Atlantic States Marine Fisheries Commission

Atlantic Coastal Cooperative Statistics Program Coordinating Council

November 7, 2022
12:45 – 2:45 p.m.
Hybrid Meeting

Draft Agenda

The times listed are approximate; the order in which these items will be taken is subject to change; other items may be added as necessary.

1. Welcome/Call to Order *(J. Carmichael)* — 12:45 p.m.

2. Council Consent — 12:50 p.m.
   - Approval of Agenda
   - Approval of Proceedings from May 2022

3. Public Comment — 12:55 p.m.

4. Consider FY2023 ACCSP Project and Administrative Proposals for Funding *(J. Simpson)* **Action** — 1:00 p.m.

5. Consider Atlantic Recreational Implementation Plan (2023-2027) *(G. White)* **Action** — 1:45 p.m.

6. Program and Committee Updates — 2:15 p.m.

7. Election of Vice-Chair **Action** — 2:30 p.m.

8. Other Business/Adjourn — 2:40 p.m.

The meeting will be held at The Ocean Place Resort (1 Ocean Boulevard, Long Branch, NJ 07740; 732.571.4000) and via webinar; click here for details

DRAFT PROCEEDINGS OF THE

ATLANTIC COASTAL COOPERATIVE STATISTICS PROGRAM

COORDINATING COUNCIL

The Westin Crystal City
Arlington, Virginia

May 2, 2022

These minutes are draft and subject to approval by the
Atlantic Coastal Cooperative Statistics Program Coordinating Council
The Council will review the minutes during its next meeting.

TABLE OF CONTENTS

INDEX OF MOTIONS

ATTENDANCE

Council Members

Bob Beal, ASMFC
Megan Ware, ME, proxy for P. Keliher
Renee Zobel, NH
Dan McKiernan, MA
Jason McNamee, RI
Greg Wojcik, CT, proxy for J. Davis
Maureen Davidson, NY, proxy for J. Gilmore
Joe Cimino, NJ
Kris Kuhn, PA, proxy for T. Schaeffer
John Clark, DE
Lynn Fegley, MD
Lewis Gillingham, VA, proxy for P. Geer
Dee Lupton, NC, proxy for K. Rawls
John Carmichael, SAFMC, Chair
Max Appelman, NMFS
Marty Gary, PRFC
Richard Cody, NOAA

Staff

Toni Kerns
Tina Berger
Pat Campfield
Maya Drzewicki
Tracey Bauer
Alex DiJohnson
Katie Drew
Chris Jacobs
Ed Martino
Daniel Mestawat
Sarah Murray
Joe Myers
Marisa Powell
Heather Power
Trevor Scheffel
Julie Defilippi Simpson
Caitlin Starks
Gabe Thompson
Geoff White

Guests

Karen Abrams, NOAA
Pat Augustine, Coram, NY
Joey Ballenger, SC DNR
Dave Bard, NOAA
Chris Batsavage, NC DENR
Alan Bianchi, NC DENR
William Brantley, NC DENR
Barry Clifford, NOAA
Heather Corbett, NJ DEP
Nicole Lengyel Costa, RI DEM
Derek Cox, FL FWC
Lauren Dolinger Few, NMFS
Dawn Franco, GA DNR
Amalia Harrington, Univ ME
Carol Hoffman, NYS DEC
Brett Hoffmeister, ACCI USA
Jesse Hornstein, NYS DEC
Kathleen Howington, SAFMC
Raymond Kane, MA (GA)
Thomas Lilly
Shanna Madsen, VMRC
Jerry Mannen, NC (GA)
Genine McClair, MD DNR
Chris McDonough, NYS DEC
David Meservey
Thomas Newman
Derek Orner, NOAA
Willow Patten, NC DENR
Cheri Patterson, NH (AA)
Andrew Peterson, BlueFin Data
Michael Pierdinock
Kathy Rawls, NC DMR
Malcolm Rhodes, SC (GA)
Scott Schaffer, MA DMF
Alexei Sharov, MD DNR
David Sikorski, CCA ME
Rene St. Amand, CT DEEP
Jason Surma, Woods Hole Group
Sebastian Tibulle, Woods Hole Group
Scott Ward
Wes Wolfe, *The News-Leader*
Chris Wright, NOAA
Erik Zlokovitz, MD DNR

The Atlantic Coastal Cooperative Statistics Program Coordinating Council of the Atlantic States Marine Fisheries Commission convened in the Jefferson Ballroom of the Westin Crystal City Hotel, Arlington, Virginia, via hybrid meeting, in-person and webinar; Monday, May 2, 2022 and was called to order at 10:00 a.m. by Mr. Geoff White.

CALL TO ORDER

MR. GEOFF WHITE: Good morning, everybody. I think we are ready to get started. I am Geoff White, the Director of ACCSP and staffing your meeting today. It is great to have some folks in the room. We're not going to be going through a particular roll call, to kind of just jump into the meeting. But we do have about 12 folks here at the table as members, we have another 5 or 6 who are participating remotely this morning.

Thank you for your attention. Our agenda is focused on the RFP and some status updates, but we should have some time for discussion and direction as we go. Thanks for making the effort to get here. I'm excited to get going, and John Carmichael is our Chair, and he will guide us through.

APPROVAL OF AGENDA

CHAIR JOHN CARMICHAEL: Yes, if I remember how to work the buttons. All right, yes. Thanks everybody, it's good to see you. Good crowd here fairly early on a Monday morning. The first bit of business is Approval of the Agenda, so are there any comments on the agenda? All right, seeing none, agenda is approved.

APPROVAL OF PROCEEDINGS

CHAIR CARMICHAEL: Any comments on the proceedings from October, 2021? All right, seeing none, Geoff, those stand approved. No hands online?

MR. WHITE: No hands online, thank you so much.

PUBLIC COMMENT

CHAIR CARMICHAEL: We'll open it up for public comment. Are there any members of the public that would like to make a comment, please come to the microphone if you're here? I don't see anyone coming forward.

MR. WHITE: No hands.

CHAIR CARMICHAEL: All right, with that then we are off and running. Geoff, I'll turn it over to you to start the presentation.

CONSIDER FUNDING DECISION DOCUMENT AND FY2023 REQUEST FOR PROPOSALS

MR. WHITE: Okay, thank you very much. It is the exciting time of year we get to review the request for proposals for next year. The good news here is there are not a lot of changes to consider, but I will go over these very, very briefly. The COVID step-down exception, to allow extending some projects a little bit longer. That language has been removed. There has been a slight change to clarify that when it comes to the ranking priorities, only one secondary module will be considered in the ranking criteria.

Then in Appendix A of the funding decision document, that is the FDD, was included to show there is one project that is in Year 5, and 0 projects that are in Year 6 of their stepdown, so if you recall in Year's 5 and 6, each of those years there is a 33 percent reduction in the total available funding, based on history.

That way in Year 7 that funding goes away from maintenance projects, and they are making room for new projects to come back in. Then of course, updating all of the relevant dates. All of that is in there. We are prepared for some discussion, but at this point opening up discussion for action on the RFP.

That [RFP approval] would open up the process for partners to generate ideas, submit proposals, and get the Operations Committee and the Advisors to

rank those and bring that back to the Coordinating Council in October for final approval. We took the liberty of drafting a motion, but before we get there, I will ask if there is any discussion in the room, or hands up for those on the webinar.

CHAIR CARMICHAEL: All right, thank you, Geoff. Yes, pretty straightforward. I appreciate you highlighting the few changes for this year. Any comments or discussion from the room? I see no hands. Okay, everybody has been here and done this many times, so I appreciate you helping this go smoothly. Would someone care to make the motion? Lynn.

MS. LYNN FEGLEY: I would move to approve the FY23 Funding Decision Document and RFP as presented to the ACCSP Coordinating Council.

CHAIR CARMICHAEL: Do I have a second? **Renee**. Any discussion on the motion? Any hands online?

MR. WHITE: No hands.

CHAIR CARMICHAEL: All right, any objection to the motion? Seeing none in the room, no hands?

MR. WHITE: No hands.

CHAIR CARMICHAEL: All right, sounds good, motion is approved.

MR. WHITE: Fantastic. I will take a moment and just remind folks that this year as you are thinking up proposals. If your proposal is expected to have an impact on ACCSP staff and workload, to please contact us early in the process to work with you on those details and coordinate the proposal development. Thank you.

COMMITTEE UPDATES

MR. WHITE: In your materials there was a long accountability report in a task that came from the Coordinating Council. Julie Simpson really led that effort as a staff member, and she is online and will be presenting this section. Julie, if you would just say next slide, either Maya or I will get the presentation moving forward.

2022 DATA ACCOUNTABILITY REPORT

MS. JULIE DeFILIPPI SIMPSON: Thanks everybody for your attention to this presentation today. The first thing that I want to do is recognize the Accountability Workgroup. Since the Coordinating Council put forth this charge that group has spent approximately two years working on this, and putting together three surveys analyzing those results, and then putting together the report that you all received. Thank you very much to this group and all of their efforts in doing that work.

As a reminder, the charge from the Coordinating Council was the data validation and accountability issues, and the idea that the data quality and their utility for use can be compromised, when there are validation or accountability issues. The idea was, how are partners validating the data?

Are there potential impacts for data use? Then is the ACCSP receiving data in a timely way, and are there coordination gaps? This charge was sent to the Commercial Technical Committee, and that group put together a small workgroup that evaluated the current validation practices that are in use by the program partners, and was set to review those and determine what are the gaps between the current procedures, and what's needed potentially for better data.

Then the idea was to review the Atlantic Coast Data Standards, and to potentially update those as needed. As you'll see through this presentation, the final directive changed a little bit as the workgroup progressed. The objectives that the small group lined out for themselves, was first to define accountability.

It was quite clear that that word meant a lot of things to a lot of different folks after the first survey, and so it was necessary to start out with a definition of accountability before we moved forward any more. Then to inventory the current practices and procedures, define the gaps between that and the data needed for science and management.

Evaluate the practices and procedures to determine which ones were most useful and productive, and then also to document and develop the best practices. Again, that last step does change as the project moves forward. The definition of accountability that was created by the group for the purpose of this project was data integrity, where fisheries data included some QA/QC procedure, and I believe previously this group has seen a picture where there was a whole series of words.

They included complete, accurate, accessible, trusted and timely, and certainty and limitations of data are acknowledged and defined, and the metadata is documented and available. This is essentially the sentence version of the previous slide that this group has seen that had this whole list of words. This definition was put forward in the subsequent surveys that were done, so that those participants would know what we meant when we said accountability.

The approach that the group took was the group first formed in 2020. Three surveys were conducted. There was the original survey, and that survey was actually conducted just before the group was formally put together. Then the second survey was directed to data managers. The third survey was aimed at data consumers, and I'll go through those surveys in a little more detail on some subsequent slides. Then the third step here is evaluation and presentation. Here we have the evaluation and practices and procedures, but then we also have document findings and recommend next steps.

That is the one step that really sort of changed once we got into it, was where we realized that a prescriptive final step in this wasn't going to be the right answer, or at least the group felt that it wasn't the right answer, and that what we needed to do was do a little bit more work before we were able to improve things, and that meant that there needed to be a little bit more coordination.

What we did was we documented what we found, and we recommended next steps for moving forward in the process, rather than ending with a prescriptive measurement. The remainder of the diagram in the approach is the same as the objectives that were set out in the beginning. The first survey, this was directed toward the partner data contacts, and also the members of the Commercial Technical Group.

This was where we asked respondents if their agency used each of 12 different accountability measures. If yes, to describe how that measure was implemented, and approximately what portion of their data were covered by that. The idea here was to determine sort of a baseline of what practices and procedures were currently in use.

There were 19 respondents to this survey, 4 of those were federal, and 15 of them were state respondents. We were able to establish a fairly solid baseline, but this was also where we realized that that definition of accountability really needed to be standardized in the future surveys. From this survey, we realized that the top three methods that are currently in use on the Atlantic Coast are audits.

That is audits of some form are used by all the respondents. To the knowledge of the group, all state and federal partners on the Atlantic Coast. Even those who did not respond to the survey, we believe that were aware of audits that are used at their agencies. Number 2 was comparison of fishermen reports and dealer reports, and then also the use of negative reports.

One of the things that the Workgroup noted was that the use of the dealer fisherman comparison,

and the negative reports is somewhat inversely correlated. If the availability of dealer and fishermen reports is less timely or complete, in terms of comprehensiveness, then negative reports are usually implemented in that partner, because of the lack of timeliness and comprehensive in the dealer and fishermen reports.

The second survey that we conducted was the Data Manager Survey. This was conducted in September of 2020; 52 data managers were surveyed. This is broken out by both sector and jurisdiction in respondents, that's why it's a table. This was because the commercial, the for-hire and the recreational sectors, as well as the jurisdictions of state, federal, and then we also had a Commission respondent and we wanted to separate that person out as well.

You can see there is sort of a cross-hatch here. The purpose of this was to determine what issues are observed by the folks that are the data managers. They are working with the data on a regular basis. The majority of these respondents have been working with data for quite some time. I believe it was 66 percent had been working with fishery dependent data for over 10 years, so we felt this was a very good representation of the folks that are using data. One of the caveats is that while we did ask early on if you were in the commercial, for-hire or recreational sector. A number of individuals are in more than one sector, and the following questions are not done by sector.

Someone could respond to something, where it's only relevant to one of the many sectors that they prepare data for. The Data Managers Survey conclusion, we put 7 issues, essentially, in front of the data managers. Of those 7, 6 of them, over 50 percent were affecting the data quality, and the 7th was other issues that we hadn't mentioned.

There is a variety of issues that are affecting data quality. They do vary by jurisdiction and sector. But the impacts to data quality and what is deemed the inadequate communication of such impacts, through either metadata or other methods, particularly when you move outside of a particular jurisdiction to a regional or coastal level.

It is something that is significant and needs to be addressed. A number of recommendations are put forth by the workgroup to improve the communication of those data limitations, and provide opportunities for the jurisdictions and sectors to either expand and/or streamline their processes. Our third survey was done in May of 2021.

This was sent to 300 data consumers. We did get 47 respondents. This is represented by a number of the partner agencies, as you can see in the pie chart on the right. There are also additional classifications in here. At the top you can see that there is one academic, and then on the nine o'clock position, you can also see that there are three other respondents. This includes folks like journalists that use the data.

The purpose here was to determine what are the data issues that are observed by the data consumers. Very similar to the data managers, what do they see in the data as being the problems? The majority of the responses the AWG or the working group found that there are several issues, but the majority of them are linked to communication rather than data issues.

It's not about a particular field not being collected, it's about the idea that the fields that are labeled and the metadata that goes along with that or the ability to know who I'm supposed to ask. That's what's missing in these communications, and so the data are there. The information is available. It's just that that is not being communicated or readily available to the data user, to be able to go back and say, ah this is what this means, or this is who I'm supposed to go to.

The recommendations that the workgroup created for this particular section are primarily geared

toward the increase of communication, in terms of availability of knowing where to go, and making that more readily apparent, and then also increasing the metadata that is available, and the caveats that are presented with data.

The Workgroup came up with 9 recommendations that are in the document. The first is a multi-jurisdictional effort to document the metadata and caveats. Again, this is about creating awareness of what data are being collected, and making that available to those that are using the data. The second is to create a regular and ongoing Best Practices Workshop, so that there can be discussion and sharing of automation and technical advances that are improving data quality, such as the automation of audits.

We would also like to consider our Best Practices Workshop as part of the fisheries information of FIS project, for either fiscal year 2023, at this point it could potentially be 2024, for data providers to compare data collection programs, audit, and trips and dealer reports. Then also, work with ACCSP to develop automated auditing and data validation tools, particularly for the data entry tools, but also for any validations that are conducted by partners.

As many of you know, we do have funding for an FIS project that is geared toward auditing at the ACCSP level that would centralize and standardize some of that auditing, and remove that burden from the partners, so this recommendation is geared toward essentially paralleling that effort, and expanding it if necessary.

Identify and share funding resources for the development and implementation of technical resources. Developing a Frequently Asked Questions document, the idea of this is not that there aren't a number of frequently asked questions available, but the idea is to create one that is centralized among the ACCSP partners, and can be shared by all partners, so that there is essentially a standardization available among the FAQs, so that the answers to the number of questions are different, depending on where you read your FAQs.

Then also, ACCSP and other data providers should review the data element and field definitions. This way making sure they are comprehensive, and also including any indication of reliability that might be part of that field, and then considering how those definitions can be part of a data download rather than available via another link or source. Expand and simplify the language on the ACCSP website to better describe the federal laws regarding data confidentiality and data sources, and possible effects that may have on a data query.

There was an acknowledgement that while that language exists, in some cases it is separated in multiple different places, and may not be as readily transparent or noticeable by someone who is pulling the data. Then the final recommendation is continuing the communication between the ACCSP and other Atlantic States Marine Fisheries Commission staff, and among the state and federal partners about data timing for stock assessments, management documents and compliance reports.

Again, this recommendation is particularly worded as continue, because there is recognition that this is already happening, and has been a significant improvement in the last three to five years in the way that data are processed and disseminated. The recommendation here is to just continue on that path. That concludes the recommendations, and all the slides that I have, and so Mr. Chair, if you would like to open the floor for any questions.

CHAIR CARMICHAEL: Yes, and thank you, Julie, for that excellent overview presentation, and definitely thanks to the Working Group for getting this done, through COVID, I'll point out, which it's really great to see all this progress continuing to be made, despite what we've dealt with the last couple of years. It looks like a pretty good effort, lots of surveys, lots went into it, and some great recommendations. With that I'll open it up to the

floor for any discussion or questions. Yes, Ms. Fegley.

MS. FEGLEY: I first just want to thank the Workgroup, and I also want to thank all of the people who responded to the surveys. I understand that we threw this out there as a little bit of a generalized idea, understanding that there was an issue here. I think that the Workgroup did just an excellent job of running with it, and turning this into something that is going to be incredibly useful.

I just want to say that there is some discussion in the document about what it takes to create data that is all of the highest quality, and that states don't necessarily always have the time or the resources. But I also want to say that the states don't always have the authority too, to make the changes that they need to make to really make the data what it needs to be.

That is going to be one of the beauties of this, is that the more specific technical guidance the states can receive on what it takes to achieve high quality accountable data, the more leverage states are going to be to make the changes that they need to make, and it also help us understand why that's important. I really want to thank you all, Julie and the Workgroup for what you've done. I also just had, if I may, Mr. Chair, a question. There was some discussion about data fields that have less credibility than others.

One of the examples used in the document was gear code, in particular. I just wonder if I can get a little more information about whether or not the people who are the stock assessment staff understand which field might not be as credible, and also Plan Development Teams for issues like allocation. Because it seems like that is a potentially pretty sticky issue if we thought data fields that we know are not reliable, are we getting that information to the people who really need it? With that I'll stop, thank you.

MS. SIMPSON: Mr. Chair, would you like me to answer that question?

CHAIR CARMICHAEL: Yes, please.

MS. SIMPSON: Yes, the recognition was made that while there are a number of parties that are aware of that. That happens on what might be considered a slightly more ad hoc basis, and so that knowledge isn't necessarily comprehensively aware to everyone that is using the data. That is exactly one of the holes that we feel like we need to close, where when someone pulls a fishing report, yes.

You can rely much more heavily on that gear code. But when you pull a dealer report, that gear code really should be used with the knowledge of the fact that that is information that is being passed, and may in some cases be a supposition rather than actual fact, and that the longer folks work with data the more aware of that they are. But especially for newer folks, or for someone who is not communicating heavily with data providers that may be unaware. I think you've touched on one of the larger issues that the Working Group became aware of.

CHAIR CARMICHAEL: Thank you, Julie. Renee.

MS. RENEE ZOBEL: Yes, I'm going to kind of follow up on Lynn's comment. I appreciate that there was a mention of trying to do a little bit more in the system itself, as far as QA/QC during the data entry process kicking out errors and bounds and that kind of thing, because you know as you mentioned, some of the gear, it's not just the gear code, but a lot of the gear characteristics are a struggle.

Having better definitions in there. I know we used to have heavier definitions on the entry side of things than we do currently, as far as when somebody sees it on the entry end. But I just appreciated that we're looking at different ways to make the data cleaner from the entry end, because as indicated in the report, it can be very difficult to get permission from a harvester, or get them to go in and change their information, or it might need to

be done on a broad scale, which involves usually ACCSP and asking for a global ask.

CHAIR CARMICHAEL: Julie, not to put you on the spot, but any thoughts? Feel free to weigh in.

MS. SIMPSON: Yes, I think that was certainly a recognition from the Workgroup was the idea that it's not, none of these issues are really focused on any particular point in the process. It's really about the global process. It starts from the fishermen all the way to the stock assessment scientists.

The idea that we could put caveats on the field, but that doesn't help if the fisherman isn't understanding or the dealer, depending on the report, isn't understanding the question that is being asked. Really that's why there are nine recommendations, is because we want to address issues at all levels of the process. Thanks for recognizing that.

MR. RICHARD CODY: I did notice that some of the responses were sector specific. For instance, some were for recreational/ commercial, and then you had for-hire. In developing the workshop, I know it's already set. Will there be any consideration as to parsing out the priorities in the Work Shop based on sector? It's a little bit of a loaded question.

MS. SIMPSON: We haven't actually talked in too much detail about that as a working group, so I'll answer from a personal perspective is that yes that is what was in my head. I believe I'm responding to Richard, is that there is going to be a need to work with the Recreational Technical Committee and the Commercial Technical Committee as well.

That there are things, if they are particular to a sector that they are handled by the experts in that sector, rather than by a small working group. I think that as we move forward, addressing different parts of the process or different aspects might be done by different people, depending on how it moves forward. Hopefully that answered your question.

MR. CODY: Yes, thanks, Julie.

CHAIR CARMICHAEL: Yes, Julie, that was Richard Cody. I thought you might be able to tell. Any other questions? Geoff said there are no hands online, anyone else around the table? Lynn, go ahead.

MS. FEGLEY: I'm just trying to figure out if you need guidance on next steps, or what you would like us to do to sort of guide the path of the Workgroup. I think obviously the Work Shop sounds like a great idea, but if there is anything you need, say the word, and we can make a motion if we need one.

CHAIR CARMICHAEL: Yes, I think that's the next bit of business. I was going to ask Julie. Based on the recommendations, if the groups had a thought of what they should do next. I know you mentioned like the Best Practices Workshops, and getting into that. That is something that may involve some financial at the least, you know certainly some time.

Then there was also mention like a 2023 Workshop with FIS. One thing I was wondering is, do you think that would be the first workshop, or would there potentially be an ACCSP Best Practices Workshop before that? If you could give us some insight into what you and the group sort of feel like is next steps, and if there is any guidance you need from us, let us know.

MS. SIMPSON: Yes, the Accountability Workgroup felt that at this point it would probably be, the way we've thought about it would be to have another small workgroup, potentially having a number of the same folks. That would essentially be charged with moving forward on executing some of these recommendations, and that would probably start with prioritizing them.

At the time that we drafted the working report, we did have an FY23 proposal for FIS. Their preproposal deadline has passed, so I'm not sure we would be able to get in a proposal for that. But we could look into that. But I think that a charge from this group, either in the form of a motion or an informal charge.

Whatever is the group's preference, to form another small working group to prioritize and execute the recommendations from this report would be extremely helpful. If any members of the Council have recommendations on any particular recommendation that they feel is a priority, we would certainly incorporate that in any work that was done.

CHAIR CARMICHAEL: I think that would be good. Maybe someone make a motion along the lines of forming a workgroup to prioritize and develop a plan for implementing these recommendations? Does anyone want to make a motion like that? I think Lynn Fegley would make a motion like that.

MS. FEGLEY: Sure, what the heck, but just a clarifying question. This wouldn't be forming a new workgroup to do that would it? It would be the Accountability Workgroup that would go on and do that, is that correct?

CHAIR CARMICHAEL: Would it be a subset, I think, is what Julie was saying, because is that a pretty big group. But please, Julie, jump in.

MS. SIMPSON: I think that we could use the existing group, it's a smaller workgroup, and then if anyone is not capable of dedicating the time to stay with the group, we could simply find an alternate member for that person. I think charging the same group would be an appropriate move.

MS. FEGLEY: All righty then. I would move to charge the Accountability Workgroup to prioritize and develop, what did we say? Whatever you type I'll move. Perfect, yes that**.**

Move to charge the Accountability Workgroup to prioritize and develop an implementation plan based on the recommendations from the accountability report.

CHAIR CARMICHAEL: Do we have a second? Yes, Mr. Clark, thank you. Okay, seeing no hands online, so are there any objections to the motion? **Seeing none; the motion is approved.** Thank you, Julie, and thanks everyone for the discussion. I think it really is impressive how a pretty small idea, as Lynn said, became all of this, and was handled this thoroughly. Accountability sounds simple, but clearly there is a lot going on there. The group did an outstanding job with this, and look forward to putting these things into practice in the future. Geoff, move on to the next bit of action.

STATUS UPDATE ON 2023-2027 ATLANTIC RECREATIONAL IMPLEMENTATION PLAN

MR. WHITE: The next two items are status updates that may generate a little bit of discussion. But I wanted to start with recognizing that this year we are continuing to develop the Atlantic Recreational Implementation Plan. This is the next five-year plan for 2023 through 2027. These were initiated as a request from MRIP to get regional input, and use the FINS for all of the regional priorities, and what should happen.

MR. WHITE: The process that we followed in 2017 when we did the first one, was to have the Recreational Technical Committee kind of develop and rank these priorities, and with some feedback from the Coordinating Council on major topics. Over the last year I've asked you, as Council members, to come up with some ideas, and those have gone through the process with Rec Tech to include citizen science and in-season monitoring.

Then just recently over the last few months, the Rec Tech Committee again reranked these. They did take out, there were six priorities before. Instead of going all the way up to eight, they kind of ended up with seven and reranked them. Those in order are on the screen. What I do want to note here is that

while this document was requested by MRIP, and the FINS all submit these back to MRIP for national prioritization of where funds come from.

ACCSP has taken a little bit additional approach to that in coordinating what are the data needs, what are the information that might be necessary, as not just direction to MRIP, but for assessment and management groups in general. I say that because there might be areas here that aren't specific asks of MRIP, but they might be areas where ACCSP as either developing data standards, data consolidation, or data distribution, may be able to help out.

That is where there is kind of an additional perspective that we've added into this. The intent is to continue to flesh out the information that goes underneath of these in the second half of the document, and bring the document back to you in October. What I will say is, Priorities 1 and 2 were there, so that is improving PSE, and the for-hire data collection monitoring. Over the last five years there has been a lot of effort there, and the direction we heard from MRIP was, since those aren't fully realized and completed, to leave them here as continuing priorities for the next five years. Of course, the improved precision and presentation, there has been a ton of progress on. The Modern Fish Act ended up with $900.000.00 that came to the Atlantic Coast for additional sampling through MRIP, to address the idea of improved precision.

That all went towards, and there is a slide later in the presentation, adding dockside sampling in the APAIS, the Access Point Angler Intercept Survey from Maine through Georgia, as administered through ACCSP. Another thing that happened is the MRIP Survey and Data Standards Group has worked on changing the presentation of the data that is drafted on their website right now, and will become effective, I believe April in 2023, where providing cumulative information instead of wave-based information.

At least on the public phasing websites, not including where the PSE is greater than 50. That improves data quality and it improves more samples throughout the year to get a more precise and intended accurate information. The other priority here, Priority 2 is a Comprehensive For-Hire Data Collection and Monitoring.

That was the intent to use logbooks more fully, and over the past five years, of course, there are now more federal logbook programs in existence, and those things are moving forward as well. With that summary of where things have happened, there was some work on a workshop for discard and release data that is a recognized data need.

There are currently no perfect solutions identified to try and test and put in place, so that remains a priority for coming up with ideas and pilot testing those. Then of course Items 4 through 7 remain as items of interest, and with that I will pause in the presentation of what these are. You had the document to read and look at, and I will invite comments.

CHAIR CARMICHAEL: All right, thank you, Geoff, for that overview, and I think we should look at the priorities, see if there is discussion on this. You know I think they're kind of in my mind of differing levels and intensities. You know overall we do want improved precision. But I think when you talk about, you know, Number 3, improve recreational discard and release data, that is kind of toward getting you Number 1 improved precision.

I think of when you talk about timeliness, it's kind of hard to do that without considering in-season monitoring, which is down there at Number 7. You know I think of something like citizen science as being potentially throughout this as a way of getting to some of these other things that are priorities to accomplish.

You know there are probably others around here that have some thoughts. I think there might be. Want to just hear what the group says, and how we might want to approach these priorities, and if we want to have some process here to get more of a Coordinating Council voice in that. Dee, I see you raised your hand.

MS. DEE LUPTON: You were talking about some of my concerns too. Is there a way to send this out and have the Coordinating Council rank it ourselves, from more of a management standpoint? I have no issue with what's here, it's just in the priority order and what managers are facing more imminent problems that we need some solutions to, and would like to see them higher prioritized.

MR. WHITE: Thank you, Dee. Yes, that is actually easy for us to do. As we kind of evolve into this process, the Gulf States Commission actually uses their FIN Coordinating Committee as the analogue to this body, to do those priorities. We had kind of worked up with other tasks through Rec Tech in the past.

It is ripe for us. Staff or I will send around these spreadsheets for Coordinating Council members to re-rank these, and then we'll come up with the averages, and put them back in front of you. If we can do that, we certainly have time between now and October to do so. I would also invite you, if you think some priorities could potentially be combined, to let me know soon, before we send that out.

I will say that when it came to citizen science there was a Rec Tech discussion of whether that would fold into discard or one of the other priorities. They had decided at the time that the use of citizen science might be one way to address discards, or one way to address some of the biological information. But in their discussion, it warranted itself as its own bullet priority. But yes, we could certainly invite and bring this back up to a Coordinating Council process to rank them.

CHAIR CARMICHAEL: Lynn.

MS. FEGLEY: It looks like there are some technical issues on the other side there. Yes, I agree with Dee and also John. I think you articulated a lot of our concerns. I know we had submitted a rejiggered priority list back to Rec Tech. In our minds that Recreational fishery discard and release data is hyper critical. I mean, clearly, it's a striped bass thing, but it's going to be an everything thing here before we know it. Also, the improved in-season monitoring. We in Maryland would certainly welcome a more robust discussion and some input of these priorities.

CHAIR CARMICHAEL: I think that would be good. You know these things are very interrelated, and it would be good to try and capture that through the group. Go ahead, Dan.

MR. DANIEL McKIERNAN: My question has to do with improving precision, PSEs and presentation of MRIP estimates. I, and I think a lot of us as state managers, kind of have to listen to the public talking about PSEs. I'm not sure they always know what that means. I'm wondering if part of the improved presentation of MRIP estimates might actually be confidence intervals around an estimate.

Instead of just throwing out a PSE value, because I know we deal with, I mean a lot of times in the management scheme people talk about a cut-off of anything with a PSE above a certain threshold should not be used, et cetera, blah, blah, blah. But I just wonder if we wouldn't all be better served with confidence intervals, and if anybody has ever thought about that, because we deal with a lot of lay people who are not necessarily trained in statistics. I think that might be part of the disconnect we suffer with the public about the precision or lack thereof of some of these estimates, especially when you get down to the mode and the wave level.

MR. CODY: Is it okay if I address this? Yes, there are options to present confidence intervals for some of the graphs that we have on the website.

Certainly, we could provide additional information to help people with their understanding of the data. Generally, though, for PSEs, there are some descriptions there that are available for folks if they want to dig a little bit deeper into what a PSE actually is, they can do so. If you have some specific recommendations related to, maybe the graphic presentation of the data, we would be happy to look at those.

CHAIR CARMICHAEL: Yes, thanks. I know a lot of times when people get in using the data when they take it from MRIP, will often present that kind of stuff. But yes, it certainly fairly straightforward to calculate them from PSEs. It's a matter of doing it. That could be a good part of the discussion. Geoff, I had a question on the timing. This is the final document October, 2022. Is your thought of going out and ranking this that we would have the results of that and we would finalize that in October at that meeting, or would we need to do that prior to October?

MR. WHITE: I think we can get it done over e-mail over the next two to three months. Allow us as staff to fill in some of the text details underneath these bullets, and then bring the document back to you for final approval in October. If there is a desire for more discussion, we can find a way to do that remotely.

CHAIR CARMICHAEL: Okay, does that sound good to folks? We'll handle it individually, get the opinions out there through a ranking exercise, and then this group will finalize how we want to have them presented in the final document at the October meeting. I feel like we're on like maiden. Richard, did you have your hand up again?

MR. CODY: Yes. I just want to, and Geoff, we've had this discussion earlier about the priority of increased utility of citizen science. I look at citizen science as a tool, and not a data priority. I think it needs to be associated with some of these priorities, I think which John kind of alluded to earlier, for it to be given consideration.

MR. WHITE: Citizen science (microphone issues). Tina, thanks, and thanks everyone for your patience online. We had a little technical swap out with one of the microphones. But we seem to be back on at the moment. Thank you, Richard, for your points on citizen science. My intent and thoughts of including citizen science at the moment were really about identifying some of the data needs that might be there, the text that would go underneath that.

Some of that again, may be more about standardizing data collection, the fields necessary, the data storage and the dissemination, as well as, you know maybe those things fold in as supplemental to MRIP in the assessment management process, not exactly a data need, as a request to MRIP. I will pause there, because I see a hand up from Kathy Knowlton. Mr. Chair, shall we call on Kathy?

CHAIR CARMICHAEL: Yes, please do. It will be nice to hear from her.

MS. KATHY KNOWLTON: Hi, good morning. I would like to go back quite a few minutes to when Dee first brought up the point about the potential for these priorities to be commented on by Coordinating Council. I agree with that. I have some concerns, and would like to discuss whether rankings provided by Coordinating Council members are averaged with those from the Rec Tech Committee.

The reason that I am having this question is because I don't know, but for the Recreational Implementation Plan we have ever done that. Again, just because we haven't done it that way in the past, doesn't necessarily mean we should not make a change for the future. But I feel like the items that are on the implementation plan came through a long and lengthy discussion through the Recreational Technical Committee with details, and

some of that is already articulated in the meeting materials that we have.

I have no objection to Coordinating Council members having comments and additional comment on their perspective from the management point of view with the priorities. But my understanding is these priorities are also used for Operations and Advisors when they rank proposals that are coming in for the next five fiscal years, if projects identify recreational activities.

I sort of feel like that might be somewhat if we got the Biological and Bycatch priorities that stand for two years at a time, and we use the Committees for their expertise in the level of discussion that occurs during the Committees. Although I understand the pressure that comes through the management process for recreational priorities.

I think I would rather see if Coordinating Council members want to comment on it, that they provide additional commentary, and perhaps we take a step back from averaging the rankings. I would really appreciate it if there was additional comment, see what Dee's response to that is, and anybody else that kind of was chiming in on this a few minutes ago. Thank you so much.

MS. LUPTON: I appreciate those comments, and I think some of the comments around the table hit on, I think citizen science as a ranked item, is what I was having some issues with. I would like to see in-season monitoring elevated, but it's still on the list. But citizen science can be a component to all the items, so if we could clarify that. I think that is what I was struggling with when I saw the ranked priorities from a manager's point of view of fisheries management.

How was that something to be implemented? But I can see it component to all of it. We're getting a lot of pressure to do something about in-season monitoring, to be quite frank. I would just like to see that as a priority a little higher on the Atlantic Coast to help resolve that issue. I don't know how the ranking would come out.

I don't know how, even if we go around the room or through the Coordinating Council re-rank these, how it would be prioritized. I think that is where I was having a little trouble. If he could add the citizen science as a little bit of component of it all and not a ranked item. That is just kind of my comment trying to fix this.

CHAIR CARMICHAEL: Thank you, Dee, and I see, Lynn, you had your hand up.

MS. FEGLEY: Particularly, I would just like to see this discussed, and the input from the states. You know as I understand it, we submitted our thoughts and prioritization, our Rec Tech representative. We submitted this back to the Committee, but Rec Tech hasn't convened to discuss those submissions.

I personally have no problem if the Rec Tech Committee is the one that gets back together, as long as there is the opportunity to have a robust discussion around the state's thoughts on this. If the process is that the Rec Tech reconvenes and discusses the input from the jurisdictions, and then that comes back to us. That is fine. But I just think we need to have that point in the process on there.

MR. WHITE: I'm going to go back to Kathy. Your point of the use of these priorities. We as staff have tried to be efficient in the use of this effort. MRIP asked for an Atlantic recreational regional priority list, and then that list was also used in the Funding Decision Document, which is used in the RFP.

It's also used to kind of direct some other funding activities, not just through MRIP. We've tried to be a little bit efficient in doing so, and of course that may have confused the how we use this particular document, you know the effort to bring it forward are similar in my mind. I also wasn't clear about how to average the input.

I know Kathy was very involved with the Operations Committee, and many of you have been, with the proposal rankings and how to average between Operations and Advisors, and present that back to the Coordinating Council. If it sounded like I had intended that the Coordinating Council priorities would be averaged with the Rec Tech priorities, I'm open to that.

I didn't actually have that set as a process. But I do appreciate the discussion of how this would be used and how to update the priorities with the perspective of the managers. Again, overall process asked that folks within agencies, we could have a lot of these discussions at the different committee levels, but the more conversations that occur within the states as these things happen, as priorities get ranked, is certainly appreciated from our level as well.

CHAIR CARMICHAEL: We sort of have two ideas. One is potentially looping back in Rec Tech. Geoff, is that an option. Then I think the other question is, you know, who really should have the final word on these are the priorities for the implementation plan? Should it be this group, or should it be like however Rec Tech works it out? I guess, Geoff, first question is, is a Rec Tech look at this perhaps after Coordinating Council provides some input a possibility?

MR. WHITE: Yes, they've been having virtual meetings every couple of months. Their next one is, I'm going to forget the date at the moment, but it's probably a month away. There is opportunity to do that, and in terms of overall process, I did raise the approach that the Gulf Commission takes.

Where their FIN Committee, analogous to this group, is the group that actually develops and sets the priorities. There certainly is an opportunity in front of you to kind of change how we have done this in the past. The one that's in place today is the first one that was ever developed. The one in front of you is going to be our second opportunity to update this and put it forward. Again, it's not like it's a longstanding tradition and we have to do it the way we did it before. Pleasure of the group to say, where do you want those priorities to be generated from?

CHAIR CARMICHAEL: Then I guess the question for the group that I see is, do you go with Rec Tech and their priorities, and approve that or does this group feel like it should have the final word in the priority list? Are there any thoughts on that?

MS. LUPTON: Well, I reckon I look at, I don't mind sending it back to Rec Tech and have them reevaluate after the Coordinating Council talks to Rec Tech members. You know if you go that way, I certainly will do that. But the Coordinating Council has always, if it's brought to us for final decisions, it seems like we should have an influence in that final decision.

I can go either way, but what is the purpose of bringing it back for final decision in October, if we really can't influence it or change it? If it's just voting on Rec Tech's recommendations all the time. I just think that is more of a philosophical type question. But I can go either way. If we go back to Rec Tech, I would like an opportunity to talk to the Rec Tech member a little bit more from a management standpoint.

You know what the needs are, and then actually ask them to re-rank them, something like that. It is what it is. I don't have any, from my perspective, anything to add to the priorities, maybe as I said before, make citizen science a component one, and actually withdraw it as a priority. Then they are all listed there. There may be some influence to re-rank them, but it may stay the same. I don't know if that helps any.

CHAIR CARMICHAEL: Yes, I think it does. You know I think Kathy made a good point about there are various types of prioritizations that go on throughout this whole ACCSP process. I certainly wouldn't want the Coordinating Council to have to

start approving annual sampling targets, that sort of thing.

But this being like a five-year plan, these to me are a little bit higher level types of priorities, so it may be more appropriate for the Coordinating Council to get into that. Then I think with seven priorities is a lot. I think we're all pragmatic enough to realize that it's unlikely that all of these things are going to be achieved.

As we initially discussed, some of them are kind of things that have been goals and objectives of the program for 20 years, and we're still working for them. I think the report has some of this, but some more detail and more tangible steps would probably be helpful in the final document about, okay what can really be done to improve the precision, which is a critical issue. What can really be done to improve recreational fishery discard and release data?

That may be where some of these global things like citizen science could be highlighted, without just being a generic priority to use citizen science. That doesn't mean a whole lot, and probably won't affect any change, if it's not directed towards some particular, specific data need. Citizen science is not going to be likely the place where you're going to improve precision of the estimates, because it's really not practical for that. But it may help with some other issues about data. Kathy, I think you had your hand up too, so let's go to you next.

MS. KNOWLTON: Yes, okay. Appreciate all this conversation, and I've been texting Georgia's Rec Tech member, she's listening on this call. She is letting me know that it was already her understanding that the Rec Tech would in fact review what comes out of other committees review of this, and in particular of course, the Coordinating Council.

I think we're closing in on a good activity and in a good way moving forward is that if staff want to circulate e-mails to Coordinating Council members, so that they can add to the comment that has already taken place during this portion of the meeting, or ask a couple of questions, or provide some input to the group.

Then the Rec Tech is already planning to have a point at which they can review those comments, and then bring it back. What I hope is that through that process that we'll be able to get the best of what the Coordinating Council members right now are talking about, with some of their priorities through management.

Also, the umbrella of citizen science, and then provide those comments to the Recreational Technical Committee for presentation back to us in October, and then of course at that time, as is traditional with any other committee output, we would have final comments from the Coordinating Council. I like that path moving forward, and I appreciate you all's time today.

CHAIR CARMICHAEL: Yes, so, Geoff, I think if I could summarize where we are, staff will solicit comments, suggestions, et cetera from the Coordinating Council on the priorities. That will go to the Rec Tech, they will talk about it, discuss it, and we'll have a final priority list for October.

MR. WHITE: Sounds good, we'll take care of it.

CHIAR CARMICHAEL: We can move on.

STATUS UPDATE ON METHODOLOGY FOR LOGBOOK ESTIMATES OF CATCH AND EFFORT WITH DOCKSIDE VALIDATION

MR. WHITE: Before we do that, there were no more hands online. All right, one of the other items that I wanted to give you the status update on. There was a document in materials on the Comprehensive For-Hire Data Collection Program. This is the methodology to more fully utilize logbooks with dockside validation for both effort and/or catch.

It includes the effort survey with dockside survey for catch. The document as written is a proposed methodology for logbook estimates. We recognize the situation of today that on the Atlantic there is no logbook program that exactly meets everything that is in this document. This is a future goal.

It is recognizing that there is the Gulf of Mexico SEFHIER Program that has some of these components, and others. The intent is to really find a methodology and work it through the MRIP certification process as a design, to work forward and balance the statistical rigor for an additional approach to use logbooks more fully. The coastal consistency of having one or two methodologies, so kind of the idea of using logbooks, as well as the idea of using the For-Hire Survey design that has been in place, I believe since 2005. Two vessels that may be in neighboring slips, but fall under different regulatory data submission or surveys, would be able to have that information combined for a total state for-hire catch estimates.

That is the ultimate goal. It does at the moment include no fishing reports, electronic logbook reporting, the use of APAIS as a dockside catch validation, and then the estimation on math that was primarily based on a pilot that we did, in coordination with South Carolina in 2016. Again, it assumes that the For-Hire Survey will continue, assumes kind of splitting some of those vessel frames.

There was a bit of a discussion, or at least a preamble to the document on how to frame this. At this point I'm going to go one more slide forward and come back to the idea of requesting comments. But our next step is to submit this to MRIP for review. Maya, thanks for going to that slide.

First thank you to NOAA for the use of their slide. But this is the whole certification process, which the box in red, I added the red. It is basically requesting the survey component for peer review. We're not even to that step yet. This idea of certification is an iterative process.

It's, take an idea, take a design, present it to MRIP, get some feedback as an iterative of what are concerns from the statisticians, and the design perspectives. Then kind of go back and forth on that development and MRIP consultation, and actually submitting those materials for peer review. We're kind of at the early stages here.

The idea is to be able to more fully utilize logbooks. At the moment there is only, most federal vessels do have a logbook component, but not all of those are integrated into use by MRIP as of this date. There are state programs that again, have been in existence for a long time and doing a great job.

But there might be areas of the timing of that submission, or some other aspect that isn't at the same level of where Rec Tech has been discussing, and the ideas of observational independence. If there are three data streams, the idea of a hail-out is independent of a logbook, which is independent of a dockside sample.

If those three things can happen as separate events and then be combined later on in the estimation process, I think that is one of the major places that when we hear MRIP talk about observational independence and designing surveys in the Gulf of Mexico, as well as the Atlantic. Those are things that come to my mind.

While I am here, I will certainly call out that this process isn't new. The Gulf of Mexico has many state or alternate surveys that have been through this process. The design of the dockside component, APAIS, has gone through this process, and the design of the Fishing Effort Survey has gone through this process. It's kind of the Atlantic's turn to ripen up and join the process. At that point I'm going to stop my presentation, and ask if you have comments on the document or the process at this point, or if you would like to submit those over e-mail after this meeting.

CHAIR CARMICHAEL: Mr. Clark.

MR. JOHN CLARK: Thank you, Mr. Chair, while these are working, I'll talk fast. Geoff, do you have a timeline? You know we've been talking about it for years, reducing the duplication of reporting for for-hire, and in a state that has a pretty weak ability to force better reporting, this complaint comes up all the time that you know we call in and you're asking for this, you're asking for that. Any idea of how much longer it will be before a for-hire boat just reports once rather than several times?

MR. WHITE: A couple things to unpack there. No, I can't give a timeline. That is the shortest and easiest answer. But I will say that there have been strides already for those with a Mid-Atlantic or GARFO permit to use those logbooks in place of the telephone call for the For-Hire Effort Survey.

That piece, there has actually been progress over the last couple years to make that easier on the states who are making those phone calls, as well as the vessels who are answering those phone calls, the vessel representatives, I should say. The Word duplicate reporting, and sort of indulge me for the extra moment here.

There are multiple reports that have different purposes at this point in time. The logbooks are designed for one reason. MRIP Surveys have been around longer and have sometimes a different timeline associated with them of when the estimates are required to come out through MRIP. Is there a goal to reduce the overall reporting burden? Yes.

Be that on both the fishing entities as well as the agencies collecting the data. The goal to maximize the use of the data and minimize the burden is absolutely there. The timeline for working through this process and addressing the concerns of all the parties involved is a little hard to put a number on. I do not see any hands online.

CHAIR CARMICHAEL: I'm a little concerned about the clock, because it is 11:20, and we're about halfway through the presentation. We may want to just keep moving ahead and maybe skip pretty quickly through some of the other updates.

PROGRAM UPDATES

MR. WHITE: Thank you, Mr. Chair, I can do that. Moving forward to the Program Updates. There is a bunch of items here, but we can move through these somewhat quickly. The first item is the Atlantic Coast Data Standards. On our action plan for this year, we do have the item to improve accessibility of the data standards to be more responsive to partner needs.

We've been as staff working to update those three committees to have more of a text update for static sections, and transition to dynamic sections that reference the current website. Broadly that means for things like the area codes, the gear codes. Instead of printing that in a document that is out of date by the time we actually finalize it. Referencing the data warehouse and the codes of how those items are structured and defined, so that maintains an always accurate reference list, is really where that goes. We've already worked through several of the committees, and we do expect to complete that late in 2022. The item for discussion here is a question, if you would like to handle it today, of the data standards, this is probably the second or third iteration since ACCSP was created.

There is a lot of work at the committee level. The Operations and Advisors do have a plan to review this in September. The question to the Coordinating Council is, would you like to remain as the approving body for those standards, or leave that task to the Operations and Advisors Committee, because it is a detail of the program?

CHAIR CARMICHAEL: Yes, thank you, Geoff, we talked about this some in the leadership pre-discussion of the meeting. The ideas that the Ops Committee and others are much more involved in

the day to day at dealing with the data, and much closer to it than members of this group often are.

Making a suggestion to allow data standard approval to be handled through Ops, rather than a formal action of this group. See if there is any discussion, or if there is support for that today then we can just make that decision and go with it, or if there is a need to discuss it, we could bring it up again in October, and have a more involved discussion of it. Yes, Lynn.

MS. FEGLEY: Yes, I support that. I think the Ops folks are really the most savvy. I would just encourage all of the managers, you know it's a busy day today, and sometimes the nuts and bolts of data are the last on our radar. But certainly, I would encourage Coordinating Council members to make sure they are communicating with their Ops team folks. That communication vine really helps. But other than that, I support that method.

CHAIR CARMICHAEL: Ooh now, Mr. Beal over there.

EXECUTIVE DIRECTOR ROBERT E. BEAL: Yes, you didn't know I was here? Thanks, Mr. Chair. I was going to say the same thing Lynn did. You know the folks that are really down in the weeds on this are the Ops Committee folks rather than this group. They know what needs to be worked on and what works and what doesn't work. I think delegating those decisions to the Ops Committee makes complete sense, to me anyway.

CHAIR CARMICHAEL: Geoff, anything online?

MR. WHITE: No hands online.

CHAIR CARMICHAEL: All right, any objections to that? All right, thank you, Ms. Fegley.

MR. WHITE: Fantastic. Moving on. Just take a moment. Another big win for the Data Team was the Data Warehouse Spring Data Load. The dates are here. Essentially the highlight is there has been wonderful cooperation from all of your staff, as well as the ACCSP staff, to kind of come together, provide the information, the participants, the data itself, and get the information out and published on the Commercial Atlantic Coast Summaries by April 4. We keep kind of sneaking a little bit earlier in the year. This started as a preparation for the fisheries of the U.S. document, and for the last three years we've been on time to support not just that document, but folding into stock assessments for the Commissions and the Councils as well. The other nice thing about this particular task is the ACCSP data tables here are the source of landings queries that get sent by computer on a nightly basis, to NOAA Headquarters, the GARFO Fisheries Dependent Data Initiative Warehouse, and the Southeast Fisheries Science Center.

That is important, so that when the public or your staff go to make a query, they should get pretty close to the same answer for landings, whether they're going to ACCSP or one of those federal data sources to do their query on landings. That does diverge a little bit when you get to assessments and bycatch and discard information. But at least from the landings catch information that's been a big focus over the years, to get the same answer out of multiple datasets, because they use the same underlying source.

We're excited about that. On the recreational side, MRIP has released updates to the 2020 and 2021 information. Within about five days of their release, we were able to load it on the ACCSP website as well, so that participants can query both the recreational and commercial data from the same location. On the recreational side, we'll start with the MRIP and the state partnerships for data collection.

I already mentioned the MFA increase of $900,000.00 per year. That is about 2,306-hour sampling assignments on the Atlantic Coast added each year. The table shows kind of the previous base number of assignments by states. How many

were add-on, what those percentage increases were. But it's about a 30 percent increase to the site assignments.

That has been a really good collaboration between NOAA, the ACCSP staff, and the states about what they can handle for staffing, what the best place to put those is to capture offshore information, species that have a little bit more concerning PSEs, as well as really focusing on the private boat modes to do that. Under the FHTS, the For-Hire Telephone Survey, the states are continuing to conduct that.

The vessel directory has had several updates, and as I mentioned, there is calling efficiencies by not calling vessels that are already submitting logbooks. There has been a tighter integration by MRIP staff within the vessel directory, to pull some permit information, either from HMS or from the Regional Offices, to kind of call the folks that are necessary, but not to call when they're already doing logbooks.

Another shutout here on the Social Economic Survey, the SES add-on for 2022, this is done about once every five years. This year we were able to plan, last summer in fact, for the development of adding that part of the survey to the tablet field staff application. That went really well as a collaborative process.

The software itself is being used by both the Atlantic and the Gulf states, so efficient use of MRIP funds there. In the data collection that started in January and February, at least for North Carolina, and then the other states have jumped in on Wave 2, and now we've got the whole coast for Wave 3. So far, it's been about 70 percent completion rate by anglers of the SES Survey. That's a pretty high completion rate that is a testament to kind of the programming, the functionality, as well as the staff that are rally making it happening out there in the field. Thanks to all of that, and we have certainly shared the software that ACCSP developed with the Gulf states, so that at least for Florida, Mississippi and Alabama, they're using the same web tools that we have developed, the same tablets out in the field, and that helps standardize the data submission to MRIP. We're excited about that.

As a result of the Modern Fish Act there is an additional report that MRIP needs to send back to Congress. They did ask us to include some information in our annual report about that. We've had a collaborative process to pick these species that have categories of species, so a common, a pulse rare event, a state or inshore species and a federal offshore species.

We actually expanded. We went above and beyond and picked six species, not four. The idea here is to look at kind of a regional ten-year graph of what's happening. Without naming the species, here is a common Atlantic closed species. The blue bars actually include the confidence intervals. Look at that, Dan, we're already ahead of you, for listening to you, I should say.

The blue bars are the coastwide, the regions for North Atlantic, Mid-Atlantic and South Atlantic are represented in the smaller bars, and then total harvest would be represented that way. Then the lower pane is the actual track of the PSEs. We intentionally chose the 20/40/60 line, so 20 percent PSE is kind of a historical.

If it's below that that supports data usage, that 20 to 40 or 40 to 60 is areas for improvement. We're hoping by going back five years and then looking forward five years, we'll see some trends in the additional sampling effort showing some improvements in PSE and confidence intervals. We've also been working up and down the coast on One Stop Reporting.

The graphic here was part of one of the ACCSP outreach items, but again, this is enabling fishermen to submit one report for all of the requirements of their associated permits. If you've got a GARFO, a SERO, and an HMS permit, and you're doing a

commercial or for-hire trip, that should not be three different reports.

Can it come in once and then get distributed by ACCSP or others to the appropriate entities? This was a big need to get implemented for the November GARFO electronic reporting implementation. We had the software out there at the time. Now that fishing is ramping back up as the weather warms up, this is coming to fruition.

Just a pat on the back to both the developers, as well as all of the Agency staff that were involved in making these agreements. There has been a bit of give and take on what data field had to be collected over everything else. But SAFIS e-trips is the first OSR reporting option that is available. We are somewhat excited about that. Joe, did you want to say something? I saw your movement, or keep going?

CHAIR CARMICHAEL: How about online? We're good.

MR. WHITE: No hands online at this point, oops, Lewis Gillingham has his hand up. Go ahead, Lewis. His hand went back down. Now I'm going to slow down a little bit here. We made some good progress on slides though. One of the questions by the Coordinating Council has been, what are the ACCSP software development projects that are coming up? This is where the software team has had some turnover and growth over the last six months. Really wanted to look at three major areas of what's going to be the next piece of work that gets focused on, as a major new item.

One of those is Electronic Dealer Reporting Redesign, Registration Tracking is another, how internally the database handles all of the people, businesses, vessels, permits, et cetera that are associated with all of the dealer reports and landings, and trip reports. That is kind of crucial to how everything else functions, and how you can query the data back out.

Then the third is the Species Tree, and we've done a lot of work in e-Trips, to identify splitting out how things work. One of the reasons that Species Tree was important, was right now the list of species that can be landed on a dealer report are the same list of species that are in on a fisherman trip report.

Of course, once it is on the trip report it's true for a commercial or for-hire, a recreational type trip. By splitting out the Species Tree we can actually shorten the lists, and make it appropriate for the people that are reporting in that zone. Of course, it's another one of those items that touches everywhere.

As we look to this process, we recognized internally, and I wanted to put on screen, the long list of ongoing work in software maintenance that we're not saying no to, we're just continuing that, maybe not in the background, but without as big of a focus. Those are things that also impact staff time.

Lewis, I do see your hand up, but I'm going to finish two more slides and then come back to that. In this evaluation we looked at six different categories. It was a pretty robust process, but looking at what the functionality of the new software, what would the timing be, what is the background work testing development and production?

What are the resources, either for ACCSP staff or a contractor, and time, what might be constraints, contributors or dependencies? After all of that, and a very awesome spider web design that Julie helped us kind of visualize what was going on. The staff came up with these priorities in this order, and then they were presented to the Information Systems Committee, as well as the Operations Committee.

It was really to look, as Development Year 2022, to look at the Species Tree, and implement that as a way to make reporting easier, faster, better now, and data quality, for release on January 1, 2023, including some of the lobster tracking information.

The aspect of work in 2023 would be to do the underlying database work for registration tracking, and release that to our production application in January, 2024.

Then spend 2024 working on the Electronic Dealer Reporting Redesign, and presenting that out in the production Apps, in January, 2025. Now we recognize that that feels like a long way away. We've built in the ideas that online, mobile and file upload will all have to be released at the same time, coordinating out the different aspects of testing. While there is a significant thousands of hours of programming and development time in this, there is also time to allow for testing, revision, fixing before it gets released out to production. These timelines look long, and we got immediate questions from the Committees on, whoa, that feels like it's really long. About 15 minutes later they were like, is this too aggressive?

It was a really good process that was followed to get committee input. I wanted to put this out in front of the Coordinating Council, so that you're aware of these internal timelines and priorities as we've developed them. At this point, I should probably pause and ask for comment, and Lewis has dutifully had his hand up, so we'll call on Lewis first.

MR. LEWIS GILLINGHAM: I just wanted to say that the question that John Clark, anytime I'm around any of the for-hire I get that all the time. About all I can tell them is, yes, we're making progress, but I can't see exactly when. But then your next slide that showed, hey if you use this SAFIS.

Basically, that means you've accomplished a good deal already, in terms of multiple reports. I would just ask if you could make that nice, neat little card or outreach materials, or get it to our APAIS people there in the field, and likewise to the commercial folks that do the stock assessment sampling. Thank you.

MR. WHITE: Thank you, Lewis, I see no other hands online, Mr. Chair.

CHAIR CARMICHAEL: Yes, I think that's a good point about letting people know about this. You're making good progress on SAFIS e-Trips and One-Stop Reporting. Letting people know is always important. You can't ever do enough outreach. Any other questions from around the table? I am seeing none.

MR. WHITE: Thank you, we will keep going. I just have a couple left in the Program Updates. I did want to highlight that for the current year the total ACCSP funding turned out to be 3.53 million. The word there is including the FIN-crease, so the Fisheries Information Networks got a particular line-item increase across the Atlantic, Gulf, and other areas, Pacific, et cetera.

That came through in the ACCSP Grant, and of course last October the Coordinating Council approved these 10 partner projects. All of them were funded and they got their receipt letters in March at the full funding level. That worked out pretty well. I know there was concern back in October, as to whether the projects could be funded at the requested amounts or not.

I wanted to make sure that you are aware that they were. This adds in that the FY2022 Administrative and Operations Proposal, so thank you to Kathy for suggesting that name in the October meeting minutes, so we added that in here instead of just the Admin Grant. But it was ultimately approved at the 2.2-million-dollar level, because of some products that were not funded, as well as a change in the Commission indirect for the benefit of ACCSP.

There is about $100,000.00 that is left unallocated in the Admin and Operations budget at this time. We are in Year 2 of 5, and so the decision was made to kind of park that and allow for the leadership team to kind of provide direction on that at a future date. Then finally, I'm very excited to say that all of our staff positions are filled at the moment. We had some staff turnover last fall. We hired three

new data coordinators that started in November. Some of our new staff were able to make it over here today, if you don't mind standing up. We'll give you a quick wave. Anna-Mai Christmas-Svajdlenka is here, she is one of our new data coordinators.

We also have Jennifer Ni, Mike Rinaldi, and maybe I'm not seeing that far, but that are here today. The other data coordinators that were added, Adam Lee joined on the data team with Anna-Mai. We have Gabe Thompson, who joined the recreational team, and then there was discussion last year of backfilling one of the software positions, and of course adding another software programmer.

That hiring process was initiated in the fall, but we didn't complete all those rounds, and so in March, middle of March, we were able to hire Daniel Mestawat and Jamal Oudiden, and they are with us and helping out with some of the software programming as of March 16. If you would like to take a chance to look at any of us and see what we all look like, now that we're coming back in person, our staff page has been updated to have everybody on it.

I would be remiss if I didn't mention Information Systems and Security. We are doing really well in keeping updated on our Oracle stable releases. We did a network modernization project between your last meeting and now. That is new. We got upgraded bandwidth to the office, for which was a big increase in functionality, and we got that for zero cost, so bonus for us.

We also replaced kind of a hardware components to keep the network flowing and going. The router, the firewall, the switches, kind of the guts of how it works. That's important because with all of the worldwide cyber security issues we are not in an excellent place to block a lot of unwanted traffic.

We also implemented a lot of redundancies, so if one point in that whole system has a hardware or software failure, that would be transparent to the end users, and the system should mostly stay up. We're excited about that, and with FISMA, the Information Security Management Act, we are just finishing up our annual external audit, and overall have a pretty strong security posture, so we're getting good feedback from our external audit at this point, so that is it for the Program Updates.

CHAIR CARMICHAEL: Thank you, Geoff. Any questions, anybody online? I don't see any around the room. That brings us to Other Business, and I understand we do have a bit of other business, another presentation.

MR. WHITE: Do you want me to do those or are you going to?

OTHER BUSINESS
SCIFISH UPDATE

CHAIR CARMICHAEL: I'll go ahead and hit them up. Just a quick update on the project. It's called SciFish. This is something that's been worked on for a little while through a number of projects that have been funded, and the idea is really to come up with a tool. It was directed towards citizen science projects, and to be kind of an interactive, essentially, App builder, so that ACCSP projects and other partners are not having to continually go to an App designer and have an App built. It will provide consistency, and it also ensures that the data collected meet ACCSP standards, and can get into the ACCSP system, and you know that we really leverage the money spent on developing a project into ways to develop projects and applications for multiple partners down the road, because there seems to be no end to the interest in Apps these days. Everywhere you go somebody wants to create an App and solve our fisheries data collection problems.

A couple key points about SciFish, as it's called, is administered through ACCSP, so it is available to all partners. The project that's been underway right

now and the development scoping meetings, questionnaire, lots of participants, lots of people involved trying to understand what are the needs out there amongst the different partners, and how might something like this be used.

What is the interest in doing a project like this? There have been multiple partners involved in the development of it for quite a while. Really the next step then is to get some guidance from the Coordinating Council on sort of where it goes next. What are the policies going to be? How is this program going to be used? Just to provide some guardrails for working with it.

What the group has asked for is that we have a virtual meeting of the Coordinating Council, where we can look at SciFish, its development, its future direction, what it will be providing us. To look at that in detail, and provide the guidance that they would like. You will be hearing from folks from this group.

They want to hold a meeting, it looks like they're talking about in late June if we can, maybe the week of June 20th. If that is possible then look for a doodle poll and some more information, to try and schedule a webinar meeting of this group. At that time, we would be providing input. This is just a heads up, so if you see that e-mail coming you don't wonder what it is, and think it's spam.

It is a legit thing, and I think this is going to be a pretty good tool in the ACCSP toolbox, as we move forward as a way to really get Apps done much more efficiently, and you know people can go in and do an App, maybe get a small piece of data from a small fishery that is not getting sampled as well as we would like, and do it very efficiently. Yes, Geoff.

MR. WHITE: Just for clarity. The intent was to have the Leadership Team participate in the webinar, but if there are other members of the Coordinating Council that wanted to participate, just please let us know.

CHAIR CARMICHAEL: Okay, yes, thanks for that clarification. Not everybody will be on tap, but everyone is welcome, of course. We'll dig into it in detail, then I think this would be a report out back in October as well from the Leadership Team?

MR. WHITE: Likely, yes.

CHAIR CARMICHAEL: Some more of that in October. Any questions from the group? I'm not seeing any here, so how about online?

MR. WHITE: No hands online. We got back on time.

CHAIR CARMICHAEL: Good job, okay. Is there any other business? I see none, any hands online?

MR. WHITE: No hands online.

CHAIR CARMICHAEL: All right, thank you everybody for muddling through our few growing pains here with the technology. Hopefully we've got it all worked out for the Commission meeting to come, and appreciate the patience of folks who were online. I think we got around to everybody. A few delays, but all in all pretty good job.

ADJOURNMENT

CHAIR CARMICHAEL: Thank you everyone, and we stand adjourned.

(Whereupon the meeting convened at 11:48 a.m. on Monday May 2, 2022.)

Atlantic Coastal Cooperative Statistics Program
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FY23 Proposal Recommendations to Coordinating Council

From the Operations and Advisory Committees

- Request that the Coordinating Council determine the appropriate avenue, such as an existing committee or new working group, for reviewing the potential to create guidance for the RFP on funding for application development, what data are being collected, how those data will be used, method of collection, duplication of effort, and to whom those data are being transmitted.
- Maintenance Proposals
    - Recommend to fully fund all proposals.
- New proposals
    - Recommend to fully fund all proposals.
    - The groups had discussion on the following topics for the proposal: Collection of Recreational Fishing Data from Citizen Science Sources. They recommend fully funding the project.
        - There were questions about setting precedent on paying a private entity for data, not having oversight or input on how the data are collected, and how this approach fits with the concept of citizen science. Note that in this pilot funding is being requested for development/programming, but FishBrain is waiving their data licensing fees for this year.
        - How does this fit in with SciFish (ACCSP citizen science module)?
        - Request that the PIs incorporate into their outreach efforts continued understanding and participation in MRIP surveys, explaining citizen science, and how the data may be used (manage expectations).
    - Note that the Accountability Workshop proposal was difficult to rank given the nature of the project. These groups appreciate the transparency by ACCSP staff and the Accountability Work Group; however, recommend that ACCSP workshops or other similar activities be included as optional in the Administrative Grant in future years.

