

GULF OF MEXICO FISHERY MANAGEMENT COUNCIL

SHRIMP MANAGEMENT COMMITTEE

Crowne Plaza @Bell Towers Shops Fort Myers, Florida

June 21, 2022

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4 Jim Nance.....GMFMC SSC  
5 Clay Porch.....SEFSC  
6 Nathan Putman.....LGL  
7 Farren Wallace.....NOAA  
8  
9 - - -  
10

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1 The Shrimp Management Committee of the Gulf of Mexico Fishery  
2 Management Council convened at the Crowne Plaza @Bell Towers  
3 Shops in Fort Myers, Florida on Tuesday afternoon, June 21,  
4 2022, and was called to order by Chairman Leann Bosarge.

5  
6 **ADOPTION OF AGENDA**  
7 **APPROVAL OF MINUTES**  
8 **ACTION GUIDE AND NEXT STEPS**  
9

10 **CHAIRMAN LEANN BOSARGE:** I would like to call my very last  
11 Shrimp Committee to order, please. To remind everybody, the  
12 members are myself, Ms. Bosarge, as Chair, Mr. Banks as Vice  
13 Chair, Mr. Anson, Mr. Broussard, Mr. Donaldson, Mr. Dugas, Mr.  
14 Gill, Mr. Riechers, Mr. Spraggins, and Mr. Strelcheck, who is  
15 absent right now, I think, and I don't think he's on the  
16 webinar.

17  
18 Okay, and so the first thing is the Adoption of the Agenda, Tab  
19 D, Number 1, and I did have one item that I was going to add  
20 under Other Business. Whether we can get to it or not, I don't  
21 know, but that would be a quick discussion of that EDM working  
22 group that is forthcoming. Are there any other changes or  
23 additions to the agenda? Seeing none, is there any opposition  
24 to adopting the agenda as amended? Seeing no opposition, the  
25 agenda is adopted.

26  
27 Item II is the Approval of our April 2022 Minutes, committee  
28 minutes, and those are under Tab D, Number 2. Are there any  
29 revisions that needed to be made to those minutes? Seeing none,  
30 we will adopt the minutes as they are presented in the briefing  
31 book.

32  
33 Item Number III is our Action Guide and Next Steps, which can be  
34 found under Tab D, Number 3, and we're going to let Dr. Freeman  
35 introduce each agenda item as we come to it from that action  
36 guide, and so we'll go straight into that Item IV on our agenda,  
37 which is the update on testing and development of options  
38 proposed as replacements for the historical cELB devices for the  
39 Gulf shrimp fishery. Dr. Freeman.

40  
41 **UPDATE ON TESTING AND DEVELOPMENT OF OPTIONS PROPOSED AS**  
42 **REPLACEMENTS FOR THE HISTORICAL CELB DEVICES FOR THE GULF SHRIMP**  
43 **FISHERY**  
44

45 **DR. MATT FREEMAN:** I will note, first, since we're short on  
46 time, that Ms. Bosarge did offer to delay the Shrimp Committee  
47 until August, if it meant that she could be a council member for  
48 another meeting.

1  
2 The action guide for this first item is that the committee will  
3 receive two presentations related to the testing and development  
4 of current options proposed as replacements for the historical  
5 cELB devices for the Gulf shrimp fishery. The first  
6 presentation will be an update from NMFS on its side-by-side  
7 field testing of cVMS units and cELB units for the purpose of  
8 collecting comparable data for vessel location and estimated  
9 speed.

10  
11 The second presentation will be an update from Dr. Putman with  
12 LGL Ecological Research Associates on its council-funded pilot  
13 study to test the P-Sea WindPlot program for vessel position  
14 data collection and automatic transmission on shrimp vessels.  
15 The committee should consider the presentations, ask questions,  
16 and provide feedback. This information does not require any  
17 formal committee action, and I believe that Mr. Wallace will be  
18 giving the first presentation for NMFS.

19  
20 **NMFS' SIDE-BY-SIDE PILOT TESTING OF CVMS AND CELB UNITS ON GULF**  
21 **SHRIMP VESSELS**  
22

23 **DR. FARRON WALLACE:** It's my pleasure to give you all a short  
24 update on our project to validate the cellular VMS units, as  
25 compared to the cELB program. As you all know, the data  
26 transmission, using the current ELB unit, is no longer possible,  
27 because the 3G network can no longer be supported, and, of  
28 course, we need the 3G network working, so we can do automated  
29 download of the GPS data, and so fishermen now are required to  
30 pull their chip sets out and mail them back in to us, and it  
31 takes a lot of effort, and it's not timely whatsoever.

32  
33 Here is essentially two cellular VMS providers out here, the  
34 Faria Beede and the Woods Hole Group, and both of these  
35 companies have been active for at least the last fifteen or  
36 twenty years. On the bottom is a picture of our 3G cELB unit  
37 that we've been using for a number of years now.

38  
39 The underlying technology is the same across all of the units,  
40 and they all use a GPS chip, which is a microchip that is used  
41 as a GPS receiver, and they receive signals from four or more of  
42 the twenty-seven satellites that are orbiting above us, and a  
43 GPS device can calculate its position on the amount of time it  
44 takes to receive a signal from the four satellites, and so all  
45 of these units are the same type of GPS receiver, and they all  
46 do the same calculations, and so there is no expectation that  
47 the data streams would be any different from any of one of these  
48 units.

1  
2 The units also include SSD cards, so we can record the location,  
3 and, of course, the cellular device to call home and upload the  
4 data when it's range of port. We were also testing the data  
5 logger, which incorporates a motion sensor, and those are also  
6 on our survey vessels, but not out on the fishing vessels.

7  
8 We have the units deployed out on the R/V Caretta and out on the  
9 Southern Journey, and so we've been collecting the data over the  
10 last month or so. The two shrimp vessels out of Louisiana,  
11 unfortunately, those vessels were sold, and so we will not have  
12 any data coming back from those two vessels. The shrimp vessel  
13 that is out of Fort Myers, the shrimp vessels out of Fort Myers,  
14 Florida, all three are active and are sending their data in, and  
15 the last vessel here, from North Carolina, we sent him a unit,  
16 and that should be getting installed over the next week or two.

