Agenda Reef Fish Management Committee

Gulf of Mexico Fishery Management Council
Hilton Galveston Island Resort
Galveston, Texas

Tuesday, October 6th - 8:30 AM - 5:00 PM Wednesday, October 7th - 8:30 AM - 9:30 AM

----- Convene at 8:30 AM -----

- I. Adoption of Agenda (Tab B, No. 1) Greene
- II. Approval of Minutes (Tab B, No. 2) Greene
- III. Action Guide and Next Steps (**Tab B, No. 3**) Atran
- IV. SSC Summary (**Tab B, No. 4**) Luiz Barbieri (SSC representative)
 - a. Best practices for constant catch ABC projections
 - b. Constant catch ABC for hogfish
 - c. SEDAR 43 gray triggerfish standard assessment and ABC
 - d. Best practices for number of years of OFL/ABC projections to provide
 - e. Other business
- V. Final Action Framework Action to set Gag Recreational Season and Gag and Black Grouper Minimum Size Limits (**Tab B, No. 5a**)
 - a. Review of framework action Atran
 - b. Review of codified regulations (**Tab B, No. 5b**) NMFS
 - c. Reef Fish AP recommendations (**Tab B, No. 11**) Simmons
 - d. Committee recommendations Greene

----- 15 minute break at 10:00 AM - 10:15 AM -----

- VI. Revised Public Hearing Draft Amendment 39 Regional Management of Recreational Red Snapper (**Tab B, No. 6**)
 - a. Review of amendment Lasseter
 - b. Reef Fish AP recommendations (**Tab B, No. 11**) Simmons
 - c. Committee recommendations Greene

----- 1 ½ hour lunch break – 12:00 PM – 1:30 PM -----

- VII. Options Paper Amendment to Define Gulf of Mexico Hogfish Stock, and set ACL and Status Determination Criteria (**Tab B, No. 7**)
 - a. Review of options paper Atran
 - b. Reef Fish AP recommendations (Tab B, No. 11) Simmons
 - c. Committee recommendations Greene

- VIII. Options Paper South Florida Management Issues a. Review of options paper (Tab B, No. 8a) - Simmons b. Remaining Gulf Reef Fish Committee recommendations from June 2015 (Tab B, No. 8b) – Simmons c. South Atlantic Council recommendations (Tab B, No. 8c) - Simmons d. Committee recommendations - Greene ----- 15 minute break at 3:15 PM - 3:30 PM ------IX. Options paper – Framework Action to set Mutton Snapper ACL (**Tab B, No. 9**) a. Review of framework action - Simmons b. Committee recommendations - Greene X. Discussion – Ad Hoc Private Recreational AP – Greene ----- Recess day 1 at 5:00 PM ---------- Convene day 2 at 8:30 AM -----XI. Options Paper – Adjust Minimum Stock Size Threshold (MSST) (Tab B, No. 10) – Atran XII. Reef Fish AP Summary additional items (Tab B, No. 11) – Simmons a. Comments on SEDAR 43 gray triggerfish assessment
 - b. Framework action to modify gear restrictions for yellowtail snapper
 - c. Comments on coral habitat areas of particular concern
 - d. Other business

XIII. Other Business - Greene

----- Adjourn at 9:30 AM -----

Members:

John Greene, Chair
Camp Matens, V. Chair
Doug Boyd
Roy Crabtree/Steve Branstetter
Jamie Miller/Kelly Lucas
Randy Pausina/Myron Fischer
Robin Riechers/Lance Robinson
David Walker
Nick Wiley/Martha Bademan
Roy Williams

Staff: Steven Atran/Carrie Simmons

| 1 | GULF OF MEXICO FISHERY MANAGEMENT COUNCIL |
|--|---|
| 2 3 | REEF FISH MANAGEMENT COMMITTEE |
| 4 5 6 | Hilton Riverside Hotel New Orleans, Louisiana |
| 7 | August 11, 2015 |
| 8 9 | VOTING MEMBERS |
| 10 11 12 13 14 15 | John Greene |
| 17 18 19 20 | Robin Riechers |
| 21 | NON-VOTING MEMBERS |
| 22 23 24 25 26 27 28 29 30 31 32 33 | Kevin Anson |
| 34 35 37 38 39 41 42 44 45 46 47 | Steven Atran |
| 4 / 48 | Pam AndersonPanama City Beach, FL |

| 1 | Tom ArdOrange Beach, AL |
|-----|-----------------------------------|
| 2 | Anna BeckwithSAFMC |
| 3 | Ellen BolenOcean Conservancy |
| 4 | Steve BranstetterNMFS |
| 5 | Theo BrainerdSEFSC |
| 6 | Bubba Cochrane |
| 7 | Jim CowanLSU, Baton Rouge, LA |
| 8 | Tracy FloydMDMR, Biloxi, MS |
| 9 | Brad GorstPalm Harbor, FL |
| LO | Peter HoodNMFS |
| L1 | Gary JarvisDCBA, Destin, FL |
| L2 | Pam JarvisDestin, FL |
| L3 | Gary Jennings |
| L 4 | Mike JenningsFreeport, TX |
| L 5 | Bill KellyFKCFA, FL |
| L 6 | Kristen McConnellEDF |
| L7 | Kimberly MillerOMB |
| L 8 | Bart NiquetLynn Haven, FL |
| L 9 | Gary ReisnerNOAA |
| 20 | Katie SemonLA |
| 21 | Bob SpaethSOFA, Madeira Beach, FL |
| 22 | Jessica StephenNMFS |
| 23 | Steve TomenyPort Fourchon, LA |
| 24 | Bill TuckerDunedin, FL |
| 25 | Russell UnderwoodLynn Haven, FL |
| 26 | Tom WheatleyTampa, FL |
| 7 | - |

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The Reef Fish Management Committee of the Gulf of Mexico Fishery Management Council convened at the Hilton Riverside Hotel, New Orleans, Louisiana, Tuesday morning, August 11, 2015, and was called to order at 8:30 a.m. by Chairman Johnny Greene.

ADOPTION OF AGENDA APPROVAL OF MINUTES ACTION GUIDE AND NEXT STEPS

CHAIRMAN JOHNNY GREENE: Good morning. I will call the Reef Fish Committee together. You have a copy of the agenda in front of you and is there any additions to the agenda? Seeing no additions, the agenda will be adopted as written.

Approval of the Minutes, is there any changes or additions or deletions to the minutes? Seeing none, the minutes will be approved as written.

Item Number III, Action Guide and Next Steps, Tab B, Number 3,

has been presented for your review and will certainly be helpful to me as we go through the day. We will move on to Agenda Number IV, Public Hearing Draft Amendment 39, Regional Management, Tab B, Number 4, and Dr. Lasseter.

PUBLIC HEARING DRAFT AMENDMENT 39 - REGIONAL MANAGEMENT OF RECREATIONAL RED SNAPPER

DR. AVA LASSETER: Thank you, Mr. Chairman. Regional Management of Recreational Red Snapper, this is Tab B, Number 4, and so looking at the action schedule, what we want to accomplish for this portion of the agenda is to review all of the actions and alternatives in the updated draft you've been provided.

We now have the Chapters 3 and 4, the affected environment and the effects sections, completed, the first draft, and so we would like the committee to review the preferred alternatives and select a preferred alternative for Action 2. If there is any further discussion on the timeline as well -- We understand that we are going to do an additional round of public hearings in October, soon after the October meeting, and so let's go ahead and move on to Action 1, which begins on page 9 of your document.

This Action 1 is defining the form of regional management, structure, that the council is interested in and so, of course, Alternative 1, we do not have regional management and current federal regulations apply to all federal waters of the Gulf.

Alternative 2 was the alternative for delegation, which has previously been considered by the council. Your current preferred alternative is Alternative 3, which would establish a regional management program where each state or group of states, as your regions, is going to submit proposals to NMFS and these proposals are going to describe the conservation equivalency measures that the region will adopt for its portion of the recreational sector ACL that will be allocated in a further action.

I want to point out that if a region does not participate or its plan is determined by NMFS to not satisfy the requirements for conservation equivalency, then the recreational harvest of red snapper in federal waters adjacent to that region would be subject to the federal default regulations for red snapper, which are currently, the status quo regulations, a two fish bag limit and the minimum size -- This amendment is being changed. Then the season would be set by NMFS, depending on the portion of allocated quota.

Preferred Alternative 3 is your current preferred. The difference between 3 and 4 is that 4 would require an additional step of review prior to the proposals being submitted to NMFS. A technical review committee would be created by the council and this committee would be responsible for reviewing the proposals, returning to the regions that they needed additional work, and then ultimately sending them to NMFS for final review.

I will point out that this Alternative 4 is similar to what the summer flounder management program at the Atlantic States does. They have their Summer Flounder Review Board.

The idea under all of these alternatives is that the EEZ, federal waters, stay open coast-wide, Gulf-wide, and that landings will be based -- Enforcement will be primarily landings-based.

Alternative 5 provides some options for sunsetting the program and you did previously, when delegation was your preferred alternative, have a sunset option selected when the preferred alternative was switched and the sunset was not selected. That's Action 1 and is there any discussion?

CHAIRMAN GREENE: Is there discussion by the committee? Dr. Crabtree.

DR. ROY CRABTREE: I still would like to hear a little discussion about the merits of Alternative 3 versus Alternative 4. It still seems, to me, there would be a lot of benefit in having a technical review group that consists of folks from the states involved in looking at some of these things, rather than just have the Fisheries Service and have us just render an opinion on it. It seems this would be beneficial in terms of keeping us all on the same page and more consensus and things and I don't know, Mr. Chairman, if we want to go through the whole document before we offer motions or do you want to --

CHAIRMAN GREENE: I think we just go through them one at a time and just go that route, I would imagine.

DR. CRABTREE: I would offer a motion to change our preferred alternative to Alternative 4.

CHAIRMAN GREENE: Okay. They are getting the motion on the board and is there a second to the motion? It's seconded by Mr. Williams. Dr. Crabtree.

 DR. CRABTREE: If I could, I mean I think for this to work that it's going to be real important for all of the states to thoroughly understand what the other states are doing and how they're calculating it and to feel like everybody is doing things consistently and everybody is being handled fairly.

It seems to me that Alternative 4 would do a better job towards getting us to that point and I don't think it necessarily has to tack all that much more time on the process.

CHAIRMAN GREENE: Okay. Mr. Riechers.

MR. ROBIN RIECHERS: Roy, I know you've suggested this alternative before and certainly, in some respects, I am starting to warm up to this alternative more. I think part of what would be helpful, and I think it's an effort that we can make between now and the next meeting, and I think it will help determine whether or not it would be a preferred or not, but that's actually outline that timeline a little bit better and thank about the makeup and composition of the technical review committee, so that it's actually a little more clear as to how that's going to function.

With that in mind, I think I will support the motion and try to help us get to a point at the next meeting where we have some of that in place and can either be added to the document or can be held to the side, but we all have an understanding of how that's going to work.

CHAIRMAN GREENE: Martha.

 MS. MARTHA BADEMAN: Thanks. Yes, I share a lot of Robin's concerns, I guess, and questions. I think our primary concern has been with the timeline for this and what that looks like, because I think it would clearly have to be longer than the one that's for the current preferred alternative, which is already pretty lengthy once you consider the legwork that it would take even to get to July 1 for the state that has a plan that they are submitting or I guess preparing to submit. I would like to see some more details.

CHAIRMAN GREENE: Okay. Any further discussion? Dr. Crabtree.

DR. CRABTREE: I think that's fair enough and I think we can certainly ask staff to try and work that into this timeline and see how much difference it makes, but you know if we get into a situation where there are disagreements about how it's going to work between the Fisheries Service and a state and all, that's

going to really drag things down, but I think that's a fair enough concern to ask staff to look at the timeline and see what that would do to it.

CHAIRMAN GREENE: Okay. Seeing no further discussion, we have a motion on the floor. All those in favor, please raise your hand; all those opposed like sign. The motion carries six to two. Dr. Lasseter.

DR. LASSETER: Thank you, Mr. Chairman. I will add a note here. If we could scroll down just a little bit to the section that starts "Requirements of Conservation Equivalency" and it's on page 13 in your document.

I just want to point out that there's a statement in here: In addition, the timeline allows the state or region an opportunity to submit a revised CPE for approval. If the -- This is the important part. If the proposed management measures extend beyond the range analyzed in this amendment, then NMFS may recommend preparing an appropriate documentation for the applicable laws to support the decision. This would basically be a NEPA analysis-type document.

I just wanted to encourage the council if there's anything that you can think of that you may want to do, please do add it into the document, so that we can get the analysis done and it could be included in your repertoire that could go faster through the process.

Then on the next page, if we could scroll down just a little bit, here is the timeline as it stands for the Preferred Alternative 3 and so we will have staff work up the potential timeline for Alternative 4 by the next meeting as well.

If we scroll down a little bit more, on page 16 of your document, and this is still in Action 1, we have a map of the proposed boundaries between the regions and I wanted to clarify, for staff's understanding in writing the analyses for these documents, that, and I remember Myron saying this and bringing this up in the October 2014 meeting, that the state license that you possess determines the regulations that you would be fishing under and do I understand that -- Do we understand that correctly? Okay.

So if anybody could conceivably be fishing in the portions of the EEZ, as long as they are open and they have not been closed by NMFS, which would be under two circumstances, if the region's conservation equivalency plan has been determined not consistent or they have exceeded their quota in a previous year and it's been closed by NMFS.

Possession of red snapper in any state waters will require possession of that state's saltwater license and is that also correct? Can people fish in the state waters of other states? That's something staff is not entirely clear on.

MR. RIECHERS: I will try to answer it. Yes, a Texas resident could fish in Louisiana, assuming he has a Louisiana license.

DR. LASSETER: So you must have the state license of the state's waters that you're fishing in, but then as long as you're in the EEZ, the regulations that apply to you are dictated by the state license that you are in possession of?

MR. RIECHERS: It's dictated by where you would be encountered by the law enforcement officer. If you are encountered by a Louisiana officer in Louisiana waters and with a Louisiana license, you would be going by Louisiana rules.

CHAIRMAN GREENE: I think the question would be if you have a Texas state license and a Louisiana license and you're in federal waters and one state is open and one state is closed. Dr. Crabtree.

DR. CRABTREE: Mara can keep me straight on this, but my understanding is if you're going to land those fish in Texas that you can fish in the EEZ off of Louisiana and you don't have to have a Louisiana license to fish in the EEZ off of Louisiana. You just have to have your Texas license for when you land.

Now, if you're talking fishing in state waters of Louisiana, which, by the way, is out to three miles, right, Myron, then you would be required to have a Louisiana state license to do that, but not in the EEZ. At least that's my understanding and is that correct, Counselor?

MS. MARA LEVY: I don't know if that's the way everybody was thinking around the table, but that's the way I thought we talked about envisioning it, is let's focus on the EEZ. If you're in state waters, that's a whole different ballgame, but in the EEZ, you can fish wherever it's open and then the regulations that apply are dictated by where you are landing those fish.

CHAIRMAN GREENE: Mr. Williams.

 MR. ROY WILLIAMS: If two boats, say one from Texas and one from Louisiana, are fishing in the EEZ off of Texas and if Texas and Louisiana have different regulations, different size and bag limits, whose regulations are they bound by then? They are fishing in the EEZ off of Texas, but one is a Louisiana boat and one is a Texas boat and whose rules do they have to follow?

DR. LASSETER: If I may answer, my understanding, so that we're clear in the document, is that the regulations you would be fishing under would be according to the state license that you are in possession of, if you're in the EEZ.

MR. WILLIAMS: Let me just point out, and this harkens back to Florida was sued by a shrimper by the name of Freeman Bateman because we -- At the time, Florida did not recognize exactly the same boundaries of the Tortugas Shrimp Sanctuary that the federal government recognized and we applied that regulation -- Florida applied its boats, its state-registered boats, regardless of where they fished, and it ended up resulting in Freeman Bateman having to follow a different set of regulations in the EEZ than boats from Alabama and Mississippi and he sued and he won over that and Florida was enjoined from enforcing that.

To me, it's setting up a parallel situation, where a boat from Alabama or say the boat from Louisiana and the boat from Texas are both fishing in the federal waters off of Texas and they are bound by two different sets of regulations. It seems, to me, that it brings up an equal protection issue.

 MS. LEVY: In the summer flounder regulations, which is the model that I think we were trying to kind of follow, with a few differences, it's where the fish are landed. I guess you could make the argument, as someone who is enforcing regulations out on the water, that if you're fishing wherever you are in the EEZ and you are only licensed to land in one state, that presumably that's where you would have to go, but there is an inference there, right, but really the regulations, the way that I envision them being written, would be you are subject to the regulations in the state in which you land.

Do you see what I'm saying about the inference if you only have the license to land in one place? But I really think enforcement in this case was supposed to be at the dock and then we started getting into this whole states can close areas and things like that and you ended up having to have potential onthe-water enforcement, but if there were none of those closed areas and things like that, it would really be a landing

enforcement type of scenario.

CHAIRMAN GREENE: Dr. Crabtree.

DR. CRABTREE: Yes, I think that's right, with the exception of the closed area. We're going to enforce this stuff at the dock and I think the difference with the Tortugas example is in this case there aren't going to be any conflicting federal regulations and we're going to lay all of this out in the fishery management plan that this is how it works and I guess in the rule that comes out of this ultimately that this is how it works and so I think we don't get in that.

 If you had a vessel that had both a Louisiana license and a Texas license, the regulations that would apply to that vessel would depend on where it landed. If it's going back to Texas, then it's got to follow those Texas rules. Now, this is going to be a real problem with any kind of enforcement out on the water, but most of the enforcement of these recreational rules is at the dock and that's the way it's going to be.

We already have a big enforcement problem with recreational rules, because we've got inconsistent seasons between states and the EEZ and, in my judgment, I think this is an improved situation over that. At least when you check a vessel at the dock, there will be no question about what regulations apply to that vessel, as opposed to now. It all depends on where they say they caught the fish.

CHAIRMAN GREENE: Myron.

MR. MYRON FISCHER: Thank you, Mr. Chair. I would go back to state water question that came up about licenses and yes, the federal government recognizes a different boundary for the three inner states, for Louisiana, Mississippi, and Alabama, than it does for Florida and Texas and state waters, regardless of what you are fishing for -- You could be fishing spotted seatrout or -- If you're in state waters, you need a state license and I am sure you need the same for all five states.

CHAIRMAN GREENE: Ms. Bademan.

MS. BADEMAN: I was going to ask Ava and the Law Enforcement AP looked at this, right, a long time ago? I can't remember if they had concerns about it or what their thoughts were.

DR. LASSETER: I looked up the minutes from October of 2014 and I wish we had Lieutenant Commander Brand here. He discussed

that at length in October and his biggest concern was the closed area issue and how enforcement would be conducted if multiple closed areas were enacted, but he felt that as long as enforcement was primarily dockside that that was not an issue, as long as there was the consistent regulations and everybody has a CEP that's approved and there would be no inconsistent regulations between state and federal waters and that makes enforcement acceptable to be primarily dockside.

The problem with enforcement is when you have those inconsistent state and federal waters, because he said that it's difficult to identify the jurisdiction of where the fish was caught and so that was his primary concern.

CHAIRMAN GREENE: Chairman Anson.

MR. KEVIN ANSON: Thank you, Mr. Chair. I am not on your committee, but just to follow up a little bit on the discussion of landing enforcement, I think, in my mind at least, enforcement would be expanded not just at landing, but it's actually in the state waters.

If you have two states, adjoining states, that have different bag limits, let's say, and you were a fisherman transiting through to land your fish, it's a possession and so if you're outside of the possession or if your bag is outside of that particular state's bag limit, then you could be issued a ticket at that time too and so it's just beyond enforcement at the dock and it's also on the water as well within the state's jurisdiction as well.

CHAIRMAN GREENE: Dr. Crabtree.

DR. CRABTREE: In state waters.

MR. ANSON: That's correct and so it increases the time, if you will, of encounter of enforcement.

CHAIRMAN GREENE: Okay. I appreciate that comment, because I was fixing to go into that very thing as well. Any other discussion? Mr. Walker.

MR. WALKER: I just have a question. Say if you're fishing out of Orange Beach or Destin and you catch some snapper on the way out and then you're fishing for tuna in Louisiana, somewhere south of Port Eads or somewhere, and the weather turns bad and you don't have the Louisiana license, but it's a safety at sea issue for you to get back to your port in Alabama or Florida and

you go into Port Eads, are you going to be in violation?

CHAIRMAN GREENE: Anyone want to take a stab at it?

DR. CRABTREE: I mean technically you would be in violation, but I think there is some officer discretion that is applied at times and so I am not sure exactly how that would work. If you got chased in -- I mean we could have that situation now, I guess, in theory, with different regulations, but that's something I suppose we could ask law enforcement and the Coast Guard how they would deal with that or the states could confer with their state agencies about how they would deal with a situation like that and we could come back to that at the next meeting, but it does seem to me that you would technically be in violation if you brought those fish in.

CHAIRMAN GREENE: Mr. Fischer.

MR. FISCHER: Thank you, Mr. Chair. Fortunately, in Louisiana, you could call and get a license on the 800 number before you make port.

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CHAIRMAN GREENE: Okay. Anybody else? Mr. Perkins.

MR. BOB PERKINS: I am sorry. I am filling in for Jason today and I'm not sure exactly what all was said at the LE subcommittee meeting, but as far as needing to land a vessel where you're not really supposed to be landing it is something the Coast Guard recognizes.

A landing law like that, I don't think unless you're taking the fish off the boat -- Because it would be the same thing with a commercial vessel. A commercial vessel is inferred to have landed the fish when they sell them at a fish house and so if he has a mechanical problem and he goes in someplace where he has no intention of selling the fish there, then he hasn't landed those fish yet and the same thing with a boat.

If you had to duck inside for weather or something and you weren't offloading the boat or you weren't getting off the boat and you were just riding out a storm in a port and then got back underway and were going home to Florida with them and you were off of Louisiana, then I don't see it being an issue.

CHAIRMAN GREENE: Okay. That's an interesting point. Being in Alabama and Florida, where we have three miles versus nine miles, we have a big corner that sticks out and so if I am coming in from the EEZ from a southeasterly heading and heading

toward Alabama and I cut through the Florida corner and I have not landed those fish, but I am transiting state waters, how does that apply?

MR. PERKINS: If this is truly going to be listed as a landing, the officers may ask you where you caught the fish and they may want to look at your GPS and see where you were fishing at and we do that all the time now with boats, looking at the GPS to figure out where they've been fishing.

Obviously there is some officer discretion there and if the officer wanted to give you a bad time about it, I'm sure he could, but I don't see that being a big issue.

CHAIRMAN GREENE: Thank you. I just wanted to make note that we may need to look at the landed definition to make sure that it is consistent with what Mr. Perkins has given us, because if you are landing in state waters, I think he's correct that that's where you unloaded your fish.

If you are traveling or transiting, that's something a little different and I just wanted to make sure that everybody understands that. Dr. Crabtree.

DR. CRABTREE: I think this, in part, will depend on how the state regulations read. If, for example, in your case, when Florida closes, if they prohibit possession in state waters and you enter state waters and you are in possession, I think you're in violation, unless Florida put some sort of transit provision in it. I think this is something that the state directors would have to confer with their state enforcement groups, because it seems, to me, it's more a state enforcement matter.

MR. GREENE: I agree and that's where I was going, because a lot of it is possession limits now and now you have landed and possession. Ms. Bademan, did you want to --

MS. BADEMAN: Yes and I think we would have to clarify that it's possession in or on the waters of the state. I think I'm with Kevin here. I think law enforcement needs the ability to stop people in state waters and check and see what's going on and it shouldn't just be limited to actually when they actually park at the dock, in my opinion.

 CHAIRMAN GREENE: The reason I bring this up is because I can see a situation where someone is saying they are in possession of fish, but they just haven't landed them yet and then it becomes a loophole and I am just trying to make sure that that's

brought up now, because I could certainly see how that could be an issue down the road. Anything else? Dr. Lucas.

DR. KELLY LUCAS: Our law enforcement in Mississippi has traditionally -- It's a discretionary call. If you were coming back from Louisiana and you cut across Mississippi waters going back into Alabama and they clearly see your trajectory is heading that way, they have pretty much allowed you just to go Now, if you're coming like into port in Mississippi, that when they're going to make the call. It's discretionary, knowing that we have that kind of corridor, and so our law enforcement makes that call when they're out on the water.

 CHAIRMAN GREENE: Thank you. I appreciate the discussion and I just wanted to make sure, because that could be an issue down the road. Anything else? Dr. Lasseter, I guess we're back to you now.

DR. LASSETER: Thank you, Mr. Chairman. Let's move on to Action 2, which begins on page 17 of your document. This action addresses if regional management is to be implemented while the separate components of the recreational sector are still in effect and how does the council want to address and reconcile those components?

The Alternative 1, this is what we have now. For the years 2015 to 2017, separate component ACTs are allocated for the federal for-hire and private angling components and this was specified in Amendment 40. Right now, we have the recreational sector ACL apportioned between components, for the next two more years.

Then there is alternatives for how the council wishes to change or modify in response to regional management going forward and so Alternative 2 -- We added remove the sunset to all of the alternatives, at the request of the council at the last meeting.

Alternative 2 would extend the separate management of the separate components and so it essentially removes the sunset and the separate components continue to be managed separately and this amendment, regional management, would apply to the private angling component only and this private angling component would be managed by each region under regional ACLs or ACTs, however the codified text will be written, and based on the allocation that will be selected in a subsequent action.

The federal for-hire component would be managed Gulf-wide, potentially under the management measures that are under

development in Amendments 41 and 42 that you have initiated.

This is where we get a little confusing. Alternative 3 is your voluntary option for your region to continue sector separation or not and so again under this alternative the sunset is removed and the sunset must be removed so that you can go ahead and implement regional management.

This alternative would extend the separate management of the two components, but this amendment would apply to both components. It's the regions that want to manage both of those components at the regional level. Those regions that do not want to manage both components and that only want to manage the private angling component within their region would do so and the corresponding allocation for the federal for-hire component from that state or region would be managed collectively with the other states that are not managing the for-hire component under a set of Gulf-wide regulations we assume that would be developed in Amendment 41 or 42.

Alternative 4, we have had some confusion at the IPT level as to the intent of the council and so I want to call attention to this alternative. Again, this one also has to remove the sunset in order to modify how you are allocating the recreational sector ACL, but this one would end the separate management of the components and regional management would apply to the entire recreational sector.

 The private angling and federal for-hire components would be managed by each region under regional ACLs based on the allocation selected in a subsequent action. Now, the sticking point that the IPT would request clarification is whether or not the council intends this alternative to mean that applying to the entire recreational sector means that that state or region is going to manage both components as a single unit or is this another form of voluntary sector separation at the regional level, where a state or region could propose, in its CEP, to manage them separately?

In that case, the difference between 3 and 4 would be in 3 that the region decides to manage either or both and in 4 -- I am confusing myself. In 3, if they do -- I apologize.

Perhaps it's easier if I go and look and these tables that we have and can we scroll down just a little bit? I am struggling to explain this. It's page 21 in your document. We have a figure of how Alternative 3 works and this will be a little clearer.

Here is Alternative 3 and we would have the recreational sector ACL that would be divided into regional and private angling component ACLs and for states that want to manage the private angling component only, their portion of the quota that would be allocated to the for-hire component goes back into an allocation pool to be managed coast-wide, Gulf-wide.

Those regions that intend to manage the component separately, and the example I used here was Louisiana and Alabama, you would see that there would be separate private angling component and for-hire component ACLs established for that region and these were just examples of which states did or didn't do it.

Alternative 4, if we scroll back up just a little bit, the way we initially interpreted this was that the recreational ACL would be divided into the five regional ACLs. The question is do each of those regional ACLs -- Must they be managed as a single unit or do you understand this alternative to mean that the region could propose to do its own sector separation? In this case, the region would manage both at the regional level and the for-hire part would not go to a separate allocation. I hope that was clear. I know it's very confusing and is there any discussion on that?

CHAIRMAN GREENE: Mr. Williams.

MR. WILLIAMS: Ava, do Alternatives 3 and 4 both have the effect of making Amendments 41 and 42 moot?

DR. LASSETER: I would think definitely Alternative 4, because they are managing at the regional level and so the region is going to establish whatever management measures are permissible within this amendment. It's required to set your season and your bag limit and all regions have agreed to adopt the federal minimum size limit, which is being evaluated in Action 4.

Under Alternative 3, I understand that yes, those parts of the for-hire component ACL -- If a state or region is not going to manage the for-hire, Amendments 41 and 42 could apply to those vessels that are not managed. I would need to go back and discuss this some more with the IPT, because really Alternative 2 seems the cleanest way to pursue 41 and 42 and so I am not -- I think it could be possible in Alternative 3 and I see Mara is going to chime in.

MS. LEVY: I think that's going to depend on what 41 and 42 do, because the problem or potential issue I see with Alternative 3

and having 41 and 42 apply is that the states could make a different decision each year as to whether they want to manage the for-hire sector and whether they don't and so then you have people going in and out and if you eventually go down the line with the headboats or whatever of doing an IFQ-type program -- Do you see what I'm saying?

You would have to allocate to certain people and so it would just depend what management you're choosing in 41 and 42 and whether it would allow the for-hire vessels to either go in or out every year, depending on what the state decide each year, because you would never know until they submit their plan for that year what their intent is to do with that particular portion of vessels. It seems really complicated.

CHAIRMAN GREENE: Mr. Riechers.

MR. RIECHERS: I would just remind everyone that we put a sunset in 40 and this is a regional management document and we're trying to move it forward and it's ahead of 41 and 42 now and so we could reach a point where 41 and 42 are less germane or more germane, depending on our selections here, but that's what we've got to do, is go ahead and answer the question to Ava regarding at least what I thought her question was of what was the past meaning in Alternative 4.

As I understand the past meaning of Alternative 4, and as I think we've talked about it around the table, it was the one that was giving the flexibility to the states in regards to how they were going to manage that charter-for-hire fleet.

It would allow you to either do it or don't do it, based on your selective state notion. 3 is a similar notion, but it's assuming a conservation equivalency as well as a predetermined allocation if you went down the road of 3, but 4 was the one that gave the greater flexibility or at least I believe that's how we've talked about it in the past. I would look to other committee members to see how they remember that.

CHAIRMAN GREENE: Dr. Crabtree.

DR. CRABTREE: This is how I understood it, that Alternative 3 is the one that gives the state flexibility, but they have to stay within that predetermined allocation. My understanding of Alternative 4 is that sector separation goes away and it's not an option.

If you want to read it, as Robin just did, that it gives the

state flexibility, but there is not a predetermined allocation, then I think what the state would have to do would be to come back to the council and say we want to do it and we want to have this allocation and the council would have to do a NEPA document and go through a plan amendment process and then put that allocation in place for that state, because we wouldn't have done any analysis or any NEPA work.

That seems, to me, to be beyond what we're doing here and so my read on 4 is just that sector separation ends when this amendment becomes effective and it's not an option for a state. They could always come to the council and ask the council to amend the plan to make it an option.

Alternative 3, what's confusing and complicated, to me, is this notion that a state could decide to manage the federally-permitted for-hire vessels separately from the private vessels based on the allocation in Amendment 4. That I get. It's the notion of or the for-hire component could be managed under a Gulf-wide kind of management thing that I hadn't thought about in the past and that seems complicated and I don't recall when we really talked about that. Maybe that works, but it is getting awfully complicated.

I think, Roy, I agree with Mara that what happens with 41 or 42 we'll have to determine at the time we do it and I guess, since those amendments are going to come after all of this is done, we could make a change to the whole deal of regional management at that point if we decided to go another path, but I don't have enough understanding of where we're heading with either one of those amendments at this point to know how it would fit into this.

CHAIRMAN GREENE: Mr. Matens.

MR. CAMP MATENS: Thank you, Mr. Chairman. As I look at this, and maybe I need some help here, but does Alternative 3 and 4 or 3 or 4 allow the states to have different days at sea regulations for the charter fleet and the private fleet?

CHAIRMAN GREENE: Dr. Lasseter.

DR. LASSETER: If I may answer, yes. You would be allowed to continue sector separation and it would depend on your conservation equivalency plan. It would have to be approved, the measures, and you could set separate seasons and bag limits. The federal minimum size limit would have to stay the same and I don't believe we have considered additional modifications

between the two components.

Really, I will point out the crucial language in Alternative 4, as it's on the board and it's not clear in the document, but the "as a single unit". It's bolded and italicized. With or without that phrase is what we're trying to get feedback on and whether that phrase should be included in there or not.

CHAIRMAN GREENE: Mr. Riechers.

MR. RIECHERS: Thank you, Mr. Greene. Given Roy's discussion of this and given the new language italicized on the screen, though not necessarily in our documents here, certainly that clarifies that Alternative 4 is basically having the reading that Dr. Crabtree has suggested.

I am fine with that narrow reading of 4, because 3 does -- 4 and 3 would be similar or basically the same otherwise, with you allowing the flexibility of the states in 3 to either opt in regionally or opt in conservation equivalency and then basically determine whether you are managing one or both sectors and then, if you are, setting those ACLs, if you're managing both, if you're choosing to do it that way.

I think what has confused 3 is all that ACL language underneath it and while it needs to be there in the description, I am not certain it needs to be in the actual alternative, though I am not going to mince words over that now at this point, because I don't think -- If it helps explain what we're trying to do, that's fine, but I think that's just part of the explanation.

CHAIRMAN GREENE: Mr. Anson.

MR. ANSON: Thank you, Mr. Chair. I am not on your committee, but going back to Camp's question, Dr. Lasseter, for Alternatives 3 and 4, I believe Mr. Matens, and he can correct me if I'm wrong, but he asked if in both of those alternatives does the state have the ability to establish different season lengths for the two components, for 3 and 4. I understand for 3, for sure, but 4, I am thinking it's more of one unit and so they have one set season for both components or that's my --

DR. LASSETER: That is the point that we're trying to clarify and so the reason "as a single unit" -- That's been added. I added that, actually, to request clarification, because the IPT -- We were not quite understanding whether or not that phrase should be in there. Leaving that phrase in there supports Dr. Crabtree's understanding of this alternative and not having that

in there, a state or region could then propose to manage them separately. It's just a little confusing if you did want to manage them separately, Alternative 3, but, actually, Alternative 3 puts the federal for-hire Gulf-wide and not at the regional level.

CHAIRMAN GREENE: Dr. Crabtree.

DR. CRABTREE: Yes and I think Alternative 4 -- We need that "single unit" language in there and so my read of the answer to Camp's question is under Alternative 3 the answer is yes, the state could manage them differently, in accordance with the allocation established in Amendment 40, but under Alternative 4, they could not, without coming back to the council and asking the council to amend the plan and put a provision in that allows them to do that and I think that's the most straightforward way to read this. I guess what Ava wants to know is, is that where we all are in terms of our understanding of this?

CHAIRMAN GREENE: Dr. Lasseter.

DR. LASSETER: I am sorry, but I think it's easiest if we look at the figures and, again, looking at the figure for Alternative 3, which is on page 21 for you, the region -- Yes, regions that do manage both can establish separate regulations for both and those that do not would be managed Gulf-wide. Then, yes, if we include that "as a single unit" language for Alternative 4, then sector separation is not an option. Now, there was an alternative proposed at the last meeting that was kind of a hybrid between these, but that motion did not pass.

CHAIRMAN GREENE: Dr. Crabtree.

DR. CRABTREE: Just for the sake of trying to be clear, let me make a motion that we accept the language in Alternative 4 to include the phrase "single unit". If I get a second, I will --

CHAIRMAN GREENE: We have a motion and Ms. Bademan seconds it.

DR. CRABTREE: That would clarify to staff that Alternative 4 means that the states can't manage them separately under this amendment.

CHAIRMAN GREENE: Okay. Is everybody understanding what we're doing?

 $47\,$ DR. CRABTREE: The motion is to accept the language in $48\,$ Alternative 4 to include the phrase "as a single unit".

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CHAIRMAN GREENE: I believe the motion on the board is correct. Any further discussion? Is there any opposition to this motion? Camp, are you in opposition or discussion?

MR. MATENS: I speak against this motion. I think I can see that Louisiana's ability, and I am certainly not speaking for the other states, but to do this would be a value to both our private sector and our charter sector.

CHAIRMAN GREENE: Dr. Crabtree.

DR. CRABTREE: Then that would be Alternative 3 and if we choose Alternative 3 as the preferred, then the states would be able to choose to manage them separately or not.

MR. MATENS: May I speak to that?

CHAIRMAN GREENE: Yes.

MR. MATENS: Is there more support for Alternative 4 if the states could manage these things separately or am I off-base here?

DR. CRABTREE: Well, then it's not clear to me what the difference between 3 and 4 is, other than with 4 you wouldn't be specifying what the allocation is, but I don't think we can do that without going through an analysis of all the allocations and everything, which hasn't been our intent to do that. I think that significantly complicates things.

MR. MATENS: Uncomplicating it would have Alternative 3 be the preferred and is that correct?

DR. CRABTREE: That would be the alternative that would allow the states to manage them separately.

CHAIRMAN GREENE: Okay. The motion carries with one in opposition. Dr. Lasseter.

DR. LASSETER: Thank you, Mr. Chairman. Then if we could go back to the document, it's page 17 in your document and the first paragraph of the discussion and I just want to highlight something there.

CHAIRMAN GREENE: Hold on, Dr. Lasseter. There were some questions, but I think we've clarified it now and please.

 DR. LASSETER: Thank you, Mr. Chairman. Right there, the highlighted part, I just wanted to point out that this action, regional management and sector separation, is only applicable in the event this amendment is implemented while the separate components of the recreational sector are still in effect.

I have heard some confusion about this and so I just wanted to make that clear, that this action is in here because we currently have separate components. The recreational sector ACL is divided through the year 2017 and so we need this action so the council can advise us how you want us to address those separate components and how the ACL should be divided.

CHAIRMAN GREENE: Mr. Riechers.

So, Ava, now that we've kind of settled that, MR. RIECHERS: that kind of begs the question, and based on your last comment, it begs the question that if we were to -- Because of things taking as long as they sometimes do, if this were not to be implemented and the sunset provision hit and there was a state wanted to manage their separate units, but necessarily want to go by the Amendment 40 overarching percentages, and I think that's what the motion that failed was trying to do, was give the states the option to look at that, but also create some locked in time windows that they would be looking for that allocation percentage. I mean does that make sense, in that that's kind of maybe another option that we need to put in here? I think that's what the motion was trying to do the last meeting, but it failed.

DR. LASSETER: I think I heard two separate things. I guess we have not discussed at the IPT level if regional management is not implemented until after the sunset would there be an option, but my understanding is right now, when sector separation sunsets, unless the council takes action to address that, all actions in Amendment 40 end at that time.

If you did then want to consider state or regional level sector separation, we will have to take that up and work that into the amendment again as an option. If we recall in an earlier version, there was an alternative where states or regions could adopt separate management measures for the separate components within their region.

CHAIRMAN GREENE: Okay. Any further discussion? Dr. Lasseter. I'm sorry. Myron.

MR. FISCHER: But if we were progressing and this was on the

verge of being implemented, to where the state, regardless of which route was taken, and the sunset on 40 was coming up, the council could extend it for a brief period until -- There is nothing precluding the council from extending that sunset for some period to take this into account.

DR. LASSETER: Through an appropriate action.

CHAIRMAN GREENE: Dr. Crabtree.

DR. CRABTREE: Yes, you could, but that action would be a plan amendment. To remove the sunset requires a plan amendment.

CHAIRMAN GREENE: Okay. Any further discussion? So it sounds like it would take a plan amendment to do that and as long as it takes us to do those --

DR. LASSETER: I had understood from Mara that it still needs to be determined or explored what kind of document would be required and what type of analysis. No? It's been decided? Okay.

MS. LEVY: Right and so I think it needs to be a plan amendment, but I mean really, in terms of timing, if it was a plan amendment that had one action about removing or not removing a sunset provision, I mean the extra time we're talking about is the Magnuson sixty-day comment period on the Notice of Availability and so it's not like it has to be a year-and-a-half-long process to remove the sunset.

CHAIRMAN GREENE: Okay. Any further discussion? Seeing none, Dr. Lasseter.

 DR. LASSETER: Thank you, Mr. Chairman. This is the one action that we do not have a preferred alternative for and we would like to begin preparing the document to file the DEIS and can I open it up for discussion? Is there any interest in selecting a preferred at this time?

MR. WILLIAMS: Mr. Chairman, I would like to move that Alternative 2 be our preferred alternative.

CHAIRMAN GREENE: We have a motion going on the board now. We have a motion on the board and do we have a second for the motion?

DR. CRABTREE: I'll second it.

CHAIRMAN GREENE: Second by Dr. Crabtree. Is there discussion? Mr. Riechers.

MR. RIECHERS: I am going to speak against the motion. You know as we try to work towards the regional management notion, we obviously have had considerable discussion about the flexibility for individual regions to have charter and the private angling component under the umbrella. With that, I would move Preferred Alternative 4 as a substitute motion.

CHAIRMAN GREENE: Okay. We have a substitute motion going on the board to make Alternative 4 the preferred alternative and is there a second? It's seconded by Ms. Bademan. Is there discussion? Mr. Williams.

MR. WILLIAMS: I speak against that and for the original motion for Alternative 2. We have had great success in managing the charter and headboat sectors this year. Under the exempted fishing permit, some of those headboats were able to get eight or nine-month seasons out of red snapper. They were able to optimize the use of red snapper both for themselves and for their customers and for the general public and I think we're backing up if we don't continue with that program in some format and the same with the charter boat sector.

This year we had I think a forty-five-day season or something like that for the charter boat sector and the private boat sector gobbles up theirs in ten days or two weeks and so I think the charter boats and the headboats have benefited from sector separation and from federal management and I think they would prefer that.

I know I would prefer that and I think the public in general receives more benefits from a federally-managed charter and headboat sector and I speak in favor of that and against the motion.

CHAIRMAN GREENE: Dr. Crabtree.

DR. CRABTREE: I think Roy makes some really good points and we have had hundreds of charter boat captains testify before us and the vast majority of them have not wanted to be managed under the states and I think we ought to respect that, from what we've heard, and so I am probably going to vote against the substitute motion.

CHAIRMAN GREENE: Is there further discussion? Mr. Fischer.

 MR. FISCHER: Alternative 4 doesn't preclude this from happening. It just gives that regional flavor of what's best in that region, because, as we have seen, the amount of charter boats and the amount of recreational boats, private boats, throughout the Gulf differs and the needs for both differ and by going to Alternative 2, you are forcing it to have a regional management plan that doesn't make use of all the faculties involved. Things are different in different parts of the Gulf and that's what this whole program was about.

CHAIRMAN GREENE: Ms. Levy.

MS. LEVY: So just to clarify, based on the discussion we had before, Alternative 4 wouldn't allow the states, at this particular time, to manage the two components separately. It would be one unit and then I guess in the future we were saying if the state wanted to ask the council to divide them and give them a new allocation that we could do that, but when Amendment 39 actually went into place and was implemented, the state's only option at that time would be to manage them as a single unit under Alternative 4.

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CHAIRMAN GREENE: Okay. Any further discussion? Mr. Boyd.

MR. DOUG BOYD: This is confusing, but, as I see it, Action 2 gives the states no option and -- Excuse me. Alternative 2 gives no option to the states for true regional management of both components. Alternative 4 does give them the potential for that. It doesn't necessarily give them that authority right now, but it gives them -- They still retain the potential to do it.

CHAIRMAN GREENE: Ms. Levy.

MS. LEVY: But Alternative 3 would give them that authority as soon as you implement Amendment 39. Now, it would be under an allocation that we've already determined is appropriate and so you wouldn't have to go through that process again, but there is the alternative in there that would give the states that discretion and that authority as soon as Amendment 39 is implemented, if that's what you all are trying to do.

CHAIRMAN GREENE: Mr. Riechers.

 MR. RIECHERS: Mara and Roy, certainly you made some good points, but, unfortunately, because of Alternative 3 being written the way it has been written now, there are certainly winners and losers between states in regards to that allocation

and so if there was one that had greater flexibility, which the only alternative we have is Alternative 4 at this point in time. That's the reason I put forward Alternative 4, because Alternative 3 -- You have some states, based on their charter allocations, are going to end up having windfall profits associated with those charter allocations or losses, depending on where you sit, given that overall Gulf allocation.

I don't disagree that obviously we have heard from a lot of folks who are looking for some separate management options and ways to extend the season and I understand that business model. We all understand that business model of having greater certainty, but we're also trying to manage -- The other greater certainty that people want too is those bait stands and those people who are also putting beds in hotels, et cetera, all the things that go along with the whole private angling community and the benefits associated with that. Again, just given the alternatives we have, that's why I went towards Alternative 4 as opposed to Alternative 2.

CHAIRMAN GREENE: Dr. Lucas.

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DR. LUCAS: I am going to let Dr. Lasseter speak, because what I was about to speak about, I think she's going to clarify.

DR. LASSETER: Actually, the way Alternative 3 would work is you would use the formula from Amendment 40 for determining the component allocations at the regional level, but we would apply that region or state's proportion of landings. We would use that state's proportion of landings between the two components and apply it to the formula.

MR. RIECHERS: Ava, I just may suggest that we make that real clear, because when it says "component allocation in Amendment 40", it certainly, at least to me, infers the overall overarching allocation and so --

DR. LASSETER: I apologize and that is my bad. I have notes in here.

MR. RIECHERS: No, there's no issue there at all. It's just that, obviously as we read these different scenarios, we can all read into them a little more or less than what may have been the intent and so good clarification and I don't know where that leaves us regarding what's on the board, but thank you for that clarification.

CHAIRMAN GREENE: Say it one more time, Dr. Lasseter.

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DR. LASSETER: I apologize. This is poorly written and I do have some notes in here about how to tweak it. The formula, based on the years that would be used, 50 percent of the average historical landings from the longest time series and 50 percent of the shortest, minus those -- In 40, it only subtracted one of those two years, 2010 or 2006 and I forget. We would use that formula, but apply it to that -- Rather than Gulf-wide, as Amendment 40 has done, apply it to that region's landings between components, private and federal for-hire.

You wouldn't have a difference between what the Gulf-wide average was. You would be using your region's average historical landings for each component and I will be sure to make that language much more clear with the IPT when we get back.

CHAIRMAN GREENE: Dr. Crabtree.

DR. CRABTREE: So it's that formula and those years and for each state that's going to give a different allocation and so I suspect -- Robin brought up Texas and I think 80 percent of the catch in Texas, maybe more than 80 percent, is for-hire and then in other states -- Louisiana, I suspect, where the for-hire component is much smaller, it would be a different answer, just so we're all clear on that.

CHAIRMAN GREENE: Okay. Now back to the muddy situation. Mr. Williams.

MR. WILLIAMS: Mr. Chairman, I know it's unusual to request a roll call vote at the committee level, but I know there's a lot of people listening out there that would like to know how each of us are voting on this and so I'm going to request a roll call vote and I have advised Doug and so he is prepared to do it.

 CHAIRMAN GREENE: Okay. Well, in light of Preferred Alternative 3, we have a motion on the board, a substitute motion, for Alternative 4 and I guess we need to go to a roll call vote on this particular motion. Mr. Gregory.

EXECUTIVE DIRECTOR GREGORY: What I have is the roll call sheets for the entire council and I have indicated which are members of the committee and I will use the sequence on the roll call sheet, just for the committee members, but I will call on the Chairman last. Mr. Riechers.

MR. RIECHERS: Yes

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    EXECUTIVE DIRECTOR GREGORY: Mr. Fischer.
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    MR. FISCHER: Yes.
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    EXECUTIVE DIRECTOR GREGORY: Mr. Matens.
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    MR. MATENS: Yes.
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    EXECUTIVE DIRECTOR GREGORY: Ms. Bademan.
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    MS. BADEMAN: Yes.
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    EXECUTIVE DIRECTOR GREGORY: Dr. Crabtree.
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    DR. CRABTREE: No.
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    EXECUTIVE DIRECTOR GREGORY: Mr. Walker.
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    MR. WALKER: No.
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    EXECUTIVE DIRECTOR GREGORY: Mr. Williams.
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    MR. WILLIAMS: No.
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    EXECUTIVE DIRECTOR GREGORY: Ms. Lucas.
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    DR. LUCAS: Yes.
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    EXECUTIVE DIRECTOR GREGORY: Mr. Boyd.
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    MR. BOYD: Yes.
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    EXECUTIVE DIRECTOR GREGORY:
                                 The motion passes six to three.
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    CHAIRMAN GREENE: Okay. The motion carries and we will move on.
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    Okay, Dr. Lasseter.
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    DR. LASSETER:
                   Thank you, Mr. Chairman. That was the worst part
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    and it's all smooth sailing from here. Let's move on to Action
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        That was really hard to explain. Action 3 begins on page 22
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46 state, which may voluntarily form multistate regions 47 adjacent states.

of your document and this action is to establish the regions for

management and you recently added the Preferred Alternative 5

and you switched from Alternative 4 to Preferred Alternative 5, which would be to establish five regions representing each Gulf

This alternative does provide additional flexibility compared with Alternative 4, if you do want to join together, and also Preferred Alternative 5 is similar to the summer flounder model that we're kind of modeling this on. They also have the opportunity to join states together into a multistate region. Is there discussion or comments on your preferred alternative or any of the alternatives?

Hearing none, we will move on to Action 4, which begins on page 25 of your document. Originally, we had discussed that the regions would be able to modify or establish the regional bag limit, season structure, season start date, whether it's going to be weekends only or whatnot, and the minimum size limit.

Through further discussions, the committee and council realized the problems inherent with having multiple size limits across the Gulf in terms of the stock assessment and so the committee has selected as its current preferred alternative Alternative 3, which will reduce the federal minimum size limit to fifteen inches total length. Is there any further discussion on this action?

Hearing none, moving right along to Action 5. It begins on page 28 of your document and so this is our closures in federal waters of the Gulf and so Alternative 1, no action, regions may not establish closed areas in federal waters adjacent to their region.

Your current preferred alternative is Alternative 2. A region may establish closed areas within federal waters adjacent to their region in which the recreational harvest of red snapper is prohibited and then there were two options there which the IPT had previously provided as a mechanism to enable a more analytical analysis. We needed something to kind of describe and compare.

However, the IPT did come up with a proposed Alternative 3 and if the council is interested in this, we would recommend adopting this proposed Alternative 3 and removing the options under Preferred Alternative 2 and so let me read proposed Alternative 3: A region may close all federal waters adjacent to their region in which the recreational harvest of red snapper is prohibited. All federal waters adjacent to a region must be either open or closed.

