPA Guidelines for the ONRW. In some cases the states fiddled with it a little bit, but they still fiddle with it within a way that's acceptable to EPA to approve their program that allows them to have the water quality certification power. I'll show you the definition in the regulation. I just can't remember the knit right off the top of my head.

MR. PUGLIESE: Why don't we take about a ten-minute break?

MR. PUGLIESE: Okay, I would like to introduce Anna Martin as our new staff working on the Comprehensive Ecosystem-Based Amendment. She is going to open up with the actions that are contained in the front section of the document, and I'll highlight some of what we've already discussed on the new EFH actions that are also included. I think one of the things we want to do is look at some focus comment on specifically some of the considerations for – habitat considerations relative octocorals and really also the EFH actions as we move through this.

MS. MARTIN: Thank you, Roger; and as you mentioned, I wanted to focus on the actions in this document that aren't specific to the EFH designations. Roger will be going over that with you shortly. Just to reiterate some of what Pace brought forth to you earlier. The purpose of these CE-BA amendments – the council generally puts forth a comprehensive ecosystem amendment every year or tries to from the historical process of these amendments, but the purpose fishery management plans needed to respond to ecosystem management issues go across fisheries and pertain to not a specific fishery but to many.

Within CE-BA 2, I'll go through some of the regulatory actions and the non-regulatory actions. The Magnuson Act, I think as many of you are probably with, requires that the council specify annual catch limits and accountability measures for all stocks not undergoing overfishing by 2011. Now, the only fishery being addressed in order to meet these requirements within CE-BA 2 is the octocoral fishery.

When we refer to octocorals throughout the amendment, we are speaking of soft corals and gorgonians. Keep in mind that gorgonians are the primarily harvested species in this grouping. There are also regulatory actions within the amendment that will modify management of South Carolina's special management zones, and this is to address exploitation, and also an action modifying sea turtle release gear requirements.

Those current requirements are set forth in Snapper Grouper Amendment 15B right now. As mentioned, Roger will go through the designating and modifying some of the essential fish habitat actions. I wanted to provide you with a little bit of background on the octocoral fishery and some of the values that currently exist that we are basing some of these decisions on.

Amendment 1 of our Coral Fishery Management Plan established the harvest of allowable octocorals in the Gulf and South Atlantic federal waters to be 50,000 colonies per year. That's both jurisdictional areas. Now, this is consistent with the regulations that the state of Florida has adopted, and they also state within their state water regulations that the harvest of octocorals will close in state waters when this federal quota is met.

One of the problems that we are trying to address is that the federal quota has never been met. This is primarily a Florida state water fishery. Now, we also have a value for optimum yield, which is 50,000 colonies combined, and this was set forth in Amendment 5 of the Coral Plan. A further value that we have again is 50,000 colonies combined, and this was clarified last week by our SSC that it's a value for our acceptable biological catch.

They intend for this value to cover state and federal waters for the South Atlantic and Gulf. These values have been helpful in kind of guiding some the management decisions. Now, we have some landings' history for the octocoral fishery; and because it's currently managed under Florida's Marine Life Fishery Program, the landings' data comes from FWRI down at the state of Florida.

Their data does indicate that the majority of harvest for the octocoral fishery has occurred on the east coast of Florida in state waters and almost exclusively in the Florida Keys. This trend has been brought forth to our Coral Advisory Panel, and they have agreed with the landings' data and that this is a pretty specific fishery in the Florida Keys.

As Pace mentioned, octocorals are a primary component of essential fish habitat, so they do have that designation. The federal rules – so there are some regulations that limit harvest of octocorals to the area south of Cape Canaveral in federal waters. Currently you cannot harvest octocorals north of Cape Canaveral in federal waters.

Okay, now I'm going to walk through the current actions in the document. This particular action, Action 1 is one we're seeking some guidance and we would like your input perhaps in the form of a recommendation. Action 1 in the document currently is to remove octocorals from the fishery management unit under the Coral Plan.

Now, the council is considering this action because of what I've mentioned; the majority of the harvest for octocoral occurs in Florida state waters. As I mentioned, octocorals are included in the Florida Marine Life Fishery Program so there is management for octocorals. They require permits for commercial and recreational harvest for octocorals, and they record landings through a trip ticket system, so management already exists and would continue as such if the council decided to move forward with removing octocorals from the management plan.

North of Cape Canaveral the limited distribution of octocorals attached to limestone outcrops constitutes live and hard bottom habitat, so that is something that they would want to keep in mind. If octocorals are removed from the plan, then the council would lose the essential fish habitat designation, which would, as Pace discussed with you, would reduce our ability to comment on potential impacts that would carry with it. The second action currently in the document – I'm sorry, discussion.

MR. STREET: Yes, even if they were removed as a managed species, they still provide habitat for other managed species, so why would – I don't see that there is much loss of comment ability.

MR. PUGLIESE: And that's why some of this is brought to the Habitat Advisory Panel to get some discussion on this point. I think one of the considerations that right now north of Florida octocorals is prohibited – everything in the entire Coral Plan is prohibited because in the last round when the Coral Plan really extended the scope, it covered live rock, and live rock essentially means anything with live attached organisms.

It really opened the conservation window and conservation for removal for the whole fishery. I think that's the consideration that needs to be taken into account because I don't think we've ever had a removal of a species from a plan that bounded it by existing like only for off of Florida or something. If it be the entire area, then you would lose that regulatory measure that prohibits removal of octocorals, but I think it would almost potentially be removal of live rock.

That's the biggest – once you pass North Florida, that constitutes the most significant component of your hard bottom species. So that's the consideration and that's why really it is being – there is discussion desired by the Habitat Advisory Panel about the consideration of this as an alternative.

MS. MARTIN: Sera.

MS. DREVENAK: What is the percentage of the octocorals landed in state waters as opposed to federal waters; do you know the percentage? I mean it looks pretty substantial, but is it 80 or 90 percent?

MR. PUGLIESE: Yes, I there is only about 3 to 5,000 colonies annual versus the 50,000, and it's probably right in that range.

MS. DREVENAK: One concern I would have is if it does get removed from the FMU because most of the landings are in state waters, that there be some kind of trigger mechanism where if those landings started to change substantially over time and the fishery moved into federal waters, there would have to be some way to reverse that removal in the FMP.

DR. LANEY: Well, a little background here. Anna, could you go back to your previous slide there, just looking at those three alternatives. As Roger said, right now under the existing plan there is no allowable harvest north of Cape Canaveral. Roger can help me out here, but the Coral and the Habitat APs and the other members who have been on the AP for a while, we discussed that at great length when the plan was first prepared.

The sentiment was that since Florida was very closely regulating harvest in their waters and they had the regulatory and implementation mechanism in place, that it was something that was controllable in Florida, the sentiment from both of the APs was that they didn't want to see any potential for harvest north of Cape Canaveral because the habitat is not nearly as abundant.

The significance basically increases I guess the further you go because hard bottom habitat and associated organisms is limited, so that's why that prohibition was put in place. Right now there is these three alternatives under that first action, and, of course, removing them from the fishery

management unit would completely remove not only EFH but also that prohibition that's in place.

Alternative 3 has been discussed quite a bit, and that's the one that would remove octocorals from the FMU and delegate management of the octocoral fishery to the state of Florida. I keep pointing out to my council colleagues that has basically the same effect as number two. Even though you would continue to have a regulated fishery in Florida, that also eliminates any protection whatsoever north of Cape Canaveral. I think what we're looking for, to put it very plainly, is some opinion from the advisory panel as to whether or not you would like to see those prohibitions remain in effect. I think that is that bottom line.

MS. DEATON: You want discussion now, right?

MR. PUGLIESE: I think now would be – as we're going through it, this would be the best time.

MS. DEATON: Well, off North Carolina, especially in state waters, octocorals are on very low relief, very common, and so I would like to see a prohibition in harvest remain. I also had a question. If that was removed, you're saying the octocorals would still be protected as live rock or not?

MR. PUGLIESE: No, I think what I was trying to say is that if you remove that prohibition, you would almost potentially remove the live rock prohibition because you're saying that you could remove octocorals; so then if you could remove octocorals, there is nothing really stopping you from removing octocorals with attached organisms within that. I think you would be bridging something that was not intended by this discussion. I think the intent had to deal with trying to deal with the existing operations of a specific harvest in an area.

MS. DEATON: But the benefit also of having the EFH designation and HAPC is there are other impacts besides harvest, especially beach nourishment right now going on around all these hard bottom areas.

MR. WILBER: I'm going to try and maybe clarify this a little bit. You have to distinguish between octocorals and the habitat in which octocorals likely occur. Under the coral and coral reef EFH designation, it protects the habitat in which octocorals likely occur. Under the Snapper Grouper Plan and I think – well, that's the obvious one off the top of my head – that protects octocorals.

So if we remove the octocorals from the fishery management unit and we're all assuming that because of what happened with red drum that the consequence of removing octocorals from the fishery management unit is that the EFH designation for octocorals, which is the muddy substrate kind of habitat in which octocorals likely occur, that that goes away; but the octocorals themselves that are an HAPC under the snapper grouper and other fishery management plans, those remain in place.

Now, that's from the non-fishing kind of threat angle. I think the more – this is a case where the ability to regulate fishing actually provides a better protection of the habitat by prohibiting the

harvest and prohibiting the live rock harvest and things like that. I think that's really to me what it comes down to is if you lose – like you said, you want to maintain that prohibition. That is what protects the most amount of habitat for the most number of species.

MR. PUGLIESE: Just a little bit of followup; I mean, those are the two plans the council has, which is fairly unique in the country is the Coral Fishery Management Plan and the Sargassum, and they are habitat fishery management plans, I think that's obvious in the way they're prosecuted and they regulate very specifically those resources, which is very different from any other areas.

MR. GREGG: Can you give some insight into why the action is requested; what is the need or the drive to remove octocorals from the fishery management plan? I think this panel generally in the discussions I heard in the past has wanted to keep protection. Alternative 4, if you will, of leaving the octocorals in the fishery management unit but delegating the management to the state of Florida where the activity is actually going on might have some merit. It had been discussed previously but it's not one of the selected alternatives.

MS. MARTIN: To that point, we've got the no action alternative in there. This is something that council wanted to receive an analysis to determine what the impacts would be. The analysis hasn't yet been completed, but they wanted to put this in there just to determine what the implications of removal would be considering that the state of Florida has expressed an interest in managing octocorals throughout the range. The no action alternative would keep that octocoral within the management plan.

DR. LANEY: The way NOAA legal counsel has explained it to us, Kurtis, is there is another mechanism that would keep EFH in place, which is transfer of authority to Florida as opposed to delegation of management authority to Florida. This was the same discussion we had with regard to red drum.

However, Mark Robson has indicated that the commission I guess prefers to have – you know, it's kind of an all or nothing thing. They would prefer to have it delegated so that way Florida has complete and sole responsibility for it versus transfer where the council would still have some authority, I guess, and hopefully I'm explaining that correctly.

Herein lies the problem in that if you delegate to Florida, Florida doesn't have the authority to exercise any regulatory control over anything north of the Florida state line, so that's why you lose the prohibition. My understanding of it is if it was transferred the council could still retain that prohibition in place in federal waters, I think, because they would be transferring that portion of it that dealt with Florida waters, but couldn't they still retain the prohibition north of the Florida line under a transfer? I don't know; that's a question legal counsel would have to answer.

MR. PUGLIESE: Yes, I think the problem is that you're talking about one state and one state is not going to be able to regulate fishing off of another state.

DR. LANEY: Right.

MR. PUGLIESE: And I think that's where there is no – it was different where we had red drum, a plan that was dealing with ASMFC and were essentially looking at changing management regimes versus this is somewhat of a more unique type of a situation where what you're really trying to do is reduce the impact this action. Everybody is trying to figure out a way to deal with this component of a fishery to the least problem that you can have.

I think the concern is that the implications could be far greater than what you're trying to accomplish, especially since you have only a couple of thousand colonies harvested actually in federal waters of which the entire has some of the most significant conservation measures.

DR. LANEY: I guess I was still under the impression that should the council transfer, they could not transfer the whole management responsibility, but just transfer the Florida piece of it to Florida and then retain jurisdiction over the remaining three states. Again, that's a question that Monica would have to answer.

MR. PUGLIESE: Yes, actually we've asked that very specifically have not gotten that type of guidance. At least everything up to this date has not really provided us that as an action and that is why you don't see it as one of the actions that's existing in the plan right now.

MR. STREET: When the penaeid shrimp plan was first done, North Carolina was not included in it, and I'm not sure if North Carolina is included other than for protected species and that was under those laws. NMFS did not have authority to close waters in North Carolina as they had – this is in the original plan. I'm not sure what it says now.

So there is a basis, there is a historic basis for a separation and different regimes for the same species, same fishery or however you want to call it, but if the state of Florida is able and wants to manage from the beach out – I mean that's what they do for, what, either stone crabs and/or lobsters, and there is precedent also in Alaska where the state of Alaska handles a good number of the fisheries out into the EEZ up there – and then leave north of St. Mary's River in federal hands.

MR. PUGLIESE: To that actually, the spiny lobster plan, we still have a federal plan. We talked about that transfer issue and it has never come to be because of this very specific issue, you can't manage north of Florida. I think that issue and historically that mechanism now I think we have to manage throughout the range to the maximum extent practicable in populations.

We need additional guidance. To date this is what has been proposed. Again, bringing it back to you that broader discussion about the implications of removal of this or potential for expansion, I think some of those discussions I think still would be useful. I think that's one of the biggest things we're talking about here is that unintended implication.

What you're trying to deal with is a situation where you have most of the fishery operating in an area. At the original time octocorals was brought on the table was by habitat in the past because originally there was a discussion about taking the next step and potentially totally prohibiting any octocorals because it was the only provision in the coral plan that was allowing harvest, the only habitat.

What has happened now is this kind of evolution to you've got an ongoing fishery; and if it's retainable in its form, how you can do it through the most efficient way possible without impacting it. I think the last time this advisory panel discussed this, the biggest concern was not really looking at especially an expansion of harvest of essential fish habitat. Again, those are considerations.

MALE VOICE: Roger, I don't know if I missed something, but has the Coral AP addressed this at all?

MS. MARTIN: They have not, no. The schedule for this document is to approve for public hearing in December, so at that point we would be going out and gathering public input. The Coral Advisory Panel is scheduled to meet not until the spring of next year, but they will be reviewing this before the document would be finally approved.

MALE VOICE: Maybe this is a rambling thought, but I think we've got to be really careful of what the legal definitions are of transfer and delegate. I also think that we have to look past this coral idea because what you're really talking about, the way I understand this, is most of the landings take place in Florida.

Well, if you were to do that, then potentially you could be setting a precedent for other species. I know this is the South Atlantic; but if you look to the Gulf, 94 percent of the red grouper harvested or landed in the Gulf are landed in Florida, so then couldn't Florida or some other organization come back and say that you've set this precedent on this organism, why can't we apply it to the other?

FEMALE VOICE: My understanding of it was also that Florida – if there were a transfer of authority to Florida, instead of removing it from the FMU, you transferred authority to Florida, that they would then be bound by the Magnuson Act and that is not particularly interested in being bound by the Magnuson Act so that they would accept a delegation of the management through removal from the FMU, but they would not necessarily accept a transfer. I think that's correct.

MR. PUGLIESE: Yes, and that's what we had actually corresponds to that effect, and you're literally quoting their intent and has Wilson has already reiterated, so the bottom line is the only thing that they were really looking at was something that would remove and provide them – and, of course, they're looking at how they can maximize the capability within their state.

This group I think needs to look at the broader picture of the implications of this potential action and the habitat implications. Coral will look at the fishery and all those, and I think you really kind of focus on that and already has had some good specific comments about what those types of considerations are and what there may be in terms of recommendations.

DR. LANEY: I'm sitting here and being the ears of the council committee, and I've heard two members, Pace and Anne, clearly say they would like to see that prohibition stay in effect, so that's the message I'll take back. Does the rest of the AP share that sentiment?

MR. GEER: So it would be Alternative 1?

DR. LANEY: Yes, Pat, I presume if that's the only way to keep the prohibition in effect, then that would be –

MR. GEER: That would be clearest way to keep the prohibition.

DR. LANEY: Yes.

MR. GEER: I would support that.

MS. DEATON: I don't know about the Florida issue. It seems like a concern if they don't want to have the Magnuson-Stevens Act responsibility and you've got to take it all or not; that if others thought if it was fine for Florida to manage it, you could take Alternative 3 and stick in the words "in Florida", "remove octocorals in Florida from the FMU". You can't do that?

MR. PUGLIESE: I think that's where we have never really been able to do something like that, pull it out of an FMP just for a specific area. We've, again, asked for more guidance on that, but I think to date I'm not sure we've ever actually been able to either you pull it out of the FMU or you leave it. It doesn't have an only in this area type of a designation.

I think there is a desire to agree with that, but I think again you should have some of the considerations about what the implications are of even doing that, because everybody is looking at the fishery itself only, and I'll tell you who does. I'll elaborate a little bit. There was some concern – we talked about some of the SSC discussion and I think this was important because right now the removals are really only brought out in color.

They have been trying to bound down what those species are. They really don't have a real good handle on what this is. The council has supported some work that is going to be done in some recent coral funding that is supposed to be looking at the context of those and how they function as habitat for spiny lobster, for a lot of other activities.

The bottom line is some of those pieces are there but not all of them because there is a lot of concern about – and going back to our first deliberations with Jenny Wheaton back when she was chair of the panel – about focused harvest, overharvest of a very specific area, critical points, where you may have settlement zones, things like that, that information is not there so all those types of considerations I think need to be also put in that context of what these removals really mean even within the bounds of what is being done right now, because it is in a focused area.

But when you open it beyond that, then the implications starts getting even further because then it's more significant habitats for snapper and, you know, and what does that mean beyond that. Also, does it take away any of the oomph when the council steps forward and says these areas are hard bottom areas and significant because they are protected under the coral plan, but they want to place a wind farm or something like – I mean, some of the connections to other non-fishing activities have to be I think early on thought about as we're moving forward so that it gets brought up in the process and make sure that we don't lose that type of –

MS. DEATON: Alternative 1.

MR. STREET: I'm not familiar with the fishery or anything like that other than what I've heard at various meetings, but what proportion of the harvest is outside the state of Florida, north of it, and what proportion of the harvest is cultured versus wild?

MR. PUGLIESE: There is no harvest north of Cape Canaveral, so there is nothing outside of Florida that is removed. We have a live rock aquaculture program and there is a significant amount of live rock. Well, actually it's starting to make its way more into the – because of the bans in Fiji and a lot of other areas overseas, it's making itself more pronounced in the marine trade. But most of that – it has some octocorals but it is a combination of the whole habitat, so it's not specific to an octocoral-based live rock component. That has been discussed.

That was actually on the table as one of the options just to say, well, you can just grow that in your existing live rock or pursue a live rock aquaculture permit to develop that, and it was not something that the – you know, it went down the road. The AP actually didn't embrace that.

MALE VOICE: How big is the fishery and what constitutes a colony?

MR. PUGLIESE: A colony would be considered removal with I think it's a one –

MS. MARTIN: It's within one inch of the substrate.

MR. PUGLIESE: One-inch substrate is all you can remove so that would be considered – whatever the one-inch substrate component would be considered a colony. Now the sighting of the permits, I think that may be for the entire marine life group because of the group that is actually removing this is I think far smaller. We have some of the players on the advisory panel right now that are involved directly in this. It also may include both Gulf and South Atlantic because that has been an issue. The 50,000 colonies is for a combined quota for the Gulf of Mexico and the South Atlantic.

MR. STREET: I think it's fairly obvious that there is considerable disagreement about moving management, to use a non-legalese term, to transfer and delegation has specific meanings. The fishery is limited in area and amount. It may be moving and should be encouraged to move from wild to farm, to cultured, and it's probably not time to consider transferring management, **so I'll make a motion for Alternative 1, no action.**

MR. GEER: I'll second that.

MR. PUGLIESE: Well, do you want to forward it as a full motion or do it by consensus? It is the opinion of the group on how you would like to do it. What we will do is we'll put these recommendations as we're moving forward. There is a motion. If you want that, that's fine, a motion on the table for approval of Action 1 and a second.

MALE VOICE: One more question; is the farmed coral part of the 50,000 colonies?

MR. PUGLIESE: No.

MALE VOICE: It's outside of that?

MR. PUGLIESE: No, actually there is no limit on the aquaculture work. The limit is what you harvest and what you place and what you can remove out, so you can actually remove anything that attaches to your live rock, but it has to be discernible and removed from your live rock aquaculture site.

MR. WILBER: All **right, all in favor, aye; opposed. The motion carries unanimously.** My only real observation on this, just yesterday I was preparing a letter on comment to the Corps of Engineers for a beach nourishment project in Florida, and the pipeline corridor for that particular beach nourishment project estimates the destruction of 219,000 soft corals. That kind of puts it all in perspective.

MS. MARTIN: Okay, moving on through the document, Action 2 would extend the management unit for octocorals into the Gulf of Mexico Fishery Management Council's area of jurisdiction. This is also being considered. There is the no action alternative and an alternative to extend the management boundaries for all octocoral species in the coral plan to include the Gulf Council's jurisdiction.

At a meeting of the Gulf Council a few weeks ago, they have an action in the generic ACL/AM Amendment for octocoral management, and they selected a preferred alternative. They are taking their document out for public hearings to gather input. Their preferred alternative for management of octocorals is to delegate management to the state of Florida.

Action 3 in the document is to modify the allowable catch limit for octocorals. Currently the ACL is set at 50,000 colonies combined for South Atlantic and Gulf federal waters only. We have an alternative in there to modify this ACL to include state waters, so it would be inclusive of Gulf and South Atlantic federal waters and state waters combined.

It's the council's intent that the ACL apply to state and federal waters and the rationale is based on the landings' history and that the 50,000 federal colony quota that is currently in effect has never been met. Therefore, the fishery in the state of Florida has remained open. It has not closed because they have the rule in place that they will close the fishery for octocorals only if that federal quota is met.

MR. PUGLIESE: The SSC reviewed this and Alternative 2 is the clarified point that was made at the last Science and Statistical Committee meeting was to be clear that the intent was that it would be both state and federal waters and essentially not allow some massive expansion in the area.

MS. MARTIN: Another action we have in the document is to modify management of South Carolina's special management zones; a no action alternative. Alternative 2 is limiting the harvest and possession of snapper grouper species with the use of all non-prohibited fishing gear

in South Carolina SMZs to the recreational bag limit. There is also a subalternative grouped to prohibit the use of hand spear and spear guns in these SMZs.

Continuing with Action 4, Alternative 3 would limit the harvest and possession of coastal migratory pelagics with the use of non-prohibited fishing gear in South Carolina SMZs to the recreational bag limit; and again a subalternative to prohibit the use of hand spear and spear guns in South Carolina's SMZs.

Now there is concern about commercial exploitation of the SMZs in South Carolina, particularly through the use of hand spear and spear guns, and this was brought forth by one of our South Carolina contingent who serves on the council, Robert Boyles. The majority of permitted offshore artificial reef sites in South Carolina are designated SMZs. The intent of that designation is to protect the relatively small reef communities from very efficient fishing practices. The council is considering limiting the harvest to the recreational bag limit regardless of the gear type that's used.

MALE VOICE: I'm sorry, clarify that again. You're saying that the SMZs, no spear guns or anything can be utilized on those areas?

MS. MARTIN: That is an option they're considering. Currently you can commercially fish in this manner.

MALE VOICE: Right, that would only apply to federally permitted commercial snapper grouper fishermen?

MS. MARTIN: Everyone would be – if they selected this alternative, everyone would be held to the recreational bag limit, yes.

MR. STREET: Are there any estimates of what the non-recreational harvest of snapper grouper species from the SMZs is at present and what the trends are; and if so, what are they?

MS. MARTIN: That's one thing we are hoping the analysis will show, and again that's something that hasn't yet been conducted. We're looking to receive that type of information from the regional office. That will certainly help to guide the decisions.

MR. PUGLIESE: And just a quick note; one of the reasons this whole action is being discussed and the whole SMZ process is in place is to work with the states to look at designations that tie into what the intended use of those areas are. This is kind of taking it to another step because most all the areas in South Carolina have been built with recreational dollars from Wallop-Breaux or other program.

The whole process of designating SMZs was to be able to enhance the intent and that's how they were able to eliminate fishing gears within those types of areas already in the designation. This is taking it to a different level where it also would then not only deal with the efficient gears but limit it to bag limits or to limit the harvest so you don't have an extended harvest and you are again taking to the intent of the original permitted artificial reef sites.

MALE VOICE: So on the artificial reef site, my concern, of course, is you're saying you want to ban any type of spear gun, recreational or commercial?

MS. MARTIN: That is included as a subalternative, so it is being considered, yes. Now, the council can choose to not select that as a preferred option for this action.

MR. PUGLIESE: Right now the existing South Carolina law prohibits powerheads being used on SMZs.

MALE VOICE: I believe it's prohibited anywhere in South Carolina, if I'm correct.

MR. PUGLIESE: Anywhere in South Carolina including the SMZs. Yes, that was a rule that was put in place a number of years ago.

MALE VOICE: Are the SMZs in federal waters?

MR. PUGLIESE: Yes.

MALE VOICE: But did South Carolina designate them or did some federal organization designated them as SMZs?

MR. PUGLIESE: The special management zone process is built on the state getting a permit to create an artificial reef and the Corps of Engineers building the artificial reef using dollars; so that mechanism of building the footprint there. The SMZ process, under the Snapper Grouper FMP is to provide then a regulatory layer for that area is a federal rule that provides the ability to meet what the intent of the area was.

So the ability to prohibit bottom longlines and fish traps and efficient gears on that area is provided the permit holder, which in most cases is the state or the organization that holds those permits that can do that, so it's built on an existing state process, a permitting capability and then allowed to create a federal rule that complements it.

MS. MARTIN: Okay, moving forward, Action 5 within CE-BA 2 is an action to modify sea turtle release gear requirements for the snapper grouper fishery. Again, currently these requirements are set forth in Snapper Grouper Amendment 15B to address the incidental catch of sea turtle and smalltooth sawfish.

Now, modifications are being considered to the gear requirements. We've received a number of complaints from fishermen about the large size of these required items relative to the size of the vessel, so there are a number of considerations within this action modifying some of those various size requirements.

MALE VOICE: Do you have any of the gear that is currently required?

MS. MARTIN: I don't recollect it all off the top of my head, but I can find it for you. I've got the document here and can show you.

MALE VOICE: Right, because I mean some of my guys are definitely in the complain category. It's so ridiculous some of the stuff that we have to do.

MS. MARTIN: Sure, the council has heard that and they're looking to amend some of that here through this action, but I can pull those requirements and I can show them for you here.

MALE VOICE: They've got it right here, right.

MS. MARTIN: It's a pretty extensive list.

MALE VOICE: Yes, it's a big list of stuff.

DR. LANEY: I was just going to say I presume Priscilla is showing it to you there. It's all in Attachment 7.

MS. MARTIN: Okay, the remaining actions in the document are modifications to essential fish habitat designations and Roger is going to walk through those with you, and then we'll discuss the timing for the document.

MR. PUGLIESE: Yes, and I'm going to be fairly quick because these are ones that we essentially kind of walked and bedded in the discussion previously, so I'm just going to highlight them and how they fall out into the document itself. The first is Action 6 in the Snapper Grouper Plan; and as Pace had indicated earlier, one of the alternatives that is being considered is to amend the plan to identify new EFH-HAPCs.

The first subalternatives have to do with golden tilefish and blueline tilefish. Those definitions, as we looked at earlier, are being proposed as refinements and creation of EFH-HAPCs for those two species under snapper grouper. Within the document itself, we have begun to build some preliminary distributions or just baseline maps for that.

The second subalternative addresses these deepwater marine protected areas. I think the point on this – originally in one of the ones we had it in and out of the proposal. One of the benefits of creating these spatial areas is that you capture the entire habitat; so everything that may be EFH and HAPCs in the Deepwater MPA hard bottom and its spawning locations and other habitats bedded in there, this essentially says that entire area and all its integrated habitat, so the feeding zones and the sand areas and all the other pieces of that are available when a comment comes up or an issue comes up about transit of a pipeline or placement of a structure, so it provides a little more substantive EFH comment capability with this.

The second is Action 7, to amend the Coral Plan, and this really addresses two parts; one a very specific smaller area of the staghorn coral stand, the very small point area of staghorn in Florida. That was brought up at a number of AP meetings ago, and again it is such a focus and unique area that there is a desire to at least acknowledge that.

The second is a more significant larger area in and of itself. Most of the habitats are essential fish habitat or areas of particular concern, but again that broader scope of the deepwater coral

habitat areas of particular concern are also brought under – again to address many other activities, LNGs, a lot ongoing or potential activities that could impact coral and coral reefs in the area. Pat.

DR. HALPIN: Roger, I just was looking at our document we have. Some of the action item numbers aren't matching up to what you have here.

MR. PUGLIESE: Yes, the original document that you were provided, the biggest change was in this evolution of the user guide and the actions that are moving forward to the council has been a continuous evolution that refines what is in and was already designated, and one of the biggest things, the ACE Basin is included under many of the different components of existing areas.

What that did is it pulled out two full actions and alternatives that the council – you know, that were management actions under coastal migratory pelagics and shrimp, so it shuffled all those action numbers around, so that is where there is some disparity in some of the numbering alternatives. But, this, as I said, has been a continued refinement of how we are going to bridge between the refined information of existing designations and where we kind of have holes or look for more enhancement. That caused numbering issues definitely.

I should have acknowledged that earlier on that this is little bit different than what was put in that, but that's the biggest one. Action 8 is to amend the fishery management plan for pelagic sargassum. Under the original Sargassum Plan, EFH was not designated, was not approved. We had originally proposed that it was essentially the entire South Atlantic EEZ in distribution wherever found, and that was not one that was brought forward.

What we've subsequently done was to look back at the original discussion, what some of the refined kind of resolution proposals – because what this is is it's not sargassum as habitat for something else. It's EFH for sargassum. So, if you look at its structural type of component, that's what this focus ends up doing.

