

1 GULF OF MEXICO FISHERY MANAGEMENT COUNCIL

2
3 SHRIMP MANAGEMENT COMMITTEE

4
5 Marriott Courtyard Gulfport, Mississippi

6
7 April 3, 2023

8
9 **VOTING MEMBERS**

10 Chris Schieble (designee for Patrick Banks).....Louisiana
11 Kevin Anson (designee for Scott Bannon).....Alabama
12 Susan Boggs.....Alabama
13 Billy Broussard.....Louisiana
14 Dave Donaldson.....GSMFC
15 Jonathan Dugas.....Louisiana
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18 Andy Strelcheck.....NMFS
19 Joe Spraggins.....Mississippi

20
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28 Greg Stunz.....Texas
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45
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3 Nathan Putman.....LGL
4 Tom Roller.....SAFMC
5 Katie Siegfried.....SEFSC
6 Farren Wallace.....SEFSC
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8
9 - - -
10

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PAGE 6: Motion to request that NMFS to continue with the Texas federal closure in the coming year in conjunction with the State of Texas closure in 2023. [The motion carried on page 6.](#)

PAGE 26: Motion to suspend action on the draft Shrimp Framework Action until NMFS conducts side-by-side testing of cELB units with the following cellular units and other cellular units on a minimum of five shrimp vessels for the full length of an average offshore trip and presents the results after the raw data is run through the new NMFS shrimp effort algorithm: 1)the Woods Hole NEMO unit that is hardwired to the vessel; 2)the Atlantic Radio Telephone ZEN VMS LTE; 3)Nautic Alert Insight X3. [The motion carried on page 35.](#)

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1 The Shrimp Management Committee of the Gulf of Mexico Fishery
2 Management Council convened at the Marriott Courtyard in
3 Gulfport, Mississippi on Monday afternoon, April 3, 2023, and
4 was called to order by Chairman Chris Schieble.

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

10 **CHAIRMAN CHRIS SCHIEBLE:** At this time, I would like to call the
11 Shrimp Committee to order. The members of the Shrimp Committee
12 are myself as Chair, Mr. Gill as Vice Chair, Mr. Anson, Ms.
13 Boggs, Mr. Broussard, Mr. Donaldson, Mr. Dugas, Mr. Geeslin,
14 General Spraggins, and Mr. Strelcheck.

15
16 The first item on the agenda is the Adoption of the Agenda,
17 which is Tab D, Number 1. Do we have any modifications, or
18 changes, the agenda as written? Any other business that needs
19 to be added at the end of the agenda? Seeing none, the agenda
20 is approved as written.

21
22 Next up is Approval of the October 2022 Minutes for the Shrimp
23 Committee, which is Tab D, Number 2. Do we have any additions,
24 or changes, to those minutes from the October meeting? Seeing
25 none, the minutes are adopted as presented in the briefing book.
26 The next item on the agenda is the Action Guide and Next Steps,
27 which is Tab D, Number 3, and we will have Dr. Freeman escort us
28 through that, please.

29
30 **BIOLOGICAL REVIEW OF THE TEXAS CLOSURE**
31

32 **DR. MATT FREEMAN:** Thank you, Mr. Chair. If it suits you, as we
33 move through each agenda item, I will return to the action
34 guide, preceding that, and so the next agenda item will be the
35 Biological Review of the Texas Closure. The Shrimp AP meeting
36 summary and recommendation will be presented to the committee,
37 and the committee is then requested to take action and determine
38 if the Texas closure should continue in 2023. Bernie, if I
39 could get you first to pull up Number 4(d), which is the
40 presentation that the AP received.

41
42 Thank you, and so, as background information, the presentation
43 that the Shrimp AP received is on the website, and then there's
44 also a complementary document that NMFS put together regarding
45 the Texas closure. Bernie, if you could to Slide 4, and I think
46 this really highlights some of the main discussion from the
47 Shrimp AP, which is that, again, the federal closure in the
48 offshore Texas waters extends from mid-May to mid-July, and so,

1 looking at the count distribution for August, they're still
2 seeing, for last year, that the count was relatively high, and
3 it fell into the thirty-one to forty-count range, as well as
4 followed by the forty-one to fifty, which, again, is the intent,
5 to allow those shrimp to reach a larger size.

6
7 Bernie, if I could get you to move to the Shrimp AP summary at
8 this point, which is going to be Number 4(a), and if we could go
9 down to page 8, the bottom of it. Again, this is a summary, and
10 the AP received that from Dr. Stevens, Dr. Molly Stevens,
11 regarding information from 2022, and then, following that, the
12 AP did make a motion requesting that NMFS continue with the
13 Texas federal closure in the coming year, in conjunction with
14 the State of Texas closure in 2023, and that motion carried
15 unanimously, and so I will pause there, if there's any questions
16 or discussion, and then I would be looking for a motion from the
17 committee of whether to adopt the AP's recommendation or not.

18
19 **CHAIRMAN SCHIEBLE:** Do we have a second? **Okay, and so we have a**
20 **motion on the board here for a request that the National Marine**
21 **Fisheries Service continue with the Texas federal closure in the**
22 **coming year, in conjunction with the State of Texas closure in**
23 **2023.** Is there any discussion or comments regarding that? **Is**
24 **anyone opposed to the motion? Seeing none, the motion passes.**

25
26 **REPORT ON EXPANDED SAMPLING OF THE FLEET FOR EFFORT MONITORING**
27 **IN THE GULF SHRIMP FISHERY**
28

29 **DR. FREEMAN:** Okay, and so the next agenda item is a Report on
30 Expanded Sampling of the Fleet for Effort Monitoring in the Gulf
31 Shrimp Fishery, and so the committee will receive the final
32 report and the results of the pilot project conducted by LGL
33 Ecological Associates.

34
35 The council funded LGL Ecological Associates to test the
36 software of P-Sea WindPlot, a commonly-used navigational
37 software, as a means of monitoring shrimp effort and compare
38 results with data from the current cellular electronic logbook,
39 or cELB, units, which ceased transmittal in December of 2020.
40 The committee last received a presentation related to this
41 project at its October 2022 meeting. The committee should ask
42 questions and provide feedback, as appropriate, and we have Dr.
43 Putman in the audience.

44
45 **DR. NATHAN PUTMAN:** Good afternoon, everybody. Yes, and we'll
46 jump right into the -- This is our final report on this council-
47 funded project, testing P-Sea WindPlot, and so, I mean, I think
48 one of the things that I think we're all aware of is the need

1 for good shrimp effort monitoring data.
2
3 Effort monitoring data for shrimp is important for things like
4 assessing how shrimp is impacting others who are using the Gulf,
5 things like calculating takes and interactions with sea turtles,
6 and it's used in things like the red snapper stock assessments,
7 and it's also important to know how others might impact the
8 shrimping industry, such as artificial reef placements or
9 infrastructure associated with offshore energy and aquaculture
10 siting, those sorts of things, and so this is an important --
11 It's important to know where shrimping occurs.

12
13 Previously, as Matt was telling you, and you're all aware, I'm
14 sure, monitoring was achieved by NOAA Fisheries with a cELB, a
15 cellular electronic logbook, and it recorded positional
16 information at ten-minute intervals, and it used that
17 information to estimate speeds that are indicative of towing
18 behavior of shrimp boats, and those position reports were
19 transmitted to NMFS, via a 3G cellular network, and, as of 2020,
20 the 3G service was discontinued, and there isn't a mechanism for
21 automatic retrieval, and so, currently, shrimpers have to return
22 and replace SD cards within the cELB units manually, and, as
23 you're sort of aware of that being problematic, the industry,
24 the Southern Shrimp Alliance in particular, was interested in
25 coming up with some sort of solution for this.

26
27 There was a suggestion that the navigational software on shrimp
28 boats could potentially serve the same purpose as those cELBs,
29 and they're already reporting location information on vessels,
30 and, with some modifications, perhaps they could store it and
31 that could be used to estimate shrimping effort, with the
32 hardware already on the boats that captains are comfortable
33 using, and that was the impetus of this project.

34
35 SSA funded our group to work with the P-Sea WindPlot developer,
36 and P-Sea WindPlot is the navigational software used by, as far
37 as we can tell, most everyone in the shrimping -- Certainly the
38 offshore federally-permitted shrimping fleet, and we modified --
39 We worked with the developer to modify this software to collect
40 location data, at ten-minute intervals, in a way that would be
41 compatible with the existing software routines for calculating
42 shrimp effort, and that was successful, but it was not designed
43 to automatically transfer position data, similar to the cELB
44 system that had been doing it, and that was an essential
45 component for any monitoring system, as being able to
46 automatically transmit that data.

47
48 The Gulf of Mexico Fishery Management Council funded a project

1 to essentially work to get P-Sea WindPlot to transmit that data
2 cellularly, and so these were the goals of our project, is to
3 update P-Sea WindPlot so that it electronically transmits the
4 ELB files, with the latitude and longitude and date and time, in
5 the format used by the cELB program, and to develop a mechanism
6 so that the computers using P-Sea WindPlot can connect to a
7 mobile communication services network, that they can connect to
8 cell signals.

9
10 Then to conduct some initial tests on five shrimp boats and then
11 to troubleshoot and revise any software or hardware protocols,
12 as needed, and then conduct secondary tests on twenty additional
13 commercial shrimp boats, and we hit all of those, with the
14 caveat of Number 5, and there was a need for more extensive
15 troubleshooting and desktop testing of P-Sea WindPlot, and there
16 was also a big drop in shrimping activity, both as a result of
17 Hurricane Ian and high fuel prices, and so we ended up
18 conducting ten tests, rather than a full twenty, but we can talk
19 about that, if you would like to, later.

20
21 For Goal 1 and Goal 2, the software was updated, and, for data
22 transfer, an FTP client was added to P-Sea WindPlot, and it can
23 connect to the internet with a cellular hotspot. Our initial
24 desktop testing showed that it functioned like it was supposed
25 to.

26
27 We took it out into the field and did some preliminary testing
28 on what turned out to be eight vessels, three out of Bayou la
29 Batre, five out of Palacios, Texas, and what we learned, during
30 those initial tests, which were sort of in the June, mid-June,
31 through early October range, is that there was a lot of software
32 troubleshooting that needed to be dealt with, and there were
33 some hardware issues that needed to be dealt with, and I will go
34 into some of the details in the next slide, but this image here
35 shows an example track that we recorded. Those yellow dots show
36 what transmitted to our server, and the blue dots show what was
37 collected during the trip by P-Sea WindPlot, but didn't actually
38 get transmitted to the server, and so, during this preliminary
39 testing, there was a lot of troubleshooting to work out.

40
41 The next slide will detail some of those, and so the first point
42 is there were some installation issues, and there were lots of
43 errors, largely because, as P-Sea WindPlot -- There's sort of a
44 play on words there, and PC is -- It's on a PC, and it's a
45 Windows-based program, and there are a lot of different Windows
46 versions out there, and different Windows versions on people's
47 computers, and that resulted in a variety of installation
48 incompatibilities that needed further refinement, further sort

1 of back-modification to the software program, so that it could
2 be compatible with older versions of Windows, as well as newer
3 versions of Windows.

4
5 There were also some technical issues, and some of the GPS
6 devices, and so some of that existing hardware on people's
7 vessels, were giving the wrong date and time, and they were not
8 -- They are older GPS, and they were not decoding the satellite
9 information correctly, and so, in September, we were standing on
10 the boat, and it was reading that it was January, which is a
11 problem. We also had some other issues with memory segmentation
12 type problems, with P-Sea WindPlot freezing up computers.

13
14 There were also some people problems, and not so much problems
15 with people, but just on the user side, and we came across a
16 fair number of captains who just didn't like the idea of us
17 messing with their computers, and they were not necessarily
18 experts on computer use, and it was set up the way they wanted
19 to, and they didn't really want us to mess something up on it,
20 and we also had some captains who would turn off their computers
21 during the trips, and some might forget to turn on their
22 hotspots, and there was user involvement that was difficult to
23 always control, or manage.

24
25 That said, I mean, of those people problems, no one was opposed
26 to working on the project with us, and that wasn't the issue.
27 They just didn't want their computer to get messed with, and so
28 there were some other instances with the testing where they were
29 fine with something in the background that they didn't have to
30 deal with.

31
32 What we came up with as the biggest hurdle was that each
33 computer was its own unique set of problems, and it was hard to
34 guarantee to captains that what we would be doing with their
35 computer wouldn't, you know, quote, mess something up and cause
36 problems for their shrimping activities that they were trying to
37 conduct, and so that's where we ended, I guess, in October, when
38 I was updating you guys last.

39
40 The next slide is how we revised the P-Sea WindPlot software in
41 response to that initial round of testing, where we set things
42 up where the installer could select the attempted transmission
43 frequency, and so, rather than just transmitting whenever it was
44 in cell service, you could specify to maybe transmit only every
45 twenty-four hours, so that that would reduce the freezing and
46 plotting issues, hopefully, by not constantly going back and
47 forth with information on the computer.

48

1 You could have the installer use the shrimp boat's permit number
2 as a unique ID for those files that were getting transmitted to
3 the server, and we also had some revisions made to the function
4 that sends the logbook files to the vessel's computer, and it
5 was storing files individually, and sending them individually,
6 rather than trying to append them together into one large file
7 and sending them in that way.

8
9 We also set it up where the installer could select the -- It
10 could tell P-Sea WindPlot whether to use the GPS time or the
11 computer time, depending on which one is more accurate, and so
12 you can change the computer time, but you can't change the GPS
13 time, and so that's where we were, and then we did a round of
14 testing in sort of that November to December shrimping period,
15 and here is some of our results.

16
17 What this shows is the percentage of paired data points
18 collected at ten-minute intervals, and so you have shrimp
19 starts, and then it ends, and you have so many ten-minute
20 intervals within that window, and so that -- If you've got all
21 ten of those, if all of your data points summed up to that total
22 number of ten-minute intervals, you would have 100 percent of
23 your data being recorded at that specified expected ten-minute
24 interval, and, if you don't, if you are reporting like
25 erratically, and like maybe you're reporting every, you know --
26 In one instance, there's a thirty-second, and then there's a
27 five-minute, and then there's a four-minute, and there's a five-
28 minute, and then there's a ten-minute, and those sub-ten-minute
29 intervals would also decrease your score from being 100 percent,
30 because you're not reporting at the specified interval.

31
32 Likewise, if you're reporting every hour, that would cut back on
33 the percentages of, you know, hitting that ten-minute mark, as
34 specified, and what -- After seeing this graph, and the blue and
35 green bars are the P-Sea WindPlot data, and the purple bars are
36 the CELB data.

37
38 The blue P-Sea WindPlot is what we manually retrieved from some
39 of the computers, which we were able to get access to the
40 captains' computers on Tests 1 through 4, as well as on Test 7,
41 and then the green bars are what was automatically transmitted
42 to our server, and so we should have green bars across all of
43 those tests, and we don't, and so certainly a surprising number,
44 perhaps, of tests just failed to transmit after the boats left
45 the dock.

46
47 All were transmitting before we left the dock, and so it was,
48 again, working initially, and then some problems occurred after

1 the fact, and so things to point out about this graph for those
2 is that in only one instance, Test 1, do you see a large
3 difference between what was recorded by the computer and what
4 was transmitted to our server, and what that suggests is that it
5 wasn't -- The biggest problems were not just a transmission
6 problem, you know, that someone wasn't turning on their
7 hotspots.

