SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL

HABITAT PROTECTION AND ECOSYSTEM-BASED MANAGEMENT COMMITTEE

Town & Country Inn
Charleston, South Carolina

September 19, 2019

Summary Minutes

Habitat Protection & Ecosystem-Based Management Committee Members

Steve Poland, Chair	David Whitaker, Vice Chair
Mel Bell	Chris Conklin
Tim Griner	Dr. Carolyn Belcher
Jessica McCawley	Art Sapp

Council Members

Anna Beckwith	Chester Brewer
Dr. Kyle Christiansen	Dr. Roy Crabtree
LCDR Jeremy Montes	Spud Woodward

Council Staff

Gregg Waugh	John Carmichael
Dr. Brian Cheuvront	Myra Brouwer
Julia Byrd	Dr. Chip Collier
Cierra Graham	Dr. Mike Errigo
John Hadley	Kim Iverson
Kelly Klasnick	Roger Pugliese
Cameron Rhodes	Christina Wiegand
BeBe Harrison	Allie Iberle

Other Observers and Participants

Dr. Wilson Laney	Pat O'Shaughnessy
Duane Smith	Susan Boggs
Erika Burgess	Tony DiLernia
Dewey Hemilright	Shep Grimes
Frank Helies	Dr. Jack McGovern
Dr. Erik Williams	Rick DeVictor
Monica Smit-Brunello	Dr. Marcel Reichert
CLT James Bruce	Jocef Santiago

Other observers and participants attached.

The Habitat Protection and Ecosystem-Based Management Committee of the South Atlantic Fishery Management Council convened at the Town & Country Inn, Charleston, South Carolina, on Thursday, September 19, 2019, and was called to order by Chairman Steve Poland.

MR. POLAND: The Habitat Protection and Ecosystem-Based Management Committee has been convened. The first order of business is Approval of the Agenda. Does anybody have any comments or suggested changes? Any modifications? Art Sapp, under Other Business, there was a few issues that he wanted to talk about in relation to Hurricane Dorian down there in his neck of the woods in Florida, and so we'll add that to Other Business. Are there any other additions? I just wanted to point out that Carolyn Belcher is on the committee, and so takes the place of Doug Haymans, and so welcome, Carolyn. All right. With no other modifications, if there are no objections, the agenda stands approved.

Moving on, Approval of the March 2019 Committee Minutes. Any discussion or any additions? All right. Any objections to approving the minutes? Seeing none, the minutes stand approved. With that, I am going to throw it over to Wilson, and he's going to go over the Habitat and Ecosystem AP Report from the May meeting. Take it away.

DR. LANEY: Thank you, Mr. Chairman. The first note I will note to the council is that, if you are really, really interested in the details, you have a 156-page transcript that you can read, which we have kindly boiled down to eight-and-a-half pages for you. Thanks so much to Steve Poland and David Whitaker for attending the AP meeting. It's great to have the committee chair and vice-chair both in attendance, and, also, thanks to the panel chair, Anne Deaton, for chairing the meeting and moderating the meeting and everything.

What I am going to do, with your approval, Mr. Chairman, is just walk through the summary report item-by-item, and it's your pleasure whether we pause in between each of those to take questions or whatever or go through the whole thing first. It's your pleasure.

MR. POLAND: How does the committee feel? I mean, I'm fine just running through the whole thing and then going back and hitting the highlights, if we've got any questions.

DR. LANEY: Okay. Sounds good, and so that's what I will do. I will just keep roaring on through the thing. The first item that we discussed was the mapping and characterization of the South Atlantic deepwater ecosystems through these different programs that are NOAA-driven, and we had Kasey Cantwell and Caitlyn Adams from the NOAA Office of Ocean Exploration and Research and Heather Coleman from the Deep-Sea Coral Research and Technology Program. They briefed us on all of the deepwater coral and sponge discoveries that they had made off of the South Atlantic and on what their bottom and habitat-mapping plans were for 2019 and 2020. We had excellent video, and we had excellent photographs.

Deep Search is a four-and-a-half-year project which is co-sponsored by the Bureau of Ocean Energy Management and the U.S. Geological Survey and NOAA. The goal of it is to understand the ecology and distribution of sensitive deep-sea habitats within BOEM's Mid-Atlantic and South Atlantic planning area. They have made a lot of discoveries. The other thing that I forgot to mention is that, when we did our summary report here, we have the links to the presentations that were given to the Habitat AP in the report, and so hopefully some of you have taken advantage of

that and clicked on some of those and looked at the actual presentations, because you get a lot more information that way.

Ms. Cantwell advised that the Windows to the Deep Expedition also is working in the Southeast and plans twenty-one ROV dives during the summer of 2019, which have already happened, I guess, for the most part, and all of their mapping priorities were identified by Roger and by Dr. Collier of the council staff, and so that's great that they are paying attention to the council and doing a lot of the mapping that we need.

The folks at the Southeast Deep-Sea Coral Initiative and Monitor National Marine Sanctuary also had identified some mapping priorities, and so the AP members were very impressed by the amount of work that's been done in the last fifteen years, since mapping efforts started. For those of you who have been around on the council for a long period of time, or in the agencies, you will remember that, way back when, the only think we had, in terms of a bottom habitat map, was derived from SEAMAP sampling, when we looked at the trawl catches and just mapped basically the species that were associated with hard bottom and generated a map from that information, and so we are well beyond that now, I think, in terms of actually having three-dimensional bottom mapping.

One consensus statement arose out of our discussion and this presentation, and I am going to read that into the record, and then, Mr. Chairman, we may want to have just a little bit of discussion on this consensus statement while we're at this particular one.

The consensus statement was: The AP recommended that the council recommend to all relevant agencies to add designated sentinel sites for monitoring and sampling, looking at long-term change in deepwater habitat condition, basing site selection and protocol on shallow-water coral sentinel site monitoring methods and recommendations of expert deep-sea ecologists.

The point of that would be that, by designating sentinel sites, you have some sites that would be established for you to be able to look at change over a long period of time and hopefully have more insight into what's going on off the South Atlantic, and, also, I neglected to say earlier that, Steve and David and Roger, if you guys want to weigh-in on anything, feel free to do so.

MR. PUGLIESE: Just a quick note. I think this is a natural follow-up from how far we've come in collaboration with the activities, and especially in the deep monitoring and mapping and characterization efforts. It also aligns well with the discussions we're having on advancing and understanding shifts in oceanographic characteristics, and so you're going to be modifying potential species distributions, habitat distributions, opportunities that provide creations of these sites.

I think at the upcoming Habitat and Environmental Protection Advisory Panel meeting in October, hopefully we'll go beyond that, because I think this is a good foundation to begin looking at potential offshore points, the potential then to look at how we can look at inshore ones that align also, so that it, again, feeds into discussions we're having across multiple organizations when we're talking about species movement patterns, and I think that's going to be really critical, and it also provides some foundation to align with our partners.

We're working with the oceanographic institutes, or the oceanographic monitoring organizations, such as the Southeast Coastal Ocean Observing Association and other organizations, that are providing inputs for the long-term monitoring of everything from acidification points to temperature and salinity and all different things that can be a foundational understanding of where these different areas are, and so this is something that will continue to be evolved, and hopefully it will -- Like I said, I'm hoping that we can expand some of that guidance and then tap in on our partners to be able to do it.

I think one of the things that came up on this also was the fact that the guidance still is to get, as much as we can, to continue to map and characterize in our region, and, depending on where the resources -- That's where I'm hoping that some of the partners can begin to weigh-in, if there's the opportunity to provide capabilities, through landers or whatever, through the cooperative institutes, through the academia, through the Ocean Observing system, through NOAA, and hopefully we'll be able to advance that, and maybe some of the directives from on-high, with our connection back with Cisco Werner, who is very understanding of the bigger pictures of these kind of needs, and hopefully maybe we can see that happen, but that's just a footnote on something I think that needs to be, ultimately, done in our region, not only for the deepwater, but beyond.