So you look at Alternative 2, it looks at designating the top ten meters of the water column because that's the largest distribution, bounded by the Gulf Stream as pelagic sargassum EFH or the top ten meters in the South Atlantic EEZ as pelagic EFH. So it refined it down in terms of area for kind of the functional mechanisms of sargassum and its value as EFH.

Action 9 takes it one step further, and again it looks at not only the sargassum within the sargassum habitat that we have identified areas of particular concern; and what this has to do is again kind of tying back to structural and functional capabilities. You've got two subalternatives that are proposed, the Charleston Bump Complex and The Point off North Carolina.

To a great degree, because it's tied to the oceanographic characteristics that either retrain the habitat and provide the ability of sargassum to persist and grow within those areas, and that's mainly to a great degree that oceanographic connection that it provides in the unique characteristics of the Charleston Bump Complex provides that as well as The Point off North Carolina, so those are proposals that are being brought forward as potentially EFH-HAPC areas. That brings us to the timing.

MS. MARTIN: I think I might have mentioned we're slated for the council to approve this amendment in a few weeks at our December meeting in New Bern, North Carolina. We have already scheduled a number of cities throughout the South Atlantic for the last week of January and the first of February. We have a number of scoping documents and amendments that we are taking out for scoping and public hearings. Looking further down the road for this particular document, the council is expected to – we're hoping to approve at the June 2011 meeting.

MR. PUGLIESE: I guess just kind of one step backward; is there any desire to specifically comment or endorse any of the existing EFH actions or alternatives going to the council? Are those an adequate list; do they suffice? Jenks.

MR. MIKELL: I would like to discuss or hear a little bit more discussion on the South Carolina portion of the proposal. I remember within the last – I want to say within the last 12 months I think – I know where Robert is coming from because I think some of the guys from down south came up here and really just cleaned out some of the artificial reefs that South Carolina has done, and they did it with spearguns, and so I think that's probably why he wants to limit the number of fish to the recreational limit so that they just don't take them all. I would like to maybe see this group at least endorse that particular portion of the amendment.

(Remark made off the record)

MR. MIKELL: No, but we can find out. Priscilla, have you got any idea?

(Remarks made off the record)

MS. MARTIN: Jenks, Robert did make this motion to include this. I believe that it's his intent – and, Wilson, correct if I'm wrong, for Alternative 2, 2A, 3 and 3A to be preferred alternatives for this action, so he would like to see all of those.

MALE VOICE: I'm curious how the bag limit would be enforced on an SMZ versus how can you tell whether the boat did three dives in other areas first and then their last dive here. It just seems to be pretty ambiguous as to how it would be enforced.

MR. PUGLIESE: Yes, and I think those discussions have started and will continue. I think the intent is that it would be a possession; so if they board you while you're in the SMZ – now you're talking about in South Carolina the SMZs, unlike the Gulf of Mexico where the SMZs are massive, these are fairly small areas, so think that the enforcement groups have already talked about certain concerns. I think ultimately what it would end up being is identifying possession while on the SMZ.

MR. MIKELL: I'm a little uncomfortable with Subalternative 2A. You know, I think if we're going to limit the catch, whether it be commercial or recreational, to a bag limit, it doesn't matter to me how they get them.

MR. STREET: Without data describing what the situation is now, has been and any trend or anything, why is action needed?

MR. PUGLIESE: I think Jenks talked about kind of what occurred and what brought the action on is a concern about overharvested and the use of gear and again to try to enhance the intent of the original proposal. I think to a great degree we're saying that we're looking for the information and it's going to be very limited even when we see the available information because of the commercial resolution of harvest information is not at the level that I think we're going to be – it's going to have to just rely on some reports or things that the state may be able to provide.

MALE VOICE: I have a brother that currently participates in North Carolina in the snapper grouper fishery, and he has related stories to me about this group coming up. Some are down south fishing in the Frying Pan Shoals area and making particularly large catches spearing fish.

MS. DEATON: I was just going to add that our commission in North Carolina has also talked about doing something, but their discussions were limited to I think powerheads because of what the guys are saying about the Florida fishermen and about the seasons and the grouper. They showed up at our meeting and they are catching a lot of fish. They were just worried about a sudden shift.

MR. PUGLIESE: Right, and if you look back in history, the movement in South Carolina and the prohibition of the use of powerheads was brought on by pretty significant harvest of grouper on some of the existing SMZs. I think it was Y-73 specifically large quantities were removed with powerheads.

MS. DEATON: The way that's worded, though, 2A, you're talking about prohibiting the use of hand spear and spearguns for harvesting, right, because that came up at our safety concerns with sharks, and they would be allowed to have them for safety and just not use them for the fish.

MALE VOICE: Well, it seems, though, what you're really talking about is whether the SMZs commercially done. Pretty much that's end of the story; if you're not commercially harvesting off the area and you don't have a commercial boat sitting on it, then it should be a non-factor if you're limited to recreational only.

MR. PUGLIESE: I think what you bring up is a very fine line here because the council can't designate to one sector in this case. What this does is it provides the ability to harvest but at what is identified as a reasonable level for activity. You can't specifically say this is going to absolutely only be a recreational area based on the way Magnuson is written. But, you can say that you can't using fishing gear and you have to limit it to the bag limit, because that's the intent of the collaboration with the state on this process. It does the same thing.

MS. WENDT: Well, I would just like to say that as the South Carolina representative here I would advise deferring to our deputy director who I'm sure consulted with our artificial reef folks. My only question is, is this an action that the Habitat Advisory Panel should either endorse or not endorse because it doesn't seem to be really a habitat issue.

DR. LANEY: Yes, I was going to sort of articulate the same point and suggest that if the Habitat AP wanted to take a position on this particular one, then you might want to do so in the context

of saying that the concern here is in maintaining the sustainability and/or ecological integrity of the artificial reef habitat, and to that end it would be beneficial to try and limit the harvest of those species that are part of that community.

I think that's at least part of Robert Boyles' motivation in proposing these action be included in the document in the first place. Yes, I agree, Priscilla, I think if you do take some – or make a recommendation on this, you should focus on the ecological aspects of it, I think, as opposed to the fishery aspects of it.

MR. PUGLIESE: Are there any other comments?

MR. WILBER: Are we done with this one? Could we go to the coral HAPC one? We kind of brushed over the coral HAPC action. I just want to make sure everybody understands what is really proposed there. Despite the fact that HAPC is used in two different contexts – well, it's a term that's used in different context and those different contexts have different regulatory significance.

The coral HAPC action that was taken or finished in July, right, by the council designated roughly, what, 23,000 square miles as a coral habitat area of particular concern. That opens the door for the council to use its discretionary authority over fishing activities to protect that area. In the traditional EFH world, that designation as a coral HAPC has no regulatory significance.

It comes from a different part of the Magnuson-Stevens Act that existed well before the EFH provisions of the Magnuson-Stevens Act were put in place in '96. What is proposed here as part of CE-BA 2 is to essentially co-designate that 23,000 square miles. One designation is the one it already has as a coral HAPC, and what is being proposed is to give it also the EFH-HAPC label. In essence, what it's proposing to do is to add 23,000 or so square miles to the HAPCs in the South Atlantic.

Now, if you go inside that area, that area has already got a lot of hard bottom and deepwater coral reefs and things like that. That is why it was designate. Those areas are already an HAPC under various fishery management plans because they happen to be corals, but the amount of percent covered inside those coral HAPCs actually are the reefs.

It is on a single-digit kind of percent kind of a thing. So by adding the coral HAPC to the EFH-HAPC list, we're now adding all of the sand and non hard bottom habitat within those big 23,000 mile polygons. Whether that's a good thing or a bad thing to do is up for discussion, and I'm sure the vetting process will kind of lead us to a good conclusion on that.

Since many of us actually advise council members and habitat committee members on items, this is an important point and I just want to make sure everyone understands that so we can advise folks appropriately on what the action really entails.

MR. PUGLIESE: Again, we're just reiterating that as of July of this year these are now officially the deepwater coral HAPCs in rule. One thing, just to follow up with Pace on this, is that a lot of the information in the Comprehensive Ecosystem Amendment 1 that you all were

involved in the development early on really does focus on the functional ecosystem activity within this area.

I think that's why a lot of that really meshes well with the EFH discussion because it was one of the first ones not looked at the area but understood that it was a complex of habitats that it was conserving and protecting, so EFH layer adds an additional discussion and ability to the council.

Are there any other concerns on any of the EFH proposals that are on the table right now or a desire to endorse those as an adequate amount, given all the discussion we've had about how much now is being identified as existing? I think any specific recommendations to the council that these are appropriate to move forward for at least public hearing would probably be appropriate, too.

FEMALE VOICE: Why was Bulls Bay deleted from I believe it's three of the actions; what was the rationale for that?

MR. PUGLIESE: Well, Bulls Bay and ACE Basin and a number of those, because they're already included under the existing designation – and if you go through the larger user guide document, you probably can weed out exactly where we get to because there is a lot of discussion about the unique character of those.

Well, when you really go into it, those technically are already considered as part of the existing EFH designation. This user guide will clarify that so we don't need to necessarily take another action. It will already be acknowledged as important and significant EFH or EFH-HAPC within the designation. Pace can chime in because this has been an evolving process because the list originally was really extensive.

MR. WILBER: Right, Bulls is specifically identified as an outstanding resource water in DHEC regulations, so that's why it's deleted. The ACE Basin is not discussed as a basin in the DHEC regulations but many of the creeks and tributaries in the ACE Basin are specifically called out in the DHEC regulations, particularly those that are on the northeastern side of the ACE Basin, so that's why the ACE Basin was pulled.

MALE VOICE: Just a suggestion; we went through the presentation with the actions, the actions were presented and we had some discussion during those, but it might tie together a little better if we go back through it and have the discussion on whether or not this advisory panel wants to comment on a particular action. You know, start with one and let's move from there because I think we're bouncing around a little bit and I don't have the benefit of the computer to see where we are and where we're going.

MR. PUGLIESE: Yes, and that's fine, and I was trying to focus some of the discussion specifically on the EFH actions, but let's quickly begin at the beginning and walk through and see if there is a desire to comment. You don't necessarily have to make a specific endorsement or whatever.

We can compile those and those can be part of the comments and recommendations from this advisory panel forward. Okay, you've already provided the recommendation on the support of Alternative 1 on Action 1. Is there any desire to comment on the extension of the management unit in the Gulf of Mexico?

MALE VOICE: I was curious of again what the challenge or problem was that the action is proposed to address.

MR. PUGLIESE: It was brought forward in the context of the original discussion or the original management of the overall quota was on both the Gulf and South Atlantic, and there was original discussion about the fact the Gulf may just want to defer and provide the South Atlantic Council the ability to just manage octocorals at that level. It started as that process because, again, it was trying to capture it and it really wasn't a big concern in the Gulf of Mexico, so there was a desire to see is there an efficient way to address this disparity between Gulf and South Atlantic combined quotas.

MALE VOICE: So the current status is the Gulf Council wants to delegate to the state of Florida?

MS. MARTIN: They've recently chosen that as an option. Again, it's in an options paper so it's a little further back. We're a little further forward with our plan here. They're taking it out for public hearing and that's their selected preferred option right now is to remove octocorals from the Gulf Coral Plan and delegate management to the state of Florida.

MALE VOICE: But advisory panel has already recommended an alternative contrary to that; and so for this particular action, it seems like the no action alternative might be something that this AP would want to recommend.

MR. STREET: I agree, no action.

MR. PUGLIESE: There has been a recommendation for no action on extension of the council's management unit into the Gulf. Any other comment? Pat.

DR. HALPIN: Just a question; on the Alternative 2, what is the extent of that extension? Is that solely in western Florida waters because it's ambiguous the way it's written right now?

MR. PUGLIESE: Again, I think that's also in that kind of disparity of how much of – if they remove it from the FMP; does that mean it's going to be octocorals throughout the jurisdictional area, which would be the Gulf of Mexico area? Again, I think there is a little bit of uncertainty on that, which would be a real mess.

I think some of the original intent was it be focused only on those areas and it would be essentially from the South Atlantic through where it occurred through Florida. I'm not sure if that can actually be done that way. Wilson probably knows and he can reiterate some of those discussions.

DR. LANEY: No, I don't. I remember that we had the discussion at the council meeting. I was just going to comment here that what concerns me is the potential for different management of the same species unit in different geographic areas.

I raised this concern at the time that red drum was delegated to the Atlantic States Marine Fisheries Commission that basically what the National Marine Fisheries Service was in effect doing was creating a situation where in the Gulf of Mexico you have red drum under council management and you have essential fish habitat in place for the species.

On the Atlantic coast you don't now. You have the Atlantic States Marine Fisheries Commission managing the species but you have no essential fish habitat for red drum. It just seemed to me that it would be very confusing to the public, especially those segments of the public that spend time in both the Gulf of Mexico and the South Atlantic coast to have different sets of regulations for the same species in different geographic areas. It seems to me that the whole octocoral situation offers the potential for that same thing to happen, so how we address it I don't know. I think it's more of a legal question, I guess.

MR. PUGLIESE: Again, actually with regard to the octocoral fishery and octocoral dealings, actually the state of Florida – in building our original permits and everything, we dealt with the state of Florida; and the state of Florida, we are kind of deferring to a great degree on how they work through their Marine Life Program and how it connects potentially into the aquaculture.

So it ultimately is already to a great degree coming through – the catch information is coming through the state of Florida. The process in federal waters, the regulatory mode, though, is the Gulf Coral Plan and the South Atlantic Coral Plan, and that was something that we did a number of years ago because it separated the plans, so that the South Atlantic could be essentially more restrictive in their views or whatever in the original discussions. Are there any other thoughts or comments?

MALE VOICE: Just a quick question; do we know how Gulf states manages octocorals outside of the state of Florida in the Gulf?

MR. PUGLIESE: Well, right now they're in the same situation where they have a prohibition of harvest in the FMP just like the South Atlantic other than removals through the Aquaculture Program, which they also have. Specific to the no action alternative; is there any real problem with looking at that or we can acknowledge that as at least one of the recommendations that the members have provided. Okay, if not, we can move forward.

Allowable catch limits; again, this was to bring it into what actually is occurring in the fishery. The allowable limit before was really not tied to the way the fishery – the SSC has provided their recommendation and this was the opportunity to the council to limit it as part of their whole process of ACL development to the actual operations of the fishery. Any comments?

Okay, we'll move forward. The SMZs at this point; I think we had a lot of discussion and we can relay some of the concerns and comments and I think there has been to a degree the desire to see what tracks the state's position. The way it's structured, I have a feeling we're going to see a

little bit of restructuring because it's laid out with limiting possession of snapper grouper, limiting possession of coastal migratory pelagics and then the whole issue of prohibition of hand and spearguns as kind of being a potential component of both. Mike.

MR. STREET: Is it moving toward Alternative 2, then, which is recreational bag limit for everyone?

MR. PUGLIESE: Yes.

MS. MARTIN: Yes, that's correct.

MR. STREET: That's what I would prefer.

MR. PUGLIESE: It's actually 2 and 3 because you've got snapper grouper under 2. They separate them for comment and discussion; snapper grouper as well as coastal migratory pelagics is 3.

MR. STREET: I meant for the SMZ.

MR. PUGLIESE: Yes. I think that's why I said this was confusing because it has got a subalternative as this, and it's not really structured the way – usually you'll have the action – the real things you're looking at is a limitation of the bag limit to snapper grouper and coastal migratory pelagics and the prohibition and use of hand spear and spearguns.

So those are three portions of really what these – they're separated in two major alternatives with both having a common issue of looking at a prohibition, so it's separating out whether you either just look at snapper grouper only and coastal migratory pelagics and the issue of the prohibition of the use of spearguns.

MR. STREET: Okay, from a fishery viewpoint, I like treating everybody the same, Alternative 2, but then from a habitat viewpoint I still don't see how this has really anything to do with habitat, and therefore I would lean toward this group not doing anything on this. It's a fishery management issue and not a habitat issue.

DR. LANEY: Mike, I largely concur with you. The only point I was making earlier was that there is a potential linkage here if it were documented that the use of one particular type of gear was, for example, skewing the age structure of the community toward much smaller sizes and younger age structure.

Then you could argue from an ecological perspective that it would be better to restrict the bag limit to strictly recreational, which is smaller than the commercial to protect the ecological integrity of the ecosystem. I think that's the only legitimate argument that the Habitat AP could make if you wanted to take a position on it.

MR. STREET: I would agree if there were any data at all to show that one way or another.

MR. MIKELL: On all these SMZs; aren't they all created habitat or created reefs?

MR. PUGLIESE: Yes, they are habitat. I think the significant habitat consideration is the creation of those as protection from efficient gears, damaging gears. That has an absolute habitat significance there. This becomes almost more of an allocation issued.

MS. DEATON: I was just going to add that I've seen a lot of damage from spear fishermen to the habitat when I was in Florida because of kicking, overturning, snapping.

MR. WILBER: So the recommendation from the panel to the council is we're not sure if there is a habitat component to this, but we are leaning towards recommendation 2 and 3.

MR. STREET: No, to me, I'd say from fishery management viewpoint I'd lean toward treating all fishers alike; but from a habitat viewpoint, I see no need for us to take a position and it would be no action.

MR. WILBER: I'm just trying to see if there is a way to combine yours and Wilson's point.

MR. DUREN: I think we don't know enough to make a recommendation on a lot of these options, and I would say we have no objection to them going out for public comment, but we send them out without a recommendation as to the alternatives.

MR. GEER: If it's happening in South Carolina, it's happening Georgia as well. They're going right by our state to do this, so we need more information on it at this point. I do think it's a fisheries management issue as well.

MR. PUGLIESE: Okay, let's move on to Action 5, which was modify sea turtle release requirements for the snapper grouper fishery. Are there any comments at this point?

MALE VOICE: Definitely want to modify.

MR. PUGLIESE: Okay, support for modification and I think concern over the – yes, kind of the inappropriate application of these. Is there any concern about moving that forward?

MR. STREET: Is it a habitat issue?

MS. MARTIN: Roger, Kurtis has a question.

MR. GREGG: Just an observation; this is the Habitat and Environment Protection Advisory Panel.

MR. PUGLIESE: Okay, Action 6 is to amend the Snapper Grouper Plan. The alternatives that were brought forward were the golden tile and blueline tilefish HAPC designations as well as the Deepwater Marine Protected Areas. Any desire to provide a recommendation to the council?

MR. STREET: I guess we should. Somebody else needs to talk and not just me.

MR. PUGLIESE: Yes, I guess given the context of what we've identified as why these were brought forward and what they're essentially doing is in terms of shoring up additional areas that potentially could be of benefit for EFH consultation, EFH process, I think the AP has the bounds to address that at this point. If not, we can move forward. Any comments? Kurtis.

MR. GREGG: If the fishery management plans or the Snapper Grouper Plan doesn't include EFH for golden and blueline, then that's what this action is to address, correct?

MR. PUGLIESE: Right now there are no HAPC designations. Truthfully, if you look back at the Habitat Plan, the predecessor of the Fishery Ecosystem Plan, it actually laid out the bounds and talked about it as an HAPC, but it never got put in as one of the items in the list of snapper grouper habitats that was acknowledged as an HAPC. This tilefish component really is shoring up a significant issue that got missed in the first round.

MR. GREGG: So the no action is leave that out, and that appears to be a shortcoming of the document, so does this advisory panel have any comment on Alternative 2 and the subalternatives. If you can illustrate the differences, there is not text on 2B to really compare right now.

MR. PUGLIESE: Yes, that's all it is. Yes, on 2B it's just acknowledging the Deepwater Marine Protected Areas. The specific wording was refining the actual golden tilefish habitat. The entire Deepwater Marine Protected Areas are the MPAs that were designated under – I was going to show those also – the Snapper Grouper Plan in part because some areas had spawning location habitats and it was to be totally protected from any snapper grouper fishing. Yes.

MALE VOICE: Does that mean we're going with Alternative 2?

MR. PUGLIESE: Alternative 2 is what has been put on the table as a recommendation to the council.

MALE VOICE: I like it.

MR. PUGLIESE: Any other comments or concerns? If not, we'll move forward. Action 7 is under the Coral Plan. Looking at no action or Alternative 2 to amend the Coral Plan to acknowledge two areas of concern; the staghorn coral stand, the small portion that is identified in Broward County, as well as the Deepwater Coral Habitat Areas of Particular Concern. We need an AP member to acknowledge for the record. Kurtis.

MR. GREGG: I think Pace pointed out the differences between EFH-HAPC and the current Deepwater Coral HAPC. If the agency doesn't get enough traction with the deepwater coral in reviewing the project, then the toolbox isn't filled with the right tools. Does the EFH-HAPC provide that additional level of traction?

MR. PUGLIESE: Yes, and that's point is the EFH-HAPC designation really does focus on trying to look at some of the non-fishing impacts that the regulatory side of the coral HAPC

would not necessarily be able to address. They can acknowledge the values, but I think that has a more clear path. Pace can reaffirm it.

MR. WILBER: He is exactly right. And just a personal plea on this point is you would not believe how much of my time has been spent in the last two years trying to explain to Silver Spring the difference between a coral HAPC and an EFH-HAPC. If we go forward with this action and essentially have a co-designation for that 23,000 square miles, then I don't need to explain that again.

MR. GREGG: In that case I would recommend that Alternative 2 would be recommended. I'm not sure about Subalternative 2A; again the speck on the map.

MR. WILBER: I personally don't see any value to 2A. In the spirit of being clean and tidy, then you would delete 2A. The reason I would not see any value to 2A is that the geographic footprint of that area; i.e., the sand outside called the staghorn coral is pretty darned small. Second, the coral itself is already an HAPC; and, third, the sand around it and the coral is already protected under the Endangered Species Act. There is really nothing we're bringing to the table that's really significant compared to what is already on the table. There is not really much point in that.

MR. GREGG: So basically we're recommending Alternative 2 and 2B?

MR. PUGLIESE: Okay, the recommendation is to endorse Alternative 2 and 2B is to move forward under amending the Coral Plan for EFH-HAPC. Any other comments? If not, we'll move forward. Action 8 is to amend the fishery management plan for pelagic sargassum. We have a no action alternative.

Pursuant to Magnuson, we essentially have to designate EFH for a managed species, so that brings us forward with Alternative 2 and Alternative 3. Alternative 2 is acknowledging amending the plan to designate the top ten meters in the bounds of the Gulf Stream and Alternative 3 is to amend the Sargassum Plan for the top ten meters throughout the South Atlantic, so those two alternatives. Mike.

MR. STREET: I was out of the room when this came up before so I don't know what kind of discussion you had. If those top ten meters, either in the Gulf Stream or everywhere, are included; is there a potential under that then to have to say you can't troll above the ten meter depth or anything like that or you can't troll so you don't catch sargassum on your line? A lot of people, of course, are fishing lines of sargassum for dolphin and things like that.

MR. PUGLIESE: Yes, and I think if you go back to the original Sargassum Plan, there is discussion about not impacting those types of activities. It discusses that. It's not an issue that would be of concern. It would be concerned more with harvest as well as then any type of mass removal.

MR. STREET: Well, I remember that and, of course, the harvest that was derived at was still insignificant. I just want to avoid unintended consequences.

MR. PUGLIESE: Yes, and we haven't had a lot of additional comments on this from the National Marine Fisheries Service itself internally and not necessarily with me and Pace but some of the other – because these are picking up on some of the recommendations when we said it was going to be sargassum everywhere; that they came back with these as being some of the alternatives and recommendations.

We're essentially picking up on some of NMFS recommendations on refining it down, and again this is not sargassum EFH. It's the area that would be important for sargassum movement and generation and those types of things, which is very different. We're just trying to track what originally was a finer resolution and tying it to the process and oceanographic process. Pace.

MR. WILBER: The choice between Alternative 2 and Alternative 3, I think it's cleaner to pick Alternative 3 because it extends to all the EEZ waters. And to be just kind of honest, these very general things that extend to all waters, they kind of become footnotes in the non-fishing impact side of EFH regulation. They're never the lead card that you would plan.

The reason why I think Alternative 3 is better than Alternative 2 is that when you go to Action 9 and you would designate some HAPCs for sargassum, you know, the HAPCs are supposed to be literally a subset of EFH. I think if you go back to Action 8 and Alternative 2 and you're just designating the Gulf Stream, then you're not going to get to that subset requirement in Action 9. I would pick Alternative 3 here because it paves the way for doing something under Action 9 whereas the other alternatives don't.

MR. PUGLIESE: And you're definitely correct especially when you look at the Charleston Bump Complex relative to that, because the Bump Complex will have a corner sticking out so it will not be a true subset of the other. We have Action 8 and Pace's recommendation to look at Alternative 3 as the recommendation.

FEMALE VOICE: The two alternatives are reversed.

MR. PUGLIESE: Okay, let me put it this way; I'm going to be state and then we can be clear because we're still making sure that they track – amend the Sargassum FMP to designate the top ten meters of the water column in the South Atlantic EEZ as EFH for pelagic sargassum. Any other comments? Anne.

MS. DEATON: I just have a question. Didn't you say that there was no EFH because you had proposed something that was really encompassing so that it didn't go – and Alternative 3 is still very encompassing. I mean all the top water. I don't mind that but it's a lot.

MR. WILBER: Well, there is a lot of politics behind the Sargassum FMP that I am completely unaware of. But given that our colleagues to the north at the Mid-Atlantic Council have designated all estuarine waters as EFH for bluefish and southern flounder, I don't think we're going to get outside the bounds with Alternative 3 here, and I'm willing to argue that internally anyway with the fisheries. Kurtis.

MR. GREGG: I think empirically Alternative 3 makes sense so I would recommend this panel support Alternative 3.

MALE VOICE: I was going to comment that I don't think Alternative 2, the way it's written, you'd have to be much more precise in defining how you're going to define the Gulf Stream, which I think will be very difficult to implement, so I would go for the broader Alternative 3.

MR. PUGLIESE: What we have on the table is Alternative 3 as specifically stated earlier to make sure we track the same wording. Any other comments? If not, we can move forward. Action 9 is the EFH-HAPCs for sargassum; and as Pace indicated, these were a – the mandate is that it's a subset of the EFH designation, which you have recommended was the broader area.

The two areas that are considered as the oceanographic components as significant for sargassum would be the Charleston Bump Complex and The Point off North Carolina. Now, both of these do have specific designations already under – sorry if I didn't mention before – as you look at the document that you've been provided for dolphin and wahoo; those actually have point location areas that encompass both -- say the Charleston Bump is the bump and gyre complex component and then The Point off North Carolina has specific bounds. Those are the two subsets that are being proposed as significant habitat for sargassum itself. Any comments or thoughts?

MR. STREET: I agree with Alternative 2 and its subsets are both very specific points.

MR. PUGLIESE: Okay, so Alternative 2 with the consideration for 2A and 2B are moving forward unless there are other comments or concerns. If not, that's it under that, and sorry for stretching it out as long as we did, but I think this went the full gamut of where we started with EFH to where we are now. I do appreciate sticking with it and really kind of walking through this entire process. We'll go ahead and break for lunch and we'll come back at 2:00.

The Habitat and Environmental Protection Advisory Panel of the South Atlantic Fishery Management Council reconvened in the Charleston Marriott Hotel, Charleston, South Carolina, Tuesday afternoon, November 16, 2010, and was called to order at 2:00 o'clock p.m. by Mr. Roger Pugliese.

MR. PUGLIESE: I think we're going to have a little bit of shifting around in the agenda and look at the Habitat Conservation Division Update after we get into some of the regional research. We're going to kind of jump into that first, I think, and take the liberty to actually – one of the presentations is going to be a powerpoint, so I think what I'm going to do is go ahead and shift Marcel, if it's okay, and have Todd do his powerpoint presentation and then Marcel is going to give us a verbal update on this, and then what I'd like to do is have some open discussion about how all these different activities and fishery-independent data are kind of converging and the connection of the ecosystem research, too.

One thing I would like to say is that we're really lucky to have the involvement again with our Beaufort Lab partners. They were a very key component when we developed the original habitat plan and participated in some much of the early activities, and with this reorientation toward ecosystem activities and Todd being the chief of the Ecosystems Branch I think it's really going to provide a longer term connection and expansion of our collaboration.

MR. KELLISON: I'm happy to be here and to see everyone. I want to just provide a bit of an update on work that we're doing at the NOAA Beaufort Laboratory, and in doing so – and I did this a little bit last year at this same meeting, so of you might be familiar with some of this; but for those who weren't, I'll provide a little bit of background on the NOAA Beaufort Facility and our NMFS organizational structure just because that can be a little confusing.

After that I'll try to provide a review of current research and capabilities with the branch that I oversee in Beaufort. Our facility is located in Beaufort on Pivers Island. We're near the Duke Marine Lab and we're also located close to a number of other marine labs, the North Carolina State Facility, the UNC-Chapel Hill Facility and the North Carolina Division of Marine Fisheries. It's a rich area for collaboration.

Our NOAA Facility is actually split into two components. One is the National Ocean Service and one is the National Marine Fisheries Service or NOAA Fisheries, and I put both of those up there because sometimes we call ourselves the National Marine Fisheries Service and sometimes we call ourselves NOAA Fisheries. It is the same thing.

It used to confuse me before I worked for them at the time so that's just a little bit of clarification. Our laboratory is about a hundred people, and it's split about 50/50 between NOS and NOAA Fisheries personnel. The NOAA Fisheries part is part of the broader Southeast Fisheries Science Center, which is headquartered in Miami.

There is a laboratory in the headquarters in Miami, but that also includes laboratories in Galveston and Pascagoula and Panama City and Beaufort. At our Beaufort Facility, for the NOAA side, our director is Aleta Hohn, and she oversees three branches, one of which is the Sustainable Fisheries Branch which focuses on population dynamics research, and then they also lead all the stock assessments for the South Atlantic.

