

SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL

CITIZEN SCIENCE COMMITTEE

**Bahia Mar Doubletree by Hilton
Fort Lauderdale, Florida**

June 11, 2018

SUMMARY MINUTES

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Charlie Phillips

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Other observers and participants attached.

The Citizen Science Committee of the South Atlantic Fishery Management Council convened at the Bahia Mar Doubletree by Hilton, Fort Lauderdale, Florida, Monday afternoon, June 11, 2018, and was called to order by Chairman Mark Brown.

MR. BROWN: The first item is to receive an update on the Citizen Science Program development and function of the Operations Committee, and, Amber, that's you.

MS. VON HARTEN: This document just has a little bit more detail, like I said earlier, to remind you where the Operations Committee kind of came out of. The Operations Committee idea came out of our Citizen Science Program blueprint, which was developed from the 2016 workshop, and I just included some of the programmatic infrastructure kind of diagrams that were in that document, to show you that we have our A-Teams down here, working to develop recommendations for the program, and then we had an Operations Committee and also an Advisory Committee, with eventually an Oversight Board to help with the major decisions for the program.

Of course, we have our five topical action teams that have been meeting on a monthly basis since August of 2017, and you will get an update about their hard work as the last attachment for the committee. Here is the five A-Teams and kind of what they were tasked with helping us develop for the program, and we did have the plenary all-hands A-Team meeting back in January, to kind of bring the teams together to discuss their work and also get recommendations and help from some of the other A-Teams on some of the terms of reference that needed to happen collaboratively, where there was some crossover in duties.

These are the formal recommendations that they presented at the March council meeting that you all adopted, and then, again, here is the description of what they will be responsible for, and, so, again, they're going to be drafting these SOPPs and the policies and helping with operational advice, as needed, and the members would consist of A-Team members as well as designees from the Science Center, SERO, and the SSC.

Staff will be providing support for coordinating and facilitating the work of the Operations Committee and helping to provide them the information from all of the Action Teams' work to develop the SOPPs. We will start that work hopefully in the next month or so via webinar, and I think it will be mainly just a lot of back-and-forth work via shared documents, and then we do hope to meet in-person in August in Charleston for a two-day meeting, and I think we're going to be just having that meeting at our office, to save on some costs, and it's a small group, and we felt that they could be accommodated at our office.

That group will be meeting then, and then hopefully we'll have some initial draft SOPPs for you guys to look at in September, and the timeline that we hope for is to finalize those at the December council meeting, and so if there is any questions about the Operations Committee, I will take those.

MR. BROWN: The next item is to review the citizen science research priorities.

MS. VON HARTEN: Okay, and so this is the result of some work from multiple groups. The Projects & Topics A-Team was tasked -- One of their first tasks was to help us figure out a mechanism to determine what types of topics and data needs that the program might be able to address using citizen science projects.

They spent a good bit of time kind of researching some of our existing resources that could inform the different topics that could come out of the citizen science research priorities, and you will see that a lot of the topics in this document are framed around some of the items that are in the council's four-year research and monitoring plan. That was one of the sources that this A-Team used to help develop this.

This also -- Of course, that reflects input from the council, and so the latest version of that research and monitoring plan was used to develop this document. This document has also been vetted by our APs, our Snapper Grouper and Mackerel Cobia APs that met recently, and, of course, all the A-Teams have had time to review this as well, which there is about fifty-five members of the Action Teams, all representing fishermen, managers, data managers, outreach folks, a whole host of expertise there.

Again, our hope is that these will be the priorities for the program, to help fuel development of projects using citizen science, and so this is very topic-based, but each of the topics is kind of broken down into what type of volunteers we're targeting, what type of data would be needed to be collected, potential target species, based on the research and monitoring plan, and also some of the SEDAR recommendations. Also, the anticipated outcome of collecting this type of information and the potential cost, and just a note about the potential cost. I just used a very subjective scale of \$ to \$\$\$, \$ kind of being lower cost and \$\$\$ possibly being higher cost. Just not knowing the scope of a project, it's kind of hard to really put a number on that.

