

Atlantic States Marine Fisheries Commission

South Atlantic State/Federal Fisheries Management Board

*August 6, 2019
10:15 a.m. – Noon
Arlington, Virginia*

Draft Agenda

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

1. Welcome/Call to Order (*P. Geer*) 10:15 a.m.
2. Board Consent 10:15 a.m.
 - Approval of Agenda
 - Approval of Proceedings from May 2019
3. Public Comment 10:20 a.m.
4. Amendment 1 to the Cobia Fishery Management Plan for Final Approval (*M. Schmidtke*) **Final Action** 10:30 a.m.
 - Review Options and Public Comment Summary
 - Review Committee Reports
 - Consider Final Approval of Amendment 1
5. Consider 2018 Traffic Light Analyses for Atlantic Croaker and Spot (*C. McDonough*) **Action** 11:20 a.m.
6. Consider Approval of 2019 Fishery Management Plan Reviews and Compliance for Atlantic Cobia and Atlantic Croaker (*M. Schmidtke*) **Action** 11:35 a.m.
7. Other Business/Adjourn 12:00 p.m.

The meeting will be held at the Westin Crystal City, 1800 S Eads Street, Arlington, VA 22202; 703.486.1111

MEETING OVERVIEW

South Atlantic State/Federal Fisheries Management Board Meeting
Tuesday, August 6, 2019
10:15 a.m. – 12:00 p.m.
Arlington, Virginia

Chair: Pat Geer (VA) Assumed Chairmanship: 02/18	Technical Committee (TC) Chairs: Black Drum: Harry Rickabaugh (MD) Cobia: Vacant Atlantic Croaker: Chris McDonough (SC) Red Drum: Vacant	Law Enforcement Committee Representative: Capt. Bob Lynn (GA)
Vice Chair: Robert H. Boyles, Jr.	Advisory Panel Chair: Tom Powers (VA)	Previous Board Meeting: February 6, 2019
Voting Members: NJ, DE, MD, PRFC, VA, NC, SC, GA, FL, NMFS, USFWS, SAFMC (12 votes)		

2. Board Consent

- Approval of Agenda
- Approval of Proceedings from May 2, 2019

3. Public Comment – At the beginning of the meeting public comment will be taken on items not on the agenda. Individuals that wish to speak at this time must sign-in at the beginning of the meeting. For agenda items that have already gone out for public hearing and/or have had a public comment period that has closed, the Board Chair may determine that additional public comment will not provide additional information. In this circumstance the Chair will not allow additional public comment on an issue. For agenda items that the public has not had a chance to provide input, the Board Chair may allow limited opportunity for comment. The Board Chair has the discretion to limit the number of speakers and/or the length of each comment.

4. Amendment 1 to the Cobia Fishery Management Plan (10:30 a.m. – 11:20 p.m.) Final Action

Background

- In May 2018, the Board initiated Draft Amendment 1 to the Cobia Fishery Management Plan (FMP) to reflect removal of Atlantic cobia from the South Atlantic and Gulf of Mexico Fishery Management Councils’ Coastal Migratory Pelagic Resources FMP and establish recommendations for measures in federal waters.
- In October 2018, the Board reviewed public comment on a Public Information Document (PID) and gave direction to the Cobia Plan Development Team (PDT) on options to be included in Draft Amendment 1.
- In May 2019, the Board approved Draft Amendment 1 for Public Comment. Four public hearings were held via webinar and in-person in Virginia, North Carolina, and South Carolina (**Briefing Materials**). Written comments were accepted through July 15, 2019 (**Briefing Materials**).

- The Advisory Panel (**Briefing Materials**) and Cobia Technical Committee (**Supplemental Materials**) met via webinar and have developed or will develop recommendations for Board consideration.

Presentations

- Public Comment Summary for Draft Amendment 1 to the Interstate Fishery Management Plan for Atlantic Migratory Group Cobia by M. Schmidtke.
- Advisory Panel and Cobia Technical Committee Report on Draft Amendment 1 by M. Schmidtke.

Board actions for consideration at this meeting

- Review public comment and consider final approval for Draft Amendment 1 to the Cobia FMP.

5. 2019 Traffic Light Analyses for Atlantic Croaker and Spot (11:20 a.m. – 11:35 a.m.) Action

Background

- Addendum II (2014) of the Atlantic Croaker Fishery Management Plan (FMP) and Addendum II (2014) of the Spot FMP establish the Traffic Light Analyses (TLA) as a new management framework for these species in non-assessment years (**Supplemental Materials**).

Presentations

- 2019 TLA Reports for Atlantic croaker and Spot by C. McDonough.

6. Consider Approval of 2019 Fishery Management Plan Reviews and Compliance for Atlantic Cobia and Atlantic Croaker (11:35 a.m. – 12:00 p.m.) Action

Background

- Atlantic cobia state compliance reports are due on July 1. The Atlantic Croaker Plan Review Team (PRT) has reviewed state reports and compiled the annual FMP Review. New Jersey, Delaware, and Maryland have requested *de minimis* status (**Supplemental Materials**).
- Atlantic croaker state compliance reports are due on July 1. The Atlantic Croaker Plan Review Team (PRT) has reviewed state reports and compiled the annual FMP Review. Delaware (commercial), South Carolina (commercial), Georgia (commercial), and Florida (commercial) have requested *de minimis* status (**Supplemental Materials**).

Presentations

- 2019 FMP Reviews for Atlantic cobia and Atlantic croaker by M. Schmidtke.

Board actions for consideration at this meeting

- Consider approval of the 2019 FMP Reviews, state compliance, and *de minimis* requests for Atlantic cobia and Atlantic croaker.

7. Other Business/Adjourn

South Atlantic Board

Activity level: High

Committee Overlap Score: Moderate (American Eel TC, Horseshoe Crab TC, Shad and River Herring TC, Sturgeon TC, Weakfish TC)

Committee Task List

- Cobia PDT – May – August 2019: Draft Amendment 1 process; current step: Board Review of Public Comment and Draft Amendment 1 for Final Approval
- Cobia TC – Involvement of certain members in SEDAR 58 assessment process
- Atlantic Croaker and Spot PDT: Draft Addendum III (croaker) and Draft Addendum II (spot) to incorporate updated Traffic Light Analyses; Board Review for Public Comment in Fall 2019
- Red Drum SAS – Develop assessment roadmap; awaiting guidance from ASC
- Atlantic Croaker TC - July 1: Compliance Reports Due
- Red Drum TC – July 1: Compliance Reports Due
- Cobia TC – July 1: Compliance Reports Due
- Atlantic Croaker PRT – August 1: Update Traffic Light Analysis
- Spot PRT – August 1: Update Traffic Light Analysis
- Black Drum TC – August 1: Compliance Reports Due
- Spotted Seatrout PRT – September 1: Compliance Reports Due
- Spanish Mackerel PRT – October 1: Compliance Reports Due
- Spot PRT – November 1: Compliance Reports Due

TC Members:

Atlantic Croaker: Chris McDonough (SC, Chair), Kristen Anstead (ASMFC), Michael Schmidtke (ASMFC), Shanna Madsen (NJ), Michael Greco (DE), Harry Rickabaugh (MD), Somers Smott (VA), Jason Rock (NC), Dan Zapf (NC), Dawn Franco (GA), Joseph Munyandorero (FL), Erik Williams (NMFS)

Black Drum: Harry Rickabaugh (MD, Chair), Jeff Kipp (ASMFC), Michael Schmidtke (ASMFC), Craig Tomlin (NJ), Jordan Zimmerman (DE), Ethan Simpson (VA), Chris Stewart (NC), Chris McDonough (SC), Ryan Harrell (GA), Liz Herdter Smith (FL)

Cobia: Michael Schmidtke (ASMFC), Shanna Madsen (NJ), Angela Giuliano (MD), Alex Aspinwall (VA), Anne Markwith (NC), Mike Denson (SC), Chris Kalinowsky (GA), Christina Wiegand (SAMFC), Michael Larkin (SERO)

Red Drum: Jeff Kipp (ASMFC), Michael Schmidtke (ASMFC), Shanna Madsen (NJ), Michael Greco (DE), Robert Bourdon (MD), Ethan Simpson (VA), Lee Paramore (NC), Joey Ballenger (SC), Chris Kalinowsky (GA), Behzad Mahmoudi (FL), Roger Pugliese (SAFMC)

Spanish Mackerel (PRT): Michael Schmidtke (ASMFC), Randy Gregory (NC), BJ Hilton (GA), Dustin Addis (FL), Christina Wiegand (SAFMC), John Hadley (SAFMC)

Spot (PRT): Michael Schmidtke (ASMFC), Harry Rickabaugh (MD), Adam Kenyon (VA), Dan Zapf (NC), Chris McDonough (SC), Dawn Franco (GA)

Spotted Seatrout (PRT): Michael Schmidtke (ASMFC), Douglas Lipton (MD), Tracey Bauer (NC), Joey Ballenger (SC), Chris Kalinowsky (GA)

SAS Members:

Red Drum: Jeff Kipp (ASMFC), Michael Schmidtke (ASMFC), Angela Giuliano (MD), Lee Paramore (NC), Joey Ballenger (SC), Liz Herdter Smith (FL)

PDT Members:

Atlantic Croaker and Spot: Michael Schmidtke (ASMFC), Harry Rickabaugh (MD), Dan Zapf (NC), Chris McDonough (SC)

Cobia: Michael Schmidtke (ASMFC), Alex Aspinwall (VA), Anne Markwith (NC), Mike Denson (SC), Andrew Scheld (VIMS), Christina Wiegand (SAFMC)

DRAFT PROCEEDINGS OF THE
ATLANTIC STATES MARINE FISHERIES COMMISSION
SOUTH ATLANTIC STATE/FEDERAL FISHERIES MANAGEMENT BOARD

The Westin Crystal City
Arlington, Virginia
May 2, 2019

TABLE OF CONTENTS

Call to Order, Chairman Pat Geer 1

Approval of Agenda..... 1

Approval of Proceedings from February 2019 1

Public Comment..... 1

Review and Consider Draft Amendment 1 to the Cobia Fishery Management Plan for Public Comment..... 1

Review State-Gathered Public Input for Potential Management Action, Atlantic Croaker and Spot 17

Adjournment 25

INDEX OF MOTIONS

1. **Approval of Agenda** by Consent (Page 1).
2. **Approval of Proceedings of February 2019** by Consent (Page 1).
3. **Move to approve Draft Amendment I to the Cobia Fishery Management Plan for public comment as modified today** (Page 16). Motion by Spud Woodward; second by Mel Bell. Motion carried (Page 16).
4. **Move to initiate addenda to the Spot and Croaker Fishery Management Plans to incorporate the revised TLA and redefine management response** (Page 23). Motion by Chris Batsavage; second by Lynn Fegley. Motion carried (Page 25).
5. **Motion to adjourn** by Consent (Page 25).

Draft Proceedings of the South Atlantic State/Federal Fisheries Management Board Meeting
May 2019

ATTENDANCE

BOARD MEMBERS

Jim Gilmore, NY (AA)	Pat Geer, VA, proxy for S. Bowman (AA), Chair
Emerson Hasbrouck, NY (GA)	Chris Batsavage, NC, proxy for S. Murphey (AA)
Adam Nowalsky, NJ, proxy for Sen. Andrzejczak (LA)	Robert Boyles, SC (AA)
John Clark, DE, proxy for David Saveikas (AA)	Mel Bell, SC, proxy for Sen. Cromer (LA)
Roy Miller, DE (GA)	Spud Woodward, GA (AA)
Craig Pugh, DE, proxy for Rep. Carson (LA)	Doug Haymans, GA (GA)
Russell Dize, MD (GA)	Erika Burgess, FL, proxy for J. McCawley (AA)
Lynn Fegley, MD, proxy for D. Blazer (AA)	Marty Gary, PRFC
Phil Langley, MD, proxy for Del. Stein (LA)	

(AA = Administrative Appointee; GA = Governor Appointee; LA = Legislative Appointee)

Ex-Officio Members

Staff

Toni Kerns	Jessica Kuesel
Robert Beal	Jeff Kipp
Mike Schmidtke	

Guests

Dave Bard, ECS/NOAA	Mike Millard, USFWS
Arnold Leo, E. Hampton, NY	Derek Orner, NOAA
Catherine Krikstan, ECS/NOAA	Jack Travelstead, CCA

The South Atlantic State/Federal Fisheries Management Board of the Atlantic States Marine Fisheries Commission convened in the Jefferson Ballroom of the Westin Crystal City Hotel, Arlington, Virginia on Thursday, May 2, 2019, and was called to order at 10:00 o'clock a.m. by Chairman Pat Geer.

CALL TO ORDER

CHAIRMAN PAT GEER: Good morning everybody. My name is Pat Geer and I'm the Chairman of the South Atlantic State/Federal Fisheries Management Board. I welcome you all here this morning and I know we're between you and going home, so we will try to expedite this meeting as quickly as possible.

APPROVAL OF AGENDA

CHAIRMAN GEER: The first order of business is to approve the agenda. Are there any changes or modifications to the agenda? Hearing none the agenda is approved by consent.

APPROVAL OF PROCEEDINGS

CHAIRMAN GEER: The next item is approval of the proceedings from the February, 2019 meeting. Are there any issues with that at all, any changes? Hearing none, the proceedings from the February, 2019 meeting are approved by consent.

PUBLIC COMMENT

CHAIRMAN GEER: Is there any public comment from anybody? I haven't heard of any public comment. Is there anybody from the public who would like to speak about something that is not on the agenda today? Hearing none, well, Mike is going to go check real quick, to see if anybody signed up. Thumbs up, nobody, okay.

REVIEW AND CONSIDER DRAFT AMENDMENT 1 TO THE COBIA FISHERY MANAGEMENT PLAN FOR PUBLIC COMMENT

CHAIRMAN GEER: We're moving on. The first item of business is Review Amendment 1 of the Cobia Fishery Management Plan for Public

Comment. The PDT has been working on this for the last several months. We have a draft ready for you today and Mike is going to take the lead on that; so Mike, you have the floor.

DR. MIKE SCHMIDTKE: As Pat said the Plan Development Team has been working for the past few months on developing Draft Amendment 1 to the Cobia Fishery Management Plan. I will go through that now. First, before I get into the actual draft Amendment, just a reminder of the timeline that we're working on. We've gone through the whole PID process and we are currently at the highlighted step, where the Board is reviewing draft Amendment 1 for public comment. If everything goes through on the anticipated schedule, then final consideration for this amendment would occur at the August meeting of this year, preceded by a public comment period over the summer.

Here is a basic outline for today's presentation; and it generally follows that of the amendment. There are sections on compliance, research needs, and protected species information. Those are included in the Amendment; but won't be covered in today's presentation, since they don't include really any substantial changes or management decisions. But I do encourage the Board and the public to review these sections if they haven't already; during or after this meeting. If you see any necessary edits please let me know.

First, I'll go through the introductory section of the amendment. You'll notice throughout the presentation that I will be skipping over some sections; trying to stick to those that are most pertinent for evaluating the management options. There were some updates to the background information in the Amendment from the original FMP to reflect the most recent information for the fishery.

One example of this is included information from the SEDAR 58 Stock ID process. Again, I encourage review of these types of sections; to make sure everybody is working on current knowledge. First of all I'll start off with the

statement of the problem. On March 21, 2019, Regulatory Amendment 31 to the Coastal Migratory Pelagics FMP became effective; which means that Atlantic Cobia is now managed solely through the Commission's FMP.

The Commission's FMP was originally written to be complementary and dependent on the Coastal Migratory Pelagics FMP. For example, we use things like the ACL set through the Council, and the EEZ regulations that were previously recommended by the Council. That all came through the Coastal Migratory Pelagics FMP; and we kind of adopted that as part of our management process as well.

The Board also gave direction to the Plan Development Team in the process of switching this management plan to more of a sole management to establish a process for specifying aspects of harvest quickly, and through Board action, so harvest specification process is spelled out in this draft Amendment.

The most recent stock assessment was completed in 2013 and it indicated that the stock was not overfished, and overfishing was not occurring. A new assessment is currently underway through the SEDAR process. Prior to this assessment to SEDAR 58, a Stock ID process was conducted to evaluate the boundary between the Atlantic and Gulf stocks of cobia. This boundary remains at the Florida/Georgia line.

Results of the process do not dispute the boundary so it's continuing to be used for management and assessment purposes. However, the results were not clear on a specific boundary or the specifics of a transition area. Instead, they basically defined a region in northeastern Florida up into Georgia as an area of uncertainty; north and south of this area cobia show different genetic and movement characteristics.

The data workshop for the SEDAR 58 Assessment was completed a few weeks ago and assessment webinars will be held over the summer. The

anticipated completion date for the assessment is January of 2020. Presumably those results would be made available in time to set regulations for the 2020 fishing year. The commercial fishery for cobia has increased over the last 15 years; particularly due to increased landings in Virginia and North Carolina. A coastwide ACL was established in 2015 by the South Atlantic Council; and this was set at 50,000 pounds. Since the establishment of the ACL, it has been exceeded in every year leading to midseason closures of this fishery from 2016 through 2018. As has often been mentioned with cobia being that it is a recreational heavy fishery. MRIP recalibrated the landings estimates to the new mail-based fishing effort survey.

Currently management is operating on estimates from the former coastal household telephone survey and will continue to do so until the completion of SEDAR 58, after which landings, quotas, and targets will be based on the new FES estimates. Just to show a comparison of what we're managing on right now.

The telephone survey landings estimates, you see those here. With the ACL that was formerly in place through the coastal migratory pelagics FMP. That is shown there; and you can see the overages that occurred in 2015, '16, and '18. By comparison the landings estimates through the Fishing Effort Survey are shown here.

The overall picture, if you're comparing the numbers between the two; is that the FES landings are approximately double, in some cases a little bit more than double those of the telephone survey estimates. But one thing that I do want to be clear about here is that we are still managing on those telephone survey estimates; because all of the targets and the recreational harvest limit that we're operating on right now, were derived using the telephone survey landings.

Now I'll move into the goals and objectives section. First of all a brief summary of the brief management history, the Commission's FMP

was established in 2017; and first implemented last year. This adopted the coastwide commercial ACL from the coastal migratory pelagics FMP, and also set a recreational harvest limit, which was derived from the recreational ACL. The recreational harvest limit is the ACL less a 1 percent *de minimis* set-aside, and this is allocated as state harvest targets. Those targets are shown in the table.

Recreational landings are evaluated against these targets as three-year averages. The goal of the FMP is shown here on the screen with a recommended edit from the Plan Development Team; that includes language about equitable and sustainable access, while maintaining the original language concerning the timeliness of management.

If this Amendment is ultimately approved, this edit would be part of that decision making process. The Board would have to include it in a motion; along with any of the other options that are selected for approval. Similarly, the Plan Development Team recommends two additional objectives to those already in the management plan.

These would be subject to a similar process for approval as the edit to the goal. The additional objectives include implementation of management measures that allow stable, sustainable harvest to Atlantic cobia in state and federal waters; and establishment of a harvest specification procedure that will allow flexibility to respond quickly to a stock assessment results or problems in the fishery, while also providing opportunities for public input on more significant proposed management changes.

A third section that was considerably revised in the draft and it will also be subject to Board approval if you all approve the Amendment; would be the definition of overfishing. Previously we adopted the overfished or overfishing status as determined by reference points from the South Atlantic Council.

This section defines a Commission process for setting these reference points; based on peer-reviewed stock assessment information. The primary peer review processes that are mentioned here are SEDAR, which would be the primary over the ASMFC process; as the assessments are still being conducted through SEDAR going forward.

But if anything were to happen to that, then obviously the Commission would be able to use the independent external peer review process as well. Now I'll move into the monitoring program. There were a few changes that will need to be made to the monitoring programs concerning the shift over in management.

From the commercial side in 2019, NOAA Fisheries will continue to monitor the landings. However, beginning in 2020 non-*de minimis* states from the commercial side, which through the criteria that are being proposed later on in this draft Amendment that would include Virginia, North Carolina, and South Carolina.

Those states would begin monitoring the landings of the commercial fishery. On the recreational side the primary landings monitoring tool will continue to be MRIP. We are aware that Virginia has a required reporting process. This does not replace the MRIP estimates. To this point it may help inform some management decisions; but MRIP is still going to be the primary method by which recreational landings are estimated.

As I said previously, stock assessments will continue to be conducted through SEDAR. The Commission will work through the representation on the SEDAR Steering Committee to schedule future cobia assessments and monitor the status of this stock. Finally I'll get into the management program.

Within the management program there are nine issues that are laid out. Some of them have multiple options; some of them do not, and I'll identify those as we go through them. But this is a section that I'll try to take a little bit more time

and give some explanation on these different options; and what's being proposed here.

Issue 1 is the harvest specification process. There are really two parts to this; and you can read the specifics of the different options in Section 4.1 of the draft Amendment. But there are really two big parts to these options; the first part is what measures are subject to the harvest specification process.

As we have it, it's the same in all three options. That would be the total harvest quota, so a quota for both sectors could be set through this process. Vessel limits, possession or bag limits, minimum size limits, and the commercial closure triggering mechanism, which I will talk about a little bit later in the presentation. The other component of these options is the timing with which they would be set; and for which they would be in place. Option A has these measures set up to every two years; B is up to every three years, C is up to every four years. Really the distinction between the options is just the timing how long can the Board put management measures in place. The next section is the Sector Quota Allocation. There weren't any alternatives recommended by the PDT, mainly because there isn't any information that would suggest a deviation from what's currently in place.

The recommendation from the PDT, the only option that is spelled out in the draft Amendment is to adopt the sector allocation that was in place from the Council management, in which 92 percent of the coastwide total harvest quota is allocated to the recreational fishery, 8 percent is allocated to the commercial fishery.

Moving into the recreational management measures section, there were a few items there, a few management measures that are simply being carried over from the previous management plan; with no recommended deviation from those measures. The minimum size limit remains 36 inches fork length with the

total length equivalent for states that use that measurement.

The bag limit remains one fish per person. The vessel limit continues to be set by the states; not to exceed six fish per vessel, and the seasons and the allocations the methods for setting those remain the same. The table that you see on the screen is adapted from Table 10 in the draft Amendment; and these just show the allocation percentages that we're working under right now, and the corresponding state targets under the current 620,000 pound recreational quota.

The percentages that you see here, if you compare them to the original FMP they're going to be slightly off; because the original FMPs table did not include the *de minimis* set-aside that's included here. That causes a little bit of change to the percentage; but the numbers and allocations themselves are the same.

For Issue 3 under the Recreational Management Measures, this was the only option that was identified by the PDT; there weren't alternatives. This had to do with the evaluation of recreational landings; and a response to an overage. This really is trying to clarify some of the implementation of the process that was originally proposed in the FMP.

When the PDT took a look at that process from the original plan there was a lot of ambiguity in the language; so we're trying to shore up some of that more, distinctly spell out that process. The recreational landings as proposed here; the recreational landings would be evaluated at the same time as whenever the Board specifies harvest.

Those two processes would be tied together. The recreational landings would be evaluated as an average of annual landings; and this average would include up to the three most recent years of data. It would be a rolling average. The average would include years only with the same regulations, even if less than three.

I have a specific example that I'll go through after this slide; to try to spell out some of the different scenarios that may play out under this. The terminal year for evaluating landings will be the previous year. For example, if the evaluation or specification occurs at the August, 2020 meeting, the terminal year of the landings that would be used in that meeting would be 2019. We wanted to spell this out; because of the timing of the availability of data for the recreational and the commercial sectors of the fishery. States with consistent underharvest for at least three years may apply to relax measures while still remaining under their target. This is again something that was brought up in the original FMP.

But the PDT felt that adding the language of consistent underharvest, and putting a length of time to that would be helpful for spelling out which states can and can't apply for relaxed measures. Table 11 in the draft Amendment is a large, and looks like a pretty intimidating table. I want to step through that; because what it does is it shows a variety of different scenarios in which this landings evaluation and the management response process, how it plays out.

I'm going to be taking it section by section looking at these different time blocks. Looking at this first time block, these are all hypothetical harvests, and a hypothetical state that has a harvest target of 100,000 pounds. In order to accomplish this harvest target that state set the shown vessel limit and season; a four-fish season going from June 1st to August 30th.

The harvests that are shown there occurred and, when you average out the harvest from 2018 through 2020, they come out to an average of about 98,000 pounds. The state is in good shape there. They've achieved their target in those three years; so in 2021 when they're evaluated no changes are necessary, and they set their regulations for '22 through '24 based on the same ones that were already in place.

We move into the next evaluation time block, '21 through '23; with that evaluation and

specification process happening in 2024. In this case the harvest generally increased; so the average harvest over that three year time period from '21 through '23 is 5,000 pounds per year over the target. Therefore that state is required to reduce their season or their vessel limit in the next specification period.

Moving into the next period, you'll notice that there was a color change to these boxes. It doesn't show up on the screen quite well but 2025 and '26 are different colors there, because instead of having a season from June 1 through August 30 that state reduced their harvest by reducing their season. Now their season starts June 10; it starts a little bit later, and they're hoping that that would achieve their target of 100,000 pounds.

When we look at 2027 that is an evaluation year, you'll notice that the years that are evaluated in '27 are only '25 and '26. 2024, since it was on the old regulations, it is not included in that average. We're only looking at that two-year average instead of a three-year average, but those are the most recent years available under that management regime.

According to those landings they're under their target so they're in good shape. Regulations are then set for the next three years. Finally, we look at the three-year time block from '27 through '29. The state has consistently in every single year from '27 through '29 harvested under their target.

Because they have harvested under their target in every single year throughout that time block, they are able to submit liberalized measures to the TC and Board for their review; and for implementation in 2031. Obviously considering the previous management regime that was in place with a June 1 start date, if they were to only change their season they would have to go somewhere between June 1 and June 10. That information would be considered in the evaluation of whether the proposed measures would achieve the target.

But they are eligible to submit for those liberalized measures. Looking in previous years, there were years where it kind of bounced around or up and down; above and below the target. If that's the case then the state would not be eligible to submit for those liberalized measures. Again, the regulations will be set based on that information for the following three years.

Hopefully that was not too confusing when stepped through like that. But at the end of the presentation if there are questions about that I am certainly open to answering them. Moving on to the next issue, Issue 4, the options that are here are really just two options; the current the status quo option is to continue managing in terms of pounds for the recreational fishery.

Option B is to convert the pounds into numbers of fish; and that process is spelled out below the option itself, and the management would occur with landings, quotas and targets all being set in the numbers of fish. Moving into commercial management measures, Issue 5 is looking back at the minimum size limit for the commercial fishery.

Status quo option is to maintain the 33-inch-fork-length; which is equivalent to 37-inch-total-length minimum size limit. From public comments there was also some desire to set the commercial minimum size limit to be equal to the recreational. That is Option B. Option B has 36-inches-fork-length, 40-total-length, and that is equivalent to what the recreational minimum size is.

Another one of kind of the carryover measures that's not being reevaluated in this Amendment is the possession limit for the commercial fishery. The commercial possession limit would be maintained at two per person, not to exceed whatever the vessel limit is for that state. It's a coastwide vessel limit that would be set through Issue 6.

There was some desire through the public comment to reevaluate the commercial vessel

limit and look at reducing that. We have options here for 6-fish, 5-fish, or 4-fish vessel limit in the commercial fishery. Then moving into Issue 7, this is one of the issues where there was only a single option recommended by the PDT.

This involves the new quota-based management that would have to be operated by the Commission. It's really a somewhat similar management regime to what was in place under the Council; but now the Commission has to kind of accommodate the state processes for being able to close the fishery if the quota is met.

The coastwide commercial quota would be set through the harvest specification and sector allocation processes defined in the earlier sections. Landings would be monitored by the states in season; and there would be a trigger mechanism that would be set through that harvest specification process as well. In general it would be set such that if coastwide non *de minimis* landings hit X percent of the non *de minimis* quota, a coastwide closure would occur Y days later. To accommodate state processes, this trigger would need to be set allowing at least 30 days from the estimated trigger data to the estimated closure data. The trigger percentage and the number of days until the closure again would be set through the harvest specification process. Just giving an example, based off of recent commercial data using 2015 through '17 weekly commercial data and the 2019 quota that is currently kind of carried over from the previous council management.

The commercial fishery would close 32 days after the commercial landings reached 77 percent of the commercial quota. That is what would be in place. The landings will be monitored and, once they hit that threshold point, a closure date would be set and after that date a coastwide closure would occur. That would occur in the state waters. It would also be recommended to NOAA Fisheries for that closure to be enforced in the EEZ.

For Issue 8, Issue 8 brings up the establishment of a commercial *de minimis* status. Option A is

the status quo that there is no commercial *de minimis* status. Option B would bring that status into place. It spells out the eligibility criteria; state commercial landings for two of the previous three years must be less than 2 percent of the coastwide commercial landings for the same time period.

Many Commission plans use 1 percent as their threshold; but due to the small size of the commercial quota, there were one or two states that if 1 percent were the threshold they would kind of be flip flopping back and forth, in and out of *de minimis* status. That would be due to a fraction of a percent being over that threshold in some years.

To eliminate that it was set at 2 percent. The PDT felt comfortable with that still being a fairly minimal amount of landings. The commercial *de minimis* states would be subject to all coastwide commercial regulations including *de minimis* size, possession, vessel limits, as well as closures of the commercial fishery that would result from the quota being reached.

De minimis status would not be required to monitor commercial cobia landings for their state within the fishing year but they still would be required to report the annual landings through their state compliance reports. To account for the unmonitored landings in *de minimis* states, 3 percent of the commercial quota would be set aside and not accessible to the non *de minimis* states.

Finally Issue 9, the Recommendation for Federal Waters. This is the issue that gave Law Enforcement Committee all kinds of headaches on Tuesday. The recommendation is able to be set through the ACFCMA process. As I said in the commercial measures, and this would also be in place for recreational measures.

If any coastwide closure occurred in state waters through the Commission process, the Commission would recommend that NOAA Fisheries also close the EEZ in the same way. There were three options that were laid out for

this issue. Option A, regulations in federal waters would be recommended to correspond to those of the vessel's state of landing. Option B, the regulations would be recommended to correspond to the location of catch with essentially an extension of state regulations into federal waters. Option C would have kind of a hybrid of those two; in which the regulations in federal waters would be recommended to correspond to the state of landing, but there would also be the ability for states to apply for specified areas of restricted harvest, in which those specified areas would have a different set of measures than the general EEZ related to that state.

A rough example is shown at the bottom there where you have your state waters, hypothetical state with a three-fish-vessel limit going out into federal waters. The vessel would be accountable to whatever the landing state is; but you see that kind of dotted area. That would be one of those specified areas; and within that specified area there would be a one-fish vessel limit.

As I mentioned, this was brought to the Law Enforcement Committee on Tuesday and they gave some recommended edits to this section. First of all they are not in favor of Option C. The complexity of it and the enforceability of it doesn't seem realistic to them. They also recommended for Option A due to some individuals within the fishery having multiple licenses coming from multiple states, to try to diffuse any confusion about where that vessel may be landing to tie state of landing to the permits.

There is some language here. The regulations would be recommended to correspond to those of the vessels permitted or licensed state of landing. If that vessel or that individual possesses a permit or license for multiple states, all of which are open, then they would be fishing on the regulations for the most restrictive state.

If that individual possesses a permit or license for multiple states but only one of them is open, then they are able to fish on the regulations for

the state that is open. Then Option B; they in general supported that because when on-the-water intercepts occur, they are able to determine a location. Then they can see from the location these are the regulations for fishing in this location.

That was probably the most supported option from the Law Enforcement Committee although they did also put forth a recommendation that I believe in previous meetings wasn't heavily supported by the Board. But to have just kind of a blanket set of measures for federal waters that would be more easily enforceable than sectioning off sections of the EEZ, especially with respect to the seasons and the vessel limits that may differ by the corresponding state waters, or the adjacent state waters.

We did have a call with the Advisory Panel. There were two attendees to this call. One additional member did write in some comments. Nobody from the Advisory Panel objected to the options as presented in the draft Amendment that you see. The attendees supported equal minimum size limits between the sectors.

They did not express any preference for any of the federal recommendation options; but they do recognize that there are some difficulties really with any of those that would eventually be chosen. With that I can answer any questions; and just a carryover from my AP presentation, I am always looking for cobia pictures that we can put in presentations and on the website; so anyone that has those I would appreciate them.

CHAIRMAN GEER: Thank you very much, Mike for that great summary and all the work you've done on this document. I'll take comments at this time with discussion. Robert.

MR. ROBERT H. BOYLES, JR.: Mike thank you for that excellent summary. This is a lot of work and we're excited about taking a lead role in cobia stewardship. I want to go back to your last Section 4.9 and just remind the Board that these are federal waters management. Just be advised that in South Carolina, cobia are a game fish.

They have been a game fish for a number of years. Our legislature did that. Again, our commercial landings, very low documented commercial landings. That may throw a potential wrench in the works; because I like Option B, in terms of extension of those. But I think that's going to be something that we have to acknowledge and work through.

CHAIRMAN GEER: Adam.

MR. ADAM NOWALSKY: Obviously New Jersey is not going to be a large player in this fishery; but as I've sat through these Board meetings I've consistently been willing to engage on the recreational component, based on our experiences in other fisheries. When I look at Section 4.3.5, I'm encouraged by the multiyear evaluation perspective; to bring some stability. I had a question though with regards to the required reductions.

One of the things GARFO has moved towards is willing to accept the need for reductions or liberalizations based on confidence intervals around the harvest estimates. Is there consideration of that in here; or are we taking a step back from what we've moved to in the Mid-Atlantic and Northeast, with regards to using those catch estimates to determine whether or not we have exceeded or not exceeded a catch target?

DR. SCHMIDTKE: There isn't any consideration of confidence intervals about the estimates. I guess I would ask if GARFO has a multiyear averaging process there because, really, if they don't then there are just two different approaches to try to address the uncertainty associated with the recreational estimates.

One of them is looking at the three-year average; taking in multiyear uncertainty. The other is looking at confidence intervals for a given estimate in one year. There are two different ways of trying to get at the same goal of not taking a specific point estimate in one year; and using that to determine to make management decisions on that one estimate, and try to

incorporate some of that uncertainty and look at an overall trend.

CHAIRMAN GEER: Follow up.

MR. NOWALSKY: Yes, by and large we're doing things on an annual basis right now; although there is hope we can move to a multiyear basis. I think the takeaway is, is this Board comfortable that that has been given adequate consideration, and that the averaging approach will account for the interannual differences with the catch estimates? If you are okay great; move forward with it. If you're not I would encourage additional consideration of those widely varying fluctuations that are going to occur on a year-to-year basis. The second item here that caught my attention was that in the example, 2024 stated required reduction based on the over target average of the last three years. When we jump down to 2030, we go to may submit liberalized measures for TC and Board review. What caught my attention here is that one of the issues we've run into is that when states have had the opportunity to liberalize measures.

In many cases they have chosen not to take the full liberalization, or any liberalization, on the basis of well we're afraid of overharvesting in future years. There is a conservation benefit here to not liberalizing. The takeaway from that the unintended consequence however, is that you've now given up what you've been able to give back when you have to take a reduction.

I would be interested in hearing thoughts about this element of required reduction versus may liberalize; as that has proven to have a significant impact on our recreational fisheries. Is that how you want to proceed here? Is that going to not cause you to have the same deficit in regulations that we've had further north on the coast?

CHAIRMAN GEER: I'll chime in on that. I think using the word may, gives the state the option. The idea of this plan is to try to have as much flexibility as possible. I see where you're coming from; but relaxing regulations, I think that's up to the individual states in that regard. That is my

opinion. I don't know what everyone else around the table thinks. Spud.

MR. A. G. "SPUD" WOODWARD: I think Adam we're going into this realizing that we're probably going to have situations where we have recreational harvest estimates that are going to be very troublesome. In fact I would probably use the term "unconfidence" index around them instead of confidence indices; because that's what's plaguing us in this situation.

I think we're trying to find a balancing point where you have enough stability to be able to look at an annual estimate; and make some almost informed judgment determination of whether that estimate is valid to consider, in the aggregate of all the estimates. We know we're going to face this to some degree; and we're going to have to just probably make some difficult decisions.

I mean, the state of Georgia has literally gone from recreational catch estimates of zero to 250,000 pounds; over the course of three or four years. I mean that's how widely variable it can be; and that's not going to change. I think on the issue of liberalization. I think the thought there is as Pat said is to give states the option; because it's a risk and uncertainty analysis is what it comes down to.

If we liberalize, knowing that we're going to have catch estimates with unpredictable outcomes; then you could very easily come back in a situation where the pendulum swings back to the other end. I think this is going to be one of those situations where we're going to do it; and we're going to learn as we go. Then we're having an assessment that is coming forth based on new MRIP estimates; so who knows? There is a lot of uncertainty going on right now in this fishery.

CHAIRMAN GEER: I have Mike and then Lynn.

DR. SCHMIDTKE: I just wanted to add one additional comment related to the requirement to reduce. One thing to point out in this entire thing; and to highlight what this plan is. The

reduction is not a reduction in the target. It's not what the state would be shooting for. It would you know essentially what it means is the season and the vessel limit that you set is not achieving the target. We're still trying to achieve the same target. There are no types of reduction to that or payback. But in order to achieve that target we need to narrow on what is an appropriate season, what is an appropriate vessel limit to be able to catch that amount of fish.

CHAIRMAN GEER: Then I have Lynn.

MS. LYNN FEGLEY: Thank you, Mike, and to the PDT this is just a good document and a lot of work. To Adam's point about the averages, if I remember we had a really long conversation in regards to the *de minimis* states about whether to use an average or two out of three years, in determining whether a state was *de minimis*. Because the thought was just that if you have a sudden really large estimated catch; then using an average you could pay for it for a while. We wound up for the *de minimis* criteria it's two out of three years.

I don't know at this point. As Spud said there is a lot of uncertainty here. But we did have this conversation in regards to *de minimis*. I'm not sure we had it in regards to the evaluation. Then my other question was to the liberalization point. Because we're in a situation where the *de minimis* states match their neighbors, Maryland is matching Virginia.

If Virginia gets to a point where they submit to liberalize; and its decided they can liberalize, but Maryland doesn't want to liberalize, because to us it looks like if we did liberalize we could be kicked out of *de minimis*. How would that work? Because the Plan says we're matching; would we have the ability to maintain status quo, even if our neighbor state liberalizes? I assume we can always be more conservative than the Plan.

DR. SCHMIDTKE: That's something that is not quite addressed and that may be something that requires some additional thought. I mean the first thought that comes to my mind is the ability

for states to be more conservative; and trying to reconcile that with the *de minimis* criteria of matching a neighboring state. That is something that I don't have an immediate answer for.

CHAIRMAN GEER: Let's go to Toni.

MS. TONI KERNS: I have to think through it in full. A state can always be more conservative than the FMP; it is their prerogative to do that. But for the *de minimis* measures they're tied to their neighboring state. If you want to be more conservative than your neighboring state then I think you should probably be able to figure that out.