8
9 In Tests 2, 3, 4, and 7, what was on the computer is what got
10 transmitted, and so it was -- In some ways, it was a recording
11 problem as well, and in only one of our tests did we get sort of
12 a good amount of data recorded, and that was in Test 3, and
13 then, in comparison to the cELBs, what you can see is we had
14 cELBs on Tests 1 through 7, and they worked well when they
15 worked, and, you know, in two of the seven tests, they were not
16 working well, and so Test 7 had a cELB on it that recorded very
17 little data, and it was a lot of garbage data in that file.

18
19 Test 5 had very spotty data as well from the cELB, and there was
20 a new cELB that we put on that vessel, as part of some other
21 testing that we were doing, and that's what is plotted in that
22 light purple, which shows that, when we had the new cELB put on,
23 it was recording appropriately, but that old one did not.

24
25 If you look at the next slide, this shows sort of just the tow
26 days by trip, and it's estimated by NOAA's former algorithm, the
27 one that LGL produced and I guess has been used historically.
28 In only one of the tests, Test 3, a relatively short trip, did
29 P-Sea WindPlot record numbers of tow days comparable to what the
30 cELB was doing, and, in the other cases, and Tests 1, 2, and 4
31 were probably the best for comparison there, cELBs were
32 reporting substantially more towing.

33
34 If you take a look at this next slide, Test 3, shown there, is,
35 again, a relatively brief trip, and the orange markers show when
36 the boat is transiting, and the purplish-maroon circles show
37 when it's either moving at a speed slower than shrimping, and
38 it's called on the hook, and then the blue Xs are when its
39 trawling, and so that Test 3 is a relatively decent-looking
40 track from P-Sea WindPlot, and it was reporting, again,
41 consistently at that ten-minute interval.

42
43 Test 1, we had -- In this particular case, it was recording
44 erratically, not at the specific ten-minute intervals, and the
45 effort algorithm did not handle that erratic pinging very well,
46 and so you can see what -- In this case, it shows lots and lots
47 of transiting, which is unlikely to be indicative of its actual
48 behavior.

1
2 If you want to go to the next slide, here is some of our longer
3 trips, where P-Sea WindPlot recorded and transmitted information
4 while out at sea, but it did not -- For whatever reason, it was
5 not continuously tracking it during the entirety of those trips.

6
7 Then this is just a summary table of those ten tests that we
8 conducted, and one of them performed well, Test 3, and then we
9 had a handful of other problems, ranging from Windows 11
10 incompatibility to P-Sea WindPlot freezing up, or failing to
11 transmit after leaving the port, and we can go to the next
12 slide, which is our conclusions and recommendations, is that,
13 basically, P-Sea WindPlot continues to display a variety of
14 malfunctions, despite extensive troubleshooting and revision,
15 with involving the developer of P-Sea WindPlot, and involving
16 one of his, you know, leading experts of on-the-ground
17 implementation, a marine electronics guy that we worked very
18 closely with, and, you know, we saw erratic performance,
19 depending on specific hardware and software configurations.

20
21 We found there is potential for captain-introduced error, and
22 then, you know, we also got some pushback from installing these
23 -- For installing P-Sea WindPlot on captains' computers who
24 would rather have something that wasn't their problem to deal
25 with, and it just, you know, sat in the back, like the old cELB.

26
27 It seems like P-Sea WindPlot can't perform to the requirements
28 of the shrimp industry, and probably you all either, and NOAA
29 Fisheries, and we do not recommend further investment in P-Sea
30 WindPlot as a method to record shrimp vessel positions for
31 calculating effort. That said, it does seem to be a good piece
32 of software for navigational purposes, and people really like it
33 for that. That's all I've got.

34
35 **CHAIRMAN SCHIEBLE:** Okay. Thank you, Dr. Putman. Great
36 presentation, and it was a very good summary of the testing.
37 Does anyone have any questions for Dr. Putman, or comments? Mr.
38 Strelcheck.

39
40 **MR. ANDY STRELCHECK:** Dr. Putman, thank you for the
41 presentation. On Slide 11, you showed the graphic kind of
42 comparing the testing results. For Tests 8 through 10, the cELB
43 was not used on those vessels, and is that correct?

44
45 **DR. PUTMAN:** Can you go to Slide 11, please? Yes, and 8 and 9
46 and 10.

47
48 **MR. STRELCHECK:** So just the first seven --

1
2 **DR. PUTMAN:** The first seven had the cELB on them.
3

4 **MR. STRELCHECK:** Then in terms of -- So, obviously, your
5 conclusions are direct, with regard to the use of P-Sea
6 WindPlot, and so I guess I'm curious in terms of your assessment
7 of the cELB units and the failure during Tests 5 and 7, as to
8 what's causing that, if you know.
9

10 **DR. PUTMAN:** I guess I'm not sure what the -- We didn't dive
11 into documenting what the problems were, but, in terms of
12 looking at the data that was taken from the SD cards, is there
13 was a lot of, I guess, nonsense records, and so whatever that
14 indicates, and I'm not sure what that does indicate, but there
15 was -- There were zeroes and ones that were being recorded on
16 it, and it was not just off, and it was not just blanks, but
17 there was lots of nonsense data rows, giving bizarre latitude
18 and longitudes, dates from 2014, and so you have two out of
19 seven.
20

21 **CHAIRMAN SCHIEBLE:** Do we have any other questions for Dr.
22 Putman? Thank you for the presentation. We appreciate it.
23 Next, we have Agenda Item VI, if you could go back to the action
24 guide for me, please.
25

26 **UPDATE ON NMFS VMS PROJECT**
27

28 **DR. FREEMAN:** Thank you, and so the next agenda item is the
29 Update on the NMFS VMS Project, and so, for this item, the
30 committee will be presented with an update on testing of
31 cellular vessel monitoring systems, or cVMS, units on Gulf
32 shrimp vessels. The committee last received a presentation
33 related to this project at its October 2022 meeting. The
34 committee should ask questions and provide feedback. Bernie, I
35 believe we should have Mr. Wallace online.
36

37 **MR. FARREN WALLACE:** Yes, I'm here, if I can have the
38 presentation brought up.
39

40 **DR. FREEMAN:** We're getting it right now.
41

42 **MR. WALLACE:** Okay. Good afternoon, everyone. I'm Farren
43 Wallace, and I'm the Director of the Fisheries Assessment and
44 Technology and Engineering Support Division, and I'll be giving
45 you a review of our pilot testing of cVMS and ELB units for Gulf
46 shrimp vessels today. Our overall objective here is essentially
47 just compare and evaluate the ELB data with VMS data, to ensure
48 the data streams are comparable.

1
2 We compared three different VMS units to the cELB unit, the one
3 in the lower-right-hand corner, which is now deployed on all the
4 vessels. The VMS units included Faria, NEMO, and ZEN units.

5
6 The NEMO unit is a weatherproof unit, and it can be deployed
7 outside, and it has a nice little solar panel that will power
8 it, at least most of the time, and we'll talk more about that,
9 but it also has a USB plug to keep it fully charged, in case
10 there isn't enough sun. We also deployed NEMO units on the R/V
11 Caretta, which is our Gulf shrimp trawl vessel that we use for
12 testing TEDs, and then we also deployed a NEMO unit on our
13 Southern Journey.

14
15 First, deployment methods, and NEMO and Faria data were checked
16 and corrected for ping-rate issues early on in the research, to
17 make sure that we had ten-minute ping levels. The NEMO and
18 Faria data were retrieved by password from web services, and
19 they both provide a really nice web service for going and
20 collecting your data. The ELB data was retrieved by the mini
21 USB drives, and those drives then were mailed to NOAA Fisheries,
22 and we downloaded the data from there.

23
24 The NEMO, Faria, and ELB data were all cleaned by eliminating
25 observation rows containing out-of-range data and data and time
26 and missing data. Tows were extracted from the dataset, after
27 cleaning, and is based on tow speed, and then, finally, in part
28 of the analysis then, we compared the estimated tow effort, in
29 terms of tow days, between the ELB data, the Faria, and the NEMO
30 units, and these are exactly the same processes that are being
31 used within the effort algorithm, the new effort algorithm.

32
33 I had quite a few questions, at the AP meeting last time, and so
34 I thought I would put in a couple of slides here to hopefully
35 better describe how we collect data, and why we clean the data,
36 and, typically, we clean the data, just to make sure that we can
37 get rid of any of the bad, or missing, data. You can see the
38 one sort of blue line on the left-hand-side of this chart here,
39 against the yellow, and the yellow line is data coming from --
40 We call it the ELB, or the VMS, and, essentially, we're missing
41 data, and so, when we're missing data like this, we connect up
42 the points, and it looks like you're going across land, and, of
43 course, that's nonsense, and so that's the type of things that
44 we try to get rid of during the cleanup.

45
46 The row errors at the right down here shows you the position and
47 time, GPS coordinates at ten-minute intervals, and you can see
48 what we get from the units themselves is just the GPS and time,

1 and then we use that to calculate the tow speed, to figure out
2 where the tows are, and we put in, just for visualization, so we
3 can see all the tows connected up from one time stamp to the
4 next consecutive time stamp, and, again, you will see, for the
5 slides coming up here, that they don't line up perfectly, and
6 that's because the pings are not synchronized, and they're built
7 on whether VMS or ELB, and they're on different ping times,
8 although at the same ten-minute rate.

9
10 Then, sort of panning-out that same dataset that has been
11 cleaned, you can see that we got rid of some of the weird data
12 that was showing coming across land here, and this is just from
13 Vessel 1, the first shrimp vessel.

14
15 This here, I'm just illustrating the towing speed, and it's been
16 1.9 and 3.8 knots, and, again, we calculate the towing speed
17 given the distance traveled and the time traveled, and so that's
18 how we figure out the towing speed, and this is exactly the same
19 way it's used within the new shrimp effort algorithm.

20
21 Here's really zooming-in on a set of tow tracks, and these
22 happen to have come from the Caretta study, and you can see what
23 you end up with, at the end of the day, is just a bunch of
24 segments of lines, and it's those lines that we use to estimate
25 the total effort from all the towing, and you can really see, in
26 the blue box in the upper-left-hand corner, again, the kind of
27 VMS data and the ELB data don't line up perfectly.

28
29 Data issues in the first deployment, the Faria units did not
30 record position data consistently across time on all vessels,
31 and devices were just faulty, and the bulletin was sent out to
32 the fishery about these Faria units, and sort of in the process,
33 over the last year or so, Faria was bought-out by NEMO, and so
34 NEMO ended up replacing all the units where the Faria units had
35 failed. With NEMO another big disappointment was the NEMO
36 devices were not deployed on any fishing vessels in this first
37 deployment, and I will tell you why in the next slide.

38
39 Here is the spreadsheet showing all of our first deployments.
40 We had the deployment on the R/V Caretta and the Southern
41 Journey at the top, and we deployed NEMO and ELBs on both the
42 Caretta and the Southern Journey, and we actually had six shrimp
43 vessels volunteer for this first deployment, and, in the top
44 three vessels here, we deployed NEMO units to the field.
45 However, they did not fish, and so, unfortunately, we didn't get
46 any NEMO data collected in our first deployments in 2022.

47
48 Then, for the last three vessels, and all three vessels came

1 mostly off of Florida, the Panhandle, the Gulf side, the Faria
2 units failed on all three vessels, and so, really, we didn't end
3 up with any good VMS data off of any of the shrimp vessels
4 during the first deployment.

5
6 The second deployment method, the raw NEMO data were retrieved,
7 by password again, from the web service, and the ZEN data -- We
8 acquired that from LGL, and the ELB data was retrieved, again,
9 from the mini USB drives being sent back to Galveston, and then
10 we processed it from there, and the raw ZEN and ELB data for
11 these were all processed through the new shrimp algorithm, to
12 estimate and compare tow days estimated between ZEN and ELB.
13 Data issues in the second deployment, the NEMO position and time
14 data was incomplete across --

15
16 **CHAIRMAN SCHIEBLE:** Mr. Wallace, we have a question for you.
17 Mr. Gill.

18
19 **MR. BOB GILL:** Thank you, Mr. Chairman. If you could go back to
20 the previous slide, please. There we go, and so the last
21 bullet, and it's in bold, and my memory is that the data were
22 not processed through the new shrimp algorithm at that time, and
23 that was, what, three weeks ago or so, and so what this says is
24 that that analysis has been done, and the results the AP has not
25 seen, and is that correct?

26
27 **MR. WALLACE:** Close. It's complicated, and so it is true, and
28 the last bullet that I have here says raw ZEN and ELB. The data
29 that I was presenting was processed through the new shrimp
30 algorithm to estimate the total tow days, and that was the same
31 as last time, but now what did change is that the NEMO data --
32 We used our own algorithm to come up with the previous estimate
33 on the comparison between ELB and NEMO, to estimate how close
34 they were, in terms of number of tow hours. However, since
35 then, and I have also updated and had the shrimp algorithm
36 process the raw NEMO data that we collected from this last
37 survey, and so that is an update.

38
39 The bottom line is all of the data that I'll be showing you in
40 the next graph coming up here are all processed through the
41 shrimp algorithm, just so we have the most complete and up-to-
42 date process going on inside of the new algorithm. Any other
43 questions?

44
45 **MR. GILL:** Yes, sir. Thank you.

46
47 **MR. WALLACE:** Okay. Next slide. Data issues in the second
48 deployment, the NEMO position and time data were incomplete

1 across time on all fishing vessels, and this was because,
2 although it has a solar panel on it, it apparently didn't have
3 enough solar to keep them running, I think, during the trips,
4 when it was deployed, and it was not plugged into the ship's
5 power, like it was during the first deployment, where we had it
6 plugged directly into the ship, and so it didn't have to rely on
7 solar entirely during data gathering, and so, anyway, it was
8 really unfortunate, and a significant amount of the data was
9 missing, and, again, it's likely due to the low-power
10 conditions, because they were not plugged into the ship's power.

11
12 Other data issues, of course, we have ZEN, and some non-paired
13 tows there, and then, also, the ELB data for Vessel 3 -- You saw
14 this in the previous presentation, but it may have been a
15 section of bad data in sort of the middle of the record, and so,
16 yes, I mean, there's always data issues out there, whether it's
17 ELB or the VMS positions, and, again, that's why we clean up the
18 data, and we try to ensure that we have the most accurate data
19 that we can glean from these deployments to estimate for all
20 effort.

21
22 Here is a chart showing the second deployments in 2023, and this
23 is all out of Palacios, Texas. Again, the red Xs indicate that
24 these incomplete, or no data collected, and you can see that, on
25 the five vessels that carried ZEN, NEMO, and ELB, none of the
26 NEMO worked perfectly on any of the shrimp vessels during this
27 time period, and both ZEN and ELB produced data on all five
28 vessels.

29
30 Here is the final results right here. The top line, on the
31 Caretta, we're looking at the sum of all tows, about a day-and-
32 a-half, a difference of about 2 percent, and, again, as I
33 mentioned, the Caretta data were run through the shrimp effort
34 algorithm, and the difference, when we ran it through the shrimp
35 effort algorithm, was 2 percent, and so not much difference
36 there.