The Protected Resources Branch, which focuses on education and sea turtle work, and then the branch I oversee, which is called fisheries ecosystems, and the two main groups within that branch are the Fishery Ecology and Biology Group and one is a new project that started up this year that has been a big coloration with MARMAP, which is the Southeast Fisheries Independent Survey, or SFIS.

I'll talk a little bit about the work that both of those groups are doing. Within the Fisheries Ecology and Biology Group, we're focusing on a wide range of research topics – and I'll sort of just read through this now – that includes reef fish life history patterns, habitat restoration ecology, the use of otolith microchemistry to look at reef fish spatial and temporal distribution patterns, looking at genetic connectivity of reef fish populations, reef fish spawning aggregations, reef fish reproductive ecology, temperate hard bottom community ecology, predator to prey relationship and invasive species impacts.

We have a number of primary researchers there focusing on a lot of different areas of fisheries ecology. Predominantly our work is within the Southeast U.S., but we also do work in the Chesapeake Bay area, we do work in the Keys and Tortugas and some work out in the Pacific as well.

Some specific examples of these, looking a little more closely at some of these bullet points, we're doing work on reef fish reproductive ecology. As background, much of our stock assessments – well, many of our reef fish species spawn multiple times a year, and in most of our stock assessments we assume that the frequency of spawning and the duration of spawning doesn't vary with the size or age of fish.

We're looking at a number of different species to see if that's a valid assumption and our results suggest that typically for the species we have examined so far it's not a valid assumption, and perhaps not unexpectedly you see changes in the frequency of spawning and stochastic situation spawning as fish grow and age.

Through some simulation modeling, we'll find that incorrectly assuming that spawning frequency and duration is constant with size and age can lead to some errors in benchmark calculations like the fishing mortality of which overfishing occurs. Perhaps it's a pretty significant thing to consider in our stock assessments, so considering size and age-specific spawning frequency and duration might lead to improved stock assessment capability.

This is a cooperative project that we have with researchers at MARMAP this year at South Carolina DNR and some also with some people in Panama City. Pace and Roger mentioned recent spawning aggregations earlier today, and we're doing some spawning aggregation research predominantly in the Keys and in the Tortugas, and we're quite interested in expanding our work farther to the north within the southeast, and I'd be interested in talking about some of the locations that you mentioned.

I know, Roger, you did some work with Ken Lindeman and published some of that work about some spawning aggregations around the Lower Keys. I'll mention some of that in a moment because we've been using some of those locations in work that we're doing. As background, many of the reef fish in the southeast and more tropical environments reproduce at very predictable times and locations, and this makes them quite successful to exploitation.

They might come to a certain places at very specific times every year. If you know where that is happening, it is very easy to go catch a lot of fish at one time. We're trying to get more information on these reef fish spawning aggregations in some different areas. Mark Burton within our group has been for a number of years looking at mutton snapper aggregations that occurs down in the Dry Tortugas, which if you're not familiar with area, it's about 60 or 70 miles west of Key West. He has been looking at a recovering aggregation there. Last year they saw many thousands of fish spawning, so it's a pretty good success story. That area is now protected from fishing.

They're also looking at whether other species are using that location as an area for spawning. In the Florida Keys we're looking at reported aggregation sites. These sites are reported either to us directly or to others; for example, to Roger or Ken Lindeman, by commercial fishers. It's their area so they say this is where we go target fish on probable spawning locations.

We're looking at those reported aggregation sites to see whether fish are continuing to utilize those site. We're also asking questions about the morphology of those sites, the habitat

characteristics for those sites to see if there might be sort of geomorphological signatures that would allow us to look at geomorphology of other areas in particular spawning locations might occur.

And as background I should note that in the Florida Keys where we're doing this work, most of the knowledge of fine-scale bathymetry and habitat distribution is limited to depths less than about 20 meters. Beyond that we really don't have a good idea of what is going on, but all the reef fish spawning aggregation sites that have been reported to us are in waters deeper than, say, 20 meters.

We have taken an approach in a number of sites off of Key Largo and a number of sites this summer off of Key West to map some of these sites. What you see is this figure – these lines are transects and we're using single-beam acoustics. It's a pretty simple approach. The red is representative and habitat classifications, and the red represents hard bottom and the gray represents sand essentially.

This is a reef barrier here, so Key West is back in this direction. This line would be a 20-meter depth contour and so on. But this is the reef and this is sort of the area in the Keys of which our knowledge of what is happening in deeper water stocks. So in these areas where we have a poor plan of age and size, we're going out and seeing what is happening in the deeper water.

And in the Upper Keys and the Lower Keys we're finding that all of these reported sites are occurring adjacent to what we're calling outlier reefs or ground reefs. We've developed some conceptual models relating to the locations of these aggregation sites to these reefs, and we have a couple of consultations. This is just one example that I wanted to show off of Key West.

We mapped this area and then we went out this past summer and on predicted spawning moons we had divers and we did split-beam acoustics, what we call fishery sonar, to see if fish were actually utilizing the site. What you'll see here is a visualization of split-beam sonar data. Right now we're looking down on this outlier reef, which is about 30 feet of depth at the top and to a point that starts to come into view are individual fish marks as indicated through the split-beam sonar.

You can fish are throughout the water column and along the bars at about four-tenths of a kilometer, so there are a lot of fish in the water column there. These are relatively large fish. With the split-beam sonar we can see post processing go out and based on the target stream for their return, returns from smaller fish.

If it's a relatively large fish, we then could perform diver surveys and determine that these were predominantly gray snapper. That's not the best picture, but these are gray snapper; so very large numbers of fish there on predicted spawning moons. Just a point of this is that we're doing this at a number of locations and trying to link the habitat utilization and patterns.

MR. PUGLIESE: A quick question for you Todd; at the same time are you able to build what the oceanographic characters are of the area, temperature, current patterns and all that. Has that been something – okay, you haven't been able to do that?

MR. KELLISON: That's a missing element. One of the big challenges that we have with this work is that we have number of sites that have been reported to us, and on predicted spawning moons they're typically only a few days that we can go out and look at what is happening. We have a number of sites where we have some very positive signs of aggregations occurring, and so the challenge for us is do we stay at these sites and try to really describe what is happening there or do we continue to go and look at these other sites.

A couple of weeks ago we just found out we were funded for another additional year for this work, and that's something that we're figuring out a balance of on the snapper spawning, which happens typically in the summer – are we going to go back and try to better describe this and perhaps get some good environmental characterizations of the site or are we going to additional sites. There is not enough time or not enough people.

DR. LANEY: Todd, back on your split-beam three-dimensional depiction there, was each one of those dots an individual fish, so can you actually count the dots and figure out how many are in the aggregation?

MR. KELLISON: Yes, each dot was an individual fish, but the important point is all of that there were not collect simultaneously, so the slot with the sonar is about 7 degrees which ends up meaning that at the bottom it's only about 12 percent of water depth, so it's not very large. You have to run a lot of surveys. It's impossible to know whether in that image set that I showed, which was just from one day – we marked that up from multiple days.

We can go back and make some estimates of the school size or we can make some very accurate counts of what the acoustic data tells, but it's impossible for us to know in between the time where we went over Mark A and Mark B if a fish moved from one to another and we're marking the same fish.

It's quite possible what I showed you was larger than what was actually there or it's also quite possible that it's quite a bit smaller. I can say that diver observations can help us figure that out – to figure out the extent of the school, and there were definitely thousands of fish in that aggregate.

MR. PUGLIESE: I guess to follow up with that, the whole point I was asking is that – and it gets right to this point as I know at Grays Reef they did combinations of passive and active acoustics so that then they could get a three-dimensional view and probably more realistic snapshot of, say, an aggregation or at least at that point just fish distributed in an area versus really actually doing the same thing for here would probably be a very beneficial thing.

MR. KELLISON: There are a number of other approaches that we'd like to use to better characterize these and hopefully we're going to continue to pursue that. I should note that this work is in cooperation with our colleagues at the Fish and Wildlife Conservation Commission based out of Marathon and at the University of Miami. We're also performing work on invasive species. Right now it's just focused on lionfish which are a huge issue in the southeast, Caribbean and coming to the Gulf as well.

This is work that our group is leading, and this is in close cooperation with a number of our NOS colleagues in Beaufort and elsewhere. I just state again lionfish are now widely distributed throughout the Southeast U.S. Continental Shelf waters. This past year we did some surveys, some RV surveys, remotely operated vehicle surveys on the NOAA Ship Nancy Foster on the shelf break – well, may shelf break areas off of South Carolina, Georgia and northeastern Florida.

It's just like 50 to 80 meters of water and there are literally just thousands and thousands of lionfish out there. They're all throughout shelf area and all over the place. They're easily one of the top six or seven most abundant species in our RV Survey, so there are just really large numbers of them.

So going by that, sort of their potential impact in general on ecologically and economically important species, just over a number of ten years or so, this species has arrived and increased at such abundances, and we must ask what the impacts to the ecosystem are. So Roldan and others have been kind of doing some stomach content work in the southeast that shows that lionfish are consuming – they consume prey typically in proportion to its availability in the environment.

If there is a lot of something there, they'll eat a lot of that. They do eat things like snappers and grouper species that are important to us from a fishery standpoint, and they also eat a lot of the prey of snappers and groupers. They have the potential of direct impacts on species of economic importance by directly consuming them and indirect impact on the species by consuming the prey of those species as well.

Right now Roldan is leading some experimental removals in Onslow Bay off of North Carolina to try to assess some impacts. You all know that people have done that in the Caribbean and they've showed some pretty strong impact of predation of lionfish, so when they're not there things look very different than when they are there.

MR. STREET: What eats lionfish? I know they're trying to promote people eating them, but natural.

MR. KELLISON: I think through our knowledge in the southeast very little so far. James Morris at the National Ocean Service at our lab in Beaufort has done a lot of just lab trials, just put in as many hungry predatory fish in tanks with little lionfish as he can, and most fish seem to have a pretty strong predator avoidance to them.

He'll starve things like black sea bass, which are voracious predators, and have a very difficult time getting them to eat them. I can't remember who the authors were, but there was like a one-page publication in a journal called Coral Reefs about a year and half ago that showed – they had done some stomach content work and identified small lionfish in a couple of different species of groupers. I want to say Nassau grouper, red grouper and tiger group from the Caribbean.

These were just a few observations of that, so there is a potential for some of the larger predators to consume them. There is some hope that in areas like out in the Dry Tortugas where they're healthier large grouper populations, that those fish might control an influx of lionfish. I think

we'll be able to determine whether or not that's the case and I imagine we'll see whether they're abundances go up like they have elsewhere in the southeast.

If I could make other point, Mike mentioned a fishery for the lionfish. It's really ironic to me that we've been in many cases worldwide really successful in depleting fisheries that we'd like to keep at sustainable levels, but here is a fish that we'd like to potentially fish until it's non-existent and we can't catch them.

Lionfish are easy to spear. You go up and grab them with a bag. If you can see them and easily collected, then there is a potential for controlling their population. That's probably true in the Keys where there is a lot of diving pressure and throughout a lot of Caribbean where they have shallow shoals.

But if you think about the southeast U.S. and trying to get divers out in diving depths at least in just huge, huge expanses of area, to try to do that from a diver's standpoint I think is non-tenable. They don't really take a hook very well, they don't go in traps very well. It's ironic to me that is one fish that we'd like to hammer, and they're apparently quite good to – well, I shouldn't say apparently, they are quite good to eat.

People have had a lot of success line in our area of Morehead City/Beaufort area, some of the locals have worked in collecting lionfish and worked with some of the local restaurants to offer them as fare on the menus, and they've been quite successful with that. There definitely would be a market there for these if we can find a way to exploit them. Roger, do you have a question?

MR. PUGLIESE: Well, just one comment. In some early discussions – when some of the lionfish activity was first identified, I remember having discussions with some of the grouper biologists – actually one specific one about the possibility that it was very different that most lionfish distribution was north of North Florida. A lot of it really was in that area.

It coincided to some degree with the range or at least the more significant distribution of Goliath grouper. Goliath, as you all know, are one of the only ones that will eat saltwater fish, stingrays. They will consume just about anything so they may be one of the few or in addition to the other groupers that potentially could be a controlling factor, a natural controlling factor.

I think there is some work in the Pacific that had maybe some sharks that they have predation of, so you would think with a population that large at this stage, that you would probably see a pretty significant at least attempt to start consuming them at other levels, especially other prey in less quantities.

The only other point I was going to make was on the – one of the real complicating factors as Todd had said is the fact that, yes, or in the Caribbean Islands this is something that they can be ahead of and get in front of and remove and try to get out of there; but when you start getting into the area, again, north of North Florida, deeper than diver depth, we have some real interesting complications because of how strict our gear regulations are.

Even they did come up with a trap design, there would be a lot of probably bumping of heads with our NOAA GC on potentially compromising our fish trap prohibition in the South Atlantic Region to try to target lionfish, so there is some real complicating factors as well as the biology of the species. It's a pretty insidious individual with – it's made for this kind of population expansion.

DR. LANEY: Todd, if you could speak for a second about the habitat use of lionfish in the South Atlantic, and specifically what I understand is that you recently got one at a thousand feet, if I heard that.

MR. KELLISON: That was not us. I'm not sure where that was, and someone posted an observation on a video capture frame from – it might have even been in the Caribbean, but it was at a thousand feet.

DR. LANEY: So I think the take-home message at least based on what I've heard is that they seem to be occupying a broader range of depths and habitats than they do in their native range; but not only that but they also seem to be growing quite a bit larger here than they do in their native range. Is my perception correct on that?

MR. KELLISON; I don't want to speak – I'm not sure specifically about their – I think it's true or at least there is anecdotal evidence that – or maybe some of our records; we do have records of larger fish than have been reported there. I don't know if many fish are growing larger, and I think that there is information on growth rates as well, but I'm not positive as that as well.

But in terms of habitat, there should be some – well, certainly they're occurring in the southeast at densities that are much greater than they do in their native range. In terms of habitat distribution, I think it's quite a bit greater than in their native range as well. Their habitat distribution is just marine habitat. They're everywhere.

Off of Miami, in Biscayne Bay they're all throughout the mangroves there. They're all throughout the seagrass beds. Like wherever there is undercuts in the seagrass beds in Biscayne Bay, they're there, and they're, of course, on the reefs as well. Wilson just mentioned that they have been observed at a thousand feet, so they're anywhere from four feet of water to a thousand feet.

When we were doing our RV surveys, everywhere we would go, we were in high-relief areas, they're at the top of the ledge, at the bottom of the ledge, the middle of the ledge. They're out on the sand. They're not worried about predation because they just – a lot of times we'll see them under ledges, but you also see them everywhere. They're just out over the sand and everything like that. It's an interesting research opportunity.

I will note one other thing, there was a discussion about lobster earlier today, so I just inserted this slide into my talk. These are some pictures from Roldan in Onslow Bay off of North Carolina, maybe about 20 miles offshore, probably about 30 meters of water. Lobsters are quite abundant up there.

There was a question about – you know, lionfish will often occupy this sort of habitat as well, which is a potential question about competition for space resources as well. We're doing some lionfish work – and I'm taking a lot of time so I'll try to go quickly through the rest of this. We have the fisheries biology team which does otolith processing and provides age-growth information to inform stock assessments.

The group that does this in my branch focuses on recreationally and commercially landed species, and Marcel's group, MARMAP does that for the fishery-independent work. Our group does anywhere from 5 to 15,000 otoliths per year and provides age-growth information to support SEDAR stock assessments.

We have a habitat restoration team that right now is working predominantly in the Chesapeake Bay area in Maryland in a very large habitat restoration project. It sets habitat utilization patterns and production rates of ecologically and economically important species. They're looking at comparative responses between restored and reference areas.

This is just some examples from our fisheries biology and ecology group. The other thing that I'll touch on quickly is our new group, the Southeast Fishery-Independent Survey. This is something that is a very close collaborative project with Marcel and his group at South Carolina DNR.

It's a new project that was initiated this year in response to – predominantly in response to fisheries closures such as the closure of the red snapper fishery, the shallow water grouper closure which prohibits landings, commercial and recreational landings of shallow water groupers from January to April.

Those closures and others resulted in a significant reduction in the availability of fisheries-dependent data, which typically had driven a lot of our stock assessments. That resulted in an increased need for fisheries-independent data; thus, this project was born and we have been cooperating closely with Marcel and company to accomplish a number of objectives, predominantly to increase the spatial footprint and sample sizes of fisheries-independent surveys in southeast U.S. waters.

This year we're assessing the utility of trap-mounted video cameras to monitor spatial and temporal abundance – spatio-temporal trends in abundance of reef fish species. We have an objective of improving knowledge of habitat distributions in the southeast by performing multi-beam mapping with implications for a subsequent survey design.

As I mentioned, we've done some ROV work this year and will presumably continue to do that to look at reef fish distribution. In general our goal is to perform applied research to inform our survey methods as sort of an iterative process of always improving and address management issues.

The work out of our Beaufort Laboratory in combination with Marcel this year and his group has focused in waters off of Georgia and Florida, and that was predominantly because of the need for specific information on red snapper because of the red snapper fishery closures. Our main

approach, our main sampling approach has been just utilizing the MARMAP methodology and increasing, as I mentioned, the spatial footprint and sample sizes. This is using Chevron traps, again just using the methodology that Marcel and his group have used for the last 30 years or so. This year we've added video cameras to begin to assess those as a survey method; again, ROV multi-beam mapping. We're also working with commercial fisherman off of northeastern Florida and Georgia to perform some longline surveys to answer some questions about red snapper distribution and abundance.

I have just one result slide which is that we spent a lot of time at sea this year, although we have increased those numbers considerably next year. We spent about 29 days on a contracted vessel from Skidaway Institute for Oceanography and then 34 days on the NOAA Ship Nancy Foster. Between those two we had 480 trap performance.

Almost all of those had video surveys or video cameras attached. We have a lot of video to watch, almost 700 hours of video right now. We did 32 multi-hour ROV surveys; again, going through an area from South Carolina down to just north of Canaveral, all along the shelf right here. And then we have – well, it's more 200 hours of split-beam sonar surveys. Those are the same kind of surveys that generated that little movie that I showed before, and we've mapped about 377 square kilometers of areas with multi-beam.

And I've put those two together there – this is my last slide – this just shows how two things could be linked. So if we have habitat information from multi-beam and this fish information from the split beam, we can look at fish distribution and abundance by size classes and relate that to habitat characteristics.

This is an example from – this is actually from the Virgin Islands. This is not the work that we did this year and I'll credit Chris Taylor, one of my co-workers, for this slide, but this is the same kind of thing that we will be doing. With that, I'll say thanks particularly for the SFIS part; Marcel and his group have been the reason that we could do what we could do.

They've helped us figure out what equipment to buy, they have gone out on all our cruises with us and helped us with their methodology. We've done that in an attempt to keep everything as consistent as possible. Thanks for letting me get up and talk a little bit, probably too much.

MR. PUGLIESE: Any questions for Todd? Thank you, I really appreciate. Jenks.

MR. MIKELL: It was less than five years ago when they really started talking about lionfish, was it not?

MR. PUGLIESE: Oh, yes.

MR. MIKELL: Are these things going to be coming up on the beach shortly?

MR. KELLISON: Well, I'm not sure when they – it has many more than five years since they were first documented in the southeast. I don't want to say it was the early to the mid-nineties –

actually it was associated with Hurricane Andrew off of South Florida when it is believed that the introduction occurred.

And from that – I mean it's a pretty intriguing expansion from this. They sort of moved up the east coast of U.S. area, they're in the Bahamas – excuse me, in Bermuda; also went to the Bahamas into the Caribbean. They're going down to the, I don't know, Leeward/Windward Islands where they're heading towards South America through the Caribbean. They've also spread eastward through the Caribbean, through Cuba, back over to the Yucatan Peninsula, up the Yucatan Peninsula.

They're now into the Gulf of Mexico, and I think it was maybe a year and a half ago that they were first observed in the Keys. So that whole time they have been spreading throughout the rest of the time that they were not observed in the Florida Keys. They have an intensive visual survey – reef fish visual survey program there where they do four to six hundred dives a year.

They just weren't there until about a year and a half ago, but they're sort of closing the loop and they're expanding into the Gulf of Mexico, too. It's possible that they're reaching some maximum density and maybe will come back down, but there are very high abundances in many different places.

MR. PUGLIESE: As a followup to that, one question is that you still do not see them once you move north of North Florida in the inshore habitats, and it's I guess presumed mainly because of the temperature variability. It's more stable once you get out in deeper water, and that at least has been a controlling factor at this point, but that doesn't mean with the changing temperatures and with the apparent adaptability of species that it won't be able to move into other areas.

But right now that seems to have been kind of the saving grace for at least the inshore habitats is that the population tends to be in the more kind of stable temperatures out in the deeper waters, deeper than mainly the area – but one of the interesting things, too, is that of it started there in – as you said, it's like just showed up in the Virgin Islands and just showed up in other areas, which you would have thought if it was going to be somewhere there first because of the temperature, so a lot of it is really still pretty intriguing on what has happened over a very short period of time, even in the time –

MR. KELLISON: There is a lot to learn, yes.

MR. PUGLIESE: Okay, I appreciate it, Todd. I think what we'll do is next we wanted to get an update on the SEAMAP and MARMAP Programs. What I provide for you all is a summary update – short summary in the briefing materials on Attachment 9 that was provided by Marcel; also the five-year plan for the SEAMAP Program, which is getting ready to be updated, which what we're trying to do is build on the activities ongoing as well as the connection between the SEAMAP and MARMAP Programs now, because there is a very close connection and now a close connection between the SEAMAP/MARMAP and the SFIS and the National Marine Fisheries Service fishery-independent work. So with that, Marcel, I'll hand it over to you.

DR. REICHERT: I didn't prepare a powerpoint, but I can show some examples of what I'm talking about in a little bit. In addition to the document that was in the briefing book, I've got a couple of additional comments. As Todd mentioned, a lot of the effort – the MARMAP and SEAMAP Reef Fish Group was directed to collaborate with the Southeast Fisheries Science Center.

Besides the field samples for our reef fish monitoring – and I gave an update last year on both the MARMAP and the SEAMAP Programs; so I thought not to repeat the methods that we are using, some of which Todd has touched upon, but besides the field efforts, a large part of our activities are the processes and analyses of the relative abundance data mostly for stock assessments and also the biological samples, and those are mostly otoliths and reproductive tissues.

We also sample stomachs for diet content analysis and provide DNA samples for several studies and samples for some other studies such as a mercury study for DHEC and some muscle tissue samples. I think it's important to reiterate that MARMAP is the only lab that provides reproductive information for stock assessments in the region, including the samples that were collected and are going to be collected in the new SFIS Program that Todd just talked about.

MARMAP will also be responsible for processing analysis of all fishery-independent age samples. That's a large part of our activities. I think in the document I mentioned that this year we processed 30,000 black sea bass otoliths and reproductive samples to prepare for the black sea bass stock assessment.

On average we are processing about 7,000 to 10,000 samples, both age and reproduction, and we're trying to catch up so hopefully in the next couple of years we have sampled and have the data ready prior to the next sampling season. We just finished our SEAMAP Fall Coastal Trawl Survey. There has not been much change in those procedures and the dates and times of those surveys.

We had a very successful SEAMAP season with a record number of sea days. As I indicated, in the documentation we also had a very successful MARMAP season. We completed this year about 60 sea days, 59, which is more than we've done in a long, long time. That coupled with the sea days on the RV Savannah as part of the sea phase, I can say that we had a very, very successful year.

That was in spite of the fact that we lost the entire month of April to vessel maintenance issues. We had an extended yard period and that highlights the issue that the Palmetto is getting really, really up in age, but fortunately we are able to catch up on some of those sea days, but we lost about 15 sea days in April due to these maintenance issues.

I would like to commend the vessel crew for the upkeep of the vessel. They are doing a commendable job keeping that vessel in the shape it is. I also would like to mention that Dawn Glascoe, a graduate student at the College of Charleston, just completed a study, and she came up with a scheme to characterize habitat based on the MARMAP/SEAMAP trap photos.

We put a digital camera on each of our traps. It takes a picture every five minutes. Using these pictures, we can verify bottom and we can also look at fish communities. Part of her thesis was – and we will use the scheme that she came up with to help us identify bottom habitats in the future. Part of her thesis was to look at potential changes in habitat over time, and she looked at three areas.

One area off of South Carolina actually changed – the live bottom habitat changed between the nineties where we had some historical information and now, so we hope to continue that and see if other areas saw a similar change in the live bottom habitat. Also, she looked at the occurrence of lionfish in the region. Last year and this year, about 7 percent of all the photos or photo series showed the presence of lionfish, and that was irrespective of habitat.

Even if we happened to set our traps on sand bottom, those pictures were included in that analysis. We feel the trap photos may be very useful as an assessment technique to look at potential changes in densities of lionfish over time. We've traditionally had a hard time catching lionfish in our traps.

We collaborated with James Morris at the Beaufort Lab and were not very successful. Although this year for the first time two traps caught one lionfish each, one on the Savannah and one on the Palmetto, so apparently the densities are getting high enough that we are now starting to catch them in our Chevron traps. We feel that the trap photos may be a better indication of densities because traditionally they are not trapped very well.

Roger mentioned already that both MARMAP and SEAMAP are in the last year of the current five-year funding, so my staff and myself are busy drafting the 2011-2016 scopes and budgets. What is important is that we will select new species that are targeted for the dive studies, which ultimately are important for the ecosystem-based management components.

A lot of the choices that we are making in terms of our priority species are based on the current SEDAR schedule. The SEDAR Steering Committee met a couple of weeks ago and set up a new SEDAR stock assessment schedule, so the species that we are targeting are the ones that are up for a stock assessment in the couple of years. With that, I can show you some pictures or I can open floor for questions.

I thought it would be interesting. These are just some images that we capture with our trap photos. This gives you an idea of how we identify live bottom habitat. We look at the percent covered, we look at biotic components, and also we look at fish densities. Obviously, this is one of the lionfish that we are capturing. This is a gray triggerfish and a grouper. This is a scamp here in a patch of live bottom.

Ultimately what we're trying to do – and that's in collaboration with Todd's group – is to see whether we can use either still cameras or the video cameras, use that as an index of relative abundance for stock assessments. I thought I had more, but it looks like that's it. With that, do you have any questions?

DR. LANEY: Marcel and Todd as well, I guess the new fishery-independent sampling program is designed I guess primarily to address the red snapper question more than anything else or is it really looking at – did you guys design it to look at the whole reef fish complex? That's question one; and then question two is where are we in terms of having some sort of comprehensive fishery-independent sampling program for the whole South Atlantic?

DR. REICHERT: Correct me if I'm wrong or interrupt me at any time, the SFIS Program was set up as a complement to the MARMAP Program to allow us to cover more habitat and to address issues of spatial coverage. The effort this year was predominantly to sample or to look for live bottom habitat that we expected had higher densities of red snapper, because one of the criticisms of the MARMAP Program was that the densities of the red snapper that we included in our sampling grids weren't high enough to be included in the stock assessment.

There was this two-pronged approach. Todd's group and the MARMAP group have worked in developing a comprehensive plan that will assure that we can continue with the current CPUE indices as well as add information for the development of future indices. We are currently re-evaluating the data collection and to treat the data so we make sure that we continue that ongoing long-term monitoring while at the same time provide additional data.

MR. KELLISON: I think that was a perfect description. The answers to your questions were yes and yes. I think they wanted us to do something that would provide immediate information on red snapper, but at the same time building a framework for something that would be providing us information on all the species that we wanted information on for now and in the future as well.

DR. REICHERT: I think this year we almost doubled the sampling effort by using both the RV Savannah and RV Palmetto in our sampling.

MS. DEATON: One question; how far in do you go; like where is the sampling; how near shore does your sampling go? Is it just in federal waters?

DR. REICHERT: The MARMAP SFIS sampling area is roughly south of Cape Hatteras, North Carolina, to the St. Lucie Inlet in Florida, potentially a little further south if we can sample there. The problem south is that the Continental Shelf is so narrow and the influence of the Gulf Stream are usually so severe that the current velocities are too high for effective sampling. And then we currently – and I don't think that's going to happen, but we're currently not sampling in state waters and we are sampling to the shelf edge.

MS. DEATON: And on that habitat assessment, so you use the photographs to – they're developed in a way that estimates percent covered and you've got different classifications of coral communities of – well, you've got sand substrate.

DR. REICHERT: Yes, the classification was based on several existing classification that were merged. We wanted to provide sufficient detail to identify different habitats but not so much detail that it's very difficult to do the analysis. The student looked at not only a percent cover

and what biotic habitat was there, but also vertical profile and what the hard bottom potentially consisted of.

MR. PUGLIESE: Again, it's new enough that we haven't had a chance to get into some of the real detail of that. Some may wonder why we're talking about fishery-independent surveys and everything, but I think in both presentations it is probably pretty clear about this connection of the species and the habitat information.

If you look back at where a lot of the offshore habitat information came from, much of it is you're connected directly through assessments that use MARMAP information, that use SEAMAP were brought through the SEAMAP Bottom Mapping Program, so this connection is very clear. What we have right now is a real opportunity because in the last round of SEAMAP, it expanded its scope significantly where it provided – when you started asking about the scope, it provided an opportunity to provide more resources to expand to inshore areas and to expand some of the offshore areas.

And then the more recent National Marine Fisheries Service add-on and connection in there has focused in some areas but also expanded the capabilities, the habitat characterization abilities, and we're really seeing this convergence of all the different programs into – and I'll get into that maybe a little later on about how a lot of them will be literally connected and available, and the data systems are actually going to work together.

SEAMAP is providing the foundation. Right now we already have a connection in with MARMAP and ultimately things such as the Pamlico Sound Survey and the National Marine Fisheries Service SFIS components are going to have the ability to work in collaboration which I think is going to provide fishery-independent information, enhanced habitat characterization information. I think it's just really a unique opportunity and we are really are poised and a real big jump forward in the ability to work with fishery-independent data and habitat expansion.

DR. LANEY: And I just note especially for those of you in the Fish and Wildlife Service and who are involved in the setups of these Landscape Conservation Cooperatives that the collection of these sorts of data I think are directly going to feed the biological planning and then ultimately the conservation design element of the functionality of those LCC groups both in the South Atlantic and hopefully in the North Atlantic as well.