Let's just quickly walk through this, and, if you do refer back to your agenda overview, I did have some specific kind of discussion questions that I think would be helpful for our discussion about the topics. If you could think about are the species that we have listed under each of these topics under consideration -- Are they adequate? Do you think there are some that need to be added to any of these topics? Are there any missing? Do we need to be considering other target audiences for project participants, based on these topics? Are we missing any research topics that should be in this list of priorities?

Then, also, we would be really interested to getting a list going of any researchers or agencies or fishermen or any other folks that are conducting complementary activities that are related to these topics, so that we can get their feedback and also just start getting a list of folks, of potential project and program partners, to start developing projects, because, again, the whole point of this is for us to be complementary in any existing research that's going on, data collection efforts, and also to help fill data gaps and make sure that the projects we are supporting are producing data that can actually be used in the management and assessment process.

The first topic is age sampling, and we felt that that would be a good topic that we could target recreational anglers. Again, obviously, we would need to be collecting otoliths and things of that nature, and some of the target species that we have listed are cobia, greater amberjack, scamp, snowy grouper, and gag, but there may be others. Obviously, this information could be used to characterize the age of catches, and we felt that this would be a moderate cost type of project. Feel free to stop me as we go.

DR. DUVAL: I guess one thing, in terms of the target species, that I was wondering if it might be worth adding, and this was really based on the SSC report, but they had made a recommendation

to consider assessing knobbed porgy or a porgy complex, and so I didn't know if it might be appropriate to add that species to the list. Obviously, we want to, I think, consult with folks at the Beaufort Lab to see what their inventory of age structures is for those species, but that might be one to add.

MR. BOWEN: Maybe it's not appropriate to ask now, or maybe when you get done, Amber, but, when we're talking about otolith collection, is that going to lead into collaboration with the states to make sure that there is someone there that can and will collect the otoliths properly?

MS. VON HARTEN: Again, that is the nitty-gritty project details that would need to be developed for a project that is focusing on age sampling, but, again, we would definitely want to be partnering with those folks that are already doing that kind of work and working that into any kind of a budget for a project, to make sure that there was the resources there to get those processed as well.

Moving on, maturity data, and pretty much both sectors could be involved in this, as well as also we had some suggestions from some of our AP members to target tournaments, since that would be an easy group of folks to work with, tournament organizers specifically, and this would involve gonad collection, either biological samples or there are some ways to do photo type of documentation of gonads. The target species would be cobia, red porgy, and snowy grouper, and the outcome would be to improve reproductive information, and that would be at a moderate cost. I am going to just keep moving on.

MR. HARTIG: Thanks, Amber, but I'm just wondering about red porgy. When do red porgy spawn? Don't we have this four-month spawning closure for red porgy, basically? I was just wondering how you're going to accomplish this task. I guess you could do an EFP and have a number of participants or something like that, and then, potentially, we are going to open up the commercial fishery during that time, and so there could be some samples coming in, but right now there aren't.

DR. DUVAL: I think Ben just made the point that I was going to make, that we're considering an action in Snapper Grouper to potentially open up that January through April time period to harvest, and so that would provide for some additional samples from one sector, but that's a couple of years down the road, I think.

MS. VON HARTEN: Okay. Number 3, and, also, I did not mention that these priorities are not in order of importance. These are just listed as-is. Discard information, targeting both sectors again, and the data needed is length of fish, depth caught and released, number of fish, reason for discard, any devices used to descend those fish. The target species, again, is scamp, red snapper, deepwater groupers, red porgy, greater amberjack, cobia, and king mackerel sub-legal releases was suggested for that. Obviously, it's to improve discard removal estimates and the ability to characterize the size composition of discards, and, again, remember this is going to be partially addressed in our pilot project with scamp, and so we are starting out with one of our priorities with the pilot project.

Genetic sampling is Number 4, targeting both sectors. Also, there was a suggestion to reach out to the bait and tackle shops. A lot of times, anglers will go there to weigh fish and measure fish. Of course, tournaments and targeting those tournament coordinators and directors to get fin clips.

Cobia was the only species listed, and there may be more that you all would like to consider. The anticipated outcome, obviously, is stock ID, with a low to moderate cost. Any other species?