MR. POLAND: Any discussion from the committee on that? Certainly -- Roger, I don't know what kind of action we need, or if there's any action we need to take, and we can just give guidance to you and staff, and I don't know if your interactions with SECOORA, or your position on SECOORA, if you could use that as a platform to raise these concerns as guidance to them.

MR. PUGLIESE: Yes, and I think that's definitely one of the avenues that we are -- I meant to mention that. The same kind of timing at the council, we're going to be doing a five-year planning activity and budget activity coming into next year, and so this is a perfect time to add some of these kind of priorities directly into the group, and so any of the different groups that are getting funded through some of these might be able to provide that, plus this could be provided as a potential priority from the council and longer-term monitoring, and that's exactly what their roles and activities are, and I think that's going to be good.

Of course, the guidance on especially sentinel sites will be some of the deep experts, both on the Habitat as well as on the Coral APs, will help weigh-in on refining it, and, as I mentioned, I think we just have the opportunity, because we have those discussions going on, funding discussions going on, all that for that, and, also, significant needs on our understanding of how these are going to influence species movements, et cetera.

DR. LANEY: Thank you. I will continue here. The second item was ecosystem considerations and prey supporting dolphin wahoo fisheries and the scoping overview for adding bullet and frigate mackerel as ecosystem components. John Hadley gave the same presentation to the AP that he provided to the council committee, the Dolphin Wahoo Committee, yesterday, and we had a very good discussion about it. It was great that Steve was there and was able to summarize his master's work for the committee.

Everybody agreed that there were several things that we would like to see pursued further, and one of the things that we discussed a bit was the reliability of the landings estimates for bullet and frigate mackerel, which you all had some discussion about. In addition, Chair Deaton noted that the Fishery Ecosystem Plan contains an action item which entails that we address council forage

science priorities, including predator dependencies, and, certainly, in this case, we have documented high dependency, especially of wahoo, on these two mackerel species, and so we discussed whether or not there was sufficient data to support designating other species in other SAFMC fisheries, and we agreed that, for the present, the dolphin wahoo fishery is a very significant one, from an economic and commercial perspective, and the data supporting designation of bullet and frigate mackerels, again thanks to Steve, is very highly robust.

If you flip over to page 7, we have the final text of the consensus statement that the AP developed, and I will read that into the record. The AP strongly recommends that the council take proactive actions for bullet and frigate mackerel due to sound existing science regarding their importance as prey for wahoo and dolphin. Additionally, the AP feels that dedicated scientific study should target bullet and frigate mackerel in conjunction with other identified forage prey to enable the future development of comprehensive fisheries management plans.

Clearly, you all took action yesterday, during the Dolphin Wahoo discussion, I would just say I think that probably the advisory panel would certainly like to hear what the possibilities are, in terms of a policy from the National Marine Fisheries Service, and hopefully that can be done maybe before June of 2020, and it sure would be nice to see that process move along a little faster.

I think, in my experience on the council, it's not often that you get two advisory panels making the same strong recommendation, and so, in this case, I think it's really clear that the Habitat AP is right where the Snapper Grouper AP is, insofar as seeing these species designated as ecosystem component. I'm sorry. Dolphin Wahoo AP, but seeing these two species designated as ecosystem components, and I'm sure the AP will be gratified by the action the council took yesterday.

Moving on to Number 3, we had a status report on the Citizen Science Program, and Julia was present for the meeting, and she gave us a briefing on that, a very excellent presentation on the council's Citizen Science Program, and she highlighted all the key activities from 2018 and reviewed the plans for 2019, including updating the citizen science research priorities. The AP and staff who were present had an extensive discussion regarding how best to generate input from the AP, and what we decided was that we would brainstorm ideas collectively, and we talked about doing it by sub-panel, but we decided that it would be more productive to do it as basically a committee of the whole. We might have a fall webinar and then provide those ideas back to Julia for consideration by the action teams and the council staff, and have we scheduled that yet?

MR. PUGLIESE: Yes, and just as a follow-up, a lot of these are tied directly to what's going to be coming up at the October advisory panel and the citizen science effort on clarifying priority research efforts, and Julia already has a webinar scheduled to get other AP representatives too from each of the APs, and that's scheduled, and she's going to do a similar presentation during the upcoming Habitat and Ecosystem Advisory Panel, because they wanted to do it at a whole, and what we're going to do is have the ability to, either through a breakout session or in whole, be able to provide some of those recommendations, and then, as the final draft is completed, the AP will also be selecting two representatives then to have the, similar to the other APs, to have the input on refining that final draft, and so that's all going to unfold and be done at the upcoming October AP meeting.

DR. LANEY: Okay, and so, continuing, the fourth thing that we talked about was the occurrence and impacts of extreme events and recent hurricane impacts on North Carolina and South Carolina

fish populations. This was a presentation by yours truly, where I had made the mistake of sending to Roger a PowerPoint presentation that I gave to a local service club in Raleigh, and he had suggested that I update that for use at the AP meeting, which I did. Most of you are very well aware, I think, that we had Florence and Michael in 2018, and that had a substantial impact on river basins in North Carolina and South Carolina, especially on the Cape Fear.

A lot of these impacts that result that are so highly visible occur when the dissolved oxygen levels become sub-optimal, or, in some cases, reach zero, and fish and other aquatic organisms die as a result. The water quality is also compromised by a lot of the inputs from both the natural flood plans and point sources, like in North Carolina the hog lagoons, for example. We had a lot of documented kills of Atlantic sturgeon throughout North Carolina and portions of South Carolina, and then the striped bass population in the Cape Fear River was especially hard hit, and even American eels, which I think most of us tend to think of as pretty hardy species and fairly tolerate of low DO circumstances, were certainly stressed, and a lot of those died, especially on the Cape Fear.

One problem with these particular events is that, a lot of times, it's difficult for agency staff to get out there and document what's going on, because, in this case, the extensive flooding prevented the field staff from getting out there to observe the kills and measure water quality, and so this presentation promoted a whole lot of discussion by the AP regarding how to proactively address hurricane impacts to fish and fisheries, and we all acknowledge that there is nothing we can do about the storms themselves, but there are things that we can do perhaps to increase resilience.

We had a number of our members, Mr. Webb and Dr. Geiger and Mr. Medders, and David Whitaker, that all gave us good examples of specific local or state actions and studies and methods that could be useful in this regard, and we talked a bit about eDNA in particular, and Dr. Laurent Cherubin noted that, in addition to the hurricanes, another event that occurs are harmful algal blooms that have increased in frequency, and that is also a concern, and so, basically, the AP and staff agreed to pursue compiling information on what the four states are doing with respect to addressing climate change, in particular, and work toward the development of a draft policy for consideration by the council. Roger may want to say a word here about his position on the CCC and how that body is charged to update essential fish habitat, and guidance could be part of that effort as well.

MR. PUGLIESE: As we've been moving forward at the Habitat Workgroup through the CCC, the charge, more recently, and we're just coming off of the workshop relative to EFH consultation associated with non-fishing activity, and so some of these different capabilities and tools and aspects of being able to access the information are all being discussed, and they're going to be coming out of a report from that workshop that will help guide and learn from all the different regions that are addressing various activities in their areas, and so some of the tools and capabilities and opportunities are being highlighted, so that we can share amongst the different regions on what may work and enhance the ability to address issues as they come up.

A lot of areas -- Our council is way forward, in terms of building policies. Some of the other regions are just beginning to think about it, and some actually have built other kinds of capabilities that feed the kind of consultation discussions more significantly, and so we're going to be able to benefit from those discussions to advance the discussions on climate in our region more significantly.

MS. MCCAWLEY: I guess I'm a little confused here about -- It says development of a draft policy statement, because we already have an EFH policy statement on climate variability, and I'm not sure how this would be different, and so it just seems a little odd.