17  
18 As you can see, we're collecting data on survey vessels, and  
19 there has not been enough time to get the data downloaded or  
20 analyzed at this point, but, again, the data streams should be  
21 exactly the same, since they all use the same technology. With  
22 that, I can take any questions.

23  
24 **MR. PATRICK BANKS:** The vessels from Louisiana have recently  
25 been sold, and so they're no longer participating, and is that  
26 what I heard?

27  
28 **DR. WALLACE:** Can you hear me?

29  
30 **CHAIRMAN BOSARGE:** Yes, sir, we can hear you, and did you hear  
31 Mr. Banks' question, Mr. Wallace?

32  
33 **DR. WALLACE:** Hello. Can you hear us?

34  
35 **CHAIRMAN BOSARGE:** We can hear you. Can you hear us? Well, I  
36 will answer your question, Patrick.

37  
38 **DR. WALLACE:** Hello?

39  
40 **CHAIRMAN BOSARGE:** Mr. Wallace, we can hear you, but you can't  
41 hear us.

42  
43 **DR. WALLACE:** Hello?

44  
45 **CHAIRMAN BOSARGE:** We're getting a presentation on how  
46 technology will be no problem, and it's a problem. Okay, and  
47 so, Patrick, those vessels -- They have not been sold yet, but  
48 it's my understanding that one of them most definitely will

1 probably be sold, and possibly the other, and that has  
2 everything to do -- That has everything to do with the state of  
3 our fishery right now, the price of shrimp and the price of  
4 fuel. It's bad. All right, and so, Mr. Wallace, can you hear  
5 me now? Dr. Porch.

6  
7 **DR. CLAY PORCH:** He's signing back in, to see if he can get a  
8 better connection.

9  
10 **CHAIRMAN BOSARGE:** All right, and so I'm wondering, and maybe  
11 Dr. Porch can answer this, and so I thought, especially on the  
12 Caretta, which is the NOAA-owned vessel -- Why did we not go  
13 ahead and put both the Faria and the Woods Hole on that boat,  
14 because we have the cELB on it, and we could have compared the  
15 exact same trawling under all three.

16  
17 **DR. WALLACE:** Can you guys hear me now?

18  
19 **CHAIRMAN BOSARGE:** Yes, sir, Mr. Wallace. Did you hear my  
20 question?

21  
22 **DR. WALLACE:** I caught the very last of it, and I think you  
23 wanted to know why we didn't install both the Woods Hole and the  
24 Faria?

25  
26 **CHAIRMAN BOSARGE:** Yes, sir, on the Caretta.

27  
28 **DR. WALLACE:** Well, we didn't really see a big reason to do  
29 that, the reason being that they all use the same GPS sensor,  
30 and they're all going to do -- Essentially give us the same data  
31 stream.

32  
33 **CHAIRMAN BOSARGE:** Right, and that's the assumption, but I  
34 thought was the hypothesis that we're testing.

35  
36 **DR. WALLACE:** Well, I mean, it's a reality of the GPS units  
37 itself. That technology is the same across all of the units,  
38 and they're all set to a ten-minute data collection of the GPS.

39  
40 **CHAIRMAN BOSARGE:** All right, and then so the second question  
41 has to do with the data, and so the point was the timeliness of  
42 the data, and, right now, you're having to get the chips mailed  
43 in, and that's not very timely, and part of the rationale about  
44 going to a VMS is because it's very timely.

45  
46 As soon as there's a cellphone signal, the data goes to NMFS,  
47 but you said you had not downloaded the data yet, and you didn't  
48 actually have the data yet. I understand you probably haven't

1 run an analysis on the data, but we should actually have the  
2 data, and it should be coming in, right?

3  
4 **DR. WALLACE:** Yes, and so the data from the cellular units are  
5 being recorded into a dataset, and we did look at some of those  
6 data points. However, to get the cELB data, you have to  
7 actually remove the chip set from the vessel itself, and so  
8 that's sort of the difficult end, is we have to be there when  
9 the survey vessel comes in, and is in port, and then get to  
10 transfer those data, and that hasn't happened yet.

11  
12 **CHAIRMAN BOSARGE:** Okay, and so the Caretta -- I think that's at  
13 dock in Panama City right now, I think, and so we're going to go  
14 ahead and get that chip from her, I guess, sometime in the near  
15 future, and it's your expectation that I guess, at least prior  
16 to January, that we will -- The whole point of the exercise is,  
17 yes, to test the units at-sea, and let's make sure that we are  
18 in fact receiving all the GPS points that we think we need to  
19 receive, and then, Number 2, to use that data in the actual  
20 shrimp algorithm and make sure that, with the extra points that  
21 the VMSs are going to collect, because they're going to collect  
22 more than every ten minutes, and we wanted to confirm that that  
23 will not be a problem in the shrimp algorithm, and so we're  
24 going to run these data, off these VMSs, through the shrimp  
25 algorithm, as part of this project, and give the council the  
26 actual trawl tracks and outputs from that, right, for that  
27 Caretta?

28  
29 **DR. WALLACE:** Yes, that is correct, and we have the cellular  
30 units set to a ten-minute data upload also, the same as the  
31 cELB.

32  
33 **CHAIRMAN BOSARGE:** But you're also allowing it to do its natural  
34 thing, right, where, when you power-up, or power-down, you're  
35 going to get an extra point for each one of those, and, as you  
36 cross these boundary lines down in the Keys, you're going to get  
37 an extra point for each one of those, and you're allowing it to  
38 do its thing, right?

39  
40 **DR. WALLACE:** Yes, and so the cellular VMS units will take  
41 additional data on power-up and power-down, but it's not  
42 necessarily set to collect additional data when it crosses a  
43 specific line in the ocean, for example.

44  
45 **CHAIRMAN BOSARGE:** Okay. As long as you didn't change any  
46 settings, other than the ten-minute ping, it ought to do that,  
47 and they're pre-programmed to do that, from my understanding.



1 **DR. WALLACE:** Yes, exactly, and we don't make -- So the ten-  
2 minute pings are going to be not all at exactly the same time,  
3 and so, whenever each unit is turned on, it will determine how  
4 closely to that ten-minute period each of the units will be  
5 pinging the data. They could be five minutes apart, for  
6 example.