** all above are consensus decisions*

FY2023 Proposal Rankings (Average)

		Admin Grant	2,206,609	$44,423	2,251,032
3.35M		Maint @ 75%	824,226	New @ 25%	274,742
3.50M		Maint @ 75%	936,726	New @ 25%	312,242

Project Name	Partner	Score	Cost	Cumulative Cost	3.5M Amt Remaining	3.35M Amt Remaining
Advancing Fishery Dependent Data Collection for Black Sea Bass (Cetropristis striata) in the Southern New England and Mid-Atlantic Region Utilizing Modern Technology and a Vessel Research Fleet Approach	RI DEM	8.96	$ 88,152	$ 88,152	$ 848,574	$ 736,074
FY23: North Carolina biological database enhancements for the transmission of data to the ACCSP	NCDMF	8.40	$ 146,981	$ 235,133	$ 701,593	$ 589,093
Electronic Trip-Level Reporting for the Potomac River Fisheries Commission Commercial Fisheries Sector	PRFC	8.04	$ 215,328	$ 450,461	$ 486,265	$ 373,765

includes carryover from maintenance projects

Data modernization and improvements to the New York Data Flow	NYDEC	53.48	$ 33,882	$ 33,882	$ 764,625	$ 614,625
Pilot Observer Program for Rhode Island State Waters Gillnet Fishery	RI DEM	51.24	$ 118,520	$ 152,402	$ 646,105	$ 496,105
FY23: Expansion of the FISHstory Citizen Science Project	SAFMC	50.88	$ 87,569	$ 239,971	$ 558,536	$ 408,536
Support for ACCSP Accountability Work Group Recommendation Implementation	ACCSP	48.13	$ 49,976	$ 289,947	$ 508,560	$ 358,560
Collection of Recreational Fishing Data from Citizen Science Sources	RI DEM	41.25	$ 134,000	$ 423,947	$ 374,560	$ 224,560
North Carolina socioeconomic database construction for the management of current and future data	NCDMF	37.72	$ 145,020	$ 568,967	$ 229,540	$ 79,540

		Partner	Title	Primary Module	Others		Cost	Max Funding Year 5/6
MAINTENANCE	1	RI DEM	Advancing Fishery Dependent Data Collection for Black Sea Bass (Cetropristis striata) in the Southern New England and Mid-Atlantic Region Utilizing Modern Technology and a Vessel Research Fleet Approach	Biological (50%)	Catch/Effort (25%), Bycatch (25%)	$	88,152	$ 88,153
	2	PRFC	Electronic Trip-Level Reporting for the Potomac River Fisheries Commission Commercial Fisheries Sector	Catch/Effort (100%)		$	215,328	
	3	NCDMF	FY23: North Carolina biological database enhancements for the transmission of data to the ACCSP	Biological (100%)		$	146,981	
					Total Maintenance	**$**	**450,461**	

		Partner	Title	Primary Module	Others		Cost
New	1	RI DEM	Pilot Observer Program for Rhode Island State Waters Gillnet Fishery	Bycatch (80%)	Catch/Effort (20%)	$	118,520
	2	NCDMF	North Carolina socioeconomic database construction for the management of current and future data	Socioeconomic (100%)		$	145,020
	3	NYDEC	Data modernization and improvements to the New York Data Flow	Catch/Effort (100%)		$	33,882
	4	SAFMC	FY23: Expansion of the FISHstory Citizen Science Project	Catch/Effort (50%)	Biological (50%)	$	87,569
	5	RI DEM	Collection of Recreational Fishing Data from Citizen Science Sources	Catch/Effort (100%)		$	134,000
	6	ACCSP	Support for ACCSP Accountability Work Group Recommendation Implementation	Catch/Effort (100%)		$	49,976
					Total New	**$**	**568,967**
Admin		ACCSP	ACCSP Administrative Budget	Admin		$	2,206,609
					Grand Total Proposed	**$**	**3,226,037**

Proposal for Funding made to:
Atlantic Coastal Cooperative Statistics Program
Operations and Advisory Committees
1050 N. Highland Street, Suite 200 A-N
Arlington, VA 22201

Advancing Fishery Dependent Data Collection for Black Sea Bass (*Centropristis striata*) in the Southern New England and Mid-Atlantic Region Utilizing Modern Technology and a Fishing Vessel Research Fleet Approach

Submitted by:

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Applicant Name: Rhode Island Department of Environmental Management (RI DEM) and the Commercial Fisheries Research Foundation (CFRF)

Project Title: Advancing Fishery Dependent Data Collection for Black Sea Bass (*Centropristis striata*) in the Southern New England and Mid-Atlantic Region Utilizing Modern Technology and a Fishing Vessel Research Fleet Approach

Project Type: Maintenance (Year 5 of Maintenance)

Requested Award Amount: $88,152

Requested Award Period: August 1, 2023 – July 31, 2024

Principal Investigators: Jason McNamee, PhD, Deputy Director of Natural Resources, Rhode Island Department of Environmental Management, David Bethoney, PhD, Executive Director, Commercial Fisheries Research Foundation; Thomas Heimann, MsC, Research Biologist, Commercial Fisheries Research Foundation

Date Submitted: June 15, 2022

This is the fifth maintenance proposal to support the continued data collection by the Black Sea Bass Research Fleet. There are no major changes to the scope of work proposed in the current proposal compared to prior years. The primary changes to this proposal include updated timelines throughout, updated fleet composition in the *Fishery-Dependent Data Collection* subsection, updated data in the *Internal Data Analysis* subsection, and the proposed budget. In addition, more details have been added to the *Outreach and Education* subsection to better illustrate what has already been accomplished in this context during the duration of this project so far.

Objective:

This proposal is a request for financial support for an additional 12 months of biological catch, effort, and bycatch sampling by the Black Sea Bass Research Fleet, which was successfully piloted in 2016 with support from ACCSP and has been in continuous operation since. Since the first year of funding provided by the ACCSP, the Research Fleet has sampled 41,614 black sea bass from 2,301 locations throughout the inshore and offshore fishing grounds of southern New England and the Mid-Atlantic. The Research Fleet will continue data collection through July 31, 2023 (Year 6 of funding from ACCSP). All biosamples data collected by this project during previous years of funding have been communicated to and accepted by ACCSP bi-annually. This data is being utilized in the current Black sea bass stock assessment with direction for expanded use expected to be provided by stock assessment scientists. The project team will continue to deliver data to ACCSP in this manner throughout Year 6 of funding, and the proposed project will allow for the continued delivery of black sea bass biosamples data to ACCSP at six-month intervals through July 31, 2024.

The goal of the proposed project is to continue the Research Fleet's sampling efforts to develop a year-round, long-term time series of black sea bass (*Centropristis striata*) catch, bycatch, and biological data for five different gear types (trawl, lobster/crab pot, fish pot, gillnet, rod and reel) throughout the Southern New England (SNE) region and reaching into the Mid-Atlantic (MAB) region. The continuation of this project is critical to the evolution of black sea bass assessment and management efforts by the Atlantic States Marine Fisheries Commission, Mid-Atlantic Fisheries Management Council, Northeast Fisheries Science Center, and Atlantic Coastal Cooperative Statistics Program as the Black Sea Bass Research Fleet produces spatially and seasonally distinct catch data for numerous commercial and recreational gear types, which is currently lacking for this species.

Project components include: 1) Continue the existing fishery dependent data collection program that utilizes fishing vessels and a custom designed sampling application to collect and relay biological catch and bycatch data (number, length, sex, disposition) and fishery characteristics (location, gear type, effort, habitat) for black sea bass from across the SNE/MAB region throughout the year; 2) Internal data analysis to address research questions about spatiotemporal patterns in black sea bass biological and fishery characteristics and gear-specific selectivity; and 3) Communication of project data and results to the Atlantic Coastal Cooperative Statistics Program (ACCSP), black sea bass stock assessment scientists, managers, and members of fishing industry.

In summary, the general goals of the proposed project are:

1) Collect and communicate critically needed fishery dependent black sea bass data (catch and effort, bycatch, and biological) in a cost-effective way using modern electronic technology and fishermen's time on the water;

2) Contribute to the evolution of the northern Atlantic black sea bass stock assessment and associated management measures;
3) Demonstrate a model for fishery dependent data collection, management, analysis, and utilization that can be duplicated in a cost-effective way in other regions of the black sea bass range and in other fisheries.

Specific objectives include the following:

- Continue the Black Sea Bass Research Fleet for an additional 12 months to further refine seasonal characterizations of northern Atlantic black sea bass biology and distribution;
- Collect fishery dependent black sea bass data from five gear types (trawl, lobster/crab pot, fish pot, gillnet, rod and reel) across the SNE/MAB region to characterize the size and sex distributions of black sea bass catch and bycatch and investigate the spatial and temporal trends of the fishery;
- Maintain and evolve the On Deck Data application to meet the data needs of scientists and the logistical needs of participant fishermen;
- Communicate black sea bass biosamples data to ACCSP every six months;
- Ensure all project data is available to Northeast Fisheries Science Center (NEFSC) scientists for inclusion in Black Sea Bass Stock Assessments
- Conduct internal analyses of the project database to: 1) Assess the selectivity and CPUE of five gear types in the SNE/MAB region and explore temporal variability, and 2) Further monitor and assess spatial and temporal trends in species' catch and bycatch composition and fishery characteristics;
- Further refine gear-specific fishery dependent indices that utilize different data error structures, standardization techniques, and Bayesian applications;
- Communicate to a broad audience the benefits and inherent value in this type of collaborative data collection program.

Need:

As asserted in the ACCSP Biological Review Panel's biological sampling priority matrix, black sea bass is identified as a top priority species for data collection, receiving the highest total priority ranking for inadequate biological sampling (ACCSP 2022), and the species remains a high priority for managing stakeholders (ASMFC, NMFS, and state agencies). In recent decades, the distribution and center of biomass of black sea bass has been experiencing a northward shift, likely due to climate change (Bell et al. 2014). As a result, the lack of adequate data for northern Atlantic black sea bass in particular is an issue of regional importance, as this highly valuable stock ranges from Cape Hatteras to the Gulf of Maine (Musick & Mercer 1977, Moser & Shepherd 2009). In part due to the dearth of data throughout the black sea bass range, assessment and management efforts have been slow to react to the shifting distribution of the species and growing abundance of the northern stock (Bell et al. 2014, NEFSC 2017). As stated by ASMFC (2019), high priority data needs for black sea bass include increased sampling of

commercial landings and sample size of observed charter trips. The Black Sea Bass Research Fleet has, and will continue to with additional funding, provide precisely this information. Ultimately, cost-effective sampling programs, such as the Black Sea Bass Research Fleet, are needed to collect these data on regional scales and inform and evolve the stock assessment to consider the complex life history and ever evolving spatial structure of black sea bass.

Fishery dependent data has become an important source of information that is used as a term of reference for many stock assessments, but in the case of the northern Atlantic black sea bass stock, the data generated by the Black Sea Bass Research Fleet serves as the only systematically collected fishery dependent data source with a focus on the data being used in the assessment process. Thus, this project seeks to strengthen the fishery dependent data for this population to provide better information from across the temporal and spatial distribution of the northern stock.

The limited coverage of optimal black sea bass habitat and semi-seasonal (spring/winter) sampling schedule of the NEFSC trawl survey may limit the suitability of the survey data for the stock assessment (ASMFC 2013) and require the addition of new data streams to improve the information available to assessment. Recent stock assessments for the southern Atlantic black sea bass stock have adapted sampling and analytical techniques to better fit the life history and habitat associations of black sea bass. These stock assessments rely heavily on fishery-dependent data collected from multiple commercial and recreational fleets representing multiple gear types to inform the stock assessment model using data such as annual length compositions of landings and discards, gear selectivity curves, and indices of abundance (SEFSC 2013; SEDAR 2018). Such fishery-dependent parameters, however, have not yet been developed for the northern Atlantic black sea bass stock due to insufficient data, but will become possible if the Black Sea Bass Research Fleet is able to amass a robust time series of data. This project aims to address this need by maintaining the existing Black Sea Bass Research Fleet to conduct year-round biological sampling of black sea bass fishing effort, catch composition, and discard composition within the trawl, lobster/crab, fish pot, gillnet, and rod and reel fisheries in the SNE/MAB region. The northern Black Sea Bass Research Track Stock Assessment is currently underway, and the Working Group has been evaluating the Black Sea Bass Research Fleet data to determine how best it can be utilized in the upcoming assessment. Continued data collection that extends the timeseries and increases sampling coverage for gear types and times of year under-sampled by other data sources will ensure that the data continues to become more useful to each successive stock assessment.

Ultimately, the proposed project will help meet ACCSP's mission of improving data quality for fisheries science. In addition, this project, and its integration with the ACCSP data housing program, will lend to the other mission of the ACCSP, namely by contributing to a single data management system that will meet the needs of fishery managers, scientists, and fishermen. Collecting timely scientific data across a species range is imperative for successful fisheries management, as more robust data enables fisheries science to be as comprehensive as possible, which in turn supports informed and efficient decision making by managers. Furthermore, stock assessment scientists rely on robust biological, catch and effort, and

bycatch data to help improve the quality of stock assessments. In these ways, the proposed project meets all the main elements of the mission of ACCSP.

Results and Benefits:

The results of the proposed project include:

- Improved quality, quantity, and timeliness of biological, catch and effort, and bycatch data for the northern Atlantic black sea bass, made available via the ACCSP;
- A vetted source of year-round black sea bass data that can be used to inform the stock assessment and management of this data poor species;
- Coordinated data transmission procedures with the ACCSP that follow the CFRF's existing data communication practices with ACCSP;
- A demonstrated, cost effective, method to collect data for a commercially and recreationally important species from areas and times of year not accessed by existing survey programs;
- Improved collaboration and trust between fishermen, scientists, and managers;
- Improved accuracy and credibility of the stock assessment and management plan for the northern Atlantic black sea bass stock;

The benefits of the proposed project are:

- Address priorities of ACCSP by providing critically needed black sea bass data from the SNE/MAB region to support assessment and management efforts that reflect the current state of the resource;
- Provide an efficient and constructive way for fishermen to be involved in the scientific process by using modern technology to collect quantitative black sea bass data during routine fishing practices;
- Fill black sea bass data gaps in areas, habitats, and times of year not covered by standard survey techniques;
- Evolve and improve the black sea bass stock assessment by providing expanded biological data from retained and discarded black sea bass from a variety of gear types;
- Support regional science and management agencies, including ACCSP, ASMFC, MAFMC, and state agencies in their efforts to sustainably manage the black sea bass resource;
- Support diversification and resilience of fishing communities in the many states across the Atlantic coast with a black sea bass fishery;
- Provide a model for cost-effective fishery dependent data collection efforts in other regions and fisheries.
- Build strong working partnerships between fishermen, scientists, and managers that will contribute to the sustainable management of the nation's living marine resources;
- Build confidence in the efficacy of the northern Atlantic black sea bass stock assessment and management process.

Data Delivery Plan:

An important component of the proposed project is the compilation and communication of fishery and biological data to the ACCSP, participant fishermen, stock assessment scientists, and management teams, which will allow this project to have the greatest impact on black sea bass management as possible. The CFRF will maintain the black sea bass database for internal project analyses (described below) but will also regularly share the project data with other users, regardless of any internal publication endeavors.

Copies of the black sea bass database will continue to be sent bi-annually (every six months) to the ACCSP. These data will be compiled in a format that is compatible with the ACCSP database to encourage data be readily used in the black sea bass stock assessment and other analyses. Data submissions to the ACCSP will build upon the established procedures from the first five years of the project. All data provided to the ACCSP will match ACCSP data collection standards and any requested and available metadata will be provided. Throughout the project, data will also be made available to fishery scientists at the NMFS Northeast Fisheries Science Center. A vessel ID system will be used to maintain the confidentiality of participant fishing vessels. The CFRF will maintain open communication with the ACCSP data coordinator and will remain available to provide any necessary information along with data submissions.

To provide regular feedback to fleet participants, the project team will compile and distribute individual data reports to vessel captains every three months (quarterly). Vessel-specific data reports will include the raw data collected by that vessel during the reporting period as well as the following summary statistics: number of catch sampling sessions, amount of effort sampled (number of trawls, hooks, traps, etc.), average depth of sampling, percentage of black sea bass catch retained for sale, percentage of black sea bass catch discarded, number of black sea bass biologically sampled, sex distribution of black sea bass sampled, minimum/maximum length of black sea bass sampled, and average length of black sea bass sampled. Additional summary statistics will be available upon request. Data reports were compiled and distributed to Research Fleet participants following the above-mentioned quarterly time frame and content guidelines throughout the entirety of past project sampling.

Completed Data Delivery to ACCSP:

During the first funding year of the project, the CFRF and RI DEM worked with the current ACCSP Data Coordinator to coordinate data formats, metadata, and delivery procedures for the Research Fleet's black sea bass biosamples data. In addition, in year 4 of the project, the project team worked with the ACCSP Data Coordinator to update the Black Sea Bass Research Fleet data submission to follow the updated ACCSP biosamples data format. As a result of these efforts, all black sea bass biosamples data collected to date through the funded project have been incorporated into the ACCSP black sea bass biosamples database. The CFRF has maintained the bi-annual data submission to the ACCSP and submits data in January and July of each sampling year. The project team will maintain a bi-annual data delivery schedule to ACCSP

throughout the proposed project following the same data formats and standards previously established, as well as any requested updates from ACCSP.

Currently, the Research Fleet collects a suite of additional effort data beyond that which is included in the biosamples data (Table 1). To present, this effort data has not been included with past data submissions as the biosamples database at ACCSP is not set up for its inclusion. Continued efforts will be made by the CFRF and RI DEM to incorporate and share all effort data, including retroactively, with the ACCSP.

Approach:

The proposed project seeks to collect, communicate, and analyze critically needed catch, bycatch, and biological data for incorporation into the ACCSP biosamples database and ultimate application in the northern Atlantic black sea bass stock assessment. Project components include: 1) Maintenance of the current Black Sea Bass Research Fleet; 2) Collection of fishery-dependent biological (catch and bycatch) black sea bass data and fishery characteristics for 12 months in the SNE/MAB region; 3) Internal data analysis to address research questions about spatiotemporal patterns in the black sea bass population and fishery; 4) Compilation and communication of project data and results to ACCSP, stock assessment scientists, and fisheries managers; and 5) Outreach and education activities to share findings. Methodological details are outlined below.

Maintenance of Black Sea Bass Research Fleet and Data Collection App:

During the first funding year of this project, the CFRF and RI DEM were successful in developing the Black Sea Bass Research Fleet for fishery dependent data collection, including the development of a Project Steering Committee, solicitation and selection of participant fishing vessels, development of the On Deck Data application and SQL database, refinement of sampling protocols, construction of sampling equipment, training of Research Fleet participants, on-time initiation of data collection, data delivery to ACCSP and professional and industry outreach. The project was implemented by the PIs, CFRF staff, and a Project Steering Committee, which consists of members of the fishing industry as well as state and federal fisheries scientists and managers. Currently the project is run by the PIs and CFRF staff, and the project steering committee serves in an advisory role and provides feedback on project progress and major milestones as needed. More information about project accomplishments is available on the project website: www.cfrfoundation.org/black-sea-bass-research-fleet.

If funded, during the seventh year of the project, the CFRF and RI DEM will maintain all active fishing vessels supported through year-6 funding from ACCSP. It is important to maintain the current members of the Research Fleet for as long as possible. Ultimately, when data will be applied to the stock assessment or validated in regards to other sources of black sea bass data, having participation from the same vessels throughout the time series will allow project staff to investigate potential vessel effects evident in the data. The sampling rate of the Research Fleet

is dictated by the highly seasonal variation of black sea bass catch and bycatch in various fisheries across southern New England and the Mid-Atlantic. As a result, the sampling rate by the Research Fleet fluctuates from year to year. If funds become available due to normal fluctuations in Research Fleet sampling, project Co-PIs will evaluate the possibility of expanding the Fleet to include more vessels. Thus, when possible, and if funds permit, the Research Fleet may be expanded during the proposed project through an open application call for new vessels.

The black sea bass data collection application, On Deck Data, was developed during the first year of the project to enable Research Fleet participants to collect standardized black sea bass data as well as day-to-day observations. On Deck Data prompts participant fishermen to record a suite of session data (location, depth, etc.) and biological data (length, sex, disposition) while at sea. To account for the multi-gear nature of the black sea bass fishery, On Deck Data prompts gear-specific data entry for Research Fleet participants (Table 1). On Deck Data was originally launched during the first year of the project and has received various improvements and quality of life updates in each funded year to streamline data collection.

Table 1. Summary of fishing effort data collected by the Black Sea Bass Research Fleet.

Trawl	**Gillnet**	**Commercial Rod & Reel**	**Charter**	**Lobster/Crab Traps**	**Fish Pot**
Mesh Size (inches)	Number of Net Panels Per String	Time Spent Fishing (hours)	Time Spent Fishing (hours)	Soak Time (days)	Soak Time (days)
Tow Time (hours.decimal)	Length of Net Panels (feet)	Number of Rods Fished	Number of Rods Fished	Number of Traps	Number of Traps
Sweep Length (feet)	Mesh Size (inches)	Humber of Hooks Used	Number of Hooks Used	Escape Vent Size (inches)	Escape Vent Size (inches)
	Soak Time (days)			Escape Vent Shape	Entrance Size (inches)
	Net Height (feet)				
	Tie Downs (inches)				

On Deck Data will be maintained throughout the proposed project to allow for efficient data collection and wireless data submission by Research Fleet participants. The CFRF and RI DEM will continue to work with an application developer to address any issues that arise and to update On Deck Data to maintain functionality. Application maintenance is a constant task, as tablets regularly receive operating system updates that may impact On Deck Data functionality. On Deck Data has to receive regular updates to specifically allow for compatibility with accessing and uploading data via wireless internet on new versions of the Android operating system. Further, as tablet models receive minor hardware changes between annual models, reformatting screens of On Deck Data to display properly across tablet models is anticipated.

The Black Sea Bass Research Fleet will continue to follow the fishery-dependent sampling protocols implemented during the first year of the project to collect catch and effort, biological,

and bycatch data from the SNE/MAB region. The percentage of project effort devoted to each of these modules is as follows: Catch and Effort 25%, Biological 50%, Bycatch 25%. The estimated project effort devoted to biological sampling reflects the collection of black sea bass length and sex data by participant vessels during three trips per month for 12 months. The intention of data collection is to provide a biological characterization of the catch and discards of black sea bass from a variety of gear types in the SNE/MAB regions. The estimated effort devoted to the catch and effort module is based upon sampling during the open black sea bass fishing season, sub periods open to commercial fishery exist nearly year-round. Further due to the multi-gear nature of the Research Fleet, every vessel interacts with black sea bass as targeted catch or bycatch differently even during open periods. Finally, the project effort allocated to the bycatch module reflects sampling efforts conducted while the commercial black sea bass fishing season is closed and while participant vessels are targeting other species. Due to the low daily allocation through the summer and fall seasons in Rhode Island, there is still a large portion of bycaught black sea bass sampled after vessels have hit their daily limits.

Fishery-Dependent Data Collection:

The Black Sea Bass Research Fleet started collecting data on November 30, 2016 and, if this proposal is funded, will continue to do so utilizing the established sampling protocols and procedures through at least July 31, 2024 (through Year 7 of ACCSP funding). The Black Sea Bass Research Fleet currently consists of fourteen active fishermen based in Rhode Island and New Jersey, chosen strategically to provide data coverage from across the SNE/MAB region, throughout the year, from a variety of gear types. In 2021, one Fleet member, F/V Saturn (fish pot) retired from fishing. Three other participants, F/V Nancy Beth (gillnet), F/V Second Wind (offshore trawl), and F/V Blue Label and Virginia Bae (same captain; fish pot, gillnet), are also now considered "inactive" as they have not sampled for more than one year. The other vessels from the prior year's proposal, F/V Johnny B (fish pot, rod & reel, lobster pot), F/V Laura Lynn (fish pot, rod & reel, lobster pot), F/V Matrix and F/V November Gale (same captain; lobster/crab pot, trawl, conch pot), F/V Priority Too (rod & reel, charter), F/V Sweet Misery and F/V More Misery (same captain; gillnet, lobster pot), F/V Debbie Sue (trawl), F/V Harvest Moon (fish pot, lobster pot), F/V X-Terminator (fish pot, gillnet), F/V Catherine Ann (fish pot, lobster pot), F/V New Hope (fish pot), F/V Ragged Edge (fish pot), F/V Savannah Paige (fish pot), F/V Saturn (fish pot). and F/V Brooke C (lobster/crab pot, fish pot, scallop dredge) have been maintained

The majority of samples have originated from statistical areas 537 and 539 as these two statistical areas exclusively cover the fishing grounds of the F/V Johnny B, F/V Laura Lynn, F/V Matrix, F/V Priority Too, and now F/V Catherine Ann, all of which are either seasonal fishing vessels or do not interact with black sea bass in the winter. The majority of inshore lobster, fish pot, rod and reel and gillnet samples come from the end of spring through the end of the fall when black sea bass are in highest abundances inshore in statistical areas 537 and 539. The F/V Brooke C fishes offshore and interacts with black sea bass heavily in the winter and spring months, however this vessel encounters black sea bass less frequently through the summer and

fall. The F/V X-Terminator and F/V Blue Label both fish seasonally and mostly inshore in stat area 537 and were brought into the Fleet to expand the number of gear replicates in the gillnet and fish pot fisheries. The F/V Debbie Sue fishes further south than most of the Rhode Island based Research Fleet members and consistently completes trips into the MAB region south of Hudson Canyon. The F/V Savannah Paige and F/V Saturn, both based in New Jersey, primarily sample in statistical areas 620 and 621. In total, the Black Sea Bass Research Fleet has sampled black sea bass from 13 distinct statistical areas: 525, 533, 537, 538, 539, 611, 613, 615, 616, 621, 622, 626, and 632.

Participant fishermen will use Samsung Tab A tablets pre-programmed with On Deck Data, described above, to efficiently and accurately record and transmit fishery dependent data. As such, the proposed project will advance the use of electronic technology in at-sea biological data collection, management, and analysis efforts. The goal for each participant is to conduct at-sea catch sampling sessions during three fishing trips each month (Nelson 2014). Thus, across the 14 active vessels, the Black Sea Bass Research Fleet will aim to sample up to 42 trips per month, resulting in as many as 504 trips over twelve months. Given the population inferences implied in the project objectives and the aggregating nature of black sea bass, a biological sampling (length/sex) minimum of 50 black sea bass per location will be the required (Zhang & Cadrin 2012). With a goal of sampling three locations per month, the Research Fleet may sample up to 25,200 black sea bass over the course of the year.

The realized sampling frequency, however, will be dependent on a variety of factors, including weather, seasonal black sea bass distribution, and fishery closures. Further, due to the high seasonality of a large portion of the Black Sea Bass Research Fleet, fishery sampling frequency exhibits high seasonal fluctuations. Due to the multi-gear nature of the Research Fleet, the proposed sampling targets do not adequately represent the fishing schedules for each gear type. For example, due to the low daily catch limit (50 pounds per day per vessel for most of the year) in Rhode Island for black sea bass if a fishing vessel is only targeting black sea bass on a day trip and the limit is caught, all fishing ceases. This leads to instances where sampling 50 black sea bass per location becomes unfeasible as fishing may have already stopped prior to landing 50 black sea bass. Further, many of the larger trip vessels are mainly retaining their daily or trip limits of black sea bass from bycatch while targeting other species, which again leads to instances of fishing ceasing prior to 50 black sea bass caught. However, the goal of sampling 150 black sea bass per month remains to ensure statistical power. Vessels may sample fewer fish from more than three locations to reach the 150 fish per month target. Further, the same scenario occurs in highly mobile fishing gears, such as charter and commercial rod and reel, which will often change locations prior to catching 50 black sea bass. Both instances may lead to the potential for more numerous sampling locations with fewer fish from each location. Finally, the maximum target of 25,200 black sea bass would only be achievable if all Research Fleet participants operated year-round. Since many of the gear types represented within the Research Fleet stop fishing for the winter months, the realized sampling numbers are lower.

At each sampling location, participant fishermen will use On Deck Data to record the date, time, location, statistical area, depth, habitat type, target species, gear type, effort deployed (see Table 1), total number or pounds of black sea bass retained and discarded, and length, sex, and disposition of at least 50 black sea bass. Sampling date, time, and location will be automatically recorded by the internal tablet GPS. Standardized fish measuring boards will be used across the Research Fleet to ensure a consistent measure of fish length to the nearest centimeter. Data will be wirelessly uploaded to a MySQL database once a vessel returns to port and continually monitored by the project team. This data communication, review, management, and storage process was established and vetted during the first year of the project and has been implemented in each year since.

Scientific collector's permits, issued by RI DEM, will be obtained for vessels fishing within Rhode Island state waters to allow for black sea bass collection for laboratory sampling. These permits were successfully acquired multiple times during the first funding years of the project and will be extended through subsequent years of data collection and expanded to cover new Research Fleet participants. During the 2020 sampling year, it was decided to no longer obtain an Exempted Fishing Permit for Research Fleet sampling. The exemptions allowed for recreational retention regardless of closure periods and exempted commercial rod and reel and charter vessels from minimum size limits for sampling purposes. Neither of these exemptions were necessary for Research Fleet operation as no black sea bass are retained for laboratory sampling from federal waters. They also allowed for participants to keep undersized fish onboard longer than the time needed for sampling.

Internal Data Analysis:

As described above, the Black Sea Bass Research Fleet was able to operate effectively and deliver data in an efficient manner during the first five+ years of data collection, sampling over 41,614 black sea bass from 2,301 sampling sessions conducted from coastal Rhode Island into the MAB and east to George's Bank from November 30, 2016 to May 1, 2022 (Figure 1). These data are summarized in Table 2. The ultimate application of these data will be the black sea bass stock assessment. To achieve this goal, the project team has worked directly with steering committee members and black sea bass stock assessment scientists (Gary Shephard, NEFSC; Steve Cadrin, SMAST) since the beginning of the project to ensure that Research Fleet data is of the necessary quality and structure for utilization in the stock assessment. More recently, the project team has been regularly communicating with the Black Sea Bass Research Track Stock Assessment Working Group and attending all meetings to discuss the Research Fleet data, provide data summaries, and answer questions about the dataset, as the Working Group evaluates how this data can be incorporated into the upcoming assessment. Communication with the above listed stock assessment scientists will continue with the proposed project. Work with the stock assessment scientists will be focused on directly incorporating the Research Fleet data into the stock assessment, creating in depth gear selectivity models for the gear types represented within the Research Fleet and exploring the creation and incorporation of CPUE indices of abundance (including gear specific indices), both of which could be directly utilized in

the stock assessment. Further, the proposed work will include gear specific discard characterizations describing the length frequencies of discarded black sea bass from each gear type through both time and space, with the intention of providing a more accurate understanding of black sea bass discards for the stock assessment.

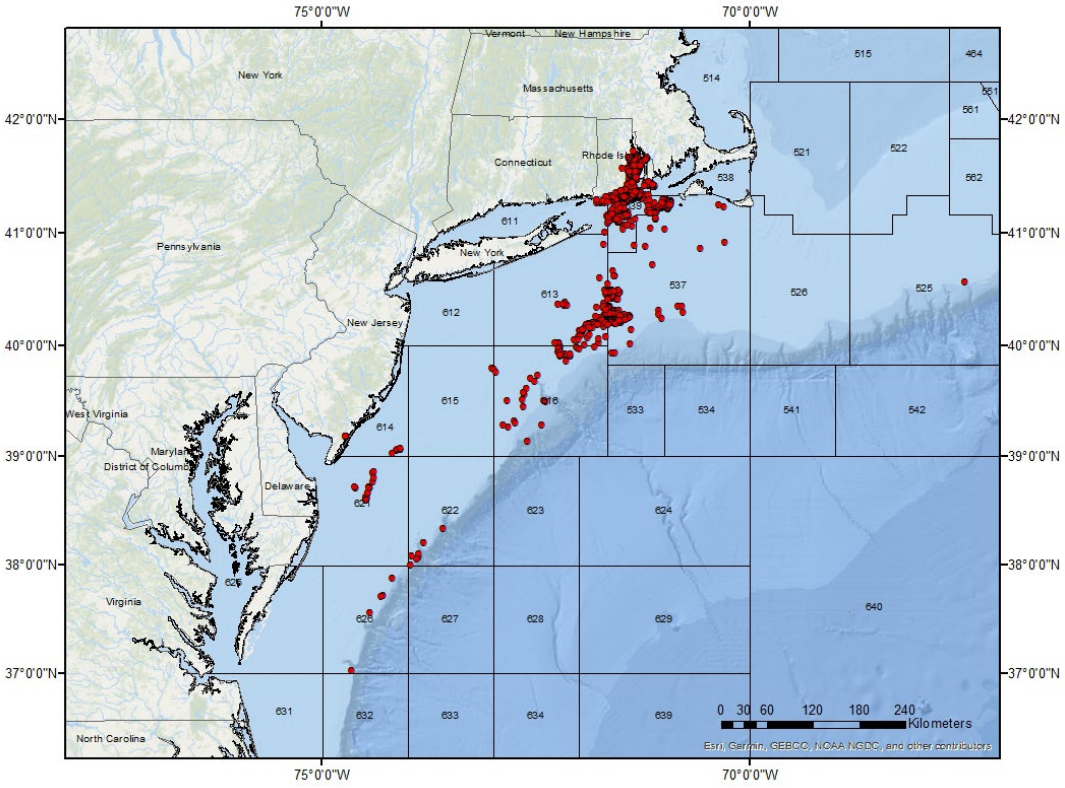

Figure 1. Black Sea Bass Research Fleet sampling locations (red dots) and associated statistical areas in the Southern New England and Mid-Atlantic region of the United States East Coast.

Table 2. Summary of data collected by the Black Sea Bass Research Fleet as of May 1, 2022.

Total Black Sea Bass Sampled	41,614
Percent Male	25%
Percent Female	39%
Percent Unknown	36%
Minimum Size (cm)	1
Maximum Size (cm)	68
Average Size (cm)	29.1
Percent Discarded	70%
Percent Retained	30%

In addition to the application of biological black sea bass data to the stock assessment, the data derived from the Black Sea Bass Research Fleet could also be used to characterize the catch, bycatch, and other characteristics of black sea bass in the SNE/MAB region, including gear selectivity and spatiotemporal patterns in catch composition. An additional 12 months of sampling by the Research Fleet will provide a better understanding of these seasonal and spatial dynamics as the data will now become the first multi-gear, multi-year, time series for the species.

The data collected during the previous funding years of the project exhibit interesting biological and fishery trends that will continue to be monitored in subsequent years of sampling for the proposed project. As expected, the average length of retained fish (39.1 cm) is larger than that of discarded fish (25.1 cm). However, the high frequency of legal-sized (>27.94 cm) discarded black sea bass caught by commercial gear suggests black sea bass are primarily being discarded due to seasonal closures and/or low daily limits, rather than the minimum size limit. For example, 44% of all commercially discarded fish have been legal size. The range of lengths of discarded fish further supports this, showing that even the largest of sampled black sea bass (receiving the highest market value) are often discarded (Figure 2).

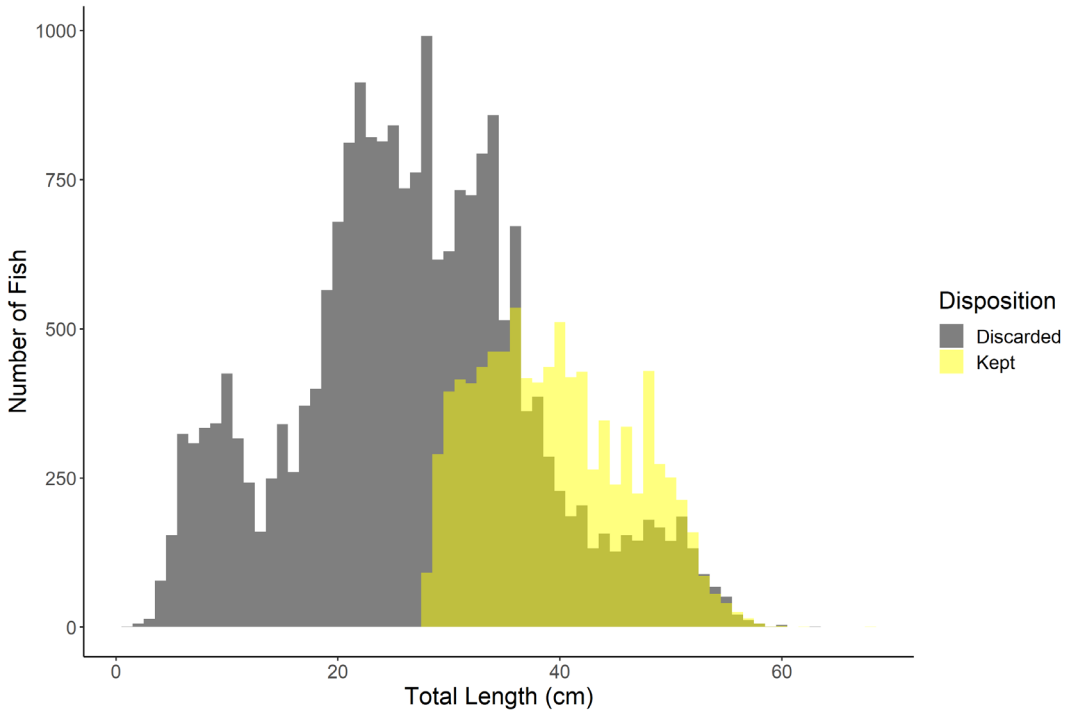

Figure 2. Size spectra of black sea bass sampled by the Research Fleet from November 30, 2016 to May 1, 2022.

When comparing gear selectivity between the different gear types represented within the Research Fleet, trends between discarded and retained black sea bass are apparent (Figures 3 and 4). Trawl gear regularly interacts with the largest size range of black sea bass of all the gear

types represented. Rod and reel (commercial and charter), fish pot, and lobster pot all exhibited nearly as wide a range of size interaction with black sea bass as trawl gear types, however, did not interact with the smallest of size classes of black sea bass as frequently and therefore had higher mean total length. Gillnet appears to be in a distinct grouping of its own and exhibits the highest selectivity amongst all represented target gear types, as this gear exclusively interacts with the largest size classes of black sea bass. Conch pot and oyster aquaculture are similarly selective compared to gillnet gear however interact primarily with the smallest size classes of black sea bass. Interestingly, black sea bass of legal size (>27.94 cm) are still sometimes captured in conch pots and have been retained for sale during sampling events.

These trends, which have become apparent from just the first several funding years of sampling, suggest there is gear-specific size selectivity occurring in the black sea bass fisheries in the SNE/MAB regions. The proposed project will continue to track these trends as the time series builds with subsequent years of sampling. This type of information could have important ramifications to the stock assessment as it could help inform the selection of fleets modeled within the assessment.

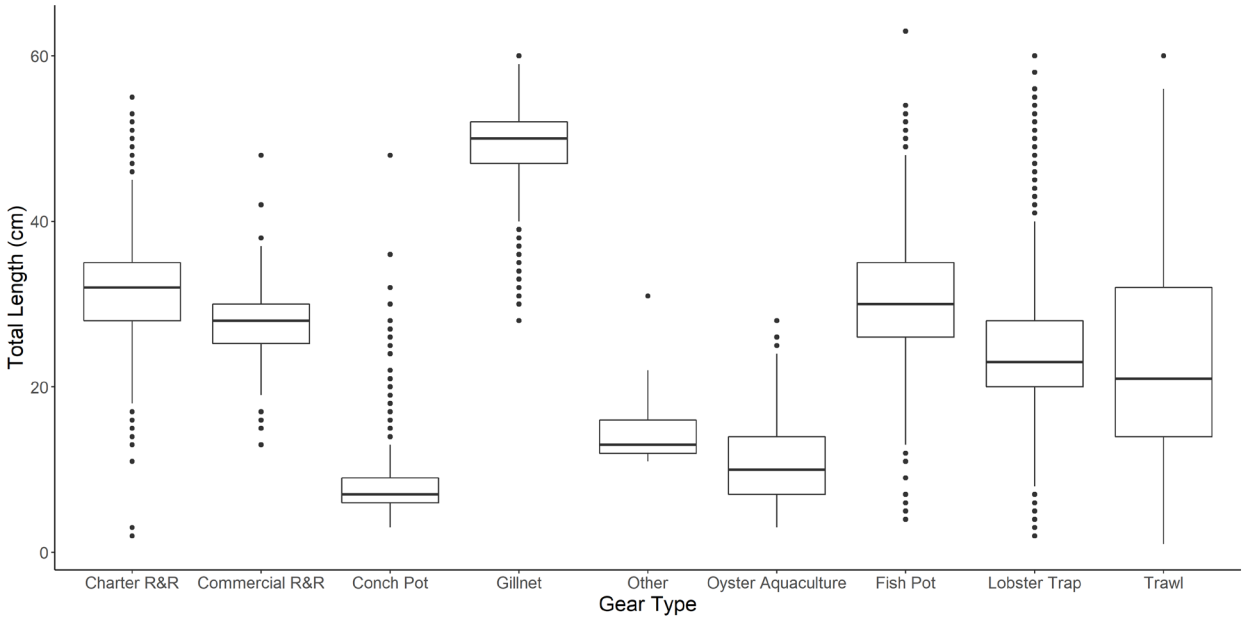

Figure 3. Size range of discarded black sea bass sampled by each gear type represented within the research fleet as of May 1, 2022.

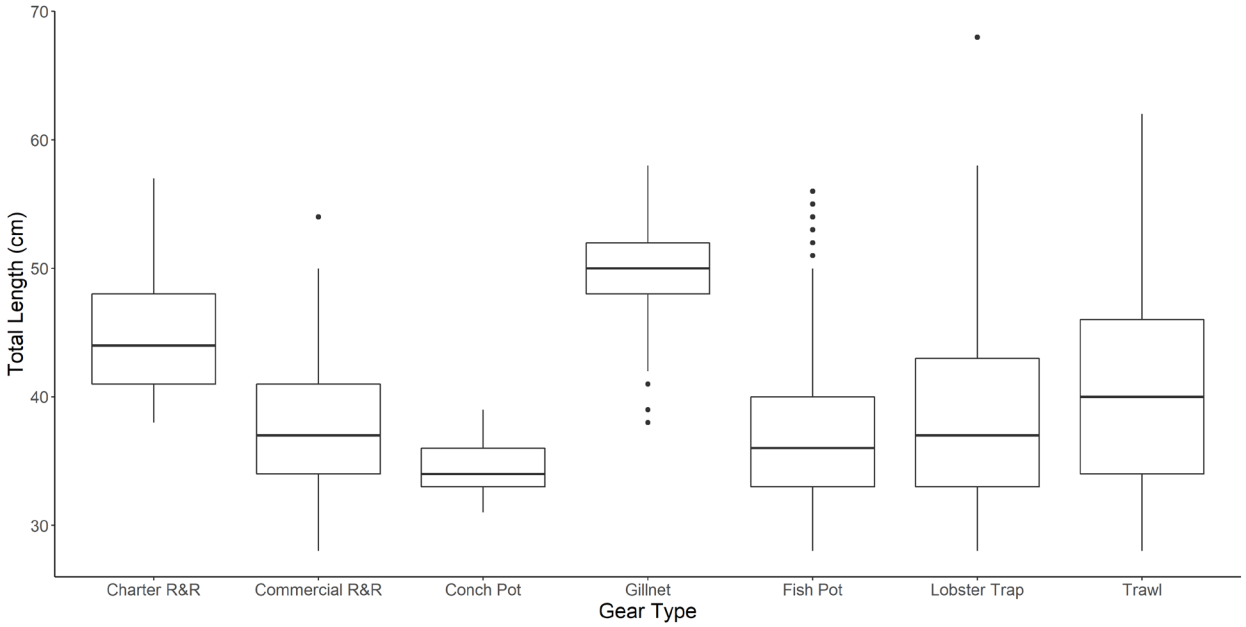

Figure 4. Size range of retained black sea bass sampled by each gear type represented within the research fleet as of May 1, 2022. Note, oyster aquaculture gear type is absent from this graph because no black sea bass have been retained from this gear type.

During the proposed year of the project, the project team will focus on the refinement and expansion of analyses previously established for application to the stock assessment including: size spectra, sex ratios, catch per unit effort (CPUE), black sea bass retention and discard structure, seasonal activity of Research Fleet, and gear selectivity. Specifically, internal data analysis questions proposed during the past funded year of the project were: 1) Are there spatial (latitudinal) patterns in the length frequency or sex ratio of black sea bass?, 2) Are there seasonal differences in black sea bass catch composition (length frequency and sex ratio)?, 3) Are different life stages of black sea bass apparent in commercial fisheries catch in specific areas or at different times of year?, and 4) What is the selectivity (min, max, mean length) of different gear types (trawl, fish pots, gillnet, lobster/crab pot, rod and reel) that harvest black sea bass? Year-7 analyses will build upon the initial results from exploration of these questions and will begin to explore temporal trends in the dataset. The project team will aim to publish a manuscript containing results from internal analyses in a peer-reviewed journal as time allows. The establishment of gear type selectivity curve models comparing different gear types as well as multiple years of Research Fleet data will serve as the potential direct input to the next black sea bass stock assessment.

The open-source statistical software package R will be used for data analysis. Length frequencies, black sea bass length gear selectivity, spatial and seasonal sex ratio regression models, and catch rate patterns will all be updated based on the protocols established in prior years of the project to further analyze seasonal trends as well as compare data from year to year. Data and code will be made available to others upon reasonable request.

In addition to further addressing the aforementioned research questions, the project team will also explore novel fishery dependent indices for the black sea bass stock assessment, as time permits. Building upon the analytical techniques established in prior years, data will continue to be standardized from the disparate gear types represented within the Research Fleet through generalized linear modeling approaches and/or hierarchical modeling techniques to allow for more direct communication into the black sea bass stock assessment.

Outreach and Education

Education, outreach, and ongoing communication are an integral part of the overall work plan for the proposed project. These components of the proposed project support the goal of fostering collaborative working partnerships among scientists, managers, and members of the fishing industry through all phases of research, from the fine-tuning of sampling strategies through the analysis and sharing of data and results.

The primary outreach/education goal of the proposed project is to share and disseminate information on two topics: 1) the lessons learned from the collaborative Research Fleet approach for fishery dependent data collection; and 2) the findings from analysis of the black sea bass catch, bycatch, and biological databases derived from this project.

A secondary goal is to share and disseminate project information to a variety of interest groups including: 1) commercial fishing industry members; 2) fisheries scientists and managers based in various state, regional, and federal agencies; 3) outside researchers who will utilize this information to inform their own research efforts in the region; and 4) other interested parties seeking information on new data collection/ocean monitoring techniques and approaches, and/or trends in black sea bass abundance and distribution in the SNE/MAB region.

There are several work elements embedded in the project work plan that are aimed at specifically addressing outreach and education goals, including:

1. Ongoing communication with project team members, including the members of the Black Sea Bass Research Fleet through personal meetings, group meetings, e-mail briefings, and phone conversations. Annual Research Fleet meetings have been held during previous years of funding, except for FY20 which was canceled due to the COVID-19 pandemic. During annual meetings, the CFRF hosts all Research Fleet members, PIs, project staff, and steering committee members to receive feedback on the data collection process and present trends and analyses of the past year's data. These Fleet meetings have been invaluable for receiving project feedback and as well as forming relationships between the fishing industry, managers, and scientists. The project team is currently planning a Fleet meeting for summer 2022, and additional annual meetings will be held for the proposed project if granted continued funding through FY23.
2. Periodic project briefings to key individuals outside the project team, including ASMFC, MAFMC, NMFS NEFSC, and NMFS GARFO staff, members of the black sea bass fishing fleet, and interested others through direct e-mail/mail correspondence, including

periodic newsletters describing the project progress. The CFRF newsletters are sent to over 1500 addresses.

3. Regular postings of project information on the CFRF website, including descriptions of the fishermen involved, the equipment being used, the type of data being collected, and findings, as this information becomes available over the course of the project (www.cfrfoundation.org/black-sea-bass-research-fleet). The CFRF also posts periodic updates on this project on the CFRF Facebook page, which has over 1500 followers.
4. Participation in scientific, public, and industry-based conferences. So far, these include:

    a. 2017
        i. Massachusetts Lobsterman's Association (MLA) Annual Trade Show (Booth)
        ii. New Bedford Working Waterfront Festival (Booth)
        iii. Coastal and Estuarine Research Federation Conference (Booth)
    b. 2018
        i. Southern New England Chapter (SNEC) of the American Fisheries Society (AFS) (Poster presentation. "*Advancing Fishery Dependent Data Collection for Black Sea Bass (Centropristis striata) in the Southern New England and Mid-Atlantic Region using Modern Technology and a Fishing Vessel Fleet Approach".* Thomas Heimann, Anna Malek Mercer, and Jason McNamee)
        ii. MLA (Seminar)
        iii. AFS (Presentation. "*Advancing Fishery Dependent Data Collection for Black Sea Bass (Centropristis striata) in the Southern New England and Mid-Atlantic Region using Modern Technology and a Fishing Vessel Fleet Approach*". Anna Malek Mercer, Thomas Heimann, and Jason McNamee)
    c. 2019
        i. SNEC AFS (Presentation. "Using Fishermen-Collected Data to Explore the Black Sea Bass (*Centropristis striata*) Population and Construct Gear-Specific Discard Characterizations". Anna Malek Mercer, Thomas Heimann, and Jason McNamee)
        ii. MLA (Booth and Seminar)
        iii. Maine Fishermen's Forum (Booth and Presentation. "*Warming Waters, Emerging Species, and Market Changes: Lessons Learned from Southern New England*". Anna Malek Mercer, Aubrey Ellertson, and Thomas Heimann)
        iv. Wakefield Fisheries Symposium (Presentation. "Using Industry Collaboration to Improve Black Sea Bass Management". Anna Malek Mercer, Thomas Heimann, and Jason McNamee)
        v. Senator Sheldon Whitehouse's 10th Annual Oceans, Energy, and Environmental Leaders Day (Poster Presentation. "*Advancing Fishery Dependent Data Collection for Black Sea Bass (Centropristis striata) in the Southern New England and Mid-Atlantic Region using Modern Technology*

and a Fishing Vessel Fleet Approach". Thomas Heimann, Anna Malek Mercer, and Jason McNamee)

vi. Gulf of Maine 2050 symposium (Lightning Talk. "Warming Waters Create Opportunity for Diversification and Collaboration: Addressing the Rise of Black Sea Bass in Southern New England". Thomas Heimann, Christopher Glass, and Jason McNamee)

d. 2020

i. New England Cooperative Research Summit. "Filling the Gap with Self-Reported Data: Research Fleets". N. David Bethoney and Fred Mattera

e. 2021

i. AFS (Two Presentations. 1. "*Using a fishery-dependent research fleet approach to characterize the composition of black sea bass (Centropristis striata) discards in the Southern New England and Mid-Atlantic fishery*". Hannah Verkamp, Thomas Heimann, Jason McNamee, and David Bethoney. 2. "*The Commercial Fisheries Research Foundation Research Fleets: Progress and New Directions*". N. David Bethoney, Aubrey Ellertson, and Thomas Heimann)

5. Sharing of relevant data and samples to aid other regional research initiatives centered on black sea bass. So far, this has included:

   a. Facilitated the collection of 30 live black sea bass for laboratory observation of black sea bass predation on lobster by a Master's student in Dr. Candace Oviatt's lab at University of Rhode Island
   b. Contributed over 150 black sea bass samples to Dr. Jonathan Grabowski at Northeastern University since 2019 to investigate differences among black sea bass across three distinct geographic zones in the northern range of black sea bass.
   c. Contributed 30 black sea bass samples to Dr. Kelton McMahon at the University of Rhode Island in 2019 to investigate stable isotope concentrations and trophic overlap with cod.
   d. Contributed length, sex, disposition, date, time, and location data from recreational fishing trips by a Research Fleet member to Mr. Chris McGuire of the Nature Conservancy in 2019 to validate the organizations camera-based data collection system.
   e. Contributed 100 black sea bass samples to Dr. Katie Lotterhos at Northeastern University in 2021 to sequence the black sea bass genome and evaluate population structure.
   f. Contributed aging structures from over 2,400 black sea bass for inclusion in the Virginia Institute of Marine Science's black sea bass aging database.
   g. Contributed 69 otoliths to scientists at Massachusetts Division of Marine Fisheries for inclusion in a study that validated ageing methods for black sea bass and compared results across different regions. This work was recently published: Koob ER, SP Elzey, JW Mandelman, MP Armstrong. 2021. "Age validation of the

northern stock of black sea bass (*Centropristis striata*) in the Atlantic Ocean. Fish Bull. 119: 261-271 DOI: 10.7755/FB.119.4.6

h. Contributed relevant data to a Masters student at the University of Massachusetts Dartmouth School of Marine Science and Technology studying the effects of windfarm development on black sea bass.

6. Organization of a research session at the end of the project involving managers, scientists, and members of the commercial and recreational fishing industries to share project findings and discuss experiences and results.
7. Issuance and distribution of a written summary report.

Geographic Location:

At-sea sampling will be conducted within the northern Atlantic black sea bass stock area (SNE/MAB region), potentially including statistical areas 521 to 631. The final distribution of at-sea data collection will depend on the fishing locations selected by participant fishermen. Project administration, and data management and analyses will be conducted at the Commercial Fisheries Research Foundation office in Kingston, Rhode Island and the RI DEM marine laboratory in Jamestown, Rhode Island.

Milestone Schedule:

Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13-15
Research Fleet data collection and Fleet support	Research Fleet data collection and Fleet support	Research Fleet data collection and Fleet support	Research Fleet data collection and Fleet support	Research Fleet data collection and Fleet support	Research Fleet data collection and Fleet support	Research Fleet data collection and Fleet support	Research Fleet data collection and Fleet support	Research Fleet data collection and Fleet support	Research Fleet data collection and Fleet support	Research Fleet data collection and Fleet support	Research Fleet data collection and Fleet support	Final report writing and submission of report and all project data to ACCSP
				Apply for RI DEM Permits	Distribute RI DEM Permits to Fleet							
Maintain sampling gear and buy new sets	Maintain sampling gear	Maintain sampling gear	Maintain sampling gear	Maintain sampling gear	Maintain sampling gear	Maintain sampling gear	Maintain sampling gear	Maintain sampling gear	Maintain sampling gear	Maintain sampling gear	Maintain sampling gear & collect after sampling	
Maintain ODD, server, and database	Maintain ODD, server, and database	Maintain ODD, server, and database	Maintain ODD, server, and database	Maintain ODD, server, and database	Maintain ODD, server, and database	Maintain ODD, server, and database	Maintain ODD, server, and database	Maintain ODD, server, and database	Maintain ODD, server, and database	Maintain ODD, server, and database	Maintain ODD, server, and database	
Data QA/QC, review, and analysis	Data QA/QC, review, and analysis	Data QA/QC, review, and analysis	Data QA/QC, review, and analysis	Data QA/QC, review, and analysis	Data QA/QC, review, and analysis	Data QA/QC, review, and analysis	Data QA/QC, review, and analysis	Data QA/QC, review, and analysis	Data QA/QC, review, and analysis	Data QA/QC, review, and analysis	Data QA/QC, review, and analysis	
		Quarterly reports to Fleet Members			Quarterly reports to Fleet Members			Quarterly reports to Fleet Members			Quarterly reports to Fleet Members	
				Submit data to ACCSP		Write progress report and submit to ACCSP				Submit data to ACCSP		
Maintain project website and project outreach	Maintain project website and project outreach	Maintain project website and project outreach	Maintain project website and project outreach	Maintain project website and project outreach	Maintain project website and project outreach	Maintain project website and project outreach	Maintain project website and project outreach	Maintain project website and project outreach	Maintain project website and project outreach	Maintain project website and project outreach	Maintain project website and project outreach	

Project History Table:

Funding Year	Title	Original Project Dates	Funded Amount	Total Project Cost	Description
2016 New	Advancing Fishery Dependent Data Collection for Black Sea Bass (*Centropristis striata*) in the Southern New England and Mid-Atlantic Region Utilizing Modern Technology and a Fishing Vessel Research Fleet Approach	September 1, 2016 – August 31, 2018	$137,827.00	$203,072.00	Piloted the research fleet technique for collection of fishery dependent catch, effort, bycatch, and biological data in the multi-gear black sea bass fishery
2018 New	Advancing Fishery Dependent Data Collection for Black Sea Bass (*Centropristis striata*) in the Southern New England and Mid-Atlantic Region Utilizing Modern Technology and a Fishing Vessel Research Fleet Approach	May 1, 2018 – May 31, 2019	$135,648.00	$187,949.00	Maintained the research fleet fishery dependent data collection of catch, effort, bycatch, and biological data in black sea bass fishery and expanded Research Fleet by two fishing vessels
2019 Maintenance	Advancing Fishery Dependent Data Collection for Black Sea Bass (*Centropristis striata*) in the Southern New England and Mid-Atlantic Region Utilizing Modern Technology and a Fishing Vessel Research Fleet Approach	June 1, 2019 – May 31, 2020	$132,749.00	$169,033.00	Maintained the Research Fleet data collection of catch, effort, bycatch, and biological data in the black sea bass fishery in the SNE/MAB region and expanded the Research Fleet by two fishing vessels
2020 Maintenance	Advancing Fishery Dependent Data Collection for Black Sea Bass (*Centropristis striata*) in the Southern New England and Mid-Atlantic Region Utilizing Modern Technology and a Fishing Vessel Research Fleet Approach	August 1, 2020 – July 31, 2021	$132,097.00	$157,735.00	Maintained the Research Fleet data collection of catch, effort, bycatch, and biological data in the black sea bass fishery in the SNE/MAB region and expanded the Research Fleet by one fishing vessel
2021 Maintenance	Advancing Fishery Dependent Data Collection for Black Sea Bass (*Centropristis striata*) in the Southern New England and Mid-Atlantic Region Utilizing Modern Technology and a Fishing Vessel Research Fleet Approach	August 1, 2021 – July 31, 2022	$132,064.00	$154,537.00	Maintained the Research Fleet data collection of catch, effort, bycatch, and biological data in the black sea bass fishery in the SNE/MAB region and expanded the Research Fleet by two fishing vessels
2022 Maintenance	Advancing Fishery Dependent Data Collection for Black Sea Bass (*Centropristis striata*) in the Southern New England and Mid-Atlantic Region Utilizing Modern Technology and a Fishing Vessel Research Fleet Approach	August 1, 2022 – July 31, 2023	$132,005.00	$154,478.00	Will maintain the Research Fleet data collection of catch, effort, bycatch, and biological data in the black sea bass fishery in the SNE/MAB region

Project Accomplishments Measurement (Metrics and *Achieved Goals*):

Project Goal	Metric 1	Metric 2	Metric 3	Metric 4	Metric 5	Metric 6	Metric 7
Collection & communication of biological and fishery data for BSB	Upkeep of ODD, CFRF server, and MySQL database *Achieved in Years 1-5 + In progress Year 6*	Support of 14 Research Fleet Members *Achieved in Years 1-5 + In progress Year 6*	Twelve months of biological BSB and fishery data collection by Fleet *Achieved in Years 1-5 + In progress Year 6*	Collection of up to 27,000 BSB records, 540 record of catch/discards, and 540 session/effort data by Research Fleet *Achieved in Years 1-5 + In progress Year 6*	Transfer of collected data into MySQL database *Achieved in Years 1-5 + In progress Year 6*	Distribution of quarterly reports to Fleet Members *Achieved in Years 1-5 + In progress Year 6*	Submission of biological and fishery data to ACCSP and other managers *Achieved in Years 1-5 + In progress Year 6*
Reduce uncertainties in BSB stock assessment	Increase number of gear replicates in non-trawl fishery *Achieved in Years 2-4*	Provide BSB data from areas and times of year currently under sampled *Achieved in Years 1-5 + In progress Year 6*	Distribution of project data to managing stakeholders at federal, region, and local level *Achieved in Years 1-5 + In progress Year 6*	Utilization of data by BSB stock assessment working group *In progress*	Explore fishery dependent index of abundance for BSB using Fleet data *In progress*		
Asses spatial & temporal patterns in BSB fishery and catch	Analyze catch trends between years, gear types, and locations of Fleet sampling *Achieved in Years 1-5 + In progress Year 6*	Monitor discard structure between years within Fleet sampling *Achieved in Years 1-5 + In progress Year 6*	Monitor size and sex structure of retained BSB between sampling years *Achieved in Years 1-5 + In progress Year 6*	Monitor trends in length frequencies within gear types, locations and times of year *Achieved in Years 1-5 + In progress Year 6*	Add additional years of data to explore inter annual differences in length frequency *Achieved in Years 1-5 + In progress Year 6*	Update of BSB sex ratio logistic regression models from prior years *Achieved in Years 1-5 + In progress Year 6*	Develop manuscript for publication utilizing biological or fishery data from Fleet *In progress*
Demonstrate model approach for cost efficient fishery dependent data collection	Usage of collaborative approach established in previous years *Achieved in Years 1-5 + In progress Year 6*	Presentations of Fleet design at scientific conferences *Achieved in Years 1-5 + In progress Year 6*	Develop manuscript to validate Fleet design through peer review *In progress*				

Cost Summary and Funding Transition Plan:

This proposal represents a one third cost reduction from Year 6's proposal of a similar scope to comply with the ACCSP funding schedule. The drop is due primarily to a reduction in CFRF personnel costs. As the staff have become more experienced in running the Research Fleet, their efficiency has increased allowing the reduction of research staff time from 50% to 35% and business manager time from 7.5% to 2.5% on the project. Additionally, less supervision and support from the Executive Director is needed due to staff experience. This is reflected in Mr. Heimann's role as a principal investigator and the decrease in Executive Director time from 10% to 2.5%. Further, the Black Sea Bass Research Fleet sampling rate was dropped from 55% to 45% based on reporting rates from the last two years. Though this is influenced by the COVID-19 pandemic, the amount of data produced from this sampling rate is adequate to meet project objectives. Reductions to the travel, programmer and supply budgets were also made. These changes are reflected in the CFRF sub-contract (section F of the Budget Table).

The CFRF and RI DEM have pursued funding from a variety of sources for the Black Sea Bass Research Fleet and will continue to do so to ensure the longevity and utility of the data collected to the management of this data poor species. In previous funding years, the CFRF has been successful in securing partial funding from the Sarah K. de Coizart Tenth Perpetual Charitable Trust to support the Research Fleet. Further, the CFRF has been successful in the past, most recently in regard to the other collaborative Research Fleet for Lobster and Jonah crab, in securing congressional funding directly for the project. These recently awarded funds represent a willingness for the CFRF and RI DEM to search for external sources of funds to support the Research Fleet as well as an agreement by the management representatives on the steering committee and the industry collaborators that the project addresses important issues. The Senate Appropriations Committee recently announced the return of Congressionally Directed Spending which will allow for Rhode Island Senators to potentially fund Rhode Island focused projects. This fiscal year a Congressionally Directed Spending request to broadly support collaborative research initiatives occurring at CFRF was made by the office of Senator Jack Reed. The Black Sea Bass Research Fleet falls under this scope and this could be a source of transition funding as ACCSP contributions decline. The CFRF and RI DEM will continue to look for outside, continued, sources of funding to support the Research Fleet and the valuable work it produces into the future.

Budget Table:

	Year 7 (Maintenance Year 5)		
	Proposal	**In-Kind**	**Total**
TOTAL	**$ 88,152**	**$ 21,488**	**$ 109,640**
% Contribution by Funding Source	**80%**	**20%**	**100%**
Object Class Category	Proposal	In-Kind	Total
A Personnel			
- RI DEM - Jason McNamee		$ 5,347	$ 5,347
- RI DEM - Contractor		$ 4,547	$ 4,547
- RI Dem - Intern		$ 2,500	$ 2,500
Total RI DEM Personnel Costs	$ -	$ 12,394	$ 12,394
B Fringe Benefits	$ -	$ 4,214	$ 4,214
C Travel	$ -	$ -	$ -
D Equipment	$ -	$ -	$ -
E Supplies	$ -	$ -	$ -
F Contractual - CFRF			
a. Personnel			
- Executive Director - David Bethoney	$ 3,176		$ 3,176
- Research Biologists	$ 20,108		$ 20,108
- Business Manager	$ 1,259		$ 1,259
Total CFRF Personnel Costs	$ 24,543	$ -	$ 24,543
b. Fringe Benefits	$ 2,455	$ -	$ 2,455
c. Travel	$ 500	$ -	$ 500
d. Equipment	$ -	$ -	$ -
e. Supplies			
- Research Supplies	$ 500		$ 500
- Office Supplies	$ 650		$ 650
Total Supplies	$ 1,150	$ -	$ 1,150
f. Contractual			
- Programmer for On-Deck Data database	$ 250	$ -	$ 250
Total Contractual	$ 250	$ -	$ 250
g. Construction	$ -	$ -	$ -
h.Other Costs			
- Fishing Vessel Stipends	$ 45,360	$ -	$ 45,360
- Executive Assistance	$ -	$ 1,500	$ 1,500
Total Other Costs	$ 45,360	$ 1,500	$ 46,860
i. Total Direct Charges	$ 74,258	$ 1,500	$ 75,758
j. Indirect Charges			
- Proposed at 18.71% of CFRF Direct Charges	$ 13,894	$ 281	$ 14,175
Total Indirect Charges	$ 13,894	$ 281	$ 14,175
k. Total CFRF Costs	$ 88,152	$ 1,781	$ 89,933
G Construction	$ -	$ -	$ -
H Other Costs	$ -	$ -	$ -
I Total Direct Costs	$ 88,152	$ 18,389	$ 106,541
J Indirect Charges	$ -	$ 3,099	$ 3,099
K Total Proposal Costs	$ 88,152	$ 21,488	$ 109,640

Budget Justification – Year 7 (Maintenance Year 5 Project, Proposed):

The total proposed federal budget requested by the Rhode Island Department of Environmental Management (RI DEM) and the Commercial Fisheries Research Foundation (CFRF) for all components of the work is $88,152 for 12 months. The voluntary non-federal match funds provided by the RI DEM and CFRF is $21,488. The total proposal value is $109,640. The proposed timeframe is August 1, 2023 to July 31, 2024.

The proposed budget justification for object class category items includes the following:

A. Personnel: $12,394 In-Kind (RI DEM). RI DEM staff will play an advisory/support role in the proposed project, providing guidance on research protocols, assisting with statistical analyses as needed, exploring gear-specific indices of abundance and alternative modeling approaches as time permits, support in the procurement and storage of samples, and communicating project results to fishery governance system via existing participation in technical committees and working groups.