MR. PUGLIESE: I think it should have been clarified that it's not developing a full policy -- This was getting to the fact that you have -- It was trying to follow the state's activities that are looking at some of these -- There was climate activities and how to address maybe best practices that could enhance conservation and essential fish habitat, and so it would be an addendum that would focus on and align with state activities, trying to move forward on addressing extreme events and climate activity, and so it's not a new policy. It's really just a -- It's kind of almost getting into the action level, like we did with the two-year roadmap and the implementation plan, and so it's kind of an adjustment to focus. There was a real desire to say we have a real opportunity to add benefit to the way the states are moving forward and align it with the way the council is looking at conservation of habitat.

DR. LANEY: One thing, Jessica, too that I was thinking about when we talked about this at the AP level is the possibility that we could collaborate with the ASMFC's Habitat Committee here in developing one of their habitat management series documents that, based on what Dr. Geiger told us about what Seabrook is doing, and David told us about what South Carolina is looking at, and Mr. Medders and Mr. Webb told us about what their jurisdictions are looking at, and it should be possible to put together some kind of a document that says here are the kinds of things you can do to increase the resilience of your coastal communities to hurricane impacts, and so that's kind of what I was thinking about.

MS. MCCAWLEY: It's almost like kind of adding some meat or codifying what the states are doing and kind of listing out how that's going to fit in with what's already in the FEP.

DR. LANEY: Exactly, yes. Okay. Continuing, Number 5, we had an update from Dr. Rua Mordecai of the South Atlantic Landscape Conservation Cooperative and from Roger on the Southeast Connectivity and Adaptation Strategy, and I think some of you are familiar with SECAS, which arose from the Southeast Association of Fish and Wildlife Agencies as an effort to sort of create a seamless coverage of the southeastern landscape and knit together what all of the six LCCs that overlie that geography are doing.

All of this fits nicely into the AP's future activities, and we encouraged all of the AP members to visit the South Atlantic LCC and the SECAS websites and take a look at the conservation blueprints that those two entities have developed, and I will note, and Roger can chime in here if he wishes, that the South Atlantic LCC is the first one in the country that actually extended their blueprint activities out into the EEZ, all the way out to the 200-mile limit, and we understand that's going to be extended into the Gulf as well at some point. Again, take a look at those websites. There is a lot of information there that dovetails nicely with what the council is trying to do.

Number 6 was the update on the BOEM research and energy development activities. Jennifer Bucatari was there for Brian Hooker to give us an update on that. She talked about the leasing and renewable energy development process, the site assessments that they're doing, and all of the projects on which they are currently working, and there's a bunch of them.

In particular, they are working on offshore sand shoals that are within the council's jurisdiction, and these would include Cape Hatteras and Frying Pan Shoals off the Cape Fear and Cape Canaveral Shoals off of the east coast of Florida, and, in conjunction with that work, they are doing some acoustic tagging and detection of selected species, such as Atlantic sturgeon and red drum, which is very beneficial when we're trying to understand how these species are using these sand shoals.

We expressed a great appreciation for the work that the U.S. Navy and BOEM and the National Parks Service and the Corps of Engineers and other agencies are doing to gain an understanding of ecosystem ecology and offshore dynamics, especially on these sand shoals, and we talked a lot about how these data may be useful in assessing environmental impacts and conducting EFH consultations. There weren't any specific recommendations from the AP membership, but, as you see, that discussion prompted a later recommendation to SECOORA, which is the next item.

Debra Hernandez, who is the Executive Director, came and briefed the AP on the SECOORA mission, on their annual meeting in Wilmington, and their five-year planning process, and I won't go into detail. You can read it there, and you can read the transcript, and the one recommendation that the AP had for Ms. Hernandez was that the capes and sand shoals be included in the ecosystem priority habitats for investigation by SECOORA.

As many of you are well aware, with the scarcity of sand resources on the east coast, communities are turning, more and more often, to try and remove sand from these capes and shoals and put those back on the beach, and so there is concern there. Members also supported any efforts that they may wish to undertake, including additional acoustic tagging studies on some species of interest, and we specifically mentioned tripletail and red drum and Atlantic sturgeon.

We also encouraged them to add temperature and salinity monitoring to their monitoring stations out there, and everyone on the AP agreed that it was important to try and document the environmental variability and how it influences species distribution and production, and, of course, during the meetings yesterday, there was a lot of discussion about how species are shifting their distribution, in a lot of cases, further north.

Item Number 8 was a very fascinating presentation by Dr. Laurent Cherubin, and Roger and I, I think, are in agreement that we would love to get him before the council, at a future meeting, to give his presentation. Basically, Laurent and other collaborators are using wave gliders now with sophisticated acoustic monitoring equipment to monitor the soundscape of the ocean, and so a lot of us are aware that many different species in the ocean rely heavily on sound. In the case of a lot of the larval reef fishes, they are listening, it turns out, for the sounds of snapping shrimp and other key indicators to determine where they are best able to settle and survive.

The more we understand the soundscape of the ocean, then the more we can actually document spawning aggregations and sites and better understand the behavioral ecology of these species whose auditory emissions are distinctive enough for us to be able to pick them up on this equipment.

Laurent explained how these signals from the equipment are used to document not only the species present and their activity, but also their biomass now, and so this stuff is getting really, really sophisticated. We can begin to obtain a comprehensive vision of the spatial extent and the

temporal dynamics of fish spawning aggregations and can get a consistent, efficient, low-cost, unmanned assessment, and we can also classify noise which results from anthropogenic activities, and so he shared with us that the ultimate goal of his work, and that of others, is to get abundance estimates of the spawning aggregations, and he showed us multiple examples of how this technology has been used to document spawning and other aspects of individual species, and so we were really inspired by the work that he and his colleagues have done and really enthusiastic about the possibilities for future work, on the council's SMZs in particular, and we did ask him to provide copies of any of the work that has been published, either in gray lit reports or as they publish in peer-reviewed literature, so we can share that with the council.

The Number 9 item was a webinar on anthropogenic sound sources that was conducted for us by Chris Knowlton, who is the Assistant Director at the InnerSpace Center. Dr. Jim Miller, Dr. Kathleen Vigness-Raposa, and Dr. Jakob Tougaard gave us a very interesting presentation during our working lunch and talked about the noises associated with piledriving and the potential impacts of those to habitats and biological organisms and what methods there are for reducing the impacts of this kind of noise and how the sound field propagates through the water column. For those of you who are technowonks, it would be really, really fascinating, and I encourage you to read the transcript on that.

They talked a lot also about noises emanating from operating windfarms, and this is not only the noise associated with the construction and operation of wind turbines, but also the boat traffic that is generated by the maintenance vessels going back and forth. We didn't have any particular recommendations resulting from that presentation.

Number 10 was the presentation by NOAA Fisheries Southeast Fisheries Science Center folks about their EBFM activities for the South Atlantic. There were three different things that Dr. Todd Kellison and Dr. Kevin Craig covered for us, and Number 1 is the development of a South Atlantic ecosystem status report. Number 2 is the South Atlantic climate vulnerability assessment, and then Number 3 is a multispecies or aggregate production modeling effort that's focused on the South Atlantic.

All of these are very relevant to our Fishery Ecosystem Plan and the roadmap and, also, to the South Atlantic ecosystem-based fishery management implementation plan, and I will take a moment just to delve into a little bit of detail with regard to the climate vulnerability assessment, because that is taking place next week, and a number of us are involved in that, and I know Steve will be there, and I will be there, and Chip is going to be there, and other folks.

Basically, what we're doing here is to undertake something which I think the Northeast Fisheries Science Center did a number of years back, and that is to look at our individual species and go through twelve different attributes associated with those species, such as their spawning cycle and their general life history, and then assess whether or not they are vulnerable to climate change and how much vulnerability each of them has, and so that's going to be a very interesting exercise, and I know I had fifteen species assigned to me, and I think Steve had a similar number, or probably more, but we had to walk through this assessment, and so that will be the preliminary assessment, and, at the workshop next week, we will all get together and put our heads together and develop a final vulnerability score for each one of these species.