DR. DUVAL: Didn't we have some questions as well about hogfish, I think maybe the delineation between the Georgia through North Carolina stock versus the Florida through Florida Keys, and I know that, in North Carolina, we have been working with some of our recreational anglers down in the southern part of the state who are pretty avid hogfish fishermen to work with both our staff as well as the NMFS port sampler out of Wilmington to try to collect as much age information or fin clips and age information as possible for hogfish, and I didn't know if -- It seemed to me like there was a little bit of uncertainty around that, and so I might just throw that out for an addition.

MR. BROWN: John, I've got a question for you. We've been catching a lot of red snapper lately, and a lot of them are full of roe, and it's pretty easy to tell, this time of year, which one is a male and which is a female. If there any benefit in doing some sort of a thing where the ones that you catch you keep a record of how many are males and females for any type of project that might be able to help for the future?

MR. CARMICHAEL: Nothing comes to mind right off in terms of that, because it would imply that you have the ability to do some sort of sex-determined assessment, and that would require being able to tally the catches by sex, and that would be a pretty tall order. It might be something if there was some reproductive information available that you could get it, if you're encountering fish in those conditions, but as far as like male versus female, I think that it would take an awful lot more than just that, and we would have to be in a position where we thought that was -- Is that a major uncertainty in the assessment, and is that what we should go after, as opposed to some of the other stuff within red snapper?

MR. HARTIG: I think red grouper might be appropriate for the fin clip one as well. I know we have disjunct white grunt populations as well, and I know there's been work done on that, but it may be interesting to look at more of that in the future.

MR. CARMICHAEL: I was just going to say that white grunt is a big one, because that's on our assessment priority list, and we have early indications, from the last time it was looked at, of there being multiple stocks, potentially.

MS. VON HARTEN: Okay. Also, looking at ecosystem and habitat types of priorities and getting into some bottom habitat mapping, targeting recreational and for-hire captains that are out there trolling around and fishing. The idea was to get some mapping data using multibeam or side-scan sonar equipped on fishing vessels to improve habitat maps and improve resolution of those things, with a probably higher cost for that type of a project.

Also, doing some work in the managed areas that the council has, our MPAs and also spawning special management zones. All of these areas have these system management plans in place, and we've been talking some with Chip about the potential for using citizen science types of approaches to get some data out of those areas. This is targeting recreational and commercial fishermen and looking at species length or depth, and it's looking at deepwater snapper and grouper to kind of look at changes in fish abundance over time in those areas, with a moderate cost.

DR. DUVAL: This overlaps a little bit with the third topic, in terms of discard information, but when I think about monitoring in those areas and when you name the target species of deepwater snapper and grouper, it seems like there is some overlap there. You may want to consider also obtaining information with regard to some of the barotrauma research, and that's not necessarily discards, because you're not allowed to fish in those areas anyway, but you might be able to get some individuals to participate in some research on looking at impacts of descending devices or barotrauma research or something like that in those managed areas.

MS. VON HARTEN: Okay. Then also looking at some of the social and economic types of projects, and so looking at fishing infrastructure and kind of trying to work with -- It could not just be fishermen, but also community members and just volunteer citizens in different communities to help us get more information about fishing-related infrastructure, and so kind of the working waterfronts, but also seasonal roadside seafood stands and things that pop up that are fishery-related that, obviously, impact our fisheries, to get a baseline of that kind of infrastructure to document potential impacts from regulations and just get a good overview of what's happening in those different fishing communities.

Historical fishing photos, this is working with primarily the for-hire sector for now, I think, using digital images and taking these historic images that are available from some of the headboat and charter fleets in years prior to when fishery-independent surveys were in place to try to help fill in some of that time series of data to get better estimates of what was actually happening in that fishery, and so getting length comps and just species composition for certain species that are in those photos. Just a note that we -- I was going to talk about it in the last presentation, but we did just submit a proposal through an internal NOAA opportunity to look at this type of work using citizen science, using actually crowdsourcing.

MR. BROWN: Was that the old-timers one?

MS. VON HARTEN: Yes, the old-timers, getting the old-timers photos, and what goes along with that is also some oral history work, because, obviously, a lot of those photos have stories behind them, and making sure that those stories aren't lost. The idea was to do some oral history type of work and possibly even training volunteers to go out and do some of the interview work to capture that kind of information, to get that historical perspective about how these different fisheries operated over time.