7  
8 **CHAIRMAN BOSARGE:** I don't understand that. Can you elaborate?  
9

10 **DR. WALLACE:** So, if the cELB unit is turned on, and it comes on  
11 first, it will start pinging, and, if the Woods Hole unit  
12 doesn't -- For example, if it doesn't come on until a minute  
13 later, or thirty seconds later, it will start pinging at a  
14 different time. The ten-minute period will be exactly the same,  
15 but the start times may be a little bit different.  
16

17 **CHAIRMAN BOSARGE:** Okay. I am following you. Okay. All right,  
18 and so but you do feel confident that you can run it through the  
19 shrimp algorithm and give the council those results, hopefully  
20 before January, our January meeting?  
21

22 **DR. WALLACE:** Yes, that is the plan.  
23

24 **CHAIRMAN BOSARGE:** Beautiful. Thank you. That's the true test,  
25 in my opinion. All right. Any other questions? Are you going  
26 to get a different boat from Louisiana, because that was a  
27 concern of some of those Louisiana shrimpers, and are you going  
28 to try and round up another boat to put those units on?  
29

30 **DR. WALLACE:** Yes, and we'll put our feelers out again, and  
31 we'll see if we can get somebody from Louisiana.  
32

33 **CHAIRMAN BOSARGE:** Thank you, sir.  
34

35 **DR. WALLACE:** Thank you, Leann.  
36

37 **CHAIRMAN BOSARGE:** All right. If there are other questions for  
38 Mr. Wallace, that's going to take us to the next item in our  
39 presentation. Matt, do you want to introduce that one for us,  
40 please? I mean, the next item on our agenda.  
41

42 **DR. FREEMAN:** Certainly, and so the action guide paragraph that  
43 I read encompassed both presentations, and the next presentation  
44 will be by Dr. Putman with LGL.  
45

46 **LGL'S RESEARCH ON P-SEA WINDPLOT MODIFICATIONS**  
47

48 **DR. NATHAN PUTMAN:** Hi, everybody. Can you hear me?

1  
2 **CHAIRMAN BOSARGE:** Yes, sir, Dr. Putman, and so you're going to  
3 give us the LGL research on P-Sea WindPlot modifications, Tab D,  
4 Number 4(b), for those following along online.  
5

6 **DR. PUTMAN:** Yes, ma'am. This is a presentation put together by  
7 myself, Taylor Beyea, and Benny Gallaway. The outline for the  
8 talk will be just a little bit on background, and I'll give you  
9 an overview of sort of the goals and timelines of this project,  
10 what are results are to-date, and then next steps, along with  
11 questions.  
12

13 As we all know, monitoring shrimp effort is important,  
14 particularly for assessing how shrimping impacts others and  
15 calculating takes and assessing the potential for interactions  
16 with sea turtles or for red snapper stock assessments or any  
17 number of other things. It's also important for assessing how  
18 others impact shrimping, such as with artificial reef placements  
19 or infrastructure associated with marine-based energy or  
20 aquaculture siting, and so it's important to know where and when  
21 shrimping occurs.  
22

23 I will just gloss over this real quick. As Dr. Wallace  
24 mentioned, there was a nice system for monitoring shrimping  
25 effort, but it relied on 3G cellular networks, and those were  
26 discontinued, and so we needed to do something else.  
27

28 The shrimping industry stakeholders put forward a suggestion  
29 that existing navigational software on shrimp boats could be  
30 used to obtain the same data as is being recorded by the cELBs,  
31 and the Southern Shrimp Alliance funded LGL to work with P-Sea  
32 WindPlot, and that's the primary navigational software used in,  
33 well, I guess a lot of fisheries across the nation, and to use  
34 that P-Sea WindPlot software, a modified version of that, to  
35 record the same information as the cELB program, and so location  
36 data at ten-minute intervals, and to do that in a way that would  
37 be compatible with existing software routines to that use data  
38 to calculate shrimping effort.  
39

40 Those efforts were successful, in terms of modifying the  
41 software to record that data, but there wasn't a mechanism in P-  
42 Sea WindPlot to automatically transfer those data, and what we  
43 had set up was much like the chip retrieval that Dr. Wallace was  
44 describing, except it used USB keys and the like, and that is,  
45 as noted, not so timely, and not so efficient, and, if you go to  
46 the next slide, the Gulf of Mexico Fishery Management Council  
47 funded an expanded sampling of the fleet for effort monitoring  
48 in the Gulf of Mexico shrimp industry.

1  
2 Basically, to do one primary thing, and it was to update P-Sea  
3 WindPlot so that it would electronically transmit ELB files with  
4 the lat-long and date-time stamp to a server, automatically  
5 remotely to do that, and the second part of that is to develop a  
6 mechanism by which computers, using P-Sea WindPlot, can connect  
7 to a mobile communications services network, and then Number 3  
8 is to conduct initial tests on five commercial shrimp boats from  
9 across the Gulf of Mexico. Part 4 is troubleshoot and revise  
10 any software or hardware issues and implement protocols, as  
11 necessary, and then conduct a secondary set of tests on twenty  
12 additional commercial shrimp boats, and sort of to have a total  
13 sample of twenty-five boats that we're looking at over the  
14 course of the year.

15  
16 I won't belabor this next graphic, and this is just essentially  
17 those five goals with some presentations and report preparation  
18 added in, and so I got started at the end of March, and we are  
19 going through the end of next March, and we're working on those  
20 five goals.

21  
22 Here are our results to-date. We have successfully updated the  
23 software. We put in an FTP client into P-Sea WindPlot that uses  
24 Secure Shell to transfer files to a designated server. At the  
25 start of a new trip, P-Sea WindPlot automatically writes the  
26 file, which is designated by the MMSI number of the boat, and so  
27 it looks for that signal, and it uses that as a unique  
28 identifier.

29  
30 If that's not available, for some reason, it uses the P-Sea  
31 WindPlot key, which is also a unique identifier for that vessel,  
32 and it records the data and time that the trip began, and that's  
33 the starting file. Every ten minutes, the data and time and  
34 GMT, Greenwich Mean Time, and the latitude and longitude are  
35 appended to that file.