 The difference is between the underlined words primarily, the closed areas, multiple, under Preferred Alternative 2, whereas Preferred Alternative 3 says all or nothing, at any one time. I

am going to open it up for discussion.

CHAIRMAN GREENE: Okay. Is there discussion? Dr. Crabtree.

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 DR. CRABTREE: My understanding too is that if we go down this path and a state closes this area that it's closed to anyone who is recreationally fishing, regardless of what state they are from, so that if Louisiana closed the EEZ off of Louisiana, it would be closed to folks from Mississippi and so these would effectively -- We would be creating commercial fishing only zones and that's what these are and I just wanted to make sure that everybody's understanding of that -- That these are going to be closed areas that only commercial fishermen are allowed to fish in and that we all have a common understanding.

CHAIRMAN GREENE: Mr. Matens.

MR. MATENS: Thank you, Mr. Chairman. I have always been uncomfortable about this and I guess I'm not certain of why. My position has been, and I really would like to hear whether other people think I'm wrong, is the EEZ is kind of a free and open zone and we do stock assessments and we worry about the fish out there and we would only be constrained as to where you land the fish. I really would like to have a biologist explain to me why this is something we should pursue.

CHAIRMAN GREENE: Dr. Crabtree.

DR. CRABTREE: Well, I share your concerns with it and I don't think we should pursue this. The goal of regional management was to eliminate exactly the type of situation that this is creating and it's going to come with a whole host of enforcement issues and it's going to mean a state can close potentially an area that's very important to the residents of another state to fish in and I think it's going to create a host of problems for us.

Now, in past meetings, I have made motions to choose Alternative 1 as the preferred, but that's never passed, but -- We can have some more discussion, but I would be prepared to make that motion again, unless someone else wants to.

CHAIRMAN GREENE: Mr. Williams.

MR. WILLIAMS: Given my friend Camp's concerns about this, I would like to move that Alternative 1 be our preferred alternative.

CHAIRMAN GREENE: We have a motion to make Alternative 1. Is there a second for this motion? Second by Camp. Any further discussion? Mr. Riechers.

MR. RIECHERS: Camp, certainly, as Dr. Crabtree indicated, he had reasons why he has promoted Alternative 1. I think you've heard others around the table suggest that Alternative 2 may have some viability and in fact some ability to allow those states with larger coastlines to manage and close areas and certainly, within the context of our state, by having our inshore waters open, we have maintained some -- I mean what Dr. Crabtree is talking about is the enforceability of offshore to inshore and that's been enforceable now.

Florida has talked about having zones, because they have a long coastline. We just want the tool and the availability to do that, if need be. We have been able to have a longer season because in fact they catch fewer fish per angler hour in the inshore waters, as opposed to offshore, and so there are some benefits to that as well, where you might be able to manage your seasons and manage for different outcomes if you have that availability.

CHAIRMAN GREENE: Dr. Crabtree.

DR. CRABTREE: Just to the issue of zones, I think we talked about this at the last meeting, and I don't think you were with us at the last meeting, but -- I don't know if this is in the document and we need to make it clear, but a state could, in their conservation equivalency plan, say the season in this portion of our state is this and the season in this portion of our state is think.

This is about closing the EEZ as opposed to state waters and that's kind of different than zones and we, from the get-go, when we talked about this, as Camp pointed out, this was about landings and enforcing things at the dock and based on landings. There are a lot of benefits to doing that.

We have had this situation with one season in the EEZ and different ones in state waters for some time and I guess it's debatable whether that has worked from an enforcement perspective. I sure hear a lot about all kinds of enforcement problems with it and we see landings of red snapper in some states that don't have any fishery in state waters, but when they open state waters, there are landings there and so unless there are unknown pockets of red snapper they're fishing, I think we still have a real issue with policing these zones and

so I would like to support Camp and Mr. Williams's motion.

CHAIRMAN GREENE: Thank you. Dr. Lasseter.

DR. LASSETER: I just wanted to add to something that Dr. Crabtree pointed out. At the bottom of page 28, the beginning of the last paragraph, it does state that a region may establish regional fishing zones.

The idea there is that it's still landings-based and so in certain areas, you allow possession and landing and that extends through state waters out into the EEZ. The EEZ remains open and you're just closing -- You're establishing where in your state waters you would allow landings to occur in different seasons, but there would not be an inconsistency between your state and federal waters.

I also wanted to point out that Jason Brand, in October of 2014, raised some enforcement issues with this as well and I don't know if you could speak to that.

Then also, when Kiley Dancy was here in January of 2015, earlier this year, she discussed the summer flounder model and she talked about that there weren't the enforcement issues, because they did not have the inconsistency between the state and federal regulations. However, the Atlantic Commission does have the authority to enforce closures in state waters, which is enforcement that we do not have and so that was a slightly different situation, but there had been expressed concerns for enforcement for preserving the ability to have different regulations between state and federal waters. Thank you.

CHAIRMAN GREENE: Thank you and that's part of the reason I brought up the conversation earlier about possession and transiting and so on and so forth. If you take a state like Florida and you want to divide it up into two or three sections and you are in possession of one area and you're right on one of those lines, it's going to be a mighty difficult thing.

I remember talking to Lieutenant Commander Brand and he was saying if you're going to make a line that it needs to be at a 27 degrees, 30 minute type of mark or something along those lines. I certainly don't want to speak for the Coast Guard and, Mr. Perkins, would you like to weigh in on this or if you don't, it's no problem, but --

MR. PERKINS: From an enforcement standpoint, what he is saying is just you have to make it something that we can consistently -

- You know if it's a strange line from one point to another, then you've got to interpolate on charts and stuff and it just makes it easier if you just give us a lat/long that we can work off of, a straight line.

CHAIRMAN GREENE: Okay. Thank you. Any further discussion? Mr. Matens.

MR. MATENS: Thank you, sir. Really this thing kind of got ahead of me. I really wanted more of a discussion on why this was an advantage to anyone and if it is, I might be more comfortable with it. Having this all of a sudden become a motion and vote is not what I intended. If I understand it correctly, Robin, this is something that is important to you and your state and is that correct?

MR. RIECHERS: Well, I think yes. As we've talked about this throughout the whole evolution of this regional management document, this is one of the tools in the toolbox, as we've referred to it, and it gives the ability for states with long coastlines especially to possibly manage differently.

It also gives the states with shorter coastlines to possibly close their EEZ waters to extend their season for more days, if they are catching fewer fish in state waters. Again, the whole notion is where they are landed is where they're counted, but as far as closing and opening, you have as much flexibility as you can have with that.

Again, it still has to go through -- If it's a conservation equivalency, it will still have to go through those discussions and it will still have to basically suggest that you're counting the landings appropriately and all of those things.

MR. MATENS: To that point, sir, you make a very good point and I am certainly in favor of states managing their own fishery, more than I am in favor of some level of discomfort that I may have about this. I mean I wouldn't want a situation where Louisiana would irritate you guys by closing off everything west of Louisiana and so, again, thank you so very much for your comment.

CHAIRMAN GREENE: Okay. We have a motion on the floor and is there any further discussion? Mr. Fischer.

 MR. FISCHER: Thank you, Mr. Chair. I am well aware this is a red snapper document, but the reason I support the preferred or possibly even the new proposed, but I speak against Alternative

1 is a different species, but just a couple of years ago, we saw Florida have a need to close or segregate part of their coast for grouper fishing, to where they had an opening in one section.

If this were species-wide, it would make such a challenge easier. It would give states, like was just stated, with long coastlines the ability to manage up and down their coast. We may not have that issue, but it would not want to deprive it from the other states and so, to that, I speak against the motion on the board.

CHAIRMAN GREENE: Okay. We have a motion on the floor and we're going to go ahead and vote it up or down. All those in favor, please raise your hand; all those opposed like sign. The motion fails three to six. Dr. Crabtree.

DR. CRABTREE: I guess, if this is where we're going, I would like to have Mara comment about how this would work exactly, because it's not clear to me that what we're going to have here is an adequate NEPA analysis and so it does then seem to me that a state would have to come back to the council saying we want to close the EEZ for this amount of time and then we would have to go through a framework or something and I don't know, Ava, if that's addressed in here.

DR. LASSETER: No, I don't believe it is and what we're really requesting or really hoping is that if there's anything that you region may wish to consider that it be explicitly included here, so that we can at least have an analysis at this stage, which is why we did add that proposed Alternative 3, because I understand that to be what Texas may be interested in, although I may be wrong. I am not sure if you wanted to close just areas within the federal waters, but we really are encouraging for anything that you may want to consider -- Let's get it analyzed here, to the extent possible, and that could help things further down the line.

CHAIRMAN GREENE: Mara.

MS. LEVY: The one comment I will make is if a state comes forward with a plan that includes closing the EEZ in addition to looking at the NEPA type analysis that's already in the document and whether the agency would need to supplement that analysis, the agency would also have to do a rulemaking, right, because to actually close those federal waters, the agency would need to do a rulemaking saying these areas are closed for this type of fishing from this time to this time. It's not going to be as

simple as a plan approval and there would have to be another regulatory process in there as well.

CHAIRMAN GREENE: Mr. Williams.

MR. WILLIAMS: Ava, under proposed Alternative 3, where it says a region may close all federal waters adjacent to their region, in that -- Does that refer to each state as being a region or would say a state like Florida be able to close the south portion and keep the upper portion open and then vice versa, in order to try to --

DR. LASSETER: Again, if you are just closing areas of your state, including state waters, and so you want to only allow landings, we'll say in Florida, in the Panhandle in one season and then off of west Florida at a different time, Florida would just establish those season dates when possession of red snapper and landing of red snapper are permissible in those separate regions in state waters.

There is no need to close the EEZ in that case and that is discussed in the third paragraph under the discussion. What this is talking about is closing parts or all of the EEZ off of a region and here we're using the term "region" to refer to however regions were selected in Action 3.

What Preferred Alternative 2 would allow is any region could close parts, areas, within federal waters, but leave its state waters open and so that introduces the different regulations between state and federal waters.

MR. WILLIAMS: Then under Alternative 3 then, Florida could close the Panhandle and Big Bend state waters and the federal zone, in order to try to keep some red snapper for the southern portion of the state.

DR. LASSETER: No, again, actually Alternative 1 allows Florida to have those multi-zone management and so I'm going to read from that third paragraph: A region may want to establish sub-regional fishing seasons for red snapper, such that the season is open in one part of the region while closed in another and vice versa.

A region would be able to do so under Alternative 1, provided the region's delegation or CEP is active, as it has been approved. Establishing sub-regional fishing seasons is possible under Alternative 1, because the region would specify where red snapper may be landed within the region and where landings are prohibited.

With active regional management, you don't have the inconsistent regulations, because its anglers are able to fish when it's open in state waters and the federal waters off of the area of state waters that is closed. Again, the idea is that the EEZ stays open under Alternative 1 and that a state establishes when and where landings may be made, possession of landings may occur within state waters. Again, we're sticking to the idea of primarily landings-based enforcement.

CHAIRMAN GREENE: Okay, Martha.

MS. BADEMAN: This might make this even more confusing, Roy, but so we have, of course, in Florida some species that are managed regionally, I think like scallops and snook and those kinds of things.

What Ava is describing is a little bit different from the way that we manage those and so with scallops and snook, when one area is closed, you may not possess scallops and snook in that area at all and for snook, that extends into federal waters and so this would be different than that. You could still have red snapper in federal waters off of the closed zone, just so long as you come back into state waters in an open zone. It's a little bit different than what we have done in the past and whether that's a good thing, I don't know.

CHAIRMAN GREENE: Myron.

MR. FISCHER: Thank you, Mr. Chair, and I just have a question for Ava, just for clarity. The closure of an area off of a region, that would be something established in their annual plan and that would not be anything we're deciding here today and that would be -- We are just giving the rights to be able to do that and then when a state or a region submits its plan, it would illustrate what its intent is.

DR. LASSETER: Exactly. If you retain Preferred Alternative 2, then in the CEPs, being our preferred alternative, the region would declare and specify in the CEP where those closed areas are, et cetera. It would provide the details and then that would have to go through the review process.

MR. FISCHER: Okay. Thank you.

CHAIRMAN GREENE: Mara.

MS. LEVY: So I just wanted to -- I don't know if there's confusion between Preferred Alternative 2 and proposed Alternative 3, but the proposed Alternative 3 is an all-ornothing proposition. If a state is going to decide to close the EEZ or the region adjacent to the region, it's going to be all of the EEZ and so there is no discretion about closing different pockets or areas off of a particular region, whereas Alternative 2 is giving those regions or states discretion about closing particular areas of the EEZ.

MR. WILLIAMS: Mara, let me follow up then. I am a little slow on this. Could Florida close all of the EEZ from Tampa Bay southward for a portion of the year under Alternative 3 and leave the rest of the EEZ open? They could not?

MS. LEVY: No, under Alternative 3, it's saying if you choose to close the EEZ that you're closing it all off --

MR. WILLIAMS: The entire EEZ off of Florida would be closed?

MS. LEVY: Right. Alternative 2 is the one that gives them the more discretion and I think we did that for analytical purposes, so you can analyze what would happen or the potential impacts, I guess, if each state were allowed to close its entire EEZ, which is a very -- We can define that, but in Alternative 2, which is much more discretionary, it's like you could close four areas or you could close one area and so there's a lot more uncertainty with Alternative 2.

CHAIRMAN GREENE: Okay. I guess this begs the question of does anyone want to pick up the proposed alternative and add it to the document or not? Okay. Seeing nobody waving their hands, I quess we will go back to Dr. Lasseter.

DR. LASSETER: Okay. Then my only other -- If we could stay there just one moment, but also the options under Preferred Alternative 2. Did you want those to be retained in the document? You haven't selected a preferred for either one of those.

CHAIRMAN GREENE: Well, if we don't have to pull them out now, I suppose we should just leave them in and continue on. If someone wants to pick it up later, they can, but we're going to move on. Mr. Boyd.

MR. BOYD: Just a clarification. Did the council vote to put in these two options of 2a and 2b or not?

 DR. LASSETER: Okay. So when we first restructured this document, we had this still as your Preferred Alternative 2 and just a region may establish closed areas within federal waters adjacent to their region. For analytical purposes, as Mara just explained also, the IPT needed to come up with a reasonable range of alternatives in order to analyze.

We came up with these options and there was also a whole other alternative that proposed a Gulf-wide boundary of nine miles out and I believe it was twenty miles out. There were like four options and at the last meeting, the council did elect to remove that to considered but rejected.

Again, that alternative, the purpose of it when the IPT came up with, was to allow us to have some defined structure to compare and contrast the potentials for different areas to be closed and so these options were really originally for us to enable the IPT to analyze the alternative.

If Proposed Alternative 3 was included, having Alternative 2 and Alternative 3 would be sufficient for us to conduct our analysis. I don't feel like we really need 2a and 2b, but there doesn't seem to be interest right now in adding proposed Alternative 3 and perhaps we could take that up later in full council.

CHAIRMAN GREENE: Okay and so 2a and 2b are proposed?

DR. LASSETER: They are. They have been in the document since last time, but to answer Mr. Boyd's question, they were part of the range of alternatives that the IPT came up with to try to help us analyze the possibilities of Alternative 2. I don't think they're very strong. I will take responsibility for them. I came up with them, but just as a way to kind of structure the possibilities, so that we can analyze them.

 The IPT did come up with the proposed Alternative 3, and I thought that was much stronger, as a way to compare the options of either closing everything or having areas closed. It just enables our analysis.

CHAIRMAN GREENE: Dr. Crabtree.

DR. CRABTREE: Just so we're clear, if a state -- If we go with our current preferred, if a state comes to us with a conservation equivalency plan that includes closure of the EEZ, we're going to have to go through a rulemaking process and I think the council will have to go through a framework and will

have to do a NEPA document.

 It's likely to take about six months to go through that and so if a state wants to go down this path, they're going to really have to put that closure in place and leave it, because they're not going to be able to come in with their plan every year and change it, or we're going to already be way into the next season by the time we go through it. I can't figure a way around that.

CHAIRMAN GREENE: Mr. Riechers.

MR. RIECHERS: Roy or even Steve, how do we implement the Texas closure each year? I think it's basically because we have a closure implemented with dates certain and then we basically alter that if we need to. I think we do have at least an option in place that allows us to use that as a model, in some respects.

DR. CRABTREE: I think you're right about that and I think once we have a NEPA analysis to support it and we know what's coming and it's a routine thing that we can do that, but if it's something that changes in magnitude or is unpredictable, but somewhere along the way, a NEPA document is going to have to analyze the impacts of it and once we have that, then I think it can move more quickly.

MR. RIECHERS: I understand the notion of that as it moves forward if it changes every year that you're going to have to go through public comment and some sort of process to make those changes, but if it weren't to change every year, you basically set it in place and then we have that ability to maintain that kind of structure for some length of time, until one would want to change it.

DR. CRABTREE: I think that's right.

CHAIRMAN GREENE: Mr. Gregory.

EXECUTIVE DIRECTOR GREGORY: Dr. Crabtree, just some clarification. The IPT put Options 2a and 2b in there so they could do some NEPA analysis upfront and I think the presumption, at least in my mind, is if that's done, then the NEPA analysis is not needed subsequently when the state wants to do something within those parameters.

I thought what you just said would be, regardless of Options 2a and 2b, the state or the agency would have to go through a NEPA analysis whenever the state made a proposal like this and if

that is true, then wouldn't it be simpler to take 2a and 2b out and just have this generic statement, since you've got to go through a NEPA analysis anyway at that point in time? Or do I misunderstand it?

DR. CRABTREE: Well, I will probably need to talk more with Mara and our NEPA people about it, but it seems to me that even with Option 2a or b in there, and if we choose one of those as the preferred, it's going to be a pretty open and rather vague NEPA analysis, because it's for up to six months or no more than 50 percent and we don't know for how long and we don't know where and I am just not sure it's going to be a sufficient analysis with what we have here to keep us from needing to supplement it, but we can look at that when we get there, but I am just not sure exactly how that's going to work, but I want to prepare folks that it could well be that when we come time to do this actually that we do have to do some sort of supplemental NEPA analysis to cover it.

CHAIRMAN GREENE: Mr. Riechers.

MR. RIECHERS: Roy, certainly if it helps the notion of a NEPA analysis now to create a set of options that -- Let's just say would umbrella all of the different options and at least give us those extremes, so that in some respects you can do a programmatic NEPA analysis at a higher level, even though you may not have the specifics underneath, if we need to keep 2a and 2b in there for that and add Alternative 3 and add Alternative 4, then we probably should do that now, but I would let you go ahead and have that conversation with some of your folks to make that determination.

Obviously NEPA is a process and what you're trying to do is notify people of some of the alternatives that could be considered and are being considered.

DR. CRABTREE: Yes and it just gets into a lot of possible permutations, because you've got five states and each state may do it different and so the combinations get so complicated that it's very difficult to do an adequate analysis of it. Part of this is going to depend on how long do you all want to spend working on this, but I will ask my staff and Mara to investigate this more carefully.

CHAIRMAN GREENE: Okay. Mr. Boyd.

MR. BOYD: Let me go back to my question for Ava. Option 2a and 2b are proposed and they are proposed?

DR. LASSETER: No, they have been in the document for at least a couple of times. They were here at the last meeting and you removed a different alternative completely and sent it to considered but rejected.

These options have been there in order to enable us to narrow some ideas of how closed areas within federal waters could be, because just that statement is completely open and so having those options enables the tech staff and the IPT to have some kind of structure with which to compare and analyze effects, potential effects.

If you selected Option 2a and areas of the Gulf council only be closed for up to half of the year, it gives us some kind of structure against which to discuss and compare effects and so that is the purpose of additional alternatives.

Again, I want to emphasize if there's something that you know that your region may want to do, I would encourage it to be in the appropriate place in the document, so that we've at least done as much analysis as we can at this point. That is why we suggested the proposed Alternative 3, because that is basically what we understand Texas is interested in doing, but we could be wrong.

MR. BOYD: All right and so proposed Alternative 3 is proposed and the other two suboptions are in the document?

DR. LASSETER: Yes.

MR. BOYD: I am not opposed to those, but my question is how did those get into the document at this point? I guess I am confused. Did they get in because it was a NEPA request that they were put in and they were just put in or did the council put them in there when it happened?

DR. LASSETER: The way it works when you have an action is we had your preferred alternative. When we restructured the document, we needed to find a home for this and so we created a separate action.

We need to have a reasonable range of alternatives and so the IPT developed alternatives that could be analyzed, as best we could, as best we could design some alternatives, and then we brought them back to you.

We discussed them at the last meeting and we removed -- You were

not interested in pursuing the Gulf-wide closures of a certain distance from shore, which that idea had come from a paper Bob Shipp had written, and so we did move that to considered but rejected.

You are free to remove these, move these also to considered but rejected, but they are options, a reasonable range of options, for the IPT to analyze the potential effects on the affected environment of this preferred alternative.

MR. BOYD: Thank you.

CHAIRMAN GREENE: Okay. We are running way behind schedule and I'm going to try to keep moving on. I certainly don't want to stop any discussion, but at this point, I don't see any time that we're going to stop and take a break and so if you need to, do it at your own leisure. We need to keep moving on. Dr. Lasseter.

DR. LASSETER: Then we will move on to Action 6, which begins on page 31 of your document, and this is apportioning the recreational ACL, which we now have a sector ACL, which is also the quota, among the regions.

I will point out the Alternative 1, no action, is to retain what you currently have and that's the recreational sector ACL is divided between the private angling component and the federal for-hire component for the years 2015 to 2017. This alternative would not divide the recreational sector ACL among regions.

The remaining alternatives propose how you would apportion the recreational sector ACL or component ACLs, depending on the preferred alternative in Action 2, among the regions and your alternatives are very similar to the range of alternatives for allocation in Amendment 40 and your current preferred alternatives almost reflect exactly your preferred alternatives for the allocation formula in 40.

You have Preferred Alternative 5, which would be to apportion the recreational sector ACL or component ACLs among the regions, based on 50 percent of average historical landings for the longest time series and 50 percent of average historical landings for the shorter period of time, the most recent, 2006 to 2013.

46 You also have selected Preferred Alternative 6, to exclude 1 landings from both 2006 and 2010. I will point out that the only difference between your preferred alternative here and the

one selected in 40 was that you only excluded landings from one of those years and it has slipped my mind which one.

CHAIRMAN GREENE: Okay. Thank you. Any discussion on Action 6? Ms. Bademan.

MS. BADEMAN: Just a question. The percentages in the days estimates that are under this action, they are for the recreational sector as a whole, right, like assuming that that whole chunk went over there?

DR. LASSETER: Yes.

MS. BADEMAN: I am assuming they would be different though if sector separation was applied before regional management and is there a way to get that information before we go to public hearings, because if we do go down that road, I think people probably would want to know that.

DR. LASSETER: Yes. Okay and so we will work on combining the options and alternatives in Action 2 and the potential apportionments in the ACL with Preferred Alternative 5 and 6. Yes, we will get that before the public hearings.

CHAIRMAN GREENE: Any further discussion? Dr. Crabtree.

DR. CRABTREE: So if you look at Table 2.6.6, and this is the table that estimates the number of days the various states would have, and if you look at under Preferred Alternative 5, it indicates a season of seventeen days for Alabama and thirteen to nineteen for Florida and forty-six for Louisiana and 132 for Mississippi and fifty-six for Texas.

There are some real inequities in terms of how many days the various states get and I think you need to have some discussion about why it's fair and equitable for fishermen in Alabama and Florida to have significantly shorter seasons than those in Louisiana, Texas, and Mississippi.

I haven't heard much discussion of that, but that's really the crux of this and I think that we're going to hear about this from the public and we're going to need to build a record for why this is the appropriate allocation and why we're effectively shifting much more of the harvest over to the western Gulf, it looks like, because there is not much in the document at this point to justify the allocation.

CHAIRMAN GREENE: Dr. Lucas.

DR. LUCAS: Dr. Crabtree, I am not exactly sure about how that discussion goes, but in looking at all the previous historical measurements made on allocation by this council, it's always based on landings and historical landings and all that. It's not generally based on time or giving a percentage of time and it seems to be based on historical landings.

I think that's the route we all went down, was looking at historical landings to base the allocation or apportionment among states, because that's what we had to go with and that seems to be the historical method by the council, is to look at those historical landings.

DR. CRABTREE: Well, that's true that we've used historical landings quite a bit, but in this case, it makes a real shift in the fishery and it has very different impacts on fishermen, depending on where they live.

I don't think it's an adequate rationale to say, well, that's what we've done in the past. I mean I think you have to explain why it's fair and equitable that fishermen in some states are going to have much shorter seasons than fishermen in other states and I just haven't heard an explanation for why that is fair and equitable. I don't know and maybe Kevin and Martha can explain how it's fair, but I have not heard that.

CHAIRMAN GREENE: Mr. Riechers.

MR. RIECHERS: Well, Roy, I mean certainly fair and equitable can be in the eyes of the beholder, in some respects. What we can say is that -- What can be recognized by looking at these time series of landings is there has been an overall shift in some of this fishery from the west to the east.

 Some of that came as this fishery became more managed and the season became more truncated and has continued to be more truncated and so you're continuing to see some of that shift. What the regional management concept is trying to move us towards is some ability for each individual state and/or the regions is to manage their days that they end up with in a way that's more beneficial for them.

The ultimate in regional management would be for us to get to the point where we're managing it off the biology that each state is seeing off of their coastline and then combining that overall into a Gulf-wide strategy, or at least a check-in on a Gulf-wide basis at some point in time, every X number of years.

When you talk about equity here, it's not completely equitable that Texas and Louisiana, specifically Texas, has been losing in this whole fishery management notion of shifting allocations through time, based on management scenarios.

If you have looked at our state recently, it's not because we don't have people and it's not because we don't have people going fishing. It's because of how the seasons have been set and how the weather is dictated over in the Gulf.

 Now, that being said, I don't want to take any more landings or anything away from the States of Alabama and Florida. They have got fishermen who need to capture those fish as well and so I think what we've attempted to do here was take both a long-term approach looking at landings and weight it by 50 percent and then the most recent five years and weight that by 50 percent, so that you're at least weighting both structures, the long-term time series as well as a weighting towards the most recent years, to help come up with some allocation.

It's not going to be completely equal, because it's not the last five years, and so it's kind of weighting both of those factors, in some respects, to try to reach a fair and equitable — Certainly I will say, as far as the numbers of days here, those have only most recently been added to the document, even though we've been talking about this for quite some time, and so I think it is important that people see what those numbers actually do and I am glad they have been added now, but we've been talking about these and these percentages for a couple of years now and so I'm glad we will be able to go out and show the public what we're going to actually have for seasons.

CHAIRMAN GREENE: Dr. Lucas.

DR. LUCAS: Dr. Crabtree, to add to the discussion, I am not sure what we have now is fair and equitable either and so I mean given that we've got states with different distances from their shoreline, three nautical miles from the middle states, recognized by the feds, and you've got nine nautical miles in Texas and Florida, which gives them the ability to get to the resource better than it does in Mississippi, and I've also got the fact that the NOAA contractor stood across the table from me and said, I'm quite sure we have never really captured Mississippi's landings correctly and so I mean I'm not sure we have fair and equitable now and we're just trying to base it on what tools we have available to us to make these decisions.

 CHAIRMAN GREENE: Ms. Bademan.

MS. BADEMAN: I think Roy queued me up and asked why I thought that Alternative 5 or the preferred alternative is the way to go and I don't think that Florida was going to get onboard with that alternative. I have suggested in here to add Alternative 8 that starts everybody at a level playing field. I can't see what the days estimates would be for that, but it seems to me that that's the fairest way to go.

One of the questions that I do have for if we do one of these landings-based allocations is what do you do with Mississippi, because clearly that data is a mess and if we have a situation where Mississippi has a 132-day season and Florida and Alabama are in the teens, we've got some issues.

Not to pick on Mississippi, but just to acknowledge the data issues that are out there and so I don't know that the resolution is for that, but I would like to see, I think, a situation where everybody is kind of starting on an even playing field and you can take your allocation and do what you want with it and perhaps you can stretch those days out with setting the season that works better for your anglers and you can stretch out the days and you can compress them into a time where everybody wants to go, but it's up to you and I think that's the whole point of this document.

CHAIRMAN GREENE: To that point, Dr. Crabtree.

DR. CRABTREE: Yes and I think that -- I wasn't able to find the number of days for Alternative 8 either and it's not listed, I guess, in one of the tables and so I think, Ava, that's something that we need to get in one of the tables.

DR. LASSETER: It's in the text.

DR. CRABTREE: It's in the text somewhere? I think it would be good to put it in a table somewhere so that people don't have to search for it. Mississippi is going to be a challenge, because the percent standard error on the catch estimates for Mississippi are very large and so when you track your landings from year to year, they are likely to fluctuate quite a bit from year to year and that's going to pose, I think, a real challenge to deal with.

I know that Mississippi is looking at some alternative ways to estimate catches and some improvements to that and I think that's going to be important for us to work with Mississippi to

try to address it.

I am not trying to tell you one way or another what the allocation ought to be, but I am just looking at -- I know I am going to get questions from people about how is this fair that some states are getting a lot more days than others and I am struggling with that one now and there is just not much in the actual document justifying how we got to this allocation and I think we're going to have to beef that up, because I think ultimately that's going to be the part of this amendment that people are going to focus on.

CHAIRMAN GREENE: Mr. Anson.

MR. ANSON: Thank you, Mr. Chair. Just going back to Dr. Crabtree's point relative to the states and the fishermen within the respective states when they look at this document and trying to make that decision of what is fair and equitable, I think a couple of points have already been brought up here and I would just quickly restate them.

From the state's perspective, there might be a chance in regional management to try to apportion some allocation or save some of that allocation, the Gulf-wide catch, if you will, within a respective state and kind of stabilize it in that respect, when you have states that are non-compliant and in situations where you don't have an increasing stock, there is no chance for increasing the number of days in that situation, where a state will go non-compliant and increase their bag rates and such and state catches go up.

 That erodes other states that don't have that luxury and so that's what this document provides, is it provides some stability in that regard. I think in these numbers you need to also take into account that the calculation, I believe, is based on total landings and so when you look at Texas, for instance, and they have fifty-six days, yes, that's a lot of days in that regard relative to federal season days, but that compresses all the 365 state catches into that fifty-six and so they go from 365 state catches down to fifty-six state and federal and so you have to just kind of -- When you look at those numbers, you have to just be wary of those subtleties.

CHAIRMAN GREENE: Mr. Fischer.

 MR. FISCHER: Thank you, Mr. Chairman. I think this has probably been the hardest action item to settle on. It's just been a struggle. Percents just change and as the document gets

delayed, it's always the next year's data comes out and it's a couple of percent different.

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We've had issues from the tables weren't exactly correct, and I think it was 103 percent when you added it up on the first table, and then we had the proportioning out of the headboats in the Panhandle and the Alabama area and there's always something changing the percents, once you've settled on them.

This was the solution after a couple of years of debate and so it didn't come easy and as far as a disparity, we just voted in Amendment 40, where the fishery went from a nine-day season to suddenly one group got forty-four days and one got ten, using the exact same years.

If it's a disparity for one amendment, it probably would be for another amendment also, but those were the dates and the council went that route and this amendment is using the same dates to mirror and what's good about using these historical landings, which was brought up just briefly, is it's back when the fishery was simple.

It uses historical dates before closures and before the inconsistent state regulations and it works its way up to where we are this past couple of fishing seasons and so it takes everything into account through the fishery and weighs them equally and this is the results.

CHAIRMAN GREENE: To that point?

DR. CRABTREE: Yes and just to -- I mean it's different though than the Amendment 40, because you've got to take into account that, yes, what we're calling the private subcomponent had a ten-day season in federal waters, but they were able to fish year-round in some states and I think 150 or 200 days in Louisiana.

 It's an oversimplification to say they only get a ten-day season, whereas the anglers who are fishing off of for-hire vessels, they can only fish during that federal season and the difference between those two estimates would be much less if that was the result. That's not the case here, because these season estimates -- I mean those are the only days that these guys are going to have to fish, because this is assuming state and federal waters close at the same time.

It is a little different than what happened with Amendment 40, because to say what the season length is for a private angler

now depends on where he lives and where he fishes.

CHAIRMAN GREENE: Dr. Lucas. Go ahead, Mr. Fischer.

MR. FISCHER: You know we accept it's different, but we're using the same guidelines and we're using the same strategy -- By not calling on me, I lost my train of thought on it, but we're -- It is a different scenario, but it does mirror and I will pick it back up.

CHAIRMAN GREENE: I apologize, Mr. Fischer. Dr. Lucas.

DR. LUCAS: I wanted to echo a little bit of what Myron said. When I first came to the Department of Marine Resources, this discussion was already underway about how to do the allocation and it was painful and to say that nobody was happy when we left, nobody was happy. Everybody had issues and had challenges and it was not an easy decision. We didn't pull it out of a hat and we struggled to get there and we beat our heads on the wall and everything else.

You know finally when nobody was happy, we really felt like we must have achieved something, because either everybody is happy or nobody is happy. When nobody was happy, it was like, well, at least we're all on the same playing field here and it's not one person who is more happy with the situation than anybody else.

In Mississippi, recognizing that our numbers had never been correct and we're having to choose things off of historical landings, yes, that's when we implemented the mandatory electronic reporting for all recreational fishermen, so that we could try to get more accurate data, if that's how choices are going to be made.

When I look at something like Alternative 8, I am not seeing how, if you just said, hey, everybody be consistent, I think you would achieve the same thing. It would be the same amount of days for everybody, which essentially should be what we have now, but because everybody is so unhappy, that's why every state has gone inconsistent. I am not sure how 8 gets you there.

CHAIRMAN GREENE: Ms. Bademan.

MS. BADEMAN: I have two things. Ava, can you tell us where the days estimate for Alternative 8 is, what page it's on, and then on 8, I don't think that the season would be -- I guess it could be the same across all five states, but, again, it comes down to

what you do.

If you set your season at a time that's the low effort time, then you're going to have longer days. You're going to have a longer season. If you put it right when everybody is out on their boat, you know Memorial Day Weekend or something like that, then yes, you're going to blast through your quota pretty quick and it's going to be faster and so it does depend on what I think each state does.

 DR. LASSETER: It begins on page 35, the last paragraph, Alternative 8, and it goes on to the next page and Dr. Farmer conducted the analyses and he used three scenarios and so it explains these three scenarios and how he came up with those proportions and the third scenario uses the observed catch rates and average fish weights for all sectors and components based on a nine-day season and so that's the only timeline we have right now for these proportions, but I will see if I can get further information on season length from them, but I believe that's why we didn't have a table.

CHAIRMAN GREENE: Okay. Ms. Bosarge.

MS. LEANN BOSARGE: I am not on your committee and so thanks for entertaining my question. I am trying to put all of the different pieces of this together based on what your committee has picked their preferreds to be at this point and so I have a question.

I know that you all chose the Alternative 4 as the preferred in the action where it allows -- It would allow the states to manage both the for-hire and the private angler sector, but together and they can't separate the two out and they are together and so if that route is chosen and then you had some debate over whether to allow the states to close federal waters, a portion of federal waters, or not close federal waters -- So if they manage both components together and they are allowed to close federal waters and leave state waters open, now we've said that they can't distinguish between the two groups and manage them separately, but we didn't manage them separately at the federal level for a long time and yet, we didn't allow for-hire boats to fish in state waters when state waters were open and federal waters were closed.

Are we setting ourselves up for a scenario here where that could happen if we have all of these preferreds that we're going with now, where you could have federal waters closed off of one state and they keep their state waters open and they are managing both components and they're not separating them out, but somewhere, maybe tied to some permit or tied to some, I don't know, capacity of the vessel or something, there's a stipulation that says these boats can't fish in state waters? Is that possible somehow?

CHAIRMAN GREENE: Ms. Levy.

MS. LEVY: If a state comes in with a conservation equivalency plan and it's approved, then what the regulations would provide is that the federal default regulations, which would include the 30B type regulation that says you can't fish in state waters, wouldn't apply to those vessels that are landing in that state. If everyone has a conservation equivalency plan that's approved, that provision wouldn't apply.

MS. BOSARGE: I understand 30B, which is our regulation, would not apply. What I am asking is being managed as two sectors together, can there still be some sort of stipulation by the state that somehow accomplishes the same thing?

MS. LEVY: Not under what was selected as the current preferred, meaning they would have to be managed as a single unit. If the plan came in and said we're not going to let federally-permitted charter vessel headboats fish in state waters and we're closing the EEZ, then I don't know that that's something that would get approved as consistent with this plan.

CHAIRMAN GREENE: Okay. Any further discussion? Dr. Crabtree.

DR. CRABTREE: One more question. Ava, it seems that I recall at the last meeting that we talked about, with respect to the state-by-state allocations, how we would deal with a change in the recreational catch accounting that was calibrated back and changed the historical timeline and whether we would just recalibrate the catches and then recalculate the allocations and apply it or whether we would have to come in and go through a whole plan amendment to change things. Am I dreaming or did we talk about that at the last council meeting?

DR. LASSETER: If I am understanding correctly, the document has been updated with the most recent calibration numbers and is that what you are speaking to?

DR. CRABTREE: It has, but there are going to be more recalibrations. All of the states -- Alabama is trying a different way to survey red snapper catches and Louisiana has got a survey that they are benchmarking against MRIP and

Mississippi is trying something. There is a mail effort survey coming and so it's quite likely that there are going to be further changes that will require calibrations to the time series.

If, for example, Alabama went to a different catch series for red snapper, we would have to calibrate that in some fashion and what I am getting at is whether we want to specify in the document that once a calibration is accepted as the best available science and applied that these allocations just recalculate or do we want to have to come back in and go through the whole plan amendment process with new alternatives and all of that or not.

I don't think we've addressed that anywhere and obviously these calibration decisions, like everyone said, they are very difficult and they are very painful and they take a long time and so I think some clarity on how we want to handle that would be helpful and whether you just want to, once it's accepted by the SSC and applied to an updated stock assessment, that we would then recalibrate all of these numbers and here are the new allocations and they just go in place without us having a big long debate about it and going through a formal NEPA analysis and everything.

DR. LASSETER: Possibly related to that, we currently have a 20 percent buffer to create the ACT that is Gulf-wide and it's been my understanding that as some of the states -- Louisiana is working on validating the LA Creel with MRIP this year and so there could be a potential in the future to be modifying the ACT regionally and so I kind of understood that those kinds of decisions would coincide with examining accountability measures in a separate action, unless there is something we should put here.

DR. CRABTREE: I am not thinking of those as related. The buffer issue is already in the regulations and we would have to go through the process to change it, but we could specify in the amendment and make it clear that we're specifying a series of years and that if the historical time series of landings is recalibrated or changed and accepted as the best available science, then that new -- Those numbers would be re-estimated and they would be changed.

CHAIRMAN GREENE: Okay. Anybody else? Any more clarification? It's pretty confusing. Okay, Dr. Lasseter.

DR. LASSETER: I do think that that would need to be a further

discussion for the council and perhaps we could work up some language for you to consider. Okay. If there is nothing further on Action 6, we will move on to our last action in the document, Action 7, which begins on page 37 of your document.

This addresses post-season accountability measures and so your current, no action, Alternative 1, is to retain what you have, which is the overage adjustment. Should the entire Gulf-wide recreational sector ACL be exceeded in a given year, reduce the following year's ACL by the full amount of the overage, unless - Then there is some caveats. Unless the best scientific information available determines that a greater, lesser, or no overage adjustment is necessary and, also, this is only applicable while the red snapper are overfished, based on the most recent Status of U.S. Fisheries Report to Congress.

This would be no matter which region exceeds its portion of the recreational sector ACL. If the entire sector ACL is exceeded, the overage would come off the top and then the regions would be apportioned their quota and then to the quota, the ACT is applied. The buffer is applied to create the ACT and it's the ACT on which the seasons would be set, so that you have that bit of buffer for uncertainty and you should not exceed your ACL, but you set your season for your ACT. That's Alternative 1.

Your preferred alternative is Alternative 2, which, again, the same caveats, that overage adjustments only apply when red snapper is overfished, based on the Report to Congress, but the overage adjustment would apply just to the region that had exceeded its ACL and contributed to the entire sector ACL going over.

Alternative 3 and 4 both relate if you do not continue with your current Preferred Alternative 4. If you continue with your current Preferred Alternative 4 in Action 2, where you were managing -- Each region is managing as a single unit all of its recreational anglers, then these alternatives would not be applicable, because you would not have component ACLs, but Alternative 3 would provide for the component that exceeds its component ACL -- The overage adjustment would be taken from that component. Alternative 4, if you have both component and regional ACLs, the respective ACL that is exceeded -- In the event the entire sector ACL is exceeded, the most specific component would be responsible for paying back the overage.

 Again, for all of Alternatives 2 through 4, the overage would be deducted from the regional ACL and/or component ACL, unless the best scientific information available determines that a greater,

lesser, or no overage adjustment is necessary. We always have that qualifying phrase in there and I will turn it over for discussion.

CHAIRMAN GREENE: Any discussion? Mr. Anson.

MR. ANSON: Dr. Crabtree, relative to buffers and relative to the new programs that states are rolling out for better data collection, and they have their own timeline for approval and acceptability within the MRIP toolbox, how could the buffer be changed? Would that require an amendment, a framework action, or such relative to a state, in monitoring their specific ACL, if that's what is selected -- Could that monitoring then be used and then could the state, after a couple or two or three years of running that program, prove that it can eat into that buffer and can that be changed through amendment or framework action?

DR. CRABTREE: I think it can be done through a framework and so I think if a state gets an alternative catch accounting methodology certified by the MRIP program and that's what we're agreed they're going to use and if they can demonstrate that the probability of going over is significantly changed, then we could readdress the buffers at that time.

CHAIRMAN GREENE: Any further discussion? Okay, Dr. Lasseter, is there anything else?

 DR. LASSETER: If there is no modifications to Action 7, no further discussion, that is what we have for the amendment and thank you, Mr. Chairman. I'm sorry. One more thing. I just want to remind everybody of public hearings. Right now, we are planning to schedule them immediately after the October meeting. We are working to get the DEIS prepared to file. Is there any further discussion on the envisioned timeline for when you would be interested in taking final action, so we can schedule when we need to file the DEIS?

CHAIRMAN GREENE: Committee? Seeing no direction from the committee --

DR. LASSETER: Okay. If there seems to be no hurry, then we're going to consider filing it in November after the public hearings.

CHAIRMAN GREENE: Any objections to November? Mr. Anson.

MR. ANSON: If you filed it in November, Ava, what -- So we would have all the comment period closed and the comments

received and what time would that be?

DR. LASSETER: I am going to ask Dr. Branstetter to answer this.

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DR. STEVE BRANSTETTER: Push come to shove, we can probably get a DEIS filed and published sometime in October and so the comment period would still be open through November, but the council can take action without the DEIS being final, as long as you recognize that if some red flag comes up from either public comment or from EPA or someone else that it would have to come back to the council for additional action in the future, but I like Ava's suggestion of postponing the publication of it until we can cross the T's and dot the I's.

DR. LASSETER: If I may speak, staff will be very busy with the public hearings that we're going to run in October, which is why if we could submit by mid-November, November 15th or so, that would be ideal.

CHAIRMAN GREENE: Okay. I am not seeing any objections and I think that will be fine. Okay, Chairman Anson, we are way behind schedule and do you want to take a break now or keep going? It's your call.

MR. ANSON: I think one or two people would like to take a break and so let's go ahead and take a break. Let's do it in ten minutes.

(Whereupon, a brief recess was taken.)

CHAIRMAN GREENE: I believe we have a quorum at the table and we're going to go ahead and get started. We've got a lot to do. We're going to pick up on Updated Options Paper - Framework Action to Set the Recreational for Gag. This will be Tab B, Number 5.

UPDATED OPTIONS PAPER - FRAMEWORK ACTION TO SET GAG RECREATIONAL SEASON AND GAG AND BLACK GROUPER MINIMUM SIZE LIMITS

MR. STEVEN ATRAN: Thank you, Mr. Chairman. This is a revised options paper. There were substantial changes made to the previous options paper and I will try to be brief, since we're behind schedule.

The last time the council met, we had numerous alternatives for modifying the ACL and ACT. However, because of concerns that catch rates seem to have declined lately, which were borne out by the CPUE indices analysis that was done for the last council

meeting, the council decided to keep the existing ACL and ACT catch levels.

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 There is another gag assessment, and I believe it's an update assessment, that is scheduled for 2016 and we should get the results of that in January of 2017. That's just to give you a little bit of a timeframe for when we'll get the next assessment.

We moved all of that ACL and ACT changes to considered but rejected. However, the council did ask that we consider a size limit change for gag and black grouper in this and the idea was to get consistency with the South Atlantic Council, which has a twenty-four-inch size limit. We have a twenty-two-inch size limit.

On those size limits, we only have two alternatives. NEPA normally likes to see more than two, but we felt that the scope of having only two alternatives met with the objective for considering them and it would simplify the set of alternatives if we can do just those two alternatives, twenty-two or twenty-four inches.

Action 1 is the gag recreational minimum size limit and it's on page 8 of the document and, again, we just have two alternatives. No action would leave the size limit at twenty-two inches and Alternative 2 would increase it to twenty-four inches total length.

Looking at the growth rates that were in the stock assessment, the gag reach twenty-two inches when they are about three-and-a-half years old and it takes them about half a year to grow up twenty-four inches and so there would be a short-term reduction in catch rates, most likely.

 We did look at what the release mortality is. The release mortality in the most recent stock assessment was reduced from the previous one. Headboats and charter boats are considered to have an average release mortality of about 16 percent and the private recreational vessels are estimated to have an average release mortality of about 12 percent and so if we increase the size limit, there will be some increased discards and dead discards due to that increase, but also we will be extending the length of the season and so there will be less of a closed season when there will also have to be regulatory discards. Given that the fish only takes about six months to grow from twenty-two to twenty-four inches, we felt that any change in dead discards is probably not going to be a major issue.

Black grouper, we did the same thing as a separate action, increase the recreational minimum size limit. This is on page 9. Alternative 1, no action, we would leave it at twenty-two inches and Alternative 2 is to set the recreational minimum size limit at twenty-four inches. Again, this would be for consistency.

By the way, the twenty-four inches originally came from earlier stock assessments that had determined that the size at 50 percent female maturity occurred at about twenty-four inches. The most recent stock assessment for gag put it at twenty-two inches. I think that's probably just variability in the data as far as whether it occurs at twenty-two or twenty-four inches.

With black grouper, the 50 percent size at maturity is a little bit larger. It's about thirty-four inches, but, again, our primary objective here was to look at consistency of regulations with the South Atlantic and black grouper are not overfished and so there is no problem with having to reduce the fishing effort for that reason.

Again, on the release mortality, there is a lot of uncertainty for release mortality rate for black grouper. The last black grouper stock assessment had used a base discard mortality rate of 20 percent, but it evaluated mortality rates all the way between 10 percent and 90 percent. It did find that the assumption of what mortality rate is used does make a difference in the results. However, right now there is a lot of uncertainty.

There is another black grouper assessment scheduled in the near future and that will be reevaluated. Again, the black grouper only takes about half a year to grow from twenty-two to twenty-four inches and so we're only talking about a small amount of time when the stock would be subject to possibly increased dead discards.

Action 3 is modifications to the gag recreational fishing season. These alternatives are basically the same as what you looked at in the previous version, except they were modified to look at what the season length would be under different size limits rather than under different ACLs.

Alternative 1, no action, would retain the recreational gag season of July 1 through December 2, period, or shorter, if the ACL is reached in a quicker time period, which doesn't appear to be the case currently.

Preferred Alternative 2, you selected this as a preferred alternative at the last council meeting, would remove that December 3 to 31 fixed season. The reason that's in place is because when the rebuilding plan was first put in place with a July 1 opening, that first year it was determined that the ACL would be filled on December 3 and so NMFS implemented a December 3 to 31 season.

The way they did it, it ended up being a fixed closed season. There is no reason for us to have that season in place today and so the preferred alternative would remove that and allow the season to run until the end of the year or until the ACL is reached, whichever occurs first. That would be in combination with one of the other alternatives.

Alternative 3 would -- It says remove the January through June gag seasonal closure and that's for consistency with the way the actual regulation is worded. The regulations tell you when the season is closed and not when it's open, but effectively that would say we would open the season on January 1 and then run until the ACL is met or until the end of the year, whichever comes first.

Since this would include the February and March closed season on waters beyond fifty fathoms, we included three options for how to deal with that with respect to gag. Option 3a is gag would be treated the same as the other shallow-water grouper. In other words, during those two months, the season would be closed beyond the twenty-fathom boundary, but it would be open inside the twenty-fathom boundary, as long as those months are otherwise option to gag fishing.

Option 3b would remove the closed season completely for gag, so that you could fish for them regardless of depth during those two months, if those two months are otherwise open, and Option 3c would go the other way. It would close the gag for February and March in all waters.

Since we're talking about the recreational fishery, a large chunk of the recreational fishery does occur in waters shallower than twenty fathoms and that is reflected in the tables I will get to in a moment which discuss the estimated season length.

 Alternative 4, rather than say we're going to start on January 1 and run until the season closes, it says we want the season to be open through December 31 and so how far back do we have to back calculate to determine what the appropriate opening date

would be and, again, there is those same three methods for how to deal with the February and March closed season if it's within the gag season are taken into consideration.

On pages 14 and 15, the estimates of season length -- I want to emphasize these are only estimates and they are based upon a single year. The first six months, catch rate estimates are based upon the year 2009, and that was the last year that February and March was open completely to recreational fishing, and the last six months are based upon landings during 2013 and so these will have to be revisited, but at the moment, they are our best estimate of how long the seasons would be.

If you look at Table 2.3.1, which is on the bottom of page 14, this is for Alternative 3, which would open the season on January 1, and then there are three methods of how to deal with the twenty-fathom closure.

If we keep the twenty-two-inch size limit, we estimate that if gag is treated the same as the other shallow-water grouper that you could fish for them beyond twenty fathoms, but not shoreward during that period. We estimate that the season would run from January until the end of August, August 27, 239 days.

If we allow the season to be open in all waters during February and March for gag, you only lose a few days, again because most of the fishery is occurring in shallow waters. We estimate a January 1 to August 23, 235 days. If we had the season closed to all fishing, regardless of depth for gag during those two months, we would estimate a January 1 to January 31 two-month closure and then an April 1 to October 6 opening, for a total of about 220 days.