MR. PUGLIESE: Just a quick note, but I also have Lauren Gentry involved. Lauren is with FWRI and working on our Ecospecies online system as well as we put together an entire diet complex and advancing the Ecopath and Ecosim modeling efforts. Part of the main reason to be involved in there is also to draw on a lot of that work that had been compiled to support the last iteration of the Ecopath model, but also the fact that the Ecospecies system is going to be a long-term repository, and, as these vulnerabilities are developed, we want to immediately integrate it into something that we can connect with other information, so that we can have a rapid way of being able to identify species that may be vulnerable with regard to different parameters and have it all in that overall system and have a long-term use, other than just a document that we can refer to, and so I think that was a pretty critical thing that's going to help add to the added benefit to the whole effort that's going to be ongoing.

DR. LANEY: Okay, and so the AP members had an opportunity to ask questions of Todd and Craig, and they did so, and we all agreed that it was important for the Southeast Fisheries Science Center to continue its regular briefings to the AP on these sorts of things and transfer that information to us. The eleventh item -- Excuse me, Steve. Go ahead.

MR. POLAND: Thanks. This is a question to agency staff. I know the committee has asked about it in the past, as far as the timing of when we can expect the ecosystem status report for the South Atlantic, and do we have an update on when that is expected to be completed and presented to the council? The timing for the South Atlantic ecosystem status report, when can we expect to see that?

DR. MCGOVERN: I am not familiar with the ecosystem status report. Can you tell me more about that?

MR. POLAND: So I guess it's not ready. Did we have a briefing at the October meeting?

MR. PUGLIESE: We had a briefing at May that basically said that that was in process and gave us some examples, and there was some working -- They had connected in with some of the partners with the Oceanographic Association, like NC State, looking at some of the different parameters that they were going to use for that, but that's as far -- I'm not sure where we are, and that's something that hopefully we're going to get an update at this upcoming Habitat AP, on what the next steps are to actually get -- A lot of the focus right now has been on the climate vulnerability work, because the same people doing that are working on the ecosystem status report, or at least connected in, Kevin Craig and others with Todd Kellison's group, et cetera, and so I think the timing is somewhat contingent on advancing all these different actions at one time. We are playing catch-up in the Southeast on a number of these different activities, but that was a very specific request last time, about getting some timelines of when this is going, and the last thing I think we heard was that it's going to start, with the intention of being completed in 2020.

DR. MCGOVERN: I guess this has to do with the ecosystem-based implementation plan, and we're working on that, and we have folks involved with the vulnerability index and all that, and so I will get back to you about that.

DR. LANEY: Thanks, Jack. The next item was the FEP II implementation plan and the two-year roadmap, and the AP reviewed the objectives under that plan, and we looked at Action 1 in particular, which is under the food webs category, and that really gets to the issues of forage and

prey and predator, again related to the bullet and frigate mackerel discussion. The important aspect under that section of the plan and the roadmap is the issue of identifying species and data that are available.

Roger also talked about the fact that we are formally advancing the discussions under the Ecopath and Ecosim modeling and the diet complexes associated with those models, not only building it for the existing conditions, but really setting the stage for understanding information across all the other species and moving that information in so that it can be collected through our existing fishery-independent and fishery-dependent surveys. Then, also, the pattern of managed species and species distribution is an important part of that.

The AP discussed the need for additional coordination with the state sub-panels, and so Roger and Anne Deaton and I are going to be working on coordinating those sub-panels and trying to gather additional information in between Habitat AP meetings, and this is something that, literally, we've been discussing for about two decades now, I think, Roger, because, when Doug Rader was the AP Chair, that was something we talked about a lot, since Doug and I were both on the North Carolina Sub-Panel. We talked about the fact that probably the most efficient way to do that would be to set up some webinars for the sub-panels in between meetings, and I think that's the way that we're going to try and proceed.

Then the last item that we talked about was an update from Roger on the next generation South Atlantic Ecopath with Ecosim model, and he gave us an update on that, and they're in the process of reviewing and refining the model, and that's going to be discussed at the next SSC meeting, I believe, coming up in October, or at least it will be discussed by the Scientific and Statistical Committee, and some of the questions we talked about that could be addressed with the model include something I know that a number of you are interested in, which is the interaction between red snapper and black sea bass, in particular, certainly between sharks and their prey, and some of this could be based on distribution information, but also the diet information that we talked about earlier. AP members asked Roger a good many questions, and we had some discussion on that, but there was no specific recommendation made.

The only other topic that we discussed under Other Business, Mr. Chairman, was our upcoming October meeting, which is going to be held October 22 through 24 in St. Petersburg at the Florida Wildlife Research Institute, and so, Mr. Chairman, that constitutes my report, and, between Roger and you and David and me, we can attempt to answer any questions that anybody might have. Thank you.

MR. POLAND: Thank you, Wilson.

MR. BREWER: I am actually not on this committee, although I think I might want to redo my preferences, because I think there's going to be some really important stuff that's going to be coming up in this committee.

Before I ask my question, or make my comment, I want to publicly apologize to Shep. Yesterday, I flew off the handle, because I misinterpreted something that he said, and, when he was speaking about -- I think the words were "rings hollow" or something like that, and I thought he was after meaning forage fish. What he actually was saying is something that I agree with 100 percent, and

that is, as we go along, forage fish are going to be a much more important topic than perhaps we have talked about in the past.

It's just gone around, but I had asked Gregg if he would send me a copy of the forage fish bill, and he has done it, and I've had the opportunity to kind of read through it rapidly, and it's a little bit hard to understand, because it's done, unfortunately, in bureaucratese, or legislative-ese, and it's like drop Paragraph Number 3 and add in its place, and add this sentence to Paragraph 5, and it's a little hard to read, but their approach here, under the bill, would be to have the different SSCs specify to the different councils the importance of forage fish that exists within each council's area of jurisdiction.

Then it goes on, and it does something very different, which maybe we can give some thought to, and that is it says that, before a directed fishery can be established, or can occur, for those listed species, listed by the SSC, there is a process that is put in place to make sure that there is some management protection for those species, and so, in essence, what they are doing is they are listing those species at the beginning, and, if a species makes that list, then you don't have a directed fishery, and it's not allowed until the council has an opportunity to take a look at that and see what regulations need to be place and what protections need to be put in place.

I make that as a statement and something to throw out, and I don't know if anybody wants to comment on it, or even if perhaps somehow, within this committee, we could formulate some rule or regulation, and I know Roy is going to get upset with me if I talk about new rules and regulations, but something that either works concurrently with or independently of the forage fish bill, because we don't know whether that's going to pass or not, and so I throw that out, and it's, I guess, in the form of a statement and a question.

MR. POLAND: Thanks, Chester. I haven't had a chance to review the bill, and I know we're going to talk about it either this afternoon or tomorrow, whenever we get to Executive Finance, but I will say that one of the options that was included for Amendment 12 to Dolphin Wahoo was an option to receive feedback from the SSC on what a forage species is, and so that's still something that we can consider and ask them to do.

MS. MCCAWLEY: FWC has gone on record about some serious concerns about having to have certain types of data before a new commercial fishery develops, and I get the concern about the species, but so FWC has a permit program in place. If you want to use a new gear, or you want to start a new fishery, it's our special activity license program, and so we feel like we already have something in place, and especially with the fact that a lot of our different commercial fisheries -- I feel like the quotas are getting smaller and smaller, and they're having to look for other things and go to other fisheries.

I just want to make sure that commercial fishermen have the opportunity to expand, or at least try out new fisheries, and I don't want to put a big hurdle in their way in order for them to try to look into these other fisheries and to try to make money and continue their business, and so FWC has definitely gone on record and been somewhat against exactly what you're describing. Not against the SSC developing a list, but a lot of it has to do with the fact that I feel like we don't have maybe the number of stock assessments coming through the process at the speed that we would like.