36  
37 If the computer is connected to the internet, every ten minutes,  
38 that file is transferred to a designated server. If the  
39 internet connection is lost, data continues to be recorded, and  
40 then, once it reconnects to the internet, files are  
41 automatically transmitted to the server again, and the file name  
42 and conventions and processing ensure that no duplicate files  
43 are ever transmitted to the server, reducing confusion on the  
44 analysis end.

45  
46 We've done some desktop testing already, and we've put together  
47 a computer wired with a GPS and an updated version of P-Sea  
48 WindPlot, and we put in a Verizon hotspot used for the

1 connection to the internet, and we used a local LGL server as  
2 the repository, and, in those tests, we were successful in  
3 simulating those ELB files, which the program automatically sent  
4 to the server from P-Sea WindPlot upon connection to the  
5 internet, another success, and P-Sea WindPlot continued to log  
6 data when the hotspot was moved out of range, and P-Sea WindPlot  
7 automatically reconnected to the hotspot, when in range, and  
8 transmitted the unsent data, seamlessly continuing transferring  
9 data thereafter, and so it works.

10  
11 Our upcoming steps are for vessel testing, and we've got some  
12 field tests lined up with five commercial shrimp vessels, and we  
13 expect these to be ready by July 15, the Texas open, and we will  
14 work to roll out twenty additional commercial shrimp -- Roll  
15 this out on twenty additional commercial shrimp vessels, using a  
16 geographically representative sample, with installation help  
17 from our marine tech expert, Jody Esteller, and we should have  
18 some good fields tests during the third trimester, for sure, and  
19 we'll keep you updated, but things are looking good.

20  
21 The program works, and we've got nice installer that's  
22 executable for easy installation on these computers, and things  
23 are progressing well, and I think I can take questions. Thanks.

24  
25 **CHAIRMAN BOSARGE:** Thank you, Dr. Putman. Do we have any  
26 questions from the committee or others? All right. Well,  
27 Nathan, I will ask you the same question that I asked Mr.  
28 Wallace, and so, once you are able to actually transfer the  
29 files from sea from a vessel back to the server, you are going  
30 to also take that data and run it through the shrimp algorithm,  
31 to make sure that it produces, you know, logical results that  
32 match what actually happened on the water, just like NMFS is  
33 going to do?

34  
35 **DR. PUTMAN:** That is correct, and we'll hopefully have some  
36 results for you in August.

37  
38 **CHAIRMAN BOSARGE:** Beautiful. I'm glad to hear it. Thank you.  
39 All right. Any other questions? All right. Thank you. We  
40 appreciate you being on the line, sir.

41  
42 **DR. PUTMAN:** It's always a pleasure to join. Thanks.

43  
44 **CHAIRMAN BOSARGE:** All right, and that takes us to Item Number V  
45 on our agenda, which is the finfish commercial logbook reporting  
46 considerations related to the potential applicability of this  
47 system to shrimp effort collection, Tab D, Number 5. Dr. Brown,  
48 do we have you on the line? Excuse me. Hold on. I skipped Dr.

1 Freeman. He needs to do the action guide. Sorry.

2  
3 **FINFISH COMMERCIAL LOGBOOK REPORTING CONSIDERATIONS RELATED TO**  
4 **THE POTENTIAL APPLICABILITY OF THE SYSTEM TO SHRIMP EFFORT**  
5 **COLLECTION**  
6

7 **DR. FREEMAN:** For this item, the committee will receive a  
8 presentation from NMFS Southeast Fisheries Science Center, and,  
9 as Ms. Bosarge mentioned, it will be Dr. Brown, and it's on the  
10 potential application of finfish commercial logbook reporting in  
11 the Gulf shrimp industry for effort, and potentially catch data  
12 collection, and how such a program would function in the Gulf  
13 shrimp industry. The committee should consider the  
14 presentation, ask questions, and consider whether or not to  
15 explore the potential application further. This information  
16 does not require any formal committee action.  
17

18 **CHAIRMAN BOSARGE:** Thank you, Dr. Freeman. Now, Dr. Brown, if  
19 you're ready, we're going to pull your presentation up, and the  
20 floor is yours.  
21

22 **DR. JULIE BROWN:** Thank you. Thanks for that introduction. I'm  
23 Julie, and I work in the commercial logbook team at the  
24 Southeast Fisheries Science Center. Today, I'm going to present  
25 some considerations related to the applicability of the  
26 electronic logbook system to the shrimp effort collection, and  
27 what I have learned, through listening to these different  
28 presentations, is that the words "electronic logbook" means  
29 different things to different people, and so hopefully, after  
30 this presentation is done, I will be able to provide clarity and  
31 not make things any more confusing.  
32

33 These are the questions that I hope to have answered by the end  
34 of the presentation. How could a logbook fit into Gulf shrimp  
35 fishery management needs? What permits are currently required  
36 to submit Southeast Fisheries Science Center logbooks? What  
37 type of information does the Southeast Fisheries Science Center  
38 consider for logbook trip reports? What information is eTRIPS  
39 best equipped to collect, and, lastly, what might an electronic  
40 logbook look like for trawl gears?  
41

42 Right now, we have four separate data streams that are used for  
43 scientific analysis and council and industry requests, and there  
44 is the cELB program that is the topic of today's considerations,  
45 and that provides one component of the shrimp effort. The  
46 observer program provides bycatch estimates. The trip tickets  
47 provide landings estimates, and the annual survey provides an  
48 assortment of other important information about the gear

1 configurations and the finances of the fleet.

2  
3 A single logbook data collection could replace the current  
4 process of collecting location data, modeling the trawling  
5 effort, and the problem of merging this information with the  
6 trip tickets on the backend, which would be needed to compute an  
7 area CPUE in data collection, and I'm going to emphasize "area",  
8 and we'll get to that a little bit later.

9  
10 Right now, none of the shrimp data collection falls under what  
11 we call the Southeast Fisheries Science Center commercial  
12 logbook program. These are the permits that do owe us a  
13 logbook, and they fall under the management of both the Gulf and  
14 South Atlantic Management Councils, and then we also have the  
15 ones that are issued by the HMS Headquarters.