We also included ACT estimates. The accountability measure for gag recreational fishing states that if the ACL is exceeded in any given year, then in the following year the closure would be based upon when the ACT is projected to be met. Otherwise, it's when the ACL. We haven't met the ACL closure this current year or last year and so that wouldn't be in place and I am just going to concentrate on the ACL closures.

If the size limit is raised to twenty-four inches, then, again, if we treat gag the same as the other shallow-water grouper in regards to the twenty-fathom closure, we would be open from January 1 until December 9, 343 days.

If we allow gag to be open completely during those two months, regardless of depth, we would go from January 1 to November 30,

334 days, and if we were to close February and March to gag fishing completely, regardless of depth, then we project there would not be an ACL closure and we would be open until the end of the year and that would be 306 fishing days, after you pull out those two months of closed seasons. That's all for Alternative 3, which is for a January 1 opening.

For Alternative 4, which is the next table, Table 2.3.2, this is the one where we're trying to get the season to be open through December 31 and then back-calculating what the opening date would be. If we keep the twenty-two-inch size limit, we would estimate that the opening date would be May 28, May 28 through December 31, and that's after the February and March period and so that would have no effect on the season.

Alternative 3a and 3b and 3c are all identical, because the February and March closed season doesn't play any factor in that estimate.

If we raise the size limit to twenty-four inches, then under Alternative 3, under Option a, which is the twenty-fathom closure is in effect and no fishing beyond twenty fathoms, but you can fish shoreward of that during February and March, we would project that the season would open on February 6 and go through the end of the year, to 329 days.

If we were to open up the season completely during those two months for gag, then we would lose it looks like about thirteen days and have the season open on February 19 and then go to the 31st of December. If we were to have those two months closed to all fishing, and this is identical to Option c in Alternative 3, we would have no ACL closure and we project that the gag season would be open year-round except for those two months, 306 days.

Again, these are estimates and these estimates would have to be revisited prior to implementation, but at the moment, they are our best estimate of what the season lengths would be under the various alternatives and options.

CHAIRMAN GREENE: Okay. We need to select some preferreds here at this point. I guess we'll go back to page 8, which would be Action 1, the gag minimum size. Does anyone wish to choose a preferred here? Ms. Bademan.

MS. BADEMAN: For Action 1, I will make a motion that we select Alternative 2 as the preferred.

CHAIRMAN GREENE: We have a motion to select Alternative 2 as

the preferred and it was seconded by Mr. Walker. Any discussion? Ms. Bademan.

MS. BADEMAN: Based on what Steve explained, it sounds like this is not going to have a big impact in terms of discards and it would make us consistent with the South Atlantic for gag and then potentially for black, if we do that in the next action.

CHAIRMAN GREENE: Dr. Lucas.

DR. LUCAS: I would just speak against the motion. The fishermen that I've talked to in our area, that area that are out fishing, twenty-four seems find to them and there doesn't seem to be a real problem with it. They seem to have some heartburn with changing to twenty-two, especially just to satisfy the South Atlantic.

I realize they're in the northern Gulf and so that kind of affects Florida more than it would our area. Right now, with having different regulations on the South Atlantic side and on the Gulf side, how are you all currently dealing with it? Do you all see a lot of problems?

MS. BADEMAN: There are a lot of problems in the Keys and just to be clear, this motion would change it to twenty-four. I think you were saying it would change it to twenty-two.

DR. LUCAS: Right. Keeping it at twenty-two. I'm sorry.

MS. BADEMAN: Yes and so we've heard a lot about -- There is a lot of confusion with grouper regulations in particular in south Florida in the Keys. The map that I showed, and I think we were talking about South Florida stuff last time, shows kind of how all the jurisdictions come together and for state waters, we lump Monroe County, which is the Keys, into Atlantic, but there is still a lot of confusion about where were the fish caught versus where they're landed and so that does simplify things quite a bit to have that consistent size limit.

Also, it looks like, if people are interested in this, it looks like if we do twenty-four that we have the potential to do a significantly longer season, if that's something folks are interested in. I will throw that out there as well.

CHAIRMAN GREENE: Any further discussion? Mr. Gregory.

EXECUTIVE DIRECTOR GREGORY: Originally, the council was considering twenty-four inches because of the size of maturity

being at twenty-four inches. We were going from eighteen inches to twenty-four inches and at the time, the recreational fishery in Florida was concerned that that large of a jump in size limit would unduly restrict their harvest and so they lobbied for a twenty-two-inch size limit and that's where that came from.

Things have changed since then. The size at maturity is between twenty-two and twenty-four and we don't know if that's because of data differences or if indeed the size at maturity has gone down, which is a normal thing to expect in a population that's being fished and being fished heavily. Indeed, gag apparently has been, given the reports we get from the industry. Twenty-four inches would definitely be a conservation step for the fishery.

CHAIRMAN GREENE: Okay. Any further discussion? We have a motion on the board and I guess we'll vote it up or down. All those in favor, please raise your hand; all those opposed like sign. The motion carries seven to one.

Okay. That takes care of Action 1 and I guess we need to move on to Action 2, if anyone would like to select a preferred there. It's on the bottom of page 9. Ms. Bademan.

MS. BADEMAN: For Action 2, I will make a motion to select Alternative 2 as the preferred alternative. My reasons are similar to the arguments for gag.

CHAIRMAN GREENE: Okay. We have a motion going on the board in Action 2 to make Alternative 2 the preferred. Is there a second for this motion? It's seconded by Mr. Williams. Noting the similar discussion earlier, is there any further discussion about this? Okay. Is there any opposition to this motion? Seeing no opposition, the motion carries.

From there, we will go to Action 3 and attempt to select a preferred there. Does anyone wish to select a preferred at this point?

MS. BADEMAN: I was just going to say we have one for Action 3 now, but it does seem like a lot of things have changed with the size limit analysis and so it's maybe something to think about over the next few days and then potentially into October.

CHAIRMAN GREENE: Okay. Yes, that's one of the reasons I was asking about it, because there was a lot of information in there. Seeing no desire to change the preferred, but noting that we may want to look over that, I guess there is one other

action item or was that it?

MR. ATRAN: That was it.

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CHAIRMAN GREENE: Okay. Anything else before we leave gag grouper and black grouper size limits? Seeing none, Mr. Chairman, I don't know that it be worthwhile to jump into Amendment 28 right here before lunch, but that is your call. I can certainly pick up some of the other stuff down the agenda if staff is ready, but I will leave that decision to you.

MR. ANSON: Perhaps maybe, so we keep it consistent and stay focused on the topic, perhaps maybe moving up one of the agenda items, maybe Yellowtail Snapper Draft Framework Action. Ryan, are you ready for that?

CHAIRMAN GREENE: With that, we will postpone Amendment 28 discussion until after lunch and we will pick up on Action Item VIII, Draft Framework on Yellowtail Snapper, and Mr. Rindone.

DRAFT FRAMEWORK ACTION - MODIFY GEAR RESTRICTIONS FOR YELLOWTAIL SNAPPER

MR. RYAN RINDONE: Thank you, Mr. Chairman. Since this is the first time you guys are seeing this, I will go through some of the big highlights in the document, so that everybody is kind of up to speed.

This was part of the whole South Florida management initiative that got parsed out because it's something that the Gulf Council could address on its own without any input or without any additional review by the South Atlantic Council and it kind of puts us on par with what they have going on in that South Florida region.

This framework action looks to modify the gear requirements for yellowtail in the Gulf and we only have one action in here, but before we get to that, I wanted to just kind of give you guys some background.

 This particular framework action is only looking at making a management change for commercial fishermen and this has a lot to do with the efficiency with which that portion of the fishery is prosecuted and so the way these guys fish for yellowtail is they have a chum slick that they put out behind the back of the boat, using a large net that goes from one side of the back of the boat to the other and the chum floats back behind the boat and the yellowtail come up and they feed on the chum and the

fishermen literally cane pole these yellowtail right off the surface, within fifteen feet of the boat, usually.

When they are dehooking these fish, they are putting them in a jig and I actually have a picture of it that I can send around to you guys if you guys are interested and they drop the fish in and they pull the line down and the hook pops right out and this works most effectively with small j-hooks, which is part of their argument.

Circle hooks, they argue in order to fish with circle hooks effectively the circle hooks have to be so small that the yellowtail are almost guaranteed to swallow them all the way down into their stomachs and so that creates a bit of an issue, they argue, as far as gut hooking, especially since not all circle hooks are created the same.

One manufacturer's 6/0 circle hook might be a different size than another's and then you have whether the hook is offset or not and so in the South Atlantic's waters south of the Keys, circle hooks are not required when fishing for yellowtail snapper. However, they are in the Gulf, because that circle hook rule applies to all reef fish.

We have a couple of tables in here that show you the landings of yellowtail snapper in the Gulf and the South Atlantic and landings in the Gulf are dominated by the commercial fishery and better than 99.9 percent of all yellowtail in the Gulf are landed in Florida and most of which are landed in that South Florida area and so this is very much a regional issue.

If we look at Table 1.1.3, you can see the actual poundages of where those fish are caught recreationally and commercially, just so you can compare the two, and just to define what these regions are, the way that the State of Florida collects recreational catch data is based on five zones spread throughout the state: the Northeast Zone, which is, and, Martha, please correct me if I screw this up, but the Northeast Zone is roughly Nassau County and Jacksonville down to Indian River Lagoon area, that zip code, generally; then the Southeast is from there down to the Miami/Dade County line; the Keys is Monroe County; West Central Coast of Florida goes from Collier County north to roughly Pasco County or Levy County; and then the Northwest is from Levy County all the way west to Pensacola and Escambia County.

For the commercial sector, we had to aggregate the landings a little bit, due to some confidentiality issues, but the East is

from Nassau County or Jacksonville all the way south to the Broward/Dade County line, and so just north of Miami, and the South Region includes Dade and Monroe and then the West is everything else.

Figure 1.1.2 shows you, using a heat map, where most of these recreational landings come from and the more towards blue a particular county is, the fewer landings it has and the more towards red a particular county is, the more landings it has and so, again, this shows you that most of the fish are still coming from South Florida. If you go to the next figure, 1.1.3, you see that commercially almost all of the yellowtail are coming from South Florida.

The purpose that we have outlined for this document, and you guys feel free to edit this if you don't agree with it, or for this framework action, is to address inconsistencies in the Gulf of Mexico and South Atlantic Fishery Management Council circle hook requirements for yellowtail snapper commercial fishing in Gulf of Mexico waters and to increase the operational efficiency of the commercial yellowtail snapper fishery.

The need for this framework action is to achieve optimum yield and to decrease the burden of compliance with differing regulations, based on separate regulatory agencies across adjacent bodies of water and this includes the Gulf Council, the South Atlantic Council, and the State of Florida. Do you guys have any input on that purpose and need or does that look pretty good to you?

CHAIRMAN GREENE: Mr. Anson.

MR. ANSON: Not any comments to the purpose and need per se, Ryan, but I guess, going back to the regulation, it's reef fish, but also when using natural bait is the regulation for use of circle hooks and so if they're up there at the surface of the water and it's basically sight fishing and these are actively feeding fish, has the industry looked at using artificial and just strips of the gulp bait, something that isn't natural, and using that in lieu of natural bait on their hooks?

MR. RINDONE: I don't know of any discussion about using artificial baits. What they will do is they will catch a Bermuda chub, which have a thick skin, and they will skin the fish and scale it and they will just use strips of the skin on the hook, because it's flashy, and they will throw that in and the yellowtail will hit that amongst the different bits of chum.

 As to whether that could be replicated with an artificial bait, I imagine it's possible. Anything can be made out of plastic, but that's not been an active discussion, so far as I know.

CHAIRMAN GREENE: Any further discussion? Seeing none, Mr. Rindone.

MR. RINDONE: Thank you, Mr. Chair. On page 12, we start Chapter 2. Like I said, we only have one action in here and Action 1 would examine changes to hook requirements for commercially-harvested yellowtail snapper in the Gulf and we have four alternatives here.

Alternative 1 would keep things as they are, which would require the use of circle hooks when fishing with natural bait for yellowtail snapper in the EEZ in the Gulf. Alternative 2 would remove the requirement to use circle hooks when commercial fishing with natural bait for yellowtail snapper throughout the EEZ in the Gulf and Alternative 3 would remove the requirement to use circle hooks when commercial fishing with natural bait for yellowtail south of 28 degrees North latitude in the EEZ in the Gulf. Just for your frame of reference, that's roughly Tampa Bay.

 Alternative 4 would remove the requirement to use circle hooks when commercial fishing with natural bait for yellowtail south of 25 degrees, 23 minutes North latitude on the west coast of Monroe County, Florida, south to the Gulf Council jurisdictional boundary. This is a reference to the Shark Point boundary that was discussed at the June joint council meeting as part of the South Florida deliberations. If you look to Figures 2.1.1 and 2.1.2, you can see where those two boundaries actually are on a map.

Again, for Alternative 3, which would use 28 degrees North latitude, that's roughly the north part of Tampa Bay south and then that 25 degrees, 23 minutes in Figure 2.1.2 is what we were referring to as Shark Point. There are a couple of different instances where Shark Point occurs on a map in that South Florida region, which is why we elected to go with the actual line of latitude. Does anybody have any questions?

CHAIRMAN GREENE: Mr. Boyd.

 MR. BOYD: Ryan, just a question on the use of any kind of hook. Are the yellowtail snapper commercial fishermen bending down the barb when they fish with what I will call the cane pole method, so that they can de-hook them quickly, or are they leaving it?

 MR. RINDONE: So far as I know, the barb is not being bent down. Sometimes the hook will get pulled or a hook will get swallowed, et cetera, and so it's a very fast fishery. You could land 600 pounds of yellowtail in two-and-a-half hours if they are really schooling and hungry and when you have guys that are cane poling off the back of the boat. It's really a time thing at that point.

I wouldn't imagine them to be bending the barb down, but I don't know if Bill Kelly is around. He represents some of those guys and he might be able to speak to that later and inform you guys about that, but I don't know.

CHAIRMAN GREENE: Ms. Bademan.

MS. BADEMAN: I don't think they are, but we can ask Bill. I went out on one of these trips with them, just to kind of see how it went down. We actually had a slow day, but it is quick. They are zipping those fish in the boat and they have got just the de-hooking and they are de-hooking the fish real quick and putting them in the box. It's kind of cool.

MR. RINDONE: If you guys like, I can send you around a picture of what this de-hooking jig they use looks like, so you have some frame of reference.

CHAIRMAN GREENE: Okay. Mr. Walker.

MR. WALKER: I was just going to say it seems to me if they did bend the hook down that it wouldn't be a circle hook anymore and so I'm not sure what they do exactly down there, but maybe John might know.

MR. SANCHEZ: I don't know for sure if some bend the barb or not, but it is definitely a j-hook, what they need.

CHAIRMAN GREENE: Typically bending the barb would help them release the fish and it sounds like they are catching them pretty expeditiously anyway. Any further comments? Mr. Rindone.

MR. RINDONE: Thank you, Mr. Chair. What we're looking for from you guys at this point is just approval of the alternatives that we have, approval of the purpose and need, and make sure that this document covers the scope of action that you want it to and then at the next meeting in October, we will bring you a final draft.

Since this is a framework action, we have an options paper that we bring to you now and then the next time you see it, it would be a final draft for you to consider for sending on to the Secretary. If you guys like what you see, let us know and if you want us to change something, let us know.

CHAIRMAN GREENE: Okay. Any direction for staff? Does anybody want anything different? I am not seeing anybody making any -- It looks good and I guess carry on.

MR. RINDONE: Do we need a motion to accept the language or --

CHAIRMAN GREENE: We need a motion to accept this language on the framework or -- Ms. Bademan.

MS. BADEMAN: I will make a motion to accept the language for Action 1. Does that cover what we need to do? Are you good with that? Okay.

CHAIRMAN GREENE: We have a motion to accept the language for Action 1 and is there a second to this motion? Mr. Walker seconds it. Any opposition to this motion? Seeing none, the motion carries.

Mr. Rindone, are you done? He is all done. All right that. That takes care of that. Now that we're not trying to get through Amendment 28 -- Chairman Anson has offered Item Number VII, Final Action, Framework Action to Retain a Portion of the Commercial Red Snapper Quota in 2016. This would be Tab B, Number 7(a) and Dr. Diagne.

FINAL ACTION - FRAMEWORK ACTION TO RETAIN A PORTION OF THE COMMERCIAL RED SNAPPER QUOTA IN 2016 REVIEW OF FRAMEWORK ACTION

DR. ASSANE DIAGNE: Thank you, Mr. Chairman. Initially, we planned on discussing this action after Amendment 28 and so we will keep that in mind when we go through the alternatives, essentially.

This amendment would grant the council the flexibility of having the reallocation considered in Amendment 28 to be implemented in 2016, because the last time we discussed this and looked at the timeline, a likely scenario would be that 28, if approved, would be implemented after January the 1st and by that time, the IFQ allocation for red snapper would have already been distributed and so this framework action would grant the authority to

withhold a portion of the commercial quota for 2016 and make the adjustment once Amendment 28 goes final.

It is a very simple framework action and it has two alternatives and your management alternatives are on page 4 in the document. We have a no action alternative, which essentially would distribute 100 percent of the commercial quota for 2016. If we were to do that, as mentioned, we would not be able to have 28 be effective in 2016 and we will have to wait until the next year, until 2017.

Alternative 2 reads as follows: Before the distribution of the 2016 red snapper commercial quota to account shareholders, withhold up to 24.7 percent of the red snapper commercial quota. I will come back to that number in a second. The exact amount to be retained for distribution will be determined by the percentage of the quota that would be reallocated in Amendment 28.

The reason why we wanted initially to discuss this after Amendment 28 is that it would have allows us to put the exact number in Alternative 2. There is a table in the document that is on page 6 and it gives us the various percentages of the commercial quota that would need to be retained to satisfy the alternatives that you have in Amendment 28.

 For example, under your preferred alternative in Amendment 28, which is Alternative 8, you would have to retain 4.9 percent of the commercial quota for 2016 to be able to make the adjustment and have 28 effective in 2016 and so you have the range of percentages here and, as written, Alternative 2 right now goes up to the maximum included in Amendment 28 to essentially preserve your flexibility in choosing whatever alternative you see fit in Amendment 28, but as soon as you make your final determination, we will put that percentage in this framework action. Essentially, that concludes my discussion of the two alternatives and I will try to answer questions, if any. Thank you.

CHAIRMAN GREENE: Okay. It's pretty straightforward, what the intent of this will be. Is there any questions of Dr. Diagne about this item? We are going to have to pick it back up after we go through 28. Any questions? Dr. Diagne.

 DR. DIAGNE: If the committee wants to, I think now would be a good time to select a preferred for the framework action, with the understanding that the percentage would be adjusted following a decision in Amendment 28.

CHAIRMAN GREENE: I think we will wait until we go through Amendment 28 and decide at that point. I guess we're just going to have to come back to it. I mean it's one of those things. Chairman Anson.

 MR. ANSON: Thank you, Johnny. I'm sorry to suggest those items in that order. Looking at the rest of the agenda, I don't see how -- I mean we would be basically stopping and I don't think we'll have enough time, looking at a twelve o'clock lunch break, to do any of the other items and so I suggest maybe we take an early break and come back and let's shoot for a one o'clock start. We will still try to retain a one-and-a-half hour, although we are a little short.

 There was one item of business I wanted to take care of. Harlon Pearce, a former council member, was -- He unfortunately had some health issues at the last council meeting and was unable to make the trip to Key West and so we wanted to provide him a gift, a token, of appreciation. Harlon, come on up here.

For his many years of service. I believe it was three full terms, three consecutive terms, he filled and so he is here and present today and so we would like to go ahead and give him the gift. Thank you, Harlon. Thanks for all your service to the council and to trying to make the Gulf of Mexico a sustainable place for fisheries. We appreciate it.

 MR. HARLON PEARCE: Thank you and thank the council. I am going to miss the council and I think that one of our famous comedians says he gets no respect and I think this council definitely doesn't get the respect it deserves and there's no doubt about that. Rodney Dangerfield would fit right in with some of the people that come after us, but I sure respect everything that all of my people at this council have done and all the staff have done and all the hard work and I am going to miss being here. I am already missing it, but this council does the job for this country and people don't appreciate what you guys are doing and all the hard work you're doing, but I do. Thank you very much.

(Whereupon, the meeting recessed at 11:44 a.m., August 11, 2015.)

August 11, 2015

TUESDAY AFTERNOON SESSION

 The Reef Fish Management Committee of the Gulf of Mexico Fishery Management Council reconvened at the Hilton Riverside Hotel, New Orleans, Louisiana, Tuesday afternoon, August 11, 2015, and was called to order at 1:00 p.m. by Chairman Johnny Greene.

CHAIRMAN GREENE: Okay. I think most everybody has found their way back to their seats. As noted from earlier today, we had moved the discussion for Final Action on Amendment 28 to after lunch and we're going to pick up there. That will be led through by Dr. Diagne and it will be Tab B, Number 6. Dr. Diagne, if you're ready.

FINAL ACTION - AMENDMENT 28 - RED SNAPPER ALLOCATION REVIEW OF AMENDMENT

DR. DIAGNE: Thank you, Mr. Chair. As indicated, the amendment, we are going to go through Reef Fish Amendment 28, which considers reallocation of the red snapper quota or ACL between the two sectors, the commercial and the recreational sector.

Our discussion, at least the first part, my part, will be very short, because the amendment still contains the nine alternatives that were previously discussed and, as you recall, just to group them by category, the first set of alternatives would allocate a fixed percentage of the quota to the recreational sector and the numbers were 3, 5, and 10 percent to be shifted.

 The second set of alternatives would move portions of the quota above a certain threshold towards the recreational sector and the two thresholds discussed here were 9.12-million pounds and ten-million pounds. Finally, the last set of alternatives, that would be 8 and 9, those alternatives try to address changes in recreational data.

As it stands, the preferred that you have selected is Preferred Alternative 8. The Preferred Alternative 8 is on page 29 in your document and it reads as follows: The increase in allowable harvest due to changes in recreational data from the update assessment will be allocated to the recreational sector.

Essentially, the increase for the recreational sector should be the amount attributable to the recalibration of MRIP catch estimates and this is for 2015 to 2017. Commercial and

1 recreational allocation will be based on the average 2 percentages.

You had this discussion during the last council, because you realized that the amount due to recalibration would fluctuate, depending on the year selected. To simplify this and streamline it, you directed us to use the average between 2015 and 2017 and so the Preferred Alternative 8 reflects that and would allocate 48.5 percent of the quota to the commercial sector and, consequently, 51.5 percent of the quota to the recreational sector.

The remainder of the alternative, for ease of implementation of the rule in the future and clarity, lists the ACT for the recreational sector as well as the corresponding ACT for the federal for-hire component and the private angling component, which were established in Amendment 40.

Again, the buffer that you selected was 20 percent and so the ACT would reflect that, the deduction of 20 percent, starting from the ACL. That is the preferred alternative and I will stop here at this time, Mr. Chair, and try to answer questions if you have some. Thank you.

CHAIRMAN GREENE: Thank you. Any questions for Dr. Diagne? Any further discussion on Amendment 28? Mr. Walker.

MR. WALKER: Karen, can you put that up, those comments I have, just so people can follow along here? Reallocation is not fair and equitable. There is no discussion in Amendment 28 about economic impacts to each sector from harvest restrictions to rebuild the stock.

The commercial sector sacrifices have driven rebuilding, because it has complied with the catch reductions to rebuild, but the recreational sector did not comply with the catch reductions. It overharvests almost every year and so it didn't endure economic impacts like the commercial sector did to rebuild the stock.

The error the recalibration is supposed to correct, the failure to accurately estimate recreational landings, only harmed the commercial sector. The commercial sector lost out on 51 percent of higher quotas that might have been set, but instead the recreational sector took 100 percent and so why are we reallocating fish to the recreational sector when it was the commercial sector that was harmed by this error? Why are we rewarding the recreational sector for repeatedly overharvesting

the stock?

Amendment 28 will cause harm to the commercial sector, but it won't generate any benefits for the recreational sector. Increasing the recreational quota doesn't do anything to extend the recreational season. Just look at recent history. The quotas keep going up and their season keeps getting shorter. Amendment 28 does nothing about state non-compliance, which is the real problem.

Any quota that gets reallocated will just get used up the states going even more non-compliant, but the federal recreational season won't be helped.

Consumer access to this resource through the commercial sector, it's not fair to take fish from seafood consumers so recreational anglers can catch them for fun. Reallocation won't promote conservation. Reallocation will manage the resource in the eastern Gulf into a permanently and severely overfished state. Under reallocation, SPR in the eastern Gulf will decrease to just 46 percent of unfished level.

Selectivity is masking real problems with the stock. CPU is way down in the eastern Gulf, where there has been poor recruitment there for many years and reallocation will make this worse, because it will concentrate more fishing effort in the eastern Gulf.

The assumption that selectivity will remain constant is not supported by available information, which suggests instead that selectivity is a function of what's available to catch now. There is no doubt that will change.

On the recreational side, discard mortality is estimated at 10 percent, but that assumes use of venting tools and that the anglers are fishing in shallower water, neither of which are valid assumptions anymore.

The council and the public don't have access to needed information. The 2014 update stock assessment report is not publicly available. Alternatives 8 and 9 are based on that assessment, but all anyone has seen is a PowerPoint presentation about it. That doesn't cut it and we need the report. Thank you.

 CHAIRMAN GREENE: Okay. Thank you. Any other comments? All right. Seeing no further comments, does anybody wish to do anything on preferreds? Okay. Seeing no action -- Mr.

Williams.

MR. WILLIAMS: I have slowly been changing my perspective on this and I have in the past supported Alternative 8, thinking that the initial allocations were erroneous and that this was going to fix it, but the fixing is done really with just a single year of data and that gives me some concern.

 I will tell you what really concerns me though and it's something that David mentioned and I have heard this from a number of people and seen it from several sources and that is this reallocation is going to shift more fishing effort into the eastern Gulf of Mexico and we don't need more fishing effort in the eastern Gulf of Mexico.

Any change that we make as we move fish from the commercial to the recreational sector, because most of the recreational fishing is in the eastern Gulf, that's where most of the increased catch is going to be taken and the SPR is already lower in the eastern Gulf than it is in the western Gulf and it's only going to go lower if we do that. The eastern Gulf is more overfished.

My impression is, based on conversations with people, it's getting somewhat worse every year and so while I have, in previous meetings, been an advocate for Alternative 8, I am now an advocate for Alternative 1, no action, and I would offer Alternative 1 as a motion, to be our preferred action.

CHAIRMAN GREENE: We have a motion to change our preferred to Alternative 1, which is no action. Is there a second for this motion? It's seconded by Mr. Walker. Any further discussion? Mr. Riechers.

 MR. RIECHERS: Mr. Walker brought up some points about the amendment and I am going to kind of reflect back on those a little bit as well. The amendment basically started as an amendment associated with some economic analysis that had been completed and basically, if I am recalling the numbers, the commercial value was at or near a little over three-dollars and on the recreational sector, that same analysis showed value at or near ten-dollars, as I am recalling. Certainly I think Assane would have that table that was presented and certainly you all have gotten studies in the past.

Really, Alternatives 2 through 7 address those issues and basically a percentage shift associated with that study and realizing that was a point-in-time study and certainly we saw a

critique of it and even the SESSC critiqued it and said there are certain limitations to projecting that forward and we all understand that.

That's exactly what occurs with our biological analysis as well, in that as we try to take those models and move them forward if there is any real change in the dynamics or the framework that that analysis was based on, then that too would change and that can change the analysis moving forward.

Alternatives 8 and 9 basically deal with a recalibration of the data and so those are basically just a recalibration of past numbers that we are basically laying back across that series now and so one could even argue that you could actually pick two preferreds here and have both the recalibration notion as well as the shift for economic allocation.

For that, I am going to speak against your motion and I think we still need to go forward with this. We've had a lot of conversation about the reasons why we looked at allocation in the past and I am not going to go into all of those, but certainly it's part of our charge and so I am going to urge us to go ahead forward with an alternative other than Alternative 1.

CHAIRMAN GREENE: Any further discussion? Mr. Boyd.

 MR. BOYD: For a lot of reasons, and we have discussed these many times, one of them being that we have an economic study that came from NMFS themselves that says that there should be some reallocation to the recreational sector from the commercial sector. There was a report that was commissioned by a special interest group and given to this council and it came through the SESSC and the SESSC didn't change their findings after seeing that report. All they did was they said they accept that other report and so I don't see that there's been a change there.

We also have an obligation, I think, to the recreational fishermen to listen to them and overwhelmingly in letters and emails and public testimony in scoping hearings, we have heard from the recreational fishermen that they would like to see a reallocation and I think that may be falling on deaf ears, but there are a lot of recreational fishermen out there.

One of the assumptions that being made here, and David alluded to this, is that the recreational fisherman fishes for pleasure and the assumption there is that they are wasting the fish. The assumption is that the fish are possibly even being thrown away and that the only valid use of those fish is to kill them and to put them into the marketplace and to sell them for a profit and that makes them okay. For those reasons, plus many other reasons, I cannot support this. Thank you.

CHAIRMAN GREENE: Okay. Any further discussions? Mr. Walker.

MR. WALKER: I would just like to mention on the -- Like I said, the one year of data and the SESSC recommended -- It was the best available science until they were dissolved and that we ought to be exploring management reform and it's not an allocation problem. I don't know when you're going to understand this.

It's a management problem and it's the plan that you're managing under. I mean I've said this so many times. The headboat, I mean those guys went from a nine day to a ten month and the charter boats were separated for state non-compliance and they had forty-four days and people are complaining that they got more days than us and that's not true. Roy told you that it was just oversimplified and you have access. You have opportunity to do something for the recreational fishermen.

This small percentage is not going to be a solution. They need a fishery management plan and I think you have an obligation to give them that plan. The allocation does not work. They've had a 200 percent increase, a nearly 200 percent increase, and it still declined. There is ways to fix this and I will tell you that -- You know, I heard a lot of testimony from the charter industry, from Alabama and Florida and Texas and all over this -- I have been listening to this for a lot of years, five years, and they don't support it.

I have heard the testimony over and over. It started out as the red grouper amendment and it got changed to red snapper and I don't know how many Executive Directors and Council Chairs and we've just listened to this over and over and why? We just keep fighting this.

 I mean we get the ad hoc panel and say, no, no, no and we need to wait and let's kick that down the road a little further. It's time to get to work for the recreational fishermen. They deserve something better than this and the allocation is not the solution, but a fishery management plan is a solution and it can be developed by the recreational fishermen and I am just going to say we keep beating this drum over and over and we've got to take action for the recreational fishermen to develop a fishery management plan and the headboats and the charter boats and all

of these -- Everyone needs to work on their plan and what works for them and addresses the issues in their fishery and allocation is not the issue.

CHAIRMAN GREENE: Ms. Levy.

MS. LEVY: Thank you. I just wanted to make a brief comment about the data. I have heard more than once that this Alternative 8 and 9 are based on one year of data, but let's just keep in mind that we went through the calibration workshop and a method was selected to calibrate these landings backwards and the council used that information -- The SSC approved it as the best available science or recommended that it be the best available science.

This council used that information to then increase the TAC and so we've already relied on it to actually increase the total TAC and so to backtrack now and somehow say that we didn't know what this was and we didn't know how the Science Center did it and because we don't have a final written report that actually memorializes all the information that was presented to the SSC, the council, and the public throughout the last eight months I think is just sort of a misstatement of what occurred.

I just want to be clear about that point. Whatever allocation decision you make here is clearly up to the council and there are many arguments and policy decisions and pros and cons that you all need to discuss and figure out what you want to do, but I don't want there to be a misunderstanding about the data that goes into Alternative 8 and 9 and the implications there.

CHAIRMAN GREENE: Dr. Crabtree.

 DR. CRABTREE: I don't think you can get around the fact that as we change, through recalibrations and things, the historical time series of landings -- It has allocation implications, because the allocations we have are based on the historical time series of landings.

In this case, it's a relatively small recalibration, but there are likely going to be much more substantial changes to the historical time series of recreational catches. It's going to change the mix between commercial and recreational.

If sector separation continues forward, it's going to change the balance between the private sector and the folks fishing on charter boats and we're going to have to deal with those, because it's going to change our landings series.

This case is tricky, because the allocation is based on a very old set of landings that can't really be effectively calibrated, but I mean ultimately these changes in the perception of what's been caught in the past I think is something that you're going to have to deal with.

CHAIRMAN GREENE: Okay. Any further discussion? Mr. Williams.

MR. WILLIAMS: A question for Roy Crabtree. Roy, you do agree though that if we make this change and if we were to approve either Alternative 8 or Alternative 9 that we are likely to be increasing fishing mortality in the eastern Gulf more than in the western, right? It's going to go up and the effect -- The same thing is going to happen with regional management in Amendment 39. That's going to have the effect of shifting more fishing into the eastern Gulf of Mexico.

DR. CRABTREE: Well, in Amendment 39, those state-by-state allocations actually shift the fishery towards the western Gulf. That's why the number of days estimates for Texas, Louisiana, and Mississippi were higher than Florida and Alabama.

You are right that because I think about 70 percent of the recreational fishery is in the eastern Gulf that reallocating to the recreational fishery shifts the catches towards the eastern Gulf, but bear in mind in this case we're talking I think 350,000, or maybe a little bit more than that, pounds of fish and so about 80 percent of that is going to come out of the eastern Gulf.

 Bear in mind though that we put in place a 20 percent buffer on the recreational fishery effective in 2014, I think, and that's about a million-and-a-half pounds that aren't being caught in the eastern Gulf right now and is a much bigger amount of fish than the amount of the recalibration and so we have lots of pots in the fire right now and all of them have distributional effects and shift things around.

CHAIRMAN GREENE: Okay. Any further discussion? We have a motion on the floor and all those in favor of the motion on the board to change the preferred to Alternative 1, please raise your hand; all those opposed like sign. The motion failed two to six.

Okay. Anything else? I guess that's pretty much the crux of 28 and is there anything else in there, Assane, that I am not thinking of? I mean that's pretty much it, correct?

DR. DIAGNE: Yes, Mr. Chair. I think at this point I will turn it over to Mr. Hood and subsequently Ms. Muehlstein to summarize the comments. Thank you.

PUBLIC COMMENTS

MS. EMILY MUEHLSTEIN: I am going to go ahead and go first and give the summary of the comments that we have received at the council level. I just wanted to let you guys know that we have comments on our website that date back to June of 2012, but right now I am going to go ahead and just present to you the comments that we've gotten since the council made some major changes to the document, since you added Alternatives 8 and 9.

Those comments started in about January of this year and run through last week. Now, there have been some comments added since I did this summary and so if you want to read the most recent comments that we've gotten in the last few days, I would encourage you to go ahead and go to the website, to that thermometer page, and read the comments on your own.

What I have so far is support for either. There is support for no action and then there is also support for some sort of reallocation scenario. I am going to start with some of the rationale for the support for no action and then I will move on to why people are supporting some sort of change in allocation.

For the support for no action, it was explained that the problem that we have is that there is potentially six-million anglers in the Gulf and that there is only about a million fish and that might be the issue and not necessarily allocation.

It is also said that allocation is not the solution and that Amendment 28 would not extend the recreational season by more than a couple of days. It does nothing to actually address the real problem with the red snapper fishery and it will not give the recreational fishermen a longer season over time and there will be no large change in the season.

It will not prevent recreational overharvesting and it will unfairly penalize the commercial sector for staying within its quota and cause instability and uncertainty in that sector. It sets a dangerous precedent with other species to follow. It will not increase the economic benefits of red snapper fishing and it could contribute to a localized depletion of the eastern Gulf.

It was also suggested that the most effective way to increase season lengths and fishing days is through management changes or increased accountability in the recreational sector. The council should concentrate on regional management and other management actions to help the recreational sector.

Recreational anglers deserve a management plan that gives them a longer season and allows their fish to be counted. Amendment 28 does not accomplish that and it was said that Amendment 28 would hurt businesses through the U.S. by disrupting the seafood supply chain and limiting access to red snapper.

Support for allocation was mostly in favor of selecting Alternative 9. Alternative 9 offers the best solution, based on sound science. Alternative 9 moves us to a better management by recognizing that recreational anglers selectively harvest larger fish. Alternative 9 would provide substantial economic benefits to the red snapper fishery and to the nation in general and then there was also some support expressed for Alternative 4 and Alternative 6. Now, most of that support was expressed prior to the additions of Alternatives 8 and 9.

We also received a letter and a resolution from Escambia County in Florida supporting Amendment 28, specifically supporting Action 1, Alternative 6 and Action 2.1, Alternative 2. Action 2.2, no action.

Then some of the other comments that we received suggest that we implement a tag system and that we approve regional management or possibly consider area closures to solve our red snapper problems. Are there any questions about that? Okay. I guess we will move to Peter.

DEIS COMMENTS

 MR. PETER HOOD: Okay. Thank you. Peter Hood, Southeast Regional Office. We had a comment period on the Draft Environmental Impact Statement for Amendment 40 that went from June 5 to July 20. During that time, we received a total of 629 comments from individuals and organizations, including the EPA.

 Of the comments that were received, three were from fishing constituent groups and these were the Coastal Conservation Association, Gulf of Mexico Reef Fish Shareholders Alliance, and the Organized Seafood Association of Alabama and then one was from a non-governmental organization, the Environmental Defense Fund.

Most of the comments, and I think these were related to a CCA alert that went out, asking their members and friends to provide comments, supported reallocation in some form. Specific to the alternatives, 384 commenters supported Alternative 9 as the preferred and sixty-five supported -- They didn't really say which alternative they supported, but they supported reallocation in general towards the recreational sector.

Three supported Alternative 6 and two supported either Alternative 6 or 9 and two supported Alternative 8 and then there were a couple of people here and there who supported Alternatives 4, 5, and 7.

Then there were fourteen comments recommending that the council not take any action. Then there were a lot of people who didn't really provide any comments specific to the DEIS, but they expressed just basically a general frustration with red snapper management of the recreational sector and then suggested other management measures that were outside the scope of the action, things like increasing the recreational season, changing the bag limits and size limits and those sorts of things.

From the Environmental Protection Agency, the DEIS got an LO rating, which basically means lack of objection. That's a good thing and we also did hear from the Department of Interior, who basically said that they didn't have any comments at this time.

From the organizations that I mentioned, CCA indicated that, because of changes in MRIP and selectivities have led to the higher ABC adopted by the council, they recommended that Alternative 9 be the preferred and they also indicated that economic information about the current allocation indicates that it's economically inefficient, further supporting revising the allocation towards the recreational sector.

From the Organized Seafood Association of Alabama, they felt that any changes from Amendment 28 would adversely affect the commercial sector and they cited National Standards 4 and 5 to support why the action should not be taken.

From the Environmental Defense Fund, they felt that the rationale provided for Alternatives 8 and 9 were not credible and I think we've heard some of those reasons already. They also felt that reallocating red snapper towards the recreational sector is projected to cause a further decline in the spawning potential ratio on the eastern Gulf and may contribute to a localized depletion in the region.

Then, also, reallocating red snapper will not bring stability to the recreational fishing season or reduce the likelihood of recreational overages, but will undermine the successful IFQ program in the commercial sector.

Then, finally, from the Gulf of Mexico Reef Fish Shareholder Alliance, and I think a copy of that was sent around in council mail and so you've probably seen that, but their points basically were that Amendment 28 doesn't contain a full range of reasonable alternatives and the DEIS is internally inconsistent and there were numerous assumptions underlying Amendment 28 that make no sense and then, finally, Amendment 28 is missing some important analyses.

I just will conclude by saying that the IPT, after receiving these comments, took a look at the DEIS and where we saw changes were warranted or things needed to be updated or revised, we did work on the amendment before it came to you in the briefing book and that's all I have.

CHAIRMAN GREENE: Okay. Thank you. Any questions? Seeing none, I guess the next item under this heading is Review of Codified Text, Tab B, Number 6(d). I am sorry, Dr. Diagne.

REVIEW OF CODIFIED TEXT

DR. DIAGNE: Thank you, Mr. Chair. At this point, we just would like to mention that they are available for your review and they are in the briefing book and if any member of your committee has a particular question, then maybe Ms. Levy or someone from NMFS will answer. Thank you.

CHAIRMAN GREENE: Okay. Thank you. Someone from National Marine Fisheries is going to lead us through the -- I mean it's pretty much codified text, basically, and do we need to go through this now?

MS. LEVY: You don't need to go through it now. The only thing I will point out is that the numbers in there are based on the current preferred alternative and obviously if that changed, now or at full council, then those final numbers would change.

CHAIRMAN GREENE: Okay and I guess that would be the same thing for Action Item VII, which was to retain a portion of the commercial quota as well, if it passes at full council. I don't guess we need to revisit that at this time to put the numbers in. Mr. Anson, do you want to do anything differently? Okay. Ms. Levy.

MS. LEVY: Given that you still have the preferred alternative in Amendment 28, did you want to look at the framework action and talk about choosing a preferred there or are you going to — The other option, I guess, is to defer the entire thing to full council.

CHAIRMAN GREENE: We went through it earlier and we just didn't put the number in. Dr. Diagne is waving at me back there.

DR. DIAGNE: As Ms. Levy mentioned, you have the option of selecting a preferred in the framework action and the number would be filled in, but at least this was a two-alternative action and it's very simple. Either you do it or you don't and so if you are so inclined, you could choose a preferred and we will deal with the number consistent with the final decision in 28.

FINAL ACTION - FRAMEWORK ACTION TO RETAIN A PORTION OF THE COMMERCIAL RED SNAPPER QUOTA IN 2016

CHAIRMAN GREENE: Okay. Fair enough. We will go back to Action Item VII, which is Framework to Retain a Portion of the Commercial Red Snapper Quota, to select a preferred. It was Tab B, Number 7(a).

As we went through this earlier, it basically is a one-action, two-alternative deal and is there anyone who wishes to select a preferred at this time? Mr. Riechers.

MR. RIECHERS: We skipped this a moment ago, but I will go ahead and offer a preferred, assuming we're going to pass Amendment 28 with some sort of action, and that would be Preferred Alternative 2. I move Preferred Alternative 2.

CHAIRMAN GREENE: Okay. We have a motion to select Preferred Alternative 2 and is there a second? By Ms. Bademan. Is there any discussion? Seeing no discussion, the motion carries. Ms. Levy.

MS. LEVY: Just one other point. When you talked about 28, there is the option at this point in committee to recommend that full council submit to the Secretary of Commerce. I don't know whether you all want to take that up now or not, but we didn't talk about it and so I just wanted to bring it up.

CHAIRMAN GREENE: Okay, committee. What would you like to do? Seeing no one wanting to push that ahead, then we will just

continue on down the agenda. Anything else before we leave Amendment 28, Dr. Diagne?

DR. DIAGNE: More towards the framework action for which you just selected a preferred. I will just note that the codified text also associated with that framework action is available in your briefing book and should you have questions, Ms. Levy would answer. Thank you.

CHAIRMAN GREENE: Okay. Thank you. We took care of the yellowtail snapper and so that will take us to Options Paper, Amendment 42, Federal Reef Fish Headboat Management, Tab B, Number 9, and Dr. Diagne.

OPTIONS PAPER - AMENDMENT 42 - FEDERAL REEF FISH HEADBOAT MANAGEMENT

DR. DIAGNE: Thank you, Mr. Chair. For this draft options paper, myself and Dr. Stephen will present the main point of this item, agenda item. Tab B, Number 9 is Reef Fish Management for Headboat Survey Vessels.

Essentially, a little bit of background, this amendment was initiated after the council appointed a Reef Fish Headboat AP and charged them to recommend to the council management measures for that component, if you would.

The council also passed a motion directing us to start essentially two amendments. I am beginning the discussion and Dr. Lasseter will have the second part later on. We were tasked with starting an amendment for the headboat component to address reef fish management for the headboat component and also start Amendment 41 to address red snapper management for the charterfor-hire component and so just that for the background.

Something that was briefly discussed, I believe Mr. Fischer brought it up, in terms of defining universes when we talk about headboats. For the purpose of this amendment, Reef Fish 42, the universe of participants would be those federally-permitted headboat vessels that are currently participating in the Southeast Survey and that universe includes, the last time we checked, sixty-nine vessels or so, sixty-eight or sixty-nine vessels.

As far as the purpose and need that you have for this action, there is a draft purpose and need and it may evolve as we further develop this amendment.

The purpose and need for this action is to provide flexibility, reduce management uncertainty, and improve economic conditions for reef fish headboat operators and owners and increase fishing opportunities for the passenger anglers by establishing a management program for these headboat vessels participating in the survey. Again, our universe of participants would be those vessels that are currently participating in the survey.

We have a range of potential actions, if you would, in Amendment 42. The first, or one of the first, issues that we would have to address would be the range of reef fish species to be included in this amendment. Because this is a Reef Fish Headboat AP, it can essentially include all -- I believe we manage thirty-one reef fish species or something along those lines, but as a starting point, we are considering the six reef fish species for which we have established commercial and recreational allocations and, as you know, those would be red snapper, red grouper, gag, black grouper, greater amberjack, and gray triggerfish.

The reason being that at some point in this process one would have to set aside, if you would, a portion of the recreational quota for these species to be able to design and implement a plan specific to the headboat component and so that will be an action item in the proposed amendment.

Now on to the suite of management alternatives that could be considered here. We have a first group and those would be what we call traditional management approaches. They are sometimes referred to as command and control management instruments, if you would.

For the large part, that is what we have been doing in the recreational sector and those would include size and bag limits as well as structure of the season and each one of those items would potentially constitute an action in this amendment in development.

It may be the case that for the headboat component that a specific size limit would be more suitable to their needs and the same thing for bag limits.

We have now a two fish bag limit and that may be revisited if that is what the council decides to do and, finally, we now have fishing seasons, at least for red snapper, that start on June 1 and run and for the other species mentioned here, will start the same date for the entirety of the recreational sector. It may be that for the headboat component a split season or a variety

of different seasons could be considered, if that is the approach that the council decides to take.

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The other set of alternatives will be discussed by Dr. Stephen in a moment and I will finish by noting that for these three command and control, or traditional instruments, if you would, none of them were recommended by a majority of the AP that you appointed, of the Headboat AP, but for completeness, we have to look around and include all management measures that we see out there. I will stop here and turn it over to Dr. Stephen. Thank you.

DR. JESSICA STEPHEN: I am going to talk about the allocation-based types of programs that are out there and just a reminder of the allocation-based programs, that's where a type of quota would be then divided up among a group of individuals or a smaller group of people and the individuals or group gets to choose when to use their allocation.

The general benefits considered in this type of program is the flexibility in harvest and that the individuals or groups get to choose when they fish and particularly if the fish are more abundant in their area during a certain time of year than another time and it also promotes your safety at sea and can have an economic impact, because they get to choose when is a good time to fish.

In these types of programs, every fish is always counted against allocation and subtracted from that and so we have a good idea of how much is being landed, but the key component to this is timely reporting of that subtraction of allocation.

Once allocation is gone, they must stop fishing or if the program allows, they can get allocation from some other individual or another group.

I just want to go over a few terms before we get started. Shares is a set percentage of the quota and that allows the holder of the shares to receive allocation each year. The amount of allocation they would receive would be dependent on the quota and the amount of shares they held.

Allocation would be the actual poundage or, as we will talk about a little bit later, maybe the number of fish that each account holder is ensured the opportunity to possess, land, or sell during a given calendar year. We typically distribute allocation at the start of a fishing year and it's effective throughout that fishing year, but then it expires at the end of

that point in time.

There is a couple of different ways in which to do allocationbased programs and there are some things that are very different among them, while others ones are very common to them.

You have two types of self-managed programs. These are programs that would be managed by the groups themselves. The group would be given shares or allocation and they would decide how to allocate that within their group. These two types are called fishing cooperatives and another one is a regional fishing organization.

With the fishing cooperative, the groups form a cooperative that has a manager. They can form one cooperative or they can form multiple cooperatives. If it was multiple cooperatives, each manager would be independent of the other cooperatives in how they decide to distribute their allocation.

In this type of program, it does not require those participants to be in the same actual area and so you could have someone in Texas and someone in Florida being within the same organizational group.

When we do these types of programs, we attach shares to the manager accounts and then the manager gets all the allocation at the start of the year and they decide amongst themselves, given whatever agreements they have within that cooperative, how to distribute the allocation.

One example of this is the headboat pilot program that we are running right now. It's set to end at the end of this year. They have one manager and the manager gets all the allocation and amongst agreements with themselves, they distribute it to the different vessels that participate.

One thing to note is that this type of structure can be incorporated into our current catch share structure, online system, because we already have a lot of it built for the headboat pilot program, and we can modify that type of program. This was also the recommended program by the AP.

Regional fishing organizations are fairly similar to a fishing cooperative, except for it would have that regional component and so you would not have vessels from Texas and Florida in the same group. You would have them divided up by region and, once again, the manager would receive the shares and distribute the allocation, but those would then be according to the bylaws

within that regional fishing organization. Again, this type of structure can also be incorporated into our current online system with some modifications.

The other two types of programs that are available are ones that we consider NMFS-managed and these are programs where NMFS would manage with respect to the allocation distribution rather than the manager within those groups and your two types are an IFQ program and what we're calling a PFQ. That is a permit fishing quota program.

The IFQ program, most of you are fairly familiar with the commercial run of it. We could do something very similar with the headboat program. The shares and allocation would be held by the entities and in this case, that would be the permit holders for the vessels in the Southeast Regional Headboat Survey Program.

Shares would be distributed to the entities and this could be based on -- Typically landings is one of the ways it's been done. You can also have a combination of landings and some kind of equal distribution. That was done in the South Atlantic wreckfish program or you can also have other criteria that's chosen and so don't be locked into the idea that just landings is the only thing that works with an IFQ program.

The main part is that after initial distribution of those shares they belong to the person who was holding the permit at that time and that person could then have rights to do different things to it, depending on what you have built into the program to restrict transfers.

Once again, this system, because we have it for the commercial IFQ program, could be easily modified within ours to handle that type of structure and I'm going to move into the permit fishing quota type of program.

 The difference in this from the IFQ is that the shares are attached to the permit and not the person holding the permit and so what that means is that if the permit gets sold, the shares go with the permit and so there can be no transfer of shares in this type of program.

There are also two different ways to think of a permit fishing quota program. There is one that is based on shares, where the shares are attached to the permit. For the sake of simplicity, I will call that a share PFQ. The other one is what I will now call an allocation PFQ, where there are no shares associated,

but a certain amount of allocation each year is given to a permit holder based on some characteristic of the permit.