I need to read the *de minimis* language again; and see if it would cause any issues, because then does that require – so if we have Maryland, Delaware, New Jersey are all *de minimis*. Say Delaware decides to be more conservative than Maryland. Does that mean New Jersey has to match Delaware's regulations? I need to think through that issue.

CHAIRMAN GEER: Lynn, follow up.

MS. FEGLEY: I think it might be worth just thinking through that one, thank you Toni, a little more; and really what happens as the year's progress. If you're getting farther apart, how does that play out in the future? I don't have a suggested answer right now; but we may want to think about it.

Then Mike, I guess my question to you is, as for the averaging issue on the evaluation, do you have any thoughts as to whether or not using that rolling average is a better solution in the face of widely varying estimates than using a two out of three years? Do you have any thoughts on that particular issue?

DR. SCHMIDTKE: I couldn't advocate one versus the other. I wouldn't really want to because it's not fully my decision to make. But if it's the Board's pleasure of having an option of consideration for that evaluation response to be two out of three years, as opposed to an

average. I guess now that I'm thinking about it, one issue that it brings up is if management changes, because if you go with a two out of three, then that means you need three years in there to evaluate.

If you have an evaluation year, specification year where there was a recent management change; would you want to include a year or up to two years of management that was already determined to be unsustainable, and be evaluated based off of those regulations? The thought that the PDT had was no; which is why the rolling average was introduced; so that you would only be evaluated based on management that at the time seems like it is going to be sustainable.

CHAIRMAN GEER: I have Chris next.

MR. CHRIS BATSAVAGE: I would like to go back to; I think it is Option 9, and Robert's concerns on how that's written relative to the game fish status in state waters for South Carolina. I think his concern was going under Option B where the state measures get extended out into federal waters. That would extend gamefish status out into federal waters; where right now commercial fishing is allowed in federal waters off South Carolina.

When we were putting these options together, we were really contemplating the recreational fishery; because we don't have state-specific-commercial measures. It's going to be basically whatever the size limit is and whatever the per person and vessel limit out coastwide. To fix this issue that South Carolina faces, can we specify that these options are for the recreational fishery or won't impact the commercial regulations in federal waters, to kind of work around the problem South Carolina currently has that the other states don't have?

CHAIRMAN GEER: I have Mel.

MR. MEL BELL: Just to follow up on that a bit. We do have a different approach from our conservation measures and our regulations that

are in place; if we had the ability to extend some of our state codified measures into federal waters that would be great, not necessarily all of them. That would be one solution I guess; to tease out commercial specifically. But we've also got some differences too in that we have an area in the southern counties that the three sounds down there that are the spawning grounds for this distinct population segment that we're trying to rebuild right now. Right now, the month of May, it's no retention. Wouldn't necessarily want to extend that out into federal water; and then draw another line. You know you would have, let's say the boundary between Georgia and South Carolina and North Carolina and South Carolina extended out. I'm not looking to extend another line out for the southern counties.

If we have the flexibility to implement at least some of our state codified measures that would be great, but I don't really know if the way things are worded that it allows you to do that or not. It's sort of all of nothing; or could we actually just propose to extend specific things out, or do we need to change something right now to facilitate that?

CHAIRMAN GEER: Toni.

MS. KERNS: I have a question about the Law Enforcement Committee's recommended language to add to the document. In lobster we use the most restrictive rule; and when you have the most restrictive rule and one state is closed, then that permit you cannot fish in either of the areas that you're allowed to fish in.

Under the first part of this I would think that that would apply. If you have multiple permits and one of those seasons is closed, then you wouldn't be able to fish at all. But then in the second sentence it says if you have multiple states, only one of which is open, then you could fish. You see where I'm going.

Under one it doesn't let you fish; and then in the other it does let you fish. It's sort of counter intuitive to me. I'm trying to figure out the

rationale there. Is it that you're trying to prevent someone from fishing that has multiple permits; but then giving them the opportunity when only one state is open? But you're not giving them that opportunity when one state is closed and the rest are open.

CHAIRMAN GEER: I have Mike.

DR. SCHMIDTKE: The first part of that it's a conditional statement. There are two conditions. If they have obviously multiple permits and if the permits for both of those states are open. Then it is more restrictive; and the goal of that was so that you can't just have multiple permits and pick the one that is least restrictive.

That was the reasoning behind that. But at the same time if somebody has multiple permits, they have multiple permits so that they can be able to fish from multiple states. The second part is if there was a closure in one of those that they are still able to operate. I mean this can certainly be edited; but this was something that was proposed there. Because of the conditions I think that is why it wasn't seen as contradictory.

MS. KERNS: I guess my point. I'll use an example to try to make my point come home. If you have a permit from Georgia, South Carolina, and North Carolina, and two of those states are open but one is closed. Under that first condition you wouldn't be able to fish; because the most restrictive rule would apply, and one state is closed. But under the second condition it says that only one state is open; then you could fish. See where I'm going?

DR. SCHMIDTKE: In the example that you stated, multiple states have open seasons. Right, but multiple states have open seasons, therefore you can fish on the most restrictive, and maybe it's most restrictive open state. Maybe that needs to be added.

MS. KERNS: Okay, it needs to say the most restrictive open state because if it's the most

restrictive rule applies, the most restrictive is closed.

CHAIRMAN GEER: Adding the word most restrictive open state shall be applied. Is that okay with everybody? Mel's looking it over. Are there any other questions or comments? Lynn.

MS. FEGLEY: I just had one question and one editorial comment. The question was, I just wanted to clarify under Issue commercial *de minimis*. Under the option, Option A, where a state cannot apply for *de minimis* for commercial, if that option was chosen then that means that that state has to figure out how to monitor its landings in season? Is that correct? Okay, all right thank you for that.

Then the other one I just wanted to say was there is language in the Plan; and I think I wrote it down. It's on Page 42 that talks about the TC and the Management Board coming up with an equivalent total length for a 36-inch-fork length, but a 40-inch-fork length is offered later in the document in a couple of spots as an equivalent to 36 inches. Just be aware that that slight inconsistency is there. I can send it; mail it to you if you want.

CHAIRMAN GEER: Mel and then Adam.

MR. BELL: I think Robert mentioned this earlier but, related to what we're looking at there. Option B under there appeals to me. Our focus is really more on the recreational fishery. We had a commercial fishery in state waters; and our recreational fishery was predominantly state waters forever.

What we did for decades was we heavily fished spawning aggregations of these fish in the southern counties, which is what we've now determined genetically is a distinct population segment. But because of what we did to that DPS, that resulted in us achieving gamefish status for cobia, because basically that was the heart and soul of our cobia fishery.

The commercial fishery is gone in state waters. We've dealt with that for a few years. The recreational aspect now, so B appeals to me if what we're able to do there is extend our conservation practices related to that distinct population segment out into federal waters. I'm not so much concerned about the May closure, again, because when we're out there it's kind of a mixed stock, if you will.

When they come into our sounds, we can genetically distinguish them as sort of our fish but would like to afford the degree of protection in the recreational fishery through implementation of the three-fish boat limit out there. Regardless of where your boat is from, and since we're fairly close to Georgia at that point, and we know we get fishermen out of Savannah that do fish on the artificial reefs off this area that are potentially right now allowed six fish in the boat. What we would prefer to do; and it's not a matter of equitability or fairness to our fishermen, because they would tell you they're not happy with that six-fish boat limit either. Our fishermen will tell me as they have consistently; I mean they would even go for a two-fish boat limit. But they would prefer to see, if South Carolina is going to take some responsibility for management of cobia in our waters out there, they would like to be more conservative. If B allows us the ability to have that as an option, where you would abide by a three-fish boat limit in federal waters off of South Carolina, then I think we're good.

I just want to make sure that I'm reading this right; and that we could actually do that because I know there was some concern about okay what is the registration of the boat, is it a Georgia boat, is it a South Carolina boat that sort of thing? But implementing enforcement on the site where the fish are aggregated, where the fishermen are aggregated. To me that makes sense from an enforcement standpoint. You go where the fishermen are if you want to check cobia fishermen.

I just want to make sure B allows for that option, because that's our concern. Right now the

recreational state fishery is really no longer there. We're a federal fishery now. I'm real sensitive to our ability to influence federal waters. If we're allowed to do that this way then I'm fine with that. If I'm not reading that right or there are some issues, then maybe we need to discuss that or seek some other wisdom.

CHAIRMAN GEER: Mel that is my understanding, if anybody on the PDT thinks differently, I think that was our thought on that. It's extending it out into the federal waters along those lines. I get thumbs up; Spud.

MR. WOODWARD: That is thoroughly my understanding. I do think this matter of being able to land fish caught in federal waters and sell them in South Carolina is still somewhat uncertain. But as I understand it, if the state of South Carolina says that you can land and sell a cobia caught in federal waters, then that applies along that same corridor just like your bag limit and anything else would. I mean it's my understanding that that's how that would work.

CHAIRMAN GEER: Mel, follow up on that.

MR. BELL: Yes and to that point. We have no intention of desiring to close down the federal fishery out there; the commercial aspect of it. We're fine with that. We don't have a huge fishery anyway; it's maybe 4,000 pounds or something. If B works for those purposes then we're happy.

CHAIRMAN GEER: Adam, I saw you had your hand raised.

MR. NOWALSKY: Yes, I was going to go back to the recreational issues unless you would like me to defer to make sure that conversation about this topic is complete first.

CHAIRMAN GEER: Let's make sure this is done first, thank you. Are there any other comments or questions on this issue? Wait one second, a couple more minutes' folks, all right Toni. I apologize for the delay.

MS. KERNS: Sorry, Mike and I were trying to think this through. I think under Option B, you might want to have sort of a sub-layer, one for recreational one for commercial. On the recreational one you would say you would extend your boundaries for your recreational fishery; but for the commercial fishery.

I think maybe the solution would be to make a recommendation to NOAA Fisheries that the regulations in federal waters are bound to the commercial vessels landing permit in order to give them a set of regulations that they could enforce when offshore in federal waters for South Carolina because, if you just extended the boundaries then it would be nothing. There would be no regulation because you're gamefish. You would need something for them to have. That is the only solution I can think of off the top of my head.

CHAIRMAN GEER: Mel.

MR. BELL: Yes to that specifically. There is no federal cobia permit within the coastal migratory pelagics group, which it was.

CHAIRMAN GEER: It was it's not any more.

MR. BELL: Cobia didn't have a permit and that was part of the problem we were having in managing it. There isn't anything to reference there.

MS. KERNS: That's why I would suggest tying it to their landing; the commercial vessels landing permit, because they would have to land somewhere.

MR. BELL: You mean their state license.

MS. KERNS: Their state license or landing permit, yes.

CHAIRMAN GEER: Does anybody have problems with us adding that wordage? Does everyone feel comfortable with the PDT taking that on; or do they want to see it first? Just try to do it on the fly? Mel.

MR. BELL: Can I just clarify something in my mind how this works? The states monitor their commercial landings. No problem. We reach the allocation or the limit or whatever. Then we as a state would notify the Commission, who notifies NOAA or we notify NOAA that we've reached that limit? You mentioned earlier that then NOAA Fisheries would have to actually close the fishery in federal waters. I was just trying to figure out the mechanics of that how it works.

CHAIRMAN GEER: Mike.

DR. SCHMIDTKE: The states would monitor the landings. They would report the landings; and I guess the way that I'm envisioning it is the states would report commercial landings to the Commission. When the non *de minimis* landings hit that 77 percent or whatever that example was. But whenever they hit that threshold, then the Commission would inform NOAA. We would recommend that NOAA close the EEZ on this date. We would also be informing the states that the closure date is this date.

CHAIRMAN GEER: Toni.

MS. KERNS: I would just say that under this extension scenario federal waters wouldn't necessarily close on the commercial fishery side, when one state harvested their quota, because if there are other states that can still fish in federal waters they could still do that. Then bring home to their state of landing for commercial. It is similar to how we manage summer flounder, in the sense that a state may achieve their quota, but other states haven't, so there is still fishing going on in federal waters. For the recreational it would be different.

CHAIRMAN GEER: Yes Mike.

DR. SCHMIDTKE: Commercial is a coastwide quota. It's not state quotas. Coastwide measures, coastwide quota.

CHAIRMAN GEER: I have Spud, and then I have Lynn.

MR. WOODWARD: Yes I can give you a scenario. Georgia is a minor contributor to the coastwide commercial harvest; but what would happen is basically when North Carolina and Virginia sort of hit that 77 percent mark, then we're going to be notified and we'll basically advise the Commissioner of DNR to take action at some point, 30 days or whatever later, to basically prohibit the commercial sale of cobia in Georgia. That's how it would work. It will be whatever happens as a coastwide aggregate drives the process.

CHAIRMAN GEER: Lynn, did that answer your question?

MS. FEGLEY: Yes, I think it did. I think so. I know in Maryland when we vote regulations for cobia, it's very small, but all of our fish harvested from our coastal waters are required to go through federal dealers so that NOAA gets that information pretty much immediately. I don't know, just to make you aware in the monitoring. Like I said, we're a really small player; but I think the scenario that Spud laid out makes sense.

CHAIRMAN GEER: The *de minimis* states that quota is already taking out and considered already. That is off the board already. Then I have Mel.

MR. BELL: In that scenario the actual closure of the federal waters would be an action taken by NOAA Fisheries. Okay, because where I'm going with this is then therefore by reference we would automatically close. I don't have to go to a Commission or I don't have to go to my legislature to close it. Just like previously, whatever they said. We call it the, what they say we say law, so if the Feds say it's closed it is closed. That works for us.

CHAIRMAN GEER: Lucky you. Okay anything else on this issue? Not hearing anything else everyone is satisfied? Okay, Adam.

MR. NOWALSKY: Going back to the recreational side again. The states reporting a consistent underharvest for liberalization, am I to read that

as a consistent underharvest means underharvest every year? Is that what that is supposed to mean?

DR. SCHMIDTKE: Underharvest every year for at least a three year period.

MR. NOWALSKY: What was the rationale that the PDT used for using those criteria versus the average landings during the three year timeframe?

DR. SCHMIDTKE: Because of the fluctuations that landings may have above and below the target; in the same way that you know the landing may go above and below the target within a three year timeframe and still achieve the goal, the target, the average landings are beneath whatever that target is.

The scenario for liberalized measures, the PDT really wanted to apply only to states where it is abundantly clear that these measures could be liberalized; that an additional fish could be taken, and they would not exceed their target. The PDT felt well if they're bouncing around their target already then there is a probability there that if they liberalized that they would start exceeding.

CHAIRMAN GEER: Follow up.

MR. NOWALSKY: But yet in the previous paragraph we're saying that if it's bouncing around there is no chance that we may be under. We're bouncing around, our average is over, and therefore we have to reduce. I'm not comfortable with it. Just from the experiences, the pain we've had. I mean to channel Robert Boyles' comments about using state descriptions earlier.

This is supposed to be the kinder, gentler Board that we have here. I don't really want to see the South Atlantic Board in front of the Policy Board the way the Summer Flounder Board has consistently been there. I think this section should be modified to at least provide options;

so that the opportunity to liberalize and reduce are treated the same.

I think that there should be an option to consider the confidence interval or “unconfidence” interval around the three-year average. If we can’t get there in a reasonable timeframe, if there is no consensus around the table here to do that. I think I would probably find myself in abstaining on the vote to release this; just because I don’t endorse, and I wouldn’t endorse this in our other recreational fisheries.

I think it’s a step forward. It’s there. But I think the options here can be better; especially for a fishery that is 92 percent recreational. I know there has been a lot of pain already. I think the fact that there are no members of the public here today speaks to the pain that has already been suffered with this. I see these options here as causing more pain for the recreational sector.

CHAIRMAN GEER: If we take that up, the PDT would have to meet again and we would have to – we could put some wordage. If it’s the pleasure of the Board that we do that we can address it. We would probably have to send final approval out through an e-mail or some other manner. Nobody really wants to do it that way. What does the Board think about this? I’m not hearing anything from anybody? Chris.

MR. BATSAVAGE: I don’t have a solution. But I would expect to hear some concern, definitely feedback from the recreational community on this option. I’m on the PDT. I understand why we put in this measure we need to have three years of consistent underharvest before a state could consider liberalizing; just due to the very high variability in recreational cobia harvest. We want to prevent states from chasing one year estimates. But I agree with Adam. There is going to be a lot of, I think concern from the recreational community on this issue.

I don’t know a way around it because we’ve seen with other fisheries with better, more consistent recreational harvest estimates that we can get into a trap where we think we’re liberalizing a

little bit, and then the landings are much higher than expected. I guess all I’m doing is acknowledging Adam’s concerns that we will hear this when we go out for public comment. But I don’t know what the solution is. It’s based on the nature of the harvest estimates.

CHAIRMAN GEER: The PSEs for some of the states are very high. Like Spud pointed out, some years in Georgia it is zero, some years it’s a quarter million pounds. That is a part of the nature of this fishery and the MRIP data. I’m not sure if I know how to address that. If we put confidence intervals on these they are going to be so broad. I don’t know if the management action is going to be useful at all; that’s the problem. I agree; I mean I think you brought up some very good points, Adam. I’m just not sure how we can address them with this species. Mel.

MR. BELL: It just seemed like we’re taking the approach where we’re looking at the three year period versus what we used to do. When we were living under federal management we were living from year to year and we were having some horrible things happen, you know in a given year. It seems like we are heading in the right direction. We’re better off than we were.

We may hear some more from the public when this goes out. But you know I don’t know how to tweak it at this point and any more. But I am more comfortable with looking at three years of data than just what we were doing under the old process with federal management. I feel we’re better off than we were.

CHAIRMAN GEER: I see a halfhearted hand from Lynn.

MS. FEGLEY: I’m really torn. This is very difficult; and I don’t have a solution, except that I wonder if there is a way to incorporate some language that would allow during this evaluation for a year, for an outlier harvest estimate to be considered differently. I think it was New Jersey that had that really large estimate in one year that was an outlier.

I think that is what led us to those two out of three years, versus average for *de minimis*. But I wonder in this case, because we want to be evaluated over this time period, if there is a way to just categorize a particular estimate as an outlier, which might provide the Board some flexibility during the evaluation and harvest specifications.

CHAIRMAN GEER: Mike.

DR. SCHMIDTKE: The Cobia TC, this was something that they were tasked with previously; and the Cobia TC their basic statement on this is MRIP is going to have outliers in either direction, so if you treat the high as an outlier are you also going to be treating the low as an outlier? That was the concern the TC had about recommending any type of outlier analysis in this type of plan is will it be one directional.

CHAIRMAN GEER: Are there any other comments? What is the pleasure of the Board at this point? What would you like to do? Do you want this moving forward or do you want it to go back to the PDT at this time for further refinement; Spud?

MR. WOODWARD: I'll make a motion that we approve Amendment 1 to the Cobia Plan for public comment.

CHAIRMAN GEER: Seconded by Mel Bell. Toni.

MS. KERNS: Spud, would you be open to adding as modified today?

CHAIRMAN GEER: Any further discussion on this? Hearing none I'll read the motion. Move to approve Draft Addendum I to the Cobia Fishery Management Plan for public comment as modified today; motion by Mr. Woodward seconded by Mr. Bell. Chris.

MR. BATSAVAGE: Never mind, they changed it to Amendment 1 up there on the board now, thanks.

CHAIRMAN GEER: I'll read it again. Move to approve Draft Addendum I, Amendment I'm sorry. I'll start over again. It's been a long week. Move to approve Draft Amendment 1 to the Cobia Fishery Management Plan for public comment as modified today; motion by Mr. Woodward, seconded by Mr. Bell.

All those in favor please raise your hand; those opposed, abstentions, null votes. The motion passes 8 to 0 to 1 to 0. Thank you very much for that and it will be going out on public comment on this. Mike will be getting with everybody about that and having comments in your states. I'm sure in Virginia, hopefully it will be very lively in Virginia, North Carolina, and more people will show up. He'll be getting with everyone about that soon.

REVIEW STATE-GATHERED PUBLIC INPUT FOR POTENTIAL MANAGEMENT ACTION, ATLANTIC CROAKER AND SPOT

CHAIRMAN GEER: Moving on the other item on the agenda today is Review State-Gathered Public Input for Potential Management Action, Atlantic Croaker and Spot. Back in August we talked about an addendum to the spot and croaker plans, the omnibus for spot and croaker FMP to make changes to the traffic light approach, to do a regional approach. Oh, he has a presentation. I don't have to say anything. Okay, Mike here you go.

DR. SCHMIDTKE: All right so a brief presentation; just kind of bringing everybody back up to speed on what has occurred to bring this about. In 2017 a benchmark stock assessment was completed for both Atlantic croaker and spot; but it did not pass peer review for several reasons. But one of the difficulties that occurred with that was due to the conflicting abundance in harvest signals; which are also used in the traffic light analysis.

In February 2018, the Plan Review Team for spot and the croaker TC recommended changes to the traffic light analysis and that's included in the memo that is in your materials. These changes,

if all implemented, would result in management action being triggered. Here is a table that you've seen before, a comparison of the current TLA and the proposed new TLA. There are changes there to the adult abundance indices.

Additional indices would be incorporated as well as a regional type of approach for evaluating those indices; then an incorporation of ages into those index evaluations, also a change to the reference time period. The triggering mechanism and ultimately the result that you saw last year, when there was a direct comparison made between these two methods for croaker and spot, there was no trigger in 2018.

But using the updated proposed TLA, both species would be triggered due to the indices in harvest that are seen in the Mid-Atlantic region. Following these results the Board talked about potential management actions; and also asked the PDT what the recommendations would be, as far as this regional approach, and what resulting management actions would follow from there.

The Croaker, Spot PDT recommended that management action be taken as the result of a trigger; that some form of baseline management measures be established in the form of seasons and/or trip limits. Right now neither croaker nor spot have a coastwide management in place; any type of management measures in place.

There are some state level management measures for one or both species; but nothing from a coastwide level, so the PDT would be recommending that the Board consider a coastwide set of measures in response to a management trigger, if the new TLA were adopted. As a result of this the Board requested additional time to gather some public input from the stakeholders; and several states went out to gather this input.

I have a really short summary of the different state public input summaries that were submitted in materials. You can reference those

for more complete description and the state representatives can certainly bring up details that I don't include here. But I tried to stick mostly to the potential management measures that would result. Maryland, their public were focused more on spot; because they already have size, creel, and season limits in place for croaker at the state level.

The public were hesitant to support any form of reduction to the harvest or setting any minimum size, possession or season limit. There was also the comment that any regulations leading to reductions in Maryland should also be reciprocated in other states. For Virginia there was general comment against size limits; but they weren't completely against an adequately sized bag limit. They provided a suggested bag limit of 30 to 50 fish per day. In North Carolina there was not much support for any new spot or croaker measures. They suggested that the declines in landings were due to reduced effort as a result of commercial regulations. Again, if there are additional details or if I misstated something, feel free to correct me, representatives from those states. But I can take questions on that and turn it back over to Pat for discussion.

CHAIRMAN GEER: Does anyone have any questions for Mike on that? Chris.

MR. BATSAVAGE: Thank you, Mike, I appreciate the presentation, kind of showing what we've done over the last year or so. A good reminder to me and I'm sure others. Just to add to the general comments we heard in North Carolina besides not wanting to implement any additional measures or any measures for spot and croaker. I think the public acknowledge the fact there are fewer spot and croaker around than in the past.

There is really not much dispute to that. But there were also, they mentioned that just environmental changes were potentially a cause. Natural predation may also contribute; so things kind of out of the control of what we manage, and not necessarily a result of fishing being the primary reason why there are fewer spot and

croaker found in the state. But I just wanted to add that to the general list of comments we received in our state.

CHAIRMAN GEER: I'll go to Lynn.

MS. FEGLEY: I just want to echo what Chris said. I think there was also a lot of discussion in Maryland about the environmental variables; and an acknowledgement that there are fewer fish. But the other thing that came up in our discussion was really the question if anything that we can do for spot could offset the issues with the shrimp trawl bycatch. If there is anything that we can do to offset that they had a lot of concerns about that.

We've gone back with North Carolina has got the additional bird requirements going in place in July, so we've updated our constituents with that information. But I just want to go on the record that there was a lot of concern that by implementing regulations in these little fisheries would just be nibbling at the edges and not attacking the problem where it lies.

CHAIRMAN GEER: That was expressed in Georgia as well as surprisingly, sorry in Virginia, forgive me. A lot of folks said that we're nibbling at the edges if we're not addressing the shrimp trawl fishery. A lot of our folks were saying it's cyclic. It's just a cycle issue. But surprisingly there was a fair amount of support for a bag limit; as Mike said.

During our discussions we didn't know what they were talking about because they said they need them for bait. That is why they didn't want a size limit. When we asked them well how many, they kind of said numbers that we were thinking anyway, so that was pretty promising in some regards for us. Commercially we get a more difficult time.

They threw out some ideas. Obviously they weren't crazy about size limit, because of culling and everything. But we were kind of trying to ask them about shortening the season just a little bit; you know trying to do something. We didn't

have a lot of folks at our meeting. We had to actually create a subpanel for one of our fisheries panels to do it, so we only had a few people actually come and speak about it. Marty, you had something to say?

MR. MARTIN GARY: PRFC didn't submit any formal comments to Mike with the other jurisdictional partners. But we did participate in the calls. I did note, and I'll note for the record now that we have several boat liveries along the river that rent boats. A lot of the folks come from metropolitan D.C. area, for instance, come down to fish with their families; a lot of them that are subsistence fishers.

Those two species are important to them; but again the abundance has been down, as we've already noted and heard from a couple people. I did broach the subject with them to talk about what if we started to see resurgence in either species, would there be a thought on adjusting creels or anything like that.

They didn't have interest; similar to what Chris said in doing that. I just want to make a note that that is an important species. We're hoping that maybe in the future that that we'll be able to have something similar to what we've had historically. In the meantime it's all you can catch invasive blue catfish for those folks. But croaker and spot are important and we'll continue to follow it.

CHAIRMAN GEER: What about the other states? Did they talk, I'll go with Delaware with John Clark first.

MR. JOHN CLARK: I would just follow up with what we've heard in the past. We didn't specifically go out and ask on this. But we already have a size limit in place for croaker; and for spot we hear the same thing the other states do, people want no size limits so it can be used as bait. In terms of a possession limit, we haven't broached that. But I don't think that would be a problem; similar to what you found in Virginia.

CHAIRMAN GEER: Any of the southern states? I know South Carolina already has an aggregate bag. I mean Georgia already has a 25 fish limit on both spot and croaker. Adam, is there anything from New Jersey at all? We're kind of at a point where we have this traffic light approach that we've been going under.

Do we want to continue to task them to do things when we're not? We keep seeing problems but we're not doing management actions as a result; no management measures are coming forth. If we want to use these new measures we have to do an addendum, we'll have to do an addendum. The TC has put a lot of time into this. They've gone ahead and made several recommendations. We're kind of like in this, as Mike said, I kind of chuckled, the saga continues.

I mean it's like we've kind of been going around with this. What do we want to do? Do we want to move forward? Do we want the TC to continue to approach this? But I've sat up here at this table. Mike is on one side, you know the TC Chair is on the other side, and they both tell me we need recommendations for management measures from the Board.

What are we going to do? We're seeing that the abundance is low; but we haven't come up with any kind of recommendations. What does the Board want to do? I'm looking for something we can tell the TC we want them to move forward with. I mean do we want to wait until August and see what the new numbers look like? Do we want them to run the numbers both in the old method and the new method? It's a fair amount of work. I'm looking out for you folks to provide some guidance to the TC. Let's go with Chris and then Mike.

MR. BATSAVAGE: Yes we're definitely at a crossroads now. If we initiate an addenda to adopt these new traffic light analyses that would result in some sort of management response, if we went that route, if you look at how it's written in the current addenda as far as what we need to do. That doesn't really match up with what we can do with the TLAs.

It talks about percent reductions. We've talked about it in previous Board meetings that the traffic light analyses aren't designed to do that. I guess that would be one option to initiate addenda for both species to adopt the new traffic light analyses; but also to modify the management response to have it more in line with what we can do.

Going back to the comments that we received from the public, there was concern that under the harvest metric there is a lot of red showing up; due to the lower landings. It was pointed out there is just a lot less fishing going on; due to just less people in the fishery, but also due to other management measures that impact the spot and croaker fisheries, at least in North Carolina.

Things such as the hundred pound trip limit for weakfish; you know really had an impact on the long haul seine fishery. Management measures in place to protect bottlenose dolphin have also impacted where commercial fishermen can set gillnets for spot. I guess this is a question for Mike. Is it possible for the Technical Committee to explore incorporating some sort of effort component into the harvest traffic light?

Because right now we just see the trends in overall landings, commercial and recreational. But it doesn't speak to whether it's just less people fishing. But is there some way to work in an effort component into that to just get a better sense of what's driving the trends? Is it just less people fishing; or is it a lower catch per unit effort, which would indicate a problem with those populations?

CHAIRMAN GEER: Jeff.

MR. JEFF J. KIPP: The TC did look at effort data and talk about effort data. I think that we would be comfortable with that for some states; but from a coastwide perspective is where we would run into issues on adequate effort data to do something like that.

CHAIRMAN GEER: Lynn.

MS. FEGLEY: Maybe the way forward, you know in our state there was a lot of conversation, and I suspect this was true up and down the coast to the degree of the conversations we had. The idea of equity, you know making sure that if action is taken that there is parity amongst the states was of critical importance.

Also, a subject of discussion was the idea that we cannot quantify any sort of percent reduction that is required or would work to get us out of the red in the traffic light. The memo to the Board said that rather than focusing on a specific numeric goal for percentage red that may not be attainable through management alone. The PDT Recommends an alternative goal of initially establishing management measures for those fisheries which have no regulations. Maybe knowing that there is a commercial season which seems somewhat palatable. I mean the idea of a commercial season seems somewhat palatable, and the idea of a bag limit for recreational seems somewhat palatable.

Maybe the way forward would be to accept the new traffic light and, in the course of management response could the TC or the PDT, look at options which result in a neutral state for the fisheries? By that I mean, the states are truly bookending. You know Maryland's commercial season would be set so that there would be a bookend to the season as it runs on average; but not necessarily a reduction, so that it can be moved in the future if we need a reduction.

If there is a year when the fish appear, when we have spot in the Bay in an anomalous time that those spot would be sheltered from the fishery, because we've set the season. Ditto bag limits that we're basically we're going forward with a bookend. We have something on the books that could potentially be adjusted in the future if needed. But we're not having the coastal, we're doing the best we can to achieve equity among the states. I hope that made sense, thank you.

CHAIRMAN GEER: That's a good idea, Lynn. Lynn, I think you and I, we've talked about this. A lot of what you were doing, we were doing

independently, coming up with the same kind of things where you can look at the bookends of the fishery by looking at cumulative percent by date; and you really end up, you're not having that much of an impact if you take a little bit off the beginning of the year, a little bit off the end of the year.

I know in our state we did look at effort data; and we were seeing in some fisheries catch per unit effort was not going down that much for a couple of fishers; gillnets it definitely was. But what we were seeing was a fairly good decline in the size of the fish. You know the fish were declining in size as well. I think that's an interesting approach and I would support that. Mel.

MR. BELL: That's kind of how we ended up with our aggregate bag limit for small sciaenids. We were basically just trying to put something in place; almost as a firewall. You just got to get a placeholder, get it in place, and the public got used to that. We were seeing some things; particularly during the spot run where a garbage can full of spot. That stuff went away.

We did have a little bit of an impact; but it was more of just kind of get us going in that direction, because anything related to small sciaenids for us, I mean we just didn't have it. I guess it was kind of a baby step or a first step; but I think that's a great concept. I think we do need to move in this direction.

If you're being advised by the TC, here is what we're seeing, here are some recommendations. We admit, well things may not be like they used to be with the fishery or maybe not be what we would like to see. But then we just don't act and don't act. That doesn't send a good message to the public; and it doesn't send a good message I think to the TC if we're kind of not listening to them. If there is a way to adopt some things to at least get us going? I think that does make sense.

CHAIRMAN GEER: I agree. Phil.

MR. PHIL LANGELY: I would support some type of additional effort looking into this; just to the fact that the importance of this fishery, I know it is spot and croaker and it's been something that's been unmanaged. But you know this is the fishery that most of the children are introduced to. There are peer fishermen that may not be able to maybe vacation and they may not be able to economically afford to go out on a charterboat or take their kids out.

But this is how we introduce young fishermen to the fishery; and young fishermen make big fishermen. I just think it's important as well as the charter, and especially the headboat fishery. You know within our states it's an important fishery. Certainly we have seen a decline; which is alarming to a lot of constituents, you know within the state. But as was stated here, it's kind of hard for one state to make adjustments and with a species that is up and down the coast to make it more impactful.

CHAIRMAN GEER: I agree with that. As Mr. Woodward once called it the under loved sciaenids. We've been down this road before a few times, huh Spud? Are there any other comments? What I'm hearing right now is that we should be moving forward with something. I've heard potentially asking the TC to look at effort data if that is available. I know it's available in Virginia. Jeff, is it available in the Mid-Atlantic? I mean is it better in one region than in another?

MR. KIPP: Yes, so I think certainly some of the states from a commercial perspective have what we thought was good effort data; and then recreationally there is effort data. But I think there was some concern with that is from MRIP how to quantify that as effort. There is kind of different metrics you can consider from an effort standpoint with MRIP data; and I think we kind of circulated around that but didn't come to any conclusion.

CHAIRMAN GEER: I think Chris's concern with the effort was primarily probably commercial, right, Chris?

MR. BATSAVAGE: Yes I think it's going to have to be looked at, at the gear level to follow trends. I don't know if every state has that; and I'm guessing that is some of the concerns that the TC has is just as far as what level of effort data is available from the individual states.

CHAIRMAN GEER: I know we can provide that. I've run that analysis for our meeting that we have with the general public.

MR. KIPP: Yes, I think the Technical Committee didn't really consider smaller spatial scales when doing this. We were kind of looking from a coastwide perspective. If we could come up with something that we think is representative from a smaller spatial scale, either regional or coastwide trend. That is I think something that we could look into a little bit further.

CHAIRMAN GEER: Does anybody want to make a recommendation to the TC? We're going down that route; but we've talked about asking to look at effort data. Do we want them to continue to pursue looking at the new regional approach? I mean we're hoping that those numbers can be ready by August; and be provided, so this will be the second year we can have those new numbers. I don't think we're going to see anything different though. I think it's from what everyone said you know 2018 wasn't any better than the previous years. Mike.

DR. SCHMIDTKE: I guess one additional thing; I mean it's not a huge addition to the workload, but it is an additional workload to what the current TLA is. I would ask if there is specific direction from the Board to the TC to run the updated TLA for this year; given that the side-by-side comparison was done last year.

Is there additional information that the Board things that they're going to get out of seeing another year of side-by-side, or should the standard TLA that is currently in place be the one that is run and used in management this year? Regardless of what the Board decides today, there isn't going to be something passed by August, which is when we normally do the TLA

that would change the methodology in the way that this is talked about. Is there any direction to do the updated TLA in addition to the current TLA for 2019?

CHAIRMAN GEER: Any thoughts on that? I am kind of the thought; I mean Jeff, tell me if I'm wrong. I mean once they have the datasets is it that difficult to run the TLA?

MR. KIPP: I think a lot of it is gathering the data; but yes the actual framework is pretty much set in place. It depends also on the framework which you go with. The regional one would take, I think, a bit more work, because there is splitting indices based on size and that stuff. There is a little bit more from the regional perspective than the coastwide, I believe.

CHAIRMAN GEER: Well at the very least we have to do coastwide. At the very least we must do coastwide; and we need those numbers by the August meeting. I didn't know if Toni wanted to talk or not. Okay. Even if we don't take on the regional approach, and that continues to show, well we had the conflict in mind on that.

I would like them to see if we could do both that would be my, but I don't want to task them with something. I don't want to set them up for failure is my concern; and then if we asked them to look at effort data too that's going to be even additional work. Mike.

DR. SCHMIDTKE: I do have a question about the tasking; just to make sure that it's clear when talking about TC looking at the effort data. Is that looking at it in the context of trying to alter the recommended changes and possibly incorporating a CPUE style of approach to replace the harvest metric, or I guess what's the end goal in looking at the effort data that the TC should be driving towards in that task?

CHAIRMAN GEER: Chris.

MR. BATSAVAGE: My thought was if there was a way to incorporate effort into the harvest component, not replace it but just give it some

context. But I'm getting the sense that the data is a little sparse; and it could be a pretty heavy lift for the TC in terms of just the workload versus what we may get. We don't know if this is even doable. If the Board supports having the TC look at that that's great. If we're concerned about the time and effort this would take in addition to other tasks such as the annual TLA update. Maybe we could forego this exercise and think about moving forward with maybe an addendum to accept the new revised traffic light approach, and then go from there.

CHAIRMAN GEER: Chris, are you suggesting that now or in the August meeting?

MR. BATSAVAGE: It might be, if we could decide which path to go today, whether we task the TC with looking at this effort idea, or just based on the conversations that we've had and heard from Jeff and Mike that that may not bear the fruit that we're hoping. Then the other option is at least entertain a motion for the revised traffic light analyses as they are, and then talk about how to handle the management response.

CHAIRMAN GEER: Any discussion on that? Lynn, you look like you're hesitating.

MS. FEGLEY: I think Chris is on the right track. I think we need to bust a move here one way or the other.

CHAIRMAN GEER: It's the pleasure of the Board. Chris.

MR. BATSAVAGE: Okay to get off the dime. I move to initiate addenda to the Spot and Croaker FMPs to incorporate the revised traffic light analyses and redefine the management responses.

CHAIRMAN GEER: We'll get that up in a second. We have a second by Lynn Fegley. Is there any discussion on this? Roy.

MR. ROY W. MILLER: Mr. Chairman, perhaps Chris or Lynn could inform us. If we're going to incorporate the revised TLA, and redefine

management response, I presume that the management responses suggested would have the goal of moving this out of the red zone and into the green zone. Is that the general idea or not? Lynn is shaking her head.

CHAIRMAN GEER: No. Lynn, do you want to respond to that?

MS. FEGLEY: As I understood and as it's written in the memo to the Board, there is no way to define what those responses should be to get us out of the red. It struck me that what we would go forward is as Mr. Bell said, rather than asserting that we're going to get ourselves out of the red that if there are no regulations on a species that we will simply bookend that species. We will simply put a firewall in place that is not necessarily a reduction; it's just something to bookend the fishery.

If the fishery expands out of where it has historically been functioning, either by a season or by a bag limit. Then it provides a buffer. But it's not designed to produce as a particular reduction; because we don't know what that reduction should be. The goal is to get something on the books; so that if we get an assessment that's helped us understand what a reduction should be, we are basically set up to get there, because we have something on the books. The question becomes, well I'll leave it there.