We never have enough data on even the species that we are primarily concerned about, and, trying to suggest that we need certain lists of research or data needs before a fishery can develop, I just think it might be too big of a hurdle here in the southeastern U.S.

I can also tell you that FWC has some pretty big concerns about that forage fish bill, and we have expressed those concerns, and, when we talk about this, I can certainly bring it up, and the concerns that we have have to do with this, that there's not really enough data here in the southeastern U.S. on a number of fisheries, and we can't get the throughput on the stock assessments that we want now, and they're not coming as far as we really would like. If we're going to require additional hurdles of data collection before fisheries can develop, then, basically, those fisheries, I think, might never be able to be developed, just because the hurdles are too big.

MR. BREWER: I completely understand that, and, by the same token though, it seems like you've got to, at least to me, have sort of a balancing act there, because, in Florida, I don't think this is going to be that big of a problem. People are not going to all of a sudden develop a fishery for threadfin herring or whatnot. Our big problem is mullet, and we have dealt with that problem, but I was thinking about perhaps in other parts of our jurisdiction, and there may be some fish that could present a problem at some point in the future.

I am throwing it out right now, and it's not like anything I am saying is like I'm 100 percent behind this kind of thing, but it's something to think about, certainly, and maybe take a look at in the future, or at least have in the back of our minds when we start talking about ecosystem-based management.

DR. LANEY: Yes, and I certainly agree with Jessica about the stock assessment productivity level and the necessity for keeping that as high as possible, but you guys have heard me say it before, and I will say it again, but habitat is where it's at, and where it's at is habitat, and, if we don't take care of that, we just might lose our habitat, that little poem I wrote many, many years ago, and I think, in order for -- You can assess species, and that's well and good, but, in order to deal with the health of the habitat, a lot of us often forget that it goes beyond the water column and beyond the structured biological or abiotic habitats, and prey is part of the habitat, and we have to understand who is eating whom and how much they're eating, and it's thanks to the work like Steve Poland has done with the dolphin and wahoo that we understand that -- Looking at wahoo, 40 percent of their diet is the Auxis mackerel species, bullet and frigate mackerel.

I think there is a tremendous amount of information out there, Madam Chairman, that it would be beneficial to have it in a compiled form. There is tons of gray literature and state reports that document the diets of a lot of species, and what may be lacking here, and I don't know, because I haven't really looked for it, would be some sort of a big -- I know Roger may want to speak to this too, because I know he and Tom Okey have put a lot of that information together, and so, to me, that would be the first step, taking a look at all those diet studies that have been done.

There has been a huge amount of work in the Chesapeake Bay in particular, because, when we were doing the cooperative winter tagging cruises, tagging striped bass, one of the things we were doing was pulling samples for that Chesapeake Bay estuarine living resources program I think that Rob Latour was heading up at VIMS, and they were doing a tremendous amount of diet work, and so they even generated a report from all the samples that we provided them on the cruise, and so, as a first step, I would suggest that was something that could be useful and maybe the kind of thing

that some of the states even could help the council with, by having some interns that would delve into all of that information.

Then I think it would be a short lift for the SSC, once you put that kind of a list together, for them to take a look and say, okay, we know wahoo is eating 40 percent of bullet and frigate mackerel, and so that's clearly an important forage species for them, and I suspect we're going to see a lot of things like Atlantic herring and bay anchovies and silversides, things like that, that would pop out as very important forage species as well.

MS. MCCAWLEY: I am not suggesting don't compile that information. I think the compilation of everything that's out there is great, and I can tell you that FWC is doing a lot of diet information, and we have whole gut content lab that's working on this, and, frankly, my master's research was on the diets of red snapper in the Gulf of Mexico, and so there's a lot of stuff out there. I just want us to be careful as we step forward. I mean, thinking about forage fish and the importance of it is a great idea, but when the rubber meets the road, when you think about preventing development of new fisheries, I think that's where some of the concerns come in for us.

MR. PUGLIESE: A lot of these discussions really were held when we originally discussed the policy and advancement of the FEP implementation plan, and we actually have put some actions within there to advance beginning to compile this information, and, truthfully, the work that was done in the last iteration of Ecopath/Ecosim and building the diet work directly with the gut labs, and so I think we have a number of different things that have been put into the plan that, if we advance, if we build that foundation of what the diet composition, what the consumptions, are of the primary managed species in our region, and, truthfully, I sometimes have issues with just saying "forage", because I think, when we get into the Ecopath/Ecosim, it's a prey-predator issue, because you have the interactions between species.

The significance of potentially red snapper eating black sea bass is just as significant as a forage basis, and so I think that whole part needs to be understood, because those have become the influences of the different arrays, and I think the SSC is setting the stage for that by initiating the initial review of this, advancing this into the future, and so they're going to be right in the middle of seeing how some of this develops, and hopefully some of these other directed information-gathering components can happen as part of the Ecospecies efforts we're doing or directly to try to compile this, as directed under the implementation plan that's already in place, and so I think we've kind of set the stage, and hopefully we can just get further, to begin to align these directly up with managed species and understand that, and I think our SSC is positioned to begin to do that, also into the future.

MR. DILERNIA: I don't offer this information as a matter of advocating or speaking against taking any action, but just to share with you that it was approximately five years from the time we received our first report from the Lenfest group on forage fish and the Lenfest forage fish study to the time that we passed our forage fish amendment, and so it took us about five years' worth of council work. We didn't work on it at every council meeting and all, but it was about a five-year start from beginning to end. Thank you.

MR. BREWER: I was just going to agree with Roger. It doesn't need to be limited to, quote, forage fish. It's well known that one of the very best baits for dolphin is dolphin.

DR. LANEY: I will say that I think most of us realize that, in the world of the estuarine ocean, everybody is forage for somebody else at some stage of their life cycle, and then that complicates the picture too, because things are getting eaten from egg and larval and post-larval and juvenile and adult stages, and so it makes the picture complicated, but I think that's what the Ecopath with Ecosim modeling effort seeks to do, and I have this vision, probably a naïve vision, that, at some point, our modeling will be sophisticated enough to be able to give the council management advice, and Erik is shaking his head no. Okay, Erik, and you and I can talk about that next week.

I think that at least these kinds of models give us insight and the ability to ask the what-if questions, and I have said, for several decades now, that one of the things we did at ASMFC, when we were managing striped bass to such a tremendously high SSB level, was we created a giant eating machine, and then we started hearing complaints from the blue crab fishermen in the Chesapeake Bay about cutting open striped bass and finding thirty or forty juvenile blue crabs, and the lobstermen off of Maine were seeing the same thing.

Gary Nelson with the Massachusetts DMF did some work up there, and he showed that stripers were eating tremendous numbers of juvenile lobster, and so these are the kinds of things that sometimes we don't think about that I think that type of modeling may give us some insight to in the future and enable the council to say, okay, which species are important to us, from a commercial and recreational standpoint, or from an ecological standpoint, and what's going to happen if we manage them in a certain way, to either increase or decrease the amount of biomass that's out there.

MR. POLAND: Thanks, Wilson. To Chester's point, I agree. Little slingers are good bait for big gaffers. I mean, everyone knows that, and I have seen that, but I think those are good comments when we discuss this in Executive Finance, because, if I put my ecologist hat on, I do have some issues with the definition that they have for forage fish in here, but I'm glad that we've had this discussion right now, and it has kind of primed us for later on this afternoon.

MR. PUGLIESE: Just one final point. I think that one of the benefits, while you may not be looking at immediately putting out regulatory guidance on some of these things, one of the first, the earlier, iterations of the Ecopath/Ecosim model was focused on forage activities, and the idea there was to do things such as take some of what you know are some of the key species and reduce them by 50 percent, or 75 percent, and regardless of what it is, because I think the point there was that, if we're looking at some of the other issues we're talking about, environmental changes, where you may have population shifts --

If you look to some of the areas like the Northeast, the thing that drove some of the things like cod is the shifts in some of those food bases into different areas, and so I think there is implications on the climate side that you can get informed what-if scenarios that, if you have massive reductions in these different ones, is the population -- Of course, it comes down to how well you have built that diet information but at least, if you do enough and have the largest components of that, you can see what some of these dramatic changes might have and what species might be influenced and what interaction between species might happen, and so it goes beyond just putting specific regulations -- At least it provides a mechanism to understand what might happen if we do see some of these changes.