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First, I just want to talk a little bit about the share PFQ. Again, the shares are attached to that permit and those shares could be assigned on any type of attribute that you want, such as landings, again equal distribution, or even a tiered approach, where certain people have X amount of landings, or some attribute like passenger capacity that you are considering, and everyone in a tier would get the same amount.

You could also do it strictly on something such as passenger capacity. In this case, again, shares are not transferable and they are not separated from the permit. One thing to keep in mind with that is if you're adding a value to the permit now that was not previously there.

There is a bluefin tuna IBQ program, individual bycatch quota, that is run out of the Southeast Regional Office's online catch share programs. This is a PFQ type of program that is exactly like this, where shares are attached to the permit.

Once again, we have a structure in place where we can modify that to take care of any type of organization that we would want along these lines.

With the allocation PFQ, there are no shares assigned at all and what happens is that before the start of each year, based on whatever criteria was accepted, each permit would receive X amount of allocation and one example of this was brought up during I believe the charter one. They wanted something based on passenger capacity and so knowing what a permit's passenger capacity was, you could put it into a tier and distribute allocation according to that.

Some things of concern with this type of program though is that we would need to know ahead of time, before the first of January, what each permit's tier was going to be and something like passenger capacity is a combination of both the permit and the vessel to get the actual passenger capacity to it.

Those are the four types of programs and I'm going to stop and ask if there are any questions about those four types before I go into the things that they have in common.

CHAIRMAN GREENE: Okay. Any questions? Good job. Continue on.

DR. STEPHEN: Okay and so the things all of these types of

program have in common that you will need to consider are what are the objectives of the programs, how will you initially do distribution of shares and/or allocation, whether you want to allow the transferability of shares or allocation, how allocation could be used, whether you want to have a use-it-or-lose-it type of clause or other restrictions on the usage of allocation, if they require referendums.

Then some other things to consider would probably be program duration, program eligibility, caps, if you have shares, cost recovery fees, and any kind of an appeals process for it.

Another aspect considered by the AP was fish tags. This was where you create a physical fish tag that is given out to the participants each year and it get attached to the fish to identify that it's been captured legally.

You can use these tags with or without allocation-based programs. If you are using them with allocation-based programs, what they provide is a tool for validation and enforcement. These were used in conjunction with the headboat pilot program and both enforcement officers and the passengers on those trips found it very helpful that they could say they legally caught the red snapper and show the tag that goes with it.

If you do it as a stand-alone, it's a type of harvesting privilege to those who have the tags. We would have to determine the number that would be available each year, which would probably have something to do with the recreational sector's ACL divided by the average weight of the fish.

At the end of the year, if the tags weren't used, they would be considered forfeit and could not be transferable to the next year. One thing to keep in mind is how many tags you distribute, because this would be on a fish number and not on a poundage, we would be making sure that you have adequate sampling to get a good average weight of those fish throughout, in order to distribute them. You could also distribute them based on a lottery or auction type system.

 The next thing we want to talk about are allocation issues. As you all know, with the headboat survey program, we have landings from 1986 onward and so we actually have historical landings to use, if so chosen as the method to distribute shares or allocation in this type of program. We also have the percentage of their landings compared to the recreational landings and those can be seen in Table 2.9.

For red snapper, the recommendation at this point would be to use the percentages between the charter and headboat that have already been predetermined, which can be seen in Table 2.10.

One of the issues I touched on briefly a moment ago was the measurement of fish in pounds versus number of fish. In the headboat pilot program, we have done number of fish, because it's rather challenging for a headboat captain and the passengers to figure out what the exact weight would be of the fish to subtract it in pounds.

What we've done is we have used fish numbers. We get estimates of the fish weights prior to the state of distributing the fish, which we call our preseason average weights, and then we take in-season average weights throughout the season to make sure that those are being consistent with the preseason.

 For example, if in-season weights were larger than preseason weights, we might want to stop all fishing or reduce the number of fish allowed to be caught that year so that they don't overshoot the amount of quota given to the program.

Average landings do change based on where you are fishing regionally as well as temporally and so you want to make sure you have adequate sampling in order to keep good in-season and preseason averages available, in which case you would need to make sure you have port samplers available to capture a lot of these vessels. I will turn it over to you now, Assane.

DR. DIAGNE: Thank you, Dr. Stephen. We have just one very last action before we take, again, questions on the entirety of this draft options paper. If the council elects to do so, during the development of this amendment, another action would be the consideration for different buffers, if you would.

I mean right now, at least for red snapper, to take it as an example, we have a 20 percent buffer across the recreational sector for all of the components. If we were to develop a different program for the headboat component, then discussions around smaller buffers, if warranted, would be something that the council may consider at that time.

 These are the range of potential actions that we have in this amendment in development at this time. If there are any other management approaches that you can think about and which we didn't consider, that will be helpful if you could mention those, so we can widen the scope of the actions to be included in this amendment. We will take questions and try to answer, if

you have any. Thank you.

CHAIRMAN GREENE: Thank you. Any questions or Dr. Diagne? Okay. Mr. Anson.

MR. ANSON: You may have covered it, but looking at page 15 and 16, under Allocation Issues, you talk about the time series and you have landings information for headboats from 1986, but you provided a table that starts in 2011 and so does the database have a lot more permits early on or why -- I mean it has a relatively short time series and is that just for brevity of the document and just to give an example or what?

DR. DIAGNE: Yes, absolutely. This was just to give an example and concentrate on the more recent years, to give you a feel for what it is that they are currently landing, in percentage terms, yes.

CHAIRMAN GREENE: Mr. Boyd.

MR. BOYD: Just a couple of things I would like to note. One is that in your 2.2.3, the scenario for tags, I could envision another scenario where the states could manage those tags and I don't see any mention of the possibility of the states managing the tags and that would be my second question to you and I don't remember the section, but when you talked about the programs managed by National Marine Fisheries, the various programs, I think if regional management is even not considered, this kind of a program could be managed by the states also, regardless.

 DR. DIAGNE: Absolutely and that's a good point and, in fact, the first part, and I will let Dr. Stephen talk about this, in self-managed programs -- I believe that she talked about cooperatives and regional organizations.

To the extent that you could define a state as a region, then there is nothing here that would prevent a state from managing that program. As far as fish tags are concerned, they can be either used in conjunction with one of the allocation-based approaches discussed or as a stand-alone management tool. Again, there is nothing in this document that would prevent a state, if it is the manager of record, of implementing that and using fish tags to manage.

CHAIRMAN GREENE: Thank you. Anything else? Okay. I am not seeing anybody wanting to comment. Does anybody wish to add any more alternatives? Dr. Diagne, do you need any -- Go ahead.

DR. DIAGNE: Thank you, Mr. Chair. If there are no questions, we will keep listening and if a council member has suggestions for us to widen the scope of management approaches, by all means forward those to us and maybe, looking ahead a little further, we are going to try to develop what I would consider a very preliminary draft, public hearing draft, if you would, before adding more information. At this point, perhaps request that you give us the flexibility of reconvening the AP that you appointed at some point so that they can help us better design the management approaches.

CHAIRMAN GREENE: Thank you. Mr. Riechers.

MR. RIECHERS: Mr. Gregory may want to sit down, because he, in discussions yesterday, was -- We were having discussions regarding scoping meetings and so forth and I am trying to figure out if this document -- It seems like there's a decision made to move towards an amendment or should it at some point be a scoping document to get feedback before we go much further?

I suspect we all know what some of the feedback is, but we shouldn't necessarily prejudge that and I am just wondering, procedurally, what are we thinking about here? I assume that falls mostly in your camp as far as letting us know about that, Mr. Gregory.

EXECUTIVE DIRECTOR GREGORY: Clearly, to us, time is of the essence. This is something straightforward and we've got the Headboat AP, which is focused on this. We thought going straight to an options paper without having to go through a scoping run was the right thing to do and the same with the charter, the Amendment 41, given the sunset date and so that's what we're doing. If the council wants to slow the process down and go through scoping hearings first, we will be glad to do that.

CHAIRMAN GREENE: Mr. Riechers.

 MR. RIECHERS: A characterization of this as fairly straightforward has me a little concerned. We started out, at least from what I thought was a sector separation document that was basically you were proceeding after sector separation on one species and we have now added, at least for discussion purposes, another suite of five species that would be under consideration here and so I suspect the public is going to want to hear about this and see about this long before it gets to an amendment stage.

In addition to that, any time we think about referendums, those have never been easy or straightforward and I think we would have to get a notion about how we would weigh in on a referendum and then I will further ask the question, since we've been down this road before on these other species, is part of the issue with red snapper has been the windfall profit issue and how we might want to not deal with that, if the council were to have those wishes, and how we might not go down that same road that we went down in regards to red snapper.

I think if we're going to consider these other species that we definitely need to take a step back and think about if you're really going to go into an IFQ-type program, and that's what you're suggesting here as a possibility -- You're not saying that's the only possibility, but you're saying it is a possibility and we're going to have to sit back with those other species and think about those things in that respect as well.

CHAIRMAN GREENE: Dr. Diagne.

DR. DIAGNE: Thank you, Mr. Chair. A couple of points. The first that I am going to start with is that as a council when you passed motions, you appointed a Red Snapper Charter AP, single species, and then you turned around and appointed a Reef Fish Headboat AP. At the time, we had discussion and your intent was clear that it was a Reef Fish AP. From that perspective, in fact we subtracted from the thirty-one species to offer you only five or six. That's the first point.

The second point is in terms of scoping, this is perhaps a novel approach in the recreational sector and I certainly understand perhaps the opportunity of providing the public additional chances, if you would, to comment and look at these issues and so if that is the desire of the council, it wouldn't be a problem for us in October, while we are doing the other public hearing rounds, to also have scoping for Amendment 42 and maybe possibly 41, if that is what the council wants.

One last point is this idea of a windfall profit, which we see typically in IFQs, is a concern for many and you have ways of getting around it. Essentially if you were to do, as an example, an allocation PFQ, meaning that the annual allocation is tied to the permit, then you would cut out those windfall profits essentially and so the way in which the program will be designed will help you control that and other factors, the transferability and expiration date and the means of enforcement and monitoring and whether you would want fish tags and the role that you would want the respective states to play in this

process.

All of that essentially right now are open questions and you have the flexibility and the control to design the type of program that would meet your needs. Thank you.

CHAIRMAN GREENE: Mr. Williams.

 MR. WILLIAMS: Assane, following up on Robin's question, of those half-dozen species that are listed there, did the advisory panel ask that they be added to it or did the staff just make that decision to go ahead and do them?

DR. DIAGNE: This list is consistent with the discussions and the recommendations from the AP and essentially, again, these are the species for which we already have a clear commercial/recreational allocation and so that would make it easy to take a portion of that for the headboat component.

CHAIRMAN GREENE: I believe the Headboat Collaborative Program is multispecies based as well and that may be where some of that came from, some of that conversation came from, as well. Any other discussion? Seeing no more discussion, I guess we will carry on.

DR. DIAGNE: That's all we have. Thank you, Mr. Chair.

28 CHAIRMAN GREENE: Dr. Crabtree.

DR. CRABTREE: So did we decide that we're going to scope this in October? I am not clear what we did decide.

CHAIRMAN GREENE: Mr. Boyd.

MR. BOYD: I move to take -- What do we call these, if we're not calling them scoping documents? I move to make these 41 and 42, to make them scoping documents and go to scoping.

CHAIRMAN GREENE: Mr. Gregory.

 EXECUTIVE DIRECTOR GREGORY: If I may, according to Table 1.1.1, there is sixty-nine boats in the Gulf of Mexico and so that's the target audience, the recreational target audience. Of course, there is indirect other people interested in this.

We have done this in the past, but we could just mail documents to those people and we can get their addresses, because they're a part of the survey, and direct mail stuff to them and then maybe invite them to the council meetings or something, but we're going to have very low turnout with primarily just sixtynine headboats in the Gulf of Mexico. It's going to be hard to pick a place to go to.

MR. BOYD: To that point, I think you're dealing with more than sixty-nine entities. Someone mentioned a while ago that there were six-million anglers. This is a recreational endeavor and it's not just a headboat endeavor.

CHAIRMAN GREENE: Mr. Fischer.

MR. FISCHER: Doug covered my point exactly. I was going to state, how about the customers who come aboard these boats and if they should have any word in it.

CHAIRMAN GREENE: We have a motion on the board and is there a second for the motion? It's seconded by Mr. Matens. Is there any opposition to the motion on the board? Hold on a minute. I will back up.

DR. CRABTREE: Don't we have a presentation -- We heard about 42 and isn't 41 next? Shouldn't we go over 41 before we pass a motion saying what we're going to do with it?

CHAIRMAN GREENE: Mr. Williams.

MR. WILLIAMS: I move to table this until after we've heard the presentation on 41.

MR. BOYD: I second that motion.

CHAIRMAN GREENE: Okay. We have a motion to table and it's been seconded and so I don't know from parliamentary -- What do you do from here? All those in favor to table this motion please raise your hand; all those opposed like sign. The motion carries unanimously. I guess that concludes Amendment 42, unless someone has something else. Now we will go to Options Paper, Amendment 41, Federal Charter-For-Hire Red Snapper Management, Tab B, Number 10, and Dr. Lasseter.

OPTIONS PAPER - AMENDMENT 41 - FEDERAL CHARTER-FOR-HIRE RED SNAPPER MANAGEMENT

 DR. LASSETER: Thank you, Mr. Chairman. We have the Draft Options Paper for Amendment 41 and I will wait for staff to put the document up. Basically, in contrast to Amendment 42, this document would pertain to red snapper only and, hence, the title

"Red Snapper Management for Federally-Permitted Charter Vessels" and this is located at Tab B, Number 10 in your briefing book.

Let's go to the first page of the introduction, page 5, and so we were directed to bring these documents to you and part of the purpose and need from Amendment 40 is reflected in this initial paragraph that establishing the separate components was to provide the basis for development of flexible management approaches tailored to each component and so that's what we have attempted to bring to you here.

If we can scroll to the next page, to the text box, there is going to be quite a bit of overlap between what I am talking about and what Dr. Diagne just covered, but basically in this amendment, for the purpose of this amendment and these two actions, charter vessels refer to all federally-permitted forhire vessels that do not participate in the Southeast Region Headboat Survey and, thus, they do not have recorded landings histories.

Headboats refer to all the federally-permitted vessels that do participate in the Southeast Region Headboat Survey and do have recorded landings histories and so, again, that's the differentiation between who would -- Each of these amendments would apply to which groups, those with landings histories and those without. Those landings histories would allow you to consider different approaches to management.

The council did establish an Ad Hoc Red Snapper Charter-for-Hire AP, the Charter AP, and they have met and I will note that their recommendations, the entire report, is provided in the appendix and their recommendations are scattered throughout the document as well and I will call attention to come of those.

We did want to bring you a full suite of management measures, management instruments, and so we are also going to talk about everything from bag limits and the fishing season as well as some of the allocation-based management approaches that was recommended by the Charter AP.

To talk first about the components of the recreational sector, again, when Amendment 40 was passed, and we discussed this earlier with Amendment 39, but there is that three-year sunset clause and so unless the council takes action, for example, in 39 to extend the sunset -- To remove the sunset and extend separation or defer the sunset or provide a longer time, the provisions of establishing those separate components will go away.

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If an action is not taken in another amendment, we would -- And this amendment lives, this amendment goes on, this would be the vehicle, or Amendment 42, to address removing the sunset in some capacity and you would need to do so in order to have separate management of the charter vessels.

Relatedly, there would need to be some kind of action that would determine how the allocation to the federal for-hire component would be allocated between charter vessels and headboats and so that will have to be addressed in the appropriate place, either in Amendment 41 or 42, and we can be working on that as these amendments develop.

Let's just scroll down a little bit more and so we have a table here and it's just a general overview of information of the regional distribution of where charter vessels are. We broke down Florida regionally and then on the following page, page 8, you have a breakdown, a brief summary, of the passenger capacity of these charter vessels and, again, these are the federally-permitted for-hire vessels that are not participating in the headboat survey. You can see even some of these, while the majority are six-pack charters, you do have some with larger capacities as well.

Let's look at the purpose and need, just a little bit lower. Again, we're on page 8 here. This is a really early draft. Of course, this is the first draft you've seen of this and so the purpose and need is going to need to be developed and that will come about as you as a council discuss the goals of any program that you pursue in developing.

 We have put a preliminary purpose here, with some potential goals that you may want to continue to pursue or you may want to modify, such as the purpose of this action is to develop a flexible management approach for federally-permitted charter vessels that provides flexibility, reduces management uncertainty, potentially improves economic conditions, increases fishing opportunities for federal charter vessels and their angler passengers.

Whatever goals we have ultimately established for the program would need to be reflected in the actions and the design of the program and so they will all work together.

Let's move to the next page and this is pretty brief. So your history of management here is a little broader than just past amendments. We do have the background of the development of

this options paper included here as well and they are on page 11. There is three paragraphs there that kind of give you the background of how we got to where we are not, which I think is good to have for this stage of the development.

Our management options begin on page 12 and so it's Chapter 2, Management Options, and so we have some options very similar to what was just presented by Assane. You can continue a traditional management approach, what is also referred to as and techniques, that could be command control managing federally-permitted charter vessels using fishing seasons and limits, alongside the existing minimum size limit accountability measures, additional accountability measures, perhaps, or we could move to allocation-based approaches, which can be designed in different ways.

Fishing privileges could be distributed to groups of charter vessels or fishing privileges could be distributed to individuals or individual vessels.

Our examples for the groups are fishing cooperatives and here we used regional fishery associations, which is the actual language in Magnuson. To date, we do not have the protocol required to go ahead and implement this now. It would require getting approval of a kind of plan from the Secretary of Commerce, but you can adapt what this type of a program would be and call it something else. You use similar features as what is provided for in Magnuson, but there is flexibility in how these are developed and there is a NOAA tech memo that is referenced and there's an active link that you can look at that goes into this a lot more, about the different possibilities.

Then to distribute fishing privileges more to the individual level, again, there is the idea of establishing a permit fishing quota program and this is the preferred approach by the charter AP, where the quota or allocation would be associated with the permit and not an individual, in contrast to an individual fishing quota program, where the fishing privileges are associated with an individual or business entity, as appropriate.

Finally, here we have establish a fish tag program and as was discussed for Amendment 42, a fish tag could be a stand-alone type of allocation-based program or it could be a tool used within another allocation-based program for the purpose of validation and enforcement.

We can scroll down to just the first sentence of the discussion

and this is really important. The goals and objectives for the management of charter vessels should guide the selection of an appropriate management approach and corresponding program features and this goes back to what I was just talking about with the purpose and need, that these should work together.

In that way, the program can be designed to avoid some of the unintended or intended consequences that you may find undesirable and so you really want to think about what do you want or not want and use that to aid in designing the program.

Let's scroll down to the next page, 13, and there's a little graphic there, a little figure. This kind of lays out various approaches and so management approaches for charter vessels, two main broad tracks. Continue with traditional management tools, and there are additional options within them. There is options for managing season structure.

The charter AP actually recommended a split season approach to enhance accountability. They would use some proportion of their quota for an initial season and wait for landings to be calculated or estimated and then provide for a supplemental season and so there is further modifications we could do within seasons.

Minimum size limits, we have included it here, but based on the discussions in 39, we assume that that would likely need to stay the same and be consistent for the entire recreational sector. Other gear restrictions, we could come up with and accountability measures and bag limits, of course, as well.

That's one track and the other track would be these rights-based or allocation-based management and fishing privileges divided in two main ways, individual charter vessels and groups of charter vessels, or the individuals thereof, with options underneath.

Now, there is one of these NOAA tech memos that I just discussed by Anderson and Holliday that talks about these additional options where under PFQs -- They didn't use PFQs, but under IFQs or fish tags, the operators could organize into groups and pool and so it's kind of an inverse cooperative structure.

 At the same time, the groups, such as fishing cooperatives or regional fishing organizations or associations, would, of course, be distributing their fishing privileges among members. Again, the fish tags can be -- You see them in different places. They are under the individual charter vessels or they could be distributed just as allocation-based or they could be used for a

PFQ or IFQ program or they could also be used under the fishing cooperatives or the regional organizations.

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One more key difference between the cooperatives and the regional fishing associations. The "regional" is the key word there. The RFAs or RFOs would be geographically based, whereas cooperatives could be grouped for a different characteristic, say passenger capacity or some other metric that they could be organized around. So there's a little more flexibility there.

 I think Jessica covered a lot of the discussion on the allocation-based management programs and a lot of what I just touched on is detailed further in the following pages. Let's see if there's anything else I wanted to comment on.

Permit fishing quotas was the charter AP's preferred alternative and I noted that fish tags could be used as a stand-alone allocation-based approach or as an enforcement and validation tool and they could definitely be distributed at the state level, especially given that state data collection programs are underway. I think that would be a great way -- I'm sure if we developed that as an option that an alternative for state distribution could be included. Those are kind of an overview of the allocation-based approaches and shall I pause here for any questions?

CHAIRMAN GREENE: Ms. Levy.

 MS. LEVY: Just one comment on the regional associations. There is very specific language in the Magnuson Act about what those are and what requirements there are and what they can and cannot do and so if the intent is to consider something broader than that, then I suggest using the language was in the other document about regional organizations.

Otherwise, when I read that, I am looking at whether -- I am looking at the Magnuson Act and what's required under that for that particular type of organization.

DR. LASSETER: If I could provide further clarification there, yes, RFAs are discussed on page 14 and it states: Regional fishery associations are defined in the MSA, and you can see the further definition, as an association formed and so on. There has been recent guidance on regional fishing associations and the idea is to provide additional assistance to community-based associations to acquire and maintain these limited access privileges.

However, no regional fishery management council has established the process necessary to implement RFAs and so we provided this because there is the exact language in Magnuson, but we did understand that it is stated -- For example, Amendment 42 uses the term "regional fishery organizations", which closely reflect the Magnuson-Stevens Act provisions for RFAs.

We do understand in here that it would be most likely that we would model, if you chose to go this direction, some kind of an association with the idea of what's in Magnuson, but we would -- You could design it to fit the needs of the council.

CHAIRMAN GREENE: Mr. Anson.

MR. ANSON: Thank you and, again, I'm not on your committee, but I was curious to know a little bit more information about the RFAs and I would say that because no other fishery management council has taken it up that it probably has some complexities and some difficulties that make it so, but that would be a question I would have as we go forward, is particularly if you're assigning communities some of the quota, and that's, I think, the big hurdle, is that community, and then how is the portability associated with the permit if vessels move among communities over time and how does that change and vary as you go through time?

I guess I would just be interested to see if there's any information about that, as to how it might work, but that would be a concern of mine, is that establishment of a community getting the quota and then how do you allow new entrants in and how do entrants that were in the original makeup that move elsewhere and how does that get transferred and such.

DR. LASSETER: I think all of those issues, if the council was to pursue this route, we definitely would elaborate on that some more, but we can provide further information in this document for you at the next time we convene with this document.

CHAIRMAN GREENE: Okay. Anything else? Any questions? Ms. Levy.

MS. LEVY: I heard a couple of times discussion about fish tags and the states being involved in the distribution, I'm assuming of those tags. I guess I am just curious what the intent was there, because it raises some questions in my mind, depending on what the intent is, about the obligations under the Magnuson Act.

If a fish tag is a limited access privilege program, it would have to meet the requirements of that part of the Magnuson Act and you have to have initial allocation discussions and all of that sort of thing and so I don't know if the intent was that fish tags would just be the states -- Like, here, you have 500 fish tags and do what you want with them, but what was being envisioned in that discussion about the states potentially implementing the fish tag piece of this?

DR. LASSETER: I was speaking to the pragmatic way of getting them to the fishermen, because I would think that there would be some relationship between NMFS and the state levels, although Mr. Boyd brought it up first and perhaps we should ask what his meaning was.

MR. BOYD: Well, Mara, I don't think there was any intent at all. I think the discussion was were there other options or other ideas that should be in that options paper and I think that that is an option, to have possibly the states issue the tags rather than the feds issue the tags, because the only thing that was listed there was federal options. There weren't any state options listed.

CHAIRMAN GREENE: Ms. Levy.

MS. LEVY: So when you say issue the tag -- I guess I'm trying to get at is it just a matter of the state physically issuing the tag to the charter vessels based on an allocation decision that the council has made about who gets what or are you more suggesting that the states have more of a role in that allocation decision?

MR. BOYD: All of the above.

CHAIRMAN GREENE: Thank you. Anybody else? Mr. Riechers.

 MR. RIECHERS: I mean, Mara, obviously with fish tags, if you go down the road of individual states issuing fish tags, then it somewhat becomes the same regional management discussion about how many fish tags does each state get, if you're going to have a set amount.

 In that respect, it's somewhat that same regional management discussions and then the next question you can have is if you're going to go down that route and you're actually going to lottery them off or auction them off, there are a host of ways to possibly do that.

Since we don't know what the universe of those anglers is, you would have to determine a fair and equitable way to do that and then that also begs the question of then why do we need sector separation, because anglers will choose where they go and what boat they may choose to get on, whether it be their private boat or whether they get on a charter boat. Tags could hold some management promises, but they also hold a lot of management complexities as well.

MS. LEVY: Maybe we need to talk more about what fish tags mean in this context, because when I was reading this, and based on just the discussions I had heard through the IPT process, I was envisioning fish tags as fish tags go to the vessels that are included in this program and not fish tags go to the anglers and the anglers decide what to do with them.

If there is some disagreement about that, maybe that's a good discussion to have about what we're actually talking about when we talk about fish tags in the context of these two documents, which is the headboat management, per se, and the charter vessel management piece.

CHAIRMAN GREENE: Thank you. Mr. Boyd.

MR. BOYD: Mara, I wouldn't say that there is any disagreement about it. I would just say that that's another option and that we ought to explore all options.

MS. LEVY: So you're saying an option in the context of a charter vessel management system to issue fish tags to anglers as opposed to the permitted vessels?

MR. BOYD: Well, I could envision that, for instance, the State of Texas would have, like Robin said, some allocation and they would have a million pounds or 200 pounds or whatever it is and they would then, in turn, get those, in the form of a tag, to the recreational fishermen and the recreational fishermen then would use that tag, whether it's on their private boat or whether it's on a charter boat or whether it's on a headboat, as a recreational fisherman.

The market would be open in that case. It wouldn't be a closed market with somebody having the tags and the fishermen have to choose who that person is that they go with. It would be the recreational fisherman choosing who he wants to go with, rather than the other way around. That's one option. I am not saying it would ever pass, but that's an option. That's all I was

saying for the options paper.

MS. LEVY: So I guess I'm just trying to -- The trouble that I'm having with it conceptually is that any allocation that would happen in the context of this particular document would be based on determining some portion of the total for-hire quota, I guess, that's attributable to these charter vessels and then how you translate that into giving it out to the general population of anglers is sort of what I am struggling with.

I see what you're saying that if you didn't have sector separation and you weren't just looking at a charter vessel amendment or options paper, but I am sort of struggling to see how you fit that in something that's directed specifically towards charter vessels that would have their own particular, I guess, cut of the total TAC to work with.

CHAIRMAN GREENE: Dr. Crabtree.

DR. CRABTREE: It does seem to me that when you start talking about a recreational fish tag program that that's kind of going beyond the scope of what this amendment is, which is tailored just towards charter boats, but if you wanted to make a motion to start working on an options paper for a recreational fish tag program, I would probably vote in favor of that.

MR. BOYD: Wouldn't it be a part of this amendment or these two amendments?

DR. CRABTREE: To me, that becomes much broader. Now you're talking about changing how we manage the recreational fishery and so that would seem to me to be a separate, broader amendment and I see what you're saying, that if we had a recreational fish tag program that maybe the need for sector separation and a lot of these things goes away, but it would seem to me to be a misnomer to call this a charter boat amendment if it's going to be much broader than that.

MR. BOYD: Well, I would just say that the discussion for tags has come up because in both amendments we mention tags.

CHAIRMAN GREENE: Dr. Lasseter.

DR. LASSETER: The reason it has come up in both of these is one is charter vessels and one is for headboats and if, for example, in regional management in committee this morning you picked as preferred, in Action 2 for the sector separation, to end sector separation and to have each region manage the components as a

single unit and then perhaps you would want to consider recreational management using fish tags, which would be an allocation-based approach, for the entire recreational sector.

I think in that case, then the tags could be distributed and anglers could decide whether they're going to use it on a private vessel or a charter boat, but this amendment here does pertain to charter vessel management and the anglers who are fishing on charter vessels only, pertaining to some part of the federal for-hire component's allocation.

CHAIRMAN GREENE: Ms. Beckwith.

MS. ANNA BECKWITH: Doug, the South Atlantic has had quite a bit of discussion on tags for recreational anglers and one of the concerns that we ran up against is the tag program would have to be open to every recreational angler in the United States.

Instead of having access because you happen to be in Louisiana or Texas and you want to go fishing and you have access to it, you could be in Ohio or California and get one of those red snapper tags from the Gulf. While you could transfer them around, our concern was it would limit actual access to the fish and so I am happy to discuss sort of further with you guys offline, but we did run into quite a bit of discussion and some real concerns once we got the feedback from our lawyers on how that particular program would actually have to work for the recreational angler portion.

CHAIRMAN GREENE: Thank you. Any other comments? Nobody wants to talk about fish tags no more? Okay. Anything else, Dr. Lasseter?

DR. LASSETER: Thank you, Mr. Chairman. Let's go on to page 16 and we have a section on bag limits here. This would be one of the -- Following one of the more traditional management approaches, the council may want to evaluate the bag limit for red snapper on charter vessels and should the council intend to manage charter vessels with fishing seasons and bag limits, they could reduce the bag limit to one fish per person on charter vessels, enabling access to more individuals, although there would be a reduction in how many fish they could catch, of course, but it could expand opportunities.

However, the drawbacks to reducing the bag limit, of course, include increased discards and the potential for high-grading. Again, these options would not likely be necessary if we did go through an allocation-based approach. These are the other

traditional-based management.

 Let's scroll down just a little bit more and here's the fishing seasons. Again, the current red snapper fishing season for both components begins on June 1 and closes when the corresponding component's annual catch target is projected to be met and so there is the ability for the council, if they wish, to modify the fishing season for the charter vessels specifically in this amendment.

As I briefly discussed before, a split season was recommended by the charter AP and that is another option and since we do not have the joint charter electronic reporting amendment in place, this idea of a split season could be a way for the charter vessels to improve accountability and determine how much of the quota is caught in the initial season and then set a secondary season to use the remaining part of the quota. That's an option as well as different start dates and different seasons could be considered as well.

Let's scroll down a little bit more and we come back to kind of a broader discussion of allocation-based management and limited access privilege programs.

There is a lot of information in the Magnuson Act about these programs and there is some definitions in there as well and so right now we have the term "limited access system" means a system that limits participation in a fishery to those satisfying certain eligibility criteria or requirements contained in a fishery management plan or associated regulation.

Right now, the federally-permitted for-hire vessels are managed under a limited access system. There is a permit moratorium and so there is a finite number of valid and renewable permits for the federally-permitted for-hire guys. In contrast, the private angling component is not considered limited access. It is open access. It remains open access.

On the other hand, the term "limited access privilege" refers to a federal permit. The privilege part refers to a federal permit and it would be issued as part of a limited access system and so you have to have that limited access system in place first to distribute limited access privileges within.

 Let's scroll down a little bit more. So there would be a range of sub-actions if you were to go forward with an allocation-based program and these are very similar to what was just discussed in Amendment 42 and so I won't go into too much

detail, but I will point out, for example, in the program duration that should this amendment result in the establishment of a LAPP that the Magnuson-Stevens Act does require a detailed review to be conducted five years after implementation of the program.

I'm sure there will be discussion about wanting some kind of a review and the council has been very interested in sunsets lately, but there is a requirement in Magnuson for a LAPP to have a five-year review and so that would be required.

Program eligibility, I will note that the charter AP recommended that the universe of eligible program participants be the 1,250 charter vessels possessing the federal reef fish for-hire permits that are not participating -- That 1,250 are not participating in the headboat survey.

Under initial apportionment, the council, if pursuing an allocation-based program, would need to determine how to allocate the fishing privileges and there is different ways to do this.

While the Southeast Region Headboat Survey -- Participants in that program do have landings histories and charter vessels that would be covered by this amendment do not and so landings histories would not be an option for distributing fishing privileges in this amendment. Instead of basing -- Also, they could distribute annual allocations in terms of either pounds of fish or in number of fish.

Now, I have it down here that the charter AP recommended using the Amendment 40 formula, and I am going to have to go back and look at that, because, of course, they don't have the landings history. The charter AP did recommend using an allocation tier level based on permit capacity that would be no greater than the approved passenger capacity and in the appendix, it does provide their recommendations as to how they would break down the allocation by shares per size of passenger capacity.

In the event a LAPP is developed, one mechanism for considering the initial apportionment must be an auction system and that is a mandate of Magnuson that this council shall consider. If appropriate, an auction system or other program to collect royalties for the initial or any subsequent distribution of allocations in a LAPP and so that would be an option under any form of a LAPP that you would continue to consider.

Ownership caps are in place for the commercial IFQ programs and

we would definitely want to consider ownership caps as well as transferability provisions. The charter AP recommended no transferability, leasing, or selling of allocation and this, again, goes back to what are your program goals? What are you trying to achieve and what are you trying to avoid happening?

There has been some concern about the idea of leasing in the commercial programs, but there was also -- The goals there were to reduce overcapacity and to avoid problems with the derby fishing and so they had different goals and the program was set up to work towards meeting those goals and so depending on what our goals are here, the charter AP has made it clear that they are not interested in having any problems with leasing and selling of allocation. They did not wish to pursue that.

Appeals process would be a required action. We would address cost recovery fees as well in an action. You may want to consider restrictions on the use of shares or allocation if either or both are a part of a program and then, finally, referendum provisions.

The Magnuson-Stevens Act mandates for a federal for-hire IFQ program, and it does -- Magnuson stipulates IFQ and now whether PFQs would be considered similar enough or not, NMFS will have to determine whether a referendum is required, but for an IFQ program, definitely a referendum would be required.

Then we just have some additional considerations. Section 407(d) of the Magnuson-Steven Act is still in place and, therefore, the establishment of a LAPP would not exempt the charter vessels, to which this amendment would apply, from the requirements of 407(d). If NMFS determines that the recreational sector ACL has been met or estimated to be met, red snapper fishing will be closed for both components or subcomponents as appropriate. 407(d) does still hold.

Another issue the council would want to address is dual-permitted vessels, those vessels who possess both a for-hire permit and a commercial permit. At the end of 2014, there were 229 federal for-hire operators and that included both charter vessels and headboats that had dual permits. In September of 2001, there were 154 vessels possessing both and so there's been an increase.

We also know that there's been -- Overcapacity has been reduced in the commercial IFQ programs and we do not know -- These could be people that are not participating in the programs that have adapted or coped by expanding into charter fishing or holding both permits, but that is a number of permits that we would want to address how you would want them to be handled under the program.

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Additional program requirements, you may want to consider vessel monitoring systems, hail-in and hail-outs, landings at approved sites. These are some features of the commercial IFQ programs that may or may not be appropriate for any program you would pursue.

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Finally, accountability measures. As I mentioned, the charter vessel reporting document is currently under development and if we get that charter reporting implemented and going, that could improve the monitoring of charter vessel landings and it could be possible in the future to reduce the need for the 20 percent It could possibly be reduced. Whether or not that need to could be considered in this amendment will determined. We'll see how the charter vessel amendment is going.

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Then I will just point out, again, that the Appendix B has the full report from the Ad Hoc Red Snapper Charter-for-Hire AP with all of their recommendations in bold. I will turn it over for discussion.

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CHAIRMAN GREENE: Okay. Robin.

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MR. RIECHERS: Ava, explain to me the -- I will call it a subtle difference and maybe you don't see it as a subtle difference, but the difference between or the distinction between a permit fishing quota and the individual fishing quota.

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I am looking at the definition you have here, but unless the permit is issued to something other than an entity or -- I mean it's going to be issued to -- Unless it's a state or a co-op or something like that, but if it gets down to a business entity, is there really a distinction here?

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DR. LASSETER: The idea with -- There was a table that we put up, that Jessica and Assane put up in 42, that shows some of the differences between those a little better. IFQs, the quota is assigned to an individual or business entity an in the IFQ program with the commercial sector, they can transfer or buy or sell that, but the individual can sell their permit and have no more permit, but those individual fishing quotas stay with that individual or business entity.

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Permit fishing quota, instead of the quota being assigned to an

individual, it's attached to the permit. If the permit holder sells the permit, those shares or allocation, however we design the program, remain with that permit, go with that permit.

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MR. RIECHERS: So you're just building in some of the requirements by -- I mean we could have done that with the IFQs. We could have made those same kind of distinctions about what you could or couldn't do and by issuing it to the permit, you're just kind of building in those restrictions upfront, but to the initial individual who has that permit, it carries all the same kind of IFQ types of properties, other than that tradability or some of those other distinctive characteristics we may have given it in another program.

DR. LASSETER: Actually, and I believe Jessica explained this a little bit, you could also do the PFQs in different ways. You could do it with shares and allocation, so that the permit does retain shares and annually allocation associated with those shares is distributed, or there could be no shares and just allocation is distributed according to some metric or characteristic to vessels and it could change annually depending on that metric or those characteristics.

Again, there is different ways to do it and, really, we would want to -- I would encourage you to start with the goals and what you would want to get out of the program and what problems in the charter vessel fleet industry are you trying to address or are you trying to solve and then let's try and identify the optimal components of a program, be it the traditional management approaches or allocation-based management approaches, that can help you solve those problems.

CHAIRMAN GREENE: Okay. Staff had their hands up earlier. Jessica and Assane.

 DR. STEPHEN: I just wanted to also clarify with the difference between the IFQ and the PFQ. Even if you had some kind of structure with the IFQ that you limit it to the shares having to be held by the person who held the permit, they could actually probably sell their shares separate from their permit, which would be different than the PFQ, where they are permanently assigned together.

That would also mean if a permit expired that you would have lost those shares and some consideration might be -- You might have to think about how to handle that or redistribute those, whereas with the IFQ program, you could continue to decrease the amount of permit holders, but the shares could be increasing in

different permit holders. There is ways to limit each one of them in a similar manner, yet they are very different.

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CHAIRMAN GREENE: Dr. Diagne.

DR. DIAGNE: I think Dr. Stephen answered the question. Thank you.

CHAIRMAN GREENE: Okay. Anyone else? Dr. Lasseter.

DR. LASSETER: I will also note that the charter AP came up with the acronym PFQ and Jessica noted that there is a similar structure to a program, where shares and allocations are attached to a permit, but it is not called a PFQ. I think it's called an IBQ or something.

This PFQ was something that the charter AP members came up with to address what they perceived would be potential problems that they wanted to avoid. They didn't want transferability and they didn't want leasing and so this was something that came from them, the acronym.

CHAIRMAN GREENE: Mr. Anson.

MR. ANSON: Just a point of clarification. On the table where you provided the number of permits, there is some mention of historical captain licenses and were those included in the vessel count, because I do think they have to claim a vessel with those, but they were included in that 1,250?

DR. LASSETER: I am pretty sure they are. Let me check with Jessica.

DR. STEPHEN: They were included in it. We did a combination of the historical captains and the regular ones.

MR. ANSON: Okay. Great. Then relative to the conversation of PFQs, it might be a little premature or maybe it wasn't discussed, but did they have -- Relative to latent permits, what was discussed about that, relative to PFQs and establishing active captains in that initial distribution and such?

 DR. LASSETER: What was discussed by the charter AP or -- They were concerned about -- We do not know how many permits are inactive or latent. The AP also talked about and noted that different regions have more or less engagement with red snapper, because of regional differences in abundance, and so they had made motions relative to that, that -- The way they had phrased

it was that people could not accept as much quota as they would receive otherwise, depending on the region, but I think we would want to expand some alternatives to kind of explore how to get at -- Because we don't have the landings histories associated with the charter vessels, I do think it's going to be difficult to identify these latent permits. We will have to talk to the permits office. Jessica has got her hand up and let's see if she has some more info.

DR. STEPHEN: I just wanted to also mention when the AP was talking about it, they were thinking more along the lines of the allocation PFQ versus the share PFQ and they had also talked about opting in and opting out and I think every year, and I would have to go back and check our notes on it, to see if you wanted to participate.

They were concerned about vessels that didn't typically catch red snapper receiving allocation and then either using it for some kind of economic gain and one of their considerations also was to restrict transferability, to stop some of that from happening.

CHAIRMAN GREENE: Okay. Anything else? Okay. I guess the situation earlier about scoping and whether to reconvene the advisory panels is something that they have asked for guidance in Tab G, Number 3 and does anyone want to proffer a motion or do anything there?

MR. WILLIAMS: Should I move to take it off the table so we can discuss it? Is that appropriate? Okay. I would move to take Doug's motion off the table.

MR. BOYD: I am not sure that's my motion and so help me a little bit here, Johnny. I think the motion is to move the options paper to a scoping document and send the scoping document out to scoping. I mean they're not amendments right now and they're only options papers and is that correct? Ava?

DR. LASSETER: Actually, it's an amendment. It's in the draft options stage and so you could have different stages that we refer to for these amendments and we've called it draft options because we were trying to get away from the term "scoping" and so this is about as preliminary of a document -- I wouldn't know how to go backward any more than this. It would mean taking information out somehow to make it less of a draft options paper and so I guess we would need more feedback as to how to --

MR. BOYD: I am just trying to get the terminology right.

That's simply all I'm doing. I would look for some help, Johnny.

CHAIRMAN GREENE: Dr. Crabtree.

DR. CRABTREE: I mean I don't want to lose ground or back up. I mean we have these documents in the form they're in. I think what we want to do is go out to public meetings and get their input on them and I wouldn't get too wound up on -- I don't want staff to have to go through a lot of work to revert these to something else. I mean is that acceptable, Doug, to just take these documents and --

MR. BOYD: Yes, but I just want to be sure we're sending out the correct thing.

CHAIRMAN GREENE: Martha.

MS. BADEMAN: Doug, I guess to get back to the conversation about what exactly we're talking about with scoping, are you picturing actually in-person meetings or something where Emily makes a video and puts it on the web and solicits comments there or what do you have in mind for this?

MR. BOYD: Well, I am envisioning that it goes out just like we have in the past, where we have in-person meetings and we get feedback from the public and we come back and this body then can make decisions about what to do with it. We can add or delete options or we can kill the whole thing or we can move it forward. It is then in the purview of this council.

CHAIRMAN GREENE: Okay. I had Assane.

DR. DIAGNE: The question was answered. Thank you.

CHAIRMAN GREENE: John Sanchez.

MR. JOHN SANCHEZ: I'm not on this committee, but I would remind everyone that I voted against the sunset provision when we started this whole process and it seems to me that attempts, directly or inadvertently, to stall this process are disingenuous to that. We should be sensitive to the sunset provision and the hard work that's been put into this and let's put it out to the public in the most efficient and quickest manner possible, out of fairness to the folks that have put in their hard work in attending numerous meetings.

CHAIRMAN GREENE: Mr. Williams.

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 MR. WILLIAMS: Doug Gregory, couldn't -- We have these ad hoc advisory panels for both the charter boat and the headboat and isn't that scoping in itself? In a sense, rather than us going out in the field and asking how we should proceed, didn't we bring the field into a central location and ask them how to proceed on this and we got a lot of ideas and isn't that scoping?

EXECUTIVE DIRECTOR GREGORY: Yes and as I pointed out during the Administrative Policy Committee meeting, everything the council does is scoping. This meeting is scoping and the public testimony we're going to take tomorrow afternoon is part of scoping and our advisory panel and SSC meetings are a part of scoping and our public hearings are a part of scoping.

Going out to scoping hearings in advance was something that the councils picked up I think once NEPA took a greater role in things and we just kind of took it to the extreme, but all of that is a part of scoping and we are really working on doing videos and we can do webinars as well as the in-person things.

 If we do this to -- If we take this out to in-person scoping meetings, we will piggyback on Amendment 39 and whatever else we have going and if we have to, we will copy some of the South Atlantic Council's approach and start at three or four in the afternoon and do one after the other at the same location. We will do it after the October council meeting and bring it back to the council in January. I don't recall if we've scheduled ad hoc AP meetings between now and January. Have we for headboat and charter boat?

DR. LASSETER: No, we have not and they only recommended that we not meet before -- I think we're out of the time now. They just wanted to make sure that they didn't meet when they were still really busy.

EXECUTIVE DIRECTOR GREGORY: Okay and so we haven't scheduled a second round of AP meetings yet.

CHAIRMAN GREENE: Dr. Lucas.

 DR. LUCAS: I mean if we're just looking for public comments, I mean is it too much to do the Amendment 39 hearings coupled with 41 and 42? Do we just feel that's too much information for everybody to take in at one time or would that be a way to capture the public comments you're looking for, Doug?

EXECUTIVE DIRECTOR GREGORY: It would be an experiment for us. We haven't done a whole lot of that. We have combined two topics before and the South Atlantic combines a number of topics in an all-day session at each location. It would be an experiment for us.

DR. LASSETER: But they meet in different rooms, I believe, for the different issues. I don't know if Anna can speak to --

MS. BECKWITH: It depends. If it's something -- Like when we scoped VMS, we had different rooms. If the information is related to one another, sometimes we will keep everyone in the same room and so it depends.

CHAIRMAN GREENE: Okay. Doug, I know you were trying to put a motion on the board and you were looking for guidance on how to word it and I don't know if that helped you or not.

MR. BOYD: We will just use that as the motion.

CHAIRMAN GREENE: Okay. You have a motion on the floor and is there a second for this motion? We are waiting for a second and I don't see a second and so it — The motion has been seconded to take Amendment 41 and 42 options papers out to scoping meetings. It's been moved by Doug Boyd and seconded by Camp Matens. Any further discussion? Is there opposition to this? Seeing opposition, we will go to a show of hands. All those in favor of the motion on the board, please raise your hand; all those opposed like sign. The motion passed. We will move on from here. Anything else before we leave this portion, Dr. Lasseter?

DR. LASSETER: For convening the AP, I am not sure if we need a motion for that or not. Is the committee interested in having the AP convened again, now that we have developed a draft options paper or not? Then, also, quickly, I would like to get a sense of the timeline for when you want the next iteration of these documents.

CHAIRMAN GREENE: The timeline, with the sunset, is going to be as soon as possible. I think that that's only fair, is my opinion, but as far as I guess you need a motion to send it --

DR. LASSETER: Actually, I believe, if I'm correct, Doug -- Doug can convene the APs or do we need motions for convening the APs?

I am not sure.

EXECUTIVE DIRECTOR GREGORY: No, we can do that on our own. If

the council wants to do it, that's fine, but we can also do it if you see a need.

DR. LASSETER: Then I would just let --

CHAIRMAN GREENE: Ms. Dana.

DR. PAMELA DANA: Thank you, Chairman Greene. Doug Gregory, when would be the soonest that you could convene the AP, in particular the for-hire charter, because of their three-year sunset?

EXECUTIVE DIRECTOR GREGORY: Probably November. We could do it between this meeting and the next council meeting. We've got seven weeks between the two council meetings and we could have a meeting then, but definitely by November or the second week in December at the latest.

CHAIRMAN GREENE: Ms. Levy.

MS. LEVY: Just a question. When you are talking about reconvening the AP, what is it that you would be looking for from the AP at this point? Just thinking about the fact that they have discussed pretty much the various options that are in the options paper and have even sort of told you, I think, what their preferred would be at that point, what are you looking for from them to tell you and what kind of document are you looking to give them at this point?

I think that kind of guidance would be very helpful, because if we're just going to go back and say tell us what you want again and then they tell you what they want and then what are you going to do with that?

I think one of the things you need to think about, if you do want to move any one of these ideas forward, is narrowing down that idea, because there is no way to draft a true amendment that is going to do all of these things, an IFQ system or a PFQ system or a community system, and so I think it's really important to think about what direction you want to go in if you want to develop any of these further, so that staff can actually work on all those details that we had very vaguely outlined, but couldn't progress with any further until we know what type of system you are thinking about actually trying to implement at some point.

CHAIRMAN GREENE: Mr. Williams.

MR. WILLIAMS: But, Mara, why do we have to -- Couldn't we give it to them and ask their opinion? First, we would be asking them have we captured everything you were talking about and now that you're looking at this document, are there other things that you're thinking about?

Then we could get some sense of what they thought was the correct way to go on it, rather than us making the choice for them. Couldn't we begin to get their preferences from what they think is the right way to move and proceed?

CHAIRMAN GREENE: Dr. Lasseter.

DR. LASSETER: I will just read from the AP report. The AP members expressed the preference not to hold an AP meeting from June through August $20^{\rm th}$, and so we'll be okay for that, due to the busy fishing season.

Then they passed the following motion: To recommend that the council reconvene this panel to provide further advice on charter-for-hire program development as soon as possible. They were very busy. Man, they produced some motions in this and so I think we could build their charge from their statements previously.

CHAIRMAN GREENE: Dr. Diagne.

DR. DIAGNE: Thank you, Mr. Chair. As far as the headboat AP is concerned, they have pretty clearly outlined some of their main preferences, if you would, and if I were to summarize it, I would say that they are interested in an allocation-based management system, essentially, the contours of which you will decide, depending on the restrictions and some of the outcomes that you would like to see.

If we were to reconvene the AP, the headboat AP that is, we will do that at a later stage, after we have developed essentially clear-cut alternatives with some rationale and some discussion and so let's say between now and the January council meeting, back for your before we bring the document suggestions. That's would do, but what we as preferences, they are interested in an allocation-based management approach.

Which one, that remains to be determined and so if you wanted to be consistent with that, you could direct us to perhaps withdraw the traditional command and control approaches, which is essentially what we have been doing at this point. We wouldn't need an AP, quite frankly, to change size limits or bag limits and then spend our time and effort developing an allocation-based system that would meet the objectives that were reflected in the charge, for example, to that AP in your previous discussions. Thank you.

CHAIRMAN GREENE: Mr. Williams.

MR. WILLIAMS: Assane, on the headboat document then, really they don't necessarily need to meet again, you're saying, but would the next step then be to develop an options paper based upon what we saw a little while ago?

DR. DIAGNE: Yes and what you saw outlined is the scope, the general scope, of the ranges of management approaches that we can think of. This has everything the AP talked about plus the traditional management approaches and by traditional, I mean what we typically do, size limits and bag limits and changing the structure of the season.