DR. REICHERT: This is the picture I was looking for. The red dots – each red triangle represents a series of sampling stations; and due to the limited number of sea days that MARMAP traditionally was able to do, as you can see the sampling grid off of Florida and also off of North Carolina is relatively thin. In the last couple years we've identified several areas of live bottom habitat that we are now going to include in our sampling grid, especially off of Florida, southern Georgia, and North Carolina. We're slowly filling in some of those gaps in that fishery-independent sampling grid.

MR. PUGLIESE: One other followup on the connections in the system; one of the first iterations that we're going to go through is to look at the last round on SEAMAP information and be able to catch up with how far MARMAP and the National Marine Fisheries Service

research has gone to begin to expand that even initial footprint that was done on both inshore and offshore habitats under SEAMAP.

We have the unique opportunity – one of the documents you were provided was the five-year plan for SEAMAP of integrating the description of not only where that program can go but where fishery-independent activities can go. Even though it may not say that SEAMAP will provide all this, it will show the connections on how a more fully functional and operational fishery-independent survey can be accomplished.

Marcel and Todd are integrated right into that process and we're really encouraged that is going forward; as well as the spatial connection for information system, that is moving forward at the SEAMAP level already. Any other questions or comments on data collection?

MR. STREET: I know in looking at where your sampling is off the central and southern North Carolina coast, a good amount of hard bottom goes right up on to the beach. In fact, there are some places where there is a thin layer of sand on top of rock; and you follow the rock offshore and it's encrusted. There has been some work done showing that these hard bottom areas are way stations for estuarine-dependent reef fishes; that they work their way out into the deeper water.

DR. REICHERT: Yes, absolutely. Traditionally, since MARMAP is a federally funded program, we have not sampled that close to shore. The other thing that MARMAP traditionally has not done is sampling wrecks and artificial reefs, and there is some discussion of potentially including those particular habitats in our sampling grid.

The problem with artificial reefs is that they're sometimes so small that it's difficult to get a representative sample using our sampling methodology. They're also frequently heavily visited, and the last thing we want to do is aggravate people who are there either fishing for pleasure or as part of their job, so it's trying to be sensitive to those activities.

MR. PUGLIESE: One other significant add-on that came in with the last round of SEAMAP increases was the work that is done on early life work on gag that I wanted to give Marcel an opportunity to talk about because it's really providing some of that beginning of understanding the connection and also beginning to understand the movement patterns or year class strengths.

DR. REICHERT: Yes, I've provided some information in the document. That's in collaboration with colleagues in North Carolina and Georgia. We are currently sampling I think two locations in Georgia, three or four locations in South Carolina and one or two in Georgia, two in Georgia. I think it has been very successful program.

We were a little discouraged because the catches were relatively low for a while this year. This year had a record of gag collected, so that was very encouraging. It would be very interesting to see if that record catch translates into a potentially strong year class if we can use that as a year class strength prediction.

Our staff is currently analyzing the data and also looking at some current patterns based on satellite imagery to see if we can make some linkages between predominant current patterns and the strength of the ingress of juvenile gag. We have every intention to continue that project in the next five years as part of the next five-year scope.

MR. PUGLIESE: Any other questions or comments for either Todd or Marcel. Pat.

DR. HALPIN: Yes, just one question on clarification on the fisheries-independent sampling; I know with previous SEAMAP and MARMAP studies, some of the sampling is directly looking at hard bottom and some is inferring hard bottom from the location of related species. Is all of this directly observed hard bottom here or is it a mix and match of things that are trawled or direct observation?

DR. REICHERT : These stations are the standard MARMAP stations, and almost all of them, if not all of them have been verified either by video or camera. Currently every single trap that we deploy has either a still-digital camera or a video camera. Now we actually verify live bottom in every single trap deployment, so we're no longer depending on our species composition, but we have direct verification of bottom.

DR. HALPIN: That's exactly the answer I wanted. Okay, thank you.

MR. PUGLIESE: That's pretty significant refinement and expansion. In the original SEAMAP we kind of blended to get at least a core baseline, so that is a pretty big jump forward. One other thing that I was going raise and actually was going to raise it in the discussion tomorrow on some of the ecosystem coordination, but now would be the appropriate time to do it, especially with the discussions we had on acoustics and some of the other things.

We have real opportunity with the observing association and observing capabilities in the southeast to begin to not have to rely wholly on the program itself but rely on partners such as the SECOORA Program to potentially provide oceanographic characterization information based on existing running models and existing capabilities to the SEAMAP program, to the MARMAP Program, to the National Marine Fisheries Service in pre, during and post survey, so you could begin to use some of that information to understand the variability in catch or characterizing spawning aggregations.

There are a couple of different activities that have been funded with FWRI directly is to use an existing program that is being operated through Louisiana and adapt it to the South Atlantic to be able to provide those characterization points I think down to even 200 meters, very fine resolution of a specific area.

The other side of this is that we can ultimately – we've had discussions with the SEMAC committee before about being a two-way communication, having some of the information directly from those platforms to be part of the observing program, so all of a sudden you build a very strong linkage and you're getting to really characterizing more than just presence/absence information of species but also the characterization of why those species are using those areas and what the oceanographic variability is in those areas, and so that was one.

Another one that is being funded through the five-year SECOORA Program is to work with an existing group that many may be familiar with, Mitch Roffer's organization is partnered with some members to provide some of the base information of their existing capabilities on oceanographic imagery as well as linking species with that.

Some individuals from Florida in Miami are going to bring to the table some of initial really preliminary model capabilities of species relative to temperature, relative to that and start bridging that gap. We have a real, again, expansion capability opportunity through collaboration. I can touch further on that on some of the SECOORA discussions tomorrow, but I wanted to at least move in because the timing here of that is really important.

Are there any other comments or thoughts? I guess the thing I would like to see if any of the members have views of what priorities may be being addressed in terms of habitat research or fisheries research right now we really need to try to make to encourage the different programs that are under development or refinement to move forward, either species based or habitat. Pat.

MR. GEER: I just would like to make – I mean, just from talking to Marcel and what have been involved with this is the videos and photos are going to be great, but there is going to be a lot – you know, it takes a lot of time to analyze it. They're collecting a lot of information. You're just at the tip of the iceberg at this point with collection information, but having the bodies to actually look through those – how many hours, 700 hours of video?

DR. REICHERT: We only take a still camera, but Todd's group has taken the videos, and, yes, that does a significant effort, but they're working on that at the moment.

MR. KELLISON: And I'm not sure if that's 700 hour total. We're still working out the methodology of how much of the video we'll watch to generate some abundance index. We have a lot work that's going on in the Gulf of Mexico. There are three different labs that perform these types of video surveys in concert, and so we can learn from them.

We've been working closely with them to guide our methodology, but we're still working that out. Our cruise season ended less than a month ago, perhaps, or maybe just a little more than that. We're just beginning the process of videos and figure that out, but our goal would be every year to have all the videos processed and the data available before we start sampling again the next year.

We're going to need to make some calculations in the next month or so about how long it takes us and figure out the personnel needs and what we can afford. If it appears that it's a good way to generate an index of abundance for some species, particularly some that might not go into a trap so well, then our hope would be that we expand it to all the sampling, so that mean putting the cameras also on all the MARMAP traps as well.

Then that number of hours of video goes up quite a bit more, in fact, so that's something that we're trying to figure out right now, but it does appear very promising. In fact, for the work that we did off of Georgia and northeastern Florida this year, now just from a very preliminary scan

through the videos, we made some estimates that we have red snapper on more than 40 percent of our camera surveys and probably we have them in 10 percent or less of our trap surveys.

For some species it is likely that the videos might or potentially even the still cameras could give us better indices than traps, perhaps, so we're still working it out. We would have to have it processed every year.

DR. REICHERT: It's important to note that 40 percent could largely be due to the fact that we were selecting habitat that we were expecting red snapper to be at, so that's probably important to notice. Relative to what Roger said – and I apologize for going through this presentation while Roger was talking – I think it's relevant to mention that at every trap or longline set both in the SFIS as well as in the MARMAP Program we take a C to D cast and we collect oceanographic parameters, mostly temperature connectivity pressure, dissolved oxygen and some other parameters the entire summer while we're out there, and that is important because we hope to increase the collaboration with the group that Roger mentioned so we could do groundtruthing of some of the model predictions and also provide some additional data that can potentially explain patterns of fish communities and also habitat use. I just wanted to mention that.

MR. MILLIKEN: What is the soak time and how many traps?

DR. REICHERT: In general the soak time is about 90 minutes. It's usually between I would say about 85 and 100 minutes, and we soak six traps or six lines – normally we soak six traps or six lines at a time. That gives us enough time to do a C to D cast and then come back to the first trap and pick it up within that 90-minute timeframe.

MALE VOICE: I've got a question about the habitat data and the subsequent groundtruthing. Where do the data go for that piece of it, acoustics, for example?

MR. KELLISON: Well, with the new project we're figuring out how to handle all the metadata. Do just mean in general how are we storing or who the keeper of the data?

MALE VOICE: I guess I mean how do we get our hands on it. Where does it go; does get disseminated?

MR. KELLISON: Well, the split-beam acoustic data is housed with NOS right now. I'd be happy to talk to you. I guess my initial reaction would be just to – if you have my contact information, contact me and we'll figure it out, but exactly how we're going to warehouse all of this.

From the video standpoint, we're generating terabytes of data and figuring out exactly how we're going to store all of it and be able to access it for analyses is quite a challenge, and I'm not sure exactly how that's going to happen. This is all information collected with federal government funds so it's accessible to anyone essentially. We haven't really figured all the details about how the data management going to be.

MR. PUGLIESE: Yes, and actually when it gets to a process level, we have our internet map server that we are providing information and actually in the background it's developing fisheries service which is really going to be targeted towards researcher access to species and detailed habitat.

That's going to be the key because a lot of it, you know, where we can, we can provide levels on the IMS, certain levels on different things, but then when we get to some of this very specific point location, whether it's sampling or whatever, we want to be able to keep it within at least the bounds of research and activity.

Otherwise, we're going to have complications with data, and that's to some degree why you saw the original SEAMAP process, the way it was where it gave you those one-minute grids because at least it provided a footprint but it didn't give you down to the individual species point locations.

But the intent now, though, is to build it so that researchers have the access to that, and some of the things that I'm going to touch on tomorrow will highlight where we're going in trying to get to that level, because it's going to be pretty critical as we see of these newer activities coming nearshore and where we have available information and really also giving it the footprint of what we don't know and how we have to direct a targeted effort on longer-term mapping efforts and species information gathering, too. Thank you, Marcel. Any other comments?

If not, I think we're bump back on the agenda actually and have an opportunity to get an update from Pace on habitat conservation activities. In your briefing materials you were provided comment letters under Attachment 4, 4 and 6 that provide at least some of the areas. I think the idea here is to open those up and have some discussions and concerns over that, plus then have the members highlight any other activities.

MR. WILBER: A couple of years ago at the joint Habitat and Coral AP meeting we started giving just sort of a brief update on the level of activity of the EFH program in the South Atlantic and highlighted some particularly controversial projects just to make sure everyone that might be interested in them was aware, but also to get some feedback from the AP members as to what projects they think are particularly controversial because while the South Atlantic Council is authorized to comment on projects, they rarely do so and they look for some kind of a signal from either an AP or from the National Marine Fisheries Service as to what projects they should be lending their considerable weight to through the review process.

I actually don't have the slide that I hoped to have brought on the level of activities, so I'm just going to kind of give you some general numbers. During the fiscal year that ended on September 30 of 2010, we did about 750 EFH consultations between North Carolina, South Carolina, Georgia and Florida.

750 sounds like a lot, and it is, but it's still down about 250 consultations from what the running average was from the years preceding the economic downturn a couple of years ago. Before the economy basically hit the skids, we were up in 1,100 or so consultations per year, and it has been interesting to see how each state sort of is rebounding at its own speed at least in terms of from

our perspective of looking at permit applications and public notices that are running through the process.

South Florida went down the latest and bounced back the soonest. In this past year it's, like I said 750 consultations in the four states; 350 of those, or over half or right around half, were from South Florida. North Carolina is still relatively low but coming back compared to where it was a few years ago. South Carolina also is relatively low but coming back. Georgia remains as depressed as ever it has been; no comment intended, but the numbers have been fairly low there.

In terms of the success of the program, we sort of keep an eye on two metrics. One is the percentage of projects that have been modified based upon our commenting process, and that percentage remains like around 90 percent. Almost any kind of change to a project that we can trace back to our comment letter, we kind of check that as a yes.

There is a more substantive measure that we use and that is did they do everything that we asked them to do, with the emphasis on everything, and that number is actually fairly high. It's around 70 percent and it bounces basically between 70 and 80 percent from year to year. The one point, though, that I think really should be mentioned is that the number of projects that actually get permits compared to the number of public notices we actually comment on is a really small percentage.

It's less than half, and that's largely because of lot of folks just sort of drop out of the permitting process after getting their foot wet and getting their first round of comment letters, getting their forced administrative withdrawal from the Corps of Engineers because they've had no response in like 60 days or 90 days, depending on the district, and then they just never come back.

It's kind of hard sometimes to measure activity or development activity by the number of public notices that are running through the system because so many of them just sort of shake out. But by and large, I do think the EFH program in the South Atlantic is working as it's designed to work. You can criticize its result, but I think that's really reflecting shortcomings in its design as opposed to shortcomings in its operation. If you compare our success statistics and things like that to the other regions across the country, we are at the average level or higher compared to the other regional offices in terms of number of comment letters with EFH conservation recommendations and the percent that are fully adopted.

The one thing that we do in our region that does make us stand out a little bit differently from the other regions is the number of projects we comment on under the Fish and Wildlife Coordination Act, which allows us to go as far upstream as we can possibly get. We regularly comment out of our office on projects up in the Greenville/Spartanburg area in North Carolina.

We've commented on projects in Asheville and Atlanta and, of course, all of Florida is a coastal zone, right, under the Coastal Zone Management Program. We do put out a fair number of comment letters on those inland projects, and part of that reflects the strong emphasis we have in our office on hydropower and diadromous fish restoration and our active participation in the re-licensing under the Federal Energy Regulatory Commission of various hydropower projects, and

just as luck would have it we just have a whole slug of hydropower projects running through the South Atlantic in this kind of ten-year period that we're in the middle of right now.

Now, I didn't bring any of our hydropower stuff really to talk about to more of a coastal group here. What I'm going to do now is just sort of walk through what are the big projects in each of the states from our perspective; and if you guys think there are some other big projects that we really should be keeping a close eye on, let us know.

As usual I'm going to start the north and head down to the south. North Carolina; I've been pulling my hair out for the last year is on the Mid-Currituck Sound Bridge up in the northern part of the state. There are several different alternatives for how to build a brand new bridge and a new highway to get folks out to Corolla a lot faster and get them back on the shore.

We provided a fairly strenuous objection letter when the draft EIS came out a few weeks ago, and this right now seems to be in North Carolina the big project that's still running through the system that needs some attention. Now, there are other things like no port in Southport, North Carolina, and things like that, but those are things that haven't entered into the regulatory process and don't seem to be poised to jump into the regulatory process. We monitor that kind of stuff, but the Mid-Currituck Sound Bridge seems to be the big one, replacing Bonner Bridge, which was on my list two year ago.

MALE VOICE: Just a question of interest; in your view will this happen in some form or another at some point?

MR. WILBER: I think this is going to be largely driven by the amount of funds available to the North Carolina Turnpike Authority. This is going to be a local funding available thing. This project isn't – I forgot to mention why do we care about it; why are we kind of recommending denial?

Depending on upon which alternative you pick and what kind of construction scenario you kind of embrace and all this stuff is kind of still up in the air, but we're talking seagrass impacts on the order of like ten to fifteen acres here, and it could get worse depending upon the construction methods chosen, and then we have shading impacts on the seagrass as well as a lot of impacts to shallow water and oyster habitat.

There is a freshwater marsh back here that they wanted a bridge through. That's also a big issue; I can't remember the name it; Maple Swamp, yes, Maple Swamp is also a huge issue for us. You know, at least from my perspective as a regulator, I'm used to working with North Carolina DOT. All kinds of process is related to North Carolina DOT to talk about things and elevate things. We don't have that with the Turnpike Authority. They seem to be kind of out on their own. Then invent their own rules and stuff like that.

MS. DEATON: I've read that comment letter and I was just curious. It talks about EFH, essential fish habitat. I mean I know it's SAV but it's a pretty drastic water system.

MR. WILBER: It should be listed in the first part of the letter. It should list all the –

MR. STREET: I think it was a suite of estuarine species because that area can be low salinity and frequently is as well as anadromous fishes, and the habitat also – well, it's major water fowl habitat for whatever they eat. I know DOT is probably the only agency in North Carolina that is thinking about sea level rise. Are the Turnpike people thinking about it at all?

MR. WILBER: I don't recall any specific discussion with the Turnpike Authority about sea level rise; but like you said, it's a big topic with DOT.

MR. STREET: Yes, because much of that area is the area that within fifty to a hundred years is predicted to be underwater.

MR. WILBER: Well, they better build it fast, right.

MS. DEATON: Was that your only North Carolina project?

MR. WILBER: Yes, I'm trying to list our hottest one for each state; and if you guys have other ones that you think we should be watching closely –

MS. DEATON: Well, one thing that just came this week is that Titan is back on because they've turned back their money that the City of Wilmington gave them, 4.5 million, so that they don't have to do SEFA, so that thing could get fast tracked and get rushed through, and it will be the largest source of mercury emissions in the U.S. in an area that is already inherent for mercury.

MR. WILBER: For the non North Carolina people, that's a cement manufacturing facility right on the shores of the northeast Cape Fear River. Yes, that's been pretty high on the list, too.

DR. LANEY: You already mentioned the no port Southport, which for those of you not from North Carolina is a proposed new international container port in the Lower Cape Fear River Estuary. It would occupy 600 acres that the previous governor acquired expressly for that purpose when in fact there is already a port at Wilmington.

I will say there that local grassroots opposition to that from Southport has been very vocal and very well organized and very astute to the extent that they basically got it I guess killed in the current session of the legislature and sort of put on the back burner, which is where it is now. And then there is one that made front page local news lately more for endangered species impacts, and that's again another Turnpike Authority Project which would be the extension of Interstate 540. That would be the southeast quadrant of it, which involves dwarf wedge mussel but also is anadromous fish habitat because it's Swift Creek and that drainage is open all the way to the sea.

That's one you might want to put on your radar screen, Pace, because there will at some point be permits for that one, right, John, I think? One other one I'll mention again, U.S. 64 widening through the Alligator River National Wildlife Refuge. It's proposed for the existing highway right away easement, but the toll there from existing traffic for vertebrates, including a lot of aquatic vertebrates, are not necessarily more under Fish and Wildlife Service and state jurisdiction than under NMFS, is huge.

I mean, we're talking animals killed each year in the tens of thousands based on studies that have been done both on the Dare County mainland but also on the Terrell and Washington County mainland part, which is on the west side of the Alligator River, and, of course, the impacts there from runoff and so forth and so on would be considerable on EFH, I would think, and nursery habitat. That's another big highway project and one would be NC DOT and federal highways I guess for that one and not Turnpike Authority.

MS. KELLISON: All right, we'll get in 17 and we'll drive south to South Carolina, and do my South Carolina colleagues want to guess what project is up here? Mark Clark Expressway! The Mark Clark Expressway, to be politically correct, is the continued extension of the beltway around Charleston; the proposed linkage between West Ashley, across the Stoner River on to Johns Island and then back across the Stoner River, though James Island County Park, across James Island and connecting up with the James Island Connector, which then dumps into downtown Charleston.

This is probably the most strenuous objection letter we've written all year. We had a whole lot of issues with this project, most of which is dealing with approximately 70 acres of impact to Tidal Creek habitat. Some of those impacts were believed to be temporary in nature, but a lot of it was kind of unclear based upon the exact alignment that would be chosen as well as the construction techniques.

This is one of the few projects in the past year we actually initiated the elevation process to ultimately go to the President's Council on Environmental Quality if we need to dispute a decision by the Corps of Engineers to issue this permit. Fortunately, as strenuous as our objections were to this project, the public objected even more strenuously to this project.

The public meetings that were had around town, they got kind of mild support for it in West Ashley, but then when they met on James Island and Johns Island and downtown, they had hundreds and hundreds of people really opposing the project; and it kind of led to, just a within a few days of the closure of the comment period, the South Carolina DOT, which is really basically a service for hire in this relationship with the customer being Charleston County, the South Carolina DOT went to the customer, Charleston County, and said, "Look, this is clearly not the project or the path that we thought we would be getting into with you. You need to tell us what you want us to do with this project."

And so the Charleston County Commission then revised the project as one of these little famous back-of-the-envelope cocktail napkin kinds of resketches of the plan. They essentially deleted the parts that crossed the second time over the Stoner River on to James Island and deleted that entire part of the project, which is the purples down at the bottom, and now South Carolina DOT is examining the input they got from their customer, Charleston County, and deciding what to do.

This project, in my opinion in the regulatory world, is basically the clock has been turned back on this for two years. It has been pushed back – the South Carolina DOT, based upon the new input from Charleston County and the South Carolina DOT, my personal opinion, is not that motivated to work on this project, so I think it is going to be a while before we ever see this one again. I could be wrong.

MR. GEER: What is the impact on wetlands in this project?

MR. KELLISON: The wetland impacts a total of about 70 acres, and the impacts come from shading, they come from the trestles that will be used to support the bridge. That are also a few impacts from filling Tidal Creek because they're not – they're doing an extensive amount of bridging as opposed to filling with causeway.

That's one I think the South Carolina DOT does particularly well actually here in the Charleston area, but they still went ahead with some filling. A lot of the impacts also are from having to build temporary causeways to get the construction equipment out there. Again, this is one of those – I don't if folks are familiar with the term – merger process.

In North Carolina they merge the NEPA process and the permitting process by the Corps of Engineers so that they're kind of going in tandem with each other, sharing off with the same documents and so on. South Carolina, I think this is the first time they did that was with this particular project. As a result of a first time, there are always first-time jitters.

The result is that the EIS went through the process with very little information compared to what the folks were accustomed to reviewing through the Corps' permitting process, so a huge amount of the impacts here and the plans for how the construction would be done were very sketchy, using worse case scenarios and things like that, and that kind of spun the whole project to a fairly difficult place.

A lot of the complaints about it were really based upon the ambiguities about what they really choose to do. I think even for a NEPA EIS, they were fairly sketchy on what it was they were planning to do, so people were reviewing it with the expectations of the Corps of Engineers process because that's really what they were more accustomed to.

DR. LANEY: Pace, hopefully you saw Nancy Vincent's entire presentation last week on the Charleston efforts to guide growth in Charleston County. I didn't catch the whole thing because I was having to shuttle between meetings at ASMFC, but the question is how does it relate to that plan for growth that I had the perception, anyway, had been put in place and was kind of guiding things and creating this big green belt around Charleston and basically constraining growth to a certain degree, anyway.

I was so impressed by the part that I did see that I was going to invite Nancy to come up and talk to the Wade County Open Space and Parks Advisory Committee in North Carolina and see if we can't figure out how you folks who live in Charleston did that so we could convince Raleigh to try and emulate it because it seemed to be a really good thing. It doesn't seem on the surface, anyway, that this is entirely consistent with the philosophy inherent in that initiative. Priscilla may want to comment on that or you or anybody else who lives in the Charleston area.

MS. WENDT: Well, I know the Coastal Conservation League, one of their main focuses is controlling growth and smart growth and as you say the Greenbelt Concept and promoting that. The way it is done in South Carolina, my understanding is that it's paid – the purchase of land to

generate this greenbelt is through the State Conservation Bank, and that is paid for by a tax on transfer of property.

That is logistically how they have managed to purchase a lot of the land that is in the greenbelt, but also they are very proactive about working with other conservation groups like the Nature Conservancy and Low Country Open Land Trust to obtain conservation easements or private property. They are adamantly opposed to the Mark Clark Expressway.

They hired their own consultants to come up with an alternative plan, and that involves mostly creating more of a network of parallel roads within the developed area, sort of more a grid system, to encourage people to take alternate routes to their destination and not rely on these big mega-highways which invariably open up undeveloped land to development pressure and eventually become as crowded and as congested as the highways they're trying to alleviate traffic on. So, yes, this project is definitely not consistent with the Coastal Conversation League's vision of good growth.

MR. MIKELL: I might add that this Mark Clark Expressway is a prerequisite to the Greenbelt Program. This project is 20 or 25 years old and you see it still hasn't been done. One of the reasons the Greenbelt was started was to fight this thing. The Greenbelt itself and the growth line are politically hot potatoes.

I mean they can move the growth line tomorrow if they want to, and they have moved it before and then they moved it back. It really depends on who is on the county council and what the mood is. The thing is crazy. My feeling is that this thing will never get built, and I hope it doesn't get built. I think probably the thing that they probably should do is what Priscilla was alluding to, that they need to take the roads that are presently there and improve on them, whether they widen them or whatever. I might add you're right, Nancy does one heck of a good job.

MS. WENDT: Before you leave South Carolina, could you comment on anything status-wise on the proposed Jasper County Port? Are you involved with that or is that on hold or what is going on with that?

MR. KELLISON: Sure, I'll comment on the Jasper County Port. This gets the segue to Georgia and to the next slide, which actually I don't have, but as some of you might know the Georgia Port Authority and the Corps of Engineers actually released a Draft EIS for the Savannah Harbor Expansion Project last night. Last night it was released.

And just because I didn't have anything else to do with my Thanksgiving or Christmas, the comments are due December 30th. We're looking forward to that. The Jasper Port, in some people's minds – and there might be other people's minds that you can kind of wade in here. I'll just tell you about the people I talk to. Jasper Port in theory should have fewer impacts on the Savannah Harbor Estuary than a harbor project should because it's lower in the estuary.

These being lower and closer to the sea, it should be easier to get the ships in and out of there with a minimal amount of dredging. That assumes that you can come up with some magic way

to get the containers and the other cargo from the Jasper Port over all the wetlands and out to the highways and railroad, but, that probably is a solvable problem, a reasonably solvable problem.

The problem with Jasper Port is it's involved in this weird kind of land deals between the states of Georgia and South Carolina that ultimately ended up in multiple parties suing each other, but the two governors agreed to kind of bury the hatchet and move forward on the Jasper Port. In my opinion it has created some interesting allies.

There are some folks who are opposed to almost any further port development inside Savannah, and they have thrown their weight behind Jasper Port because they feel if they can kind of make Jasper Port look like it's possible and on the near-term horizon, that becomes a significant dagger in the Savannah Harbor Expansion Project.

There are all kinds of South Carolina versus Georgia reasons to want to do that, but that's what some people's minds actually think. We're going to actually see how much of this is going to come to fruition when now we've got a comment period and Draft EIS that is out on the streets.

MS. WENDT: So as far as what you received last night, you're going to do an EIS on right now, another one or what?

MR. KELLISON: No, the Draft EIS for Savannah is out and we have to comment on it. There are various studies funded by different groups to examine the potential of the Jasper Ocean Terminal or JOT is what most people call it, and the speed at which those move I think is really going to be largely dependent upon what happens with Savannah is what I think is going to happen. We'll see how it all shakes out.

MR. MIKELL: Two more bridges that I'd like for you to comment on; one is the James Clyburn Bridge and the other one is the 601 Bridge or dam that is being worked on presently through the Congaree National Park.

MR. KELLISON: I know all the agencies have opposed the James Clyburn Bridge. We're not monitoring that really closely, so that's all I really kind of know. The 601 Bridge on the Congaree is one that we have not commented on – our office has not commented on. It was largely due to staffing. We just got someone in South Carolina to focus on projects there. We haven't commented on that. It's pretty far out.

MR. STREET: Can I make a comment and ask a question? I don't know how many of you have seen the draft report from the Budget Deficit Commission Report that the president appointed. It's 24 pages long and it came out just a few days ago. Among the reductions that they're talking about are getting rid of the Corps of Engineers participation in beach nourishment and also dredging reductions for ports and things like that. We've heard two things here – and we're just two states so far – on expansions of ports downstream. The Corps of Engineers dredges for seaports.

The question that comes to mind is how many ports are really needed for the commerce of the United States as the ships get larger and larger, mostly coming from China. I know the original

presentation of the Southport Project was to receive containers from the Far East; no mention whatever of shipping anything out. It was 100 percent one way.

Does North Carolina need state ports in Wilmington and Morehead City? Does South Carolina need ports at Charleston and Georgetown? Does Georgia need Savannah and Brunswick, et cetera? The Corps of Engineers could save an awful lot of money by dredging fewer channels and having ports more concentrated, and I think the nation could, too. I think this is an issue that is appropriate to bring up.

MR. MIKELL: You are looking for a fight.

MR. STREET: I think it is a valid issue for national budgetary and security reasons. I mean, if you have to have security for fewer ports, you can probably do a better job.

DR. LANEY: To that point, Mike makes an excellent point. If I recall correctly, I believe it was the Southern Environmental Law Center that wrote a letter to the Corps probably a decade ago now recommending that the Corps do a comprehensive study of port development along the U.S., and it seems to me, Roger, the council may have even sent a letter in support of that. I'm not sure, but I'm pretty sure we discussed it at the Habitat Advisory Panel meeting. Anyway, the issue has been raised, Mike, and if I recall correctly they never got a response to that letter from the Corps of Engineers, not surprisingly.

MR. DUREN: Mike raises a whole bunch of complicated issues, and there is no question that there are some places that are better for ports than others, but the nation does need a good network of ports. It's not only the water-related issues, but as Pace said it's very important to factor in what happens to the cargo once it's offloaded from the ship, because all the land-related resources are critical, too.

I can tell you that Georgia does need a port in Savannah and it does need one in Brunswick. The two ports serve very different purposes and they have very different on-shore capabilities. The Port of Savannah now is average seven large container ships per day coming in and out. That is an awful lot of cargo movement.