DR. BELCHER: Roger, I am going to my first SEAFWA meeting this year, and so I was kind of curious, because I had seen the SECAS site, and I guess are we -- Is the SAFMC looking to partner with that group, because, as you're looking down the list -- I mean, I know for us, our director is -- It's actually our wildlife resources side of the shop, and it's the director representing, but Roy is listed as the federal partner, but the contact is his Gulf folks. Then, in looking at the Southeast and seeing where the line delineation is, and knowing that there's a Florida peninsula involved in that, and, I mean, I guess I'm just trying to think about how we're drawing all of this together, because we really don't have a complete picture for the marine environment. The Florida peninsula doesn't seem to show anything out in that direction, and I'm just trying to figure out how all that is being drawn in for us at the council.

MR. PUGLIESE: Right, and I didn't get into it when we discussed it earlier, because I think there is some additional follow-up. The bottom line is the foundation for all of the SECAS activities is built on the conservation blueprint from the Landscape Conservation Cooperative, which created that offshore, and we were the first ones to do it, and the anticipation was the rest of the LCCs, especially the peninsula, was going to add it in, and the Gulf and different parts of it, and it has evolved because of that kind of pulling down of the LCC to the foundation, but the SECAS is still driving that conservation -- It's exactly what we had originally input and provided in there.

The bottom line is the foundational information, the connections, and the partners that are built in there are already still involved directly in it. How we can re-engage, so that we can update a lot of the information, because I think a lot of the original information from the marine can be updated as we continue with especially what we're going to do in the Ecospace and refined bottom habitat distribution and all that, and so that's why we've been kind of reaching back out and bringing back in, because there is so much activity, and it's the only place they're doing that type of thing with the connectivity between all the systems.

In the South Atlantic, even the connectivity into the marine, to understand corridors and to understand all of these things, and so, yes, and it's just been how do we -- Because we were a full partner at the table in the LCC, and, with it going to the SECAS side, we don't really have the direct connection. However, everything is still the same, in terms of what we had provided for foundational information, and the value that can come back to us is still there and how that has to happen to make sure that we can do it, and that's why I've been trying to at least keep that connection with the groups, because it's the same players that are doing a lot of the technical connections, and there is that motivation and momentum, and it really does provide some of the most sophisticated review of inshore information that can really feed and better understand our essential fish habitat and our connection to managed species and all of that.

The bottom line is I'm trying to figure out exactly how we can have a more predominant -- Because, when we used to have the group, it used to be the council was a predominant part of the LCC group, and SECAS has the state level directions, with NOAA's participation, and we haven't had that same direct connection. However, all of it is connected directly with what we have and the foundation from our essential fish habitat designations and whatever, and so yes.

I'm almost in the same situation, because we just need to figure out how to more -- Because I think everything they're doing is exactly what we need to do. The down-scale climate models are being integrated, and everything is being done at some of the finest-scale levels. The water flow management and all of that type of stuff is being done through that system, and so it's going to

happen one way or another, but just make sure that we have aligned and can inform it, but it's important enough that, yes, I think that we still need to do it, but I just need to figure out exactly how we build that formally for the connections, just because, before, we were not only a member, but actually I served on the executive board for the LCC, as we were moving forward.

DR. LANEY: So the staff is still there in Raleigh, Carolyn, where I am located, and I talk to them on probably a weekly basis, for the South Atlantic LCC, and, as Roger said, the emphasis has changed, because of changes within the Department of Interior and a change in focus for those different LCCs, but I am so happy that SECAS jumped in there, with the intention of knitting together all those conservation blueprints from those six LCCs, and, obviously, the initial focus was more on the terrestrial side of things.

Again, it's because you can look at the Earth from satellites and get a lot of your image information, your habitat information, by remote sensing, which we can't exactly do in the ocean, but I think we set, again, the precedent for everybody else by going out 200 miles into the EEZ in the first place, from the beginning, and that was a vision that -- I was on the operations team that wrote the initial plan for the South Atlantic LCC, and they were very much into the ocean aspect of it, in addition to the terrestrial aspect of it, and hopefully the other LCCs that are part of the SECAS initiative will get onboard, and I think it will be very much a big asset for the council.

DR. BELCHER: To that, I think the hard part was that, until today -- Like, when I first went into that site and looked at the Southeast, and it was these drawing lines, and I'm like, I don't even understand how these boundaries came through, because they don't really link it back to the LCC, and you guys kind of did that for me now, and so understanding Florida is its own standalone, and the fact that the Southeast actually has Gulf coastline in it, because it comes across the peninsula, and it's just that doesn't extend out the same way it does on the other side, and so, to me, it was trying to figure out how that would knit together, and then not seeing us listed as partners was kind of the other head-scratching on that, and so I appreciate the clarity.

MR. POLAND: Anything else for Wilson on the AP report?

DR. MCGOVERN: I do have an update on this ecosystem status report. Erik and I found out about it, and Todd Kellison at the Science Center is the lead on it, and Karla Gore from my office is involved in it as well. Right now, the priority is the climate vulnerability species, and they are working on that, and they hope to have this report done by mid-2020.

MR. POLAND: Thanks, Jack. All right. Thank you, Wilson. That was a good discussion. All right. Moving on through the agenda, Roger, any council actions on habitat or ecosystem and anything that you wanted to review?

MR. PUGLIESE: No, I think I've gone into it. I think a lot of things are going to be happening through the upcoming Habitat Advisory -- One just point that I was going to raise during the energy discussions is that the council -- On behalf of the council, we did submit a request on additional work that was going to be done with seismic testing permits that were going through the CZM process in the State of South Carolina.

We provided pretty much our foundational information that we had provided in the past on impacts to council-managed species, habitats, et cetera, and the bottom line is we got a response back that

the State of South Carolina had found the permit activities inconsistent with the state's coastal zone program.

I think it was really important to have that, and we collaborated really closely with DNR and with the CZM, because, originally, when this was even discussed, that was brought to the table, and we provided the mapping information and provided -- Even in the first iterations, when they were thinking about doing some of this -- I think one thing I wanted to raise, because it has connections with some of the other activities, is that the state was very effective at highlighting how important the SMZ areas were and had gotten even the first discussions movement away from all the inshore areas, away from the special management zones and conservation areas at the state level.

I think that was an important aspect that was integrated early in that process, but, ultimately, so far, that has followed-up on the council's direction to address the issues on oil and gas and then support trying to advance our activities on wind development. Hopefully, at this meeting, we can have an update of the more recent research that was done on the Kitty Hawk, and we had the good kind of foundational information, and I think we're in a very different position than they are in the Northeast, in terms of it being able to collaborate closer right from the beginning. We already have some, and then hopefully we'll see what the latest is and get some timing beyond that and just some energy updates on that.

MR. POLAND: All right. Thank you. As was mentioned earlier, under Other Business, we added Art to the agenda, and he wanted to discuss some habitat issues related to Hurricane Dorian and its impacts in Florida and the Bahamas.

MR. SAPP: As I'm sure everybody in the room here is aware, Hurricane Dorian a couple of weeks ago crawled across the northern Bahamas, as an extremely strong Category 5 storm, wreaking havoc on mainland Abaco and its keys, and, of course, Grand Bahama. The whole world knows about the humanitarian crisis that occurred over there, and it was truly was a horrible thing, but we got lost in the crisis, and somehow the world did not find out about a substantial oil leak, or bunker oil one-time treated crude oil leak.