On that front, we are covered. We will need them to reconvene, but we need to put something before them to discuss and that something would be, for example, we are talking about PFQs, but what does it entail? Attaching the allocation or shares to the permit and having these types of restrictions and explicitly discuss the type of allocation scenarios that you may consider as a council, for example.

Here, we gave you just broad outlines, but we will need the AP's help later on in the process, after we put more meat, but one thing that could be helpful, if that is consistent with the direction that you want to take, based on the charge to the AP, would be, for example, to take out from this document the size limits and bag limits and structure of the season, because we don't need really the Reef Fish AP for that, essentially, if that is consistent with your intent. If you still want it in the document, then we will leave it in and develop it. Thank you.

CHAIRMAN GREENE: Dr. Crabtree.

DR. CRABTREE: I mean it seems to me what we want to move forward with in the headboats is an allocation-based program. I mean we've had one in place for two years and it's worked great and I think that's what they want, the majority of them, and so, for my purposes, I would support taking out some of these size and bag limit and season adjustments and that kind of thing.

I don't know that I would leave the fish tag part of this in here and focus on that allocation-based management program and then staff could go in and start fleshing that out and once we have something a lot more developed, that would be the point to reconvene them.

I think we're further along with the headboats than we are with the charter boats, because we have a functioning program. The question is, as a council, is that what we're wanting to do? It's not clear to me where the majority of people are on this issue.

CHAIRMAN GREENE: I concur. Committee, what do you guys want to do here? Mr. Williams.

MR. WILLIAMS: I am being put on the spot here, because nobody else is saying anything. I am not sure what to do either, but if we can move the -- If we can accelerate the headboat program, I would really like to do that.

As Dr. Crabtree says, we're going into the second season of a program that the majority of them seem to like and I have heard — I have heard nothing but good comments about it and I am sure there are some negative ones out there as well, but if we can accelerate the — I don't want to do anything to slow the headboat down and so if we can move it up — You're suggesting that taking out size limits and bag limits and seasons would be appropriate for those?

DR. CRABTREE: It seems to me and to give staff the guidance that we want to move this amendment forward to develop a program similar to the Headboat Cooperative that we have through the exempted fishing permit. That would take out these other kinds of things that aren't along those lines.

MR. WILLIAMS: Then that would leave us with just the allocation portion and we do have the six different species in there though too and I guess -- Did the program that they're under now, did that have all six of those species in there as well?

DR. CRABTREE: No, the current program is just red snapper and gag, but I think that's something else you could give guidance to staff about, is whether you want to keep this focused on really red snapper or whether you want to branch it out to other species.

CHAIRMAN GREENE: Martha, did you have --

MS. BADEMAN: Just a question and I apologize if I missed this during the presentation, but at what point, especially if we move down the road of going towards the allocation-based strategies, do we have to start talking about referendums?

CHAIRMAN GREENE: Dr. Lasseter.

DR. LASSETER: According to Magnuson, an IFQ-type program requires a referendum and so NMFS would have to determine if the PFQ approach, and, again, that's the preference in 41, is or is not an IFQ-type. Now, what the Headboat Collaborative prefers is an IFQ-type program and so that would require a referendum.

CHAIRMAN GREENE: Dr. Crabtree.

DR. CRABTREE: With the current programs, we basically reached the DEIS phase, where we had everything developed and all the analysis done and all the preferreds selected and we were essentially at a point where we were ready to take final action on it, and that's when we sent it out, right, for the referendum?

Then in the process, then you're going to have to develop the voting rules for the referendum and it's permit holders who are substantial participants and we will have to figure out that kind of thing. We have had weighting in some cases and we usually have to go through a rulemaking phase with that.

CHAIRMAN GREENE: Okay. John Sanchez.

MR. SANCHEZ: Again, I'm not on the committee, but I just want to make sure that we don't forget the charter-for-hire as we're proceeding aggressively with headboats. I am very confident that they will be able to come up with an industry proposal that addresses their desires in a meaningful, efficient way that I think would address things and probably fall short of needing a referendum.

CHAIRMAN GREENE: Okay. Mr. Williams.

MR. WILLIAMS: Can I make a motion? I know we've passed the headboat presentation, but it's not too late for me to make a motion in that regard, is it? I know that we're not through talking about charter boats yet, but I would like to make a motion in the Amendment 42 options paper, B-9, I would like to move that we remove Section 2.2.1, Size, Bag, and Season Adjustments.

CHAIRMAN GREENE: Mr. Fischer.

MR. FISCHER: Is this a scoping document, because if it is --

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MR. WILLIAMS: This would be to take this out and then for staff -- Based on the conversation we had, staff could then proceed to develop this into an options paper.

DR. CRABTREE: I mean it already is an options paper. If you look at the cover sheet, it says "Draft Options Paper" and so --

MR. WILLIAMS: Well, then should we be making preferences on it?

DR. CRABTREE: We don't even have alternatives yet. What we're trying to do is narrow down what's it in so they can then develop it into it. Did you get a second on your motion? I will second it.

CHAIRMAN GREENE: All right. There is a motion on the board to remove Section 2.2.1, Size, Bag, and Season Adjustments, to considered but rejected.

MR. WILLIAMS: Just that's in B-9. That's under the headboat section, Amendment 42.

CHAIRMAN GREENE: Amendment 42. Mr. Riechers.

MR. RIECHERS: Mr. Williams, I am not necessarily opposed to this in some respects, but do you not think there might not be some size, bag, and season adjustments that could also help lengthen the season and think about it in that construct as well?

MR. WILLIAMS: I am sure that there are, but I just see these other issues as slowing this whole thing down. If the industry has expressed their preference for an allocation-based management system, I am willing to do that and I don't want to slow it down. As we know, we've got about two-and-a-half years left to get this done.

CHAIRMAN GREENE: Mr. Riechers.

MR. RIECHERS: Well, under sector separation, you have about two-and-a-half years to get this done. Under the exempted fishing permit, I believe that's set to expire on whichever day it expires and it sounds like it's coming up. I don't remember and I apologize, but I don't remember the exact date.

DR. LASSETER: The end of this year.

MR. RIECHERS: The end of this year. Regardless of our desire to push this, we're not going to beat that date and while Mr. Sanchez alluded to disingenuine actions, I would say that at this point I will say there are a host of people who probably don't even know five other species are now being talked about in this construct and that we're talking about -- Whether you want to call it a permit FQ or an IFQ or what have you, a continued IFQ type of discussion element regarding IFQs and furtherance in the charter sector.

I think we owe it to get it out in scoping, as we've suggested and we just passed that motion, and so what you're talking about is how do we continue to move the document forward and it seems to me that you all have talked about holding a meeting and you've said you don't need our motion to have you go do that.

You've set up a timetable to do it and I'm just not certain what else we're accomplishing here by trying to narrow the window of discussion items, at least at this point, because all that's in there is what is already written. You are not necessarily adding to those items. You're just keeping what's in there, until you want to move them at a later time, but if you all want to keep pulling stuff and trying to figure out ways to hurry it up, go ahead.

CHAIRMAN GREENE: Dr. Diagne.

DR. DIAGNE: Just one quick comment. When the council considered and ultimately approved Amendment 40, it was very specific that it included one species, red snapper. For Amendment 42, that's what I am speaking about and this amendment is called "Reef Fish Management for the Headboat Sector".

Sector separation did not apply to reef fish. It applied to red snapper and so really, in our understanding at least for now, at the IPT level, when we look at all of this, the future development of Amendment 42 of course rests within your authority and you can tell us to stop or to continue, et cetera, but it's independent from the sector separation issue. To that extent, this is a reef fish amendment that includes potentially up to thirty-one species if you wanted to, but as a starting point, we offered only six.

It has nothing to do with the sunset provision and basically sector separation. That would definitely apply to Amendment 41, which is a red snapper-specific amendment, with the allocation

that you decided upon in 40 and so forth. 42, Headboat Reef Fish Management, is independent from sector separation and as long as a council you decide that we should continue developing it, even past the sunset date, we have the flexibility, I guess, to be able to continue that. Thank you.

CHAIRMAN GREENE: Okay. Thank you. We have a motion on the floor and let's go ahead and vote it up or down and then we'll take a break. All those in favor, please raise your hand; all those opposed like sign. The motion fails three to six. Let's go ahead and take a break, unless anyone has anything. I guess we'll come back and pick up on Item Number XI. It says fifteen minutes on here, but that's up to you, Mr. Chairman. Fifteen minutes.

(Whereupon, a brief recess was taken.)

DISCUSSION - AD HOC PRIVATE RECREATIONAL AP

CHAIRMAN GREENE: Under Ad Hoc Private Recreational AP, there were some state director summaries of comments that were posted in the briefing book and unless staff has any other direction, I guess the first one would be Florida, which would be Tab B-11(a). I guess, Martha, you will lead this? Okay.

STATE DIRECTOR SUMMARIES OF COMMENTS FLORIDA

MS. BADEMAN: Emily asked, I think all of the states to give a rundown of feedback that we've gotten on management of recreational fisheries. I am going to talk about two series of workshops that we did in Florida. One was last summer and was particularly about the recreational red snapper fishery and then I will give you a quick overview of some workshops that we held this summer. These were state-wide workshops just about general fisheries issues. It wasn't pointed towards one particular sector or one particular fishery.

 Last summer, we had workshops in Pensacola, Destin, Panama City, Carrabelle, and St. Petersburg on red snapper management for the recreational fishery and this was at the request of our commissioners and there was a lot of stuff happening last summer with sector separation or the decision about sector separation coming up and many of the issues that we're still talking about today and so we just did a couple of workshops where we talked about the interplay between state and federal management and some of the options that the council was talking about and what the commission had been talking about in terms of recreational

red snapper management.

We laid that information out for people at these workshops and then we did something a little bit different. We broke the workshop participants into small groups and each group had a staff member and the staff member asked the people in each group the following questions.

The first question was considering limitations and management challenges, what are you expectations for the recreational red snapper fishery? The second question was what management methods or regulations would you like to see implemented to improve the recreational red snapper fishery?

Then each group kind of brainstormed their ideas and we just wrote them down on the whiteboard and it was just kind of a brain-dump exercise. After that, we polled the participants at the workshops about some of the management options that we discussed in the PowerPoint and that had come up in those brainstorming sessions and so we had these cool little clicker devices. It just looks like a little remote control and there's a picture on there and it was like a multiple-choice quiz on PowerPoint and people could pick what they like or what they didn't like or rate things.

People could provide feedback that way and it was somewhat anonymous, because people were just clicking in their answers. It worked really well actually and so I'm going to talk a little bit about the feedback that we got from those workshops first.

In terms of expectations, we heard I would say four common themes at all of the workshops. One thing that was really important to just about everybody was having more fishing days and more fishing opportunities.

We also heard a lot about having predictable fishing seasons and then also people called for better data collection and better science and better and more frequent assessments and then improved trust and transparency at both the state and federal levels in terms of red snapper management.

About some of the red snapper management measures, again this was before we had a decision on sector separation and we had very polarized opinions on sector separation. We had the most support in Destin, which probably is no surprise to most of the people at this council.

People viewed regional management at the Gulf-wide level more

favorable than unfavorable. Some people also wanted to see regional management within Florida, like having different zones for the Panhandle or west central Florida, options like that. There was a desire to see more state management rather than federal management and then, of course, support for simple red snapper regulations.

Some more comments that we heard, there were mixed views on having some kind of IFQ-type program for the federal for-hire. We did hear support for linking IFQ shares and allocation to the federal permit, so that those shares could not be leased or sold, at least without the permit being transferred as well.

Of course, we heard opposition to IFQ-type programs as well. We had mixed views on harvest tags for red snapper and strong opposition to intersector trading and most people opposed one-fish bag limits and going to a weekends-only season and looking at slot limits or hook size requirements and days at sea.

Some anglers were interested in changing the timing of the harvest season and maybe moving towards the spring or the fall or doing split seasons. Then we, of course, heard support for creating more habitat via artificial reefs.

So really quick, let me shift gears to the workshops we held this summer. Our commission is undergoing a strategic planning process right now and the commissioners directed us to hold some workshops. We're trying to look forward and develop a proactive plan to managing fisheries and so these workshops were not limited to recreational anglers and not limited to red snapper or federally-managed species by any means. We were seeking input from commercial, businesses, the recreational industry, just concerned citizens, anybody that wanted to come, the tourism industry.

Before we went to these workshops, we did an online survey where people could identify their top fisheries concerns and the concerns are listed in bullets up here. These were the top concerns that people identified and so the first thing is the recreational and commercial allocations. It's confusing and it complicated fishing regulations. Water quality and habitat loss were top things and impacts from invasive species and then release mortality and regulatory discards.

The workshops themselves, we had 190 attendees. We had workshops pretty much throughout the month of July. I think we ended up having nineteen, again, on the Gulf coast and the Atlantic coast. We had a webinar.

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We are still compiling all of the information from those workshops and we will be presenting it to our commission at their November meeting, which is going to be in Panama City. you want more information about that, I can certainly pass that on to you and I can share the reports that we have from those workshops with the council at a later date, but we did hold some workshops on that and so any questions?

Okay. I don't see any questions. Next up is CHAIRMAN GREENE: Alabama. Kevin, did you want to say something?

ALABAMA

MR. ANSON: You will note that we don't have a presentation. That is due, in part, because we have not held any formal gathering workshops or listening sessions or what have you specific to recreational fisheries management or red snapper management.

We have participated in local fishing groups, their meetings and such, and certainly we try to relay information from a federal level, at least from the council level and state level, and have heard their concerns relative to management at the time for both and try to bring that back to the council as appropriate, but that pretty much concludes it. Again, no formal workshops and so I can't provide any details as to what specifically anglers have been saying to us in that format. Thank you.

CHAIRMAN GREENE: Thank you. I guess next is Mississippi and Dr. Lucas.

MISSISSIPPI

DR. LUCAS: I would be glad to just talk from here if somebody will click the presentation when I need to. Actually, we have already seen a presentation on this information. The comments that we received were mainly related to red snapper, as that was what was asked of us by the council, to go out and get comments from our recreational fishermen and fishermen in our related to red snapper.

This occurred in May of last year, 2014, and we actually had a general presentation. Carrie Simmons came from the council and spoke and Dale spoke and our Finfish Director spoke and gave some information to them, just to kind of brief them up to speed and clarify definitions and it kind of zoned us into what we were going to be talking about, which was mainly related, of

course, to red snapper. There was all kinds of managementrelated decisions at the council going on at the time.

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We did something kind of similar to Florida. We had talked about this and we actually did this before and provided some information to Florida. What we really wanted to do was really hear from them and so our ideas were to ask a couple of questions and send them out into small breakout groups of eight to ten people and address those questions and then would write down a bunch of information and it came back to us and we filled out, in a real kind of tough timeframe, like trying to highlight their main concerns and put them in a structure that they could then vote on.

We reported on the breakout sessions and we had the clickers and we allowed them to vote. When they signed in to get a clicker, we also asked them to tell us whether they were a private recreational angler, whether they owned a for-hire boat, or whether they fell into other. Other could be commercial fishermen. We had some academics there and we had some people that owned bait shops and so really it was kind of a large category of other that we captured.

These were the three questions that we asked. Basically it was very similar. Expectations for the recreational red snapper fishery, given the constraints from the presentation, of which both Carrie Simmons and Dale did a really good job of laying out kind of the limits.

We asked them what they thought could be done to improve data collection from recreational red snapper fishermen and what methods they would be likely to support and if there was any new management methods or new ideas that they thought could be implemented to improve recreational red snapper fishing.

With about sixty people in attendance, these were the most favorable ideas and the scale, just to give you an idea, you have five and so you can really dislike it, you can kind of dislike it, you can have no opinion really either way, or you can kind of like it or really, really like it type of situations and so it provides for -- We just try to break it down into favorable or unfavorable situations and so these are the most favorable.

They wanted mandatory reporting for all for-hire vessels. They thought an app or website would be good for that and they wanted to participate in a red snapper data collection program from the private angler side. At the time, we were going into the 2014

season and we were piloting a voluntary program.

 It has since now moved to a mandatory program, but the program support really came from this meeting. They really wanted to do this and they really thought this was a good way to go. They wanted to use an app to do it and they really wanted the idea that they would be able to see the data, because they thought that would be interesting to them.

They really would like to see multiple species open for harvest at the same time. Our fishermen tend to prefer a fall season for red snapper. They want regional management, to give the authority to the Gulf States, and they also favored federal legislation for regional management, if possible, and they favored federal legislation for managing fisheries out to nine nautical miles.

They want to develop and implement sampling that would directly affect the accuracy of stock assessments. They favored independent data collection programs. They really wanted to increase that, because they thought that would be a way to provide data for stock assessments.

On the next page, you see the least favorable. There was a large kind of -- Almost a 50/50 split in the slot limit and not really depending on whether they were private or for-hire or the other category. They did not like a one fish bag limit at all. Weekend-only seasons were mostly unfavorable.

The tagging system was mostly unfavorable, but it wasn't extremely unfavorable. It was kind of more in the middle range. It was mostly unfavorable on the days at sea and sector separation was mostly unfavorable, but it was split, I guess a lot because of the other category. A lot of the other category and a little bit of the charter-for-hire did favor it, but then you had all the rest kind of weigh on the other extreme.

They did not favor the closure areas or sanctuaries and so that really just kind of captured the data and the way we moved forward in our state. Any questions?

CHAIRMAN GREENE: Okay. Seeing no questions, I guess we will look towards Louisiana now, if you're ready.

LOUISIANA

MS. KATIE SEMON: We don't have a formal presentation or anything and just kind of a brief discussion of some new survey

methods we have been trying out. As far as recreational angler feedback, we conduct public comment sessions at our commission meetings and our task force meetings and talk with anglers at outreach events, but we also wanted to find a more efficient and effective way to get more feedback from anglers on various issues.

We require anglers who fish offshore for species such as snappers and groupers to have this free recreational offshore landings permit and through that permit, we now have a database of all these permit holders, including their contact information, especially their emails.

We decided to take advantage of this email database and determine that we could use it to conduct online surveys. We could easily contact thousands of anglers and solicit their input on management issues.

Through this online survey, we were able to target and take a good census of our entire offshore population, offshore angler population and so this really gives everyone an equal opportunity to comment and this is important to us, because these matters are of public importance. On top of that, online surveys are low cost and they have a quick turnaround and we're also able to design the survey questions to reduce bias.

In 2014, we tested this idea through two angler surveys. We did one in May and June regarding perspectives on regional management and then the other in July and August, regarding sector separation. We saw a lot of benefits of this method through our survey results.

For one, we had a high response rate. For regional management, 35.7 percent of the anglers we polled responded and so that's about 4,800 out of 13,550 anglers and that's the number of anglers that were registered at that time.

Later in the year, when we did the sector separation survey, we got a 24.3 percent response rate and that's about 4,500 anglers out of 18,300 anglers and so that's pretty good.

We found that the feedback was a better representation of the angler population, because of all the feedback we got, thousands of respondents versus kind of a select few that are able to attend our meetings. We also got good demographics information on our respondents and we could analyze the survey results based on this. We got age, where they live, their status, private angler versus charter boat, fishing activity, like the number of

days they spend fishing, and things like that.

These surveys were just intended to kind of test the system to see if it was a viable option to get angler opinions. We do have the results available if anyone is interested, but we just wanted to talk about the method here, but we did find that these surveys are cost effective and it's a really practical way to hear from a lot of our anglers and understand a view that's more representative of our whole angler population and we have since launched an effort to collect up-to-date, accurate contact information for all of our saltwater fishermen, to facilitate more of these types of surveys in the future.

We have been working with local vendors to collect a sweepstakes to award anglers for submitting and updating their contact info and we also launched a new recreational website and I will be happy to answer any questions.

CHAIRMAN GREENE: Thank you. Mr. Riechers.

MR. RIECHERS: I have gotten some reports back on how you all go about surveying after an angler trip and can you just give me a little bit of detail about it? I mean we don't have to go into great detail, but just how do you -- You all identify it and send a survey to them a week after they fished or a month after they fished or can you just share a little bit about that?

MS. SEMON: As far as through LA Creel? I don't believe I am the best to answer that question, but I could refer you to Myron on that one.

MR. FISCHER: If you're familiar with the MRIP two-month waves, what we basically have would then be termed a one-week wave. We start requesting on Monday, Monday, Tuesday, and Wednesday, what was caught the previous week, to reduce the recall bias.

CHAIRMAN GREENE: Okay. Thank you.

 MR. FISCHER: Robin, if I could add, this was a telephone survey and we requested if people would prefer to be interviewed via internet, via email, and I think it was immediately we had a 35 percent response that preferred the email version and that's escalated our response rate, but we do continue harassing them until we get the answers.

CHAIRMAN GREENE: Thank you. Anything else for Louisiana? Mr. Riechers.

1 TEXAS

 MR. RIECHERS: I don't have a formal report either, but it's probably worth reporting a little bit on at least what we've done regarding landings. As far as some of the options, we've been looking for the council RAP sessions and other things and our hearings that we've been going through to basically feed us the information regarding the private angler sector in Texas and their wishes.

Many of you have seen some of the summaries that we have presented with those tabulations as a state to you all. In addition, you have received some letters from our commission chair along the way on some specific issues that were of particular concern and so I won't go back into those, but in our sampling this year, I will say that working with the Harte Research Institute -- You all know, like all the other states, are trying to also incorporate some self-reporting systems.

This year, we stood up Harte Research and we stood up that online survey last year, but this time we stood up Harte Research in directing all those anglers to Greg and his team, because he has a design or a study going along with MRIP, where hopefully we are getting past just a self-reported mechanism, but also an expansion of those reportings to a full population, if you will, population of red snapper anglers.

I know Greg, at some later time when we want to do those presentations, he could give you that and he may have something to add to that, but that's part of what we're doing, along with validation of that. This year, we increased our samples at Gulf boat ramps by 300 percent and I know every state has taken on those kinds of extra burdens and so it's not that I am suggesting we're doing anything any other state around here is not doing, because I know we all have taken that on.

CHAIRMAN GREENE: Dr. Stunz.

DR. STUNZ: I can just follow up briefly to what Robin said with the iSnapper private rec study going on now. It's going really well. We're not getting near as many as we would like. Of course, as scientists, we always want more and more, but in talking to our statisticians, they are feeling really good about the numbers. We've got a good validation program in place and working with Robin's creel and encountering these anglers after they have entered the data, but before they have reached the dock. That is going very well. Of course, we're doing that during the state season now and so it's kind of in progress and

I will be happy to report on that later, once we wrap it up later this fall.

CHAIRMAN GREENE: Thank you. Any other comments? Okay. I think that wraps up the state-by-state and now we'll go to Past Council Efforts and Emily.

PAST COUNCIL EFFORTS

MS. MUEHLSTEIN: Thank you, Mr. Chair. Just to let you guys know a little context of why we're having this conversation, is at the last meeting in June in Key West, there was two motions. The first motion was to create an ad hoc private recreational committee to discuss possible management changes to the private recreational fishery.

If you remember, after lunch we came back and brought that back up and the council asked that staff take no action on the formation of an ad hoc private recreational committee before the August 2015 council meeting.

Around those two motions, there was a lot of discussion about needing some context about how we would build a charge and a number of council members had mentioned that they were looking for a little bit of background information so they had a better understanding of what we've already gathered from the recreational anglers.

That's why we started with what the states had already done, because I knew that there was some directed efforts from the states to figure out what their anglers were looking for specifically in recreational management and it turns out a lot of those state efforts were red-snapper-specific, but I am going to go ahead and present to you the two directed efforts that we as a council have done in pretty recent history and neither one of them are red-snapper-specific and so that differs a little bit from what we got from the states.

The first is we've had an Ad Hoc Recreational Data Collection Advisory Panel and while this isn't just a management panel and they're not just talking about different management options, they did give some advice on different management options and I sort of distilled that information for you here.

Then we also went and did those RAP Sessions back in January of 2014. Now, I want to caveat this discussion with the idea that we've had some pretty major recent management changes that might shift where anglers are now versus where they were when we made

those efforts.

In 2014, we had that 20 percent buffer put on the recreational red snapper annual catch limit and then we had that MRIP calibration that happened. Then in 2015, we had red snapper sector separation, a major increase in the red snapper quota, and then some major differences in the state seasons and so just make sure that you understand that what I'm about to tell you was before those changes were made and so maybe it's not the best context for us to use today's management situation with what we heard a couple of years ago.

With that said, your Ad Hoc Private Recreational Data Collection Advisory Panel had a charge to identify methods for improving private boat recreational data collection through programs that would supplement data currently collected through MRIP.

You also asked them to prioritize identified programs for possible consideration and implementation and give some rationale and then provide some detail for a concept that is of their highest priority for a data collection program.

We had two meetings with this group. The first meeting was in May of 2012 and their major recommendation coming out of this meeting that had to do with a management system was that no tagging system be considered as a part of the panel's recommendation to the council. You will see that motion carried seven to five and the rationale that they provided the council was that there was concern over fair distribution of tags if such a program was used to control harvest rather than just to collect data.

They convened again in February of 2013 and they made two major recommendations. The first was to implement a private recreational boat permit system that would be required to harvest species managed by the Gulf Council.

The permit should not limit entry of individuals in that fishery and so it wasn't designed to constrain effort at all. They also asked that the council require daily permits for the daily bag limit of private recreational boat owners to be issued for red snapper. It would have to be filled out with the necessary information and submitted in order to receive more permits so that you could go harvest red snapper again.

They provided a long list of rationale for those two motions of why they thought it was a good idea for the council to consider such a program. They wanted better data collection in general,

hoping that we would be able to sort of better define our sample frame and just improve data, including our discard data. They were also hoping that a program like that would create more angler buy-in and give a little bit more confidence in the science and things like that.

Moving on from that ad hoc advisory panel, we also hosted RAP Sessions in January of 2014. We hosted nine in-person meetings and one webinar and we had about 450 attendees. Now, that was all recreational anglers, both charter and private anglers, and I want to make it clear that we had a range of different things that were suggested and if you're interested in reading those summaries again, they are contained in the briefing book, but I have kind of distilled out sort of the management options and issues that dealt specifically with the private recreational anglers and so that's what I'm going to go over here.

There were five reoccurring themes when it came to private recreational angler management. The first was concern over our limited harvest data and the second was concern over limited fishing opportunities in the private recreational sector. There was concern over unequal access to allocation and one-size-fits-all management and also some major concern about discard mortality.

Now, if you recall, in those RAP Sessions what we did was ask our anglers to identify what problems they were having with federal management and these were those reoccurring themes and then we asked for solutions and so I will just go through each one of these themes and give you the solutions that those anglers themselves have presented to solve these problems.

Solutions for limited harvest data, as suggested by our anglers, include mandatory reporting, self-reporting, a hail-in and hail-out, a tag system, some sort of offshore endorsement, involving law enforcement in catch counts. The kind of rationale there was law enforcement is already stopping us and looking at our catch and so why not write that down?

Also, use of an angler survey as a condition of a license, much like a duck stamp or the way that that harvest works. You would have to report what you caught that season before you were allowed to harvest in the next season.

The next is limited fishing opportunity and some of the solutions that were presented there included changing the season structure. There was a desire for some weekend-only seasons and seasons at a different time of year or potentially a monthly

quota, where you would be able to fish each month a certain amount and then stop, within that month, when the quota is harvested.

Adjusting bag and size limits or considering slots for fish and to create harvest permits for rodeos. I think there's a lot of rodeos and tournaments that happen outside of our current seasons and they were looking for a sort of special ability to harvest fish in those specific rodeos so that they wouldn't have to time those with our short recreational seasons.

Reallocate to the recreational sector was a major suggestion that we heard as a solution to limited fishing opportunity and also using a tag system. Incentivizing state compliance was also mentioned and decreasing the uncertainty buffers and so much like that 20 percent buffer that I said that we have now on the private recreational angler quota, they were hoping that things like that could be reduced so that we would be allowed to catch the full amount of the allocation and also considering a split license and so that would allow different people to participate in different seasons, you know whether it be split up by alphabetical order or whatever. They didn't mind the idea of some people being able to fish in the spring and some people being able to fish in the spring and some people

Moving on to the theme of unequal access and allocation, the anglers suggested that we reallocate to the recreational sector and they also suggested that we allow recreational anglers to harvest commercial allocation and somehow try some sort of purchase-in system if they wanted to harvest those fish. Also that we consider socioeconomic benefits of recreational fishing, with the rationale that that would obviously increase the amount of recreational fish that should be harvested.

One-size-fits-all management was another theme that came out. People were pretty concerned that the Gulf is a very different place, depending on where you are, and so they suggested and supported regional management.

They suggested geographically restricting fishing zones to encourage local fishing. I think there was some frustration with the fact that some people run their boats to different areas of the Gulf and harvest fish that maybe aren't in their own local waters and then there was also a suggestion that we relinquish federal control to the states as much as possible.

Then, finally, discard mortality was an issue that bothered most anglers. They were asking for a bycatch allowance and so that

would be like a one fish per boat all year-round and they asked to reduce or eliminate the size limits altogether. They asked for a mixed bag limit, meaning you could either have a mixed species limit -- Let's say you could have five snappers altogether or five groupers and it not really be specific as to which species or also the mixed bag limit is maybe you get to have four fish at a certain size and one over-slot fish and so just sort of looking at novel ways that we can cap how many fish or what fish stay onboard the boats.

The next was supporting new bycatch reduction tools. You know we removed the venting tool requirement, but they were asking that maybe we potentially consider requiring the use of decompression tools or something.

Limit allowable hook size and so the idea that maybe if we wanted to not catch small fish and we didn't allow the use of smaller hooks. Also maybe consider us using weak hooks when you are fishing a certain depth. Maybe the farther out you are, if we want to make sure that those breeders stay in the water, we make sure that anglers are using weak hooks so that we don't have issues with larger fish coming to the surface and not making it back down.

Then the idea that maybe we create a keep your first fish for certain species and so there wouldn't be any discard mortality, because you would have to keep whatever you caught until you hit a certain amount.

Moving on from here, I think the point of having this session right now is basically for you all the decide whether or not we want to create an ad hoc private recreational advisory panel. If so, we would like you to consider creating a charge for that panel and potentially outline which potential management measures they would evaluate and so give them some direction on maybe what you guys would like to be considered and what you would like them to look over and provide their suggestions on and then I would like also for you to consider specifying panel membership.

So if we are to go out and advertise for this panel, we would like a little bit of direction as a staff on who we would be looking for. Are we looking for just private anglers? Are we looking for private anglers and charter anglers and whoever else wants to join, but we would like some guidance on that as well and that concludes. Thank you.

CHAIRMAN GREENE: Okay. Thank you, Emily. Anybody have any

comments or questions before we move on? Mr. Fischer.

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MR. FISCHER: Thank you, Mr. Chair. I just wanted to add a sentence to what I told Robin earlier. On our surveys, of course the phone/email is an effort survey. The composition of catch is calculated by biologists dockside.

CHAIRMAN GREENE: Okay. Anything else? All right. The last agenda item under Other Business was Gray Triggerfish. Sorry?

MR. ATRAN: The question is, is there any interest, at least at the committee level, in forming an ad hoc AP and, if so, what would the charge be and what would the makeup be? If you don't want to address that now, that's fine and it could come up at full council.

CHAIRMAN GREENE: I was getting ahead of myself on my notes here. Any desire to do anything with the private recreational AP? Mr. Williams.

MR. WILLIAMS: Well, we voted to do it last time, right, but we told staff not to do anything between then and now and I mean we do have to come up with a charge for them. I suspect any charge that I might come up with would fail and so I will probably wait until full council, but I think we have to come up with some kind of charge. We've already said to assemble them and so unless we rescind that, we need to come up with a charge.

 CHAIRMAN GREENE: Well, I agree and some of the charges in the past APs, the one from 2012, the charge that was presented was a pretty good one as well and that may give us something to work off of. Perhaps if you want to pick it back up at full council, Mr. Williams.

I am not sure, but does anybody else wish to comment or have anything on behalf of the private recreational? Okay. Seeing none, I guess we will move on to Other Business. The last item under Other Business was Gray Triggerfish Bag and Size Limits.

OTHER BUSINESS GRAY TRIGGERFISH BAG AND SIZE LIMITS

I have had a ton of phone calls from private recreational and charter for-hire asking to do something different with triggerfish, reduce the bag or increase the size to potentially lengthen that season as much as possible.

In conversation with Mr. Atran, I understand that we're coming

up pretty quickly to a triggerfish assessment. A lot of the guys were wanting to kind of get ahead of this as much as possible and potentially framework actions and all and so I just bring this to your attention, just letting you know what I have been hearing a lot of and seeing a lot of personally as well. With that being said, I don't have anything else under Other Business and if anyone would like to comment about triggerfish or anything else before we adjourn, please feel free to do so now. Ms. Bademan.

MS. BADEMAN: I will just chime in and say I've heard a lot of the same. A lot of people are seeing triggerfish and wondering what's going on and hoping this assessment is going to look good, but I guess we'll see how it shakes out.

CHAIRMAN GREENE: Ms. Dana. Did you have a comment, Pam?

DR. DANA: No, it's just to concur with you. I've been hearing the same thing.

CHAIRMAN GREENE: Mr. Anson.

MR. ANSON: Just to educate the council members, Ryan, the assessment, triggerfish assessment, is due next week or in two weeks?

MR. RINDONE: Yes, Mr. Chair. It should be available to the SSC a week to two weeks before their meeting, which I think, Steven, did you say it was early September?

MR. ATRAN: The SSC meeting will be September 1 to 2. We've been told by the Science Center to expect the final report by August 25, I believe.

MR. RINDONE: That's about what I had recalled as well and so at that point, it will be a public document and we will put it on our website and anybody can take a peek at it and the SSC will get a look at it for their meeting and then they will make management recommendations from there to the council.

 MR. ANSON: Thank you. I guess the word on the street, Martha, is that it's not good and hence the comment, as Johnny alluded to, to try get ahead of the curve and start thinking about some things management-wise.

I think you made a comment that there is lots of triggerfish, relatively speaking, this year compared to prior years and we are seeing a lot of that in Alabama and so we're a little

perplexed and we would be curious to see the final report and comments from the SSC on that.

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CHAIRMAN GREENE: Ms. Bademan.

MS. BADEMAN: Yes and so are we going to get that report in October at the council level about the assessment?

CHAIRMAN GREENE: Mr. Rindone, did you --

MR. RINDONE: Yes, Mr. Chair.

13 CHAIRMAN GREENE: Okay. Dr. Simmons.

DR. SIMMONS: Thank you, Mr. Chairman. I just wanted to mention to the committee and the council that we are planning to have a Reef Fish AP meeting and it looks like September 16 is definitely the best date for everyone so far and we are looking at whether we need another half-day meeting or a full two-day meeting and so right now, it's probably going to be the 16th and 17th of September, if we do that. We're waiting to finalize the agenda until after the council meeting, but hopefully we will have some advice from the SSC regarding red grouper and gray triggerfish and get some feedback on those two species as well at the AP meeting.

CHAIRMAN GREENE: Okay. Any other business to come before this committee? Seeing none, we are done with Reef Fish.

(Whereupon, the meeting adjourned at 4:30 p.m., August 11, 2015.)

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TABLE OF MOTIONS PAGE 4: Motion to change the preferred alternative in Action 1 Action 1 Action 1 Action 1

6 PAGE 19: Motion to accept the language in Alternative 4 to 7 include the phrase "as a single unit". The motion carried on 8 page 20.

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10 PAGE 22: Motion to make Alternative 4 the preferred alternative 11 in Action 2 of Amendment 39. The motion carried on page 27.

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13 PAGE 29: Motion to make Alternative 1 the preferred alternative 14 in Action 2 of Amendment 39. The motion failed on page 33.

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16 PAGE 59: Motion in Action 1 to select Alternative 2 as the 17 preferred. The motion carried on page 61.

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19 PAGE 61: Motion in Action 2 to select Alternative 2 as the 20 preferred. The motion carried on page 61.

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22 PAGE 67: Motion to accept the language for Action 1. The 23 motion carried on page 67.

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25 PAGE 73: Motion to make Alternative 1 the preferred 26 alternative. The motion failed on page 77.

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28 PAGE 82: Motion to select Alternative 2 as the preferred 29 alternative. The motion carried on page 82.

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31 PAGE 94: Motion to take Amendment 41 and 42 options papers out 32 to scoping meetings. The motion was tabled on page 95. The 33 motion was untabled on page 112. The motion carried on page 34 115.

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36 PAGE 120: Motion in the Amendment 42 options paper to remove 37 Section 2.2.1, Size, Bag, and Season Adjustments. The motion 38 failed on page 123.

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Reef Fish Committee: Action Schedule for Tab B

Agenda Item IV: SSC Summary

Timeline Status: Report of the September SSC meeting

Council Input and Next Steps: The SSC representative will review the SSC actions and recommendations from its September 1-2, 2015 meeting with respect to reef fish issues. This includes discussions which may be relevant to some of the agenda items on the Reef Fish Committee agenda. The Committee should keep this report in mind when discussing those items. The SSC representative will be available for the entire Committee meeting to answer questions that may arise.

Agenda Item V: Final Action – Framework Action to set Gag Recreational Season and Gag and Black Grouper Minimum Size Limits

Timeline Status: Final Action

Council Input and Next Steps: The Committee should review the draft amendment and recommend Preferred Alternatives for gag recreational minimum size limit, black grouper recreational minimum size limit, and recreational gag season. The Council has previously adopted Preferred Alternatives to increase the recreational minimum size limit for gag and black grouper to 24" TL, and a Preferred Alternative under Action 3 to eliminate the fixed December 3-31 recreational closed season on gag. However, additional recommendations are needed on possible changes to either the recreational season opening or closing date, and to how the February-March partial closed season on shallow-water grouper should be treated for gag if the gag open season includes those months. The Committee should also review the draft codified regulations and recommend whether they should be deemed necessary and appropriate.

Agenda Item VI: Revised Public Hearing Draft Amendment 39 – Regional Management of Recreational Red Snapper

Timeline Status: Public Hearings in October; Final Action in January

Council Input and Next Steps: The Committee should review the updated public hearing draft and the current preferred alternatives. New tables and figures are included for Action 2. The Committee should discuss the new information and select a preferred alternative. Staff will review the Action 7 alternatives alongside Action 2, and the Committee should ensure the compatibility of the respective preferred alternatives.

Agenda Item VII: Options Paper – Amendment to Define Gulf of Mexico Hogfish Stock, and set ACL and Status Determination Criteria

Timeline Status: Initial options paper

Council Input and Next Steps: The Committee should review the options paper and consider selecting Preferred Alternatives for the boundary of the Gulf hogfish stock, status determination criteria for Gulf hogfish. The Committee should also consider alternatives for revising ACL and optionally ACT for hogfish based on ABC recommendations from the SSC. However, the council had requested a constant catch ABC for the years 2016-2018, which the SSC will be unable to provide until January 2016. For this reason, the Committee may consider a recommendation to split the amendment and proceed only with the stock boundary and status determination criteria actions, leaving the ACL/ACT adjustments for a subsequent regulatory action. There is a priority for setting the stock boundary because the East Florida/Florida Keys hogfish stock is overfished, and the South Atlantic Council must prepare and submit a rebuilding plan (including that part of the stock that falls within the Gulf jurisdiction) within two years.

Agenda Item VIII: Options Paper – South Florida Management Issues

Timeline Status: Revised options paper—

Council Input and Next Steps: The Committee should review the revised Draft South Florida Options Paper (Actions 1-4) and provide feedback to staff about the revised need and updated alternatives. The Committee should also review the remaining actions and outstanding Gulf Committee motions from the June 2015 Council meeting to determine how they want to move forward. Staff will also inform the Committee of any motions made at the September 2015 South Atlantic Council meeting and request that the Committee take any necessary action to advise staff how to move forward with these document(s).

Agenda Item IX: Options Paper – Framework Action to set Mutton Snapper ACL

Timeline Status: Draft options paper

Council Input and Next Steps: The Committee should review the draft options paper and provide feedback to staff about the range of draft action alternatives. The Committee should request to add or remove any alternatives so that staff can move forward data analyses. The Committee should provide any feedback on the proposed timeline and priority status of this action.

Agenda Item X: Discussion – Ad Hoc Private Recreational AP

Timeline Status: Discussion on formation of an AP

Council Input and Next Steps: At the August Council meeting, the Council voted to defer any action on creating an Ad Hoc Private Recreational AP until the October meeting. The Committee should discuss this issue and decide whether to recommend the formation of an AP. If the committee recommends that an AP be created, it should then create a draft charge, and discuss the number and composition of the AP membership.

Agenda Item XI: Options Paper – Adjust Minimum Stock Size Threshold

Timeline Status: Revised options paper

Council Input and Next Steps: The Council reviewed an initial options paper in January 2014 to define minimum stock size threshold (MSST) for stocks with a low natural mortality rate in order to maintain some minimum buffer between the MSY biomass level and MSST, but that options paper was unnecessarily wieldy and complex. This revised options paper simplifies the alternatives based on input from the Council and IPT. It will define or redefine MSST for all stocks (only 6 reef fish stocks currently have an MSST definition) with special consideration for low natural mortality rate stocks. Because the MSY proxy is a part of the MSST definition and is also currently undefined for most reef fish stocks, an additional action has been added to define MSY proxies. The Committee should review the options paper and decide if it agrees with the range of actions and alternatives. The Committee should also recommend whether to proceed with a draft plan amendment based on the options paper.

Agenda Item XI: Reef Fish AP Summary additional items

Timeline Status: Recommendations and feedback on ongoing Council actions

Council Input and Next Steps: The Committee should review the Reef Fish AP recommendations on each action item. The AP's recommendations and rationale should help the Committee discussion and build rationale/motions for actions that are forwarded to the Council. Depending on the stage of the action if the committee agrees with some of the AP recommendations they may want to direct staff to start new documents for any motions/recommendations that are outside of the scope of any of the current documents.

Agenda Item XII: Other Business

Timeline Status: Additional items that can be brought up for discussion, but no action can be taken since they have not been announced

Council Input and Next Steps: Additional items may be brought up for discussion by Committee members, time permitting. If the committee wishes to pursue action, then action can be scheduled at a future Council meeting.



Standing and Special Reef Fish SSC Meeting Summary Tampa, Florida September 1-2, 2015

The meeting of the Standing and Special Reef Fish SSC was convened at 1:00 pm on September 1, 2015. The agenda and the minutes of the May 20, 2015 Standing and Special Reef Fish SSC meeting were approved as written. Elections were held for a new Chair and Vice-Chair. The following were elected:

Chair: Luiz Barbieri Vice-Chair: Joe Powers

Luiz Barbieri agreed to be the SSC representative at the October 5-8, 2015 Council meeting in Galveston, Texas.

Discussion of Best Practices for Constant Catch ABC Projections

Luiz Barbieri presented an overview of options for developing a standardized method to calculate constant catch ABCs:

- 1. Use equilibrium yield at F_{ABC}
- 2. Average ABCs over the projection period
- 3. Pick an ABC value from the ABCs in the projection stream

Method 1 would produce the most conservative ABC if the yield stream projections under a constant F are in a declining trend. This would also make it unlikely that future reductions in ABC would be needed, but at a cost of foregone short-term yield. If the yield stream projections are increasing, this method would not be viable because it would set ABC at a high equilibrium level that may not be sustainable at current spawning stock biomass levels.

Method 2 was suggested as a possibility at the May SSC meeting. Preliminary analysis by the SEFSC suggests that this method would produce an ABC close to what would be obtained from running the projection model in an iterative process. This has the advantage of allowing the SSC to determine a constant catch ABC for any length time period they feel is appropriate (e.g., 3 years, 5 years, 10 years). If this method is used, a constant catch OFL would also need to be calculated, otherwise, the ABC would exceed the OFL in at least one year. This method could be used with either a declining or increasing trend. Some SSC members were hesitant to endorse this method because they felt it was not scientific.

Method 3 would select to lowest ABC of the three methods considered here in the constant F yield stream projections for the projection period being considered. This would allow a higher constant catch ABC than under Method 1, but would still result in some forgone yield. This method could be used with either a declining or increasing trend.

Shannon Cass-Calay stated that the SEFSC could produce a constant catch ABC using an iterative projection process, but only after the SSC had selected a base assessment model to use for management. In addition, to run the projections, the SEFSC would need to know what reference points to use (e.g., P*, coefficient of variance, number of years under constant catch), any allocation changes, and how bycatch and discard mortality should be handled. This means that the constant catch projections would need to be brought back to the SSC at a subsequent meeting.

After reviewing the alternative methods and Dr. Cass-Calay's comments, the SSC members agreed that the iterative process described by Dr. Cass-Calay was the most scientifically defensible way to calculate a constant catch ABC and they passed the following motion.

Without opposition, the Committee recommends that for future stock assessments reviewed by the SSC, once a base model is selected and projection parameters, including P* are determined, the SSC will ask for both constant F and constant catch OFL and ABC projections to be computed.

Constant Catch ABC for West Florida Shelf Stock of Hogfish

Dustin Addis presented an analysis of a constant catch projection for the West Florida Shelf Stock of Hogfish based on OFL being set at the equilibrium yield at F30% SPR, and a constant catch ABC from the ABC control rule using a $P^* = 0.4$ and CV = 0.37. He noted that these parameters were borrowed from red snapper as the SSC had not developed control rule parameters for hogfish. The results indicated an equilibrium OFL of about 162,000 pounds whole weight, and an equilibrium ABC of about 159,000 pounds whole weight. However, since the SSC had agreed to use the iterative process to calculate a constant catch OFL and ABC, the Committee decided to wait until that analysis becomes available at the next SSC meeting before making a recommendation.

Once the final year of a yield stream projection has been reached, if there is no new assessment or reevaluation of ABC, the ABC stays at the level of the final year of the projection. For a declining yield stream, or one where the equilibrium yield at FABC is below that final year, this could eventually lead to overfishing. Mr. Addis also presented the results of exploratory projection runs that assumed the ABC would remain at the levels previously recommended by the SSC for 2016-2018 under a constant F projection. The 2018 ABC recommendation under a constant F scenario is 200,800 pounds whole weight. If that ABC were continued as a constant catch ABC for 2019 and beyond, and the ABC catch level was taken each year, the analysis projects that the stock would collapse in 2061. Thereafter, catches would fluctuate between near-zero and the ABC level (the fluctuations may be an artifact of the model), while spawning stock biomass remains at extremely low overfished levels (Figures 1 and 2).

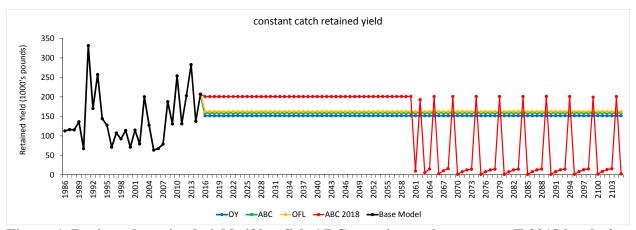


Figure 1. Projected retained yields if hogfish ABC remains at the constant F 2018 level of 200,800 pounds whole weight. (Black line is actual retained yield from 1986 - 2014)

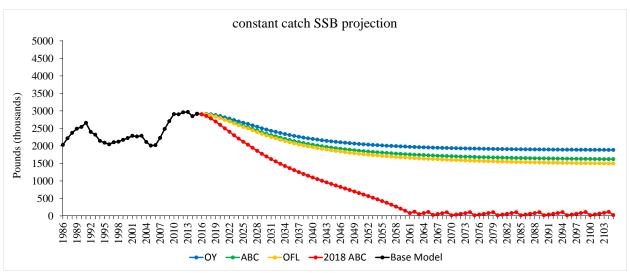


Figure 2. Projected spawning stock biomass if hogfish ABC remains at the constant F 2018 level of 200,800 pounds whole weight.

In light of the above concerns, a motion was made to have the ABC revert to the equilibrium yield at F_{ABC} under such conditions. Some SSC members felt that this would result in wild fluctuations from one constant catch period to the next, or may not be appropriate under some scenarios. Others felt that this would provide an incentive to get an update assessment conducted in a timely manner. The following motion is a recommendation to apply to all short-term ABC projections with a declining yield, not just hogfish.

By a vote of 18 to 2, the Committee recommends that if at the end of the projection period no new assessment is available, and the equilibrium ABC is below the ABC of the constant catch yield stream, ABC should revert to the equilibrium ABC.

SEDAR 43 Gray Triggerfish Standard Assessment

Jeff Isely presented a review of the gray triggerfish assessment. This assessment was conducted using Stock Synthesis 3, and used data updated through 2013. Rather than use a fixed natural mortality rate (M) for all age groups, this assessment used a Lorenzen function in which M varies with age, averaging M = 0.28. A new growth curve was calculated, which resulted in larger fish at age-0, a faster growth rate than previously calculated and maximum size achieved at a young age. The assessment used coefficient of variation at age of CV = 0.22. There was little relationship between age and length beyond age-2. Because of the variable growth, there is no fecundity-age relationship, but there is a length-fecundity relationship which was used in the assessment. Ages were calculated from annual age-length keys. Consistent with previous assessments, landings and indices were calculated for eastern and western regions, but one population model was constructed for the entire Gulf of Mexico. Shrimp effort was used as a proxy for shrimp trawl bycatch. Size composition data from gray triggerfish captured in shrimp trawls suggested that > 90% of fish were age-0. The annual fraction of age-1 fish could not be determined accurately, so all shrimp trawl bycatch fish were entered as age-0. Modeled landings were fit to observed landings using an assumed coefficient of variance of 0.05. Landings showed a good fit to the model, but discards showed a high variability. Most indices of abundance showed a general downward trend, as did the estimate of total biomass (Figure 3).

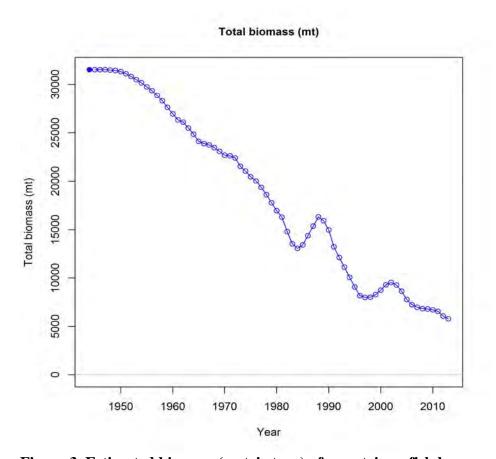


Figure 3. Estimated biomass (metric tons) of gray triggerfish by year.