B. Fringe Benefits: $4,214 In-Kind (RI DEM). Fringe costs are charged on RI DEM FTEs only.
RIDEM Annual Fringe benefit rates are:

Retirement 24%	Deferred Compensation 0.4%
FICA 6.2%	Medicare 1.45%
Health care $21,937/year	Dental $1,132/year
Vision Mercer $165/year	Assessed Fringe 4.25%
Retiree Health 6.75%	

C. Travel: There are no direct travel charges.

D. Equipment: There are no direct equipment charges.

E. Supplies: There are no direct supplies charges.

F. Contractual: The CFRF will conduct most of the work involved in this project, with administrative and technical assistance provided by RI DEM as In-Kind. These services will be charged to the grant as contractual costs and are outlined below to provide more detail as to how the funding will be used:

a) Personnel: $24,543 federal. This includes the wages for the following CFRF personnel for time spent working directly on the project:

1. Executive Director – Proposed at 2.5% of time for 12 months = $3,176.
D. Bethoney, CFRF Executive Director, will oversee the administration, team communication/coordination, and outreach aspects of the project. He will also assist with data analysis, report and outreach material development, and communication of project progress to the client, fishing industry and management communities.

2. Research Scientist – Proposed at 35% of time for 12 months = $20,108.
   T. Heimann and another CFRF Research Biologists will be the primary individuals responsible for fleet organization, maintenance, and support, as well as data management, communication, and analysis. They will also support the Executive Director in project oversight tasks.
3. Business Manager – Proposed at 2.5% of time for 12 months = $1,259.
   T. Winneg, CFRF Business Manager, will carry out all the finance related aspects of the project including research budget tracking, invoice processing, and administrative support tasks, including purchasing supplies.

b) Fringe Benefits: $2,455 federal. This includes a percentage for payroll taxes and worker's compensation insurance prorated in accordance with % of salary paid from program. Benefits proposed at 10% of personnel costs based on 2021 benefits and historical analysis.

c) Travel: $500 federal. Travel costs include travel support (mileage) for project staff to provide support at docks to Research Fleet participants, to participate in meetings with the Research Fleet, stock assessment scientists, and managers. The advent of remote participation may allow for dissemination of project methods, findings, and conclusions at an industry/professional conference.

d) Equipment: $0. There will be no equipment costs on this project.

e) Supplies: $1,150 federal. This category includes research supplies and project office supplies.

   1. Research Supplies: $500 - Costs of tablets, waterproof cases, stylus & fish measuring board. Proposed at $500 per set x 1 vessels for the duration of the project. The set of sampling equipment for existing Research Fleet vessels are replacements for equipment that is damaged or lost.
   2. Office Supplies: $650 – Costs to cover database storage and website fees ($50/month), project office and meeting supplies, etc.

f) Contractual: $250 federal. This includes costs associated with:

   1. Programmer ($250 - federal) - CFRF hires an outside computer programmer to maintain the OnDeckData application and database coding for data relay and storage, to address any issues that arise, and to update the app to maintain functionality.

g) Construction: There are no construction costs.

h) Other Costs: $45,360 federal + $1,500 match = $46,860. This includes:
   1. Fishing vessel stipends ($45,360 - federal) for 14 vessels for 12 months at $600 per month. A fleet of 14 vessels will be utilized each month to obtain the proposed

biological samples. The total stipend is computed at 45% due to fluctuations in vessel sampling associated with weather, vessel maintenance, and seasonal black sea bass distribution.

2. Executive Assistance ($1,500 - in-kind match) covers the administration assistance for the project (including, review of fleet applications and invoices) by the CFRF President and Vice President, who provide these services at no cost. Costs proposed at $250 per day for 3 days for 2 people over the duration of the project.

i) Total Direct Charges: $74,258 federal + $1,500 in-kind = $75,758 total. This is the total direct charges for cost items a-h.

j) Indirect Charges: $13,894 federal + $281 in-kind = $14,175 total. Indirect general and administrative costs are calculated as 18.71% of Total Direct Charges. Indirect general and administrative costs are used to cover costs associated with the general operations of the CFRF including accounting services, legal services, maintenance of office space, liability insurance, payroll fees, phone/fax lines, internet service, etc. The CFRF's FY2022 Indirect Cost Rate Authorization Letter dated 2/11/22 is for 18.71% based on FY2021 actual costs.

k) Total Proposal Costs: $88,152 Federal + $1,781 In-Kind = $89,933 Total.

G. Construction. There are no construction costs on this grant

H. Other Costs. There are no other costs associated with this grant.

I. Total Direct Charges: $88,152 Federal + $21,254 In-Kind = $109,406 total. This is the total direct charges for cost items A-H.

J. Indirect Charges: $3,099 In-Kind (RIDEM). Indirect charges are charged on RIDEM Salaries only. The Negotiated Indirect Cost Rate for FY2017 is 25%. (Total personnel is $12,394 x 25% = $3,099.)

K. Total Proposal Costs: $88,152 Federal + $21,488 In-Kind = $109,640 Total.

Previous Year's Budget Narrative – Year 6 (Maintenance Year 4 Project, Funded FY22):

The total proposed federal budget requested by the Rhode Island Department of Environmental Management (RI DEM) and the Commercial Fisheries Research Foundation (CFRF) for all components of the work is $132,005 for 12 months. The voluntary non-federal match funds provided by the RI DEM and CFRF is $22,473. The total proposal value is $154,478. The proposed timeframe is August 1, 2022 to July 31, 2023.

The proposed budget justification for object class category items includes the following:

L. Personnel: $12,394 In-Kind (RI DEM). RI DEM staff will play an advisory/support role in the proposed project, providing guidance on research protocols, assisting with statistical analyses as needed, exploring gear-specific indices of abundance and alternative modeling approaches as time permits, support in the procurement and storage of samples, and communicating project results to fishery governance system via existing participation in technical committees and working groups.

M. Fringe Benefits: $4,214 In-Kind (RI DEM). Fringe costs are charged on RI DEM FTEs only.

RIDEM Annual Fringe benefit rates are:

Retirement 24%	Deferred Compensation 0.4%
FICA 6.2%	Medicare 1.45%
Health care $21,937/year	Dental $1,132/year
Vision Mercer $165/year	Assessed Fringe 4.25%
Retiree Health 6.75%	

N. Travel: There are no direct travel charges.

O. Equipment: There are no direct equipment charges.

P. Supplies: There are no direct supplies charges.

Q. Contractual: The CFRF will conduct most of the work involved in this project, with administrative and technical assistance provided by RI DEM as In-Kind. These services will be charged to the grant as contractual costs and are outlined below to provide more detail as to how the funding will be used:

l) Personnel: $44,096 federal. This includes the wages for the following CFRF personnel for time spent working directly on the project:

1. Executive Director – Proposed at 10% of time for 12 months = $12,100.
   D. Bethoney, CFRF Executive Director, will oversee the administration, team communication/coordination, and outreach aspects of the project. He will also assist with data analysis, report and outreach material development, and communication of project progress to the client, fishing industry and management communities.

2. Research Scientist – Proposed at 50% of time for 12 months = $28,392.
   T. Heimann and another CFRF Research Scientist will be the primary individuals responsible for fleet organization, maintenance, and support, as well as data management, communication, and analysis.

3. Business Manager – Proposed at 7.5% of time for 12 months = $3,604.
   T. Winneg, CFRF Business Manager, will carry out all the finance related aspects of the project including research budget tracking, invoice processing, and administrative support tasks, including purchasing supplies.

m) Fringe Benefits: $3,969 federal. This includes a percentage for payroll taxes and worker's compensation insurance prorated in accordance with % of salary paid from program. Benefits proposed at 9% of personnel costs based on 2020 benefits and historical analysis.

n) Travel: $3,000 federal. Travel costs include travel support (mileage) for project staff to provide support at docks to Research Fleet participants, to participate in meetings with the Research Fleet, stock assessment scientists, and managers, and to participate in one industry/professional conference for two personnel to share and disseminate project methods, findings, and conclusions.

o) Equipment: $0. There will be no equipment costs on this project.

p) Supplies: $2,000 federal. This category includes research supplies and project office supplies.

   1. Research Supplies: $1,000 - Costs of tablets, waterproof cases, stylus & fish measuring board. Proposed at $500 per set x 2 vessels for the duration of the project. The two sets of sampling equipment for existing Research Fleet vessels are replacements for equipment that is damaged or lost.

   2. Office Supplies: $1,000 – Costs to cover database storage and website fees ($50/month), project office and meeting supplies, etc.

q) Contractual: $1,500 federal. This includes costs associated with:

   1. Programmer ($1,500 - federal) - CFRF hiring an outside computer programmer to maintain the OnDeckData application and database coding for data relay and storage, to address any issues that arise, and to update the app to maintain functionality.

r) Construction: There are no construction costs.

s) Other Costs: $55,440 federal + $2,500 match = $57,940. This includes:
   1. Fishing vessel stipends ($55,440 - federal) for 14 vessels for 12 months at $600 per month. A fleet of 14 vessels will be utilized each month to obtain the proposed biological samples. The total stipend is computed at 55% due to fluctuations in vessel sampling associated with weather, vessel maintenance, and seasonal black sea bass distribution.
   2. Executive Assistance ($2,500 - in-kind match) covers the administration assistance for the project (including, review of fleet applications and invoices, work agreements, progress/final reports) by the CFRF President and Vice President, who provide these services at no cost. Costs proposed at $250 per day for 5 days for 2 people over the duration of the project.

t) Total Direct Charges: $110,005 federal + $2,500 in-kind = $112,505 total. This is the total direct charges for cost items a-h.

u) Indirect Charges: $22,000 federal + $500 in-kind = $22,500 total. Indirect general and administrative costs are calculated as 20.0% of Total Direct Charges. Indirect general and administrative costs are used to cover costs associated with the general operations of the CFRF including accounting services, legal services, maintenance of office space, liability insurance, payroll fees, phone/fax lines, internet service, board member participation, etc. The CFRF's FY2021 Indirect Cost Rate Authorization Letter dated 1/22/21 is for 22.0% based on FY2020 actual costs.

v) Total Proposal Costs: $132,005 Federal + $3,000 In-Kind = $135,005 Total.

R. Construction. There are no construction costs on this grant

S. Other Costs. There are no other costs associated with this grant.

T. Total Direct Charges: $132,005 Federal + $19,608 In-Kind = $151,613 total. This is the total direct charges for cost items A-H.

U. Indirect Charges: $3,099 In-Kind (RIDEM). Indirect charges are charged on RIDEM Salaries only. The Negotiated Indirect Cost Rate for FY2017 is 25%. (Total personnel is $12,394 x 25% = $3,099.)

V. Total Proposal Costs: $132,005 Federal + $22,473 In-Kind = $154,478 Total.

Summary of Proposal for Ranking Purposes

Type: Maintenance

Primary Program Priorities:
This project follows fishery-dependent sampling protocols to collect black sea bass catch and effort, biological, and bycatch data from the SNE/MAB region. The percentage of project effort devoted to each of these modules is as follows: 50% Biological, 25% Catch and Effort, 25% Bycatch. Thus, Biological sampling is the primary program priority. The estimated project effort devoted to biological sampling reflects the collection of black sea bass length and sex data by participant vessels during three trips per month for twelve months (up to 504 trips and 25,200 black sea bass total).

Data Delivery Plan:
All biosamples data collected from this project to date has been bi-annually submitted to and accepted by the ACCSP biosamples database. With additional funding for the proposed project, the project team will continue to work closely with ACCSP to ensure data is in the correct format to be incorporated into the ACCSP biosamples database. Data will continue to be submitted bi-annually in June and December of the proposed project period.

Project Quality Factors

Multi-Partner/Regional impact including broad applications:
The results of the proposed project have regional impacts and broad applications, as black sea bass are expanding to inhabit, and potentially be harvested from, the majority of the US east coast. Furthermore, the social and economic implications of this work could be extensive, as project data contributes to the improvement of the northern Atlantic black sea bass stock assessment and potentially the creation of new economic opportunities. From a collaboration perspective, this project provides a unique opportunity for the RI DEM and CFRF to maintain a fisherman-based research fleet to address ACCSP priorities, drawing upon networks of partners in industry, fisheries research, and management. This project will help RI DEM and CFRF demonstrate that, with support from ACCSP, they have the ability to bring stakeholders together, outside of a contentious management environment, to collect, communicate, and analyze critically needed data to address the data needs of the data poor northern Atlantic black sea bass.

Greater than year 2 contains funding transition plan and justification for continuance:
This proposal is for a one-year study to continue an industry-based research fleet approach to biological, catch, and bycatch sampling for northern Atlantic black sea bass. The project has been successful through the first four years of funded work and has sampled over 41,000 black sea bass. An additional year of funding would bolster the first year-round, multi-year database

for this biologically data poor species. Ultimately, long term maintenance of this project will provide invaluable data to the ACCSP, ASMFC, and MAFMC, and improve the assessment and management of the northern Atlantic black sea bass resource. The CFRF and RI DEM have continued to apply for funding for this project through external sources and have secured supplemental funding to partially support the Research Fleet as described above. Obtaining long-term funding for the Research Fleet is a top and ongoing priority for project PIs and staff.

In-kind contribution: The total project cost is $109,640. In-kind contributions provided by RI DEM and CFRF total $21,488. Thus, RI DEM and CFRF will provide 20% of total project costs.

Improvement in data quality/quantity/timeliness:
The proposed project addresses the critical need to improve the quality, quantity, and timeliness of biological, catch and effort, and bycatch data for the northern Atlantic black sea bass, which the ACCSP Biological Review Panel identified as having inadequate biological sampling and high stakeholder priority, resulting in the highest-ranking priority score. Ultimately, the proposed project will help to meet ACCSP's mission of improving data quality for fisheries science by contributing to a single data management system that will meet the needs of fishery managers, scientists, and fishermen.

Potential secondary modules as by-products:
The potential secondary modules are catch and effort (25%) and bycatch sampling (25%). The project effort allocated to the catch and effort module refer to the sampling that occurs while the fishery is open. Although the fishery is open for a large portion of the year, black sea bass is often caught and retained as a non-target species. The project effort allocated to the bycatch module reflects sampling efforts conducted while the commercial black sea bass fishing season is closed and while participant vessels are targeting other species but still interacting with black sea bass as bycatch.

Impact on stock assessment:
The northern Atlantic black sea bass stock assessment new model requires spatially and temporally comprehensive data that is currently lacking. Thus, the proposed project aims to provide critically needed biological data from retained and discarded black sea bass, and fishery data from a variety of gear types to continue to evolve and improve the black sea bass stock assessment. The project team will also explore novel fishery dependent indices for the black sea bass stock assessment, as time permits.

The Research Fleet collected data has the potential to directly improve the federal stock assessment in a number of ways including reducing the uncertainty gear type specific selectivity, and gear (and location) specific discard and catch characterizations. Currently, the indices of abundance relied upon in the black sea bass stock assessment come primarily from the NEFSC winter and spring trawl survey, Northeast Area Monitoring and Assessment Program (NEAMAP) survey trawls, recreational catch per effort, and is supplemented with various state

trawl survey indices of abundance (NEFSC 2017). The utility of the Research Fleet data in this respect is to inform the management about catch and discard structure from a variety of gear types. Whereas the stock assessment currently only delineates between trawl and non-trawl gear types, after building a multiple-year time-series the Research Fleet data could potentially be utilized to create a variety of CPUE indices of abundance (trawl, gillnet, lobster pot, rod & reel, fish pot, and multigear). Further, the Research Fleet data has the potential to be directly used to create a discard characterization for the northern stock sub-unit and reduce uncertainties in the annual total fishery removals.

Innovative:
The innovative and cost-effective nature of the proposed project, which relies upon collaboration between a Program partner and the fishing industry, can provide an opportunity for fishermen to constructively engage in the data collection process for black sea bass and provide a model for future data collection efforts in other regions and fisheries. In addition to demonstrating a novel sampling approach, the proposed project also leverages modern technology to improve the efficiency of data collection and communication.

Properly Prepared:
This proposal follows the guidelines provided in the ACCSP Funding Decision Document.

Principal Investigators:

The co-Principal Investigators of the proposed project are: Jason McNamee (Chief, RI DEM Marine Fisheries), David Bethoney (Executive Director, CFRF), and Thomas Heimann (Research Biologist, CFRF). Curriculum vitae are provided in the following pages.

Jason McNamee will play an advisory/support role in this project, given his existing commitments at the RI DEM Division of Marine Fisheries. More specifically, Jason will provide advice for sampling protocols, act as a liaison to the existing black sea bass assessment/management infrastructure and assist with data analysis as his time permits (data review/analysis will primarily be the role of the CFRF Research Biologist). In his role as both a technical committee member, and as a member of the black sea bass Research Track Stock Assessment Working Group, Jason McNamee will be able to help the project with capturing the correct information and making sure this information is formatted appropriately for inclusion in future northern Atlantic black sea bass stock assessments.

Dr. N. David Bethoney, Executive Director of the CFRF, will serve as the lead Co-PI for the proposed project. Dr. Bethoney will be responsible for overall projection direction and progress towards completing proposed objectives. Dr. Bethoney will be primarily responsible for overseeing proposed data analysis as well as dissemination of project results to the MAFMC and ASMFC. He will also assist in at-sea related research on an as-needed basis.

Thomas Heimann, CFRF, will serve in an advisory/support role working with the CFRF Research Biologist responsible for Research Fleet maintenance and support, as well as data management,

communication, and analysis. Heimann was the primary researcher for the Black Sea Bass Research Fleet since its first year of funding starting in September 2016. Heimann has gained extensive experience with the work involved in initiating and supporting an industry-based research fleet and has formed a relationship with the current Fleet Members.

Jason Earl McNamee, PhD
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WORK EXPERIENCE

RI Department of Environmental Management 12/2002 - Present
Jamestown, RI US
Chief, Marine Resource Management
Duties:

- Management of the Marine Fisheries program for the RI Dept. of Environmental Management
- Management of a staff of 20 professionals in the field of marine fisheries
- Manage operating budgets for multiple federal grants and state accounts
- Creation of grant proposals for marine fisheries projects
- Management of the Ft Wetherill Marine Laboratory building and research vessels
- Membership on several technical panels: the New England Council Science and Statistics Committee (Chair), Atlantic States Marine Fisheries Commission Menhaden (chair), Tautog (chair), and Summer Flounder/Scup/Black Sea Bass technical and stock assessment committees, Biological and Ecological Reference Point committee
- Support to the RI Marine Fisheries Council
- Creation and administration of the RI Marine Fisheries Institute
- Principal investigator (PI) on the Narragansett Bay juvenile seine survey
- PI for the Narragansett Bay Menhaden monitoring program
- Small vessel operation
- Production and review of multiple annual technical and grant completion reports
- Perform stock assessment analyses

Skills developed: Personnel and budget management experience; Supervisory experience; Good statistical and computer skills (ADMB, R, Microsoft software, ADAPT, JMP, ASAP, Oracle Discoverer, web design); Species identification experience; Experience using water quality instrumentation (DO meter, pH meter, Gas Chromatograph, Conductivity meter, flow meter); GIS Experience (Arcview and R); Field work experience; Experience in the construction and maintenance of technical research equipment; Seine, fyke net, trawl net, gillnet, fish pot, and electroshock surveying; Small boat handling (State of Rhode Island and Coast Guard certified)
Supervisor's Name: Janet Coit
Supervisor's Phone: 401-222-4700 ext. 2409

RI Department of Environmental Management 4/2000 - 12/2002
Providence US
Senior Natural Resource Specialist

Duties: My duties were to perform all tasks necessary to conduct and complete a Total Maximum Daily Load reports including field work, data collection and processing, and writing of the report. I also participated with other staff to help in the completion of their reports.

Skills developed: Good statistical and computer background (Microsoft software), Experience designing and implementing a personal research project, Experience preparing a federally approved Quality Assurance Protection Plan, Experience using water quality instrumentation (DO meter, pH meter, Conductivity meter), Experience in the collection of water samples for testing (biological and metals), GIS Experience (Arcview) Field work experience, Small boat handling (State of Rhode Island and Coast Guard certified), Experience in the preparation of a federally approved Total Maximum Daily Load report, Experience disseminating information to the public
Supervisor's Name: Christian Turner
Supervisor's Phone: unsure, no longer employed at RIDEM

EDUCATION

University of Rhode Island – Graduate School of Oceanography
Narragansett, RI US
PhD – 8/2018
Major: Biological Oceanography
Doctoral Dissertation Topic: Multispecies Statistical Catch-At-Age Model for a Mid Atlantic Species Complex

University of Connecticut
Groton, CT US
Masters of Science Degree - 6/2006
38 Semester Hours
Major: Biological Oceanography

University of Rhode Island
Kingston, RI US
Bachelor's Degree - 5/1996
136 Semester Hours
Major: Zoology

PROFESSIONAL PUBLICATIONS

- ASMFC Lobster stock assessment (2015), ASMFC Menhaden stock assessment (2004, 2012, 2015), ASMFC Tautog stock assessment (2006, 2011, 2015), NEFSC Summer flounder stock assessment (2011, 2013), NEFSC Scup stock assessment (2011, 2015), NEFSC Black sea bass stock assessment (2004, 2016), Interactions between the introduced Asian shore crab, *Hemigrapsus sanguineus*, and three common rocky intertidal littorine gastropods in Southern New England (MS Thesis).
- Taylor, DL, J McNamee, J Lake, CL Gervasi , and DG Palance. 2016. Juvenile winter flounder (*Pseudopleuronectes americanus*) and summer flounder (*Paralichthys dentatus*) utilization of Southern New England nurseries: Comparisons among estuarine, tidal river, and coastal lagoon shallow-water habitats. Estuaries and Coasts. 39:1505-1525.

Dr. NAIFF DAVID BETHONEY
Executive Director
Commercial Fisheries Research Foundation
P.O. Box 278
Saunderstown, RI
401-515-4662, dbethoney@cfrfoundation.org

EDUCATION:

University of Massachusetts at Dartmouth School for Marine Science and Technology
PhD Dissertation: Understanding and avoiding River herring and American shad bycatch in the Atlantic herring and mackerel mid-water trawl fisheries.
Cum. GPA: 3.92 PhD Received 2013

MA Thesis: Association between diet and epizootic shell disease in the American lobster (*Homarus americanus*) around Martha's Vineyard
Cum. GPA: 3.93 M.S. Received 2010

Colby College - Waterville, ME
Major: Biology with Concentration in Environmental Science
Cum. GPA: 3.41, Cum Laude B.A. Received 2008

SEA Education Association of Woods Hole, MA Study Abroad: Fall 2006
Documenting Change in the Caribbean: Designed and implemented an original biological research project with practical application while at sea. Studied at Woods Hole, and sailed from St. Croix, USVI to Key West, Florida with research stops at Montserrat, Dominican Republic, and Jamaica.

RECENT WORK EXPERIENCE:

- Commercial Fisheries Research Foundation Spring 2020-Presesent

Executive Director: Responsible for overseeing foundation business manager, scientific staff, interns, and consultants to carry out all tasks associated with ongoing projects and general administration. In addition, responsible for pursuing new partnerships and projects, including proposal development and submission, under the advisement of the foundation Board of Directors.

- UMASS-Dartmouth School for Marine Science and Technology Fall 2008-Spring 2020

Research Assistant Professor, Fall 2014-Spring 2020: All responsibilities of research associate position related to drop camera and herring work with the ability to be lead principle investigator on research proposals and serve on student committees**.** Served on the New England Fishery Management Council's Scallop Plan development team from March 2017-April 2020

Research Associate, Summer 2013-Summer 2014: All responsibilities of research assistant position described below with management and development responsibilities for scallop drop camera and groundfish video surveys. Management responsibilities include equipment purchasing and maintenance and oversight of all technical operations and student involvement.

Research Assistant, Summer 2010- Spring 2013: Major responsibilities included coordinating River Herring bycatch avoidance program, assisting the Massachusetts Division of Marine Fisheries port side sampling program, and scallop drop camera survey at-sea data collection and analysis.

JOURNAL PUBLICATIONS IN LAST 3 YEARS:

1. Chen C, Zhao L, Gallager S, Ji R, He P, Davis C, Beardsley RC, Hart D, Gentleman WC, Wang L, Li S, Lin H, Stokesbury KDE, Bethoney ND. Impact of larval behaviors on dispersal and connectivity of sea scallop larvae over the northeast U.S. shelf. Progress in Oceanography. 2021 May 11; 195. DOI: 102604

2. Harper DL, Bethoney ND, Stokesbury KDE, Lundy M, McLean MF, Stokesbury MJW. 2020. Standard Methods for the Collection of Morphometric Data for the Commercially Fished Sea Cucumber *Cucumaria frondosa* in Eastern Canada. Journal of Shellfish Research 39(2):481–489

3. Bethoney, ND. 2020. Investigating uncertainties created by camera improvement in an optical survey. Limnology and Oceanography: Methods. doi: 10.1002/lom3.10365

1. Stokesbury KDE and Bethoney ND. 2020. How many sea scallops are there and why does it matter? Frontiers in Ecology and the Environment. doi:10.1002/fee.2244.

2. Bethoney ND and Stokesbury KDE. 2019. Implications of extremely high recruitment: crowding and reduced growth within spatial closures. Marine Ecology Progress Series 611:157-165.

3. Bethoney ND, Cleaver C, Asci SC, Bayer SR, Wahle RA, Stokesbury KDE. 2019. A comparison of drop camera and diver survey methods to monitor Atlantic sea scallops (*Placopecten magellanicus*) in a small fishery closure. Journal of Shellfish Research 38(1):43-51.

4. Stokesbury KDE, Bethoney ND, Georgianna D, Inglis S, Keiley EF. 2019. Convergence of a disease and litigation leading to increased scallop discard mortality and economic loss in the Georges Bank, USA fishery. North American Journal of Fisheries Management 39(2):299-306.

RELEVANT GRANTS RECEIVED AS A PRINCIPAL INVESTIGATOR IN LAST 3 YEARS:

1. "Empowering fishermen to collect essential data; Piloting the Research Fleet approach in the Atlantic Sea scallop fishery" — April 2021
   Awarded from: National Oceanic and Atmospheric Administration
   Value: $121,260

2. "Catalyzing the restoration and conservation of the Bay scallop" — January 2021
   Awarded from: The Sarah de Coizart Charitable Trust
   Value: $52,463

3. "Supplement to Piloting a Low-Bycatch Commercial Squid Jig Fishery in Southern New England" — December 2020
   Awarded from: Mid-Atlantic Fisheries Management Council
   Value: $22,500

4. "Piloting Underwater Video to Improve Ghost Gear Removal" — November 2020
   Awarded from: 11th Hour Racing/The Schmidt Family Foundation
   Value: $32,000

5. "Piloting a Low-Bycatch Commercial Squid Jig Fishery in Southern New England" — September 2020
   Awarded from: National Oceanic and Atmospheric Administration
   Value: $196,256

6. "South Fork Wind Farm Fisheries Monitoring Plans" — August 2020
   Awarded from: Deepwater Wind South Fork LLC
   Value: $2,528,044

7. "American lobster and Jonah crab Research Fleet: A Collaborative Fishing Vessel Approach to Addressing Data Needs for the American lobster and Jonah crab fisheries" — August 2020
   Awarded from: Atlantic States Marine Fisheries Commission
   Value: $285,714

8. "Assessing Vulnerability of the Atlantic Sea Scallop Social-Ecological System in the Northeast Waters of the US" — July 2020
   Awarded from: National Oceanic and Atmospheric Administration
   Value: $159,526

9. "CFRF's Lobster and Jonah Crab Research Fleet: A Collaborative Fishing Vessel Approach to Addressing Data Needs for the American Lobster and Jonah Crab Fisheries" — June 2020
   Awarded from: National Oceanic and Atmospheric Administration
   Value: $194,983

10. "Cooperative Marine Research Projects" — May 2020
    Awarded from: The Campbell Foundation
    Value: $90,000

Thomas E. Heimann
114 Olney Street Unit 1
Providence, RI 02906
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theimann@cfrfoundation.org

EDUCATION

NORTHEASTERN UNIVERSITY **Boston, MA**
Master's: Marine Biology, Jan 2016

PRESCOTT COLLEGE **Prescott, AZ**
B.A. Marine Science, May 2013

RELATED WORK EXPERIENCE

Commercial Fisheries Research Foundation **South Kingston, RI**
Research Biologist *Sep 2016 – Present*

- Research project management position working collaboratively with the Rhode Island fishing industry as well as state and federal fisheries management bodies. Responsible for management of both Black sea bass Research Fleet and Quahog Research Fleet as well as lead at-sea sampler for the Southern New England Cooperative Ventless Trap Survey. Duties include Fleet support and training, sampling protocol development, database management, data manipulation and statistical analysis, report writing, at-sea sampling on lobster vessels, grant writing, and outreach.

Northeastern University **Nahant, MA**
Diving Research Methods Teaching Assistant *Sep 2015 – Oct 2015*

- Employed by Northeastern University to be a teacher's assistant for an intensive American Academy of Underwater Sciences diving research methods course. Duties included demonstrating underwater research and diving skills, minor SCUBA gear maintenance and repair, and supervision of student divers.

Mote Marine Laboratory **Sarasota, FL**
Research Experience for Undergrads, National Science Foundation Intern *May 2012 – Jul 2012*

- Highly competitive National Science Foundation funded internship at Mote Marine Laboratory in Florida. Worked closely with a postdoctoral fellow on an independent research project in sensory biology and behavior of the common snook, a local sportfish. Project dealt specifically with the impacts of the hatchery rearing environment on the survival of released fish in the wild. Worked extensively with Microsoft Excel for data analysis.

Sheriff's Meadow Foundation **Vineyard Haven, MA**
Ecological Stewardship Intern *May 2010 – Aug 2010*

- Summer Intern position on Martha's Vineyard. Responsibilities included property management, boundary mapping, invasive species control, vegetation identification, and tour guide.

SCIENTIFIC PUBLICATIONS

Malek Mercer, A.J., Ellertson, A., Spencer, D., and **Heimann, T**. 2018. Fishermen fill data gaps for American lobster (*Homarus americanus*) and Jonah crab (*Cancer borealis*) in the Northeast USA. Bulletin of Marine Science, 94:3, pp 1121-1135.

SELECTED PRESENTATIONS

Heimann, T., McManus, C., Leavitt, D., Malek Mercer, A.J. 2018. Methods for Establishing a Quahog (*Mercenaria mercenaria)* Industry-Based Research Fleet for expansion of Fishery Dependent Data Sources. National Shellfisheries Association Annual Meeting. Seattle, Washington.

Heimann, T., McManus, C., Leavitt, D., Malek Mercer, A.J. 2018. Engaging Fishermen to Address Data Gaps and Evolve Management of the Quahog in Narragansett Bay. Southern New England Chapter of the American Fisheries Society Winter Meeting. New Bedford, MA.

Heimann, T., Malek Mercer, A.J., and McNamee, J. 2018. Advancing Fishery Dependent Data Collection for Black Sea Bass (*Centropristis striata)* in Southern New England and Mid-Atlantic Region Using a Fishing Vessel Research Fleet Approach. American Fisheries Society 148th Annual Meeting. Atlantic City, New Jersey.*

Heimann, T., Malek Mercer, A.J., and McNamee, J. 2019. Using Fishermen-Collected Data to Explore the Black Sea Bass (*Centropristis striata)* Population and Construct Gear-Specific Discard Characterizations. Southern New England Chapter of the American Fisheries Society Winter Meeting. Storrs, Connecticut.

Heimann, T., McManus, C., Leavitt, D., Malek Mercer, A.J. 2019. Quantifying Quahogs (*Mercenaria mercenaria)* in Narragansett Bay: Insights from a Collaborative Sampling Program. Southern New England Chapter of the American Fishery Society Winter Meeting. Storrs, Connecticut.

Heimann, T., Malek Mercer, A.J., and McNamee, J. 2019. Using Industry Collaboration to Improve Black Sea Bass Management. Wakefield Fisheries Symposium. Anchorage, Alaska.

CERTIFICATIONS AND SKILLS

- Statistical Language R (Commonly used packages; ggplot, shiny, sp)
- MySQL
- ArcGIS
- American Academy of Underwater Sciences Scientific Diver Certificate
- PADI Rescue Diver Certificate
- At-Sea Safety Training Certificate
- Experienced in Small Boat Operations

References:

Atlantic Coastal Cooperative Statistics Program (ACCSP). 2022. Biological Sampling Priority Matrix. 4 p.

Atlantic States Marine Fisheries Commission (ASMFC). 2013. Research Priorities and Recommendations to Support Interjurisdictional Fisheries Management. Special Report # 89. ASMFC, Arlington, VA. 58pp.

Bell, R. J., Richardson, D.E., Hare, J.A., Lynch, P.D., and Fratantoni, P.S. 2014. Disentangling the effects of climate, abundance, and size on the distribution of marine fish: an example based on four stocks from the Northeast US shelf. ICES Journal of Marine Science: fsu217.

Drohan, A. F., J. P. Manderson, and D. B. Packer. 2007. Essential fish habitat source document: Black sea bass, *Centropristis striata*, life history and habitat characteristics. 2nd Edition. NOAA Technical Memo. NMFS-NE-200, 78 p.

Moser, J., and G. R. Shepherd. 2009. Seasonal distribution and movement of black sea bass (*Centropristis striata*) in the Northwest Atlantic as determined from a mark-recapture experiment. Journal of Northwest Atlantic Fishery Science 40: 17-28.

Nelson, G.A. 2014. Cluster Sampling: A Pervasive, Yet Little Recognized Survey Design in Fisheries Research. Transactions of the American Fisheries Society 143 (4): 926-938.

Northeast Fisheries Science Center (NEFSC). 2011. 53rd Northeast Regional Stock Assessment Workshop (53rd SAW) Assessment Report. US Department of Commerce, Northeast Fish Science Center Reference Document 12-05; 559 p.

Northeast Fisheries Science Center (NEFSC). 2017. 62nd Northeast Regional Stock Assessment Workshop (62nd SAW). Assessment Summary Report. US Department of Commerce, Northeast Fish Science Center Reference Document 17-01; 37 p.

Musick, J. A., and L. P. Mercer. 1977. Seasonal distribution of black sea bass, *Centropristis striata*, in the Mid-Atlantic Bight with comments on the ecology of fisheries of the species. Transactions of the American Fisheries Society. 106: 12-25.

Southeast Fisheries Science Center (SEFSC). 2013. Stock Assessment of Black Sea Bass off the Southeastern United States: SEDAR Update Assessment. 102 p.

SEDAR. 2018. SEDAR 56 – South Atlantic Black Seabass Assessment Report. SEDAR, North Charleston SC. 164 pp.

Steimle, F. W., C. A. Zetlin, P. L. Berrien, and S. Chang. 1999. Essential fish habitat source document: Black sea bass, *Centropristis striata*, life history and habitat characters. NOAA Technical Memorandum NMFS-NE-143: 1-42.

Waltz, W., Roumillat, W.A., and P. K. Ashe. 1979. Distribution, age structure, and sex composition of the black sea bass, *Centropristis striata*, sampled along the southeastern coast of the United States. Marine Resources Research Institute, South Carolina Wildlife and Marine Resources Department. Technical Report Number 43, December 1979.

Zhang, Y. and S.X. Cadrin .2013. Estimating Effective Sample Size for Monitoring Length Distributions: A Comparative Study of Georges Bank Groundfish, Transactions of the American Fisheries Society 142 (1): 59-67.

MARYLAND - VIRGINIA
"Potomac River Compact of 1958"

Potomac River Fisheries Commission
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Colonial Beach, Virginia 22443
TELEPHONE: (804) 224-7148 · FAX: (804) 224-2712
www.prfc.us contactprfc@gmail.com

June 15, 2022

Atlantic Coastal Cooperative Statistics Program
1050 N. Highland St. Ste. 200 A-N
Arlington, VA 22201

Dear ACCSP:

The Potomac River Fisheries Commission (PRFC) is pleased to submit its proposal for the Fiscal Year 23 ACCSP Request for Proposal, titled "FY23: Electronic Trip-Level Reporting or the Potomac River Fisheries Commission Commercial Fisheries Sector" for your consideration. The continued maintenance of this project enabled PRFC to continue to expand its electronic catch reporting leveraging the ACCSP eTrips application while simultaneously improving accuracy, timeliness, and level of detail for catch reporting throughout the Potomac River.

PRFC has made significant progress in the first two years of this project to include the initial groups of testers gaining access to eTrips, PRFC developed training, initial ACCSP-PRFC interface development, Oracle Cloud Infrastructure (OCI) Infrastructure as a Service (IaaS)/Platform as a Service (PaaS) procurement, and the development of the new Sport & commercial Application Integrated Licensing (SAIL) tool.

The Year 3 proposal is an exciting opportunity for ACCSP and PRFC to maintain momentum as a larger portion of the PRFC license holders switch to eTrips for their catch reporting and improved data interfaces are constructed for bi-directional data management between SAFIS and SAIL. Thank you for your consideration and please reach out to Marty Gary with any questions.

Sincerely,

Martin L. Gary
Executive Secretary
(804)456-6935
martingary.prfc@gmail.com

Proposal for Funding made to:
Atlantic Coast Cooperative Statistics Program
Operations and Advisory Committees
150N. Highland Street, Suite 200 A-N
Arlington, VA 22204

FY23: Electronic Trip-Level Reporting for the Potomac River Fisheries Commission Commercial Fisheries Sector

Revised as of 8/15

Submitted by:
Martin L. Gary
Executive Secretary
Potomac River Fisheries Commission
222 Taylor Street
Colonial Beach, VA 22443
martingary.prfc@gmail.com

Applicant Name:	Potomac River Fisheries Commission
Project Title:	**Electronic Trip-Level Reporting for the Potomac River Fisheries Commission (PRFC) Commercial Fisheries Sector**
Project Type:	Maintenance Project

(No change in scope of work, continued emphasis on Electronic Data Reporting using eTrips, increasing participation, and integration with PRFC databases)

Principal Investigator:	Martin L. Gary, PRFC Executive Secretary
Project Manager:	Martin L. Gary, PRFC Executive Secretary
Requested Award Amount:	**$215,328.11** for the year three maintenance project. This is intended to scale both participation and supporting IT infrastructure.
Requested Award Period:	One year after receipt of funds
Objective:	This is the third year of the project to report trip-level catch and effort data, using the ACCSP eTrips tools, from Commercial license holders who fish within the jurisdiction of the Potomac River Fisheries Commission (PRFC) continuing in the 2023 seasons, which begins in July 2023 for the FY23 licenses and January 2023 for the CY23 licenses.

Need:

ACCSP and its partner agencies have established the collection of trip-level data as the standard which all agencies should strive to reach and maintain. Over 60 years ago, PRFC began collecting catch and effort data from commercial shellfish (oyster and crab) and finfish permit holders, which are submitted weekly. Storage of the data in electronic databases has taken place since the late 1980s. Since that time, more details regarding the catch have been collected in terms of targeting specific locations, species, and gear. The data are reported at the trip-level on a daily basis and are submitted weekly to PRFC and provided to ACCSP twice annually for the previous calendar year.

The third year of the project will work to increase the use of census-style reporting by expanding the use of ACCSP eTrips technology among a group of PRFC Commercial license holders and evaluating the efficacy of this method compared to traditional methods.

Participating license holders will use ACCSP eTrips tools to report their catch and effort in PRFC managed waters. In Year 3, the plan is to transition all eTRIPS users to electronic catch reporting only. Only allowing paper reports provided to PRFC to be submitted by PRFC staff for the waterman who do not use eTRIPS. Electronic harvest reporting has been discussed in the proceedings of meetings of advisory committees to the PRFC and the Commission itself for several years, and numerous harvesters have expressed an interest and willingness to participate. Many commercial constituents are already participating in electronic harvest reporting in Maryland or Virginia and are eager for similar opportunities to report electronically for PRFC.

Results and Benefits:
During the third year of the project, trip-level reporting to collect catch and effort data from commercial permit holders - harvesters is a goal for all ACCSP partners. On average, on an annual basis (Table 1):

Table 1: Average Count of License Holders and Daily Catch Reports for FY19 & CY19

Gear	License Holders	Daily Catch Reports
Oyster	215	300
Crab	432	11,500
Fish	742	14,000

Presently, the PRFC staff collect, organize, validate, obtain corrections, and enter the catch data for each License Holder - Harvesters, which is a rather labor-intensive effort that potentially induces errors and is time consuming; therefore, the data stored and available for decision making reports can be lagging. **The anticipated benefits use of ACCSP eTrips are faster data entry with less errors and less staff hours required.**

Data Delivery Plan: During the third year of the project, ACCSP eTrips will collect all catch data reports either directly entered by commercial harvesters or entered on their behalf by PRFC staff. PRFC will leverage the ACCSP eTrips database API to synchronize eTrips catch data with the current custom designed Microsoft Access Data Management System that has been in use for many years for ALL the catch data records that are NOT being entered directly into ACCSP eTrips by the commercial harvesters. The PRFC staff will be entering catch data for some of the paper reports that are submitted to PRFC by the commercial harvesters (see Task 2 in the Approach).

PRFC will continue transmitting data twice per year for all catch reports submitted for the prior year but excluding the records that have been entered into ACCSP eTrips. This will be discontinued once two consecutive reports show 100% consistency with data from ACCSP eTrips.

Approach:
During the third year of the project, PRFC will fully transition from the legacy Microsoft (MS) Access databases and Operator interface code that require all license issuing and catch data reporting performed by PRFC staff. PRFC will continue to expand its participation rate and update/improve training processes and materials. Additionally, PRFC will maintain a contract with a Software Development provider company or consultant to continue to maintain relevant interfaces and continue to develop the upgraded cloud application.

During Year 3, PRFC will be in maintenance for the following items:

1. Task 1 Identification of License Holder Participants: Continued Identification of commercial harvesters to participate:

   In the third year of the project, continue to expand participation in the project. The commercial harvester community is comprised of a mix of limited entry and open access fishery participants. Though the number varies year to year, approximately 1,400 commercial harvesters are candidates, and based upon the most recent license metrics, the target would be an additional 30% = 840 participants in year three for ACCSP eTrips. The participants will be volunteers. This would provide a large portion of the existing license holders (50%) and each Gear category. These numbers are manageable for the purpose of refining the SAIL application and the integration interfaces between eTrips and SAFIS tools, developing enhanced training guides & gaining feedback for future participant expansion.

2. Task 2 eTrips installation & training; data entry: ACCSP eTrips installation and training for commercial harvesters. It is anticipated that on average, four (4) hours will be provided to each harvester to support on data entry, submission and use of mobile devices and software. Included within the four hours are staff hours for making presentations at meetings, developing/updating "cheat sheet" guides, and identifying enhancements and overall process improvement. In addition to the harvesters, the PRFC staff will enter a sampling of a variety of paper catch reports into ACCSP eTrips:

   The PRFC staff will augment the commercial harvesters ACCSP eTrips submissions to ensure a more comprehensive data set is being processed for the purpose of identifying enhancement requests for the ACCSP eTrips tools and the data can be successfully processed (downloaded, modified / corrected, and uploaded).

3. Task 3 MS Access Operator Interface Maintenance: **Maintenance of MS Access required interfaces until ACCSP eTrips collected is data is verified as 100% matching with PRFC records:**
   a. Download ACCSP eTrips data from ACCSP

b. Maintain an Operator Interface to validate downloaded data
c. Upload verified data to ACCSP

In Year 3, this function will be completely developed and no longer necessary to support. **All support will instead be to the new Sport & commercial Application Integrated Licensing tool (SAIL) to enhance its capabilities and align with eTRIPs and SAFIS reporting.**

4. Task 4 Software Development: During year three of the project, PRFC intends to expand its modern database platform: SAIL. SAIL is a cloud-based application with a more consistent Operator Interface and is able to be upgraded more efficiently. The requirements will be documented, and the selected vendor will continue to develop and implement. **This effort will look to grow SAIL's capabilities from the original MS Access Database to a modern, scalable, web first tool that can more effectively capture and report on PRFC catch information in real time using advanced analytics.**

5. Task 5 Maintain Oracle Cloud Database: During year three of the project PRFC will continue to procure cloud-based resources with a focus on providing cost savings up-front and long term during the sustainment and maintenance phases.

6. Task 6 Develop & Maintain Oracle web-based applications: Continue development and maintenance of web based PRFC applications to perform PRFC office automation functions:
    a. Process License issue and renewal requests
    b. Print Licenses and associated tags, flags, and catch report forms, etc.
    c. Processing paper catch reports
    d. Reporting interface – currently there are approximately 25 unique reports with many that have sub-options
    e. Database Utility interface – currently there are approximately 13 unique operations required to modify lookup tables, set/re-set sequencing, and perform database integrity checks and repair
    a. Perform modifications as necessary to resolve technical problems
    b. Perform updates as necessary to support new requirements

    The current (historical) PRFC data was exported, reformatted, and imported into the new SAIL database system.

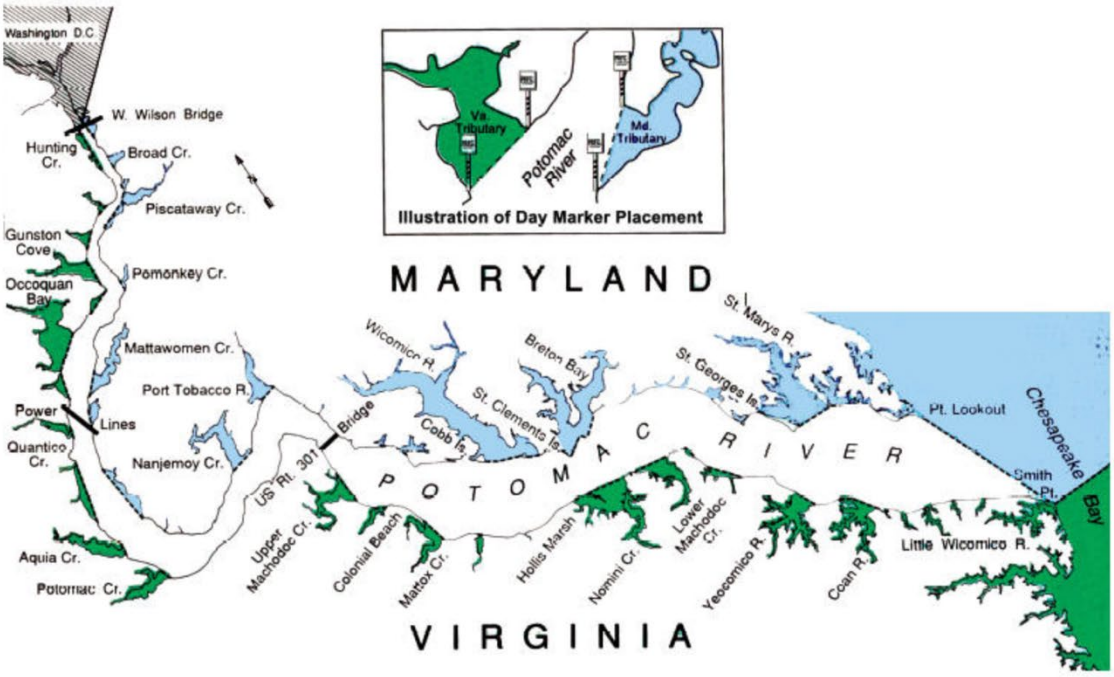
7. Task 7 Commercial Harvesters increased participation: Continue to increase the number of commercial harvesters using the ACCSP eTrips-tools:

The goal would be to have 100% of the commercial harvesters using the ACCSP eTrips tools in Year 3 where able and supported by PRFC staff where not.

To facilitate the effort to meet these goals:

i. Provide direct support as needed using PRFC staff via phone or in-person
ii. Presentations at various Committee meetings with demonstrations and open for questions
iii. Creating short "tri-fold" instructions specific to various topics
iv. Creating short YouTube video tutorials specific to various topics
v. Utilize existing ACCSP support products (e.g., videos, tech support and other)
vi. Incentivizing future participation by using various strategies, such as:
    1. Successful strategies used by other jurisdictions (e.g., Rhode Island license endorsement)
    2. Establishing a fee for having the PRFC staff perform the ACCSP eTrips data entry such as a flat fee - $100 per License Holder per year
    3. Fee per Gear Type - $25 for each gear type license
    4. Fee per Week per Gear Type - $5 for each weekly report for each gear type license

Geographic Location: Jurisdictional waters of the Potomac River Fisheries Commission. From the Woodrow Wilson Bridge (District of Columbia Demarcation) downriver to the confluence of the Chesapeake Bay. Approximately 100 nautical miles.



Milestone Schedule:

Task # / Month	Project Period Month											
	1	2	3	4	5	6	7	8	9	10	11	12
T1: Identification of License Holder Participants			X			X			X			X
T2: eTrips installation & training; data entry	X	X	X	X	X	X	X	X	X	X	X	X
T3: MS Access Operator Interface Maintenance	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
T4: Software modifications	X	X	X	X	X	X	X	X	X	X	X	X
T5: Maintain Oracle Cloud Database	X	X	X	X	X	X	X	X	X	X	X	X
T6: Develop & Maintain Oracle web-based applications	X	X	X	X	X	X	X	X	X	X	X	X
T7: Commercial Harvesters increased participation	X	X	X	X	X	X	X	X	X	X	X	X

Project Accomplishments Measurement:
The results of this project will provide the basis to improve the accuracy and timeliness of catch and effort estimations, and could subsequently inform science, stock assessments, and management policies.

The results will help determine the scope of the effort to migrate to a more robust database system that is more accessible to the Commercial License Holders.

PRFC in Year 1 completed one task fully and made progress on many others.

1. Year 1 Task 5 Completed: Established contract for the software development work required to complete Tasks 3 through 6.

PRFC in Year 2 completed five tasks for the year, with several repeating each cycle.

1. Year 2 Task 1 Completed: Identified and trained 20% of license holders with most moving to full time electronic catch reporting.
2. Year 2 Task 2 Completed: Developed eTrips installation and training guides/data for use by the license holders.
3. Year 2 Task 3: Completed all maintenance on the Access Database and have shut it down with full time operations shifting to SAIL.
4. Year 2 Task 4: Completed initial round of software modifications to support the reporting and synchronization between the Access DB and SAIL.
5. Year 2 Task 5 Completed: Maintained contract for the software development work required to complete Tasks 3 through 6. Established Oracle Cloud Infrastructure (OCI) account and procured the Infrastructure-as-a-Service (IaaS) for use in SAIL.
6. Year 2 Task 6 Completed: Completed initial development on the OCI hosted, SAIL application. Iterated through team and volunteer issues to.

PRFC will continue to monitor progress and accomplishment using the following goals and measurements.

Task	Goal	Measurement
T1: Identification of License Holder Participants	Identification of additional 30% commercial harvesters to target for enrollment in eTrips electronic catch reporting.	Records updated to reflect they have been contacted and notified about the opportunity and its benefits.
T2: eTrips installation & training; data entry	100% of identified eTrips participants who request training/support receive in person or electronic training/support.	Participant records updated to note whether training has been provided and support provided.
T3: MS Access Operator Interface Maintenance	100% completion and execution of the interface steps.	Verification that the steps executed correctly and ACCSP/PRFC data is synchronized.
T4: Software modifications	100% of requirements documented in RTM and updated to reflect Year 3 changes in process or ACCSP data requirements.	Verification that RTM is completed and updated.
T5: Maintain Oracle Cloud Database	100% of cloud-based services procured and available.	Verification by PRFC staff that cloud services are invoiced and available.

T6: Develop & Maintain Oracle web-based applications	100% of year 3 requirements identified, developed, and delivered.	Completed RTM showing Year 3 requirements marked as complete and verification by PRFC staff.
T7: Commercial Harvesters increased participation	Marketing materials developed and presented at regular meetings and in routine communications. Incentives identified and presented to the PRFC Commissioners for approval.	Verification by PRFC staff that materials were sent and communicated during meetings. Documented minutes showing discussions at Commissioner meeting.

Project Funding Justification for Continuance / Transition Plan:

PRFC is requesting the same level of funding as the previous two years due to the amount of work and license holders still not using electronic catch reporting. While great achievements have been made over the previous two years, there is still a good amount of effort to synchronize the PRFC SAIL catch report information with SAFIS in a way that does not cause harm to overall data quality. Additionally, there are a large number of license holders that will take significant outreach and training to get them onboard with using eTrips as a replacement for the paper forms. PRFC has detailed plans to address both of these factors in Year 3.

Funding transition is expected for this project beginning in Year 6 when funding is reduced based on maintenance project rules. PRFC is working to complete all development and activities by Year 7 to minimize funding necessary to keep SAIL and eTrips usage. PRFC will leverage new state resources and existing IT budgets to cover SAIL OCI expenses and additional routine maintenance costs.

BUDGET FOR PROPOSAL PLANNING – FY2023

Description	Calculation	ACCSP Cost	PRFC Cost	Total Cost
Personnel (a)				
Principle Investigator	60 ACCSP / 100 PRFC hours @ 56.46/hr	$3,387.60	$5,646.00	$9,033.60
Data Administrator	200 ACCSP / 1880 PRFC hours @ 22.4/hr	$4,480.00	$42,112.00	$46,592.00
Data Management Specialist	600 ACCSP / 1480 PRFC hours @ 12.21/hr	$7,326.00	$18,070.80	$25,396.80
Personnel Subtotal		**$15,193.60**	**$65,828.80**	**$81,022.40**
Fringe (b)				
Principle Investigator	15% of salary	$523.44	$17,622.48	$18,145.92
Data Administrator	49% of salary	$2,192.47	$20,609.21	$22,801.68
Data Management Specialist	50% of salary	$3,630.00	$8,953.92	$12,583.92
Fringe Subtotal		**$6,345.91**	**$47,185.61**	**$53,531.52**
Travel (c)				
n/a				
Travel Subtotal		**$0.00**	**$0.00**	**$0.00**
Equipment (d)				
Oracle Cloud Database:				
a. MySQL DB Services 1 instance, 31 days/month, 24 hours/day 1 OCPU 16 GB RAM 50 GB storage 50 GB backup	$58/month x 12 months	$696.00	$0.00	$696.00
b. Java Cloud Service Enterprise Edition 1 instance, 31 days/month, 24 hours/day	$461month x 12 months	$5,532.00	$0.00	$5,532.00

2 OCPU				
c. Cloud Infrastructure 1 instance, 31 days/month, 24 hours/day 2 X9 OCPU 32 GB X9 RAM 50 GB storage	$164/month x 12 months	$1,968.00	$0.00	$1,968.00
d. Oracle APEX 1 instance, 31 days/month, 24 hours/day 2 OCPU 1 TB Storage	$598/month x 12 months	$7,176.00	$0.00	$7,176.00
Equipment Subtotal		**$15,372.00**	**$0.00**	**$15,372.00**
Supplies (e)				
n/a				
Supplies Subtotal		**$0.00**	**$0.00**	**$0.00**
Contractual (f)				
In-house Consultant/Developer	387 Hours @ $103/hr	$39,861.00	$0.00	$39,861.00
Vendor/Developer	1121 Hours @ $123.6/hr	$138,555.60	$0.00	$138,555.60
Contractual Subtotal		**$178,416.60**	**$0.00**	**$178,416.60**
Other (h)				
n/a				
Other Subtotal		**$0.00**	**$0.00**	**$0.00**
Totals				
Total Direct Charges (i)		$215,328.11	$113,014.41	$328,342.52
Indirect Charges (j)	n/a	$0.00	$0.00	$0.00
Total (sum of Direct and Indirect) (k)		**$215,328.11**	**$113,014.41**	**$328,342.52**
Percentage		**66%**	**34%**	**100%**

BUDGET NARATIVE

(Funding Period, FY23)

Project:	Electronic Trip-Level Reporting for the Potomac River Fisheries Commission (PRFC) Commercial Fisheries Sector
Project Period:	1 March 2022 – 28 February 2023
1 Year Funding:	$215,328.11
Prepared By:	Martin L. Gary, PRFC Executive Secretary

Personnel (Salaries) $15,193.60: Three PRFC employees' salary time will be covered using these funds. The three employees are: Principle Investigator, for 60 hours ($3,387.60); Data Administrator, for 200 hours ($4,480.00), and a Data Management Specialist, for 600 hours ($7,326.00).

In-Kind $113,014.41: The three PRFC employees proposed in this effort spend most if not all of their remaining hours working on catch report data and the tool. For each employee, their salary + Fringe costs not covered by the ACCSP grant is considered In-Kind by the PRFC. For this proposal Principle Investigator (100 hours, $5,646.00 + $17,622.48 Fringe), Data Administrator (1880 hours, $42,112.00 + $42,112.00 Fringe), and Data Management Specialist (1480 hours, $18,070.80 + $8,953.92 Fringe) sum up to $113,014.41 or 34% of total expense for Year 3.

Fringe Benefits $5,950.00: The current PRFC fringe benefit cost is set per employee at: Principle Investigator at 15% of Salary ($523.44), Data Administrator at 49% of salary ($2,192.47), and Data Management Specialist at 50% of salary ($3,630.00). The Principle Investigator falls within the fringe guidelines set forth by NOAA, however, a full breakdown of how the Fringe Benefits are calculated below (PRFC does not have a NICRA established).

Fringe Benefits Details				
		Principle Investigator	Data Administrator	Data Management Specialist
Gross	Annually	$117,436.80	$46,592.00	$25,396.80
	Hourly	$56.46	$22.40	$12.21
Fringe	Health	N/A	$15,840.00	$8,572.80
	Retirement	$15,972.24	$6,337.20	$3,454.80 (Inc. Mission Square)
	Life	$1,573.68	$624.48	$340.32
	Disability			$216.00 (VLDP)
	Def Comp	$600.00		
	Total	**$18,145.92**	**$22,801.68**	**$12,583.92**

	Per Hour	$8.72	$10.96	$6.05
	Rate	15%	49%	50%
ACCSP Project Hours				
FY 22-23 Hours / Year:		2080		
	ACCSP Hours	60	200	600
	Fringe Cost	$523.44	$2,192.47	$3,630.00
	ACCSP Cost	$3,387.60	$4,480.00	$7,326.00
	PRFC Hours	100	1880	1480
	PRFC Fringe	$17,622.48	$20,609.21	$8,953.92
	PRFC Cost	$5,646.00	$42,112.00	$18,070.80

Travel $0.00: N/A

Equipment $15,372.00: Oracle Cloud Infrastructure (OCI) resources are procured to host the PRFC interface between ACCSP and PRFC's MS Access application on a monthly basis. Additionally, PRFC's modernized application runs on the OCI infrastructure as well.

Supplies $0.00: N/A

Contractual $178,416.60:

In-house Consultant – Ray Draper: $39,861.00
Updating the existing PRFC Access based application will require the knowledge and expertise of the consultant/developer Ray Draper. Ray has designed and developed the entire PRFC application from the ground up over the last 15 years and will be the primary developer of the ACCSP interface. This work will require five (5) months of part-time development work, estimated at 501 hours total, and PRFC has contracted with Ray at a rate of $100 an hour to perform these services.

Talent & Technical Solutions Corporation (TTSC): $138,555.60
Developing a new PRFC database, procuring cloud services and infrastructure, and assisting with the PRFC existing application integration will be handled by TTSC. PRFC has contracted with TTSC at a rate of $130 an hour and expects the work to support T3, T4, T6, and T7 to take 12 months of part-time work and an estimated 1,180 hours.

Other $0.00: N/A

Summary of Proposal for Ranking

Project Details

Proposal Type: Maintenance

Primary Program Priority:

Catch and Effort (10 points / 100%): 100% of license holders will be providing electronic catch reporting.

Data Delivery Plan (2 points): All data from license holders using eTrips will go directly to SAFIS database. PRFC personnel will transfer remaining catch reports to SAIL which will use an interface to transfer to SAFIS.

Project Quality Factors

Multi-Partner/Regional impact including broad applications (5 points): PRFC's migration to eTrips and electronic catch reporting will benefit ACCSP and all regional partners in ensuring they have access to accurate, timely data on PRFC monitored species.

Contains funding transition plan (4 points): A detailed justification and funding transition plan is laid out in the proposal. PRFC sees a large need to continue funding at current levels in Year 3 with reduced funding in the out years and a transition to routing IT budgets and other state grants.

In-kind contributions (2 points): PRFC has provided a breakdown of the in-kind contributions made in support of this program and show that PRFC is providing 34% In-kind contributions. The contributions are significant and cover all the time for three personnel that manage and oversee the current catch reporting system.

Improvement in data quality/quantity/timeliness (4 points): Transition to eTrips and PRFC's new SAIL application will greatly increase the timeliness of reporting from bi-annually to almost real time. This will reduce manual entry and ensure much high-quality data is available for review by PRFC and other members.

Potential secondary module as a by-product (3 points): This project has led to the development of SAIL which will greatly streamline PRFC operations and interactions with ACCSP's SAFIS.

Impact on stock assessment (3 points): Regional management organizations that perform stock assessments will have better data to operate from as a direct result of this proposal and continued funding for PRFC's efforts.

Other Factors

Achieved Goals (3 point): PRFC has achieved a great number of its goals over the last two years and has plans to achieve more in Year 3 with this proposal.

Data Delivery Plan (2 points): A detailed data delivery plan has been included for review. PRFC will continue to work with ACCSP to increase speed of delivery as more electronic catch reports are captured and interfaces stood up.

Level of Funding (1 points): PRFC has requested a smaller level of funding compared to FY22 as an acknowledgement for the large decrease in funding given up in Year 1 to help support other projects. It is projected that funding will decrease starting in Year 4 through 7.

Properly Prepared (1 point): PRFC followed all applicable ACCSP and RFP guidelines in preparing this document along with feedback gleaned from previous years proposal.

Merit (3 points): The Electronic Catch Reporting proposal is vital to the continued evolution of PRFC and ACCSP regional partners in implementing innovated processes for increasing data capture, quality, and timeliness.

APPENDIX A: BUDGET – FY2021 – APPROVED BY ACCSP

Description	Calculation	Cost
Personnel (a)		
Principle Investigator	60 hours @ $55.50/hr	$3,330.00
Data Administrator	200 hours @ $20.50/hr	$4,100.00
Data Management Specialist	600 hours @ $11.50/hr	$6,900.00
Fringe (b)		
Principle Investigator	14% of salary	$455.55
Data Administrator	51% of salary	$2,092.93
Data Management Specialist	49% of salary	$3,401.46
Travel (c)		
n/a		
Equipment (d)		
Oracle Cloud Database:		
a. MySQL DB Services 1 instance, 31 days/month, 24 hours/day 50 GB storage 50 GB backup	$21/month x 8 months	$168.00
b. Java Cloud Service Enterprise Edition 1 instance, 31 days/month, 24 hours/day	$550/month x 8 months	$4,400.00
c. Cloud Infrastructure 1 instance, 31 days/month, 24 hours/day 50 GB storage	$33/month x 8 months	$264.00
Supplies (e)		
n/a		
Contractual (f)		
In-house Consultant/Developer	501 hours @ $100/hr	$50,100.00
Vendor/Developer	1,080 hours @ $130/hr	$140,400.00
Other (h)		
n/a		
Totals		
Total Direct Charges (i)		$215,612.00
Indirect Charges (j)	n/a	$0.00
Total (sum of Direct and Indirect) (k)		$215,612.00

BUDGET NARATIVE

(Requested Funding Period, FY21)

Project:	Electronic Trip-Level Reporting for the Potomac River Fisheries Commission (PRFC) Commercial Fisheries Sector
Project Period:	1 March 2020 – 28 February 2021
1 Year Funding:	$215,425.44
Prepared By:	Martin L. Gary, PRFC Executive Secretary

Personnel (Salaries) $14,759.90: Three PRFC employees' salary time will be covered using these funds. The three employees are: Principle Investigator, for 60 hours ($3,429.90); Data Administrator, for 200 hours ($4,223.00), and a Data Management Specialist, for 600 hours ($7,107.00).

Fringe Benefits $5,950.00: The current PRFC fringe benefit cost is set per employee at: Principle Investigator at 14% of Salary ($455.55), Data Administrator at 51% of salary ($2,092.93), and Data Management Specialist at 49% of salary ($3,401.46). The Principle Investigator falls within the fringe guidelines set forth by NOAA, however, a full breakdown of how the Fringe Benefits are calculated below (PRFC does not have a NICRA established).

		Principle Investigator	Data Administrator	Data Management Specialist
Gross	Annually	$ 111,000.00	$ 41,000.00	$ 23,000.00
	Hourly	$ 55.50	$ 20.50	$ 11.50
Fringe	Health	$ -	$ 15,418	$ 8,333
	Retirement	$ 13,086	$ 4,945	$ 2,696
	Life	$ 1,499	$ 566	$ 309
	Disability	$ -	$ -	
	Def Comp	$ 600	$ -	$ -
	Total:	$ 15,185	$ 20,929	$ 11,338
	Per Hour:	$ 7.59	$ 10.46	$ 5.67
Hours / Year:	2000			
	Rate:	14%	51%	49%
		$ 7.59	$ 10.46	$ 5.67
	Hours:	60	200	600
		$ 455.55	$ 2,092.90	$ 3,401.40
	Total Cost:	$ 3,330.00	$ 4,100.00	$ 6,900.00

Travel $0.00: N/A

Equipment $15,372.00: Oracle Cloud Infrastructure (OCI) resources are procured to host the PRFC interface between ACCSP and PRFC's MS Access application on a monthly basis. Additionally, PRFC's modernized application runs on the OCI infrastructure as well.

Supplies $0.00: N/A

Contractual $179,343.60:

In-house Consultant – Ray Draper: $40,788.00

Updating the existing PRFC Access based application will require the knowledge and expertise of the consultant/developer Ray Draper. Ray has designed and developed the entire PRFC application from the ground up over the last 15 years and will be the primary developer of the ACCSP interface. This work will require five (5) months of part-time development work, estimated at 396 hours total, and PRFC has contracted with Ray at a rate of $103 an hour to perform these services.

Talent & Technical Solutions Corporation (TTSC): $138,555.60

Developing a new PRFC database, procuring cloud services and infrastructure, and assisting with the PRFC existing application integration will be handled by TTSC. PRFC has contracted with TTSC at a rate of $123.60 an hour and expects the work to support T3, T4, T6, and T7 to take 12 months of part-time work and an estimated 1,121 hours.