CHAIRMAN GEER: Roy, did you have a question, follow up on that?

MR. MILLER: Would we be taking this action if the TLA wasn't in the red zone? In other words this bookending process, would we do that if it was in the green zone or the yellow zone?

CHAIRMAN GEER: We would have to adopt the new traffic light approach. We would have to do an addendum anyway. This new regional approach, we would have to go through an addendum process just to adopt that if we did nothing else. But talking to some folks, they're feeling that why go through an addendum

process to adopt this new traffic light approach if we're not going to try to have some kind of management measure associated with it. Yes, regardless of what it was. If we're using this new method we would have to have an addendum; any other discussion on this? I see Lynn's hand again.

MS. FEGLEY: I guess my question is when we say redefine management response. We would adopt these TLAs. Currently the way the plans are written as I understand, once we adopt the TLAs, they trigger, we are required to take some sort of action. In that wording of redefine management response, does that mean that this would give us the opportunity to adopt the new TLA but not be bound to take immediate action? Is that what redefine management response means? Could we just do an addendum to adopt the TLAs and nothing else? That's the shorter way to ask the question.

CHAIRMAN GEER: I guess I would ask Chris what his thought was on the terms.

MR. BATSAVAGE: I didn't know how best to word that part. But as I mentioned earlier, if you look at the current addenda I think it talks about a management response that incorporates percent reductions, which you really can't do. We talked a lot today about the Technical Committee's recommendation of kind of bookending the fishery; and Lynn has talked about how that could possibly be done.

Replace the language that is in the current addenda with that. Although now the question as to whether we would have to take action after adopting the revised TLAs, I think we would. But that's where you're redefining the management response. We can say what that is, who would have to implement management.

We've heard from states that already have management in place. Maybe the Board feels that the states that have already implemented measures already have those bookends for their fisheries, and it may not be necessary to do more, as opposed to states that don't have any

management that perhaps they should be the ones putting in measures.

CHAIRMAN GEER: I would assume those measures and actions are going to be defined in how we do the addendum; how we write the addendum. **Is there any other discussion on this? All right let me read the motion. Move to initiate addenda to the Spot and Croaker FMPs to incorporate the revised TLA and redefine management response.**

Motion by Mr. Batsavage and seconded by Ms. Fegley. All those in favor raise your hand; all those opposed, abstentions, null votes. The vote carries unanimously. Okay, is there anything else on spot and croaker we have to address today? Anything else this Board has to consider today, any other items? Chris.

MR. BATSAVAGE: Just a quick heads up to the Board. Normally this is the meeting that we would request an e-mail Board vote on an exemption to the Spanish mackerel size limit. After evaluating the information that we received from sampling, we are not going to move forward with that this year. We're going to stay at the 12 inch size limit that's in place coastwide.

ADJOURNMENT

CHAIRMAN GEER: Thank you, Chris; is there anything else to come before this Board today? Motion to adjourn, seconded. Thank you very much for coming and safe travels home, folks.

(Whereupon the meeting adjourned at 12:00 o'clock p.m. on May 2, 2019)

Atlantic States Marine Fisheries Commission

Draft Amendment 1 to the Atlantic Migratory Group Cobia Interstate Fishery Management Plan for Board Review



This draft document was developed for Management Board review and discussion. This document is not intended to solicit public comment as part of the Commission/State formal public input process, as this process has already concluded.

Sustainable and Cooperative Management of Atlantic Coastal Fisheries

August 2019

DRAFT AMENDMENT FOR BOARD REVIEW; NOT FOR PUBLIC COMMENT

Amendment 1 to the Interstate Fishery Management Plan for
Atlantic Migratory Group Cobia

Prepared by

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DRAFT AMENDMENT FOR BOARD REVIEW; NOT FOR PUBLIC COMMENT

The process and current timeline for completion of Amendment 1 is as follows:

Step	Anticipated Date
Approval of Draft PID by the Board	Aug 2018
Public review and comment on PID	Aug – Oct 2018
Board review of public comment; Board direction on what to include in Draft Amendment 1	Oct 2018
Preparation of Draft Amendment 1	Oct 2018 – May 2019
Review and approval of Draft Amendment 1 by Board for public comment	May 2019
Public review and comment on Draft Amendment 1	May 9 – July 15, 2019
Board review of public comment on Draft Amendment 1 and consideration for final approval by the Board and Commission Current step	Aug 2019

Table of Contents

1.0 INTRODUCTION 1

1.1 Background Information 1

1.1.1 Statement of Problem..... 1

1.1.2 Benefits of Implementation 2

1.2 Description of the Resource 3

1.2.1 Species Life History 3

1.2.2 Stock Assessment Summary 5

1.2.3 Current Stock Status 7

1.3 Description of the Fishery 7

1.3.1 Commercial Fishery..... 7

1.3.2 Recreational Fishery..... 11

1.3.3 Subsistence Fishing 18

1.3.4 Non-Consumptive Factors 18

1.3.5 Interactions with Other Fisheries 18

1.4 Habitat Considerations..... 19

1.4.1 Habitat Important to the Stocks 19

1.4.2 Identification and Distribution of Habitat and Habitat Areas of Particular Concern
22

1.4.3 Present Condition of Habitats and Habitat Areas of Particular Concern 22

1.5 Impacts of the Fishery Management Program 25

1.5.1 Biological and Environmental Impacts 25

1.5.2 Social Impacts 25

1.5.3 Economic Impacts 27

1.5.4 Other Resource Management Efforts..... 29

2.0 GOALS AND OBJECTIVES 30

2.1 History of Management 30

2.2 Purpose and Need for Action 30

2.3 Goal 31

2.4 Objectives..... 31

2.5 Management Unit 31

2.5.1 Management Area 32

DRAFT AMENDMENT FOR BOARD REVIEW; NOT FOR PUBLIC COMMENT

2.6	Definition of Overfishing	32
3.0	MONITORING PROGRAM SPECIFICATION	34
3.1	Summary of Monitoring Programs.....	34
3.1.1	Commercial Catch and Landings Program.....	34
3.1.2	Recreational Catch and Effort Program.....	35
3.2	Biological Information.....	37
3.3	Social and Economic Information	38
3.4	Observer Programs.....	38
3.5	Assessment of Stock Condition	38
3.5.1	Assessment of Annual Recruitment.....	39
3.5.2	Assessment of Spawning Stock Biomass	39
3.5.3	Assessment of Fishing Mortality Target and Measurement	39
3.6	Stocking program	39
3.7	Bycatch Reduction Program.....	40
3.8	Habitat program.....	41
4.0	MANAGEMENT PROGRAM	41
4.1	Harvest Specification Process	41
4.2	Sector Quota Allocation	42
4.3	Recreational Fishery Management Measures	42
4.3.1	Size Limit	42
4.3.2	Bag Limit.....	42
4.3.3	Vessel Limit	42
4.3.4	Seasons and Allocations.....	42
4.3.5	Evaluation of Landings against State Harvest Targets and Overage Response.....	43
4.3.6	Units for Recreational Landings, Quotas, and Targets	46
4.4	Commercial Fishery Management Measures	46
4.4.1	Size Limit Options.....	46
4.4.2	Possession Limit Options	46
4.4.3	Vessel Limits.....	47
4.4.4	Quota-based Management.....	47
4.5	Alternative State Management Regimes	48
4.5.1	General Procedures	48

DRAFT AMENDMENT FOR BOARD REVIEW; NOT FOR PUBLIC COMMENT

4.5.2	Management Program Equivalency.....	48
4.5.3	<i>De Minimis</i> Fishery Guidelines.....	49
4.6	Adaptive Management.....	51
4.6.1	Measures Subject to Change	51
4.7	Emergency Procedures.....	52
4.8	Management Institutions.....	52
4.8.1	Commission and the ISFMP Policy Board	52
4.8.2	South Atlantic State/Federal Fisheries Management Board	52
4.8.3	Plan Development Team / Plan Review Team.....	53
4.8.4	Technical Committee	53
4.8.5	Stock Assessment Subcommittee.....	53
4.8.6	Advisory Panel.....	54
4.8.7	Federal Agencies	54
4.9	Recommendation to the Secretary of Commerce for Complementary Actions in Federal Jurisdictions	55
4.10	Cooperation with other management institutions	55
5.0	COMPLIANCE.....	55
5.1	Mandatory Compliance Elements for States	56
5.1.1	Mandatory Elements of State Programs	56
5.2	Compliance Schedule	57
5.3	Compliance Reports	57
5.4	Procedures for Determining Compliance.....	57
5.5	Analysis of the Enforceability of Proposed Measures	58
6.0	RESEARCH NEEDS.....	58
6.1	STOCK ASSESSMENT AND POPULATION DYNAMICS	58
6.2	RESEARCH AND DATA NEEDS.....	59
6.2.1	Biological	59
6.2.2	Social	59
6.2.3	Economic.....	60
6.2.4	Habitat	60
6.2.5	State-specific.....	60
7.0	PROTECTED SPECIES.....	61

DRAFT AMENDMENT FOR BOARD REVIEW; NOT FOR PUBLIC COMMENT

7.1 Marine Mammal Protection Act (MMPA) Requirements 61

7.2 Endangered Species Act (ESA) Requirements 62

7.3 Migratory Bird Treaty Act (MBTA) Requirements..... 63

7.4 Protected Species with Potential Fishery Interactions 63

7.5 Protected Species Interactions with Existing Fisheries 66

 7.5.1 Overview of the Cobia Fishery and Gears Used 66

 7.5.2 Marine Mammals..... 67

 7.5.3 Sea Turtles..... 67

 7.5.4 Sturgeon, Smalltooth Sawfish, Nassau Grouper..... 69

 7.5.5 Seabirds..... 69

7.6 Population Status Review of Relevant Protected Species 70

 7.6.1 Marine Mammals..... 70

 7.6.2 Sea Turtles..... 70

 7.6.3 Sturgeon, Smalltooth Sawfish, and Nassau Grouper..... 70

 7.6.4 Seabirds..... 71

7.7 Existing and Proposed Federal Regulations/Actions Pertaining to Relevant Protected Species 72

 7.7.1 Marine Mammals..... 72

 7.7.2 Sea turtles 73

 7.7.3 Sturgeon, Smalltooth Sawfish, and Nassau Grouper..... 74

 7.7.4 Seabirds..... 74

7.8 Potential Impacts to Atlantic Coastal State and Interstate Fisheries 75

7.9 Identification of Current Data Gaps and Research Needs 75

 7.9.1 General Bycatch Related Research Needs..... 75

 7.9.2 Marine Mammals..... 76

 7.9.3 Sea Turtles..... 76

 7.9.4 Sturgeon..... 77

 7.9.5 Sawfish 78

 7.9.6 Seabirds..... 78

8.0 REFERENCES..... 79

APPENDIX I 1

DRAFT AMENDMENT FOR BOARD REVIEW; NOT FOR PUBLIC COMMENT

1.0 INTRODUCTION

The Atlantic States Marine Fisheries Commission (Commission), under the authority of the Atlantic Coastal Fisheries Cooperative Management Act (ACFCMA), is responsible for managing the Atlantic Migratory Group of cobia (Atlantic cobia) (*Rachycentron canadum*) from Georgia through New York. The Commission has coordinated the interstate management of Atlantic cobia in state waters (0-3 miles) since 2017. Amendment 1 to the Interstate Fishery Management Plan for Atlantic Migratory Group Cobia (FMP) establishes management measures that transition the FMP from complementary management with the South Atlantic and Gulf of Mexico Fishery Management Councils' (SAFMC and GMFMC, respectively) Fishery Management Plan for Coastal Migratory Pelagic Resources in the Gulf of Mexico and Atlantic Region (CMP FMP) to sole management by the Commission. Amendment 1 to the FMP was initiated in response to Regulatory Amendment 31 to the CMP FMP, which removes Atlantic cobia from the CMP FMP. Management authority in the exclusive economic zone (3-200 miles from shore) lies with the National Oceanic and Atmospheric Administration's (NOAA) National Marine Fisheries Service (NOAA Fisheries), but the Commission, through the ACFCMA, is able to recommend management measures in this area for implementation by NOAA Fisheries.

Updates from the FMP have been made to introductory sections to reflect the most up-to-date information about the Atlantic cobia fishery.

1.1 BACKGROUND INFORMATION

At their May 2018 meeting, the South Atlantic State/Federal Fisheries Management Board (Board) initiated the development of Amendment 1 to the Cobia FMP to establish recommended management for Atlantic cobia in federal waters and a process by which aspects of harvest regulations may be specified through a Board vote. The Board approved the Amendment 1 Public Information Document for public comment in August 2018. Public comment was received and hearings were held between August 2018 and October 2018. At their October 2018 meeting, the Board tasked the Plan Development Team (PDT) with developing Draft Amendment 1.

1.1.1 Statement of Problem

1.1.1.1 Recommended Management for Federal Waters

In June 2018, the SAFMC and GMFMC approved Regulatory Amendment 31 to the CMP FMP, which would remove Atlantic cobia from the CMP FMP (SAFMC, 2018a). This removal was approved and became effective on March 21, 2019. Therefore, the SAFMC no longer manages Atlantic cobia, and the Commission has sole management authority for this stock. The SAFMC is the management body that previously recommended the annual catch limit (ACL) and other measures used by NOAA Fisheries to manage federal waters. Additionally, the Recreational Harvest Limit (RHL) from the FMP is currently dependent on the federal ACL, and state commercial fisheries are required to close if a federal closure occurs due to the commercial ACL

DRAFT AMENDMENT FOR BOARD REVIEW; NOT FOR PUBLIC COMMENT

being met. To accommodate the SAFMC's and GMFMC's action to remove Atlantic cobia from the CMP FMP, the Commission is working to establish a mechanism for recommending management measures to NOAA Fisheries for implementation in federal waters, through authority and process defined in the ACFCMA.

1.1.1.2 Harvest Specification Process

Recent concerns for the Atlantic cobia fishery include multiple overages of the commercial and recreational ACLs, early fishing season closures due to the ACLs being met or exceeded, and in-season evaluation of recreational harvest estimates from the Marine Recreational Information Program (MRIP) against the recreational ACL. Recent ACL overages have caused concern among managers about the status of this stock, which was last assessed in 2013 (Southeast Data, Assessment, and Review [SEDAR], 2013). Additionally, the recent transition of MRIP from estimating effort through the Coastal Household Telephone Survey to the current, mail-based Fishing Effort Survey in 2018 required a re-calibration of previous recreational effort and harvest estimates. The change in harvest estimates is likely to impact stock assessment results. Thus, assessments must be conducted to update biological reference points and better inform future management for species impacted by the re-calibration, including cobia. A stock assessment is currently being conducted for Atlantic cobia through the SEDAR process (SEDAR 58). Assessment results are anticipated to be available for management use early in 2020.

In order to quickly respond to assessment results and to address other areas of concern in the fishery, management through a harvest specification process is considered in this draft amendment. Several Commission-managed species are managed through a harvest specification process, a process by which the Management Board may specify regulations controlling future harvest within a meeting, through a Board vote. Typically, regulations are annually specified for the following year. However, one of the primary desires expressed by managers and stakeholders is for regulatory stability. Thus, a multi-year specification process is also considered in this draft amendment.

1.1.2 Benefits of Implementation

Amendment 1 is designed to respond to the removal of Atlantic cobia from SAFMC management. Amendment 1 will establish a process for recommending how NOAA Fisheries should enforce management regulations in federal waters. Since the approval of Regulatory Amendment 31 to the CMP FMP in March, 2019, the Commission is now the only management body that will make such recommendations.

Amendment 1 will also establish a process by which the Board may specify harvest regulations for one or more future years. Through this process, the Board can implement regulations that remain in place throughout entire fishing seasons or across multiple seasons, allowing for increased regulatory stability. An additional advantage of management through this approach is increased flexibility for states to establish or revise measures in response to changes in the

DRAFT AMENDMENT FOR BOARD REVIEW; NOT FOR PUBLIC COMMENT

fishery or stock status, without needing to alter the FMP through an addendum or amendment. Measures that may be set through the specification process are defined in *Section 4.1*.

1.1.2.1 Social and Economic Benefits

Draft Amendment 1 proposes a management regime that will help ensure the long-term sustainability of the Atlantic cobia population, enhancing the social and economic benefits attributable to Atlantic cobia fisheries in Commission member states. In addition to ensuring the cobia fishery for future generations, socioeconomic benefits of implementation may arise from increased flexibility and the capacity to accommodate differences in member state fisheries and fishery management regimes. Amendment 1 will also enable the Board to specify harvest regulations for periods possibly exceeding one year. Increased stability in harvest regulations could be beneficial for individuals, businesses, and communities that depend on cobia fisheries financially or otherwise. In addition, the recognition of important socioeconomic monitoring requirements and research needs in Amendment 1 will increase the likelihood of implementing and/or continuing those monitoring and research tasks essential for effective fishery management at the state and regional levels.

1.2 DESCRIPTION OF THE RESOURCE

1.2.1 Species Life History

Cobia are a member of the family Rachycentridae and are distributed worldwide in tropical, subtropical and warm-temperate waters. In the western Atlantic they occur from Nova Scotia, Canada, south to Argentina, including the Caribbean Sea. They are abundant in warm waters off the coast of the U.S. from the Chesapeake Bay south and throughout the Gulf of Mexico (Gulf). Cobia prefer water temperatures between 68-86°F. As a pelagic fish, cobia are found over the continental shelf as well as around offshore natural and artificial reefs. Cobia frequently reside near any structure that interrupts the open water such as pilings, buoys, platforms, anchored boats, and flotsam, and are often seen under or accompanying rays, large coastal sharks, and sea turtles. Cobia are also found inshore inhabiting bays, inlets, and mangroves.

1.2.1.1 Stock Structure and Migration

Microsatellite-based analyses demonstrated that tissue samples collected from North Carolina, South Carolina, east coast Florida (near St. Lucie), Mississippi, and Texas showed disparate allele frequency distributions, and subsequent analysis of molecular variance showed population structuring occurring between the states (Darden et al., 2014). Results showed that the Gulf of Mexico stock appeared to be genetically homogeneous and that a segment of the population continued around the Florida peninsula to St. Lucie, FL, with a genetic break somewhere between St. Lucie, FL, and Port Royal Sound, SC. However, no samples were available from Cape Canaveral, FL, to Hilton Head Island, SC. Tag-recapture data across multiple studies and locations also suggested two stocks of fish that overlap at Brevard County, FL,

DRAFT AMENDMENT FOR BOARD REVIEW; NOT FOR PUBLIC COMMENT

corroborating the genetic findings (Burns and Neidig, 1992; Hendon and Franks, 2010; Wiggers, 2010; Denson, 2012; Orbesen, 2012; Perkinson and Denson, 2012).

The Atlantic and Gulf stocks were separated at the Florida-Georgia (FL/GA) line during SEDAR 28 because genetic data suggested that the split is north of the Brevard/Indian River County line and tagging data did not dispute this split (SEDAR, 2013). The FL/GA line was selected as the stock boundary based on recommendations from the commercial and recreational work groups and comments that this boundary would allow easier management and did not conflict with the life history information available. However, there was not enough resolution in the genetic or tagging data to suggest that a biological stock boundary exists specifically at the FL-GA line, only that a mixing zone occurs around Brevard County, FL, and potentially to the north. The Atlantic stock was determined to extend northward, as far as New York.

In preparation for SEDAR 58, a Stock Identification Workshop was conducted in 2018. This workshop found similar results to those of SEDAR 28 using more recent tagging and genetic data. The Stock ID Workshop identified biologically distinct Atlantic and Gulf stocks separated by a transition zone that occurs from the southern boundary of Brevard County, FL, to Brunswick, GA (SEDAR, 2018). Data that would categorize cobia within the transition zone as belonging to either of the two defined stocks (Atlantic or Gulf) are not available. Additionally, this Workshop identified sub-regional population structure within the Atlantic stock, in which inshore populations from SC were biologically distinct from those in NC/VA. However, data did not support fish found in NC/SC offshore areas as being biologically distinct from either of these populations. Due to uncertainty surrounding biological structure within the Atlantic stock, the Workshop recommended to continue assessing this region as a single stock, from the FL/GA border north through New York.

Several ongoing research projects are expanding sample collection throughout coastal Georgia and northern Florida, which may help provide better resolution within the transition zone. In addition, a few hundred cobia have been tagged with acoustic tags in South Carolina, Georgia, and the east coast of Florida to evaluate movement patterns along the South Atlantic (FL-NC) coast of the United States.

During autumn and winter months, cobia presumably migrate south and offshore to warmer waters. In early spring, migration occurs northward along the Atlantic coast. However, tagging information from the 2018 Stock ID Workshop suggests a greater amount of inshore-offshore movement than was previously thought. Significant efforts are currently underway using various tagging methods to better understand the migratory behavior of cobia.

1.2.1.2 Age and Growth

Weighing up to a record 135 pounds whole weight (lb ww), cobia are more common along the US Atlantic coast at weights of approximately 40 lb ww (SEDAR, 2013). In this region, they reach lengths exceeding 160 cm (63 inches). Cobia grow quickly and have a moderately long life span. Maximum ages observed for Atlantic cobia were 15 and 16 years for males and females,

DRAFT AMENDMENT FOR BOARD REVIEW; NOT FOR PUBLIC COMMENT

respectively (SEDAR, 2013). Cobia sexual maturity is more closely linked to size than age, with nearly all females maturing by the time they reach 80 cm (31.5 inches, approximately 2-3 years old) (SEDAR, 2013).

1.2.1.3 Spawning and Reproduction

Cobia form large aggregations, spawning during daylight hours between June and August in the Atlantic Ocean near the Chesapeake Bay and off South and North Carolina in May and June, respectively (SEDAR, 2013). Spawning is done through the release of multiple batches during the spawning season, at a frequency of once every 4-6 days (Brown-Peterson et al., 2001; Lefebvre and Denson, 2012; SEDAR, 2013). During spawning, cobia undergo changes in body coloration from brown to a light horizontal-striped pattern, releasing eggs and sperm into offshore open water. Cobia have also been observed spawning in estuaries and shallow bays with the young heading offshore soon after hatching. Cobia eggs are spherical, averaging 1.24 mm in diameter. Larvae are released approximately 24-36 hours after fertilization.

Newly hatched larvae are 2.5 mm (1 inch) long and lack pigmentation. Five days after hatching, the mouth and eyes develop, allowing for active feeding. A pale yellow streak is visible, extending the length of the body. By day 30, juveniles take on the appearance of adult cobia with two color bands running from the head to the posterior end.

1.2.2 Stock Assessment Summary

1.2.2.1 SEDAR 28

As described in *Section 1.2.1.1*, the most recent stock assessment, SEDAR 28, established the stock boundary between Atlantic and Gulf of Mexico cobia at the FL/GA border, based on tagging and genetic information and applicability to management (SEDAR, 2013). Therefore, the stock boundary for the assessment was also established at the FL/GA line. The Atlantic stock extends northward to New York.

The primary model used in SEDAR 28 was the Beaufort Assessment Model (BAM), a forward-projecting statistical catch-at-age model (SEDAR, 2013). This model included data from two fishery-dependent surveys and the recreational and commercial fisheries. Results of this assessment are summarized in the following sections.

1.2.2.1.1 Abundance and Structure

Estimated abundance at age since the 1990s showed a slight truncation of the oldest ages compared to the 1980s, but in general there was little obvious change in age structure over time. Total estimated abundance has varied about two-fold since the 1980s with a general decline since 2005. A strong year class was predicted to have occurred in 2005 comparable to those predicted periodically in the late 1980s and throughout the 1990s. However, predicted recruitment in later years (2007-2009) was below average.

DRAFT AMENDMENT FOR BOARD REVIEW; NOT FOR PUBLIC COMMENT

1.2.2.1.2 *Fishing Mortality*

The estimated time series of fishing mortality rates (F) from the BAM was highly variable, with F for fully selected ages varying greater than four-fold since the 1980s. There was a drop in F in the 1990s following the implementation of the 2-fish per person bag limit, but there was a notable increase since the early 2000s. Since 2003, estimates of F averaged about 0.30. The recreational fleet has been the largest contributor to total F throughout the time series.

The estimated time series of F divided by F producing Maximum Sustainable Yield (F_{MSY}) from the base run suggested that overfishing has not been occurring over the course of the assessment period but with considerable uncertainty, particularly since the mid-2000s. Current fishery status, with current F represented by the geometric mean from 2009-2011, is estimated by the base run to be $F_{2009-2011}/F_{MSY} = 0.599$, but with much uncertainty in that estimate. As current F is less than F_{MSY} , overfishing is not occurring.

1.2.2.1.3 *Spawning Stock Biomass*

Estimated biomass at age followed the same general pattern as estimated abundance at age. Total biomass and spawning biomass showed similar trends - generally higher biomass in the 1990s and early 2000s compared to the 1980s and a decline in more recent years. The stock was estimated to be at its lowest point in the late 1980s and was estimated to be at a comparable level in the terminal year.

Estimated time series of stock status (Spawning Stock Biomass [SSB]/ Minimum Stock Size Threshold [MSST], SSB/SSB producing Maximum Sustainable Yield [SSB_{MSY}]) showed a general decline through the 1980s, an increase in the late 1980s and early 1990s, followed by a decline in more recent years. The increase in stock status in the 1990s may have been driven by several strong year classes and perhaps reinforced by the 2-fish per person bag limit implemented in 1990. Base run estimates of spawning biomass have remained above MSST throughout the time series. Current stock status from the base run was estimated to be $SSB_{2011}/MSST = 1.75$, indicating that the stock is not overfished. Age structure estimated from the base run shows more old fish than the (equilibrium) age structure expected at MSY. However, in the most recent year, ages 1-7 approached the MSY age structure.

1.2.2.2 **SEDAR 58**

Another stock assessment, SEDAR 58, is currently ongoing and scheduled for completion by the beginning of 2020. A Stock Identification Workshop was conducted in 2018 to prepare for this assessment. This Workshop maintained the FL/GA border as the stock boundary, because this border is within a transition zone that occurs from the southern boundary of Brevard County, FL, to Brunswick, GA (SEDAR, 2018). Data that would categorize cobia within the transition zone as belonging to either of the two defined stocks (Atlantic or Gulf) are not available.

1.2.3 Current Stock Status

The Gulf and Atlantic migratory groups of cobia were last assessed by SEDAR 28 in 2013. The SEDAR 28 stock assessment for Atlantic migratory group cobia (Atlantic cobia) determined that the stock is not overfished nor experiencing overfishing.

1.3 DESCRIPTION OF THE FISHERY

1.3.1 Commercial Fishery

Commercial fisheries statistics throughout this amendment were obtained from the Atlantic Coastal Cooperative Statistics Program (ACCSP), unless otherwise stated.

From 2010 through 2017, annual commercial landings of Atlantic cobia ranged from approximately 33,000 to 91,000 lb ww (Table 1). Total coastwide dockside revenues in constant 2017 dollars from those landings have generally increased since 2010, ranged from approximately \$80,000 to \$235,000 in 2016 (Table 1). The annual average dockside price in 2017 dollars for those eight years was \$2.43 per lb ww. The highest landings and revenues occurred in 2016, whereas the lowest for both landings and revenues occurred in 2011. When the Florida east coast zone was still part of the management area for Atlantic cobia, commercial harvest reached the sector's quota of 125,712 lb ww in 2014 and closed on December 11, 2014. Under the modified management area excluding the Florida east coast zone (SAFMC Amendment 20B to CMP FMP – May 2014), the quota for Atlantic cobia was revised to 60,000 lb landed weight (lw) in 2015 and 50,000 lb lw in 2016 and thereafter. Although landings exceeded the 2015 quota, no quota closure was imposed. Commercial landings for 2016 were 90,887 lb (ACCSP, queried April, 2019) and the federal commercial fishery closed on December 6, 2016. Although 2018 landings are not finalized, the 50,000 lb quota was exceeded each of the past two years (2017: 61,817 lb, 2018: TBD) with the federal commercial fishery closing September 5th of each year (Table 1).

Commercial landings of Atlantic cobia have predominantly come from North Carolina, followed by Virginia and South Carolina (Table 1). Georgia landings are relatively small and confidential. Cobia landings north of Virginia are relatively rare and sporadic, thus, Virginia is considered the northernmost major contributor to the commercial Atlantic cobia fishery. One notable feature for Virginia is the surge in landings since 2014, although they were still typically lower than landings in North Carolina. However, after 2016, North Carolina commercial cobia landings and related dockside revenues declined substantially and were much lower than Virginia.

Commercial fishermen harvest cobia using a variety of gear types. Table 2 shows commercial Atlantic cobia landings and revenues by major gear types. Gill nets are the foremost gear type used in harvesting cobia for most years (Table 2), followed by hook and line. Hand line landings have increased substantially since 2010. Longline has been a minor gear type in the commercial harvest of cobia. The 8-year averages for annual dockside revenues from major gear categories range from \$80,000-\$235,000 (Table 2).

DRAFT AMENDMENT FOR BOARD REVIEW; NOT FOR PUBLIC COMMENT

Table 1. Annual commercial Atlantic cobia landings (lb ww) and dockside revenues (2017 \$) by state/area 2010-2017. State landings outside of VA-SC are small and may be confidential. Coastwide total landings include all commercial landings in the management unit, GA-NY. Source: ACCSP, queried April, 2019.

Year	SC	NC	VA	Coastwide Total	Federal Season Close Date
	Pounds (whole weight)				
2010	2,749	43,715	8,852	56,255	
2011	4,466	19,924	8,522	33,708	
2012	3,731	31,972	5,389	42,401	
2013	4,254	35,456	11,073	53,313	
2014	3,880	41,798	22,345	69,366	12/12/2014*
2015	2,763	52,684	27,722	84,367	
2016	4,532	48,244	36,460	90,887	12/6/2016
2017	4,590	20,842	36,384	66,289	9/5/2017
2018					9/5/2018
Average	3,871	36,829	19,593	62,073	
Year	SC	NC	VA	Coastwide Total	Federal Season Close Date
	Annual Dockside (Ex-vessel) Revenues in Constant 2017 Dollars ^a				
2010	\$10,709	\$72,722	\$19,511	\$105,149	
2011	\$19,578	\$38,395	\$19,994	\$80,182	
2012	\$15,063	\$66,591	\$12,036	\$97,340	
2013	\$15,253	\$77,638	\$29,569	\$129,432	
2014	\$11,666	\$91,457	\$61,993	\$169,305	12/12/2014*
2015	\$9,043	\$114,602	\$79,052	\$205,779	
2016	\$16,664	\$110,120	\$104,507	\$235,023	12/6/2016
2017	\$17,409	\$50,076	\$110,123	\$186,964	9/5/2017
2018					9/5/2018
Average	\$14,423	\$77,700	\$54,598	\$151,147	
* Included Florida					
^a Nominal dollars converted to 2017 constant dollars using the annual, not seasonally adjusted, GDP implicit price deflator (Index = 2015) provided by the U.S. Bureau of Economic Analysis.					

DRAFT AMENDMENT FOR BOARD REVIEW; NOT FOR PUBLIC COMMENT

Table 2. Commercial Atlantic cobia landings (lb ww) and dockside revenues (2017 \$) by gear, 2010-2017. Source: ACCSP, queried April, 2019.

	Hook and Line	Gill nets	Hand Line	Others	Total
Year	Pounds (Whole Weight)				
2010	14,474	23,327	3,899	14,554	56,255
2011	10,651	9,168	5,463	8,426	33,708
2012	9,854	21,027	2,651	8,869	42,401
2013	20,512	13,279	5,285	14,237	53,313
2014	18,779	23,416	12,895	14,276	69,366
2015	18,535	36,737	16,510	12,585	84,367
2016	17,471	35,426	22,529	15,462	90,887
2017	12,994	21,397	19,348	12,550	66,289
Average	15,409	22,972	11,072	12,620	62,073
Year	Annual Dockside (Ex-vessel) Revenues in Constant 2017 Dollars^a				
2010	\$30,884	\$39,643	\$9,344	\$25,279	\$105,149
2011	\$30,707	\$18,476	\$13,877	\$17,122	\$80,182
2012	\$27,683	\$43,649	\$6,177	\$19,831	\$97,340
2013	\$51,298	\$29,339	\$14,905	\$33,889	\$129,432
2014	\$45,702	\$51,884	\$38,621	\$33,098	\$169,305
2015	\$46,786	\$80,467	\$49,060	\$29,465	\$205,779
2016	\$48,112	\$81,962	\$64,992	\$39,956	\$235,023
2017	\$39,682	\$53,233	\$59,516	\$34,533	\$186,964
Average	\$40,107	\$49,832	\$32,061	\$29,147	\$151,147
^a Nominal dollars converted to 2017 constant dollars using the annual, not seasonally adjusted, GDP implicit price deflator (Index = 2015) provided by the U.S. Bureau of Economic Analysis.					

1.3.1.1 State-Specific Commercial Fisheries

1.3.1.1.1 Virginia

Virginia has had variable commercial landings of cobia since the Virginia Marine Resources Commission instituted mandatory reporting in 1993, with landings being high in the mid-1990s (Appendix I, Table A1), lower in the mid-2000s, steadily increasing from 2013-2017, and peaking in 2016 and 2017. There was a decline in commercial landings in 2018 (preliminary from VMRC; Appendix I, Table A1) contributed in part to state regulations limiting harvest to two fish per commercial license holder, or six per vessel. In most circumstances, there is only one licensed

DRAFT AMENDMENT FOR BOARD REVIEW; NOT FOR PUBLIC COMMENT

fishermen onboard each vessel, restricting daily landings to two fish. There is a small but directed hook-and-line fishery, which has been the prominent gear since 2007 with over 71% of the harvest the past ten years. Bycatch landings occur from gillnets (12.1%) and pound nets (8.2%), although these landings can be sizable. Other gears that have caught cobia include haul seines (1.34%) and trawls (1.99%).

1.3.1.1.2 *North Carolina*

Commercial landings of cobia in North Carolina are available from 1950 to the present.

However, monthly landings are not available until 1974. North Carolina instituted mandatory reporting of commercial landings through their Trip Ticket Program, starting in 1994. Landings information collected since 1994 are considered the most reliable. The primary fisheries associated with cobia in North Carolina are the snapper-grouper, coastal pelagic troll, and the large mesh estuarine gill net fisheries. Cobia landings from 1950 – 2018 have ranged from a low of 600 lb (1951; 1955) to a high of 52,684 lb (2015) with average landings of 16,730 lb over the 68-year time series (landings since 1981 shown in Appendix I, Table A1). Since 2010, landings have ranged from 19,924 lb (2011) to 52,684 lb (2015), averaging 36,829 lb (Table 1).

The primary commercial gear used to harvest cobia has changed over time. This is most likely due to changing fisheries and the fact that it is mostly considered a marketable bycatch fishery, especially after North Carolina adopted the CMP FMP measures of 33-inches minimum fork length and two-per person possession limit in 1991. From 1950 to the late 1970s, cobia were mostly landed out of the haul seine fishery. Most landings that occurred during the 1980s came from the pelagic troll and hand line fishery with modest landings from the haul seine and anchored gill net fishery. From 1994-2018, the majority of landings have occurred from the anchored gill net and pelagic troll and hand line fisheries with gill nets being the top gear during most of those years.

1.3.1.1.3 *South Carolina*

There is a limited commercial fishery for cobia in South Carolina. Cobia are a state-designated Gamefish, and as such, cobia landed in state waters may not be sold commercially. However, cobia landed in Federal waters can be sold commercially under current regulations. Commercial cobia landings have ranged from 2,700-4,600 lb per year with an annual mean of 3,800 lb per year for 2010-2017 and dollar values (2017 dollars) ranging from \$9,000-\$19,600 annually (Table 1).

1.3.1.1.4 *Georgia*

There is no directed commercial fishery for cobia in Georgia. Commercial landings may occur but they are typically the result of bycatch in other targeted fisheries. Some illegal sale of recreationally-caught cobia may occur; however, the total amount and dockside value is relatively small. The greatest recorded landings in Georgia (since annual landings became

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available in 1979) occurred in 1993 when 2,730 lb of cobia were landed resulting in a market value of \$4,728 (in nominal dollars).

1.3.2 Recreational Fishery

The recreational sector is comprised of a private component and a for-hire component. The private component includes anglers fishing from shore (including all land-based structures) and private/rental boats. The for-hire component is composed of charter boats and headboats (also called party boats). Although charter boats tend to be smaller, on average, than headboats, the key distinction between the two types of operations is how the fee is typically determined. On a charter boat trip, the fee charged is for the entire vessel, regardless of how many passengers are carried, whereas the fee charged for a headboat trip is paid per individual angler.

1.3.2.1 Permits

There are no specific federal permitting requirements for recreational anglers to fish for or harvest cobia. Instead, anglers are required to possess either a state recreational fishing permit that authorizes saltwater fishing in general, or be registered in the federal National Saltwater Angler Registry system, subject to appropriate exemptions.

Recently, the states of North Carolina and Virginia have developed programs to survey recreational cobia fishermen. These programs may provide information in the future that would help characterize the cobia fisheries in these states.

1.3.2.2 Harvest

In July, 2018, the MRIP began releasing recreational harvest information with fishing effort estimated or calibrated according to the mail-based Fishing Effort Survey (FES), rather than the previously used Coastal Household Telephone Survey (CHTS). Recreational landings shown in this section and throughout the amendment are shown as FES estimates/calibrations, although 2018 and 2019 regulations and landings are based on calibrations to CHTS effort. The FES calibrations and estimates are being incorporated into the ongoing stock assessment. Upon completion of the stock assessment and acceptance by the Board for management use, FES estimates will be used for setting quotas and targets and evaluating recreational harvests. For comparative and short-term management purposes, Appendix I, Table A2, shows recreational harvest estimates in pounds since 1981 based on the CHTS effort estimates or calibrations. Appendix I, Table A3, shows recreational harvest estimates in pounds since 1981 based on the FES effort estimates or calibrations.

On average, from 2010 through 2018, the recreational sector landed approximately 1,837,610 lb ww of Atlantic cobia (Table 3). North Carolina has been the dominant state in recreational landings of cobia, followed by Virginia, South Carolina, and Georgia. Cobia landings north of Virginia are relatively rare and sporadic, thus, Virginia is considered the northernmost major contributor to the recreational Atlantic cobia fishery. However, in 2018, recreational landings of

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cobia were reported in Delaware, as well as outside of the management unit in Connecticut. Harvests from these states are considered minimal, however this information could indicate that cobia migrate further north than expected.

The private/rental mode has been the most dominant fishing mode for harvesting cobia (Table 4). Party boats have provided the lowest contribution to recreational landings of cobia. Information reported in Table 4 indicates that harvest estimates in 2018 were the highest across all modes in the time-series except for the private/rental mode in 2015. Harvest levels in 2018 were also higher across all modes in comparison to the long-term average (2010 through 2018).

Table 3. Annual recreational landings (lb ww) of Atlantic cobia, by state, 2010-2018 (preliminary). Source: MRIP, queried April, 2019.