16  
17 By our definition of what a logbook looks like, these are the  
18 fields that are required for every trip, on every vessel that  
19 has a SERO federal permit with logbook requirements. Many of  
20 the vessels, due to their permit type, or fishing behavior, are  
21 only going to be logging one effort per trip, and the exceptions  
22 would be if a trip involves multiple gear types or if it's one  
23 of those HMS fisheries.

24  
25 At the trip level, you have things that, as the name implies,  
26 describe the trip, who is operating the vessel, when did you  
27 start and end your trip, where is the county of your landing, et  
28 cetera, and then you have your effort, and it may be one effort,  
29 or it may be multiple, where we learn about your gear type, and  
30 then, lastly, the species that you caught.

31  
32 The effort information required is highly variable, depending on  
33 the gear and the permit, and so, for example, our HMS permits  
34 must report latitudes and longitudes for every set, and that's  
35 compared to the coastal permit, which simply reports an  
36 estimated total time fished for the trip. Electronic logbook  
37 users do have the ability to log multiple fishing events, and  
38 multiple offload/sale events, but it is important to note that  
39 the electronic logbook that we are talking about does not  
40 passively collect any location information.

41  
42 To top all of that off, we also ask a portion of our fleet,  
43 about 20 percent, to participate in our discard survey, and also  
44 our economic survey, for each trip, and so you can kind of just  
45 read through some of those questions that we would ask those  
46 survey participants about their fishing trip.

47  
48 How does the electronic logbook work for the finfish permits

1 that are reporting to the Southeast Fisheries Science Center?  
2 Well, we have partners. The Atlantic Coastal Cooperative  
3 Statistics Program, ACCSP for sure, and their contractor, Harbor  
4 Lights, they build and maintain the software in its various  
5 forms. It's important to note that the Science Center does not  
6 design or build the application. It's our job to either approve  
7 or not approve a program, based on whether it meets the  
8 regulatory requirements, and so the software built by Harbor  
9 Lights is called eTRIPS.

10  
11 As we'll see, it's mostly designed to collect information that  
12 is manually entered by the user. They do have some handy  
13 features, like being able to set up predetermined favorites that  
14 make data entry quicker, but, however, it does not passively  
15 collect data without some sort of interaction by the user.

16  
17 NOAA and ACCSP have a cooperative agreement to share data. The  
18 way this works is that ACCSP is getting up-to-date permit  
19 information from us, which they can use to enroll the users, and  
20 then, once those users are on the app, they have to show those  
21 users the correct logbook questions, depending on the permit.  
22 The data is then shared with the Science Center, and we do some  
23 backend processing and then grant compliance.

24  
25 eTRIPS can run on several different devices. Probably the most  
26 common would be a cellphone or tablet, and that's simply for  
27 ease of use on the fishing vessel. On those devices, the data  
28 is entered and then uploaded when either Wi-Fi or a cellphone  
29 signal allows it. They also maintain a website that mirrors the  
30 data collected through the app. However, as you can imagine,  
31 the website does require the user to be connected to the  
32 internet at the time of data entry.

33  
34 Here are just some very, very rough cost estimates to both the  
35 industry and the logbook program. Obviously, smartphones,  
36 tablets, computers can run the full spectrum, in terms of how  
37 either basic or sophisticated you would personally like your  
38 device to be, and then the development of a logbook program that  
39 would add an additional fleet would obviously require more staff  
40 of the logbook program.

41  
42 Let's just look at an example of the Southeast Fisheries Science  
43 Center commercial electronic logbook program. After logging-in  
44 with a username and password, the user must choose the correct  
45 fishing trip, and also the correct vessel, in order to trigger  
46 the rest of the questions correctly.

47  
48 Next, we have some questions about the overall trip, and some of

1 these fields are mandatory for any logbook program that goes  
2 through the ACCSP system, and then other questions are set up  
3 for the individual logbook program kind of a la carte. The  
4 purpose of the mandatory fields is to ensure that comparable  
5 information is collected across all federal fisheries.

6  
7 Here's just another quick example of more of the trip-level  
8 details that the app collects, and I'm not going to go into  
9 those too much, and the next section of the app is asking about  
10 the fishing activity itself, and so, for instance, this is the  
11 grid of fishing areas for our finfish permits, and this app  
12 basically shows you a reference map. Dropping a pin doesn't  
13 really do much, besides help you zoom-in to where you think you  
14 are, and so, after you determine where you are, then you go on  
15 to select the correct grid code from that pull-down list that  
16 says, "waters fished".

17  
18 Here's just another example of some more of the a la carte  
19 questions that each logbook program can determine for itself.  
20 At the Southeast Fisheries Science Center, each unique gear type  
21 also has a unique set of questions, and so we wouldn't be asking  
22 for the length of the net, obviously, for longlines, for  
23 instance, and these are all pertaining specifically to that gear  
24 type.

25  
26 Next, you get into the catch section. Your target species and  
27 also whether or not you caught anything are considered  
28 mandatory. There is also an option to include some personal  
29 notes, if you want. Next, we have some more mandatory  
30 questions, like the start date and time for your trip, the end  
31 data and time for your trip, and also an estimation of how many  
32 hours you were actively fishing.

33  
34 Next, you're going to describe your catch. For our fisheries,  
35 we want the pounds of each species, and then you can do some  
36 more descriptions down there. Again, these are kind of a la  
37 carte for the program. The user can also enter any discards  
38 that they want to, or perhaps are required, to report, and then  
39 it also gives you the option to report the reason why they were  
40 discarded.

41  
42 Then you have the offloads. Any catch that wasn't discarded  
43 needs to be offloaded, whether it was catch for personal use or  
44 sold to a dealer, and you also have to enter the date and time.  
45 Lastly, just to sign-off, you click an affidavit basically  
46 saying that you are reporting correctly, to the best of your  
47 knowledge.



1 One feature that I did want to mention that's been added to help  
2 us with our HMS fisheries is this auto-configure button, and so  
3 the HMS permits, like I briefly mentioned earlier, have to  
4 report the date, time, latitude, and longitude for each set. If  
5 the captain is filling out the logbook while on the trip,  
6 instead of back at the dock, that person can just click the  
7 button to populate those fields, instead of typing them all  
8 individually by hand.