37
38 The R/V Southern Journey, we were out on the Gulf for several
39 hundred nautical miles, and, during that entire spring and
40 summer that it was out, the NEMO data matched the ELB track over
41 a really large geographic area, and it wasn't towing, and so we
42 didn't break it down by towing, and, again, we just wanted to
43 make sure that they were producing the same data all the way
44 across the Gulf, and that certainly would seem to be what this
45 is telling us.

46
47 Below that, here is a spreadsheet showing the percent
48 differences between the ELB and ZEN unit, on the far-right-hand

1 side, and you can see that we had a very tight concurrence, in
2 terms of total number of tow days fished, or estimated, and,
3 again, these are processed through the new shrimp algorithm,
4 and, at the top, you know, minus-0.23 percent, and the next one
5 down is minus-0.18 percent, and, if you average these out, you
6 will come out to a very tight overlay of the estimation of tow
7 days, within about 0.2 percent, and, again, this is all on the
8 cleaned data, and the shrimp effort also cleans the data
9 upfront, before it searches for and identifies specific tows,
10 and just, you know, it's very similar to what we did at the
11 start of the study.

12
13 I wrote down some pros and cons here, comparing the VMS data
14 over the ELB, and the ELB pros and cons are on the right, and
15 the VMS is on the left, and so the pros for VMS are they
16 accurate compared to the ELB, and the data work with the effort
17 algorithm. There is little or no delay obtaining data, and you
18 can discover data failures pretty quickly, by monitoring the
19 data online. The pros for the ELB are it provides our
20 historical baseline that works with the effort algorithm, and
21 it's currently deployed on the vessels.

22
23 The cons for the VMS is that the industry is reluctant to send
24 the data to OLE, because, currently, all VMS data go through
25 OLE. However, the agency is evaluating moving VMS program
26 administration from OLE over to S&T. The cons for ELB, the
27 antenna failure is fairly common, and there is an extended time
28 lag to discover data issues and replacement. Of course, because
29 we --

30
31 **CHAIRMAN SCHIEBLE:** We have another question for you. Please
32 hold on a second. Mr. Gill.

33
34 **MR. GILL:** Thank you, sir. When you talk about the cons for the
35 NEMO and ZEN, it seems, to me, that you haven't covered the
36 network entirely. The NEMO failed multiple times, and the ZEN
37 had issues, which might have been resolved, but it didn't get
38 further testing to ensure that they were, and so the NEMO and
39 ZEN options that you have on whatever -- On 17, they don't
40 reflect, at least that I can see, the issues with those two
41 units, and, therefore, it paints a much better picture of them
42 than reality exists, and so the ZEN might be good, but, on the
43 other hand, it had issues, and it's not clear that those issues
44 have really been resolved in a shrimp working condition, and so
45 this slide, to me, is somewhat misleading.

46
47 **MR. WALLACE:** Okay. Thank you for that question, and let me
48 clarify. When I am talking about NEMO, you can see that I have

1 a subscript 1, and this is only for devices that are plugged
2 into a ship's power. You cannot rely on them, especially in
3 January off of Texas, to fully power using just a solar panel,
4 because we did not see -- On the NEMO units deployed to the
5 Caretta, we did not -- All the data there were just fine, and
6 they matched up with the ELB data quite tightly.

7
8 For the ZEN units, you're exactly right, and some data were
9 missing from the data stream, as there was for the ELB, and
10 then, also, within the ZEN dataset, there was some issues on one
11 of the units, that it needed a software update, and the one
12 thing nice about being connected to the cellular tower, and
13 having an easily-accessible dataset online, is that they picked
14 up the issue with that ZEN unit, and they were able to send a
15 software update to that unit, over the cell system, and then
16 that was then fixed.

17
18 Again, all of the -- Any units that you put out there for GPS,
19 or any electronics that you put out on the ocean, it's a tough
20 environment, and, yes, every one of these are going to fail at
21 one time or another, and there's no doubt about it, but,
22 overall, in terms of being able to fix the issue upfront,
23 certainly we can get our hands on the data as soon as a vessel
24 comes close enough to shore to have the data uploaded, and we're
25 able to fix those issues in near-time.

26
27 **CHAIRMAN SCHIEBLE:** Mr. Wallace, a follow-up for you, real
28 quick. Mr. Gill.

29
30 **MR. GILL:** Thank you, Mr. Wallace, and so is there a hardwired
31 version of NEMO that is on the market? My understanding was the
32 solar unit was the design, and it's got a plug-in charge port,
33 just like your cellphone, et cetera, so that there is no
34 hardwired version, and is that correct or wrong?

35
36 **MR. WALLACE:** Well, it depends on what you mean by a hardwired
37 version. Essentially, you just plug it into the ship's power,
38 and then it's plugged in, and then there's no issue at that
39 point, and so, yes, it is a USB plug that it has, and so, again,
40 as long as you plug it in, it's going to be fully powered for
41 the entire time period, and it could be -- You know, these units
42 were made for vessels that didn't have sufficient power, but so,
43 again, the pros and cons here, I'm only talking about the NEMO
44 units that are plugged into the ship's power, and hopefully that
45 clarified it a little bit for you.

46
47 **CHAIRMAN SCHIEBLE:** I had the same concern as Mr. Gill, and so
48 these units are on the outside of the boat, right, and they're

1 exposed to saltwater, and is that correct, for the solar panel?
2

3 **MR. WALLACE:** Typically, yes.
4

5 **CHAIRMAN SCHIEBLE:** Okay. Mr. Gill has a question, also.
6

7 **MR. GILL:** My recollection, actually, is that the AP -- You
8 indicated that the NEMO unit was not appropriate for shrimp
9 industry use, and, if there is no hardwiring, do you consider
10 the NEMO still a viable piece of equipment for what we're
11 talking about here?
12

13 **MR. WALLACE:** If you cannot -- What I'm saying is that, if the
14 NEMO cannot be powered by the ship's power, you should not use
15 it.
16

17 **MR. GILL:** That, to me, says that NEMO is out of consideration,
18 because you're going to have different units for different
19 ships, et cetera, and you have distinct compatibility problems.
20

21 **MR. WALLACE:** Well, I mean, we still have to power-up both the
22 ZEN and ELB. They all have to get power from some source. They
23 all need to be powered.
24

25 **MR. GILL:** They're meant to be hardwired.
26

27 **MR. WALLACE:** Yes, that's what I'm saying, is, if you hardwire
28 the NEMO, if you plug it in, then there are no issues.
29

30 **CHAIRMAN SCHIEBLE:** We have one more question from Ms. Boggs.
31

32 **MS. SUSAN BOGGS:** So not to the equipment itself, but I do have
33 a question about the cons under the NEMO and ZEN, and, number
34 one, the industry is reluctant to send data to OLE, and, well,
35 they haven't been reluctant in the past, and I think that's
36 probably an unfair statement, based on the fact that we've been
37 trying to get these SD cards over to the proper hands as
38 efficiently as possible, and the next part is what is the
39 advantage of moving -- If you go to VMS, why would you move the
40 administration from OLE to NMFS S&T, when I thought the VMS was
41 more, as it was in all of these other programs that we use it
42 for, for enforcement, and, well, some of them will tell you law
43 enforcement purposes, but validation purposes.
44

45 **CHAIRMAN SCHIEBLE:** Dr. Walter has his hand up.
46

47 **DR. JOHN WALTER:** Thank you, Mr. Chair. In terms of the
48 administration of the data, it's really about moving a large

1 amount of data and having a server and the infrastructure and
2 capacity to move that data, and that's where the Office of
3 Science and Technology is better positioned, within the agency,
4 to be able to do that large data movement.

5
6 Originally, VMS was started as an enforcement tool, in a lot of
7 fisheries, and so they just happened to have stood up that data
8 catching process. In this case, because we're talking about
9 using it for scientific data collection, it doesn't need to go
10 through OLE, and it's just that happens to be the particular
11 structure, and so the question could be, if it just gets
12 administered through where NOAA's data policy is it would be
13 administered through Science and Technology, and would that
14 alleviate some of the concerns that we've heard about law
15 enforcement and how law enforcement might be the first group to
16 touch that data?

17
18 Now, law enforcement, we've heard from them, and they've said
19 they can get access to any data that they need at any time,
20 depending on their needs, from Science and Technology, from the
21 Science Center, from anywhere. However, they wouldn't be the
22 first catcher's mitt, so to speak, if this process were to move,
23 and it just kind of makes sense in the way that NOAA wants to
24 manage large data. Thanks.

25
26 **CHAIRMAN SCHIEBLE:** Mr. Wallace, please continue.

27
28 **MR. WALLACE:** Okay, and I think I was just finishing the cons
29 under ELB, I believe, and, again, we have a long delay in
30 obtaining data, now that we have to collect the cards to be sent
31 in, and, anyway, so that's like one of the biggest issues that
32 is resulting in significant delays in obtaining data, and, by
33 the time you see that a certain unit isn't working, it's already
34 too late in the season to probably recover any data from a
35 particular vessel.

36
37 **CHAIRMAN SCHIEBLE:** We have a question again for you, real
38 quick. Ms. Boggs.

39
40 **MS. BOGGS:** So I'm toggling between slides, and, if you go back
41 to Slide 3, and you show a picture of this cELB, and it looks
42 like a little computer, to me, and I know, a lot of times, with
43 hardware, you can upgrade and do, and is there a reason that
44 that can't be done with these components, because it's something
45 that the industry is familiar with, and we know it works,
46 because it has in the past, and I guess I'm just asking, and is
47 there not a way to modify the current units to be compatible
48 with the new technology, without having to make a whole big

1 switch?

2
3 **MR. WALLACE:** We are exploring that with the company that
4 developed this unit right here. We're uncertain at this time,
5 but do remember that there is some software that is hardwired
6 into some of these chips here, and so I'm really uncertain
7 whether or not it would be doable or not, but we should have
8 some good answers coming back from the company.

9
10 **CHAIRMAN SCHIEBLE:** Dr. Walter has a comment, real quick.

11
12 **MR. WALTER:** I think one of the things we're finding out is
13 that, when we get this like purpose-built unit like this, and we
14 brought all these things, and I've got one right here, as a
15 demo, and I was going to put this on my boat, but the problem is
16 that there's no manufacturer support for it.

17
18 The manufacturer may, or may not, be able to do this, and
19 they've told us, in the past, that they really can't, because
20 they would have to get into it, and there's issues with whether
21 that data is going to -- If the data security will still
22 persist, but, either way, it's going to cost a substantial
23 amount, probably, to reconfigure that particular unit, and that
24 manufacturer has no incentive whatsoever to do that, because
25 they sold a one-off product.

26
27 I think that's kind of the message that we need to think about,
28 is what is the longer-term solution, and that's where having
29 some industry support, and the industry being invested in
30 supporting the product, and competition amongst the various
31 vendors, is what we see as a viable path forward for this
32 technology, and it's one of the benefits that you get by having
33 multiple vendors, as opposed to being stuck with these units,
34 which we may or may not see a future for. Thank you.

35
36 **CHAIRMAN SCHIEBLE:** Okay, Mr. Wallace. Please continue.

37
38 **MR. WALLACE:** Okay. The final takeaway here is the NEMO devices
39 should require the ship's power for charging. The Caretta NEMO
40 had about a 2 to 3 percent difference relative to an ELB, in
41 total estimated tow days, although we only had a relatively low
42 number of observations, compared to the second part of the
43 study.

44
45 The comparison of ZEN summary statistics and tow days generated
46 by the new shrimp algorithm are within 0.2 percent, compared to
47 the ELB, and we had over sixty tow days observed in that study,
48 and five vessels, and decreasing ELB coverage levels, since

1 resorting to our mail-in procedures, from a high of
2 approximately 60 percent, is down to about 40 percent in 2021.
3 The 3G ELB device may no longer meet the agency needs, or data
4 standards, and what I'm saying here is, because of the
5 timeliness of trying to get the data back, long-term reliability
6 -- You saw several occasions where it looked like the ELB was
7 failing, and you saw the comparison between a new ELB and the
8 old ELB, in the one case, and it was simply that it was just
9 failing, and it needed to be replaced. Another big one, of
10 course, is we cannot identify hardware problems in a speedy
11 manner, resulting in data loss.

12
13 Finally, I just wanted to thank LGL, and all the captains and
14 crews and the eight fishing vessels that participated in this
15 work, and I can take any other questions that you may have at
16 this time.

17
18 **CHAIRMAN SCHIEBLE:** Okay. Thank you, Mr. Wallace. We have a
19 few questions here. First up is Ms. Boggs.

20
21 **MS. BOGGS:** Thank you, Mr. Wallace. On Slide 16, and it's the
22 results of the cELB compared to the cVMS, there's not a whole
23 lot of difference. I mean, I guess the biggest difference is
24 the accessibility of the data. In other words, the VMS
25 transmits automatically, where the ELB is something that you
26 have to go around and collect, but, I mean, the data is so
27 close, and, again, I don't know why we're going to all of this
28 trouble, other than if there's not a better way that we can
29 figure out how to collect these SD cards, at the end of the day,
30 the week, the month, however, and it seems like there's just not
31 a whole lot of difference in what we're seeing.

32
33 The big thing is just how do we get the data more efficiently,
34 and am I missing something? I would be curious to know is this
35 one tow, three days, twenty days, thirty days, and, I mean, what
36 are we comparing here? All we see are the vessels, but are we
37 comparing apples to oranges, the number of tows, the number of
38 days, and I think we need a little more information to look at,
39 but that's just me. Thank you.

40
41 **MR. WALLACE:** Sure, and so these are all in number of tow days,
42 and, obviously, a tow doesn't last all day, and I'm a little
43 uncertain of what the average tow length is, but it's quite a
44 few tows to a single tow day of twenty-four hours, and so that's
45 the comparison. The comparison is exactly the same across ELB
46 or NEMO or ZEN, in this chart right here.

47
48 Now, you can see they're all pretty darned accurate, but what

1 you don't get, from this chart though, is where there are some
2 data failures. Sometimes the data failures were on the VMS
3 side, and sometimes the data failure was on the ELB, because, if
4 we didn't have data to compare directly, tow-by-tow, from each
5 of the units, then they were left out of the study, and that's
6 why I had that list of data problems, and that sort of gave you
7 sort of just a quick review that we're missing data from every
8 one of these units that we were processing data from out there,
9 and so that's the part that's not in here.

10
11 **CHAIRMAN SCHIEBLE:** Okay. Ms. Boggs.

12
13 **MS. BOGGS:** Well, so a follow-up to that, and this is kind of
14 new to me, and I'm trying to get my feet wet on this, but it
15 seems like, if we're not seeing all the data here, we really
16 don't know what we're comparing to, and yet we're being asked to
17 make decisions, and I don't feel like we have all the
18 information, based on what you just said, and it may not be
19 imperative to the decision, but, when you tell me that, well,
20 you don't have that information, then how do I know what
21 decisions I'm making?

22
23 **MR. WALLACE:** Right, and so there isn't a comparison of the
24 missing data and the data that we do have, but less than 10
25 percent of the data were missing overall, and so we collected
26 over 90 percent of the information, in parallel, across all of
27 these systems, and so it's not a failure of the systems
28 themselves, because, like I said, most all the data were there,
29 so we could do this comparison.