Year	NJ	DE	MD	VA	NC	SC	GA	Total
2010	0	0	1,179	557,907	808,227	100,614	230,865	1,698,792
2011	0	0	0	341,751	399,192	0	182,799	923,742
2012	60,473	0	0	47,547	102,077	214,512	512,499	937,108
2013	0	0	0	488,181	980,541	24,005	43,915	1,536,642
2014	0	0	0	499,218	645,427	79,171	42,481	1,266,297
2015	0	0	0	1,166,000	1,925,762	434,899	102,917	3,629,578
2016	0	0	307	1,505,528	838,363	159,345	0	2,503,543
2017	0	0	0	488,287	872,861	0	390	1,361,538
2018	0	9,664	3,254	1,936,274	561,526	160,191	6,226	2,677,135
Average	6,719	1,074	527	781,188	792,664	130,304	124,677	1,837,153

Source: MRIP, queried April, 2019.

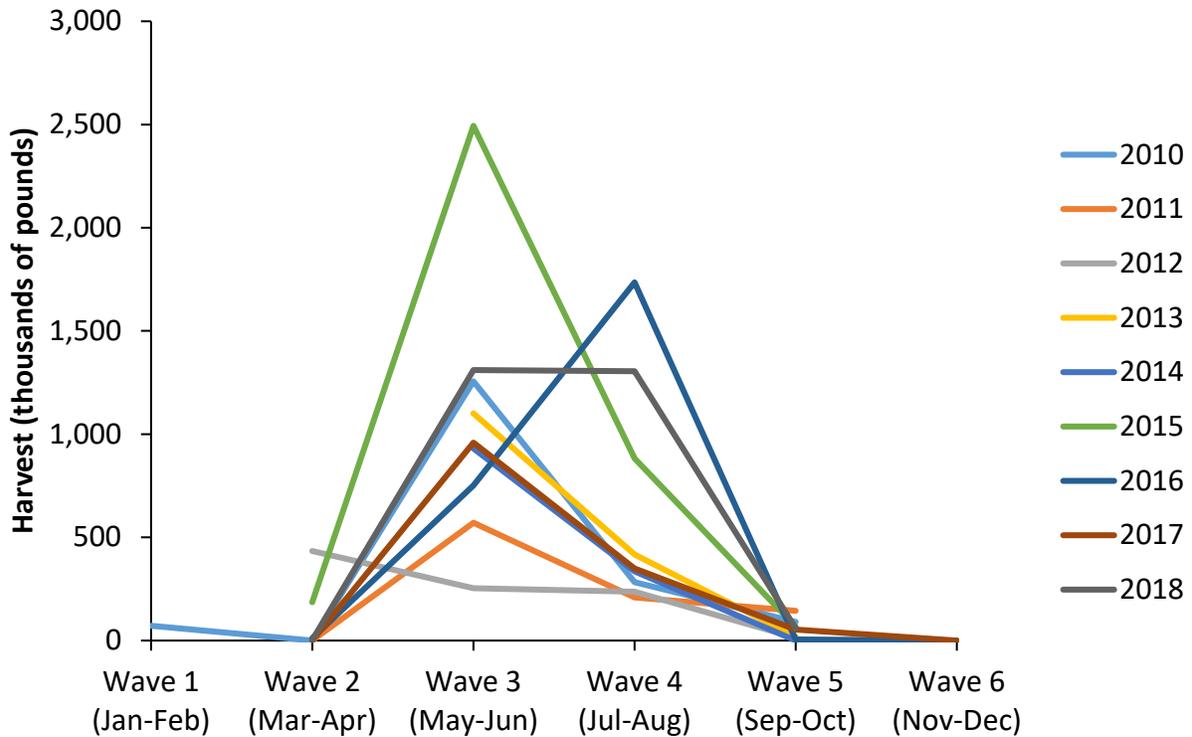
Table 4. Annual recreational landings (lb ww) of Atlantic cobia, by fishing mode, 2010-2018 (preliminary).

Year	CHARTER BOAT	PRIVATE/RENTAL BOAT	SHORE	Grand Total
2010	99,424	1,550,698	48,670	1,698,792
2011	17,668	771,218	134,856	923,742
2012	21,605	855,030	60,473	937,108
2013	98,524	1,438,118	0	1,536,642
2014	56,727	1,057,192	152,377	1,266,296
2015	70,342	3,303,860	255,375	3,629,577
2016	116,598	1,921,275	465,671	2,503,544
2017	47,407	1,314,131	0	1,361,538
2018	138,276	1,977,726	559,635	2,675,637
Average	74,063	1,576,583	186,340	1,836,986

Source: MRIP, queried April, 2019.

Peak recreational landings of cobia typically occur in Wave 3 (May-June) each year (Figure 1). In 2016, recreational landings peaked in Wave 4 (July-August). Recreational landings steeply increased from Wave 2 (March-April) to their peak and also steeply declined after the peak wave. Landings are concentrated around the Waves 3 and 4. In 2018, the peak was broader with similar landings in Waves 3 and 4.

Figure 1. Distribution of Atlantic cobia recreational harvest, by wave, 2010-2018 (preliminary). Source: MRIP, queried April, 2019.



1.3.2.3 Effort

Recreational effort derived from the Marine Recreational Fisheries Statistics Survey (MRFSS)/MRIP database can be characterized in terms of the number of trips as follows:

Target effort - The number of individual angler trips, regardless of duration, where the intercepted angler indicated that the species or a species in the species group was targeted as either the first or second primary target for the trip. The species did not have to be caught.

Catch effort - The number of individual angler trips, regardless of duration and target intent, where the individual species or a species in the species group was caught. The fish did not have to be kept.

Total recreational trips - The total estimated number of recreational trips in the Atlantic, regardless of target intent or catch success.

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Other measures of effort are possible, such as the number of harvest trips (the number of individual angler trips that harvest a particular species regardless of target intent), and directed trips (the number of individual angler trips that either targeted or caught a particular species), but the three measures of effort listed above are used in this assessment.

Estimates of annual Atlantic cobia effort (in terms of individual angler trips) for 2010-2018 are provided in Table 5 for target trips and Table 6 for catch trips. Target and catch trips are shown by fishing mode (charter, private/rental, shore) for Georgia, South Carolina, North Carolina, and Virginia. These are trips for cobia in state or federal waters off of these states. Estimates of cobia target and catch trips for additional years, and other measures of directed effort, are available at <http://www.st.nmfs.noaa.gov/recreational-fisheries/access-data/run-a-dataquery/queries/index>.

Cobia is one of the few species where target trips generally exceed catch trips. The 2010-2018 average target trips were 4,721 for the charter mode, 291,682 for the private/rental mode, and 143,999 for the shore mode (Table 5). In contrast, the average catch trips were 2,896 for the charter mode, 38,965 for the private/rental mode, and 3,240 for the shore mode (Table 6). This is suggestive of a relatively strong interest in fishing for cobia among recreational anglers across all fishing modes. For each state, the private/rental mode has been the most dominant fishing mode both in target and catch effort.

Headboat data in the Southeast do not support the estimation of target or catch effort because target intent is not collected and the harvest data (the data reflects only harvest information and not total catch) are collected on a vessel basis and not by individual angler. Table 7 contains estimates of the number of headboat angler days for the South Atlantic states for 2010-2017. Georgia and South Carolina data are combined for confidentiality purposes. Virginia information was not available because only South Atlantic headboats are included in the SRHS.

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Table 5. Target trips for Atlantic cobia, by fishing mode and state, 2010-2018 (preliminary).
Source: NOAA Fisheries, Fisheries Statistics Division, queried April, 2019.

Year	Georgia	S. Carolina	N. Carolina	Virginia	Total
	Charter				
2010	0	3,239	1,904	499	5,642
2011	21	1,423	1,386	245	3,075
2012	0	987	251	10	1,248
2013	0	0	2,446	24	2,470
2014	0	1,247	1,463	299	3,009
2015	658	1,430	2,541	1,430	6,059
2016	0	1,477	4,192	519	6,188
2017	0	1,409	3,723	678	5,810
2018	359	570	6,953	1,103	8,985
Average	115	1,309	2,762	534	4,721
	Private/Rental				
2010	5,725	28,751	74,155	159,971	268,602
2011	8,774	46,087	39,326	105,236	199,423
2012	12,959	96,256	40,374	52,301	201,890
2013	38,131	60,983	97,360	121,668	318,142
2014	1,754	37,370	111,211	125,694	276,029
2015	47,929	36,447	146,966	120,189	351,531
2016	7,332	42,256	147,313	192,557	389,458
2017	402	1,352	140,667	152,785	295,206
2018	3,861	14,945	69,677	236,378	324,861
Average	14,096	40,494	96,339	140,753	291,682
	Shore				
2010	0	0	26,791	32,717	59,508
2011	0	0	23,836	10,078	33,914
2012	0	5,304	36,502	92,793	134,599
2013	0	3,528	58,781	21,160	83,469
2014	0	77,879	49,807	77,879	205,565
2015	0	1,583	106,171	96,147	203,901
2016	0	171	132,730	85,610	218,511
2017	0	0	102,087	130,665	232,752
2018	0	11,563	75,279	36,931	123,773
Average	0	11,114	67,998	64,887	143,999

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Table 6. Catch trips for Atlantic cobia, by fishing mode and state, 2010-2018 (preliminary).
Source: NOAA Fisheries, Fisheries Statistics Division, queried April, 2019.

Year	Georgia	S. Carolina	N. Carolina	Virginia	Total
	Charter				
2010	74	942	3,297	179	4,492
2011	369	0	778	25	1,172
2012	63	0	306	10	379
2013	160	48	1,802	24	2,034
2014	54	0	1,702	0	1,756
2015	0	598	2,047	1,302	3,947
2016	0	809	2,818	208	3,835
2017	37	0	1,237	133	1,407
2018	314	796	5,173	759	7,042
Average	119	355	2,129	293	2,896
	Private/Rental				
2010	7,776	2,322	15,713	15,876	41,687
2011	7,898	0	4,870	5,867	18,635
2012	15,090	5,830	2,946	1,348	25,214
2013	788	1,566	28,193	15,753	46,300
2014	3,667	4,727	18,101	17,444	43,939
2015	8,934	13,320	35,080	9,744	67,078
2016	0	5,892	8,392	13,863	28,147
2017	0	0	16,982	10,652	27,634
2018	0	4,521	11,151	36,378	52,050
Average	4,906	4,242	15,714	14,103	38,965
	Shore				
2010	0	0	2,447	0	2,447
2011	0	0	6,583	0	6,583
2012	0	0	0	0	0
2013	0	0	0	0	0
2014	0	0	5,437	0	5,437
2015	0	0	7,591	0	7,591
2016	0	0	4,918	0	4,918
2017	0	0	0	0	0
2018	0	1,375	806	0	2,181
Average	0	153	3,087	0	3,240

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Table 7. South Atlantic headboat angler days, by state, 2010-2017. Source: NOAA Fisheries Southeast Region Headboat Survey (SRHS).

Year	GA/SC	NC	TOTAL
2010	46,908	21,071	67,979
2011	46,210	18,457	64,667
2012	42,064	20,766	62,830
2013	42,853	20,547	63,400
2014	44,092	22,691	66,783
2015	41,479	22,716	64,195
2016	43,954	21,565	65,519
2017	38,655	20,170	58,825
Average	43,277	20,998	64,275

1.3.2.4 State Specific Recreational Fisheries

1.3.2.4.1 Virginia

Virginia’s recreational landings of cobia have been highly variable since the mid-1980s, with the lowest estimate being 21,167 lb in 1987 and the highest being 1,936,274 lb in 2018. The recreational fishery seems to have grown in recent years, both in the number of participants, and the effectiveness of fishing due to the advent of sight-casting – especially when aided by “cobia towers.” Traditionally, cobia had been targeted using live-bait bottom-fishing, but these new techniques are causing a shift in preference among anglers.

Other states experience pulses of abundance in cobia as they migrate up and down the Atlantic coast. However, the amount of time cobia spend in Virginia waters is substantially longer that of other Mid-Atlantic states. Cobia can be found in Virginia waters from mid-May through the end of October.

In 2016, Virginia developed a monitoring program to survey recreational cobia fisherman. The program was developed to characterize Virginia’s cobia fishery for future management.

1.3.2.4.2 North Carolina

Historically, recreational fisherman targeted cobia from a vessel by anchoring and fishing with dead, live, or a mixture of both bait types near inlets and deep water sloughs inshore (Manooch, 1984). Fish were also harvested from shore or off of piers using dead or live bait. In the early 2000s, fishermen began outfitting their vessels with towers to gain a higher vantage point to spot and target free-swimming cobia along tidelines and around bait aggregations. This method of fishing actively targets cobia in the nearshore coastal zone and has become the primary mode of fishing in most parts of the state.

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Recreational harvests of cobia in North Carolina from 1981-2018 have ranged from a low of 0 lb (1983) to a high of 1,925,762 lb (2015) (Appendix I, Table A3). Landings during the 1980s and 1990s remained relatively constant from year to year. Landings began to increase and become more variable beginning in the mid-2000s. From 2010-2018, recreational cobia landings in North Carolina ranged from 102,077 to 1,925,762 lb (792,664 lb on average). Seasonally, cobia are landed mostly in the spring and summer months corresponding with their spring spawning migration (Smith, 1995). Peak landings occur during the latter part of May into June and quickly diminish thereafter. However, recreational landings of cobia can occur through the month of October.

1.3.2.4.3 *South Carolina*

The recreational fishery accounts for the majority of cobia landings in South Carolina. The fishery occurs in both nearshore waters and around natural and artificial reefs offshore. Historically, the majority of cobia landings have occurred in state waters in and around spawning aggregations from April through May. However, due to intense fishing pressure in the inshore zone, annual landings of cobia have fallen drastically since 2009, such that the majority of recreationally caught cobia in South Carolina now come from offshore (federal) waters. Anglers begin targeting cobia in late April-early May with the peak of the season typically occurring May into early June. Late season catches can occur on nearshore reefs through October depending on water temperatures.

1.3.2.4.4 *Georgia*

A large recreational fishery exists for cobia in Georgia. The majority of this fishery occurs in nearshore waters around natural and artificial reefs. While there are some instances of cobia being caught inshore and on beach front piers in Georgia, most landings come from outside state waters. Anglers begin targeting cobia in late April-early May with the peak of the season typically occurring in June. Late season catches often occur on nearshore reefs through October depending on water temperatures. However, these fall runs of fish are sporadic and are often missed by anglers.

1.3.3 Subsistence Fishing

No subsistence fisheries for Atlantic cobia have been identified at this time.

1.3.4 Non-Consumptive Factors

No significant non-consumptive factors for Atlantic cobia have been identified at this time.

1.3.5 Interactions with Other Fisheries

The recreational cobia fishery tends to be a targeted fishery. Various small and large coastal sharks and ray species are the most common bycatch. Cobia are encountered as bycatch in the

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troll and live bait fisheries for king and Spanish mackerel, dolphin, and other pelagic species. Additionally, cobia are taken incidental to offshore bottom fishing activities for snapper/grouper species.

The commercial cobia fishery is primarily bycatch in the same troll fisheries and taken incidental to snapper/grouper fisheries. Some directed harvest does occur; however, low limits preclude a large scale fishery.

1.4 HABITAT CONSIDERATIONS

1.4.1 Habitat Important to the Stocks

1.4.1.1 *Description of the Habitat*

1.4.1.1.1 *Spawning Habitat*

Cobia spawn in nearshore waters along the South Atlantic coast from April through June. Nearby states (South Carolina) have documented the presence of inshore spawning aggregations of cobia (Lefebvre and Denson, 2012). However, there have been no such aggregations identified in Georgia. Eggs and larvae are typically found in nearshore waters and juveniles most often occur inshore or in protected nearshore waters.

Cobia enter nearshore waters along the south Atlantic Coast when water temperatures reach 20-21 °C, usually late April and aggregate to spawn through June. Histological evaluation of gonads from these nearshore collections suggest cobia are mature and spawning in inshore waters of high salinity estuaries (Callibogue, Port Royal Sound and St. Helena Sound in SC) (Lefebvre and Denson, 2012). The inshore spawning aggregations in South Carolina have been determined to be genetically distinct from the Atlantic stock of cobia (Darden et al., 2014). These findings are corroborated by conventional tag-recapture information and show estuarine fidelity for spawning fish and natal homing annually into estuaries. Eggs and larvae are typically found in nearshore waters where there is significant retention time of estuarine waters; however, juveniles (< 2yrs of age) are only occasionally caught inshore or in protected nearshore waters making it unclear what habitat the majority of this life stage utilizes until they mature and join spawning aggregations (Lefebvre and Denson, 2012).

1.4.1.1.2 *Larval Habitat*

Little is known about the larval stages of cobia. Larvae have been collected in pelagic waters of the Gulf of Mexico (65-134 m isobaths), within a meter of the water column (Ditty and Shaw, 1992).

1.4.1.1.3 *Juvenile Habitat*

Juveniles, like larvae, have also been found in pelagic waters of the Gulf of Mexico, and are believed to utilize floating *Sargassum* as habitat in such areas (Ditty and Shaw, 1992). Early

DRAFT AMENDMENT FOR BOARD REVIEW; NOT FOR PUBLIC COMMENT

juveniles then move to high-salinity, inshore areas along beaches, river mouths, barrier islands, and bays/inlets (Swingle, 1971; McClane, 1974; Hoese and Moore, 1977; Benson, 1982).

1.4.1.1.4 *Adult Habitat*

Adults enter estuaries on a seasonal basis but otherwise inhabit coastal waters and the continental shelf (Collette et al., 1978; Benson, 1982; Robins and Ray, 1986). Although generally considered pelagic, adult cobia are found at various depths throughout the water column (Freeman and Walford, 1976). They do not appear to be substratum-specific, but extensive tagging research is currently being conducted by various states along the U.S. Atlantic coast to better determine movement and habitat usage.

1.4.1.1.4.1 South Atlantic Region

The continental shelf off the southeastern U.S., extending from the Dry Tortugas, FL, to Cape Hatteras, NC, encompasses an area in excess of 100,000 square km (Menzel, 1993). Based on physical oceanography and geomorphology, this environment can be divided into two regions: Dry Tortugas, FL, to Cape Canaveral, FL, and Cape Canaveral, FL, to Cape Hatteras, NC. The continental shelf from the Dry Tortugas, FL, to Miami, FL, is approximately 25 km wide and narrows to approximately 5 km off Palm Beach, FL. The shelf then broadens to approximately 120 km off Georgia and South Carolina before narrowing to 30 km off Cape Hatteras, NC. The Florida Current/Gulf Stream flows along the shelf edge throughout the region. In the southern region, this boundary current dominates the physics of the entire shelf (Lee et al., 1994).

In the northern region, additional physical processes are important and the shelf environment can be subdivided into three oceanographic zones (Atkinson et al., 1985; Menzel, 1993), the outer shelf, mid-shelf, and inner shelf. The outer shelf (40-75 meters (m)) is influenced primarily by the Gulf Stream and secondarily by winds and tides. On the mid-shelf (20-40 m), the water column is almost equally affected by the Gulf Stream, winds, and tides. Inner shelf waters (0-20 m) are influenced by freshwater runoff, winds, tides, and bottom friction.

Water masses present from the Dry Tortugas, FL, to Cape Canaveral, FL, include Florida Current water, waters originating in Florida Bay, and shelf water. Spatial and temporal variation in the position of the western boundary current has dramatic effects on water column habitats. Variation in the path of the Florida Current near the Dry Tortugas induces formation of the Tortugas Gyre (Lee et al., 1992; Lee et al., 1994). This cyclonic eddy has horizontal dimensions of approximately 100 km and may persist near the Florida Keys for several months. The Pourtales Gyre, which has been found to the east, is formed when the Tortugas Gyres moves eastward along the shelf. Upwelling occurs in the center of these gyres, thereby adding nutrients to the near surface (<100 m) water column. Wind and input of Florida Bay water also influence the water column structure on the shelf off the Florida Keys (Smith, 1994; Wang et al., 1994). Further downstream, the Gulf Stream encounters the "Charleston Bump", a topographic rise on the upper Blake Ridge where the current is often deflected offshore resulting in the formation of a cold, quasi-permanent cyclonic gyre and associated upwelling (Brooks and Bane,

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1978). On the continental shelf, offshore projecting shoals at Cape Fear, Cape Lookout, and Cape Hatteras, NC, affect longshore coastal currents and interact with Gulf Stream intrusions to produce local upwelling (Blanton et al., 1981; Janowitz and Pietrafesa, 1982). Shoreward of the Gulf Stream, seasonal horizontal temperature and salinity gradients define the mid-shelf and inner-shelf fronts. In coastal waters, river discharge and estuarine tidal plumes contribute to the water column structure.

The water column from Dry Tortugas, FL, to Cape Hatteras, NC, serves as habitat for many marine fish and shellfish. Most marine fish and shellfish release pelagic eggs when spawning and thus, most species utilize the water column during some portion of their early life history (Leis, 1991; Yeung and McGowan, 1991). Many fish inhabit the water column as adults. Pelagic fishes include numerous clupeoids, flying fish, jacks, cobia, bluefish, dolphin, barracuda, and the mackerels (Schwartz, 1989). Some pelagic species are associated with particular benthic habitats, while other species are truly pelagic.

1.4.1.1.4.2 Mid-Atlantic Region

Information about the physical environment of the Mid-Atlantic region was provided by the Mid-Atlantic Fishery Management Council (MAFMC) and adapted from the 2016 Mackerel, Squid, and Butterfish Specifications Environmental Assessment, available at: <http://www.greateratlantic.fisheries.noaa.gov/regs/2016/January/16msb2016specspr.html>.

Climate, physiographic, and hydrographic differences separate the Atlantic Ocean from Maine to Florida into the New England-Middle Atlantic Area and the South Atlantic Area (division/mixing at Cape Hatteras, NC). The inshore New England-Middle Atlantic area is fairly uniform physically and is influenced by many large coastal rivers and estuarine areas. The continental shelf (characterized by water less than 650 ft. in depth) extends seaward approximately 120 miles off Cape Cod, narrows gradually to 70 miles off New Jersey, and is 20 miles wide at Cape Hatteras. Surface circulation is generally southwesterly on the continental shelf during all seasons of the year, although this may be interrupted by coastal indrafting and some reversal of flow at the northern and southern extremities of the area. Water temperatures range from less than 33°F from the New York Bight north in the winter to over 80°F off Cape Hatteras in summer.

Within the New England-Middle Atlantic Area, the Northeast U.S. Continental Shelf Large Marine Ecosystem includes the area from the Gulf of Maine to Cape Hatteras, extending from the coast seaward to the edge of the continental shelf, including the slope sea offshore to the Gulf Stream. The Northeast U.S. Continental Shelf Large Marine Ecosystem is a dynamic, highly productive, and intensively studied system providing a broad spectrum of ecosystem goods and services. This region, encompassing the continental shelf area between Cape Hatteras and the Gulf of Maine, spans approximately 250,000 km² and supports some of the highest revenue fisheries in the U.S. The system historically underwent profound changes due to very heavy exploitation by distant-water and domestic fishing fleets. Further, the region is experiencing

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changes in climate and physical forcing that have contributed to large-scale alteration in ecosystem structure and function. Projections indicate continued future climate change related to both short and medium-term cyclic trends as well as non-cyclic climate change.

A number of distinct subsystems comprise the region. The Gulf of Maine is an enclosed coastal sea, characterized by relatively cold waters and deep basins, with various sediment types. Georges Bank is a relatively shallow coastal plateau that slopes gently from north to south and has steep submarine canyons on its eastern and southeastern edge. It is characterized by highly productive, well-mixed waters and fast-moving currents. The Mid-Atlantic Bight is comprised of the sandy, relatively flat, gently sloping continental shelf from southern New England to Cape Hatteras, NC. Detailed information on the affected physical and biological environments inhabited by the managed resources is available in Stevenson et al. (2004).

1.4.2 Identification and Distribution of Habitat and Habitat Areas of Particular Concern

Habitat information for Atlantic cobia is sparse. Few, if any, fishery independent surveys consistently interact with cobia in numbers adequate to develop any trends or conclusions. Much of the habitat data presented is generic for the coastal migratory pelagic fishes that include king and Spanish mackerel. Species-specific habitat information is a data and research need.

A description of the Habitat Areas of Particular Concern (HAPC) for CMP species is provided in Amendment 18 to the CMP FMP (GMFMC and SAFMC, 2011), and is incorporated herein by reference. Areas which meet the criteria for HAPCs include sandy shoals of Cape Lookout, Cape Fear, and Cape Hatteras from shore to the ends of the respective shoals, but shoreward of the Gulf Stream; The Point, the Ten-Fathom Ledge, and Big Rock (North Carolina); The Charleston Bump and Hurl Rocks (South Carolina); The Point off Jupiter Inlet (Florida); *Phragmatopoma* (worm reefs) reefs off the central east coast of Florida; nearshore hard bottom south of Cape Canaveral; The Hump off Islamorada (Florida); The Marathon Hump off Marathon (Florida); The "Wall" off of the Florida Keys; Pelagic *Sargassum*; and Atlantic coast estuaries with high numbers of Spanish mackerel and cobia based on abundance data from the Estuarine Living Marine Resources Program. Estuaries meeting this criteria for Spanish mackerel include Bogue Sound and New River (North Carolina), for cobia, Broad River (South Carolina).

1.4.3 Present Condition of Habitats and Habitat Areas of Particular Concern

1.4.3.1 Coastal Spawning Habitat: Condition and Threats Coastal Spawning

It is reasonable to assume that areas where coastal development is taking place rapidly, habitat quality may be compromised. Coastal development is a continuous process in all states and all coastal areas in the nation are experiencing significant growth. The following section describes particular threats to the nearshore habitats in the South Atlantic that meet the characteristics of suitable spawning habitat for cobia.

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One threat to the spawning habitat for cobia is navigation and related activities such as dredging and hazards associated with ports and marinas (ASMFC, 2013). According to the SAFMC (1998), impacts from navigation related activities on habitat include direct removal/burial of organisms from dredging and disposal of dredged material, effects due to turbidity and siltation; release of contaminants and uptake of nutrients, metals, and organics; release of oxygen-consuming substances, noise disturbance, and alteration of the hydrodynamic regime and physical characteristics of the habitat. All of these impacts have the potential to substantially decrease the quality and extent of cobia spawning habitat.

Besides creating the need for dredging operations that directly and indirectly affect spawning habitat for cobia, ports also present the potential for spills of hazardous materials. The cargo that arrive and depart from ports include highly toxic chemicals and petroleum products. Although spills are rare, constant concern exists, since huge expanses of productive estuarine and nearshore habitat are at stake. Additional concerns related to navigation and port utilization are discharge of marine debris, garbage, and organic waste into coastal waters.

Maintenance and stabilization of coastal inlets is of concern in certain areas of the southeastern U.S. Studies have implicated jetty construction to alterations in hydrodynamic regimes, thus, affecting the transport of estuarine-dependent organisms' larvae through inlets (Miller et al., 1984; Miller, 1988).

1.4.3.2 Estuarine Nursery, Juvenile and Sub-adult Habitat: Condition and threats

Coastal wetlands and their adjacent estuarine waters likely constitute primary nursery, juvenile, and sub-adult habitat for cobia along the coast. Between 1986 and 1997, estuarine and marine wetlands nationwide experienced an estimated net loss of 10,400 acres. However, the rate of loss was reduced over 82% since the previous decade (Dahl, 2000). Most of the wetland loss resulted from urban and rural activities and the conversion of wetlands for other uses. Along the southeast Atlantic coast, the state of Florida experienced the greatest loss of coastal wetlands due to urban or rural development (Dahl, 2000). However, the loss of estuarine wetlands in the southeast has been relatively low over the past decade, although there is some evidence that invasion by exotic species, such as Brazilian pepper (*Schinus terebinthifolius*), in some areas could pose potential threats to fish and wildlife populations in the future (T. Dahl, pers. comm.).

Throughout the coast, the condition of estuarine habitat varies according to location and the level of urbanization. In general, it can be expected that estuarine habitat adjacent to highly developed areas will exhibit poorer environmental quality than more distant areas. Hence, environmental quality concerns are best summarized on a watershed level.

Threats to estuarine habitats of the southeast were described in Amendment 2 to the Red Drum FMP (ASMFC, 2002). Due to the cobia's similar dependence on estuarine habitats throughout its early life history, these same threats are likely to impact cobia as well.

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Nutrient enrichment of estuarine waters throughout the southeast is a major threat to the quality of estuarine habitat. Forestry practices contribute significantly to nutrient enrichment in the southeast. Areas involved are extensive and many are in proximity to estuaries. Urban and suburban developments are perhaps the most immediate threat to cobia habitat in the southeast. The almost continuous expansion of ports and marinas in the South Atlantic poses a threat to aquatic and upland habitats. Certain navigation-related activities are not as conspicuous as port terminal construction but have the potential to significantly impact the estuarine habitat upon which cobia depend. Activities related to watercraft operation and support pose numerous threats including discharge of pollutants from boats and runoff from impervious surfaces, contaminants generated in the course of boat maintenance, intensification of existing poor water quality conditions, and the alteration or destruction of wetlands, shellfish and other bottom communities for the construction of marinas and other related infrastructure.

Estuarine habitats of the southeast can be negatively impacted by hydrologic modifications. The latter include activities related to aquaculture, mosquito control, wildlife management, flood control, agriculture and silviculture. Also, ditching, diking, draining, and impounding activities associated with industrial, urban, and suburban development qualify as hydrologic modifications that may impact the estuarine habitat. Alteration of freshwater flows into estuarine areas may change temperature, salinity, and nutrient regimes as well as alter wetland coverage. Studies have demonstrated that changes in salinity and temperature can have profound effects in estuarine fishes (Serafy et al., 1997) and that salinity partly dictates the distribution and abundance of estuarine organisms (Holland et al., 1996). Cobia may be similarly susceptible to such changes in the physical regime of their environment.

1.4.3.3 Adult Habitat: Condition and Threats

Threats to the cobia's adult habitat are not as numerous as those faced by postlarvae, juveniles, and sub-adults in the estuarine and coastal waters. Current threats to the nearshore and offshore habitats that adult cobia utilize in the South Atlantic include navigation and related activities, dumping of dredged material, mining for sand and minerals, oil and gas exploration, offshore wind facilities, and commercial and industrial activities (SAFMC, 1998).

An immediate threat is the sand mining for beach nourishment projects. Associated threats include burial of bottoms near the mine site or near disposal sites, release of contaminants directly or indirectly associated with mining (i.e. mining equipment and materials), increases in turbidity to harmful levels, and hydrologic alterations that could result in diminished desirable habitat.

Offshore mining for minerals may pose a threat to cobia habitat in the future. Currently, no mineral mining activities are taking place in the South Atlantic. However, various proposals to open additional areas off the Atlantic coast to seabed mining have been introduced by the Federal Executive and Legislative branches.

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Offshore wind farms may also pose a threat to cobia habitat throughout different life stages in the future (ASMFC, 2012). The first US offshore wind farm was established in 2016. Several additional wind farm projects have been proposed, including locations off the US Mid-Atlantic, which could impact cobia habitat.

1.5 IMPACTS OF THE FISHERY MANAGEMENT PROGRAM

1.5.1 Biological and Environmental Impacts

Significant recreational fishery overages of the ACL in 2015 and 2016 raise concerns over the future status of the stock and potential of the stock becoming overfished. Adoption of coastwide management measures can provide flexibility to states while maintaining harvest within the ACL and protecting a portion of the spawning stock. Limits on catch can provide additional protection throughout cobia's geographic range to support a sustained population and fishery.

1.5.2 Social Impacts

This section and the following, *1.5.3 Economic Impacts*, summarize selected impact considerations that are mainly based on social and economic analyses in Chapters 3 and 4 of Amendment 31 to the CMP FMP (see SAFMC, 2018) and Amendment 20B to the CMP FMP (GMFMC and SAFMC, 2014).

In order to understand the possible social impacts that any proposed and/or new rules and regulations may have on participants in any fishery, in-depth community profiles are needed. Very limited applied social science research has been conducted on recreational and commercial fishing communities identified as being linked to Atlantic cobia harvesting. Therefore, adequate information to qualitatively or quantitatively address the possible social impacts of proposed cobia fishery management actions on communities are not currently available.

Regardless, notable social science research completed during the previous decade included a NOAA funded project that employed rapid assessment methods to document the location, type, and history of fishing communities in the South Atlantic region. SAFMC staff worked collaboratively with the University of Florida on a project that described fishing communities in a broad manner (for example, whether the community is characterized mostly by the commercial fishing sector, the for-hire component, the recreational angler component or some combination of these), and linked on-the-ground fieldwork with the collection of secondary data including U.S. Census records, landings, permits, and state information (see Jepson et al., 2005). This research contributed to forming an important historical South Atlantic fishery baseline dataset that has assisted in the measurement of social and economic impacts related to fishery management actions and has also helped to better understand external socioeconomic factors (e.g. demand for coastal waterfront property) influencing South Atlantic fishing communities.

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Limited, currently available social impact information includes demographic descriptions of South Atlantic fishing communities (see the SERO (2019) Community Snapshots 10¹) as well as three sets of 2016 indices generated to judge the potential social vulnerability of Atlantic fishing communities (SAFMC, 2018a). The indices' variables were identified through the literature as being important components that contribute to a community's vulnerability (Jepson and Colburn, 2013; Jacob et al., 2013). While this information is useful in broadly characterizing fishing communities, there is currently no social impact information available that is specific to Atlantic cobia fisheries.

1.5.2.1 Recreational Fishery

The recreational sector of the Atlantic cobia fishery is much larger than the commercial sector, and cobia is an important species for the recreational sector that includes the private angler and for-hire components. Recreational landings estimates indicate that private recreational anglers constitute the dominant component of the fishery (Table 4), and most landings are associated with Virginia and North Carolina (Table 3). Therefore, implementation of Amendment 1 to the cobia FMP is expected to impact the recreational sector. Specifically, it is likely that social impacts would be most significant for private recreational fishermen and related businesses as well as for-hire businesses and their angler customers in Virginia and North Carolina.

Using 2016 data, South Atlantic (excluding Florida) fishing communities were evaluated according to recreational engagement scores, which were based on a factor analysis of several criteria including the number of charter permits and level of recreational fishing infrastructure (SAFMC, 2018). This metric was not specific to cobia, so it was assumed that the overall recreational engagement measure would be generally congruent with engagement specific to cobia. SAFMC (2018) concluded that the South Atlantic communities of Atlantic Beach, Hatteras, Manteo and Morehead City, North Carolina, and Charleston, Hilton Head, Little River and Murrells Inlet, South Carolina all exceeded the 2016 ranking threshold of 1 standard deviation and therefore would "...likely have some dependence upon recreational fishing."

With regard to Virginia recreational fishing communities, SAFMC (2018) noted that recreational fishing communities of Northumberland and Hampton have seen recent increases (e.g. during 2015 and/or 2016) in their cobia harvest. Input from public comments and attendance at public hearings also indicted that Virginia Beach, Virginia, is an important community for recreational cobia harvesting.

¹ https://sero.nmfs.noaa.gov/sustainable_fisheries/social/community_snapshot/index.html

1.5.2.2 Commercial Fishery

The commercial sector has historically operated primarily as a bycatch fishery. The 2019 ACL for the commercial fishery is 50,000 lb from Georgia-New York. Current measures and those proposed in this document essentially maintain status quo for the commercial fishery. Depending on the timing of any closure, social impacts would vary.

Based on a regional quotient (RQ) metric, the SAFMC (2018a) identified and ranked the top 16 coastal communities in terms of their annual commercial landings of cobia within the South Atlantic states using 2010-2016 dealer data aggregated at the community level. The RQ measures how commercial harvest is distributed throughout a region and can be used to identify “top commercial communities”. This is helpful in determining which communities might be most affected by changes to commercial cobia management. During the analysis period, the community of Washington, NC, saw a marked increase in its cobia RQ in 2015 and 2016, especially since it had little to no reported landings before 2015. Avon, NC, had a marked decline in their 2014 RQ, followed by an increase in 2015 and 2016. Wanchese, NC, was previously in the top 16 but has dropped out in recent years (2015-2016). In general, most of the Carolinas’ commercial fishing communities that engaged in cobia harvesting had a decline in their RQs (SAFMC, 2018). Commercial landings of cobia in Virginia have been increasing recently, though no communities displayed consistently high RQs.

1.5.3 Economic Impacts

1.5.3.1 Recreational Fishery

Consumer spending on various goods and services needed for recreational fishing generates economic activity that spurs direct, indirect and induced economic effects or economic contribution effects² that ripple through the region. Estimates of the business activity, i.e. economic contribution effects, associated with recreational angling for Atlantic cobia annually averaged for the 2012-2016 period were approximated by the SAFMC (2018a) using average trip-level impact coefficients (NOAA Fisheries, 2017) and related data provided by the NOAA Fisheries Office of Science and Technology. The SAFMC estimated that the total average annual (2012-2016) economic contribution sales effects (in 2016 dollars) attributable to Atlantic recreational cobia target trips based on aggregating state-level effects for the Carolinas, Georgia and Virginia cobia were approximately \$13.0 million and these sales generated about

² In this section, the term “economic contribution” denotes an economic distributional analysis that estimates the status quo economic contributions (e.g. jobs and household income) to local and/or regional economies (see Watson et al., 2007) due to economic activities such as those associated with recreational or commercial fishing. However, economic contribution analysis results (e.g. total economic contribution sales and income effects) should not be interpreted to represent the net economic impact effects if managed fish species were not available for harvest or purchase (SAFMC, 2018b).

DRAFT AMENDMENT FOR BOARD REVIEW; NOT FOR PUBLIC COMMENT

\$4.6 million in income and 130 jobs in the recreational harvest sector (SAFMC, 2018a). However, the SAFMC (2018b) noted that these figures were based upon MRIP trip estimates before effort recalibrations took place in 2018. Economic contribution effects may be several times larger if based on recalibrated MRIP effort estimates. Additionally, these estimates may represent lower bounds on the economic activities associated with recreational cobia fishing because expenditures on durable goods were not included (SAFMC, 2018a). Furthermore, as noted by the SAFMC (2018b), aggregating state-level economic contribution estimates to produce a regional four state total most likely underestimates the actual amount of total business activity because state-level economic contribution multipliers do not account for interstate and interregional trading (IMPLAN, 2019).

The Commission currently limits Atlantic cobia recreational harvests to the recreational Atlantic cobia ACL established by the SAFMC (ASMFC, 2017). Upon approval of Amendment 1, the level of recreational harvest allowed by the previous ACL would be maintained as the recreational quota, at least until completion of the next stock assessment. However, if Board actions following a future assessment lead to changes in the recreational quota, this could lead to shifts in benefits for the recreational sector due to changes in the amount or quality of fishing trips. Recreational sector quota changes might also lead to changes in local economic contribution effects due to shifts in Atlantic cobia fishing-related expenditures by recreational anglers and individuals in the for-hire component (e.g., local spending on lodging, restaurant meals, groceries, etc.).