Looking at just general oceanographic environmental and weather condition type of projects, and lots of different avenues to approach there, whether it's collecting bottom temperature or weather impacts to fishing. Presence and absence of sargassum and the size of the area has come up from some of our advisors, and also our Mackerel Cobia AP suggested looking at the movement of forage fish, looking at bait and shifts in the patterns of a fishery, in particular mackerel, based on how that bait is moving around based on environmental conditions to help just build a database on what's happening in the environment and climate and conditions and how those impact the patterns in a fishery.

Then the last one is looking at possible recordings of rare species observations, just getting point observations of unusual or rarely-encountered species that maybe you're seeing in areas that you haven't seen before to look for a baseline for a species shift, and I know Mark has talked about

seeing some mutton snapper up off of Charleston after some of the hurricanes this past fall, and kind of getting some of that information could really be interesting and useful down the road.

DR. DUVAL: Amber, I should have mentioned this earlier, I think when we were on Topics 7, 8, and 9, the infrastructure, historical photos, and the fishery oral histories, and I think we mentioned -- I might have mentioned this on the last call, but there are a few researchers in North Carolina who have been working on fishery oral histories, folks located in Carteret County, and maybe one bullet to add to this -- I really like how you organized this of who are the target volunteers, what is the data needed and the anticipated outcome, so that people know what the benefit is and the potential cost, and maybe add that item for potential partners, because I keep forgetting that that's one of the questions.

MS. VON HARTEN: Thanks for that. That's a good suggestion. Just so you kind of know where this document hopefully will go, once we have these research priorities kind of finalized, the Finance & Infrastructure A-Team has been working on developing different funding models that we can pursue to support not just projects, but also the program, where that source of funding might be coming from, and then different funding opportunities that arise throughout the year, whether they are RFPs through grant programs or foundations that might be interested in partnering with the council's program, corporate sponsors, folks like that, so that we can start matching up some of the funding opportunities with some of our priorities and see where there is some overlap and alignment in common goals and objectives and pursuing projects, and so that's our intent of how this document would be used.

MR. HARTIG: Part of this question is going to go to Clay, and I don't see -- I see the age sampling that you have as the first one, and I know that's the gold standard of the assessment, but, if you're asking volunteers to collect otoliths, it takes a long time, and you're still not going to get a lot of otoliths. I mean, you're going to get more, but I have collected them for a number of species, and so I understand, but if you can get lengths from someone and get a lot of them, does that give you a bang for your buck in the assessment? Say if you had ten times the lengths that you have now in your assessment from the entire area of the fishery, does that help, in lieu of more ages?

DR. PORCH: That's a long answer. It depends, right? It depends on how they're collected. If it's just completely opportunistic and we don't know where all the samples came from, it may not be that useful at all. Now, if we have the otoliths and the lengths, and we know roughly where they are coming from, we can use those towards an age-length key, and so then the answer is going to depend on how well we've sampled whatever species we're talking about, and so, not being familiar with the exact numbers that we have in the South Atlantic stocks, I can't say which ones that it would most benefit, but that's what we would have to look at. If we've got some stocks where we're just not getting many samples and we can get the citizen science conducted in a way that we can determine where they are being caught and make sure, like I said, we get lengths along with those otoliths, then, yes, we could probably make use of it.

MR. HARTIG: That having been said, lengths might be something we could add to this list, and certainly I see these things, Clay, in working with you guys to set up the sampling protocol and where those samples should be collected up and down the coast, so they are appropriate for assessment use, and that's how I see this working. I don't see us just going out and collecting -- Coming to you and you tell us when and where do these samples need to be collected.

DR. PORCH: I would just add that where we would get even greater bang for the buck is the size of the discards, or even if we only knew why they were being discarded, and so because they're below the size limit or because of the bag limit, and that would actually be informative for assessments.

DR. DUVAL: I guess, maybe in light of that, in terms of discard information, and so Topic Number 3, in terms of the target species, we know we have a huge number of -- We have had, in the past, a huge number of black sea bass discards, and I know Mike E. did an analysis looking at the MRIP data and basically determined from that that the majority of those discards were undersized, but, if we could specifically just ask people why did you throw your black sea bass back, especially when you have millions of fish being discarded, like we do with black sea bass.