30
31 Sort of the really important part about this is having the
32 ability to know and be able to check the data that are coming
33 in, so you can identify when issues are happening and get them
34 fixed, in real-time, by sending a software update to a unit, or
35 sending a whole unit, whether it's VMS or ELB, to vessels to be
36 deployed if it fails, and so that's all sort of a matter of
37 having a good functioning program and making sure that it is as
38 efficient and working to sort of the top of its efficiency as it
39 possibly can. We can't do that if they're waiting for months at
40 a time to get the data back from the unit.

41
42 **CHAIRMAN SCHIEBLE:** Dr. Walter and then Mr. Strelcheck.

43
44 **DR. WALTER:** Okay, and I can see that there's a lot of confusion
45 here, but, essentially, with these boxes, it's like putting a
46 GPS on that you can't call Garmin when it breaks, and you've got
47 no support, and no way to know that it's broken, and so you're
48 out there fishing, and no one can tell you that there's

1 something wrong with it, and it's not transmitting back, and
2 it's not until months later, when the chip gets sent in, back to
3 the agency, that we're like, you know what, this didn't collect
4 any data for six months, and, oh, by the way, the unit is
5 broken, and there's no warranty on it, and so we've got to
6 replace it with something else.

7
8 That's basically like years-old technology, and it's not really
9 a good model for the future, and that's why we're saying we need
10 to go with something that's got some support, some tech support,
11 and some kind of model for the future.

12
13 These are working right now. They are working in the fishery,
14 and we need to get the chips back, and, as noted, I think boots
15 on the ground might be able to help us get those chips back, but
16 I think this council probably wants something that's going to be
17 working for the future, and I think that's kind of what we need
18 to think about, is what's going to be the future of data
19 collection. We'll probably have a couple of years while these
20 things -- While we get these out, before we eventually move to
21 something different, and the question is what's that new future
22 going to be. Thanks.

23
24 **CHAIRMAN SCHIEBLE:** Mr. Strelcheck and then Ms. Boggs.

25
26 **MR. STRELCHECK:** I am going to try to tie a few things together
27 here as well, and so we, obviously, have to compare two units
28 that are working side-by-side, and, when one is not working, we
29 can't compare it to the other, to determine, obviously, the tow
30 time, and, right now, what I'm being told is, at least with the
31 SD cards that are being sent back to us, about 15 percent have
32 bad data, right, and so they're not working, and that's partly
33 why I asked Dr. Putman the question about those two units,
34 right, and these units -- I think, if I recall correctly, we
35 started in 2014, and so they're nine years old. They're not
36 getting any younger, like the rest of us, and so they're going
37 to fail, more likely, over time, right, as we continue to use
38 them.

39
40 Also, keep in mind that we were previously under the model of
41 going and pulling the data from the shrimp vessels, and then, in
42 2014, this council made the move to 3G units, and we were
43 getting it automatically transmitted to the agency, right, and
44 so, at this stage, what we would expect with a cellular ELB,
45 which is essentially a cellular VMS, is that those would be a
46 close to one-to-one match, and that's at least what proof-of-
47 concept for the ZEN units is telling us.

48

1 We certainly could look at, and should look at, other units, and
2 we've learned some hard lessons with regard to catastrophic
3 failures, with units just not working, as well as the solar-
4 powered units, but absolutely I think there are units out there
5 on the market that can work for us, and can produce the same, or
6 better, results than even what we're getting currently.

7
8 **CHAIRMAN SCHIEBLE:** Ms. Boggs. Okay. Pass. Any other
9 comments? The Shrimp AP decided to make a motion, based on
10 there was no clear-cut winner in looking at these, or at least a
11 viable solution that came out ahead of all the rest, and Dr.
12 Freeman is going to read us that motion.

13
14 **DR. FREEMAN:** Thank you, Mr. Chair. Bernie, could I get you to
15 pull up the Shrimp AP summary again and go to page 5? At the AP
16 meeting, following a similar presentation to this one, and, as
17 mentioned, there were some updates in this presentation,
18 compared to what the AP saw, and the AP made this motion.

19
20 Referencing the previous request of the council's focus group on
21 the shrimp data collection framework, at its October 21, 2021
22 meeting, for NMFS to test all type-approved cellular VMS units
23 on shrimp vessels, the Shrimp AP requests the council suspend
24 action on the draft shrimp framework action until NMFS conducts
25 side-by-side testing of cELB units with the following cellular
26 units on a minimum of five shrimp vessels for the full length of
27 an average offshore trip and presents the results after the raw
28 data is run through the new NMFS shrimp effort algorithm, and
29 those devices were the Woods Hole NEMO unit that is hardwired to
30 the vessel, the Atlantic Radio Telephone ZEN VMS LTE, and the
31 Nautic Alert Insight X3, and that motion carried unanimously,
32 and, if there's any questions, I can do my best to answer them,
33 and we also have the Shrimp AP chair available as well.

34
35 **CHAIRMAN SCHIEBLE:** Mr. Gill.

36
37 **MR. GILL:** Thank you, Mr. Chairman, and so I think this motion
38 is dramatic, but it points out that, despite all the testing,
39 which, unfortunately, was partly a failure, and we didn't gain a
40 whole lot, and we certainly didn't gain at all from what we
41 expected when we started, and so what we've got are problems
42 with every unit on that list that hasn't been fully tested and
43 verified.

44
45 At the end of the day, we all want to have equipment that
46 provides the data we need and is reliable and we can depend on
47 it to do that. None of the units here meet that criterion,
48 currently, and so I'm in sympathy with this motion, and I have a

1 revised motion. Bernie, would you pull up my framework motion?

2
3 It says, in essence, the same thing, and what we need to do is
4 get through an adequate testing of the units, so that we have
5 some faith, and, yes, there's valid reasons, as Dr. Walter and
6 Andy suggested, but we need to have faith in them, and these
7 three haven't sufficiently passed that test yet, and, yes, it
8 extends out the implementation of this program, and the ultimate
9 choice, but, if we don't know what the unit is going to do, as
10 our testing has shown, there is no point in going through it.

11
12 I think the background of the motion that the AP proffered was
13 right on target, and that's what we need to implement here at
14 the council and suspend work until we've got the testing that
15 says, okay, we've got units that will work and do the job we're
16 looking for. Until then, we're fishing in a pond with no fish.
17 Thank you.

18
19 **CHAIRMAN SCHIEBLE:** Okay. We have a motion on the board. Mr.
20 Gill, do you want to read this, or do you prefer if I read it?

21
22 **MR. GILL:** The motion is to suspend action on the draft
23 framework action until NMFS conducts side-by-side testing of
24 CELB units with the following cellular units on a minimum of
25 five shrimp vessels for the full length of an average offshore
26 trip and presents the results after the raw data are run through
27 the new NMFS shrimp effort algorithm: 1)the Woods Hole NEMO unit
28 that is hardwired to the vessel; 2)the Atlantic Radio Telephone
29 ZEN VMS LTE; and 3)the Nautic Alert Insight X3. That one has
30 had zero testing.

31
32 **CHAIRMAN SCHIEBLE:** Okay. Can we get a second for this motion?

33
34 **MR. BILLY BROUSSARD:** I second it.

35
36 **CHAIRMAN SCHIEBLE:** Mr. Broussard seconds the motion.
37 Discussion from anyone? Mr. Strelcheck.

38
39 **MR. STRELCHECK:** Lots of comments. I am certainly sympathetic
40 that we need to do more testing, especially running this side-
41 by-side and through the effort algorithm. What I am concerned
42 about is, one, narrow scope of potential units to test, because
43 I think there was others that were more broadly approved under
44 the SEFHIER program that could be tested, and we're essentially
45 picking and choosing possible companies to test.

46
47 Two, to suspend action on the draft framework action, I think we
48 need to have some conversation about the draft framework action,

1 because, right now, we had three alternatives, and one was
2 status quo, and one was cellular VMS, and, essentially, the
3 third was P-Sea WindPlot, right, and we don't have P-Sea
4 WindPlot, and so we're down to two alternatives.

5
6 To me, we should continue with the framework action, but the
7 framework action is contingent on the results of this testing
8 and data and results and information. However, my concern still
9 is that industry is not going to support a VMS option, period,
10 and we're going to go down a lengthy testing process, only for
11 them to push back and say, well, we don't want this, because
12 it's still going through OLE, if that doesn't change, right, and
13 so my concern, really more broadly, is the narrow scope of the
14 units that you would be asking us to test, because I think
15 there's others, and then stopping action entirely, because I
16 don't think we have other options, at this point. We either
17 have status quo or VMS, and, to me, we can continue to work on
18 the amendment while this testing is being done simultaneously.

19

20 **CHAIRMAN SCHIEBLE:** Okay. Ms. Boggs and then Mr. Gill.

21

22 **MS. BOGGS:** Go to Bob.

23

24 **CHAIRMAN SCHIEBLE:** Okay. We'll go to Mr. Gill first.

25

26 **MR. GILL:** Thank you, Mr. Chairman. Well, to your first point,
27 the units that are identified here are the ones that the agency
28 brought forward, and, if the agency has other units in mind that
29 probably can do the job, they've not been part of the
30 discussion, based on Mr. Wallace's presentation and our prior
31 presentation, and so you're right, but that will always be the
32 case, will it not, that there will be some units coming online,
33 and, yes, it might do the job, but it hasn't been tested, and so
34 that's nothing new.

35

36 If that's not acceptable, then perhaps you can suggest what that
37 testing universe ought to be, because this is directly what
38 you've provided thus far, and the units that have passed the
39 tests thus far.

40

41 In regard to working on the document, it's hard to see what we
42 can do with that document until we find out what we've got to
43 work with, and we certainly have had only two alternatives, and
44 many documents in the current briefing book are two-alternative
45 documents. You know, in the old days, we didn't do that, but
46 it's apparently now okay, and so I don't see, until we figure
47 out what we've got to work with, how we can amend the document
48 to be any better, because we're operating with it where we

1 started. We have the ELB units and some subset that we can look
2 in comparison, but, at some point, we've got to say, okay, we're
3 going to look at this subset, and, if you don't like these, then
4 I'm fine with considering some others that you think might be
5 better, under some basis, but that's all you've talked about,
6 and so I don't quite understand why, all of a sudden, that's not
7 okay.

8
9 **CHAIRMAN SCHIEBLE:** My understanding was there were only four
10 type-approved units to begin with, and I thought these were
11 three of those, but, anyway, Mr. Strelcheck.

12
13 **MR. STRELCHECK:** All right. Well, I might have been mistaken,
14 and Faria was one of the units that now has been removed, and so
15 I'll double-check with my team, but I feel like we can still
16 work on the amendment without knowing the results of this,
17 because, to me, it's either we stick with what we have
18 currently, the status quo with the chips, or we have VMS that's
19 type-approved and can meet the shrimp effort algorithm
20 requirements, right, and, if we don't proceed, we're going to
21 wait probably a couple more meetings before we start moving on
22 this, and we're going to delay action for another six months,
23 when we could have been working on the amendment all along and,
24 as the results come in, continue to benefit the amendment by
25 updating it with that new information.

26
27 **CHAIRMAN SCHIEBLE:** Ms. Boggs.

28
29 **MS. BOGGS:** Well, I was trying to find the type-approved
30 cellular units for SEFHIER, but all I could find was software,
31 and so that's not going to help me, but the Woods Hole NEMO -- I
32 guess I got confused in the conversation, and can it be
33 hardwired, or can it not, and is that a viable option here?

34
35 **MR. WALLACE:** Yes, it can, and, yes, it is a viable option.

36
37 **CHAIRMAN SCHIEBLE:** Okay. Any further comments on this motion?
38 Dr. Walter.

39
40 **DR. WALTER:** If I could just provide maybe a friendly amendment,
41 and, rather than being specific, there was language to test all
42 type-approved in the previous motion, rather than specifying
43 which three, because I think we're going to maybe get it wrong
44 on the fly, if we only say three and not others, and so maybe we
45 might say to include the following or others that may be
46 identified.

47
48 **CHAIRMAN SCHIEBLE:** Mr. Gill.

1
2 **MR. GILL:** I think I'm okay with your suggestion, but I want to
3 understand it a little clearer, and so what you're suggesting is
4 there would be a Number 4 and Number 5, and then will have "XXX"
5 next to them, and is that what you're basically suggesting, and
6 so you want to leave room open for other units to be added to
7 this list, and is that correct?

8
9 **DR. WALTER:** Absolutely, and I think competition is good, and I
10 don't, off the top of my head, know all the ones that are
11 available, and there might be others.

12
13 **MR. GILL:** On the other hand, at some point, what you're making
14 is the testing more expensive, and more difficult, and so, at
15 some point, you've got to say, hey, we're going with whatever,
16 and maybe three is not the right number, but leaving it open, to
17 me, is -- You're adding expense, and I'm not sure you're gaining
18 a whole lot of benefit as a result of doing it.

19
20 **CHAIRMAN SCHIEBLE:** Mr. Strelcheck.

21
22 **MR. STRELCHECK:** I mean, just a comment to that. You know, it's
23 kind of a parallel process to our type-approval process, right,
24 and so all these have been type-approved. What they haven't
25 been type-approved for, or haven't been tested on, is shrimp
26 vessels with the ten-minute intervals, right, and so it's kind
27 of an additional requirement under a type-approval. At any
28 point in time, a vendor could come in and say I want to be type-
29 approved and test, you know, for the VMS program, and then get
30 added to the VMS program, if they pass that type-approval.

31
32 I was, I think, mistaken earlier, thinking we had more cellular
33 VMS units, and I was wrong about that, but I agree with, at
34 least in concept, that we should leave the door open, in the
35 event that there are others out there that we may have
36 overlooked.

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

39
40 **MS. BOGGS:** Well, I didn't make the motion, nor did I second it,
41 but I would recommend that we specify "and other cellular units,
42 to be determined", to specify that you want to look at cellular
43 units, and that's just -- But I'm not the motion maker.

44
45 **CHAIRMAN SCHIEBLE:** Then we'll remove 4, 5, and 6, and are you
46 good with that, Mr. Gill? Mr. Broussard, the seconder, are you
47 good with that change? Do we have any other further comments,
48 before we take a vote on this? Dr. Frazer.

1
2 **DR. TOM FRAZER:** Thank you, Mr. Chair. I'm not on the
3 committee, and I'm just trying to think a little more broadly
4 about this issue, and what I'm hearing people say -- I mean,
5 clearly, there is a concern about whether or not we're in a
6 position to continue to collect the data that would allow us to
7 generate effort data that we need for management, and, to my
8 understanding, there's a little more than a thousand federally-
9 permitted shrimp vessels, and a little over 400 of them, and so
10 some population have the cellular ELB units on them, right, and,
11 of that, what I'm learning now is there's only a fraction of
12 those that are being returned for -- The SD cards, right, for
13 analysis, and there are concerns -- So a population, shrimp
14 population, the fleet, there's a little over a thousand vessels,
15 and those that have the units are about 400.

16
17 Those that actually return the cards are getting to a hundred,
18 right, or thereabouts, but some of those are compromised, and
19 the concern is, as we continue through this -- In the absence of
20 having a plan to replace them, we're concerned about degradation
21 of data quality, but what I've heard John Walter say, and, John,
22 I just want to make sure that I heard it right, is that, when
23 you held that unit up and said we still have some of these,
24 right, and how many of those do you have?