While SAFMC estimates of cumulative economic effects of previous closures of the Atlantic cobia fishery in federal waters are not available, it is apparent that these in-season closures had a proportionally more negative economic effect on recreational and related fishing communities in Georgia and South Carolina compared to those found further north (SAFMC, 2018a). If Amendment 1 reduces the likelihood or frequency of fishery closures in federal waters, it could possibly generate additional beneficial effects in the social and economic environments of these states.

1.5.3.2 Commercial Fishery

The commercial fishery for Atlantic cobia is small, though landings have been increasing in Virginia recently (see Table 1). Dockside prices (in 2017 \$) are typically between \$2/lb and \$3/lb and total dockside revenues for the fishery are usually less than \$200,000 annually, although they did exceed \$200,000 (in 2017 \$) in 2015 and 2016. Commercial vessels landing Atlantic cobia rely on other species for the majority of their revenues, with cobia accounting for less than 1% of annual all-species revenues (in 2016 \$) on average for vessels landing cobia in Georgia, South Carolina, and North Carolina, from 2012 through 2016 (SAFMC 2018a). Using an input-output model developed to look at economic impacts of the seafood sectors broadly, SAFMC estimates that the commercial fishery for Atlantic cobia contributes 21 jobs, \$1.6 million in sales impacts, and \$0.8 million in value added impacts to the regional economy (SAFMC 2018a).

DRAFT AMENDMENT FOR BOARD REVIEW; NOT FOR PUBLIC COMMENT

If Commission Atlantic cobia commercial fishery management measures implemented in the FMP are similar to the current federal CMP FMP regulations, the SAFMC (2018a) concluded that there should be no substantial near-term changes in commercial fishery economic value and economic impact effects compared to the current federal management regime. However, the SAFMC noted that it was uncertain how future Commission regulations might affect Atlantic cobia commercial harvest in federal waters (SAFMC, 2018a), hence making the distribution, magnitude, and direction (negative or positive) of possible economic effects unclear.

1.5.4 Other Resource Management Efforts

1.5.4.1 Artificial Reef Development/Management

Approximately 120,000 acres (155 nm²) of ocean and estuarine bottom along the South Atlantic coast have been permitted for the development of artificial reefs (ASMFC, 2002). The Georgia Department of Natural Resources is responsible for the development and maintenance of a network of man-made reefs both in estuarine waters and in the open Atlantic Ocean. Funding for the artificial reef program is provided by Federal Aid in Sport Fish Restoration, fishing license revenues, and private contributions. To date, there are 15 reefs within the estuary proper, which are constructed of a variety of materials including concrete rubble, metal cages, and manufactured reef units. These provide habitat for juvenile cobia and other species of recreationally important fishes. In 2001, three "beach" reefs were constructed in locations within Georgia's territorial waters just off the barrier island beaches. These are experimental in nature, but should provide some habitat for juvenile and adult cobia. There are 19 man-made reefs in the U.S. Exclusive Economic Zone (EEZ) ranging from depths of 40 to 130 feet. These reefs are constructed of a variety of materials including surplus vessels, concrete rubble, barges, bridge spans, and manufactured reef units. Both juvenile and adult cobia are known to use these reefs.

New Jersey has also developed and invested in an artificial reef program, with the state agency involved since 1984. Similarly, Delaware has invested in an artificial reef program, with 14 reef sites within Delaware Bay. Artificial reef construction is especially important in the Mid-Atlantic region, where near shore bottom is usually featureless sand or mud.

States should continue support for habitat restoration projects, including oyster shell recycling and oyster hatchery programs as well as seagrass restoration, to provide areas of enhanced or restored bottom habitat.

1.5.4.2 Bycatch

Cobia are uncommon bycatch components in most U.S. South and Mid-Atlantic fisheries. Mortalities resulting from cobia released from varying depths in the hook and line fisheries and regulatory discards from the large mesh gill fisheries in North Carolina are unknown.

2.0 GOALS AND OBJECTIVES

2.1 HISTORY OF MANAGEMENT

The Commission’s Interstate Fishery Management Plan for Atlantic Migratory Group Cobia (FMP) was approved in November 2017 and first implemented in the 2018 fishing year (ASMFC, 2017). This FMP established the Commission’s first involvement in Atlantic cobia management. The FMP was designed to complement federal management of Atlantic cobia by the SAFMC through the CMP FMP. Complementary measures mirrored by the FMP included vessel, bag/possession, and minimum size limits. Under Commission management, states were allowed to establish measures up to, but not exceeding, several measures that matched those of the CMP FMP. The Commission’s FMP also established a Recreational Harvest Limit (RHL), derived from the federal Annual Catch Limit. The RHL is allocated among non-*de minimis* states (those harvesting greater than one percent of the coastwide recreational harvest) as state harvest targets (Table 8). Average landings over 3-year periods are evaluated against harvest targets to determine whether states can maintain their current recreational vessel limit and season or must adjust these measures to achieve their target. The FMP also established *de minimis* criteria and management options for the recreational fishery.

Table 8. State recreational harvest targets (lb) as established through the Commission’s Cobia FMP. These targets were set based on recreational landings estimated with effort estimates from the Coastal Household Telephone Survey (CHTS). Therefore, these targets should only be compared to CHTS landings estimates (Appendix I, Table A2).

State	Recreational Harvest Target (lb)
VA	244,292
NC	236,316
SC	74,885
GA	58,311

2.2 PURPOSE AND NEED FOR ACTION

Currently, the Commission’s FMP is designed for complementary management with the CMP FMP, with several management measures dependent upon the CMP FMP or SAFMC management. Since Regulatory Amendment 31 to the CMP FMP was approved and the Final Rule’s implementation began on March 21, 2019 (NOAA, 2019), Atlantic cobia is no longer managed by a federal FMP. Additionally, this means that the SAFMC will no longer be recommending management measures for Atlantic cobia in federal waters to NOAA Fisheries.

Previous management relied on the SAFMC to set the ACL, then adapted that figure to the needs of Commission management. However, with the transition to sole management by the Commission comes the responsibility of specifying acceptable harvest levels. A harvest specification process allows such levels to be set in an expedient manner, allowing a quick response to significant events such as stock assessments, but also within bounds specified in

DRAFT AMENDMENT FOR BOARD REVIEW; NOT FOR PUBLIC COMMENT

this amendment. Certain aspects of management that are outside the specification process would require longer processes with more opportunities for public input.

2.3 GOAL

Issue 1

Bold language is a proposed addition to the following language from the FMP, subject to public comment and Board approval.

The goal of Amendment 1 is to provide for an efficient management structure that implements coastwide management measures, **providing equitable and sustainable access to the Atlantic cobia resource throughout the management unit** in a timely manner.

2.4 OBJECTIVES

Issue 2

Bold language is a proposed addition to the following language from the FMP, subject to public comment and Board approval.

The following objectives are intended to support the goal of Amendment 1.

- 1) Provide a flexible management system to address future changes in resource abundance, scientific information, and fishing patterns among user groups or area.
- 2) **Implement management measures that allow stable, sustainable harvest of Atlantic cobia in both state and federal waters.**
- 3) **Establish a harvest specification procedure that will allow flexibility to respond quickly to stock assessment results or problems in the fishery, while also providing opportunities for public input on potential significant changes to management.**
- 4) Promote continued, cooperative collection of biological, economic, and social data required to effectively monitor and assess the status of the cobia resource and evaluate management efforts.
- 5) Manage the cobia fishery to protect both young individuals and established breeding stock.
- 6) Develop research priorities that will further refine the cobia management program to maximize the biological, social, and economic benefits derived from the cobia population.

2.5 MANAGEMENT UNIT

The management unit is defined as the cobia (*Rachycentron canadum*) resource from Georgia through New York within U.S. waters of the northwest Atlantic Ocean, from the U.S. Atlantic coastal estuaries eastward to the offshore boundaries of the EEZ. The selection of this management unit is based on genetic analysis and tag-recapture data described in *Section 1.2.1.1*.

DRAFT AMENDMENT FOR BOARD REVIEW; NOT FOR PUBLIC COMMENT

2.5.1 Management Area

The management area is the Atlantic coast distribution of the resource from Georgia through New York.

2.6 DEFINITION OF OVERFISHING

Issue 3

Prior to this amendment and Amendment 31 to the CMP FMP, the CMP FMP specified that overfishing is occurring when current fishing mortality (F_{Current}), defined as the geometric mean of the 3 most recent annual estimates of F , exceeds the maximum fishing mortality threshold (MFMT), set at the fishing mortality that achieves maximum sustainable yield (MSY) (F_{MSY}) (SAFMC, 2011). The CMP FMP also specified that the stock is overfished when the current spawning stock biomass (SSB_{Current}), defined as the geometric mean of the 3 most recent annual estimates of SSB , is less than the minimum stock size threshold (MSST), defined as $MSST = [(1-M) \text{ or } 0.5, \text{ whichever is greater}] * B_{\text{MSY}}$, where M is natural mortality and B_{MSY} is the biomass at which MSY is achieved (SAFMC, 2011). Estimates for fishing mortality, biomass, and threshold levels are determined through a stock assessment. These levels were unknown at the time of CMP Amendment 18, but were updated following the most recent stock assessment, SEDAR 28, through CMP Amendment 20B (GMFMC and SAFMC, 2014). Through Amendment 1, these overfished and overfishing definitions shall be maintained until the Board accepts new definitions through the process defined below.

Although management of Atlantic cobia will occur solely through Amendment 1, without any complementary SAFMC FMP, stock assessments will primarily continue to be conducted through the Southeast Data, Assessment, and Review (SEDAR) process. The next peer-reviewed assessment is scheduled for completion early in 2020.

To allow flexibility in responding to assessment results, Amendment 1 allows for the incorporation of new, peer-reviewed stock status determination criteria (both the methods used to set reference points and the reference point values), when available, through Board action. This allows flexibility to incorporate changes to the definitions of MFMT or MSST as the best scientific information becomes available, while maintaining objective and measurable status determination criteria for identifying when the stock is overfished. Similar actions have been taken with other Commission-managed species' FMPs (e.g., Addendum XIX to the FMP for Summer Flounder, Scup and Black Sea Bass, Addendum XVI to the FMP for American Lobster, and Amendment 3 to the FMP for Northern Shrimp). To attain this information, stock assessment and peer review terms of reference will include evaluations of existing or proposed biological reference point definitions and values (if estimable).

This action allows for the incorporation of new, peer-reviewed stock status determination criteria as soon as it becomes available, through the harvest specification process (*Section 4.1*), allowing timely use of the best available scientific information in the management of Atlantic

DRAFT AMENDMENT FOR BOARD REVIEW; NOT FOR PUBLIC COMMENT

cobia. This action does not have a direct influence on fishing effort or fishery removals but, instead, facilitates use of the most current scientific information available to define the status determination criteria for the stock, so that the stock can be managed to prevent overfishing and such that it is not overfished.

The following describes the potential sources of peer-reviewed scientific advice on status determination criteria and the current process of how that scientific advice will move forward in the development of management advice through the Board's specification process.

Specific definitions or modifications to the status determinations criteria and their associated values would result from the most recent peer-reviewed stock assessments and their panelist recommendations. The primary peer-review processes for Atlantic cobia that may be used are:

- The SEDAR Peer Review process, which is the primary mechanism used in the Southeast Region at present to review scientific stock assessment advice, including status determination criteria, for Atlantic cobia. As part of this process, the Commission appoints scientists to serve as reviewers along with those appointed by SEDAR.
- The Commission's Independent External Peer Review process, which follows a similar process to SEDAR in contracting independent experts to review scientific stock assessment advice, including status determination criteria, but allows the Commission more flexibility in determining the timing of a benchmark assessment.

The above list of peer review entities does not preclude groups from bringing independent stock assessments performed for the Atlantic cobia stock forward to the attention of the Commission. The Commission may recommend that these independent reviewed stock assessments pass through either of the peer review processes above, to ensure that sufficient peer review of the information occurs before the scientific advice can be used in the management process.

The SEDAR and Commission review processes both operate with a goal of reaching consensus. If consensus opinion of the peer review is to maintain current definitions of status determination criteria for Atlantic cobia, values produced by current criteria definitions may be updated to reflect the most recent data without any specific Board action, as using updated values is implied in this provision of Amendment 1. In this case, the scientific advice can then move forward such that management advice can be developed. If consensus opinion of the peer review is to recommend changes or different definitions of the status determination criteria and the panelists reach consensus as to how these status determination criteria should be changed, this advice may also move forward without any specific Board action such that management advice can be developed. Under these first two potential scenarios, consensus has been reached. Therefore, the scientific advice moving forward to the Board's management advisory groups should be clear.

A third potential scenario is that peer review scientific advice with respect to the incorporation of status determination criteria are split (consensus is not reached) or uncertain

DRAFT AMENDMENT FOR BOARD REVIEW; NOT FOR PUBLIC COMMENT

recommendations are provided (weak consensus). In this case, the scientific advice provided by the reviewers may be conflicting or may not be specific enough to provide adequate guidance as to how the MFMT or MSST should be defined. Additionally, the resulting management advice that should be developed from these changes may be unclear. Under these circumstances, the Board may engage the Commission's Assessment Science Committee (ASC) to review the information and recommendations provided by the peer review panel and Technical Committee. Based on the terms of reference provided to the ASC, they may prepare a consensus report clarifying the scientific advice for the Board as to what the status determination criteria should be. At that point, the scientific advice on how the status determination criteria should be defined will be clear and can move forward such that management advice can be developed.

3.0 MONITORING PROGRAM SPECIFICATION

In order to meet the goals and objectives of Amendment 1, the collection and maintenance of quality data is necessary.

Updates from the FMP have been made to monitoring sections to reflect the most up-to-date information about the Atlantic cobia fishery.

3.1 SUMMARY OF MONITORING PROGRAMS

The FMP included no requirements regarding fishery-dependent monitoring programs, but all state fishery management agencies were encouraged to pursue full implementation of the standards of the Atlantic Coastal Cooperative Statistics Program (ACCSP). The Management Board recommended a transitional or phased-in approach be adopted to allow for full implementation of the ACCSP standards. Participation by program partners in the ACCSP does not relieve states from their responsibilities in collating and submitting harvest/monitoring reports to the Commission as required under the FMP.

3.1.1 Commercial Catch and Landings Program

The ACCSP's standard for commercial catch and effort statistics is mandatory, trip-level reporting of all commercially harvested marine species, with fishermen and/or dealers required to report standardized data elements for each trip by the tenth of the following month.

The current commercial ACL was set by the South Atlantic Fishery Management Council's (SAFMC) CMP FMP Amendment 20B; this was complemented by the ISFMP for Atlantic cobia. Quota monitoring is done by the NOAA Southeast Regional Office and landings are updated on a weekly basis. Monitoring data can be found at <https://www.fisheries.noaa.gov/southeast/commercial-fishing/2019-preliminary-south-atlantic-commercial-landings>.

Issue 4

Starting in 2020, due to the removal of the Atlantic cobia stock from SAFMC jurisdiction, all commercially non-*de minimis* states will be required to monitor cobia landings in order to maintain sustainable cobia harvest and minimize the potential for overages.

3.1.2 Recreational Catch and Effort Program

3.1.2.1 Recreational Fishery Catch Reporting Process

The Marine Recreational Information Program (MRIP) contains estimated Atlantic cobia catches from 1981-2018. The MRIP evolved from the Marine Recreational Statistics Survey (MRFSS; 1981-2003) and included improvements in survey and estimation methodologies to remove sources of bias. The MRFSS and MRIP programs were simultaneously conducted in 2004-2006 and this information was used to calibrate past MRFSS recreational harvest estimates against MRIP recreational harvest estimates.

The MRIP is a national program that uses several surveys to obtain catch and effort data at a regional level. The Access Point Angler Intercept Survey (APAIS) provides the catch rates and species composition from anglers fishing in estuarine or marine waters (not freshwater). Anglers who have completed a fishing trip are interviewed to gather catch and demographic data. Sampling is separated by fishing mode (charter boat, private/rental boat, beach/bank and man-made structures), area fished, and wave (two-month period).

The MRIP implemented the Fishing Effort Survey (FES) in 2018, an improved methodology to address several concerns with the prior survey (Coastal Household Telephone Survey) including under-coverage of the angling public, declining number of households using landline telephones, reduced response rates, and memory recall issues. The number of fishing households and the numbers of fishing trips taken are determined by FES. The data from the two surveys are combined to provide estimates of the total number of fish caught, released, and harvested. Additionally, information is collected on the weight of the harvest, total number of trips, and the number of people participating in marine recreational fishing. Improvements within APAIS and the adoption of FES have required calibrations of pre-existing data to standardize estimates and as such all recreational data presented herein represent the latest techniques. For additional information on the MRIP see <https://www.fisheries.noaa.gov/topic/recreational-fishing-data>.

Additionally, Virginia has a Cobia Recreational Permit that is required for all recreational fishermen (private and for-hire). Permit holders are required to report all trips, both those that resulted in catches and the zero-catch trips as well. Catch and effort information is captured by the reporting forms. This permit was created to supplement the MRIP sampling.

DRAFT AMENDMENT FOR BOARD REVIEW; NOT FOR PUBLIC COMMENT

3.1.2.1.1 *For Hire Fishery Catch-Reporting Process*

The ACCSP has selected the NOAA Fisheries For-Hire Survey as the preferred methodology for collecting data from charter boats and headboats (partyboats), also called the “for-hire” component. The For-Hire Survey is similar to the MRIP. The independent survey components of the For-Hire Survey include: 1) telephone survey to collect fishing effort data from vessel representatives; 2) an effort validation survey; 3) an access-site intercept survey for catch data; and 4) at-sea samplers on headboats for catch data. Using the data collected through these surveys, NOAA Fisheries generates catch and effort estimates for for-hire fisheries.

The vessel effort survey is a mandatory survey for the for-hire vessels which uses a coastwide directory of such vessels as the sampling frame for for-hire fishing effort. The directory is continually updated as intercept and telephone interviewers identify changes in the fleet. Optimal sampling levels will be determined following evaluation of the Atlantic coast For-Hire Survey results from the first three years. Until optimal sampling levels are determined, a minimum of 10% of for-hire vessels (or three charter boats and three headboats, whichever is greater), will be randomly sampled each week in each state. A vessel representative, usually the captain, is called and asked to provide information on the fishing effort associated with that vessel during the previous week. Vessel representatives are notified in advance that they have been selected for sampling and an example form is provided. To be included in the sample frame for particular wave, a vessel record must include: 1) at least one vessel representative’s telephone number; 2) the name of the vessel or a vessel registration number issued by a state or the U.S. Coast Guard; 3) the county the boat operates from during that wave, and 4) designation as either a charter or guide boat (both called “charter”) or headboat.

To validate the self-reported effort data collected through the vessel telephone survey, field samplers periodically check access sites used by for-hire vessels to observe vessel effort. Interviewers record the presence or absence of a for-hire vessel from its dock or slip, and if the vessel is absent, they try to ascertain the purpose of the trip. Those observations are compared to telephone data for accuracy and to make any necessary corrections.

3.1.2.1.1.1 Charter Boat Sampling

Vessels that meet the ACCSP definition of a charter boat, “typically hired on a per trip basis,” are sampled for catch data through an intercept site survey of anglers similar to the MRIP. The intercept survey has been ongoing since 1981.

Some partners collect for-hire effort data using Vessel Trip Reports (VTR), which are mandatory for some vessels and contain all minimum data elements collected by the For-Hire Survey. In areas where the survey runs concurrently with VTR programs, captains selected for the weekly telephone survey are permitted to fax their VTRs in lieu to being interviewed by phone.

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Additionally, South Carolina requires charter boats to submit logbook trip reports to the state on a monthly basis. These logbooks capture catch and effort information. South Carolina is working to develop validation methods for self-reported data.

3.1.2.1.1.2 Headboat Sampling

Catch and effort data for federally permitted headboats operating in the South Atlantic (North Carolina – Georgia) is monitored through the Southeast Region Headboat Survey conducted by the Southeast Fisheries Science Center. Vessel operators are required to file weekly electronic reports for all trips to report catch and effort information. Dockside samplers collect biological samples from the catches, which supplement the samples collected by the at-sea observers.

3.1.2.1.1.3 South Atlantic Mandatory Reporting for Federally-Permitted Charter Vessels

In December 2016, the South Atlantic Fishery Management Council approved an amendment that, if implemented, would require weekly electronic reporting of all charter vessels operating under a South Atlantic federal for-hire permit. The amendment proposes to implement the same reporting requirements for federally-permitted charter vessels in the snapper grouper, dolphin wahoo, and coastal migratory pelagics (mackerel and cobia) fisheries that currently exist for federally-permitted headboats. A federal permit is required for all for-hire vessels (charter and headboats) operating in the exclusive economic zone (federal waters, more than 3 miles offshore). While Atlantic cobia are no longer part of the CMP FMP, they may be caught along with the affected SAFMC-managed fisheries and, thus, reported through this program. Mandatory electronic reporting for charter vessels is expected improve the data available for management and stock assessments, improve the accuracy and timeliness of data collection, and allow fishery managers to better monitor landings and discards, and more accurately assess the impacts of regulations on the for-hire industry fishing in federal waters. Currently, the amendment has been approved by the SAFMC and is under review by NOAA Fisheries and the US Secretary of Commerce.

3.2 BIOLOGICAL INFORMATION

The ACCSP has set standards for how biological data should be collected and managed for commercial, recreational, and for-hire fisheries. Trained field personnel, known as port agents or field samplers, should obtain biological samples. Information should be collected through direct observation or through interviews with fishermen. Detailed fishery statistics and/or biological samples should be collected at docks, unloading sites, and fish houses. Biological sampling includes species identification and disposition; individual lengths and weights; extraction of hard parts including otoliths; and tissue samples such as gonads, stomachs, fin clips, and scales.

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Commercial fishery biological samples are collected by federal port agents through the Trip Interview Program (TIP). Some states supplement TIP with state sampling programs; these states are encouraged to continue with these programs.

All states are encouraged to continue sampling programs, such as freezer collection programs, that collect biological information. Information from these programs may be reviewed by the TC and Board on a case-by-case basis for use in management decisions. Examples of current programs include the Virginia Marine Resource Commission's Marine Sportfish Collection Project, North Carolina Division of Marine Fisheries Carcass Collection Program, South Carolina's Freezer Fish Program, and Georgia's Marine Sportfish Carcass Recovery Project.

Additionally, states are encouraged to continue to take biological samples from cobia encountered incidentally during fishery independent sampling to add to information on life history, stock ID, and individual weight.

3.3 SOCIAL AND ECONOMIC INFORMATION

Data on a number of variables relevant to social and economic dimensions of the cobia fishery are collected through existing ACCSP data collection programs and the MRIP; however, no explicit mandates to collect socioeconomic data for cobia currently exist. In addition to pounds landed, commercial cobia harvesters and dealers may report ex-vessel prices or value, fishing and landing locations, landing disposition, and a variety of measures capturing fishing effort. The MRIP regularly collects information on recreational fishing effort and landings, and occasionally gathers socioeconomic data on angler motivations and expenditures.

3.4 OBSERVER PROGRAMS

No specific observer programs are in place to monitor the cobia fishery. Observer programs already in place, whether state or federal, may observe capture of cobia in other monitored fisheries or specific gear types. A review of these programs should take place.

3.5 ASSESSMENT OF STOCK CONDITION

Although management of Atlantic cobia will occur solely through Amendment 1, without any complementary SAFMC FMP, stock assessments will primarily continue to be conducted through the Southeast Data, Assessment, and Review (SEDAR) process. Every five years, the Atlantic cobia stock assessment will be reviewed to determine whether stock assessment or update is necessary. The Commission, through participation in the SEDAR Steering Committee, will coordinate with partnering organizations to schedule SEDAR assessments. This schedule may be modified as needed to incorporate new information and in consideration of the Atlantic cobia stock.

Stock assessments may also be conducted through the Commission's assessment process by the Cobia Stock Assessment Subcommittee (SAS, *Section 4.8.5*). For this process, the TC and

DRAFT AMENDMENT FOR BOARD REVIEW; NOT FOR PUBLIC COMMENT

Advisory Panel (AP) will meet to review the stock assessment and all other relevant data sources. The stock assessment report shall follow the general outline as approved by the Interstate Fisheries Management Program Policy Board (ISFMP Policy Board) for all Commission-managed species. In addition to the general content of the report as specified in the outline, the stock assessment report may also address the specific topics detailed in the following sections. Specific topics in the stock assessment may change as the SAS continues to provide the best model and metrics possible to assess the Atlantic cobia stock.

3.5.1 Assessment of Annual Recruitment

No programs currently collect data necessary to assess annual recruitment of cobia.

The original FMP (ASMFC, 2017) recommended examination of possible surveys from which Atlantic cobia abundance indices could be developed, as these indices would be valuable for informing future stock assessments. Pre-data workshop calls for SEDAR 58 cobia assessment did not identify any new data sources for recruitment.

3.5.2 Assessment of Spawning Stock Biomass

SEDAR 28 (2013) provides the most current information on spawning stock biomass. While the stock is not currently considered overfished, the 2013 stock assessment does indicate declines in biomass over the last few years of the assessment (terminal year: 2010). New information should be revealed by SEDAR 58, scheduled for completion in early 2020.

3.5.3 Assessment of Fishing Mortality Target and Measurement

SEDAR 28 (2013) provides the most current information on fishing mortality. The stock is not currently considered to be undergoing overfishing. Recent overages of the ACL for both the commercial and recreational sectors have raised concerns. New information should be revealed by SEDAR 58, scheduled for completion in early 2020.

3.6 STOCKING PROGRAM

The Virginia Institute of Marine Science (VIMS) began an experimental stocking program in the Chesapeake Bay in 2003 to explore stock enhancement and study juvenile movement and habitat utilization.³ Juvenile cobia were tagged and released into the Chesapeake Bay in 2003, 2006, 2007, and 2008, with more than 300 tagged releases occurring in those first two years. Recapture information indicated habitats ranged from 1-4 m in depth and consisting of sandy and grass-bed bottoms. It is unclear whether this program had any effect on the population of

³ https://www.vims.edu/research/departments/fisheries/programs/tagging_research/cobia/

DRAFT AMENDMENT FOR BOARD REVIEW; NOT FOR PUBLIC COMMENT

cobia in Virginia, although it is assumed to have had minimal impact due to the small number of releases.

South Carolina has an experimental stock enhancement program designed to evaluate the methodology necessary for augmenting wild populations. Experiments have been designed to determine the best size and time of year to stock cobia in coastal rivers focusing on augmentation of the distinct population segment of cobia in South Carolina. Locally-caught brood stock are conditioned to spawn in recirculating seawater systems using temperature and photoperiod conditioning and hormone implantations to facilitate final oocyte maturation. Multiple years of spawning and grow out have occurred, and more than 50,000 (60-350 mm TL) cobia have been stocked in the Colleton and Broad rivers of Port Royal Sound. All fish are genetically identifiable to broodstock group and can be identified in the catch and distinguished genetically from wild-spawned fish. Cobia tissue samples collected from charter boat captains and from carcasses collected at tournaments and cooperating recreational anglers show that as much as 50% of the catch from the 2007 year-class were from hatchery releases and that these animals have persisted in the catch each year since release. This research has demonstrated the application of stock enhancement as an additional management tool for cobia. In addition to research on production of animals, the SCDNR has developed predictive individual-based genetic models to determine the appropriate number of cobia that should be produced and stocked each year in order to grow the population while minimizing any negative impact on the genetic health of the wild population.

3.7 BYCATCH REDUCTION PROGRAM

Bycatch is defined as “portion of a non-targeted species catch taken in addition to the targeted species. It may include non-directed, threatened, endangered, or protected species, as well as individuals of the target species below a desired or regulatory size” (ASMFC, 2009). Bycatch can be divided into two components: incidental catch and discarded catch. Incidental catch refers to retained or marketable catch of non-targeted species, while discarded catch is the portion of the catch returned to the sea because of regulatory, economic, or personal considerations.

The recreational cobia fishery is largely a directed fishery with bycatch occurring in fisheries directed towards other species. Mortality associated with regulatory discards of undersized cobia or fish taken after the bag limit is reached is largely unknown but likely varies based on depth caught and methods used to boat the catch. Several ongoing tagging studies will aid in estimating survivability.

The commercial cobia fishery tends to be a bycatch fishery in the hook-and-line and large mesh gill net fisheries. Regulatory discards do occur, but the mortality associated with those discards varies with gear. Juvenile cobia have been documented as bycatch in shrimp trawls off the Atlantic coast, although this is not a frequent occurrence. From 1998-2010, only five cobia were observed from approximately 1,700 shrimp nets and only three of the five were within the stock boundary (SEDAR, 2013). As of Amendment 2 to the federal Shrimp Fishery Management

DRAFT AMENDMENT FOR BOARD REVIEW; NOT FOR PUBLIC COMMENT

Plan for the South Atlantic Region (SAFMC, 1996), all shrimp trawlers in the South Atlantic are required to use bycatch reduction devices.

3.8 HABITAT PROGRAM

Particular attention should be directed toward cobia habitat utilization and habitat condition (environmental parameters). A list of existing state and federal programs generating environmental data such as sediment characterization, contaminant analysis, and habitat coverage (marsh grass, oyster beds, submerged aquatic vegetation) should also be produced and updated as new information arises. Habitats utilized by cobia range from the middle portions of estuaries and coastal rivers out to and likely beyond, the shelf break. Thus, virtually any study generating environmental data from estuarine or coastal ocean systems could be of value.

4.0 MANAGEMENT PROGRAM

4.1 HARVEST SPECIFICATION PROCESS

Issue 5

Options

- a. The coastwide total harvest quota, vessel limits, possession or bag limits, minimum size limits, and commercial closure triggering mechanism may be specified by Board action for up to two years. Subsequent harvest specification would occur for implementation after expiration of the previous specification (up to two years apart) or following a completed stock assessment.
- b. The coastwide total harvest quota, vessel limits, possession or bag limits, minimum size limits, and commercial closure triggering mechanism may be specified by Board action for up to three years. Subsequent harvest specification would occur for implementation after expiration of the previous specification (up to three years apart) or following a completed stock assessment.
- c. The coastwide total harvest quota, vessel limits, possession or bag limits, minimum size limits, and commercial closure triggering mechanism may be specified by Board action for up to four years. Subsequent harvest specification would occur for implementation after expiration of the previous specification (up to four years apart) or following a completed stock assessment.

For all options, in years when harvest specifications are conducted, they will occur no later than the Fall Board Meeting, and resulting measures will be implemented in the following year.

4.2 SECTOR QUOTA ALLOCATION

Issue 6

The recreational quota will be 92% of the coastwide total harvest quota set through Board specification. The commercial quota will be 8% of the coastwide total harvest quota set through Board specification. These allocation percentages were derived from those previously in place through the CMP FMP. These percentages may be changed in the future through an addendum to this amendment.

4.3 RECREATIONAL FISHERY MANAGEMENT MEASURES

4.3.1 Size Limit

All states shall maintain a recreational minimum size limit of 36 inches fork length or the total length equivalent (40 inches).

4.3.2 Bag Limit

All states shall maintain a 1 fish per person recreational bag limit.

4.3.3 Vessel Limit

All states shall maintain a recreational daily vessel limit, not to exceed 6 fish per vessel.

4.3.4 Seasons and Allocations

Management of the coastwide recreational quota shall be accomplished by state-specific seasons and allocations. One percent of the recreational quota shall be set aside to account for harvests in *de minimis* states.

State-defined seasons must adhere to state shares (harvest targets) of the coastwide recreational quota. Percentage allocations are based on states' percentages of the coastwide historical landings in numbers of fish, derived as 50% of the 10-year average landings from 2006-2015 and 50% of the 5-year average landings from 2011-2015. Table 9 shows landings used to develop percentage allocations. Numbers of fish are used for allocation percentages to eliminate confusion from differences in average weights applied to numbers data by the MRIP and Southeast Fishery Science Center (SEFSC). Table 10 shows state allocation percentages of the recreational quota, including a one percent set aside that accounts for landings in states with *de minimis* status for their recreational fisheries. These percentages would be used to determine state allocation percentages regardless of whether pounds or numbers of fish are used to evaluate compliance.

DRAFT AMENDMENT FOR BOARD REVIEW; NOT FOR PUBLIC COMMENT

Table 9. Average AMG Cobia recreational landings in numbers (n) from Georgia through Virginia for establishing soft recreational harvest targets as an average of the 5-year and 10-year time periods (5-yr/10-yr Average), 2011-2015 and 2006-2015. Data Source: SEFSC (with headboat), queried 2017.

State	5-yr/10-yr Average
Georgia	n = 2,298
South Carolina	n = 2,935
North Carolina	n = 9,273
Virginia	n = 9,589
Total	n = 24,095

Table 10. Allocation percentages for Atlantic cobia by state, with recognition of 1% of the quota being set aside for recreational harvest in *de minimis* states, based on percentages derived from Table 9. State allocation percentages are the same as those found in Table 10 of the Cobia FMP (ASMFC, 2017), except with the inclusion of the 1% *de minimis* set aside from the total recreational quota.

State	Allocation Percentage
GA	9.4%
SC	12.1%
NC	38.1%
VA	39.4%
De Minimis	1.0%
Total	100%

4.3.5 Evaluation of Landings against State Harvest Targets and Overage Response

Issue 7

Bold language is a proposed addition to the following language from the FMP, subject to public comment and Board approval.

The following language describing the landings evaluation process and response to an overage is similar in concept to what was included in the FMP. However, additional details are included, which further clarify the implementation protocol with consideration of the new harvest specification process (*Section 4.1*).

Recreational landings will be evaluated against state recreational harvest targets at the same time (i.e., in the same meeting) as Board specification of harvest. Recreational landings for each non-*de minimis* state will be evaluated against that state’s target as an average of annual landings. **The timeframe for this average will only include years that had the same recreational season and vessel limit. The timeframe will include the most recent years with**

DRAFT AMENDMENT FOR BOARD REVIEW; NOT FOR PUBLIC COMMENT

the same season and vessel limit. If the same season and vessel limit have been in place for at least three years, the timeframe will include the three most recent years under these regulations (a rolling average). If the same season and vessel limit have been in place for less than three years, the timeframe will include all years under these regulations.

The terminal year of the evaluated time period will be the year before the evaluation and specification processes are conducted, e.g., 2019 would be the terminal year for data used in an evaluation conducted in 2020, coinciding with a specification of regulations for 2021-2023.

If a state's averaged recreational landings exceed its annual recreational harvest target, that state must adjust its recreational vessel limit or season to reduce harvest, such that its average landings over the following period of specified harvest will achieve the state recreational harvest target.

States reporting a **consistent** under-harvest during an evaluation time period **of at least 3 years** may present a plan to extend seasons or increase vessel limits, if desired, to allow increased harvests that will not exceed the harvest target.

Changes to management measures for states with overages or states that wish to liberalize management measures must be reviewed by the TC and approved by the Management Board prior to implementation. A hypothetical example of several potential evaluation and response scenarios is depicted in Table 11.

Allocation of the recreational quota may be reevaluated by the Management Board if a recreational *de minimis* state exceeds the recreational *de minimis* landings threshold. **Reallocation of the recreational quota among states may be accomplished through an addendum to Amendment 1.**

DRAFT AMENDMENT FOR BOARD REVIEW; NOT FOR PUBLIC COMMENT

Table 11. A hypothetical example timeline for a state with a recreational harvest target of 100,000 lb. Evaluation years depict examples of an achieved target (2021), overharvest (2024), short-term underharvest (2027), and long-term underharvest eligible to apply for more liberal measures (2030). Rows with the same shading have the same season and vessel limit regulations. Evaluations occur in August-October, before harvest data for the current year is available.

	Year	Vessel Limit/Season	Harvest	Evaluation Status & Specification
Harvest Target: 100,000 lb	2018	Vessel Limit: 4 fish Season: June 1-Aug. 30	110,000	Not evaluated
	2019	Vessel Limit: 4 fish Season: June 1-Aug. 30	90,000	Not evaluated
	2020	Vessel Limit: 4 fish Season: June 1-Aug. 30	95,000	Not evaluated
	2021	Vessel Limit: 4 fish Season: June 1-Aug. 30	105,000 lb	Evaluated: Achieved target in 2018-2020 . Regulations set for 2022-2024.
	2022	Vessel Limit: 4 fish Season: June 1-Aug. 30	115,000 lb	Not evaluated
	2023	Vessel Limit: 4 fish Season: June 1-Aug. 30	95,000 lb	Not evaluated
	2024	Vessel Limit: 4 fish Season: June 1-Aug. 30	110,000 lb	Evaluated: Over target by average of 5,000 lb per year in 2021-2023 . Required reduction of season or vessel limit. Regulations set for 2025-2027.
	2025	Vessel Limit: 4 fish Season: June 10-Aug. 30	80,000 lb	Not evaluated
	2026	Vessel Limit: 4 fish Season: June 10-Aug. 30	75,000 lb	Not evaluated
	2027	Vessel Limit: 4 fish Season: June 10-Aug. 30	85,000 lb	Evaluated: Achieved target in 2025-2026 (different regulations in 2024). Regulations set for 2028-2030.
	2028	Vessel Limit: 4 fish Season: June 10-Aug. 30	65,000 lb	Not evaluated
	2029	Vessel Limit: 4 fish Season: June 10-Aug. 30	75,000 lb	Not evaluated
	2030	Vessel Limit: 4 fish Season: June 10-Aug. 30	70,000 lb	Evaluated: Achieved target in 2027-2029 . May submit liberalized measures for TC and Board review, for implementation in 2031. Regulations set for 2031-2033.

4.3.6 Units for Recreational Landings, Quotas, and Targets

Issue 8

Options

- a. (Status Quo) Recreational landings, quotas, and targets will be evaluated and set in units of pounds.
- b. Recreational landings, quotas, and targets will be evaluated and set in units of numbers of fish. The recreational quota and harvest targets will be converted to numbers of fish by dividing poundage amounts by the average of the three most recent annual average weights for cobia landed recreationally, as determined by data from the Marine Recreational Information Program (average weight = recreational pounds/recreational numbers).

Conversions conducted prior to the availability of average weight data from 2020 will exclude the use of 2016 and 2017, as a portion of the management unit was closed to recreational fishing during those years, and replace them with data from 2014 and 2015, respectively.

A state may submit alternative data sets that would provide more appropriate estimates of average weight for their state's fishery. Alternative data sets must be evaluated by the TC and approved by the Board before being implemented in converting that state's recreational harvest target from pounds to numbers.