That site is owned by Equinor. Now, by no means am I here to point direct blame with Equinor, and I don't know that there is a facility of any kind designed to stand up to thirty-plus hours of Category 5 storm conditions. You can see that black stain that reaches out across to the north and east there, and it goes a long way. Now, their capacity, or what they are claiming to have held at the time, was 1.8 million barrels of oil, and that's 27 percent of its capacity.

They say they had 1.8 million barrels onsite, and, again, there's a -- The difficulty we're having here is the wind is still blowing close to forty knots off the west when this video was taken, and so vessels weren't really able to get in and get their hands on that material. By the time the wind did come down, five days later, god knows where that stuff went. We're told by some that bunker oil, after being tossed and turned around, is prone to sink, and so, if that occurred, perhaps it's something that can be found on the bottom over there, but, if it did not, it floated for five days at forty knots, and it's gone, god knows where, into the loop current.

My concern here is the lack of press that has occurred with this, and I'm hoping that somebody here knows someone that can at least get some national coverage on this, and the purpose of that coverage would be to ensure that Equinor does the right thing in cleaning it up, and so there's ten

tanks there, and six of them failed, and one of them quite clearly did not have any oil in it. The tank was rusty, and there's still shot in here somewhere that will show it, but five of the others did. Two of them are still full to the brim, and clearly oil had blown off it, and any water, obviously, is going to displace, and more will spill out, and then there's three that are quite clearly dry and very black and appear to have contained oil.

That one right there is -- That shot right there is one of my biggest concerns, and so there was a boat that did try to get in to -- Sweetings Key is the eastern end of Grand Bahama, and it's a very secluded, small-populated area, but they took the brunt of it there on Grand Bahama. They were under an extraordinary condition for a long time, and these guys took a pretty substantial risk getting in there, and all they were thinking is humanitarian and we've got to get some support to our friends. These guys came out of the Keys, and asked not to be named, but they ran by a substantial amount of oil in the water and didn't give it a second thought. It was just we've got to get these guys something.

Materials did go into the ocean, and we're confident of that. We can't prove it, but it's being said now that there is no proof that oil went into the ocean and it's just this mess on land, and so my purpose here is simply to hopefully get some people to put the right kind of pressures on them to clean it up properly and maybe find out where all this stuff did go, but it's clearly a substantial mess. You don't paint the ground black like that with a couple of gallons of oil. That's all I've got.

You know what? I do have one more thing. I have been here all week, and I haven't mentioned sharks, and so NOAA currently is taking public comment on the current, or next year, 2020, shark retention, commercial shark retention, limits, and so, if you want to please your constituents, the fishing constituents, perhaps somebody make some calls and ask them to let us take a few more of those things. That's it.

MR. POLAND: Thanks. It always goes back to sharks. I appreciate that, Art, and I will say that I had no idea that this occurred, and I don't think most people did, and I am certainly sensitive to it and sensitive to the habitat impacts of this. Process-wise, I don't know what the council as a body can do, and, I mean, certainly there is folks sitting around the table that can take this information back to their agencies and to their stakeholders and discuss it. Roger is a member of SECOORA, and he can certainly take it back to SECOORA and raise the issue with them, but, again, it's devastating, the pictures, and I agree. I don't know any structure that could withstand eighteen hours at thirty-six -- It's just bad, bad, bad, and so thank you.

MR. WOODWARD: I am not on your committee, but I guess take some comfort in the fact that *Time Magazine*, their online version, is now treating this subject matter, and the *Sentinel* did a pretty extensive -- But the thing is they are really focusing on that onshore oil and the recovery of it, and, like you say, I think the oil that got away is sort of in the out-of-sight-out-of-mind world, which is a convenient thing to happen when these types of events occur. Unless it's out there where somebody can see it and it's annoying, it just gets forgotten about, and so I think your point is very relevant, but it's going to be a challenge, and we'll probably find it eventually.

MR. SAPP: One of the biggest concerns that we had, immediately, was, due to that substantial westerly breeze -- There is a really special area on the western side of mainland Abaco called the Marls, and I don't know anywhere else in the world that it exists, and it's world-class bone fishing,

a species we don't deal with, and, really, I don't either, on a personal basis, but a lot of my customers do, and I have had the good fortune of riding around in there, and it really is a beautiful place, and you see things that you don't ever see anywhere else.

I am petrified that a good portion of this stuff may have made it up into there, and it's so hard to access, especially after more than 90 percent of the vessels, especially the small vessels in the area, got obliterated in that storm, and I don't know that anybody has put feet on the ground or boats in the water in that shallow stuff to find out, and that would be a goal as well here, to maybe figure out how to make that happen.

MR. WAUGH: In terms of what you asked about what the council can do, I think the concern to us would be is there any potential for some of that oil to make it to the stream and get up into our environment, and so I wonder, and Roger may have a better idea of who to direct a letter to, but if the council chose to send a letter asking for a presentation at December or March on what information is available to show did any of that oil make it into the stream and does it have the potential of entering our ecosystem. That is something that would concern the council and the council could weigh-in on.

MR. PUGLIESE: To that, I think that was -- Originally, I had seen very small things, and this has become a lot greater. I think one of the things that I wanted to follow-up immediately was the opportunity to go through our partners with SECOORA and some of those to be able to provide information on if they have the ability to show circulation pattern activities that would give us some insight into that.

The other thing that I think would probably also be worthwhile looking into is the State of Florida's oil contingency planning, and I think Kathleen O'Keefe was involved directly with the bigger plan, and that may have some contingencies in there with -- I can't believe that somebody hasn't thought about that from outside of the state activities, what some of those are, and so there may be some insight into if that's something that's been considered, and they may have some things that already have the ability to look and see if that is something that would actually be moving through the area or potentially impact U.S. waters.

I think the only last point that I was going to make is that I also look at this as a concern, because of, very specifically, that opportunity of impacting the U.S. waters. There may be activities to the south that have pretty significant advances in oil and gas exploration in Cuba, and so these types of considerations -- This may just be the beginning of that for other aspects too, and so I think it's important that we understand some of those -- I think we do have some of the partners that are monitoring the ocean itself and the opportunity to be able to highlight that and really understand what the impacts potentially could be on U.S. waters. There is a lot of work being done on that discussion between the Bahamian boundary right now, and I think that's very timely to engage.

MR. POLAND: Thanks, Roger.

DR. LANEY: Mr. Chairman, I am reminded of a conversation that I had with Spud earlier in the week, and I was just going to suggest that -- I know we have a capsized ship in Georgia, and I would just ask Carolyn or Spud if they wanted to give us a brief update on the status of that. I know I had talked to Spud about it earlier in the week.

MR. POLAND: Do you all know anything about a ship?

DR. BELCHER: You're taking away from my report on Friday, and that's what you're doing, but, last Sunday, early morning hours, two o'clock, one of the roll-on-roll-off vessels, and it's predominantly vehicles, and so mostly Hyundai and Kia go out on them, but they do have some small like farm implement machines that go out as well, like Kubota and that kind of thing, and so a vessel transport.

The current I am going to say speculation, because it's not anything that has been confirmed, but the discussions that have been had was there was a loss of steerage, and they were trying to make the dogleg to go through the sound, and so they were basically heading north to make the east swing to go out, and the boat listed, and they went to correct, and, when they corrected, there was more of an over shift, and so they don't know if it was steering loss or ballast shift, and there is all of that that is out there. There is the National Transportation Safety Board involved, and so that's all going to be looked at.

The boat basically heeled over to the south side of the channel, and so it was at an angle for a while, before it completely rolled over to its side, and so it took a ninety-degree roll. Twenty people were taken off, and four people were on for a little bit of time, and they were down in the lower engine compartment of the boat, and they were able to successfully get them off last Monday, and the good news is it's not actively leaking.

We have had some degree of sheening, and it's put what they call like a bathtub scum ring on some of the adjacent marsh areas, but nothing of any significance to coat. They see there is a high-tide mark and a low-tide mark, but there's not anything actively sheening right now. They have had a couple of vents that they put some socks in, to make sure that there wasn't any kind of belching of materials, but all of the fuel tanks are solid, and they are not having issues with that.