25
26 **DR. WALTER:** 899.

27
28 **DR. FRAZER:** So my point being is -- I'm hearing the frustration
29 and the tension between the agency and the council and the
30 industry, and it's that we could essentially upgrade, or
31 replace, right, the units that we suspect are ageing out, as
32 Andy said, and feel good about that for some period of time, and
33 maybe the quality of the data would be better, and so that's
34 one, and I think we have enough equipment to continue with the
35 data collection program.

36
37 What I'm trying to figure out here is how long this testing
38 period is going to be carried out, how long it will take to
39 accomplish, right, and I would like to think about is this going
40 to give the industry some certainty, and so we're going to do
41 this for two years, and everybody is -- We're going to feel good
42 about the data, and maybe put a time stamp, or a certain date,
43 on how long we've got to accomplish this, whether we have three
44 VMS units or four or five or whatever, because, as Andy pointed
45 out, you can come back in at a later time and register, right,
46 for the program.

47
48 The reason I'm bringing all of this up is because I'm concerned

1 about data acquisition and stability in the industry, for one,
2 but I'm also think about we haven't asked some of the right
3 questions here, and some of those questions were brought up in
4 the SSC meeting that was held recently, right, and so these
5 units were placed on vessels like over a decade ago, and whether
6 or not the vessels that still have the units on them are
7 representative of the fleet, as it exists today, is a question
8 that needs to be answered.

9
10 I think the Science Center and the agency needs to be able to
11 tell us what are the minimum number of units that need to be
12 functional, with data reported, to provide us with the
13 information we need to characterize the fishery for management,
14 not only for shrimp, the shrimp fishery, but also for the
15 bycatch that accompanies that, right, and that may give me, and
16 I'm not on the committee, but a little more confidence that
17 we'll have the data that we need to manage not only the shrimp
18 fishery, but get the information we need to effectively manage
19 other fisheries, and so I'm asking, I guess, John, what's that
20 minimum amount of data? Are we well positioned to ensure that
21 we capture it, and, if so, can we set, you know, a timeframe to
22 carry this -- Or achieve the motion, as it's intended? I think
23 I'm done.

24
25 **CHAIRMAN SCHIEBLE:** Dr. Walter, do you want to reply to that,
26 and then Mr. Donaldson.

27
28 **DR. WALTER:** Okay. I think you brought up a number of very good
29 questions about, one, the representativeness of the fleet, and
30 this was always intended to be a random sample that would be re-
31 randomized. We've never done that, and we have only used one
32 sample of the fleet, and so there are many vessels who have
33 never had to carry these.

34
35 From a scientific standpoint, if you wanted data that was
36 representative of the fleet, you would want it to be a random
37 sample, and you would want to ensure that that sample doesn't
38 suffer from biases of like maybe certain vessels would drop out
39 over time, which often happens, and so that sample certainly
40 needs a refresh of that random selection, and, ideally, it needs
41 something where all vessels would be part of the universe of
42 that sample selection, and that is the definition of a random
43 sample, and, in that case, we would probably --

44
45 If we were to redo that, and if you were to keep reviewing it
46 from a scientific standpoint, you would say how have you
47 randomized the sample, and I think that conversation hasn't
48 happened here at the council, in terms of what the sampling

1 would look like and whether we would eventually get to a census
2 of all the boats, so that everyone was part of it, which would
3 be the gold standard for effort monitoring, and less than that
4 would be something like a sample of a smaller fraction of that.

5
6 I don't have a good answer as to what that number and the
7 timeframe to get that that would be, but I just know that we're
8 now -- We're usually covering 60 percent of the effort, and
9 we're now only covering about 40 percent of the landings, and
10 that's about 60 percent of the active vessels, and the permits
11 are now only about 40 percent of active vessels, the active
12 permits, and so that's a fairly substantial reduction, and that
13 may be due to some factors about getting chips returned, and we
14 might be able to, with some boots on the ground, correct that,
15 but we are starting to see hardware failures creep in to become
16 a growing problem.

17
18 In terms of a timeframe, or a bridge, to something new, I think
19 that's an intriguing concept of could we specify here's what
20 we're going to do in the interim, until we move to something
21 else, which would provide a little bit of certainty as to what
22 the future directions are, and I think we've been at a little
23 bit of an impasse of trying to talk around what people want and
24 don't want, and it has stalled us being able to move forward, in
25 both the interim and the long-term.

26
27 I think, in that case, probably there could be something like,
28 for the next couple -- A year or two years, that we need to get
29 out these chips, until we get something else in the fleet, and I
30 will speak a little bit, because I think there's another agenda
31 item about the funding that we've received from Congress, which
32 is to try to solve this situation, and how we could motivate
33 that funding to provide some solutions.

34
35 I don't want to speak about it yet, because I think we need to
36 have some more conversation, but I think that is really what
37 Congress has told us to do, and has put the money forth to fix
38 this, and we have an obligation, I think, to use that money
39 wisely, and I hope the council recognizes that opportunity, and
40 certainly the agency recognizes that it's an opportunity that
41 doesn't come along very often, that Congress hears our concerns,
42 and resources them, and so I think hopefully we'll use it
43 wisely. Thanks.

44
45 **CHAIRMAN SCHIEBLE:** Okay. Mr. Donaldson and then Ms. Boggs, and
46 then I'm getting requests for a timeout for five minutes.

47
48 **DR. STUNZ:** I don't know about a timeout, but if you just want

1 to finish that and dispense with what we need to do, but, pretty
2 quickly, I think some people could use a break here.

3
4 **MR. DAVE DONALDSON:** Thank you, Mr. Chair. To throw another
5 wrinkle into this, you may recall, when we first came up with an
6 interim plan on how we would phase out these outdated pieces of
7 equipment, right now, the SD cards are coming to the commission,
8 and we clean them up and make sure that there's not any viruses,
9 and then we send them to NOAA Fisheries.

10
11 When we were first approached, this was going to be a one or
12 two-year endeavor, and we are past two years by quite a number
13 of years, and now, if we're talking about -- Now we're talking
14 about potentially another two years, or more, to figure this
15 out, and so, when we agreed to it, it was supposed to be a
16 fairly short-term activity, and we're doing it with existing
17 staff, and, while we can still handle it at this point, I can't
18 ensure that we can continue to do this for another three to five
19 years, and so that's something to consider as well.

20
21 **CHAIRMAN SCHIEBLE:** Okay. Ms. Boggs, and then we'll work on
22 this motion.

23
24 **MS. BOGGS:** So, Dr. Walter, you mentioned that, and I'm not
25 going to get all this right, but active permits, but are all
26 those active permits -- Are they actively fishing? I mean, we
27 see it in the charter fleet, and you have active permits, but
28 we've determined -- You know, we're guessing it, and so, I mean,
29 does that help you with your numbers, that they wouldn't be
30 quite -- I don't know what the total shrimp fleet is, but I keep
31 hearing stories that they're slowly dwindling down, because of
32 the price of shrimp and everything that is happening, and so I'm
33 just curious, and do we know how many vessels, and then what
34 percentage of those that you would still need to -- I don't know
35 what percentage you're looking at now, but could that number --
36 I mean, if you started with -- I'm just using round numbers, but
37 500 vessels, and you were monitoring 250, half of the fleet, and
38 now it's 250, that would certainly bring it down, and I'm just
39 curious how many vessels are actively shrimping, if you know
40 that number, and you may not.

41
42 **DR. WALTER:** I don't have that number off the top of my head,
43 but the way I wrapped my head around it is you want to cover
44 enough of the effort, and landings kind of gets you effort, and
45 we're getting about 60 percent of the landings, or we were
46 usually getting 60, and now we're getting about 40, and it's
47 about the same numbers for the active permits.

48

1 We could break it down by like how much landings per permit, but
2 that's kind of a good ballpark about where we're declining, and
3 I think that came up at the AP, as to are we still getting a
4 reasonable sample of what has actually probably been a declining
5 number of permits, but I think landings kind of tells you the
6 story that we are getting a declining fraction of even the
7 landings.

8
9 **CHAIRMAN SCHIEBLE:** Okay. We modified the language in this
10 motion, and do we need to read it out loud again and then take a
11 vote? Okay. Do you want to do that, Mr. Gill, since it's your
12 motion, or I can do it, if you want.

13
14 **MR. GILL:** I can do it, Mr. Chairman. All right. **The motion is**
15 **to suspend action on the draft shrimp framework action until**
16 **NMFS conducts side-by-side testing of cELB units with the**
17 **following cellular units, and other cellular units, to be**
18 **determined, on a minimum of five shrimp vessels for the full**
19 **length of an average offshore trip and presents the results**
20 **after the raw data are run through the new NMFS shrimp effort**
21 **algorithm: 1)the Woods Hole NEMO unit that is hardwired to the**
22 **vessel; 2)the Atlantic Radio Telephone ZEN VMS LTE; 3)Nautic**
23 **Alert Insight X3.**

24
25 **CHAIRMAN SCHIEBLE:** Okay. Thank you, Mr. Gill. **Is there anyone**
26 **opposed to this motion?** Okay. **We have two opposed. The motion**
27 **passes.** Do you want ten?

28
29 **DR. STUNZ:** Yes, and let's do a ten-minute break, and we'll meet
30 here promptly at 3:50, ready to go. So 3:50.

31
32 **CHAIRMAN SCHIEBLE:** Okay. Thank you, Mr. Chair.

33
34 (Whereupon, a brief recess was taken.)

35
36 **DRAFT SHRIMP FRAMEWORK ACTION: MODIFICATION OF THE VESSEL**
37 **POSITION DATA COLLECTION PROGRAM FOR THE GULF OF MEXICO SHRIMP**
38 **FISHERY**

39
40 **DR. FREEMAN:** Okay, and so the next item on the action guide is
41 Agenda Item VII, the Draft Shrimp Framework Action, and so, for
42 this item, the committee will be presented with a draft
43 framework amendment to transition the Gulf shrimp fishery from
44 the expired cELB to a new device collecting vessel position data
45 for the purpose of maintaining effort estimation.

46
47 Staff will review the draft purpose and need statements and
48 draft alternatives, as well as other potential decision points.

1 The committee last reviewed the draft framework amendment at its
2 June 2022 meeting and decided to hold on further discussion
3 until the final results of the LGL Ecological Associates P-Sea
4 WindPlot pilot project and the NMFS VMS project were presented.
5 Therefore, the committee may consider discussion of the draft
6 framework amendment in the context of the two projects presented
7 at this meeting.

8
9 Staff will also provide the summary recommendations from the
10 March 2023 Shrimp AP, who also received the results of the two
11 projects. Southeast Fisheries Science Center will then provide
12 an update on congressional funding for shrimp vessel position
13 data reporting, as it relates to the purpose for the draft
14 shrimp framework action. The committee should ask questions and
15 provide staff with further direction for the draft framework
16 amendment.

17
18 Mr. Chair, I think it would most likely make sense, similar to
19 what we did at the Shrimp AP meeting, to have Dr. Walter speak
20 first about the congressional funding, so that the committee
21 will have some context of those funds in relationship to the
22 draft document, if that works for you.

23
24 **CHAIRMAN SCHIEBLE:** Okay. Thank you, Dr. Freeman. This is Tab
25 D-7(b). Dr. Walter, are you good to go?

26
27 **DR. WALTER:** I am, Mr. Chair. All right, and so Congress had
28 allocated \$850,000, and we should probably dig out the language,
29 so we're all really clear on what that is, and I don't have it
30 front of me, and maybe, Matt, if you could dig that out, so that
31 we could maybe even enter it into the record.

32
33 Of that, we have been directed to take a 22 percent reduction
34 from that for maintenance and operations by our budget staff,
35 and we had originally planned that the bulk of the money that we
36 can use for things could go to what we were terming an early-
37 adopters program, which would be the boats and captains and
38 vessels who would want to early adopt whatever might become the
39 preferred alternative of the council, which would -- We were
40 assuming, at that point, that it would probably be some sort of
41 hardware that meets type-approval that would collect electronic
42 effort position, of which many of the off-the-shelf cellular
43 electronic, or cellular VMS, units could or should do, and the
44 "should" being that some of the testing proved that they didn't,
45 but those early adopters would get units for free and get
46 support for installation and then be basically the beta testers
47 for those units, and they would likely be units that would
48 eventually be rolled-up in rulemaking and allowable whatever

1 rules happen.

2
3 It could be indeed that, now that we've got this new substantive
4 testing request from the council, that those early adopters
5 could help with that testing, i.e., they could take on a number
6 of these units and put them on their boats, and we could use
7 some of this funding to help with that.

8
9 We anticipate that we could probably get about 200 boats
10 outfitted with some sort of units, as a part of this, and that's
11 kind of the gist of the early adopters' program, and there's
12 some money there for outreach, and also to do some of the
13 necessary programming that would probably be needed. However,
14 that was -- This was also presented to the AP, but we felt that
15 presenting any changes to our initial approach were premature,
16 until we had this conversation with the council. Thanks.

17
18 **CHAIRMAN SCHIEBLE:** Okay. Thank you, Dr. Walter. Any questions
19 about that? Okay. Moving on to the rest of Agenda Item VII.
20 Sorry. Andy.

21
22 **MR. STRELCHECK:** So are we going to talk framework action? Is
23 that what is next? I just wanted to make a point of order then,
24 in terms of the previous motion, as to whether we should be
25 discussing it, given that we were told to stop working on it.
26 You wanted to stop working on it, and why are we talking about
27 it?

28
29 **CHAIRMAN SCHIEBLE:** Mr. Gill.

30
31 **MR. GILL:** Well, that's true, Andy. However, that hasn't been
32 decided that we will, and that's a council ultimate decision,
33 and we're in committee, and so our recommendation, effectively,
34 is to stop work, but, until the council votes, we continue.

35
36 **DR. STUNZ:** Well, spoken like a true past chair. No problems at
37 this point, and so --

38
39 **MR. STRELCHECK:** I guess I didn't read the footnote in two-point
40 font.

41
42 **DR. FREEMAN:** Bernie, can you pull up that email with the
43 language again? Everybody squint really hard to read it, and I
44 believe that Bernie also sent it to everyone's email as well, so
45 that folks will have a copy of it, and so one thing that we
46 would also appreciate feedback from the committee, and from Full
47 Council, is that, in the language, it refers to use of those
48 funds in consultation with the council and shrimp industry

1 stakeholders, for the continued development and implementation.
2
3 Along those lines, I did send a doodle poll to the Shrimp AP
4 with dates in mid-May, and, again, it was -- We discussed this
5 around the AP, that it would be contingent upon a decision from
6 the council if the AP should be convened, along with other
7 appropriate members from the council, to hear some sort of draft
8 budget plan from NMFS again, related to the language that you
9 see on the screen in front of you. Dr. Simmons, I don't know if
10 you have anything to add to that.

11
12 **EXECUTIVE DIRECTOR SIMMONS:** Mr. Chair, if I may, and so I was
13 under the impression that we were going to get quite a bit more
14 information by the council meeting, regarding how the council
15 and stakeholders were going to be engaged in this process and
16 how the monies were going to be spent, and so I'm a little bit
17 confused about what was just rolled out, but I guess we're not
18 getting more information than this at this meeting, so that we
19 can plan a follow-up Shrimp AP meeting to discuss this.