Other $0.00: N/A

APPENDIX B: BUDGET – FY2022 – APPROIVED BY ACCSP

Description	Calculation	Cost
Personnel (a)		
Principle Investigator	60 hours @ $57.57/hr	$3,429.90
Data Administrator	200 hours @ $21.12/hr	$4,223.00
Data Management Specialist	600 hours @ $11.85/hr	$7,107.00
Personnel Subtotal		**$14,759.90**
Fringe (b)		
Principle Investigator	14% of salary	$455.55
Data Administrator	51% of salary	$2,092.93
Data Management Specialist	49% of salary	$3,401.46
Fringe Subtotal		**$5,949.94**
Travel (c)		
n/a		
Travel Subtotal		**$0.00**
Equipment (d)		
Oracle Cloud Database:		
d. MySQL DB Services 1 instance, 31 days/month, 24 hours/day 1 OCPU 16 GB RAM 50 GB storage 50 GB backup	$58/month x 12 months	$696.00
e. Java Cloud Service Enterprise Edition 1 instance, 31 days/month, 24 hours/day 2 OCPU	$461month x 12 months	$5,532.00
f. Cloud Infrastructure 1 instance, 31 days/month, 24 hours/day 2 X9 OCPU 32 GB X9 RAM 50 GB storage	$164/month x 12 months	$1,968.00
g. Oracle APEX 1 instance, 31 days/month, 24 hours/day 2 OCPU 1 TB Storage	$598/month x 12 months	$7,176.00
Equipment Subtotal		**$15,372.00**
Supplies (e)		
n/a		
Supplies Subtotal		**$0.00**

Contractual (f)		
In-house Consultant/Developer	396 hours @ $103/hr	$40,788.00
Vendor/Developer	1,121 hours @ 123.60/hr	$138,555.60
Contractual Subtotal		**$179,343.60**
Other (h)		
n/a		
Totals		
Total Direct Charges (i)		$215,425.44
Indirect Charges (j)	n/a	$0.00
Total (sum of Direct and Indirect) (k)		$215,425.44

BUDGET NARATIVE

(Approved Funding Period, FY22)

Project:	Electronic Trip-Level Reporting for the Potomac River Fisheries Commission (PRFC) Commercial Fisheries Sector
Project Period:	1 March 2021 – 28 February 2022
1 Year Funding:	$215,612.00
Prepared By:	Martin L. Gary, PRFC Executive Secretary

Personnel (Salaries) $14,330.00: Three PRFC employees' salary time will be covered using these funds. The three employees are: Principle Investigator, for 60 hours ($3,330.00); Data Administrator, for 200 hours ($4,100.00), and a Data Management Specialist, for 600 hours ($6,900.00).

Fringe Benefits $5,950.00: The current PRFC fringe benefit cost is set per employee at: Principle Investigator at 14% of Salary ($455.55), Data Administrator at 51% of salary ($2,092.93), and Data Management Specialist at 49% of salary ($3,401.46). The Principle Investigator falls within the fringe guidelines set forth by NOAA, however, a full breakdown of how the Fringe Benefits are calculated below (PRFC does not have a NICRA established).

		Principle Investigator	Data Administrator	Data Management Specialist
Gross	Annually	$ 111,000.00	$ 41,000.00	$ 23,000.00
	Hourly	$ 55.50	$ 20.50	$ 11.50
Fringe	Health	$ -	$ 15,418	$ 8,333
	Retirement	$ 13,086	$ 4,945	$ 2,696
	Life	$ 1,499	$ 566	$ 309
	Disability	$ -	$ -	
	Def Comp	$ 600	$ -	$ -
	Total:	$ 15,185	$ 20,929	$ 11,338
	Per Hour:	$ 7.59	$ 10.46	$ 5.67
Hours / Year:	2000			
	Rate:	14%	51%	49%
		$ 7.59	$ 10.46	$ 5.67
	Hours:	60	200	600
		$ 455.55	$ 2,092.90	$ 3,401.40
	Total Cost:	$ 3,330.00	$ 4,100.00	$ 6,900.00

Travel $0.00: N/A

Equipment $4,832.00: Oracle Cloud Infrastructure (OCI) resources are procured to host the PRFC interface between ACCSP and PRFC's MS Access application on a monthly basis. Additionally, PRFC's modernized application runs on the OCI infrastructure as well.

Supplies $0.00: N/A

Contractual $190,500.00:

In-house Consultant – Ray Draper: $50,100.00
Updating the existing PRFC Access based application will require the knowledge and expertise of the consultant/developer Ray Draper. Ray has designed and developed the entire PRFC application from the ground up over the last 15 years and will be the primary developer of the ACCSP interface. This work will require five (5) months of part-time development work, estimated at 501 hours total, and PRFC has contracted with Ray at a rate of $100 an hour to perform these services.

Talent & Technical Solutions Corporation (TTSC): $140,400.00
Developing a new PRFC database, procuring cloud services and infrastructure, and assisting with the PRFC existing application integration will be handled by TTSC. PRFC has contracted with TTSC at a rate of $130 an hour and expects the work to support T3, T4, T6, and T7 to take 12 months of part-time work and an estimated 1,180 hours.

Other $0.00: N/A

APPENDIX C: Maintenance Projects History for Primary Program Priorities:

Funding Fiscal Year	Amount	Time Period	Results/Comments
2021	$215,612.00	1 Mar 2020 – 28 Feb 2021	Pilot implementation of ACCSP eTrips and initial development of PRFC Interface & modernized cloud application
2022	$215,612.00	1 Mar 2021 – 28 Feb 2022	Completed development of PRFC Cloud application SAIL v1.0, piloted eTrips with expanded waterman beta group, delivered initial SAFIS interface to synchronize data between PRFC SAIL v1.0 and SAFIS.
2023	TBD	1 Mar 2022 – 28 Feb 2023	Complete development of PRFC SAIL v2.0, finalize SAFIS-SAIL two way interface communication, expand pilot to 50% of waterman.

APPENDIX D: Resumes for all personnel proposed on the project

Martin L. Gary

Education

Texas A&M University: B.S. Wildlife & Fisheries Sciences May 1986
Specialization: Fisheries Ecology

Experience
Potomac River Fisheries Commission: July 2013 to Present
Executive Secretary

- Currently:
  - Co-Chair, NOAA Chesapeake Bay Program Sustainable Fisheries Goal Implementation Team
  - Chairman, Atlantic States Marine Fisheries Commission's Atlantic Striped Bass Board
  - President Elect, Tidewater Chapter of the American Fisheries Society
  - Member, Chesapeake Bay Program Invasive Catfish Work Group
  - Member, Maryland Sea Grant External Advisory Board 2016-Present
- Previously:
  - Co-Chair, Atlantic States Marine Fisheries Commission's Striped Bass Work Group (2020)
  - Chairman, Atlantic States Marine Fisheries Commission's American Eel Board (2017-2019)
    Member, Interstate Commission for the Potomac River Basin (ICPRB) Blue Ribbon Panel for Comprehensive Watershed Planning (2017-2019)

Maryland Department of Natural Resources, Fisheries Service: (July 1985 through June 2013)

- Fisheries Service - Assistant Director (2006-2013)
- Fisheries Service – Program Manager for Recreational & Commercial Fisheries and Outreach (1996-2006)
- Fisheries Service – Program Manager for Recreational Fisheries and Commercial Striped Bass Fisheries (1995-1996)
- Fisheries Service – Legislative Officer (1994-1995)
- Fisheries Service – Striped Bass Stock Assessment Biologist (1990-1994)

- Fisheries Service – Program Manager for Artificial Reefs & Habitat Enhancement (1988- 1990
- Fisheries Service: Estuarine Finfish Biologist (1986-1988)

Affiliations

American Fisheries Society Member American
Fisheries Society Southern Division
American Fisheries Society Tidewater Chapter (President Elect) American
Fisheries Society Estuaries Section
American Fisheries Society Invasive & Introduced Species Section American
Fisheries Society Fish Habitat Section
American Fisheries Society Fish Health Section American
Fisheries Society Fish History Section American Fisheries
Society Fish Management Section
American Fisheries Society Fisheries Information & Technology Section
American Fisheries Society Virginia Chapter Member
American Fisheries Society Mid Atlantic Chapter Member
American Fisheries Society Potomac Chapter
American Fisheries Society Marine Fisheries Section American
Fisheries Society Science Communication Section American
Fisheries Society Socioeconomics Section American Fisheries
Society Water Quality Section American Society of Ichthyologists
& Herpetologists
The Interstate Shellfish Sanitation Conference (ISSC)
National Association of Underwater Instructors (NAUI Scuba certifications for: Advanced Open Water, Ice, Night, Cave, Nitrox)

Cathy Friend

WORK EXPERIENCE

Potomac River Fisheries Commission **Colonial Beach, VA**

Administrative Specialist Jan 2012 – Present

- Operate office equipment such as fax machines, copiers, electronic postage machines, and multi-line phone systems, and use computers for spreadsheet, word processing, database management, and other applications;
- Greet customers or callers and handle their inquires or direct them to the appropriate person according to their needs;
- Prepare the daily cash report making sure all monies balance for the day, verifying receipts vs. monies received that day match;
- Prepare and mail law enforcement manual updates monthly;
- Review and process incoming commercial and recreational license applications; ensuring the correct fees are collected;
- Attend and record all advisory committee meetings and quarterly Commission meetings. Transcribe and prepare minutes from each meeting in a timely manner for review by the Executive Secretary;
- Update and prepare any regulation changes or supplement updates and mail to the appropriate recipients including Commission members, law enforcement, judges, and clerks;
- Adhere to mandatory time lines for preparing and distributing certain documents;
- Enter daily deposits into Quickbooks.

Database Specialist Jun 2006 – Present

- Trouble shoot and fix any errors associated with the operating database, including contact the IT person for help if needed;
- Maintain the integrity of the data entered by ensuring proper procedures are followed;
- Accurately entering hand written harvest catch data received weekly through the mail and in person; and reach out to any harvester with discrepancies found;
- Adhere to regulations regarding commercial activities to include making sure regulations are followed and provided to harvesters;
- Respond to customer or management request for data by creating queries in the database.

NSWC Federal Credit Union **Dahlgren, VA**

Positions held: 1992 - 2004

Human Resource Assistant

Mortgage and Home Equity Loan Officer

Mortgage Loan Clerk

Customer Service Teller

EDUCATION

Rappahannock Community College (1994 – 2000) **King George, VA**

Completed coursework towards a A.S. Accounting Specialist (degree not obtained)

West Virginia University (1986 – 1991) **Morgantown, WV**
Completed coursework towards B.S. Speech Pathologist (125 credit hours – degree not obtained)

ADDITIONAL SKILLS

- Proficient and accurate in using Microsoft Office suite, including Word, Excel, Access and Power Point;
- Entry level use of Quickbooks;
- Able to use a copier to make multiple collated copies as well as making booklets;

Morgan Shaffer

Objective

- To offer my services to a company that promotes conservation and education

Education

BACHELOR OF SCEINCE| MAY 2020 | UNIVERSITY OF MARY WASHINGTON

- Major: Environmental Science: Natural
- Minor: Environmental
  Sustainability
  Biology
- Related coursework: Introduction to GIS, Environmental Geochemistry, Field Methods in EESC & GEOL, Pollution Prevention Planning, Hydrology, Toxicology, Ornithology, Animal Behavior

ASSOCIATES | MAY 2017 | RAPPAHANNOCK COMMUNITY COLLEGE

- Major: General Arts & Sciences

Skills & Abilities

COMPUTER SKILLS

- Excellent experience using Word, PowerPoint, Excel, Publisher, and the online Google equivalences
- Good understanding of Skype, Zoom, Webinar, Google Hangouts, and online application Trello
- Experienced in GIS map building, general data analysis, and graphical analysis
- Competent in research using the internet and online databases/libraries
- Quick to learn new programs and technologies

CONSERVATION

- Led and participated in State Park conservation programs such as beekeeping, monarch butterfly raising and tracking, implementing pollinator gardens, and collecting wildflower seeds
- Cared and handled animal ambassadors such as a corn snake, eastern king snake, red-eared sliders, and saltwater fish
- Informed the general public, school groups, and day-care groups about local flora and fauna
- Inspired creativity and critical thinking in children and adults of all ages regarding environmental problems by using hands-on outdoor activities

VISITOR EXPERIENCE & CUSTOMER SERVICE

- First point of contact greeting clients and answering phone calls
- Enriched the experience of 200 – 300 park guests daily through programs, point-duty, and roving
- Performed 2-4 20min-1h long programs daily on a wide variety of subjects, tailoring topics to fit the needs and interests of park guests
- Assisted in providing information, answering questions, taking pictures, and finding resources for guests
- Established a safe environment where the public felt comfortable asking a wide range of questions Assisted in activities directly targeting 4H groups, YMCA, YCC, homeschool groups, and summer school groups
- Adapted all programming and guest interactions to follow Covid guidelines

TEAMWORK

- Basic management such as scheduling other individuals and delegating tasks while taking into account strengths, weaknesses, and time available
- Shared responsibilities with coworkers, willing to take on additional work when coworkers needed extra support
- Capable of taking initiative and handling independent duties

Experience

DATA ENTRY SPECIALIST | POTOMAC RIVER FISHERIES COMISSION | JULY 2022 - PRESENT

- First point of contact between PRFC and the public via in person, phone, or electronical communication
- Data entry and management of fishery related data to fulfill the agency's mission to conserve and improve the valuable fishery resources of the tidal Potomac River
- Handled daily front office financial transactions and bank deposits

DATA ENTRY INTERN | POTOMAC RIVER FISHERIES COMISSION | FEBUARY 2022 – JULY 2022

- Data entry and management of fishery related data
- Responsible for the daily upkeep and organization of harvest records
- Answering phone calls and taking messages for coworkers
- Analysis of data tables and catching anomalies/mistakes

INTERPRETIVE PARK RANGER | WESTMORELAND STATE PARK | MARCH 2021 – JANUARY 2022

- Supervisor of 1 other park staff and 2 AmeriCorps volunteers; in charge of fairly delegating tasks between coworkers and ensuring they submitted necessary data promptly
- Organized all park programming and the creation of fliers promoting weekly program guides
- Promoted Westmoreland State Park and offered educational programs at local events such as First Friday in Montross and the Fall Festival in Montross

- Created, revised, and transcribed educational park programs including 6 new programs
- Adapted all programming and guest interactions to follow Covid guidelines
- Enriched the experience of 3,000 – 5,000 guests during the summer months

INTERPRETIVE PARK RANGER | WESTMORELAND STATE PARK | MAY 2019 – JULY 2020

- Trained AmeriCorps volunteers
- Led guided tours and activities for park guests daily, teaching topics involving environmental and biological information
- Cared for permanent and temporary ambassador animals such as snakes, lizards, and frogs
- Planned, participated, and volunteered for yearly park events including races and family events

RESUME

Raymond (Ray) Draper

SUMMARY

More than 45 years of providing technical guidance and leadership for numerous people over a variety of computer systems and projects.

EXPERIENCE

Potomac River Fisheries Commission / Consultant, Independent Contractor (April 1993 – Present) Produced multiple database programs in support of daily operations provided by the PRFC staff. Duties included understanding the requirements, designing the database, operator interfaces, and reports.

Provided hardware support for the first ten years. Supported the transition from the old to the new facility. Provide ad-hoc consulting regarding new technology and capabilities. Provide as-needed support to the staff regarding special requests and system modifications.

Enterprise Resource Planning Supervisor & Time Management Instructor (January 2012 – November 2020) *Contractor/Consultant/Employee – depending on the company who won the follow-on contracts:*

- Primarily responsible for conducting the Instructor Led Training (ILT) that is required for personnel to perform their duties as a Supervisor, Time Keeper, and/or Time Approver.
- Developed specific Step-by-Step guides for trained personnel to use as a refresher after the ILT.
- Modified Navy produced classroom material to be specific to personnel at NSWC Dahlgren.
- Presented ERP seminars to the Government population (general users) on how to use the new ERP system who did not require ILT.
- Developed Step-by-Step guides in PDF format and a parallel video (MP4) version for the general users.
- Designed and taught Knowledge Transfer (KT) sessions on specific, user requested topics related to the Time functionality, such as how to obtain names and quantity of employees working overtime or on a telework status.
- Provide follow-up support via phone, on-site, or on-line as needed.

Naval Surface Warfare Center, Dahlgren Division (September 1984 – December 2011) *Civil Service employee assigned to various technical and managerial positions on multiple Navy projects:*

- Special Systems Intelligence & Surveillance Branch Head (2008 – 2011): Provided technical and personnel leadership to several intelligence, surveillance and reconnaissance (ISR) projects. These projects included approximately 45 personnel and twenty million dollars.
- Classified Project Software / Project Lead (2002 – 2008): Established and lead a team of software and hardware engineers, technicians, and support personnel with the development of

an intelligence

collection and data fusion system. Responsible for the requirements, design, development, documentation, installation, and training.

- Cooperative Engagement Capability Software Lead (1996 – 2002): Provided technical software oversight to the lead contractors (Raytheon and Lockheed-Martin) for the Government Program Office. Lead local team with software builds, metrics, and installation aboard ships and land sites.
- Cryptologic Systems Embedded Trainer Software Lead (1993 – 1996): Provided technical software oversight to the lead contractor (Electronic Warfare Associates) for the Government Program Office. Facilitated system and design requirements and conducted acceptance testing at the contractor's facility.
- Combat Direction Finder Software Independent Verification Lead (1989 – 1993): Provided technical software oversight to the lead contractor (Raytheon-Sanders) for the Government Program Office and conducted Independent Verification & Validation for initial systems.
- Computer Aided Design & Drafting System Software Developer / Site Lead (1984 – 1989): Developed local applications to improve efficiency with system management (printing, plotting, and data storage). Provided project leadership to cross-functional team and training across the Center.

United States Air Force (June 1974 – June 1980) *Telecommunications Specialist:*

Provided technical analysis and repair to long-haul communication systems, which included HF, VHF, landline, and tropospheric systems. Maintained cryptologic equipment and conducted training on systems to co-workers and members of the US Marine Corp during combat exercises.

EDUCATION

Embry-Riddle Aeronautical University (September 1980 – September 1984)

- BS Computer Science
- AS Aviation Management
- Commercial Pilot's License
- Flight Instructor

J. BLAIR PARSONS III,
PMP, CISSP, ITIL4

Chief Information Officer (CIO)

PROFILE

Blair Parsons is a partner and CIO of Talent & Technical Solutions Corporation (TTSC). He has been an IT industry leader for the last 16 years where he has served in various senior leadership roles, including: Activity Command Information Officer (ACIO), Senior IT Program Manager (PM), Senior Software Engineer PM, and Senior Information Systems Engineer. Blair is laser focused on continuous process improvement through advanced use of IT systems both on-prem and in the cloud to provide accountability, performance monitoring, process metrics, and advanced reporting. His accomplishments include the design and implementation of a dynamic, workflow based, custom action tracking system at NAVSEA; a custom, Talent Management application across the US Navy; and numerous successful cloud native system migrations and refactoring projects.

CONTACT

PHONE: 540.903.3537

EMAIL: blair@tts-c.com

WEBSITE: www.tts-c.com

PROFESSIONAL HIGHLIGHTS

TTSC – Chief Information Officer (CIO)
Oct 2019 – Current

- Design and execute the corporate IT solutions business strategy to include identification of solutions and services being offered, targeting of customer markets and outreach to potential clients, development of technology roadmaps and trends assessments, and establishment of partner programs for rapid execution and value maximization.
- Lead all IT related efforts, including the implementation and deployment of MS365, design and development of the TTSC Assessment Model (OAM), design and development of the tts-c.com corporate home page, and design and development of the PowerBI OAM Dashboard.

Falconwood, Inc – Senior Cloud Engineer (DevSecOps)
Sep 2019 – April 2020

CACI – Senior IT Program Manager (PM) / ACIO
Oct 2017 – Sep 2019

CACI – Developer, Group Lead, Project Manager
July 2004 – Sep 2017

EDUCATION

MASTER OF BUSINESS ADMINISTRATION (2010)
University of Mary Washington ▪ Fredericksburg, VA

MASTER OF MANAGEMENT OF INFORMATION SYSTEMS (2010)
University of Mary Washington ▪ Fredericksburg, VA

BACHELOR OF SCIENCE IN COMPUTER SCIENCE (2004)
University of Mary Washington ▪ Fredericksburg, VA

CERTIFICATIONS

PROJECT MANAGEMENT PROFESSIONAL (PMP) (2016)
Project Management Institute (PMI) ▪ ACTIVE

CERTIFIED INFORMATION SYSTEMS SECURITY PROFESSIONAL (CISSP) (2016)
International Information System Security Certification Consortium (ISC)² ▪ ACTIVE

ITIL 4 FOUNDATION (2020)
ITIL ▪ ACTIVE

Bold Comments indicate sections that help with the ranking process
Highlighted text indicates changes from the first submission

Ranking Guide – Maintenance Projects:

Project Quality Factors	Point Range	Description of Ranking Consideration
Multi-Partner/Regional impact including broad applications	0 – 5	Rank based on the number of Partners involved in project OR regional scope of proposal (e.g. geographic range of the stock).
> yr 2 contains funding transition plan and/or justification for continuance	0 – 4	Rank based on defined funding transition plan away from Program funding or viable justification for continued Program funding.
In-kind contribution	0 – 4	1 = 1% - 25% 2 = 26% - 50% 3 = 51% - 75% 4 = 76% - 99%
Improvement in data quality/quantity/timeliness	0 – 4	1 = Maintain minimum level of needed data collections 4 = Improvements in data collection reflecting 100% of related module as defined within the Program design. Metadata is provided and defined within proposal if applicable.
Potential secondary module as a by-product (In program priority order)	0 – 3 0 – 3 0 – 3 0 – 1	Ranked based on single additional module data collection and level of collection as defined within the Program design of individual module.
Impact on stock assessment	0 – 3	Rank based on the level of data collection that leads to new or greatly improved stock assessments.

Other Factors	Point Range	Description of Ranking Consideration
Properly Prepared	-1 – 1	Meets requirements as specified in funding decision document Step 2b and Guidelines
Merit	0 – 3	Ranked based on subjective worthiness

Ranking Guide – Maintenance Projects: (*to be used only if funding available exceeds total Maintenance funding requested*)

Ranking Factors	Point Range	Description of Ranking Consideration
Achieved Goals	0 – 3	Proposal indicates project has consistently met previous set goals. Current proposal provides project goals and if applicable, intermediate metrics to achieve overall achieved goals.
Data Delivery Plan	0 – 2	Ranked based if a data delivery plan to Program is supplied and defined within the proposal.
Level of Funding	-1 – 1	-1 = Increased funding from previous year 0 = Maintained funding from previous year 1 = Decreased funding from previous year
Properly Prepared	-1 – 1	-1 = Not properly prepared 1 = Properly prepared
Merit	0 – 3	Ranked based on subjective worthiness

Ranking Guide – New Projects:

Primary Program Priority	Point Range	Description of Ranking Consideration
Catch and Effort Biological Sampling Bycatch/Species Interactions Social and Economic	0 – 10 0 – 10 0 – 6 0 – 4	Rank based on range within module and level of sampling defined under Program design. When considering biological, bycatch or recreational funding, rank according priority matrices.
Data Delivery Plan	+ 2	Additional points if a data delivery plan to Program is supplied and defined within the proposal.

ROY COOPER
Governor

ELIZABETH S. BISER
Secretary

KATHY B. RAWLS
Director

July 29, 2022

Atlantic Coastal Cooperative Statistics Program
Operation and Advisory Committee
1050 N. Highland Street, Suite 200A-N
Arlington, VA 22201

To Whom it May Concern,

We are pleased to submit the proposal entitled "**FY23: North Carolina biological database enhancements for the transmission of data to the ACCSP"** for consideration for funding in FY2023.

This maintenance proposal is being submitted to fund a developer for NCDMF's Biological Database (BDB) upgrade. When the FY2021 proposal titled *"North Carolina biological database enhancements to prepare for transmission of data to the ACCSP"* was submitted, NCDMF was fully staffed and the BDB had 100% support of existing processes so that the contractor hired on this grant as well as the NCDMF IT developer could focus 100% on the new database and its enhancements.

Just before the start of the FY21 project, the BDB Administrator that supported the existing system retired leaving a huge vacancy causing the IT developer to shift to supporting the existing system instead of new development. Hiring of the contractor on the FY21 grant was delayed due to the funding not being available to the North Carolina Department of Information Technology (NCDIT) to start the hiring process; however, a contractor was finally hired in November 2021. Due to several other hiring issues, a qualified replacement BDB Administrator couldn't be hired until January 2022. These personnel changes were not expected at the time of the previous grant submission and have set work on this project back considerably. A no-cost extension has been submitted for the FY21 grant to continue development.

The scope of this project hasn't changed but has been narrowed in the attached proposal to reflect design decisions that were made during the current FY21 grant work such as moving forward with a SQL Server database instead of maintaining the existing ASCII 128-byte database. The ASCII version of the BDB has been migrated to SQL Server and is still being finalized. Delays on the web-based interface for data entry and editing will not delay the start of the funded FY2022 grant that will be starting July 2022, titled *"North Carolina fishery-dependent biological data transmissions to the Atlantic Coastal Cooperative Statistics Program Data Warehouse"*.

Thank you for your consideration.

Sincerely,

Stephanie McInerny

State of North Carolina | Division of Marine Fisheries
3441 Arendell Street | P.O. Box 769 | Morehead City, North Carolina 28557
252-726-7021

Proposal for Funding made to:

Atlantic Coastal Cooperative Statistics Program
Operations and Advisory Committees
1050 N. Highland Street, Suite 200 A-N
Arlington, VA 22204

FY23: North Carolina biological database enhancements for the transmission of data to the ACCSP

Submitted by:

Stephanie McInerny
North Carolina Division of Marine Fisheries
3441 Arendell Street; P.O. Box 769
Morehead City, NC 28557
stephanie.mcinerny@ncdenr.gov

Applicant Name:	North Carolina Division of Marine Fisheries
Project Title:	FY23: North Carolina biological database enhancements for the transmission of data to the ACCSP
Project Type:	Maintenance
Principal Investigator:	Stephanie McInerny NCDMF Information Technology Section Chief
Requested Award Amount:	$146,981
Requested Award Period:	For one year, beginning after the receipt of funds.
Original Date Submitted:	June 10, 2022
Revised Date Submitted:	July 29, 2022

Objective

To enhance the biological database used by the North Carolina Division of Marine Fisheries (NCDMF) to ensure continued use and maintenance of the database on State authorized equipment and to facilitate transmissions of fishery-dependent biological data to the Atlantic Coastal Cooperative Statistics Program (ACCSP) Data Warehouse.

Background/Need

The development of a comprehensive database to house field sampling collections for the NCDMF was initiated in May 1980 and incorporates data from the 1960s to present. Data are collected from both fishery-dependent and fishery-independent surveys and used in stock assessments and fishery management plans (FMPs) to manage species important to the state as well as those managed by regional and federal management commissions and councils.

Biological data collected are stored in the NCDMF Biological Database (BDB) which consists of a hierarchical set of 128-byte ASCII records that detail various data collected by the sampling programs conducted by the division. The BDB currently consists of nine record types:

- Record Type 1 - Environmental Data
- Record Type 8 - Fishing Gear Data
- Record Type H - Free Format Header Data
- Record Type 2 - Replicate Data
- Record Type R - Free Format Replicate Data
- Record Type 3 - Species Data
- Record Type 4 - Individual Fish Data
- Record Type 5 - Individual Fish Age Data
- Record Type 9 - Individual Fish Tag Recapture Data

For each biological program, data are typically entered onto biological program data sheets according to set protocols contained in each program's written standard operating procedures (i.e., program documentation). While the data field names on the BDB record are rigorously controlled, the type of data collected in a biological program for a given field may vary dependent upon what information the respective biologist is capturing. Data elements that are required and standard across all programs include the following: collection id (sequence number), program id, date, location, gear, replicate id, species id, species status, and the number of individuals. Specific programs may also record in addition several other data elements such as station number, duration of sample, sediment type, depth, air temperature, dissolved oxygen, pH, weather, current speed, additional data on individuals collected (weight, age, tag number, annulus measurements), etc. The BDB structure allows each program to capture the data elements needed in a flexible and organized manner with like codes and other standards, but no single program captures all the data defined in the BDB record types. Consequently, biological program data elements vary from program to program. This leads to many variations in the biological data or "coding" sheet. At this moment, there are over 125 different coding sheets defined; but, this number could change at any time dependent on new or changing program documentation requirements.

Currently, there are data from over 120 programs within the BDB and 18 million records. This includes both fishery-dependent and fishery-independent data types. These data are important to the management of species in North Carolina as well as regional and federal species. The primary method for data entry into the BDB can only run on a Windows XP machine; therefore, it has been cumbersome to maintain the BDB as built since computer operating systems used by the state upgraded from Windows XP. The

need to enhance the BDB and its data entry interfaces has been increasing over time but there is an immediate need to address database structure, data entry tools, and create a plan for improved user extraction tools as North Carolina State security guidelines currently prohibit PCs not using Windows 10 or newer to be on the state network. This adds an additional level of difficulty in maintaining the BDB and a strong reason for upgrading the database and input/output (I/O) interfaces. In addition, data entry and regular maintenance on the BDB cannot be done via remote access. With the ongoing COVID-19 pandemic, teleworking has been required in some cases and is likely to be maintained in some form moving forward.

The NCDMF has been an active participant in transferring selected BDB program data to other regional databases. Two fishery-independent surveys are provided to the Southeast Assessment Monitoring Program (SEAMAP) which is a cooperative program to facilitate the management, and dissemination of fishery-independent data from the waters of the southeastern United States. North Carolina fishery-dependent biological data from the snapper-grouper fishery is provided to the NOAA Fisheries Southeast Fisheries Science Center's Trip Information Program (TIP) which is a major component of the ACCSP. With the upgrades outlined in this proposal, NCDMF will be prepared for future transmissions of data to the ACCSP Data Warehouse to meet the goals and standards of data sharing initiatives between North Carolina and ACCSP. Other than snapper-grouper data, biological data collected by North Carolina are not currently available in the Data Warehouse.

This maintenance proposal is being submitted to fund a developer for NCDMF's Biological Database (BDB) upgrade. When the FY2021 proposal titled *"North Carolina biological database enhancements to prepare for transmission of data to the ACCSP"* was submitted, NCDMF was fully staffed and the BDB had 100% support of existing processes so that the contractor hired on this grant as well as the North Carolina Department of Information Technology (NCDIT) developer located at NCDMF could focus 100% on the new database and its enhancements. Just before the start of the FY21 project, the BDB Administrator that supported the existing system retired leaving a huge vacancy, causing the NCDMF IT developer to shift to supporting the existing system instead of new development. Hiring of the contractor on the FY21 grant was delayed due to the funding not being available to the NCDIT to start the hiring process; however, a contractor was finally hired in November 2021. Due to several other hiring issues, a qualified replacement BDB Administrator couldn't be hired until January 2022. These personnel changes were not expected at the time of the previous grant submission and have set work on this project back considerably. A no-cost extension has been filed for the FY21 grant to continue development.

The scope of this project hasn't changed but has been narrowed to reflect design decisions that were made during the current FY21 grant work such as moving forward with a SQL Server database instead of maintaining the existing ASCII 128-byte database. The scope of this project remains modernizing NCDMF's BDB. Delays on the web-based interface for data entry and editing will not delay the start of the funded FY2022 grant that will be starting July 2022, titled *"North Carolina fishery-dependent biological data transmissions to the Atlantic Coastal Cooperative Statistics Program Data Warehouse".*

Review of Previous Results:

Scripts have been created to migrate the ASCII flat file database into a SQL Server database. The format of the SQL Server database is close to finalized and is synced to the ASCII database daily to help facilitate verification of data between the two databases. Development on a new web-based interface has been started and several ways to view and export data from the SQL database have been created based on previously available functionality that uses the ASCII database. Biologists are verifying accuracy of the data format and results from the new interface. Reference tables have been created and added to the SQL

database to allow for additional formatting of the data. The ability to edit records has begun on Record Types 1 and 2 records and program-specific business rules are starting to be included in this process. The FY21 grant is currently ongoing.

Approach

NCDMF staff continually work with NCDIT staff on a requirements document to detail specific needs and expectations of the corresponding I/O interfaces. This document will be fluid and will be updated as decisions are made. Minor changes occur as data inconsistent with known documentation are discovered. In the final database, data will still be flagged as dependent or independent based on the biological sampling program they were collected from to differentiate between these data types so that only fishery-dependent data are transferred to ACCSP. The web-based interface development will continue under this proposed grant to facilitate data entry as well as data corrections that can be used on Windows 10 PCs. With this new modernized interface, continued maintenance of the BDB will be easier as standard upgrades to operating systems occur over time. The SQL database also offers greater flexibility to meet new data requirements that were more difficult to implement under the ASCII database format. New data verification methods will be implemented in the web-based interface with corresponding database elements to track progress through the verification process. NCDMF staff will work with NCDIT staff to complete this project. Several NCDIT staff are housed at the NCDMF Headquarters office in Morehead City, NC and will be overseeing, assisting, and facilitating this project as well as actively developing new functionality for the interface. A contractor will be hired to help complete the interface development.

The new SQL Server database and the BDB's new web-based interface will allow for frequent transfers of fishery-dependent program data from the NCDMF to the ACCSP. These transfers could also replace the need for yearly transfers of biological data from North Carolina to the TIP program by providing necessary TIP variables within the ACCSP data transmission. Those data could be retrieved by the SEFSC from the ACCSP Data Warehouse, as needed. Once the ACCSP transfer process is built and refined, the data could be transmitted monthly which will significantly improve timeliness of NC data to TIP compared to the annual transfer that happens currently. The scope of the funded FY22 grant is specifically the portal for this data transmission and the SQL scripts to compile the data for transfer. Some work to get the data into the TIP database from ACCSP may be required and is not funded under the FY22 project.

NCDIT at NCDMF has been using the Agile SCRUM methodology for software development over the last 8-10 years. Development of the BDB web-based application will also be conducted using Agile development and 3-week development Sprints. User stories to define "bite-sized" pieces of functionality from the requirements document will be created to guide the development process.

Results and Benefits

Successful fulfillment of this project will provide:

- Enhanced data entry and verification functionality for North Carolina biological program data
- Increased timeliness and cleanliness of North Carolina's biological data
- Remote access to the BDB by staff that maintain the database, as well as biologists
- The ability for the BDB to meet State security requirements
- Data that can be easily formatted to facilitate transmissions of fishery-dependent biological data from North Carolina to the ACCSP Data Warehouse which will be accessible by regional partners including SEFSC TIP staff, as needed

Geographic Location

The NCDMF Headquarters are located in Morehead City, North Carolina. This project may be performed remotely and does not require the position to be located in Morehead City. Other NCDIT contractors working for the division are located in Raleigh, North Carolina.

Data Delivery Plan

Documentation of the enhanced data entry and editing process as well as any metadata and database schema changes will be provided to ACCSP as part of the annual report. The NCDMF BDB has extensive documentation for each of the sampling programs that are stored in the database. New documentation on the enhanced database will include data mapping tables that provide a definition of each variable with respect to the old database to ensure data migration is successful and accurate. Any new stored procedures created during this project will include documentation on primary function, data tables being accessed, and corresponding variables within the procedure's SQL code.

Biological data will be submitted to ACCSP through the data transmission portal outlined in the FY2022 grant titled "North Carolina biological data transmissions to the Atlantic Coastal Cooperative Statistics Program Data Warehouse" that is set to begin in July 2022.

Completed Data Delivery to ACCSP

The FY2021 project is still ongoing and performance reports have been submitted as required. The annual report for FY21 is not yet due to ACCSP.

Milestone Schedule (start date depending on time of grant award):

	Month											
Task	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
Hire Contractor	**X**	X										
Develop requirements document	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
Create user stories	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
Interfaces for data entry and verification will be built and tested.	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
Finalize documentation											**X**	**X**

The contractor is expected to work 40 hours a week on this project. Report writing will follow the requirements of two semi-annual status reports and a final report due at the end of the grant award.

Project Accomplishments Measurement (Metrics and Achieved Goals)

Projects	Accomplishments
Update requirements document, as needed throughout project	• Document is completed and describes functionality that needs to be completed in new application
User stories are created for Agile Development	• User stories are written and document small tasks for developers to complete requirements within Sprints
Create interface for data entry	• Process completed and fully documented • Data are able to be entered into biological database
Create interface for data verification/editing	• Process completed and fully documented • QA/QC tests can be run on data • Data are able to be viewed and edited
Finalize documentation	• Documentation reflects new enhanced process and data structure

Project Personnel

Stephanie McInerny—Section Chief, NCDMF IT Section (NCDIT)
Casey Knight—Biological User Group (BUG) Chair, NCDMF
Vacant—BUG Co-Chair, NCDMF
Chris Capoccia—Applications Systems Analyst II, NCDMF IT Section (NCDIT)
Scott Smith—Biological Database Administrator, NCDMF IT Section (NCDIT)
Phyllis Howard—Biological Database Clerk, NCDMF IT Section (NCDIT)
Leslie Hester— Biological Database Clerk, NCDMF IT Section (NCDIT)

Funding Transition Plan

This project should be completed within the proposed 1-year grant period. NCDIT and NCDMF staff can maintain the systems developed from this grant; therefore, subsequent years of funding are not needed.

FY23 Budget Narrative

The cost summary table below shows an explanation for each budget item for a one-year period. NCDIT will not charge an indirect fee for the Contractor. The cost for the developer in the summary below is based on an expert level .NET developer from NCDIT's convenience contracts. This rate is what the current contractor is making and is largely different from the rate estimated in last year's proposal which was the standard rate for a developer that specializes in Microsoft Dynamics CRM (a customer relationship management software package that NCDIT has been using to replace other legacy systems

within the state). CRM was not chosen as the solution for the Biological Database upgrade; therefore, the developer costs have been reduced from $100 per hour to $68.26 per hour.

In-kind amounts have increased compared to the previous year's proposal as the NCDIT developer and BDB Administrator have been committed to completing this upgrade and new interface; however, they are still responsible for maintaining the existing system until the upgrade is completed so only 8 months of their time is dedicated to new development.

FY23 Cost Summary

Category	Expense	Units	Cost	ACCSP Request	State In-Kind	Explanation
Personnel	Contractor	1	$141,981	$141,981		One Analyst @ $68.26/hr for 2,080 hrs (1 year)
	IT Section Chief	1			$37,876	$9,469/month for 4 months
	NCDIT Application Systems Analyst	1			$56,440	$7,055/month for 8 months
	NCDMF BUG Chairs	2			$19,744	Average salary of $4,936/month for 4 months (2 months each)
	NCDMF BDB Administrator	1			$48,064	$6,008/month for 8 months
	NCDMF BDB clerk	2			$12,296	$3,074/month for 4 months (2 months each)
Subtotal				$141,981	$174,420	
Fringe	Retirement, Social Security, Health Insurance				$59,440	Fringe=24.19% of salary ($42,192) plus $7,397/year for health insurance (1 month insurance = $616*28 months combined work=$17,248)
Indirect						No indirect needed for NCDIT contractors
Subtotal				$0	$59,440	
Travel				$3,500		Travel for PI to present upgraded interface and functionality at conference
Subtotal				$3,500	$0	
Supplies	Computer	1	$1,500	$1,500		Replacement laptop for contractor, if needed
Subtotal				$1,500	$0	
	Column Totals			$146,981	$233,860	Total project cost = $380,841
	Total Request					
	Percent			39%	61%	Percentage calculated from total cost

Attachment 1: Budget Narrative and Cost Summary for previously funded project (FY2021)

FY21 Budget Narrative

The cost summary table below shows an explanation for each budget item for a one-year period. NCDIT will not charge an indirect fee for the Contractor.

NCDIT has convenience contracts in place that can be used to fill the budgeted position in this proposal; therefore, if money is awarded, a job posting will be sent to the temporary agencies used by NCDIT to solicit for applicants. Qualified individuals will be interviewed to select the best candidate for the position. A formal RFP will not be needed to hire a contractor for this project.

The cost for the developer in the summary below is based on the standard rate for a developer that specializes in Microsoft Dynamics CRM which is a customer relationship management software package that NCDIT has been using to replace other legacy systems within the state. If CRM is not the chosen solution for this project, the cost for the developer may be less.

FY21 Cost Summary

Category	Expense	Units	Cost	ACCSP Request	State In-Kind	Explanation
Personnel	Contractor	1	$150,000	$150,000		One Analyst @ $100.00/hr for 1,500 hrs (9 months)
	IT Section Chief	1			$26,250	$8,750/month for 3 months
	NCDIT Application Systems Analyst	1			$22,800	$5,700/month for 4 months
	NCDMF District Manager	2			$24,000	Average salary of $6,000/month for 4 months (2 months each)
	NCDMF BDB Administrator	1			$20,772	$5,193/month for 4 months
	NCDMF BDB clerk	2			$11,364	$2,841/month for 4 months (2 months each)
Subtotal				$150,000	$105,186	
Fringe	Retirement, Social Security, Health Insurance				$41,125	Fringe=29.09% of salary ($30,599) plus $6,647/year for health insurance (1 month insurance = $554*19 months combined work=$10,526)
Indirect						No indirect needed
Subtotal				$0	$41,125	

Travel				$1,000		Travel for contractor between work location and Morehead City HQ office for in-person meetings, as needed
Subtotal				$1,000	$0	
Supplies	Computer	1	$2,500	$2,500		
	External Hard Drive	1	$100	$100		
Subtotal				$2,600	$0	
	Column Totals			$153,600	$146,311	Total project cost = $299,911
	Total Request					
	Percent			51%	49%	Percentage calculated from total cost

Attachment 2: Project History and Total Project Cost by Year

YEAR	TITLE	COST	RESULTS
2021	*North Carolina biological database enhancements to prepare for transmission of data to the ACCSP*	$153,600	Project currently underway; SQL database created, design decisions made for web-based interface, development started on web-based interface for viewing and editing data

Summary of Proposal for Ranking Purposes

Proposal Type: ***Maintenance***

Program Priority

Catch and Effort: 0%

Biological Sampling: 100%

The North Carolina Biological Database (BDB) was developed in 1980 to house field sampling data from fishery-dependent and fishery-independent sampling programs. The database contains data from the 1960s to present. There are data from over 120 programs within the BDB and 18 million records. These data are used in stock assessments and fishery management plans to manage species important to the North Carolina as well as those managed by regional and federal management commissions and councils. (see pages 3, 4)

Bycatch/Species Interactions: 0%

Social and Economic: 0%

Metadata:

The NCDMF BDB has extensive documentation for each of the sampling programs that are stored in the database. New documentation on the enhanced database will include data mapping tables that provide a definition of each variable with respect to the old database to ensure data migration is successful and accurate. Any new stored procedures created during this project will include documentation on primary function, data tables being accessed, and corresponding variables within the procedure's SQL code. Documentation will be provided as part of the grant completion report. (see pages 3-6)

Project Quality Factors

Multi-Partner/Regional impact including broad applications:

Although this project only covers data for North Carolina, future transmissions of biological data to the ACCSP will benefit other partners as the data will be more readily available for data requests and stock assessments. Many species within North Carolina are managed regionally. Regional management agencies such as the Atlantic States Marine Fisheries Commission (ASMFC) and Mid-Atlantic Fishery Management Council (MAFMC) would benefit from having more access to these fishery-dependent data. (see pages 3, 4)

Contains funding transition plan and/or justification for continuance:

The goals defined in this project should be completed within the grant cycle. (see page 7)

In-kind contribution:

61% (see cost table on page 8)

Improvement in data quality/quantity/timeliness:

The project identified in this proposal will greatly improve data quality and timeliness by providing a more modernized format for the data with enhanced data entry/verification screens and workflows that will prepare North Carolina for transmitting data to the Data Warehouse. (see page 5)

Potential secondary module as a by-product:

None

Impact on stock assessment:

Although this project only covers data for North Carolina, future transmissions of biological data to the ACCSP will benefit other partners as the data will be more readily available for data requests and stock assessments. Many species within North Carolina are managed regionally. Regional management agencies such as the Atlantic States Marine Fisheries Commission (ASMFC) and Mid-Atlantic Fishery Management Council (MAFMC) would benefit from having more access to these fishery-dependent data. (see pages 3, 4)

Properly Prepared:

This proposal follows the guidelines provided in the ACCSP Funding Decision Document.

Merit:

Modernizing NCDMF's Biological Database and the front-end interfaces that allow data entry clerks, technicians, biologists, and analysts to interact with the database is crucial to the success of biological data sampling programs in North Carolina. Failures to the interfaces that interact with the ASCII database are regularly occurring which result in excessive IT time to fix and excessive wait times for biologists and technicians that need to use the data for stock assessments and fishery management plans.

Stephanie McInerny

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3441 Arendell Street / P.O. Box 769
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EXPERIENCE

Information Technology Section Chief (Applications Systems Manager I) **March 2020–Current**
North Carolina Department of Information Technology (NCDIT), Morehead City, NC

Supervisory and Management

- Manage 15 technical staff members of IT Section at NCDMF through the North Carolina Department of Information Technology.
  - Directly supervise seven employees to include assigning and reviewing tasks, coaching, mentoring, performance reviews, encouraging enhancement of skills, time management, and hiring.
- Manage six different budgets including budgets that fund NCDMF biological staff
- Currently, overseeing several IT projects occurring simultaneously requiring daily multi-tasking, prioritization of staff and resources, planning, meetings, and organization.
- Oversee and manage applications development, biological database, and GIS staff and activities

License and Statistics Section Chief (Environmental Program Manager I) **2016–2020**
North Carolina Division of Marine Fisheries (NCDMF), Morehead City, NC

Supervisory and Management

- Manage around 60 staff members of the License and Statistics Section including office and field staff located in five different offices throughout NC. Had roles in time management, coaching, mentoring, hiring, firing, disciplinary action, performance reviews, encouragement of skills, and training.
- Directly supervise seven employees to include assigning and reviewing tasks, coaching, mentoring, performance reviews, encouraging enhancement of skills, time management, and hiring.
- Manage 20 different budgets including budgets that fund Information Technology (IT) staff and projects. Monies consist of appropriations, receipts, and federal grants totaling over $3 million.
- Responsible for presenting at quarterly Marine Fisheries Commission meetings on license, commercial, and recreational data issues requiring effective communication of complex statistics and data collection programs.
- Currently, overseeing several IT projects occurring simultaneously requiring daily multi-tasking, prioritization of staff and resources, planning, meetings, and organization. Current projects using either Waterfall or Agile application development are listed below:

  Agile development projects:
  - **NCDMF Fisheries Information Network (FIN) replacement project using Agile SCRUM**
  - **NCDMF FIN-GIS for shellfish leases and pound nets** (2 similar projects)

  Waterfall development projects:
  - **NCDMF-ACCSP upload portal interface upgrade and improvement project**
  - **NCDMF Coastal Angling Program Catch U Later project** (i.e., mobile discard reporting for recreational fishermen focused on flounder)
  - **NCDMF Trip Ticket Program VESL project** (web software for seafood dealer reporting)

Data, Statistics, and Committees

- SQL Server Database Schema Design – actively review and comment on schema changes to the FIN Database proposed by developers to improve and simplify data capture and in particular, data analysis by analysts at DMF
- Perform daily data queries of FIN using SAS and SQL (through SQL Management Studio)
- Frequently querying FIN for data related to section programs, license sales, and commercial trip ticket data using SAS, SQL, R, and Crystal Reports
- Serve on the DMF Management Review Team (MRT)
- Serve on Atlantic Coastal Cooperative Statistics Program (ACCSP) Operations Committee
- Serve on ACCSP Commercial Technical committee and ACCSP Information Systems committee
- Serve as Chair of the FIN Software Change Control Board and member of IT Steering Committee.
- Serve on Coastal Recreational Fishing License (CRFL) Joint Review Team

- Serve on Rules Advisory Team (RAT) as well as several RAT subcommittees (Permit NOV subcommittee, Periodic Review Subcommittee, Shellfish Workgroup)

Trip Ticket Data Analyst (Marine Fisheries Biologist II) **2008–2016**
North Carolina Division of Marine Fisheries (NCDMF), Morehead City, NC

IT Project Management and Documentation

- Created, led, and managed multiple IT software development projects using Waterfall. Was responsible for drafting scopes of work, database schema review, drafting data specification documents, requirements gathering, review of architectural solutions suggested by DMF IT, communication between IT and business users, prioritizing projects and budget, coordinating resources, and testing. Projects are listed below:
  - **Trip Ticket Data Upload Interface**
  - **ACCSP Automated Update**
  - **Simplification of E-Dealer data importing**
  - **Electronic Import of Quota Monitoring Data**
  - **ACCSP Upload Interface** - Principal Investigator
- Acted as Business Architect and Product Owner for NCDMF during Pega FIN replacement project
- Served as Chair of the FIN Software Change Control Board and member of IT Steering Committee.
- Wrote and/or compiled standard operating procedures and policies for the NCDMF eel monitoring program, NCDMF Biological Database extraction and analysis, and ACCSP data transmission process as well as FIN data entry procedures for Marine Patrol violation data and several Habitat and Enhancement section permits.

Data Analysis, Statistics, and Committees

- Was the primary data analyst for the NCDMF Trip Ticket Program. Performed daily commercial fishery data queries and statistical analyses using programming languages such as SAS, SQL, Microsoft Office Products (e.g., Excel and Access), and R (statistical analysis software) including weight-length regressions, nonlinear growth models, length and age compositions, CV, natural mortality, and landings trends.
- Analyzed data from the DMF Biological Database, when needed and trained staff on extraction and analysis.
- Participated as a member of plan development teams that facilitate fishery management plans for species important to North Carolina.
- Provided commercial data, analyzed life history data, wrote technical reports, and give presentations at data workshops for Southeast Data Assessment and Review (SEDAR) stock assessments for NOAA Fisheries and the Atlantic States Marine Fisheries Commission (ASMFC) as part of the life history and commercial workgroups.
- Accessed, verified, and performed quality control on ACCSP, NOAA, and NCDMF fisheries data for NC using SAS, SQL, Oracle SQL Developer, Microsoft SQL Management Studio, Crystal Reports, and R.
- Involved in training, coaching, and mentoring new and existing employees on procedures and policies of the Trip Ticket Program and SAS programming as well as counseling and mediating conflicts between staff to maintain a team environment.
- Served on the NCDMF Biological Review Team (BRT), BRT Technical Committee, BRT Biological User Group, BRT Life History Subcommittee, and BRT Editorial Subcommittee.
- Served on CRFL Joint Review Team
- Served on ACCSP Committees including Commercial Technical, Information Systems, Outreach, and Conversion Factor Subcommittee.
- Involved in interviewing over 30 applicants for a variety of NCDMF positions as well as evaluating, recruiting, selecting candidates, and hiring for positions within License and Statistics Section, Fisheries Management Section, and Protected Resources Section.

EDUCATION

July 2007 University of North Carolina Wilmington Wilmington, NC
M.S., Marine Biology with Applied Statistics Certificate

Fall 2006 North Carolina State University Raleigh, NC
Post Baccalaureate Studies – Quantitative Fisheries Management

December 2002 East Carolina University Greenville, NC
B.S., Biology/Marine Biology

Proposal for funding made to the
Atlantic Coastal Cooperative Statistics Program
1050 N. Highland Street, Suite 200A-N
Arlington, VA 22201

FY23: Pilot Observer Program for Rhode Island State Waters Gillnet Fishery

Total Cost: $118,519.58

Submitted By:
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Applicant Name:	Rhode Island Department of Environmental Management Division of Marine Fisheries
Project Title:	Pilot Observer Program for Rhode Island State Waters Gillnet Fishery
Project Type:	New Project
Requested Award Amount:	$118,519.58
Requested Award Period:	One year after receipt of funds (April 2023 to April 2024)
Program Priority:	Primary: bycatch (80%) Secondary: catch and effort (20%)
Date Submitted:	August 16, 2023
Project Supervisor:	Julia Livermore, Deputy Chief, Julia.livermore@dem.ri.gov
Principal Investigator:	Nicole Lengyel Costa, Principal Biologist, nicole.lengyel@dem.ri.gov
Project Staff:	JA Macfarlan, Principal Biologist, Reuben.Macfarlan@dem.ri.gov Fisheries Specialist Seasonal Interns

Bold comments intended to help with ranking

Atlantic Coastal Cooperative Statistics Program (ACCSP) Proposal for the State of Rhode Island

Objectives:

- Implement a pilot **observer program** within RI state waters for the **gillnet** fishery.
- Collect **discard data on important target species including Atlantic menhaden (*Brevoortia tyrannus*), striped bass (*Morone saxatilis*), bluefish (*Pomatomus saltatrix*), black sea bass (*Centropristis striata*), summer flounder (*Paralichthys dentatus*), winter skate (*Leucoraja ocellata*), little skate (*Leucoraja erinacea*), and spiny dogfish (*Squalus acanthias*)**. Discard data will be collected on additional species as time allows.
- **Collect effort data to characterize the fishing behavior of the Rhode Island gillnet fishery**. Data reported by gillnet fishers on commercial catch and effort logbooks will be validated by collecting effort data while at-sea including gear code, gear quantity, number of hauls, and days fished. Additional effort data currently not reported by commercial fishers will be collected including mesh size, number of panels per string, haul time, depth, and area fished (latitude/longitude).
- Analyze data collected and conduct modeling to investigate the utility of weekly aggregate limits in reducing discards, the potential for increased effort for active gillnet fishers, the size distribution of discarded target species, and the seasonality of pulse fisheries.
- Evaluate the feasibility and value of a Rhode Island state waters observer program for all commercial gear types by conducting a pilot observer program for the Rhode Island state waters gillnet fishery.

Need:

In recent years, the RI Department of Environmental Management (RIDEM) Division of Marine Fisheries (DMF) has seen a dramatic increase in the number of requested regulatory changes submitted by commercial fishers to improve the efficiency and profitability of their fishing operations and decrease bycatch and regulatory discards. Some of these requests include implementing weekly aggregate possession limits for quota-managed species currently managed with daily limits, lifting the gillnet prohibition for the harvest and possession of striped bass in state waters, and increasing our weekly possession limits seasonally for pulse fisheries such as bluefish. While the DMF has worked with the commercial fishing industry to vet proposals such as these through our public rulemaking process, these proposals have not been adopted due to the lack of data available. Before the DMF could consider adopting such proposals, data collection on fishing behavior, effort, bycatch, and regulatory discards in state waters fisheries is necessary. These data would aid the DMF in better characterizing the potential impacts of these proposed regulatory changes, should they be adopted.

Developing a state waters observer program for all commercial fisheries in the state of Rhode Island would be a costly, time-intensive endeavor that would also require hiring several additional staff members. As such, the DMF is proposing to conduct a pilot observer program for the state waters gillnet fleet to test the feasibility of an observer program while also developing sampling protocols and training materials. **Upon completion of this pilot program, the DMF would work to scope out a state waters observer program for all RI commercial fisheries and fund this work under an alternate source of funding that has already been identified (e.g., Recovering America's Wildlife Act (RAWA))**.

Bold comments intended to help with ranking

Results and Benefits:

The **data collected on effort, bycatch and regulatory discards in the Rhode Island state waters gillnet fleet** will be used by DMF staff to model the potential impacts of proposed regulatory changes submitted by the commercial fishing industry. By modeling the potential impacts of these proposals, RI stakeholders, the Rhode Island Marine Fisheries Council (RIMFC), and the RIDEM will have a better understanding of any associated risks and will be able to make more informed decisions on which proposals to recommend for adoption. Additionally, conducting this pilot scale observer program on the RI state waters gillnet fleet will provide the DMF with an opportunity to test the feasibility of conducting such a program and allow for the development of sampling protocols and training materials to be used.

Although the geographical scope of this proposal is confined to Rhode Island state waters, the collection of this data will be of great value to many ACCSP partners and species-specific stock assessments. **The Rhode Island gillnet fleet is part of the New England Extra-Large-Mesh Gillnet Fleet and New England Gillnet Fleet, both in the top quartile of the FY23 Bycatch Matrix contained in the ACCSP Request for Proposals (RFP). Several of our target species are also contained in the top quartile of the FY23 Biological Matrix contained in the ACCSP RFP including black sea bass, Atlantic menhaden, winter skate, and spiny dogfish. Although striped bass and bluefish are not in the top quartile of the Biological Matrix, the following are research needs or recommendations from species-specific management documents that this proposal addresses:**

- **Amendment 7 to the Interstate Management Plan for Atlantic Striped Bass states in section 3.7 – Bycatch Data Collection Program (ASMFC, 2022):**
    - **States should collect data from commercial fisheries on the number of fish being discarded from commercial gears that either target or encounter striped bass by implementing at-sea observer coverage.**
    - **States with commercial fisheries should implement observer coverage in state waters on 2-5% of trips.**
- **Amendment 2 to the Bluefish Fishery Management Plan states in section 6.2 – Research and Data Needs (ASMFC, 2021):**
    - **The stock assessment assumption of zero discards in the commercial fishery should be investigated.**

Data Delivery Plan: Data will be submitted to ACCSP as soon as a platform for submitting bycatch and discard data is made available to state partners. Data will be made available to any state partner upon request and will be submitted for inclusion in individual species stock assessments during the benchmark stock assessment process.

Approach:

The following outlines the approach that DMF staff will take to complete the proposed work regarding personnel, outreach, data collection, and analysis.

Personnel:

The DMF will contract a full-time Fisheries Specialist I who will work out of the DMF offices in Jamestown, RI. The employee will go through the following:

- Standard DMF onboarding process

- At-sea vessel safety training
- Species identification training
- Fisheries data collection and data entry training
- Training on the RI gillnet fleet participants, frequently landed species, and fishing practices

The employee will be provided with foul weather gear, a laptop computer, and supplies necessary to conduct at-sea data collection.

Outreach:

Prior to the submission of this proposal, DMF staff reached out to several gillnet fishers who fish in state waters to inform them of our plans for this pilot project and get their feedback. The fishers who were contacted were all supportive of the project and happy to see the DMF take steps towards a more comprehensive state waters observer program. As a result, we do not anticipate any challenges in gaining participation and achieving our sampling targets.

The DMF will dedicate a page on our website to the project, discuss the proposed project at our finfish regulatory workshops in 2022 and early 2023, and present an overview of the project to our RIMFC. Upon notification that funding has been approved for this project, DMF staff will send a letter to all fishers who reported fishing gillnets in 2022 to inform them about the pilot project. DMF staff will reach out to each fisher individually to inquire if they plan on fishing in state waters, federal waters, or both. **Any fishers who plan to fish exclusively in federal waters will be removed from the pool of fishers. This will ensure there is no overlap between our pilot observer program and the federal waters observer program.** For reference, 16 commercial fishers reported using gillnets in 2021.

Data Collection:

Data will be collected for this project from May 2023 through October 2023. A target of **5% sampling coverage per week will be used to determine the number of trips sampled each week, using data from 2022 as a proxy. The value of 5% was chosen as Amendment 7 to the Atlantic Striped Bass Interstate Fishery Management Plan recommended sampling 2 – 5% of trips, the DMF chose the higher threshold. Additionally, the ACCSP Atlantic Coast Fisheries Data Collection Standards (2012) document defines adequate sampling as 2 – 5 % observer coverage (ACCSP, 2012)**. Analysis of 2021 data indicates that the number of required trips per week will range from 1 – 3. Each licensed fisher will be assigned a random number and on Friday of each week, DMF staff will use a random draw to select 1 – 3 fishers for the following week. These fishers will be contacted on Friday and notified that they have been selected to have a trip observed for the following week. DMF will remain in close communication with these fishers the following week to coordinate trips and ensure that the required number of trips are completed. Should it be determined that a fisher will not be fishing at all in a selected week, an alternate fisher will be selected.

Prior to April 2023, several DMF staff members, along with the Fisheries Specialist I, will complete training exercises with a few selected fishers to gain practice on board the vessels, and determine the time available for data collection so that sampling protocols can be developed. Sampling protocols will be similar to those utilized by the Northeast Fisheries Observer Program (NEFOP) where detailed information will be collected for each haul and **individual weights and lengths will be collected for all target species to the extent practical and for non-target species as time allows**. Sub-sampling procedures will be used for high-volume catches and notes will be made regarding the condition of discarded fish (i.e., dead, alive, unknown).

Analysis:

All data collected at-sea will be entered into an MS Access database by DMF staff. The statistical software R, ArcGIS, and MS Excel will be used for all data analysis. The following details the analyses that will be performed to address specific regulatory proposals.

Striped bass gillnet prohibition

Trip and haul data including time of year, depth, mesh size, gear quantity, and area will be explored as factors affecting the catchability of striped bass in gillnets. Length frequency data of striped bass will be used to determine how many legal and sub-legal sized striped bass are encountered on each trip. These data will be used to determine if lifting of the striped bass gillnet prohibition will increase dead discards, increase quota utilization rates, or increase effort. Area, seasonal, and gear restrictions will be explored as potential tools to limit potential impacts.

Possession limits for target species

Regulatory discards of target species on each trip will be analyzed and extrapolated to estimate total landed catch and discards of each target species for each week. Modeling simulations will be performed to test the effect of weekly aggregate limits on effort and discards for species currently managed with daily possession limits (i.e., to determine if weekly aggregate limits would significantly reduce effort and regulatory discards). Simulations will also be performed to determine if increasing weekly possession limits for pulse fisheries such as bluefish would decrease effort and discards.

Geographic Location: This project will be conducted by RIDEM DMF staff out of Jamestown, RI. At-sea sampling will occur on vessels fishing with commercial gillnets in Rhode Island state waters.

Milestone Schedule:

Table 1. Milestone Schedule.

Activity	Month											
	1	2	3	4	5	6	7	8	9	10	11	12
Industry outreach	X	X										
Hire Fisheries Specialist I	X											
Conduct trainings		X										
Develop training materials		X	X	X								
Conduct at-sea sampling			X	X	X	X	X	X	X	X		
Analyze data										X	X	X
Report writing										X	X	X

Project Accomplishments Measurement:

Table 2. Project Accomplishment Metrics.

Goal	Metric
Safety training	Vessel safety course completed
Training materials	PDF document of protocols
At-sea sampling	5 % weekly trip coverage
Data analysis	Analysis and modeling in R and ArcGIS
Report writing	Report submitted to ACCSP

Bold comments intended to help with ranking

Cost Summary (Budget):

Table 3. Project Summary Budget

PERSONNEL:

Item	ACCSP Share	Direct State Share	Total
Deputy Chief (FTE 5%)	$0.00	$7,706.45	$7,706.45
Principal Biologist (FTE 5%)	$0.00	$6,395.20	$6,395.20
Principal Biologist (FTE 15%)	$19,558.95	$0.00	$19,558.95
Fisheries Specialist (Contractor 100%)	$77,807.00	$0.00	$77,807.00
Seasonal Intern (RIDEM 10%)	$0.00	$1,200.00	$1,200.00
Indirect Charges (ASMFC Contractor 15%)	$11,671.05	$0.00	$11,671.05
Indirect Charges (RIDEM FTE 18.5%)	$3,618.41	$2,830.81	$6,449.22
TOTAL PERSONNEL	$112,655.41	$18,132.46	$130,787.87

EQUIPMENT & SUPPLY

Item	ACCSP Share	Direct State Share	Total
US Maritime Resources Center Training Course	$1,515.00	$0	$1,515.00
Grundens Boots	$129.99	$0	$129.99
Grundens Hekules Bibs	$159.99	$0	$159.99
Gloves (10 pair)	$69.90	$0	$69.90
Grundens Neptune Pullover	$99.99	$0	$99.99
Fish basket (3)	$74.97	$0	$74.97
Ketch 32" Fish Board	$38.99	$0	$38.99
Rite in the Rain Paper	$120.00	$0	$120.00
Bench Scale	$1,500.00	$0	$1,500.00
Dell Laptop computer	$1,100.00	$0	$1,100.00
TOTAL SUPPLY	$4,808.83	$0.00	$4,808.83

TRAVEL

Item	ACCSP Share	Direct State Share	Total
Mileage (41 trips @ 44 miles roundtrip @ $0.585/mile)	$1,055.34	$0	$1,055.34

TOTAL

Item	ACCSP Share	Direct State Share	Total
Total Direct Charges	$118,519.58	$18,132.46	$136,652.04
Percentage	87%	**13%**	

Bold comments intended to help with ranking

COST DETAILS:
Description of budget categories and expenses for this project
Overall match: RIDEM is providing 13% of services as in-kind contribution.

a. **Personnel:** The DMF project team has several staff members working in a collaborative effort to accomplish project objectives. Each staff member will spend a percentage of their time on the project as follows:

From ACCSP:

i. **Principal Biologist**: 15% funded position to act as the principal investigator and may conduct initial observer trips; 15% of salary ($89,128) and fringe benefits ($41,265) for one year = $19,558.95.
ii. **Fisheries Specialist**: 100% funded position (contracted through ASMFC) to serve as the primary fisheries observer; 100% of salary ($57,105) and fringe benefits ($20,702) for one year = $77,807.

From RIDEM as In-kind:

i. **Deputy Chief**: 5% funded to provide project oversight and staff management; 5% salary ($100,436) and fringe benefits ($53,693) for one year = $7,706.45.
ii. **Principal Biologist**: 5% funded position to act as support to the principal investigator and provide assistance on field work as needed; 5% salary ($77,548) and fringe benefits ($50,356) for one year = $6,395.20.
iii. **Intern**: 10% funded seasonal intern to assist with data entry. Approximately 10% of six-month salary = $1,200.

Fringe benefits
Annual fringe benefits rates for all employees include the following:

Retirement 24%
Deferred Compensation 0.4%
FICA 6.2%
Medicare 1.45%
Health care $21,937/year
Dental $1,132/year
Vision $165/year
Assessed Fringe 4.25%
Retiree Health 6.75%

- Total annual fringe benefits for the Deputy Chief are $53,693. Fringe benefits for 5% of their time are $2,684.65
- Total annual fringe benefits for the Principal Biologist (project PI) are $41,265. Fringe benefits for 15% of their time are $6,189.75.
- Total annual fringe benefits for the additional Principal Biologist are $50,356. Fringe benefits for 5% of their time are $2,517.80.

Indirect
The RIDEM indirect rate for FY23 is 18.5%. The ASMFC indirect rate for the contracted employee is 15%

From ACCSP:

i. **Principal Biologist**: 18.5% of the 15% ($19,558.95) is $3,618.41 per year.
ii. **Fisheries Specialist**: 15% of the 100% funded position ($77,807) contracted through ASMFC is $11,671.05 per year.