The imports are greater than the exports but a tremendous amount of cargo is exported from Savannah, and it is a critical economic factor for not only Georgia but for the whole region. I am anxious to see the environmental impact statement. I have been – I don't know how to describe my feelings, but happy about the way this environmental impact statement has been developed over the years, and I'm not optimistic that any of us are going to like it. There have been too many cooks in the kitchen. Anyway, I'm anxious to read it. We do need ports and hopefully we can operate them in a sound manner.

DR. LANEY: Well, to that point, John, I agree. I think the point Mike is trying to make is that economics alone – if anybody ever did a comprehensive economic study, it would sort of preclude the thought that every single port on the east coast needs to be a deepwater port. Right now you've got proposals for deepening of the Savannah and the Cape Fear, and I'm not sure how many – I think the Delaware may have already been deepened.

One of my colleagues made the point that shipping companies are not going to have their big container ships stop at every single point. They're going to stop – and this is consistent with the point you just made, I think, that they're going to stop at ports where it is most advantageous to them from a subsequent shipping cost perspective to get those containers offloaded and to the markets that they're destined for.

It gets back to the Corps of Engineers being the logical entity, since they're responsible for navigational maintenance and ports, to do a study of, okay, where on the east coast, you know, what is the most optimal location for a deepwater facility or maybe even more than one deepwater facility, but the point is that not every single facility on the east coast is going to be economically viable as a deepwater port, and it has been very difficult to get them to acknowledge that fact. I think if anybody ever did a thorough comprehensive study, one port of maybe two are going to jump out above all the others as being more economically viable.

MR. KELLISON: A quick response to that; many of you know that I actually used to work for the Army Corps of Engineers. I worked there for five years. One thing you learn at the Army Corps that makes it different from every other agency is that, first, it has no base budget. Every agency in the federal government has a base budget. The Corps of Engineers doesn't.

It pays the light bill, it pays the salary of every employee by tying it back to an individual project. Those projects come from congress, they do exactly what congress tells them to do, and they don't go outside those bounds because they're prohibited by congress from going outside those bounds.

Now, there is a couple of little dollar projects here and there that let them go outside, but by and large they can't do that study unless congress asks them to do that study and funds them to do that study. They can't deepen a port unless congress tells them to deepen the port and wants them to deepen the port.

We have argued in the Department of Commerce that perhaps the agency that is best suited to do this national port study is the Department of Commerce and not the Corps of Engineers. Since it's really a commerce-driven kind of thing here, maybe we're the ones that should be doing it, and, of course, we would do it in partnership with the Corps of Engineers because we would need to make use of their engineering expertise.

A lot of the environmental factors related to maintenance of a port are already well represented by agencies inside the Department of Commerce. I can tell you as soon as you start floating this idea amongst even the most middle-level managers inside NOAA and the Department of Commerce, they basically freak out and run. I think it's something that really does need to be done, and I do think DOC is the group to do it.

Now, in that spirit and again kind of going back to Georgia – again, I apologize for not having a slide of the Savannah Harbor Expansion Project, but there are probably two or three things that are absolutely unique about the Savannah Harbor Expansion Project that might be of general interest.

The first is that when congress authorized the current version of the Savannah Harbor Expansion Project in 1999, they did something that remains to this day to be absolutely unique in that they gave EPA, the Fish and Wildlife Service and NOAA veto power over the projects. In all other cases we comment and we watch the Corps of Engineers do what the Corps chooses to do with our comment, but in this particular project each of those three agencies separately have a veto power.

There has been a lot of discussion inside NOAA and I'm sure inside the Fish and Wildlife Service whether to embrace that power or to run away from that power, and I'm sure you can guess what the lawyers inside our agencies are telling us to do. It will be interesting to see exactly the mechanics of this power and how it all kind of rolls out.

The second point is that the Savannah District – yes, there have been a lot of problems with how this EIS has put together. It's, what, a \$36 million EIS, 12 or 13 years to put it together, which by itself is almost precedent-setting. This project is precedent-setting in the Corps of Engineers from the terms of the number of dollars that are being spent on compensatory mitigation and the percentage of project costs that are being spent on compensatory mitigation.

There has been a lot of effort by the Savannah District to do what they can to explore various alternatives for how to minimize the impacts from the project, and we'll see how that kind of shakes through the regulatory process. It will be interesting to see. Then the third part – and this is something I really can't get into because I don't have the technical expertise, but the extent to which hydrodynamic and water quality and vegetation models have been pushed to beyond what I thought were their predictive limits in the planning of this project is truly interesting.

It is really setting some very interesting lessons learned and some precedence for how far you can push these individual modeling systems; and for the real hard core engineer scientists group it will be pretty interesting to see how that works. And then, lastly, this is I believe the first project in the Corps of Engineers that ultimately acknowledges having an adaptive management program; so that in addition to the regular compensatory mitigation, there are a whole bunch of other projects that are pre-approved and that the Corps is basically figuring out ways to get the funding for and various monitoring activities are going to trigger these additional mitigation measures throughout the process.

There is kind of like a money kind of thing going on between the Georgia Port Authority and the Corps in order to make this happen, but this is also a fairly unique kind of approach as to how to deal with the mitigation from the Corps. Again, personally I don't think this project is going to happen either because I think we're all going to end up in court over this project, because we already were in court over this project back in the late 1990s.

I think there is a lot of very interesting and very positive things that have happened in association with this project, and it will be interesting to see how they kind of play out in the regulatory process. I don't have any other particular projects to talk about in Georgia. I wish I had some more details, but we've had some really great mitigation projects in the Brunswick area from the Corps associated with the deepening of the Brunswick Harbor. Alice.

MS. LAWRENCE: I spend a great deal of my time working on providing comments to the Corps and FERC for a lot of projects much farther upstream in the basins of Georgia, but just a couple of projects both our office and the Charleston ES Office have been working on much farther upstream in the Savannah are the Corps drought operations. I think you all would be interested in perhaps providing comments on that in the future because those operations affect the salinity regime and the connection of oxbows and a whole of issues much farther downstream.

That and then also specifically the New Savannah Bluff Lock and Dam, which is the first Corps of Engineers Facility as you move upstream. There are now preliminary permits or applications for competing preliminary permits for hydropower that just came out a few months ago through FERC; and then also the Corps had, I don't know, a month or two ago, I guess, asked for our comments on some fish passage design plans, and our office came back and recommended removal of the structure completely, but that may be something – both of those projects may be things that you all might be interesting in commenting. I know Steph is kind of in the loop already and I'm sure Prescott is, too.

MR. KELLISON: Our office has commented on all of those activities. It's not a big secret but it's the position of the Fish and Wildlife Service and the National Marine Fisheries Service that the pathway to adequate mitigation for the Savannah Harbor Expansion Project begins with tearing down the New Savannah Bluff Lock and Dam.

That deals with our fish passage issues there. It deals with much of our upstream drought management issues, and it also improves the quality of habitat within the harbor. Now, that's about the hottest political hot potato I've ever seen, but that is the position that we have already made public to the Corps in our discussions and the one that both agencies actually have and are beginning to take written comments and I expect we will have in our official comment letters on the project.

The nice thing about the New Savannah Bluff Lock and Dam is once that gets torn down or at least there's adequate fish passage there, which is what the Corps is proposing to do in the Draft EIS, is that it will trigger a bunch of other hydropower exemptions that are upstream there, past hydropower projects that went through the relicensing with FERC.

Rather than prescribing fish passage, the Fish and Wildlife or NOAA Fisheries put in a reservation to prescribe fish passage at a future date once there is fish passage at New Savannah Bluff Lock and Dam, so there is probably five or six different FERC projects upstream from New Savannah Bluff Lock and Dam whose reservation would be almost immediately triggered by either the passage being put in place or the dam being torn down.

MR. MIKELL: Pace, what is your feeling on the survival of the Corps of Engineers if earmarks go away?

MR. KELLISON: You know, I don't really know – this is coming from Jim DeMint's office, our senator. I do think DeMint is – well, of course, he is a senator so I have to kind of talk like

he is my boss or something, but I think if he wants to reform the way the Corps of Engineers is funded, more power to him, and anything I can do to help I'll get on that bandwagon to go.

The way that I perceive his stuff is all this anti-earmark kind of sound bytes that makes it to the news media that makes it seem like he is doesn't understand how the Corps of Engineers is funded. I'm not really sure whether he really fully understands this issue and is willing to take on a very difficult problem and deserves all of our support in trying to pull that off or whether he is just sort of getting a little bit askew of the no earmarks kind of thing.

Under most people's definition of earmarks, everything in the Corps of Engineers is an earmark, and I think that's why you asked the question, so are we really talking about like not funding the Corps of Engineers or are we talking about replumbing the whole way that they operate, and that would be a good thing. I really do think that would be a good thing.

DR. LANEY: Pace, on the Savannah Harbor Project, could you just give us a – for those of us in Florida and North Carolina who know less about it than those of you in South Carolina and Georgia, just give us a quick capsule summary of the major impacts on habitat of the proposed project, and then the second question is are we at a point where the Habitat Advisory Panel needs to express an opinion one way or the other on that?

I know the council has I think commented on it in the past, and with a DEIS on the streets, obviously you guys are going to weigh in and I presume Fish and Wildlife Service will be weighing in as well since we have an obligation to do so. This is a question that applies more broadly to I guess all of these different projects is – and Roger may want to speak to what the process is for generating a council letter on these things and how the Habitat Advisory Panel's opinion fits into that. The first question is very specific to the Savannah Harbor deepening; what are the habitat impacts; and the second question is how does the Habitat Advisory Panel weigh in on any or all of these projects.

MR. KELLISON: I'm winging Savannah from memory here, but if John and Patrick want to jump in, feel free. Basically, most parts are fairly standard channel deepening projects and they're deepening almost entirely within the footprint of the existing channel. They're having to make some adjustments and some widening and things like that to cut into some new ground, but largely just basically a deepening project.

The material is going either offshore in some sand mounds in an offshore disposal site or on shore in a confined disposal facility, so that's kind of fairly standard kind of stuff and it gets a whole lot of regulatory hairs up in arms. The problem with Savannah is that it's a fairly low energy system; and so the deeper the channel gets, the more stagnant the water gets in the harbor, and then it starts to incur all these water quality issues.

Savannah is already a system that is kind of at the limit for what the levels of pollutants the system can absorb under EPA's regulations. When you start deepening the harbor, you start to compromise the system's ability to absorb even the existing pollutants, so the Corps and the Georgia Port Authority has to do something to sort of restore back into that system the ability to absorb those pollutants.

Dissolved oxygen for pluses or minuses turns out to be the magic parameter for sort of monitoring all this stuff. Part of the project is to install these aerators that purport to put back into the system the amount of oxygen that a deepened channel will remove from the system over the course of the year.

All of this is kind of done through a modeling study that determines what the deficit should be; and if they close that deficit, then the existing polluters continue to pollute at their existing level; whereas, if they unclosed that deficit, then the polluters had to start cutting back on the amount of stuff they put in in order to reach their TMDL criteria. It's a very complicated modeling issue. It's the only time I'm aware of and the Corps seems to be aware of these kinds of aerators ever being used in an estuarine system.

They ran a demonstration project a couple of years ago that gave equivocal results at best as to whether or not these aerators would work, and the fact that it cost, what – I think the last assessment I saw was \$45 million plus a couple of million dollars a year in operating costs, you know, and who knows; let's give it a shot. That's the DO side.

The other part, too, and it's also related to DO is that the Fish and Wildlife Service has a National Wildlife Refuge and that National Wildlife Refuge is largely a legal haline and tidal freshwater wells historically, and those habitats have been compromised by the past deepening of the harbor, allowing more and more salt intrusion and converting those things back into like mesohaline kind of a marsh.

The Fish and Wildlife Service said basically enough is enough; we need to be kind of net neutral on this. So much of the mitigation is about replumbing the Savannah Harbor Estuary to move water out of what is called Front River, which is the big pipe that goes down into the City of Savannah into the two smaller pipes, which are Back River and Middle River, to get the freshwater back into the refuge to at least stem the flow of the increased salt ledge that will be coming up from the deepening so you won't have anymore conversion of marsh.

And depending upon the luck of the draw and maybe the actual deepening of the harbor, you might actually get some restoration of the old marsh back towards a ratio that it historically was. In the nutshell, those are the basic impacts and the plans for how they're going about doing that. Yes.

DR. LANEY: One followup and that is specific to impacts on shortnose sturgeon and Atlantic sturgeon and striped bass; has there been any modeling – I talked to Alice and John and my colleague, John Robinette who was the biologist at the Savannah National Wildlife Refuge, and was very intimately involved in a lot of the restoration work that was done by the Corps taking out the tide gate and restoring reproductive conditions for striped bass.

Now what I'm hearing from him is there may be some concern that some of these changes could reverse some of that, so for striped bass, sturgeon, Atlantic sturgeon is it safe to presume that these impacts are not going to benefit any of those species?

MR. KELLISON: I'm going to pass to the Georgia guys on striped bass; but just to give you 30 seconds to get your thoughts together on how you're going to respond that, I'll deal with the sturgeon side. There has been I think an extensive amount of habitat suitability modeling for shortnose sturgeon and trying to use the hydrodynamic models and the water quality models to predict how many acres of habitat will be present in the future based upon the proposed changes to the harbor.

Now, exactly what the numbers are going to be and what the change is going to be, I really can't comment on, first, because that's the Protected Resources Division on Habitat, but, second, there were some flaws in the habitat suitability criteria that the Corps used the last time they did that acreage calculation and they're going back and redoing the acreage calculations based upon these revised habitat numbers.

Even if I could remember what the old numbers were, it really wouldn't matter because they were wrong and that they needed to be redone and they should be redone in this new Draft EIS that has come out. Now I know striped bass has been a very popular component of this discussion.

MR. GEER: I'm trying to refresh my memory on this one. I know that studies have shown about 70 percent of the striped bass that are caught are coming from stock enhancement in the hatchery, so I'm sure that is playing into the factor there. As I recall, there was an issue – Cecil Jennings did some work on some the eggs and larvae, and I don't think it was found to be favorable, as I recall. Other than that, it has been a while. I would have to look back at it. It has been six years since I was sitting on that committee.

MALE VOICE: But they are spawning –

MR. GEER: There is some spawning going on, but the studies from – DNR has a stocking program and they're finding that about 70 percent of the striped bass that are being caught in the river are from hatchery fish.

DR. LANEY: One of the reasons I asked the question is because Cecil had a relatively recent article, within the last couple of years, in Fisheries presenting the striped bass restoration efforts on the Savannah as a good example of how you could restore a stock that had been impacted by past environmental alternations, so I'm wondering how the additional proposed alterations would play into that, but I can call Cecil and talk to him about that. Pace, I guess from a council perspective, what is the bottom line impact on EFH that you guys see?

MR. PUGLIESE: Well, we've been involved, as you indicated, for a long time in this activity; concern over maintenance of the water flow regime. To have adequate estuarine habitats I think is still think probably the predominant concern of the council. In our EFH discussions on this, anything that would be compromising that I think is one of the probably most significant ones.

Any of the estuarine-dependent species like gag and Spanish and species like that, compromising those or any of the prey species utilizing those habitats would be of concern in our joint work with the National Marine Fisheries Service on any of the activities that may change with

deepening – the biggest issue with the degraded water quality I think is something that has been of concern from the beginning of this whole discussion. Yes, the intrusion and the implications of potential dying off of the estuarine – the marsh grass and some of the things that happened earlier on, a number of years ago, concerns that would exacerbate that issue.

MR. DUREN: Pace highlighted two issues. One is will the deeper channel cause oxygen-depleted zones in the river after the dredging. The river is 46 feet now; the ship channel is 46 feet deep now and the proposal is to move it to 52 feet. I don't know if that will create an oxygen problem or not, and I don't know if the aeration system will solve it.

There are a lot of unknowns. The other issue that has been discussed is that the freshwater/saltwater boundary will be moved by the deepening and I don't think anybody is a good enough hydrologist to know exactly where it's going to move to and how much. That's another unknown. As far as the quality of the fishery now, the good news is there are sturgeon and there are striped bass in the river.

There are flounder, black drum, red drum, spotted seatrout. I mean, it's a very popular sport fishery. From the upriver boundary of the terminal out to the mouth of the Savannah River, it's a very popular sport fishery. Nobody would like to see that changed, but I don't believe the models are – I personally don't think that they're more than guesses, and so nobody will ever know what is really going to happen unless it happens.

MR. STREET: In the modeling has anybody looking a sea level rise because the marsh is at sea level and it will go under as sea level rises?

MR. KELLISON: Yes, the models did include sea level rises. Now, I will kind of – we need a little asterisk, though, next to that. The decisions about how the models would deal with sea level rise was the decision made almost ten years ago, so it reflects the understanding folks had ten years ago, or almost ten years go.

There are still a lot of ambiguities about what is the best way to move forward, so, yes, it has been considered. Do I think it is going to end up being like a model for other ports to follow on sea level rise? No, it's not going to do that, but they did consider it and I think they did the best that they could given the timing of the decisions they had to make and the level of information.

To kind of give an example, John, about their models being guesses; in order to do this modeling, they have a hydrodynamic model that tells you where the salt is moving up and down the mainstream channel. Then they have another model that links to the hydrodynamic model that tells you how the salt is moving away from the channels and out into the marsh.

Then they have a third model that turns that salt moving out in the marsh and turns that into the vegetation that's going to grow and replace the existing vegetation in the marsh. Then there is a fourth model that tries to keep the other three from fighting with each other. It's amazing to the degree to which they've really kind of pushed the technology on this. It's really pretty interesting.

DR. LANEY: Recall that the second question was what, if anything, does the AP need to do at this stage of the game?

MR. PUGLIESE: Well, I'm kind of going back to what you kind of combined, what the AP needs to do and what how the AP interacts. I think we have a very specific process or opportunity where we can either have deliberations at the AP – have input from either individual AP or directly from the National Marine Fisheries Service in commenting and provide the mechanism to develop a complementary companion comment letter on any activity.

What we have tracked is a number of different avenues. If it's of concern of an AP member, in the past we've had it go through the individual sub-panel chair and then provided to the AP chair and then up through the council chairman or the committee chair. A more rapid capability is to get highlighted by an AP member and be able to go directly to – based on our existing policies work to develop a draft letter to forward or again work with the National Marine Fisheries Service to craft a draft letter to forward. We have a couple of different avenues that this can be raised to the council if it's of enough concern to expand beyond the kind of the traditional individual other agency or National Marine Fisheries comment activities.

Those are the kinds of the avenues or the opportunities and what we do a lot of times is defer to a great degree to our individuals in the field, which is the National Marine Fisheries Service is implementing the EFH designation, so if there is enough concern, from there we can raise that or from an individual state.

If the state itself, from the agency, has a real encouraged desire to step forward, I think we can bring it forward. So, those are the avenues that an advisory panel has to either bring it directly up through the chain and get a comment or concern raised. The other one is it have it brought to the council as a concern of the advisory panel and then the council can react at the committee level and the council level and a letter provided through the chair.

At this stage, on the activities that we're discussing, this is in kind of an information mode. However, as Pace and others have identified, there may enough in the future to move forward with additional – and a supporting letter from the council.

MR. KELLISON: All right, just to wrap this up real quickly, Florida, the St. Johns River Crossing, the new beltway around the – well, pretty far south of Jacksonville – this one came out in a Draft EIS last March or May or so, and they're kind of going back to the table and having to redo a lot of their impact assessment largely because they did not consider the tidal creeks in the St. Johns system to be essential fish habitat for white shrimp.

We met with the Southeast Fisheries Science Center, particularly the Galveston Bay folks and the folks in Baton Rouge, and were able to kind of convince Florida DOT that there really is a impact to habitat important to white shrimp, and they're going back and recalculating their impacts as well as redesigning bits and pieces of this.

I think this project kind of came out of nowhere. I mean, no one really kind of heard about it until the Draft EIS was on the street, which is a little bit unusual for Florida because you tend to

get these signals many months in advance. I do think this project probably will end up in sort of a good place. I don't think we're kind of headed towards a huge disaster there.

The only thing that I would just sort of note kind of tongue in cheek is that this is the only EIS that I've ever read that referred to the alternatives by the colors used for the line to drive on the map. When you've got like 14 alternatives and you're kind of a little bit color challenged like me, the difference between purple and magenta is what, you know.

And the other interesting part was the alternatives that had the least environmental impact are the black alternative and the brown alternative and the gray alternative; and the ones that had the most environmental impact but also coincidentally the ones that Florida DOT was pushing, those were the yellow ones and the green ones and the red ones.

It was an interesting use of color in that particular EIS and particularly for those of us whose color printers are also challenged, and so it was a little bit odd. This to my knowledge is the biggest project right now that we have in the regulatory process in Florida. Usually we talked about Port Everglades in this kind of discussion, but Port Everglades is kind of a little bit on the back burner and probably will remain on the back burner for a while, so this is the big dog for Florida.

MALE VOICE: Interstate?

MR. KELLISON: No, it's not an interstate.

MR. MIKELL: It looks like the road to nowhere; it ends on both ends.

(Remarks made off the record)

MR. KELLISON: That's getting close to I-95, but I don't know if that actually is I-95. I don't know my Florida geography as well as someone who has lived in Florida for 18 years should.

MALE VOICE: Is it south of St. Augustine; it's in St. Johns County, probably?

MR. KELLISON: Well, it crosses several counties, but this is basically – I mean, Jacksonville, in the little inset map, is right there. That's the main downtown Jacksonville. Anything else that should be on the hit list for Florida?

MALE VOICE: No, I can't think of another project that would need the AP potential.

DR. LANEY: I'll just mention that last week the ASMFC Habitat Committee met here in Charleston, also, in the Francis Marion and had only a half a day session. We spent about half of that half-day session getting updates on the oil discharge in the Gulf of Mexico. Kent Smith, who is our Florida administrative representative on the Habitat Committee gave us a pretty extended presentation on Florida's response.

Pace gave one on the National Marine Fisheries Service and NOAA response and I gave one on the Fish and Wildlife Service response. That is something that we might want to consider discussing at some future meeting, maybe. I don't know that it's especially critical that we do it at this meeting, but we brought it up at the ASMFC Habitat Committee with a view toward trying to inform our membership with regard to what sort of resources were needed, what sort of information was needed when you have to respond to a disaster of that magnitude.

Those of you who are interested, we've got those presentations and I guess we can make them available on the website, if need be, and you certainly are welcome to ask Pace and me about the Fish and Wildlife Service and the National Marine Fisheries Service response, and I'm sure the Florida guys could address to some extent – I don't know how much you all were involved in that, but, yes, you may want to go ahead and say something about Florida's involvement and that whole response.

MALE VOICE: Sure. I'm actually still physically on deployment in New Orleans, so I'm the state scientific support coordinator, and I also serve as a deputy to the commander for the oil spill. If there is anything you do want to know, I was activated on Day One and deployed Day Three and I'm still deployed to the Gulf Coast Incident Management Team. I've worked with every possible agency and every possible private agency that has been involved with this. If you have questions about the response of area contingency plans – that's kind of a hot button topic – the Florida Fish and Wildlife produces the area conditioning plans that the coast guard uses. During the initial response, we produced them all the way from Sector Mobile through the state of Florida, Sector San Juan and all the way up to Sector Charleston, so all those will be undergoing changes over the next couple of years.

Those conditioning plans worked really, really good for about a week; and then after that, people start asking really more difficult questions. We have been doing this now for seven months, so you can imagine the types of questions we're getting. If there is anything I can add to that, please feel free to let me know.

DR. LANEY: Yes, John, I was deployed to Houma, Louisiana, for two weeks. John was deployed, what, on a couple of different occasions. Alice was deployed, too, so I probably – and, Pace, I don't know, did you ever deploy down there?

MR. KELLISON: No we had people from our office.

DR. LANEY: Yes, so there were a whole bunch of people on the panel who got deployed; so if you have questions, feel free to ask any of those folks.

MR. PUGLIESE: Okay, and 8:30, we're starting a little bit earlier in the morning. Thank you all for your participation.

The Habitat and Environmental Protection Advisory Panel of the South Atlantic Fishery Management Council reconvened in the Charleston Marriott Hotel, Charleston, South Carolina, Wednesday morning, November 17, 2010, and was called to order at 8:30 o'clock a.m. by Mr. Roger Pugliese.

MR. PUGLIESE: We've got a couple of slight modifications. I'm going to walk through a presentation on the South Atlantic Alliance first, and the other item that we need to take under other business would be election of a chair for the advisory panel so that I can coordinate directly with the chair and we can look at enhancing our individual sub-panel activities this year, also.

So what I would like to do is start off with the topic on the South Atlantic Governor's Alliance Action Plan and the movement on that. What I would like to do is thank Carolyn Boltin-Kelly. She provided a presentation that was just given at the recent Executive Planning Team meeting that was held to facilitate movement on the action plan and the entire effort of the governors.

The Governor's South Atlantic Alliance, what I would like to do is give you an overview of the status and the direction that this is moving forward and provide a background on the formation of this organization, the regional framework, priority issues, next steps, and we can into some discussion after that.

What I have provided you is the action plan draft that was provided to the public as well as there was also a followup on resources to facilitate spatial planning. This was directed to the existing alliances and organizations that were kind of stepping forward as the beginnings of regional ocean planning bodies, so that process is kind of in its infancy but a first step and actual resources laid on the table.

The South Atlantic Alliance has the geographic scope of the states of North Carolina, South Carolina, Georgia and Florida and the intent is it also cover ocean areas and coordinate efforts between the individual states as well as the regional partners. The partnership agreement was originally signed in October of 2009.

Actually its infancy started significantly before that and I still remember some of the preliminary discussions kind of came from two different ways. Sea Grant had been coordinating some efforts with the states as well as the South Atlantic Council had sat down with the directors of each individual state and talking about our original terminology was an eco-regional plan or something to that degree, so there has been this convergence and opportunity to collaborate for the development of the South Atlantic Governor's Alliance.

The partnership agreement was signed by the governors. It recognizes the southeast challenges, supports the regional-based actions and solutions and creates a partnership between the states, federal, local agencies, academia, non-governmental organizations and the public. The idea here is to align states' recommendations to the U.S. Commission on Ocean Policy.

The Alliance provides a structure and a forum for collaborating, coordinating and sharing information, look at resources sustainability, to improve regional alignment, cooperative planning and leveraging of resources, integrated research and observations of mapping, increased awareness of challenges facing the South Atlantic Region and inclusiveness and integration at all different levels.

To define the flip side of this, what isn't the Alliance? The Alliance is not a governing body. It's not intended to be a governing body. It's doesn't dictate actions and there is a real intent not

to duplicate actions, either. This is the general structure of the way the South Atlantic Alliance is both developing and established.

You have the Alliance Executive Group, which essentially are the governors of the four states. You have an Alliance Steering Group, which are the designees of the individual states to be considered the executive group of the South Atlantic Alliance. Then you have the group that really has been kind of coordinating the broadest scope of it.

You see the supporting partners and actually that group right there is what has been the executive planning team that has been coordinating the development, integration and operation of the effort and provides the direction and coordination with the tier on the center, which is the Alliance issue or technical teams.

Those teams were developed to create the opportunity to focus efforts on what have been identified in the action plan on directions for initial work on the four major areas that have been identified for the initial efforts of the Alliance, disaster resilient communities, working waterfronts, clean coastal and ocean waters and healthy ecosystems.

Under the healthy ecosystems is where a lot of our fisheries and habitat conservation efforts have been coordinated. The steering group, as I mentioned, are the four state designees for – the individual states for the Alliance. The federal co-leads also have designees for NOAA, Department of the Interior and EPA.

This is the executive planning team and I've served on that and a number of the other state partners, either state directors or other regional efforts – Jenny Faye with the National Marine Fisheries Service, Southeast Regional Office – and it's a very broad collaboration to get this off the ground; other regional components such as the SECOORA, Southeast Ocean Observing Regional Association as well as academia and even NGOs within this organization,

This has really been the group that has been kind of doing the crunching in the background to get the action plan together and to get things hammered out and provide oversight in the development of the process. One of the biggest things in the front I think that really sets the South Atlantic Alliance apart from many of the other efforts that have been done in the other regions is the up-front immediate acknowledgment of regional efforts that are ongoing and how that can provide some synergy in working with this.

Some of the major areas that were identified were the – there was an effort under a South Atlantic Regional Research Planning Effort, and a lot of the players that are involved in this and we've been working with over the years in fisheries and in habitat and the state CZM programs provided inputs that gave research on coastal and ocean priorities.

My involvement on that, what we did is we essentially took our priority species and habitats that we were working on and provided that into that process I've got integrated into discussions and efforts under that. Some of the other things are the Southeast Center for Ocean Sciences and Education Excellence, COSEE, so we have a regional educational component that has been acknowledged that I have mentioned before.

SECOORA we have been discussing already, some of the fishery-independent programs that are providing significant information for assessments and for habitat for a number of different efforts; MARMAP and SEAMAP, and the integration again with our National Marine Fisheries Service partners; Nature Conservancy, and the South Atlantic Council has been involved in regional fisheries and habitat management in the region; the SECRT, which is the Southeast Caribbean Regional Team, a regional NOAA partnership effort what really has been coordinating some of the efforts in the background to facilitate movement toward ecosystem-based management; as well at the Southeast Regional Partnership for Planning and Sustainability, which is a DOD coordinated effort where many of the states are getting resources or efforts to facilitate interaction with the DOD through the SURPASS Group.

The initial priority areas I had mentioned were four areas, and it's initial. The idea is that there needs to be a springboard stepping stone, and the idea is that they will have the opportunity to add or modify in the future. The biggest challenge there was to get some common focus that all the governors could agree on that you could move forward on. To a great degree this is very different than the way it worked in the Gulf of Mexico because right from the beginning it had that broader scope of concept.

It is very limited in the initial work in the Gulf Alliance. I've mentioned to help the ecosystem, waterfronts, clean coastal and ocean, and disaster communities. Under the healthy ecosystems, the biggest acknowledgment is the complexity of the South Atlantic Region, the diversity of the coastal and estuarine habitats, offshore systems, the ecosystems were involved in, and the ecological and economic benefits of those.