MR. PHILLIPS: Amber, when you're collecting up your finance partners, are they going to have a say-so on what projects they're interested in funding, or how are you going to do that?

MS. VON HARTEN: One of the things that, when the Finance A-Team started delving into how to develop partnerships for the program, it was -- We talked to several different foundation groups and non-profits to kind of learn of the approaches that they use, and one of them was Tall Timbers, and they are a quail conservation group that partners with the states. I remember, from our conversation with him, with Bill, he said the number-one thing that will ensure a successful partnership is making sure that you align your goals from the get-go, because, if both parties aren't interested in what you're doing, then it's not going to be successful.

That is kind of the approach that we're starting to use, and we are starting to develop some partnerships, and so the Finance Team has helped identify some potentially programmatic-level partners as well as project-level partners, and we're starting to make those approaches, and making sure that we have our research priorities and we have our goals and objectives for our program and let's talk about what their goals and objectives and their research priorities and find out where they overlap and let's build a long-term partnership that's based on that, and so that's kind of the approach we're taking, so it's mutually beneficial.

MR. BROWN: Is there any more questions?

MS. VON HARTEN: If you guys think of other stuff to add, especially on the partner front of folks that are doing some of this work, and, obviously, we have a good list already going in our heads, but especially on the academic side. If you know of some researchers that are doing similar types of work, please feel free to forward those on to me.

The last thing that I wanted to share with you guys was just to give you hopefully a better sense of how and why we're spending so much time on the program development side of things and share with you some of the work, more specifically, that the A-Teams have done, because, as I have mentioned and keep saying, the whole purpose of developing this program is to work collaboratively with fishermen, scientists, researchers, and managers, all the folks that are going to be involved in projects, to design projects that are robust and that can actually -- Then have an end-use already in mind when they are planned, and we have a place for that data to be stored and warehoused, and we have an end-use in mind and that it's been designed in a way that can stand up to an assessment as well as helping you all make better management decisions.

We have been very fortunate to have this team, these fifty-plus members on these Action Teams, that are experts in their fields, in these different topical areas, to help us develop these program recommendations and the different components of our program and then actually be able to test it out, test out their recommendations, through our pilot project.

As I mentioned earlier, the team has been meeting. The teams have been meeting since August of last year, and we are getting close to being wrapped up with those original terms of reference that we've been working on, and, again, as I just mentioned, we are starting to develop some program partnerships and seeking out project level funding opportunities, not just internally, but also trying to help encourage external projects to be developed, and so letting people know what our research priorities are, so that we can help foster project development that other people can seek funding for but that fall under the umbrella and meet the standards of our program.

Our pilot project, we did get the funding secured in March of 2018, and so we have been working on that to develop that project to address the scamp discards, and I will talk a little bit about that, and then, of course, we're moving forward with activating our Operations Committee, and you guys have just given me a review of the research priorities, and so we can move forward with that.

I have these two tables in this presentation, and the first is kind of showing you all of the A-Team products that have been developed from a programmatic standpoint, and so they have kind of fallen into a couple of different categories, one being templates that they have developed to help us be able to help guide development of projects, inventories that we can use as a resource to help develop the program and projects, and then a bunch of additional items.

For instance, the Data Management A-Team, they have helped us develop a document that is a template for how a project should consider developing data standards, QA/QC, data requirements documents that outline how data will be collected and managed for a project, and so all of these types of templates are things that we can use -- We get a project idea, and we can use these templates to start just plugging in information and getting that project up off the ground and designed in this way that these A-Teams have deemed are going to be really, really strong.

We also have a data management resources by agency, and that was based off of the inventory that they developed through a survey asking folks of the existing resources that we have in the region, and they're also working on looking at different options for how data from the Citizen Science Program should be stored. The Volunteers Program is developing, or has developed, templates for a basic volunteer orientation program that volunteer citizen scientists would participate in to participate in a project and ideas for training by different types of projects and then sample approaches for training.

They also have developed probably one of the most important first tools that we will hopefully launch this summer, and that's the online volunteer interest form, which is going to be our recruitment tool for getting volunteers to participate in our program. It's going to be our first point of contact that anybody that is interested in getting involved with our program can tell us a little bit about themselves and their expertise and what their interests are in collecting data and the types of things they are willing to go out and do and the time that they are willing to commit, and then, also, hopefully, it will serve as a recruitment tool for our scamp project.