4.4 COMMERCIAL FISHERY MANAGEMENT MEASURES

4.4.1 Size Limit Options

Issue 9

Options

- a. (Status Quo) All states shall maintain a minimum size limit of 33 inches fork length or the total length equivalent (37 inches).
- b. All states shall maintain a minimum size limit of 36 inches fork length or the total length equivalent (40 inches).

4.4.2 Possession Limit Options

All states shall maintain a commercial possession limit of no more than 2 cobia per person, not to exceed the vessel limit stated in *Section 4.4.3*.

4.4.3 Vessel Limits

Issue 10

Options

- a. (Status Quo) All states shall maintain a daily vessel limit, not to exceed 6 fish per vessel.
- b. All states shall establish a daily vessel limit, not to exceed 5 fish per vessel.
- c. All states shall establish a daily vessel limit, not to exceed 4 fish per vessel.

4.4.4 Quota-based Management

Issue 11

The commercial fishery shall be managed by a coastwide, commercial quota, set through the harvest specification and sector allocation processes defined in *Sections 4.1* and *4.2*. If commercial *de minimis* states exist, three percent of the commercial quota will be set aside to account for commercial landings in *de minimis* states (qualifications for *de minimis* status are defined in Section 4.5.3).

Commercial landings shall be monitored in-season by non-*de minimis* states and NOAA Fisheries. If reported in-season commercial landings from non-*de minimis* states reach a trigger percentage of the commercial quota, the states will be informed and a future coastwide closure will be scheduled based on that date, after which the commercial fishery will be closed in all state waters within the management unit for the remainder of the calendar year. The Commission will also request through ACFCMA that NOAA Fisheries issue a similar closure in the Exclusive Economic Zone (EEZ).

The trigger percentage and number of following days until a closure occurs will be specified as part of the harvest specification process defined in *Section 4.1*. The number of days past the trigger percentage until a closure occurs will be calculated as the average number of days from the previous three years for commercial landings to go from the trigger percentage to the full commercial quota, less any *de minimis* set aside. The trigger shall be updated as part of the specification process, using similar methodology, to allow the states at least 30 days' notice of an impending commercial closure.

For example, the average number of days for weekly commercial landings in Virginia (VA)-South Carolina (SC) to go from 77% to 97% (accounting for a 3% *de minimis* set aside) of the 2019 commercial quota (50,000 lb) in 2015-17 was 32 days (ACCSP, queried April, 2019). Therefore, a commercial trigger based on these data would initiate a closure 32 days after in-season reported VA-SC landings reach 38,500 lb (77% of the commercial quota).

4.5 ALTERNATIVE STATE MANAGEMENT REGIMES

States are required to obtain prior approval from the Board of any changes to their management program for which a compliance requirement is in effect. Changes to non-compliance measures must be reported to the Board but may be implemented without prior Board approval. A state can request permission to implement an alternative management measure to any mandatory compliance measure only if that state can show, to the Board's satisfaction, that its alternative proposal will have the same or greater conservation value as the measure contained in this amendment or any addenda prepared under Adaptive Management (*Section 4.6*). States submitting alternative proposals must demonstrate that the proposed action will not contribute to overfishing of the resource. All changes to a state's plan must be submitted in writing to the Board and to the Commission as part of their annual compliance report.

4.5.1 General Procedures

A state may submit a proposal for a change to its regulatory program or any mandatory compliance measure under this amendment to the Commission. Such changes shall be submitted to the Chair of the Plan Review Team (PRT), who shall distribute the proposal to appropriate groups, including the Board, the PRT, the TC, and the AP.

The PRT is responsible for gathering the comments of the TC and the AP. The PRT is also responsible for presenting these comments to the Board for decision.

The Board will decide whether to approve the state proposal for an alternative management program if it determines that it is consistent with the goals and objectives of this amendment.

In order to maintain consistency within a fishing season, new rules should be implemented prior to the start of the fishing season. Given the time needed for the TC, AP, and Board to review the proposed regulations, as well as the time required by an individual state to promulgate new regulations, it may not be possible to implement new regulations for the on-going fishing season. In this case, new regulations should be effective at the start of the following season after a determination to do so has been made.

4.5.2 Management Program Equivalency

The TC, under the direction of the PRT, will review any alternative state proposals under this section and provide its evaluation of the adequacy of such proposals to the Board. The PRT can also ask for reviews by the Law Enforcement Committee (LEC) or the AP.

Following the first full year of implementation of an alternate management program, the PRT shall be responsible for evaluating the effects of the program to determine if the measures were equivalent with the standards of the FMP and subsequent amendments or addenda. The PRT will report to the Management Board on the performance of the alternate program.

4.5.3 *De Minimis* Fishery Guidelines

The Commission's Interstate Fisheries Management Program Charter (ISFMP Charter) defines *de minimis* as "a situation in which, under the existing condition of the stock and scope of the fishery, the conservation and enforcement actions taken by an individual state would be expected to contribute insignificantly to a coastwide conservation program required by a Fishery Management Plan or amendment," (ASMFC, 2016).

4.5.3.1 *Recreational De Minimis Eligibility*

A state can apply annually for *de minimis* status for their recreational fishery. To be eligible for *de minimis* consideration, a state's recreational landings for 2 of the previous 3 years must be less than 1% of the coastwide recreational landings for the same time period. Once *de minimis* status is granted, designated states must submit annual reports including commercial and recreational landings to the Management Board, justifying the continuance of *de minimis* status. States must include *de minimis* requests as part of their annual compliance reports.

4.5.3.1.1 *Procedure to Apply for De Minimis Status*

States must request *de minimis* status each year. Requests for *de minimis* status will be reviewed by the PRT as part of the annual FMP review process (*Section 5.3*). Requests for *de minimis* must be submitted to the Commission's Cobia FMP Coordinator as a part of the state's annual compliance report. The request must contain the following information: all available recreational landings data for the three previous full years of data and the proposed management measures the state plans to implement for the year *de minimis* status is requested. The FMP Coordinator will then forward the information to the PRT.

In determining whether a state meets the *de minimis* criteria, the PRT will consider the information provided with the request, the most recent available coastwide landings data, any information provided by the TC and SASC, and projections of future landings. The PRT will make a recommendation to the Board to either accept or deny the *de minimis* request. The Board will then review the PRT recommendation and either grant or deny the *de minimis* classification.

The Board must make a specific motion to grant a state *de minimis* status. By deeming a given state *de minimis*, the Board is recognizing that: the state has a minimal Atlantic cobia recreational fishery; there is little risk to the health of the Cobia stock if the state does not implement the full suite of management measures; and the overall burden of implementing the complete management and monitoring requirements of the FMP outweigh the conservation benefits of implementing those measures in that particular state.

If the Board denies a state's *de minimis* request, the state will be required to implement all the provisions of the FMP, including adherence to an allocation of the coastwide recreational

DRAFT AMENDMENT FOR BOARD REVIEW; NOT FOR PUBLIC COMMENT

quota. When a state rescinds or loses its *de minimis* status, the Board will set a compliance date by which the state must implement the required regulations.

4.5.3.2 Plan Requirements if De Minimis Status is Granted

One percent (1%) of the recreational quota shall be set aside to account for harvests in *de minimis* states. If a state qualifies for *de minimis*, the state may choose to match the recreational management measures implemented by an adjacent non-*de minimis* state (or the nearest non-*de minimis* state if none are adjacent) or the state may choose to limit its recreational fishery to 1 fish per vessel per trip with a minimum size of 29 inches fork length. A total length equivalent may be considered by the TC and Management Board. Should a *de minimis* state choose to match an adjacent (or the nearest) non-*de minimis* state, the *de minimis* state shall be subject to all recreational cobia regulations, including bag, size, vessel, and season restrictions, of their adjacent (or nearest) non-*de minimis* state. *De minimis* states that choose to limit their recreational fisheries to 1 fish per vessel per trip will not be subject to seasonal restrictions for their recreational fishery.

If the coastwide fishery is closed for any reason through Emergency Procedures (*Section 4.7*), *de minimis* states must close their fisheries as well.

Any additional components of the FMP, which the Board determines necessary for a *de minimis* state to implement, can be defined at the time *de minimis* status is granted.

4.5.3.3 Commercial De Minimis Options

Issue 12

Options

- a. (Status quo) States may not apply for *de minimis* status for their commercial fishery.
- b. States may apply for *de minimis* status for their commercial fishery. To be eligible for commercial *de minimis* consideration, a state's commercial landings for 2 of the previous 3 years must be less than 2% of the coastwide commercial landings for the same time period. States must annually request and prove their eligibility to maintain *de minimis* status. These states would be subject to all coastwide commercial regulations, including minimum size, possession, and vessel limits, as well as closures of the commercial fishery resulting from the commercial quota being reached. States with *de minimis* status for their commercial fishery would not be required to monitor commercial cobia landings for their state within the fishing year. They would still be required to report annual landings through their annual state compliance report. To account for potential, unmonitored landings in these states, 3% percent of the commercial quota would be set aside and not accessible to non-*de minimis* states.

4.6 ADAPTIVE MANAGEMENT

The Board may vary the requirements specified in this FMP as a part of adaptive management in order to conserve the Atlantic cobia resource. Specifically, the Board may change target fishing mortality rates, harvest specifications, or other measures designed to prevent overfishing of the stock complex or any spawning component. Such changes shall be instituted to become effective on the first fishing day of the following year, but may be put in place at an alternative time when deemed necessary by the Board.

4.6.1 General Procedures

The PRT shall monitor the status of the fisheries and the resources and report on that status to the Board annually or when directed to do so by the Board. The PRT shall consult with the TC, SAS, and AP in making such a review and report. The report will contain recommendations concerning proposed adaptive management revisions to the management program.

The Board shall review the report of the PRT, and may consult further with the TC, SAS, or AP. The Board may, based on the PRT Report or on its own discretion, direct the PDT to prepare an addendum to make any changes it deems necessary. An addendum shall contain a schedule for the states to implement its provisions.

The PDT will prepare a draft addendum, as directed by the Board, and distribute it to all states for review and public comment. The document will be released for public comment for a minimum of 30 days. A public hearing will be held in any state that requests one. After the comment period, the PDT will summarize the comments and present them to the Board along with the recommendations of the TC, SAS, LEC, and AP, when applicable. The Board shall then decide whether to adopt or revise and then adopt the addendum.

Upon adoption of an addendum by the Board, states shall prepare plans to carry out the addendum and submit them to the Board for approval, according to the schedule contained in the addendum.

4.6.1 Measures Subject to Change

The following measures are subject to change under adaptive management upon approval by the Management Board:

- (1) Fishing year and/or seasons;
- (2) Area closures;
- (3) Overfishing definition, MSY and OY;
- (4) Rebuilding targets and schedules;
- (5) Fishery Specifications;
- (6) Catch controls, including bag and size limits;
- (7) Effort controls;

DRAFT AMENDMENT FOR BOARD REVIEW; NOT FOR PUBLIC COMMENT

- (8) Bycatch allowance
- (9) Reporting requirements;
- (10) Gear limitations;
- (11) Measures to reduce or monitor bycatch;
- (12) Observer requirements;
- (13) Management areas;
- (14) Recommendations to the Secretaries for complementary actions in federal jurisdictions;
- (15) Research or monitoring requirements;
- (16) Frequency of stock assessments;
- (17) *De minimis* specifications;
- (18) Management unit;
- (19) Maintenance of stock structure;
- (20) Catch allocation; and
- (21) Any other management measures currently included in Amendment 1.

4.7 EMERGENCY PROCEDURES

Emergency procedures may be used by the Board to require any emergency action that is not covered by or is an exception or change to any provision in Amendment 1. Procedures for implementation are addressed in the Commission's ISFMP Charter, Section Six (c) (10) (ASMFC, 2016).

4.8 MANAGEMENT INSTITUTIONS

The management institution for cobia will be subject to the provisions of the ISFMP Charter (ASMFC, 2016). The following are not intended to replace any or all of the provisions of the ISFMP Charter. All committee roles and responsibilities are included in detail in the ISFMP Charter and are only summarized here.

4.8.1 Commission and the ISFMP Policy Board

The Commission and the ISFMP Policy Board are generally responsible for the oversight and management of the Commission's fisheries management activities. The Commission must approve all fishery management plans and amendments, including Amendment 1, and must make all final determinations concerning state compliance or non-compliance. The ISFMP Policy Board reviews any non-compliance recommendations of the various Management Boards and Sections and, if it concurs, forwards them on to the Commission for action.

4.8.2 South Atlantic State/Federal Fisheries Management Board

The South Atlantic State/Federal Fisheries Management Board (Board) was established under the provisions of the Commission's ISFMP Charter (Section Four; ASMFC, 2016) and is responsible for carrying out all activities under this Amendment.

DRAFT AMENDMENT FOR BOARD REVIEW; NOT FOR PUBLIC COMMENT

The Management Board establishes and oversees the activities of the PDT, PRT, TC, and SAS, as well as the South Atlantic Species AP. Among other things, the Board makes changes to the management program under adaptive management and approves state programs implementing the amendment and alternative state programs under Sections 4.5 and 4.6. The Management Board reviews the status of state compliance with the management program annually, and if it determines that a state is out of compliance, reports that determination to the ISFMP Policy Board under the terms of the ISFMP Charter.

4.8.3 Plan Development Team / Plan Review Team

The Cobia Plan Development Team (PDT) and Cobia Plan Review Team (PRT) are composed of scientists and/or managers whose responsibility is to provide all of the technical support necessary to carry out and document the decisions of the Board. A Commission FMP Coordinator chairs the PDT and PRT. The PDT and PRT will be directly responsible to the Management Board for providing information and documentation concerning the implementation, review, monitoring and enforcement of the species management plan. The PDT and PRT will be comprised of personnel from state and federal agencies who have scientific and management ability and knowledge of the relevant species. The Cobia PDT is responsible for preparing all documentation necessary for the development of management documents, using the best scientific information available and the most current stock assessment information. The PDT will either disband or assume inactive status upon completion of Amendment 1. Alternatively, the Board may elect to retain PDT members as members of the species-specific PRT, or appoint new members. The PRT provides annual advice concerning the implementation, review, monitoring, and enforcement of the FMP once it has been adopted by the Commission.

4.8.4 Technical Committee

The Cobia Technical Committee (TC) will consist of representatives from state and/or federal agencies, Regional Fishery Management Councils, Commission, university or other specialized personnel with scientific and technical expertise and knowledge of Atlantic cobia. The Management Board will appoint the members of a TC and may authorize additional seats as it sees fit. The role of the TC is to assess the species' population, provide scientific advice concerning the implications of proposed or potential management alternatives, and respond to other scientific questions from the Board, PDT, or PRT. The SAS reports to the TC.

4.8.5 Stock Assessment Subcommittee

Atlantic cobia will be primarily assessed through the Southeast Data, Assessment, and Review (SEDAR) process. However, in addition to SEDAR, the Management Board may appoint members to the Cobia Stock Assessment Subcommittee (SAS). The SAS is approved by the Management Board, with consultation from the TC, and consists of scientists with expertise in the assessment of Atlantic cobia. Its role is to assess the species population and provide scientific advice concerning the implications of proposed or potential management alternatives,

DRAFT AMENDMENT FOR BOARD REVIEW; NOT FOR PUBLIC COMMENT

or to respond to other scientific questions from the Management Board, TC, PDT or PRT. The SAS reports to the TC.

4.8.6 Advisory Panel

The South Atlantic Species Advisory Panel (AP) was established according to the Commission's Advisory Committee Charter. Members of the AP are citizens who represent a cross-section of commercial and recreational fishing interests and others who are concerned about the conservation and management of cobia, as well as Atlantic croaker, black drum, red drum, Spanish mackerel, spot, and spotted seatrout. The AP provides the Management Board with advice directly concerning the Commission's management programs for these seven species.

4.8.7 Federal Agencies

4.8.7.1 Management in the Exclusive Economic Zone (EEZ)

Management of Atlantic cobia in the EEZ was previously under the jurisdiction of the SAFMC under the Magnuson-Stevens Fishery Conservation and Management Act, as amended (16 U.S.C. 1801 et seq.). However, in the absence of a Council Fishery Management Plan for Atlantic cobia, as is the case under Amendment 31 to the CMP FMP, management of this species is the responsibility of NOAA Fisheries, as mandated by the Atlantic Coastal Fisheries Cooperative Management Act (16 U.S.C. 5105 et seq.). The Commission may recommend regulatory measures to NOAA Fisheries for implementation in the EEZ.

4.8.7.2 Federal Agency Participation in the Management Process

The Commission has accorded the United States Fish and Wildlife Service (USFWS) and NOAA Fisheries voting status on the ISFMP Policy Board and the South Atlantic State/Federal Fisheries Management Board in accordance with the Commission's ISFMP Charter. NOAA Fisheries and the USFWS may also participate on the Management Board's supporting committees described in *Sections 4.8.3-4.8.6*.

4.8.7.3 Consultation with Fishery Management Councils

As of March 21, 2019, Atlantic cobia is no longer included in any SAFMC or other Council FMP. No Regional Fishery Management Councils have indicated an intent to develop a future plan for this stock. However, the SAFMC will continue to have a role in stock assessments for Atlantic cobia by conducting them through the SEDAR process. Additionally, in accordance with the Commission's ISFMP Charter, a representative of the SAFMC shall be invited to participate as a full member of the South Atlantic State/Federal Fisheries Management Board.

4.9 RECOMMENDATION TO THE SECRETARY OF COMMERCE FOR COMPLEMENTARY ACTIONS IN FEDERAL JURISDICTIONS

Through approval of Amendment 31 to the CMP FMP, the SAFMC no longer manages cobia in the EEZ. Therefore, it is necessary for the Commission to recommend measures to be implemented by NOAA Fisheries in the EEZ through authority and process defined in the ACFCMA.

If, for any reason, the coastwide fishery for either the commercial or recreational fishery are closed within state waters, the Commission will request through the ACFCMA that NOAA Fisheries issue a similar closure in the EEZ.

Issue 13

Options

- a. Regulations in federal waters will be recommended to correspond to those of the vessel's permitted or licensed state of landing. If possessing permits or licenses for multiple states with open seasons, regulations for the most restrictive open state shall apply. If possessing permits or licenses for multiple states, only one of which is open, regulations for the state with an open season shall apply.
- b. Regulations for the recreational fishery in federal waters will be recommended to correspond to the location of catch, with regulations persisting along a latitudinal extension of state boundaries into federal waters. This extension for all boundaries would be directly due east, not along any alternative trajectory of these boundaries as they approach the Atlantic coast.

Regulations for the commercial fishery in federal waters will be recommended to correspond to the vessel's permitted or licensed state of landing. If possessing permits or licenses for multiple states with open seasons, regulations for the most restrictive open state shall apply. If possessing permits or licenses for multiple states, only one of which is open, regulations for the state with an open season shall apply.

4.10 COOPERATION WITH OTHER MANAGEMENT INSTITUTIONS

The Board will cooperate with other management institutions during the implementation of this amendment, including NOAA Fisheries and the SAFMC.

5.0 COMPLIANCE

The full implementation of the provisions included in this amendment is necessary for the management program to be equitable, efficient, and effective. States are expected to implement these measures faithfully under state laws. The Commission will continually monitor

DRAFT AMENDMENT FOR BOARD REVIEW; NOT FOR PUBLIC COMMENT

the effectiveness of state implementation and determine whether states are in compliance with the provisions of this fishery management plan.

The Board sets forth specific elements that the Commission will consider in determining state compliance with Amendment 1, and the procedures that will govern the evaluation of compliance. Additional details of the procedures are found in the Commission's ISFMP Charter (ASMFC, 2016).

5.1 MANDATORY COMPLIANCE ELEMENTS FOR STATES

A state will be determined to be out of compliance with the provisions of this fishery management plan, according to the terms of Section Seven of the ISFMP Charter if:

- Its regulatory and management programs to implement Section 4 have not been approved by the Board; or
- It fails to meet any schedule required by *Section 5.1.2*, or any addendum prepared under Adaptive Management (*Section 4.6*); or
- It has failed to implement a change to its program when determined necessary by the Board; or
- It makes a change to its regulations required under Section 4 or any addendum prepared under Adaptive Management (*Section 4.6*), without prior approval from the Board.

5.1.1 Mandatory Elements of State Programs

To be considered in compliance with this Amendment, all state programs will include harvest controls on cobia fisheries consistent with the requirements of *Sections 4.3, 4.4, 4.5*; except that a state may propose an alternative management program under *Section 4.5*, which, if approved by the Board, may be implemented as an alternative regulatory requirement for compliance.

5.1.1.1 Regulatory Requirements

States may begin to implement Amendment 1 after final approval by the Commission. Each state will be required to submit its Atlantic cobia regulatory program to the Commission through the Commission staff for approval by the Board. During the period between submission and the Board approval of the state's program, a state may not adopt a less protective management program than contained in this Amendment or contained in current state law. The following lists the specific compliance criteria that a state/jurisdiction will be required to implement in order to be in compliance with Amendment 1:

DRAFT AMENDMENT FOR BOARD REVIEW; NOT FOR PUBLIC COMMENT

- Recreational fishery management measures as specified in *Section 4.3* including the size limit (*Section 4.3.1*), bag limit (*Section 4.3.2*), coastwide vessel limit (*Section 4.3.3*), and adherence to a state recreational harvest target (*Section 4.3.4*).
- Commercial fishery management measures as specified in *Section 4.4* including the size limit (*Section 4.4.1*), possession limit (*Section 4.4.2*), coastwide vessel limit (*Section 4.4.3*), and closures of the commercial fishery if the commercial quota is met (*Section 4.4.4*).
- Monitoring requirements as specified in *Section 3.1.1*.
- All state programs must include law enforcement capabilities adequate for successful implementation of the compliance measures contained in this Amendment.
- There are no mandatory research requirements at this time; however, research requirements may be added in the future under Adaptive Management, *Section 4.6*.
- There are no mandatory habitat requirements in Amendment 1.

5.2 COMPLIANCE SCHEDULE

States must implement this Amendment according to the following schedule:

Month Day, 201X: Submission of state programs to implement Amendment 1 for approval by the Board. Programs must be implemented upon approval by the Board.

Month Day, 201X: States with approved management programs must implement Amendment 1. States may begin implementing management programs prior to this deadline if approved by the Board.

5.3 COMPLIANCE REPORTS

Each state must submit to the Commission an annual report concerning its Atlantic cobia fisheries and management program for the previous year, no later than July 1st. A standard compliance report format has been prepared and adopted by the ISFMP Policy Board. States should follow this format in completing the annual compliance report.

5.4 PROCEDURES FOR DETERMINING COMPLIANCE

Detailed procedures regarding compliance determinations are contained in the ISFMP Charter, Section Seven (ASMFC, 2016). In brief, all states are responsible for the full and effective implementation and enforcement of fishery management plans in areas subject to their jurisdiction. Written compliance reports as specified in this amendment must be submitted

DRAFT AMENDMENT FOR BOARD REVIEW; NOT FOR PUBLIC COMMENT

annually by each state with a declared interest. Compliance with Amendment 1 will be reviewed at least annually; however, the Board, ISFMP Policy Board, or the Commission may request the PRT to conduct a review of state's implementation and compliance with Amendment 1 at any time.

The Board will review the written findings of the PRT within 60 days of receipt of a State's compliance report. Should the Board recommend to the Policy Board that a state be determined out of compliance, a rationale for the recommended noncompliance finding will be addressed in a report. The report will include the required measures of Amendment 1 that the state has not implemented or enforced, a statement of how failure to implement or enforce required measures jeopardizes Atlantic cobia conservation, and the actions a state must take in order to comply with Amendment 1 requirements.

The ISFMP Policy Board will review any recommendation of noncompliance from the Board within 30 days. If it concurs with the recommendation, it shall recommend to the Commission that a state be found out of compliance.

The Commission shall consider any noncompliance recommendation from the ISFMP Policy Board within 30 days. Any state that is the subject of a recommendation for a noncompliance finding is given an opportunity to present written and/or oral testimony concerning whether it should be found out of compliance. If the Commission agrees with the recommendation of the ISFMP Policy Board, it may determine that a state is not in compliance with Amendment 1 and specify the actions the state must take to come into compliance.

Any state that has been determined to be out of compliance may request that the Commission rescind its noncompliance findings, provided the state has revised its Atlantic cobia conservation measures.

5.5 ANALYSIS OF THE ENFORCEABILITY OF PROPOSED MEASURES

The Commission's Law Enforcement Committee will, during the implementation of this FMP, analyze the enforceability of new conservation and management measures as they are proposed.

6.0 RESEARCH NEEDS

These management and research needs will be reviewed annually as part of the Commission's FMP Review process. The annual Cobia FMP Review will contain an updated list for future reference.

6.1 STOCK ASSESSMENT AND POPULATION DYNAMICS

An updated stock assessment for the Atlantic cobia has been scheduled for completion in 2020, led by SEFSC Beaufort Lab. The assessment will provide updated status information since the

DRAFT AMENDMENT FOR BOARD REVIEW; NOT FOR PUBLIC COMMENT

terminal year of the last assessment (2012). Anticipated results will include updated stock status and reference points and contribute to recommendations for additional management needs, if any.

6.2 RESEARCH AND DATA NEEDS

The following research recommendations were developed by the Cobia PDT and are ordered, within each category, from highest to lowest recommended priority.

6.2.1 Biological

- 1) Obtain more precise and timely estimates of harvest from the cobia recreational fishery.
- 2) Investigate release mortality and fishing mortality within the commercial and recreational fisheries in along the US Atlantic coast.
- 3) Continue to collect and analyze current life history data from fishery independent and dependent programs, including full size, age, maturity, histology workups and information on spawning season timing and duration. Any additional data that can be collected on any life stages of cobia would be highly beneficial.
- 4) Increase spatial and temporal coverage of age samples collected regularly in fishery dependent and independent sources. Prioritize collection of age data from fishery dependent and independent sources in all states.
- 5) Collect genetic material to continue to assess the stock identification and any Distinct Population Segments that may exist within the management unit relative to recommendations made by the SEDAR 58 Stock ID Process.
- 6) Conduct a high reward tagging program to obtain improved return rate estimates. Continue and expand current tagging programs to obtain mortality and growth information and movement at size data.
- 7) Conduct studies to estimate fecundity-at-age coastwide and to estimate batch fecundity.
- 8) Obtain better estimates of bycatch and mortality of cobia in other fisheries, especially juvenile fish.
- 9) Obtain estimates of selectivity-at-age for cobia through observer programs or tagging studies.
- 10) Define, develop, and monitor adult and juvenile abundance estimates through the expansion of current or development of fishery independent surveys.

6.2.2 Social

- 1) Using social impact analysis approaches such as updating applicable recreational and commercial fisheries community profiles and measures of social vulnerability

DRAFT AMENDMENT FOR BOARD REVIEW; NOT FOR PUBLIC COMMENT

(See Jepson & Colburn, 2013), evaluate the local and regional dependency on cobia resources managed by the Commission.

6.2.3 Economic

- 1) Obtain better data (e.g. more comprehensive and timely) to estimate the annual economic impacts, net benefits, and economic contributions of recreational and commercial Atlantic cobia fishing on coastal communities and regions.
- 2) Obtain cost and expenditure data for recreational fishing trips targeting cobia by fishing mode, for different states, and for anglers returning to private sites, who would not be sampled by the MRIP.
- 3) Estimate willingness-to-pay associated with recreational cobia angling.

6.2.4 Habitat

- 1) Expand existing fishery independent surveys in time and space to better define and cover cobia habitats.
- 2) Conduct otolith microchemistry studies to identify regional recruitment contributions.
- 3) Conduct new and expand existing satellite tagging programs to help identify spawning and juvenile habitat use and regional recruitment sources.

6.2.5 State-specific

6.2.5.1 Georgia

Little is known regarding cobia stocks off Georgia. It is unclear if Georgia has a unique subpopulation of East-West migration cobia as seen in other nearby states (South Carolina). Currently cobia in Georgia are recognized and managed as part of the Atlantic Migratory Group (AMG). It is possible that some portion of Georgia fish could be mixing more with the Florida East Coast/Gulf stock rather than the AMG. If this is occurring, it could have important management implications for the species. Furthermore, the range of habitat types (inshore vs. nearshore) utilized by cobia in Georgia remains unknown. It would be beneficial to better explain the range of habitats utilized by cobia in Georgia as well as identify overwintering locations for Georgia cobia. This could be easily done through a simple acoustic telemetry study. Identifying these basic life history characteristics for cobia in Georgia will aid in the management of the species both at a state and a regional level. Additionally, better socio-economic estimates of the impact of cobia fishing in Georgia would aid in understanding how regulatory changes may impact the socio-economic benefits of cobia fishing to the State of Georgia and the South Atlantic region.

7.0 PROTECTED SPECIES

In the fall of 1995, Commission member states, the National Marine Fisheries Service (NMFS; now, NOAA Fisheries) and the U.S. Fish and Wildlife Service (USFWS) began discussing ways to improve implementation of the Marine Mammal Protection Act (MMPA) and the Endangered Species Act (ESA) in state waters. Historically, these policies have been minimally enforced in state waters (0-3 miles). In November 1995, the Commission, through its ISFMP Policy Board, approved amendment of its ISFMP Charter (Section Six (b)(2)) so that interactions between Commission-managed fisheries and species protected under the MMPA, ESA, and other legislation, including the Migratory Bird Treaty Act be addressed in the Commission's fisheries management planning process. Specifically, the Commission's fishery management plans describe impacts of state fisheries on certain marine mammals and endangered species (collectively termed "protected species"), and recommend ways to minimize these impacts. The following section outlines: (1) the federal legislation which guides protection of marine mammals, sea turtles, and marine birds; (2) the protected species with potential fishery interactions; (3) the specific type(s) of fishery interactions; (4) population status of the affected protected species; and (5) potential impacts to Atlantic coastal state and interstate fisheries.

7.1 MARINE MAMMAL PROTECTION ACT (MMPA) REQUIREMENTS

Since its passage in 1972, one of the primary goals of the MMPA has been to reduce the incidental mortality and serious injury of marine mammals permitted in the course of commercial fishing operations to insignificant levels approaching a zero mortality and serious injury rate. Under the 1994 Amendments, the MMPA requires the NMFS to develop and implement a take reduction plan to assist in the recovery or prevent the depletion of each strategic stock that interacts with a Category I or II fishery. Specifically, a strategic stock is defined as a stock: (1) for which the level of direct human caused mortality exceeds the potential biological removal (PBR) level; (2) which is declining and is likely to be listed under the Endangered Species Act (ESA) in the foreseeable future; or (3) which is listed as a threatened or endangered species under the ESA or as a depleted species under the MMPA. Category I and II fisheries are those that have frequent or occasional incidental mortality and serious injury of marine mammals, respectively, whereas Category III fisheries have a remote likelihood of incidental mortality and serious injury of marine mammals. Each year, NOAA Fisheries publishes an annual List of Fisheries which classifies commercial fisheries into one of these three categories.

Under the 1994 mandates, the MMPA also requires fishermen participating in Category I and II fisheries to register under the Marine Mammal Authorization Program (MMAP), the purpose of which is to provide an exception for commercial fishermen from the general taking prohibitions of the MMPA for non-ESA listed marine mammals. All fishermen, regardless of the category of fishery they participate in, must report all incidental injuries and mortalities caused by commercial fishing operations within 48 hours.

DRAFT AMENDMENT FOR BOARD REVIEW; NOT FOR PUBLIC COMMENT

Section 101(a)(5)(E) of the MMPA allows for the authorization of the incidental taking of individuals from marine mammal stocks listed as threatened or endangered under the ESA in the course of commercial fishing operations if it is determined that: (1) incidental mortality and serious injury will have a negligible impact on the affected species or stock; (2) a recovery plan has been developed or is being developed for such species or stock under the ESA; and (3) where required under Section 118 of the MMPA, a monitoring program has been established, vessels engaged in such fisheries are registered in accordance with Section 118 of the MMPA, and a take reduction plan has been developed or is being developed for such species or stock. Permits are not required for Category III fisheries; however, any mortality or serious injury of a marine mammal must be reported.

7.2 ENDANGERED SPECIES ACT (ESA) REQUIREMENTS

The taking of endangered sea turtles, fish, seabirds, and marine mammals is prohibited and considered unlawful under Section 9(a)(1) of the ESA. In addition, NOAA Fisheries or the USFWS may issue Section 4(d) protective regulations necessary and advisable to provide for the conservation of threatened species. The ESA defines take as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." There are several mechanisms established in the ESA to allow exceptions to the take prohibition in Section 9(a)(1). Section 10(a)(1)(A) of the ESA authorizes NOAA Fisheries to allow the taking of listed species through the issuance of research permits for scientific purposes or to enhance the propagation or survival of the species. Section 10(a)(1)(B) authorizes NOAA Fisheries to permit, under prescribed terms and conditions, any taking otherwise prohibited by Section 9(a)(1)(B) of the ESA, if the taking is incidental to, and not the purpose of, carrying out an otherwise lawful activity. Finally, Section 7(a)(2) requires federal agencies to consult with NOAA Fisheries to ensure that any action that is authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of critical habitat of such species. If, following completion of consultation, an action is found to jeopardize the continued existence of any listed species or cause adverse modification to critical habitat of such species, reasonable and prudent alternatives will be identified so that jeopardy or adverse modification to the species is removed and Section

7(a)(2) is met (see Section 7(b)(3)(A)). Alternatively, if, following completion of consultation, an action is not found to jeopardize the continued existence of any listed species or cause adverse modification to critical habitat of such species, reasonable and prudent measures will be identified that minimize the take of listed species or adverse modification of critical habitat of such species (see Section 7(b)(4)). Section (7)(o) provides the actual exemption from the take prohibitions established in Section 9(a)(1), which includes Incidental Take Statements that are provided at the end of consultation via the ESA Section 7 Biological Opinions.

7.3 MIGRATORY BIRD TREATY ACT (MBTA) REQUIREMENTS

Under the Migratory Bird Treaty Act it is unlawful “by any means or in any manner, to pursue, hunt, take, capture, [or] kill” any migratory birds except as permitted by regulation (16 USC. 703). Section 50 CFR 21.11 prohibits the take of migratory birds except under a valid permit or as permitted in the regulations. Many migratory waterbirds occur within the boundaries of cobia fisheries. USFWS Policy on Waterbird Bycatch (2000) states: “It is the policy of the U.S. Fish and Wildlife Service that the Migratory Bird Treaty Act of 1918, as amended, legally mandates the protection and conservation of migratory birds. The USFWS seeks to actively expand partnerships with regional, national, and international organizations, States, tribes, industry, and environmental groups to address seabird bycatch in fisheries, by promoting public awareness of waterbird bycatch issues, and facilitating the collection of scientific information to develop and provide guidelines for management, regulation, and compliance.”

Birds of Management Concern are a subset of MBTA-protected species which pose special management challenges because of a variety of factors (e.g., too few, too many, conflicts with human interests, societal demands). These species are of concern because of: documented or apparent population declines; small or restricted populations; dependence on restricted or vulnerable habitats; or overabundant to the point of causing ecological and economic damage.

7.4 PROTECTED SPECIES WITH POTENTIAL FISHERY INTERACTIONS

The management unit of the cobia Atlantic Migratory Group extends from the Georgia/Florida line through New York. There are numerous protected species that inhabit the range of the cobia management unit covered under this FMP. Listed below are ESA and MMPA protected species found in coastal and offshore waters of the Atlantic Ocean within the range of cobia fisheries. USFWS species of management concern that have the potential to interact with cobia fisheries are also listed. Species of management concern are protected under the MBTA, but lack the protections mandated by the ESA.

ESA – Endangered⁴

- Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*), NY Bight, Chesapeake Bay, Carolina, and South Atlantic Distinct Population Segments (DPSs)⁵
- Shorthnose sturgeon (*Acipenser brevirostrum*)
- Smalltooth sawfish (*Pristis pectinata*)
- Blue whale (*Balaenoptera musculus*)

⁴ <http://www.nmfs.noaa.gov/pr/species/esa/listed.htm>

⁵ A distinct population segment (DPS) is a vertebrate population or group of populations that is discrete from other populations of the species and significant in relation to the entire species. The ESA provides for listing species, subspecies, or DPS of vertebrate species.