The fishing mortality rate has been below the overfishing threshold since 2008 (Figure 4), but the spawning stock biomass has continued to be at or below the minimum stock size threshold, and below the MSY biomass level, since at least 1993 (Figure 5).

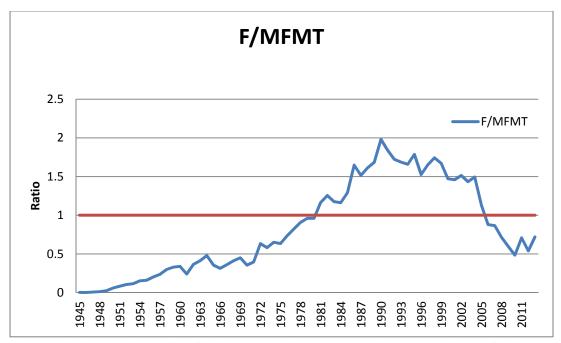


Figure 4. Gray triggerfish fishing mortality rate relative to maximum fishing mortality threshold, 1945-2013.

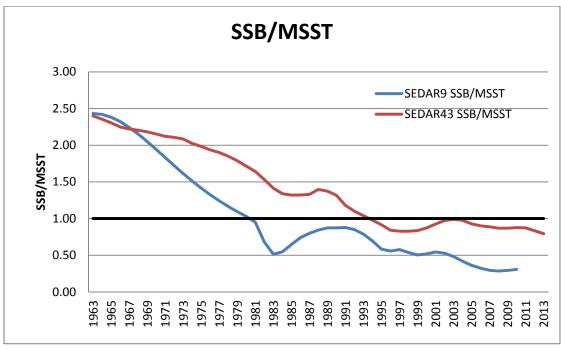


Figure 5. Gray triggerfish spawning stock biomass estimates from both SEDAR 9 and SEDAR 43 relative to minimum stock size threshold.

During and after the stock assessment presentation, several concerns were brought up by SSC members.

- A pooled growth rate was used for male and female gray triggerfish combined, but the sexes have different growth rates. The combined growth rate may be overestimating SSB. As sex is not determined I the field by port samplers, there is little that can be done to correct this.
- Stock-recruit steepness was estimated at 0.45. However, the likelihood profiles suggest that any values above 0.4 are equally likely.
- Shrimp trawl bycatch mortality was assigned entirely to age-0 fish, but age-0 fish are still in the pelagic environment and are closely associated with *Sargassum* habitat. The age-0 assumption for shrimp trawl bycatch may be overestimating the proportion of discard mortality occurring on age-0 fish and underestimating age-1 mortality.
- Shrimp trawl bycatch estimates assumed 100% mortality, but this may be an overestimate. Texas estimates a 50% mortality rate from shrimp trawls, but these data were unavailable at the time of the assessment. However, when using a Lorenzen mortality curve, the natural mortality on age-0 fish is so high that the bycatch mortality should not have much additional impact.
- The minimum size limit from 1999 to 2008 was 12 inches total length, but in 2008 it was changed to 14 inches fork length. The assessment assumed that all size limits were in fork length (this was later determined not to be a significant source of error).
- There are questions as to how long the recent low recruitment from the six previous years will continue. Due to the unique life history of gray triggerfish spending 4 to 7 months up in the pelagic environment before recruiting the benthic reefs and the neuston plankton tow information stopping in 2007 little information about recruitment is available for the model. Some SSC members suggested a regime shift in recruitment could be occurring, possibly attributed to predation by increasing populations of red snapper and lionfish.
- The stock-recruit relationship assumes the spawning stock is 50% female:50% male based on sampling from commercial sources, but the assessment document states that 56% female based upon histology and 64% female based upon macroscopic observation. Gray triggerfish are known to form harem groups when spawning with one dominate male and up to three females on active nests. The fishery-dependent landings may not be accurately capturing the ratio of males to females in the population. However, as the proportion females is used as a scaler, it has little effect on conclusions drawn from the assessment.

SSC members were in agreement that the results of the assessment were not useful for management. However, the assessment was conducted properly and produced the best results

possible given the uncertainties of the data inputs. The SSC was split on whether to accept the assessment as the best available science, but passed the following motion.

By a vote of 12 to 8, the Committee accepts the SEDAR 43 Gray Triggerfish Assessment as the best available science.

Although the SEFSC provided OFL and ABC projections based on the assessment, SSC members felt that they could not use the assessment to make recommendations. However, the SSC was concerned about several negative trends in the assessment, including the continuing decline in SSB despite the fishing mortality rate being below MFMT (i.e., overfishing is not occurring).

By a vote of 19 to 1, the Committee expressed concerns about continued estimated low gray triggerfish recruitment, declining or level indices of abundance, and declining SSB estimates, despite nearly a decade of F being well below MFMT. Therefore, the Committee recommends OFL and ABC to continue at the current rebuilding levels and not based on assessment results that would produce much higher levels.

Finally, the SSC voted on status determination.

With one opposed, the Committee concludes that the gray triggerfish stock is not experiencing overfishing, but is overfished. The Committee further notes that the stock does not appear to be recovering under the current rebuilding plan.

The SSC noted that gray triggerfish is projected to miss its rebuilding deadline of 2017 even if the stock is closed to fishing. With the caveat that the yield projections were not accepted by the SSC, and are provided for reference only, projections from the SEFSC indicate that, if the stock is closed to all fishing, it will rebuild to the SSB at 30% SPR between 2020 and 2023. If fished at the maximum rate allowed under Amendment 37 (the yield when fishing at 75% of F_{30% SPR}), the stock is projected to rebuild between 2028 and 2035. This fishing rate is also consistent with the guidance in the National Standard 1 guidelines for stocks that have missed their rebuilding target date.

SSC members suggested that the most appropriate course of action is to establish a new rebuilding schedule. However, in order to provide OFL and ABC guidance, the SSC needs a benchmark assessment that produces credible reference points that adequately capture the productivity and dynamics of the stock. An alternative might be to use Tier 3b of the ABC control rule. This would set the OFL at the recent average catch level, and would set ABC at some level below the recent level. The SSC would like guidance from the Council on how to proceed.

SEDAR 47 Goliath Grouper Benchmark Assessment Preliminaries

Staff reviewed the Terms of Reference and schedule for the goliath grouper assessment SEDAR review panel workshop. Since this assessment is being conducted by the Florida FWC, SEDAR

is only responsible for the review workshop part of the assessment process. The assessment will use a catch-free model that is being modified from an earlier model by FWC and SEFSC staff. The Terms of Reference have also been modified to reflect that the catch-free model produces relative reference points rather than the MSY-based reference points that are produced by traditional methods. SEDAR is also requesting two volunteers from the SSC, one to act as the Review Panel Chair, and one to act as a reviewer on the Panel.

The following SSC members volunteered to serve as either the Chair or as a reviewer. The SEDAR Steering Committee will decide which SSC member will serve in which capacity.

- Mary Christman
- Robert Ellis

Note: Staff recommends that Mary Christman be the reviewer and that Robert Ellis be the Chair.

By acclamation, the SSC accepts the SEDAR 47 Review Workshop Terms of Reference as written.

The SSC had no opposition to the proposed assessment schedule

Integrated Ecosystem Assessment – Management Strategy Evaluation – Single Species

Bill Harford presented a demonstration of how Management Strategy Evaluation (MSE) could be applied to an ecosystem model to evaluate the impacts of various management strategies on single-species management. This process can incorporate simulations of a random episodic event such as a red tide event. By varying not only whether such an event occurs, but also when it occurs, MSE can provide a dynamic evaluation of possible management outcomes (Figure 6).

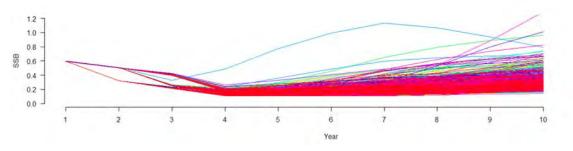


Figure 6. An example of applying multiple simulations to determine the likelihood that a specific management objective will be achieved. Each line in this spaghetti plot is an iteration of the simulation run (n = 1,000)

MSE can be used to evaluate the effect of different harvest control rules on multiple objectives by plotting the results relative to each objective on a radar graph (Figure 7).

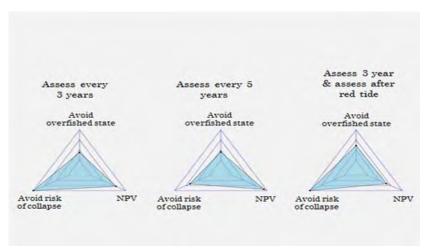


Figure 7. Example of evaluating various harvest control rules on multiple objectives. This example shows radar graphs with three objectives (net present value, avoid overfished state, avoid collapse), but the process is not limited to that number.

Examples of additional dimensions that could be incorporated into the evaluation include:

- Red tide magnitude & frequency
- Stock assessment uncertainty (imprecision)
- Frequency of assessment
- Alternative HCRs and scalar levels
- Relevant performance measures
- Implementation uncertainty (i.e. ACLs)

The presentation was not intended to be a comprehensive evaluation of the MSE process, but rather an introduction for which Dr. Harford was seeking feedback.

SSC members suggested that, in terms of determining relevant objectives to include, input from user groups and stakeholders should be a part of the process, and that more of the human element should be considered. Other factors were also noted for inclusion including the time lag between an ecological event and the ability of an assessment to capture the impact of the event on the stock. One suggestion was made to collaborate with the Reef Fish AP to determine relevant performance factors. However, it was noted that there will be tradeoffs between management needs and stakeholder needs.

One SSC member requested that the Ecosystem team provide the SSC with progress report presentations once or twice per year. A suggestion was made to form a working group. Dr. Cass-Calay noted that each of the regional Science Centers will be hiring an MSE expert. Dr. Cass-Calay added that the SEFSC was forming an MSE Advisory Committee, and suggested that perhaps there could be a Council representative on that committee.

Dr. Harford indicated that he would use the feedback that he received from the SSC to help further the development of the MSE process.

Review of SEDAR Assessment Schedule

Staff reviewed the proposed SEDAR assessment schedule for 2015-2018. Some SSC members questioned the limited number of species included in the Data Poor Workshop scheduled for 2016. Staff noted that the number of species included was the most that the Science Center felt it could handle. A suggestion was made to postpone the 2016 greater amberjack update assessment for year in order to get more landings data under the current regulations. Another suggestion was to make a gag standard assessment a priority rather than the gag update assessment currently scheduled for 2016. However, Julie Neer informed the SSC that the 2016 schedule has been finalized. In addition, while 2017 and 2018 are still proposed schedules, the major emphasis for those years will be to update existing assessments with the MRIP adjusted recreational catch data.

(Note: Part of the reason for requesting a gag standard assessment was so the SSC could consider changing some of the output parameters such as using total SSB rather than female SSB to determine stock status. However, in discussions with Dr. Neer after the meeting, it appears that this may be possible within the context of an update assessment.)

Tentative 2016 SSC Meeting Dates

Staff reviewed the tentative dates for the 2016 SSC meetings. Meetings are generally scheduled three weeks before each Council meeting. A suggestion was made to consider moving the January 6-8, 2016 SSC meeting to December so it would occur before the holidays rather than afterwards. However, more SSC members have meeting conflicts in December than in January, so it was decided to keep the January meeting as scheduled.

One SSC member asked that we consider holding some of the SSC meetings in locations other than Tampa, noting that due to the size of the SSC, meetings can no longer be held in the Council's conference room.

Other Business

Council staff noted that it was working on an options paper for revising the ABC control rule based on the previous work of the SSC and the previous ABC Control Rule Working Group. The Executive Director has suggested that the ABC Control Rule Working Group, which has not met for some time, be reconstituted, consisting only of selected SSC members and staff, to assist staff in the preparation of the options paper. The SSC Chair requested that staff come back in January with more detailed information as to what issues and objectives are to be addressed by the proposed working group.

SSC Members Present

Standing SSC

Luiz Barbieri, Chair Walter Keithly Joe Powers, V. Chair Kai Lorenzen Harry Blanchet Paul Mickle Benjamin Blount William Patterson Mary Christman Sean Powers Bob Gill Ken Roberts David Griffith Steven Scyphers Jack Isaacs Robert Shipp

Special Reef Fish SSC

Jason Adriance James Drymon Robert Ellis Jennifer Herbig John Mareska

Council Staff

Jeff Isely

Others

Dustin Addis, FWCC/FWRI Steven Atran John Froeschke Shannon Calay, NMFS/SEFSC **Doug Gregory** Michael Drexler, Ocean Conservancy

James Tolan

Ryan Rindone Emily Dudash, UF Charlotte Schiaffo Claudia Friess, UF **Carrie Simmons** Alicia Frudakis, UF

Arnaud Gruss, NMFS/SEFSC

Council Representative Chad Hanson, Pew Environment Group John Greene

Bill Harford, NMFS/SEFSC

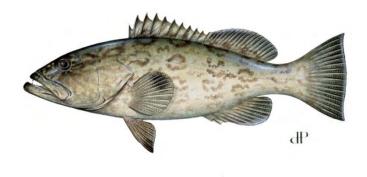
Holden Harris, UF Susana Hervas, UF Paul Manoval, UF Julie Neer, SEDAR Charlotte Nowak, UF Melanie Rider, UF

Matthew Smith, NMFS/SEFSC

Chris Swanson, UF

Courtney Stachowiak, UF

Modifications to Gag Minimum Size Limits, Recreational Season and Black Grouper Minimum Size Limits



GAG

Mycteroperca microlepis

Draft Framework Action to the Fishery Management Plan for the Reef Fish Resources of the Gulf of Mexico

October 2015





This is a publication of the Gulf of Mexico Fishery Management Council Pursuant to National Oceanic and Atmospheric Administration Award No. NA15NMF4410011.



ENVIRONMENTAL ASSESSMENT COVER SHEET

Name of Action

Framework Action to Modify Gag Minimum Size Limits and Recreational Season, and Black Grouper Minimum Size Limits

Responsible Agencies and Contact Persons

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Type of Action

| () Administrative | () Legislative |
|--------------------|-----------------|
| (X) Draft | () Final |

ABBREVIATIONS USED IN THIS DOCUMENT

ABC acceptable biological catch

ACL annual catch limit
ACT annual catch target
AM accountability measure

AP advisory panel

CEA cumulative effects analysis

CEQ Council on Environmental Quality

Council Gulf of Mexico Fishery Management Council

CPUE catch-per-unit-effort CS consumer surplus

CZMA Coastal Zone Management Act
EA environmental assessment
EEZ exclusive economic zone
EFH essential fish habitat

EIS environmental impact statement

E.O. environmental justice E.O. Executive Order

ESA Endangered Species Act

FEIS final environmental impact statement

FMP fishery management plan

FWCC Florida Fish and Wildlife Conservation Commission

GMFMC Gulf of Mexico Fishery Management Council

Gulf of Mexico gw gutted weight

HAPC habitat area of particular concern

IFQ individual fishing quota

IRFA initial regulatory flexibility analysis

km² square kilometers LNG liquefied natural gas

Magnuson-Stevens Act Magnuson-Stevens Fishery Conservation and Management Act

MMPA Marine Mammal Policy Act
MOU memorandum of understanding

mp million pounds

MRFSS Marine Recreational Fisheries Statistics Survey MRIP Marine Recreational Information Program

MSST minimum stock size threshold

NEPA National Environmental Protection Act

nm² square nautical miles

NHPA National Historic Preservation Act
NMFS National Marine Fisheries Service

NOAA National Oceanic and Atmospheric Administration

NOR net operating revenue

NRFCC National Recreational Fisheries Coordination Council

OFL overfishing limit
OY optimum yield
PS producer surplus

RDT recreational decision tool
RFA Regulatory Flexibility Act
RIR regulatory impact review

SEDAR Southeast Data, Assessment, and Review process

SEFSC Southeast Fisheries Science Center SERO NMFS Southeast Regional Office

SFA Sustainable Fisheries Act

SRHS Southeast region headboat survey

SSB spawning stock biomass

SSC Scientific and Statistical Committee

TAC total allowable catch

TL total length

USFWS U.S. Fish and Wildlife Service VEC valued environmental components

WTP willingness to pay

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CHAPTER 1. INTRODUCTION

1.1 Background

In 2009 a gag update assessment under the Southeast Data, Assessment and Review (SEDAR) program (SEDAR 10 Update 2009) indicated the gag stock size had declined since 2005. A large part of the decline was attributed to an episodic mortality event in 2005 (most likely associated with red tide) that resulted 18% of the gag stock being killed in addition to the normal natural and fishing mortalities. The update assessment indicated the Gulf gag stock was both overfished and undergoing overfishing, and the Gulf of Mexico Fishery Management Council (Council) was informed of this status determination in August 2009. In response, an interim rule was implemented on January 1, 2009 to reduce overfishing of gag, followed by permanent rules under Amendment 30B (GMFMC 2008). Amendment 32 (GMFMC 2011a) subsequently established a formal rebuilding plan for gag not to exceed 10 years.

A benchmark assessment for gag completed in 2014 (SEDAR 33 2014) indicated that the gag stock was no longer overfished or undergoing overfishing, and had rebuilt to above its maximum sustainable yield level. However, in 2014 a major red tide event occurred off of the Florida west coast in the region of greatest gag abundance. Due to uncertainty about the impact of this red tide event on the gag stock, the Scientific and Statistical Committee (SSC) recommended a conservative acceptable biological catch (ABC) that assumed the 2014 red tide event would have the same impact on the gag stock as the 2005 event. The Council requested that the SSC reevaluate its ABC recommendation, and in January 2015 the SSC received an analysis of the red tide event from the Florida Fish and Wildlife Research Institute which indicated that the impact of the 2014 red tide event was only 4% to 7% of the 2005 event. With this new information, the SSC revised its recommended ABCs based on a projection scenario that assumed no significant impact from the 2014 red tide event.

A benchmark assessment for black grouper was conducted by the Florida Fish and Wildlife Research Institute in 2010 (SEDAR 19 2010). Based on genetic studies, black grouper are considered a single black grouper stock in southeast U.S. waters. Spawning season is February through April. The assessment was conducted using ASAP2, an age-structured assessment program, although a surplus production model (ASPIC) was also run for comparison. Both males and females were included in the spawning stock biomass estimates, and a proxy for F_{MSY} was used ($F_{30\% SPR}$) as specified in the 1999 Generic Sustainable Fisheries Act Amendment. The assessment found that 50% of black grouper females are mature at 6.5 years old and 33.7 inches total length (TL). The length at which 50% transition from female to male occurs is 47.7 inches TL, and the age at which 50% of the specimens were male was 16.0 years. Results of the base model run found that the stock was neither overfished nor undergoing. The fishing mortality in 2008 was at half the overfishing limit ($F_{2008}/F_{30\% SPR} = 0.50$), and the spawning stock biomass level was 40% above the maximum sustainable yield level ($SSB_{2008}/SSB_{F30\% SPR} = 1.40$). Nearly all of the sensitivity runs also found the stock to be neither overfished nor undergoing overfishing.

Currently, the gag and black grouper recreational and commercial fishing regulations differ between the Gulf and South Atlantic Council waters and state and adjacent federal waters. These

regulations include size limits and closed seasons. This makes it difficult for fishermen to abide by different regulations in the south Florida area, particularly the Florida Keys, where anglers can fish in multiple jurisdictions on a single trip (Figure 1.1.1).

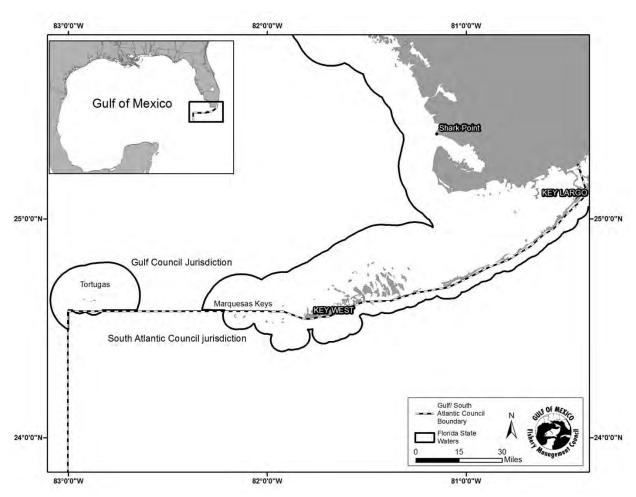


Figure 1.1.1. Inter-Council jurisdiction boundary between the Gulf of Mexico and South Atlantic Councils. A full description of the inter-Council boundary can be found: 61 FR 32540, June 24, 1996, as amended at 63 FR 7075, February 12, 1998 or (CFR 600.105).

Another issue deals with the reporting of black grouper and gag recreational landings in Monroe County, Florida (Tables 1.1.1 and 1.1.2). Monroe County falls in the middle of two regions with Gulf of Mexico to the west and the South Atlantic to the east. Monroe County recreational landings are collected from two different recreational landings surveys: 1) Marine Recreational Information Program (MRIP) for private, charter, and shore trips and 2) Southeast Region Headboat Survey for headboat trips. MRIP landings in Monroe County are not able to be distinguished between Gulf of Mexico and South Atlantic regions. The assessments for black grouper and gag assumed that the majority of the Monroe County MRIP landings come from the South Atlantic region. Therefore, all of the MRIP landings from Monroe County are counted towards the South Atlantic annual catch limit (ACL). The Headboat Survey collects more specific fishing location information, and allows the headboat landings to be separated between the Gulf of Mexico and South Atlantic regions. Therefore, for both species the headboat

landings in the Gulf of Mexico region of Monroe County are added to the Gulf of Mexico ACL, and the headboat landings in the South Atlantic region of Monroe County are added to the South Atlantic ACL. However, the majority (99%) of the headboat landings in Monroe County for both black grouper and gag occur in the South Atlantic region.

Table 1.1.1. Gag recreational landings by region, 2010-2014 in lbs gw.

| Gag Recreational Landings by Region | | | | | | |
|-------------------------------------|--------------------------------------|--|-----------|-----------------|----------|--|
| | Monroe County MRIP+Headboat SA | Monroe County Headboat only Gulf | West FL | FL Panhandle/AL | TX/LA/MS | |
| 2010 | 1,064 | <2,500* | 1,246,151 | 433,186 | 8,598 | |
| 2011 | 1,007 | <400* | 427,043 | 305,511 | 23,773 | |
| 2012 | 2,449 | <400* | 552,192 | 468,609 | 3,050 | |
| 2013 | 1,135 | 0 | 1,124,003 | 398,225 | 4,896 | |
| 2014 | 19,839 | 0 | 683,351 | 222,252 | 2,237 | |
| % by Gulf Region | n/a | <1% | 68% | 31% | 1% | |

Source: NFMS-SERO. Monroe County MRIP landings are counted as South Atlantic landings, while headboat landings are split between the Gulf and South Atlantic. *Exact Monroe County Gulf headboat landings are not shown for reasons of confidentiality. FL Panhandle is defined as Escambia to Dixie County. West FL is defined as Levy to Collier County.

Table 1.1.2. Black grouper recreational landings by region, 2010-2014 in lbs gw.

| Black Grouper Recreational Landings by Region | | | | | | |
|---|---|--|---------|-----------------|----------|--|
| | Monroe County MRIP+Headboat S. Atlantic | Monroe County Headboat only Gulf | West FL | FL Panhandle/AL | TX/LA/MS | |
| 2010 | 21,264 | <200* | 27 | 9 | 138 | |
| 2011 | 17,097 | <100* | 353 | 29 | 127 | |
| 2012 | 51,894 | <200* | 391 | 24,959 | 503 | |
| 2013 | 31,459 | 0 | 2,922 | 0 | 311 | |
| 2014 | 49,585 | 0 | 348 | 0 | 397 | |
| % by Gulf Region | n/a | 1% | 13% | 81% | 5% | |

Source: NFMS-SERO. Monroe County MRIP landings are counted as South Atlantic landings, while headboat landings are split between the Gulf and South Atlantic. *Exact Monroe County Gulf headboat landings are not shown for reasons of confidentiality. FL Panhandle is defined as Escambia to Dixie County. West FL is defined as Levy to Collier County.

Gulf of Mexico Fishery Management Council

- Responsible for conservation and management of fish stocks.
- Consists of 11 voting members who are appointed by the Secretary of Commerce, 1
 voting member representing each of the five Gulf states, and the Regional
 Administrator for the National Marine Fisheries Service Southeast Region.
- Responsible for developing fishery management plans and recommending regulations to the National Marine Fisheries Service for implementation.

National Marine Fisheries Service

- Responsible for preventing overfishing while achieving optimum yield.
- Approves, disapproves, or partially approves Council recommendations.
- Implements regulations.

1.2 Purpose and Need

The purpose is to address inconsistencies in recreational minimum size limits for gag and black grouper in South Atlantic and Gulf of Mexico waters; and modify the gag recreational fishing season to allow the ACL in the Gulf of Mexico to be based on the SEDAR 33 benchmark stock assessment.

The need is to allow the recreational sector to harvest gag and black grouper at a level consistent with achieving optimum yield while preventing overfishing, to address social and economic impacts of keeping the recreational gag fishing season open to achieve optimum yield, and to minimize confusion among anglers over inconsistent size regulations for gag and black grouper.

1.3 History of Management

Federal management of gag began in November 1984 with the implementation of the Reef Fish Fishery Management Plan and its associated environmental impact statement (EIS). The initial regulations, designed to rebuild declining reef fish stocks, included prohibitions on the use of fish traps, roller trawls, and powerhead-equipped spear guns within an inshore stressed area and directed the National Marine Fisheries Service (NMFS) to develop data reporting requirements in the reef fish fishery.

In July 1985, the Florida Marine Fisheries Commission (now Florida Fish and Wildlife Conservation Commission - FWCC) established a Florida state regulation to set a minimum size limit of 18 inches total length for gag, black grouper, and several other shallow-water grouper species. In December 1986 FWCC implemented a state recreational bag limit of five grouper per

person per day, with an off-the-water possession limit of 10 per person, for any combination of groupers excluding rock hind and red hind.

Amendment 1 (EA/RIR/IRFA), implemented February 21, 1990, established several reef fish management measures including a 20-inch total length (TL) minimum size limit on red grouper, Nassau grouper, yellowfin grouper, black grouper, and gag. Florida modified its regulations in 1990 to be consistent with the federal regulations.

An August 1999 regulatory amendment, implemented June 19, 2000, increased the commercial size limit for gag and black grouper from 20 to 24 inches TL, increased the recreational size limit for gag from 20 to 22 inches TL, prohibited commercial sale of gag, black, and red grouper each year from February 15 to March 15 (during the peak of gag spawning season), and established two marine reserves (Steamboat Lumps and Madison-Swanson) that are closed year-round to fishing for all species under the Council's jurisdiction. An additional action to further increase the recreational minimum size limit for gag and black grouper by one inch per year until it reached 24 inches TL was disapproved by NMFS. [65 FR 31827].

On August 11, 2009, the Council was notified by NMFS that the Gulf of Mexico gag stock was both overfished and undergoing overfishing based on the results of a 2009 update stock assessment. The remaining summary focuses on the history of gag management since the stock was declared overfished. For a full history of grouper management, refer to Amendment 30B, History of Management Activities Affecting Grouper Harvest (GMFMC 2008).

Regulatory Actions Since Gag Stock Was Declared Overfished

A rule under the Endangered Species Act was implemented October 16, 2009 that prohibits bottom longlining for Gulf reef fish east of 85°30'W longitude (near Cape San Blas, Florida) shoreward of the 35-fathom depth contour, and it restricts the number of hooks on board to 1,000 hooks per vessel with no more than 750 hooks being fished or rigged for fishing at any given time. The rule replaced the 50 fathom boundary emergency rule in order to relieve social and economic hardship on longline fishermen who were prevented from fishing for shallow-water grouper by the emergency rule, and to keep fishing restrictions consistent with the Amendment 31 actions in place while proposed Amendment 31 is reviewed. [74 FR 53889].

Amendment 29 (EA/RIR/IRFA), implemented January 1, 2010, established an IFQ system for the commercial grouper and tilefish fisheries.

In response to an uncontrolled oil spill resulting from the explosion on April 20, 2010 and subsequent sinking of the Deepwater Horizon oil rig approximately 36 nautical miles (41 statute miles) off the Louisiana coast, NMFS issued an emergency rule to temporarily close a portion of the Gulf of Mexico exclusive economic zone (EEZ) to all fishing [75 FR 24822]. The initial closed area extended from approximately the mouth of the Mississippi River to south of Pensacola, Florida and covered an area of 6,817 square statute miles. The coordinates of the closed area were subsequently modified periodically in response to changes in the size and location of the area affected by the spill. At its largest size on June 1, 2010, the closed area

covered 88,522 square statute miles, or approximately 37 percent of the Gulf of Mexico EEZ. This closure was implemented for public safety.

Amendment 30B (FEIS/RIR/IRFA), implemented May 2009, established annual catch limits (ACLs) and accountability measures (AMs) for gag and red grouper, and managed shallow-water grouper to achieve optimum yield and improve the effectiveness of federal management measures. The amendment (1) defined the gag minimum stock size threshold (MSST) and optimum yield (OY); (2) set interim allocations of gag and red grouper between recreational and commercial fisheries; (3) made adjustments to the gag and red grouper total allowable catches (TACs) to reflect the current status of these stocks; (4) established ACLs and AMs for the commercial and recreational red grouper fisheries, commercial and recreational gag fisheries, and commercial aggregate shallow-water grouper fishery; (5) adjusted recreational grouper bag limits and seasons; (6) adjusted commercial grouper quotas; (7) reduced the red grouper commercial minimum size limit; (8) replaced the one month February 15 through March 14 commercial grouper closed season with a four month seasonal area closure at the Edges, a 390 square nautical mile area in the dominant gag spawning grounds; (9) eliminated the end date for the Madison-Swanson and Steamboat Lumps marine reserves; and (10) required that vessels with federal commercial or charter reef fish permits comply with the more restrictive of state or federal reef fish regulations when fishing in state waters.

Amendment 31 (FEIS/RIR/IRFA), implemented May 26, 2010, (1) prohibited the use of bottom longline gear shoreward of a line approximating the 35-fathom contour from June through August; (2) established a longline endorsement; and (3) restricted the total number of hooks that may be possessed onboard each reef fish bottom longline vessel to 1,000, only 750 of which may be rigged for fishing. The boundary line was initially moved from 20 to 50 fathoms by emergency rule effective May 18, 2009 to protect endangered sea turtles. That rule was replaced on October 16, 2009 by a rule under the Endangered Species Act moving the boundary to 35 fathoms and implementing the maximum hook provisions.

While management measures for the gag rebuilding plan were being developed (**Amendment 32**), an interim rule was published on December 1, 2010 [75 FR 74654], to reduce gag landings consistent with ending overfishing. This interim rule implemented conservative management measures while a rerun of the update stock assessment was being completed. At issue was the treatment of dead discarded fish in the assessment. The rule reduced the commercial quota to 100,000 pounds gutted weight, suspended the use of red grouper multi-use individual fishing quota allocation so it would not be used to harvest gag, and to temporarily halted the recreational harvest of gag until recreational fishing management measures being developed in Amendment 32 could be implemented to allow harvest at the appropriate levels.

The gag 2009 update stock assessment was rerun in December 2010 addressing the problems with discards identified earlier in 2010. This assessment was reviewed in January 2011 by the Council's Scientific and Statistical Committee and presented to the Council at their February 2011 meeting. The assessment indicated that the gag commercial quota implemented in the December 1, 2010, interim rule could be increased and that a longer recreational season could be implemented. In response, the Council requested an interim rule while they continued to work on long-term measures including a gag rebuilding plan in Amendment 32. The interim rule set

the commercial gag quota at 430,000 pounds gutted weight (including the 100,000 pounds previously allowed) for the 2011 fishing year, and temporarily suspended the use of red grouper multi-use individual fishing quota (IFQ) allocation so it cannot be used to harvest gag. It also set a two-month recreational gag fishing season from September 16 through November 15. This temporary rule was effective from June 1, 2011 through November 27, 2011, and was extended for another 186 days or until Amendment 32 was implemented [76 FR 31874].

Amendment 32 (EIS/RIR/RFA), implemented March 12, 2012, established a rebuilding plan for gag that would rebuild the stock in 10 years or less. The stock-ACL was set at the yield corresponding to the annual estimate of maximum sustainable yield, and the stock-annual catch target (ACT) was set at the yield corresponding to optimum yield. The stock ACL and ACT were then allocated to the recreational and commercial sectors at 61% and 39%. The initial reduction in gag catch levels resulted in a large decrease in the commercial quota, from 1.410 million pounds gutted weight (mp gw) to 0.430 mp gw (Table 1.3.1). This created a concern that, once the grouper IFQ system was implemented in 2012, there would be insufficient shares to accommodate the commercial take of gag, forcing an increase in regulatory discards and additional discard mortality. This additional discard mortality had not been taken into consideration in the stock assessment. Therefore, the commercial gag ACT was reduced by an additional 14% to account for dead discards as a result of insufficient gag IFQ shares that had not been accounted for in the assessment. This adjusted ACT became the commercial gag quota. In addition, the amendment revised the use of multi-use IFQ shares and reduced the commercial gag minimum size limit to 22 inches total length (TL), also to reduce discards. The amendment set the recreational gag season as July 1 through October 31, with a 22-inch TL minimum size limit and a 2-fish bag limit within the 4-fish aggregate grouper bag limit. The amendment also implemented overage adjustments for the gag recreational sector while the stock was under a rebuilding plan.

Table 1.3.1. Gag ACL, ACT and actual landings in mp gw for 2009-2014.

| | Commercial | | | Recreational | | |
|------|--------------|--------------------|-----------------|--------------|----------|-----------------|
| Year | Comm. ACL | Comm. ACT/Quota | Actual landings | Rec. ACL | Rec. ACT | Actual landings |
| 2009 | na | 1.320 | 0.715 | 2.590 | 2.060 | 1.543 |
| 2010 | na | 1.410 | 0.497 | 2.640 | 2.140 | 1.664 |
| 2011 | 0.616 | 0.430 | 0.319 | 0.964 | 0.781 | 0.660 |
| 2012 | 0.788 | 0.567 | 0.523 | 1.232 | 1.031 | 0.939 |
| 2013 | 0.956 | 0.708 | 0.575 | 1.495 | 1.287 | 1.435 |
| 2014 | 1.110 | 0.835 | 0.586 | 1.720 | 1.519 | 0.821 |

Source: NMFS SERO, Amendment 32 (2011a), and SEDAR 33 (2014). Prior to 2011 there was not a commercial ACL.

Amendment 38 (EA/RIR/RFA) was implemented March 1, 2013. It revised the post-season recreational accountability measure that reduces the length of the recreational season for all shallow-water grouper in the year following a year in which the ACL for gag or red grouper is exceeded. The modified accountability measure reduces the recreational season of only the species for which the ACL was exceeded.

A December 2012 framework action (GMFMC 2012), implemented July 5, 2013, revised the recreational gag open season. It would still open on July 1, but instead of closing on October 31 it would close on the date when the ACT is projected to be reached. This framework action also modified the February 1 through March 31 recreational closed season on shallow-water grouper to apply only on waters beyond the 20-fathom boundary. In waters shoreward of 20 fathoms, recreational shallow-water grouper fishing would remain open except for gag, which is subject to a separate closed season. This modified closed season took effect with the 2014 calendar year.

An April 2013 framework action (GMFMC 2013), implemented September 3, 2013, removed the requirement to have onboard and use venting tools when releasing reef fish.

Regulatory Amendments, Emergency and Interim Rules

A rule under the Endangered Species Act was implemented October 16, 2009 that prohibits bottom longlining for Gulf reef fish east of 85°30'W longitude (near Cape San Blas, Florida) shoreward of the 35-fathom depth contour, and it restricts the number of hooks on board to 1,000 hooks per vessel with no more than 750 hooks being fished or rigged for fishing at any given time. The rule replaced the 50 fathom boundary emergency rule in order to relieve social and economic hardship on longline fishermen who were prevented from fishing for shallow-water grouper by the emergency rule, and to keep fishing restrictions consistent with the Amendment 31 actions in place while proposed Amendment 31 is reviewed [74 FR 53889].

In response to an uncontrolled oil spill resulting from the explosion on April 20, 2010 and subsequent sinking of the Deepwater Horizon MC252 oil rig approximately 36 nautical miles (41 statute miles) off the Louisiana coast, NMFS issued an emergency rule to temporarily close a portion of the Gulf of Mexico EEZ to all fishing [75 FR 24822]. The initial closed area extended from approximately the mouth of the Mississippi River to south of Pensacola, Florida and covered an area of 6,817 square statute miles. The coordinates of the closed area were subsequently modified periodically in response to changes in the size and location of the area affected by the spill. At its largest size on June 1, 2010, the closed area covered 88,522 square statute miles, or approximately 37 percent of the Gulf of Mexico EEZ. This closure was implemented for public safety.

While management measures for the gag rebuilding plan were being developed (Amendment 32), an interim rule was published on December 1, 2010 [75 FR 74654], to reduce gag landings consistent with ending overfishing. This interim rule implemented conservative management measures while a rerun of the update stock assessment was being completed. At issue was the treatment of dead discarded fish in the assessment. The rule reduced the commercial quota to 100,000 pounds gutted weight, suspended the use of red grouper multi-use individual fishing quota allocation so it would not be used to harvest gag, and to temporarily halted the recreational harvest of gag until recreational fishing management measures being developed in Amendment 32 could be implemented to allow harvest at the appropriate levels.

The gag 2009 update stock assessment was rerun in December 2010 addressing the problems with discards identified earlier in 2010. This assessment was reviewed in January 2011 by the Council's Scientific and Statistical Committee (SSC) and presented to the Council at their

February 2011 meeting. The assessment indicated that the gag commercial quota implemented in the December 1, 2010 interim rule could be increased and that a longer recreational season could be implemented. In response, the Council requested an interim rule while they continued to work on long-term measures including a gag rebuilding plan in Amendment 32. The interim rule set the commercial gag quota at 430,000 lbs gw (including the 100,000 lbs previously allowed) for the 2011 fishing year, and temporarily suspended the use of red grouper multi-use IFQ allocation so it could not be used to harvest gag. It also set a two-month recreational gag fishing season from September 16 through November 15. This temporary rule was effective from June 1, 2011 through November 27, 2011, and was extended for another 186 days or until Amendment 32 was implemented [76 FR 31874].

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An April 2013 framework action (GMFMC 2013), implemented September 3, 2013, removed the requirement to have venting tools onboard and to use them when releasing reef fish.

1.4 Gag ACL and ACT

Amendment 32 established a rebuilding plan for gag, including yield streams for increasing ACLs and ACTs for 2012 through 2015. For 2015, the rebuilding plan set a stock ACL of 3.12 mp gw. This was an increase of 300,000 lbs, or 10.6%, above the 2014 ACL. The resulting sector ACLs and ACTs for 2015 are shown in Table 1.4.1.

Table 1.4.1. Gag acceptable biological catch (ABC), ACL, and annual catch target (ACT) for 2015 from the gag rebuilding plan (Amendment 32).

| | | Recreational | | Comm | ercial |
|-------|---------------|--------------|-------|--------|----------|
| Year | ABC/Stock ACL | ACL | ACT | ACL AC | CT/Quota |
| 2015+ | 3.12 | 1.903 | 1.708 | 1.217 | 0.939 |

Source: Amendment 32 (GMFMC 2011a). Units are in million pounds gutted weight. The stock ACL is allocated 61% recreational, 39% commercial.

The 2014 benchmark assessment (SEDAR 33, 2014) indicated that the gag stock was no longer overfished or experiencing overfishing as of 2012. However, as discussed in Section 1.1, in 2014 a major red tide event occurred off of the Florida west coast in the region of greatest gag abundance. After reviewing an analysis of the red tide event from the Florida Fish and Wildlife Research Institute, the SSC concluded that it would have no significant impact on the gag stock, and recommended an overfishing limit (OFL) and acceptable biological catch (ABC) for 2015-2017 based on the rebuilt stock status. The resulting yields from the ABC control rule produced

ABC projections that were very close to the OFL yields. The SSC felt that this buffer was too small to provide protection against overfishing (exceeding OFL). Therefore, the SSC decided to recommend a yield stream based on the optimum yield (OY) yields (Table 1.4.2).

Table 1.4.2. OFL, ABC, and OY projections for gag based on SEDAR 33 benchmark assessment and assuming no red tide mortality in 2014.

| assessment and assuming no rea trae mortality in 2011. | | | | | |
|--|------|-----------------------|----------------------------|--|--|
| Year | OFL | ABC from control rule | OY (ABC recommended by SSC | | |
| 2015 | 6.77 | 6.43 | 5.21 | | |
| 2016 | 5.84 | 5.57 | 4.75 | | |
| 2017 | 5.38 | 5.13 | 4.57 | | |
| Equilibrium | 4 45 | 4 21 | 4 46 | | |

Units are in million pounds gutted weight.

Upon review of the SEDAR 33 assessment and ABC recommendations, both recreational and commercial members of the Reef Fish Advisory Panel (Reef Fish AP) pointed out they have not observed the rapid recovery of the gag stock that the stock assessment has indicated. The Reef Fish AP therefore recommended that the Council set a pre-cautionary approach to the gag ACL (GMFMC 2014).

The SSC subsequently reviewed several catch-per-unit-effort (CPUE) indices for gag updated through 2014. The updated indices indicated that recreational landings per angler hour have been declining since 2010 for headboats, and since 2008 for charter boats and private vessels. Fishery-independent indices have also shown declining CPUE indices in recent years. In addition, an index of recruitment success for northeastern Gulf of Mexico gag grouper by year based on a model that uses oceanographic conditions to project larval transport model runs projects below average recruitment since 2010 (Figure 1.4.1) (GMFMC 2015).

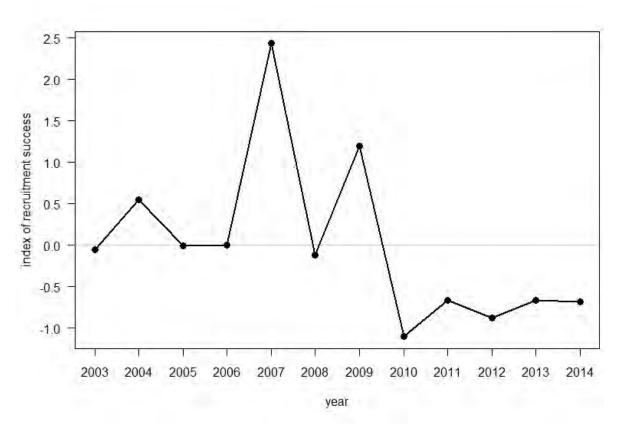


Figure 1.4.1. Expected recruitment anomalies for northeastern Gulf of Mexico gag grouper by year based solely on the effects of oceanographic conditions (update from SEDAR33-DW18).

As a result of the updated analysis, the SSC recommended that, given the recent declines in fishery dependent and fishery independent indices of abundance for gag, that the Council use caution when setting ACL and ACT for 2015-2017.

Based on the recommendations of the Reef Fish AP and the SSC, plus public testimony presented at the June 2015 Council meeting, the Council voted not to change the gag ACL or ACT at this time. The status quo ACLs and ACTs shown in Table 1.4.1 will remain in effect, and all alternatives to change them have been moved to the considered but rejected section of this framework action.

A SEDAR gag update assessment is tentatively scheduled to be conducted in 2016, with results presented to the Council in March 2017.

CHAPTER 2. MANAGEMENT ALTERNATIVES

2.1 Action 1 – Gag Recreational Minimum Size Limit

Alternative 1. (No Action) The recreational minimum size limit for gag remains at 22 inches total length (TL).

Preferred Alternative 2. Set the recreational minimum size limit for gag at 24 inches TL.

Discussion:

This action evaluates whether the gag recreational minimum size limit in the Gulf, currently 22 inches TL, should be made consistent with the minimum size limit in the South Atlantic, which is 24 inches TL. Thus, the range of alternatives is based on retaining inconsistent size limits (Alternative 1) or adopting a minimum size limit to be consistent with the South Atlantic's minimum size limit (Preferred Alternative 2). Therefore, only the Preferred Alternative is considered reasonable to address the purpose and need.

These alternatives also encompass the range of estimated sizes at 50% female gag maturity. The SEDAR 33 assessment estimated the size at 50% maturity to be 22 inches TL, but earlier assessments estimated the size at 24 inches TL.

An additional issue to consider is the misidentification of gag and black grouper by recreational fishermen. Black grouper and gag are similar looking, and gag are often called black grouper in the northern Gulf. This can result in confusion if gag and black grouper have different regulations. For this reason, Action 1 (gag minimum size limit) and Action 2 (black grouper minimum size limit) have the same range of alternatives. On a percentage basis, Monroe County landings of gag account for less than 1 percent of the Gulf gag landings (Table 1.1.1), but 85% of the black grouper landings (Table 1.1.2).

Alternative 1, No Action, leaves the gag recreational minimum size limit at 22 inches TL. This is inconsistent with the South Atlantic minimum size limit which was set to 24 inches TL for both the recreational and commercial sector in 1999 (SAFMC 1999). The 22-inch TL recreational minimum size limit was implemented in the Gulf of Mexico (Gulf) for gag and black grouper in 2000 (GMFMC 1999). At that time the commercial minimum size limit for gag and black grouper was set at 24 inches TL which was estimated to be the size at which 50% of female gag maturity (Schirripa and Goodyear 1994). The Council proposed a further increase in the recreational minimum size limit by one inch per year until it reached 24 inches TL. However, that proposal was disapproved by NMFS on the basis that setting both the commercial and recreational minimum size limits at 24 inches TL would disproportionately impact the recreational sector, which catches smaller fish on average than the commercial sector. In 2012, Amendment 32 reduced the commercial minimum size limit for gag to 22 inches TL to reduce discard mortality. More recent analysis has estimated the gag size at 50% female maturity to be 22 inches TL (SEDAR 33 2014). Therefore, Alternative 1 would keep the gag size limit at the size of 50% female maturity, but it would be inconsistent with the South Atlantic's 24-inch TL minimum size limit. For recreational fishermen in the south Florida area who fish in both Gulf and South Atlantic Council jurisdictions, this can create confusion as to which size limit should

be adhered to. In addition, while the state of Florida has a 22-inch TL size limit in state waters of the Gulf and a 24-inch TL size limit in the South Atlantic, the state's 24-inch TL size limit applies to state waters off Monroe County in both the Atlantic and Gulf.

Preferred Alternative 2 sets the gag recreational minimum size limit at 24 inches TL, which is consistent with South Atlantic's and State of Florida's Monroe County minimum size limit. However, it is inconsistent with the minimum size limit for the State of Florida north of Monroe County, plus Alabama, Mississippi, Louisiana, and Texas, which all have a 22-inch TL recreational minimum size limit in their state waters (unless the states also adopt size limit changes). As noted above, a 2000 proposal to increase the gag minimum size limit to 24 inches TL for both the commercial and recreational sectors was disapproved by NMFS on the basis that it would disproportionately impact the recreational sector, which catches smaller fish on average than the commercial sector. Although there still may be different impacts between the sectors in terms of regulatory discards, as discussed below, release mortality for gag in shallow water is fairly low, and an increase in the size limit could reduce the rate of retained yield and help to extend the recreational fishing season. Gag reach 22 inches TL at about 3.5 years and take about half a year to grow to 24 inches TL (Table 2.1.1).

Table 2.1.1. Gag size (inches TL) at age (years) based on growth function in SEDAR 33.

| Age | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|--------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Inches | 10 | 16 | 20 | 24 | 28 | 31 | 33 | 36 | 38 | 39 | 41 | 42 | 44 | 45 | 45 | 46 | 47 | 48 | 48 | 49 |

Increasing the minimum size limit will reduce the retained catch rate and extend the season (Tables 2.3.1 and 2.3.2), but will also increase regulatory discards and discard mortality. Discard mortality rates vary with depth. The 2006 gag stock assessment (SEDAR 10 2006) calculated the overall discard mortality for gag from all sources of recreational fishing at 21%. However, analysis conducted for the current SEDAR 33 (2014) assessment calculated a lower rate of mortality, 16% from headboats and charter vessels, and 12% from private recreational vessels (Table 2.1.2) (Sauls 2013).

Table 2.1.2. Calculated average depth of released gag by fishing fleet and associated discard mortality rate estimate.

| Fishing Fleet | Avg. depth (m) | Sauls (2013) % Mortality | SEDAR 10 (2006) % Mortality |
|----------------------|----------------|-----------------------------|--------------------------------|
| Vertical line | 31 | 0.27 | 0.57 |
| Longline | 58 | 0.27 | 0.76 |
| Headboat | 27 | 0.16 | 0.21 |
| Charter vessel | 25 | 0.16 | 0.21 |
| Private recreational | 17 | 0.12 | 0.21 |

From SEDAR 33 (2014), Table 5.2. Original source: Sauls 2013.

Given the speed at which gag grow from 22 inches TL to 24 inches TL, and a relatively low release mortality rate in shallow water, any increase in dead discards from increasing the size limit should be fairly minor.

2.2 Action 2 – Black Grouper Recreational Minimum Size Limit

Alternative 1. (No Action) The recreational minimum size limit for black grouper remains at 22 inches TL.

Preferred Alternative 2. Set the recreational minimum size limit for black grouper at 24 inches TL.

Discussion:

As with gag, the primary issue regarding this action is whether the black grouper recreational minimum size limit in the Gulf should be consistent with the size limit in the South Atlantic, which is 24 inches TL, and whether it should be consistent with the size limit for gag selected in Action 1. Black grouper and gag are similar looking, and gag are often called black grouper in the northern Gulf. This can result in confusion if gag and black grouper have different size limits. The range of alternatives is to be either consistent or remain inconsistent. Black grouper reach 50% female maturity at about 6.5 years of age, and at about 34 inches TL (Table 2.2.1). The minimum size limits being considered are both under the size of 50% female maturity. However, the SEDAR 19 black grouper stock assessment concluded that the black grouper stock is neither overfished nor undergoing overfishing. The fishing mortality in 2008 was at half the overfishing limit, and the spawning stock biomass level was 40% above the maximum sustainable yield level (SEDAR 19 2010). Therefore, it is unnecessary to reduce catch rates by increasing the size limit. In addition, black grouper are included as part of the ACL for "other" shallow-water grouper (black, scamp, yellowmouth, and yellowfin grouper). This aggregate ACL has never been reached, and from 2011 to 2013 black grouper contributed to only about 7% of the total recreational shallow water grouper landings (pers. comm. NMFS SERO). Since the issue is consistency of regulations, there are only two reasonable alternatives.