10 Right now, this is the closest thing that eTRIPS offers, in  
11 terms of having an automatic data collection, but, you know, I  
12 just do want to reiterate that it does still require interaction  
13 by the user to work correctly.

15 With the finfish permits that we currently manage, and the  
16 shrimp fleet as well, there's a discussion about the usefulness  
17 of these extremely large grid codes for fishing area, versus  
18 more specific latitudes and longitudes of fishing activity. Our  
19 position is that the specificity of the data needs to evolve  
20 along with the capabilities of scientific analysis. Like I said  
21 on the last slide, and I will keep reiterating, eTRIPS is not  
22 currently set up to automatically log location information the  
23 way that the cELB program or other VMS-style units are capable.

25 Hopefully maybe -- Hopefully this slide will be useful for the  
26 council. The e-logbook, again, under what we define an e-  
27 logbook to be, is on the left. I am calling this a GPS tracker,  
28 or a GPS logger, and I think one of the earlier presenters  
29 referred to this as a cVMS unit, and, again, we've got to keep  
30 our terminology straight, to the best of our ability, and then  
31 the last column would be the classic VMS unit that has been  
32 traditionally used for a long time.

34 The screenshots that I just showed you were for the eTRIPS  
35 logbook application. It doesn't passively collect anything, but  
36 it can collect a wide variety of information. The caveat is  
37 that it all has to be manually entered by the user, but the  
38 benefit is that all the information is coming from a single  
39 source, and it doesn't have to be linked together on the  
40 backend.

42 The GPS loggers, and the VMS units, on the other hand, do  
43 passively collect and transmit data. In fact, that's exactly  
44 what they are designed to do. The VMS units are transmitting in  
45 real time, but the GPS loggers are storing the information and  
46 then transmitting when in cellphone or Wi-Fi range, similar to  
47 the old cELB program. For both of these units, the effort has  
48 to be modeled, using additional sources of information, like the

1 annual survey, and that information has to be linked to the  
2 fleet on the backend, because they're coming from two different  
3 data sources.

4  
5 To wrap things up, how could a logbook fit into the Gulf shrimp  
6 fishery management needs? The information needed for CPUE  
7 analysis would be collected in one single form. What permits  
8 are currently required to submit Southeast Fisheries Science  
9 Center logbooks? We do have a variety of permit holders, and  
10 it's mainly finfish, that are managed from the Gulf and South  
11 Atlantic and the HMS Headquarters.

12  
13 What information does the Southeast Fisheries Science Center  
14 consider a, quote, unquote, logbook for trip reporting? The  
15 reports are organized by trip, effort, and catch-level  
16 information, plus we also have the discard and economic survey  
17 that is tied to that logbook.

18  
19 What type of information is eTRIPS best equipped to collect?  
20 Manually-collected data, or manually-entered data. Sorry.  
21 Lastly, what might an electronic logbook look like for trawl  
22 gears? It can be as simple or as detailed as the program wants,  
23 but it must comply with the minimum standards set out by NMFS  
24 and our cooperative partners, and I think the next slide is just  
25 questions. Thank you so much.

26  
27 **CHAIRMAN BOSARGE:** We have a couple of questions here. We've  
28 got Mr. Gill and then Ms. Boggs.

29  
30 **MR. BOB GILL:** Thank you, Madam Chair, and thank you for the  
31 presentation, Dr. Brown. An early slide indicated that five  
32 additional staff were needed for quality control, and so, if you  
33 were to put that on the comparison chart, can you tell me what  
34 the comparable figure would be for what you're calling the GPS  
35 logger and the VMS unit would be?

36  
37 **DR. BROWN:** I'm not in a good position to answer that question,  
38 and maybe Clay or Dave might want to pop-in with the answer to  
39 that. Is there any other -- Maybe we can grab someone.

40  
41 **DR. PORCH:** I'm sorry, and I was chatting about this, and I  
42 didn't hear the specific question.

43  
44 **MR. GILL:** My question, Clay, was that an early slide in this  
45 presentation for the eTRIPS version of possible units for  
46 collecting this data requires five additional folks, on the  
47 government side, for quality control, and so, if you put that  
48 into the comparison chart, as it's provided at the end, just

1 prior to the summary, the question that I'm asking is what are  
2 the comparable numbers for the GPS logger, the middle column,  
3 and the right column, the VMS column?  
4

5 **DR. PORCH:** In terms of the exact number of people, I'm not  
6 sure, but, when we looked at this before, to execute it  
7 properly, we would need to actually hire several more folks, and  
8 so whether it's five or three, I'm not sure, and we'll see if  
9 Dave wants to chime-in on that.

10  
11 **DR. DAVE GLOECKNER:** The five was based on staffing for our  
12 coastal logbook in the Southeast that covered the Gulf, and the  
13 GPS logger is collecting less data, and so it's not collecting  
14 catches, and it's not collecting species, and it's not  
15 collecting the grids and the time spent fishing directly from  
16 the fishermen, and so it's less. My guess would be an  
17 additional two to handle that, since we never actually had staff  
18 to do that, and that's what I would estimate we need.

19  
20 **MR. GILL:** And the VMS unit?  
21

22 **DR. GLOECKNER:** It's the same data, and so --  
23

24 **MR. GILL:** The same data as the logger or the same data as --  
25

26 **DR. GLOECKNER:** Any of the GPS, it's the same data. You're just  
27 capturing location data.  
28

29 **MR. GILL:** The eTRIPS version adds five people, and the other  
30 two options on the comparison add two people, and is that  
31 correct?  
32

33 **DR. GLOECKNER:** Yes.  
34

35 **MR. GILL:** Thank you, sir.  
36

37 **CHAIRMAN BOSARGE:** Ms. Boggs.  
38

39 **MS. SUSAN BOGGS:** Thanks for recognizing me, Madam Chair. I'm  
40 not on your committee, but I see this flowing through some later  
41 discussion, maybe this week, but it may not get this in-depth,  
42 but I have a question to Ms. Brown, and is the eTRIPS -- I know,  
43 for the charter fleet, we don't pay a fee, and so I'm curious,  
44 and is there a -- I just want to make sure it's apples-to-  
45 apples, and, I mean, would it be the same for the commercial  
46 fleet, the shrimping fleet, and, I mean, there's not a fee  
47 associated with this?  
48

1 **DR. BROWN:** eTRIPS is free to users, yes.