The Projects & Topics Team, as you just saw, they helped develop these research priorities and ways to help identify research needs moving forward, and another thing that they have developed is something called a project endorsement program, and this is a program that's being modeled after an ASMFC habitat initiative program that, in the absence of funding, the project still wants to be able to offer something, or the program wants to be able to offer something to potential researchers that are developing a project. That would be through applying to the program with your project idea, and it goes through a review process, and we give it a stamp of approval that it meets our standards for the Citizen Science Program, and we could give them a letter of support to help them carry out their project. They have also developed project review metrics for that program and an evaluation component as well.

The Finance & Infrastructure Team has been working on helping us figure out the operational and programmatic budget needs that we need for the program, an active list of project and program funding opportunities, as well as different funding models and the sources that the program needs to pursue for long-term sustainable.

The Communication A-Team has developed a template for a communication plan, and so how we craft our messaging around projects and the program as a whole and also different approaches for communicating and doing outreach and also sharing project results.

This is a pretty big accomplishment for these five A-Teams, who have been meeting virtually for the last ten months to produce these -- These are the kind of templates and resources that will go directly into our SOPPs, and we'll have all of this set up so that we can operate pretty efficiently and really produce some good information.

A little bit about the pilot project. As I mentioned, we did secure the funding in March of 2018, and we quickly realized that we really needed to put together a project planning and design team to help us develop the project as a whole but also work with the app developer on developing the app. We felt it was really important to include a whole host of expertise on that team, and so we have fishermen, and the Science Center folks are on there and some researchers from North Carolina Sea Grant, and, of course, the app developer with Harbor Lights Software. ACCSP has stepped up and is serving as our data partner for this project, and so we're working with them.

Also, we are still working with the folks from Cornell that you all have met several times, Rick Bonney and Dr. Jennifer Shirk, as a research study partner on this project, and, of course, staff, and John and Chip have been really helpful in being included in those planning team meetings as well.

As I mentioned, the A-Teams are developing specific plans for the project related to communication, volunteer training, and data management, and kind of a dual project that's going on alongside of our discard project is this research study with the Citizen Science Association and Cornell, and Jennifer and Rick are going to be working on documenting our process, to see how program development can help support successful projects, and also helping us to develop some evaluation metrics for the scamp project.

From a project level standpoint, these are some of the things that the A-Teams have helped us work with so far, and these are things that are still in progress. As I mentioned, the planning team has all those different points of expertise, and a lot of them are on our A-Teams, and so they have

been very intimately involved with the development of the program as well, and so the Data Management A-Team has been working on requirements documents, like I mentioned earlier, specifically to help craft the data collection tool, which is the mobile app, and also, on the backend, develop the API, which helps the app communicate to the database and do all the data transfer.

Then, of course, also helping with the partnership development with ACCSP, and the Volunteers A-Team is working on some scamp-specific basic orientation materials that will cover a little bit of background about who the council is, why we're doing citizen science, and some of the basics on data collection and also a fact sheet about scamp life history and some of the information about that species.

Also developing a training plan that will include approaches for the different sectors that will be involved with the project and the different materials that we're going to need, and the Projects & Topics Team has developed a project development plan that outlines everything that the project will need moving forward with developing, and the Communications Team has developed a really detailed and nice communication plan that has key messaging, talking points, and then an implementation plan of all the different approaches that we need to carry out in different phases, from pre-project to implementation to post-project, to communicate about the project using social media and different frequencies with different groups of our volunteers, to make sure that we're getting all the information out about the project and also sharing project updates and results with all those folks.

More specifically, there has been a lot of collaboration between the A-Teams in the last few months, and I kind of just talked about them a little bit, but the Communication and Volunteer A-Teams have found that there's been a lot of overlap with what they're doing, and so I mentioned the basic orientation module, and so our vision is kind of to have a training plan that would be set up in modules, and people would go through different modules. Then, once they have completed all the modules, they are certified to be a participant in our project, and, again, it's really to make sure that they understand who the council is and why we're doing this and also just the basics about data collection. The same thing with the communication plan, which I just described.