Enhancing the ecosystem-based management is one of the directions, maintaining and improving the ecosystem structure and function; increasing our understanding of the scope, scale, distribution of resources; and standardizing and integrating and making accessible spatial and temporal data.

Under working waterfronts, the intent was to look at the commercial facilities, required direct access and locations, sustain the adequate access and infrastructure, looking at striking a balance between new development and historic uses, supporting port development, maintenance and ensuring public access.

Clean coastal and ocean waters, again addressing the estuarine and coastal ecosystem health and trying to look at the impacts and management at regional level, consider point and non-point discharge impacts on oceans as well as human health, and to utilize regional observation and monitoring and decision-making. And, again, as you see these, you can see the connection back continuously to regional partners and other activities and newer efforts that are ongoing.

The disaster-resilient communities is to look at both short- and long-term changes in weather and climate. Here is the linking into some of the climate considerations that not only are being addressed but are being facilitated with some resources through a number of other programs; looking at what the major concerns are, the threats to the coastal communities, towards them and towards fishing, share the best practices and preparation for emergencies, increase understanding

and vulnerability to impacted storms and climate change, as well as improving prediction and observation and forecasting capabilities.

Those were the four major areas and some of the conceptual ideas behind those. Now, there have been – as I mentioned, the action plan was distributed and comments were due by November 8, 2010. There were public comment sessions actually held in each of the states. The action plan is to be finalized. It's really a springboard.

If you didn't get a chance to go through it, it still is pretty much a shell. The most common denominator is agreements of those major categories and direction; but if you did look, it did have some very important aspects for fisheries and for habitat, a lot of things that the council and our partners in the region really – and the concerns at the council level will be facilitated here.

The biggest thing is that is the springboard to really get to the kind of the guts of this. The next stage is the implementation plan development. The idea is that is going to facilitate efforts under each one of the major categories. Those plans are being initiated now and they're moving forward. The idea is those will move forward with the idea to address each of the major areas. Now, one thing I had mentioned before, the other part of the briefing material that was distributed to you was the call for program projects under – it was really done under the Coastal Management Program but initiated to look at marine spatial planning in the coastal and ocean areas.

What occurred was it was also directed at those resources would be funneled through what potentially could be the developing regional ocean bodies. In our area the South Atlantic Alliance is kind of the one that has kind of stepped forward and has this collaboration. It is not fixed as what was identified in, say, the ocean policy. I think that's still is going to be involving effort, but it directed the resources to go there.

The idea was that the group determines the best way to make sure that this was going to be effective was to funnel those calls through the Alliance so that there could be an oversight and an integrated proposal provided, and that is what is in process right now. Letters of intent were requested and there is a developing collaboration on a proposal for marine spatial planning that is going to be moving through and up through and be submitted by the Alliance to that call.

Now, it is open through December and there technically could be outside participation. However, the way it's structured in the Federal Register, it does basically provide those organizations the ability the focus what they need to accomplish in their area and thereby there could be some weight given to efforts that are done through this collaboration versus an external effort.

I think the biggest thing is that everything moved fast and it got put together, and at least it is focused and working together it's covering everything in all four of the major areas. It's a big effort and hopefully we'll have an opportunity in the not too distant future to begin reviewing and looking at what those – how it's going to be put together and essentially have that submission with hopefully addressing many of the concerns of the partners and having a focused effort instead of just re-plowing a lot of existing efforts and whatever.

I think that's going to be the biggest challenge is to make sure that it's not going to be duplication and it's going to be something that can facilitate truly looking beyond where we are. The way it's established right now – I started talking about the ability of the group to actually focus it, and this just lays out the way the projects actually are going to be evaluated; applicability of the project for regional program goals; collaboration of partnerships' engagement – this is especially touching on where it's connecting into existing regional partners – relevance and expected benefits, technical organizations, scientific merit; overall qualifications and funding; application and project cost and merit. Those are the percent balances that were given to the criteria.

Opportunities for collaboration really highlighted a number of these different things and issues we have discussed here already and ones that are basically coming the pike. Offshore energy facilities identifies natural gas, wind. There is ocean energy, there is a whole suite of efforts that this group here I think is going to be a whole lot more involved hopefully in this next year to potentially refine our energy policy and effort.

But this is in the spring work for review – this is a priority. Sand mining for beach nourishment, that's all the individual states that the council has weighed in a number of times and essentially had highlighted our essential fish habitat activities relative to those to provide more directed facilitation of efforts. Military exercise, navigation of marine transport, marine protected area, essential fish habitat as well as offshore aquaculture siting, as that is considered and the policy is being looked at at this time.

Under offshore energy, looking at the energy grid, coastal infrastructure and community engagement; under coastal and ocean water, hypoxia through eutrophication; harmful algal blooms, storm runoff, many of the key water issues in the coastal area that the individual states are now dealing with and looking at a broader scope of these episodic and chronic events, hurricanes, flooding, shoreline change, land subsistence, sea level rise and temperature shifts, and those temperature shifts can be everything from increasing water temperature to things such as really defining upwelling events and cold water occurrences in the South Atlantic Region.

Healthy ecosystems, addressing habitat, species diversities and invasive species. The challenges ahead really are going to be looking at the level of engagement between the partner institutions and the regional bodies, setting up a scope of regional efforts, looking at the degree of governance. They're trying to figure out the balance of how the Alliance is to going to work between state and federal entities; planning at the regional scale, policy implementation and application from all different levels, from local, state and regional levels.

It identifies lack of authority. It depends on which interpretation right now – you have authority under different scales at the regional. The council has fisheries and habitat. There may be other issues across policies. Finding the appropriate niche, where does this fit in terms of the National Ocean Policy and its relationship, the Alliance's relationship.

And, again, that idea that I had mentioned under that policy, what is identified as regional planning bodies. One of the concerns – this is moving forward but you are also in that phase shift of governors moving in now, so this is very continent on trying to get I think – the bottom

line is they're trying to get as much done as they can in a very short period before all of a sudden you have a total shift of everything in the southeast again, so at least setting the stage for the near term and at least the longer terms to facilitate things.

With that, I did acknowledge that Carolyn Boltin-Kelly, the deputy commissioner of South Carolina DHEC, did put this together in collaboration with Rick DeVoe, our executive director of the South Carolina Sea Grant. I know that was a lot to throw at you. Were there any questions specifically on, say, the action plan that I had included in the documentation or comments or suggestions or recommendations relative to the South Atlantic Alliance and continued development. Mike.

MR. STREET: I've been involved over the last 40 years in many, many, many, many regional large-area cooperative planning attempts, and there are a lot of dusty plans around. In the current and near-term budget climate, especially at the state levels but also I think we can all assume coming up at the federal level, who is going to fund it, how is it going to be funded and who is going to watch to ensure that there is not overlap with existing programs?

The programs we have in the southeast, Gulf and South Atlantic, have been ahead of most our other regions for 20-25 years, the cooperation under SEAMAP that the council has fostered beyond its specific requirements and a good number of other programs particularly in coastal and fisheries up in the estuaries and in the ocean, and we have frankly for much of the stuff SEAMAP for most of its existence – and I'm not sure if it still is – has been an earmark; and in that kind of a climate coming up in D.C., where is the money going to come from and how well integrated is it going to be so that we're not going to set up another executive system and duplicate, honestly, some things that are going and have gone on, some for many, many years?

MR. PUGLIESE: Again, I think that's the immediate question right from the beginning of this. The one thing that I think I can acknowledge is if you look at the participation in this effort, that is where the key is on at least attempting to ensure that there is not going to be duplication. The idea and the way this has been initiated, facilitated and coordinated with other regional efforts has all the intent of ensuring that does not happen.

Now, there is commitment to moving these types of things forward with, number one, the fact that you do have the ocean policy. The ocean policy is directing these types of efforts. Number two, the fact that you have an amount of money laid on the table to immediately facilitate things that are going to support ocean policy through spatial planning and discussion immediately put out and directed toward these organizations facilitating its distribution is at least setting the stage that there is a lot of political will from the executive down to the individual states to see these support-existing operations within states, but also give that broader scope and perspective and give some resources to be able to look at those kinds of projects.

I think at least right now is the commitment. Now, there is not legislation that establishes these other than the ocean policy, and those are some things that are still in the works in the background to look at what these bodies potentially could be the executive or the ocean planning bodies. Now, that is still evolving and where that ultimately goes – right now that seems to be

stepping forward as these organizations are going to be kind of the beginning of how those discussions can occur.

So, yes, I think the funding is of concern about where it is going, but I think everybody is committed to build the structure and then figure out how you can expand the collaboration and then more directly get the funding. Now, the biggest thing is you do have the highest level of the individual states moving forward with endorsement of these types of efforts, being the Governor's Alliance.

MR. CLEARY: Will you let me comment to that point?

MR. PUGLIESE: Yes, you have to do it on the record. I meant to introduce you. Dr. Halpin is not able to be here. He had to leave for another meeting, and I was just fortunate to be able to get him involved. He is usually in between travels; he is heading to Belgium. I didn't get a chance to introduce one of his colleagues, who is going to sit in and least provide some input on some their other activities.

MR. CLEARY: I promise not to vote on anything. Anyway, Pat sends his apologies. He is racing home to teach classes this morning and then flying to Belgium right after he teaches class. I'm Jesse Cleary. I work in Pat Halpin's Lab at Duke University. At least in a short-term sense with the SAA, we've been involved with SECOORA and some of the other folks that were listed there, the Nature Conservancy, a consortium of state management folks to put in a letter for this SAA call for letters of intent to go in on this NOAA regional ocean partnership issue.

I would say that the request for proposals did have a specific item that was just to fund these regional ocean partnerships, essentially. It was capped at kind of a small level, but at least I think the idea is in the short term that they'll be able to – you know, no one anticipates making ten or eleven or these or ten or eleven of these regional ocean partnerships, and we can figure that is the intent for that particular piece.

The other thing I would say is that at least the letter that we submitted to the SAA from SECOORA and the partnership that we built was very much plugged in with existing efforts. I mean, it was state management folks across the southeast, it was SECOORA, it was the Nature Conservancy and some other labs that have been working in the southeast for some time; so in terms of concerns about duplication, that was really foremost I think in the development of that letter to the SAA.

Hopefully, that will make sure that this is just perhaps a different funding umbrella but going to the same kinds of entities and projects that are already underway in the region. We should hear back this week I think whether our little partnership has been supported and will be part of the general SAA letter or proposal which they'll make to NOAA at the beginning of December.

DR. LANEY: Roger, what do you think the impact is going to be of the fact that 75 percent of the governors have changed; and generally speaking, their executive level staffs who the ones that are usually involved in these kinds of things are also frequently replaced, not always but frequently, so has there been any sort of assessment yet? I guess they don't take office until

January, but has anybody tried to do any contact with the new governors to see if the level of support is going to remain the same and also the personnel are going to remain the same?

MR. PUGLIESE: I think the biggest thing is to deal with the matter at hand and get the action plan completed, get this call completed and facilitated, especially since it has got the structure and development dollars. I appreciate your mentioning that because it is in – it actually provides those resources for those entities to function and operate.

As a step beyond here, there is commitment at least through the executive planning groups, which are tying directly into those who were the ones that were going to the governor, going to the individuals to get the sign-on and to get the collaboration. There is that commitment right now. I'm not sure anybody has done an assessment yet, and I think maybe at the last executive planning there may have been at least a stage-setting of what may be done, but I think we'll have to just wait and see to go forward.

What is more important at this stage is to get it to the next stage and then react and try to respond on how it's going. A lot of those efforts I think are being pushing forward. You are right, we just don't know what the individual state response after we get to the next step is going to be. Yes, David.

DR. PALANDRO: I can't speak very much about the SAA, but I can speak pretty intelligently about GOMA, which is the other half of Florida, in that GOMA started, and the reason why it was so successful and remains successful is because it has state buy-in. For the first three years of GOMA there was no federal funding provided to GOMA. It was all state funded. We've changed governors twice then and we're still going.

The reason for that is because GOMA got its legs under it and now receives federal funding from NOAA, EPA and NASA with projects directly related to the Gulf of Mexico Alliance. For the SAA to have that kind of success, I think it's going to have to go after federal funding that specifically targets the South Atlantic of the U.S., but that's the only way that GOMA was allowed to operate.

I have proposals in through the Gulf of Mexico Alliance for this NOAA call. Previously the alliances didn't have to battle with each other. Each alliance got a set dollar amount every year from NOAA. This year is the first year that the alliances are actually competing with each other for the same pot of money. There are two pieces of money. There is research dollars and there is admin dollars, and the admin dollars are set aside directly to hold meetings, fly people to those meetings and to pay for coordinators for each of the action teams.

MR. PUGLIESE: Yes, and I think that really does set the stage potentially what the other alliances can look to, and I think the other big thing is the fact that the Gulf Alliance was also selected as the group to funnel the oil dollars through, which was the big – that was a big acknowledgment of that being an appropriate body to direct what needs to be done at that level.

Those were all alluding to the fact that it's even going beyond the scope of the individual governors at this time that it is getting enough horsepower, but ultimately I think the biggest

thing is going back to the research dollars. You're correct, the money is going to be a state coordinated effort for the money and resources. If you really want to see this be a successful effort is to facilitate other federal resources to be able to target in on appropriate and collaboration between states.

MR. WILBER: I'm not part of the South Atlantic Alliance Advisory Group, but I am on three different groups that the South Atlantic Alliance thinks it partners with. Over the past several months, each of those three groups have had various kinds of think tanks, workshops, whatever you want to kind of call them, about how to help the Alliance sort of move forward.

The prevailing point of view in those three particular stakeholder groups – and I'm not going to generalize to the entire community – is that the South Atlantic Alliance needs to take baby steps before it takes big steps and not look towards creating a huge infrastructure or any kind of executive steering/oversight kind of group or anything like that.

What they really kind of struggled with is trying to identify a single project that really requires all four states to work together on in order for it to get done as opposed to projects that the four states really could continue to pursue independently and there might be thin veneer of additional benefit from cooperation but really you don't absolutely have to have cooperation among the four states in order for the project to move forward.

This is where it's kind of come into conflict a little bit with the various ideas that NOAA has put out about regional spatial planning and ocean policy development and things like that. For example, wind energy, you know, you can't get too far into any of these CMSP discussions or regionalized discussions until somebody throws wind energy out on the table.

You really don't need cooperation among the agencies to have wind energy. Sure, there is some benefit and that benefit might be tied to the on-shore distribution of the energy, but you really don't need cooperation in order to decide where the best place for a wind farm might be and how it might be build. The one example that does come up in these discussions is the Atlantic Intercoastal Waterway.

The Intercoastal Waterway really is only as strong as its weakest link, and many folks right now kind of view that to be in Georgia down near Brunswick. It's a huge corridor by which commerce moves up and down, and there is all kinds of economic benefits and studies of those benefits that have sort of emerged. It's a fairly discrete project and how can the four states band together to enhance management of the Intercoastal Waterway?

It means pulling together four Corps of Engineers districts and trying to get them to work together. It also talks about how to kind of finagle various tax laws and other things on the socio-economic side that sort of force people to move from one state to another up and down the waterway. It has been a pretty interesting kind of discussion, and coincidentally has been led by Duke for other groups.

Anyway, I really think the South Atlantic Alliance needs some kind of very simple manageable project that all four states have a clear benefit from participating in order for it to kind of move

forward. To talk just vaguely about coordination and things like that, you're going to end up exactly where Mike kind of said you'd end up. I mean, it's just a bunch of chat and not a whole lot kind of happening.

MR. PUGLIESE: Yes, and I think that's going to be a real key. I think there is a real desire to get at least the core foundation clarifying what the Alliance is, and that's the action plan and some of these initial efforts and then really do the springboard from there to be able to address across – and they have been very strategic on trying to integrate as broad of a scope in the individual areas that are being considered, but also to do things or at least look at issues that ultimately there is a hope that there can be some collaboration between individual states and the activities that may be a good first springboard from which you see the next stage in implementation.

MR. MIKELL: There has got to be a negative concept, and I'm going to be the guy. What I saw up there I was not very impressed with. They're trying to stop duplication and it looks like every focus point up there was a duplication. The management team, it looked like to me that there is not a lay person or least from South Carolina there is not a lay person involved; it's all, pardon me, bureaucrats.

It looks like to me it's another way for them to go after more dollars that they're not getting from some other place, and I just don't think it's going to work right now. I think Pace is exactly right; it needs to start off not with a whole scope of ideas by dreamers but by a focus point like the Inland Waterway and then branch out from there.

MR. CLEARY: I can't speak to the SAA in general, but the proposal that our group put into them, the first part of that was just kind of building out the stakeholder kind of back end for the SAA, which as you say really doesn't exist from that list of folks. There was a whole section that was focused on kind of developing that group and bringing the kinds of folks that you're talking about into the discussion that our proposal might then build upon. The other piece I wanted to mention was the proposal at least that we have put in with the SAA has a really heavy state focus, and I think that was initially to get the SAA to buy in on it.

Frankly, I think if you look at that list who is represented there really heavily is state management kind of folks. Our group's interest I think is actually to operate at a regional level and so we have been pushing the proposal that we're working with the SAA to address a more regional issues.

Certainly, the proposal development work that we've done actually mentions the SAFMC as a potential client for some of the work that might go on there in terms of tools development and data set development, and our group would be I think a good liaison into that to make sure that some of those regional pieces don't get let behind by all the kind of state interests as you mentioned are really heavily represented currently in the SAA.

MR. MIKELL: I guess my concern is in South Carolina – and I'm sure North Carolina is the same way and probably Georgia and Florida, also – it's pretty frustrating to be on the outside and know that South Carolina DNR is the leading instrument, supposedly. They crossed horns with

DHEC. The University of South Carolina has a marine lab; the College of Charleston has a marine lab.

All of them do a lot of the same things but they can't talk to one another through their computers or anything else. It is duplication, and I see this as being duplication of what the South Atlantic does, what NOAA does. We've just got to pull the whole thing together and speak as a voice and not as multiple voices; or multiple voices one, how about that.

MR. PUGLIESE: Yes, and I do understand your concern, and I think from at least my participation from my aspect, that is one of the biggest things is not to see something that is going to be just a pie in the sky or developed outside the box of that. I mean, we were going in with a lot of faith that it's state focused but we have the ability to step forward.

As I mentioned, we do have specific mandates and specific efforts. The partners in the region that are working there are – as was indicated, there is this opportunity to connect together and then be able to look at building tools, building capabilities and providing things that are going to make fisheries management more efficient and coastal management.

I guess I'm a little more hopeful that some of these next steps in terms of stakeholder engagement and effort are really going to be the core ones that build on existing groups that have those links and be able to bring the right people together to help guide the longer-term effort. This is still at the early stages and by no means do I think that they are going to be setting something that is not going to kind of be directed by the state individuals, the actual people, the fishermen, the individuals in the state. At least I'm hopeful that we're going to see this be realized at a better level than some of the other efforts in the past.

MR. MIKELL: Yesterday we talked about the Corps of Engineers and whose baby is the Inland Waterway; the Corps of Engineers. We can't even get them to dredge Charleston Harbor because we can't get an earmark to pay the folks. How in the world are we going to get one to dredge Georgia? I mean, I think we're putting the cart before the horse.

MS. LAWRENCE: How new is the Alliance; how new is it; how long has been around?

MR. PUGLIESE: Well, 2009 is when the governors – actually last year was when the governors first signed it; I mean, just the intent, so it is fairly – you know, it's fairly new in terms of it getting off the ground for a concept. That is why I was saying is the first step was to put together this action plan and then immediately respond to some resources that were on the table to facilitate the development of – in response to the National Ocean Policy and some of these other efforts.

MR. MIKELL: Did you just say resource; looking for resources to – did you not say that?

MR. PUGLIESE: Yes.

MR. WILBER: Alice, even though it was signed October of 2009, the work to get to that signing document in 2009 was at least 18 months before that date. As it is with a lot of these

governor signing kind of documents, it was done months before the actual signing dates and sitting on someone's desk while they're hiking the Appalachian Trail or something like that, before they're able to schedule some time in the office to sign.

MR. PUGLIESE: Yes, and those discussions; I mean, 18 months was the development once the decision was made that something was going to move forward. The discussions I mentioned about getting the directors to sit down and talk about from a fisheries aspect and all that, that was a number of years ago that we first started talking kind of that regional compact for the South Atlantic Region, and some of the efforts were already being initiated through – as people were talking about ecosystem-based management, so there has been that kind of convergence on an intent; and then looking at that as a springboard to move forward on an alliance. Yes, Anne.

MS. DEATON: I was just going to add that I've been involved with the healthy ecosystem group. I believe, Patrick, you're on that, also. For South Carolina, just so you know, Bob Van Dolah was very active; also, Mary Connolly with the Nature Conservancy, so South Carolina actually did, I would say, the front of the work on those ideas and were represented.

Just as a technical advisory participant, I think the feeling was duplication by design, that those were overarching things that all the states were working on, anyway, but they did need more money, and they wanted to ensure coordination between states; so if South Carolina is mapping oysters, well, why doesn't North Carolina, you know, let's get this done similarly so we can do some larger regional trend analysis in the long term; so nothing new, but that it would have the governor or this high-level representation help funding. So, yes, it was I think a funding issue and to get a little more efficient between the states for things that are collected in similar manners, but South Carolina was represented.

DR. PALANDRO: Just using the Gulf of Mexico Alliance again, it's collaboration to get money. The Alliance is there to form a collaboration to do work together and to have money focused towards that geographic region. I imagine the South Atlantic will be similar. It's a state-led effort supported by local government and the feds, but it's a mechanism to fund a location where states have common interests. We use seagrass in the Gulf of Mexico Alliance because all the states have seagrass, so it's one of the common habitats. Like you were saying, if there is a mapping project that we're working on, well, can we get the other states involved and go after a pot of money and get a lot more work done for less money than it would cost each of the individual states to do the work.

MR. PUGLIESE: Any other comments or recommendations or thoughts on the developing alliance?

MR. MIKELL: Would you all like to tar and feather me now?

MR. PUGLIESE: No, I think you are raising good points. You need to go in this thing with eyes open to make sure you're not going to be going down some road that ultimately just doesn't accomplish what kind of the original intent was.

MR. MIKELL: Well, when it was first announced, I thought it was a wonderful idea, and I'm not saying that it's not, but what I saw up there leads me to have some concerns about it.

MR. GEER: Just real quickly; the South Atlantic Alliance is new but the Gulf Alliance has been going for, how many years now, ten? The west coast has a real successful one, too. There are at least eight regional alliances right now, so we're behind on all this at this point; so, yes, it's a potential funding source, but all the other regions are doing this as well.

MR. STREET: Getting cooperation among the different groups in issues of common concern is the endpoint. Then what comes out technically will be. An example that we have from within North Carolina is that we needed seagrass maps. There were a number of individual efforts over about 30 years, but we were able to get, what, about 15 agencies, Anne – I think four or five provided funding.

We needed groundtruthing done and about ten agencies went out and did the groundtruthing while the aerial photography was being done. There was no charge from anybody; nobody said how much are you going to pay me to do it? They all we'll do it and they did, but it just took finally getting the folks together, to sit down and say, yes, we all need it and this is the way to get it. This is what is intended; I agree.

I am skeptical about a number of these things, but I agree that finding one or two or three initial things that can be done to demonstrate to the actual and potential partners that there are benefits in working together will also foster things for the long term. SEAMAP has been I think a very good example of this on a very large scale; Gulf, South Atlantic and Caribbean. You can have this nice, big plan, but choose some things that can actually be accomplished and provide benefits, and the states must provide funding; not just the federal government.

MR. PUGLIESE: Again, and just a followup to that, I think one of the key things, and the reason this is being brought to you, is that as we move to this next stage with implementation plans for those different areas, we have the opportunity for the individual state sub-panels and the council and everything to weigh in on what direction this organization could take and what may be priorities or the types of action or how this can move forward.

I think the other side of it is as this was even being considered, I kept on seeing situations where resources were available through EPA and they looked to, oh, the Gulf Alliance is in existence; we're going to funnel that money to the Gulf because they have a regional that is addressing some of the concerns that overlap with our organization or NASA's, and so it just kept on pouring into those types of situations, so it does provide at least that opportunity to get us – as Pat said, we were kind of behind the curve on some of this – to at least be able to begin to speak as a regional voice on some other types of effort. I think everybody has to go in with their eyes open and make it – and it's going to be a key to make it what the states and individuals want to see this be.

DR. PALANDRO: Just one last thing to build on that piece; if you look at the past three years of EPA, NOAA and NASA funding that has gone to the Gulf, each priority action team, which is

what they're called in the Gulf of Mexico Alliance, produces a list – has a five-year plan and produces a list of the things that are most important within that team.

Those lists are taken directly from the Gulf of Mexico Alliance Action Plan and put directly in the RFPs. Because the Gulf of Mexico Alliance is state led and has state input from all five states and so forth, the federal agencies can come in and say, look, these are what the states want to fund from the feds; and literally verbatim out of the actual Gulf of Mexico Action Plan, the action items that are selected are funded through those federal agencies. They're decided by the Priority Action Teams which represent the states involved. That gets produced and then those things actually get funded from federal agencies.

MR. PUGLIESE: Any other comments or thoughts? This is just the beginning of this, and the idea is that hopefully a lot of these – as things are developed, we can get out to the individual sub-panels and the advisory panel and weigh in. Wilson.

DR. LANEY: Pace mentioned the one project that he has heard consistently come up in these three different forums, which is the AIWW. I was wondering if any of the advisory panel members have any ideas about any other potential collaborations that could be undertaken by the South Atlantic Alliance?

(Remarks made off the record)

DR. LANEY: Yes, that was one and I guess Anne mentioned that; and certainly Mike talked about our SAV collaboration in North Carolina, which has been ongoing for, gosh, probably 15 years now. I think Bob Noffsinger was one of the original instigators of that whole thing. It kind of arose out of the ASMFC SAV work toward developing a coast-wide policy that we did way back.

I know South Carolina doesn't have much SAV and Georgia may not have any, but Florida certainly has a lot, so there may be some potential there in terms of common habitats, oyster reefs, SAV, maybe hard bottom as well. I don't know what form that would take, but those are certainly habitats that the South Atlantic states have in common and might fit under that healthy ecosystems umbrella.

MR. WILBER: Actually, I just want to second throwing oysters out on the table. I mean, the fishery value is obvious to everyone in the room, but I think the other point, too, is that right now each of the four states, as well as NOAA and other federal agencies, are all pouring millions of dollars into oyster restoration. So whether there is an opportunity to kind of take that existing pot of money and discuss how it might be spent more efficiently, you know, there is a lot of opportunity there that may not require a whole lot of effusion of new cash onto the table given the large amount of cash that is already on the table there.

There have been some discussions, too, about various institutional roadblocks to oyster restoration that occur in some states that don't occur in other states, that maybe this kind of a collaborative kind of approach on that would be a way to kind of bust some of those institutional roadblocks.

DR. LANEY: And one other one that occurs to me, too, is all four of the South Atlantic states have fairly vast expanses of inner-tidal marsh, and those are going to be certainly affected by increase sea level, so I'm wondering – I know that TNC is collaborating with the Fish and Wildlife Service, and I think Duke has been involved in that, too, looking at the impacts of sea level rise on the Alligator River National Wildlife Refuge in eastern North Carolina and trying to proactively develop ways to make those ecosystems more resilient in the face of rising sea level, so that may be another topic that we could toss out there and see if there might be some interest on the part of the South Atlantic Alliance in collaborating on way to make those ecosystems more resilient in the face of SLR.

MS. DEATON: I was just going to add to the oyster restoration. When our technical committee was drafting what the actions would be, the focuses were on mapping and monitoring because we still don't even know in all places what we have. We are putting a lot of money into restoration but we don't know if we're doing it in the most cost-effective way, so I really think we need a lot of assessment of the restoration we are doing and then come up with the best way to move forward.

MR. MIKELL: What is the state of the ocean off of the South Atlantic coast?

MR. PUGLIESE: State of the ocean is a pretty broad recommendation; the oceanographic state or the bottom habitat or the –

MR. MIKELL: Well, there are a lot of things. The governor's kids can't swim at Myrtle Beach part of the year because of storm water runoff. People don't understand that. They just know that they can't go swimming. We can't eat the king mackerel we catch because of mercury poisoning. I mean, there are a gazillion reasons to put this thing together, and there are a lot of things that we can address.

MR. PUGLIESE: I think you get to a good point, and this is where the connection into some of the other partners becomes a real useful tool. State of the ocean; for example, SECOORA in its infancy, beginning when SECOOS was developing, that's exactly what they began building was the state-of-the-ocean snapshots of what is the condition of harmful algal blooms or these different things within those areas.

Essentially they were elevating issues to address at a regional level and conditions that need to be looked at. They are a very direct partner as identified in the developing of this alliance that has broad sweeping capabilities for technology for modeling for information, and I think that's going to be the big thing across all of these different partners is information and education on why we need to be doing these different things in the region and what the impacts are and what the considerations are, so the information and education side of this is a very big part of both the Alliance but then some of the bigger partners.

The SECOORA group has just developed a brand new information and education group to begin to address these broader scopes but at a regional level so they can coordinate with the states and get the information out on algal blooms or on what the link is with oceanography and fisheries distribution and those types of things.

That is where I see really this ability; so that broad statement, ultimately I think that's what people are going to want to be able to see is what the condition is of the area and then what types of things can we do as a group or the individual states to begin to address problems or issues that are there. Pat.

MR. GEER: There were several issues in this alliance that ran across all four priority areas. Education was one and so was sea level rise. There were a few other ones, too, but when you looked at the different priority areas, everybody had education and everyone had sea level rise. Maybe if you're looking at issues and things that should be dealt with, look at those kinds of issues first because they ran across all – you know, in all of the discussions, those things kept coming up.

MR. STREET: What is the level of federal funding and state funding that is available for this current fiscal year that these proposals are going to be applying for?