It closed the port for a few days, and the good news is they are letting limited traffic past, and they were able to get -- There was a couple of boats that were in port that needed to get out, and, on the maritime thing, a lot of us go and check that out, because you get to see all the cool boats that transit it and out, and there was like eight boats stacked up last week before they could open it up, and so it had a pretty heavy impact for the port. They are working on that, and there's a lot of people involved in this, and it's impressive to see the number of teams that are coming together from all across the globe to handle this problem.

She is GPS marked, in case there is drift, and they have used tugs to get her more secure to the bank, and so they're not worried about the passing traffic right now dislodging it or moving it other places, but we're in a status quo hold until they figure out what the best way is to right her, whether they take her apart -- She is only two years old, and so, therein, obviously, the company doesn't want to lose her.

If they can get away with not cutting her up, they are not going to cut her up. One of the groups that is involved is the group that righted the Concordia, and so, that one, they were actually able to do that without cutting up, and so hopefully there's a good thinktank there that might be able to bring her up. That's kind of where we're at now, is it's just letting that brilliant thinktank of engineers and marine specialists to figure out how they're going to deal with it, because the weight load is the biggest thing. There was 4,200 cars on it.

MR. POLAND: Thanks, Carolyn. We heard a little discussion about potentially sending a letter, and I don't know who a letter would go to, and I don't know what kind of information we would request or expect to receive, and I think, at the very least, give guidance to staff and Roger to maybe just investigate that and see if there's any information out there that can be brought back to the council in December or March to talk a little bit more about the potential impacts from the oil in the Bahamas and kind of general what kind of habitat and species impacts we could expect here in our management jurisdiction.

MR. PUGLIESE: Yes, and I think, as I stated, I think one of the first things would be reaching out to our observing partners at SECOORA, and also with the state on their oil spill contingency planning, that aspect. The other aspect, and I know, when we were in international discussions, the Coast Guard has some pretty significant planning that they are doing, and they had already been doing some planning on the potential activities with Cuba, and so there may be a number of those that we can reach out to get at least a scope of what the potential is and what might be a consideration that might impact council-managed species.

MR. POLAND: All right. Thanks, Roger. Any other business to come before the committee? If not, this committee is adjourned. Thank you.

(Whereupon, the meeting adjourned on September 19, 2019.)

Certified By: _____ Date: _____

Transcribed By:
Amanda Thomas
October 17, 2019

9/19

SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL

2019 COUNCIL MEMBERS

✓Jessica McCawley, **Chair**
Florida Fish and Wildlife Conservation Commission
2590 Executive Center Circle E. Suite 201
Tallahassee, FL 32301
(850)487-0554 (ph); (850)487-4847 (f)
Jessica.mccawley@myfwc.com

✓Mel Bell, **Vice Chair**
SCDNR-Marine Resources Division
P.O. Box 12559
217 Ft. Johnson Road
Charleston, SC 29422
(843)953-9007 (ph); (843)953-9159 (fax)
bellm@dnr.sc.gov

Robert Beal
Executive Director
Atlantic States Marine Fisheries Commission
1050 N. Highland St. Suite 200 A-N
Arlington, VA 22201
(703)842-0740 (ph); (703)842-0741 (f)
rbeal@asmfc.org

✓Anna Beckwith
1907 Paulette Road
Morehead City, NC 28557
(252)671-3474 (ph)
AnnaBarriosBeckwith@gmail.com

✓Chester Brewer
250 Australian Ave. South Suite 1400
West Palm Beach, FL 33408
(561)655-4777 (ph)
wcbsafmc@gmail.com

✓Dr. Kyle Christiansen
150 Cedar St.
Richmond Hill, GA 31324
(912)756-7560 (ph)
christiansensafmc@gmail.com

✓Chris Conklin
P.O. Box 972
Murrells Inlet, SC 29576
(843)543-3833
conklinsafmc@gmail.com

✓Dr. Roy Crabtree
Regional Administrator
NOAA Fisheries, Southeast Region
263 13th Avenue South
St. Petersburg, FL 33701
(727)824-5301 (ph); (727)824-5320 (f)
roy.crabtree@noaa.gov

✓Tim Griner
4446 Woodlark Lane
Charlotte, NC 28211
(980)722-0918 (ph)
timgrinersafmc@gmail.com

✓ ~~Doug Haymans~~ Dr. Carolyn Belcher
Coastal Resources Division
GA Dept. of Natural Resources
One Conservation Way Suite 300
Brunswick, GA 31520
(912)264-7218 (ph); (912)262-2318 (f)
haymanssafmc@gmail.com

U.S. Fish and Wildlife Service
Representative
TBD

✓LCDR Jeremy Montes
U.S. Coast Guard
909 SE 1st Ave.
Miami, FL 33131
(305)415-6788(ph); (305)710-4569(c)
Jeremy.J.Montes@uscg.mil

✓Stephen Poland
NC Division of Marine Fisheries
PO Box 769
3441 Arendell Street
Morehead City, NC 28557
(252)808-8011 (direct); (252)726-7021 (main)
Steve.Poland@ncdenr.gov

✓Art Sapp
2270 NE 25th St.
Lighthouse Pointe, FL 33064
(954)444-0820 (ph)
artsappsafmc@gmail.com

2019 COUNCIL MEMBERS continued

Deirdre Warner-Kramer
Office of Marine Conservation OES/OMC
2201 C Street, N.W. Department of State, Room 5806
Washington, DC 20520
(202)647-3228 (ph)
Warner-KramerDM@state.gov

✓David Whitaker
720 Tennent Street
Charleston, SC 29412
(843)953-9392
david.whitakersafmc@gmail.com

✓Spud Woodward
860 Buck Swamp Road
Brunswick, GA 31523
(912)258-8970 (ph)
swoodwardsafmc@gmail.com

Dr. Wilson Laney

Pat O' Shaughnessy

Duane Smith

Susan Boggs

Erika Burgess

Tony DiLernia

Dewey Hemilright

Shep Grimes

Frank Helies

Dr. Jack McGovern

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Monica Smit-Brunello

Marcel Reichert

CLT James Bruce

Jocef Santiago

SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL

COUNCIL STAFF

Executive Director
✓Gregg T. Waugh
gregg.waugh@safmc.net

Deputy Director – Science & Statistics
✓John Carmichael
john.carmichael@safmc.net

Deputy Director - Management
✓Dr. Brian Cheuvront
brian.cheuvront@safmc.net

Fishery Scientist
✓Myra Brouwer
myra.brouwer@safmc.net

Citizen Science Program Manager
✓Julia Byrd
julia.byrd@safmc.net

Admin. Secretary/Travel Coordinator
Cindy Chaya
cindy.chaya@safmc.net

Fishery Scientist
✓Dr. Chip Collier
chip.collier@safmc.net

Purchasing & Grants
✓Cierra Graham
cierra.graham@safmc.net

Fishery Biologist
✓Dr. Mike Errigo
mike.errigo@safmc.net

Fishery Economist
✓John Hadley
john.hadley@safmc.net

Public Information Officer
✓Kim Iverson
kim.iverson@safmc.net

Administrative Officer
✓Kelly Klasnick
kelly.klasnick@safmc.net

Senior Fishery Biologist
✓Roger Pugliese
roger.pugliese@safmc.net

Outreach Program Coordinator
✓Cameron Rhodes
cameron.rhodes@safmc.net

Staff Accountant
Suzanna Thomas
suzanna.thomas@safmc.net

Fisheries Social Scientist
✓Christina Wiegand
christina.wiegand@safmc.net

Outreach Specialist
✓BeBe Harrison
bebe.harrison@safmc.net

Outreach Specialist
✓Allie Iberle
allie.iberle@safmc.net

SEDAR Coordinators

Dr. Julie Neer
julie.neer@safmc.net

Kathleen Howington
kathleen.howington@safmc.net

SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL

2019 COMMITTEE MEMBERS

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