20
21 **CHAIRMAN SCHIEBLE:** Dr. Walter.

22
23 **DR. WALTER:** You were expecting a specific itemized budget plan?
24

25 **EXECUTIVE DIRECTOR SIMMONS:** Well, slides with some information
26 would be good.

27
28 **DR. WALTER:** Well, I guess we were feeling that this was
29 somewhat of a conversation, given that, originally, our plan was
30 not well received at the AP, and so we felt that the AP, as a
31 subsidiary body of this council, would give advice for how they
32 felt that money should be spent, and we would take some
33 direction from that, rather than come back with another proposal
34 that either would have sounded somewhat either preempting this
35 council's view on it or simply stating the same thing that we
36 stated at the AP, which would have sounded tone-deaf to come
37 back with the exact same thing.

38
39 I guess I would ask the question of is the idea of an early
40 adopters approach, where we would essentially use that funding
41 to get about 200 shrimp vessels outfitted with cellular VMS
42 units, a non-starter, because I think that's the main question,
43 about whether we use that money to get started on this, down the
44 path of what is likely to be a more modern data collection
45 approach, or do we use this money to invest in the past, which
46 would be somehow boosting up the 3G system, and not actually
47 invest in the future, and I think that's where -- We can put an
48 itemized spend plan, and I've got one, but I feel it's somewhat

1 premature to do that without some more guidance. Thank you.

2
3 **CHAIRMAN SCHIEBLE:** To that point, Kevin?

4
5 **MR. KEVIN ANSON:** Yes. Thank you. Dr. Walter, I wasn't fully
6 paying attention when you first started to talk about the
7 congressional funding, and I apologize, and so you mentioned
8 something about a 22 percent reduction, and I don't know if that
9 applies to this figure here, and what's the timeline of this
10 money, and when does it have to be spent, and I guess that's a
11 question I have, and that might help us answer some of that
12 question, and then whether or not -- You know, what is the
13 additional cost, if you are going to be, you know, applying a
14 cost for testing, and what's any additional cost for three
15 units, versus five or six or seven, I guess, as we talked about
16 earlier, before the break, of adding additional units, and so
17 those are, I think, some of the, at least in my mind, what I
18 would like to hear relative to how they impact the money and
19 then to answer your question relative to this early-adopter
20 question.

21
22 **DR. WALTER:** Okay, and so these are FY23 funds, and they must be
23 spent this year, and we have a report to Congress on this. In
24 terms of how the testing would factor into this, we did not
25 initially cost out the substantive testing of three or four or
26 five units, paired on vessels, because that's going to greatly
27 increase the cost, if we indeed need to do that.

28
29 We had assumed that, particularly for units that seem to be
30 working, that are type-approved, vessels could choose to say,
31 hey, I'm going to going to put this on, and I'm just going to
32 early adopt it, but I think we could probably fold in a
33 component of testing, within that, that wouldn't be
34 substantially cost-prohibitive to do that, and it might be that,
35 rather than 200 boats, we might get maybe 150, or 180, to build-
36 in that testing. Thank you.

37
38 **CHAIRMAN SCHIEBLE:** Okay. I have Ms. Boggs.

39
40 **MS. BOGGS:** Okay, and so, with this funding, and I may get
41 something thrown at me -- Are you paying attention?

42
43 **DR. WALTER:** The Regional Administrator was talking in my ear.

44
45 **MS. BOGGS:** That box you have over there, is there a new version
46 of that box? That seems to be what the shrimp industry is
47 comfortable with, and I know we're looking at these other units,
48 components, and maybe they do the same thing, and I'm not

1 understanding that, and, I mean, I'm a visual person, and so is
2 there a new version of this box that either the maker of the box
3 that you have makes now, and is there -- You know, I understand
4 what you're saying about the new technology versus the old
5 technology, but you already have the shrimp industry comfortable
6 with the way that they're submitting their data now, and is
7 there a way, and I think we've gone full circle with this, to
8 make that box compatible, or does that -- Does the developer of
9 that box have a newer version of that box that could be used,
10 and implemented, and I will say this about the funding.

11
12 I know that you have to have boots on the ground, and you have
13 to have the administrative side of it, but I hope that most of
14 this money is used to truly improve the shrimp industry, and the
15 collection of the data, what's needed to stand the science up,
16 and not all administrative uses.

17
18 **DR. WALTER:** So you asked does this manufacturer have a new one
19 of these, and not that meets our exact requirements that we know
20 of, and, if we did, it would be a one-off purchase of a set of
21 several hundred of these things, which would be we buy them and
22 then that's it.

23
24 The reason we're trying to go to these cellular VMS units that
25 other industry providers are building is that they will support
26 them, and they will ensure that they are working in the future,
27 which is part of the type-approval process, and so there are
28 these units that you can put on the boat, and that's what we're
29 recommending as the path forward.

30
31 As to why there is acceptance of this, and rejection of the VMS
32 unit, as used, as one of these, I'm not sure -- I don't quite
33 understand why there's such concern, because, essentially, this
34 is doing the same thing we would be using those off-the-shelf
35 VMS units for. They wouldn't transmit in real-time. They would
36 transmit when they get within cell phone range. They would not
37 be used for law enforcement, if that's not part of the fishery
38 management plan that says it will be used to enforce things. It
39 will be used to collect the effort, because that's what will be
40 specified in the plan.

41
42 Then, essentially, it's using that unit, from ZEN VMS or the
43 NEMO plug-in, to do the exact same thing this is, but we just
44 have warranty support. We can call the manufacturer, and some
45 of the representatives are in the room right now here, and you
46 can ask them, and they might even have a unit, and, if we could
47 get one maybe in the next couple of days, we could visually see
48 it. Thanks.

1
2 **CHAIRMAN SCHIEBLE:** Ms. Boggs.

3
4 **MS. BOGGS:** So, in the Headboat Collaborative, we, the
5 collaborative, purchased these VMS units that we had to use
6 during the program. Fast-forward to the new SEFHIER, or, well,
7 suspended SEFHIER, program, and those units were no longer
8 usable. They said, no, they're not compatible anymore, and you
9 have to upgrade.

10
11 That's technology, and so, anything that you say here, it is
12 not going to be permanent. My computer right now is in the red
13 zone for the data and memory, and I know I'm getting ready to
14 have to have to buy a new computer, and so the point is
15 technology is ever-evolving, and so what I felt like I just
16 heard you say is, you know, we're going to go to this, and it's
17 going to be good forever, and, well, that's a lie, okay, and
18 it's just not going to be, because technology is moving so fast,
19 and I don't see it stopping, and so I do -- I disagree with
20 that.

21
22 Yes, if there's something newer and better that can be used, but
23 can you use it from here until kingdom come, I don't think so.
24 I think you're going to have, at some point, invest again in new
25 technology, because that's going to become whatever this
26 council, if we ever move forward with it, and it's not going to
27 be forever, and so I just am trying to find a compromise with
28 the shrimp industry, that is comfortable with this way that the
29 data has been collected, and maybe it's not the most efficient,
30 and I don't know. I don't know how often you look at the data,
31 but, I mean, it's just -- It's ever-changing.

32
33 Now, you say there's vendors in the audience, and they can come
34 show us, and it's going to work, and, well, I am living proof
35 that SkyMate didn't know that my unit wasn't working for over
36 six months, and, you know, there I was finding out, all of a
37 sudden, that my unit wasn't working, and they couldn't figure
38 out why it wasn't working, and I was out of -- I was not in
39 compliance, and so technology is always going to be a challenge
40 to this council, the fishermen, the shrimpers, everybody
41 involved, and I don't know how we get past that.

42
43 I am just trying to find a middle ground, where we can move
44 forward with this and make everybody happy, but you're dealing
45 with fishermen, shrimpers, and it's never going to happen.

46
47 **CHAIRMAN SCHIEBLE:** Dr. Walter and then Mr. Strelcheck.
48

1 **DR. WALTER:** Thank you, Mr. Chair. Well, I take a little
2 offense that I was called a liar here, and I think my -- Perhaps
3 it wasn't clear, and I never intended to say that any of these
4 are permanent, but, like your cellphone, if something goes wrong
5 with it today, while it's still working, there's a manufacturer
6 who at least has some honor of warranty and support, whereas,
7 once we've bought these, they're done for, and that's it, and
8 there's no way to go back to them and say, hey, it's not working
9 again, and we need it to do something else, and you've got to
10 buy a whole new batch of them, and so they're out of --

11
12 They're not building these for this market anymore, and the
13 people who are building VMS are looking at that as a market for
14 the long-term, and seeing that they're going to want to support
15 this with new technology when this thing breaks. You can go
16 back and get something else, and that's why having that market
17 support for it is part of the type-approval, where you actually
18 have to be able to support the product, and that's one of the
19 benefits of being in that market and why moving to something
20 that is supported, at least in the medium-term, even if that
21 piece of hardware isn't going to be -- Then at least there's
22 some manufacturer out there to support it, whereas, with these,
23 we don't have that. Thank you.

24
25 **CHAIRMAN SCHIEBLE:** Andy.

26
27 **MR. STRELCHECK:** I wanted to bring us back to the budget
28 language on the screen, and I feel like the agency is kind of in
29 a pickle right now, because we did have a general proposal, and,
30 yes, it wasn't detailed to the AP, but we saw the AP's motions
31 about VMS, and opposition to VMS, and the idea of putting a lot
32 of money toward 200 VMS units, or some large study fleet, to me,
33 doesn't seem very palatable, given the shrimp industry's
34 opposition right now to VMS and the previous motion that we just
35 passed.

36
37 Then that leaves, you know, us consulting with the council, and
38 the council is frustrated with the agency, in terms of not
39 bringing forward a plan, but we're kind of dead in the water
40 trying to figure out, well, what that plan should look like. We
41 want to move forward, obviously, with improving the ELB program,
42 and the industry has come forward and said, well, you know,
43 collect the chips, boots on the ground, right, and so there's
44 money that could be put toward that.

45
46 There's testing that could be done, and money could be put
47 toward that. Whether it totals \$850,000, minus the management
48 and administrative expenses, I doubt it will, right, and I think

1 there's -- So we're really looking for some feedback here, from
2 you guys, as to how to best spend this money, and what are the
3 options available to us, and is a VMS study fleet something
4 reasonable? Would you want to pare it back from 200 to
5 something else? Would you want us to do some work with, you
6 know, these units?

7
8 I mean, I think everything is on the table right now, and I'm
9 not saying that we can make a full commitment to all of that,
10 but we are also looking for some direction, just given,
11 obviously, the AP meeting and what occurred during that
12 discussion.

13
14 **CHAIRMAN SCHIEBLE:** Okay, and so one last comment here by Ms.
15 Boggs, and then I have a little housekeeping, and we'll move on.

16
17 **MS. BOGGS:** So, I apologize, Dr. Walter, and I should have said
18 it's a misnomer to think that you will always have this
19 technology available, and so I'm sorry that I called you a liar,
20 and I didn't mean to directly, but just the spirit of the
21 conversation.

22
23 Based on Mr. Donaldson's comments about they're multiple years
24 into this two-year program, is some of the funding that could be
25 used here, or is some of this funding -- Could it be used to
26 hire a staff member in the Science Center, with the server, that
27 can do what Mr. Donaldson's office is doing, to alleviate that
28 from the Gulf States Marine Fisheries Commission, and would that
29 be a constructive way to spend the money, as we work toward an
30 ultimate solution to where we're going with this?

31
32 **CHAIRMAN SCHIEBLE:** Dr. Walter, and I don't know if you have to
33 answer that now or you could hold your piece.

34
35 **DR. WALTER:** I am so happy to get that I wasn't called a liar
36 that I will chime in. That was bothering me. I won't speak for
37 Dave's shop, but I think one of the questions that has been
38 brought up, and I will try to clarify, is what Dave's shop is
39 doing is taking a chip and running it through a virus check and
40 then mailing it to us, and this is not high science, and this is
41 really like very basic hands-on stuff.

42
43 The challenge is whether there is a separate server set up to
44 actually collect the data, which has been one of the
45 conversations, about trying to bypass the usual NOAA system,
46 which happens, right now, to go through OLE, and stand up a
47 separate server, either at Gulf States or somewhere else, and
48 then the question -- I think that's what your question is, more

1 than really like handling the chips.

2
3 Could this money be used to set up a separate server? Possibly,
4 the issue being that, if a system already exists that taxpayers
5 have funded, we would be standing up something separate to do
6 something that's duplicative, and already available, and would
7 that be a good use of taxpayer dollars, and I think that is a
8 question that the agency would have to answer, and be beholden
9 to, because we'll have to answer for how that money is spent.
10 Usually, I think that the sentiment is, if it's already in
11 existence, then don't replicate it for a one-off situation.
12 Thank you.

13
14 **CHAIRMAN SCHIEBLE:** Thank you, Dr. Walter, and so a little bit
15 of housekeeping here. Right now, we are supposed to be
16 finishing the Shrimp Committee and starting the beginning of
17 Reef Fish, but we're going to plow through to a hard stop at
18 five o'clock, right? Is that correct, Mr. Chair, that, at five
19 o'clock, we've got to be done with this? So let's try to move
20 on here, I think, in order to be able to get through some of
21 these. Dr. Simmons.

22
23 **EXECUTIVE DIRECTOR SIMMONS:** Thank you, Mr. Chair. Right now,
24 just so everyone knows, staff is planning to convene the Shrimp
25 AP again, probably a half-day webinar, with some different
26 options, I'm assuming, that the leadership will come up with for
27 them to discuss. Right now, we're looking at like May 16 or 18,
28 and we'll have a council rep at that meeting, and we'll
29 hopefully flesh some of this out, and that would be my
30 suggestion, and we can certainly take any ideas that are brought
31 up during this council meeting, and try to flesh those out a
32 little bit better, maybe some different options when we have
33 that meeting, and is that possible by May?

34
35 **DR. WALTER:** Yes, and I think we want to hear the options here,
36 because it's valuable to get those options, and those thoughts,
37 from the council, so that we can bring something forward that
38 isn't simply the agency opinion, and that we find a consensus
39 path forward. Thank you.

40
41 **CHAIRMAN SCHIEBLE:** Okay. Dr. Freeman, can you run us through
42 the next step in the action guide here, real quick, with
43 remaining Agenda Item VII?

44
45 **DR. FREEMAN:** Right, and so I did read through that action guide
46 for Dr. Walter's update, and for the framework, and so I will go
47 through the presentation for the framework action at this point.
48 I am getting direction that perhaps we should save that for

1 last, and revisit it.

2
3 **CHAIRMAN SCHIEBLE:** Okay. So you're going to go to Agenda Item
4 VIII, and is that right?

5
6 **UPDATE ON SHRIMP EFFORT ESTIMATION MODEL AND 2021 GULF SHRIMP**
7 **FISHERY EFFORT**
8

9 **DR. FREEMAN:** Yes, sir, and so, okay, and we'll jump ahead to
10 the Update on Shrimp Effort Estimation Model and 2021 Gulf
11 Shrimp Fishery Effort. The committee will be presented with
12 information regarding the discussions of the recently-held
13 shrimp effort estimation workshop. This will include proposed
14 modifications to the shrimp effort estimation model and a
15 discussion of the 2021 Gulf shrimp fishery effort calculations.