Alternative 1, No Action, leaves the black grouper recreational minimum size limit at 22 inches TL. This is inconsistent with the South Atlantic minimum size limit which was set to 24 inches TL for both the recreational and commercial sector in 1999 (SAFMC 1999), but is consistent with the commercial minimum size limit of 22 inches TL in the Gulf. As discussed under Action 1, the 22-inch TL recreational minimum size limit was implemented in the Gulf for gag and black grouper in 2000 (GMFMC 1999). The Council proposed a further increase in the recreational minimum size limit by one inch per year until it reached 24 inches TL. However, that proposal was disapproved by NMFS. For recreational fishermen in the south Florida area who fish in both Gulf and South Atlantic Council jurisdictions, the difference in minimum size limit regulations can create confusion as to which size limit should be adhered to. In addition, while the State of Florida has a 22-inch TL recreational size limit in state waters in the Gulf and a 24-inch TL recreational size limit in the South Atlantic, the 24-inch TL size limit applies to state waters off Monroe County in both the Atlantic and Gulf. Alabama, Mississippi, and Louisiana also have a 22 inch TL recreational minimum size limit for black grouper, while Texas has no black grouper size limit (Table 2.2.2). Black grouper are primarily a southern Florida stock, particularly a Monroe County stock (Table 2.1.2). Although landings of black grouper have been reported from the northern and western Gulf, gag are frequently referred to as black grouper, which can create confusion in properly identifying gag and black grouper.

Preferred Alternative 2 sets the black grouper recreational minimum size limit at 24 inches TL, which is consistent with the South Atlantic's minimum size limit and with the commercial minimum size limit in the Gulf. It is inconsistent with the minimum size limit for the State of Florida north of Monroe County, plus Alabama, Mississippi, and Louisiana, which all have a 22inch TL recreational minimum size limit in their state waters (unless the states also adopt size limit changes). Texas has no size limit for black grouper (Table 2.2.2). As noted above, a 2000 proposal to increase the black grouper minimum size limit to 24 inches TL for both the commercial and recreational sectors was disapproved by NMFS on the basis that it would disproportionately impact the recreational sector, which catches smaller fish on average than the commercial sector. However, the benefits of having a size limit that is consistent with both the proposed gag size limit and the South Atlantic and Florida state size limits off Monroe County may outweigh any negative impacts on catch rates. Furthermore, gag are sometimes landed as black grouper. Having the same size limit for gag and black grouper eliminates any possible confusion over species identification. Black grouper reach 22 inches TL at just under 3 years and take about half a year to grow to 24 inches TL (Table 2.2.1). Increasing the minimum size limit will reduce the retained catch rate, but since the season is already open year-round (except for a February – March closure in waters less than 20 fathoms), there will be no effect on season length. Increasing the minimum size limit will increase regulatory discards and discard mortality. Given the speed at which black grouper grow from 22 inches to 24 inches, any increase in discard mortality from increasing the size limit should be fairly minor.

Table 2.2.1. Black grouper size (inches TL) at age (years) based on growth function (in SEDAR 19)

| | 1 | | | | | | | | | | | | | | | | | | | |
|--------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Inches | 13 | 18 | 22 | 26 | 30 | 33 | 36 | 38 | 40 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 48 | 49 | 49 | 50 |

Increasing the minimum size limit will increase regulatory discards and discard mortality. The SEDAR 19 (2010) black grouper assessment used a base discard mortality rate of 20% for hook and line fishing. However, due to a lack of empirical data, sensitivity runs were performed that varied this estimate from 10 - 90%, and found that varying the discard mortality rate had a high impact on the results. A new black grouper standard assessment is planned for 2015-2016, under which the discard mortality rate estimate will be reevaluated. Despite the uncertainty regarding the discard mortality rate, given the speed at which black grouper grow from 22 inches to 24 inches, any increase in dead discards from increasing the size limit should be fairly minor.

Table 2.2.2. State recreational minimum size limits for gag and black grouper in inches TL

| | FL | AL | MS | LA | TX |
|---------------|-----|-----|-----|-----|------|
| Gag | 22" | 22" | 22" | 22" | 22" |
| Black Grouper | 22" | 22" | 22" | 22" | none |

2.3 Action 3 – Modifications to the Recreational Gag Fishing Season

Alternative 1: (No action) The recreational gag season will remain July 1 through December 2 (155 days) unless shortened due to a projection that the annual catch level (ACL) will be reached sooner.

Preferred Alternative 2: Remove the December 3-31 fixed closed season. The recreational gag season will remain open through the end of the year or until a projection that the ACL will be reached sooner¹. Note Alternative 3 or 4 may also be selected in combination with this alternative.

Alternative 3: Remove the January through June gag seasonal closure. Begin the season on January 1 and close when the recreational ACL is projected to be reached¹.

Option 3a. Maintain the February 1 through March 31 closed season on recreational harvest of gag seaward of the 20-fathom boundary. Fishing for gag will be allowed shoreward of the boundary during those months.

Option 3b. Remove the February 1 through March 31 closed season on recreational harvest of gag seaward of the 20-fathom boundary. Fishing for gag will be allowed in all federal waters during those months. The 20-fathom closure will continue to be in effect for other shallow-water grouper.

Option 3c. Close the gag recreational season from February 1 through March 31 in all Federal waters

Alternative 4: Remove the January through June gag seasonal closure. Set an opening date for the recreational gag season such that the ACL is projected to be reached on or after December 31 (based on the 2016 ACL).

Option 4a. Maintain the February 1 through March 31 closed season on recreational harvest of gag seaward of the 20-fathom boundary. Fishing for gag will be allowed shoreward of the boundary during those months if gag season is open.

Option 4b. Remove the February 1 through March 31 closed season on recreational harvest of gag seaward of the 20-fathom boundary. Fishing for gag will be allowed in all federal waters during those months if gag season is open. The 20-fathom closure will continue to be in effect for other shallow-water grouper.

Option 4c. Open January 1 through 31, close February 1 through March 31 to recreational harvest of gag in all federal waters, and re-open on the date such that the 2016 ACL is projected to be reached on or after December 31.

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¹ The recreational season closing date for gag is normally based on when the date when the ACL is projected to be reached. However, under the accountability measures for gag, if the recreational landings for gag exceed the ACL, then in the following year the season will close based on when the ACT is projected to be reached.

Discussion:

Gag have a protracted spawning season (December to May), but their peak spawning occurs during February-March in depths of 35 to 45 fathoms. There is currently a closed season for all shallow-water grouper from February 1 through March 31 of each year in offshore waters seaward of a series of boundary lines that approximate the 20-fathom depth contour (GMFMC 2012). During this period, recreational harvest of shallow-water grouper (red, black, gag, yellowfin, yellowmouth, and scamp) is prohibited in depths seaward of 20 fathoms. Shoreward of this boundary, harvest of shallow-water grouper is allowed, except for gag which is under a January 1 through June 30 closed season. If the open season for gag is modified to include days from February or March, that opening will apply only shoreward of the 20-fathom boundary during those days unless modified by options in the above alternatives. In waters seaward of 20 fathoms harvest would continue to be closed to all shallow-water grouper including gag.

Alternative 1 leaves the recreational gag season at its current dates of July 1 through December 2. Preliminary landings estimates for 2014 indicate that the recreational sector landed 870,720 lbs. of gag, just 48% of the 2014 ACL (1.72 mp), and 43% of the 2015 ACL (1.903 mp). Without changes to increase the number of fishing days in the recreational season, it is unlikely that the recreational sector will be able to catch its allocation.

Preferred Alternative 2 removes the December 3-31 fixed closed season. This alternative removes the December 3 closure date, allowing the season to remain open for any length of time or until the ACL (or ACT if season is under accountability measures) is projected to be reached. This alternative can be selected in combination with either **Alternative 3** or **Alternative 4**.

Alternatives 3 and 4 revise the recreational gag fishing season by modifying either the opening or closing date. Normally, the recreational gag season is closed on the date when the ACL is projected to be reached. However, if the ACL is exceeded, then under the accountability measures for gag, the following season is closed when the ACT is projected to be reached. Tables 2.3.1 and 2.3.2 show estimated season dates for Alternatives 3 and 4 under both ACL and ACT closures. However, given the low catch rates in recent years, it is probable that the season closure will be governed by the ACL, at least for the first year of implementation.

Alternative 3 sets a gag recreational season that opens on January 1 and closes when the recreational ACL is projected to be reached (unless accountability measures are in effect, in which case the closing date is based on when the ACT is projected to be reached). Option 3a leaves the February-March shallow-water grouper closed season beyond the 20-fathom boundary in place for gag and other shallow-water grouper. Gag recreational harvest would be closed seaward of the 20-fathom boundary but would be open shoreward of the boundary during these months. These days are counted as open days when calculating the number of days in the gag fishing season. Option 3b eliminates the February-March closed season seaward of the 20-fathom boundary for gag (but not for other shallow-water groupers), so that gag could be caught in all waters during this period. The 20-fathom boundary closure would remain in place for other shallow-water grouper. Option 3c closes February-March to harvest of gag in all waters (but not for other shallow-water groupers). The recreational gag season would open in January, close February and March, and then reopen on April 1 and remain open until the ACL is projected to be reached (or ACT if accountability measures are in effect). Table 2.3.1 shows the

projected season dates and number of fishing days under each combination of Action 1 size limit alternative and Action 2, **Alternative 3** option.

Alternative 4 sets an opening date for the gag recreational season that is projected to allow the 2016 gag season to remain open (other than fixed closures) through December 31 without exceeding the ACL. Option 4a leaves the February-March shallow-water grouper closed season beyond the 20-fathom boundary in place for gag and other shallow-water groupers. Gag recreational harvest would be closed seaward of the 20-fathom boundary but would be open shoreward of the boundary during these months if the gag season is open. These days are counted as open days when calculating the number of days in the gag fishing season. Option 4b eliminates the February-March closed season seaward of the 20-fathom boundary for gag (but not for other shallow-water groupers), so that gag could be caught in all waters during this period if the gag season is open. The 20-fathom boundary closure would remain in place for other shallow-water grouper. Option 4c closes February-March to harvest of gag in all waters (but not for other shallow-water groupers). The recreational gag season would open in January, close February and March, and then reopen on the date that is projected to allow the 2016 gag season to remain open (other than fixed closures) through December 31 without exceeding the ACL. Table 2.3.2 shows the projected season dates and number of fishing days under each combination of Action 1 alternative and Action 2, Alternative 4 option.

Under **Alternative 4**, the opening dates would only be calculated once, when first implemented. These opening dates would then remain in effect in future years unless modified in a framework action. Consequently, it is possible that an ACL (or ACT) closure could occur in future years if the ACL or ACT is reduced or if catch rates increase.

These season projections in the following tables are based on estimates for 2016 only and are subject to revision. The projection model does not account for effort shifting that may take place during a seasonal closure, nor does it consider any changes in the average size of gag over time. Additionally, reductions in harvest from closure dates are relative to future projected landings. Actual future landings may be higher or lower than projected, resulting in harvest reductions being over or underestimated.

Table 2.3.1. Estimated gag recreational seasons under combinations of Action 1 size limits and Action 3, Alternative 3 options.

| | | | Action 3 Alternative 3 Option | | | | | | | | |
|-----------------------|-----|---|---------------------------------|---|--|--|--|--|--|--|--|
| Minimum Size Limit | | Alt. 3a 20-fathom closure in effect | Alt. 3b No 20-fathom closure | Alt. 3c Feb-Mar closed in all waters | | | | | | | |
| 22 inches | ACL | 1/1-8/27 (239 days) | 1/1-8/23 (235 days) | 1/1-1/31 : 4/1-10/6 (220 days) | | | | | | | |
| TL | ACT | 1/1-8/15 (227 days) | 1/1-8/10 (222 days) | 1/1-1/31 : 4/1-8/28 (181 days) | | | | | | | |
| 24 inches | ACL | 1/1-12/9 (343 days) | 1/1-11/30 (334 days) | 1/1-1/31 :4/1-12/31 (306 days) | | | | | | | |
| TL | ACT | 1/1-11/2 (306 days) | 1/1-10/21 (294 days) | 1/1-1/31 : 4/1-11/30 (275 days) | | | | | | | |

Season closes at 12:01 am on the day following the last date of the season. The upper numbers are the estimated season dates and days to reach the ACL. The lower numbers (in italics) are the estimated season dates and days to reach the ACT. Seasons will be based on the ACL dates unless the ACL was exceeded in the previous year, in which case season dates will be based on the ACT.

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Table 2.3.2. Estimated gag recreational seasons under combinations of Action 1 size limits and Action 3. Alternative 4 options.

| | | | Action 3 Alternative 4 Options | | | | | | | | |
|-----------------------|-----|---|---------------------------------|---|--|--|--|--|--|--|--|
| Minimum Size Limit | | Alt. 4a 20-fathom closure in effect | Alt. 4b No 20-fathom closure | Alt. 4c Feb-Mar closed in all waters | | | | | | | |
| 22 inches | ACL | 5/28-12/31 (218 days) | 5/28-12/31 (218 days) | 5/28-12/31 (218 days) | | | | | | | |
| TL | ACT | 6/21-12/31 (194 days) | 6/21-12/31 (194 days) | 6/21-12/31 (194 days) | | | | | | | |
| 24 inches | ACL | 2/6-12/31 (329 days) | 2/19-12/31 (316 days) | 1/1-1/31 :4/1-12/31 (306 days) | | | | | | | |
| TL | ACT | 4/18-12/31 (258 days) | 4/18-12/31 (258 days) | 4/18-12/31 (258 days) | | | | | | | |

Season closes at 12:01 am on the day following the last date of the season. The upper numbers are the estimated season dates and days to reach the ACL. The lower numbers (in italics) are the estimated season dates and days to reach the ACT. Seasons will be based on the ACL dates unless the ACL was exceeded in the previous year, in which case season dates will be based on the ACT.

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CHAPTER 3. AFFECTED ENVIRONMENT

The actions considered in this amendment and associated environmental assessment (EA) would affect fishing in the Gulf of Mexico (Gulf), both in state and federal waters (Figure 3.1). Descriptions of the physical, biological, economic, social, and administrative environments are available in the Reef Fish Amendment 32 (GMFMC 2011b) and associated environmental impact statement (EIS). Information from this EIS is being incorporated herein by reference and the reader is directed to the document to obtain the information which is located at http://www.gulfcouncil.org/fishery_management_plans/index.php.

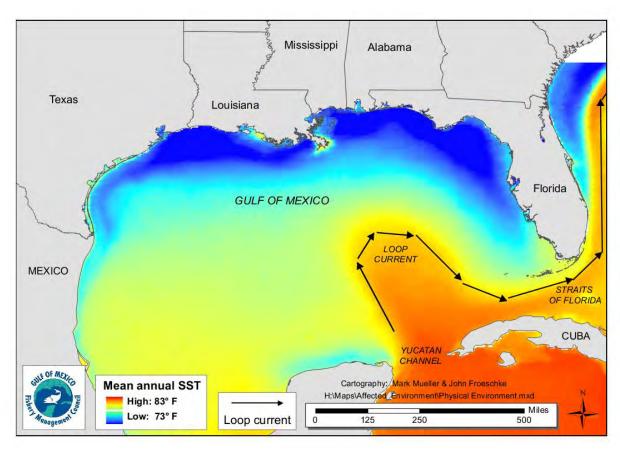


Figure 3.1. Physical environment of the Gulf including major feature names and mean annual sea surface temperature as derived from the Advanced Very High Resolution Radiometer Pathfinder Version 5 sea surface temperature data set (http://accession.nodc.noaa.gov/0072888)

3.1 Description of the Physical Environment

The Gulf has a total area of approximately 600,000 square miles (1.5 million km²), including state waters (Gore 1992). It is a semi-enclosed, oceanic basin connected to the Atlantic Ocean by the Straits of Florida and to the Caribbean Sea by the Yucatan Channel (Figure 3.1). Oceanographic conditions are affected by the Loop Current, discharge of freshwater into the northern Gulf, and a semi-permanent, anti-cyclonic gyre in the western Gulf. The Gulf includes both temperate and tropical waters (McEachran and Fechhelm 2005). Mean annual sea surface temperatures ranged from 73 through 83° F (23-28° C) including bays and bayous (Figure 3.1) between 1982 and 2009, according to satellite-derived measurements (NODC 2012: http://accession.nodc.noaa.gov/0072888). In general, mean sea surface temperature increases from north to south with large seasonal variations in shallow waters.

The physical environment for gag and black grouper has been described in detail in the EIS for the Generic Essential Fish Habitat (EFH) Amendment (Generic EFH Amendment) (GMFMC 2004a), and the Generic Annual Catch Limit (ACL)/Accountability Measure (AM) Amendment (Generic ACL/AM Amendment) (GMFMC 2011) which are hereby incorporated by reference.

The management unit for Gulf gag extends from the United States—Mexico border in the west through the northern Gulf waters and west of the Dry Tortugas and the Florida Keys. Currently, the Council manages Gag as one unit. Black grouper has been assessed as a single stock throughout the Gulf and South Atlantic. The ABC is apportioned 47% to the South Atlantic and 53% to the Gulf, and the apportionments are managed as separate South Atlantic and Gulf of Mexico units with the boundary essentially being U.S. Highway 1 in the Florida Keys west to the Dry Tortugas.

Gag range from the New York to Brazil and in the Gulf (Smith 1971; Huntsman 1976; Hardy 1978; Collins et al. 1987). Gag are protogynous and make annual late-winter migrations to specific locations to form spawning aggregations (Collins et al., 1987; Keener et al., 1988; Van Sant et al., 1994).

Gag eggs and larvae are pelagic with juveniles settling out to coastal seagrass beds. Adult gag are associated with bottom topographies on the continental shelf which have high relief, i.e., coral reefs, artificial reefs, rocky hard-bottom substrates, ledges and caves, sloping soft-bottom areas, and limestone outcroppings (GMFMC 2004). The vast majority of gag are caught on the west coast of Florida from northern Pinellas County to the northern extent of the state (Schirripa and Goodyear 1994).

Black grouper in the southeastern United States (the northern most part of their range) are found chiefly in southern Florida and the Florida Keys, although specimens have been recorded from Massachusetts to Texas. The range of black grouper extends south to Brazil and east to Bermuda.

Black grouper eggs and larvae settle to the bottom, and juvenile black grouper have found near shallow rocky reef habitats which had either high vertical relief with crevices, caves, or small dispersed rocks (Brulé et al. 2005). They are often found associated with rocky ledges and coral reefs from 10-100 meters (m). Black grouper are caught more commonly in the Florida Keys along the reef tract, and are caught along high relief areas in deeper waters off of the west coast of

Florida to the Florida Middle Grounds and off of the east coast of Florida. Generally, larger and older individuals are caught more often in deeper waters (SEDAR 19 2010).

Habitat Areas of Particular Concern (HAPC)

Generic EFH Amendment 3 (GMFMC 2005) for addressing EFH, habitat areas of particular concern (HAPC), and adverse effects of fishing in the following fishery management plans of the Gulf Reef Fish Resources, Red Drum, and Coastal Migratory Pelagics is hereby incorporated by reference. Amendment 32 (GMFMC 2011b) also describes environmental sites of special interest relevant to the reef fish fishery including gear restricted areas, area closures, and HAPCs.

Environmental Sites of Special Interest Relevant to Reef Fish, Red Drum, Coastal Migratory Pelagics, Spiny Lobster, Red Drum, and Coral and Coral Reefs (Figure 3.1.1)

<u>Longline/Buoy Gear Area Closure</u> – Permanent closure to use of these gears for reef fish harvest inshore of 20 fathoms (36.6 meters) off the Florida shelf and inshore of 50 fathoms (91.4 meters) for the remainder of the Gulf, and encompasses 72,300 square nautical miles (nm²) or 133,344 km² (GMFMC 1989). Bottom longline gear is prohibited inshore of 35 fathoms (54.3 meters) during the months of June through August in the eastern Gulf (GMFMC 2009).

<u>Madison-Swanson and Steamboat Lumps Marine Reserves</u> - No-take marine reserves (total area is 219 nm² or 405 square kilometers (km²⁾) sited based on gag spawning aggregation areas where all fishing is prohibited except surface trolling from May through October (GMFMC 1999; 2003).

<u>The Edges Marine Reserve</u> – All fishing is prohibited in this area (390 nm² or 1,338 km²) from January through April and possession of any fish species is prohibited, except for such possession aboard a vessel in transit with fishing gear stowed as specified. The provisions of this do not apply to highly migratory species (GMFMC 2008).

<u>Tortugas North and South Marine Reserves</u> – No-take marine reserves (185 nm²) cooperatively implemented by the state of Florida, National Ocean Service, the Gulf of Mexico Fishery Management Council (Council), and the National Park Service in Generic Amendment 2 Establishing the Tortugas Marine Reserves (GMFMC 2001).

Reef and bank areas designated HAPCs in the northwestern Gulf include – East and West Flower Garden Banks, Stetson Bank, Sonnier Bank, MacNeil Bank, 29 Fathom, Rankin Bright Bank, Geyer Bank, McGrail Bank, Bouma Bank, Rezak Sidner Bank, Alderice Bank, and Jakkula Bank – pristine coral areas protected by preventing the use of some fishing gear that interacts with the bottom and prohibited use of anchors (totaling 263.2 nm² or 487.4 km²). Subsequently, three of these areas were established as marine sanctuaries (i.e., East and West Flower Garden Banks and Stetson Bank). Bottom anchoring and the use of trawling gear, bottom longlines, buoy gear, and all traps/pots on coral reefs are prohibited in the East and West Flower Garden Banks, McGrail Bank, and on significant coral resources on Stetson Bank (GMFMC 2005).

<u>Florida Middle Grounds HAPC</u> - Pristine soft coral area (348 nm² or 644.5 km²) that is protected by prohibiting the following gear types: bottom longlines, trawls, dredges, pots and traps (GMFMC and SAFMC 1982).

<u>Pulley Ridge HAPC</u> - A portion of the HAPC (2,300 nm² or 4,259 km²) where deepwater hermatypic coral reefs are found is closed to anchoring and the use of trawling gear, bottom longlines, buoy gear, and all traps/pots (GMFMC 2005).

<u>Alabama Special Management Zone</u> – For vessels operating as a charter vessel or headboat, a vessel that does not have a commercial permit for Gulf reef fish, or a vessel with such a permit fishing for Gulf reef fish, fishing is limited to hook-and-line gear with no more than three hooks. Nonconforming gear is restricted to recreational bag limits, or for reef fish without a bag limit, to 5% by weight of all fish aboard.

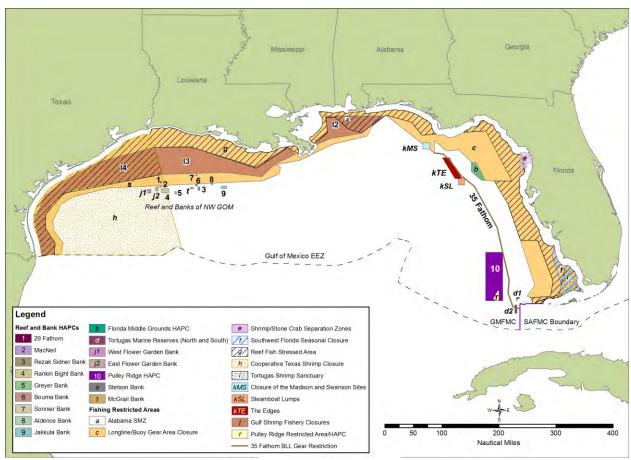


Figure 3.1.1 Environmental Sites of Special Interest Relevant to Reef Fish, Red Drum, Coastal Migratory Pelagics, Spiny Lobster, Red Drum, and Coral and Coral Reefs

There is one site listed in the National Register of Historic Places in the Gulf of Mexico. This is the wreck of the *U.S.S. Hatteras*, located in federal waters off Texas.

Deepwater Horizon MC252

The Deepwater Horizon MC252 oil spill in 2010 affected at least one-third of the Gulf area from western Louisiana east to the Florida Panhandle and south to the Campeche Bank in Mexico. The impacts of the Deepwater Horizon MC252 oil spill on the physical environment are expected to be significant and may be long-term. Oil was dispersed on the surface, and because of the heavy use of dispersants (both at the surface and at the wellhead), oil was also documented as being suspended within the water column, some even deeper than the location of the broken well head. Floating and suspended oil washed onto shore in several areas of the Gulf as were non-floating tar balls. Whereas suspended and floating oil degrades over time, tar balls are persistent in the environment and can be transported hundreds of miles.

Changes have occurred in the amount and distribution of fishing effort in the Gulf in response to the oil spill. This has made the analysis of the number of days needed for the recreational sector to fill its quota more complex and uncertain, and will make the requirement to allow the recreational sector to harvest its quota of gag and black grouper while not exceeding the quota particularly challenging. Nevertheless, substantial portions of the gag and black grouper populations are found in the northern and west Florida shelf. Thus, spawning by this segment of the stock may not be impacted, which would mitigate the overall impact of a failed spawn by that portion of the stock located in oil-affected areas.

As a result of the Deepwater Horizon MC252 spill, a consultation pursuant to ESA Section 7(a)(2) was reinitiated. On September 30, 2011, the Protected Resources Division released a biological opinion, which after analyzing best available data, the current status of the species, environmental baseline (including the impacts of the recent Deepwater Horizon MC252 oil release event in the northern Gulf), effects of the proposed action, and cumulative effects, concluded that the continued operation of the Gulf reef fish fishery is not likely to jeopardize the continued existence of green, hawksbill, Kemp's ridley, leatherback, or loggerhead sea turtles, nor the continued existence of smalltooth sawfish (NMFS 2011a). For additional information on the Deepwater Horizon MC252 oil spill and associated closures, see: http://sero.nmfs.noaa.gov/deepwater_horizon_oil_spill.htm.

3.2 Description of the Biological/Ecological Environment

A description of gag life history and biology is summarized and incorporated here by reference from Amendment 32 (GMFMC 2011b). In summary gag, and other shallow-water grouper species have typical reef fish life histories where eggs and larvae are pelagic. Gag larvae then settle to the bottom in submerged aquatic vegetation. Juvenile gag and other groupers can be found on nearshore reefs. As gag mature, they move out into deeper waters of the Gulf.

A description of black grouper life history and biology is summarized and incorporated here by reference from the Generic ACL/AM Amendment (GMFMC 2010). In summary black grouper, have typical reef fish life histories where eggs and larvae are pelagic. Black grouper larvae settle to the bottom, and black grouper juveniles are found near shallow rocky reef habitats which had either high vertical relief with crevices, caves, or small dispersed rocks (Brulé et al. 2005). Adult black grouper are often found in higher relief habitats (Sluka et al. 1998).

Status of Gag and Black Grouper Stocks

See Section 1.1 under the Introduction.

General Information on Reef Fish Species

The following is summarized from the January 2011 Regulatory Amendment (GMFMC 2011a). The National Ocean Service of NOAA (NOS) collaborated with the NMFS and the Gulf of Mexico Fishery Management Council (Council) to develop distributions of reef fish (and other species) in the Gulf of Mexico (SEA 1998). The NOS obtained fishery-independent data sets for the Gulf of Mexico, including the Southeast Area Monitoring and Assessment Program (SEAMAP), and state trawl surveys. Data from the Estuarine Living Marine Resources (ELMR) Program contain information on the relative abundance of specific species for a series of estuaries, by five life stages and month for five seasonal salinity zones. The NOS staff analyzed the data to determine relative abundance of the mapped species by estuary, salinity zone, and month. For some species not in the ELMR database, distribution was classified as only observed or not observed for adult, juvenile, and spawning stages.

Habitat types and life history stages can be found in more detail in GMFMC (2004b). In general, reef fish are widely distributed in the Gulf, occupying both pelagic and benthic habitats during their life cycle. In general, both eggs and larval stages are planktonic. Larvae feed on zooplankton and phytoplankton. Exceptions to these generalizations include the gray triggerfish that lay their eggs in depressions in the sandy bottom, and gray snapper whose larvae are found around submerged aquatic vegetation. Juvenile and adult reef fish are typically demersal, and are usually associated with bottom topographies on the continental shelf (<100 m) which have high relief, i.e., coral reefs, artificial reefs, rocky hard-bottom substrates, ledges and caves, sloping soft-bottom areas, and limestone outcroppings. However, several species are found over sand and soft-bottom substrates. Some juvenile snappers (e.g. mutton, gray, red, dog, lane, and yellowtail snappers) and groupers (e.g. goliath, red, gag, and yellowfin groupers) have been documented in inshore seagrass beds, mangrove estuaries, lagoons, and larger bay systems (GMFMC 1981). More detail on hard bottom substrate and coral can be found in the Fishery Management Plan (FMP) for Corals and Coral Reefs (GMFMC and SAFMC 1982).

Status of Reef Fish Stocks

The Fishery Management Plan for Reef Fish Resources of the Gulf of Mexico (Reef Fish FMP) currently encompasses 31 species (Table 3.2.1). Eleven other species were removed from the Reef Fish FMP in 2012 by the Council in their Generic ACL/AM Amendment. Stock assessments and stock assessment reviews may be found on the Council (www.gulfcouncil.org) and Southeast Data Assessment review (SEDAR) (http://sedarweb.org/) and have been conducted for 13 species:

- red snapper (SEDAR 7 2005; SEDAR 7 Update 2009; SEDAR 31 2013; SEDAR 31 Update 2014)
- vermilion snapper (Porch and Cass-Calay 2001; SEDAR 9 2006a; SEDAR 9 Update 2011b; SEDAR Update 2014)
- yellowtail snapper (Muller et al. 2003; SEDAR 3 2003)
- mutton snapper (SEDAR 15A 2008; SEDAR 15A Update 2014)
- gray triggerfish (Valle et al. 2001; SEDAR 9 2006b; SEDAR 9 Update 2011c; SEDAR 43 2015)
- greater amberjack (Turner et al. 2000; SEDAR 9 2006c; SEDAR 9 Update 2010, SEDAR 33 2014)
- hogfish (Ault et al. 2003; SEDAR 6 2004a, SEDAR 37 2013)
- red grouper (NMFS 2002; SEDAR 12 2007; SEDAR 12 Update 2009)
- gag grouper (Turner et al. 2001; SEDAR 10 2006; SEDAR 10 Update 2009, SEDAR 33 2014)
- black grouper (SEDAR 19 2010)
- yellowedge grouper (Cass-Calay and Bahnick 2002; SEDAR 22 2011a)
- tilefish (golden) (SEDAR 22 2011b)
- goliath grouper (Porch et al. 2003; SEDAR 6 2004b; SEDAR 23 2011)

Table 3.2.1. Species of the Reef Fish FMP grouped by family.

**Note: Goliath grouper is a protected grouper.

| · · Note. Gonath grouper | is a protected grouper. | _ |
|---------------------------|--------------------------------------|---------------------------------------|
| Common Name | Scientific Name | Stock Status |
| Family Balistidae – Tri | ggerfishes | |
| gray triggerfish | Balistes capriscus | Overfished, no overfishing |
| Family Carangidae – Ja | ncks | |
| greater amberjack | Seriola dumerili | Overfished, overfishing |
| lesser amberjack | Seriola fasciata | Unknown |
| almaco jack | Seriola rivoliana | Unknown |
| banded rudderfish | Seriola zonata | Unknown |
| Family Labridae – Wra | sses | |
| *Hogfish | Lachnolaimus maximus | Not overfished, no overfishing |
| Family Malacanthidae | – Tilefishes | |
| Tilefish (golden) | Lopholatilus chamaeleonticeps | Unknown |
| blueline tilefish | Caulolatilus microps | Unknown |
| goldface tilefish | Caulolatilus chrysops | Unknown |
| Family Serranidae – Gi | oupers | |
| Gag | Mycteroperca microlepis | Not overfished, no overfishing |
| red grouper | Epinephelus morio | Not overfished, no overfishing |
| Scamp | Mycteroperca phenax | Unknown |
| black grouper | Mycteroperca bonaci | Not overfished, no overfishing |
| yellowedge grouper | Hyporthodus flavolimbatus | Not overfished, no overfishing |
| snowy grouper | Hyporthodus niveatus | Unknown |
| speckled hind | Epinephelus drummondhayi | Unknown |
| yellowmouth grouper | Mycteroperca interstitialis | Unknown |
| yellowfin grouper | Mycteroperca venenosa | Unknown |
| warsaw grouper | Hyporthodus nigritus | Unknown |
| **goliath grouper | Epinephelus itajara | Unknown, not overfishing |
| Family Lutjanidae – Sn | | |
| queen snapper | Etelis oculatus | Unknown |
| mutton snapper | Lutjanus analis | Unknown |
| blackfin snapper | Lutjanus buccanella | Unknown |
| red snapper | Lutjanus campechanus | Overfished, no overfishing |
| cubera snapper | Lutjanus cyanopterus | Unknown |
| gray snapper | Lutjanus griseus | Unknown |
| lane snapper | Lutjanus synagris | Unknown |
| silk snapper | Lutjanus vivanus | Unknown |
| yellowtail snapper | Ocyurus chrysurus | Not overfished, no overfishing |
| vermilion snapper | Rhomboplites aurorubens | Not overfished, no overfishing |
| Wenchman | Pristipomoides aquilonaris | Unknown |
| * Hagfigh ganatia alustar | g are identified as (1) Western Flor | ride (not including heafigh west of t |

^{*} Hogfish genetic clusters are identified as (1) Western Florida (not including hogfish west of the Florida panhandle), (2) Florida Keys/Eastern Florida, and (3) Georgia through North Carolina. The Western Florida and Florida Keys/Eastern Florida genetic populations converge south of Naples, Florida. Therefore, a portion of the Florida Keys/Eastern Florida population occurs within the Gulf of Mexico Council's area of jurisdiction, but the majority of the population occurs within the South Atlantic Council's area of jurisdiction. These genetic populations have

not been previously specified as distinct management stocks under South Atlantic and Gulf of Mexico Council FMPs. Recent findings indicate the Florida Keys/Eastern Florida is overfished and undergoing overfishing.

Bycatch

The reef fish fishery is multi-species and includes popular handlines. Handline gear is not selective, and therefore the vulnerability of the reef fish fishery to bycatch is high. Bycatch can negatively impact the ability of a stock to maintain itself at a level where fishing can be optimized.

Population and ecosystem effects resulting from changes in the bycatch of other species of fish and invertebrates are difficult to predict. As discussed in Amendment 30B (GMFMC 2008b), snappers, greater amberjack, gray triggerfish and other reef fishes are commonly caught in association with shallow-water grouper. Many of these species are in rebuilding plans (red snapper, gray triggerfish, and greater amberjack) with the stocks improving. Regulatory discards significantly contribute to fishing mortality in all of these reef fish fisheries.

Various studies to help gauge bycatch from the directed Reef Fish fishery (commercial or recreational) have been implemented over time, including use of logbooks, port sampling, observers and fisheries independent studies. Ward and Brooks (2010) studied the composition and disposition of bycatch and discards in the Gulf.

Protected Species

There are 28 different species of marine mammals that can or are known to occur in the Gulf. All 28 species are protected under the Marine Mammal Protection Act (MMPA) and six are also listed as endangered under the Endangered Species Act (ESA) (i.e., sperm, sei, fin, blue, humpback and North Atlantic right whales). Other species protected under the ESA occurring in the Gulf of Mexico include five sea turtle species (Kemp's Ridley, loggerhead, green, leatherback, and hawksbill); two fish species (Gulf of Mexico sturgeon and smalltooth sawfish), and two coral species (elkhorn coral and staghorn coral). Information on the distribution, biology, and abundance of these protected species in the Gulf is included in Generic EFH Amendment (GMFMC 2004a) and the February 2005, October 2009, and September 2011 ESA biological opinions on the reef fish fishery (NMFS 2005; NMFS 2009; NMFS 2011). Marine Mammal Stock Assessment Reports and additional information are also available on the NMFS Office of Protected Species website: http://www.nmfs.noaa.gov/pr/species/.

The MMPA 2015 List of Fisheries (79 FR 14418) considers vertical line gear and longline gear as Category III gears. These gears are the dominant gear used in the reef fish fishery - vertical line (90%) and longline (5.4%) gear. This classification indicates the annual mortality and serious injury of a marine mammal stock resulting from any fishery is less than or equal to 1% of 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. Dolphins are the only species documented as interacting with these fisheries. Bottlenose dolphins prey upon bait, catch, and/or released discards of fish from the reef fish fishery. They are also a common predator around reef fish vessels, feeding on the discards.

All five species of sea turtles are adversely affected by the reef fish fishery. Incidental captures are relatively infrequent, but occur in all commercial and recreational hook-and-line components of the reef fishery. Loggerhead sea turtles are by far the most frequently incidentally caught sea turtles. Captured sea turtles can be released alive or can be found dead upon retrieval of the gear as a result of forced submergence. Sea turtles released alive may later succumb to injuries sustained at the time of capture or from exacerbated trauma from fishing hooks or lines that were ingested, entangling, or otherwise still attached when they were released. Sea turtle release gear and handling protocols are required in the commercial and for- hire reef fish fisheries to minimize post-release mortality.

Smalltooth sawfish also interact with the reef fish fishery, but to a much lesser extent. Smalltooth sawfish primarily occur in the Gulf off peninsular Florida. Incidental captures in the commercial and recreational hook-and-line components of the reef fish fishery are rare events, with only eight smalltooth sawfish estimated to be incidentally caught every three years, and none are expected to result in mortality (NMFS 2011). Fishermen are required to follow smalltooth sawfish safe handling guidelines. The long, toothed rostrum of the smalltooth sawfish causes this species to be particularly vulnerable to entanglement in fishing gear.

NMFS has conducted specific analyses (Section 7 consultations) to evaluate potential effects from the reef fish fishery on species and critical habitats protected under the ESA. On September 30, 2011, the Protected Resources Division released a biological opinion (Opinion), which concluded that the continued operation of the Gulf reef fish fishery is not likely to jeopardize the continued existence of sea turtles (loggerhead, Kemp's ridley, green, hawksbill, and leatherback) or smalltooth sawfish (NMFS 2011a). The Opinion also concluded that other ESA-listed species are not likely to be adversely affected by the Reef Fish Fishery Management Plan (FMP). An incidental take statement was issued specifying the amount and extent of anticipated take, along with reasonable and prudent measures and associated terms and conditions deemed necessary and appropriate to minimize the impact of these takes. The Council addressed further measures to reduce take in the reef fish fishery's longline component in Amendment 31 (GMFMC 2009).

Subsequent to the completion of the biological opinion, NMFS published final rules listing 20 new coral species (September 10, 2014), and designating critical habitat for the Northwest Atlantic Ocean distinct population segment of loggerhead sea turtles (July 10, 2014). NMFS addressed these changes in a series of consultation memoranda. In a consultation memorandum dated October 7, 2014, NMFS assessed the continued operation of the Gulf reef fish fishery's potential impact on the newly-listed coral species occurring in the Gulf of Mexico (3 species of *Orbicella* and *Mycetophyllia ferox*) and concluded the fishery is not likely to adversely affect any of the protected coral species. Similarly, in a consultation memorandum dated September 16, 2014, NMFS assessed the continued authorization of South Atlantic and Gulf fisheries' potential impacts on loggerhead critical habitat and concluded the Gulf reef fish fishery is not likely to adversely affect the newly designated critical habitat.

3.3 Description of the Economic Environment

A description of the Gulf gag stock is provided in Section 3.2. Details on the economic environment for both sectors of the grouper component of the Gulf reef fish fishery are provided in the 2010 Red Grouper Regulatory Amendment (GMFMC 2010) and the environmental assessment for the 2011 gag interim rule (NMFS 2010) and are incorporated herein by reference. The following section contains updated information on the economic environment of this fishery.

3.3.1 Commercial Sector

Additional information on the commercial sector is not provided because this framework action would only change management measures for the recreational sector.

3.3.2 Recreational Sector

The Gulf recreational sector is comprised of a private and for-hire component. The private component includes anglers fishing from shore (all land-based structures) and private/rental boats. The for-hire component is composed of charter boats and headboats (also called party boats). Charter boats generally carry fewer passengers and charge a fee on an entire vessel basis, whereas headboats carry more passengers and payment is per person.

Landings

The majority of recreational Gulf gag landings (2010 through 2014) were estimated to occur in West Florida on private vessels (Table 3.3.2.1 and Table 3.3.2.2). On average (2010 through 2014), most of the estimated gag landings occurred during waves three through six (May through December), with a peak in wave four (July and August) (Table 3.3.2.3).

Table 3.3.2.1. Recreational landings in pounds (lbs) gutted weight (gw) and percent distribution

of gag across all modes, by state, 2010 - 2014.

| | AL | AL/FLW* | FLW | LA/MS** | TX | | | | |
|---------|--------|-------------------|--------------|---------|-------|--|--|--|--|
| | | Landings (lbs gw) | | | | | | | |
| 2010 | 30,003 | 69,821 | 1,581,451 | 6,739 | 1,858 | | | | |
| 2011 | 633 | 48,384 | 683,915 | 22,914 | 860 | | | | |
| 2012 | 4,496 | 43,518 | 973,167 | 813 | 2,237 | | | | |
| 2013 | 1,559 | 0 | 1,520,669 | 1,890 | 3,006 | | | | |
| 2014 | 2,759 | 0 | 902,845 | 2,059 | 178 | | | | |
| Average | 7,890 | 32,345 | 1,132,409 | 6,883 | 1,628 | | | | |
| | | Perce | nt Distribut | ions | | | | | |
| 2010 | 1.8% | 4.1% | 93.6% | 0.4% | 0.1% | | | | |
| 2011 | 0.1% | 6.4% | 90.4% | 3.0% | 0.1% | | | | |
| 2012 | 0.4% | 4.2% | 95.0% | 0.1% | 0.2% | | | | |
| 2013 | 0.1% | 0.0% | 99.6% | 0.1% | 0.2% | | | | |
| 2014 | 0.3% | 0.0% | 99.4% | 0.2% | 0.0% | | | | |
| Average | 0.5% | 3.0% | 95.6% | 0.8% | 0.1% | | | | |

Source: SEFSC Marine Recreational Information Program (MRIP) ACL dataset with LA Creel add-on (July 2015).

Table 3.3.2.2. Recreational landings (lbs gw) and percent distribution of gag across all states, by mode, 2010 - 2014.

| | | Landings | (lbs gw) | | Percent Distribution | | | | | |
|---------|-----------------|----------|-----------|--------|----------------------|----------|---------|-------|--|--|
| | Charter boat | Headboat | Private | Shore | Charter boat | Headboat | Private | Shore | | |
| 2010 | 427,432 | 70,718 | 1,146,105 | 45,618 | 25.3% | 4.2% | 67.8% | 2.7% | | |
| 2011 | 99,029 | 48,834 | 604,496 | 4,346 | 13.1% | 6.5% | 79.9% | 0.6% | | |
| 2012 | 384,910 | 44,249 | 587,664 | 7,408 | 37.6% | 4.3% | 57.4% | 0.7% | | |
| 2013 | 165,196 | 34,117 | 1,327,811 | 0 | 10.8% | 2.2% | 86.9% | 0.0% | | |
| 2014 | 93,125 | 40,728 | 773,987 | 0 | 10.3% | 4.5% | 85.3% | 0.0% | | |
| Average | 233,938 | 47,729 | 888,013 | 11,474 | 19.4% | 4.3% | 75.5% | 0.8% | | |

Source: SEFSC MRIP ACL dataset with LA Creel add-on (July 2015).

Note: Landings are post stratified to exclude Monroe County, FL.

^{*} Beginning in 2013, NMFS Southeast Region Headboat Survey (SRHS) data was reported separately for NW Florida and Alabama.

^{**} Landings data from Louisiana and Mississippi are combined for confidentiality purposes. Note: Landings are post stratified to exclude Monroe County, FL.

Table 3.3.2.3. Recreational landings (lbs gw) and percent distribution of gag, by wave, 2010-2014.

| | 1 (Jan-Feb) | 2 (Mar-Apr) | 3 (May-Jun) | 4 (Jul-Aug) | 5 (Sep-Oct) | 6 (Nov Dec) | | | | |
|---------|-------------|-------------------|-------------|-------------|-------------|-------------|--|--|--|--|
| | | Landings (lbs gw) | | | | | | | | |
| 2010 | 71,881 | 179,819 | 622,772 | 220,257 | 240,598 | 354,544 | | | | |
| 2011 | 47,883 | 141,917 | 135,203 | 7,302 | 285,981 | 138,418 | | | | |
| 2012 | 920 | 52,190 | 169,401 | 498,764 | 302,524 | 432 | | | | |
| 2013 | 11,547 | 94 | 83,989 | 958,115 | 267,090 | 206,287 | | | | |
| 2014 | 2,155 | 9,621 | 76,133 | 296,875 | 198,063 | 324,993 | | | | |
| Average | 26,877 | 76,728 | 217,500 | 396,263 | 258,851 | 204,935 | | | | |
| | | | Percent Dis | tribution | | | | | | |
| 2010 | 4.3% | 10.6% | 36.9% | 13.0% | 14.2% | 21.0% | | | | |
| 2011 | 6.3% | 18.8% | 17.9% | 1.0% | 37.8% | 18.3% | | | | |
| 2012 | 0.1% | 5.1% | 16.5% | 48.7% | 29.5% | 0.0% | | | | |
| 2013 | 0.8% | 0.0% | 5.5% | 62.7% | 17.5% | 13.5% | | | | |
| 2014 | 0.2% | 1.1% | 8.4% | 32.7% | 21.8% | 35.8% | | | | |
| Average | 2.3% | 7.1% | 17.0% | 31.6% | 24.2% | 17.7% | | | | |

Source: SEFSC MRIP ACL dataset with LA Creel add-on (July 2015).

Note: Landings are post stratified to exclude Monroe County, FL.

Black grouper landings were estimated to be much lower than gag landings from 2010 through 2014 (Table 3.3.2.4). Although not shown, on average (2010 through 2014), approximately 74% of these estimated landings occurred in West Florida through Alabama and 26% occurred in Texas. There were no estimated black grouper landings for Louisiana or Mississippi during this time period.

Table 3.3.2.4. Recreational landings (lbs gw) and percent distribution of black grouper across all states, by mode, 2010 - 2014.

| | | Landings (| lbs gw) | | | Percent Dis | tribution | |
|---------|-----------------|------------|---------|-------|-----------------|-------------|-----------|-------|
| | Charter boat | Headboat | Private | Shore | Charter boat | Headboat | Private | Shore |
| 2010 | 0 | 331 | 0 | 0 | 0.0% | 100.0% | 0.0% | 0.0% |
| 2011 | 0 | 565 | 0 | 0 | 0.0% | 100.0% | 0.0% | 0.0% |
| 2012 | 0 | 1,174 | 24,858 | 0 | 0.0% | 4.5% | 95.5% | 0.0% |
| 2013 | 170 | 2,161 | 902 | 0 | 5.3% | 66.8% | 27.9% | 0.0% |
| 2014 | 0 | 745 | 0 | 0 | 0.0% | 100.0% | 0.0% | 0.0% |
| Average | 34 | 995 | 5,152 | 0 | 1.1% | 74.3% | 24.7% | 0.0% |

Source: SEFSC Marine Recreational Fisheries Statistical Survey (MRFSS) ACL dataset (July 2015).

Note: Landings are post stratified to exclude Monroe County, FL.

Angler Effort

Recreational effort derived from the Marine Recreational Information Program (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 the 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 Gulf, regardless of target intent or catch success.

Other measures of effort are possible, such as directed trips (the number of individual angler trips that either targeted or caught a particular species), among other measures.

Gag Effort

Almost all of the estimated target and catch trips for Gulf gag occurred in West Florida from 2010 through 2014 (Table 3.3.2.5 and Table 3.3.2.6). The majority of this estimated effort was recorded from the private mode. Although there were very few gag landings recorded from the shore mode, as discussed earlier, there was a moderate amount of estimated gag target and catch effort from 2010 through 2014. This suggests that recreational fishermen are targeting gag from shore in Florida and are catching and releasing a substantial number of these fish, likely due to state-enforced size limit restrictions. On average (2010 through 2014), about 60% of gag target effort was estimated to occur in waves four and five (July through October), whereas estimated gag catch effort was more evenly distributed throughout the year (Table 3.3.2.7 and Table 3.3.2.8). Estimates of gag target or catch effort for additional years, and other measures of directed effort, are available at http://www.st.nmfs.noaa.gov/recreational-fisheries/access-data/run-a-data-query/queries/index.

Table 3.3.2.5. Number of gag recreational target trips, by mode and state, 2010-2014*.

| | Alabama | West Florida | Mississippi | Total |
|---------|---------|--------------|-------------|---------|
| | | Shore N | Mode | |
| 2010 | 0 | 47,441 | 0 | 47,441 |
| 2011 | 0 | 26,233 | 0 | 26,233 |
| 2012 | 0 | 10,269 | 0 | 10,269 |
| 2013 | 0 | 32,956 | 0 | 32,956 |
| 2014 | 0 | 6,238 | 0 | 6,238 |
| Average | 0 | 24,627 | 0 | 24,627 |
| | | Charter | Mode | |
| 2010 | 0 | 23,746 | 0 | 23,746 |
| 2011 | 433 | 5,357 | 0 | 5,790 |
| 2012 | 0 | 26,271 | 0 | 26,271 |
| 2013 | 138 | 19,799 | 0 | 19,937 |
| 2014 | 0 | 15,447 | 0 | 15,447 |
| Average | 114 | 18,124 | 0 | 18,238 |
| | | Private/Ren | tal Mode | |
| 2010 | 429 | 343,183 | 0 | 343,612 |
| 2011 | 0 | 186,536 | 0 | 186,536 |
| 2012 | 0 | 185,396 | 0 | 185,396 |
| 2013 | 1,146 | 417,054 | 127 | 418,328 |
| 2014 | 0 | 244,591 | 906 | 245,498 |
| Average | 315 | 275,352 | 207 | 275,874 |
| | | All Mo | odes | |
| 2010 | 429 | 414,370 | 0 | 414,799 |
| 2011 | 433 | 218,126 | 0 | 218,558 |
| 2012 | 0 | 221,936 | 0 | 221,936 |
| 2013 | 1,284 | 469,809 | 127 | 471,220 |
| 2014 | 0 | 266,275 | 906 | 267,182 |
| Average | 429 | 318,103 | 207 | 318,739 |

^{*} Texas and headboat information unavailable. No gag target effort was recorded in Louisiana from 2010 through 2013. MRIP sampling was not conducted in Louisiana in 2014.