2  
3 **CHAIRMAN BOSARGE:** There was a monthly cost for the  
4 transmission. The monthly cost is in the transmission?

5  
6 **DR. BROWN:** The transmission would basically be whatever your  
7 personal cellphone plan is. It's just running the same way any  
8 other app would run to send data back and forth.

9  
10 **CHAIRMAN BOSARGE:** Okay, and so Ms. Boggs has a follow-up for  
11 you.

12  
13 **MS. BOGGS:** Right, and so the second part of that question would  
14 be -- I don't use eTRIPS on the charter side, and so does eTRIPS  
15 generate a unique identifier, and I know that's been something  
16 we've talked about, which each trip that's processed through it?

17  
18 **DR. BROWN:** Yes, absolutely.

19  
20 **CHAIRMAN BOSARGE:** All right, and so I have a question. I  
21 actually had a lot of notes on this presentation, and I thought  
22 it was an excellent presentation, and I'm onboard with Susan,  
23 and it actually is informative for a presentation, a discussion,  
24 that we'll have in Data Collection, and we're out of time today,  
25 of course, as usual, and so this program requires a lot of  
26 burden on the fishermen, because we have to enter everything  
27 manually.

28  
29 However, you all, at the Science Center, have kind of developed  
30 this, and fleshed it out, and worked with the software engineers  
31 to get it the way you want it, and is there a possibility to  
32 take this software and make it passively collect the location  
33 for the vessel, and then it would be a much more realistic  
34 version of what's happening on the water with shrimping, once  
35 you run that through the algorithm, rather than asking the  
36 fisherman to pick a block for where he shrimped and give you the  
37 hours that he shrimped, which is the way it's laid out right now  
38 in your presentation?

39  
40 **DR. BROWN:** Right, and so I will answer that to the best of my  
41 ability, but the way eTRIPS is working right now, no, that would  
42 not be feasible in the short-term future. Now, in terms of  
43 massively reworking the program to do what you describe, I think  
44 you would have to have some very in-depth meetings with the  
45 software engineers and developers that work at Harbor Lights. I  
46 am not in a position to try and speculate what they could do,  
47 but I do feel comfortable saying that it wouldn't happen in the  
48 short-term.

1  
2 **CHAIRMAN BOSARGE:** All right. Well, just to summarize, the  
3 piece of this logbook program that I did like is the fact that  
4 it does have one benefit that I've been asking for, which is I  
5 really would like the specifications and the testing and  
6 approval process and the repository for the data to flow through  
7 the Science Center, to have that process be flowing through the  
8 Science Center, and, eventually, the Science Center -- It may go  
9 through a third-party intermediary, such as ACCSP, but ACCSP is  
10 then transferring that data, or it's being downloaded by the  
11 Science Center, and so I do like that piece of this.

12  
13 Unfortunately, this logbook -- It almost takes us backwards, and  
14 so, right now, we have some pretty accurate data being  
15 collected, because it's passively collected every ten minutes,  
16 our lat-long, and you can run it through an algorithm, and you  
17 can tell when we were towing the nets in the water, versus doing  
18 anything else, and so you really know where we're shrimping.

19  
20 If you go to this system, we're just picking a block and saying  
21 this is where we caught the bulk of our shrimp, I guess, and  
22 then we're telling you the hours that we towed, and so there's a  
23 lot more bias, I guess, recall bias, and such in that, and it's  
24 not as accurate, and it's a lot more burdensome to the  
25 fishermen, and so there are some pros and cons.

26  
27 Maybe you could talk to the developers and see if it's possible  
28 to passively collect that data, and the one other thing that I  
29 will try and very quickly touch on is that it does increase,  
30 substantially, what we're reporting. I mean, we've had some  
31 discussions about possibly giving you that trip ticket data, you  
32 know at the end of the trip, and I don't know that that's a huge  
33 dealbreaker, but all these other questions, like is it for food  
34 consumption, or is it standard catch, what was the gallons of  
35 fuel, what was the price of fuel, what was the share to the  
36 captain, share to the crew, and, I mean, those types of -- You  
37 want the dimensions on the nets for every single trip, and, I  
38 mean, these are not things we normally -- Nets and things like  
39 that, we report that to you once a year and not, you know, ten  
40 or twelve times a year.

41  
42 The burden is increasing exponentially if we start going down  
43 that road, and I'm just throwing it out there, because I won't  
44 be here anymore after this, but notate it, and maybe we can keep  
45 working on this, but it sounds like it might be a heavy lift,  
46 and that's sad, because it does go through the Science Center.  
47 All the pieces that we want would go through the Science Center,  
48 but I don't know if it's feasible, but thank you for the

1 presentation, and it was very informative.

2  
3 **DR. BROWN:** You are most welcome. Thank you for having me.

4  
5 **CHAIRMAN BOSARGE:** All right, and so we're going to skip the  
6 next agenda item, and we'll do it during Full Council, but we're  
7 going to try and get through -- Dr. Nance, if you're amenable,  
8 we'll let you come up and go over Agenda Item VII, the SSC  
9 Recommendations. Then, once you finish that, we'll very quickly  
10 go through that Other Business, and it won't take but a second.  
11 Thank you.

#### 12 13 **SSC RECOMMENDATIONS**

14  
15 **DR. JIM NANCE:** Thank you very much. I appreciate being able to  
16 be here today, and you've got to get ELBs out of your mind,  
17 because we did not talk about ELBs at the SSC meeting, and so  
18 this is going to be a completely different subject matter.

19  
20 Dr. Michael Travis came and presented at our meeting, and he's  
21 from the Southeast Regional Office, and he presented on the Gulf  
22 royal red shrimp landings, and he presented the data from 1962  
23 through 2020, showing the landings peaked in the mid-1990s.  
24 Royal reds are not an annual crop species, and they're longer  
25 lived than the penaeid version, and so we have an ACL of 375,000  
26 pounds of tails, and we also have an accountability measure for  
27 this fishery.