Moving forward, in 2018 and beyond, the A-Teams, like I said, are going to be wrapping up their work probably pretty soon, and the Operations Committee will hopefully have draft SOPPs to you by September, and we are still pursuing additional project funding internally. As I mentioned, the historical photos project, and there is also some other opportunities, through some NOAA federal grants, that we could partner with some folks to develop some of these projects. National Geographic also has a participatory science grant that is open on a quarterly basis that we're looking at, and then further partnership development with ASMFC, and I just went down and met with some Gray's Reef National Marine Sanctuary folks last week, to talk about some of their projects that they have going on and where there is room for collaboration, and also the Nature Conservancy, and so we are moving forward with the pilot project and continuing with our program development.

MR. BROWN: Dale, did you have a question?

MR. DIAZ: Not specifically about what Amber just went over, but I do have another question and a comment. First, I want to say, Amber, you and the council, I can tell that you all have done a lot

of work, and it looks really good, what you all have done so far, and I still want to get you to come to the Gulf Council and do a presentation, maybe in October, and that will probably be perfect.

Anyway, it looks really good, but I did have a question though a little while back, and I haven't heard anything about tagging programs come up. Have you all ever discussed some type of a tagging program, because it seems like that would be a natural fit for something like this. Anyway, I just wanted to ask that question, because I'm curious.

MS. VON HARTEN: Yes, that's definitely something that we've talked about, and, again, it's just designing the project to get the information that we need from tagging, and there is, of course, all different types of tagging that you can do, and so I think that that would definitely be one tool to use, using citizen science, to get at some of the data questions we have.

MR. BROWN: Michelle, did you have a question?

DR. DUVAL: Really just more of a comment and a compliment, I mean to Amber particularly. I mean, Amber has done an incredible amount of work over the past year. If you think about it, Amber just came on as our Program Manager at the beginning of last year, and I think, if anybody has listened into one of the A-Team webinars or participated in one of the A-Team webinars, Amber is there.

I mean, she is producing the report from the team webinar as it is going on, and she is addressing all the tasks, and everything gets posted immediately, and I think, if you were to go to the Citizen Science webpage and poke around in all those different Google Doc sites for the different A-Teams, you will see how much the teams have produced. I mean, it's really tremendous, and I can't believe how much they have done in such a short period of time, and so I just want to -- Hats off to Amber and to the rest of the A-Team participants for all the work that they've done.

People are volunteering their time to do this, and I think you can see that people really want this to be a success, and so I am grateful to all of our partners and to those who are providing resources for the pilot project, and I think this is really what is necessary to demonstrate success and for I think some of the teams to kind of sink their teeth into to be able to apply some of these tools.

Sometimes it takes something concrete like that to really work out the kinks and sort of the proof of concept of these tools that you're developing for each of these components, and so I know it seems like it's taking a long time, but it's really been just over a year, and so I think, to be in this position is fantastic, and so thank you.

MS. VON HARTEN: Thank you. It's been truly a team effort, and I will say that you're right that having the scamp project to really be able to showcase and demonstrate how some of these tools that the A-Teams have been talking about will be carried out has been helpful, and also the planning team meetings have been really helpful. We've had some tough conversations and worked out a lot of kinks very early on, and I think that that will only be shown as the app is developed and actually tested out, and it will be what it needs to be for this project.

DR. DUVAL: Just one more thing. I will put in a plug for maybe in the list of topics that, as Dale mentioned, tagging. I know some of the conversations that I've had with folks at the Science Center as well as some of our SSC members that if you're looking to potentially try to refine

estimates of natural mortality or fishing mortality that a tagging program, if done appropriately, could be a great citizen science project.

I think if your question is very specific, then that's something that you could accomplish quickly, and so I would just encourage us to maintain communication with the folks at the Science Center as we come up on these assessments, to see if there is anything that is multiple, three to four, years out where that type of information would be useful.

MR. BROWN: All right. Is there any other business to come before the committee? Seeing none, the Citizen Science Committee is adjourned.

(Whereupon, the meeting adjourned on June 11, 2018.)

Certified By: _____ Date: _____

Transcribed By
Amanda Thomas
July 18, 2018

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Manday Public Sign In 10/11/18

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