From RIDEM as In-kind:

i. **Deputy Chief**: 18.5% of the 5% funded position ($7,706.45) is $1,425.69 per year.
ii. **Principal Biologist**: 18.5% of the 5% funded position ($6,395.20) is $1,183.11 per year.
iii. **Intern**: 18.5% of the 10% funded seasonal intern ($1,200) is $222.00 per year.

b. **Equipment & Supply:** Equipment and supplies for this grant will be for the Fisheries Specialist to conduct at-sea sampling on-board commercial fishing vessels. Supplies include at-sea vessel safety training, a set of foul gear (bibs, pullover, boots, gloves), fish baskets, measuring board, bench scale, Rite in the Rain paper, and a laptop computer.
c. **Travel:** Travel for this grant includes mileage to travel roundtrip from the DMF Office located in Jamestown, RI to the Port of Galilee in Narragansett, RI. The ASMFC mileage rate of $0.585/mile was used to travel 44 miles roundtrip with a total of 41 trips. A total of 41 trips was calculated based on 5% weekly coverage using 2021 data as a proxy.

SUMMARY OF PROPOSAL FOR RANKING

Proposal Type: New

Primary Program Priority: Bycatch/Species Interactions (80%)

- Bycatch and regulatory discard data (number, length, weight) will be collected from the Rhode Island gillnet fleet on important target species including Atlantic menhaden, striped bass, bluefish, black sea bass, summer flounder, winter skate, little skate, and spiny dogfish. Data will be collected on additional species as time allows.
- The Rhode Island gillnet fleet is part of the New England Extra-Large-Mesh Gillnet Fleet and New England Gillnet Fleet, both in the top quartile of the FY23 Bycatch Matrix contained in the ACCSP Request for Proposals (RFP).
- Several of our target species including black sea bass, Atlantic menhaden, winter skate, and spiny dogfish are in the top quartile of the FY23 Biological Matrix contained in the ACCSP RFP.

Data Delivery Plan: Data will be submitted to ACCSP as soon as a platform for submitting bycatch and discard data is made available to state partners. Data will be made available to any state partner upon request and will be submitted for inclusion in individual species stock assessments during the benchmark stock assessment process.

Multi-Partner/Regional Impact: Although the geographical scope of this proposal is confined to Rhode Island state waters, the collection of this data will be of great value to many ACCSP partners and species-specific stock assessments.

- Amendment 7 to the Interstate Management Plan for Atlantic Striped Bass states in section 3.7 – Bycatch Data Collection Program (ASMFC, 2022):
    - States should collect data from commercial fisheries on the number of fish being discarded from commercial gears that either target or encounter striped bass by implementing at-sea observer coverage.
    - States with commercial fisheries should implement observer coverage in state waters on 2-5% of trips.
- Amendment 2 to the Bluefish Fishery Management Plan states in section 6.2 – Research and Data Needs (ASMFC, 2021):
    - The stock assessment assumption of zero discards in the commercial fishery should be investigated.

Contains Funding Transition Plan: This is a pilot project that will be used to test the feasibility of a Rhode Island state waters observer program for all commercial gear types. This pilot project may warrant several years of data collection and therefore Rhode Island anticipates submitting this proposal for funding as a new project for one year, and up to but not exceeding, two additional years as a maintenance project. At the completion of this pilot project, Rhode Island will evaluate the feasibility of a full-scale state waters observer program and plans to apply for funding from an alternate source to fund the project moving forward (e.g., Recovering America's Wildlife Act (RAWA)).

In-Kind Contribution: In-kind contribution for this project is 13% as stated in the budget table.

Bold comments intended to help with ranking

Improvement in Data Quality/Quantity/Timeliness: This project will collect data that addresses priorities in the FY23 Bycatch and Biological Matrices. Additionally, data collected will address several research recommendations identified in species-specific management documents.

Potential Secondary Module: Catch and Effort (20%)

- Effort data will be collected to characterize the fishing behavior of the Rhode Island gillnet fishery.
- Data reported by gillnet fishers on commercial catch and effort logbooks will be validated by collecting effort data including gear code, gear quantity, number of hauls, and days fished.
- Additional effort data currently not reported by commercial fishers will be collected including mesh size, number of panels per string, haul time, depth, and area fished (latitude/longitude).

Impact on Stock Assessment: Data collected as part of this project will address questions regarding the quantity and size distribution of commercial discards occurring the New England gillnet fleet. Information on commercial discards remains limited for many stock assessments and in some cases is assumed to be zero but has not been validated in state waters.

Innovative: This project in innovative in that it is attempting to test the feasibility of a state waters observer program. In federal waters, NEFOP collects essential data on bycatch and regulatory discards but fishing operations occurring in state waters are not part of this effort. This project will not only test the feasibility of having such a program in state waters, but it will fill large data gaps identified in several stock assessments and lay the groundwork for other ACCSP partners who may wish to implement a similar program.

Properly Prepared: This proposal meets the requirements as specified in the Funding Decision Document.

Merit: This project will sample from a fleet in the FY23 Bycatch Matrix, will collect data from several species in the FY23 Biological matrix, and will satisfy several species-specific research recommendations.

LITERATURE CITED:

Atlantic Coastal Cooperative Statistics Program. (2012). *Atlantic Coast Fisheries Data Collection Standards*.

Atlantic States Marine Fisheries Commission. (2021). *Amendment 2 to the Interstate Fishery Management Plan for Bluefish*. https://www.asmfc.org/uploads/file/61b39d5aBluefishAmendment2_Aug2021.pdf

Atlantic States Marine Fisheries Commission. (2022). *Amendment 7 to the Interstate Fishery Management Plan for Atlantic Striped Bass*.

Bold comments intended to help with ranking

Appendix A: Curriculum Vitae for Principal Investigator

Nicole Lengyel Costa nicole.lengyel@dem.ri.gov 401-423-1940

PROFESSIONAL EXPERIENCE

RI Department of Environmental Management, Jamestown, RI, 05/10/09 – Present
Principal Biologist (Marine)
Duties:

- Principal Investigator (PI) for the finfish age and growth study responsible for overseeing the program and staff including a principal biologist, a fisheries technician, and seasonal interns
- PI for the Narragansett Bay Atlantic Menhaden monitoring survey responsible for management of the commercial menhaden fishery within RI state waters
- Write grant narratives and create grant budgets for marine fisheries projects and programs
- Review grant proposals and rank proposals to receive federal funding through Atlantic Coastal Cooperative Statistics Program (ACCSP) and NOAA Fisheries
- Former lead on offshore renewable energy projects. Played a vital role in all aspects of the RI Ocean SAMP and the permitting and construction of the Block Island Wind Farm
- Support Deputy Chief on matters pertaining to the New England Fishery Management Council (NEFMC) small mesh multispecies (whiting) plan
- Current Membership on various technical committees/panels: Atlantic States Marine Fisheries Commission (ASMFC) Striped Bass Technical Committee (TC) (former chair), ASMFC Striped Bass Plan Development Team (PDT), ASMFC Striped Bass Plan Review Team (PRT), ASMFC Menhaden PRT, ASMFC Menhaden PDT, ASMFC Ageing committee, ASMFC Northeast Area Monitoring and Assessment Program (NEAMAP) Operations committee (chair), ASMFC Bluefish TC, ASMFC Bluefish PRT, Mid-Atlantic Fishery Management Council (MAFMC) Bluefish monitoring committee (MC), ACCSP Operations committee (chair), ACCSP Biological Review Panel (former chair), ACCSP Bycatch Prioritization committee (former chair), NEFMC Whiting PDT
- Previous Membership on various technical committees/panels: ASMFC Weakfish TC, ASMFC Bluefish Benchmark Stock Assessment Working Group, ASMFC Artificial Reefs committee, NOAA Fisheries Red hake Stock Structure Working Group
- Participate in benchmark stock assessments and stock assessment updates including complex analysis and/or modeling, and writing of technical/scientific reports for peer-review
- Previously in charge of RI quota monitoring tracking via SAFIS dealer reports and RI seafood dealer compliance tracking including creation of an automated process through the statistical software R
- Prepare and submit annual fishery compliance reports
- Present annual reports including fisheries data and analytical results to Rhode Island stakeholders (RIDEM public workshops) and Board members at ASMFC Board Meetings
- Marine Fisheries information management team leader in charge of promulgation of RI marine fisheries regulations and all storage/IT related issues including running public meetings in-person and virtually
- Serve as professional reviewer for peer-reviewed journal articles as requested

Skills developed: 15 years of Marine Fisheries experience working for the state of Rhode Island, Strong teamwork and leadership skills as chair of many committees; Experience in giving public presentations

Bold comments intended to help with ranking

and fielding questions; Supervisory experience though overseeing age and growth project staff and seasonal interns as well as training new staff; Fisheries Management experience by attending and participating in ASMFC Board meetings, ASMFC and ACCSP technical committees and panels, RI promulgation of regulations process, and Rhode Island Marine Fisheries Council (RIMFC) meetings; Computer and statistical skills (R, SPSS, Microsoft software, ASAP, NOAA Fisheries Toolbox); Field work experience on a variety of fisheries surveys.

University of Rhode Island Graduate School of Oceanography, Narragansett, RI, Feb. 2004 – 05/09/09
Laboratory Technician/Marine Research Assistant I
Duties:

- Managed all aspects of the benthic ecology laboratory including analyszing Naturalist dredge samples and bottom photos taken on annual benthic habitat surveys
- Managed study database using MS Excel and Access; Performed statistical analysis of Naturalist dredge data
- Supervised, trained, and delegated tasks to undergraduate student help
- Performed genetic analyses on colonial ascidian tissue samples including DNA extraction, primer design, polymerase chain reaction (PCR), PCR clean-up, gel electrophoresis, and DNA sequence analysis

Scientist: Georges Bank Benthic Habitat Survey
Duties:

- Participated in and helped organize four benthic habitat research cruises spanning 10-14 days on board NOAA fisheries research vessels (R/V Delaware II and FSV Henry B. Bigelow).

RI Department of Environmental Management, Providence, RI, June 2005 -August 2005
Seasonal Policy Intern
Duties:

- Participated in many aspects of the Greenwich Bay restoration project; Daily tasks included: gathered tax parcel data for restoration sites; managed data in MS excel; created project maps in Arcmap; performed field site investigations

EDUCATION

University of Rhode Island, Kingston, RI
PhD candidate, Marine Affairs

University of Rhode Island, Graduate School of Oceanography, Narragansett, RI
Master of Science Degree, Biological Oceanography - May 2013

University of Rhode Island, Kingston, RI
Bachelor of Science Degree, Biological Sciences - December 2005

The School for Field Studies (Boston University), Queensland, Australia
Rainforest Studies – September 2004 – December 2004

Bold comments intended to help with ranking

Proposal for Funding made to:

Atlantic Coastal Cooperative Statistics Program
Operations and Advisory Committees
1050 N. Highland Street, Suite 200 A-N
Arlington, VA 22204

North Carolina socioeconomic database construction for the management of existing and future data

Submitted by:

Jason Walsh
North Carolina Division of Marine Fisheries
3441 Arendell Street; P.O. Box 769
Morehead City, NC 28557
jason.walsh@ncdenr.gov

Applicant Name:	North Carolina Division of Marine Fisheries
Project Title:	North Carolina socioeconomic database construction for the management of current and future data
Project Type:	New Project
Principal Investigator:	Jason Walsh NCDMF Fisheries Economics Program Manager
Requested Award Amount:	$145,020
Requested Award Period:	For one year, beginning after the receipt of funds.
Original Date Submitted:	August 5, 2022

Objective

To build a consolidated socioeconomic database to be used by the North Carolina Division of Marine Fisheries (NCDMF) to organize existing data for easier analysis and standardize future data entry and storage, as well as facilitate transmissions of fishery-dependent socioeconomic data to the Atlantic Coastal Cooperative Statistics Program (ACCSP) Data Warehouse.

Background/Need

North Carolina's fisheries are a significant social and economic resource to the state and its communities. The North Carolina Division of Marine Fisheries (NCDMF) works to better understand and predict the impact these fisheries have both on their communities and on the state's economy. The North Carolina Fisheries Economics Program (NCFEP) has a wide range of surveys that they use to monitor economic performance over time.

NCDMF has been collecting socioeconomic information on commercial and recreational fishing in North Carolina for more than two decades. The NCFEP collects data on all stakeholders in commercial and recreational fisheries to better understand the role fisheries play in the state of North Carolina. Due to the diversity of stakeholder groups in fisheries the data collected varies between surveys and between years as surveys are continuously updated to summarize contributions. The variables that are often collected include but are not limited to the following: demographic information, gear used, species targeted, expenditure and/or costs associated with business, income, fishing history, and perceptions and awareness of regulations. These data are collected to better understanding coastal communities that rely on the fishing industries, recreational and commercial fishermen, and the impact of all fishing industries on the State's economy through intra and interstate commerce.

The program administers surveys to stakeholders to monitor species-specific and broad fishery performance to achieve the goals of the Division. The data collected through these surveys are considered sensitive and confidential information about fishermen and dealers in North Carolina but are currently stored on a NCDMF network drive that is open to every employee within the License and Statistics Section. These data are collected and stored in Microsoft Excel or Microsoft Access formats in organized folders with corresponding metadata in Microsoft Excel or Microsoft Word documents according to standard operating procedures written by the NCFEP. Given the diversity and structure of datasets there has not been a centralized location for data to be stored. This leads to data being disorganized, difficult to work with and challenging to identify trends which is pertinent to the goal of identifying fishery economic performance and participation over time. Consolidation of these data into a database will also allow for increased protection and organization to ensure data are handled appropriately.

Some surveys are newly created every year, while other surveys are updated about every five years. In the last few years, there has been a delay in data collection due to the COVID-19 pandemic and staff turnover. To better accommodate future variability, a centralized location for data will allow for less delay and better organization and structure of resources to adequately collect, structure, and share data across management bodies.

Approach

NCDMF staff will work with NCDIT staff on a requirements document to detail specific needs and expectations of the new data structure and corresponding input/output (I/O) interface. This document will be fluid and will be updated as decisions are made.

All data will be consolidated into a relational database within SQL Server. This database will be able to interact with the NCDMF FIN database where the commercial license data are stored as well as access to the Wildlife Resources Commission ALVIN database where the recreational license data are stored.

A web-based application will be built to serve as the front-end interface for data entry and modification. NCDMF staff will work with NCDIT staff to complete this project. Several NCDIT staff are housed at the NCDMF Headquarters office in Morehead City, NC and will be overseeing, assisting, and facilitating this project as well as helping with database development. A contractor will be hired to complete the interface development.

The new SQL Server database and web-based interface will allow for consolidation of NCFEP data for optimized use by the NCDMF to meet fishery management goals. Once the data are consolidated, a file can be submitted to ACCSP for use by other state partners and in regional fishery management plans such as Black Sea Bass, Bluefin Tuna, American Shad, Cobia, and other commercially and recreationally targeted species in North Carolina.

NCDIT at NCDMF has been using the Agile SCRUM methodology for software development over the last 8-10 years. Development of the database and interface referenced in this proposal will also be conducted using Agile development and 3-week development Sprints. User stories to define "bite-sized" pieces of functionality from the requirements document will be created to guide the development process.

Results and Benefits

Successful fulfillment of this project will provide:

- Consolidation and standardization of NCDMF's socioeconomic data
- Data that can be easily formatted to facilitate use of fishery-dependent socioeconomic data by NCDMF staff and other state partners once data are submitted to ACCSP
- Enhanced data entry and verification functionality for North Carolina NCFEP data
- Increased timeliness and cleanliness of North Carolina's socioeconomic data to state and regional fishery managers and stakeholders

Geographic Location

The NCDMF Headquarters are located in Morehead City, North Carolina. This project may be performed remotely and does not require the position to be located in Morehead City. Other NCDIT contractors working for the Department are located in Raleigh, North Carolina. The current NCFEP manager is located in Kill Devil Hills, NC, which is close to the NCDMF Manteo field office.

Data Delivery Plan

Documentation of the new data entry and editing interface as well as any metadata and the new database schema will be provided to ACCSP as part of the annual report. New documentation on the new database will include data mapping tables that provide a definition of each variable. Any new stored procedures created during this project will include documentation on primary function, data tables being accessed, and corresponding variables within the procedure's SQL code.

Milestone Schedule (start date depending on time of grant award):

	Month											
Task	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
Hire Contractor	**X**	**X**										
Develop requirements document	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
Create user stories		**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
Database will be created			**X**	**X**								
Interface for data entry and editing will be built and tested				**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
Finalize documentation											**X**	**X**

The contractor is expected to work 40 hours a week on this project. Report writing will follow the requirements of two semi-annual status reports and a final report due at the end of the grant award.

Project Accomplishments Measurement (Metrics and Achieved Goals)

Projects	Accomplishments
Update requirements document, as needed throughout project	• Document is completed and describes functionality that needs to be completed in new application
User stories are created for Agile Development	• User stories are written and document small tasks for developers to complete requirements within Sprints
Create database and migrate data	• Consolidated database was created and accurately contains all socioeconomic data required
Create interface for data entry	• Process completed and fully documented • Data can be entered into the new database

Projects	Accomplishments
Create interface for data verification/editing	• Process completed and fully documented • Data can be viewed and edited
Finalize documentation	• Documentation reflects new enhanced process and data structure

Project Personnel

Jason Walsh— Fisheries Economics Program Manager, NCDMF License and Statistics Section (NCDEQ)
Stephanie McInerny—Section Chief, NCDMF IT Section (NCDIT)
Brandi Salmon—Section Chief, NCDMF License and Statistics Section (NCDEQ)

Funding Transition Plan

This project should be completed within the proposed 1-year grant period. NCDIT and NCDMF staff can maintain the systems developed from this grant; therefore, subsequent years of funding are not needed.

Budget Narrative

The cost summary table below shows an explanation for each budget item for a one-year period. NCDIT will not charge an indirect fee for the Contractor. The cost for the developer in the summary below is based on an expert level .NET developer from NCDIT's convenience contracts.

Cost Summary

Category	Expense	Units	Cost	ACCSP Request	State In-Kind	Explanation
Personnel	Contractor	1	$143,520	$143,520		One Analyst @ $69/hr for 2,080 hrs (1 year)
	IT Section Chief	1			$18,938	$9,469/month for 2 months
	L&S Section Chief	1			$11,154	$5,577/month for 2 months
	Fisheries Economics Program Manager	1			$28,134	Average salary of $4,689/month for 6 months
Subtotal				$143,520	$58,226	

Category	Expense	Units	Cost	ACCSP Request	State In-Kind	Explanation
Fringe	Retirement, Social Security, Health Insurance				$20,245	Fringe=24.19% of salary ($14,085) plus $7,397/year for health insurance (1 month insurance = $616*10 months combined work=$6,160)
Indirect						No indirect needed for NCDMF contractors
Subtotal				$0	$20,245	
Supplies	Computer	1	$1,500	$1,500		Laptop for contractor, if needed
Subtotal				$1,500	$0	
	Column Totals			$145,020	$78,471	Total project cost = $223,491
	Total Request					
	Percent			65%	35%	Percentage calculated from total cost

Summary of Proposal for Ranking Purposes

Proposal Type: ***New***

Program Priority

Catch and Effort: 0%

Biological Sampling: 0%

Bycatch/Species Interactions: 0%

Social and Economic: 100%

The NCFEP strives to assess and follow the economic performance of the State's marine resources. This goal includes, but is not limited to, understanding coastal communities that rely on the fishing industries, recreational and commercial fishermen, and the impact of all fishing industries on the State's economy through intra and interstate commerce. The program administers surveys to recreational fishermen, commercial fishermen, processors, and other stakeholders to achieve the goals of the Division. (Page 3,4)

Metadata:

New documentation on the new database will include data mapping tables that provide a definition of each variable. Any new stored procedures created during this project will include documentation on primary function, data tables being accessed, and corresponding variables within the procedure's SQL code. Documentation will be provided as part of the grant completion report. (Page 3)

Project Quality Factors

Multi-Partner/Regional impact including broad applications:

Although this project only covers data for North Carolina, many species within North Carolina are managed regionally. Regional management agencies such as the Atlantic States Marine Fisheries

Commission (ASMFC) and Mid-Atlantic Fishery Management Council (MAFMC) would benefit from having more access to these fishery-dependent socioeconomic data. (Page 3,4)

Contains funding transition plan and/or justification for continuance:

The goals defined in this project should be completed within the grant cycle. (Page 6)

In-kind contribution:

35% (see cost table on Page 6,7)

Improvement in data quality/quantity/timeliness:

The project identified in this proposal will greatly improve data quality and timeliness by providing a more modernized format for the data with enhanced data entry/verification screens and workflows that will prepare North Carolina for future data reference and analysis. (Page 4)

Potential secondary module as a by-product:

None

Impact on stock assessment:

Although this project only covers data for North Carolina, future organization of socioeconomic data will benefit other partners as the data will be more readily available for data requests and stock assessments. Many species within North Carolina are managed regionally. Regional management agencies such as the Atlantic States Marine Fisheries Commission (ASMFC) and Mid-Atlantic Fishery Management Council (MAFMC) would benefit from having more access to these fishery-dependent socioeconomic data. (Page 3,4)

Properly Prepared:

This proposal follows the guidelines provided in the ACCSP Funding Decision Document.

Merit:

Modernizing NCDMF's Socioeconomic Database and the front-end interface that allow data entry clerks and analysts to interact with the database is crucial to the success of socioeconomic data collection programs in North Carolina. (Page 3)

Jason Walsh

Cell:(525)269-9299 **Email:** Jason.walsh@ncdenr.gov

SUMMARY OF QUALIFICATIONS

EDUCATION

University of Rhode Island **Graduated: 2021**

Master's Graduate Student: Environmental and Natural Resource Economics

University of North Carolina (Wilmington, NC) **Graduated: 2015**

Overall GPA: 3.6; Dean's List

Dual Major: B.S. Environmental Science, B.A. Economics

Nelson Mandela Metropolitan University (Port Elizabeth, South Africa) **January-May 2014**

Moulay Ismail University (Meknes, Morocco) **January-May 2013**

TEACHING EXPERIENCE

Teaching Assistant University of Rhode Island

- Teach an introductory Biology course incorporating statistics and R **August 2016-May 2021**

WORK EXPERIENCE

North Carolina Division of Marine Fisheries Morehead City, North Carolina

- Fisheries economics program manager **January 2022-Present**

McArthur Environmental Consulting Framingham, Massachusetts

- Prepare documents for clients and local municipalities part time **December 2020-December 2021**

Rhode Island Fish and Wildlife Wakefield, Rhode Island

- Field interview marine recreational anglers **July 2017-October 2017**

RESEARCH

Research Assistant (Dr. Todd Guilfoos, Professor of Natural Resource Economics URI) May 2017-May 2021

- 20 Hours/Week
- Creating hedonic studies on the economic effect of dam removals in New England using statistical tools Stata and ArcGIS

Student Trainee (USDA Economic Research Service) **June 2019-August 2019**

- 40 Hours/ Week
- Intern modelling nutrient runoff of farms from the agricultural resource management survey using the environmental policy integrated climate model software.

Research Assistant (Annette Bourbonniere) **September 2018-May 2019**

- 10 Hours/ Week
- A team member developing the model and performing analysis using R for a discrete choice study on the effect of removing earnings from insurance and social security payments for persons with spinal chord injuries

Research Consultant (Chris Brozyna) **December 2018-May 2019**

- 5 Hours/ Week
- A team member providing assistance during analysis and writing stages of an experimental economics study on TURFS (a rights based fishery management strategy)

Directed Independent Study (Dr. Peter Schuhmann, Professor of Economics at UNCW) **July 2015-2016**

- Used Contingent valuation methods and regression analysis to assess willingness to pay and willingness to return of tourists to Barbados

Directed Independent Study (Dr. Zachary Long, Professor of Ecology at UNCW) **July-December 2014**

- Studied macro algae at Fort Fisher recreation area to find how stability of benthic marine communities' consumers is influenced by the presence of invasive macro algae

PUBLICATIONS

TURF Wars: Group Dynamics in Resource Management **October 2019**

- Working paper at the Center for Growth and Opportunity on TURF as a fishery management tool.
- https://www.thecgo.org/wp-content/uploads/2020/04/working-paper-2019.013.pdf

PRESENTATIONS

AAEA Conference Presentation **August 2018**

- Present preliminary results from first chapter of dissertation. A hedonic study on dam removals heterogeneous effect on housing prices.

Guest Lecturer **February 2019 & February 2020**

- Present results from first chapter of dissertation in an ecohydrology graduate course. A hedonic study on dam removals heterogeneous effect on housing prices. This also serves as an introduction to environmental economics to the masters of environmental management at URI.

Proposal for funding made to the
Atlantic Coastal Cooperative Statistics Program
1050 N. Highland St. Ste. 200A-N
Arlington, VA 22201

FY23: Data modernization and improvements to the New York Data Feed

Submitted by:

Melissa Albino Hegeman
New York State Department of Environmental Conservation
Division of Marine Resources
123 Kings Park Blvd
Kings Park, NY 11754
melissa.albino@dec.ny.gov

Applicant Name: New York State Department of Environmental Conservation, Division of Marine Resources (DMR)

Project Title: Data modernization and improvements to the New York Data Flow

Project Type: New

Requested Award Amount: $33,882

Requested Award Period: FY 2023

Objectives:

* Modernize data flow by utilizing the eTrips for Data Entry Staff to allow NYSDEC staff to enter vessel trip reports received on paper directly into SAFIS. Focuses on commercial and party/charter trip level information on catch and effort. Improve the timeliness of providing data to ACCSP. Improve New York's ability to check electronically submitted reports for errors and to fix them within SAFIS.

* Provide new and existing New York commercial fishers with outreach and technical support for electronic reporting on SAFIS eTrips in order to improve the speed at which fisheries data are available in the ACCSP data warehouse for use in New York Quota Management.

* Increase the volume of electronic trip reports received by helping to transition fishers to electronic reporting. The goal is to achieve a 50% electronic reporting rate over the course of three years.

Need: New York State Department of Environmental Conservation (NYSDEC) began requiring trip level catch and effort reporting in 2008. This program collects fisheries-dependent data from all New York licensed dealers and harvesters. All dealers must enter their activities directly into the eDR (electronic dealer report) SAFIS application. However, most New York commercial harvesters' trip reports are submitted on paper (approximately 80% of commercial trip reports). This workflow results in a substantial delay in uploading trip reports in SAFIS. We propose to work with ACCSP directors and staff to help oversee and develop a plan to transition harvesters and

NYSDEC staff to electronic reporting and SAFIS data entry. Three in-house DMR staff will work to coordinate efforts to meet these objectives.

Results and Benefits: Data entry directly into SAFIS by NYSDEC staff will result in substantial improvements in the timeliness of New York's commercial fishing data. Additionally, focusing on increasing direct online reporting by the harvesters will reduce the volume of paper data and save time and paperwork for the fishing industry and for the DMR staff. This project will work to encourage and provide technical support for online reporting.

The objectives will modernize data collection processes through establishing a direct data feed with ACCSP which will make catch and effort data available in a timelier manner. By the end of fiscal year 2023 the data flow will be established, and we aim to see an increase of online reporters through outreach and education efforts.

Data Delivery Plan: Harvester data received by NYSDEC will be entered directly into SAFIS and available immediately to partners. There will be an increased emphasis on moving harvesters away from paper entry forms and into eTrips for required reporting.

Approach: The following outlines the tasks required to complete this project:

Task 1: Establish a direct data flow to SAFIS.

- Identify and execute the necessary changes to eTrips for Data Entry Staff to allow NYSDEC staff to efficiently enter trip reports into SAFIS and make necessary corrections.
- Provide a direct data feed between SAFIS and New York's fisheries databases.
- Identify any additional requirements to ensure that there is no loss in functionality by switching to SAFIS for data entry.
- Automate standard reports such as landings summaries and quota monitoring.
- Provide additional training to NYSDEC staff. Topics may include, but are not limited to, query designs and data integrity.

Task 2: Increase electronic reporting.

- Shift to an electronic-first outreach program. All new license holders will be offered a SAFIS account and training when they receive their license, if they opt-out they will be given paper VTRs.

- Evaluate existing partner eTrips outreach and support plans to gather methodologies that have been successful for other Partners.
- Provide increased live training opportunities, both in-person and virtual.
- Improve electronic reporting content and information on NYSDEC Vessel Trip Reporting website.
- Solicit feedback from harvesters to determine roadblocks to electronic reporting.
- Create additional training content such as videos, handouts, etc.
- Continue to provide technical support for general questions regarding reporting, licensing, permitting, and other topics.
- Provide incentives to harvesters to switch to electronic reporting using promotional items. These items might include insulated tumblers, hats, coolers, etc.
- Create an eTrips ambassador program to target early electronic reporting adopters and provide them with additional training and tools to spread the word to other harvesters.

Task 3: Provide additional training to NYSDEC staff.

- Introductory and advanced data management training covering topics such as SQL query design, best practices in quality control, and data integrity.

Geographic Location: This project will be administered and conducted by NYSDEC offices as well as ACCSP offices. The scope of the project covers all of NY and adjacent state and federal waters fished by NY license holders.

Table 1. Milestone Schedule

Activity	Month														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Establish data feed with ACCSP	X	X	X	X	X	X	X	X	X	X	X	X			
eTrips and eDR support	X	X	X	X	X	X	X	X	X	X	X	X			
Create training content	X	X	X	X	X	X	X	X	X						
Distribute training content				X	X	X	X	X	X	X	X	X			
Report Writing							X						X	X	X

Program Accomplishment Measurement Metrics:
The success of the project will be measured by the following metrics:

- Improved data delivery from NYSDEC to ACCSP.
- Improved quality in data submitted to the ACCSP.
- Provide support to New York license holders to improve data collection and data quality.
- Creation of eTrips training material.

Goal	Metric	Accomplished
Establish data flow to/from ACCSP	Trip level data entered, verified, and properly formatted	Data delivered to ACCSP in a timely manner.
Provide support for eTrips and eDR users	Number of interactions regarding SAFIS questions	Record interactions with a call log
Create training content	Amount of handouts generated and videos created	New content available on NYSDEC website
Distribute training content	Amount of handouts distributed and the number of videos uploaded	Report of content usage
Increase number of eTrips users	Number of new accounts created	Report of new accounts created
NYSDEC staff training	Completed coursework	Demonstrated knowledge of key subjects.

Project Personnel:

- Melissa Albino Hegeman – Unit Leader (Biologist 2), Marine Fisheries Data Management Unit
- Jessica Steve – Biologist 1, Marine Fisheries Data Management Unit
- Alyssa Lefebvre – Biologist Trainee 2, Marine Fisheries Data Management Unit

Funding Transition Plan: This project should be completed within the proposed 1-year period. No transition is needed.

Budget Narrative:

The majority of this project's budget focuses on the creation of outreach tools, the purchase of promotional items, and the cost of mailing these products to license holders. There are also additional funds to train DMR staff to better manage and analyze the fisheries-dependent data and make it available to other programs for use in management decisions.

NYSDEC will provide in-kind staff time to facilitate moving harvesters to electronic reporting, including onboarding new harvesters, developing outreach materials, and hosting training events. This in-kind staff time represents 48% of the total project budget.

Cost Details:

Category	Description		ACCSP Cost	State In-Kind
Personnel	ACCSP Contractor			
	Biologist 2 (1)	10% @ $85,000/year		$ 8,500.00
	Biologist 1 (1)	20% @ $65,000		$13,000.00
	Biologist Trainee 2 (1)	20% @ 50,000		$10,000.00
Equipment and Supplies	Outreach documents	Printing outreach materials	$10,000.00	
	Promotional materials	Hats, tumblers, stickers, etc. for participants	$10,000.00	
	Postage	mailing out promotional items, outreach documents, etc.	$ 5,000.00	
Travel	Travel to training sessions	$0.585/mile * 360 miles		$ 175.50
Other	NYSDEC staff training	Introductory and advanced training	$ 5,000.00	
	Subtotal		$30,000.00	$31,675.50
	ACCSP Overhead		$ 3,882.00	
	Subtotal		$33,882.00	$31,675.50
	Project Total		$65,557.50	

Summary of Proposal for Ranking Purposes

Proposal Type: New

Program Priority:

Catch and Effort: 100%

Increasing the timeliness of catch and effort data from New York by increasing the electronic reporting by harvesters and having NYSDEC staff enter paper vessel trip reports directly into SAFIS via the eTrips for Data Entry tool.

Biological Sampling: 0%

Bycatch/Species Interactions: 0%

Social and Economic: 0%

Overview:

We are transitioning harvesters to electronic reporting from paper-based reporting by developing additional training and outreach activities and creating incentive programs for harvesters who choose to report through eTrips.

NYSDEC staff will also enter trip report data directly into SAFIS to make that data available to ACCSP partners immediately.

Multi-Partner/Regional impact including broad applications:

More timely submissions of New York's catch and effort data means this information will be available for data requests and stock assessments for regionally managed species.

Contains funding transition plan and/or justification for continuance:

This project will be completed within the proposed 1-year period. No transition is needed.

In-kind contribution:

48%

ACCSP - $33,882.00
State In-kind - $31,675.50
Total - $65,557.50

Improvement in data quality/quantity/timeliness:

Focusing on increasing electronic reporting from harvesters improves the accuracy and timeliness of vessel trip report data. By entering data directly into SAFIS, New York may take advantage of built-in data validation that will increase the accuracy of the trip data. This workflow will also increase the speed at which New York catch and effort data are available to ACCSP partners.

Potential secondary module as a by-product:

None

Impact on stock assessment:

This project focuses on improving New York data; however, this data is crucial to assess species that are managed regionally properly. Making this data available for analysis is vital for accurate stock assessments.

Properly Prepared:

This proposal follows the guidelines provided in the ACCSP Funding Decision Document.

Merit:

This project addresses required trip reporting for commercial harvesters in New York.

Melissa Albino Hegeman

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I am a marine biologist and geospatial analyst with 15+ years of experience. I am interested in fisheries management, marine spatial planning, and sustainability.

Professional Experience

Marine Fisheries Data Management Unit Leader
New York State Department of Environmental Conservation
Kings Park, NY
August 2019–Present

- Supervise a staff of six to collect, organize, process, store, and analyze New York's commercial and party/charter fisheries data. Maintenance of fishery data from vessel trip reports and dealer purchase forms to ensure that fishers and dealers are complying with required reporting schedules.
- Maintain and enhance the Commercial Marine Fisheries System which includes building and maintaining a SQL Server database, providing accurate and detailed data to partner agencies, analyzing the data, and providing reports to answer current fisheries management questions.
- Provide effective communication between the Marine Fisheries Data Management office, licensed fishers and dealers, stakeholders, staff, and other agencies.
- Represent New York on several interstate committees within the Atlantic Coastal Cooperative Statistics Program, including the Operations Committee and the Standards and Codes Committee.
- Provide guidance and expertise to other units in Marine Resources regarding data management and analysis.
- Work with all programs in the Division of Marine Resources to help them organize and manage their data resources, specifically focusing on geospatial data (including developing and maintaining web feature services).
- Create and maintain web mapping applications for both internal and external users on the ArcGIS Online platform using ArcMap to manage the feature services (such as the Artificial Reef Mapper and the Public Shellfish Mapper).
- Lead Marine Resources participation in agency-wide activities such as the Field Inspection Tools program, and DECinfo Locator focusing on the collection and analysis of geospatial data.

Marine Permit Supervisor
New York State Department of Environmental Conservation
East Setauket, NY
April 2018-August 2019

- Oversee the operation of the Marine Permit Office (MPO) which issues commercial permits for fishing, shellfishing, crabbing, party/charter boats, and non-commercial licenses to collect and possess (LCP).
- Review applications that come through the MPO to ensure that they are reviewed and issued in a timely manner according to the law.
- Develop a tracking and issuing system for Marine LCPs including tracking incoming applications, coordinating program review when necessary, issuance of the license, and the renewal process.
- Program lead for the creation of a new marine permitting system, including the analysis of business needs, requests for proposals, and contracting and developing phases.
- Develop regulations to codify marine permit office practices.
- Supervise a staff of three.

Data and GIS Coordinator
New York State Department of Environmental Conservation
East Setauket, NY
October 2014-April 2018

- Lead the development of the division's data management strategy.
- Coordinate and promote the collection of DMR's citizen science efforts including seagrass monitoring, blue crab fishing, volunteer diver and angler logs, and the striped bass cooperative angler program
- Work with partner agencies and non-governmental programs on projects such as LINAP's Stormwater Infrastructure Mapping Project and the inter-governmental Ocean Mapping Data Team
- Develop the department-wide recreational map standards, modernize the marine permitting system, creation of DMR's Team SharePoint site.
- Solicit and prepare data for inclusion in the Open Data Project and the New York Geographic Information Gateway.
- Manage outreach activities including the division's web presence, coordinating the Shellfishing, and Saltwater Fishing and Boating newsletter, and creating printed materials (signage, kiosks, and brochures).

Education

UNIVERSITY OF RHODE ISLAND, Kingston, RI
August 2022
Graduate Certificate Fisheries Science

PENNSYLVANIA STATE UNIVERSITY, State College, PA
December 2015
Masters Geographic Information Systems

UNIVERSITY OF RHODE ISLAND, Kingston, RI
August 2001
Bachelor of Science Biological Sciences

Additional Skills

- R, ArcGIS, Python, SQL
- Microsoft 365 (Word, Excel, PowerPoint), SharePoint, PowerAutomate

Jessica Steve

(518) 598-7071
jsteve28@gmail.com

CAREER OBJECTIVE

Experienced, reliable, and analytical Marine Biologist who conducts thorough research, authors and revises unit protocols, and builds collaborative relationships with stakeholders to influence accuracy in producing verifiable data and consensus with agency policies and procedures. Communicates clearly with the general public in a relatable fashion to generate awareness and influence interest in and cooperation with conservation efforts.

WORK EXPERIENCE

NYS Department of Environmental Conservation *(December 2019-Present)*
Division of Marine Resources, Data Management Unit, Kings Park, NY
Biologist I (Marine)

- Oversee the entry of commercial fishing data into Access database and assign tasks to staff to meet the data needs of the Division.
- Implement and maintain a quality control program for Vessel Trip Report data to find and correct errors in the dataset.
- Review and update documentation of standard procedures for the Unit as needed to ensure staff are following unit protocols consistently.
- Represent New York in meetings and committees with other state and federal agencies to promote management measures that benefit New York's fishing community.
- Supervise one Fish & Wildlife Tech 1 and provide guidance on daily tasks for two contract staff members.
- Manage Standard Atlantic Fisheries Information System (SAFIS) for New York and provide instruction on electronic reporting to permit holders.
- Act as FOIL Coordinator for Division of Marine Resources (April 2021 to present).

Atlantic States Marine Fisheries Commission *(November 2018-December 2019)*
Atlantic Coastal Cooperative Statistics Program, East Setauket, NY
New York Assistant State Coordinator

- Managed project involving entry and quality control of NY commercial fishing data from 2008 to 2012.
- Administered SAFIS for New York's electronic Dealer and Vessel Trip Reporting.
- Performed monthly quality control checks on fisheries data to ensure accuracy and completeness of dataset.
- Trained and supervised three data entry clerks.

New York Data Entry Clerk *(July 2018 – November 2018)*

- Entered New York commercial fisheries data into Access from State and Federal Vessel Trip Reports.
- Created SAFIS accounts and assisted permit holders with electronic reporting online and via mobile app.
- Conducted annual reporting compliance program.
- Interacted with fishermen regarding catch data and Vessel Trip Report protocols.

North Carolina Department of Environmental Quality *(February 2016-July 2018)*
Division of Marine Fisheries, Striped Bass Unit, Elizabeth City, NC
Marine Fisheries Technician II

- Conducted Independent Gill Net and Juvenile Abundance trawl surveys.
- Trained four technicians on sampling and data collection procedures.
- Tagged Striped Bass, collected scales and fish ear bones, pressed and aged Striped Bass scales.

NYS Department of Environmental Conservation *(September 2014-February 2016)*
Division of Marine Resources, Diadromous Unit, East Setauket, NY
Fish and Wildlife Technician I

- Conducted Western Long Island Striped Bass beach seining survey.
- Tagged Striped Bass and collected, pressed, and aged Striped Bass and Menhaden scales.
- Entered survey data, Federal and State Vessel Trip Reports into Access databases.

Achievements

- Authored article in New York State's *Conservationist Magazine*, Vol. 70.5, April 2016, entitled "Searching for Stripers - A glimpse into New York's striped bass fishery".
- Co-authored newsletter to members of the Cooperative Anglers Program.
- Created juvenile species identification key.

EDUCATION

Master of Science, Marine Sciences, Stony Brook University, Stony Brook, NY
Bachelor of Science, Marine Vertebrate Biology, Stony Brook University, Stony Brook, NY

OTHER SKILLS AND CERTIFICATIONS

Microsoft Office360 Suite (Access, Sharepoint, Teams, Word, Excel, Powerpoint, Outlook), R/RStudio, Adobe Acrobat DC, New York State Boating Safety Course, Certified PADI Open Water Diver

Alyssa A. Lefebvre
alyssa_lefebvre@yahoo.com |
508-395-5885 (c)

Environmental Scientist

Analytical marine scientist with a direct focus on data management of the commercial fishing industry. New York State Department of Environmental Conservation, Division of Marine Resources, Commercial Fisheries.

Professional Experience

NYS Department of Environmental Conservation
March 2022 - Present
Kings Park, NY

The DEC aims to conserve and improve New York's natural environment and resources while working to control and prevent air, land, and water pollution to enhance the health, safety, and welfare for the people of New York.

Marine Biologist, Data Management, Commercial Fisheries

This job title has a diverse set of responsibilities revolving around marine fisheries, fishery data, quota management, and marine habitat management.

- Extensive use of internal and external database programs to provide NYS with various fisheries datasets.
- Management of two statewide tagging programs with a team of five, strengthening aligning procedures and developing a streamlined process with the available technology and resources.
- Involvement in a variety of partner program tasks representing NYS on various fishery management agencies in the development and implementation of interstate fishery management plans.
- Preparation of reports, staff supervision, participation in meetings, and aiding the work of other divisions.
- Access Database management system, ArcGIS, GitHub, virtual meeting platforms, and ongoing coursework with SQL to gain proficiency in R.

August 2017 - March 2022

Fish & Wildlife Technician, Water Quality, Bureau of Shellfisheries

Monitor and sample approximately one million acres of shellfish lands to certify for the safe harvest of shellfish.

- Composed detailed reports for the Food and Drug Administration and the Interstate Shellfish Sanitation Conference which supply overviews of water quality and regional pollution sources.
- Arranged and executed needs with the Department of Environmental Conservation's FDA approved Microbiology Laboratory.
- Served in compliance with the Environmental Protection Agency, the Interstate Shellfish Sanitation Conference, and the National Marine Fisheries Service.
- Used Geographic Information Systems to conduct shoreline pollution source surveys and generated detailed maps.
- Extensive use of ArcGIS, Nearmap, virtual meeting platforms, and Microsoft Office suite programs.
- Self-authored articles for New York State conservation-based magazine, Conservationist, as well as for the Department of Environmental Conservation’s public website.

Brevard Zoo August 2015 - December 2016
Melbourne, FL

AZA accredited facility with a mission of environmental conservation through education and participation.

Lead Lagoon Naturalist, Education Staff

Led the science based marine conservation program, *Lagoon Quest,* for public schools across the county.

- Worked with a team of five to manage daily operations of *Lagoon Quest,* a six hour outdoor STEM-inspired program for school-aged children.
- Introduced topics of environmental importance; healthy waterways, adverse effects of excess nutrients, hypoxic environments, runoff, and marine pollution.
- Maintained relationships with participating institutions and collaborated with teachers to execute program events.
- Strengthened public speaking, staff and scheduling management, program development and budgeting.
- Collaborated with other education staff to coordinate events and engaged in logistics planning.

Education

Bachelor of Science, Marine Biology
Florida Institute of Technology
Melbourne, FL

SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL

4055 Faber Place Drive, Suite 201, North Charleston SC 29405
Call: (843) 571-4366 | Toll-Free: (866) SAFMC-10 | Fax: (843) 769-4520 | Connect: www.safmc.net

Melvin Bell, Chair | Carolyn N. Belcher, Ph.D., Vice Chair
John Carmichael, Executive Director

August 17, 2022

Atlantic Coastal Cooperative Statistics Program
1050 N. Highland St. Ste. 200 A-N
Arlington, VA 22201

We are pleased to submit the proposal titled, "FY23: Expansion of the FISHstory Citizen Science Project." It is being submitted as a new proposal. The FISHstory pilot project was developed through the SAFMC's Citizen Science Program. It uses historic photos from the 1940s-1970s to document for-hire catch and size composition for a time before recreational catch monitoring programs were established in the South Atlantic region. This proposal builds on the success of the pilot and will expand the geographic and temporal scope of the project by compiling, archiving, and analyzing additional historic photos from multiple fleets, geographic regions, and from an expanded time range. It will provide additional catch, effort, and length data on the recreational for-hire sector during its nascent period which will offer researchers and managers an understanding of long-term changes in the fisheries and fish populations.

Please let us know if you have any questions or would like any additional information.

Best,

Julia Byrd
South Atlantic Fishery Management Council
4055 Faber Place Drive, Suite 201
North Charleston, SC 20405
Julia.byrd@safmc.net

Applicant Name: South Atlantic Fishery Management Council (SAFMC)

Project Title: FY23: Expansion of the FISHstory Citizen Science Project

Project Type: New

Requested Award Amount: $121,076

Requested Award Period: One year upon receipt of funds

Submission Date: August 17, 2022

Principal Investigators: Julia Byrd, SAFMC and Jie Cao, North Carolina State University

Collaborators: Chip Collier and Allie Iberle, SAFMC
Ken Brennan and Kyle Shertzer, NOAA Southeast Fisheries Science Center

Photo from the Marianne in September 1965 archived through the FISHstory project. Credit: Rusty Hudson, Hudson, Stone & Timmons families.

OBJECTIVES:

- Expand geographical and temporal range of the FISHstory citizen science project in support of developing abundance indices for stock assessments of South Atlantic species
- Improve efficiency of data collection and photo processing
- Estimate length compositions for multiple species using the protocols developed during the pilot project with focus on Red Snapper and King Mackerel
- Implement an outreach and engagement strategy to retain FISHstory's current volunteer base and recruit new users

NEED:

Stock assessments, which provide critical information to guide fishery management, rely on historical time-series information to make inferences about how fish stocks have responded to fishing activities. Relative abundance index, e.g., catch per unit effort, and size/age composition are two main types of data that are commonly used in fisheries stock assessments. However, it is rare for these data to reach back to the beginning of exploitation. Consequently, stock assessments often start from the year when these data are available and/or make assumptions about the status prior to that year. Such assumptions on historic stock abundance and size/age composition can have a significant influence on the inferences about fish population, e.g., productivity. Lack of historical information about abundance and size composition of exploited species can result in shifting baselines, against which modern populations are benchmarked. McClenachan et al. (2012) and Rosenberg et al. (2005) demonstrated that omission of relevant historical information typically led to overestimated abundance, underestimated recovery targets, and overestimated fisheries quotas. For instance, excluding the earliest 27 years of time series data in the Atlantic cod assessment resulted in reductions in estimates of maximum level of spawning stock biomass and long-term average biomass (McClenachan et al. 2012).

In the South Atlantic, few fishery-dependent surveys were in existence prior to the 1970s; those that existed were limited in scope and lacked comprehensiveness and continuity. Monitoring of the recreational headboat fishery began in the 1970s, and monitoring of private and charter boat fishing began in the early 1980s. However, there is indication that recreational fisheries were already operating in the region (Clark 1962; U.S. Department of the Interior et al. 1991). Therefore, for most South Atlantic species (e.g., Red Snapper), traditional abundance indices and size/age composition data are not available for the years prior to 1970, when fisheries had already begun. In fact, for a species such as Red Snapper, the highest commercial landings on record occurred in the 1950s and 1960s. Lack of historical data may impair our ability to measure and understand long-term changes, to set meaningful targets for management and formulate stock rebuilding plans, and to better understand nonstationarity or regime shifts in stock productivity.

Many stock assessments in the South Atlantic region start prior to the 1970s (e.g., SEDAR 73 South Atlantic Red Snapper, SEDAR 38 Update South Atlantic King Mackerel). To account for the lack of information prior to this time period, stock assessment scientists rely on species ratios and catch estimates from other sectors as proxies to estimate landings; alternately modern landings trends are regressed back in time to recreate historical landings (SEDAR 2015). Historic photos have the potential to provide quantifiable species and length composition data at a point in time when fishery dependent surveys of the for-hire fleet did not exist (McClenachan 2009).

Using historic photos to improve recreational catch and size composition information is a 2021-2023 research priority for the SAFMC's Citizen Science Program. It addresses ACCSP recreational priorities #2 – 'Comprehensive for-hire data collection and monitoring' and #4 – 'Biological sampling for recreational fisheries separate from MRIP APAIS' by improving historic catch and effort and biological data from the for-hire sector prior to when fishery dependent catch programs were established in the South Atlantic region. This also matches research recommendations from recent stock assessments for important recreational species including Black Sea Bass, Cobia, Gray Triggerfish, and Red Snapper (SEDAR 2011, 2013, 2016, and 2017).

A pilot citizen science project, FISHstory, aiming to address this historic data gap, was completed in 2022. FISHstory was developed under the SAFMC's Citizen Science Program. This novel project successfully developed a standardized protocol for archiving and analyzing historic photos from the 1940s to 1970s from a for-hire fleet based in Florida to describe the beginnings of the South Atlantic for-hire fishery. The project had three primary components: digitizing and archiving historic fishing photos, analyzing historic photos to estimate for-hire catch composition and effort using crowdsourcing, and developing a method to estimate length distributions from historic photos. Through the pilot project, over 1,370 historical images were digitized and archived. The project established the FISHstory interface on Zooniverse, an online crowdsourcing platform, and developed an electronic data collection protocol using crowdsourcing to analyze historical catch images to determine historical species composition. This method is more cost-effective than traditional analysis techniques and allows for larger volumes of data to be collected in a more efficient manner. The protocol trained volunteers to identify and count the fish and people in the photos using online tutorials and training materials. Each photo was classified by multiple volunteers and when there was disagreement among volunteers, a Validation Team, composed of fishermen and scientists verified species identifications and counts. Through the pilot, over 2,100 volunteers analyzed 1,000 photos which provided information from daily catches of a Florida fleet including species composition, total number by species or species group, and number of anglers per trip. The pilot also verified the feasibility of using an open-source image analysis software to determine historical length estimates. The method developed estimated fish length in the photos using the lumber in the

leaderboards as a scalar. During the pilot project, King Mackerel were measured in the 1,374 archived photos and length compositions were produced.

The pilot FISHstory project demonstrated an opportunity to provide information on historical catch, fishing effort, and length composition for years before dedicated fishery-dependent monitoring. This proposal will build on its success by expanding FISHstory's geographic and temporal range, improving the efficiency of data collection and photo processing using lessons learned through the pilot, and estimating length composition for multiple species. The data collected through this proposal can be integrated into the fishery dependent database and used to develop abundance indices for years during which they are not available. The extended historic time-series of abundance indices can potentially improve the assessments of South Atlantic species. However, in order to develop reliable abundance indices and include them in the assessments, more photos need to be collected and analyzed and a protocol for standardizing catch and effort data needs to be developed. The existing data collected from the FISHstory project are not likely to produce representative abundance indices of South Atlantic fish stocks because the data were collected from one fleet in one area, i.e., Daytona Beach, Florida. We therefore propose expanding the spatial coverage of the data collection in this study. Through the pilot project, several other fishermen across the South Atlantic have indicated they have historical photos they would be willing to share with the FISHstory project.

The photos collected in the pilot FISHstory project were from the 1940s to 1970s. To make the historical abundance indices more useful and informative in the assessment, the historical indices need to be calibrated to existing modern indices used in the assessments. This will result in a complete time-series abundance index, allow better estimation of the productivity of the stock, and provide better information on the range of exploitation and population levels. Monitoring of the recreational headboat fishery began in the 1970s, and the headboat index would be a good candidate modern index. To calibrate historical indices to the headboat index, photos overlapping in time are needed. Therefore, we also propose expanding the temporal range of photo collection in this project (through the 1980s or 1990s).

RESULTS and BENEFITS:

This proposal will build on the success of the FISHstory pilot project which was developed under the SAFMC's Citizen Science Program. The project used an innovative citizen science approach to gather data from historic photos that serve as an untapped source of biological data for years prior to dedicated catch monitoring programs. This proposal aims to expand the geographical and temporal scope of the pilot project by collecting, compiling, archiving, and analyzing additional historic photos from multiple fleets, geographic regions, and from an expanded time range (1940s – 1990s). Additionally, this proposal will continue estimating length compositions for multiple species using the protocols developed during the pilot project with focus on Red Snapper and King Mackerel, two important recreational species. The pilot project

developed a protocol to measure fish length in the historic photos and estimate length compositions using King Mackerel as a test species. This proposal will result in an extended database with more fishery and biological information on the recreational for-hire sector during its nascent period. These comprehensive historic data will offer researchers and managers an understanding of long-term changes in the fisheries and fish populations. Additionally, these historic data will allow us to develop long-term time series of abundance indices for South Atlantic species which can be directly used in the stock assessments. The inclusion of these long-term indices in the assessments will likely improve the population estimates. The length compositions can also be included in the assessments, which can help inform changes in population structure, growth, natural mortality, and recruitment. Ultimately, this proposal will increase the likelihood of more sustainable fisheries in the South Atlantic.

This proposal is a unique opportunity to use a citizen science approach to expand time series of length data and potentially abundance trends back into history. Citizen science, as defined by the Crowdsourcing and Citizen Science Act of 2016, is a form of open collaboration in which individuals participate voluntarily in the scientific process. This project will use citizen scientists in a variety of ways (see APPROACH): data submission through photographs, data analysis with crowdsourcing, and data verification through a validation team made up of government and academic scientists along with fishermen as citizen scientists.

Citizen science is growing in the United States and other countries (McKinley et al. 2017) and has been used for research, management, policy, and public engagement (Poisson et al. 2020). A growing number of publications has shown that diverse citizen science projects can produce data on par with traditional scientific data when properly designed, implemented, and evaluated (McKinley et al. 2017, Kosmala et al. 2016, Freitag et al. 2016). The FISHstory pilot project developed protocols that helped ensure the data collection methods would minimize bias, be appropriate for use in management, and could be expanded if the pilot project was successful (Byrd et al. in press). Additionally, citizen science projects can foster learning opportunities, increase scientific engagement and acceptance, and can help build positive relationships within the community (Fairclough et al. 2014). The FISHstory pilot project provided an opportunity for volunteers to learn about the beginnings of the South Atlantic for-hire fishery and hone their fish identification skills. It also provided an opportunity for scientists to learn more about the historic fishery from captains operating during this time period. Overall, there was a very positive response to the pilot project from stakeholders across the South Atlantic region and there has been overwhelming support to continue and expand the project.

This proposal addresses ACCSP FY23 Request for Proposal priorities 1a. *Catch, effort, and landing data* and 1b. *Biological data*, as well as ACCSP recreational priorities #2 – 'Comprehensive for-hire data collection and monitoring' and #4 – 'Biological sampling for recreational fisheries separate from MRIP APAIS' by improving historic catch and effort and

biological data from the for-hire sector prior to when fishery dependent catch programs were established in the South Atlantic region.

The specific benefits to each data type and the rank of the target species within priority matrices included are addressed below.

Primary Program Priority: Catch and Effort: 50%

Historic photos provide the opportunity to collect trip level effort and landings data for the for-hire sector for a historic time period prior to when catch monitoring programs were in place. The for-hire catch composition component of the FISHstory project will provide species composition and catch rate information from this historic time period. The effort and landings data collected through this proposal will be used to develop abundance indices which can be included in the assessments.

Secondary Priority: Biological Sampling: 50%

The length component of the FISHstory project will estimate length compositions for multiple species using the protocols developed during the pilot project. Although estimating fish lengths in historic photos may not be the traditional view of biological sampling, it can provide the same information – lengths of fish if that sampling had been done. If pictures are obtained that overlap some of the traditional sampling programs, the two sources of biological samples – fish lengths – can be compared. Through the pilot project, King Mackerel length compositions were developed for the photos currently archived representing length measurements for over 1,100 fish (Figure 1). For this proposal, length analysts will initially focus on producing length compositions for Red Snapper and updating the King Mackerel length compositions with measurements from newly archived historic photos. Red Snapper is in the top 25% of the ACCSP biological sampling priority matrix and will be undergoing a SEDAR Research Track stock assessment starting in 2024. The PI's and project collaborators will be involved in this assessment, so there is a direct avenue to ensure these data are considered in this assessment. Additionally, a SEDAR South Atlantic King Mackerel operational stock assessment is scheduled to begin in 2025. If time allows, additional species will be measured that are frequently found in the historic photo set and are also in the top 25% of the ACCSP biological sampling matrix, such as Dolphin, Scamp, Red, and Gag Grouper.

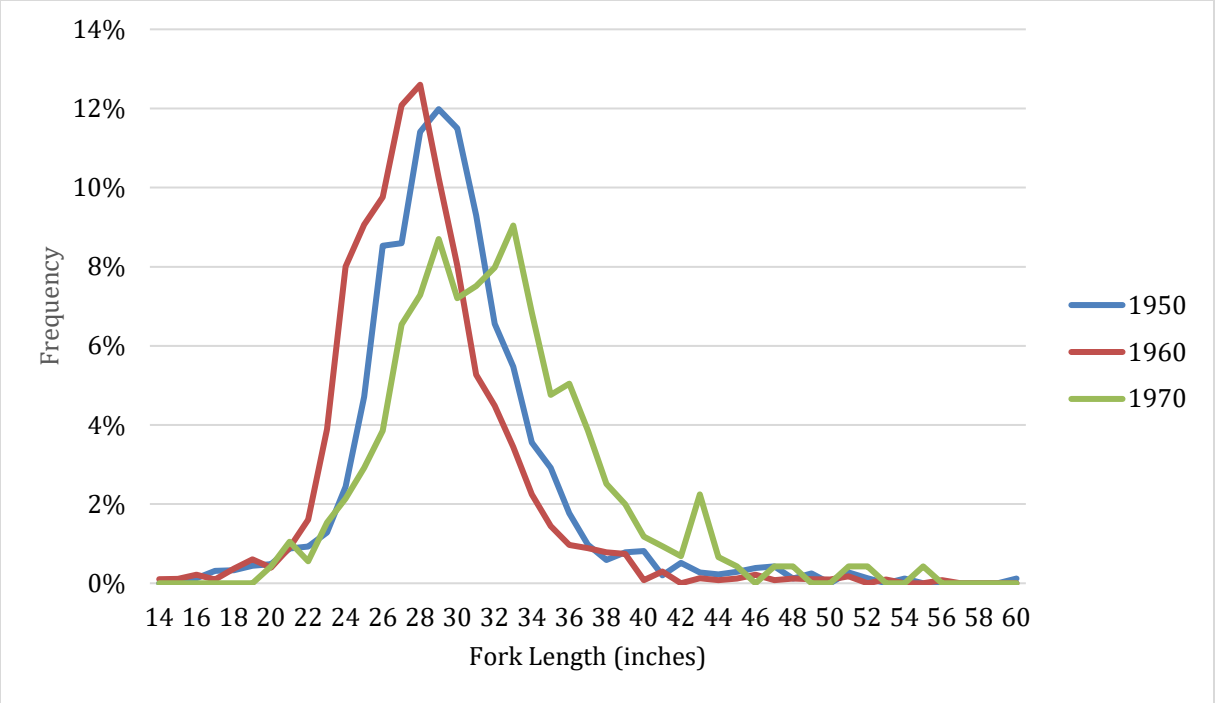

Figure 1. King Mackerel length compositions estimated through the FISHstory pilot project by 10-year time periods.

Stock Assessment and Management Benefits and Impact:

The positive impacts of this project to stock assessment and management could be substantial and are described in the following aspects:

Most stock assessments of South Atlantic species assume fish stocks were virtually unexploited through the 1950's when consistent monitoring of the commercial fishery began, and only lightly exploited through the 1970's when recreational monitoring began. There is very little information on overall catch or size composition to evaluate these assumptions. This proposal will provide fishery-dependent information from a time prior to catch monitoring. These data can help verify these assumptions made in assessments and potentially lead to more accurate assumptions. For example, the size compositions estimated from the photos for the early years can improve the assumptions on the size and therefore age composition of stocks in the initial years included in stock assessments.

Understanding how fishing activities and technological advancements affect fish stocks requires an estimate of what they are capable of producing when there is no fishing or little fishing. However, data rarely extend back to pre-exploitation or the beginning of exploitation. Therefore, stock assessments often start from the year when abundance index and/or size/age compositions are available and/or make assumptions about the status prior to that year. Lack of historic information on abundance and size/age composition can result in biased estimates of productivity and therefore shifting baselines against which modern stocks are benchmarked. This proposal is

designed to expand the FISHstory project in support of developing long-term abundance indices for stock assessments, as well as to estimate length compositions for the early years. The inclusion of these data in the assessments is likely to improve the estimates, e.g., productivity, size/age structure, and recruitment, and therefore increase the likelihood for managers to set meaningful targets for management and formulate stock rebuilding plans.

In addition to the benefits of an extended historic time series for existing assessments, length frequency and catch per unit information can be used in data limited modeling techniques to provide assessments for stocks which are now unassessed. Providing information from periods prior to heavy exploitation is particularly important in data limited frameworks.

DATA DELIVERY PLAN:
Data collected through the for-hire catch and length composition components of the project will be made available to stock assessment scientists, fishery managers, and ACCSP partners as requested. Biological data collected through the length component of the project will be formatted for submission to the ACCSP biological database. Project PI's will coordinate with ACCSP staff on timing and submission of these data to ACCSP.

APPROACH:
Task 1: Compile, digitize and archive historic photos from different fleets, geographic regions, and from an expanded time range (1940s-1990s).

Consultant and Photo Curator, Rusty Hudson

- Process, scan, and catalog ~400 photos compiled by retired Captains Billy Smitherman (FL) and Robert Freeman (NC).

SAFMC

- Plan and implement historic photo scanning events at Council related meetings and other outreach events.
- Help identify and contact additional photo providers from the South Atlantic region and assist with photo compilation.

North Carolina State University (NCSU)

- Help identify and contact additional photo providers from the South Atlantic region and assist with photo compilation.
- Update photo archive spreadsheet.

SEFSC

- Help identify and contact additional photo providers from the South Atlantic region and assist with photo compilation.

Task 2: Collect for-hire species composition data via Zooniverse platform.

SAFMC

- Train NCSU graduate student on the Zooniverse processes developed during the FISHstory pilot project.
- Help identify and assist in implementing improvements to the existing workflows in the FISHstory Zooniverse project to improve data quality and data collection efficiency.
- Assist with Validation team recruitment and training.

NCSU

- Identify and implement improvements to the existing workflows in the FISHstory project in Zooniverse to improve data quality and data collection efficiency.
- Batch & add photos into the Zooniverse project.
- Assist with Validation Team recruitment and training
- Identify photos and coordinate Validation Team review.
- QA/QC & data analysis.

Task 3: Estimate length compositions for multiple species from photo archive focusing initially on Red Snapper and King Mackerel.

SAFMC

- Train graduate student on the length protocol developed during the FISHstory pilot project.
- Help identify and assist with implementing improvements to the length data collection process.
- Assist with length analyst recruitment and training.
- Assist with length measurements, as needed.

NCSU

- Identify and implement improvements to the length data collection process.
- Assist with length analyst recruitment and training.
- Coordinate fish measurements among length analysts.
- QA/QC & data analysis.
- Format data for submission to ACCSP.

Task 4: Design and implement an outreach and engagement strategy.

SAFMC

- Update and refine FISHstory communication and volunteer engagement plan from the pilot project.
- Develop and distribute promotional materials to spread awareness, provide progress updates, and recruit new volunteers for the project using SAFMC communication platforms, collaborations with existing partners, and through the formation of new partnerships.
- Provide monthly newsletters and outreach materials summarizing project findings to active volunteers.
- Monitor talk boards in the FISHstory Zooniverse project.

NCSU

- Help monitor talk boards in the FISHstory Zooniverse project.
- Assist SAFMC with other outreach and volunteer engagement initiatives, as needed.

GEOGRAPHIC LOCATION:

The FISHstory project will digitize, archive, and analyze historic fishing photos throughout the South Atlantic region (North Carolina through the East Coast of Florida to the Florida Keys). The catch and biological data collected through the program will be available to all other partners for use in assessment and management. Although the geographic scope of the project focuses on the South Atlantic region, the FISHstory image analysis methods have a high likelihood of scalability and transferability to other ACCSP partners throughout the Atlantic coast who have similar historic photos.

FUNDING TRANSITION PLAN:

The initial year of funding for the FISHstory project will focus on compiling and archiving additional photos, collecting additional catch and effort data through the FISHstory project in Zooniverse, and estimating length composition for multiple species. An additional year of funding will be needed to develop indices of abundance using the data collected through the project. Project PI's are already developing proposals to submit through other funding opportunities to help support an additional year of this project.

MILESTONE SCHEDULE:

Task	Month											
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
Digitize & archive additional photos	x	x	x	x	x	x	x					
Identify and implement improvements to existing workflows and training materials in Zooniverse	x	x	x	x								
Re-launch project & collect data in Zooniverse				x	x	x	x	x	x			
Validation Team photo review						x	x	x	x			
For-hire catch composition analysis								x	x	x		
Identify and implement improvements to existing length protocol and training materials		x	x									
Length measurements & analysis			x	x	x	x	x	x				
Volunteer outreach & communication	x	x	x	x	x	x	x	x	x	x	x	x
Data sharing preparation & report writing										x	x	x

PROJECT ACCOMPLISHMENTS MEASUREMENTS:

Component	Deliverables
Photo archiving	Five photo scanning events are planned and implemented. Target of 400 additional photos digitized and archived.
For-Hire Catch Composition	Workflows and training materials refined; FISHstory project relaunched in Zooniverse; target of 600 photos analyzed and validated for species composition, as needed.
Length Composition	Length processes and training materials refined; target for all photos in archive to be analyzed for Red Snapper length composition estimates; target for any photos added to the archive through this project to be analyzed for King Mackerel lengths and length composition analysis to be updated.
Volunteer Outreach & Engagement	Staff will work to retain current and recruit new FISHstory volunteers for the Zooniverse project, Validation team, and length analysts. Validation team members and length analysts will receive virtual training sessions. Active volunteers will receive monthly project updates via electronic/print/social media outlets and an end of the year progress report for the project. Data visualizations will be provided on trends in species/length composition and how the data may be used.
Data Sharing Preparation & Report Writing	Data will be compiled and formatted for transfer to ACCSP, SEDAR and others for use in assessments and management. Final project report is completed outlining the project findings, successes, and lessons learned.