28  
29 It's not a year-round fishery, and there is probably -- I'm  
30 going to guess probably six vessels left that fish royal red,  
31 and usually they fish penaeids. They fish brown, pink, and  
32 white, and then, when those are a little bit less, they go out  
33 and capture royal reds. It's a deepwater species, if you're not  
34 familiar with that, and they're in I think 600 meters of water,  
35 and it takes great effort to get those.

36  
37 Dr. Travis then reviewed the shrimp imports from Argentina,  
38 which have tripled from 2015 to 2020. Most of these are warm-  
39 water species, and they compete directly with the domestic royal  
40 red shrimp that are being harvested in the Gulf of Mexico.  
41 There is an issue there that these imports are competing  
42 directly with the royal reds in our markets.

43  
44 The next subject that Dr. Travis talked about, he reviewed the  
45 number of valid shrimp, Gulf shrimp, permits and the number of  
46 active shrimp permits from 2015 through 2019, and he showed that  
47 both groups have declined over the timeframe.

1 Dr. Travis then talked about the third subject, and he discussed  
2 the economic performance of the Gulf shrimp fishery from 2014  
3 through 2019, with the note that this information would be  
4 incorporated into the current draft shrimp framework actions.  
5 The 2015 through 2019 average landings may be more indicative of  
6 a baseline data, and performance declined in 2014, and so it's  
7 off the -- It's a lot different than the 2015 through 2019, and  
8 so we're considering it an outlier.

10 Dr. Travis explained that, for amendments, baseline economic  
11 data is important for analyses. Council staff stated that the  
12 Shrimp Advisory Panel concurred with the idea of 2014 being an  
13 outlier in the data, and there wasn't any issue with the SSC  
14 also saying that same thing, and so, with that, Madam Chair,  
15 that's all I have.

17 **CHAIRMAN BOSARGE:** Do we have any questions for Dr. Nance? I  
18 have one quick question for you.

20 **DR. NANCE:** Yes, ma'am.

22 **CHAIRMAN BOSARGE:** The Argentinian red shrimp, that's what they  
23 have, and that's the import, and we have a royal red.

25 **DR. NANCE:** Yes.

27 **CHAIRMAN BOSARGE:** So those are two -- One is warm-water, and  
28 one is cold-water?

30 **DR. NANCE:** No.

32 **CHAIRMAN BOSARGE:** Are they two different species?

34 **DR. NANCE:** They're the same genus. They are two different  
35 species, but they are similarly packaged, and so they look very  
36 similar. A normal eater would not be able to tell the  
37 difference between the two. The only two species that are cold-  
38 water shrimp are the pandalids off the east coast, and we have  
39 the pink shrimp off of Washington and Oregon, and those are the  
40 true cold-water species, and so, while they are deep, and they  
41 are Argentina, and those types of things, and some people think  
42 they're cold-water down there, but they're considered warm-water  
43 species when they are imported.

45 **CHAIRMAN BOSARGE:** Okay. Sorry, and so I had some fishermen  
46 reach out to me, and they had a concern that -- Obviously,  
47 that's a very small quota for our domestic production on royal  
48 reds, and it's not all that great, right?

1  
2 **DR. NANCE:** That's correct.

3  
4 **CHAIRMAN BOSARGE:** All right, and so a lot of what you eat is  
5 imported.

6  
7 **DR. NANCE:** Well, now, royal red has always been a species that  
8 you go to Alabama and Mississippi -- That's where you can find  
9 them, and it's a rarer species in other places. What this is  
10 doing is giving access, maybe, to a larger population than the  
11 domestic U.S. to be able to eat this type of species, but it is  
12 in direct competition with the royal reds, which have not seen  
13 competition before, and I think that's the difference.

14  
15 **CHAIRMAN BOSARGE:** We're okay with competition, as long as it's  
16 fair competition and transparent competition, and what I was  
17 being told is that, instead of these being labeled as  
18 Argentinian reds, maybe they're being labeled as royal reds,  
19 which people would interpret as a domestic shrimp, right?

20  
21 **DR. NANCE:** Sure. They leave the Gulf off, and so I guess royal  
22 red -- It's a red shrimp, and, if you put the name in front of  
23 royal red, and people are going to consider that as this is  
24 caught in the Gulf of Mexico. Absolutely.

25  
26 **OTHER BUSINESS**

27  
28 **CHAIRMAN BOSARGE:** I know Dr. Travis is listening in, and I'm  
29 sure he'll look into that for us and report back. Thank you,  
30 Dr. Travis. All right. If there's nothing else for Dr. Nance,  
31 we're going to move Other Business, and it was -- I had a quick  
32 question, and so the staff sent out the letter that -- They  
33 copied all of us on the letter they sent to the Science Center,  
34 based on our last meeting, and we had that motion where we asked  
35 the Science Center to please form an EDM working group for that  
36 empirical dynamic modeling for shrimp, you know, prior to  
37 anything being finalized or figuring out how to come up with  
38 management criteria and things like that.

39  
40 Before the SSC sees it again, to get a working group together  
41 and maybe really flesh through a few things, and are we on track  
42 to do that anytime soon? Have we got anything on the schedule?  
43 Dr. Porch.

44  
45 **DR. PORCH:** I'm sorry that we forgot to forward our response to  
46 the council, but absolutely we agreed with all the recommended  
47 personnel from the council that were listed in the letter. The  
48 plan right now is we funneled some more funds to Steve Munch's



1 group, and he's the reigning expert on empirical dynamic  
2 modeling, and he's doing some work right now, as we speak, and  
3 we're planning to have a meeting in August, and we would invite  
4 all those participants.

5  
6 **CHAIRMAN BOSARGE:** Sounds excellent. Thank you so much. All  
7 right. Mr. Chairman, we're over time, as usual, and I wouldn't  
8 want to do anything for my last meeting, and we'll wrap it up  
9 right there and take the rest up during Full Council.

10  
11 (Whereupon, the meeting adjourned on June 21, 2022.)  
12  
13  
14

- - -