DRAFT AMENDMENT FOR BOARD REVIEW; NOT FOR PUBLIC COMMENT

- Fin whale (*Balaenoptera physalus*)
- Humpback whale (*Megaptera novaeangliae*)
- North Atlantic right whale (*Eubalaena glacialis*)
- Sei whale (*Balaenoptera borealis*)
- Sperm whale (*Physeter microcephalus*)
- Hawksbill sea turtle (*Eretmochelys imbricata*)
- Kemp's ridley sea turtle (*Lepidochelys kempii*)
- Leatherback sea turtle (*Dermochelys coriacea*)
- Bermuda petrel (*Pterodroma cahow*)
- Roseate tern (*Sterna dougallii dougallii*), northeastern U.S. and Nova Scotia breeding population

ESA – Threatened⁶

- Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*), Gulf of Maine DPS
- Nassau grouper (*Epinephelus striatus*)
- Green sea turtle (*Chelonia mydas*), North Atlantic and South Atlantic DPSs
- Loggerhead sea turtle (*Caretta caretta*), Northwest Atlantic Ocean DPS
- Roseate tern (*Sterna dougallii dougallii*), Southeastern U.S. and Caribbean breeding population (FL, GA, NC, SC, Puerto Rico, Virgin Islands)
- Piping plover (*Charadrius melodus*)

MMPA – Protected⁷

Includes all marine mammals above in addition to:

- Atlantic spotted dolphin (*Stenella frontalis*)
- Bottlenose dolphin (*Tursiops truncatus*)
- Atlantic white-sided dolphin (*Lagenorhynchus acutus*)
- Clymene dolphin (*Stenella clymene*)
- Pantropical spotted dolphin (*Stenella attenuata*)
- Risso's dolphin (*Grampus griseus*)
- Rough-toothed dolphin (*Steno bredanensis*)
- Short-beaked common dolphin (*Delphinus delphis*)
- Spinner dolphin (*Stenella longirostris*)
- Striped dolphin (*Stenella coeruleoalba*)
- Gray seal (*Halichoerus grypus*)
- Harbor porpoise (*Phocoena phocoena*)
- Harbor seal (*Phoca vitulina*)

⁶ <http://www.nmfs.noaa.gov/pr/species/esa/listed.htm>

⁷ <http://www.nmfs.noaa.gov/pr/species/mammals>

DRAFT AMENDMENT FOR BOARD REVIEW; NOT FOR PUBLIC COMMENT

- Minke whale (*Balaenoptera acutorostrata*)
- Cuvier's beaked whale (*Ziphius cavirostris*)
- Gervais' beaked whale (*Mesoplodon europaeus*)
- True's beaked whale (*Mesoplodon mirus*)
- Bryde's whale (*Balaenoptera edeni*)
- Dwarf sperm whale (*Kogia sima*)
- False killer whale (*Pseudorca crassidens*)
- Killer whale (*Orcinus orca*)
- Long-finned pilot whale (*Globicephala melas*)
- Melon-headed whale (*Peponocephala electra*)
- Pygmy killer whale (*Feresa attenuate*)
- Pygmy sperm whale (*Kogia breviceps*)
- Short-finned pilot whale (*Globicephala macrorhynchus*)

ESA – Species of Concern⁸

- Alewife (*Alosa pseudoharengus*)
- Blueback herring (*Alosa aestivalis*)
- Dusky shark (*Carcharhinus obscurus*)
- Porbeagle shark (*Lamna nasus*)
- Rainbow smelt (*Osmerus mordax*)
- Sand tiger shark (*Carcharias taurus*)
- Speckled hind (*Epinephelus drummondhayi*)
- Striped croaker (*Bairdiella sanctaeluciae*)
- Warsaw grouper (*Epinephelus nigritus*)

MBTA—USFWS Species of Management Concern

- Canvasback (*Aythya valisineria*)
- Redhead (*Aythya americana*)
- Greater scaup (*Aythya marila*)
- Lesser scaup (*Aythya affinis*)
- Surf scoter (*Melanitta perspicillata*)
- White-winged scoter (*Melanitta fusca*)
- Black scoter (*Melanitta americana*)
- Long-tailed duck (*Clangula hyemalis*)
- Common goldeneye (*Bucephala clangula*)
- Red-throated loon (*Gavia stellata*)
- Black-capped petrel (*Pterodroma hasitata*)
- Greater shearwater (*Puffinus gravis*)

⁸ <http://www.nmfs.noaa.gov/pr/species/concern/>

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- Audubon’s shearwater (*Puffinus lherminieri*)
- Band-rumped storm-petrel (*Oceanodroma castro*)
- Masked booby (*Sula dactylaria*)
- Brown booby (*Sula leucogaster*)
- Pied-billed grebe (*Podilymbus podiceps*)
- Horned grebe (*Podiceps auritus*)
- Magnificent frigatebird (*Fregata magnificens*)
- Least tern (*Sternula antillarum*), non-listed Atlantic coast subspecies
- Gull-billed tern (*Gelochelidon nilotica*)

7.5 PROTECTED SPECIES INTERACTIONS WITH EXISTING FISHERIES

7.5.1 Overview of the Cobia Fishery and Gears Used

Recreational fisheries are prosecuted similarly along the coast. The directed cobia fishery is prosecuted in two distinct ways. Bottom fishing with live or dead baits, often while chumming, in estuarine waters or around inlets or offshore around structure, buoys, markers, natural and artificial reefs. More recently, an active method of searching for fish traveling alone or in small groups on the surface or associated with schools of Atlantic menhaden or other bait fishes has grown in popularity. This newer method has resulted in the further development of the for-hire component for cobia, as well as the development of specific artificial baits and boat modifications (e.g., towers) to facilitate spotting and catching the fish. A third method primarily prosecuted in offshore waters is to target large rays, large sharks, sea turtles or floating debris around which cobia congregate. However, the practice of targeting sea turtles while cobia fishing is considered a “take” under the Endangered Species act and is, therefore, unlawful. Additionally, the Atlantic coast of Florida is starting to see more directed spearfishing pressure on cobia. Specifically, spearfishers are chumming for bull shark and then diving/free-diving to spear cobia that associate with them. Spearfishing also occurs off North Carolina, along with a popular pier fishery.

The recreational fishery also takes cobia as bycatch in offshore bottom fisheries such as snapper/grouper, nearshore trolling for king mackerel, bluefish, and dolphin and any other fishery that employs live or dead bait fished on or near the bottom. While the directed fishery appears to focus more on the spring-summer spawning migration, bycatch, especially offshore, can yield cobia virtually year round. The average of recreational Atlantic cobia landings from 2010-2018 is 1.8 million lb (MRIP, queried April, 2019).

The commercial fishery has traditionally been a bycatch in other directed fisheries such as the snapper/grouper hook and line fishery and troll fisheries for various species (e.g., king mackerel, dolphin, wahoo, amberjack). Directed fisheries are generally precluded as a result of the low possession limits, but do occur, specifically Virginia’s commercial hook and line fishery. Cobia from for-hire trips may also be sold commercially, depending on the state’s permit requirements for selling fish. The average of commercial Atlantic cobia landings from 2010-

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2017 is 62,073 lb (ACCSP, queried April, 2019). In 2017, the predominant gear categories that were used commercially to capture Atlantic cobia were gill nets (33%), hand line (29%), hook and line (20%), and pound nets (11%) (ACCSP, queried April, 2019).

7.5.2 Marine Mammals

NMFS completed a biological opinion on June 18, 2015, evaluating the impacts of the CMP fishery on ESA-listed species. In the biological opinion, NMFS determined that the proposed continued authorization of the CMP Fishery, is not likely to adversely affect any listed whales (i.e., blue, sei, sperm, fin, humpback, or North Atlantic right whales). NMFS also determined that the CMP fishery will have no effect on designated critical habitat for North Atlantic right whale (NMFS, 2015).

The Gulf and South Atlantic CMP hook-and-line fishery (which includes fisheries that capture cobia) is classified in the 2017 MMPA List of Fisheries as a Category III fishery (82 FR 3655; January 12, 2017). This means the annual mortality and serious injury of a marine mammal resulting from the fishery is less than or equal to 1% of PBR, the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population. In other words, there is a remote likelihood of or no known incidental mortality and serious injury of marine mammals resulting from these fisheries.

The Gulf and South Atlantic CMP gillnet fishery is classified as Category II fishery in the 2017 MMPA List of Fisheries. This classification indicates an occasional incidental mortality or serious injury of a marine mammal stock resulting from the fishery (1-50% annually of PBR). The fishery has no documented interaction with marine mammals; NMFS classifies this fishery as Category II based on analogy (i.e., similar risk to marine mammals) with other gillnet fisheries.

7.5.3 Sea Turtles

7.5.3.1 Overview

As mentioned above, the NMFS completed a biological opinion on June 18, 2015, evaluating the impacts of the CMP fishery (including king mackerel, Spanish mackerel, and cobia) on ESA-listed species (NMFS, 2015). According to the biological opinion, green, hawksbill, Kemp's ridley, leatherback, and loggerhead sea turtles are all likely to be adversely affected by the CMP fishery. Green, hawksbill, Kemp's ridley, leatherback, and loggerhead sea turtles are all highly migratory, travel widely throughout the GOM and South Atlantic, and are known to occur in area of the fishery. The biological opinion evaluated the potential for the following gears to interact with protected species: hook-and-line gear, cast net gear, and gill net gear. The biological opinion found that gill net gear is the only gear used in the CMP fisheries that may adversely affect sea turtles. Gill net gear is used to target both Spanish and king mackerel, but not cobia.

7.5.3.2 Hook-and-Line Fishing

The 2015 biological opinion for CMP resources concluded that sea turtles (as well as smalltooth sawfish and Atlantic sturgeon) are not likely to be adversely affected by CMP hook-and-line fishing. The 2015 biological opinion stated: *“The hook-and-line gear used by both commercial and recreational fishers to target CMP species is limited to trolled or, to a much lesser degree (e.g., historically ~2% by landings for king mackerel), jigged handline, bandit, and rod-and-reel gear. Sea turtles, Atlantic sturgeon, and smalltooth sawfish are both vulnerable to capture on hook-and-line gear, but the techniques commonly used to target CMP species makes effects on these listed species extremely unlikely and, therefore, discountable. Sea turtles are unlikely to be caught during hook-and-line trolling because of the speed (4-10 kt) at which the lure is pulled through the water. As cedar plugs and spoons are generally used when trolling, it is unlikely that a sea turtle of any size would actively pursue the gear and get hooked. Likewise, we also believe sea turtles would be unlikely to be snagged by jigged gear as it is deployed at or near the surface and constantly reeled and jigged back to the boat. It is possible that a sea turtle could be incidentally snagged if it comes in contact with a trolled or jigged hook, but the chances of this occurring are extremely low... We believe that CMP species caught on bandit gear or standard rod-and-reel gear (i.e., baited and deployed as passive, vertical gear) are largely bycatch when targeting other species closer to the bottom (e.g., snapper and grouper); use of the gear in this method (i.e., mid-water placement) is not effective at catching mackerel based on available information (e.g., landings data). In summary, we believe effects from these gear types on Atlantic sturgeon, smalltooth sawfish, and sea turtles are extremely unlikely to occur, and are therefore discountable”* (NMFS, 2015).

There is limited information about protected species interactions within recreational fisheries.

In 2015, The North Carolina Division of Marine Fisheries conducted a project funded under the ACCSP to examine potential protected species interactions and finfish discards and releases in the recreational cobia hook-and-line fishery. Observations were made via an alternative observer platform, where recreational fishing activity was monitored at close proximity from individuals on state owned vessels. From April 27, 2015, through October 29, 2015, 552 recreational hook-and-line observations (observed fishing trips) were completed over 138 observed fishing days with 16.2% of fishing trips targeting cobia. Observations occurred in inshore (estuarine) and near-shore waters (≤ 3 miles) of Carteret County. No protected species interactions were observed (Boyd, 2016).

7.5.3.3 Gill Net

Cobia are generally considered a bycatch species within gill net fisheries. The 2015 biological opinion for CMP resources concluded that gill net gear used in the federal CMP fisheries of the Atlantic and GOM have adversely affected sea turtles, smalltooth sawfish, and Atlantic sturgeon in the past via entanglement and, in the case of sea turtles, via forced submergence (NMFS, 2015).

7.5.3.4 Targeting of Large Animals

One known method used to prosecute cobia in offshore waters is to target large rays, large sharks, sea turtles, or floating debris around which cobia congregate. However, the practice of targeting sea turtles while cobia fishing is considered a “take” under the Endangered Species act and is, therefore, unlawful. Not much is known about this method or its impacts on protected species.

7.5.4 Sturgeon, Smalltooth Sawfish, Nassau Grouper

The 2015 biological opinion for CMP resources concluded that gill net gear used in the federal CMP fisheries of the Atlantic and GOM have adversely affected smalltooth sawfish⁹ and Atlantic sturgeon in the past via entanglement.

The biological opinion also concluded that smalltooth sawfish and Atlantic sturgeon are not likely to be adversely affected by CMP hook-and-line fishing. Fishers who capture smalltooth sawfish most commonly report that they were fishing for snook, redfish, or sharks (Simpfendorfer and Wiley, 2004), not CMP species. Additionally, Atlantic sturgeon and smalltooth sawfish are largely bottom-dwelling species, whereas CMP lures and baits are typically fished near the surface of the water. This also greatly reduces the likelihood of Atlantic sturgeon and smalltooth sawfish interactions with trolling gear (NMFS, 2015).

On June 29, 2016, NMFS published a final rule listing Nassau grouper as threatened under the ESA. Reinitiation of Section 7 consultation on the CMP FMP is needed to address newly listed species. NOAA Fisheries is currently prioritizing completion of the consultation along with other consultations required after recent listings.

7.5.5 Seabirds

The roseate tern, Bermuda petrel, and piping plover are the only ESA listed bird species within the mid-and south-Atlantic maritime regions. The roseate tern and Bermuda petrel are uncommon in inshore and coastal waters of the mid- and south-Atlantic and thus, have relatively low likelihoods of interacting with cobia fisheries. Nevertheless, exceptional efforts to avoid deleterious interactions with these species are warranted as they are rare and highly vulnerable to even minimal levels of mortality. The piping plover could be impacted by shore-based fishing activity if individuals were disturbed or killed by vehicles related to fishing efforts. However, during the nesting season, when plovers are highly vulnerable to beach disturbance, sensitive areas are posted and beach access is often restricted.

⁹ Although smalltooth sawfish are typically found in the peninsula of Florida, there have been recent interactions as far north as North Carolina.

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Bermuda petrels are occasionally seen in the waters of the Gulf Stream off the coasts of North Carolina and South Carolina during the summer. Sightings are considered rare and only occurring in low numbers. Roseate terns occur widely along the Atlantic coast during the summer but in the southeast region, they are found mainly off the Florida Keys (unpublished USFWS data). Interaction with fisheries has not been reported as a concern for either of these species. Although, the Bermuda petrel and roseate tern occur within the action area, these species are not commonly found and neither has been described as associating with vessels or having had interactions with the CMP fishery. Framework Amendment 4 to the FMP for CMP resources in the Gulf of Mexico and Atlantic Region concluded that the CMP fishery is not likely to negatively affect the Bermuda petrel and the roseate tern.

7.6 POPULATION STATUS REVIEW OF RELEVANT PROTECTED SPECIES

7.6.1 Marine Mammals

The status review of marine mammal populations inhabiting the Southwest Atlantic are discussed in detail in U.S. Atlantic and Gulf of Mexico Marine Mammal Stock Assessments. The most recent assessment was published in 2016 (Waring et al., 2016). The report presents information on stock definition, geographic range, population size, productivity rates, PBR, fishery specific mortality estimates, and compares the PBR to estimated human-caused mortality and serious injury for each stock.

7.6.2 Sea Turtles

All sea turtles that occur in U.S. waters are listed as either endangered or threatened under the ESA. The Kemp's ridley (*Lepidochelys kempii*), leatherback (*Dermochelys coriacea*), and hawksbill (*Eretmochelys imbricata*) are listed as endangered. The Northwest Atlantic Ocean DPS of loggerhead turtles (*Caretta caretta*) and the North Atlantic and South Atlantic DPSs of green turtle (*Chelonia mydas*) are listed as threatened. All five of these species inhabit the waters of the U.S. Atlantic and Gulf of Mexico.

Atlantic coastal waters provide important developmental, migration, and feeding habitat for sea turtles. The distribution and abundance of sea turtles along the Atlantic coast is related to geographic location, reproductive cycles, food availability, and seasonal variations in water temperatures. Water temperatures dictate how early northward migration begins each year and are a useful factor for assessing when turtles will be found in certain areas. Sea turtles can occur in offshore as well as inshore waters, including sounds and embayments. More information about sea turtles can be found here: <https://www.fisheries.noaa.gov/sea-turtles>.

7.6.3 Sturgeon, Smalltooth Sawfish, and Nassau Grouper

No estimate of the historical population size of shortnose sturgeon is available. While the shortnose sturgeon was rarely the target of a commercial fishery, it often was taken incidentally in the commercial fishery for Atlantic sturgeon. In the 1950s, sturgeon fisheries declined on the

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east coast, which resulted in a lack of records of shortnose sturgeon. Shortnose sturgeon has been listed as endangered since 1967. A status assessment of shortnose sturgeon was last published in 2010 (SSSRT, 2010).

In 2012, NOAA Fisheries listed four DPSs of Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*) as endangered (NY Bight, Chesapeake Bay, Carolina, and South Atlantic DPSs) and one as threatened (Gulf of Maine). More information about Atlantic sturgeon can be found here: <https://www.fisheries.noaa.gov/species/atlantic-sturgeon>.

The U.S. DPS of smalltooth sawfish was listed as endangered in 2003. No accurate estimates of abundance trends over time are available, but available data, including museum records and anecdotal observations from fishers, indicate that the population has declined dramatically by about 95%. Smalltooth sawfish were once common throughout their historic range, but they have declined dramatically in U.S. waters over the last century. Still, there are few reliable data available, and no robust estimates of population size exist.¹⁰

In 2016, NOAA Fisheries listed Nassau grouper as threatened under the ESA (81 FR 42268; June 29, 2016). While the species still occupies its historical range, overutilization through historical harvest has reduced the number of individuals which in turn has reduced the number and size of spawning aggregations. Although harvest of Nassau grouper has diminished due to management measures, the reduced number and size of spawning aggregations and the inadequacy of law enforcement continue to present extinction risk to Nassau grouper. The Nassau grouper's confirmed distribution currently includes Bermuda and Florida (U.S.A.), throughout the Bahamas and Caribbean Sea. Many earlier reports of Nassau grouper up the Atlantic coast to North Carolina have not been confirmed.

7.6.4 Seabirds

The overall population status of the Bermuda Petrel is unknown. The Bermuda Petrel is a pelagic seabird, and its range and distribution at sea make it very difficult to survey. It is known to nest only on five small islets in Bermuda. Surveys are limited to the breeding grounds. The total population of the Bermuda Petrel is estimated as 101 breeding pairs (USFWS, 2013).

The roseate tern is a federally protected and endangered seabird that is mainly found in the Northern Hemisphere on the northeastern coast of North America, extending from Nova Scotia to the southern tip of Florida, as well as several islands in the Caribbean Sea. Populations in the northeastern U.S. greatly declined in the late 19th century due to hunting for the millinery, or hat trade. In the 1930s, protected under the MBTA, the population reached a high of about 8,500, but since then, population numbers have declined and stayed in the low range of 2,500 to 3,300. The species was listed in 1987 as endangered in the northeastern U.S. Populations in

¹⁰ <https://www.fisheries.noaa.gov/species/smalltooth-sawfish>

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Florida, Georgia, North Carolina, Puerto Rico, South Carolina and the Virgin Islands are listed as threatened.¹¹

The piping plover breeds on coastal beaches from Newfoundland and southeastern Quebec to North Carolina. These birds winter primarily on the Atlantic Coast from North Carolina to Florida, although some migrate to the Bahamas and West Indies. Piping plovers were common along the Atlantic Coast during much of the 19th century, but nearly disappeared due to excessive hunting for the millinery trade. The current population decline is attributed to increased development and recreational use of beaches. The most recent surveys place the Atlantic population at less than 2000 pairs.¹²

7.7 EXISTING AND PROPOSED FEDERAL REGULATIONS/ACTIONS PERTAINING TO RELEVANT PROTECTED SPECIES

7.7.1 Marine Mammals

Species of large whales protected by the ESA that occur throughout the Atlantic Ocean include the blue whale, humpback whale, fin whale, North Atlantic right whale, sei whale, and the sperm whale. Additionally, the West Indian manatee also occurs in both the Gulf of Mexico and the Atlantic Ocean. These species are also considered depleted under the Marine Mammal Protection Act (MMPA). Depleted and endangered designations afford special protections from captures, and further measures to restore populations to recovery or the optimum sustainable population are identified through required recovery (ESA species) or conservation plans (MMPA depleted species). Numerous other species of marine mammals listed under the MMPA occur throughout the Atlantic Ocean.

The MMPA mandates NOAA Fisheries to develop and implement Take Reduction Plans for preventing the depletion and assisting in the recovery of certain marine mammal stocks that are seriously injured or killed in commercial fisheries. In the Atlantic, the following Take Reduction Plans have been developed, which address in part, gears that have been used to capture cobia (gillnet):

- The Atlantic Large Whale Take Reduction Plan is designed to reduce the risk of mortality and serious injury of large whales (right, fin, humpback) incidental to U.S. commercial trap/pot and gillnet fisheries, including Southeast Atlantic gillnet.
- The Bottlenose Dolphin Take Reduction Plan is designed to reduce the incidental mortality and serious injury of the western North Atlantic coastal bottlenose dolphin stock in several coastal fisheries, including the Southeast Atlantic gillnet fishery.

¹¹ <https://www.fws.gov/northeast/pdf/Roseateatern0511.pdf>

¹² <https://www.fws.gov/northeast/pipingplover/overview.html>

7.7.2 Sea turtles

Under the ESA, and its implementing regulations, taking sea turtles – even incidentally – is prohibited, with exceptions identified in 50 CFR 223.206. The incidental take of endangered species may only legally be authorized by an incidental take statement or an incidental take permit issued pursuant to Section 7 or 10 of the ESA, respectively. According to the 2015 biological opinion on CMP fisheries, green, hawksbill, Kemp’s ridley, leatherback, and loggerhead sea turtles are all likely to be adversely affected by the CMP fishery (NMFS, 2015). Green, hawksbill, Kemp’s ridley, leatherback, and loggerhead sea turtles are all highly migratory, travel widely throughout the GOM and South Atlantic, and are known to occur in the area of the fishery. The 2015 biological opinion for CMP established an incidental take statement with reasonable and prudent measures and terms and conditions for incidental take coverage in the federal CMP fisheries for sea turtles takes throughout the action area.

On April 6, 2016, NMFS published a final rule (81 FR 20058) listing 11 distinct population segments (DPSs) for green sea turtles. The listing of the DPSs of green turtles triggers reinitiation of consultation under Section 7 of the ESA because the previous opinion did not consider what effects the CMP fishery is likely to have on this species, therefore NOAA Fisheries must analyze the impacts of these potential interactions. NOAA Fisheries is also in the process of identifying critical habitat, which will be proposed in a future rulemaking.

In 2013, the North Carolina Division of Marine Fisheries was issued a [permit](#) for the incidental take of listed sea turtles associated with the otherwise lawful large and small mesh gill net fishing in specified inshore estuarine areas. This permit requires North Carolina to close designated areas to avoid approaching the take limit.

Existing NOAA Fisheries regulations specify procedures that it may use to determine that unauthorized takings of sea turtles occur during fishing activities, and to impose additional restrictions to conserve sea turtles and to prevent unauthorized takings (50 CFR 223.206(d)(4)). Restrictions may be effective for a period of up to 30 days and may be renewed for additional periods of up to 30 days each. In 2007, NMFS issued a regulation (50 CFR 222.402) to establish procedures through which each year NMFS will identify, pursuant to specified criteria and after notice and opportunity for comment, those fisheries in which the agency intends to place observers (72 FR 43176, August 3, 2007). NOAA Fisheries issues a notice or regulation each year maintaining or updating the fisheries listed on the annual determination. The most recent determination was in December 2016 (81 FR 90330, December 14, 2016). NOAA Fisheries may place observers on U.S. fishing vessels, either recreational or commercial, operating in U.S. territorial waters, the U.S. exclusive economic zone (EEZ), or on the high seas, or on vessels that are otherwise subject to the jurisdiction of the U.S. Failure to comply with the requirements under this rule may result in civil or criminal penalties under the ESA.

7.7.3 Sturgeon, Smalltooth Sawfish, and Nassau Grouper

Shortnose sturgeon (*Acipenser brevirostrum*) and Atlantic sturgeon (*A. oxyrinchus*) were listed under the ESA in 1967 and 2012, respectively. The Commission and federal government implemented a coastwide moratorium on sturgeon harvest in late 1997 and early 1998. Bycatch remains an important issue in the recovery of Atlantic sturgeon populations throughout their range (ASMFC, 2007). The National Marine Fisheries Service established a recovery plan for shortnose sturgeon in 1998.

In 2013, the Georgia Department of Natural Resources was issued a permit for the incidental take of shortnose and Atlantic sturgeon associated with the otherwise lawful commercial shad fishery in Georgia. In 2014, the North Carolina Division of Marine Fisheries was issued a permit for the incidental take of Atlantic sturgeon DPSs associated with the otherwise lawful commercial inshore gillnet fishery in North Carolina.

The 2015 biological opinion for the Federal CMP fisheries established an incidental take statement with reasonable and prudent measures and terms and conditions for incidental take of Atlantic sturgeon (as well as sea turtles and smalltooth sawfish) throughout the action area (NMFS, 2015). In June 2016, NOAA Fisheries published proposed rules to designate critical habitat for Atlantic sturgeon (81 FR 36077; 6/3/2016 and 81 FR 35701; 6/3/2016).

The U.S. DPS of smalltooth sawfish was listed as endangered in 2003. Critical habitat was designated for it in 2009 (74 FR 45353; 9/2/2009) and a recovery plan was finalized in 2009 as well.

Harvest and possession of Nassau grouper is prohibited in the United States, Puerto Rico, and the U.S. Virgin Islands. NOAA Fisheries is evaluating potential management actions, such as critical habitat or application of the 4(d) rule in the ESA. When NMFS listed Nassau grouper as threatened, it solicited information from the public that may be relevant to the designation of critical habitat for Nassau grouper. A 4(d) rule provides regulations necessary for the conservation of any threatened species

7.7.4 Seabirds

Under the ESA and its regulations, take of Bermuda petrels, roseate terns, and piping plovers, even incidentally, is prohibited. The incidental take of an ESA listed species may only be legally authorized by an incidental take statement or incidental take permit issued pursuant to Section 7 or 10 of the ESA. No incidental takes of ESA listed bird species is currently authorized for cobia fisheries.

Section 316(c) of the Magnuson-Stevens Fishery Conservation and Management Act authorizes the Interior and Commerce Departments to undertake projects, in cooperation with industry, to improve information and technology to reduce seabird-fisheries interactions. USFWS seeks to partner with State, regional, and Federal agencies; industry; tribes; and NGOs to facilitate

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outreach and improve information and technology to reduce seabird bycatch in fisheries within state and Federal waters. A Memorandum of Understanding between NMFS and the USFWS (2012) describes additional collaborative efforts recommended to better understand and reduce bird bycatch in fisheries.¹³

Most actions to understand and reduce marine bird bycatch in the U.S. have occurred in Pacific waters. However, in 2011, the USFWS issued a business plan for addressing and reducing marine bird bycatch in U.S. Atlantic fisheries. The plan identified priority goals and actions to target the following marine bird-fisheries interactions: greater shearwaters in the New England groundfish fishery, and red-throated loons in the mid-Atlantic gillnet fisheries.¹⁴

7.8 POTENTIAL IMPACTS TO ATLANTIC COASTAL STATE AND INTERSTATE FISHERIES

Regulations under the take reduction plans for Atlantic large whales and bottlenose dolphins have the potential to impact gill net fisheries that capture cobia as bycatch.

7.9 IDENTIFICATION OF CURRENT DATA GAPS AND RESEARCH NEEDS

7.9.1 General Bycatch Related Research Needs

The following activities would improve our understanding of bycatch of fish and protected species in the Southeast Region. These activities were identified within NOAA Fisheries' Southeast Regional Office's FY16-20 Strategic Plan¹⁵:

- In coordination with the Marine Recreational Information Program (MRIP), test and validate the use of on-board recording systems (e.g., electronic logbooks) for capturing information on discarded fishes and bycatch of protected species in the commercial and recreational fisheries including species, length, depth, location, and disposition; priority fisheries include shrimp (including assessing TED compliance), South Atlantic snapper grouper, other Southeast Region recreational hook-and-line fisheries, and fisheries under take reduction teams.
- Enhance existing tools (e.g., observers, logbook requirements, electronic technologies) to collect bycatch data that inform agency bycatch priorities; priority fisheries include shrimp (including assessing TED compliance), South Atlantic snapper-grouper, other Southeast Region recreational hook-and-line fisheries, and fisheries under take reduction teams.
- Invest in new, innovative fishery monitoring techniques, such as electronic fishing logbooks and video monitoring, to provide a cost effective means of producing more

¹³ <https://www.fws.gov/migratorybirds/pdf/management/mounmfs.pdf>

¹⁴ <https://www.fws.gov/migratorybirds/pdf/management/focal-species/GreaterShearwater.pdf>

¹⁵ https://sero.nmfs.noaa.gov/documents/main_articles/pdfs/final_strategic_plan_october_2015.pdf

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information to effectively quantify bycatch; priority fisheries include shrimp (including assessing TED compliance), South Atlantic snapper-grouper, other Southeast Region recreational hook-and-line fisheries, and fisheries under take reduction teams.

- Improve the discard estimates needed for informing snapper-grouper, reef fish, dolphin wahoo, and coastal migratory pelagic SEDAR assessments in the next 3-5 years.

7.9.2 Marine Mammals

The following bycatch related research needs were identified within NOAA Fisheries' Southeast Regional Office's FY16-20 Strategic Plan¹⁶:

- Characterize frequency, scope, and scale of bottlenose dolphin interactions with recreational rod/reel fishing gear.
- Enhance and increase observer coverage for gillnet fisheries under the bottlenose dolphin take reduction plans by focusing observer coverage in specific geographic areas and fisheries, improving observer data collection and quality, and measures of fishing effort, as well as coordinating with state observer programs.
- Experimentally investigate possible attractants/deterrents for pilot whale/Risso's dolphins to pelagic longline gear and gear modifications to decrease the likelihood of hooking and/or entanglement.

7.9.3 Sea Turtles

Observer coverage of recreational fisheries has been relatively limited (Boyd, 2016). Expansion of observer programs to recreational hook-and-line fisheries would help determine the level of protected species interactions in those fisheries.

The following bycatch related research needs were identified within NOAA Fisheries' Southeast Regional Office's FY16-20 Strategic Plan¹⁷:

- Improved methods/models/techniques for estimating sea turtle bycatch in commercial fisheries including accounting for life stage and recovery unit (where applicable) impacts.
- Produce annual bycatch estimates for the shrimp trawl fisheries, pelagic longline, Gulf and South Atlantic reef fish, and Gulf and South Atlantic shark gillnet and bottom longline fisheries.

¹⁶ https://sero.nmfs.noaa.gov/documents/main_articles/pdfs/final_strategic_plan_october_2015.pdf

¹⁷ https://sero.nmfs.noaa.gov/documents/main_articles/pdfs/final_strategic_plan_october_2015.pdf

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- Implement monitoring program to assess bycatch of sea turtles in recreational fisheries, including piers, jetties, head boats and FMP covered recreational fisheries.
- Develop tools to reduce recreational fishing bycatch including on piers/jetties.
- Develop and improve analytic methods for sea turtle bycatch estimation and sampling design to optimally allocate observer coverage and identify gaps and recommend improvements/changes to improve sea turtle bycatch information.
- Ensure sea turtle bycatch data collected across fisheries is standardized and contains all necessary elements to assess post interaction mortality and to inform conservation management.
- Conduct gear research and technology transfer to reduce sea turtle interactions and mortalities in both domestic and foreign trawl, longline, and gill net fisheries.
- Develop sea turtle observer programs for commercial fisheries not currently observed but for which data are needed.

7.9.4 Sturgeon

NOAA Fisheries Southeast Regional Office has identified the following research needs for Atlantic sturgeon¹⁸:

- Identification of spawning and nursery grounds and overwintering areas.
- Long-term population monitoring programs.
- Population genetics.
- Toxic contaminant and biotoxin impacts and thresholds.
- Develop fish passage devices for sturgeon.
- Impacts of dredging.
- Reducing bycatch and bycatch mortality.

Regarding bycatch, very little information is available on current levels of bycatch and bycatch mortality occurring in fisheries in the Southeast. Research is needed to identify the spatial and temporal distribution of bycatch throughout the species range, and to identify measures that can be implemented to reduce bycatch and/or bycatch mortality.

NOAA Fisheries Southeast Regional Office has identified the following research needs for shorthnose sturgeon¹⁹:

- Genetic assessments.
- Surveys and presence/absence studies.
- Identification of spawning and nursery grounds and overwintering areas.
- Develop fish passage devices for sturgeon.

¹⁸ https://sero.nmfs.noaa.gov/protected_resources/sturgeon/documents/ats_research_priorities.pdf

¹⁹ https://sero.nmfs.noaa.gov/protected_resources/sturgeon/documents/sns_research_priorities.pdf

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- Contaminant research.
- Impacts of dredging.

7.9.5 Sawfish

The following research needs were identified within NOAA Fisheries' Southeast Regional Office's FY16-20 Strategic Plan²⁰:

- Develop a functional assessment model of juvenile sawfish habitat use within the critical habitat units.
- Determine the post-release mortality of sawfish from various types of fishing gear.
- Investigate movements (short-term and seasonal) of adult sawfish to identify aggregation habitats and habitat use patterns.
- Develop habitat models to identify potential sawfish nursery habitats in areas unsurveyed or outside of the currently known habitat areas.
- Continue current sawfish surveys as these will be the basis of monitoring recovery.
- Conduct juvenile sawfish surveys beyond the boundaries of current surveys (e.g., east coast or north of Charlotte Harbor) to refine a baseline abundance estimates and monitor recovery.
- Conduct adult surveys throughout the range of smalltooth sawfish to determine a relative abundance estimate, the distribution of adults, and to identify sawfish mating and pupping habitats.

7.9.6 Seabirds

- Initiate and expand observer coverage/bycatch monitoring and collection and analysis of bird bycatch data to better understand extent of bird bycatch and identify bycaught bird species within the target fisheries (state waters).
- Collaborate with fishermen to develop and test gear and identify deployment practices that reduce bird bycatch within the target fisheries (state waters).
- Conduct outreach activities to facilitate sharing of bird bycatch information in the target fisheries among agencies, industry and the public.

²⁰ https://sero.nmfs.noaa.gov/documents/main_articles/pdfs/final_strategic_plan_october_2015.pdf

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DRAFT AMENDMENT FOR BOARD REVIEW; NOT FOR PUBLIC COMMENT

APPENDIX I

Table A1. Commercial landings by state, in pounds, 1981-2018. 2018 data is preliminary and provided by individual states. * indicates confidential data. Source: ACCSP, queried April, 2019.

Year	NY	NJ	DE	MD	VA	NC	SC	GA	Total
1981					1,400	5,260	10,137	1,126	17,923
1982				100	2,000	10,574	16,286	2,304	31,264
1983					900	4,279	11,357	1,497	18,033
1984					1,900	6,701	2,523	2,570	13,694
1985				100	2,300	6,640	1,464	611	11,115
1986					1,200	18,303	3,690	2,561	25,754
1987	100				300	32,672	4,718	2,705	40,495
1988		100			5,700	15,690	5,224	1,924	28,638
1989		200		300	10,600	14,898	6,835	440	33,273
1990	17	1,649		431	16,532	21,938	1,802	1,367	43,736
1991		1,155		2,045	11,743	23,217	3,005	2,651	43,816
1992		1,037		1,882	6,110	18,534	6,925	2,187	36,675
1993		792		471	5,986	20,431	9,092	2,730	39,502
1994	165	483		*	7,817	30,586	5,488	2,483	47,022
1995	411	1,736		*	22,011	35,143	6,133	1,543	66,977
1996	*	2,295		*	*	33,404	4,483	675	40,857
1997	89	3,989		377	11,710	42,063	3,513	1,742	63,484
1998	60	2,853		*	13,419	22,197	3,481	*	42,010
1999	46	1,432		*	5,808	15,491	2,568	*	25,345
2000	101	1,762		*	7,525	28,754	2,974	*	41,116
2001	252	683		*	*	24,718	4,395	*	30,048
2002	70	2,086		*	11,445	21,058	5,007	*	39,666
2003	84	621	*	*	7,387	21,313	4,746	*	34,151
2004	758	576		211	6,143	20,162	4,459	705	33,014
2005	*	329		*	6,108	17,886	4,192	*	28,515
2006	*	*	*	398	6,369	20,270	2,672	*	29,709
2007	*	1,650		*	6,086	19,005	3,786	245	30,771
2008	*	*		*	6,978	22,047	3,464	*	32,488
2009	*	1,134		196	6,197	31,898	2,275	*	41,701
2010	*	270		*	8,852	43,715	2,749	*	55,586
2011	408	*		*	8,522	19,924	4,466	*	33,320
2012	152	701		*	5,389	31,972	3,731		41,945
2013	841	885	*	*	11,073	35,456	4,254	*	52,509
2014	311	366		*	22,345	41,798	3,880	*	68,701
2015	235	226		*	27,722	52,684	2,763	*	83,631
2016	129	312	*	*	36,460	48,244	4,532	*	89,677
2017	81	*	*	*	36,384	20,842	4,590	*	61,898
2018**					25,194	20,447			

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Table A2. Cobia recreational harvest (A + B1) by state, in pounds, 1981-2018, with effort estimated by or calibrated to the Coastal Household Telephone Survey (CHTS). 2018 data is preliminary. Source: MRIP, queried April, 2019.

Year	NY	NJ	DE	MD	VA	NC	SC	GA	TOTAL
1981					4,705	6,484			11,189
1982						66,342	22,215	24,997	113,554
1983				0				20,894	20,894
1984						191,237	125,332	78,428	394,997
1985	0			49,528	103,391	20,985	104,178	17,817	295,899
1986		108,701		4,416	77,695	178,128	145,843	15,252	530,035
1987					24,956	79,944	44,033	17,994	166,927
1988						106,749	42,133	3,927	152,809
1989				65	105,819	115,373	60,962	38,687	320,905
1990					86,345	118,387	16,923	16,677	238,331
1991				23,667	412,996	128,710	123,868		689,241
1992					159,502	120,261	40,285	24,977	345,025
1993					93,858	94,990			188,848
1994	0				159,460	94,394	31,994		285,848
1995					200,794	144,757	16,629		362,180
1996					152,759	99,867	82,476	9,347	344,449
1997					358,225	154,862	28,916	1,555	543,558
1998					141,566	125,545	35,561		302,673
1999				6,787	101,308	47,477	178,753	5,192	339,517
2000					324,562	118,349	763		443,674
2001					367,003	74,757		10,074	451,834
2002					75,489	209,043	10,691	1,172	296,395
2003				0	37,213	84,773	425,939	342	548,266
2004					35,189	294,042	649,803	44,045	1,023,079
2005			818		516,764	239,195	3,130	774	760,680
2006		17,035			898,542	184,300	53,634	1,733	1,155,244
2007					352,071	106,213	271,431	46,729	776,444
2008					116,420	82,566	32,497	320,174	551,657
2009					445,993	166,195	62,332	2,009	676,530
2010				1,069	254,414	498,581	67,946	89,840	911,850
2011					107,424	145,796		74,651	327,871
2012		6,796			26,537	104,106	201,223	97,766	436,427
2013					224,442	506,067	9,873	25,183	765,565
2014					173,772	247,386	26,439	19,079	466,677
2015					882,022	695,842	124,933	26,499	1,729,296
2016				193	915,151	298,090	76,754		1,290,187
2017					252,683	259,737		328	512,748
2018			4,840	3,254	843,994	364,810	36,683	6,226	1,259,807

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Table A3. Cobia recreational harvest (A + B1) by state, in pounds, 1981-2018, with effort estimated by or calibrated to the mail-based Fishing Effort Survey. 2018 data is preliminary. Source: MRIP, queried April, 2019.