REFERENCES:

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McKinley, D.C., A.J. Miller-Rushing, H.L. Ballard, R. Bonney, H. Brown, S.C. Cook-Patton, D.M. Evans, R.A. French, J.K. Parrish, T.B. Phillips, S.F. Ryan, L.A. Shanley, J.L. Shirk, K.F. Stepenuck, J.F. Weltzin, A. Wiggins, O.D. Boyle, R.D. Briggs, S.F. Chapin, D.A. Hewitt, P.W. Preuss, and M.A. Soukup. 2017. Citizen science can improve conservation science, and natural resource management, and environmental protection. Biological Conservation 208: 15-28.

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FY23 BUDGET:

Item	ACCSP Share	Partner Share	Total
PERSONNEL COSTS			
SAFMC Personnel Julia Byrd, Citizen Science Program Manager (2 months; salary and fringe) Allie Iberle, Fishery Scientist (0.5 months; salary and fringe)		$24,066 $4,441	
SEFSC Personnel Ken Brennan, Kyle Shertzer, and headboat port agents		$5,000	
CONTRACT			
A. Consultant and photo curator Processes, scans and catalogs ~ 400 photos (Smitherman and Freeman photos)	$3,500		
B. North Carolina State University (NCSU)			
1) Personnel Graduate student stipend PI summer salary (0.5 months)	 $28,000 $4,675		
2) Fringe Graduate student fringe PI fringe	 $5,235 $1,437		
3) Tuition NCSU (Year 1)	 $10,005		

4) Travel	$2,039		
5) Indirect at 27.6%	$11,422		
TOTAL NCSU Contract	$62,813		
TRAVEL			
Support for SAFMC staff to compile and digitize photos via scanning nights at Council related meetings and other outreach events	$6,325		
SUPPLIES			
Portable photo scanner	$600		
Software design packages	$870		
Outreach, promotional, and training materials	$5,500		
Indirect costs - 10% of total costs	$7,961		
TOTAL	**$87,569**	**$33,507**	**$121,076**
Percentage	**72%**	**28%**	**100%**

BUDGET NARRATIVE:

Contractual ($66,313):

A) Rusty Hudson ($3,500): Hudson will be a project consultant and photo curator. He will process, scan, and catalog ~400 photos compiled by retired Captains Billy Smitherman (FL) and Robert Freeman (NC).

B) North Carolina State University ($62,813)

Personnel ($32,675 total)

- Jie Cao, Ph.D., Principal Investigator (0.5 calendar month) will be responsible for supervising the graduate student, $4,675
- Graduate student (12 calendar months), $28,000

Fringe Benefits ($6,672 total)

- Jie Cao, Ph.D., Principal Investigator, $1,437
- Graduate student, $5,235

Fringe benefits are requested for personnel on this project at the following rates:

	Fringe Benefits (% of salary)	Health Insurance per FTE
Faculty/Staff	30.73%	$6,512
Faculty (summer months)	30.73%	N/A
Postdoctoral Associates	9.05%	$4,336
Graduate Students	9.05%	$2,701
Hourly Workers	9.05%	N/A

Travel ($2,038.8 total)

Funds are requested for travel as follows:

Purpose of Travel	Location	Item	Rate	Cost
Council visits	South Carolina	Mileage	$0.585/mile * 600 miles * 3 trips	$1053
		Hotel	$120/person * 1 person * 2 nights * 3 trips	$720
		Per Diem (meals)	$44.3/day * 1 person * 6 days	$265.8

Note: NCSU travel rate estimates are based on NC state reimbursement and per diem rates.

Other Direct Costs ($10,005 total)

Tuition

- The estimated graduate student's tuition rate at NCSU in 2023-2024 is $10,005 based on a 10% increase over 2022-2023 rates.

Indirect Costs ($11,422 total)

- Indirect costs are applied at the off-site research rate of 27.60% of Modified Total Direct Costs. Indirect costs are calculated on the total NCSU contract minus tuition costs. North Carolina State University's indirect cost rate agreements and other information can be found here: https://research.ncsu.edu/sparcs/budgeting-guidelines/budgeting-f-and-a/

Total Contractor Costs ($62,812.8 total)

Travel ($6,325): Support will be used for staff to travel throughout the South Atlantic region to compile and digitize historic photos via scanning nights at Council related meetings and other outreach events and to distribute promotional materials. Funds are requested to support travel for two staff members on five trips approximately 2-3 days each. Costs are estimated for a total of 20 hotel nights (10 per staff member at $120/night), 30 days per diem (15 per staff member at $75/day), ~1400 miles for four trips (at $0.625/mile) and two airplane fares at ~$400/ticket. Note: Council travel rate estimates are based on federal reimbursement and per diem rates.

Supplies ($6,970): Funding will be used to purchase a portable photo scanner (estimated at $600) to use at photo scanning events. Design software annual subscriptions will be purchased (Adobe Creative Cloud and Canva Pro estimated at $870 for annual subscriptions) to assist with photo manipulation and help design outreach, promotional, and training materials. Promotional, outreach, and training materials (estimated at $5500) will be purchased and distributed to raise awareness about the project, help with volunteer recruitment and retention, and share project updates and results. Cost for print materials range from wallet cards (~$0.05 each) to flyers (~$1.50 each). Using an average cost of $0.78 per item $2,000 will allow us to print 2,564 items for distribution. Funds will also be used to purchase small promotional items (e.g. notebooks, stickers, etc.) to help increase recruitment and retention of participants. Cost for promotional items range between stickers (~$1.50 each) to notebooks (~$4.00 each). Using an average cost of $2.75 per item, $3,500 will allow us to distribute ~1,272 items to participants. Materials would potentially be distributed through industry business and organizations (e.g. tackle shops, trade shows), educators (e.g. marine educator organizations, fisheries graduate and undergraduate programs, and K-12 classrooms), citizen science organizations (e.g. SciStarter) and fisheries organizations.

Indirect charges of 10% are applied to the total cost of the grant for a total of $7,961.

Summary of Proposal for Ranking

Proposal Type: New

Primary Program Priority: Catch and Effort - 50%
This proposal addresses ACCSP recreational priority #2 – 'Comprehensive for-hire data collection and monitoring' by improving historic catch and effort data prior to when fishery dependent catch programs were established in the South Atlantic. Historic photos provide the opportunity to collect trip level effort and landings data for the for-hire sector for a historic time period prior to when catch monitoring programs were in place in the South Atlantic. The for-hire catch composition component of the FISHstory project will provide species composition and catch rate information from this historic time period. The effort and landings data collected through this proposal will be used to develop abundance indices which can be included in stock assessments.

Data Delivery Plan:
Data collected through the for-hire catch and length composition components of the project will be made available to stock assessment scientists, fishery managers, and ACCSP partners as requested. Biological data collected through the length component of the project will be formatted for submission to the ACCSP biological database. Project PI's will coordinate with ACCSP staff on timing and submission of these data to ACCSP.

Project Quality Factors:

- **Multi-partner/Regional impact including broad applications:**
  Partners in this proposal include the SAFMC, NOAA Fisheries SEFSC, and NC State University. The FISHstory project will digitize, archive, and analyze historic fishing photos throughout the South Atlantic region (North Carolina through the East Coast of Florida to the Florida Keys). The catch and biological data collected through the program will be available to all other partners for use in assessment and management. Although the geographic scope of the project focuses on the South Atlantic region, the FISHstory image analysis methods have a high likelihood of scalability and transferability to other ACCSP partners throughout the Atlantic coast who have similar historic photos.

- **Contains funding transition plan:**
  The initial year of funding for the FISHstory project will focus on compiling and archiving additional photos, collecting additional catch and effort data through the FISHstory project in Zooniverse, and estimating length composition for multiple species. An additional year of funding will be needed to develop indices of abundance using the data collected through the project. Project PI's are already developing proposals to

submit through other funding opportunities to help support an additional year of this project.

- **In-kind contribution:** 28%

- **Improvement in data quality/quantity/timeliness**
  - This proposal will build on the success of the FISHstory pilot project which uses an innovative citizen science approach to gather data from historic photos to provide for-hire catch and effort and biological information before fishery dependent monitoring programs were in place in the South Atlantic region.
  - By expanding the geographic and temporal scope of FISHstory, this proposal will collect more representative historic data for the South Atlantic region which will broaden the use of the data for both stock assessment and management.
  - These historic data will provide researchers and managers a better understanding of the long-term changes in the fisheries and fish populations.

- **Potential secondary module as a by-product: Biological - 50%.**
  This proposal addresses ACCSP recreational priority #4 – 'Biological sampling for recreational fisheries separate from MRIP APAIS' by improving historic biological data prior to when fishery dependent catch programs were established in the South Atlantic. Although estimating fish lengths in historic photos may not be the traditional view of biological sampling, it can provide the same information. The length component of the FISHstory project will estimate length compositions for multiple species using the protocols developed during the pilot project. Length analysts will initially focus on producing length compositions for Red Snapper and King Mackerel in the historic photos. Red Snapper is in the top 25% of the ACCSP biological sampling priority matrix and will be undergoing a SEDAR Research Track stock assessment starting in 2024. A SEDAR South Atlantic King Mackerel stock assessment is scheduled to begin in 2025. If time allows, additional species will be measured that are frequently found in the historic photo set and are also in the top 25% of the ACCSP biological sampling matrix, such as Dolphin, Scamp, Red, and Gag Grouper.

- **Impact on stock assessment**
  Stock assessment impacts from this proposal are significant.
  - Most stock assessments of South Atlantic species assume fish stocks were virtually unexploited through the 1950's when consistent monitoring of the commercial fishery began, and only lightly exploited through the 1970's when recreational monitoring began. There is very little information on overall catch or size composition to evaluate these assumptions. This proposal will provide fishery-dependent information from a time prior to catch monitoring. These data

can help verify these assumptions made in assessments and potentially lead to more accurate assumptions.

- Lack of historic information on abundance and size/age composition can result in biased estimates of productivity and therefore shifting baselines against which modern stocks are benchmarked. This proposal is designed to expand the FISHstory project in support of developing long-term abundance indices for stock assessments, as well as to estimate length compositions for the early years. The inclusion of these data in the assessments is likely to improve the estimates, e.g., productivity, size/age structure, and recruitment, and therefore increase the likelihood for managers to set meaningful targets for management and formulate stock rebuilding plans.
- Length frequency and catch per unit information can be used in data limited modeling techniques to provide assessments for stock which are now unassessed. Providing information from periods prior to heavy exploitation is particularly important in data limited frameworks.

Other Factors:

- **Innovative**

  Historic photos serve as an untapped source of catch, effort, and biological information for years prior to dedicated catch monitoring programs. This proposal uses an innovative citizen science approach to gather data from historic photos. The methodology developed is more cost-effective than traditional analysis techniques and allows for larger volumes of data to be collected in a more efficient manner using the power of the crowd.
- **Properly prepared**

  This proposal follows the guidelines under the ACCSP Funding Decision Process Document.
- **Merit**

  This proposal builds on a successful pilot project that demonstrated historic photos have the potential to provide quantifiable species and length composition data at a point in time when fishery dependent surveys of the for-hire fleets didn't exist in the South Atlantic. This proposal will provide catch and effort and biological data for a time period where data are very limited for the recreational sector. These data will satisfy several species specific research recommendations. Additionally the biological data collected include species from the top 25% of the FY23 ACCSP Biological matrix.

JIE CAO

Assistant Professor
Department of Applied Ecology
Center for Marine Sciences and Technology
North Carolina State University

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Education

Ph.D. Marine Biology	2015 University of Maine
M.S. Marine Fisheries Resources	2010 Shanghai Ocean University
B.S. Marine Fisheries Sciences	2007 Shanghai Ocean University

Professional Experience

2018 – present	Assistant Professor, NCSU, Morehead City, NC
2017 – 2018	Post-doctoral Associate, UW&NOAA, Seattle, WA
2015 – 2017	Post-doctoral Associate, UM, Orono, ME

Advisory Board

2020 – present	SSC, South Atlantic Fishery Management Council
2019 – present	Vice-chair of SC, North Pacific Fisheries Commission
2019 – present	Vice-chair of WP billfish, Indian Ocean Tuna Commission

Selected publications

Cao J, Thorson J, Punt A, and Szuwalski C, A novel spatiotemporal stock assessment framework to better address fine-scale species distributions: development and simulation testing. Fish and Fisheries, 2019. DOI:10.1111/faf.12433

Cao J, Thorson J, Richards A, Chen Y. Spatio-temporal index standardization improves the stock assessment of northern shrimp in the Gulf of Maine. *Canadian Journal of Fisheries and Aquatic Sciences*, 2017.

Cao J, Chen Y, Richards A. Improving assessment of *Pandalus* stocks using a seasonal, size-structured assessment model with environmental variables: Part I: Model description and application. *Canadian Journal of Fisheries and Aquatic Sciences*, 2017, 74(3): 349-362.

Cao J, Chen Y, Richards A. Improving assessment of *Pandalus* stocks using a seasonal, size-structured assessment model with environmental variables: Part II: Model evaluation and simulation. *Canadian Journal of Fisheries and Aquatic Sciences*, 2017, 74(3) 363-376.

Cao J, Guan WJ, Treusdell S, et al. An individual-based probabilistic model for simulating fisheries population dynamics. *Aquaculture and Fisheries*, 2016, 1:34-40.

Cao J, Chen XJ, Tian SQ. Bayesian hierarchical DeLury model for stock assessment of west winter-spring cohort of neon flying squid (*Ommastrephes bartramii*) in northwest Pacific Ocean. *Bulletin of Marine Science*, 2014, 91(1): 1-13.

Cao J, Truesdell S, Chen Y. Impacts of seasonal stock mixing on the assessment of Atlantic cod in the Gulf of Maine. *ICES Journal of Marine Science*, 2014, 71(6): 1443-1457.

Guan WJ, **Cao J**, Chen Y, et al. Impacts of population and fishery spatial structures on fishery stock assessment. *Canadian Journal of Fisheries and Aquatic Sciences*, 2013, 70 (8): 1178-1189.

Cao J, Chen XJ, Chen Y. Influence of surface oceanographic variability on abundance of the western winter-spring stock of neon flying squid (*Ommastrephes bartramii*) in the northwest Pacific Ocean. *Marine Ecology Progress Series*, 2009, 381: 119-127.

Funded Research Projects

Estimating seasonal growth and size-dependent mortality of North Carolina blue crab in support of improving its stock assessment and management. North Carolina Sea Grant. **J. Cao**, L. Yan, D. Eggleston, J. Buckel, L. Lee, A. Rocco. $59,692 US Dollars, 2022-2023.

Spatiotemporal distribution and habitat use of major Snapper-Grouper species in the Atlantic Ocean off the southeastern U.S. NOAA/CISESS. **J. Cao**. $39,384 US Dollars, 2021-2022

Development and Application of an International Stock Assessment and Management Strategy Evaluation Tool for Common Dolphinfish (*Coryphaena Hippurus*) in the Atlantic Ocean and the Caribbean Sea (Matthew Damiano, 2020 NMFS-Sea Grant Population Fellowship). North Carolina State University Sea Grant Program. **J. Cao,** K. Shertzer, M. Damiano. $118,817 US Dollas, 2020-2023.

Evaluating the Impacts of Environmental Stress and Bioactive Chemicals on North Carolina Blue Crab Population: An Individual-Based Model. North Carolina Sea Grant. **J. Cao**, L. Yan, L. Lee. $56,786 US Dollars, 2020-2021.

Development and application of a management strategy evaluation tool: tradeoffs between the management objective of recreational and commercial fisheries. Marine Fisheries Initiative (MARFIN) Program, NOAA. **J. Cao**, K. Shertzer. $121,756 US Dollars, 2019-2021.

Promoting China-US collaborative research on assessment and management of Chinese fisheries. Packard Foundation. R. Hilborn, C. Szuwalski, A. Punt, **J. Cao**. $222,628 US Dollars, **Cao's subaward**: 31,850 US Dollars, 2019-2020.

Incorporating environmental variables to improve assessment and predictive capacity for American lobster in a changing Gulf of Maine and southern New England. The Fisheries and the Environment (FATE) Program, NOAA. B. Shank, Y. Chen, **J. Cao**, K. Tanaka. $182,633 US Dollars. 2017-2019.

Incorporating environmental and ecological variables to improve the assessment of northern shrimp in the Gulf of Maine. The Fisheries and the Environment (FATE) Program, NOAA. A. Richards, Y. Chen, **J. Cao**, K. Drew. $106,104 US Dollars. 2015-2017.

Evaluate performance of length-structured models for the assessment of northern shrimp and Atlantic herring in the Gulf of Maine. Maine Sea grant Program. Y. Chen, **J. Cao**. $143,778 US Dollars. 2014-2016.

JULIA ISOBEL BYRD

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EDUCATION: UNIVERSITY OF CHARLESTON, SC, Charleston, SC

-**Masters of Environmental Studies**, focus on environmental and marine biology, December 2004

WAKE FOREST UNIVERSITY, Winston-Salem, NC

-**Bachelor of Science** in **Biology**, Minor in **Environmental Studies**, Cum Laude, May 2000

WORK EXPERIENCE:

Citizen Science Program Manager, South Atlantic Fishery Management Council (SAFMC; March 2019 – present)

- Provide programmatic leadership and support for the SAFMC's Citizen Science Program
- Foster collaboration between researchers, scientists, and fishermen to design and support citizen science projects
- Develop grant proposals for citizen science projects and assist program partners in developing grants
- Serve as PI or co-PI on grant supported citizen science projects addressing SAFMC research priorities; duties include project design and management, oversight of data collection, data QA/QC and analysis, report writing, and grants administration
- Assist in developing and delivering outreach materials and training related to the Citizen Science Program and projects
- Work with partners and advisory committees to develop and implement strategic plan for Citizen Science Program, including development of goals, objectives, strategies, indicators, and evaluation plan
- Develop and deliver training programs to work with participants to design and implement citizen science projects
- Conduct presentations for advisory committees, the general public, fishermen, and scientists on the SAFMC's Citizen Science Program and projects
- Communicate scientific, technical issues to a variety of audiences
- Build relationships with fishery professionals and stakeholders throughout the Southeast U.S. to develop program partnerships and help engage more people in the SAFMC's Citizen Science Program
- Staff lead for Citizen Science Projects Advisory Committee and Operations Committee
- Supervise Citizen Science personnel (staff and students) working on citizen science projects
- Serve as member of the SAFMC Outreach Team providing input and participating in Council related outreach activities
- Represent the SAFMC on various citizen science related working groups
- SAFMC's representative on the Atlantic Coastal Cooperative Statistics Program Operations Committee

Adjunct faculty at the College of Charleston (2020 to present)

- Serve as a primary advisor and/or thesis committee member for Masters of Environment and Sustainability Studies graduate students

Southeast Data Assessment and Review (SEDAR), South Atlantic Fishery Management Council (SAFMC)
SEDAR Coordinator (August 2012 – February 2019)

- Plan, coordinate and manage SEDAR stock assessment projects and procedural workshops. Duties include project management, work planning, timeline development, brainstorming strategies, problem solving, event planning, and facilitation.
- Chair and/or facilitate SEDAR stock identification, data, assessment and procedural workshops. Experience includes facilitating variety of group discussions engaging scientists, managers, fishermen, and other stakeholders in order to lead groups through productive discussions and explore different points of view.

- Build relationships with fishery professionals and stakeholders throughout the Southeast U.S. to help engage more people in the SEDAR Stock Assessment Program.
- Communicate scientific, technical issues to a variety of audiences
- Lead re-design of the SEDAR website and serve as SEDAR webmaster.
- Assist with coordination and facilitation of SAFMC's Snapper Grouper Visioning Project
- Assist with the development of the SAFMC's Citizen Science Program. Duties included helping coordinate and facilitate SAFMC's Citizen Science Workshop, helping develop SAFMC's Citizen Science Blueprint, and assisting the Citizen Science Program Manager in developing infrastructure for the Program.
- SAFMC's representative on the Atlantic Coastal Cooperative Statistics Program Operations Committee
- Instructor for Marine Recreational Education Program, Southeast – Science Workshop 2017
- Participate in SCDNR's in-water sea turtle regional abundance and health assessment survey as Chief Scientist or Scientific Crew

TRAINING:

- Management Assistance Team (MAT) Leader as Communicator Training
- Smithsonian's Communication & Facilitation Skills for Conservation Managers Course
- Technology of Participation (TOP) Facilitation Methods
- NOAA Coastal Service Center Planning and Facilitating Collaborative Meetings
- Well's National Estuarine Research Reserve Coastal Training Program Collaborative Learning Workshop
- NOAA Coastal Service Center Project Design and Evaluation Workshop
- NOAA Coastal Service Center Public Issues and Conflict Management Workshop
- University of Maryland's Communicating Science Effectively Workshop
- NOAA Coastal Service Center Community Based Social Marketing Workshop
- Basic and Advanced Microsoft Access Training Workshop
- Atlantic States Marine Fisheries Commission Basic Stock Assessment Workshop
- Atlantic States Marine Fisheries Commission Maximum Likelihood Modeling Workshop

PROFESSIONAL MEMBERSHIPS:

- Citizen Science Association
- American Fisheries Society
- SC Chapter of the American Fisheries Society
- ACCSP Operations Committee (2015-present)

SELECTED PUBLICATIONS AND PRESENTATIONS:

- Byrd, J. W.R. Collier, and A. Iberle. In press. Designing the FISHstory project to support fisheries management. Fisheries.
- Oremland, L., A. Furnish, J. Byrd, and R. Cody. In press. How fishery managers can harness the power of the crowd: Using citizen science and non-traditional data sources in fisheries management. Fisheries.
- Bonney, R., J. Byrd, J. T. Carmichael, L. Cunningham, L. Oremland, J. Shirk, and A. Von Harten. 2021. Sea Change: Using Citizen Science to Inform Fisheries Management. BioScience: 71(5): 519-530.
- Byrd, J. A. Iberle, C. Collier, D. Cathey, J. Simpson, F. Karp, B. Spain, K. Knowlton, and M. Bucko. 2021. Development of the SciFish Application, a customizable citizen science project builder. American Fisheries Society Annual Meeting. (Oral presentation)
- Byrd, J. C. Collier, and A. Iberle. 2020. The SAFMC's Citizen Science Program: Designing a program to support fisheries science and management decision making. American Fisheries Society Annual Meeting (held virtually). (Oral presentation)
- Brown, S.K., M. Shivani, R. Koeneke, D. Agnew, J. Byrd, M. Cryer, C. Dichmont, D. Die, W. Michaels, J. Rive, H. Sparholt, and J. Weiberg. 2020. Patterns and practices in fisheries assessment peer review systems. Marine Policy: 117,103880.
- Byrd, J., J. Carmichael, and J. Neer. 2017. The Importance of Peer Review in SEDAR Stock Assessments. American Fisheries Society Annual Meeting, Tampa, FL. (Oral presentation)
- VonHarten, A. and J. Byrd. 2016. Building a Fishery Citizen Science Program in the U.S. South Atlantic to Improve Management and Policy. 4th International Marine Conservation Congress. (Oral presentation and helped facilitate focus group.)
- SEDAR. 2015. SEDAR Procedural Workshop 7: Data Best Practices. SEDAR, North Charleston, SC. 151pp. (editor)

Geoff White, Director
Atlantic Coastal Cooperative Statistics Program
1050 N. Highland Street, Suite 200 A-N
Arlington, VA 22204

August 17, 2022

Dear Mr. White,

The Rhode Island Division of Marine Fisheries is pleased to submit the proposal titled "*Collection of Recreational Fishing Data from Citizen Science Sources*" for your review. We believe this proposal is an important step toward integration of various voluntary recreational angler catch and effort data streams into ACCSP SAFIS databases.

Please address questions to John Lake of the Rhode Island Division of Marine Fisheries.

Sincerely,

John Lake
Rhode Island Department of Environmental Management
Division of Marine Fisheries
3 Fort Wetherill Road
Jamestown, RI 02835
john.lake@dem.ri.gov
401-212-7538

Enclosures:
ACCSP Proposal: "*Collection of Recreational Fishing Data from Citizen Science Sources*"
Appendix A: Principal Investigators' Curricula Vitae

Proposal for Funding made to:
Coordinating Council and the Operations Committee
Atlantic Coastal Cooperative Statistics Program
1050 N. Highland St., Ste. 200 A-N
Arlington, VA 22201

FY23: Collection of Recreational Fishing Data from Citizen Science Sources

Submitted By:
John Lake
Rhode Island Department of Environmental Management
Division of Marine Fisheries
3 Fort Wetherill Road
Jamestown, RI 02835
john.lake@dem.ri.gov

Proposal for FY2023 ACCSP Funding

Applicant Name:	Rhode Island DEM
Project Title:	**Collection of Recreational Fishing Data from Citizen Science Sources**
Project Type:	New Project
ACCSP Program Priorities:	Recreational Catch and Effort Module
.	
Principal Investigators:	John Lake, Supervising Biologist, john.lake@dem.ri.gov
Requested Award Amount:	**$134,000**
Requested Award Period:	One year upon receipt of funds
Submission Date:	August 17, 2022

Objectives:

- To obtain recreational catch and effort data from anglers who are utilizing commercially available logbook applications acting as citizen scientists to provide data that is currently lacking by current collection methods.
- To evaluate the submitted data and construct them in a standardized manner to be sent to the ACCSP through currently available or future application interfaces (API).
- Produce and deliver data which can be analyzed by the respective States for comparison with other sources of recreational data.
- To utilize the data collected to make better informed decisions in relation to recreational fisheries.
- Implement product enhancement and outreach activities to increase the quantity of citizen science-based recreational fishing data submissions.

Need:

According to the 2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation issued by the U.S. Fish and Wildlife Service, there were 151,000 saltwater anglers in Rhode Island, accounting for over 1.1 million trips.

The recreational angling community has been asking to have a feedback mechanism for discard data over the past ten years, the most common of which has been for Black Sea Bass and Striped Bass - two species with high discard rates in our region. While kept catch is a common and accurate reported data element of angler data collection programs, uncertainty remains around quantifying discard fish remains.

Understanding the magnitude of discards is imperative, as many species have associated discard mortality rates that are otherwise unaccounted for. Further, recreational discard data is becoming increasingly important as more recreational species have had regulatory actions aimed at reducing harvest. For example, RIDEM is in the decision-making process of reducing harvests on Striped Bass, moving from two fish to one fish and increasing the size limit on Scup and/or Black Sea Bass this year. The resulting shortened fishing seasons, lower bag limits and increased minimum sizes have increased the number of fish discarded at sea and thus not available for direct observation and measurements. The only direct measurements of discarded fish take place during at-sea observations on head boats. Having an alternative data source to obtain this discard information on these species would be a great help in the regulatory decision-making process.

The accuracy of discard data collected via the Marine Recreational Information Program (MRIP) in-shore and private/rental modes suffers from angler recall bias. Discard data from other volunteer logbooks have been used in previous stock assessments, notably for bluefish in 2015, where the value of these data streams has been proven.

Results and Benefits

In addition to discard data, volunteer data from commercially available mobile apps will be useful for improving the Rhode Island MRIP Access Point Angler Intercept Survey (APAIS). In 2019, there were 2,496 MRIP intercepts in Rhode Island for shore and private/rental anglers. Effort statistics and catch rates for various species will be compared to those estimated by APAIS to provide further insight on the accuracy of the estimates. These comparisons will allow

RIDMF staff to identify areas of the MRIP site registry which need to be repressured to accurately capture the level of recreational fishing in the state.

These comparisons to MRIP will be particularly helpful for short term or pulse fisheries such as Atlantic Cod and Tautog. Both these recreational fisheries take place in a discrete time frame outside of intense sampling periods. Having additional information of the timing of when the fishing effort and harvest is taking place will allow managers to direct sampling efforts in a more directed manner to increase sample size and thus improve estimates for these species.

This project will also address the desire from anglers to participate in fisheries management as citizen scientists. Many of these anglers currently utilize a mobile application to assist them with understanding fisheries rules and regulations and/or to collect data about their trips and catches with the hope of improving their fishing experience. These recreational anglers are aware of the capabilities of smart devices to facilitate all aspects of both professional and everyday life. As a group, they see themselves as an additional source of data, one that is often overlooked. The random nature of the MRIP survey does not guarantee an opportunity for all anglers to provide data about their fishing activity on a regular basis. As such, the lack of input can lead to disenfranchisement of anglers to the MRIP survey. Although volunteer logbook data does not feed into MRIP, in cases where anglers disagree with an estimate, knowing they have contributed data that may be used to make improvements in the future will likely lead to increased confidence in the data and trust between stakeholders and managers.

This project will develop and test the infrastructure required to collect recreational fishing data for the purposes of fisheries management. In addition to creating a data pipeline for the collection of data from multiple mobile recreational fishing applications, the applications will be enhanced with features that motivate anglers to use the applications to report data, and outreach programs will be implemented to encourage greater reporting of data among recreational anglers in Rhode Island and surrounding areas.

Data Delivery Plan

Two recreational fishing apps will send data to the ACCSP in this proposal. AnglerCatch and FishBrain. FishBrain, has 20,000 registered users in Rhode Island and over 100,00 registered users in Massachusetts. They have logged approximately 80,000 catches last season between these two states. Because the FishBrain mobile app is a commercially targeted and monetized app, they have no desire or intentions to standardize their data to ACCSP requirements. Instead, FishBrain have requested that Harbor Light Software convert the data from their anglers into a standardized format for upload to the ACCSP SAFIS database. AnglerCatch data is already standardized to be sent to SAFIS.

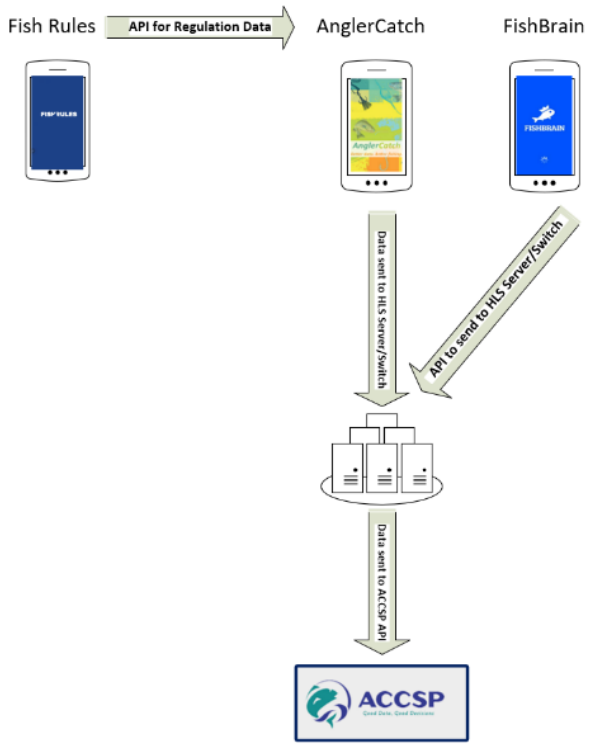
Figure 1

Possible Data Points to Upload	Mobile Application
Date/Time of Catch	AnglerCatch/FishBrain
Fish Species	AnglerCatch/FishBrain
Fishing Method	AnglerCatch/FishBrain
Fish Weight	FishBrain
Fish Length	AnglerCatch/FishBrain
Latitude	AnglerCatch/FishBrain
Longitude	AnglerCatch/FishBrain
< or > 3 miles from shore	AnglerCatch
Shore Position	AnglerCatch/FishBrain
Released/Harvested	AnglerCatch/FishBrain
Gear Used	AnglerCatch/FishBrain
Image of catch	FishBrain
State	AnglerCatch/FishBrain
Target Species	AnglerCatch/(FishBrain to add)
Note: Both apps may be able to calculate the # of times the angler has fished in the past months based on usage	

Data collected by the AnglerCatch mobile application is delivered to and collected at an AnglerCatch host server running in Microsoft Azure. Data from this host server will be transferred to SAFIS using an API based on existing SAFIS data standards and formats.

Data collected by the FishBrain application will be delivered to the Angler Catch host server, and then transferred to SAFIS using an API based on existing SAFIS data standards and formats.

Figure 2



Approach:

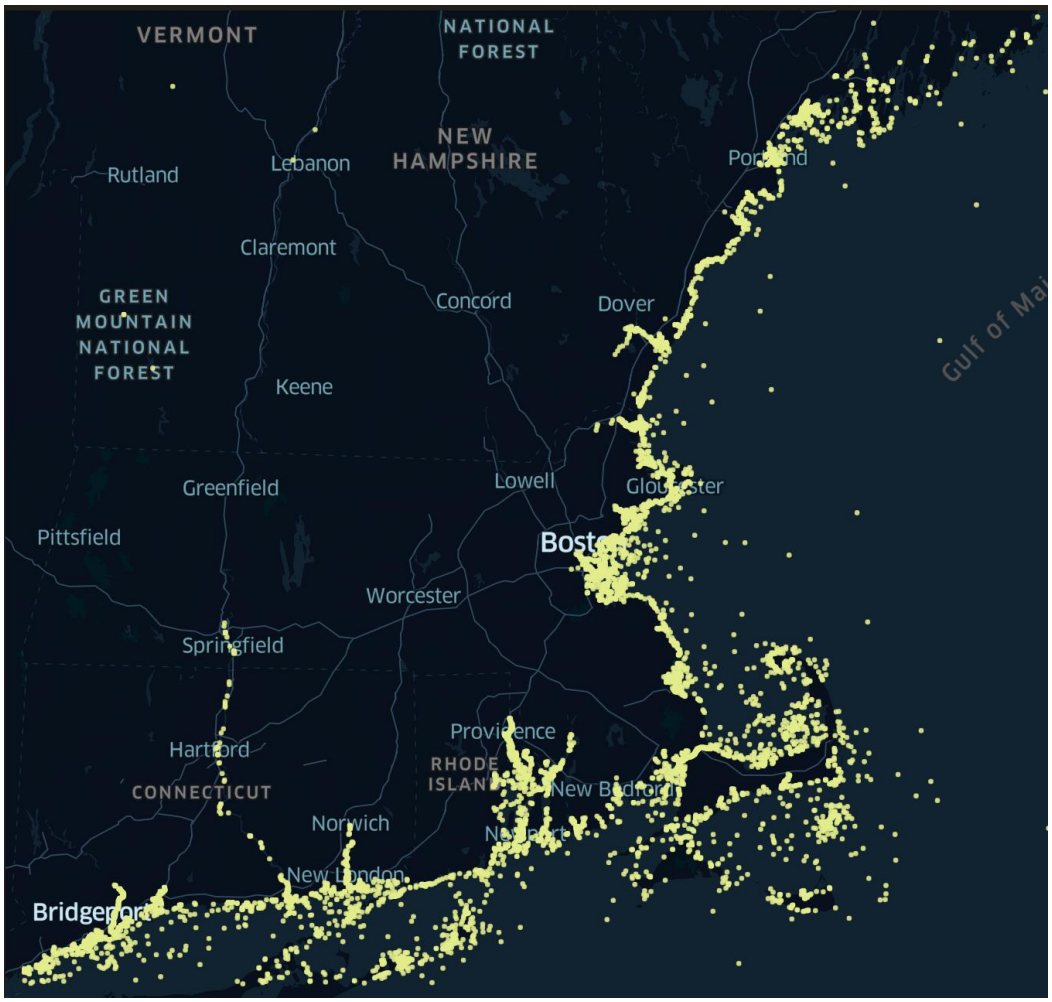
In 2021, the RIDEM teamed with the Rhode Island Saltwater Anglers Association (RISAA), and Harbor Light Software to conduct a series of ideation sessions, online workshops, focus groups and angler surveys sent to c. 7,500 affiliated members of RISAA fishermen in Rhode Island and Massachusetts. These anglers gave feedback to assist with building the AnglerCatch mobile application which delivers catch data from anglers to the RIDEM. AnglerCatch is currently in its first season of being launched by RIDMF and RISAA. To date, over 300 catch records have been received using the app.

As part of the outreach initiatives with the anglers by RISAA and RIDMF, information was gathered in the following areas:

- Which apps, if any, do recreational anglers utilize?
- What are their motivations for using a fishing app?
- What are the current trust levels of the anglers in the data being collected and how do they see their role in the process as a whole?

Fish Rules App and FishBrain were found to be the most widely used recreational fishing applications amongst the group surveyed. Fishbrain has approximately 20,000 users in Rhode Island and Massachusetts and 100,000 recreational users in Massachusetts. An example of FishBrain catch locations for this fishing season shows the last 1000 Striped Bass only catches for this area.

Figure 3.
Catch location data for last 1000 Striped Bass Catches logged in FishBrain



Fish Rules was used for primarily for understanding of fisheries Rules and Regulations, while FishBrain was used to connect with other anglers, learn new fishing techniques and as a catch logbook.

Of note, the ACCSP currently has the SciFish application that is in use by both the SAFMC and the NCDNR. The SciFish application is also a citizen science, voluntary data collection application. This application is a data collection tool that management can build and define as needed to address their individual needs. Although SciFish, FishBrain and AnglerCatch can all be classified as Citizen Science applications, there are unique differences between the three products.

SciFish	AnglerCatch	FishBrain
Gives managers the ability to quickly design and launch an app to an audience to target a	Built utilizing the ACCP data standards for things such as gears, species, fishing mode	Used by a large population of anglers. The business model is one of customer acquisition

specific need in the moment. Some of the apps within SciFish may not be intended to have longevity, but instead answer questions about a specific species or regulation. Managers may limit data collection to a few species.	and disposition. Follows a subset of the MRIP APAIS questions. Tools such as weather, buoys, tides are given to the angler for free while guiding them to send in their catch data. Utilized by RI/MA members of RISAA and used as a fishing logbook.	and profit by selling upgrades within the application. Thought of as the Facebook for anglers, users connect with other users, share photos and learn new fishing techniques.

To encourage the usage of the AnglerCatch application by recreational anglers, features will be added such as ESRI-based nautical maps and enhanced historical weather-catch analysis. FishRules has developed and will provide modified APIs to share fishing regulation data amongst the logbook vendors. This will negate the need for rec anglers to use multiple apps for their fishing information.

Enhancements will be made to the functionality of the AnglerCatch host server to accept data collected by the FishBrains mobile fishing application, and software will be implemented which converts that data into a format that can be delivered to SAFIS.

In addition, funding for direct marketing campaigns to both RISAA affiliated fishing clubs and other recreational anglers in Rhode Island, Massachusetts and Connecticut would be targeted for outreach to educate anglers about the project. Outreach will be done using social media, direct marketing, distribution of hard copy materials and attending fishing organizational meetings. Anglers will become informed of how they can participate and the goals of the use of the data in recreational fishing estimates. RIDEM will assist in marketing the applications through their website and on their social media accounts.

The vendors have agreed to cross market the project on their individual platforms to increase awareness and promote the need for recreational data. Harbor Light Software and FishBrain will also provide in-kind marketing hours in the way of outreach activities such as social media posts, presentations at local fishing club meetings, and generation of promotional materials.

Geographic Location:
Waters surrounding Massachusetts, Rhode Island, Connecticut, New York, and New Jersey.

Milestone Schedule:

The milestone schedule is based on the starting month of the project as month "1."

	Month												
Task	1	2	3	4	5	6	7	8	9	10	11	12	13
Complete requirements gathering	X	X											
Acquire APIs	X	X											
Implement inter-vendor APIs and data flow		X	X										
App Enhancements		X	X	X	X								
Marketing and Outreach					X	X	X	X	X	X	X	X	X
Data Review					X	X	X	X	X	X	X	X	X
Coordinate data feed to ACCSP		X	X	X	X	X							
Semi and Annual Report Writing						X	X					X	X

Project Accomplishments Measurement:

Project Component	Goal	Measurement
Submit data from AnglerCatch to ACCSP	Submit data from AnglerCatch to ACCSP using standard data fields and codes	Data is sent from AnglerCatch client application to ACCSP successfully and is accessible by RIDEM for analysis and review.
Collect data from FishBrain and submit to ACCSP	Collect data from FishBrain, transform into proper data fields and codes, and submit the data to the ACCSP	Data is sent from FishBrain to Harbor Light host server successfully, is forwarded to ACCSP in the correct format, and is accessible by RIDEM for analysis and review.
Enhance AnglerCatch functionality	Increase the functionality of AnglerCatch and promote submission of citizen science-based recreational fishing data to increase the quantity of available data.	Increased downloads of AnglerCatch, and increased quantity of uploaded catch data from AnglerCatch.
Outreach	Promote AnglerCatch and FishBrain as tools for submitting citizen science-based recreational fishing data.	Increased data submissions. Improved public perception of RIDEM's fisheries management efforts.

Cost Summary:

Description	Calculation	Funding Source RIDEM	In-kind HLS	FishBrain	Requested From ACCSP Admin Cost
Personnel (a)		**$2,391**			**$0.00**
John Lake	3% of John Lake's salary	$2,391			
Fringe (b)		**$1,141**			**$0.00**
RI Fringe rate	Applied to John Lake's salary	$1,141			
Supplies (c)		**$0.00**	**$0.00**	**$0.00**	**$0.00**
Contractual (d)		**$0.00**			**$104,000**
Harbor Light Software: FishBrain	264.7 hours @$170/hour 347.1 hours @$170/hour				$45,000 $59,000
Other (e)			**$5,000**	**$32,500**	**$30,000**
FishBrain/FishRules licensing fees	a. FishRules Regulation Access License: $2,500 / yr b. FishBrain Catch / Trip Data Access License: $20,000/ yr c. Fish Management Products License: $5,000/ yr.			$2,500 $20,000 $5,000	
Outreach expenses and materials. Professional Marketing	200 hrs @ $50/ hr Estimated professional Marketing fees/Printed & Incentive items	**$0.00**	$5,000	$5,000	$30,000
Total Direct Charges		**$3,532**	**$5,000**		
Indirect Charges (f)		**$689**			
19.5% RI Indirect	Applied to J. Lake salary	$689			
Totals		**$4,221**	**$5,000**	**$32,500**	**$134,000**
Total Project Cost		**$175,721**			
In-kind versus Direct Percent Contributions		**24%**		**76%**	
Requested Amount		**$134,000**			

Budget Narrative:

a. **Personnel (0 Requested; $2,391 Match)** John Lake will provide in-kind support from RI. There is no request for Lake's salary from the ACCSP. His CV is also attached.

b. **Fringe (0 Requested; $1,141 Match)** RI will provide matching funds to cover fringe for expenses associated with J. Lake's match salary.

c. **Equipment/Supplies ($30,000 Requested; $10,000 Match)**
Outreach will be done using social media, direct marketing, distribution of hard copy materials and attending fishing organizational meetings. We are budgeting $30,000 for these activities to cover marketing consulting services, and printing of materials. This funding will be split between the vendors as needed.

d. **Contractual ($134,000 Requested; $0 Match)**
Harbor Light Software will develop software to add functionality to the AnglerCatch application, specifically adding support for ESRI nautical maps, enhanced catch analysis, integration of the FishRules API and presenting fishing regulations data, and modifications to

the user interface to make the application applicable to the broader New England region. Harbor Light will additionally enhance the existing AnglerCatch host server software to accept catch and effort data from the FishBrain application and transmit data from both sources to the ACCSP.

Fishbrain will modify the Fish Rules regulation API to be suitable for integration into the AnglerCatch app. Fishbrain will develop, maintain and optimize a new API to properly format and share catch data with Harbor Light for formatting into ACCSP standards. Fishbrain will also develop new features, product enhancements and UX improvements to Fish Management (the backend system used to update and distribute fishing regulations), including tools that allow state partners to export data (e.g. regulation views) directly from within Fish Management.

e. Other (0 Requested; $37,500 Match)

Fish Rules regulations data license fee will be given as an in-kind for year one of the project. This is valued at $2,500. FishBrain catch data licensing fee will be given as an in-kind for year one of the project. This is valued at $20,000. FishBrain Fish Management Regulations license fee will be given as an in-kind for year one of the project. This is a $5,000 value.

Harbor Light Software and FishBrain will each contribute as in-kind service, 100 hours of outreach content creation and social media activity for a total of 200 hrs @ $50/hr, valued at $10,000.

f. Indirect ($0 Requested; $689 Match)

19.5% RI indirect charges applied to John Lake’s salary.

Proposal Summary for Ranking Criteria

PROPOSAL TYPE: New Project

PRIMARY PROGRAM PRIORITY:
Catch and Effort Data (100%): This project will provide RIDEM with an additional data source of catch and effort data from recreational anglers. These data will include discard lengths and other data that is not current available through other sources.

PROJECT QUALITY FACTORS

Multi-Partner/Regional impact including broad application:
Although this project focuses on activities of recreational fishermen in Rhode Island and Massachusetts, it includes the data collection of species managed regionally including striped bass, black seabass, thus, ASMFC and its partners will benefit from the catch and effort data collected from this project.

Funding Transition Plan
This project is a one-year pilot project with a defined end goal. The goal is to prove that multiple commercial vendors can submit standardized voluntary recreational catch data to the ACCSP SAFIS database to be reviewed and used by RIDEM in stock assessment and management.

In-kind Contribution:
Please see cost table on page 11. (23%)

Improvement in data quality/quantity/timeliness:
All catch and effort data collected as part of this project will be available for partners to review. Some of the data collected, such as discard lengths, is currently unavailable through the current means of data collection in the recreational sector. This data will help by providing raw discard length data and can be used to compare against data collected via the MRIP APAIS survey.

Impact on stock assessment:
The quality of stock assessments is expected to improve by providing greater quantity and quality of recreational fishing discard data on key species in the Rhode Island fishery.

Innovative:
This project is quite innovative and brings together various data sources to provide a unique insight into recreational fishing while providing data that has been difficult or impossible to obtain in the past.

Properly Prepared:
This proposal document meets the requirements as specified in the funding decision document Step2b and Guidelines.

Merit:
This proposal is particularly worthy in its quest to lessen gaps in recreational data collection while providing partners with an additional source of fisheries dependent data.

Appendix A: Curricula vitae for the principal investigators

John M Lake

13 Breton Drive
Charlestown, RI 02813
Phone: (401)377 2250
Email: john.lake@dem.ri.gov

Recent Experience

Supervising Biologist, Rhode Island Division of Fish and Wildlife
August 2018 – Present, Jamestown, RI

In my current position I am the supervisor of a full-time staff of 10 and up to 10 seasonal employees at the RIDEM Division of Marine Fisheries. My duties include day to day operations, coordination of the RI recreational fishing program, program development and hearing officer.

Principal Biologist, Rhode Island Division of Fish and Wildlife
July 2009 – August 2018, Jamestown, RI

I was a Principal biologist for the Rhode Island Division of Fish and Wildlife. I served as the fisheries management plan coordinator for winter flounder and Atlantic herring. I was also responsible for coordination and implementation of the NOAA Fisheries Marine Recreational Information Program (MRIP) program to collect recreational fishing data in the state. Part of this process involved the initial planning and implementation of a saltwater recreational fishing license for the state of Rhode Island. I coordinated stakeholder meetings, government contracts, website development, advertisement campaigns, legislative reports, and vendor sales. I was on a team coordinating the creation of a combination recreational hunting/fishing license. I conducted an annual juvenile finfish survey in Rhode Island's coastal ponds. I represent Rhode Island on two interagency fisheries management committees. I ran several smaller projects from small grants I have written including; shellfish conversion factor project, recreational license vendor incentive program, and piloting use of handheld data collection devices for use in Party and Charter fishing fleet. I maintained several MS Access databases and update content on the RIDFW webpage.

Fisheries Specialist 2, Atlantic States Marine Fisheries Commission
February 2002 – July 2009, Jamestown, RI

This position was a contract to the Rhode Island Department of Environmental Management. I was the Rhode Island coordinator for the Atlantic Coastal Cooperative Statistics Program (ACCSP). My full-time duties included grant writing, project development, as well as design and management of three commercial fisheries data collection programs. I represented Rhode Island on five interagency fisheries management committees, including the ACCSP Operations committee. From 2003 to 2009, I wrote annual grant proposals that were awarded $150,000 per year. I helped design the Standard Atlantic Fisheries Information System (SAFIS) and successfully put

it into operation at seafood dealers throughout Rhode Island. I designed and maintained the databases that collect Rhode Island commercial fishery statistics. I was responsible for supervising up to three employees at a time. Finally, excellent communication skills were required for this position, to routinely facilitate coordination between the public, state, and federal agencies on a suite of data management projects.

Biological Technician, End to End Inc.
March 2001 – January 2002, South Kingstown, RI

This position was a contract to the Rhode Island Department of Environmental Management. My duties included collecting fisheries dependent statistics from both the catch and discards of fish caught onboard commercial vessels in Rhode Island. I calculated aging statistics for commercially important finfish. I data entered commercial lobster catch logbooks. I was responsible for annual report writing and setting up purchase orders for supply requisition. I would also frequently assist other field projects carried out on small vessels within Narragansett Bay, Rhode Island.

Education

University of Connecticut, Storrs, CT
Master of Science, Biological Oceanography, March 1997

Relevant Coursework: Biological Oceanography, Marine Biogeochemistry, Physical Oceanography, Geological Oceanography, Applied Statistics 1-2, Principles of Fisheries Management, Zooplankton Ecology

Thesis Research: Diet Selectivity of Scup, (Stenotomus chrysops), in Long Island Sound. Graduate level research involving experimental design, field work, laboratory work, and statistical analysis. Patterns of Scup diet were determined relative to ontogenetic development, Western Long Island Sound hypoxia, and external morphology.

College of the Holy Cross, Worcester, MA
Bachelor of Arts, Biology, May 1991

Relevant Coursework: Cell Biology, Genetics, Biochemistry 1-2, Immunology, Animal Physiology, Marine Biology/Ecology 1-2, Organic Chemistry 1-2, General Chemistry 1-2, Introduction to Biology, Physics 1-2, Invertebrate Zoology, Botany, Calculus 1-2, Methods of Teaching.

Job Related Certifications:
SQL Programming April 30, 2008
At Sea Safety Training, June 2007
Power Squadron Safe Boating and Navigation June 1999

Additional Skills:

I possess exceptional computer skills and am competent in a wide variety of software packages. These packages include MS Access, MS Excel, MS Word, Oracle Discoverer Plus, and SQL Developer. I can program in Visual Basic and SQL. I also maintain a current state of New Hampshire safe boating certificate.

Funding Proposal
FY23 ACCSP Accountability Work Group

Applicant Name:	Atlantic States Marine Fisheries Commission
Project Title:	Support for ACCSP Accountability Work Group Recommendation Implementation
Project Type:	New Project
Principal Investigator:	Geoff White, Director, ACCSP
Collaborators:	Julie DeFilippi Simpson, ACCSP and Accountability Work Group
Requested Award Amount:	$49,976
Requested Award Period:	One year upon receipt of funds

A. Objectives

1. Conduct a Best Practices Workshop for data providers to compare data collection programs, audits, and trips/dealer reports and to identify and share funding resources for development and implementation of technological advances.
2. Facilitate ACCSP and data providers review of data element/field definitions to make sure they are as comprehensive as possible, including indicating the reliability of each field.

B. Need

A Data Accountability Work Group (AWG) was formed in 2020 to address several tasks from the Atlantic Coastal Cooperative Statistics Program (ACCSP) Coordinating Council in regard to fisheries data quality, accountability, verification, and use for the US Atlantic Coast. The AWG was tasked with evaluating the practices and procedures currently in use and reviewing and updating the ACCSP standards as needed. The AWG recognized that further work was necessary before updates to the standards were addressed. Based on comments collected from data managers and consumers through surveys and the discussion within the AWG, a number of recommendations were proposed to improve communication of data limitations and provide opportunities for jurisdictions and sectors to expand and streamline processes. The AWG report

outlines all 9 of these recommendations along with specifics of the surveys conducted and those results.

Since the writing of the report, the AWG has met to prioritize those recommendations and determine which ones were appropriate for action first. Three (3) top priority recommendations were identified and have been adapted as the objectives for this project. A collaborative and interactive workshop that allows partners to discuss, share, review, and prioritize is the vital first step in addressing the recommendations of the AWG and will serve as the foundation upon which future actions are based.

C. Results and Benefits

The results of this project will allow the AWG and other ACCSP groups as deemed necessary to undertake the remaining recommendations outlined in the AWG report. Addressing these recommendations will allow for an update to the ACCSP standards to reflect the current best practices for both data validation and provisioning. This directly responds to the problem statement put forth by the Coordinating Council at their March 12, 2019 meeting.

> *Data validation and accountability issues can compromise data quality and reduce their utility for stock assessments, compliance reports, and other management activities.*

The concept was based on a forward thinking approach toward data quality and maximizing the value of the investment of ACCSP and partner staff time and resources in data warehousing. The idea of data accountability was to have a standardized mechanism or approach to verify that data reflect what is happening on the water and at the docks. The Coordinating Council considered that data clerks entering paper data provided an initial check of data. While there are advantages to the shift to electronic forms, the loss of the data entry clerk presents a need for additional data verification and auditing. <u>This project and workshop will more fully explore the components of electronic at-entry data validation, auditing, and comparison to alternate data streams to assess overall accountability.</u>

D. Data Delivery Plan

<u>Documentation of the workshop in the form of a workshop report will be made available on the ACCSP website in a timely fashion following the meeting.</u> This report, along with other meeting products, will be made available to the AWG and any other ACCSP groups that will be addressing the remaining recommendations from the AWG report.

E. Approach

1. AWG members will meet to determine the feedback and data needed from data providers and consumers prior to the meeting. (Objectives 1 and 2)
2. AWG members, data providers, data consumers, and other relevant parties will provide feedback and compile materials for review. (Objective 2)
3. Virtual sessions will be held as needed to prepare for the in-person workshop. (Objective 2)
4. A multi-day in person workshop will be held with facilitated plenary and breakout sessions to review, compare, and evaluate various approaches to catch and effort data collection and audits. Activities will be based on pre-meeting virtual feedback and will utilize appropriate Quality Management and Continuous Improvement tools. All sessions, including breakouts will have a note taker. (Objective 1 and 2)
5. The results and products of the workshop will be compiled into a final report. (Objective 1 and 2)

F. Geographic Location: Atlantic Coast (Maine through Florida)

G. Funding Transition Plan

This proposal is to host a series of virtual meetings and a single in-person workshop and is a single year proposal. The results of this project will serve as the foundation upon which the AWG and other ACCSP groups can address the remaining recommendations of the original report. At this time, the remaining action items have not been scoped from a needed funding perspective. Internal ACCSP funds and other sources of funding will be explored at that time prior to putting forth another proposal.

H. Milestone Schedule

	Month												
Activity	1	2	3	4	5	6	7	8	9	10	11	12	13
AWG scoping	X	X	X										
Feedback and materials gathering			X	X	X	X	X	X					
Virtual pre-meeting sessions						X	X	X	X				
In-person workshop										X			
Workshop report writing											X	X	
Semi and Annual report writing						X	X					X	X

I. Project Accomplishments Measurement

Objective	Measurement
Conduct a Best Practices Workshop for data providers to compare data collection programs, audits, and trips/dealer reports and to identify and share funding resources for development and implementation of technological advances.	Realization of a multi-day in-person workshop with facilitated plenary and breakout sessions to review, compare, and evaluate various approaches to catch and effort data collection and audits
Facilitate ACCSP and data providers review of data element/field definitions to make sure they are as comprehensive as possible, including indicating the reliability of each field.	Comprehensive meeting materials that are compiled in an easily digestible fashion and reflect the feedback and perspectives of all participating partners.

J. Budget:

Budget Summary	Description	Proposal	In-kind
Contract	Meeting facilitator		$20,000
Travel	30 participants x 5 days x $275	$41,250	
Supplies	Meeting facilitation supplies	$1,000	
Other	Meeting room costs	$2,000	
Total Project		$44,250	
ASMFC Overhead (12.94%)		$5,726	
Total Proposal		$49,976	$20,000
		71%	29%

K. Budget Narrative

NOTE: This proposal is separated from the ACCSP ADMIN grant as a priority item for progress that is not part of the ongoing travel budget. This approach allows for separate evaluation and full transparency.

Personnel
All members of the AWG, listed below, will be dedicating a significant amount of their time to this effort. However, as those efforts are part of the larger project to which they have

volunteered their time, hours dedicated to this portion of the work have not been tallied as part of the in-kind contribution.

Kristen Anstead, Atlantic States Marine Fisheries Commission
Nichole Ares, Rhode Island Department of Environmental Management
Heather Baertlein, NOAA Fisheries
Lauren Dolinger-Few, NOAA Fisheries
Eric Hiltz, South Carolina Department of Natural Resources
Matthew Maiello, NOAA Fisheries
Julie DeFilippi Simpson, Atlantic Coastal Cooperative Statistics Program
David Ulmer, NOAA Fisheries
Rob Watts, Maine Department of Marine Resources
Anna Webb, Massachusetts Division of Marine Fisheries
Jackie Wilson, NOAA Fisheries

Contractor
Facilitation will be provided by the Fisheries Information Systems Quality Management and Continuous Improvement Professional Specialty Group or the NOAA Facilitation Network. This resource is available because of the involvement in these groups by the ACCSP Deputy Director. A facilitator capable of leading small group sessions where specific topics can be covered and then full group sessions where small groups report out for a meeting of this length would cost an additional $20,000 if a contractor was hired.

Travel
The travel budget is based on an ASMFC average estimated $275 per day multiplied by number of meeting days multiplied by non-federal expected attendees plus staff. The in-person meeting is scheduled for 5 days to allow a sufficient amount of time to comprehensively cover the desired topics in-depth in small group settings and have higher level summarized conversations and decision making as needed in full plenary sessions. This time frame is based on other similar scientific and data fisheries meetings, such as stock assessment data workshops. More specifically, this time frame is the same as best practices workshops that have been held by SEDAR/SAFMC.

Supplies and Other Costs
In addition to the cost of the room(s) necessary to host a meeting that includes breakout sessions, facilitation of these types meetings will require materials for interactive sessions such as flip charts, markers, sticky notes, paper rolls, posters, and other supplies.

L. Summary for Ranking

Proposal Type

New

Primary Program Priority

100% Catch and Effort

Data Delivery Plan

A workshop report and other potential workshop products will be made publicly available through the ACCSP website.

Project Quality Factors

Multi-partner/Regional impact including broad application

This project includes all ACCSP partners across the entire region. The results of this workshop will be used to adapt the Atlantic Coast Standards, which have a significant impact on the Northeast, Mid-Atlantic, and Southeast regions.

Contains funding transition plan

This project is intended to be a single year of funding. As the need for future feeding may arise the AWG intends to seek alternative funding sources and leverage ACCSP internal funds prior to putting in another proposal.

In-kind contribution

The quantitative in-kind contribution is possible because of the involvement of the ACCSP Deputy Director's in Fisheries Information Systems and the Quality Management and Continuous Improvement Specialty Group. The total project costs of $69,976 include $20,000 (29%) of in-kind services.

Improvement in data quality/quantity/timeliness

This project is carrying out recommendations of the AWG report, which addressed the problem put forth by the Coordinating Council of "Data validation and accountability issues can compromise data quality and reduce their utility for stock assessments, compliance reports, and other management activities".

Potential secondary module as a by-product

There is no secondary module.

Impact on stock assessment

The responses from the data user survey helped the AWG to identify several issues. Examination of these issues led to the belief that the core of the issue was not the data, but rather communication between the data providers and users. Recommendations were developed by the group aimed at improving communication between these two groups. These recommendations include the workshop that is the core of this project.

Other factors

Innovating

Best practices workshops as a specific event have not previously been held by ACCSP, despite that numerous meetings and work have been directed to establishing best practices. This is a novel approach by ACCSP to streamline and minimize the burden on partners by consolidating the discussions and work to a few virtual meetings and a single week of in-person attendance.

Properly prepared

This proposal follows the guidelines and formats put forth in the ACCSP Funding Decision Process Document***.***

Merit

This project is a direct result of a report from a working group that was formed to respond to a charge from the Coordinating Council. It is a single year directed use of funds to forward the primary mission of the ACCSP and address the needs of the partners.

Geoff White

ACCSP Director

EXECUTIVE COMPETENCIES

- Committed to excellence and accountability
- Empowering leadership and inclusive management style
- Leveraging technology and cooperative approach
- Belief in holistic and integrated solutions
- Passion for strategic vision
- Project design and oversight
- Financial responsibility and accountability
- Effective communicator, writer and presenter
- Proven ACCSP ambassador

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SELECTED ACHIEVEMENTS

- Supported reduced fishery reporting burden through One Stop Reporting.
- Improved efficiency of APAIS data collection by integrating tablet data capture, Oracle database, SAS processing and delivery.
- Extended state conduct of MRIP FHTS and LPS with integrated web tools.
- Developed budget and managed over $4.5M annual funding for multiple MRIP surveys through ACCSP and 13 State Partners
- Initiated development of comprehensive for-hire data collection methods.
- Developed and implemented the MRIP APAIS Atlantic state conduct transition
- Conceived and implemented changes to improve availability of ACCSP data

EMPLOYMENT EXPERIENCE

***Director, ACCSP* 2019 – Present**
Responsible for ACCSP strategic direction through the Coordinating Council, and management of ongoing projects. Represent ASMFC and Atlantic states on data related topics in regional and national meetings.

***Recreational Program Manager ACCSP* 2015 – 2019**
Responsible for ACCSP's recreational fishery data standards and implementing state conduct of MRIP APAIS and FHTS surveys. Developed coastwide budgets, data collection, processing, and delivery systems. Managed local staff and guided partner staff in survey completion. Represented ACCSP and Atlantic states on MRIP Regional Council and at national meetings.

***Data Team Lead / Systems Admin ACCSP* 2008 – 2015**
Provided data team leadership and subject expertise for ACCSP data projects and priorities. Engineered transition to state conduct of MRIP APAIS. Responsible for ACCSP information systems maintenance including network, servers, oracle databases, and 2010 office relocation.

***Systems Admin -ACCSP* 2004–2008**
Responisble for the ACCSP's IT infrastructure. Provided subject expertise for partner data access, data translations, and development of web-based recreational and commercial queries.

Fisheries Specialist -ASMFC 1998–2004
Coordinated SEAMAP SA, staffed development of two multi-species assessment models, designed and implemented the Lobster Assessment Database, coordinated fisheries research programs and stock assessment reviews supporting fisheries management.

***Marine Scientist -VIMS* 1996–1998**
Estimated fishing mortality of tautog in Virginia waters. Project results accepted as Virginia's fishery status in the ASMFC Tautog FMP.

MANAGEMENT EXPERIENCE

- Managed multiple concurrent projects and contracts to extend ACCSP capabilities.
- Contributing member of MRIP Regional Implementation Council & MRIP NAS reviews.
- Extended development of the MRIP survey state conduct through leadership of three local staff and 160 remote partner staff.
- Coached RecTech Committee development of Atlantic Recreational Implementation Plan.
- Supported Cooperative agreement funding and management, including proposal writing, information gathering, contract oversight, and report submission.
- Demonstrated ability to bring together diverse groups on issues by coordinating and facilitating workshops.

FISHERIES EXPERIENCE

- Deep understanding of the ACCSP mission, activities, and partners gained over 24 years of working in consensus-driven environment of Atlantic coast fisheries management
- Adept at balancing state and federal partner needs in the development of coastwide data standards, data entry and query tools for recreational and commercial fisheries data
- Proven ability to understand fisheries stock assessment data needs

IT EXPERIENCE

Software Development – Strategic priorities for SAFIS capabilities. Managed and programmed projects to create Data Warehouse end user queries, APAIS web interface, APAIS Tablet application, API data transmission and FHTS CATI.

Oracle DBA – Managed 10 DB instances supporting coastwide standardization of fisheries data collection and dissemination.

Systems Administrator– Performed or directed data center implementation and support including network security & system availability.

EDUCATION & AWARDS

- B.S. Dickinson College
- M.S. Virginia Institute of Marine Science
- ASMFC Stock Assessment Training I-III
- Oracle PL/SQL, DB Administration, Windows & Linux Server Administration
- Project Management & Leadership Training
- ASMFC Employee of the Qtr 2003, 2011
- ASMFC Directors Meritorious Service 2017
- ASMFC Science & Technical Excellence 2019
- Eagle Scout, Boy Scouts of America

Atlantic Coastal Cooperative Statistics Program
1050 N. Highland Street, Suite 200A-N | Arlington, VA 22201
703.842.0780 | 703.842.0779 (fax) | www.accsp.org

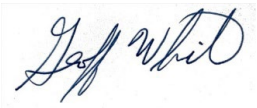
June 15, 2022

To the members of the Operations and Advisory Committees:

The FY2023 Administrative Budget contains a few changes. ACCSP leadership has made concerted efforts to maximize the potential of the administrative budget by finding additional sources of funding, which are outlined at the end of the proposal. We are also exploiting opportunities to gain efficiencies, which is evidenced in the budget reductions found in travel and internet connectivity. Additionally, the ASMFC has decreased its overhead rate from 16.81% to 12.94%. All of these efforts have resulted in a decrease in the Administrative Budget compared to FY2022.

Attachment I of the FY2023 Administrative Budget request, the 2019 ASMFC Strategic Plan (Goal 3), provides an overview of the high level tasks and milestones expected for the coming year.

Sincerely,



Geoff White

ACCSP Director

Funding Proposal
FY23 ACCSP Administrative Budget

Applicant Name:	Atlantic States Marine Fisheries Commission
Project Title:	Administrative Support to the Atlantic Coastal Cooperative Statistics Program
Principal Investigator:	Geoff White, Director, ACCSP
Requested Award Amount:	$2,206,609
Request Type:	Maintenance/Administrative
Requested Award Period:	March 1, 2023 through February 28, 2024

A. Goals

The Atlantic Coastal Cooperative Statistics Program (ACCSP) is a state-federal cooperative partnership between 23 entities responsible for fisheries management, and fisheries data collection on the Atlantic Coast: the 15 Atlantic coast states and the District of Columbia, two federal fisheries agencies (Commerce's NOAA Fisheries and Interior's U.S. Fish and Wildlife Service), three regional fisheries management councils (New England, Mid-Atlantic, and South Atlantic), the Potomac River Fisheries Commission, and the Atlantic States Marine Fisheries Commission (ASMFC). Partner agencies are listed in the original ACCSP Memorandum of Understanding.