MR. PUGLIESE: It's \$20 million for the entire –

MALE VOICE: Yes, I think it's \$20 million for all regional alliances that we will split, and there may be an addition ten is what it said in the RFP. Yes, I think when we first started this process, they were looking at the alliance getting – Anne, correct me if I'm wrong – they were looking at maybe like 1.8.

This got brought up in our first meetings; it was like, well, how much is going to be involved in this, and that's the number they threw out. I don't know if they were just looking at that 20 dividing by the number of alliances, but if it's going to be competitive that's going to be a lot different.

MR. CLEARY: Yes, if I could, in the discussions we had about our proposal going into the SAA, that was exactly the thought was here is the number of regional ocean partnerships, here is the pot, and we think there is going to be some kind of an equitable distribution geographically. I'm not sure if that goes to the competition necessarily. I don't know how that factors in, but that was our sense.

MALE VOICE: I think that every alliance will get some level of funding. My instinct tells me that the ones that have the greater number of proposals and are better established might get more of the lion's share.

MR. WILBER: Just so people know this, in addition to that 20 million that is put out in the RFP, there is, it has been and will continue for at least the short time a fair number of federal offices that are using their discretionary funds to pay for various developmental activities. I'll speak to NOAA because I know the details of the NOAA stuff a little bit better than others.

But, like paying for invitational travel orders to get state people to attend regional workshops, paying for meeting rooms, facilitators and websites and all that kind of stuff, a lot of that is occurring in addition to the money that is being competed out at this RFP level. Now, percent-wise it's probably collectively not more than 10 percent of what is being thrown around in the RFP, but it's probably pretty darned close to 10 percent when you add up the value of the staff

time and the travel and all that other stuff. The South Atlantic Alliance in particular has gotten a fair amount of assistance from that route.

MR. PUGLIESE: Any other thoughts? This is definitely again, as I say, is a developing condition and the intent is to engage the advisory panel members, the states and our council at the level to ensure that it's working and being able to address some of the concerns that at a regional level that I think are folded under a number of these different areas.

Hopefully, our commitment and other commitments to being involved will make sure that this organization does mature in a way that it becomes something that is going to make the South Atlantic Region step forward to be able to get its fair share of resources to accomplish a lot of tasks that need to be done as well as address real priorities on what needs to be accomplished and do it in an effective way.

MR. STREET: Roger, one of the things that we need to be aware of is that there are ongoing cooperative programs, and SEAMAP is the one I'm thinking of the most, that are in serious trouble. SEAMAP is woefully underfunded. Its data bases are significant and important for a number of things. It's a very focused program. Its fifth plan is out there, something like that.

I think we need to take care of some things that are important and ongoing before jumping into a bunch of new stuff. We heard yesterday that the Palmetto, the South Carolina vessel, needs replacement. They were unable to accomplish 15 days of sea time because of repairs. It had to be in the shipyard.

There are a lot of fisheries management issues in the region that depend on those cruises. That is just one example of something where there is a significant need, and it's a regional cooperative program. The data base management was another one in the plan, and there are a number of other things. We need to be very careful of spreading very limited resources too thin across programs. One of the most appropriate things may be for the Governor's Alliance to say let's support SEAMAP and get these issues of regional need addressed.

MR. PUGLIESE: Again, you make a very significant point, and that's something I've been trying to relay through this, and that's to a great degree why I've been involved and the council has been involved because there are opportunities and this provides that type of opportunity that facilitates that very effective state/federal partnership and more effectively provides the resources that we can see work being done.

That's going to be something that is extremely important. We also have that opportunity that bridges between the existing opportunities but also other new technologies such as the oceanography – the Ocean Observing Association opportunity to collaborate and connect and enhance the capabilities there. The idea here is to definitely look at those as vehicles to highlight the importance and the need for those things that are woefully unfunded that support priorities at the state and federal and regional level, as well as where you go beyond this point.

If there are no other comments at this time, as I said, that was the first step moving forward on the Alliance, more to come. The next area that I wanted to step into is one that does have

connection back into the Alliance but has been a developing program for a while now and again an opportunity that our region can step further forward on new technologies and new capabilities, address state and federal needs on whole 'nother area and ocean observing.

The Southeast Coastal Ocean Observing Regional Association is an organization that is really providing the opportunity to look at regional solutions for integrated coast and ocean observing in our area. It has been developed to address everything from information systems that support model efforts on looking at hurricane activities to ultimately being able to look at the implications for sea level rise, fishing operations, ocean observing for biological information and a very broad number of areas in our region.

The difference of this organization versus what we had just talked about in the Alliance, the Southeast Association is actually connected to legislation now. The Omnibus Public Lands Management Act of 2009 essentially established the intent and the direction to develop an integrated ocean observing system for the country as well as develop regional components that provide information; and right in the front end regional information and coordination that includes remote and other coastal and ocean observing technologies, data management, communication systems and address regional and national needs.

One of the key things is to identify in rule what it is being directed to do; to support national defense, marine commerce, navigation and safety, weather climate and marine forecasting, energy siting and production, economic development and ecosystem-based management, ecosystem-based marine, coastal and resource management, as well as public safety and public outreach and training and education, so it's a broad directive to ultimately provide the country as well as the individual regions with information, more refined information tools and capabilities.

SECOORA is member-based and is actually a non-profit organization that has been established to integrate a lot of technical capabilities. Its origins were from kind of really a forward-thinking effort. Originally when the ocean observing systems were being considered, there were line item earmarks provided in a number of different regions.

In our region we had some very key ones given to individual academic associations with the idea of building the capability, building the model capability, the technical capability and the processing and the on-site location information and the data management capability right in the front end before a lot of the mechanisms were done.

That fed directly into the movement for the broader ocean observing capability at the national level, but also into the evolution into these regional associations; so as the association was stepping forward, it already had a fairly significant foundation of capability which is – and most of the time you're trying to play catch-up on trying to figure out what you can do.

Here you actually have a significant model capability, an established mechanism for data and operational at the regional and integrated at the national level and then the ability to really connect into priority needs for your individual region. One of the big things, too, is that it's a stakeholder-driven organization. You have membership to the organization, but then you're guided by documentation.

In one of the documents I did provide you with the strategies and priorities for SECOORA, which again does have some pretty significant connections into our fisheries and habitat and activities at the council level. The idea is to provide the most reliable marine data, protection of people and property, help the marine economy and sustainable national and coastal resources.

There is more recently more direct work with the South Atlantic Alliance and other stakeholder groups. The idea there is to connect into existing stakeholder group of partners. One thing that we're hoping to do more effectively at the council level is to begin to go tapping in on our individual advisory panels to be able to get some input directly on needs for fisheries or fisheries habitats or activities in the future.

The conceptual design of an operations plan is work with the stakeholders to develop the plan and have a fully operational coastal ocean observing system. Right now we're at a pretty important step of SECOORA because it has been provided the resources to establish and maintain the administrative side of SECOORA but also is just going through a five-year planning and integrated program proposal; very similar to what just is trying to happen through the South Atlantic Alliance, but this was highlighting major areas of concern; one being enhancement of fisheries oceanography, the ability to look at using information from ocean observing models or other capabilities and enhance the stock assessments in building indices, connecting ocean observing information to programs such as SEAMAP and MARMAP and others that give you the oceanographic capability.

As we started discussing the other day, and Marcel highlighted, the idea is that maybe we potentially could have a two-way communication capability where they're providing real-time information to the SECOORA program and being able to get products and capabilities that provide the researchers with understanding the variability of the work they're doing in the ocean as well as giving an understanding of the characteristics that are defining the species associated with the habitats as well as why those are important that they may be sampling.

That gets to that issue of product and tool development. The coverage in the area is basically the South Atlantic and moves into the Gulf of Mexico, also, because SECOORA has a broader scope than just the South Atlantic Region, and the connection of oceanographic characterization is really what drives the Florida current, the Gulf Stream and associated currents, defining those and providing information on the areas and building models that support it.

Just capturing some of the fisheries; again, developing methods to link fisheries assessment, oceanographic data, improve management decisions, observation alerts and maybe research components, as I mentioned. In the actual priority document that I did provide you, it does define initial priorities.

Again, this is initial priorities because they're trying to take those steps on where you can refine the available information and then expand the program to meet even more significant priority needs in our region. The audience of the document was SECOORA members themselves and regional stakeholders, potential members and decision-makers and elected officials.

The needs assessment revealed some of the key priorities in our region and addressed things such as climate change, impacts on habitat from sea level rise. I mean, in terms of fisheries, looking to the future and the loss of estuarine habitats relative to estuarine-independent species or prey species is going to be a significant consideration and thought needs to be in what that they mean in terms of populations or sustainability of populations.

Marine weather and operations and ecosystem management including fisheries and water quality; these tie closely to – or I should say the Alliance actually has very close priorities to what the regional association has been developing over time, so there is a synergy of issues that's being developed.

Moving forward, the organization is taking the next steps beyond their initial funding and the initial integrated proposal and refining what it's going to mean to address these other focus areas, including fisheries, water quality, coastal hazards and marine operations such as offshore energy as well as climate change. The idea is to refine the understanding of what capabilities are available and what some of the longer-term needs are going to be and priorities under each of these different areas.

I think this is where it's going to be real useful to look beyond where we stand because one of the things that I think is acknowledged in the past – and this is going to take resources to do this – is as you look for fisheries in our region, if you really want to be able to cover and define and connect fisheries information with some of the oceanographic information and fisheries operations, the distribution of capabilities are raised or ocean observing platforms is something that has to be looked at in terms of potential expansion both in the capabilities, the ability to begin to integrate biological sampling capabilities on those, as well as just the outright distribution, whether it be for fisheries operations, ensuring that there is adequate – that, you know, people have the buoy system enough that they can understand to be able to use those, to things such as looking at existing acoustic arrays in the region and figuring out how to strategically place those to integrate and build, say, a regional acoustic array in our region.

There are some really key opportunities for where this program can go to support fisheries and habitat in our region. In the near term, again, there is this direct collaboration with the South Atlantic Alliance and some of the other existing stakeholder groups. Building this conceptual design and operations plan is the next big stage of SECOORA, and that's going to really engage stakeholders.

That's where I had mentioned on the fisheries is an opportunity to collaborate with our existing advisors, both the fisheries as well as our Habitat Advisory Panel on defining and providing more guidance on the longer-term development. One of the things that I think is real useful now is with having Pat Halpin involved in this.

Pat was involved on some of the original discussions about the array development for observing, and I think that's going to be real important to have that kind of original discussion and then really see how you can effectively use or deploy things to build information systems that are going to be effective for habitat or characterization of fisheries used in our region.

That is, as I mentioned, the document I provided you with the existing strategic priorities document and SECOORA had just finalized and submitted their five-year proposal. I mentioned before one of the key things is building significant model capabilities and expansion but then also building fisheries connections to existing information to support expansion for stock assessments and for characterization.

I think we're really moving forward and have the opportunity to see a lot from this organization to facilitate in the South Atlantic Region. Were there any thoughts or comments on where SECOORA is of what it is or questions about engagement. Yes, John.

MR. DUREN: Roger, near the end of materials you gave us in advance, there was a comment about a \$3 million budget for SECOORA for this fiscal year. Is that money being used for grant administration; how is it being used to promote these goals of SECOORA?

MR. PUGLIESE: There are a couple of different levels of resource use. One, the DMAC, the management of the actual data management – facilitating data management; the support of the model capabilities and operations, the administrative support, so it's kind of the three-level area. The bulk of it is going into the research that is building models and it's kind of expanding the capabilities, but you do have that core for the administrative side and then the other component which is the actual data management – facilitation of data management of the ocean observing information.

That's a pretty significant one because it has to be connected – it has to be build in a way that it can be connected to the national system, it can be accessible to the national system, so they all integrate for the whole nation; not only the whole nation and then it goes beyond that because it goes to the G-2s – or not G-2s, the whole global system, so it's a very – but those are kind of the three tiers of expenditures for the organization.

MR. DUREN: The reason I ask is I'm familiar with at least two projects that is at Skidaway Institute of Oceanography that relate to ocean observing. I know they're linked to SECOORA, but I don't know exactly how they're linked. Are they recipients of grants or they got funding from other sources, but they're doing work that is linked in; so if anybody could help with that, it would be great.

MR. PUGLIESE: They definitely are members of SECOORA and are getting resources.

MR. CLEARY: Yes, I just wanted to add – and I'm not sure about those two specifically, but one other piece that – and I should say that before I came to work for Pat, I worked for SECOORA through UNC-Chapel Hill. But, the big line items, and I'm not sure whether this has changed or not, is actually supporting the observing technologies themselves, putting buoys in the water, putting radar arrays up, and that is obviously really expensive.

I think that is where Skidaway in the past has received money was to do the WARA System that they have, the high-frequency radar system that they have or those sorts of observing technologies are also a place where I think SECOORA I'm assuming still spends a good chunk of money because this is kind of an expensive endeavor.

MR. PUGLIESE: Yes, and you're correct. I guess I kind of was folding that in under projects, but that is actually almost a totally separate tier because it's the functional operational other component of SECOORA, the actual on-site radar or buoy system that is under the blanket. In SECOORA you have that core component, but then it does connect into existing buoy systems and existing other components, but that is another major subpart of what I was – I guess I was relaying as kind of the research side, but it's really research and support of operational capability.

MR. CLEARY: Maybe I'll make one more point, but in the time that I was working for SECOORA, it was very much focused on physical oceanography and the physical state of the ocean, and so I would really strongly encourage this group if there is an opportunity to help them move in a direction that is more supportive of the work that you would like to see.

A biological focus is something that they have struggled with and continue to; and I think if there is an opportunity now to kind of push that group in that direction, I would encourage this group to take that opportunity because they've kind of done a good job at kind of describing in real time the physical state of the ocean in the southeast, but connections into some of the other biological applications of that data are not quite there yet, I think.

MR. PUGLIESE: Yes, and that was the challenge even in the transition from the SECOOS program because really it was truly physical oceanographers. I still remember the first meeting I went to where we had to kind of beat on everybody to say you need to be talking together, biologists and physical oceanographers, and there was that acknowledgement, and I think what we've seen now is not only an acknowledgement that is important but fisheries is one of the most significant priorities under SECOORA.

I think that's a big positive move forward in terms of that view of the oceanographic information really is going to be a key information system to support long-term fisheries management and ecosystem management assessment enhanced and capability. I think that is a big positive that the policy level intent is integrated in the strategic plan now, and hopefully we can actually move it forward.

One of those first proposals that was done before there was a lot of money on the table was going to bring the biologists together to build a – to begin to look at the oceanographic data and build a recruitment index based on temperature for gag grouper, and the idea was that we were immediately going to fast track directly into the SEDAR process where they would be sitting down with the stock assessment scientists and providing what is there.

And it was going to open the door not for just that species, but open the door about, oh, these are all the different types of models we're using, the capabilities, the information collected; how we go beyond that first step because that could lead to, well, it also is applicable to this species or if you vary this and use some other type of parameter, so it was going to engage and I think we're right at that point now where we're going to engage further in terms of tool development and integration of potential new information into assessment.

But also the other aspect is some of the fisheries operation information as used in the past, I mentioned the Roffs and some of the other ones that have been using NOAA data but interpreting it and providing it, there are some very directed resources provided under the latest to build some capabilities so that we're going to have things that we can look at and get snapshots of individual areas for researchers, for fishermen, for a broad array of effort.

It's a pretty significant move forward, but we need to get to those next steps where we really are actually moving forward. And, again, Pat's group has been investigating that connection for a while, but I think getting Pat Halpin back on board, your lab is going to do it, and with the direction that the Beaufort Lab is moving in kind of that broader ecosystem, there is that real opportunity for connection and collaboration with – and bringing the right people to the table to make the fisheries oceanography information more effective, but also guiding what the long-term capabilities are.

Resources come to the table and they start saying, well, we're going to have dollars for buoy expansion in these areas; what is going to be key? Do we need to look at placement next to a marine protected area, you've got a spawning location, so we can begin to have something that provides us acoustic capabilities of understanding what the spawning timing is and to be able to do deployed mapping and characterization based on, you know, remote signatures and not having to be in the water the entire time and be able to get something, queue it and be able to have strategic efforts.

I think that's the other side of SECOORA that is evolving, too, is kind of strategic information gathering like that, being able to have glider array capabilities that you can go out and have a directed oceanographic mapping, you have an event or something like that or you want to do something else. Pat.

MR. GEER: Roger, one of the things that I was thinking about because with fisheries we're using more and more acoustic tags and we have to put out sonic arrays, and being able to have joint platforms for those, that they can be used by oceanographic equipment as well as these arrays might be a good partnership as well.

If anybody has done any of this kind of work, it is kind of a loose array where it's a loose association. Almost all the tags are coming from a company called Vemco, but you purchase your acoustic arrays, you put them on the bottom, you put these tags on your fish, and while they're in your array they appear, but then they go down to Florida and you've got to hope that the people down there – and they're trying to set up a network for that, but having all these things together may be – you know, and they need platforms for these acoustic arrays as well, so maybe another way for having a partnership where they have their buoy systems and we may be able to mount some of these on there.

MR. PUGLIESE: Yes, I think that's really a pretty opportunity. I've raised that a number of times, especially since you do have a number of arrays in existence, here is an opportunity to build the linkage and SECOORA pretty much would be the most appropriate platform.

MR. CLEARY: I just wanted to add on a related note our group has worked with a project on the census on marine life. The Post Project which is on the Pacific Coast, which manages a series of these arrays for tagging salmon and sturgeon and other species, and are doing ongoing work, although the census is wrapping up, if you're interested in contacts into that group, we have folks – actually somebody is going out there tomorrow I think to meet with that group to kind of talk about data management as well as the array network.

But, certainly, I think that's a really – and they actually have been building this tie with the ocean observing system in the northwest or at least are writing proposals to be able to do that. I'm not sure if it's the OOI initiative that's going on there that would have some of these acoustic arrays tied in with the infrastructure that would be built to do other wider ocean observing.

MR. PUGLIESE: And I think that's going to be important to build on other locations that have taken this on, and I think there are some other efforts also in terms of using specifically biological sensors beyond even acoustics, and I think that is going to be important to investigate those. Yes, Todd.

MR. KELLISON: Roger or Jesse, what is the mechanism for I guess working with SECOORA or approaching SECOORA about I guess obtaining data sets that we could link with; for example, fisheries data as you were talking about?

MR. PUGLIESE: Well, one of the avenues is working directly with some of the existing programs that are building models and collaborating. The most direct one is that I serve on the board, and one of the intents was to bring some of these key players for fisheries more directly involved.

As I mentioned, we've got some of these implementation efforts, some of the things that are kind of taking the next steps. This is going to be where I think it's going to be important to get players like the Beaufort Lab and others directly involved in envisioning where things can go, so that would a door-opening opportunity to do that.

Plus, we can talk directly about some of the existing efforts and I think that's where there is going to be an immediate bridge because the intent there is to open those information systems to the researchers, the fisheries researchers, so the skids are kind of greased to get that to happen. You'll be hearing from SECOORA and then we can talk about exactly where to go beyond that.

MR. CLEARY: A followup with that; they're building kind of automated systems to be able to pull this kind of information. Those are not fully complete I think. I mean, the real-time push of information is there for the most part; maybe not so much on the modeling side, but they do entertain ad hoc requests for data.

And certainly if you're asking for a capability that does not exist yet in an automated kind of on-line way, certainly there are data management folks that could handle that request. And also it's valuable to make those requests as they're thinking about – and I think you kind of hinted at this – so that folks who are designing these kind of data extraction systems or sharing mechanisms

know what you want so they can of – you know, as a requirement's setting for the development work that they do.

I need to make sure I haven't worked for SECOORA in several years, but that's my understanding is that ad hoc requests work. They're collecting requirements for other pieces of data that don't exist in this kind of automated way and they would welcome I think the chance to work on that.

MR. PUGLIESE: Yes, I think that definitely still exists, the direct requests, but the intent is to build some of these systems so you can get that information at a number of different levels. Some of the very specific fisheries tools I think are going to be some of the most immediate things that are going to be available to all SEAMAP/MARMAP, the National Marine Fisheries Service in a very short period of time.

Then we really can look at what other types of things can be used in areas and capabilities. There are a number of different avenues and you can sure that you'll be engaged. Any other thoughts or comments or recommendations on anything back to SECOORA on direction or priorities or issues that should be addressed? Why don't we take about a ten-minute break and then we'll get back in and finish up with the last couple of things on the agenda.

MR. PUGLIESE: I apologize for the delay but I think we had some good discussions on some future activities that hopefully the partners and the council can be involved in. What I wanted to do was address the last item on the agenda. Tina Udouj was not able to be with us for this meeting, but I worked with her on getting this presentation together.

We've had a long-standing working relationship with FWRI on building tools that are really supporting the council's habitat conservation and long-term move toward ecosystem-based management. The material that you were provided did provide information on two documents that highlight our work on the Internet Map Server and a draft user manual, which is in its beginnings for significant revision, as well as the document that discusses our transition to GIS services.

What I'd like to do is at least highlight where things are and where we are moving with these tools. The Habitat and Ecosystem IMS has been actually in development for a number of years. Since 2003 we've been collaboratively building this system. It's developed to compile, create and host GIS data.

Part of it had a connection directly to essential fish habitat as well as coral distribution information. The IMS is designed as a one-stop-shot for managers, scientists and the public to explore marine resources in a region, and it provides the council and regional users with a unique tool to support habitat conservation and ecosystem management.

It has layers across everything from land use to connections into existing buoy systems and oceanographic information and actually some of the layers from the original ocean observing temperature area. This is a snapshot of the existing South Atlantic Habitat and Ecosystem IMS.

The points you're seeing on there right now, the most predominant are actually the SECOORA, the base core observing platforms for SECOORA.

This system does include base layers, management and regulatory layers, gear restrictions, essential fish habitat, sanctuaries, MARMAP information, unique habitats, coral, SEAMAP bottom mapping, general habitat, estuaries as well as background imagery. Integrated into it, there are even components such as videography.

If you go into the GIS data, you can actually go directly into the data itself. It provides a short description of the layer. The idea here was to get a number of different types of formats available so that you can use it in whatever you want; one being, of course, the original shape files, the zip shape files; so if you have ArcGIS, you are able to work with the actual shape files that these are presenting.

The other one that has expanded the capability significantly is putting them in KMZ files so that you could actually go in and look at these in Google Earth, so that has been another evolution to be able to basically present virtually of the available layers in Google Earth compatible files. As I mentioned before, the page itself, the data existing right now is EFH, EFH-HAPCs, the bounds of the coral EFH-HAPCs and then even bounds such as the gear restriction, so what area in the South Atlantic has a prohibition on bottom longline, on fish traps, on sargassum harvest, on octocoral removals.

Those are all presented in the various shape files in the GIS and on the IMS. Now, one of the things that we knew when we were working with it is that it had limitations on capability on the Internet Map Server. You can work on it, you could actually save and print a component, a representation of an area if you want, and people are using some of that directly in EIS activities, but there is no ability to have tool development or manipulation of the information within the system, so we have been in a long-term discussion about a transition to a more powerful capability.

Again with FWRI we were able to secure and create an Arc Server, a totally separate server. Now all these are actually being served in Florida with FWRI, so this whole Arc Server is the new transition. Now, the real key here is that we're able to leverage FWRI's hardware, software and personnel.

Most of our resources go into design and capability; and as a partner with them, they basically are updating the software, they're maintaining the server, they're really operating on doing a lot of the overall maintenance of it, which for what we get is pretty amazing; you know, a very small investment for a huge effort.

It reduces the software deployment costs for us, and it also disseminates the geographic information needed to improve decision-making. It also promotes our move toward ecosystem management and the available ecosystem data in shared map formats. The Arc Server has customized tasks to query specific GIS data layers; so this gets back to this issue of instead of just having things stacked on each other, you can actually do custom queries.

You have zoom and identify tools where you can really go into and look for certain things or zoom directly into specific subparts of the layers. You have Arc Web Services to display topography and street data, and you have the print capabilities. There is also a quick link back to the council site itself as well as help pages and all of the GIS data layers that you can download.

The first of the Arc Server applications is the essential fish habitat server. That actually provides all the spatial layers for our EFH and EFH-HAPCs. In CE-BA 1, the original comprehensive amendment that was approved in July of this year, it presented snapshots of what those were in combination and highlighted its connection to the availability through the service.

Now, the one thing that you need here, too, is it not only provides the council's designations but it also provides the highly migratory species EFH designations. There are all the layers for essential fish habitat that we have on site and accessible and downloadable. Some of that is going to be refined further as we refine the designation documents to upload any of the other ones that may not have been highlighted, the EFH guide, so that then hopefully those will all be available through that system.

The next area is fisheries, to serve the marine resources assessment and predictions, the MARMAP program as well as the SEAMAP program. This is a collaboration – we have in the past already been serving the SEAMAP hard bottom because much of that was information through the SEAMAP program, both inshore as well as offshore on both essential fish habitat or HAPC designations, as well as in the offshore area a number of that information – an amount of that information went into the Coral HAPC designations, kind of the initial footprint and then really expanding detailed information.

Now, what has evolved is the SEAMAP program has matured further where the actual data management system for the South Atlantic is now going to be housed in South Carolina DNR actually, and what we will be able to do is in one location be able to access the SEAMAP data, but at the same time it accesses the MARMAP data and then other SEAMAP programs such as the Pamlico Sound Survey, the trawl surveys, the nearshore trawl survey for SEAMAP, and have links to other groups such as the SIRT group in South Carolina, but it was originally funded through NOAA that is doing the taxonomic center in this area that is collecting all information on the taxonomy in the entire southeast region.

This system will provide access to researchers on detailed information but also on detailed – hopefully detailed habitat information, too, versus some of the processed information that may be in the IMS system, so this is an evolving component. We also have a place-based management serving a variety of regulatory boundaries for the council and federal or management boundaries within the council's jurisdiction, and habitat, serving all our habitat information by SEADESC

The SEADESC program was something that was developed when we were doing the deepwater coral activities. It was a rapid assessment tool that when they had cruises they provided snapshots of imagery and information on species and basically a quick cruise report that literally was supposed to be done like right after the cruise was done, which is very different than a lot of things happen.

Most of the time when those big cruises are done, a lot of the information isn't available until somebody publishes the data. It was not something that we could work with before, and that's always a big challenge, but this was one of the first opportunities to try to do that where we had an immediate need to get most of that information as we were in the development process for management, and then that could be backfilled with the fine details from published documents, and that's actually what we ultimately did.

Other information, the Harbor Branch Oceanographic, their detailed information on collection, videography, as well as the original ocean exploration dives – a lot of the information that came out of OE also supported our deep coral activities. We had the more detailed information integrated in the system we worked in-house, but some of the basic dive information was included. And, as mentioned before, all the SEAMAP information through the different programs for deepwater mapping, multibeam, et cetera.

It contains the EFH and HAPC layers, highly migratory species, the marlins, tunas and sharks, and you have custom queries for the council's EFH and HAPC data. This is a snapshot of the EFH service itself, and what you're seeing is layers for snapper grouper EFH-HAPCs. This would be The Point off North Carolina, inshore areas, hard bottom, Oculina HAPC, et cetera.

This is one of the first where you have the ability to zoom directly in, identify, gives you bounds of the area and detailed links of where the spatial layer is found. On the fishery I mentioned before, this is a more detailed description of the fisheries, serves MARMAP data on species, gear types, bathymetry, boundaries for the background boundaries and is going to include all the SEAMAP surveys itself.

That is a snapshot of the beginnings of the fisheries, in this case showing all council-managed species in one mass in terms of point information across all the area. This is vermilion, I guess, and specifically this one right here is vermilion snapper. The regulation service is really to try to get at what rules are in place that the council has either put in place or proposed.

It includes everything from the marine protected areas, the coral HAPCs, both the oculina HAPC and the deepwater coral HAPCs, any federally established danger zones or federally established marine-managed areas are also included under this. As I mentioned, proposed actions are included under here; so as the council is looking at, say, those red snapper closures, we were integrating and changing those proposals as they were being developed so people would have access to and know what would be considered at the council level.

This is a snapshot of the regulation service. The areas in here are the deepwater marine protected areas. These are larger areas, the coral HAPCs, the oculina HAPC and experimental closed area and actually inside of the larger coral HAPCs also include things such as the golden crab allowable areas as well as the shrimp fishing areas that were established as part of the Comprehensive Ecosystem-Based Amendment 1.

The habitat includes virtually all the habitat we have from, as I mentioned earlier from SEADESC and from SEAMAP, the Charleston Bump Surveys, Grays Reef Surveys and specific

habitat in the individual areas such as in oculina. We are in the process of developing the secure access component because the ones for regulations and for EFH are open access.

What we're trying to do is looking at secure for the fisheries because that one is ultimately being designed for interaction with researchers and so what we want to do is have the ability to get the detailed information but be able to use in formats and capabilities by personnel that would be using it for longer-term research efforts.

Right now they're developing the security we've established to be different levels and we just have to implement and make it operational. They're configured as a reverse proxy server right now to provide that first level of security, but then I think we're going to get into the more detailed security issues in the future as we refine fisheries.

This is giving you an example of the habitat mapping application and some of the type of information that we begin to integrate. In this case you're looking at a SEADESC dive area. You can click on the dive area and you're able to pull up the actual dive sheet that gives you details about species collected in that area, a preliminary map of the habitat within that area and ultimately possible potential links to videos, et cetera, in the future.

Recent updates that have happened with the entire system is that we added in the logbook catch grid for the whole area; so if, say, the National Marine Fisheries Service wants to access that, they could actually look at that; or as we are working with something online, we could actually look at individual grids, collection grids relative to habitat distribution and relative to some of the base species information we have or information on proposals that the council may be considering at that time.

We added in the 240-foot bathy contour to provide the deepwater closure bathymetry that was put in under the snapper grouper plan and updated all the EFH-HAPCs for the snapper grouper areas and began creating the snapper grouper spawning site areas by using a buffer.