Year	NY	NJ	DE	MD	VA	NC	SC	GA	Total
1981					5,788	3,726			9,514
1982						8,430	9,991	26,075	44,496
1983				0		0		73,504	73,504
1984						259,354	194,569	130,102	584,025
1985	0	0		63,281	78,704	2,720	193,778	47,167	385,650
1986		48,781		20,807	134,568	533,982	76,547	5,633	820,318
1987					21,167	81,833	4,477	9,989	117,466
1988						103,975	62,918	2,434	169,327
1989				25	262,795	208,259	91,078	50,169	612,326
1990					86,491	188,539	22,471	37,195	334,696
1991				2,095	118,737	266,633	477,604		865,069
1992					229,977	317,628	53,255	47,111	647,971
1993					113,636	168,142			281,778
1994	0		0		196,525	169,168	26,051		391,744
1995					637,842	302,745	20,718		961,305
1996					1,287,826	102,899	821,361	11,902	2,223,988
1997					516,108	129,299	90,931	1,498	737,836
1998					379,056	117,754	18,991		515,801
1999				1,387	164,817	101,465	100,955	3,446	372,070
2000					383,077	91,143	1,267	0	475,487
2001					283,256	121,751		8,354	413,361
2002					242,697	319,178	3,446	3,557	568,878
2003				98,524	120,097	223,508	940,447	459	1,383,035
2004		0			76,408	420,684	426,301	106,405	1,029,798
2005			5,044		792,006	401,557	1,549	899	1,201,055
2006		6,768			1,596,234	196,330	148,146	1,918	1,949,396
2007					499,736	218,447	538,625	63,024	1,319,832
2008		0			182,451	167,463	37,124	499,198	886,236
2009					855,629	320,075	94,996	1,831	1,272,531
2010		0		1,179	557,907	808,227	100,614	230,865	1,698,792
2011					341,751	399,192	0	182,799	923,742
2012		60,473		0	47,547	102,077	214,512	512,499	937,108
2013					488,181	980,541	24,005	43,915	1,536,642
2014					499,218	645,427	79,171	42,481	1,266,297
2015		0			1,166,000	1,925,762	434,899	102,917	3,629,578
2016				307	1,505,528	838,363	159,345	0	2,503,543
2017					488,287	872,861	0	390	1,361,538
2018		0	9,664	3,254	1,936,274	561,526	160,191	6,226	2,677,135

Summary of Public Comment on Draft Amendment 1 to the Atlantic Cobia Fishery Management Plan

The Public Comment period for Draft Amendment 1 to the Atlantic Cobia Fishery Management Plan (FMP) closed on July 15, 2019, and 8 written comments were received. Of the 8 written comments, 3 were organizational letters from the American Sportfishing Association (ASA), Hilton Head Island Sportfishing Club (HHISC), and Virginia Saltwater Sportfishing Association (VSSA). Comments are described below according to numbered options from Draft Amendment 1, along with general comments provided that did not pertain to these options.

Issue 1: Edit to Section 2.3 Goal

The ASA and VSSA support the edit.

Issue 2: Edit to Section 2.4 Objectives

The ASA and VSSA support the edit.

Issue 3: Edit to Section 2.6 Definition of Overfishing

The VSSA supports the edit, specifically incorporation of stock status criteria through Board action and potential use of the Commission's Independent External Peer Review Process.

The ASA supports incorporation of peer-review stock status determination criteria through Board action, but recommends adding language that would allow this process to establish fishing mortality and spawning stock biomass targets, in addition to the thresholds currently described in the Draft Amendment. The ASA also recommends renaming Section 2.6 to "Stock Status Criteria" or "Reference Points" to reflect inclusion of overfished status definition.

Issue 4: Edit to Section 3.1.1 Commercial Landings/Catch Monitoring

The VSSA supports state monitoring of commercial landings. The VSSA also supports current recreational monitoring efforts through Virginia's Cobia Recreational Permit, and recommends the Commission encourage other states to implement similar monitoring to supplement Marine Recreational Information Program (MRIP) information.

Issue 5: Section 4.1 Harvest Specification Process

The ASA and VSSA support **Option a (Harvest specification on a 2-year timeframe)**.

Issue 6: Section 4.2 Sector Quota Allocation

The ASA recommends a description of the methods for the current sector quota allocation and recalculation of sector allocations using the recalibrated MRIP harvest estimates.

The VSSA supports maintaining the current sector allocation.

Issue 7: Edit to Section 4.3.5 Evaluation of Recreational Landings and Overage Response

The ASA generally supports the edit, but recommends changing the time period of consecutive underharvest for a state to apply for relaxed measures to be reduced from 3 years to 2 years.

The VSSA supports the edit.

Issue 8: Section 4.3.6 Recreational Units

The ASA supports use of the option recommended by the Cobia Technical Committee.

The VSSA supports **Option b (numbers)**.

Issue 9: Section 4.4.1 Commercial Size Limit

The VSSA supports **Option b (36-inch fork length minimum commercial size)**.

Issue 10: Section 4.4.3 Commercial Vessel Limit

The VSSA supports **Option a (maximum commercial vessel limit of 6 fish)**.

Issue 11: Section 4.4.4 Commercial Quota Based Management

The VSSA supports the drafted language for managing the commercial quota.

Issue 12: Section 4.5.3.3 Commercial *De Minimis*

The VSSA supports **Option b (establishment of commercial *de minimis* status)**.

Issue 13: Section 4.9 Recommendation to the Secretary of Commerce for Complementary Actions in Federal Jurisdictions

The ASA supports **Option a (recreational and commercial regulations by licensed/permitted state)**, but also recommends seeking input from the Commission's Law Enforcement Committee before taking final action.

Two (2) SC individual written comments and the HHISC support **Option b (recreational regulations by area fished, commercial by licensed/permitted state)**.

The VSSA supports regulations corresponding to the state of landing, regardless of where the fish is caught or licenses/permits for other states.

General Comments:

- One VA commenter recommends delaying action on Amendment 1 until the SEDAR 58 stock assessment is complete. This commenter also described harvest overestimation by the MRIP in comparison to data collected by the Virginia Marine Resources Commission.
- One SC commenter supports a closure of all cobia fishing, except for those below the poverty line and fishing only for subsistence, due to cobia's ecological role as prey for large animals such as orcas and large sharks.
- One SC commenter supports management of cobia off South Carolina should be done exclusively by South Carolina due to a resident population of cobia there. This commenter also supports recreational limits of 1 fish per person (currently in place) and up to 2 fish per vessel.
- One commenter supports recreational limits of 1 fish per person (currently in place), a 36-inch total length minimum size limit, and up to 3 fish per vessel.
- The ASA also commented that the recalibrated MRIP harvest estimates should be used to recalculate state allocation percentages.

In addition to written comments, four public hearings were held, three in person in Virginia, North Carolina, and South Carolina, and one via webinar. Numeric counts of votes on issues with multiple options are shown in the Summary Table below. Comments beyond these votes for the Virginia, North Carolina, and South Carolina hearings are also summarized in this report,

and recordings of hearing comments are available upon request. No public attended the webinar hearing.

Summary Table

Issue	Comments in Favor of Options for Multi-Option Issues														
	Issue 5 (Harvest Spec)			Issue 8 (Rec Units)		Issue 9 (Com Min Size)		Issue 10 (Com Vessel Limit)			Issue 12 (Com <i>De Min</i>)		Issue 13 (Fed Regs)*		
	Option	a	b	c	a	b	a	b	a	b	c	a	b	a	b
Individual															2
Organization	2			1			1	1				1	1	1	1
Hearings															
VA	5	1		5		3		5		1		1	3**		
NC	7			7		7		7				7	7		
SC	3	3		6			6			6					6
TOTAL	17	4	0	19	0	10	7		0	7	0	9	11	9	

*VSSA supports federal recreational regulations according to the state of landing, regardless of catch location or multiple state licenses/permits.

**These individuals only support Issue 13 Option a with the removal of language requiring fishers with multiple licenses/permits for states with open seasons to fish using the most restrictive state's regulations.

Cobia Draft Amendment 1 Public Hearing Summary
Hampton, Virginia
June 12, 2019
8 Public Attendees

Staff: Dr. Michael Schmidtke (ASMFC), Pat Geer (VMRC), Alex Aspinwall (VMRC)
Attendees: Chris Ludford, Mike Gurley, Pat Link, Mike Avery, Jerry Hughes, John Sawyer, Wes Blow, Chris Martin

For Issues with multiple options (5, 8, 9, 10, 12, and 13), votes were taken to show attendees' preferred options. Totals for these votes are recorded in the Summary Table.

Issue 5

Patrick Link supported Option a, commenting the two years would allow flexibility and quicker ability to change management, while four years could lock in management that is unsustainable for the stock or the fishery.

John Sawyer supported Option a, due to the newness of management and knowledge about the fishery. Option a would allow necessary tweaks to management to be made more quickly.

Issue 6

Chris Martin commented that there should be consideration of expanding the commercial quota.

Issue 8

Patrick Link supports Option b, and commented that number of fish should be used throughout recreational management. **Mike Avery** agreed.

John Sawyer commented that the current VA limits reduce the average weight for that state's harvest (only 1 fish over 50 inches is allowed), so using number of fish makes harvests across states more comparable.

Issue 9

Wes Blow commented that current minimum size limits may not be useful and should be further evaluated.

Issue 13

Mike Avery commented that the port of departure and return should determine regulations, regardless of catch location or whether multiple licenses are held. **John Sawyer** supported this. If law enforcement intercepts a vessel in federal waters on which licenses for multiple states are possessed, law enforcement should ask the license holders where they left and are returning to and enforce the corresponding regulations. Mr. Avery commented that the currently drafted language is confusing for anglers with licenses from multiple states to determine which regulations apply to them.

Additional Comments:

Attendees expressed concern about MRIP recreational harvest estimates.

Mike Avery raised concerns regarding the lack of language that would prevent the Commission from closing the fishery mid-season. Dr. Schmidtke explained that one of the primary intentions of the plan is to avoid mid-season closures, although the Commission would retain the ability to close the fishery in an emergency situation. Mr. Avery also commented on current Virginia commercial regulations that set a vessel limit of two fish per license holder, and the difficulty for commercial fishers to find multiple license holders to harvest the vessel limit of 6 fish. Dr. Schmidtke noted that the per license holder regulation is set by Virginia, but is not required of the Commission's FMP, which sets the commercial possession limit as per person.

Patrick Link would like to see the Commission consider recreational harvest data other than MRIP. In comparing VMRC harvest data to that of MRIP, the 2018 MRIP estimate of harvest is 11 times greater than VMRC data. Mr. Link would like to see such data used to supplement MRIP data when evaluating recreational harvests and making management decisions.

Chris Martin commented on current Virginia commercial regulations that set a vessel limit of two fish per license holder, and the difficulty for commercial fishers to find multiple license holders to harvest the vessel limit of 6 fish. Mr. Martin also supports expanding the commercial fishery through increased quota and/or possession limits.

VIRGINIA MARINE RESOURCES COMMISSION

ASMFC Cobia Public Hearing on Amendment 1

380 FENWICK RD, BUILDING 96, FORT MONROE, VA

VMRC COMMISSION ROOM

Tuesday, June 12, 2019 - 6:00 PM

AW

Public Sign-In Sheet

PLEASE PRINT CLEARLY

Chris Ludford

Mike Gurley

Pat Link

Mike Avery

JERRY MORGAN

John Sawyer

Wes Block

Chad Martin

Cobia Draft Amendment 1 Public Hearing Summary
Manteo, North Carolina
June 13, 2019
7 Public Attendees

Staff: Dr. Michael Schmidtke (ASMFC), Chris Batsavage (NC DMF)

Attendees: Kyle Berry, Jack Piddington, Garrett Grant, Jake Worthington, Bill Gorham, Ward Trotter, David Wilson

For Issues with multiple options (5, 8, 9, 10, 12, and 13), votes were taken to show attendees' preferred options. Totals for these votes are recorded in the Summary Table.

Issue 2

Bill Gorham asked about the extent of flexibility that the Board will have through the new objectives. Dr. Schmidtke explained that the parameters of the Board's flexibility for the harvest specification process are defined within Issue 5.

David Wilson asked about how stock assessments will be conducted. Dr. Schmidtke explained that stock assessments will be conducted through the Southeast Data, Assessment, and Review (SEDAR) process, which primarily uses scientists from the NOAA Southeast Fisheries Science Center to conduct assessments.

Issue 3

Bill Gorham asked about what would happen if the ongoing assessment does not produce results usable for management use. Dr. Schmidtke explained that, for other Commission assessments that were not recommended for management use, if no information indicated that the stock was in jeopardy, status quo measures have continued. In the case of Atlantic cobia, continuation of any status quo beyond the stock assessment timeline would likely require a conversion of recreational quotas and targets from Coastal Household Telephone Survey (CHTS) units to those of the mail-based Fishing Effort Survey (FES). Mr. Gorham commented that continuation of status quo measures would be troubling.

David Wilson asked about whether SEDAR would be the only assessment process that the Board could use for management. Dr. Schmidtke explained that SEDAR will be the primary process moving forward, but if something happens that would prevent Atlantic cobia from being assessed in this manner, language in the Draft Amendment allows consideration of a Commission-conducted assessment or an assessment from another source that is approved by the Board and Cobia TC.

Issue 4

Bill Gorham asked about consideration of recreational state reporting for monitoring recreational harvests. He expressed concern with continued use of MRIP for recreational harvest monitoring without consideration of other recreational data sources.

Issue 5

Bill Gorham expressed concern with leaving current NC regulations in place for a long period of time via Option c. Mr. Gorham also commented that he would like to add an option of 1-year specification for Board consideration.

David Wilson asked about how the recreational allocations and targets were calculated. Dr. Schmidtke explained that the allocation percentages were based on a weighted average of MRIP landings from 2006-2015. Mr. Wilson also asked why management through a specification process is being considered. Dr. Schmidtke explained that the immediate need is to respond to results from the ongoing stock assessment in a timelier manner than would be allowed under an addendum or amendment, but on a longer term basis, this would allow the Board also to quickly make necessary changes to the fishery.

Kyle Berry asked about how often a vessel limit would change through harvest specification. Dr. Schmidtke explained that the vessel limit referred to in the specification process is the coastwide maximum, currently at 6 fish for both sectors. For the recreational sector, states set lower vessel limits to achieve their state recreational harvest targets.

Garrett Grant asked whether the timeframe of the specification process could vary. Dr. Schmidtke explained that the Draft Amendment allows specification for up to a certain number (2, 3, or 4) of years, but the average timeframe used to evaluate harvest would be up to 3 years, regardless of the specification timeframe selected.

Issue 6

Bill Gorham asked if the sector allocation percentages would remain after incorporation of the FES MRIP harvest estimates. Dr. Schmidtke explained that the percentages would remain in place and would require an addendum to change.

Issue 7

Bill Gorham would like to increase communication of MRIP methods to stakeholders, and to incorporate some sense of the estimate uncertainty. Mr. Gorham expressed a desire for stability, but would like to see stability at a harvest level that better allows businesses to persist.

Issue 8

Bill Gorham asked whether language could be added that would allow consideration of alternative data for estimating harvest. Mr. Batsavage followed up by asking if alternative harvest data were considered, would those data need to be certified by MRIP. Dr. Schmidtke explained that any decision on consideration of alternative recreational harvest data would need to be made by the Board.

Issue 9

Bill Gorham expressed concern with increasing the size limit for a small fishery, which would also increase discards and associated mortality.

Issue 13

David Wilson asked about the distinction between options. Mr. Batsavage explained that these options are really applicable to on-the-water enforcement, because a fisher would still have to

adhere to state possession and landing rules, i.e. if Option b were preferred, a recreational fisher from NC could fish in federal waters off VA under VA rules, but if they return to NC state waters, NC state laws would still apply.

Additional Comments:

Attendees expressed concern about MRIP recreational harvest estimates.

Bill Gorham expressed concern with Florida voting on any issues pertaining to Atlantic cobia management. Mr. Gorham stated that any Florida vote that is a deciding vote for Atlantic cobia management would be challenged, because cobia in FL waters are not included in the Atlantic stock or management unit.

Ward Trotter asked about how a stock assessment accounts for management that limits the amount of fish harvested. Dr. Schmidtke explained some basic stock assessment principles used to account for this.

David Wilson expressed concern with a lack of stakeholder involvement in the stock assessment process. Dr. Schmidtke explained that SEDAR directly incorporates stakeholders by appointing them as observers. Additionally, all SEDAR, Commission stock assessment, and Commission management meetings are open to the public, and stakeholders often attend to provide comments.

Cobia Draft Amendment 1 Public Hearing

Atlantic States Marine Fisheries Commission

June 13, 2019

North Carolina

-- PLEASE PRINT CLEARLY --

Name	Company/Organization	City, State
Caleb Berry		Kill Devil Hills, NC
Justin Piddington		Kill Devil Hills
Garrett Grant		Manteo, NC
Jake Worthington		Southern Shores, NC
Bill Graham	Pounded the Lure	Southern Shores, NC
Ward Trotter	Tie in Off	Wendell, NC
Paul Wilson		

Cobia Draft Amendment 1 Public Hearing Summary
Okatie, South Carolina
June 13, 2019
6 Public Attendees

Staff: Dr. Michael Schmidtke (ASMFC), Mel Bell (SCDNR), Wallace Jenkins (SCDNR), Amy Dukes (SCDNR) , Jake Morgenstern (SCDNR)

Attendees: Rick Percy, Dave Harter, Chris Kehner, Al Stokes, Earl Swierkowski, Dan Utley

For Issues with multiple options (5, 8, 9, 10, 12, and 13), votes were taken to show attendees' preferred options. Totals for these votes are recorded in the Summary Table.

Issue 5

Rick Percy supported Option a as this would allow for quicker conservation measures if needed.

Issue 8

David Harter supported Option b (number of fish), as records kept by the Hilton Head Sportfishing Club indicate that the coastwide average weight being used to convert pounds to numbers seems accurate for cobia caught in SC.

Issue 13

Rick Percy asked whether a Georgia angler fishing in federal waters would be required to have a South Carolina license. Mel Bell explained that if the angler left and returned to Georgia, they would not need an SC license, but if they trailered the boat up to SC and left or returned to an SC port, they would. Mr. Percy also commented that current management and any regulations for federal waters off SC that would allow more fish per recreational vessel than allowed in SC state waters is counterproductive to the conservation efforts SC has made to rebuild their distinct population segment of cobia. This includes the May closure that occurs in state waters south of Jeremy Inlet.

Al Stokes commented that recreational fishers from Savannah, GA, do continue to go to the Betsy Ross Reef (in federal waters off SC) and keep 6 fish per vessel, which differs from the 3 fish per vessel allowed in SC state waters.

Mel Bell noted that tagging and genetic information indicate a distinct population segment that migrates inshore and offshore of SC and that past and current SC state management actions, called for by the recreational fishery, have been geared toward conserving this population segment.



July 15, 2019

Dr. Michael Schmidtke
Atlantic States Marine Fisheries Commission
1050 North Highland Street, Suite 200
Arlington, Virginia 22201

Dear Dr. Schmidtke,

The American Sportfishing Association (ASA) appreciates the opportunity to provide comments to the Atlantic States Marine Fisheries Commission (ASMFC) on Draft Amendment 1 to the Atlantic Migratory Group Cobia Fishery Management Plan (FMP).

ASA is the nation's recreational fishing trade association and represents sportfishing manufacturers, retailers, wholesalers, and angler advocacy groups, as well as the interests of America's 49 million recreational anglers. ASA also safeguards and promotes the social, economic, and conservation values of sportfishing in America, which results in a \$125 billion per year impact on the nation's economy.

The recreational fishery for Atlantic cobia is socially and economically important to many states throughout the Southeast and Mid-Atlantic regions. ASA is encouraged that ASMFC now has sole management authority of this important fishery, and we recognize that with that authority comes great responsibility. To help assist ASMFC in developing a comprehensive FMP for cobia that is responsible to the resource and its fisheries, we submit the following comments on Draft Amendment 1 to the cobia FMP.

Goal (2.3)—ASA supports changing the FMP goal to include the language "...providing equitable and sustainable access to the Atlantic cobia resource throughout the management unit..."

Objectives (2.4)—ASA supports adding the two new objectives as proposed to the FMP. We believe the use of management measures that provide stability to the fishery, while also maintaining flexibility in the harvest specification process are useful objectives that will help achieve the FMP goal.

Definition of Overfishing (2.6)—ASA supports allowing for the incorporation of new, peer-reviewed stock status determination criteria through Board action. However, we recommend adding language to this section that enables the Management Board to establish fishing mortality and spawning stock biomass targets (in addition to already established thresholds). Additionally, we recommend renaming this section "stock status criteria" or "reference points" as this portion of the FMP contains both overfishing and overfished definitions.

AMERICAN SPORTFISHING ASSOCIATION

1001 N. Fairfax Street, Suite 501, Alexandria, VA 22314 • 703-519-9691 • Fax: 703-519-1872
Web: www.ASAFishing.org • Email: info@ASAFishing.org

Harvest Specification Process (4.1)—ASA supports Option A, establishing a two-year harvest specification process to provide flexibility to the fishery while balancing that with some stability.

“The coastwide total harvest quota, vessel limits, possession or bag limits, minimum size limits, and commercial closure triggering mechanism may be specified by Board action for up to two years. Subsequent harvest specification would occur for implementation after expiration of the previous specification (up to two years apart) or following a completed stock assessment.”

Sector Quota Allocation (4.2)—ASA recommends adding a description of the sector quota allocation period to the document in this section. Additionally, we recommend considering using the revised recreational landings data from the recalibrated Marine Recreational Information Program (MRIP) to calculate sector allocation. As detailed in section 1.1.1.2 in the draft amendment, the revised catch data will be incorporated into the SEDAR 58 assessment currently underway and is expected to impact the results.

Note that management for other species that have used the recalibration recreational landings data in recent assessments are currently at odds with sector allocation in their FMPs because the allocations are based on old landings data (e.g., summer flounder). This can be avoided if revised recreational landings estimates are incorporated when allocation decisions are being considered.

Recreational Seasons and Allocations (4.3.4)—ASA also recommends considering the use of the revised MRIP recreational landings data to determine state specific allocations.

Evaluation of Landings against State Harvest Targets and Overage Response (4.3.5)—ASA generally supports the proposed added language that helps clarify the timeline and process for evaluating landings against harvest targets. However, we suggest the following change, “States reporting a consistent under-harvest during an evaluation time period of at least ~~3 years~~ **(we recommend changing to 2 years)** may present a plan to extend seasons or increase vessel limits, if desired, to allow increased harvests that will not exceed the harvest target.”

Units for Recreational Landings (4.3.6)—ASA recommends using the option that the Technical Committee deems most dependable as it relates to the units for the recreational landings, quotas, and targets. It is difficult to evaluate the impacts of using pounds versus numbers of fish with the available information in the document.

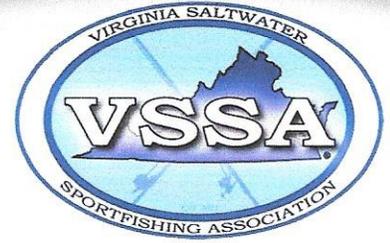
Recommendation to the Secretary of Commerce for Complementary Actions in Federal Jurisdictions (4.9)—ASA recommends option A that regulations in federal waters will be recommended to correspond to the licensed state of landings. From a recreational angler perspective, it is much easier to keep track of the regulations that apply to your port state, then it is to determine the state boundary extensions into federal waters as described in option B. It will also likely be easier for enforcement as well, but we recommend seeking input from ASMFC’s law enforcement committee on these options prior to taking final action.

Thank you for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read "M. Waine". The signature is fluid and cursive, with a long horizontal stroke at the beginning.

Michael Waine
Atlantic Fisheries Policy Director
American Sportfishing Association



Mike Avery
President

July 6, 2019

John Satterly
Vice President

Mike Ruggles
Treasurer

Lanie Avery
Secretary

Dr. Michael Schmidtke

Atlantic States Marine Fisheries Commission (Subject: Cobia Amd 1)

1050 N. Highland Street, Suite 200 A

Arlington VA. 22201

I am writing on behalf of the six hundred plus (600+) members of the Virginia Saltwater Sportfishing Association (VSSA) to provide our comments on the Draft Amendment 1 to the Atlantic Migratory Group Cobia Interstate Fishery Management Plan. VSSA represents both recreational and commercial for hire charter boat captains in the Commonwealth of Virginia. VSSA looks forward to ASMFC's expeditious approval of the Interstate Fishery Management Plan. Our comments by issue are as follows:

Board of Directors

Curtis Tomlin,
Chairman

Mike Avery

John Bello

Mike Ruggles

Jerry Hughes

Lanie Avery

Mark Roy

David Tobey

Sam Ashbee

Stan Sutliff

Steve Atkinson

Denny Dobbins

Issue 1. Goal Section 2.3 (page 39) adds the language *"providing equitable and sustainable access to the Atlantic cobia resource throughout the management unit..."* VSSA supports the addition of the proposed language.

Issue 2. Objectives Section 2.4 (Page 39) adds the following:

2) *Implement management measures that allow stable, sustainable harvest of Atlantic cobia in both state and federal waters.*

3) *Establish a harvest specification procedure that will allow flexibility to respond quickly to stock assessment results or problems in the fishery, while also providing opportunities for public input on potential significant changes to management.*

VSSA supports the addition of the proposed language.

Issue 3. Definition of overfishing Section 2.6 (page 40). VSSA supports *"the incorporation of new, peer-reviewed stock status determination criteria as soon as it becomes available, through the harvest specification process (Section 4.1), allowing timely use of the best available scientific information in the management of Atlantic Cobia."*

Additionally, VSSA supports utilizing *"The Commission's Independent External Peer Review process, which follows a similar process to SEDAR in contracting independent experts to review scientific stock assessment advice, including status determination criteria, but allows the Commission more flexibility in determining the timing of a benchmark assessment."*



July 6, 2019
Dr. Michael Schmidtke
Page 2

Issue 4. Recreational fishing effort and reporting Section 3.1.2 (page 43). VSSA supports all states reporting both recreational and commercial harvest of Cobia. Additionally, VSSA supports Virginia's Cobia Recreational Permit and would support ASMFC recommending same to the other member states to supplement MRIP sampling.

Issue 5. Harvest Specification Process Section 4.1 (page 49). VSSA supports Option A.
a. The coastwide total harvest quota, vessel limits, possession or bag limits, minimum size limits, and commercial closure triggering mechanism may be specified by Board action for up to two years. Subsequent harvest specification would occur for implementation after expiration of the previous specification (up to two years apart) or following a completed stock assessment

Issue 6. Sector Allocation Section 4.2 (page 42). VSSA supports maintaining 92% recreational and 8% commercial coast wide quota allocation. Additionally, VSSA supports state specific management of the size, bag, and vessel limits as well as seasonal allocation of the state specific quotas.

Issue 7. Evaluation of Landings against State Harvest Targets and Overage Response Section 4.3.5 (page 43). VSSA supports the language as proposed and supports individual states adjusting limits and seasons for reduced harvest to such that average landings will achieve the states recreational harvest target.

Issue 8. Units for Recreational Landings, Quotas, and Targets Section 4.3.6 (page 54). VSSA supports Option b.
b. Recreational landings, quotas, and targets will be evaluated and set in units of numbers of fish. The recreational quota and harvest targets will be converted to numbers of fish by dividing poundage amounts by the average of the three most recent annual average weights for cobia landed recreationally, as determined by data from the Marine Recreational Information Program (average weight = recreational pounds/recreational numbers). Conversions conducted prior to the availability of average weight data from 2020 will exclude the use of 2016 and 2017, as a portion of the management unit was closed to recreational fishing during those years, and replace them with data from 2014 and 2015, respectively.

A state may submit alternative data sets that would provide more appropriate estimates of average weight for their state's fishery. Alternative data sets must be evaluated by the TC and approved by the Board before being implemented in converting that state's recreational harvest target from pounds to numbers.



July 6, 2019
Dr. Michael Schmidtke
Page 3

Issue 9. Commercial Size Limit options Section 4.4 (page 54). VSSA supports the Commercial Size limit Option b.

b. All states shall maintain a minimum size limit of 36 inches fork length or the total length equivalent (40 inches).

Issue 10. Vessel Limits Section 4.43 (page 47). VSSA supports the Commercial Vessel limit Option a.

c. All states shall establish a daily vessel limit, not to exceed 6 fish per vessel.

Issue 11. Quota Based Management Section 4.4.4 (page 55). VSSA supports the language as proposed.

Issue 12. Commercial De Minimus Options Section 4.5.3.3 (page 58). VSSA supports option b.

b. States may apply for de minimis status for their commercial fishery.

Issue 13. RECOMMENDATION TO THE SECRETARY OF COMMERCE FOR COMPLEMENTARY ACTIONS IN FEDERAL JURISDICTIONS Section 4.9 (Page 63). VSSA believes the options offered will lead to confusion with both anglers and law enforcement. Accordingly we do support any of the options as offered. We recommend the regulations in Federal waters correspond to the actual state of landing regardless of where the fish is caught, or how many state licenses are held.

VSSA looks forward to Cobia being managed effectively and efficiently utilizing the best available science and management practices. Thank you for the opportunity to provide input on this important and valuable fishery.

Respectfully,

A handwritten signature in blue ink, appearing to read "John J. Bello", is written over a blue circular stamp.

John J. Bello
Chairman Government Affairs Committee

cc. Mr. Rob O'Reilly, Virginia Marine Resources Commission
Alex Aspinwall, Virginia Marine Resources Commission
Pat Geer, Virginia Marine Resources Commission

From: [David Harter](#)
To: [Comments](#)
Cc: [Al Stokes](#); [Bill Parker](#); [Collins Doughtie](#)
Subject: Cobia Draft amendment
Date: Monday, July 15, 2019 2:34:36 PM

The Hilton Head Reef Foundation and its parent organization, the Hilton Head Island Sportfishing Club is very much in favor of Option B for Issue 13.

In 2006-8, we were chief investigators for an archival satellite tagging program of our inshore spawning cobia to track their movements. This was funded by NOAA/Seagrant and conducted by marine biologist Don Hammond.

While several tags showed a distinctive straight offshore movement toward the Navy Towers, one cobia moved back and forth from Port Royal Sound to the Betsy Ross Reef several times.

Before extensive genetic studies, and in conjunction with returns from traditional dorsal tagging (which we were also heavily engaged in), we were convinced early on that our mature inshore cobia had minimal migration to other estuarine systems.

Subsequent results from the SCDNR DNA studies continue to confirm that position.

Thus, in order to protect our local cobia stocks they must be regulated by South Carolina and any size, catch or possession limits should apply to the harvest area rather than the port of origin.

Overall, we feel that the handoff of cobia fisheries management to the ASMFC is a very good step for the cobia fishery and the fishermen.

Sincerely
David Harter
Pres. HHI Sportfishing Club
VP Hilton Head Reef Foundation

"I like to see a man proud of the place in which he lives. I like to see a man live so that his place will be proud of him." Abe Lincoln

Tina Berger

From: marcuspor@aol.com
Sent: Monday, July 15, 2019 2:19 PM
To: Comments
Subject: Draft amendment 1 Issue 13 Option B

Allow SC to enforce existing and future state regulatory measures in the federal waters off S.C. regardless of the port of origin.or state registration of the vessel encountered.. Also one fish /person/day with 3 fish/boat/day. with 36" TL limit. Thanks Mark

Tina Berger

From: Richard Pollitzer <rpollitzer@gmail.com>
Sent: Friday, July 12, 2019 6:38 PM
To: Comments
Subject: Cobia Ammendments

To Those Concerned:

I am a Beaufort SC native and a charter captain in Hilton Head, SC and have been in the business for nearly 30 years. I also hold a degree in resource management with a minor in Fisheries Biology from Clemson. I spend countless hours in our offshore and inshore waters in pursuit of Cobia and have contributed 100's of carcasses and fin clippings to SCDNR for the research of Cobia. My interest in them is both professional and intellectual and I support the efforts being made to ensure their sustainability.

It is my opinion that the limits on Cobia set for SC Waters should be enforceable to boats of all ports of call not just those from SC. This is important for many reasons, not the least of which is the ease of enforcement. How would our enforcement officers know where a vessel registered in another state actually departed from? I'm certain that 1000's of vessels registered in other states are launched from one of our many boat landings each year with the intention of targeting Cobia. Our officers will not be able to monitor those boats, once checked, to make sure they are returning to non-SC ports. The other reason is scientific. If "our" Cobia are spawning locally, management should fall in the hands of our regulatory body not that of other states. I would also like to see the limit set at 2 per boat per day or 1 per person in both inshore and offshore waters. I urge my clients to allow me to implement that rule on my boat as 2 legal Cobia yield plenty of meat to make the day of fishing worth while.

As an aside I'd like to point out a cycle I have noticed in my lifetime of fishing in SC waters. The population (or perhaps fishing yield) of Cobia is directly reciprocal to King Mackerel. In years that the King Mackerel fishery is at its strongest, the Cobia fishery seems weakest. This is the second time I have observed this cycle which seems to reciprocate fully every 30 years.

Thank you for your attention to my email and to this very important facet of SC fishing.

Richard Pollitzer
Tallboy Fishing Charters
Tideland Realty
(843)575-2550

Tina Berger

From: Ellen Sinderman <ellenindia219@gmail.com>
Sent: Thursday, July 4, 2019 7:53 AM
To: Comments
Subject: Cobia Amd 1

Michael, I am against cobia fishing for the indefinite future. They are prey for larger pelagic fish like orcas and great white sharks, which are endangered.

In the future, only those below the poverty line, who own the right boat and equipment, should be allowed to catch certain species- for food only. Our economy is booming for most and so sport fishing and fishing for "fun" should be curtailed imo. Even catch and release leads to injury per the Lemon Island Maritime Center staff, where I volunteer.

I will be leaving \$10k to WWF in my will- that's my commitment. And I am not some unbalanced liberal, but an independent and moderate.

Thanks for reading

Ellen Rebekah Drager
Beaufort, SC

He is born in vain, who having attained the human birth, so difficult to get, does not attempt to realize God in this very life. - Ramakrishna, born 1836, was an Indian Hindu mystic and saint in 19th century Bengal.

Tina Berger

From: Jonathan French <french60wasp@gmail.com>
Sent: Thursday, June 20, 2019 12:27 AM
To: Comments; Rob O'Reilly; Cimino, Joe (MRC); Ryan Jiorle; STEVEN G. BOWMAN; Bryan Plumlee; Monty Mason
Subject: Cobia Amd 1

Dear Members of the Atlantic States Marine Fisheries Council,

Thank you for the opportunity to comment on the proposed Cobia Amendment 1. Based on evidence being presented during the current cobia stock assessment activity regarding the size of the cobia biomass that runs counter to the conclusions made as part of the SEDAR28 process in 2014, I think it would be premature to take action on Cobia Amendment 1 until the new stock assessment is completed. I strongly encourage members of the ASMFC to vote against implementation of Amendment 1 until the new stock assessment is completed.

Virginia Institute of Marine Sciences tagging data and VMRC mandated reported directly refutes conclusions made about cobia behavior and catch estimates following 2014's SEDAR28, and that data is currently being weighed by the SEDAR cobia stock assessment group. Following a separation of stocks and allocations based on questionable assertions by SEDAR28, there was a significant spike in MRIP estimates for the cobia catch. The catch was a significant statistical outlier, over three standard deviations from the MRIP estimated annual catch of the previous decade. Despite the lack of data quality, the SAMFC chose to use the data, enacted a closure of federal water for cobia harvest, and pressured states to do the same.

The catch data was wildly inconsistent with state estimates as well. In response, the Commonwealth of Virginia enacted a mandatory cobia permit and mandatory trip reporting to provide an alternative data source to the MRIP estimates. In 2018, VMRC analysts estimated 27,342 cobia landed in Virginia waters, with 18,049 of those fish reported directly from the mandatory reporting program. VMRC estimated that 6,388 of those fish were harvested.

During the same measurement period, MRIP estimated a cobia catch of 262,916 fish landed for 2018 in Virginia waters. This reflects a ten fold increase over Virginia estimates, despite Virginia's sample size being much larger and reflecting a much more accurate reflection of the state of the fishery and fishing pressure. Making management decisions based on this data, coupled with biomass estimates and scientific assertions which have been proven to be inaccurate about cobia reproductive behavior and migration which completely failed to consider data and anecdotal evidence from Virginia does not reflect fisheries management using the best science available. Making management decisions without utilizing state collected data, even though variation exists in the federal data collection which no industry would credibly use for management decisions, is wrong and goes against the scientific method and every fisheries management principle emphasized in federal law.

Thank You,
Jonathan French
2820 Emma Lee St #303
Falls Church VA, 22042



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South Atlantic State/Federal Fisheries Advisory Panel Meeting Summary

Conference Call/Webinar
July 8, 2019

Advisory Panel Members: Craig Freeman (VA)

ASMFC Staff: Mike Schmidtke

The South Atlantic Advisory Panel (AP) met via conference call to review Draft Amendment 1 to the Fishery Management Plan for Atlantic Migratory Group (Atlantic) Cobia (FMP). This meeting was to review the presented issues and options to and develop AP comments and recommendations to be considered with final action by the South Atlantic State/Federal Fisheries Management Board (Board) at their meeting in August, 2019.

Mike Schmidtke presented the Draft Amendment, focusing on the information and issues discussed in the first four sections of the document. Draft Amendment 1 addresses 13 issues. These issues, along with AP comments and recommendations, are listed below.

Issue 1: Edit to Section 2.3 Goal

The AP does not object to the edit.

Issue 2: Edit to Section 2.4 Objectives

The AP does not object to the edit.

Issue 3: Edit to Section 2.6 Definition of Overfishing

The AP does not object to the edit.

Issue 4: Edit to Section 3.1.1 Commercial Landings/Catch Monitoring

The AP does not object to the edit.

Issue 5: Section 4.1 Harvest Specification Process

The AP supports Option a: The coastwide total harvest quota, vessel limits, possession or bag limits, minimum size limits, and commercial closure triggering mechanism may be specified by Board action for up to two years. Subsequent harvest specification would occur for implementation after expiration of the previous specification (up to two years apart) or following a completed stock assessment.

Issue 6: Section 4.2 Sector Quota Allocation

The AP does not object to the section as written (92% recreational, 8% commercial allocations).

Issue 7: Edit to Section 4.3.5 Evaluation of Recreational Landings and Overage Response

The AP does not object to the edit.

Issue 8: Section 4.3.6 Recreational Units

The AP supports Option b: Recreational landings, quotas, and targets will be evaluated and set in units of numbers of fish.

Issue 9: Section 4.4.1 Commercial Size Limit

The AP supports Option a: (Status Quo) All states shall maintain a minimum size limit of 33 inches fork length or the total length equivalent (37 inches).

Issue 10: Section 4.4.3 Commercial Vessel Limit

The AP supports Option c: All states shall establish a daily vessel limit, not to exceed 4 fish per vessel.

- The AP's support of Option c is contingent that the 4 fish vessel limit would be able to apply regardless of the number of commercial license holders on the vessel. While the Commission's FMP does not specify commercial regulations on a per license holder basis, current Virginia regulations do.
- The AP supports the general principle that the commercial fishery's vessel limit should in effect be equal to or one fish greater than that of the recreational fishery.

Issue 11: Section 4.4.4 Commercial Quota Based Management

The AP does not object to the section as written.

Issue 12: Section 4.5.3.3 Commercial *De Minimis*

The AP supports Option b: States may apply for *de minimis* status for their commercial fishery.

Issue 13: Section 4.9 Recommendation to the Secretary of Commerce for Complementary Actions in Federal Jurisdictions

The AP supports Option a: Regulations in federal waters will be recommended to correspond to those of the vessel's permitted or licensed state of landing. If possessing permits or licenses for multiple states with open seasons, regulations for the most restrictive open state shall apply. If possessing permits or licenses for multiple states, only one of which is open, regulations for the state with an open season shall apply.

Following the webinar, the AP was contacted via email and additional comments were requested. No additional comments were provided through July 19, 2019.