The Program was established in 1995 to design, implement, and conduct marine fisheries statistics data collection programs and to integrate those data into a single data management system that will meet the needs of fishery managers, scientists, and the general public.

By establishing and maintaining data collection standards and providing a data management system that incorporates state and federal data, ACCSP will ensure that the best available statistics can be used for fisheries management.

B. Objectives

1. Manage and expand a fully integrated data set that represents the best available fisheries-dependent data;
2. Continue working with the program partners to improve fisheries data collection and management in accordance with the evolving ACCSP standards within the confines of limited funds;

3. Explore the allocation of existing Program funds and work with partners to pursue additional funding;
4. Maintain strong executive leadership and collaborative involvement among partners at all committee levels;
5. Monitor and improve the usefulness of products and services provided by the ACCSP;
6. Collaborate with program partners in their funding processes by providing outreach materials and other support to demonstrate the value of ACCSP products and the importance of maintaining base support for fishery-dependent data collection programs to state partners and their executive and legislative branches as well as to all other partner agencies; and,
7. Support nationwide systems as defined in the Magnuson-Stevens Fishery Conservation and Management Act (MSA).

C. Need

Various state and federal fishery management agencies on the Atlantic coast collect data on the status and trends of specific fish populations and the fisheries that utilize these resources; however, it is often difficult to develop sound recommendations to fisheries managers due to inconsistencies in the way data are collected and managed. The various data sets often cannot be integrated to provide accurate information at the state, regional, or coast-wide level. In addition, the disparate manner in which these data are collected and managed places duplicative burdens on fishermen and dealers reporting to multiple state and federal agencies and regions. Due to rapidly changing stock conditions, within-season regulatory changes and catch quotas have become common fishery management strategies. Timely and accurate harvest information for both recreational and commercial fisheries is required to determine the need for and effects of these management measures.

The Atlantic Coastal Fisheries Cooperative Management Act of 1993 mandated a cooperative state-federal program for the conservation of Atlantic coastal fisheries. Section 804 of the Act requires the Secretaries of Commerce and the Interior to develop a program to support state fisheries programs and those of the ASMFC, including improvements in statistics programs. Since the mid-1990s, the ASMFC has provided administrative support for this coordinated effort to improve data collection and management activities.

In 1995 the states, the ASMFC, and the federal fishery management agencies on the Atlantic coast entered into a Memorandum of Understanding (MOU) to develop and implement a cooperative state-federal statistics program that would meet the management needs of all participating agencies. All program partners signed the MOU for the ACCSP at the Commission's 54th Annual Meeting in Charleston, SC. Following signing, an Operations Plan was developed to outline the specific tasks and timetables required to develop and initiate implementation of this program. In October of 2016, an updated MOU was approved that made the ACCSP a program of the ASMFC. This governance change integrates the long-term and annual planning processes with those already in existence for the ASMFC and conform to policy as set by the ACCSP Coordinating Council.

D. Results and Benefits

The ACCSP developed and adopted 1999, 2004 and 2012 versions of the Program Design (now renamed Atlantic Coast Fisheries Data Collection Standards), which document the standards and protocols for collection and management of commercial, recreational, and for-hire fisheries statistics. Program partners developed and approved minimum data elements for collection of catch, effort, biological, social, and economic statistics. The ACCSP also developed standard codes and formats to ensure consistency of all data collected under the Program. These standards require periodic review and revision as the needs of fisheries managers and the state of the art of fisheries science change.

In 2000, the first version of the Data Warehouse was made available to the program partners. Since then, it has grown to encompass almost a 70 year time series of fisheries-dependent catch and effort data. Loading of biological data has begun. These data are constantly reviewed and updated as needed.

In 2004, the first version of the Standard Atlantic Fisheries Information System (SAFIS) eDR (electronic dealer reporting) was deployed, followed in 2008, by eTRIPS (electronic trip reporting). This system is used to collect data from commercial and recreational fishermen and dealers and is now deployed from Maine to Georgia. SAFIS is an ongoing and evolving system, requiring support, review, and revision.

The ACCSP will continue to reduce duplication of effort by dealers and fishermen, make more efficient use of limited funds, promote education of resource users, and provide a more complete information base for formulating management policies, strategies, and tactics for shared resources. An integrated multi-agency program using standard protocols for reporting compatible information will lead to more efficient and cost-effective use of current federally and state funded data collection and management programs. The ACCSP will reduce the burden on the fishing industry to provide information in multiple formats to multiple agencies, and will provide more accurate and timely information to achieve optimum public benefits from the use of fishery resources along the Atlantic coast. The ACCSP will ensure the timely dissemination of accurate data on commercial and recreational fisheries for use in stock assessments and fisheries management through a comprehensive and easily accessible data management system.

E. Approach

The ACCSP is managed collaboratively by committee: the Coordinating Council, composed of high level fisheries policy makers from all the program partners, is the governing body; the Operations Committee provides guidance in standards setting and funding priorities. An Advisory Committee provides industry input into the process. A number of other technical committees provide input into various aspects of the process.

Program planning builds on basic principles related to the goals stated in the ACCSP MOU:

- Development of data collection standards and the implementation of data collection programs will be done cooperatively, across jurisdictional lines;
- Consistent coast-wide data collection standards will be implemented by all program partners that include data on all fishing activities -- commercial, recreational and for-hire fisheries;
- Once achieved, data collection improvements will be maintained;
- These data will be loaded and maintained in a central data repository and provided to data users through a user-friendly query system;
- Program planning will be done collaboratively, by consensus;
- The program will be responsive and accountable to partner and end-user needs; and
- Focus on activities that yield maximum benefit.

Goal 3 of the ASMFC Strategic Plan (Attachment I) details activities to be conducted by ACCSP staff and committees under the FY23 Administrative Budget. As a program of the ASMFC, administrative support of ACCSP activities is funded through indirect charges of all ACCSP awards, including the Administrative Grant. Note that program activities and staff in support of the Marine Recreational Information Program are separately funded and therefore not included in this plan.

The ACCSP initially developed common standards collaboratively, by consensus, then began to work with program partners to implement the standards, according to a commonly agreed upon priority. All ACCSP technical committees, except for the Advisory Committee which is composed of industry and recreational representatives, are comprised of managers and staff of the partner agencies and set policy by consensus. Only the Coordinating Council votes directly on motions.

The standards, known as the Atlantic Coast Fisheries Data Collection Standards, for data collection and management are developed and maintained by ACCSP Technical Committees, with review and oversight by the Operations Committee, and advice from the Advisory Committee. The ACCSP Coordinating Council makes policy level decisions to adopt the program standards. The full-time ACCSP staff coordinates all activities conducted by the ACCSP.

The Atlantic Coast Fisheries Data Collection Standards documents all completed standards and provides the basic framework for full implementation of the ACCSP by all program partners. The ACCSP is continuously evolving as technology and the needs of management and science change over time. Therefore the *Standards* and supporting systems are always developing. Support for the implementation of ACCSP modules is provided by staff in various jurisdictions. To this end, funding is required to provide for full-time staff for all ACCSP activities, as well as for travel and meeting expenses.

The ACCSP Director, reporting to the Executive Director of the ASMFC, provides leadership for the Program, overall programmatic management and guidance, and is responsible for the day-to-day operations. The ACCSP Deputy Director supports the ACCSP Director on operation and development of the Program and is responsible for managing the competitive ACCSP funding process, coordinating cross-team project management, and providing support for a wide range of Program activities. The ACCSP Program Assistant provides assistance to the ACCSP Director and ACCSP Deputy Director, provides staff support for program and technical committees by drafting, maintaining and coordinating program documents, and publicizes the availability and benefits of the Program. The ACCSP IT Manager manages the information systems infrastructure and security and jointly coordinates the development and management of ACCSP data collection systems with the ACCSP Deputy Director. The Data Team Leader provides guidance for data compilation and dissemination related activities. The Recreational Team Lead coordinates MRIP survey implementation and recreational and for-hire data standards. The Data Coordinators and Developers provide programming services and system support required to develop and fine-tune the data management systems, assist users as they access the system and provide quality management and control. The Data Coordinators also complete custom data requests, QA/QC existing data, maintain data feeds, and directly participate in data intensive activities such as a stock assessment data workshops. The Software Team staff provides expert consultation to partners as they implement new reporting, and licensing/permitting systems. The Software Team will continue to support development of SAFIS.

ACCSP staff will follow Goal 3 of the ASMFC 2019 Strategic Plan during FY23, in consultation with all partners. Specific tasks to be accomplished during the period include initiation and maintenance of Partner data feeds from the commercial, recreational, and biological modules; implement registration tracking component of SAFIS redesign; maintenance of Federal Information Security Management Act procedures; and support of other partner projects by providing technical expertise as necessary.

The ASMFC has basic responsibility for the logistics of all committee meetings which support the development of the ACCSP, including: the ACCSP Coordinating Council, the ACCSP Operations Committee, the Advisory Committee, the Recreational Technical Committee, the Commercial Technical Committee, the Information Systems Committee, the Biological Review Panel, the Bycatch Prioritization Committee, the Standard Codes Committee. Full-time ACCSP personnel staff these committees for planning of work, providing minutes and other documents, and other follow-up.

The ACCSP has helped foster an improved atmosphere of cooperation among its partners. The Program has succeeded in establishing coast-wide fisheries data standards that all program partners have agreed to adopt. Data collection and management systems will be developed and deployed and maintained as the standards and Partner needs evolve. Program partners remain engaged in the process, and the program has made substantial progress towards its goals.

1. Geographic Location: Atlantic Coast (Maine through Florida); eTRIPS software is deployed in the Gulf of Mexico as part of the SERO For-Hire Program

2. Milestone Schedule: See Goal 3 of the ASMFC 2019 Strategic Plan (Attachment I)

This is a continuation from previous projects. Table 1 contains the base administrative budget amounts by year since implementation began in 1999.

Table 1. Administrative funding for ACCSP from 1999-2022

Year	Funding	Number of Staff
1999	$907,902	3
2000	$681,451	3
2001	$1,054,466	5
2002	$1,178,677	6
2003	$1,302,768	7
2004	$1,298,319	8
2005	$1,409,545	8
2006	$1,380,598	8
2007	$1,489,189	8
2008	$1,447,620	9
2009	$1,527,996	9
2010	$1,509,899	9
2011	$1,530,699	9
2012	$1,509,555	9
2013	$1,582,780	9
2014	$1,718,447	9.5
2015	$1,731,666	9.5
2016	$1,623,360	9.5
2017	$1,855,113	9.5
2018	$1,854,249	9.5
2019	$1,816,503	9.5
2020	$2,012,744	11
2021	$2,069,244	12
2022	$2,224,272	13

3. Cost Summary: The ACCSP requests $1,957,788 for administrative support, committee travel and systems operations during FY23. The addition of the 12.94% indirect rate raises the request to $2,211,126. The decrease in request from FY22 reflects an alternative funding source for the ACCSP help desk and FISMA, and the retirement of the Software Team Lead, duties assumed by ACCSP IT Manager and ACCSP Deputy Director, and replacement with a Software Programmer.

The funds used for the ACCSP shall be accounted for separately from all other ASMFC funds.

4. Personnel

Program personnel funded through this grant, except the Recreational Team Lead, are dedicated 100% to the ACCSP and are full-time employees of the Atlantic States Marine Fisheries Commission. Note that personnel associated with the MRIP state conduct and 85% of the Recreational Team Leader are funded under separate authority and not accounted for in this document. Fringe benefits which include health care, vision, dental, annual and sick leave are calculated at 28%. ASMFC salaries are kept confidential, thus only totals are displayed. Additionally, an agreement has been put in place with NMFS Highly Migratory Species (HMS) to partially fund the Information Systems Specialist responsible for maintaining HMS data feeds. The addition of a software development position would transition some contract support for mobile software maintenance to staff role.

- ACCSP Director - Geoff White
- ACCSP Deputy Director – Julie DeFilippi Simpson
- Program Assistant – Marisa Powell
- ACCSP IT Manager and Software Developer – Edward Martino
- Recreational Team Lead (15%) – Alex DiJohnson
- Software Developer – Jamal Oudiden
- Software Developer – Daniel Mestawat
- Software Developer – VACANT
- Data Team Lead – Michael Rinaldi
- Data Analyst - Jennifer Ni
- Senior Data Coordinator – Joseph Myers
- Senior Data Coordinator – Heather Konell
- Data Coordinator – Anna-Mai Christmas-Svajdlenka
- Data Coordinator – Adam Lee

Salaries and Wages		
Total Salary	$	1,321,846
Benefits @28%	$	370,117
Total Costs	$	1,691,962

5. Travel

Travel is broken down into two general categories; committee meetings and staff travel. The bulk of travel is in support of committee meetings. While significant savings have been achieved by using remote meeting technologies (such as online meetings), face-to-face meetings are often required to complete the tasks assigned. In general, each committee will have at least one face-to-face meeting during the year. In addition to staff travel to support committee meetings, staff travel is needed for implementation planning, data collection activities, outreach efforts, and information system development meetings with partners.

The Program funds fares to and from the meeting site, per diem according to Office of Personnel and Management guidelines and facilities costs for the meeting itself. (The daily rate per meeting includes cost of airfare or mileage, lodging, meals and other travel related expenses.) Reimbursable participants include state fisheries directors and biologists, state and university scientists, law enforcement personnel and citizen advisors from Maine through Florida. Meetings will be held in various locations on the Eastern Seaboard, including but not limited to: Annapolis, MD; Norfolk, VA; Charleston, SC; Philadelphia, PA; Alexandria, VA; Providence, RI; Jacksonville, FL; Washington, D.C.

The travel budget is based on an ASMFC average estimated $275 per day multiplied by meetings multiplied by days multiplied by non-federal membership plus staff.

In FY2023, there is a higher likelihood of in-person meetings considering the desire to interact in response to the lack of in-person interaction due to COVID. In addition, travel is currently more expensive than the previous calculated average. However, less meetings were held in-person in FY22 than anticipated. As such, travel costs are consistent with the previous year as the carry-over will cover additional expected costs in FY2023.

Committee Travel	**Meetings**	**Days**	**Membership**	**Total**	**Staff**	**Total**	**Grand Total**
Biological Review panel	1	1.5	15	$6,188	1	$413	$6,600
Bycatch Prioritization	1	1	15	$4,125	1	$275	$4,400
Commercial Technical Committee	1	1	15	$4,125	1	$275	$4,400
Coordinating Council (with ASMFC)	2	0.5	12	$3,300	2	$550	$3,850
Operations and Advisory Committees	1	2.5	20	$13,750	2	$1,375	$15,125
Recreational Technical	1	2	15	$8,250	1	$550	$8,800
Information Systems Committee	1	1	15	$4,125	1	$275	$4,400
Total Committees				$43,863		$3,713	$47,575
Staff Travel							
Partner Coordination	5	2	2	$5,500			
Data Support (Stock Assessment etc)	1	5	2	$2,750			
IT/SAFIS Support	3	1	1	$825			
Outreach/Training	4	1	1	$1,100			
GulfFIN Coordination	2	1.5	1	$825			
Staff Training	2	4	2	$4,400			
Total Staff Travel				$15,400			
Grand Total							$62,975

Attachment II provides the FY22 schedule of the funding cycle and calendar of meetings, which serves as a tentative schedule for FY23.

6. Supplies

Supply costs include supplies not covered by the ASMFC indirect. This includes ACCSP specific materials for outreach, smaller information systems items such as network switches and cables.

Supplies	
Misc Hardware (cables, network hubs etc)	$4,651
Backup Tapes	$1,000
Total	$5,651

7. Equipment

ACCSP maintains several large server systems and related hardware in support of the Data Warehouse, website, SAFIS and administrative functions. These systems typically have a 5 year life cycle after which they require upgrade or replacement. In cases of the larger items, lease options have been explored, but it appears that, in part due to current staffing, it is more cost effective to own and maintain the equipment internally.

Included in the costs are normal life cycle replacements of laptop and desktop systems, assuming replacement of 3 systems annually. Costs are based upon current market surveys and an estimate of our needs. In FY23, we will require replacement of two servers.

Equipment	
Infrastructure Replacements (two servers)	$12,000
Desktop/Laptop Systems	$ 4,500
Total	**$16,500**

8. Other Costs

Hardware and software support are supplied by a number of different vendors and includes costs associated with licensing and maintenance fees (such as *Oracle* licensing).

The Program maintains a high speed internet connection and associated infrastructure in support of the server systems. The primary internet connection is covered by ASMFC. The second connection, using an entirely different technology and provider provides redundancy to the

primary connection in case of failure. The system is configured to automatically fail over in the event of a failure of the primary internet connection. A previously maintained ACCSP funded connection dedicated to the NOAA Fisheries Greater Atlantic Regional Fisheries Office (GARFO) to provide full time secure connectivity requested by the Region has been replaced with a VPN connection through NOAA's OCIO office. Coordination of ACCSP with the OCIO has resulted in a permanent decrease in costs in this area by about $10,000.

Outside vendors include Hewlett Packard for systems hardware and software support; Oracle for database management systems support; DLT Solutions and Trident Solutions for hardware support. All pricing is based on the GSA schedule.

Software maintenance and development workload at times exceeds staff's resources. Contract services will be utilized to provide services that staff may be unable to perform.

E-Reporting Support

Funds are requested for electronic reporting outreach and support activities. Interest among state Partners and harvesters has been steadily rising and a steady stream of new users are adopting the system where agencies will accept electronic reports though SAFIS. In addition, recent and pending management actions mandate electronic reporting. SAFIS eTrips in both the mobile and on-line versions are likely to be used by the majority of harvesters as the reporting tool. This will be especially true in FY2022 and FY2023 as eTRIPS will be the only application on the east coast that will be considered compliant with the One Stop Reporting (OSR) requirements. In addition, the majority of trips will be reported to the SAFIS system regardless of the tool selected.

Funds requested include both costs associated with initial deployment and ongoing support. Initial startup costs include, but are not limited to, in-person and virtual training workshops for harvesters and partner agency personnel and published training guides and videos that will be available via the ACCSP website. ACCSP continues to contract for help desk support for SAFIS which includes 24/7 helpdesk support, a toll free number to contact support personnel, and a helpdesk ticketing program designed to keep track of all requests and provide feedback to the Program. The ACCSP Director and ASMFC Executive Director have secured external funding to support the help desk and FISMA costs in FY2023.

Other Expenses	**2023**
Software Support	$60,000
Hardware Support	$7,500
Communications/Internet Connectivity	$16,700
Printing (outreach)	$2,500
Software Development	$90,000
Help Desk Support	$0
Total	**$176,700**

Budget Summary

Budget Summary	**2023**
Personnel	**$1,321,846**
Fringe Benefits	**$370,117**
Travel	**$62,975**
Equipment	**$27,500**
Supplies	**$5,651**
Other	**$176,700**
Total Program	**$1,957,788**
ASMFC Overhead (12.94%)	**$253,338**
Total Proposal	**$2,206,609**

Resources actively sought to support ACCSP activities in addition to the Administrative Grant

2023 Support	**Coverage**	**Funding Expected**
HMS	Partial Data Analyst	$ 40,000
FIS Quality Management FY22 Proposal	Implementation of Automated Data Auditing Validation for Electronic Logbooks	$ 116,810
FIS FIN Development FY22 Proposal	Federal Information Security Management Act Compliance	$ 105,129
NOAA Fisheries Office of Science and Technology	ACCSP SAFIS Help Desk and FISMA Support	$215,000
MRIP	State Conduct of MRIP APAIS, FHTS ME-GA, and additional surveys in some states (LPIS in ME, Catch Cards in MD & NC, and LPBS in NC). Includes Recreational Team Staff (4).	Total Grant: $5,912,000 ACCSP: $ 540.305

ATLANTIC STATES MARINE FISHERIES COMMISSION

Five-Year Strategic Plan 2019-2023

The nation behaves well if it treats the natural resources as assets which it must turn over to the next generation increased and not impaired in value.

Theodore Roosevelt

Introduction

Each state has a fundamental responsibility to safeguard the public trust with respect to its natural resources. Fishery managers are faced with many challenges in carrying out that responsibility. Living marine resources inhabit ecosystems that cross state and federal jurisdictions. Thus, no state, by itself, can effectively protect the interests of its citizens. Each state must work with its sister states and the federal government to conserve and manage natural resources.

Beginning in the late 1930s, the 15 Atlantic coastal states from Maine to Florida took steps to develop cooperative mechanisms to define and achieve their mutual interests in coastal fisheries. The most notable of these was their commitment to form the Atlantic States Marine Fisheries Commission (Commission) in 1942, and to work together through the Commission to promote the conservation and management of shared marine fishery resources. Over the years, the Commission has remained an effective forum for fishery managers to pursue concerted management actions. Through the Commission, states cooperate in a broad range of programs including interstate fisheries management, fisheries science, habitat conservation, and law enforcement.

Congress has long recognized the critical role of the states and the need to support their mutual efforts. Most notably, it enacted the Atlantic Coastal Fisheries Cooperative Management Act (Atlantic Coastal Act) in 1993, which built on the success of the Atlantic Striped Bass Conservation Act of 1984. Acknowledging that no single governmental entity has exclusive management authority for Atlantic coastal fishery resources, the Atlantic Coastal Act recognizes the states' responsibility for cooperative fisheries management through the Commission. The Atlantic Coastal Act charges all Atlantic states with implementing coastal fishery management plans that will safeguard the future of Atlantic coastal fisheries in the interest of both fishermen and the nation.

Accepting these challenges and maintaining their mutual commitment to success, the Atlantic coastal states have adopted this five-year Strategic Plan. The states recognize circumstances today make the work of the Commission more important than ever before. The Strategic Plan articulates the mission, vision, goals, and objectives needed to accomplish the Commission's mission. It serves as the basis for annual action planning, whereby Commissioners identify the highest priority issues and activities to be addressed in the upcoming year. With 27 species currently managed by the Commission, finite staff time, Commissioner time and funding, as well as a myriad of other factors impacting marine resources (e.g., changing ocean conditions, protected species interactions, offshore energy, and aquaculture), Commissioners recognize the absolute need to prioritize activities, dedicating staff time and resources where they are needed most and addressing less pressing issues as resources allow. Efforts will be made to streamline management by using multi-year specifications where possible and increase stability/predictability in fisheries management through less frequent regulatory changes. A

key to prioritizing issues and maximizing efficiencies will be working closely with the three East Coast Regional Management Councils and NOAA Fisheries.

Mission

The Commission's mission, as stated in its 1942 Compact, is:

> *To promote the better utilization of the fisheries, marine, shell and anadromous, of the Atlantic seaboard by the development of a joint program for the promotion and protection of such fisheries, and by the prevention of physical waste of the fisheries from any cause.*

The mission grounds the Commission in history. It reminds every one of the Commission's sense of purpose that has been in place for over 77 years. The constantly changing physical, political, social, and economic environments led the Commission to restate the mission in more modern terms:

> *To promote cooperative management of marine, shell and diadromous fisheries of the Atlantic coast of the United States by the protection and enhancement of such fisheries, and by the avoidance of physical waste of the fisheries from any cause.*

The mission and nature of the Commission as a mutual interstate body incorporate several guiding principles. They include:

- States are sovereign entities, each having its own laws and responsibilities for managing fishery resources within its jurisdiction
- States serve the broad public interest and represent the common good
- Multi-state resource management is complex and dependent upon cooperative efforts by all states involved
- The Commission provides a critical sounding board on issues requiring cross-jurisdictional action, coordinating cooperation, and collaboration among the states and federal government

Vision

The long-term vision of the Commission is:

Sustainable and Cooperative Management of Atlantic Coastal Fisheries

Values

The Commission and its member states have adopted the following values to guide its operations and activities. These values affirm the Commission's commitment to sustainable

fisheries management for the benefit of recreational and commercial fishermen and coastal communities. They also acknowledge the growing importance of managing fisheries in a more holistic and adaptive way, seeking solutions to cross cutting resource issues that lead to long-term ecological and socio-economic sustainability.

- Effective stewardship of marine resources through strong partnerships
- Decisions based on sound science
- Long-term ecological sustainability
- Transparency and accountability in all actions
- Timely response to new information through adaptive management
- Balancing resource conservation with the economic success of coastal communities
- Efficient use of time and fiscal resources
- Work cooperatively with honesty, integrity, and fairness

Driving Forces

The Commission and its actions are influenced by a multitude of factors. These factors are constantly evolving and will most likely change over the time period of this Strategic Plan. However, the most pressing factors affecting the Commission today are changing ocean conditions, resource allocation, the quality and quantity of scientific information, competing ocean uses, a growing demand to address ecosystem functions, and interactions between fisheries and protected species. The Strategic Plan, through its goals and broad objectives, will seek to address each of these issues over the next five years.

Changing Ocean Conditions

Changes in ocean temperature, currents, acidification, and sea level rise are affecting nearly every facet of fisheries resources and management at the state, interstate, and federal levels. Potential impacts to marine species include prey and habitat availability, water quality, susceptibility to disease, and spawning and reproductive potential. The distribution and productivity of fishery stocks are often changing at a rate faster than fisheries stock assessments and management can keep pace with. Several Commission species, such as northern shrimp, Southern New England lobster, Atlantic cobia, black sea bass, and summer flounder are already responding to changes in the ocean. In the case of northern shrimp and Southern New England lobster, warming ocean waters have created inhospitable environments for species reproduction and survivability. For cobia, black sea bass, and summer flounder, changing ocean conditions have contributed to shifts in species distributions, with some species expanding their ranges and others moving into deeper and/or more northern waters to stay within preferred temperature ranges. Where shifts are occurring, the Commission may need to reconsider state-by-state allocation schemes and make adjustments to our fishery management plans. For other species depleted due to factors other than fishing mortality (e.g., habitat degradation and availability, predation), the states will need to explore steps that can be taken to aid in species recovery. And, if a stock's viability is compromised, Commission resources and

efforts should be shifted to other species that can be recovered or maintained as a rebuilt stock.

Allocation

As noted above, resource allocation among the states and between various user groups will continue to be an important issue over the next five years. Many of the Commission FMPs divvy up the available harvestable resource through various types of allocation schemes, such as by state, region, season, or gear type. The changing distribution of many species has further complicated the issue of resource allocation with traditional allocation schemes being challenged and a finite amount of fishery resources to be shared. Discussion may be difficult and divisive, with some states (and their stakeholders) wanting to maintain their historic (traditional) allocations, while others are seeking a greater share of the resource given increased abundance and availability in their waters. States will need to seek innovative ways to reallocate species so that collectively all states feel their needs are met. What will be required to successfully navigate these discussions and decisions is the commitment of the states to work through the issues with honesty, integrity, and fairness, seeking outcomes that balance the needs of the states and their stakeholders with the ever changing realities of shifting resource abundance and availability.

Science as the Foundation

Accurate and timely scientific information form the basis of the Commission's fisheries management decision-making. Continued investments in the collection and management of fishery-dependent and -independent data remain a high priority for the Commission and its member states. The challenge will be to maintain and expand data collection efforts in the face of shrinking state and federal budgets. Past and current investments by state, regional and federal partners of the Atlantic Coastal Cooperative Statistics Program (ACCSP) have established the program as the principal source of marine fishery statistics for the Atlantic coast. State and regional fishery-independent data collection programs, in combination with fishery statistics, provide the scientific foundation for stock assessments. Many data collection programs will continue to be strained by budget restrictions, scientists' workload capacities, and competing priorities. The Commission remains committed to pursuing long-term support for research surveys and monitoring programs that are critical to informing management decisions and resource sustainability.

Ecosystem Functions

Nationally, there has been a growing demand for fisheries managers to address broader ecosystem functions such as predator-prey interactions and environmental factors during their fisheries management planning. Ecosystem science has improved in recent years, though the challenges of comprehensive data collection continue. A majority of the Commission's species are managed and assessed on a single species basis. When ecosystem information is available, the Commission has managed accordingly to provide ecosystem services. The Commission remains committed to seeking ecological sustainability over the long-term through continuing its work on multispecies assessment modeling and the development of ecosystem-based reference points in its fisheries management planning process.

Competing Ocean Uses

Marine spatial planning has become an increasingly popular method of balancing the growing demands on valuable ocean resources. More specifically, the competing interests of commercial and recreational fishing, renewable energy development, aquaculture, marine transportation, offshore oil exploration and drilling, military needs, and habitat restoration are all components that must be integrated into successful ocean use policies. The Commission has always emphasized cooperative management with our federal partners; however, the states' authorities in their marine jurisdictions must be preserved and respected. The Commission will continue to prioritize the successful operation of its fisheries, but it will be imperative to work closely with federal, state, and local governments on emerging ocean use conflicts as they diversify into the future.

Protected Species

Like coastal fishery resources, protected species, such as marine mammals, sea turtles, and listed and candidate fish species, traverse both state and federal waters. The protections afforded these species under the Marine Mammal Protection Act and Endangered Species Act can play a significant role in the management and prosecution of Atlantic coastal fisheries. The Commission and the states have a long history of supporting our federal partners to minimize interactions with and bycatch of marine mammals and sea turtles. The listing of Atlantic sturgeon under the Endangered Species Act has added a whole new level of complexity in the ability of the Commission and its member states to carry out their stewardship responsibilities for these important diadromous species. The species spends the majority of its life in state waters and depend on estuarine and riverine habitat for their survival. Listing has the potential to jeopardize the states' ability to effectively monitor and assess stock condition, as well as impact fisheries that may encounter listed species. It is incumbent upon the Commission and its federal partners to work jointly to assess stock health, identify threats, and implement effective rebuilding programs for listed and candidate species.

More recently, the depleted status of the Northern right whale population and the potential impacts to this population by entanglement in fishing gear, particularly lobster and crab gear, has heighted concern for both whales and the lobster industry.

Increased Cooperation and Collaboration among the States and between the States and Our Federal Partners

Demands for ecosystem-based fisheries management, competing and often conflicting ocean uses, and legislative mandates to protect marine mammals and other protected species, further complicate fisheries management and require quality scientific information to help guide management decisions. There is a growing concern among fishery managers that some "control" over fisheries decisions and status has been diminished due to political intervention and our inability to effect changing ocean conditions and other environmental factors that impact marine resources. Fisheries management has never been more complex or politically charged. State members are pulled between what is best for their stakeholders versus what is best for the resource and the states as a whole.

While the issues may seem daunting, they are not insurmountable. In order for the Commission to be successful, the states must recommit to their collective vision of "Sustainable and Cooperative Management of Atlantic Coastal Fisheries," recognizing that their strength lies in working together to address the fisheries issues that lie ahead. Given today's political and environmental realities, the need for cooperation among the states has never been more important. It is also critical the states and their federal partners seek to strengthen their cooperation and working relationships, providing for efficient and effective fisheries management across all agencies. No one state or federal agency has the resources, authority, or ability to do it alone.

GOALS & OBJECTIVES

The Commission will pursue the following eight goals and their related strategies during the five-year planning period, from 2019 through 2023. It will pursue these goals through specific objectives, targets, and milestones outlined in an annual Action Plan, which is adopted each year at the Commission's Annual Meeting to guide the subsequent year's activities. Throughout the year, the Commission and its staff will monitor progress in meeting the Commission's goals, and evaluate the effectiveness of the strategies. While committed to the objectives included in this plan, the Commission is ready to adopt additional objectives to take advantage of new opportunities and address emerging issues as they arise.

Goal 1 - Rebuild, maintain, fairly allocate, and promote sustainable Atlantic coastal fisheries

Goal 1 focuses on the responsibility of the states to conserve and manage Atlantic coastal fishery resources for sustainable use. Commission members will advocate decisions to achieve the long-term benefits of conservation, while balancing the socio-economic interests and needs of coastal communities. Inherent in this is the recognition that healthy and vibrant resources benefit stakeholders. The states are committed to proactive management, with a focus on integrating ecosystem services, socio-economic impacts, habitat issues, bycatch and discard reduction measures, and protected species interactions into well-defined fishery management plans. Fishery management plans will also address fair allocation of fishery resources among the states. Understanding changing ocean conditions and their impact on fishery productivity and distribution is an elevated priority. Successful management under changing ocean conditions will depend not only on adjusting management strategies, but also in reevaluating and revising, as necessary, the underlying conservation goals and objectives of fishery management plans. Improving cooperation and coordination with federal partners and stakeholders can streamline efficiency, transparency, and, ultimately, success. In the next five years, the Commission is committed to ending overfishing and working to rebuild overfished Atlantic coast fish stocks, while promoting sustainable harvest of and access to rebuilt fisheries. Where possible, the Commission will seek to aid in the rebuilding of depleted stocks, whose recovery is hindered by factors other than fishing pressure.

Annual action planning will be guided by the following objectives:

- Manage interstate resources that provide for productive, sustainable fisheries using sound science
- Strengthen state and federal partnerships to improve comprehensive management of shared fishery resources
- Adapt management to address emerging issues
- Practice efficient, transparent, and accountable management processes
- Evaluate progress towards rebuilding fisheries
- Promote sustainable harvest of and access to rebuilt fisheries
- Strengthen interactions and input among stakeholders, technical, advisory, and management groups

Goal 2 – Provide sound, actionable science to support informed management actions

Sustainable management of fisheries relies on accurate and timely scientific advice. The Commission strives to produce sound, actionable science through a technically rigorous, independently peer-reviewed stock assessment process. Assessments are developed using a broad suite of fishery-independent surveys and fishery-dependent monitoring, as well as research products developed by a broad network of fisheries scientists at state, federal, and academic institutions along the coast. The goal encompasses the development of new, innovative scientific research and methodology, and the enhancement of the states' stock assessment capabilities. It provides for the administration, coordination, and expansion of collaborative research and data collection programs. Achieving the goal will ensure sound science is available to serve as the foundation for the Commission's evaluation of stock status and adaptive management actions.

Annual action planning will be guided by the following objectives:

- Conduct stock assessments based on comprehensive data sources and rigorous technical analysis;
- Characterize the risk and uncertainty associated with the scientific advice provided to decision-makers
- Provide training to enhance the expertise and involvement of state and staff scientists in the development of stock assessments
- Streamline data assimilation within individual states, and among states and ASMFC
- Proactively address research priorities through cooperative state and regional data collection programs and collaborative research projects, including stakeholder involvement
- Explore the use of new technologies to improve surveys, monitoring, and the timeliness of scientific products
- Promote effective communication with stakeholders to ensure on-the-water observations and science are consistent

- Utilize ecosystem and climate science products to inform fisheries management decisions

Goal 3 - Produce dependable and timely marine fishery statistics for Atlantic coast fisheries

Effective management depends on quality fishery-dependent data and fishery-independent data to inform stock assessments and fisheries management decisions. While Goal 2 of this Action Plan focuses on providing sound, actionable science and fishery-independent data to support fisheries management, Goal 3 focuses on providing timely, accurate catch and effort data on Atlantic coast recreational, for-hire, and commercial fisheries.

Goal 3 seeks to accomplish this through the activities of the Atlantic Coastal Cooperative Statistics Program (ACCSP), a cooperative state-federal program that designs, implements, and conducts marine fisheries statistics data collection programs and integrates those data into data management systems that will meet the needs of fishery managers, scientists, and fishermen. ACCSP partners include the 15 Atlantic coast state fishery agencies, the three Atlantic Fishery Management Councils, the Potomac River Fisheries Commission, NOAA Fisheries, and the U.S. Fish and Wildlife Service.

Annual action planning will be guided by the following objectives:

- Focus on activities that maximize benefits, are responsive and accountable to partner and end-user needs, and are based on available resources.
- Cooperatively develop, implement, and maintain coastwide data standards through cooperation with all program partners
- Provide electronic applications that improve partner data collection
- Integrate and provide access to partner data via a coastwide repository
- Facilitate fisheries data access through an on-line, user-friendly, system while protecting confidentiality
- Support technological innovation

Goal 4 – Protect and enhance fish habitat and ecosystem health through partnerships and education

Goal 4 aims to conserve and improve coastal, marine, and riverine habitat to enhance the benefits of sustainable Atlantic coastal fisheries and resilient coastal communities in the face of changing ecosystems. Habitat loss and degradation have been identified as significant factors affecting the long-term sustainability and productivity of our nation's fisheries. The Commission's Habitat Program develops objectives, sets priorities, and produces tools to guide fisheries habitat conservation efforts directed towards ecosystem-based management.

The challenge for the Commission and its state members is maintaining fish habitat under limited regulatory authority for habitat protection or enhancement. Therefore, the Commission will work cooperatively with state, federal, and stakeholder partnerships to achieve this goal. Much of the work to address habitat is conducted through the Commission's Habitat and Artificial Reef Committees. In order to identify fish habitats of concern for Commission managed species, each year the Habitat Committee reviews existing reference documents for Commission-managed species to identify gaps or updates needed to describe important habitat types and review and revise species habitat factsheets. The Habitat Committee also publishes an annual issue of the *Habitat Hotline Atlantic*, highlighting topical issues that affect all the states.

The Commission and its Habitat Program endorses the National Fish Habitat Partnership, and will continue to work cooperatively with the partnership to improve aquatic habitat along the Atlantic coast. Since 2008, the Commission has invested considerable resources, as both a partner and administrative home, to the Atlantic Coastal Fish Habitat Partnership (ACFHP), a coastwide collaborative effort to accelerate the conservation and restoration of habitat for native Atlantic coastal, estuarine-dependent, and diadromous fishes. As part of this goal, the Commission will continue to provide support for ACFHP, under the direction of the National Fish Habitat Partnership Board.

Annual action planning will be guided by the following objectives:

- Identify fish habitats of concerns through fisheries management programs and partnerships
- Educate Commissioners, stakeholders, and the general public about the importance of habitat to healthy fisheries and ecosystems
- Better integrate habitat information and data into fishery management plans and stock assessments
- Engage local state, and regional governments in mutually beneficial habitat protection and enhancement programs
- Foster partnerships with management agencies, researchers, and habitat stakeholders to leverage scientific, regulatory, political, and financial support
- Work with ACFHP to foster partnerships with like-minded organizations at local levels to further common habitat goals

Goal 5 – Promote compliance with fishery management plans to ensure sustainable use of Atlantic coast fisheries

Fisheries managers, law enforcement personnel, and stakeholders have a shared responsibility to promote compliance with fisheries management measures. Activities under the goal seek to increase and improve compliance with fishery management plans. This requires the successful coordination of both management and enforcement activities among state and federal agencies. Commission members recognize that adequate and consistent enforcement of fisheries rules is required to keep pace with increasingly complex

management activity and emerging technologies. Achieving the goal will improve the effectiveness of the Commission's fishery management plans.

Annual action planning will be guided by the following objectives:

- Develop practical compliance requirements that foster stakeholder buy-in
- Evaluate the enforceability of management measures and the effectiveness of law enforcement programs
- Promote coordination and expand existing partnerships with state and federal natural resource law enforcement agencies
- Enhance stakeholder awareness of management measures through education and outreach
- Use emerging communication platforms to deliver real time information regarding regulations and the outcomes of law enforcement investigations

Goal 6 – Strengthen stakeholder and public support for the Commission

Stakeholder and public acceptance of Commission decisions are critical to our ultimate success. For the Commission to be effective, these groups must have a clear understanding of our mission, vision, and decision-making processes. The goal seeks to do so through expanded outreach and education efforts about Commission programs, decision-making processes, and its management successes and challenges. It aims to engage stakeholders in the process of fisheries management, and promote the activities and accomplishments of the Commission. Achieving the goal will increase stakeholder participation, understanding, and acceptance of Commission activities.

Annual action planning will be guided by the following objectives:

- Increase public understanding and support of activities through expanded outreach at the local, state, and federal levels
- Clearly define Commission processes to facilitate stakeholder participation, as well as transparency and accountability
- Strengthen national, regional, and local media relations to increase coverage of Commission actions
- Use new technologies and communication platforms to more fully engage the broader public in the Commission's activities and actions

Goal 7 – Advance Commission and member states' priorities through a proactive legislative policy agenda

Although states are positioned to achieve many of the national goals for marine fisheries through cooperative efforts, state fisheries interests are often underrepresented at the national level. This is due, in part, to the fact that policy formulation is often disconnected from the processes that provide the support, organization, and resources necessary to implement the policies. The capabilities and input of the states are an important aspect of

developing national fisheries policy, and the goal seeks to increase the states' role in national policy formulation. Additionally, the goal emphasizes the importance of achieving management goals consistent with productive commercial and recreational fisheries and healthy ecosystems.

The Commission recognizes the need to work with Congress in all phases of policy formulation. Several important fishery-related laws will be reauthorized over the next couple of years (i.e., Atlantic Coastal Act, Magnuson-Stevens Fishery Conservation and Management Act, Interjurisdictional Fisheries Act, Atlantic Striped Bass Conservation Act, and Anadromous Fish Conservation Act). The Commission will be vigilant in advancing the states' interests to Congress as these laws are reauthorized and other fishery-related pieces of legislation are considered.

Annual action planning will be guided by the following objectives:

- Increase the Commission's profile and support in the U.S. Congress by developing relationships between Members and their staff and Commissioners, the Executive Director, and Commission staff
- Maintain or increase long term funding for Commission programs through the federal appropriations process and other available sources.
- Engage Congress on fishery-related legislation affecting the Atlantic coast
- Promote member states' collective interests at the regional and national levels
- Promote economic benefits of the Commission's actions (return on investment)

Goal 8 – Ensure the fiscal stability & efficient administration of the Commission

Goal 8 will ensure that the business affairs of the Commission are managed effectively and efficiently, including workload balancing through the development of annual action plans to support the Commission's management process. It also highlights the need for the Commission to efficiently manage its resources. The goal promotes the efficient use of legal advice to proactively review policies and react to litigation as necessary. It also promotes human resource policies that attract talented and committed individuals to conduct the work of the Commission. The goal highlights the need for the Commission as an organization to continually expand its skill set through training and educational opportunities. It calls for Commissioners and Commission staff to maintain and increase the institutional knowledge of the Commission through periods of transition. Achieving this goal will build core strengths, enabling the Commission to respond to increasingly difficult and complex fisheries management issues.

Annual action planning will be guided by the following objectives:

- Conservatively manage the Commission's operations and budgets to ensure fiscal stability
- Utilize new information technology to improve meeting and workload efficiencies, and enhance communications

- Refine strategies to recruit professional staff, and enhance growth and learning opportunities for Commission and state personnel
- Fully engage new Commissioners in the Commission process and document institutional knowledge.
- Utilize legal advice on new management strategies and policies, and respond to litigation as necessary.

Atlantic Coastal Cooperative Statistics Program
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This list includes dates for fiscal year 2022, including ACCSP committee meetings, relevant dates of the funding cycle, as well as meetings or conferences ACCSP typically attends or which may be of interest to our partners. If you have any questions or comments on this calendar please do not hesitate to contact the ACCSP staff at info@accsp.org.

Feb 1-3:	NEFMC Meeting – Portsmouth, NH
Feb 7:	Recreational Technical Committee – Webinar
Feb 8-10:	MAFMC Meeting – Durham, NC
Feb 9:	Biological Review Panel Annual Meeting – Webinar
Feb 9:	Bycatch Prioritization Committee Annual Meeting –Webinar
Feb 22:	Atlantic Coast FHTS Training– Webinar
Feb 23-24:	Atlantic Coast APAIS Training– Webinar
Mar 1:	Start of ACCSP FY22
Mar 2:	Information Systems Committee Annual Meeting – Webinar
Mar 3:	Commercial Technical Committee Annual Meeting – Webinar
Mar 7-11:	SAFMC Meeting – Jekyll Island, GA
Apr 5-7:	MAFMC Meeting – Galloway, NJ
Apr 12-14:	NEFMC Meeting – Mystic, CT
Week of April 11:	Operations and Advisory Committees Spring Meeting – Webinar
Week of April 11:	Recreational Technical Committee – Webinar
May 2-5:	ASMFC/Coordinating Council Meeting – Arlington, VA
May 11:	ACCSP issues request for proposals
Late May:	APAIS Wave 2 Meeting – Webinar
Jun 7-9:	MAFMC Meeting – Riverhead, NY
Jun 13-17:	SAFMC Meeting – Key West, FL
Jun 15:	Initial proposals are due
Jun 22:	Initial proposals are distributed to Operations and Advisory Committees
Jun 28-30:	NEFMC Meeting – Portland, ME
July 6:	Any initial written comments on proposals due
Week of Jul 11:	Review of initial proposals by Operations and Advisory Committees – Webinar
July 20:	If applicable, any revised written comments due
Week of Jul 25:	Feedback submitted to principal investigators
Late July:	APAIS Wave 3 Meeting – Webinar
Aug 1-4:	ASMFC Meeting/Coordinating Council Meeting – Arlington, VA

Aug 8-11:	MAFMC Meeting – Philadelphia, PA
Aug 17:	Revised proposals due
Aug 24:	Revised proposals distributed to Operations and Advisory Committees
Week of Sep 5:	Preliminary ranking exercise for Advisors and Operations Members – Webinar
Sep 12-16:	SAFMC Meeting – Charleston, SC
Sep 20-21:	Annual Advisors/Operations Committee Joint Meeting (in-person; location TBD)
Sep 27-29:	NEFMC Meeting – Gloucester, MA
Late October:	APAIS Wave 4 Meeting – Webinar
Oct 4-6:	MAFMC Meeting – Dewey Beach, DE
Oct 19-21:	ASMFC Annual Meeting/Coordinating Council Meeting – Webinar
Dec 5-9:	SAFMC Meeting – Wrightsville Beach, NC
Dec 6-8:	NEFMC Meeting – Newport, RI
Dec 12-15:	MAFMC Meeting – Annapolis, MD

Geoff White

ACCSP Director

EXECUTIVE COMPETENCIES

- Committed to excellence and accountability
- Empowering leadership and inclusive management style
- Leveraging technology and cooperative approach
- Belief in holistic and integrated solutions
- Passion for strategic vision
- Project design and oversight
- Financial responsibility and accountability
- Effective communicator, writer and presenter
- Proven ACCSP ambassador

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SELECTED ACHIEVEMENTS

- Supported reduced fishery reporting burden through One Stop Reporting.
- Improved efficiency of APAIS data collection by integrating tablet data capture, Oracle database, SAS processing and delivery.
- Extended state conduct of MRIP FHTS and LPS with integrated web tools.
- Developed budget and managed over $4.5M annual funding for multiple MRIP surveys through ACCSP and 13 State Partners
- Initiated development of comprehensive for-hire data collection methods.
- Developed and implemented the MRIP APAIS Atlantic state conduct transition
- Conceived and implemented changes to improve availability of ACCSP data

EMPLOYMENT EXPERIENCE

***Director, ACCSP* 2019 – Present**
Responsible for ACCSP strategic direction through the Coordinating Council, and management of ongoing projects. Represent ASMFC and Atlantic states on data related topics in regional and national meetings.

***Recreational Program Manager ACCSP* 2015 – 2019**
Responsible for ACCSP's recreational fishery data standards and implementing state conduct of MRIP APAIS and FHTS surveys. Developed coastwide budgets, data collection, processing, and delivery systems. Managed local staff and guided partner staff in survey completion. Represented ACCSP and Atlantic states on MRIP Regional Council and at national meetings.

***Data Team Lead / Systems Admin ACCSP* 2008 – 2015**
Provided data team leadership and subject expertise for ACCSP data projects and priorities. Engineered transition to state conduct of MRIP APAIS. Responsible for ACCSP information systems maintenance including network, servers, oracle databases, and 2010 office relocation.

***Systems Admin -ACCSP* 2004–2008**
Responisble for the ACCSP's IT infrastructure. Provided subject expertise for partner data access, data translations, and development of web-based recreational and commercial queries.

Fisheries Specialist -ASMFC 1998–2004
Coordinated SEAMAP SA, staffed development of two multi-species assessment models, designed and implemented the Lobster Assessment Database, coordinated fisheries research programs and stock assessment reviews supporting fisheries management.

***Marine Scientist -VIMS* 1996–1998**
Estimated fishing mortality of tautog in Virginia waters. Project results accepted as Virginia's fishery status in the ASMFC Tautog FMP.

MANAGEMENT EXPERIENCE

- Managed multiple concurrent projects and contracts to extend ACCSP capabilities.
- Contributing member of MRIP Regional Implementation Council & MRIP NAS reviews.
- Extended development of the MRIP survey state conduct through leadership of three local staff and 160 remote partner staff.
- Coached RecTech Committee development of Atlantic Recreational Implementation Plan.
- Supported Cooperative agreement funding and management, including proposal writing, information gathering, contract oversight, and report submission.
- Demonstrated ability to bring together diverse groups on issues by coordinating and facilitating workshops.

FISHERIES EXPERIENCE

- Deep understanding of the ACCSP mission, activities, and partners gained over 24 years of working in consensus-driven environment of Atlantic coast fisheries management
- Adept at balancing state and federal partner needs in the development of coastwide data standards, data entry and query tools for recreational and commercial fisheries data
- Proven ability to understand fisheries stock assessment data needs

IT EXPERIENCE

Software Development – Strategic priorities for SAFIS capabilities. Managed and programmed projects to create Data Warehouse end user queries, APAIS web interface, APAIS Tablet application, API data transmission and FHTS CATI.

Oracle DBA – Managed 10 DB instances supporting coastwide standardization of fisheries data collection and dissemination.

Systems Administrator– Performed or directed data center implementation and support including network security & system availability.

EDUCATION & AWARDS

- B.S. Dickinson College
- M.S. Virginia Institute of Marine Science
- ASMFC Stock Assessment Training I-III
- Oracle PL/SQL, DB Administration, Windows & Linux Server Administration
- Project Management & Leadership Training
- ASMFC Employee of the Qtr 2003, 2011
- ASMFC Directors Meritorious Service 2017
- ASMFC Science & Technical Excellence 2019
- Eagle Scout, Boy Scouts of America

Funding Decision Process
Atlantic Coastal Cooperative Statistics Program
May 2022

The Atlantic Coastal Cooperative Statistics Program (the Program) is a state-federal cooperative initiative to improve recreational and commercial fisheries data collection and data management activities on the Atlantic coast. The program supports further innovation in fisheries-dependent data collection and management technology through its annual funding process.

Each year, ACCSP issues a Request for Proposals (RFP) to its Program Partners. The ACCSP Operations and Advisory Committees review submitted project proposals and make funding recommendations to the Deputy Director and the Coordinating Council.

This document provides an overview of the funding decision process, guidance for preparing and submitting proposals, and information on funding recipients' post-award responsibilities, including providing reports on project progress.

Overview of the Funding Decision Process

Funding Decision Process Timeline

April- Operations and Advisory Committees develop annual funding priorities, criteria and allocation targets (maintenance vs. new projects)

May- Coordinating Council issues Request for Proposals (RFP)

June- Partners submit proposals

July- Operations and Advisory Committees review initial proposals, PIs are invited (not mandatory) to this meeting to answer questions and hear feedback; ACCSP staff provide initial review results to submitting Partner

August- Final proposals are submitted. Final proposals must be submitted electronically to the Deputy Director, and/or designee by close of business on the day of the specified deadline. Final proposals received after the RFP deadline will not be considered for funding.

September- Operations and Advisory Committees review and rank final proposals

October- Funding recommendations presented to Coordinating Council; Coordinating Council makes final funding decision

ACCSP Staff submits notification to submitting Partner of funded projects and notification of approved projects to appropriate grant funding agency (e.g. NOAA Fisheries Regional Grants Program Office, "NOAA Grants") by Partner

As Needed- Operation and/or Leadership Team and Coordinating Council review and make final decision with contingencies (e.g. scope of work, rescissions, no-cost extensions, returned unused funds, etc.)

Detailed Steps of Funding Decision Process

1. Develop Annual Funding Priorities, Criteria and Allocation Targets (maintenance vs. new projects).

Prior to issuing the Request for Proposals, the Coordinating Council will approve the annual funding criteria and allocation targets. These will be used to rank projects and allocate funding between maintenance and new projects respectively.

In FY16, a long-term funding strategy policy was instituted to limit the duration of maintenance projects. Maintenance projects are now subject to a funding reduction following their fourth year of maintenance funding.

- For maintenance projects entering year 5 of ACCSP funding in FY20, a 33 percent funding cut was applied to whichever sum was larger: the project's prior two-year-average base funding set in FY16, or the average annual sum received during the project's four years of full *maintenance* funding. In year 6, a further 33 percent cut will be applied and funding will cease in year 7. Please see Appendix A for a list of maintenance projects entering year 6 in FY20 and the maximum funds available for these projects.
- For more recent maintenance projects (i.e., those entering year 5 of maintenance funding after FY20), the base funding will be calculated as the average of funding received during the project's four years as a *maintenance* project. These projects will receive a 33 percent cut in year 5, a further 33 percent cut in year 6, and funding will cease in year 7. Please see Appendix A for a list of maintenance projects entering year 5 or 6 in FY23 and the maximum funds available for these projects.

2. Issue Request for Proposals

An RFP will be sent to all Program Partners and Committees no later than the week after the spring Coordinating Council meeting. The RFP will include the ranking criteria, allocation targets approved by the Coordinating Council, and general Program priorities taken from Goal 3 of the current ASMFC Five-Year Strategic Plan. The RFP and related documents will also be posted on the Program's website here.

All proposals MUST be submitted either by a Program Partner, jointly by several Program Partners, or through a Program Committee. The public has the ability to work with a Program Partner to develop and submit a proposal. Principle investigators are strongly encouraged to work with their Operations Committee member in the development of any proposal. All proposals must be submitted electronically to the Deputy Director, and/or designee, in the standard format.

3. Review initial proposals

Proposals will be reviewed by staff and the Operations and Advisory Committees. Committee members are encouraged to coordinate with their offices and/or constituents to provide input to the review process. Operations Committee members are also encouraged to work with staff in their offices who have submitted a proposal in order to represent the proposal during the review. Project PIs will be invited to attend the initial proposal review, held in July. The review and evaluation of all written proposals will take into consideration the ranking criteria, funding allocation targets and the overall Program Priorities as specified in the RFP. Proposals may be forwarded to relevant Program technical committees for further review of the technical feasibility and statistical validity. Proposals that fail to meet the ACCSP standards may be recommended for changes or rejected.

4. Provide initial review results to submitting Partner

Program staff will notify the submitting Partner of suggested changes, requested responses, or questions arising from the review. The submitting Partner will be given an opportunity to submit a final proposal incorporating suggested changes in the same format previously described in Step 2(b) by the final RFP deadline.

5. Review and rank final proposals

The review and ranking of all proposals will take into consideration the ranking criteria, funding allocation targets, and overall Program Priorities as specified in the RFP**.** The Deputy Director and the Advisory and Operations Committees will develop a list of prioritized recommended proposals and forward them for discussion, review, and approval by the Coordinating Council.

6. Proposal approval by the Coordinating Council

The Coordinating Council will review a summary of all submitted proposals and prioritized recommended proposals from the Operations and Advisory Committees. Each representative on the Coordinating Council will have one vote during final prioritization of project proposals. Projects to be funded by the Program will be approved by the Coordinating Council by the end of November each year. The Deputy Director will submit a pre-notification to the appropriate NOAA Grants office of the prioritized proposals to expedite processing when those offices receive Partner grant submissions.

7. Confirmation of final funding amounts

The Director and Deputy Director will be notified by NOAA Fisheries of any federal grant adjustments (e.g. additions or rescissions). Additional funds will generally go to the next available ranked project. Reductions may include, but are not limited to:

- Lower than anticipated amounts from any source of funding
- Rescission of funding after initial allocations have been made
- Partial or complete withdrawal of funds from any source

If these or other situations arise, the Operations Committee will notify Partners with approved proposals to reduce their requested budgets or to withdraw a proposal entirely. If this does not reduce the overall requested amount sufficiently, the Director, Deputy Director, the Operations Committee Chair and Vice-Chair, and the Advisory Committee Chair will develop a final recommendation and forward to the ACCSP Leadership Team of the Coordinating Council. These options to address funding contingencies may include:

- Eliminating the lowest-ranked proposal(s)
- A fixed percentage cut to all proposals' budgets
- A directed reduction in a specific proposal(s)

8. Notification to submitting Partner of funded projects and submittal of project documents to appropriate grants agency (e.g. NOAA Grants) by Partner.

Notification detailing the Coordinating Council's actions relevant to a Partner's proposal will be sent to each Partner by Program staff.

- Approved projects from Non-federal Partners must be submitted as full applications (federal forms, project and budget narratives, and other attachments) to NOAA Grants via www.grants.gov. These documents must reflect changes or conditions approved by the Coordinating Council.
- Non-federal Partners must provide the Deputy Director with an electronic copy of the narrative and either an electronic or hard copy of the budget of the grant application as submitted to the grants agency (e.g. NOAA Grants).
- Federal Partners do not submit applications to NOAA Grants.

9. Operation and/or Leadership Team and Coordinating Council review and final decision with contingencies or emergencies.

Committee(s) review and decide project changes (e.g. scope of work, rescissions, no-cost extensions, returned unused funds, etc.) during the award period.

Proposal Guidance

- General Proposal Guidelines
- Format
- Budget Template

General Proposal Guidelines

- The Program is predicated upon the most efficient use of available funds. Many jurisdictions have data collection and data management programs which are administered by other fishery management agencies. Detail coordination efforts your agency/Committee has undertaken to demonstrate cost-efficiency and non-duplication of effort.

- All Program Partners conducting projects for implementation of the program standards in their jurisdictions are required to submit data to the Program in prescribed standards, where the module is developed and formats are available. Detail coordination efforts with Program data management staff with projects of a research and/or pilot study nature to submit project information and data for distribution to all Program Partners and archives.

- If appropriate to your project, please detail your agency's data management capability. Include the level of staff support (if any) required to accomplish the proposed work. If contractor services are required, detail the level and costs.

- Before funding will be considered beyond year one of a project, the Partner agency shall detail in writing how the Partner agency plans to assume partial or complete funding or, if not feasible, explain why.

- If appropriate to your project, detail any planned or ongoing outreach initiatives. Provide scope and level of outreach coordinated with either the Program Assistant and/or Deputy Director.

- Proposals including a collection of aging or other biological samples must clarify Partner processing capabilities (i.e., how processed and by whom).

- Provide details on how the proposal will benefit the Program as a whole, outside of benefits to the Partner or Committee.

- Proposals that request funds for law enforcement should confirm that all funds will be allocated towards reporting compliance.

- Proposals must detail any in-kind effort/resources, and if no in-kind resources are included, state why.

- Proposals must meet the same quality as would be appropriate for a grant proposal for ACFCMA or other federal grant.

- Assistance is available from Program staff, or an Operations Committee member for proposal preparation and to insure that Program standards are addressed in the body of a given proposal.

- Even though a large portion of available resources may be allocated to one or more jurisdictions, new systems (including prototypes) will be selected to serve all Partners' needs.

- Partners submitting pilot or other short-term programs are encouraged to lease large capital budget items (vehicles, etc.) and where possible, hire consultants or contractors rather than hire new permanent personnel.

- The Program will not fund proposals that do not meet Program standards. However, in the absence of approved standards, pilot studies may be funded.

- Proposals will be considered for modules that may be fully developed but have not been through the formal approval process. Pilot proposals will be considered in those cases.

- The Operations Committee may contact Partners concerning discrepancies or inconsistencies in any proposal and may recommend modifications to proposals subject to acceptance by the submitting Partner and approval by the Coordinating Council. The Operations Committee may recommend changes or conditions to proposals. The Coordinating Council may conditionally approve proposals. These contingencies will be documented and forwarded to the submitting Partner in writing by Program staff.

- Any proposal submitted after the initial RFP deadline will not be considered, in addition to any proposal submitted by a Partner which is not current with all reporting obligations.

Proposal Format

Applicant Name: Identify the name of the applicant organization(s).

Project Title: A brief statement to identify the project.

Project Type: Identify whether new or maintenance project.

> *New Project – Partner project never funded by the Program. New projects may not exceed a duration of one year.*
>
> *Maintenance Project – Project funded by the Program that conducts the same scope of work as a previously funded new or maintenance project. These proposals may not contain significant changes in scope (e.g., the addition of bycatch data collection to a catch/effort dealer reporting project). PIs must include in the cover letter whether there are any changes in the current proposal from prior years' and, if so, provide a brief summary of those changes. At year 5 of maintenance funding, a project's base funding will be calculated as the average of funding received during the project's four years as a* maintenance *project.*

Requested Award Amount: Provide the total requested amount of proposal. Do not include an estimate of the NOAA grant administration fee.

Requested Award Period: Provide the total time period of the proposed project. The award period typically will be limited to one-year projects.

Objective: Specify succinctly the "why", "what", and "when" of the project.

Need: Specify the need for the project and the association to the Program.

Results and Benefits: Identify and document the results or benefits to be expected from the proposed project. Clearly indicate how the proposed work meets various elements outlined in the ACCSP Proposal Ranking Criteria Document (Appendix B). Some potential benefits may include: fundamental in nature to all fisheries; region-wide in scope; answering or addressing region-wide questions or policy issues; required by MSFCMA, ACFCMA, MMPA, ESA, or other acts; transferability; and/or demonstrate a practical application to the Program.

Data Delivery Plan: Include coordinated method of the data delivery plan to the Program in addition to module data elements gathered. The data delivery plan should include the frequency of data delivery (i.e. monthly, semi-annual, annual) and any coordinate delivery to other relevant partners.

Approach: List all procedures necessary to attain each project objective. If a project includes work in more than one module, identify approximately what proportion of effort is comprised within each module (e.g., catch and effort 45%, biological 30% and bycatch 25%). Please note that only one primary module and one secondary module are considered for ranking.

Geographic Location: The location where the project will be administered and where the scope of the project will be conducted.

Milestone Schedule: An activity schedule in table format for the duration of the project, starting with Month 1 and ending with a three-month report writing period.

Project Accomplishments Measurement: A table showing the project goals and how progress towards those goals will be measured. In some situations the metrics will be numerical such as numbers of anglers contacted, fish measured, and/or otoliths collected, etc.; while in other cases the metrics will be binary such as software tested and software completed. Additional details such as intermediate metrics to achieve overall proposed goals should be included especially if the project seeks additional years of funding.

Cost Summary (Budget): Detail all costs to be incurred in this project in the format outlined in the budget guidance and template at the end of this document. A budget narrative should be included which explains and justifies the expenditures in each category. Provide cost projections for federal and total costs. Provide details on Partner/in-kind contribution (e.g., staff time, facilities, IT support, overhead, etc.). Details should be provided on start-up versus long-term operational costs.

> **In-kind** - [1]Defined as activities that could exist (or could happen) without the grant. [2]In-kind contributions are from the grantee organization. In-kind is typically in the form of the value of personnel, equipment and services, including direct and indirect costs.
>
> [1] The following are generally accepted as in-kind contributions:
>
> i. Personnel time given to the project including state and federal employees
>
> ii. Use of existing state and federal equipment (e.g. data collection and server platforms, Aging equipment, microscopes, boats, vehicles)

Overhead rates may not exceed 25% of total costs unless mandated by law or policy. Program Partners may not be able to control overhead/indirect amounts charged. However, where there is flexibility, the lowest amount of overhead should be charged. When this is accomplished indicate on the 'cost summary' sheet the difference between the overhead that could have been charged and the actual amount charged, if different. If overhead is charged to the Program, it cannot also be listed as in-kind.

Maintenance Projects: Maintenance proposals must provide project history table, description of completed data delivery to the ACCSP and other relevant partners, table of total project cost by year, a summary table of metrics and achieved goals, and the budget narrative from the most recent year's funded proposal.

Principal Investigator: List the principal investigator(s) and attach curriculum vitae (CV) for each. Limit each CV to two pages. Additional information may be requested.

Budget Guidelines & Template

All applications must have a detailed budget narrative explaining and justifying the expenditures by object class. Include in the discussion the requested dollar amounts and how they were derived. A spreadsheet or table detailing expenditures is useful to clarify the costs (see template below). The following are highlights from the NOAA Budget Guidelines document to help Partners formulate their budget narrative. The full Budget Guidelines document is available here.

Object Classes:

Personnel: include salary, wage, and hours committed to project for each person by job title. Identify each individual by name and position, if possible.

Fringe Benefits: should be identified for each individual. Describe in detail if the rate is greater than 35 % of the associated salary.

Travel: all travel costs must be listed here. Provide a detailed breakdown of travel costs for trips over $5,000 or 5 % of the award. Include destination, duration, type of transportation, estimated cost, number of travelers, lodging, mileage rate and estimated number of miles, and per diem.

Equipment: equipment is any single piece of non-expendable, tangible personal property that costs $5,000 or more per unit and has a useful life of more than one year. List each piece of equipment, the unit cost, number of units, and its purpose. Include a lease vs. purchase cost analysis. If there are no lease options available, then state that.

Supplies: purchases less than $5,000 per item are considered by the federal government as supplies. Include a detailed, itemized explanation for total supplies costs over $5,000 or 5% of the award.

Contractual: list each contract or subgrant as a separate item. Provide a detailed cost breakdown and describe products/services to be provided by the contractor. Include a sole source justification, if applicable.

Other: list items, cost, and justification for each expense.

Total direct charges

Indirect charges: If claiming indirect costs, please submit a copy of the current approved negotiated indirect cost agreement. If expired and/or under review, a copy of the transmittal letter that accompanied the indirect cost agreement application is requested.

Totals of direct and indirect charges

Example. Budget narrative should provide further detail on these costs.