This is building from the MARMAP information on identified spawning but combining those and then buffering those. That's not online yet, but that is being developed for inclusion online. In addition, the rest of the dolphin and wahoo EFH layers and some of the other ones that had been previously identified but just were never integrated on the gyre, Florida current and some of the Gulf Stream components, and updated the HMS, as I indicated before, included into the most recent because that changed recently.

That's a snapshot of where we are with both the IMS and the Arc Services. What I'd like to encourage members to do would be able to – the links are included in the system – be able to access and look at some of the different things. I'm looking for recommendations on, number one, making it more user friendly, accessible, other layers that should be included, other applications that may be useful or tools that would be worthwhile. Any comments or questions or guidance on where we go? There is a lot that is happening and more to come on this. I

think, as I mentioned, we're going to be more active at getting, say, a more refined user guide out to a broader scope. We've had a number of number of IMS workshops. I think we're going

to be going forward especially as we look at other activities. There are so many different places where they're to do almost exactly the same thing.

This gets directly to what Jenks said in talking about duplication of effort. We've been concerned about a lot of this kind of thing being redone; and where this can provide the foundation, we're hoping that can do it to help facilitate some of the discussions for a broad array of other activities at least based on concerns over fisheries or habitat that the council has; everything from alternative energy siting to aquaculture and other types of activities.

One of the things that is not presented there that will be integrated and actually is being processed now is working closely with the National Marine Fisheries Service in building a layer that is going to present just basically a connection to where there is permit activity, permit responses so that there is actually going to be the ability to look at where a permit comment letter was provided on an area that was being considered in the South Atlantic Region but working with Pace.

We will have it at I think at two different levels. One of is kind of a core that gets integrated maybe into the EFH layer but then also have again a Google capability that I think they could use as well as others to be able to look at a watershed.

There has been a lot of discussion in other platforms about what is going on, will be it good to see what all has been proposed within a river system or a watershed, and this would begin to kind of give you a snapshot of both what has happened over time as well as what types of comments and things that would have occurred in those areas. That is underway right now. Mike.

MR. STREET: Everything you talked about was pretty much federal fisheries management. Are there query possibilities to go to the inside of the three-mile line, into, say, an area that is closed beginning at three miles offshore; then what is the state doing immediately adjacent to that, into the beach. And, also, secondly, are the military restrictions showing because military airspace restrictions are something that not that many people are aware of, but they're a major impact on potential wind farms in areas because of military flight restrictions and height restrictions for training purposes.

MR. PUGLIESE: Yes, on the first, IMS actually shows information all the way inland and has land use as well as the habitat distributions all in the interior. Where there are managed areas that the states have provided, we have integrated. We're in the process of doing that next query about where else beyond that.

I mean I look to where we've got primary and secondary nursery areas in the state of North Carolina, and those have been integrated. SAV distribution, oyster distribution, a lot of those layers are all existing in that system now to the degree possible and what we have been provided by the individual states, state-managed areas.

I think we've got some crab zones and the trawl zones. Some of those have already been integrated, but I think we're at that level where we need to go back and see what other marine-

managed areas or state-managed areas can be integrated beyond that. I know we have the danger zones and we have some of the layers for the military included on here, but we want to make sure that we have not missed it.

I don't know if we have the flight zone; I don't think we do, the marine flight areas, but a number of the other layers, and we were hoping to get a more significant amount of what had been presented to our last AP meeting by the navy about a lot of the other areas. I think we're in that process of coordinating to get that now. That's a very significant layer especially for the types of activities you're talking about. Yes.

MALE VOICE: Perhaps my abilities or lack thereof, but in looking at this site, I have a couple of comments. One is when I look at the MARMAP data, it looks like gag is omitted. The second comment is in talking about user friendly, maybe I'm spoiled with my chart plotter, but I can move the cursor over to a point and it will give me lat/lon. Is that capability here and I just don't know how to use it?

MR. PUGLIESE: On the IMS it isn't. On the Arc Service, you can get more detailed information on the Arc Service; and to some degree on the IMS, those types of things are not there because the presentation right now is just an imagery presentation. It's not intended to be a point – even though it's a point presentation, the detailed information is going to be in the fisheries permission site for that information.

There is some integrated kind of layers but you can't pull those individual point layers out of there. If you've noticed, you couldn't go in and pull those out, so they were more for presentation. Truthfully, that MARMAP, number one, it's dated under the IMS, because that whole thing is actually being developed totally in a separate location under that fisheries Arc Service, and that's where all the real detailed information is going to be.

What we want to do, though, is work with partners like Beaufort and other ones, between MARMAP and SEAMAP, to come up with things such as fishery distribution maps that combine that information to give you some kind of depth contour in components that give you core information, and that would be the most appropriate thing to include into the IMS System versus, say, the other system, which will be the real detailed point information.

So, yes, some of it, that has not been updated since we kind of created that core area. The idea is that ultimately would have something more of a distributional level versus point information. Yes, gag is one of the most important. It's all being integrated on the other side. Any other thoughts, comments or recommendations for capabilities? You're right, that's one of the biggest things with moving to Arc Services is the ability to move around and manipulate and get base information on the area is a lot easier and lot more functional. Yes, Wilson.

DR. LANEY: Roger, Pace and I were asking this; is the Mid-Atlantic Council EFH designations on there?

MR. PUGLIESE: No, we don't have the Mid-Atlantic but that's something to –

DR. LANEY: Well, that's one of the things – could I tell them, then, at the workshop coming up that that is one way the South Atlantic Council could collaborate with them is to put those designations on the IMS Website as well because I know the –

MR. PUGLIESE: I think Pace has a comment specific to that.

MR. WILBER: Well, in the spirit of cooperating between the council, sure, but the value of the output I think is exceedingly small. There are three species that the Mid-Atlantic Council manages that the Mid-Atlantic Council has designated EFH for in South Atlantic waters. The two that I'm most familiar with are bluefish and summer flounder, and they have designated estuarine waters as EFH for those two species.

The only thing we would have is a map that shows estuaries. Again, it's not all that useful. Even a presence/absence type EFH designation, going back to that triangle from the other day, we never leave with that card in a negotiation with an applicant about having to change their project.

The third species that has EFH in South Atlantic waters is scup, and I'm not as familiar with that because the scup designation in South Atlantic waters is based upon that grid system that the Mid-Atlantic folks use offshore. It's relatively recent that they've done that EFH designation, so it might be helpful to put that on there. The number of projects that we have out in those areas is exceedingly small so the urgency for that is relative low, in my opinion.

DR. LANEY: Spiny dogfish is another one, I think, and again that one is largely offshore. Haven't they designated EFH for that? They should have; that's a joint plan between the ASMFC and Mid-Atlantic, I think, and New England, too, probably.

MR. WILBER: I don't think they designated EFH in South Atlantic waters for spiny dogfish, but I can go back and check that.

MR. PUGLIESE: Any other thoughts or recommendations on either the IMS or the Arc Server?

MR. WILBER: Well, I just have a question for the people here and who you think you feel comfortable kind of representing. We're kind of at a fork in the road as to how this kind of information becomes available through the web. One way is to kind of – and I'm sure we're going to pick to go down both forks, but it's really a question of relative emphasis.

One fork is to continue development of an IMS or an Arc Services type kind of a thing; so that in order for you to access it outside of some official GIS software, you would turn on a web browser and you would, like, navigate to a webpage and you would just sort of hit little radio buttons and hit "refresh my map" kind of a thing and stuff like that.

The other road to go down is to package this information so it works most efficiently inside Google Earth. Okay, so you would turn on Google Earth and you'd get a bunch of layers that are already pre-packaged for you. It would set it up in neat little folders, and then you'd open those folders and you would click on the data layers.

You want to kind of download it; and maybe the first time you download it, it might take a few seconds because it hasn't put that data layer in the buffer yet for your personal computer, but eventually it would sort of do that. Then if you want to start kind of drawing on it and move your cursor around to get exact latitudes and longitudes, and you want to draw your favorite fishing hole on there, make a map and then send it to your friends or something like that, you have that kind of capability through Google Earth.

We really can go down both of those roads. I'll just speak for my staff, my staff works almost exclusively off of Google Earth these days. The whole of idea buying ESRI software and putting people through training and all that kind of stuff, that's just an expensive non-starter, not a very fruitful kind of thing.

Even though Google Earth really isn't that much easier to use than all that ESRI software, because they're both actually fairly easy to use, people don't have that kind of mental block against Google Earth. They feel they can click and zoom and do all kinds of stuff; and if they have any problems, they find a kid and the kid will show them how to do it.

Anyway, it is becoming more and more important for us to package stuff so it works efficiently inside Google Earth. I guess I kind of disclosed my bias here, but if you guys have a preference as to what road you'd like to see emphasized in the production of these capabilities so that they can be distributed in different ways, let us know and we can certainly push for that particular capability.

MR. PUGLIESE: Any comments to that? David.

DR. PALANDRO: Yes, actually I like the idea of using both, and the reason for that is that for the common person being able to download a KMZ file is very, very easy, and they probably are using Google Earth. But for researchers who actively use Arc because of the powerful statistical tools that are build into Arc, you really want to have both pieces there. IMS allows you to download a shape file, which you can directly access with Arc, but you can't using Google.

MR. WILBER: Actually, there are different versions of Google. There is the free version which can't read a shape file, and there is the kind that cost a couple of hundred dollars that NOAA actually has a site license for that does read shape files as well as a fair number of other ESRI GIS formats. You can get over that sort of hump that Google kind of presents if you just focus on the free version.

But even if you can't get over that hump just technologically, there are certain formats to data that work really well on Google that are – well, actually, I should phrase it the other way. There are certain formats to data that work really well inside an Arc IMS that don't work well inside Google, and so a lot of times you need access to somebody who has the ability to reshape that file and then put it out for the Google user.

That's the kind of thing that if we knew a lot of folks wanted that kind of capability, we could on the back end sort of have two different versions of a shape file; one that works really well on an IMS and one that works really, really well inside Google.

DR. PALANDRO: Right, but the image formats aside, the number of things you can do to a file in ESRI far outweigh what you can do in Google. That's why you're paying the extra thousands of dollars. So for those people who want to be able to still use a spatial analyst and still do interpolations and still do all those other things, you're still going to need shape files. And then, of course, if you want to bring in any kind of imagery data, you need to be able to read tips or Geo-tips and other things that Google Earth isn't especially good at yet.

MR. WILBER: I totally agree with that; it comes down to who is the primary customer of the product or service that you're providing. For us, my concern is getting spatial data out to all the biologists that work in our division; and the kind of analysis that they need to do during the six hours or so that might have to devote to a particular EFH consultation is largely what other things are near my site and maybe what the distance is between Point A and Point B or maybe what the acreage, you know, of the polygon is.

They're not doing any sophisticated analysis or GEO statistics kind of thing partly because they don't have the training to do it and partly because they don't have the tools to do it. Again, there are relatively few people who need that capability and there are a relatively large number of folks who need that more accessible kind of data format. It really comes down to what group does the council really want to pour its sweat equity in servicing. I would just vote for the more general audience for the most part.

MR. PUGLIESE: Yes, but following up on David's point is the way we're designing it right now is we're doing both. We have it where you have both the shape file and the KMZ side by side to be able to download whichever you want. Now, there is probably a way to be able to have something where you can go to a location to have all the KMZs – and we talked about this on some of the permitting capabilities, so maybe there is another way to kind of package it and still provide both, but then have kind of those tiers where you can be able to access all those.

I think that's something that's evolving so it meets both. The area that I definitely would say that we definitely would not want to be able to have a hundred percent Google enabled would be the fisheries detailed point location information; because once it goes into Google, it's there for everything, so that kind of information would essentially not be a secure location for that kind of detailed point location. I think that fisheries will evolve ultimately that way.

DR. PALANDRO: And I think it's easy to do that because all the files that go into Google are made in Arc, so you just maintain the shape files and have them someplace – because you don't make files in Google. You make them in Arc and then export them to a KMZ, so it's easy to do both, and how you display them is whole 'nother question. As long as you have the files for the handful of folks who want the more detailed information, I think that's important.

MR. STREET: You just said something that caused me to pause a moment. You said you would not want fisheries point data. Now, do you mean fishing as a business or research data?

MR. PUGLIESE: Well, the information that we are creating under the fisheries service is all the point data from MARMAP and SEAMAP. That's the sampling locations for those areas.

MR. STREET: And why should they not be public record? They are collected with government tax money. This is an issue that Anne may have heard me talk about in the past that when public monies acquire data, that's my data and your data unless there is some overriding and legal reasons for it not being public.

MR. PUGLIESE: And you're right, we've had this discussion a lot of times; and in the SEAMAP program that's why we ended up with those grid systems on that to be able to – you still were providing a product to the public, you still were using the data, but retaining the research integrity of the information.

That's one of the considerations and why we've kind of been evolving that in a slower format because of the concern about essentially dumping all that out and essentially encouraging everybody to fish on the spawning locations and the point information on red snapper, everywhere we have it.

I understand it and I think we've been going down this at a bunch of different levels, but I think there is some ability to try to work on what you provide to the public and then what you provide at a researcher level to ensure the integrity of that long-term research information system. No, I'm definitely very aware of that type of thing. We deal with that and just have to address it as it moves forward.

I think the biggest thing is we want to maximize the ability of these systems to be able to use it across the board, especially with a lot of these other activities that are ongoing right now in collaborations with SECOORA and Ocean Observing and the Alliance and the state programs. I think when we re-initiate discussions with the individual state programs, that's going to also kind of set the stage for what we need. Anne.

MS. DEATON: I was just going to say at least for our uses, shape files we really need because then we can pull that in. That's how we're using all of our North Carolina data in the state with Arc View, Arc GIS shape files because then we could have a comprehensive mapping tool. But, for others like permit reviewers and a lot of our biologists, that Google Earth is the ticket. People love it, it's easy to use, so I'd like for the Arc map, the Arc IMS, you know, click on those buttons, you know, we don't use that so much. We get the shape files; and the Google Earth for the viewing purposes, it's quicker.

MR. PUGLIESE: Yes, and I think what we're also seeing is the expansion of some of the canned components in there, maps of all the individual components that you could just pull and use, grab it and then integrate it somewhere. GEO-tips where you can have the detailed spatial information integrated in one geographic multiple files that people who want to use that, so we've looked at a number to maximize the capability and use of some of these where appropriate and integrate those together or have them in KMZ, shape files, et cetera.

We're going to re-initiate discussions with the states to ensure that we are developing in a way that can be useful at that level as well as expand and make sure that we've the data sets that are available or that should be available and then what else should be added in over time. Any comments or thoughts? Kurtis.

MR. GREGG: As a user of both, the district has its own Google Earth tool with our own aerial imagery loaded into it as well as pretty extensive Arc format, I use both all the time as a permit reviewer. For a quick look at what is going on around the site, the Google Earth serves is up really well. But there are times when I want to see a time lapse of the photography and I'll look at aerial imagery from the sixties and fifties and on through more current times, and it's the Arc format that gives me that suite of selections to be able to pull those data layers in.

MR. WILBER: With the enhanced version of Google Earth you also get access to that historical imagery. There is a little button up there and you just slide it back and forth and you can look at those time lapses. Now, I haven't seen any imagery that predates sort of like the mid-seventies. It varies a lot on location, but, again, that capability is there in this enhanced tool. I guess I'm trying to kind of sell this enhanced version of Google, but –

FEMALE VOICE: You have to pay for it, right?

MR. WILBER: Yes, you have to pay for it but it's amazing what you can do with that and how much of the GIS capability it really has inside it. One of the coolest things you can do with it is if you have a plan you're drawing of a project in a public notice or something like that, you can take that plan view drawing out of the public notice – assuming you've got it in a PDF format, you can take that plan view drawing and stick it inside your Google image, draw some corners to bound it on the roads or something else like that and then turn the transparency or fiddle with the transparency on the image so that you can actually see that plan view drawing on top of the imagery and anything else you happen to have and Google it.

You can do all that in 30 seconds from the time you turn it on to the time it is actually working. At least with my computers, I can't even get the ESRI software to even boot up on screen in 30 seconds, let alone start doing all the kind of finagling.

There is a lot of capability inside Google, and I think that capability is growing, and it's really a matter for those of us that are still staying on the ESRI side of the world to figure out how to just reformat our way of thinking about how shape files are built and packaged in order to put them out in the format that they really can be used officially on the Google side of the street.

MALE VOICE: Just to follow up on the points, I think if the data are input in the ESRI format to begin with and then they're transferred to the format that Google can read, the council might as well provide access in both formats. That seems like the most user friendly, end user friendly way to serve it up.

MR. PUGLIESE: Yes, and that's where we are. Bare with me a couple of seconds, I would like to just walk through kind of the process so that when you get back, you can look at both the IMS and then maybe one of the services to provide some additional guidance. When you go to the council site, you can go directly to the ecosystem section.

On Quick Links there is a mapping and GIS button that brings you to the description of the IMS System, and then on the right you have start the IMS server application. Before I go there,

though, what I'd like to note is one thing we've done to kind of frontload even before you get into the service is the ability to access the actual data right in the front end of this.

For example, you can go directly into this area and look at, say, the dolphin and wahoo EFH-HAPC through Google Earth. What it will do is it will just give you the details of it, zoom down into the location, gives you the description of the EFH and provide an access to the metadata and even provide information on the species itself.

So you have links back in there, but you have this type of a format that you can look in and see there I already had some of my other layers already included in Google Earth. So it provides – under Google Earth, once you've loaded them once, they're all accessible. It provides details and give you area locations and then some of them I think actually can give you the bounds and some of the things that we've created. That's the quick access.

The shape file and as well as the metadata is available so we have across those different bounds. Now that is before you even get into the service itself. When you go to the service, you can go directly into the IMS itself and what it will do is it will provide the links to the data, provide all the layers, provide the metadata.

One thing we did earlier on, too, is one of the layers – as I mentioned before, we even provided external snapshots of the ocean conditions. The background, you can get the modulus or the sea surface temperatures as background layers, snapshots that will pull directly from there. We don't house the information. It's going and grabbing from the location.

So what you can do in here, you have the legend, your layers, GIS data. The GIS data brings you to a similar type of a component that identifies all the major categories, identifies the different formats if they're available, and then again it provides you, it provides you the zip shape file as well as provides you the KMZ files for appropriate different components.

But if you look at the – it has got everything from the asset inventory that we were looking at for SECOORA to marine facilities, all the boundaries, shipping routes, port information. One other thing is that an expanding component is this right here, and this is again in collaboration with what the state of Florida had done is we have created an eco-research area.

These are all research polygons and what it does is provide you access to information on what research has been accomplished within those areas. The intent is to go further on a more sophisticated program in the Gulf of Mexico that gets you into even more detailed information across all aspects of fisheries research and habitat research, but then even will have – the intent I think is working to maybe even get the live access of cruises, ongoing cruises, and then have links to personnel involved, so then you can facilitate collaboration between researchers.

So if you need an individual that can provide geology background on a specific cruise, somebody could go to that and identify that cruise, when it will be held and then even be able to look at some of the live access. In terms of the management areas, it has everything from all our regulatory measures that I talked about, but then all different things such as state – some of the sanctuary protection areas and state marine-managed areas, sea turtle sanctuaries.

One of the layers that we were including was even some of the information on fisheries such as permit distribution throughout the region. The military danger zones are included in here; sand resources that have been developed by the individual states or in collaboration with MMS, or formerly MMS, and all the ODMS, the dredge disposal sites.

All the gear regulations I mentioned before, the fish trap prohibitions, gear prohibitions are identified and then even the proposed actions that the council is considering at the time. All the essential fish habitat designations are included under these areas so that you can go in this one site and be able to look at the designations that exist at this time, both EFH and HAPC designations. Yes.

MR. WILBER: You touched upon my pet peeve. I'll be happy to jump on Roger's computer to provide an example, but there are some GIS depictions of EFH and HAPCs that are really – I don't believe are accurate. If we want to go through a process of cleaning those babies up, what do we need to do to do that?

MR. PUGLIESE: We just have to work together to do it because we've been building it based on the terminology. I think we actually did address some of the ones that were done earlier, but some of the refinement is going to be tied to the descriptions that we are working on in the user manual. I think that's where we can tweak it based on back and forth on that. We are making sure that is going to happen in that next round, both in the IMS system as well as the EFH itself.

MR. GREGG: What is the fine-scale resolution that you can get on this product; how close can you zoom in? Can you zoom into a project level depiction?

MR. WILBER: Having used that product, the system allows you to zoom into a meter, a square meter. The problem is the data that you have turned on at that time, and the scale at which the data were developed across the different data layers in this product varies humongously, from probably 1 to 12,000 data at its finest to stuff that is clearly at the one to a million kind of scale.

The difficulty we have in using it sometimes by itself as opposed to trying to use Google Earth as a way to kind of bridge some stuff is that some of the EFH data, just because that's what I'm most familiar with, was developed at very different scales and for no obvious real reason as to why.

Like coastal inlet, for example, coastal inlet is mentioned in three different fishery management plans and it's actually depicted at three different spatial scales inside that IMS. The more frustrating part is as an inlet gets wider and then gets narrow and then gets wide again, as they often do as they cut across a barrier island, well, at certain scales that narrow part disappears from the data because it's not at the scale that map or the data layer was trying to depict, so now your inlet looks like a series of finger lakes rather than a continuous kind of structure.

And then if you're a landowner or a developer and you happen to be on what will look like land in that series of finger lakes and you say, well, I'm going to put my project here, I'm not in an HAPC, looked at the website, I'm not there, then we kind of get into a whole sort of nasty place of discussion with action agencies and applicants.

Whereas, there are other data layers in there that have a very nice, clean depiction of inlets based upon the ones that I was kind of putting forth the other day. There is a lot of that kind of cleanup that needs to be kind of – that I think needs to be done. It's really largely related to how the shoreline is depicted.

I think one of the original problems that was very germane ten years ago when this was put together was storage capacity and things like that. Now those aren't as big a problem as they used to be and getting back to like reformatting how the data are organized, I would rather than format the data by species and then have coastal inlet repeated multiple times, I would have a single coastal inlet file that is drawn at the best resolution practical and then have each of those EFH designations touch that same coastal inlet file. Right now they touch separate coastal inlet files so that maximizes their storage problems and led to why they chose to use one to a million scale or 1 to 250,000 scale mass.

MR. PUGLIESE: Yes, and that's some of the cleanup that we definitely are doing. I know with working with Tina Udouj, who has been building a lot of these different layers with us, and we have been trying to minimize duplications within here and do more of the direct connection to that. I think, as I mentioned, as we discussed the refinement of that user guide, we're going to be tracking and making sure that those kind of coincide so we're not having presentations of, say, the same layer.

We've had this discussion before and we just need to get it done and refining it. I think we did eliminate some of them, the most obvious ones before, but we still need to go back through and do more, and it will be more effective and efficient. The one other area I wanted to just touch on was one of the Arc Services itself, and this was the regulation service that provides access to information on all the regulations in the southeast marine protected area, special management zones, the coral HAPCs, the sanctuaries.

What you can do is go directly into the individual areas that provide information on the individual area, pull down and it gives you the actual area, and you can do queries. We're going to add multiple areas together and give you kind of combined information. It also provides access to – so this becomes a real useful tool when you're looking at how many different layers of management exist already within an area or closely associated with it.

I think that's where we have quick references to be able to access in context everything from special management zones to existing other regulations such as the coral and even in – yes, these are special management zones that are being identified inside inshore areas, and at the same time you're looking at – it gives you the artificial reef, the details on it, the number and areas.

You'll be able to look at the marine protected areas and it has got things such as imagery links and video links that you can get into specific information on video for that area. But it's providing the ability to query a number of these and combine those and be able to look at them all in context at the same time.

This is using the link that has identified the ocean, SAFMCs regulations or EFH. That's a quick a snapshot of how to access these areas and some of the different layers that you can get within

those areas right now and the formats and capabilities. I would recommend taking a look at how it's presented and what is presented and if there are specific either ways these should be presented or needs that an individual sees that would be a lot more efficient to use this, I would appreciate any direct input on. Any other comments? Yes.

MR. CLEARY: Yes, just a couple of interactive user interface issues that I wanted to ask about. You've just gone through and selected a lot of layers and you've gotten to a scale you feel comfortable with and you've kind of – are you able to then export that exact snapshot to use someplace else as an image, for example, as GEO tip or to select out even the layers you have there to clip to that region to export to shape files, Google Earth. That would be really useful, I think.

MR. PUGLIESE: Yes, under the Arc Service you have more of that capability and under the IMS you can print. You basically send it to a file that gives you what you were looking at, a print of that image with the layers that you present, so you have that capability. Now, that's something that really does need some tweaking because some of those weren't as scalable and the capability to do that, and that's why some of the shifting over to the Arc Service is going to provide you a lot of that capability to either get an image of what you're looking at or a combined file with all the shape files that you are looking at.

MR. CLEARY: Okay, and our lab does a lot of this kind of interactive web development. I'm kind of relaying this, but to able to save what you've looked at to go back to that viewer and open it later, like you've built a view, layers, scale, et cetera; can you say I want to save this and come back to this site in the future and look at this same piece. I think that would be really useful.

And then the other piece I was going about is do you have the ability to upload a file to view over the top of this? For example, you might have a KML file that you'd like in this environment instead of pulling it all out by – you know, not upload into your system but just for visualization and say I know where I want to do something. I've got a lat/lon, let's say, or I have another file that you'd like to upload and just kind of see how that sits in here.

MR. PUGLIESE: Yes, again, in the Arc Service I think you're ultimately going to be able to have those kinds of capabilities. We haven't designed the tool or the point or something that would do that, but that's the whole point of going to that because I think you can do a number of those different kinds of things right now.

And Google, of course, you can do the Google. As you noticed, it has retained my queries from before. When I went into Google for the one file, it had all the other shape files that I was looking at, but those are types of tools and capabilities under the Arc Service that we want to be able to generate.

Those are the kinds of things that if that is a capability, we want to make that it's easily interpreted on how to do it and be able to access it and there is some guidance on how to be able to do it, too. Any thoughts or comments? Okay, with that, are there any other issues to come before the Habitat Advisory Panel at this time?

One thing that I think is still outstanding is the need to select a chairman for the advisory panel. Actually in the past we have had individual state sub-panel chairs, because what I'll do a lot of times is work directly with an individual sub-panel on an issue and then maybe bring it back to the full panel or directly to the council.

At this time I think it's going to get the chair itself; but I would be thinking about within your individual state sub-panel – I was trying to remember if we still have a couple of chairs. We have shuffled around enough where I think we've lost most of our chairman within the individual sub-panels.

I think at least at this point getting a chair for the overall panel and then we can work on that, because one thing I would like to – and I've talked to a number of you about doing this. Right now we have the annual meeting on the slot for 2011, but I think given some of the discussions we've had here and opportunities we have here, to maybe have individual state sub-panel meetings earlier next year, prior to the annual meeting to be able to address in your area some of the issues and get some guidance and provide some additional recommendations that we can look on policy, on priority areas and then some more input on maybe some of the ongoing activities. Given that, I'll open the floor and turn it back to Pace or others.

MR. MIKELL: Is Pace eligible?

MR. PUGLIESE: Miles is actually the representative but Pace is his alternate, so he's eligible.

MR. MIKELL: I make a motion that we accept him.

MALE VOICE: A motion and a second. Are you willing?

MR. GEER: I'm willing to be the chair for Georgia.

MR. PUGLIESE: We have a motion on the table for electing Pace as the chair of the Habitat Advisory Panel. All in favor. It's unanimous and welcome, Pace. I think it's a real good opportunity. We work very closely already on everything, and I think it will help facilitate our collaboration. It's pretty key for me.

We kind of had a little bit a lag in between when Doug Rader was on board, so hopefully you all have been at least patient on trying to move through in this transition, so this will help us go further on a lot of the things that we've discussed in the last day or so. With that, we'll move forward to the other ones.

At this time we have the opportunity to get the chairs of the individual sub-panels. The sooner we can do some of these things it will help me to get especially the sub-panel coordination efforts in the not too distant future. I think Pat had already volunteered to chair the Georgia Panel. Are there any other state members that would be willing to step forward as chair? Okay, Anne, good.

MS. DEATON: I was going to nominate Wilson.

MR. PUGLIESE: Wilson can't; he is a council member. Wilson is our liaison with the council.

MALE VOICE: I would like to second that motion.

MR. PUGLIESE: Anne, are you willing?

MS. DEATON: How much time does that mean?

MR. PUGLIESE: It really is our collaboration. Most of the broader coordination is going to be with Pace. This is going to kind of facilitating our direct work with individual panels. Say if we have a comment letter develop in your region, what we usually try to do is work directly with the chair and they can solicit a quick response and back and we can do.

And then if we have individual chair meetings or individual AP meetings, sub-panels, or if we get the chairs all together for something, so the time investment is not nearly as much. But it's good to have that point for our area with a lot of the things going on. We have Georgia and North Carolina now. Okay, Priscilla for South Carolina; thank you.

David, I saw your hand go up. Okay, well, what I would do is request Florida to either caucus with each other and identify a point contact for us and then get back with me as soon as possible on who can help chair on that. Any other comments or questions or recommendations or issues that need to come before the advisory panel?

Okay, with that, I really appreciate all the individual involvement and look forward to follow up on a number of different issues that we have raised and recommendations and moving forward on all the work on habitat and ecosystems.

MR. MIKELL: Do we look at next November for the next meeting?

MR. PUGLIESE: Yes, we used to have it in August. Are there thoughts about trying to hold it earlier next year? Right now I think it's still slotted for November for next year. It would make sense to – if we have spring, either like two panel meetings like Georgia/Florida or North Carolina and South Carolina in the spring and then be able to have it November. It would probably be better to push it further.

MR. MIKELL: Don't forget the Florida people like to come to Charleston but the Charleston people would like to go to Florida.

MR. PUGLIESE: So, yes, that's probably right now timing-wise is we're looking at the fall here. Okay, with that, thank you, and I would see the advisory panel meeting adjourned.

(Whereupon, the meeting was adjourned on November 17, 2010.)

Certified By: _____ Date: _____

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Charleston, SC

Tuesday, November 16, 2010

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