16
17 The SSC, and the Shrimp AP, received similar presentations in
18 March of 2023, and representatives from those groups will
19 provide feedback from their meetings. The committee should
20 consider the information presented, ask questions, and provide
21 recommendations for improvements or future considerations.

22
23 **MR. KYLE DETTLOFF:** Good afternoon, everyone. I am Kyle
24 Dettloff, a statistician at the Southeast Fisheries Science
25 Center, in the Fisheries Statistics Division, and I'm going to
26 go through the modified shrimp effort estimation algorithm.

27
28 As Matt mentioned, this method was presented a few times over
29 the past couple of months, first to a special workshop and to
30 the Shrimp AP in November of 2022 and February of 2023, as well
31 as the SSC in March of 2023.

32
33 The goals behind the development of this new method were, one,
34 to simplify the assumptions of the historical approach, to
35 increase the transparency of the code and modernize the code to
36 current standards, and make more complete use of the ELB effort
37 data. The workshop that we had back in February brought
38 together members of the Southeast Fisheries Science Center,
39 SERO, the fishery management council, Shrimp AP and SSC reps,
40 and we had a thorough review of the historical effort estimation
41 method, a thorough examination of the proposed new method that
42 I've outlined here, and a comparison of the results with
43 previous estimation methods.

44
45 There was a general agreement on the validity of the approach,
46 with some suggestions for further examination, and a similar
47 positive reception of the method at the SSC and Shrimp AP
48 meeting, and there were additional suggestions for further

1 investigation.

2
3 All right, and so a brief overview of the estimation process,
4 and the estimation begins with a QC step of the raw ELB data, to
5 eliminate any points or tracks that are obviously due to data
6 not at the ten-minute interval, or any other data issues that
7 may arise. Once the data are cleaned, a distribution of vessel
8 speeds is generated, and that is used to identify an optimal
9 cut-point to classify fishing activity. Next, based on --

10
11 **DR. WALTER:** Kyle, could I -- The sound is hard on our end, and
12 could you maybe speak a little further from the microphone?
13 It's really choppy on our end, and I'm sorry for interrupting,
14 but I just want to make sure that everyone hears this.

15
16 **MR. DETTLOFF:** I was getting some feedback myself as well.
17 After the initial step of classifying fishing versus towing
18 activity, the activity that -- Once that effort is defined, and
19 so that would be the effort that you saw in the previous
20 presentation of tow days, those tow days then could be scaled up
21 to a fleet level, because we only have a sample fleet with the
22 ELB devices onboard, and that is done according to landings
23 aggregated at the season and area level, with areas being
24 defined as various aggregations of the NMFS 1 through 21
25 Statistical Grid. Then landings are matched, by vessel ID, to
26 the vessel ID associated with a box.

27
28 After all the effort estimates are scaled-up to the fleet, those
29 total estimates can then be scaled back to any particular depth
30 zone or statistical area of interest, according to the original
31 observed ELB effort distribution.

32
33 These are the five major assumptions that go into the method,
34 and these are really just a subset of the assumptions that have
35 existed all along, with both the historical LGL and the current
36 method, and it's simplified down to these five.

37
38 First and foremost, we're assuming the ELB devices are capturing
39 all fishing activity. We're assuming there is no systematic
40 bias in the classification of effort from ELB devices by the
41 algorithm or any non-effort that's maybe classified as effort or
42 effort that may be classified as non-effort is happening in
43 roughly equal proportions.

44
45 We're assuming the catch per unit of vessels with ELBs onboard
46 is representative of the CPUE for the total fleet, and we're
47 assuming the spatial distribution of ELB vessels is
48 representative of the total fleet within those time and space

1 strata that I mentioned, and the Assumptions 3 and 4 rely on the
2 fact that we have what was originally a random sample of vessels
3 selected to have ELBs onboard. Then Assumption 5, for the
4 landings, we're assuming that the reported landings, both in the
5 completeness and in quality, is similar between ELB and non-ELB
6 vessels.

7
8 A brief summary of changes, and, first, for the effort
9 classification step, the distances are now calculated using a
10 method that takes the curvature of the Earth into account, and
11 there were not large changes from the original Euclidian
12 distance method, but it's just a way to be more thorough with
13 the current tools available.

14
15 Additionally, we're now using a bathymetric grid to filter out
16 data that may be occurring at depths that are known to be too
17 deep for shrimping activity, and so anything beyond the maximum
18 biological range of royal red shrimp, 2,500 feet, is now
19 filtered out. We're now using a more up-to-date, higher-
20 resolution shapefile, with the fathom zone delineations, and we
21 get a higher resolution than the original, and, also,
22 encompassing the entire Gulf EEZ, and we're using the Gaussian
23 mixture model to calculate a speed threshold, rather than using
24 fixed numbers, in the case that fishing activity can potentially
25 change through time.

26
27 The scaling is where most of the difference arise between the
28 two, and -- value, as opposed to -- Matching what was classified
29 as a trip, according to effort, to the trip ticket landings
30 reported to the dealer, and that step is now done at an
31 aggregate level of those broad time/area strata, rather than
32 attempting to match individual trips, and so what that ensures
33 is that 100 percent of effort recorded by the ELB devices is
34 used in the calculation, rather than only using effort from
35 those trips that end up getting matched, for whatever reason,
36 and not having to drop effort associated with trips that aren't
37 matched to a trip ticket.

38
39 In terms of code, all the code has been substantially simplified
40 and modernized, and all the processing and report generation is
41 now done within a single R script, rather than a collection of
42 various scripts and different languages that would historically
43 have to be run in sequence, and it's done just with a single
44 input parameter, entered in years, and it will run the algorithm
45 and produce the result, for any given year.

46
47 This is a comparison of the results for the two methods for 2014
48 through 2021. The LGL method is in red, and the updated

1 Southeast Fisheries Science Center method is in the dashed-green
2 line, and you can see that both approaches come out within the
3 range of either other, within substantial overlap, and
4 indicating no systematic bias in one direction or another, and
5 these estimates here are for the western Gulf and through thirty
6 fathoms of defined, defined as the red snapper area.

7
8 This is just a tabular plot of the 2020 offshore estimates,
9 according to the new algorithm. Gulf-wide effort was estimated
10 to be 59,475 twenty-four-hour tow days, 18,861 of those were
11 coming from within the red snapper restricted area, defined as
12 Zones 10 through 21, in the ten through thirty-fathom zone,
13 representing a 77.2 percent reduction from the 2001 through 2003
14 baseline.

15
16 Then this is the slide for the 2021 -- Similar to 2020, with
17 46,658 twenty-four-hour effort days, and 15,945 within the red
18 snapper restricted area, representing an 80.7 percent decrease
19 from the baseline, and then we see how that effort breaks down
20 throughout the 10 through 21 statistical zones.

21
22 For historical landings through time, and this is a figure
23 that's been presented to the council in the past, and really
24 with just data with the most two recent years of data appended
25 on, for 2020 and 2021. As I stated, the time series of landings
26 are not affected by anything from the effort algorithm, and
27 they're just pulled from the trip ticket data, updated for 2020
28 and 2021 Gulf offshore.

29
30 We would like to thank the Gulf of Mexico shrimp fishing
31 industry, the Gulf of Mexico commercial shrimp fishermen, the
32 fishery management council, SSC, and Shrimp AP, and an internal
33 bycatch and effort working group that we had at the center, that
34 I've been part of for the past couple of years, to aid in
35 development of the effort estimates. I will take questions,
36 with that. Thank you.

37
38 **CHAIRMAN SCHIEBLE:** Okay. Thank you, Mr. Dettloff, for that
39 presentation. It was very well done and concise. I'm keeping
40 us hopefully on schedule here, as best as possible, and do we
41 have some questions? Dr. Freeman.

42
43 **DR. FREEMAN:** I was just going to remind the committee that,
44 following this, we will have the SSC Chair and Shrimp AP Chair
45 also provide their feedback.

46
47 **CHAIRMAN SCHIEBLE:** Mr. Anson.

48

1 **MR. ANSON:** I was just wondering if you could go back and kind
2 of describe the scalar method. I think you said you used the
3 trip ticket data, in combination with the ELB.

4
5 **MR. DETTLOFF:** Right, and so I think there's a couple of slides
6 in the appendix that detail that. All right, and so the
7 equation for the scaling is there at the bottom, and the
8 definitions of the various strata are according to those
9 aggregations of what originally started as one through four
10 areas is now one through five areas, after a comment received at
11 the SSC meeting, and so the current breakdown is those one
12 through five area zones, according to areas that are most likely
13 to encompass the full length of a trip, and so there was this
14 hierarchical clustering done to quantify trip extent.

15
16 If you were to divide it up into any five areas, those are the
17 five that come out that end up containing the most -- Data from
18 the most complete trips, since these trips are long, and they
19 span multiple zones, and then the times of year, quadrimesters,
20 broken down into January through April, May through August, and
21 September through December, and so the scalars are calculated at
22 the combination of those five-times-three, fifteen, or what was
23 previously four-times-three, twelve, total combinations.

24
25 Within each of those combinations, you have a box effort that
26 you want to convert up to a total effort, and so you will take
27 the box effort in each of those cells, multiply it by the total
28 landings in each of those cells, over the ELB landings in each
29 of those cells, and so you're really just scaling the ELB effort
30 to the total fleet, based on the aggregated landings within each
31 of those fifteen combinations.

32
33 **CHAIRMAN SCHIEBLE:** Do we have any further questions for Mr.
34 Dettloff? Dr. Walter.

35
36 **DR. WALTER:** Thanks, and I just wanted to impress upon the
37 council what a substantial amount of effort this was. This was
38 a long-standing problem that we had, where the code needed to be
39 modernized from the original code, and to get this done, and
40 also do it in a collaborative manner, with the industry and AP
41 representatives, as was requested by the AP motion, under a very
42 tight timeframe, was actually a pretty substantial
43 accomplishment, and it gets us exactly where we need to be to be
44 able to provide these annual estimates, and so I just wanted to
45 point out that that was not an inconsequential thing for us to
46 do, and it's a good step forward. Thanks.

47
48 **CHAIRMAN SCHIEBLE:** Okay. Thank you. Seeing no further

1 questions, it might be helpful if we go through the SSC summary
2 report by Dr. Nance, because they've got some motions in there
3 regarding this as well, and this is Tab B, the Reef Fish tab,
4 Number 8(a).

5
6 **DR. JIM NANCE:** I will echo Dr. Walter, in the fact that we had
7 the opportunity to look at this, and I've looked at it several
8 times over the past year, myself and then the SSC, and then in
9 other meetings, and I think it's an excellent new method. Being
10 one of the inventors of the old method, this is a good update,
11 and I appreciate the time and effort that went into this.

12
13 I am going to skip this next slide, because, really, it's just a
14 summary of what was presented, and so I'm going to skip the next
15 slide, and I'm just going to go right to the motions with our
16 time.

17
18 During our discussion, and we had a lengthy discussion after the
19 presentation, the SSC noted that, despite some concerns with
20 data collection, and we talked about those at our meeting, with
21 the shrimp effort and those types of things, the shrimp
22 landings, we had no issues with the new effort estimation model,
23 and so I wanted to emphasize that. We feel very comfortable
24 with this new method of estimation of shrimp effort.

25
26 We wanted though, while there were some -- As you saw, there
27 were some assumptions made, the five assumptions, and there was
28 a motion to test, to the extent practicable, given certainly
29 currently-available data, the five assumptions underlying the
30 analysis used to estimate fishing effort in the offshore waters
31 of the Gulf of Mexico shrimp industry and that those results be
32 brought back to the SSC.

33
34 Those five assumptions, as you saw, were the electronic logbook
35 are capturing all fishing activities, there was no systematic
36 bias in classification of effort for the ELB devices, CPUE from
37 vessels with ELBs onboard is representative of the total fleet,
38 spatial distribution of electronic logbook vessels are
39 representative of the total fleet, and reporting of landings is
40 similar between vessels that have ELB and those that don't.
41 That motion carried without opposition.

42
43 We had two additional motions in our discussion, and these are -
44 - We came up with the SSC supports National Marine Fisheries
45 Service's continued examination of new technology and its
46 potential acceptance in the industry for passive spatial
47 monitoring of the offshore Gulf of Mexico shrimp industry to aid
48 in meeting the assumptions of the current method of calculating

1 effort. That motion carried twenty-one to one, and we had three
2 abstentions and two absent for that vote.

3
4 The last motion in the shrimp meeting is the SSC supports
5 consideration of universal adoption, among other levels of
6 coverage, of a passive electronic monitoring system for
7 federally-permitted vessels in the Gulf of Mexico shrimp
8 industry. That motion carried nineteen to two with one
9 abstention and two absent during that vote. With that, Mr.
10 Chair, that's our summary of our meeting with regard to shrimp.

11
12 **CHAIRMAN SCHIEBLE:** Thank you, Dr. Nance. Do we have any
13 questions for Dr. Nance regarding the SSC motions? Thank you,
14 sir. I appreciate it.

15
16 **DR. NANCE:** Thank you.

17
18 **CHAIRMAN SCHIEBLE:** With that, we're going to move on to the
19 summary of the November 2022 and March 2023 Shrimp AP Meeting,
20 Tab B, Number 4(a), with the Shrimp AP representative, Ms.
21 Bosarge, the chair of the Shrimp AP.

22
23 **REMAINING ITEMS FROM THE SUMMARY OF THE NOVEMBER 15, 2022 AND**
24 **MARCH 15-16, 2023 SHRIMP ADVISORY PANEL MEETINGS**

25
26 **MS. LEANN BOSARGE:** Thank you. It's good to see everybody
27 again, and so I guess I'll start with the shrimp effort
28 algorithm. The Shrimp AP, as well as the working group, we also
29 are very encouraged, once we looked at the new algorithm and
30 went through it.

31
32 We did have a couple of questions that we wanted to see looked
33 into further, some sensitivity analyses run around a couple of
34 items, to actually see some of the landings indices that are
35 being generated from that effort algorithm, just like you do
36 with the stock assessment, and you want to look at the landings
37 going into it, and so we would like to just kind of go through
38 that, but I think it's definitely on its way to us blessing that
39 algorithm.

40
41 The one question we did have, that the council might want to
42 think about, regarding the effort algorithm, was, in the past,
43 we've always had effort for pink, white, and brown individually,
44 right, the three colors of shrimp, and this effort algorithm
45 currently gives us just shrimp effort as a total, for all three
46 combined, and, as we're moving forward with this research track
47 for the shrimp stock assessment, we did have concerns that we
48 may be limited in the types of models that we could explore if

1 we only had total shrimp effort and not effort parsed out by
2 white, pink, and brown.

3
4 We asked Dr. Dettloff, and he said he thought that was something
5 that he could look into and move forward on, but he would have
6 to get that direction from somewhere, and the AP felt like we
7 would want to start moving on that now and not wait until
8 September, when you might actually need it and be under the gun
9 to get it, and so we hoped that there would be some forward-
10 thinking there, but thanks to Dr. Dettloff, and he did a great
11 job. He really did.