Description	Calculation	Cost
Personnel (a)		
Supervisor	Ex: 500 hrs x $20/hr	$10,000
Biologist		
Technician		
Fringe (b)		
Supervisor	Ex: 15% of salary	$1500
Biologist		
Technician		
Travel (c)		
Mileage for sampling trips	Ex: Estimate 2000 miles x $0.33/mile	$660
Travel for meeting		
Equipment (d)		
Boat	Ex: $7000, based on current market research	$7000
Supplies (e)		
Safety supplies		$1200
Sampling supplies		$1000
Laptop computers	2 laptops @$1500 each	$3000
Software		$500
Contractual (f)		
Data Entry Contract	Ex: 1000 hrs x $20/hr	$20,000
Other (h)		
Printing and binding		
Postage		
Telecommunications charges		
Internet Access charges		
Totals		
Total Direct Charges (i)		
Indirect Charges (j)		
Total (sum of Direct and Indirect) (k)		

Post-award Responsibilities

Changing the Scope of Work

Partners shall submit requests for amendments to approved projects in writing to the Deputy Director. The Coordinating Council member for that Partner must sign the request.

When Partners request an amendment to an approved project, the Deputy Director will contact the Chair and Vice Chair of the Operations Committee. The Deputy Director and Operations Committee Chairs will determine if the requested change is minor or substantial. The Chairs and Deputy Director may approve minor changes.

For substantial proposed changes, a decision document including the opinions of the Chairs and the Deputy Director will be sent to the Operations Committee and the ACCSP Leadership Team of the Coordinating Council for review.

The ACCSP Leadership Team will decide to approve or reject the request for change and notify the Deputy Director, who will send a written notification to the Partner's principal investigator with a copy to the Operations Committee.

When a requested major amendment is submitted shortly before a Coordinating Council meeting, the approval of the amendment will be placed on the Council Agenda.

The Deputy Director will notify NOAA Grants of any change in scope of work for final approval for non-federal proposals, and the Partner will need to request a Change in Scope through Grants Online. Necessary communications will be maintained between the concerned Partner, the Program and NOAA Grants. Any changes must be approved through the normal NOAA Grants process.

Requesting a No-cost Extension

If additional time is needed to complete the project, Program Partners can request a no-cost extension to their award period. Partners should let the Program know of the need for additional time and then request the extension as an Award Action Request through NOAA Grants Online at least 30 days before the end date of the award.

Necessary communications will be maintained between the concerned Partner, the Program, and NOAA Grants office. Any changes must be approved through the normal NOAA Grants process.

Declaring Unused/Returned Funds

In an effort to limit the instances in which funds are not completely used during the award period, draw down reports from the NOAA Grants offices indicating remaining grant balances will be periodically reviewed during each fiscal year.

While effort should be made to complete the project as proposed, if Program Partners find that they will not be able to make use of their entire award, they should notify the Program and their NOAA Federal Program Officer as soon as possible. Depending on the timing of the action, the funds may be able to be reused within the Program, or they may have to be returned to the U.S. Treasury.

Program Partners must submit a written document to the Deputy Director outlining unused project funds potentially being returned. The Partner must also notify their Coordinating Council member (if applicable) for approval to return the unused funds. If the funding is available for re-use within the Program, the Director and Deputy Director will confer with the Operations Committee Chair and Vice-Chair and the Advisory Committee Chair, and then submit a written recommendation to the ACCSP Leadership Team of the Coordinating Council for final approval on the plan to distribute the returned money.

Necessary communications will be maintained between the concerned Partner, the Program, and NOAA Grants office. Any changes must be approved through the normal NOAA Grants process.

Reporting Requirements

Program staff will assess project performance.

The Partner project recipients must abide by the NOAA Regional Grant Programs reporting requirements and as listed below. All semi-annual and final reports are to include a table showing progress toward each of the progress goals as defined in Step 2b and additional metrics as appropriate. Also, all Partner project recipients will submit the following reports based on the project start date to the Deputy Director:

- Semi-annual reports (due 30 days after the semi-annual period) throughout the project period including time periods during no-cost extensions,
- One final report (due 90 days after project completion).
- Federal Partners must submit reports to the Deputy Director, and State Partners must submit reports to both the Deputy Director and the appropriate NOAA Grants office.

Program staff will conduct an initial assessment of the final report to ensure the report is complete in terms of reporting requirements. Program staff will serve as technical monitors to review submitted reports. NOAA staff also reviews the reports submitted via Grants Online.

A project approved on behalf of a Program Committee will be required to follow the reporting requirements specified above. The principle investigator (if not the Chair of the Committee) will submit the report(s) to the Chair and Vice Chair of the Committee for review and approval. The Committee Chair is responsible for submitting the required report(s) to the Program.

Joint projects will assign one principle investigator responsible for submitting the required reports. The principle investigator will be identified within the project proposal. The submitted reports should be a collaborative effort between all Partners involved in the joint project.

Project recipients will provide all reports to the Program in electronic format.

Partners who receive no-cost extensions must notify the Deputy Director within 30 days of receiving approval of the extension. Semi-annual and final reports will continue to be required through the extended grant period as previously stated.

Partners that have not met reporting requirements for past/current projects may not submit a new proposal.

A verbal presentation of project results may be requested. Partners will be required to submit copies of project specifications and procedures, software development, etc. to assist other Program Partners with the implementation of similar programs.

Report Format

Semi-Annual(s) – Progress Reports: (3-4 pages)

- Title page - Project name, project dates (semi-annual period covered and complete project period), submitting Partner, and date.
- Objective
- Activities Completed – bulleted list by objective.
- Progress or lack of progress of incomplete activities during the period of semi-annual progress – bulleted list by objective.
- Activities planned during the next reporting period.
- Metrics table
- Milestone Chart – original and revised if changes occurred during the project period.

Final Report:

- Title page – Project name, project dates, submitting Partner, and date.
- Abstract/Executive Summary (including key results)
- Introduction
- Procedures

- Results:
    - Description of data collected.
    - The quality of the data pertaining to the objective of the project (e.g. representative to the scope of the project, quantity collected, etc.).
    - Compiled data results.
    - Summary of statistics.
- Discussion:
    - Discuss the interpretation of results of the project by addressing questions such as, but not limited to:
    - What occurred?
    - What did not occur that was expected to occur?
    - Why did expected results not occur?
    - Applicability of study results to Program goals.
    - Recommendations/Summary/Metrics
- Summarized budget expenditures and deviations (if any).

Programmatic review

Project reports will inform Partners of project outcomes. This will allow the Program as a whole to take advantage of lessons learned and difficulties encountered. Staff will provide final reports to the appropriate Committee(s). The Committees then can discuss the report(s) and make recommendations to modify the Data Collection Standards as appropriate. The recommendations will be submitted through the Program committee(s) review process.

Appendix A: Maximum Funding for Maintenance Projects Entering Year 5 or 6 of Funding in FY23

Projects in Year 5 or 6 of Maintenance Funding	**Calculated Base** (4-year avg)	Maximum Funding Year 5	**Maximum Funding Year 6 (Final Year)**
Advancing Fishery Dependent Data Collection for Black Sea Bass (Cetropristis striata) in the Southern New England and Mid-Atlantic Region Utilizing Modern Technology and a Vessel Research Fleet Approach	**$132,229**	$88,153	

Appendix B: Ranking Criteria Spreadsheet for Maintenance and New Projects

Ranking Guide – Maintenance Projects:

Primary Program Priority	**Point Range**	**Description of Ranking Consideration**
Catch and Effort Biological Sampling Bycatch/Species Interactions Social and Economic	0 – 10 0 – 10 0 – 6 0 – 4	Rank based on range within module and level of sampling defined under Program design. When considering biological, bycatch or recreational funding, rank according priority matrices.
Data Delivery Plan	+ 2	Additional points if a data delivery plan to Program is supplied and defined within the proposal.

Project Quality Factors	**Point Range**	**Description of Ranking Consideration**
Multi-Partner/Regional impact including broad applications	0 – 5	Rank based on the number of Partners involved in project OR regional scope of proposal (e.g. geographic range of the stock).
> yr 2 contains funding transition plan and/or justification for continuance	0 – 4	Rank based on defined funding transition plan away from Program funding or viable justification for continued Program funding.
In-kind contribution	0 – 4	1 = 1% - 25% 2 = 26% - 50% 3 = 51% - 75% 4 = 76% - 99%
Improvement in data quality/quantity/timeliness	0 – 4	1 = Maintain minimum level of needed data collections ↓ 4 = Improvements in data collection reflecting 100% of related module as defined within the Program design. Metadata is provided and defined within proposal if applicable.
Potential secondary module as a by-product (In program priority order)	0 – 3 0 – 3 0 – 3 0 – 1	Ranked based on single additional module data collection and level of collection as defined within the Program design of individual module.
Impact on stock assessment	0 – 3	Rank based on the level of data collection that leads to new or greatly improved stock assessments.

Other Factors	Point Range	Description of Ranking Consideration
Properly Prepared	-1 – 1	Meets requirements as specified in funding decision document Step 2b and Guidelines
Merit	0 – 3	Ranked based on subjective worthiness

Ranking Guide – Maintenance Projects: (*to be used only if funding available exceeds total Maintenance funding requested*)

Ranking Factors	Point Range	Description of Ranking Consideration
Achieved Goals	0 – 3	Proposal indicates project has consistently met previous set goals. Current proposal provides project goals and if applicable, intermediate metrics to achieve overall achieved goals.
Data Delivery Plan	0 – 2	Ranked based if a data delivery plan to Program is supplied and defined within the proposal.
Level of Funding	-1 – 1	-1 = Increased funding from previous year 0 = Maintained funding from previous year 1 = Decreased funding from previous year
Properly Prepared	-1 – 1	-1 = Not properly prepared 1 = Properly prepared
Merit	0 – 3	Ranked based on subjective worthiness

Ranking Guide – New Projects:

Primary Program Priority	Point Range	Description of Ranking Consideration
Catch and Effort Biological Sampling Bycatch/Species Interactions Social and Economic	0 – 10 0 – 10 0 – 6 0 – 4	Rank based on range within module and level of sampling defined under Program design. When considering biological, bycatch or recreational funding, rank according priority matrices.
Data Delivery Plan	+ 2	Additional points if a data delivery plan to Program is supplied and defined within the proposal.

Project Quality Factors	Point Range	Description of Ranking Consideration
Multi-Partner/Regional impact including broad applications	0 – 5	Rank based on the number of Partners involved in project OR regional scope of proposal (e.g. fisheries sampled).
Contains funding transition plan / Defined end-point	0 – 4	Rank based on quality of funding transition plan or defined end point.
In-kind contribution	0 – 4	1 = 1% - 25% 2 = 26% - 50% 3 = 51% - 75% 4 = 76% - 99%
Improvement in data quality/quantity/timeliness	0 – 4	1 = Maintain minimum level of needed data collections ↓ 4 = Improvements in data collection reflecting 100% of related module as defined within the Program design. Metadata is provided and defined within proposal if applicable.
Potential secondary module as a by-product (In program priority order)	0 – 3 0 – 3 0 – 3 0 – 1	Ranked based on single additional module data collection and level of collection as defined within the Program design of individual module.
Impact on stock assessment	0 – 3	Rank based on the level of data collection that leads to new or greatly improved stock assessments.

Other Factors	Point Range	Description of Ranking Consideration
Innovative	0 – 3	Rank based on new technology, methodology, financial savings, etc.
Properly Prepared	-1 – 1	Meets requirements as specified in funding decision document Step 2b and Guidelines
Merit	0 – 3	Ranked based on subjective worthiness

Atlantic Coastal Cooperative Statistics Program

Coordinating Council

November 7, 2022

ACCSP Atlantic Recreational Implementation Plan – 2023-2027

Summary: This document was approved by the Operations Committee in September, 2022 and is provided to the Coordinating Council for consideration and action. This plan will guide MRIP in allocating resources to further improve to best address data needs of fishery assessors and managers in the Atlantic Coast region. The plan is also used by ACCSP in the annual ACCSP funding process to guide regional developments of recreational data collections that may not be addressed within the MRIP.

Note: Since the Council met in May, the priorities were re-ranked, and the use of citizen science was moved from a priority to a data collection tool supported to supplement census or survey methods, as appropriate.

The updated prioritized list of regionally important data needs are presented on pages 8-14.

1. **Improved precision (PSE) and presentation of MRIP estimates**
2. **Comprehensive for-hire data collection and monitoring**
3. **Improved recreational fishery discard and release data**
4. **Improved timeliness of MRIP recreational catch and harvest estimates**
5. **Biological sampling for recreational fisheries separate from MRIP**
6. **Improved in-season monitoring**

Background: Regional Recreational Implementation plans are developed for MRIP with ACCSP functioning as the Atlantic Coast Regional partner, and MRIP uses the 5-6 regional plans to set national priorities. These plans should be updated when a major change in regional priorities occurs, or every five years. As part of the MRIP Regional Implementation Council, ACCSP gathers input from our Partners (Commission, Councils, and states) on priority areas to direct resources. MRIP and ACCSP request that Partner priorities for recreational data collection are properly reflected in the Atlantic Regional Implementation Plan.

An example of how the current 2017-2022 Implementation plan was used is the work by MRIP to address Atlantic Priority 1 – Reduce PSE. Over the last 5 years, MRIP has developed data and survey standards for public presentation of MRIP data where cumulative estimates are intended to increase sample size and reduce the confidence intervals around point estimates. MRIP also secured additional funding via the Modern Fish Act resulting in $900,000 per year to increase dockside sampling assignments for Maine to Georgia. Those sampling efforts became fully active in 2021. The overall sampling assignment increase was ~30%, with variability along the coast. MRIP, ACCSP, and the states worked together to allocate funds and assignments by APAIS sampling season length, species diversity, and fishing mode (Charter, Private-Rental, Shore).

Atlantic Coastal Cooperative Statistics Program

Atlantic Recreational Implementation Plan

2023 – 2027

Table of Contents

Background and Introduction

The Atlantic Coastal Cooperative Statistics Program (ACCSP) is a state-federal cooperative program to collect, manage, and disseminate statistical data and information on the marine and estuarine commercial and recreational fisheries of the Atlantic Coast. The ACCSP has provided coordination and data collection standards for recreational data collection efforts from Maine to Florida since 2004. The Marine Recreational Information Program (MRIP) of NOAA Fisheries was developed in 2008 out of the need to modify survey methods for collecting saltwater recreational fishery data for estimating fishery catch and effort for use by stock assessment scientists and marine fishery managers.

In 2013, the MRIP Executive Steering Committee adopted a hybrid approach to implementation (PDF, 45 pages). Under this approach:

- NOAA Fisheries maintains a central role in developing data collection and estimation methods, administering recreational fishing surveys, implementing survey and data standards, and producing recreational fisheries statistics.
- Regional and state partners identify data collection priorities, coordinate survey operations and on-site data collection, and participate in quality assurance and quality control procedures.
- The Marine Recreational Information Program's eight Regional Implementation Teams are responsible for publishing Regional Implementation Plans that identify regional information needs and recommendations for programmatic improvements.

As the MRIP evolved, the Atlantic region, through the ACCSP Partners have played a more active role MRIP planning, survey implementation, and pilot research projects to test new data collection techniques. The MRIP Access Point Angler Intercept Survey (APAIS) transitioned to Atlantic state conduct of field data collection with central administration, coordination, and data processing for Maine through Georgia provided by ACCSP staff in 2016 and the MRIP For-hire Telephone Survey (FHTS) and Large Pelagics Telephone (LPTS) Add-on followed in 2020. These MRIP surveys on the Atlantic Coast of Florida are also conducted by the state; however, they are coordinated along with the Gulf of Mexico coast by the Gulf States Marine Fisheries Commission (GSMFC). The ACCSP's Coordinating Council and Recreational Technical Committees of state, Commission, Council, and federal partners has developed this implementation plan in response to regional needs on the Atlantic Coast. This plan will guide MRIP in allocating resources to further improve to best address data needs of fishery assessors and managers in the Atlantic Coast region. The plan is also used by ACCSP in the annual ACCSP funding process to guide regional developments of recreational data collections that may not be addressed within the MRIP.

Baseline Assessment of Current Regional Data Collection Programs and Data Needs

MRIP General Survey

The MRIP is a data collection program that uses several regionally designed sampling surveys to collect representative data and produce statistically robust estimates of recreational fishing effort and catches. Complementary surveys covering recreational fishing for finfish in marine and estuarine waters by shore, for-hire and private boat anglers comprise the general survey design of the Atlantic Coast MRIP. The Fishing Effort Survey (FES) and For-Hire Telephone Survey (FHTS) provide data to produce angler effort estimates (trips per angler) and the Access Point Angler Intercept Survey (APAIS) provides individual angler catch data to produce

average catch rates by anglers. The two survey products are used to produce total catch and effort estimates by shore, for-hire and private boat anglers. This general survey design is conducted through a combination of the ACCSP, GSMFC, state partners, and federal contractors in Maine through Florida.

The main products of the MRIP general survey are bi-monthly, state level estimates of effort and catch for all saltwater finfish species encountered in the APAIS. Precise annual estimates of landings and discards are adequate for stock assessments of managed species for commonly encountered fishes. However, annual estimates at state and regional levels may lack adequate precision for species that are rarely intercepted in the general survey. For example, deep water fishing trips which target fewer common fish such as Tilefish, offshore of southeastern states, are rarely intercepted by the APAIS and so consistently precise catch estimates may not be available over a long time series. These bi-monthly and annual catch estimates may not be timely nor precise enough for monitoring and management of recreational fisheries with Annual Catch Limits (ACLs); however, bi-monthly estimates may be used to predict whether an ACL will be met before the end of a fishing year. Although the MRIP surveys are not intended or designed to provide in-season quota monitoring, more precise estimates on a shorter time scale (both sampling and production of estimates from data) would provide higher certainty in managing fisheries with established ACLs.

For-Hire Recreational Fishing Components of Atlantic MRIP

In addition to shore and private/rental boats, anglers that fish from for-hire charter vessels are interviewed at the dock when they are intercepted in the APAIS. The Atlantic APAIS also includes a separate mode for headboats (i.e., party boats), and interviews during these assignments are conducted at sea, so that detailed data from discarded fish may also be collected. The APAIS interviewer rides the headboat, observes anglers while they are fishing, and identifies, counts, and measures discarded fish. This protocol was adopted on the Atlantic Coast in 2005 following a year of preliminary testing and a pilot study in South Carolina.

Effort for both sectors of the for-hire recreational fishery (i.e., charter and headboats) is estimated through a weekly telephone survey of for-hire vessel operators, called the For-Hire Telephone Survey (FHTS). This telephone survey replaced the Coastal Household Telephone Survey (CHTS) for these sectors in 2004 and provides precise estimates of angler-effort by the same bi-monthly sampling periods, by state. In the Southeastern States (NC to FL), the headboat sector of the FHTS is replaced by a special survey program of NOAA Fisheries, the Southeast Regional Headboat Survey (SRHS). The SRHS utilizes a census logbook reporting method to produce bimonthly estimates of catch and effort for this portion of the for-hire fishing fleet.

<u>MRIP General Survey Components – Future Focus Areas</u>

Access Point Angler Intercept Survey (APAIS)

2022 APAIS sampling levels are adequate to produce precise annual regional catch estimates of many state-managed species based on recommended levels of precision identified as standards by the ACCSP. For specific fisheries, some state partners elect to conduct additional dockside APAIS assignments not funded through the MRIP to reduce variances of the catch estimates (as measured by Percent Standard Error (PSE)), including Massachusetts, Rhode Island, Delaware, North Carolina, and South Carolina. Atlantic states from Maine through Georgia conduct at-sea headboat assignments to collect angler interview and discard data. Beginning in 2021, additional Modern Fish Act (MFA) funding through NOAA Fisheries was made available for Atlantic states site assignments from Maine to Georgia. This increased the total number of APAIS assignments sampled by 30% with the target of improving estimate precision for all species. In the first year, this increase led to a 19% increase in the number of overall interviews. Atlantic states funding was distributed with a focus

on areas and fishing modes with longer seasons and greater species diversity, particularly those with routinely higher PSEs.

MRIP state conduct for Florida recreational fisheries is directed through the GSMFC. A large portion of the funds allocated to Florida were used to increase the number of assignments along the Atlantic and Gulf coasts in areas and fishing modes where PSEs have been historically high. The ACCSP annual reports to MRIP include tracking of indicator species PSE levels. However, additional analyses to quantify effectiveness of these additional assignments for reducing PSEs is needed to evaluate if sampling changes have met the data needs to support fisheries management.

The accuracy and precision of estimates for the released portion of recreational catch is an issue which still requires future attention. Currently in the modes sampled by the APAIS dockside survey, catch per unit effort (CPUE) information for discarded catch is based on angler recall of the number of each species released by each angler intercepted, and the accuracy of that recall at the dock is unknown. Furthermore, dockside intercept surveys are inadequate for collecting information about the size and condition of fish released at sea, which are critical data needs for stock assessments. APAIS protocols for at-sea sampling are adequate for headboats but, due to small fleets and higher costs, the number and variety of vessels eligible for at-sea observations of discards is small. APAIS protocols do not allow for at-sea sampling observations from charter and private boats. Without adequate data from those sectors on areas and depths fished, it is unknown whether the length frequency of discards observed from headboats is representative of the entire recreational boat fishery.

Fishing Effort Survey (FES)

Fishing effort for shore and private boat mode angling from Maine to Florida was historically collected through the CHTS. However, it was determined that the CHTS was biased and inefficient due to low response rates and an increasing number of households without landline telephones. As more people abandoned landlines for cellphones, a growing number of potential respondents became unreachable. For this reason, MRIP transitioned to a new methodology in 2018 to provide a more representative sample and explicitly account for bias. The FES is a mail survey that utilizes state recreational saltwater fishing license databases to target licensed anglers and the U.S. Postal Service address database to distribute surveys to unlicensed anglers. The FES uses a two-month recall design to collect data. Fishing effort estimates increased following the transition to FES, depending on the state and mode, and MRIP should continue to evaluate improvements to FES methodology in the future.

For-Hire Telephone Survey (FHTS)

The FHTS focuses specifically on estimating the numbers of angler trips in the charter boat and headboat fishing modes. Since implemented in 2000, the FHTS has resulted in improved effort estimates for charter and headboat modes of fishing, which has improved overall precision of catch estimates for the charter fleet. However, non-response rates in the FHTS remain a concern. To increase coverage, GARFO vessel trip reports (VTRs) are used to calculate MRIP effort estimates for the part of the fleet that reports via mandatory VTRs.

Atlantic states from Maine to Florida maintain the MRIP online Vessel Directory. Staff in Maine to Georgia complete calls via the ACCSP-hosted Assignment Tracking Application (ATA) which houses a Computer Assisted Telephone Interviewing system (CATI) and Florida conducts the FHTS in coordination with the GSMFC.

Some for-hire fisheries are exploring management as a distinct sector with their own allocation. However, current FHTS survey methodology does not meet the data monitoring needs for sector management options in for-hire fisheries. For this reason, the ACCSP has identified increased timeliness of catch and effort estimates as a high priority along with maintaining dockside sampling levels. Electronic logbooks have the capability to produce accurate and timelier catch and effort statistics when paired with dockside validation. The Mid-Atlantic Fishery Management Council (MAFMC) implemented mandatory electronic logbook reporting options for federally permitted charter and headboat vessels in 2018 and the South Atlantic Fishery Management Council (SAFMC) and New England Fishery Management Council (NEFMC) followed in 2021. These regulatory changes increase the burden on for-hire fishery participants when conducted in addition to the current FHTS methods. Modifications to the FHTS may be necessary to reduce reporting burden for those vessels included in MRIP certified data collection programs.

Special Surveys and Data Collection Programs

Highly Migratory Species

Highly Migratory Species (HMS) are federally managed billfish, tuna, and sharks that range along the entire Atlantic and Gulf of Mexico regions. NOAA Fisheries directly manages these species since they range across regional boundaries in US waters. A summary of the HMS-targeted data collection programs along the Atlantic Coast is provided below.

MRIP Large Pelagic Survey (Large Pelagic Intercept, Telephone, and Biological Surveys)

The Large Pelagic Survey (LPS) began in 1992 as a specialized survey program of rare event HMS species in support of domestic management and international treaties. The LPS includes several surveys: a targeted angler intercept survey, the Large Pelagic Intercept Survey, which is similar to the APAIS but only intercepts recreational and for-hire fishing trips which targeted HMS species; the Large Pelagic Telephone Survey, which is a list-frame sampling survey to produce angler effort estimates in the HMS/LPS fisheries; and the Large Pelagic Biological Survey, used to obtain biological samples for life-history parameter estimation, such as age, size, and sex distribution, as well as reproduction parameters. The collective surveys collect information to identify fishing effort and catch (harvest and discard) from vessels holding HMS permits, and is conducted from Maine to Virginia during the months of June through October.

HMS Catch Card Census – Maryland and North Carolina

Highly Migratory Species Catch Card Census programs began in 1998 to improve reporting compliance required of for-hire licenses or HMS permits, and to identify catch (harvest and discard). Two states have chosen to implement these census programs and are essentially the same in each state. The programs include private anglers as well as for-hire charter and headboat operators from Maryland and North Carolina holding a Charter/Headboat HMS permit. All recreationally landed Bluefin tuna, billfish, and swordfish must be reported via a catch card, regardless of waters fished (state or federal). Reporting of Bluefin tuna dead discards is also required, while the Maryland Catch Card program also collects data on shark landings.

HMS Catch Reporting Program

The HMS Catch Reporting program is used to identify harvest and dead discards of Bluefin tuna, as well as harvest of billfish and swordfish. This program operates from Maine through Texas and the Caribbean territories, covering private anglers as well as for-hire headboats and charter vessels holding Atlantic HMS permits for fishing in federal waters. Any vessel landing one of the species listed above is required to report

their catch within 24-hours after the end of the trip via an online reporting system on the HMS permits website, the HMS Catch Reporting Smartphone App, SAFIS eTrips, or telephone.

Atlantic HMS Tournament Registration and Reporting System (ATR)

All tournaments offering rewards or prizes for the catch or landing of Atlantic HMS are required to register with NMFS within 30 days of the start of the event, and must report all catch and the number of participating vessels for each day of the event within seven days of the completion of the event. Registration and reporting may be done via the online ATR portal, or via paper forms provided for download on the NMFS website. Data collected via the ATR system is used for ICCAT reporting purposes, and is one of the primary data sources for tracking the 250 billfish limit (included blue and white marlin and roundscale spearfish) imposed on the U.S. Atlantic recreational billfish fishery by ICCAT.

Reef Fish Species

Florida State Reef Fish Survey (SRFS)

The Florida SRFS began in July of 2020 and is a specialized recreational fishing survey, certified by MRIP, which provides more precise estimates of private boat effort and catch for reef fishes on the Gulf and Atlantic coasts of Florida. The survey uses angler intercept data collected through the APAIS, combined with additional assignments (drawn with the APAIS sample), which target reef fish trips to estimate CPUE at the angler trip level. A complementary mail survey of state saltwater fishing license holders with the State Reef Fish Angler designation directly estimates targeted fishing effort for reef fishes. That State Reef Fish Angler designation is required to legally harvest certain types of reef fishes[1] from a private boat. Under-coverage attributed to fishing effort by unlicensed anglers without the special reef fish designation is accounted for in the APAIS and supplemental intercept surveys.

South Atlantic Red Snapper Season Survey

Since 2017, during the South Atlantic Red Snapper season, the state of Florida conducts special surveys during short recreational season openings for Red Snapper in the South Atlantic that are designed to estimate in-season landings with high precision. Precise estimates are necessary to track the small annual catch limit (ACL), which allows for a very limited harvest season <10 days in duration (as few as 2-3 days in recent years). Private boat fishing effort and CPUE are monitored by surveying recreational boating activity in coastal inlets and conducting separate dockside interviews with boat parties as they return from trips. For-hire vessel operators with federal permits receive a data sheet in the mail that allows them to keep track of trips and catch, which is followed up by telephone calls after the season ends to collect data. In-season landings estimates help track the South Atlantic Red Snapper ACL and improve precision for stock assessments. Biological data collected from harvested fish, including length, weight, age, sex, and genomics also contribute to regional stock assessments.

For-hire Logbook Programs

The following items provide additional information on ongoing for-hire data collection programs along the Atlantic Coast associated with logbook reporting requirements. These data collection programs utilize logbooks for reporting details of individual recreational fishing trips in the for-hire fishery on the Atlantic Coast. Federally required (mandatory) reporting is linked to specific fishery management plans (FMPs) and permits to participate in the specific fisheries (e.g., groundfish through the Greater Atlantic Regional Fisheries

[1] Mutton Snapper, Yellowtail Snapper, Hogfish, Red Snapper, Vermillion Snapper, Gag, Red Grouper, Black Grouper, Greater Amberjack, Lesser Amberjack, Banded Rudderfish, Almaco Jack, and Gray Triggerfish

Office (GARFO)). Individual state logbook reporting programs may be comprehensive in scope or limited to fishery-specific data collections.

GARFO Vessel Trip Reporting For-hire Logbooks

Commercial and for-hire operators participating in New England and Mid-Atlantic fishery FMPs are required to report results of all fishing trips via VTR, a mandatory trip-reporting logbook data collection program administered by NOAA GARFO. Trip reports are required to be submitted within 48 hours. VTR data are incorporated into the MRIP bi-monthly effort estimates.

Southeast Region Headboat Survey (SRHS)

The SRHS was implemented in the South Atlantic in 1972 and extends from North Carolina through Florida. The survey focuses on producing landings and effort estimates from the federally permitted headboat fishery targeting offshore reef fishes. This data collection program includes mandatory electronic trip reporting by headboats on a weekly basis along with a dockside intercept program to validate reporting and obtain biological samples for age, growth, and reproductive parameters used in stock assessments. Federal regulations require only federally permitted boats to report to the SRHS so headboats without federal permits are not included. Headboats which do not have a federal permit are also not included in the FHTS which can represent a significant gap in coverage in regions where reef fishes are targeted in state waters.

The APAIS headboat at-sea sampling component is conducted in much of the same region that is covered by the SRHS (NC, SC and GA), although MRIP does not produce landings estimates for use by stock assessment or management for headboats in the South Atlantic. The state of Florida also conducts at-sea observer surveys of headboats on the Atlantic coast. The primary objective of at-sea headboat surveys in the South Atlantic is to provide size and species composition data for discards for use in regional stock assessments. These data collection programs overlap in time and space, however, the headboat catch estimates generated by MRIP apply to Maine - Virginia and the SRHS estimates for headboat catch are used from North Carolina - Florida.

Southeast For-hire Integrated Electronic Reporting (SEFHIER)

NOAA Fisheries implemented reporting requirements for more than 3,000 federally permitted for-hire vessels through the Southeast For-Hire Integrated Electronic Reporting (SEFHIER) program in January 2021. The purpose of this program is to enhance the timeliness and accuracy around the information about for-hire trips including catch, effort, and discards. All federal South Atlantic/Atlantic-only Charter/Headboat permitted vessels have been required to submit electronic trip reports since Jan. 5, 2021. These data are not currently referenced in MRIP methodology and estimates.

Maryland Charter Fisheries Logbook

The Maryland DNR charter logbook began in 1995 as a mandatory weekly reporting program for charter boats fishing for Striped Bass in Chesapeake Bay only. This program was modified to include reporting by vessels and/or captains holding several recreational fishery permits in MD: The Chesapeake Bay & Coastal Sport Charter Boat License, the Maryland Commercial Fishing Guide License, and/or the Maryland Unlimited Tidal Fish License. These permits and reporting requirements cover all species in the Chesapeake Bay and coastal Maryland waters. This program collects variables to determine fishing effort, and harvest, including weights from landed fish and catch disposition (e.g., released, landed, kept, regulatory release, etc.). Vessel operators are required to submit trip level reports on a weekly basis.

Maryland DNR provides the trip data to MRIP for those vessels selected in the FHTS to be used for effort estimation in lieu of telephone survey responses by Maryland vessel operators (who are not called by the FHTS). Maryland ocean-side for-hire vessel operators holding a federal for-hire vessel permit are required to submit VTRs to NOAA as well as the state reporting requirements. Hence, there is the potential for duplicative reporting by Maryland for-hire vessels fishing in coastal Atlantic waters.

Other state data collection programs

The following state logbook programs cover for-hire vessels in varying scope of vessels and fisheries in paper or electronic reporting forms. They are referenced here as areas for future coordination and possible integration if later certified by MRIP. Currently (2022), none of these programs are used in MRIP estimation:

- Rhode Island DFW via SAFIS eTrips and eLogbook
- Connecticut Party and Charter Vessel Black Sea Bass Program
- New York State Vessel Trip Reports via SAFIS eTrips
- New Jersey Striped Bass Bonus Program
- Virginia Cobia Permit Reporting Program & February Black Sea Bass Reporting Program
- South Carolina For-hire Logbook

Other logbook programs

- MAFMC Recreational Tilefish Permitting and Electronic Reporting (private angler)

For-hire Observer Programs

Note the Atlantic APAIS general survey includes at-sea observer data collection on headboats from Maine to Georgia (see APAIS section on page 2). Additional program(s) highlighted below.

Florida

Historically, for-hire observer coverage on the Atlantic coast of Florida was limited to large-party headboats. A cooperative research program for charter vessels was pilot tested in 2013-2015 with funding through MARFIN (Sauls and Ayala, 2020) and in 2021 observer coverage on the Atlantic coast of Florida was expanded to include the offshore charter fishery. Charter boat operators are voluntarily recruited into the survey and vessels are randomly selected each week to carry an observer during a single trip. Fishery observers collect information on the depth fished, gear used, types and sizes of fish retained and released, release methods, and the condition of released fish at each unique fishing location during a sampled trip. Some regulatory discards are marked with conventional tags prior to release. Data are used to monitor catch and release methods in the charter fishery, estimate discard mortality, and characterize the size distribution of discards for Southeast Data, Assessment, and Reviews (SEDARs).

Atlantic Regional Implementation Priorities to Meet Data Needs

The ACCSP solicited input from state and federal partners to develop the prioritized list of regionally important data needs.

4. **Improved precision (PSE) and presentation of MRIP estimates**
5. **Comprehensive for-hire data collection and monitoring**
6. **Improved recreational fishery discard and release data**
7. **Improved timeliness of MRIP recreational catch and harvest estimates**
8. **Biological sampling for recreational fisheries separate from MRIP**
9. **Improved in-season monitoring**

Priorities are described below to provide justification for the regional importance along with the approach for implementation and where possible, the estimated annual costs. Some priorities have associated MRIP-certified methodologies and action. However, some are included for utility in fisheries stock assessment and management. ACCSP will continue to update this plan as regional priorities change or methods to collect and utilize data evolve. The use of citizen science as a data collection tool is supported to supplement census or survey methods, as appropriate.

Costs of implementation may come in a form of tradeoffs other than dollars. With the move to cumulate estimates via the MRIP Recreational Fishing Survey and Data Standards in 2023, cumulative estimates throughout the year (e.g., January – July) will generally have lower PSEs than that of a single month's estimates. That is, if focusing on cumulative estimates throughout the year, each additional month might result in lower PSE as the year progresses and so the trade-off between smaller sample size (and thus likely higher PSEs) for a single month may not be as relevant. However, if monthly estimates are desired, the trade-off between PSE and timeliness would need to be considered (see "Improved timeliness of MRIP recreational catch and harvest estimates" section). ACCSP and MRIP partners are encouraged to develop proposals to address these data needs.

Improved precision (PSE) of MRIP catch estimates

For many managed species on the Atlantic Coast, MRIP estimates are reasonably precise at the annual and regional scale for interjurisdictional stock assessments. Inshore species that are frequently encountered in the APAIS survey also have reasonably precise state-level estimates for use in single jurisdiction assessments. However, regional estimates through 2021 for some species are not precise enough to meet fisheries assessment and management needs.

Managed species with chronically high PSEs have been prioritized for improvements. Historically, efforts to reduce PSE have primarily focused on increasing the APAIS sample size; however, ACCSP recommends that future resources continue to focus on targeted sampling design changes, alternative estimation approaches, and methods to optimize sampling effort (with strategic allocation of samples at existing or increased levels) to reduce PSEs to acceptable levels.

Progress has been made to address precision of MRIP estimates through the Modern Fish Act (MFA) increases to Atlantic APAIS and the adoption of MRIP Survey and Data Standards. Beginning in Wave 5, 2020 and fully implemented in 2021, the annual Atlantic APAIS sampling assignments have been increased by 30% supported by MFA funds. Similar funding in the Gulf region was allocated to increase APAIS sampling on the

Atlantic coast of Florida. Assignment increases were cooperatively developed between MRIP, ACCSP, GSMFC, and the states. Allocation of assignments was based on length of sampling season, species diversity, and mode of fishing.

It is unlikely that optimized sample allocation alone will address data needs for rare event species pulse fisheries or those with very small ACL's (e.g., tilefish, Red Snapper, Cobia, tuna, and billfish). Specialized data collection should also be developed to address these particularly problematic species. For example, alternative catch and effort surveys are necessary to track the ACL for Red Snapper over the harvest season which occurs over a period of days. Also, LPS and HMS catch card programs are an alternative method implemented to address low precision estimates for billfish and tuna. Methods should be developed to collect data from private anglers on species not sufficiently encountered by APAIS to develop precise-enough estimates through other means. As the need for reliable estimates increases for managed species under quotas, alternative survey methods could be developed for MRIP certification with a regional framework that is scalable.

Biological stock boundaries often do not coincide with state boundaries used to pre-stratify the MRIP APAIS and FES (e.g., the northern and southern Black Sea Bass stock split at Cape Hatteras, the Gulf of Maine and Georges Bank stocks of Atlantic Cod, the Long Island Sound management unit of Tautog, the Gulf and Atlantic stocks of many species separated at the Florida Keys). As a result, precise estimates of recreational removals for both input to stock assessments and annual quota monitoring would be beneficial to have at a finer scale and often with different boundaries than in MRIP's pre-stratified design.

There are several approaches to resolving this issue: (1) increase sample size to allow for more precise post-stratified estimates; (2) distribute base number of assignments to pre-stratified sub-state regions (as some states already do); and (3) further stratify the survey around important biological boundaries, which may require changes to the survey sampling schedule.

Post-stratification (using MRIP domain estimation) is the simplest approach, and methods to improve precision would also help improve the usability of finer spatial scale estimates. However, some boundaries cannot be resolved with post-stratification. For example, Monroe County (the Florida Keys) straddles two federal fishery management council jurisdictions and is a stock boundary for many assessments in the Gulf of Mexico and Atlantic. Currently in MRIP, all effort and catch for this county is assigned to west Florida estimates regardless of waters fished (note: Monroe County, Florida estimates are post-stratified for Black Grouper, Gag, Greater Amberjack, Mutton Snapper, Yellowtail Snapper, Blueline Tilefish, Nassau Grouper, Goliath Grouper, Snowy Grouper, and Red Grouper). Although county-level estimates of landings and discards may be post-stratified to reassign to the Atlantic, there is often a need to develop estimates of removals from this county by area fished (Gulf and Atlantic), and this is not possible with the current MRIP design. A combination of methods may be required to fully resolve this issue for all recreationally important species.

A related issue is the development and presentation of post-stratified estimates. Currently, MRIP offers SAS template programs to allow users to define custom domains to post-stratify estimates along appropriate biological or management boundaries. Developing web tools to allow users to obtain custom estimates, or estimates for a standardized set of regions with standardized, pre-defined boundaries, with the appropriate calibration factors applied, would improve usability and transparency of these estimates for use in stock assessments and the management process. These could be provided to all users through the current MRIP interface, or to a subset of more advanced users through the ACCSP Data Warehouse interface.

Expected costs: The ACCSP recommends the continuation of the MFA at $900k per annum to continue supporting APAIS sampling and data presentation.

Comprehensive for-hire data collection and monitoring

For-hire catch and effort estimates combine distinct data collection methodologies for effort (FHTS) and catch (APAIS) with a validation component. This provides adequate coverage for commonly encountered species on an annual basis. However, FHTS and APAIS overlap with other mandatory reporting requirements varying by jurisdiction, such as federal VTRs, SRHS, and state or regional logbook programs. Some data streams are not fully integrated into MRIP estimates (preliminary and/or final). The current system has been criticized for increased reporting burden on captains, lack of integration of data collection to produce catch statistics, and under coverage of pulse fisheries and deep-water species.

Recent changes in fishery management practices have further strengthened the argument for the use of logbooks in the for-hire sector. The NEFMC, MAFMC, and SAFMC have implemented mandatory electronic for-hire reporting requirements to improve reporting. Federally permitted charter vessels are required to submit fishing activity via electronic logbooks within 48 hours of a fishing trip (NEFMC/MAFMC) or within 7 days of a fishing trip (i.e., weekly; SAFMC). These actions have allowed for logbook data collection to monitor both catch and effort data within the federally permitted for-hire sector.

ACCSP supports development of MRIP certified logbook programs with validation as one method to monitor catch and effort in the for-hire fishery. Logbook compliance with reporting requirements depends on effective outreach and enforcement mechanisms; however, logbook programs may not always be practicable due to legislative or regulatory hurdles or may not be preferred by fisheries managers, necessitating reliance on statistically-valid surveys instead. The critical need along the Atlantic Coast is to minimize overlapping for-hire fishery reporting programs. A Comprehensive For-hire Data Collection Program with full, but not duplicative, coverage of both federally and non-federally permitted boats needs to be implemented. Non-federally permitted boats include vessels that fish exclusively in state waters or for fishes not currently regulated via permits that have reporting requirements.

To meet future data collection and fishery monitoring needs, data collection must be timely, precise, cost effective, and minimize the reporting burden on captains and anglers. The ACCSP recommends this Comprehensive For-hire Data Collection Program continue development and certification efforts to ensure minimal reporting burden and to leverage data sharing among federal and state programs. Coverage shall include headboats and charter boats fishing in both state and federal waters, and methods may include logbooks where feasible, and alternative approaches to data collections for fishery monitoring where logbooks are not feasible or practicable. The implemented program should follow MRIP certified designs for logbooks with validation or sampling surveys.

In an effort to draft an Atlantic Comprehensive For-hire Data Collection Program, the RTC updated the ACCSP Data Standards with a set of minimum data standards for for-hire reporting and, with consultation from NOAA Fisheries, submitted a document to the MRIP certification process detailing the use of census logbook data with validation. Participating in the MRIP certification methodology is the first step in working towards the ability for for-hire recreational estimates to be calculated either through survey or census logbook. The RTC and NOAA Fisheries will continue to update the data standards and to progress within the MRIP certification process.

Recognizing various federal logbooks have been implemented, the Atlantic region needs completion and certification of a method to validate logbooks and further utilize logbook effort and catch in MRIP estimates. The new program shall meet the needs of statistical estimation, stock assessment, and fisheries management.

Expected costs: MRIP is not expected to cover costs of external logbook data collection programs. Maintaining funding for general survey FHTS and APAIS data collection will support the field component of the for-hire comprehensive program. However, there may be costs to MRIP staffing related to design review, data collection and estimation workloads that cannot be estimated at this time.

Improved recreational fishery discard and release data

In response to stock declines, fishery managers have taken regulatory steps to reduce harvest in the recreational sector, including increased size limits, reduced bag limits, and reduced recreational fishing seasons to ensure harvest levels do not exceed management targets. This has translated into a growing portion of recreational catch that is released at sea and unavailable for direct observation in dockside surveys. Numbers of discarded fish and accurate species identification of discarded fishes are more difficult to obtain with precision than harvested catch, due largely to the fact that current methods rely on angler recall.

Proper identification of discarded species is a requirement for any type of estimation of released fish. Studies have shown anglers have varying ability to identify their catch, including a study on the Pacific Coast that demonstrated anglers could reliably recognize Pacific Halibut and Sand Bass (unique body morphs without similar conspecifics) but had difficulty with rockfishes which encompass many species which are very similar in appearance. The Atlantic Coast region has similar species identification issues with flounders, kingfishes, sharks, and some reef fishes. Lack of angler expertise in proper identification of species requires they be reported at family or genus level groups. These grouped discarded species must be delineated into their constituent species prior to stock assessment to provide accurate and complete counts of all discards of a particular species. There is no standard method and little supplementary information to aid in these delineations. Given the regulatory status and differential stock health within these species groupings, accurate identification is paramount for holistic management. Supplemental surveys to ascertain the makeup of species within these groups should not be the only method for improving discard identification. Distribution of taxonomic keys or other fish identification guides or tools for these species, and an increase in angler education and outreach about proper fish identification, should be a priority part of any improved program for discarded fish identification, enumeration, and biological data collection. Citizen science may be used to capture discarded and released species and length frequency information.

The Atlantic APAIS has included a protocol specific to for-hire headboat at-sea discard monitoring and angler interviewing since 2005 wherein state interviewers directly observe recreational anglers as they fish on headboats and collect information on the species composition, size, and release condition of discards. Based on the success of projects funded to date, the use of at-sea observers in the headboat fishery has proven to be a viable method for collecting accurate data on discards that fills important data gaps in stock assessments. However, headboat sampling could be improved with an expanded frame of active, eligible vessels participating (currently voluntary participation within the APAIS), and an increased number of headboat fishing trips sampled. The ACCSP supports and recommends improvements to the current headboat at-sea sampling program to include more robust sample sizes to support better precision of discard rates and composition, and improved outreach efforts to increase participation by eligible headboats throughout the Atlantic Coast.

Discard data from headboat mode is not necessarily representative of other modes. Florida successfully pilot tested the use of fishery observers on charter boats on the Atlantic coast and recently secured state funding to support this monitoring long-term; however, expanding this to other Atlantic states may be limited by available funds. More information is also needed for private/rental and shore mode discards. While addition of observers on charter vessels might be too costly at this time and is not feasible for private boats, one modest improvement would be inclusion of depth fished in the intercept. The APAIS collects coarse trip-level data on the primary area fished (inland, state territorial seas up to 3 miles from shore, or federal waters greater than 3 miles from shore) but does not provide data on the depth fished. These data are critical for determining depth-dependent discard mortality for released portions of recreational catch.

Expected costs: Cannot be estimated at this time.

Improved timeliness of recreational catch and harvest estimates

There are two aspects of timing to consider regarding recreational catch and harvest estimates: the unit of estimation (i.e., month, two-month wave, cumulative, annual) and how quickly estimates are generated after an estimation period has ended. State and Commission managed species would benefit from monthly estimates to set seasons, especially in northern areas where fish may only be active during one month of a two-month wave, or for ephemeral fisheries where a species may pass through and be available for only one month (e.g., Cobia). This could be especially important to for-hire fishery captains as it could assist business planning. Also, even though MRIP was not designed to track ACLs, having more refined temporal estimates could help reduce gaps or buffers set between ACLs and Annual Catch Targets (ACTs), allowing anglers to harvest more fish by reducing uncertainty in landings. Both the 2016 and 2021 National Academy of Science (NAS) Review recommended additional evaluation of the cognitive properties of the two-month recall period, and a shorter estimation period would likely reduce any recall bias. APAIS data collection is already amenable to monthly recreational estimates and the FES was found to not have significant differences between one- and two-month recall periods (Andrews et al., 2018).

In terms of how quickly estimates are generated, currently annual estimates of catch and harvest are often not available until April of the following year and wave estimates are not available until 45 days after the completion of a wave. Improving the timeliness of recreational catch and harvest estimates could help fishery managers better predict when seasons need to be closed before landings are exceeded. Managers would also have more time to develop management options before decisions for an upcoming season must be made if a reduction in the lag time is achieved. Electronic data collection of both the APAIS and FHTS in 2019 and 2021, respectively, has allowed for quicker access to raw data for use in the estimation process and also improved the quality of data.

The trade-off between the additional cost of moving to monthly waves and/or faster turn-around time for generating estimates should be evaluated against budgeting for improved precision at the current two-month/annual levels and other recreational data priorities. Moving to one-month waves without additional sampling could result in monthly estimates of sufficiently low precision that having monthly estimates does not actually improve management. Andrews et al. (2018) discerned that, while there was no significant difference in effort estimates between a feasible one-month alternative to the FES and the current FES, multiple reference periods in a single survey may reduce bias for one-month estimates. In determining trade-offs of effort survey design, Andrews at al. (2018) recommend consideration be given to estimate precision, sampling requirements needed to support different levels of resolution, and also the impact of increased

sampling on survey costs. Given the change in data presentation to cumulative estimates in CY2023, the potential to change FES to monthly recall should be revisited.

Expected costs: Cannot be estimated at this time.

Biological sampling for recreational fisheries separate from MRIP

Fishery-dependent monitoring programs on the Atlantic Coast which collect vital statistics on catch and effort from the recreational fishery do not provide some of the critical data inputs needed for age-based stock assessments. The MRIP is the only dedicated coast-wide fishery dependent program that monitors private and for-hire charter boat-based segments of the recreational fishery. The MRIP strives to provide a statistically valid sample of the size composition and biomass of harvested finfish that is representative of the spatial and temporal distribution of the recreational fishery. However, for many important managed species, the MRIP survey intercepts low numbers of landed fish, particularly for species with strict harvest limits, such as Red Snapper, or that are targeted by a small subset of participants in the overall recreational fishery, such as tilefishes and deep-water grouper species. Furthermore, time constraints and strict interview procedures of the APAIS do not allow field interviewers to collect age structures or record sex from fish sampled.

Methods to supplement data collected through the APAIS are needed to collect length, weight, age structures and sex ratios from managed species that are representative of current recreational landings. Doing so does not necessarily require a uniform coast-wide approach, since biological sampling may be more efficient and cost effective when it is targeted at the scale appropriate for a given fishery. Biological sampling may be incorporated into supplemental surveys that are also needed to improve timeliness and precision of catch estimates for specialized fisheries. An example is the Red Snapper Season Survey that Florida has implemented to monitor in-season landings on the Atlantic coast, which also provides a unique opportunity to collect biological samples from large numbers of fish over a short sampling period. Supplemental survey(s) could be focused on intercepting trips with catch and maximizing biological samples, whereas the APAIS would continue to be the primary data source for catch-per-unit-effort. The supplemental survey(s) should also allow for the collection of trip-level data on area fished, depths fished, fishing methods, and characteristics of discards (numbers by species, proportions under legal size limits, immediate mortalities, and notable impairments).

Expected costs: Cannot be estimated at this time.

Improved in-season monitoring

Stock assessments may partition fishery removals into seasons or redefine calendar years into fishing years. Fishery managers also require precise estimates of landings and discards over time periods that better match the scale of the recreational fishery. For example, for federally managed species with an ACL that cannot be exceeded, recreational fisheries have demonstrated the capacity to exceed limits well before the end of a full year. Thus, annual seasons have been reduced and precise estimates are now needed over much shorter periods (in some cases weeks or days) to ensure that ACLs are not exceeded and overfishing is not occurring. Increasing precision of estimates within waves may be necessary for species where the unit of analysis has a temporal scale less than a year.

The MRIP is intended to be a general survey and is therefore not designed for the purposes of in-season management of recreational fisheries with ACLs. Improving timeliness of estimates is one feasible

method to improve ability to monitor in-season estimates but the cost of increasing sample sizes to produce precise enough estimates is high. Development of data collection as supplemental to MRIP also has the potential to address in-season monitoring, especially related to fisheries with short seasons. Additionally, it's possible that a different approach to management, rather than data collection method and/or supplemental surveys, would be more useful for species with small seasons and/or rare occurrences.

The 2021 NAS review of MRIP yielded several suggestions to assist with improving in-season monitoring including: using raw data streams of MRIP data, mode-based projecting and/or forecasting, further implementation of new technologies to better collect data, and using supplemental and ancillary data. Additionally, new recreational surveys and survey methods could be implemented but partners should anticipate the need for possible inter-calibration and continued survey development, ensuring that these needs are also clearly communicated to anglers, managers, and stakeholders. It will also be beneficial to continue pilot testing new approaches including the use of harvest tags or web-based reporting used to track the harvest of individual fish or private recreational fisheries license endorsements. These could be used to identify a subset of licensed anglers to better target managed species.

Expected costs: Cannot be estimated at this time.

Note on utility of citizen science to address data needs:

Citizen science was originally identified as a separate data priority but was later removed noting that citizen science as a tool to support data needs rather than its own individual priority. Angler-reported recreational fishing activity and catch, supplemental to the MRIP, continues to be an evolving aspect of engaging citizens in fisheries management and in helping to bolster the breadth of data collection for state, federal, council, and Commission partners. The ultimate use of citizen science data may be supplemental to MRIP in the assessment and management process, and may not include integration into the MRIP. Citizen Science data collection methods can assist with capturing changing spatial and temporal presence/absence of species and important species-length information. While productive for agency-public relationships, the vast majority of data collection tools (i.e., mobile applications) have not yet followed a standardized approach to data collection. A number of partners in the South Atlantic (e.g., 'Release' by the SAFMC and 'Catch U Later' by NC DMF) have collaborated with ACCSP to create these mobile-based applications on the Atlantic Coast and there are continued plans to further standardize data standards/elements. This could include the use of a 'switchboard' base application which can have a standard set of questions/responses to choose from to provide flexibility based on partners needs and could be submitted in the same format and data stream(s).

A more standardized approach to data collection via opt-in angler applications would provide more useful data for use in stock assessments by assuring data are collected in the same manner, regardless of where the data are being collected which in turn could allow for data users to potentially include opt-in angler reported information into the recreational fishery management process for management. In 2020, the RTC and ASMFC Assessment Science Committee preliminarily discussed data element needs and data utility of opt-in angler reported information, including the potential for biases and the difficulty in assuring data reliability for statistical use of data. Another major factor to be considered is the communication and outreach required to begin and maintain engagement from a broad segment of the angling public.

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May 2022 Committee Newsletter

This monthly newsletter is intended to keep all committee members informed of the activities and accomplishments of ACCSP committees and staff. ACCSP staff welcomes feedback on all content.

Upcoming Events

- **June 1:** Commercial Technical Committee Meeting
- **June 6:** Recreational Technical Committee Meeting
- **June 15:** Initial Proposals are due
- **June 22:** Initial proposals are distributed to Operations and Advisory Committees
- **See** ACCSP Calendar Link **for more information**

Coordinating Council

- Provided updated rankings for Atlantic Regional Recreational Implementation Plan, a document scheduled for completion and Council Action at the Annual Meeting in November.

- The ACCSP technical Committees have been working to update the 2012 Atlantic Coast Data Standards. This includes updating tables, figures, and language. As well as determining which sections will be dynamic and which will be static.
- The plan is to also update the way the Atlantic Coast Data Standards are presented and organized. The idea is to identify **dynamic** text – text that is frequently changing, vs. **static** text – text that does not change as frequently and does not have to be reviewed as often. Identifying dynamic text this will allow more response to changes in the industry, the standards, and the technical committees' level. The standards review is usually done every 5 years.
- ACCSP staff will need all feedback by August. The updated standards will then be presented to the Operations Committee and Advisory Committee in September, and finally presented to the Coordinating Council in October.

Status of Standards Review:

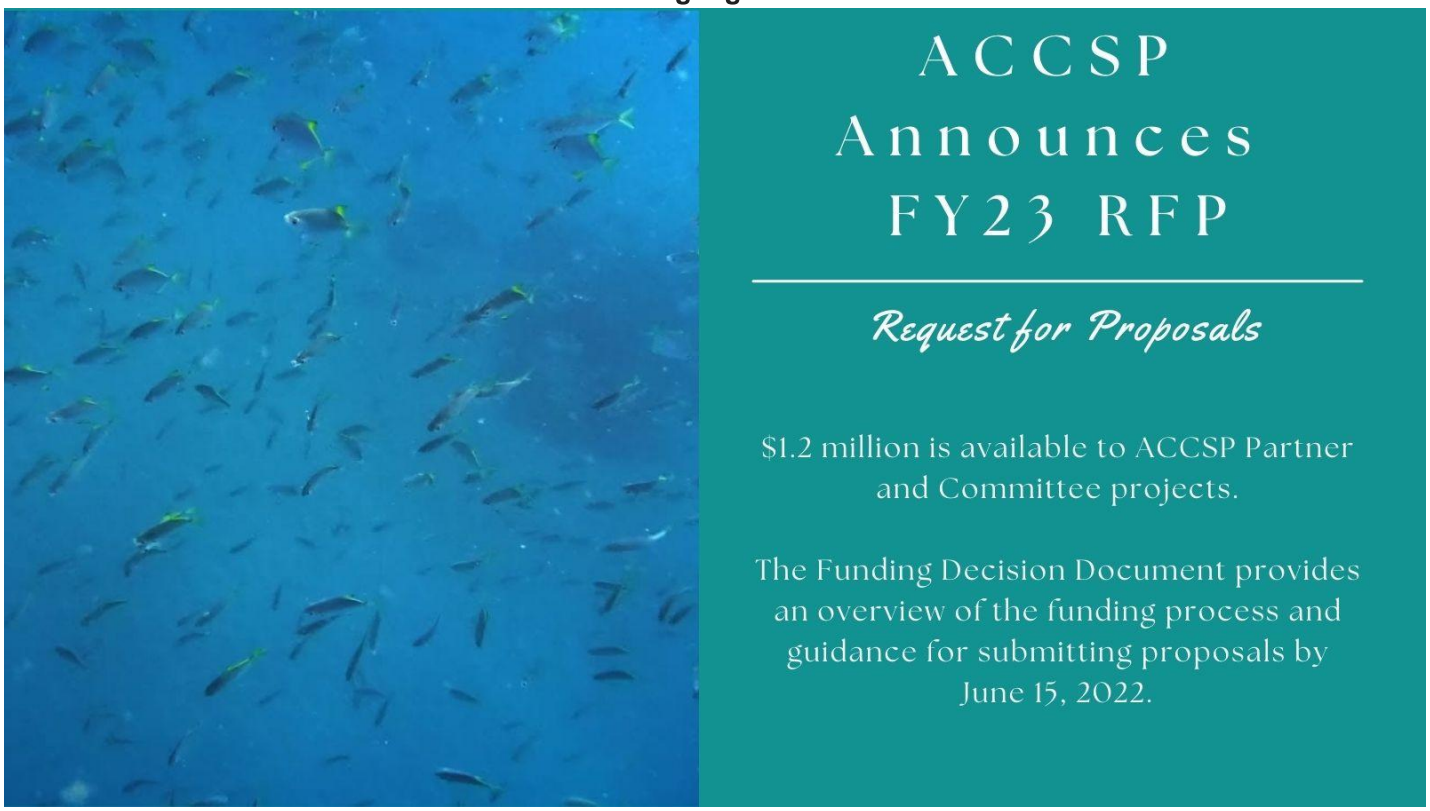
Bycatch Prioritization Committee: Review complete

Biological Review Panel Committee: Review in Progress, Next standards review meeting is pending.

Commercial Technical Committee: Review in Progress, Next standards review meeting June 1, 2022.

Recreational Technical Committee: Review in Progress, Next standards review meeting June 6, 2022.

Highlights



Editor: Marisa Powell
Please contact us if you have any questions or feedback at info@accsp.org

June 2022 Committee Newsletter

This monthly newsletter is intended to keep all committee members informed of the activities and accomplishments of ACCSP committees and staff. ACCSP staff welcomes feedback on all content.

Upcoming Events

- **July 13:** Commercial Technical Committee Meeting
- **July 14:** Operations and Advisory Committees Meeting
- **August 2-4:** ASMFC Meeting
- **See** ACCSP Calendar Link **for more information**

The Recreational Technical Committee (RTC) held a call on June 6th to:

A. Finalize the revised static text portions of the ACCSP Recreational and For-hire Data Standards, the dynamic data element sections will be revised in 2023.
B. Finalize a proposed methodology for the creation of for-hire logbook estimates of both catch and effort with the use of a dockside validation component to NOAA Fisheries with the intention of movements towards MRIP certification. Note this was submitted to MRIP for consideration after the RTC call and the ACCSP will work with MRIP on next steps.
C. Discuss the recent, combined ranking of priorities of the 2023-2027 Atlantic Recreational Implementation Plan which will help guide MRIP allocation of resources to best address data needs of recreational fisheries.
D. Request ideas for inclusion in the annual ACCSP Request for Proposal (RFP).
E. There was a transition of the Recreational Technical Committee Chair from Greg Wojcik (CT) to Angela Giuliano (MD), and the nomination of a new Vice-Chair Dawn Franco (GA).

- The Recreational Technical Committee will meet again in October/November of 2022 to reflect on recent efforts and set direction for 2023-forward.

Highlights

ACCSP RE-OPENS FY23 RFP

DEADLINE AUGUST 17

- Opportunity to utilize available funds
- Support Partner needs
- Encourage new proposals
- Equally consider all proposals received

SUBMISSIONS:
Please submit proposals to
Julie DeFilippi Simpson, ACCSP Deputy Director
julie.simpson@accsp.org.

MORE INFORMATION
CLICK

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July 2022 Committee Newsletter

This monthly newsletter is intended to keep all committee members informed of the activities and accomplishments of ACCSP committees and staff. ACCSP staff welcomes feedback on all content.

Upcoming Events

- **August 2-4:** ASMFC Meeting
- **See** ACCSP Calendar Link **for more information**

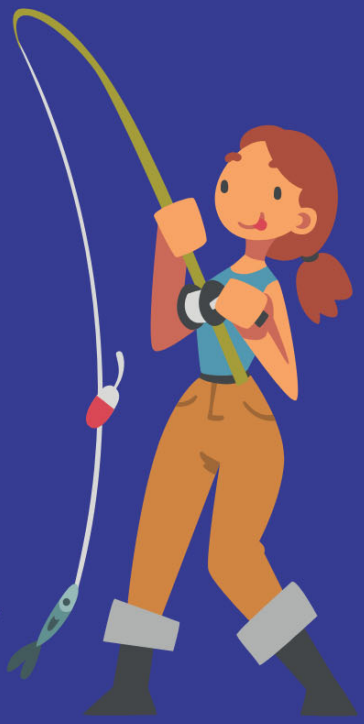
Standard Codes Committee

- NEFSC would like to review the current “common name” for SAFIS species-codes. This would be to ensure other agencies are aware of the possible data cleanup that may be needed in the future.

Highlight

ACCSP FY23 RFP STILL OPEN

ACCSP encourages new proposals. The FY23 RFP process remains open til August 17th.



Submissions

Deadline: August 17, 2022

Please submit proposals to Julie DeFilippi Simpson, ACCSP Deputy Director Julie.Simpson@accsp.org

ACCSP WISHES EVERYONE A HAPPY & SAFE SUMMER!

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August 2022 Committee Newsletter

This monthly newsletter is intended to keep all committee members informed of the activities and accomplishments of ACCSP committees and staff. ACCSP staff welcomes feedback on all content.

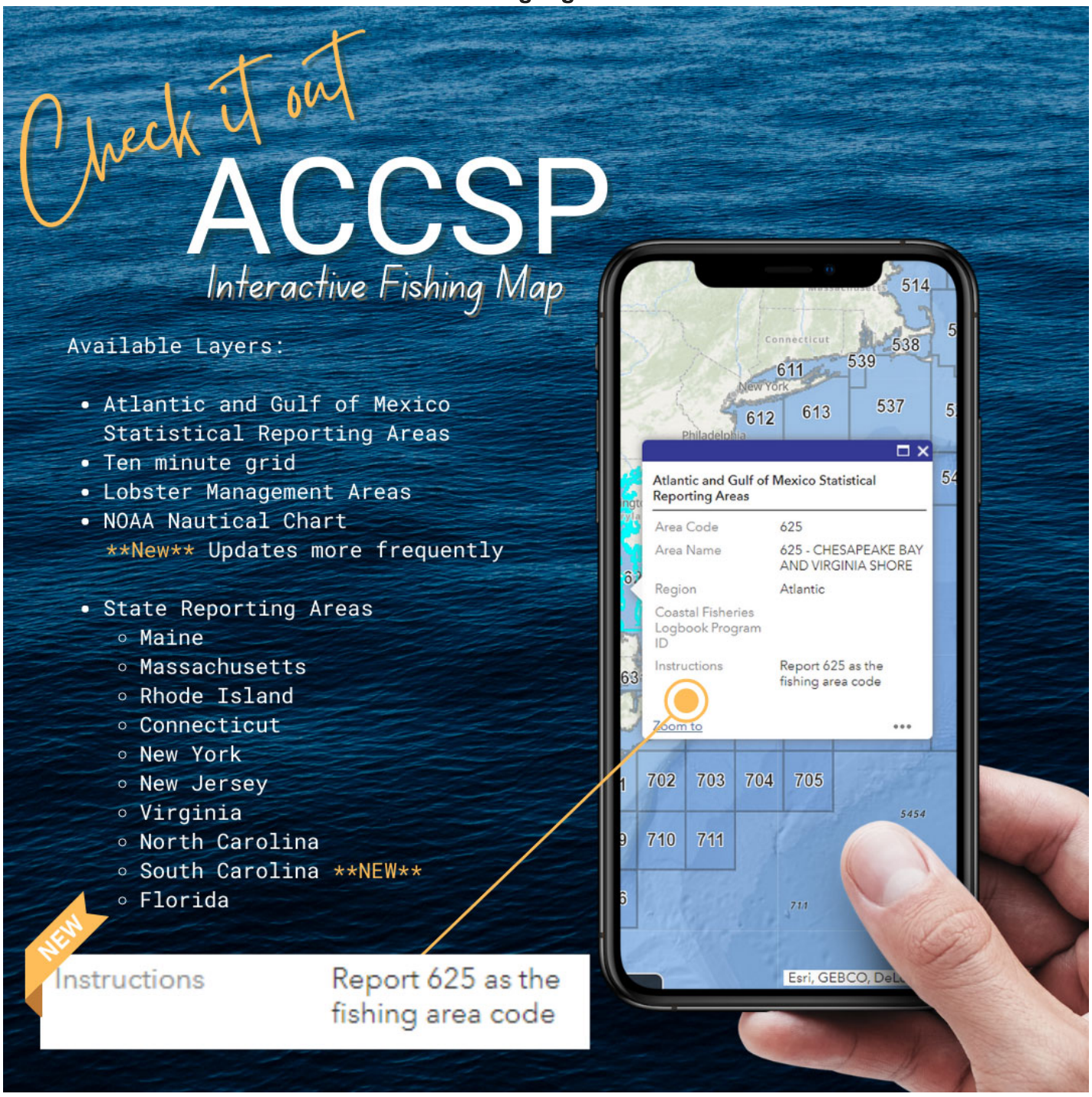
Upcoming Events

- **September 20-21:** Joint Operations and Advisory Committees Meeting
- **See** ACCSP Calendar Link **for more information**

Commercial Technical Committee

dynamic format, and reference best practices outlined by the ACCSP Accountability subgroup.

Highlight



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