12
13 You have covered the shrimp framework action somewhat, and I
14 think the only thing that I may point out, that you haven't
15 talked about yet, was a motion on the industry's path forward,
16 and so we understand that NMFS has some concerns with the return
17 rate on the chips, and we had asked if maybe port agents and/or
18 SEFHIER agents, that some of their duties I guess are remiss at
19 this point, could be utilized to help collect and beef-up that
20 return rate a little bit, since the only outreach that's been
21 done thus far is mailing letters, and nobody has -- We haven't
22 had any boots on the ground for this change in our data
23 collection.

24
25 We were hoping we could get that, and it didn't sound like we
26 were going to get that, based on the responses in the Shrimp AP,
27 and so the industry is actually going to pay someone to help us
28 get the rest of the chips back, to make sure that we're
29 compliant and that our return rates stay high, although I will
30 say we're not really excited about that. We were really hoping
31 that there were some assets, somewhere within the government,
32 that could be repurposed and utilized for that, but we will do
33 it, and so don't worry.

34
35 Of the congressional funding that you talked about earlier, we
36 were given a verbal, a very brief verbal, report, and we
37 appreciated that. We weren't very excited about the idea of
38 buying VMS units that haven't been proven to work yet and
39 putting them on the boats, especially considering there's a
40 fund, within the government already, that pays for VMS units to
41 go on commercial fishing vessels. We didn't like the idea of
42 using separate congressional funding to essentially backfill
43 that, that we would get anyway, if we went to a VMS program.

44
45 One option that was thrown out was this idea, that I think
46 somebody around the table mentioned, of purchasing a dedicated
47 shrimp server, owned and housed by the Science Center, and that,
48 to us, was not this idea of moving backwards, rather than moving

1 forward. Even if you went, which the industry does not support
2 a VMS. However, if NMFS went with a VMS, we would certainly
3 like to see it go to the Science Center, to our own dedicated
4 server, and not through OLE, and so, regardless of the path
5 forward, even if we use the old devices and try and make them
6 transmit again, we still need a server to send it to.

7
8 You have a server in the North Carolina office somewhere, but I
9 don't know if you can turn it back on, and we would like to see
10 you use some of that money to buy a server and set up scanning
11 protocols that Gulf States is currently using to scan our data,
12 so that, regardless of what system you put in place, the people
13 that we love at the Science Center can receive the data
14 directly, and so we hope that you will consider that and convene
15 the AP and let us talk to you about it some more.

16
17 The other item that -- We had a two-day meeting, and we touched
18 on all sorts of stuff, but I think the other one that I would
19 like to highlight for you was the -- It was actually the
20 National Seafood Strategy that Dr. Rubino presented to the
21 shrimp industry at our AP meeting, and we got a lot of traction
22 on that from the AP, a lot of good feedback, and requested that
23 we continue to be part of that dialogue, as the agency moves
24 forward and actually works to try and implement something from
25 that. We would like to have a seat at the table, or at least a
26 voice in the process.

27
28 Just to take a step back, that National Seafood Strategy -- So
29 things have gotten so bad in our industry, at this point, and
30 you know how you all have said, with commercial fishermen, it's
31 like herding cats, and so, if you see any commercial fishery,
32 and take mine, the shrimp industry, come together as one unit to
33 write a letter to the government, that's how you know that
34 things have gotten just about so bad that we don't know if we
35 can go any further, because we don't want a handout, and we just
36 want to work.

37
38 You will be receiving a letter, Dr. Rubino will, as our public
39 comment for the National Seafood Strategy, that essentially says
40 we don't know how much longer we can survive. You know, it used
41 to be a question of can we get a decent price for our shrimp,
42 because all the imports drive our price down. Last year, it
43 started to get scarier, and it was a question of will the dock
44 unload us, and can we sell them at all, and the processors have
45 told us that, if you think it was bad last year, wait until this
46 year, and we don't know if we can buy your shrimp at all.

47
48 That's where our industry is at, and so I look forward to

1 talking to you more on that National Seafood Strategy. Keep
2 that in mind as you talk about adding financial burdens to our
3 plight that may be nice, but we need to meet our needs. Right
4 now, wants aren't even in our vocabulary in the industry, and
5 we're just trying to survive, and so that's all I have. Thank
6 you for allowing me to get up and speak today.

7
8 I certainly have tons more to say on that shrimp framework
9 action, but I'm not going to take up all your time with that,
10 unless you ask me to, but I certainly will come back, if you
11 want to go through Matt's presentation.

12
13 **CHAIRMAN SCHIEBLE:** Well, I think we are, and so don't run away
14 too far. We may have a question for you. Dr. Freeman, are we -
15 - We're back to Agenda Item VII, right, the draft framework
16 action?

17
18 **DRAFT SHRIMP FRAMEWORK ACTION PRESENTATION: MODIFICATION OF THE**
19 **VESSEL POSITION DATA COLLECTION PROGRAM FOR THE GULF OF MEXICO**
20 **SHRIMP FISHERY**
21

22 **DR. FREEMAN:** Yes, sir. If I can get admin to open that
23 presentation, I will do my darndest to get us through in fifteen
24 minutes. Bernie, before I dive into that, and I apologize, but
25 can I also get you to open the Shrimp AP summary? There is one
26 additional motion that I think, again, ties in that I would like
27 to just visit, quickly, and it's the first motion on page 3.

28
29 Again, before I dive into the document, I did want to note that
30 there was a motion as well from the AP, requesting that NMFS re-
31 task the current port agents to make shrimp a part of their
32 annual directive and to also investigate the possibility of
33 repurposing current SEFHIER personnel to provide an in-person
34 dockside focus on the Gulf shrimp industry, including, but not
35 limited to, the retrieval of SD cards. I did want to highlight
36 that, given that there has been discussion about the return
37 rates of those SD cards. Thank you, Bernie, and we can switch
38 back over to the PowerPoint.

39
40 You all have seen the purpose and need statements before, and I
41 do want to note that the AP had motions related to both the
42 purpose statement as well as to the need statement, and, Bernie,
43 if you can go ahead and go to the next slide, actually, and so,
44 on the next slide, you will see the motion on modifying the
45 purpose statement.

46
47 Their revision here was that the purpose of this framework
48 action is to evaluate options for a system that would maintain

1 the council's and NMFS' scientific ability to estimate and
2 monitor fishing effort in the Gulf shrimp fishery, while
3 minimizing the economic burden on the industry, to the maximum
4 extent practicable. For all of these motions, the IPT has not
5 had a chance to weigh-in, but I just wanted to present them to
6 the council.

7
8 Like I mentioned, the Shrimp AP also had a motion, that the IPT
9 will need to revisit in the future, to modify the need statement
10 to base conservation and management measures on the best
11 scientific information available, as required by the Magnuson-
12 Stevens Fishery Conservation and Management Act. That was
13 simply just the previous language referred to ESA, and so they
14 were interested in potentially removing that language from the
15 need statement.

16
17 I was going to just mention, very briefly, at the June 2022 Full
18 Council, there was some discussion about modifying Objective 3,
19 changing the language, the last part of that, to say, instead of
20 "when feasible", and change that to "to the extent practicable".
21 However, noting that any change to FMP objectives would have to
22 occur in an amendment, and this is currently a draft framework
23 action, and so I can hold onto that idea for the future, and you
24 all can revisit that, if you all would like.

25
26 **CHAIRMAN SCHIEBLE:** Dr. Freeman, we have a question.

27
28 **DR. FREEMAN:** Yes, sir.

29
30 **MS. BOGGS:** Back to the purpose, and if this council chooses to
31 adopt the new purpose, which is to evaluate -- I mean, I
32 thought, when you did something like this framework action, that
33 you're making a change. I mean, to evaluate is to take a look
34 at these things, and, to me, that's not making a formal
35 decision, moving forward, and is this appropriate language?

36
37 **DR. FREEMAN:** Yes, ma'am, and so that's a great question. I
38 share that concern as well. However, it was an AP motion, and I
39 didn't want to insert myself directly into that, and so, as I
40 mentioned, it would be something that we could vet through the
41 IPT process and see if that would be appropriate language or
42 not.

43
44 **CHAIRMAN SCHIEBLE:** Mr. Gill.

45
46 **MR. GILL:** Thank you, Mr. Chairman, and so I had the same
47 concern, and I drafted a suggested change, but, given our time
48 limit, I will introduce that at council.

1
2 **DR. FREEMAN:** All right. Bernie, if you can move forward, and
3 let's see. Go ahead to the next -- Sorry. I know we're pressed
4 for time. Bernie, go ahead two more slides, and so you all have
5 seen the Alternatives 1, 2, and 3 previously, and so, again, I
6 just wanted to emphasize, just as a reminder, that Alternative 2
7 is focused on cellular VMS, as it's currently written, and so it
8 would not include the possibility of satellite VMS, at this
9 point.

10
11 Bernie, go ahead to the next slide, and all of these next few
12 slides you all saw at the June meeting of last year, and this
13 shows similarities between Alternatives 2 and 3, in terms of the
14 data collection. Then the next slide, Bernie, and then,
15 actually, these next few slides -- I incorporated a suggestion
16 from Ms. Boggs, to try to make it a little more visually
17 appealing, the side-by-side of some of these categories, and so,
18 in terms of reimbursement, the way it's written, there would be
19 no reimbursement for Alternative 3. Alternative 2, assuming
20 that there is still funding available, it would likely fall
21 under that VMS reimbursement program.

22
23 In the next slide, there is a side-by-side on data storage, and
24 the next slide has, lastly, type-approval, and the last one is
25 the at-sea trials for the review process. For this one, I
26 highlighted the differences between Alternatives 2 and 3, the
27 way they're currently worded, in either the current type-
28 approval for Alternative 2 or the Alternative 3 drafted type-
29 approval, which is in one of the appendices in the document.

30
31 In the next slide, I will note to you that Alternatives 2 and 3
32 both refer to archiving vessel position when on a fishing trip,
33 and the AP had some discussion about that, and, again, this has
34 not come back to the IPT, but I did want to bring it to the
35 committee, and so, Bernie, the next slide, and their suggestion
36 was to change the language from "when on a trip" to "when
37 actively shrimping", and their concern was, particularly, if a
38 cellular VMS requirement is put in place, they would have to
39 have that onboard and active, even if they were moving a vessel
40 for routine maintenance.

41
42 All right, and so here's some of the meat-and-potatoes, and we
43 have three motions from the Shrimp AP. The first was to inform
44 the council that the Shrimp AP opposes the implementation of a
45 VMS requirement at this time.

46
47 The next was that the consensus of the Shrimp AP is to place
48 boots on the ground to retrieve the SD cards from the existing

1 cELBs and to ensure that the existing cELBs are functioning
2 properly, and, as a path forward for the collection of vessel
3 position data for the purpose of shrimp effort estimation, to
4 work towards retrofitting existing cELBs to transmit cellularly.
5

6 This is the last motion, which was, if the Shrimp AP is unable
7 to review the framework action again, prior to the council
8 selecting the preferred alternative, then the Shrimp AP
9 recommends, based on current available information, to the
10 council that it selects, as its preferred alternative in Action
11 1, Alternative 1. I have left five minutes for questions.
12

13 **CHAIRMAN SCHIEBLE:** Okay. Ms. Boggs is the first one.
14

15 **MS. BOGGS:** Matt, explain to me Alternative 3, and is this -- I
16 am just asking, because I don't know where this document is
17 going to go, and so Alternative 2 is specific to a VMS. Would
18 Alternative 3 eliminate -- I mean, you've got VMS and then
19 cELBs, and those are distinctly two separate types of products,
20 and so those would be two -- I am just making sure I'm right in
21 what I'm thinking, that Alternative 3 would just be any kind of
22 cELB, and not necessarily the current one they're using, but
23 something new, type-approved.
24

25 **DR. FREEMAN:** Yes, ma'am, and so one of the considerations, when
26 the language for Alternative 3 was drafted, was, you know, like
27 the LGL project that was presented on, and it was that, if
28 something like P-Sea WindPlot could be modified to transmit that
29 data, via cellular transmission, that would be something that
30 isn't a cellular VMS, but it would still be appropriate, and it
31 would fall under the Alternative 3 category.
32

33 It is certainly something as well that would need to be
34 considered if there is, for instance, some way to retrofit the
35 existing devices, or if new devices from that manufacturer were
36 available. Things like that perhaps may fall under Alternative
37 3, but we would have to discuss that further.
38

39 **MS. BOGGS:** So that alternative would be specific to that box
40 that John Walter has over there?
41

42 **DR. FREEMAN:** If it were retrofitted or if it was similar ones.
43 Yes, ma'am, and so the box he has right now is what's currently
44 under Alternative 1, where it's still collecting the data, and
45 those SD cards are removed and mailed back.
46

47 **CHAIRMAN SCHIEBLE:** Mr. Anson.
48

1 **MR. ANSON:** Dr. Freeman, you had on the slide there summarizing
2 the differences, or similarities, between Alternatives 2 and 3
3 for Action 1, and it says here that a vessel position will be
4 recorded every ten minutes, and a minimum number of position
5 fixes will be 14,400, and so, according to my calculation,
6 that's a hundred-day trip, if you were going to collect every
7 ten minutes, and you were going to have to have a minimum of
8 14,000 positions. I mean, that's -- Am I reading that
9 correctly?

10
11 **DR. FREEMAN:** I didn't have time to do that math, after I
12 answered Ms. Boggs' question, but I will trust you on that. I
13 believe that, again, some of that simply had to do with making
14 sure that there was enough storage on the devices, so that, when
15 they transmit, everything would be maintained, and nothing would
16 be lost, or perhaps not be recorded.

17
18 **MR. ANSON:** Thank you.

19
20 **CHAIRMAN SCHIEBLE:** Okay. Two-minute warning. Mr. Strelcheck.

21
22 **MR. STRELCHECK:** So I have three minutes? I tried. To Ms.
23 Boggs' question, for those that have been around the council
24 table a few years, and when Ms. Bosarge was on the council, we
25 had some lively discussions, to say the least, but, to me, the
26 distinction between Alternative 2 and Alternative 3, whether
27 it's this unit or you call it a VMS, they're both cellular-
28 based, producing GPS data, and so they would fall under the
29 cellular VMS type-approval requirements under Alternative 2.

30
31 Under Alternative 3, I've always viewed it as you would be
32 outside of that type-approval process, but it would be a
33 cellular VMS unit, but just not defined as such, in terms of not
34 meeting the type-approval standards. Then the other issue,
35 which we noted in our presentation, was the issue of sending it
36 to OLE versus, you know, the Science Center.

37
38 The challenge, I think, with the agency, is, you know, use of
39 taxpayer dollars, and creating a duplicative system, and so
40 that's, I think, been the struggle, in terms of differentiating
41 between Alternatives 2 and 3, because Alternative 3 essentially
42 sets up a parallel system to essentially accomplish the same
43 thing, when we already have type-approval in place, and we have
44 a catcher's mitt that can easily transmit that data to the
45 agency.

46
47 **CHAIRMAN SCHIEBLE:** Okay. It's five o'clock. That concludes
48 the longest Shrimp Committee ever, and I will turn it back over

1 to the Chair, please.

2

3 (Whereupon, the meeting adjourned on April 3, 2023.)

4

5

- - -