Table 3.3.2.6. Number of gag recreational catch trips, by mode and state, 2010-2014*.

| | Alabama | West Florida | Louisiana | Mississippi | Total | |
|---------|---------|--------------|-------------------|-------------|---------|--|
| | | | Shore Mode | | | |
| 2010 | 496 | 93,273 | 0 | 0 | 93,769 | |
| 2011 | 0 | 65,239 | 0 | 0 | 65,239 | |
| 2012 | 705 | 49,354 | 0 | 0 | 50,059 | |
| 2013 | 0 | 34,171 | 0 | 0 | 34,171 | |
| 2014 | 0 | 51,228 | NA** | 0 | 51,228 | |
| Average | 240 | 58,653 | 0 | 0 | 58,893 | |
| | | | Charter Mode | | | |
| 2010 | 2,327 | 111,205 | 692 | 0 | 114,223 | |
| 2011 | 395 | 66,551 | 102 | 0 | 67,048 | |
| 2012 | 1,024 | 106,781 | 665 | 0 | 108,470 | |
| 2013 | 1,960 | 108,802 | 0 | 0 | 110,761 | |
| 2014 | 580 | 48,441 | NA** | 0 | 49,021 | |
| Average | 1,257 | 88,356 365 | | 0 | 89,905 | |
| | | Pri | vate/Rental Mo | de | | |
| 2010 | 6,027 | 617,870 | 0 | 1,008 | 624,906 | |
| 2011 | 3,559 | 308,274 | 12,147 | 0 | 323,980 | |
| 2012 | 2,492 | 319,990 | 4,518 | 0 | 327,000 | |
| 2013 | 7,386 | 449,991 | 503 | 1,739 | 459,619 | |
| 2014 | 1,025 | 356,753 | NA** | 0 | 357,778 | |
| Average | 4,098 | 410,576 | 4,292 | 549 | 418,657 | |
| | | | All Modes | | | |
| 2010 | 8,849 | 822,348 | 692 | 1,008 | 832,898 | |
| 2011 | 3,953 | 440,064 | 12,249 | 0 | 456,267 | |
| 2012 | 4,221 | 476,125 | 5,183 | 0 | 485,529 | |
| 2013 | 9,346 | 592,963 | 503 | 1,739 | 604,551 | |
| 2014 | 1,605 | 456,421 | NA** | 0 | 458,027 | |
| Average | 5,595 | 557,584 | 4,657 | 549 | 567,454 | |

^{*} Texas and headboat information unavailable.

^{**} MRIP sampling was not conducted in Louisiana in 2014, so these values are not available. The averages for Louisiana include only 2010 through 2013.

Table 3.3.2.7. Gag target trips and percent distribution across all modes and states, by wave, $2010 - 2014^*$.

| | 1 (Jan- Feb) | 2 (Mar-Apr) | 3 (May- Jun) | 4 (Jul-Aug) | 5 (Sep- Oct) | 6 (Nov Dec) | | | | | |
|---------|-----------------|------------------|-----------------|-------------|-----------------|----------------|--|--|--|--|--|
| | | Gag Target Trips | | | | | | | | | |
| 2010 | 40,824 | 41,185 | 92,016 | 77,522 | 78,641 | 84,611 | | | | | |
| 2011 | 31,902 | 46,992 | 38,216 | 8,070 | 70,798 | 22,580 | | | | | |
| 2012 | 17,013 | 2,914 | 8,079 | 115,223 | 75,887 | 2,821 | | | | | |
| 2013 | 3,432 | 6,431 | 38,831 | 206,364 | 128,345 | 87,818 | | | | | |
| 2014** | 3,539 | 1,307 | 16,715 | 132,587 | 52,295 | 60,738 | | | | | |
| Average | 19,342 | 19,766 | 38,771 | 107,953 | 81,193 | 51,714 | | | | | |
| | | | Percent Dis | stribution | | | | | | | |
| 2010 | 9.8% | 9.9% | 22.2% | 18.7% | 19.0% | 20.4% | | | | | |
| 2011 | 14.6% | 21.5% | 17.5% | 3.7% | 32.4% | 10.3% | | | | | |
| 2012 | 7.7% | 1.3% | 3.6% | 51.9% | 34.2% | 1.3% | | | | | |
| 2013 | 0.7% | 1.4% | 8.2% | 43.8% | 27.2% | 18.6% | | | | | |
| 2014** | 1.3% | 0.5% | 6.3% | 49.6% | 19.6% | 22.7% | | | | | |
| Average | 7% | 7% | 12% | 34% | 26% | 15% | | | | | |

^{*} Texas and headboat information unavailable.

^{**} Louisiana effort information is unavailable for 2014; however, based on historical data, it is unlikely that any gag target trips occurred in Louisiana in 2014.

Table 3.3.2.8. Gag catch trips and percent distribution across all modes and states, by wave, 2010 - 2014*.

| | 1 (Jan- Feb) | 2 (Mar-Apr) | 3 (May- Jun) | 4 (Jul-Aug) | 5 (Sep- Oct) | 6 (Nov Dec) | | | | |
|---------|-----------------|-------------|-----------------|-------------|-----------------|----------------|--|--|--|--|
| | Gag Catch Trips | | | | | | | | | |
| 2010 | 56,304 | 76,289 | 241,278 | 151,260 | 171,831 | 135,935 | | | | |
| 2011 | 36,767 | 94,367 | 116,498 | 68,319 | 86,539 | 53,777 | | | | |
| 2012 | 55,163 | 76,907 | 84,939 | 132,668 | 92,734 | 43,118 | | | | |
| 2013 | 47,824 | 60,472 | 122,214 | 185,587 | 97,939 | 90,515 | | | | |
| 2014** | 45,253 | 62,159 | 60,255 | 103,192 | 91,622 | 95,546 | | | | |
| Average | 48,262 | 74,039 | 125,037 | 128,205 | 108,133 | 83,778 | | | | |
| | | | Percent Dis | tribution | | | | | | |
| 2010 | 6.8% | 9.2% | 29.0% | 18.2% | 20.6% | 16.3% | | | | |
| 2011 | 8.1% | 20.7% | 25.5% | 15.0% | 19.0% | 11.8% | | | | |
| 2012 | 11.4% | 15.8% | 17.5% | 27.3% | 19.1% | 8.9% | | | | |
| 2013 | 7.9% | 10.0% | 20.2% | 30.7% | 16.2% | 15.0% | | | | |
| 2014** | 9.9% | 13.6% | 13.2% | 22.5% | 20.0% | 20.9% | | | | |
| Average | 9% | 14% | 21% | 23% | 19% | 15% | | | | |

Note: Effort estimates have been post-stratified to exclude Monroe County, FL.

Black Grouper Effort

There were far fewer estimated target and catch trips for black grouper in the Gulf than there were for gag from 2010 through 2014. The only Gulf state with black grouper target trips recorded by MRIP during this time was Florida and these trips were sparse (Table 3.3.2.9). Black grouper catch effort in Florida was more substantial than target effort was, but was still low compared to that of gag (Table 3.3.2.10). There were a small number of black grouper catch trips estimated for Alabama in 2010 and 2012; however, these MRIP estimates were expanded from only two intercepted trips.

^{*} Texas and headboat information unavailable.

^{**} Louisiana effort information is unavailable for 2014; however, based on historical data, this is not expected to have a noticeable impact on 2014 Gulf totals.

Table 3.3.2.9. Black grouper recreational target trips, by mode and state, 2010-2014*.

| | West Florida** | | | | | | | | |
|---------|---|-------|-------|-------|--|--|--|--|--|
| | Shore Mode Charter Mode Private/Rental Mode All Modes | | | | | | | | |
| 2010 | 0 | 0 | 2,763 | 2,763 | | | | | |
| 2011 | 892 | 2,306 | 0 | 3,198 | | | | | |
| 2012 | 0 | 0 | 0 | 0 | | | | | |
| 2013 | 0 | 0 | 2,097 | 2,097 | | | | | |
| 2014 | 0 | 0 | 194 | 194 | | | | | |
| Average | 178 | 461 | 1,011 | 1,650 | | | | | |

^{*}Texas and headboat information unavailable.

^{**}Florida was the only state with recorded target effort for black grouper.

Table 3.3.2.10. Black grouper recreational catch trips, by mode and state, 2010-2014*.

| | Alabama | West Florida | Total | | | | | | |
|---------|------------|---------------------|--------|--|--|--|--|--|--|
| | | | | | | | | | |
| | Shore Mode | | | | | | | | |
| 2010 | 0 | 0 | 0 | | | | | | |
| 2011 | 0 | 3,124 | 3,124 | | | | | | |
| 2012 | 0 | 5,220 | 5,220 | | | | | | |
| 2013 | 0 | 4,019 | 4,019 | | | | | | |
| 2014 | 0 | 10,946 | 10,946 | | | | | | |
| Average | 0 | 4,662 | 4,662 | | | | | | |
| | | Charter Mode | | | | | | | |
| 2010 | 0 | 0 | 0 | | | | | | |
| 2011 | 0 | 0 | 0 | | | | | | |
| 2012 | 0 | 0 | 0 | | | | | | |
| 2013 | 0 | 69 | 69 | | | | | | |
| 2014 | 0 | 0 | 0 | | | | | | |
| Average | 0 | 14 | 14 | | | | | | |
| | Pri | ivate/Rental Mo | de | | | | | | |
| 2010 | 398 | 5,287 | 5,685 | | | | | | |
| 2011 | 0 | 9,720 | 9,720 | | | | | | |
| 2012 | 1,526 | 16,170 | 17,696 | | | | | | |
| 2013 | 0 | 33,300 | 33,300 | | | | | | |
| 2014 | 0 | 23,405 | 23,405 | | | | | | |
| Average | 385 | 17,576 | 17,961 | | | | | | |
| | | All Modes | | | | | | | |
| 2010 | 398 | 5,287 | 5,685 | | | | | | |
| 2011 | 0 | 12,844 | 12,844 | | | | | | |
| 2012 | 1,526 | 21,390 | 22,916 | | | | | | |
| 2013 | 0 | 37,388 | 37,388 | | | | | | |
| 2014 | 0 | 34,350 | 34,350 | | | | | | |
| Average | 385 | 22,252 | 22,637 | | | | | | |

Note: Effort estimates have been post-stratified to exclude Monroe County, FL.

Similar analysis of recreational effort is not possible for the headboat mode because headboat data are not collected at the angler level. Estimates of effort by the headboat mode are provided

^{*}Texas and headboat information unavailable. No catch effort was recorded for black grouper in Louisiana or Mississippi.

in terms of angler days, or the total number of standardized full-day angler trips². The stationary "fishing for demersal species" nature of headboat fishing, as opposed to trolling, suggests that most headboat trips and, hence, angler days, are demersal or reef fish trips by intent. According to a recent survey of the recreational for-hire industry in the Gulf of Mexico, approximately 84% of headboat trips, on average, target reef fish species such as snappers or groupers (Savolainen et al. 2012).

The distribution of headboat effort (angler days) by geographic area is presented in Table 3.3.2.11. For purposes of data collection, the headboat data collection program divides the Gulf into several areas. In Table 3.3.2.11, FLW refers to areas in Florida from the Dry Tortugas through the Florida Middle Grounds, FL-AL covers Northwest Florida and Alabama, MS-LA refers to the combined coastlines of Mississippi and Louisiana, and TX includes areas in Texas from Sabine Pass-Freeport south to Port Isabel. The number of headboat angler days in West Florida through Alabama increased steadily from 2010 through 2014. In Texas, the number of angler days was relatively constant from 2010 through 2014, with a peak in 2013. In Mississippi through Louisiana, the number of angler days rose dramatically in 2011, following a five-year low in 2010, then remained mostly stable through 2014, with a peak in 2012. The low number of angler days in 2010, especially in the area from Northwest Florida through Louisiana, could be due in part to the Deepwater Horizon oil spill, associated closures and its effect on angler demand for headboat trips (see Section 3.1).

Table 3.3.2.11. Headboat angler days and percent distribution, by state, 2010 - 2014.

| | | Angle | r Days | Percent Distribution | | | | |
|---------|-----------------------|--------|--------|----------------------|-------|-------|-------|-------|
| | FLW FL-AL* MS-LA** TX | | | | | FL-AL | MS-LA | TX |
| 2010 | 70,424 | 40,594 | 715 | 47,154 | 44.3% | 25.5% | 0.5% | 29.7% |
| 2011 | 79,722 | 77,303 | 3,657 | 47,284 | 38.3% | 37.2% | 1.8% | 22.7% |
| 2012 | 84,205 | 77,770 | 3,680 | 51,776 | 38.7% | 35.8% | 1.7% | 23.8% |
| 2013 | 94,752 | 80,048 | 3,406 | 55,749 | 40.5% | 34.2% | 1.5% | 23.8% |
| 2014 | 102,841 | 88,524 | 3,257 | 51,231 | 41.8% | 36.0% | 1.3% | 20.8% |
| Average | 86,389 | 72,848 | 2,943 | 50,639 | 40.7% | 33.7% | 1.3% | 24.2% |

Source: NMFS Southeast Region Headboat Survey (SRHS).

Headboat effort in terms of angler days for the entire Gulf was concentrated most heavily during the summer months of June through August on average (2010 through 2014) (Table 3.3.2.12). The monthly trend in angler days was very similar across years, building gradually from January through May, rising sharply to a peak in June and July, dropping rapidly through September, increasing slightly in October, then tapering through December.

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^{*}Beginning in 2013, HBS data was reported separately for NW Florida and Alabama, but has been combined here for consistency with previous years.

^{**}Headboat data from Mississippi and Louisiana are combined for confidentiality purposes.

² Headboat trip categories include half-, three-quarter-, full-, and 2-day trips. A full-day trip equals one angler day, a half-day trip equals .5 angler days, etc. Angler days are not standardized to an hourly measure of effort and actual trip durations may vary within each category.

Table 3.3.2.12. Headboat angler days and percent distribution, by month, 2010 - 2014.

| | 5.5.2.12. Treadooat angler days and percent distribution, by month, 2010 - 2014. | | | | | | | | | | | _ |
|------|--|--------|--------|--------|--------|------------|------------|--------|--------|--------|-------|-------|
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
| | | | | | | | | | | | | |
| | Headboat Angler Days | | | | | | | | | | | |
| 2010 | 4,962 | 5,709 | 13,186 | 18,077 | 14,029 | 26,495 | 22,616 | 14,378 | 8,759 | 16,328 | 9,488 | 4,860 |
| 2011 | 5,242 | 9,174 | 16,378 | 17,626 | 16,148 | 39,775 | 42,089 | 22,513 | 10,766 | 12,609 | 8,514 | 7,132 |
| 2012 | 7,924 | 9,364 | 18,326 | 16,404 | 17,708 | 39,662 | 46,468 | 21,440 | 12,629 | 13,281 | 7,135 | 7,090 |
| 2013 | 8,630 | 9,576 | 16,759 | 16,426 | 17,150 | 47,791 | 38,304 | 27,610 | 12,697 | 21,256 | 8,654 | 9,102 |
| 2014 | 7,069 | 12,402 | 18,626 | 18,733 | 21,345 | 44,342 | 46,246 | 30,893 | 12,089 | 17,395 | 7,557 | 9,156 |
| Avg | 6,765 | 9,245 | 16,655 | 17,453 | 17,276 | 39,613 | 39,145 | 23,367 | 11,388 | 16,174 | 8,270 | 7,468 |
| | | | | | | | | | | | | |
| | | | | | P | ercent Dis | stribution | | | | | |
| 2010 | 3.1% | 3.6% | 8.3% | 11.4% | 8.8% | 16.7% | 14.2% | 9.0% | 5.5% | 10.3% | 6.0% | 3.1% |
| 2011 | 2.5% | 4.4% | 7.9% | 8.5% | 7.8% | 19.1% | 20.2% | 10.8% | 5.2% | 6.1% | 4.1% | 3.4% |
| 2012 | 3.6% | 4.3% | 8.4% | 7.5% | 8.1% | 18.2% | 21.4% | 9.9% | 5.8% | 6.1% | 3.3% | 3.3% |
| 2013 | 3.7% | 4.1% | 7.2% | 7.0% | 7.3% | 20.4% | 16.4% | 11.8% | 5.4% | 9.1% | 3.7% | 3.9% |
| 2014 | 2.9% | 5.0% | 7.6% | 7.6% | 8.7% | 18.0% | 18.8% | 12.6% | 4.9% | 7.1% | 3.1% | 3.7% |
| Avg | 3.2% | 4.3% | 7.9% | 8.4% | 8.2% | 18.5% | 18.2% | 10.8% | 5.4% | 7.7% | 4.0% | 3.5% |

Source: NMFS Southeast Region Headboat Survey (SRHS).

Permits

For-hire vessels are required to have a Charter/Headboat for Reef Fish permit (for-hire permit) to fish for or possess reef fish species in the Gulf EEZ. This sector is currently under a permit limitation program since June, 2006. On September 1, 2015, there were 1,284 valid (non-expired) or renewable³ Gulf for-hire permits. Although the for-hire permit application collects information on the primary method of operation, the permit itself does not identify the permitted vessel as either a headboat or a charter vessel and vessels may operate in both capacities. However, only federally permitted headboats are required to submit harvest and effort information to the NMFS SRHS. Participation in the SRHS is based on determination by the Southeast Fishery Science Center (SEFSC) that the vessel primarily operates as a headboat. As of April 24, 2015, 69 Gulf headboats were registered in the SRHS (K. Fitzpatrick, NMFS SEFSC, pers. comm.). The majority of these headboats were located in Florida (37), followed by Texas (16), Alabama (9), and Mississippi/Louisiana (7).

Information on Gulf charter boat and headboat operating characteristics is included in Savolainen et al. (2012) and is incorporated herein by reference.

There are no specific federal permitting requirements for recreational anglers to fish for or harvest reef fish, including gag and black grouper. Instead, anglers are required to possess either

³ A renewable permit is an expired permit that may not be actively fished, but is renewable for up to one year after expiration.

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. As a result, it is not possible to identify with available data how many individual anglers would be expected to be affected by this proposed amendment.

Economic Value

Participation, effort, and harvest are indicators of the value of saltwater recreational fishing. However, a more specific indicator of value is the satisfaction that anglers experience over and above their costs of fishing. The monetary value of this satisfaction is referred to as consumer surplus (CS). The value or benefit derived from the recreational experience is dependent on several quality determinants, which include fish size, catch success rate, and the number of fish kept. These variables help determine the value of a fishing trip and influence total demand for recreational fishing trips. The estimated value of the CS for catching and keeping a second grouper on an angler trip is approximately \$103 (values updated to 2014 dollars⁴), and decreases thereafter (approximately \$69 for a third grouper, \$51 for a fourth grouper, and \$40 for a fifth grouper) (Carter and Liese 2012). Values by specific grouper species are not available.

The foregoing estimates of economic value should not be confused with economic impacts associated with recreational fishing expenditures. Although expenditures for a specific good or service may represent a proxy or lower bound of value (a person would not logically pay more for something than it was worth to them), they do not represent the net value (benefits minus cost), nor the change in value associated with a change in the fishing experience.

With regards to for-hire businesses, economic value can be measured by producer surplus (PS) per passenger trip (the amount of money that a vessel owner earns in excess of the cost of providing the trip). Estimates of the PS per for-hire passenger trip are not available. Instead, net operating revenue (NOR), which is the return used to pay all labor wages, returns to capital, and owner profits, is used as a proxy for PS. The estimated NOR value is \$153 (2014 dollars) per charter angler trip (Liese and Carter 2011). The estimated NOR value per headboat angler trip is \$53 (2014 dollars) (C. Liese, NMFS SEFSC, pers. comm.). Estimates of NOR per gag or black grouper target trip are not available.

Business Activity

The desire for recreational fishing generates economic activity as consumers spend their income on various goods and services needed for recreational fishing. This spurs economic activity in the region where recreational fishing occurs. It should be clearly noted that, in the absence of the opportunity to fish, the income would presumably be spent on other goods and services and these expenditures would similarly generate economic activity in the region where the expenditure occurs. As such, the analysis below represents a distributional analysis only.

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⁴ Converted to 2014 dollars using the 2014 annual Consumer Price Index (CPI) for all US urban consumers provided by the Bureau of Labor and Statistics (BLS).

Estimates of the business activity (economic impacts) associated with recreational angling for gag and black grouper were derived using average impact coefficients for recreational angling for all species, as derived from an add-on survey to the Marine Recreational Fisheries Statistical Survey (MRFSS). This add-on survey collected economic expenditure information, as described and utilized in NMFS (2011b). Estimates of the average expenditures by recreational anglers are also provided in NMFS (2011b) and are incorporated herein by reference.

Recreational fishing generates business activity (economic impacts). Business activity for the recreational sector is characterized in the form of full-time equivalent jobs, output (sales) impacts (gross business sales), and value-added impacts (difference between the value of goods and the cost of materials or supplies). Estimates of the average gag target effort (2010-2014) and associated business activity (2014 dollars) are provided in Table 3.3.2.13. The average impact coefficients, or multipliers, used in the model are invariant to the "type" of effort and can therefore be directly used to measure the impact of other effort measures such as gag catch trips. To calculate the multipliers from Table 3.3.2.13, simply divide the desired impact measure (output impact, value-added impact, or jobs) associated with a given state and mode by the number of target trips for that state and mode.

The estimates provided in Table 3.3.2.13 only apply at the state-level. These numbers should not be added across the region. Addition of the state-level estimates to produce a regional (or national) total could either under- or over-estimate the actual amount of total business activity because of the complex relationship between different jurisdictions and the expenditure/impact multipliers. Neither regional nor national estimates are available at this time.

Florida clearly received the greatest level of economic impact from gag in comparison to the other Gulf States, which is not surprising given the majority of gag target trips are estimated to be taken by Florida anglers (Table 3.3.2.13). Although not shown, on average (2010 through 2014), black grouper target trips in West Florida across all modes were estimated to generate approximately \$408,000 (2014 dollars) in output impact, \$266,000 in value added impact, and 4 jobs. There were no target trips for black grouper in the other Gulf States.

Estimates of the business activity associated with headboat effort are not available. Headboat vessels are not covered in the MRIP, so, in addition to the absence of estimates of target effort, estimation of the appropriate business activity coefficients for headboat effort has not been conducted.

Table 3.3.2.13. Summary of gag target trips (2010-2014 average) and associated business

activity (2014 dollars). Output and value added impacts are not additive.

| | . Output una varae acade impacts are not acative. | | | | | | | |
|---------------------|---|--------------|--------------|-------------|-------|--|--|--|
| | Alabama | West Florida | Louisiana* | Mississippi | Texas | | | |
| | | SI | ore Mode | | | | | |
| Target Trips | 0 | 24,627 | 0 | 0 | ** | | | |
| Output Impact | \$0 | \$1,199,533 | \$0 | \$0 | ** | | | |
| Value Added Impact | \$0 | \$668,531 | \$0 | \$0 | ** | | | |
| Jobs | 0 | 11 | 0 | 0 | ** | | | |
| | | Privat | e/Rental Mod | le | | | | |
| Target Trips | 315 | 275,352 | 0 | 207 | ** | | | |
| Output Impact | \$17,300 | \$15,131,579 | \$0 | \$7,404 | ** | | | |
| Value Added Impact | \$9,362 | \$8,568,328 | \$0 | \$3,766 | ** | | | |
| Jobs | 0 | 129 | 0 | 0 | ** | | | |
| | | Ch | arter Mode | | | | | |
| Target Trips | 114 | 18,124 | 0 | 0 | ** | | | |
| Output Impact | \$74,033 | \$13,506,432 | \$0 | \$0 | ** | | | |
| Value Added Impact | \$50,664 | \$9,029,775 | \$0 | \$0 | ** | | | |
| Jobs | 1 | 117 | 0 | 0 | ** | | | |
| | | A | All Modes | | | | | |
| Target Trips | 429 | 318,103 | 0 | 207 | ** | | | |
| Output Impact | \$91,333 | \$29,837,544 | \$0 | \$7,404 | ** | | | |
| Value Added Impact | \$60,026 | \$18,266,634 | \$0 | \$3,766 | ** | | | |
| Jobs | 1 | 257 | 0 | 0 | ** | | | |

Source: effort data from MRIP, economic impact results calculated by NMFS SERO using the model developed for NMFS (2011b).

3.4 Description of the Social Environment

This framework action affects recreational management of gag and black grouper.

Gag and black grouper are part of the shallow-water grouper complex. This group consists of gag, red grouper, and the four grouper species that make up the other shallow-water grouper complex (scamp, black, yellowfin, and yellowmouth grouper). Currently recreational regulations for gag and black grouper include a daily bag or possession limit, fishing seasons, and minimum size limits. Shallow-water grouper species are part of a four-fish combined grouper total daily bag or possession limit. Specific daily limits for black grouper and gag include limits of four black grouper per person as part of the four-fish combined grouper total and two gag per person within the four-fish combined grouper total. All shallow-water grouper is closed for recreational

^{*} MRIP sampling was not conducted in Louisiana in 2014, so Louisiana estimates reported here are based on average gag target effort for 2010 through 2013 only.

^{**} Because target information is unavailable, associated business activity cannot be calculated.

fishing from February 1st through March 31st when fishing beyond the 20-fathom break. Gag is open from July 1st through December 2nd and is subject to an in-season closure. The minimum recreational size limit is currently set for black grouper and gag at 22 inches TL.

A description of the social environment including analysis of communities engaged in gag and black grouper fishing was provided in Amendment 38 (GMFMC 2012) and is incorporated here by reference. In summary, the referenced description highlights that, from a socio-cultural perspective, gag is the most important of the shallow-water grouper species as it is the declared target species for the most recreational bottom-fishing trips. The referenced information includes a description of the proportion of recreational landings by species within the other shallow-water grouper complex over time. In addition, descriptions of top grouper communities are included.

Updated information on effort including gag and black grouper target effort is included in Section 3.3.2. The following description contains updated information on recent recreational landings of gag and black grouper. Information is summarized by state and by mode. In addition, descriptions of top Gulf recreational fishing communities are included and indices of recreational reliance and engagement are summarized. And lastly, minority, poverty, and social vulnerability data are presented to assess the potential for environmental justice concerns.

Recreational Fishing Communities

Gag

Over the past five years, Gulf recreational landings for gag have ranged from 756,705 lbs gutted weight to 1,689,872 lbs gutted weight (2010 – 2014, Table 3.3.2.1). By state, the majority of Gulf gag caught by recreational anglers is landed in West Florida through Alabama (99.3% on average for years 2010 - 2014, Table 3.3.2.1) with the bulk of gag caught in West Florida. The remainder of Gulf recreational gag is landed Louisiana and Mississippi (average of 0.6% per year, Table 3.3.2.1) and Texas (0.1%). Landings of gag in Florida are the greatest in West Florida (68% of Gulf region for years 2010-2014, Table 1.1.1) and in the Panhandle (31% of Gulf region). A small amount of gag is landed in Monroe County (less than 1% in the Gulf and a range of 1,007 lbs gutted weight to 19,839 lbs gutted weight in the South Atlantic for years 2010-2014, Table 1.1.1). The majority of recreational gag landings that occur in Monroe County are attributed to the South Atlantic and counted toward the South Atlantic ACL. However, Monroe County, which includes the Florida Keys, is the area in which inconsistent regulations between Councils would affect anglers. By mode, anglers fishing from private vessels represent on average 75.5% of the recreational landings, followed by charter boats (19.4%); headboats represent on average 4.3% of recreational landings (Table 3.3.2.2).

Black grouper

Over the past five years, Gulf recreational landings for black grouper have ranged from 331 lbs gutted weight to 26,032 lbs gutted weight (2010 – 2014, Table 3.3.2.4). Black grouper is harvested recreationally in Florida, Alabama, and Texas. As reported in Section 3.3.2, the majority of Gulf black grouper caught by recreational anglers is landed in West Florida through Alabama (74% on average for years 2010 - 2014, SEFSC MRFSS/MRIP ACL Dataset), followed by Texas (26%). However, Gulf-wide recreational landings of black grouper are very

small in comparison to the amount of black grouper landed in Monroe County, Florida (Monroe County landings have ranged from greater than 17,097 lbs gutted weight to 49,585 lbs gutted weight for years 2010-2014, Table 1.1.2). The majority of recreational black grouper landings that occur in the waters around Monroe County are attributed to the South Atlantic and counted toward the South Atlantic ACL. However, Monroe County, which includes the Florida Keys, is the area in which inconsistent regulations between Councils would affect anglers. By mode, anglers fishing from headboats represent on average 74.3% of Gulf recreational landings, followed by private vessels (24.7%); charter boats represent on average 1.1% of recreational landings (Table 3.3.2.4).

Landings for the recreational sector are not available by species at the community level; therefore, it is not possible with available information to identify communities as dependent on recreational fishing for gag and black grouper. Because limited data are available concerning how recreational fishing communities are engaged and reliant on specific species, a set of indices were created using secondary data from permit and infrastructure information for the southeast recreational fishing sector at the community level (Jepson and Colburn 2013; Jacob et al. 2013). Using a principal component and single solution factor analysis, each community receives a factor score for each index to compare to other communities. With a selected group of communities that may have gag grouper and black groupers fishing activity, factor scores of both engagement and reliance were plotted onto bar graphs. Factor scores are denoted by colored bars and are standardized, therefore the mean is zero. Two thresholds of one and ½ standard deviation above the mean are plotted onto the graphs to help determine a threshold for significance. Figure 3.4.1 identifies the recreational communities that are engaged and reliant upon fishing in general. Using thresholds of fishing dependence of ½ standard deviation and one standard deviation, Figure 3.4.1 suggests that several communities are substantially engaged in recreational fishing. Because the analysis used discrete geo-political boundaries, Panama City and Panama City Beach had separate values for the associated variables. Calculated independently, each still ranked high enough to appear in the top 16 list suggesting a greater importance for recreational fishing in that area.

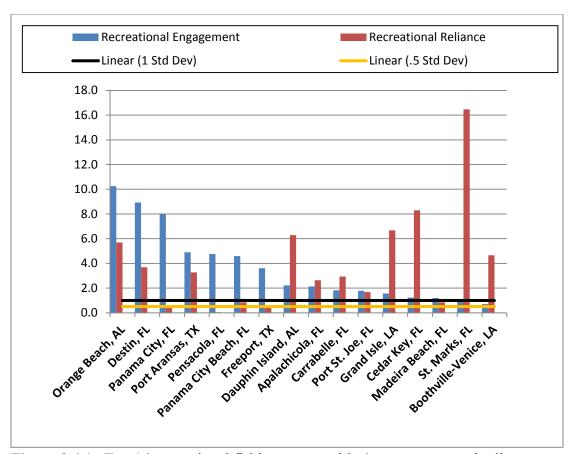


Figure 3.4.1. Top 16 recreational fishing communities' engagement and reliance. Source: SERO, Social indicators database (2012).

Environmental Justice Considerations

Executive Order 12898 requires federal agencies conduct their programs, policies, and activities in a manner to ensure individuals or populations are not excluded from participation in, or denied the benefits of, or subjected to discrimination because of their race, color, or national origin. In addition, and specifically with respect to subsistence consumption of fish and wildlife, federal agencies are required to collect, maintain, and analyze information on the consumption patterns of populations who principally rely on fish and/or wildlife for subsistence. The main focus of Executive Order 12898 is to consider "the disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories..." This executive order is generally referred to as environmental justice (EJ).

The proposed actions could be expected to affect recreational fishermen and associated industries in numerous communities along the Gulf of Mexico coast. However, information on the race and income status for groups at the different participation levels (individual fishermen, for-hire vessel owners, crew, employees of associated support industries, etc.) is not available. Although information is available concerning communities overall status with regard to minorities and poverty (e.g., census data), such

information is not available specific to fishermen and those involved in the industries and activities, themselves. To help assess whether any environmental justice concerns arise from the actions in this framework, a suite of indices were created to examine the social vulnerability of coastal communities. The three indices are poverty, population composition, and personal disruptions. The variables included in each of these indices have been identified through the literature as being important components that contribute to a community's vulnerability. Indicators such as increased poverty rates for different groups, more single female-headed households and households with children under the age of five, disruptions such as higher separation rates, higher crime rates, and unemployment all are signs of populations experiencing vulnerabilities. Again, for those communities that exceed the threshold it would be expected that they would exhibit vulnerabilities to sudden changes or social disruption that might accrue from regulatory change.

Figure 3.4.2 provides the social vulnerability of recreationally engaged communities. Three communities exceed the threshold of one standard deviation above the mean for two of the indices (Freeport, Texas; Apalachicola and Carrabelle, Florida), and would be the communities most likely to exhibit vulnerabilities to social or economic disruption due to regulatory change.

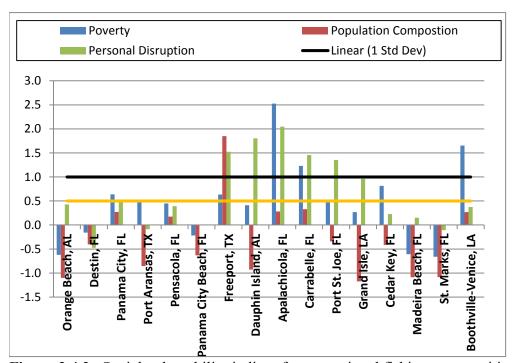


Figure 3.4.2. Social vulnerability indices for recreational fishing communities. Source: SERO, Social indicators database (2012).

People in these communities may be affected by fishing regulations in two ways: participation and employment. Although these communities may have the greatest potential for EJ concerns, no data are available on the race and income status for those involved in the local fishing industry (employment), or for their dependence on gag grouper or black grouper specifically (participation). There are no known claims for customary usage or subsistence consumption of gag or black grouper by any Gulf of

Mexico population including tribes or indigenous groups. Although no EJ issues have been identified, the absence of potential EJ concerns cannot be assumed.

The current preferred alternatives would increase the recreational minimum size limit for gag and black grouper and would eliminate the recreational fixed closed season for gag. The effects resulting from these actions are addressed in Sections 4.1.4, 4.2.4, and 4.3.4.

3.5 Description of the Administrative Environment

3.5.1 Federal Fishery Management

Federal fishery management is conducted under the authority of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) (16 U.S.C. 1801 *et seq.*), originally enacted in 1976 as the Fishery Conservation and Management Act. The Magnuson-Stevens Act claims sovereign rights and exclusive fishery management authority over most fishery resources within the exclusive economic zone (EEZ). The EEZ is defined as an area extending 200 nautical miles from the seaward boundary of each of the coastal states. The Magnuson-Stevens Act also claims authority over U.S. anadromous species and continental shelf resources that occur beyond the EEZ.

Responsibility for federal fishery management decision-making is divided between the Secretary of Commerce (Secretary) and eight regional fishery management councils that represent the expertise and interests of constituent states. Regional councils are responsible for preparing, monitoring, and revising management plans for fisheries needing management within their jurisdiction. The Secretary is responsible for promulgating regulations to implement proposed plans and amendments after ensuring management measures are consistent with the Magnuson-Stevens Act and with other applicable laws summarized in Section 10. In most cases, the Secretary has delegated this authority to NMFS.

The Council is responsible for fishery resources in federal waters of the Gulf. These waters extend to 200 nautical miles offshore from the nine-miles seaward boundary of the states of Florida and Texas, and the three-miles seaward boundary of the states of Alabama, Mississippi, and Louisiana. The length of the Gulf coastline is approximately 1,631 miles. Florida has the longest coastline of 770 miles along its Gulf coast, followed by Louisiana (397 miles), Texas (361 miles), Alabama (53 miles), and Mississippi (44 miles).

The Council consists of seventeen voting members: 11 public members appointed by the Secretary; one each from the fishery agencies of Texas, Louisiana, Mississippi, Alabama, and Florida; and one from NMFS. The public is also involved in the fishery management process through participation on advisory panels and through publically open Council meetings, with some exceptions for discussing internal administrative matters. The regulatory process is also in accordance with the Administrative Procedures Act, in the form of "notice and comment" rulemaking, which provides extensive opportunity for public scrutiny and comment, and requires consideration of and response to those comments.

Regulations contained within FMPs are enforced through actions of the NOAA's Office of Law Enforcement, the U.S. Coast Guard, and various state authorities. To better coordinate enforcement activities, federal and state enforcement agencies have developed cooperative agreements to enforce the Magnuson-Stevens Act. These activities are being coordinated by the Council's Law Enforcement Advisory Panel and the Gulf States Marine Fisheries Commission's Law Enforcement Committee have developed a two year "Gulf of Mexico Cooperative Law Enforcement Strategic Plan – 2011 - 2012."

3.5.2 State Fishery Management

The purpose of state representation at the Council level is to ensure state participation in federal fishery management decision-making and to promote the development of compatible regulations in state and federal waters. The state governments of Texas, Louisiana, Mississippi, Alabama, and Florida have the authority to manage their respective state fisheries. Each of the five Gulf states exercises legislative and regulatory authority over their states' natural resources through discrete administrative units. Although each agency is the primary administrative body with respect to the states' natural resources, all states cooperate with numerous state and federal regulatory agencies when managing marine resources. A more detailed description of each state's primary regulatory agency for marine resources is provided in Amendment 22 (GMFMC 2004b).

CHAPTER 4. ENVIRONMENTAL CONSEQUENCES

4.1 Action 1 - Gag Recreational Minimum Size Limit

Alternative 1. (No Action) The recreational minimum size limit for gag remains at 22 inches total length (TL).

Preferred Alternative 2. Set the recreational minimum size limit for gag at 24 inches TL.

4.1.1 Direct and Indirect Effects on the Physical Environment

With respect to **Action 1**, fishery management actions that affect the physical environment mostly relate to the interactions of fishing with bottom habitat, either through gear impacts to bottom habitat or through the incidental harvest of bottom habitat as described in Section 3.1.1. Most gag are caught with hook-and-line fishing gear, although some spearfishing does occur. Fishing gear can damage or disturb bottom structures and occasionally incidentally harvest such habitat. The degree a habitat is affected by fishing gear depends largely on the vulnerability of the affected habitat to disturbance, and on the rate that the habitat can recover from disturbance (Barnette 2001). For example, the complex structure and vertical growth pattern of coral reef species makes reef habitat more vulnerable to adverse impacts from fishing gear and slower to recover from such impacts than is sand and mud bottom habitat (Barnette 2001).

In general, gag eggs and larvae are pelagic. Juvenile gag are found in seagrass beds and oyster shell reefs while adult gag primarily occur over mid-to-high relief natural reef habitat (GMFMC 2004b). Adult gag are associated with hard bottom substrates, including offshore reefs and wrecks, coral and live bottom, and depressions and ledges. Spawning adults form aggregations in depths of 50 to 120 meters (m), with the densest aggregations occurring around the Big Bend area of Florida. Females undergo a migration from shallower waters to the deeper waters where spawning occurs, while males generally stay at the same depths where spawning occurs (Koenig 1999).

Longlines

Longline gear is deployed over hard bottom habitats using weights to keep the gear in direct contact with the bottom. Its potential for adverse impact is dependent on the type of habitat it is set on, the presence or absence of currents and the behavior of fish after being hooked. In addition, this gear upon retrieval can abrade, snag, and dislodge smaller rocks, corals, and sessile invertebrates (Bohnsack in Hamilton, 2000; Barnette 2001). Direct underwater observations of longline gear in the Pacific halibut fishery by High (1998) noted that the gear could sweep across the bottom. Some halibut were observed pulling portions of longlines 15 to 20 feet over the bottom. Although the gear was observed in contact with or snagged on a variety of objects including coral, sturdy flexible corals usually appeared unharmed while hard corals often had portions broken off. However, in another study that directly observed deployed longline gear (Atlantic tilefish fishery) found no evidence that the gear shifted significantly, even when set in currents. This was attributed to anchors set at either end of the longline as well as sash weights

along the line to prevent movement (Grimes et al. 1982). Based on the direct observations, it is logical to assume that bottom longline gear would have a minor impact on sandy or muddy habitat areas. However, due to the vertical relief that hardbottom and coral reef habitats provide, it would be expected that bottom longline gear may become entangled, resulting in potential negative impacts to habitat (Barnette 2001).

Vertical lines

Concentrations of many managed reef fish species are higher on hard bottom areas than on sand or mud bottoms, thus vertical line gear fishing generally occurs over hard bottom areas (GMFMC 2004b). Vertical lines include multi-hook lines known as bandit gear, handlines, and rod-and-reels. Vertical-line gear is less likely to contact the bottom than longlines, but still has the potential to snag and entangle bottom structures and cause tear-offs or abrasions (Barnette 2001). In using bandit gear, a weighted line is lowered to the bottom, and then the lead is raised slightly off the bottom (Siebenaler and Brady 1952). The gear is in direct contact with the bottom for only a short period of time. Barnette (2001) suggests that physical impacts may include entanglement and minor degradation of benthic species from line abrasion and the use of weights (sinkers). Commercial or recreational fishing with rod-and-reel and handlines also puts gear on the bottom. The terminal part of the gear is either lifted off the bottom like fishing with bandit gear, or left contacting the bottom. Sometimes the fishing line can become entangled on coral and hard bottom outcroppings. The subsequent algal growth can foul and eventually kill the underlying coral (Barnette 2001). Researchers conducting studies in the restricted fishing area at Madison-Swanson reported seeing lost fishing line on the bottom, much of which appeared to be fairly old and covered with growth (personal communication, Andrew David), a clear indication that bottom fishing has had an impact on the physical environment prior to fishing being prohibited in the area (GMFMC 2003). The National Fish and Wildlife Foundation, in issuing grants to remove marine debris, established monofilament fishing line is a priority marine debris issue.

Anchor damage is also associated with vertical-line fishing vessels, particularly by the recreational sector where fishermen may repeatedly visit well marked fishing locations. Bohnsack and Hamilton (2000) showed that "favorite" fishing areas such as reefs are targeted and revisited multiple times, particularly with the advent of global positioning technology. The cumulative effects of repeated anchoring could damage the hard bottom areas where fishing for grouper occurs.

Spear and Powerhead

Spearguns and slings are used in both commercial and recreational grouper fishing but are a relatively minor component of both. Barnette (2001) cited a study by Gomez (1987) that concluded that spearfishing on reef habitat may result in some coral breakage, but damage is probably negligible. In addition, there could be some impacts from divers touching coral with hands or from resuspension of sediment by fins (Barnette 2001). Such impacts should be negligible to non-existent for well-trained and experienced spearfishermen who stay in the water column and avoid contact with the bottom.

Indirectly, size influence the management measures needed, including closed seasons and seasonally closed areas. These actions affect the amount of time that fishing gear can interact with the physical environment. Fishing line can get entangled on bottom structures and lead to local fouling of areas in some situations. In this respect, **Alternative 1**, the no action alternative, will have less indirect impact to the physical environment than **Preferred Alternative 2**. These impacts would be from the expected increase in the amount of time to harvest the recreational gag quota, and conversely, increase gear interactions with the physical environment. In combination with which season closure is selected by the Council, **Alternative 1**, is expected to result in a 220-239 day fishing season while **Preferred Alternative 2** is expected to result in 306-343 fishing days. These impacts are expected to be minor.

Alternative 1 (no action), would maintain the current 22-inch TL size limit and is not expected to affect recreational fishing for gag and would therefore not be expected to result in effects to the physical environment. Although the size limit increase to 24 inches TL in **Preferred Alternative 2** may have indirect effects on the physical environment but allowing a longer season, it is not expected to alter the overall execution of the reef fish fishery and therefore is not be expected to have any substantial effects on the physical environment.

4.1.2 Direct and Indirect Effects on the Biological/Ecological Environment

Alternative 1, the no action alternative, is expected to have the greatest negative impact on the gag stock. It will allow the recreational fishery to operate year round, except for a fixed February-March shallow-water grouper closed season. **Preferred Alternative 2** increases the recreational minimum size limit from 22 inches to 24 inches and would be expected to provide greater benefits to the gag stock as more mature individuals would reach sexual maturity. At 22-24 inches TL it is estimated that 50% of the female population would be sexually mature and capable of spawning (SEDAR 9 2006c, SEDAR 33 2014). **Preferred Alternative 2** would be expected to provide more gag the opportunity to spawn than **Alternative 1**, and provide a greater positive effect to the population.

The Council and its Reef Fish Advisory Panel have stated concerns about bycatch mortality of gag if the minimum size limit is increased. There were also concerns about whether or not the minimum size limit would sufficiently slow the rate of harvest and increase gag bycatch. To address these concerns, the decision model (Appendix B) was used to evaluate how the rate of harvest and dead discards would change with increases to the minimum size limit. However, **Preferred Alternative 2** is not expected to alter the overall execution of the fishery and therefore is not expected to have any substantial effects on the biological environment.

4.1.3 Direct and Indirect Effects on the Economic Environment

This action considers increases in the recreational size limit for gag. Alternative 2 would increase the size limit to 24 inches TL. Alternative 1 (no action), which would maintain the current 22-inch minimum size limit, is not expected to affect recreational fishing for gag and would therefore not be expected to result in economic effects. Economic effects, measured in changes in consumer surplus for the recreational sector were derived from a recreational decision

tool developed by SERO (2015). As discussed in Section 3.3.2, changes in consumer surplus are determined based on a consumer surplus of \$103 (2014 dollars) per gag. Table 4.1.3.1 provides estimated recreational gag harvests for Alternatives 1 and 2 and associated annual changes in consumer surplus for Alternative 2 relative to the status quo in the first year the action is fully implemented⁵. For subsequent years, a qualitative discussion of the economic effects expected to result from the management alternatives is provided.

This analysis does not include estimates for changes in producer surplus because it is assumed that the size limit adjustment under consideration would not affect the number of for-hire trips. For-hire trips are expected to remain the same because gag are typically harvested with other reef fish (including other groupers). Therefore, although size limit changes could be expected to change the catch composition for recreational anglers on for-hire trips, the number of for-hire trips is expected to remain unaffected. It is also noted that the decision tool used to estimate changes in consumer surplus to the recreational sector does not account for potential changes in the quality of recreational trips due to size limit modifications.

Table 4.1.3.1. Estimated landings and decreases in number of fish harvested and consumer surplus (by mode) relative to Alternative 1 (no action). Landings and consumer surplus are expressed in number of fish and 2014 dollars, respectively.

| Fishing | Estimated (Number | _ | Decrease relative to Alternative 1 | | |
|----------|-------------------------|-------------------------|------------------------------------|---------------------|--|
| Mode | Alternative 1 (22-inch) | Alternative 2 (24-inch) | Number of fish | Consumer Surplus | |
| Headboat | 5,185 | 4,193 | 992 | \$102,175 | |
| Charter | 22,956 | 18,290 | 4,665 | \$480,524 | |
| Private | 177,055 | 141,447 | 35,608 | \$3,667,616 | |
| Total | 205,196 | 163,931 | 41,265 | \$4,250,315 | |

Source: SERO - Gag Decision Tool 2015

Relative to Alternative 1 (no action), a greater size limit would be expected to result in a reduced retained catch rate. Therefore, without adjustments to the season length, Alternative 2, which would increase the size limit from 22 to 24 inches TL, would be expected to result in lower gag recreational harvests. Based on the recreational gag decision tool, Alternative 2 would be expected to result in a 20.1 % decrease in recreational gag harvests in the first year this action is fully implemented relative to the status quo. The associated loss in consumer surplus, derived by multiplying the decrease in gag harvests (measured in number of fish) by the estimated consumer surplus per gag, is estimated at approximately \$4.25 million. Because neither the ACL nor the ACT is expected to be reached under the status quo season length, the estimated change in consumer surplus from a size limit increase would be the same whether or not accountability measures are in place for gag. Although the uncertainty associated with the decision tool increases as projections are made further out into the future, a greater size limit would be expected to continue to result in comparable decreases in harvests and in consumer surplus of similar magnitudes in subsequent years. A discussion of the combined economic

⁵ The current expectation is that this framework action will be fully implemented in 2016.

effects expected to result from modifications to the recreational season and to the size limit is provided in Section 4.3.3.

4.1.4 Direct and Indirect to the Social Environment

Usually, the minimum size limit for a stock is changed to address biological goals, such as decreasing dead discards. In this case, the recreational minimum size limit for gag would be modified to make it consistent with the South Atlantic Council's minimum size limit, which is larger than the current minimum size limit for gag in the Gulf. Increasing the minimum size limit would also allow for the fishing season to be extended. The effects of increasing the minimum size limit in terms of extending the recreational fishing season are provided in Section 4.3.4.

Additional effects would not be expected from retaining the current 22-inch TL minimum size limit for gag (**Alternative 1**). However, this alternative would allow different minimum size limits to remain in the waters surrounding the Florida Keys, which is part of both the Gulf and South Atlantic Council jurisdictions. In this area, it can be confusing for anglers to comply with the appropriate minimum size limit, which is 22 inches TL in federal waters of the Gulf Council's jurisdiction, but 24 inches TL both in state waters of the Florida Keys and in federal waters of the South Atlantic Council's jurisdiction.

Monroe County, which includes the Florida Keys, is the only area for which the inconsistent regulations between Councils would affect anglers. Very little gag is harvested by recreational anglers in Monroe County (Table 1.1.1). For anglers fishing for gag in Monroe County, some positive effects would be expected under **Preferred Alternative 2**, which would reconcile the different minimum size limits by increasing the Gulf minimum size limit to 24 inches TL. Anglers who are confused as to where each size limit applies would benefit by establishing a consistent minimum size limit with the South Atlantic Council. Some negative effects could potentially occur if the increase in the size limit restricts anglers in the Gulf Council's jurisdiction of Monroe County from being able to retain a legal size gag.

Outside of the state and federal waters surrounding Monroe County where inconsistent minimum size limits do not exist for gag, **Preferred Alternative 2** would be expected to result in negative effects for anglers. In recent years, the recreational sector has not caught its quota (Table 1.3.1). Gag is a very popular recreational target species for the west coast of Florida, especially from Levy to Collier County (Table 1.1.1). That anglers are not landing their allotted quota could be due to numerous factors, including restrictive regulations or decreasing stock availability. Action 3 evaluates extending the recreational fishing season to provide more fishing opportunities for anglers to catch the quota. Assuming that fishing activity and effort remain the same, increasing the minimum size limit by 2 inches TL would be expected to result in less of the quota being caught than under **Alternative 1**. Thus, for the majority of Gulf anglers, **Preferred Alternative 2** would be expected to result in greater negative effects than **Alternative 1**.

4.1.5 Direct and Indirect Effects on the Administrative Environment

The alternatives in Action 1 are expected to have minimal impacts to the administrative environment compared to no action. Alternative 1, which maintains the 22-inch TL minimum size limit, will continue to create enforcement complications in the south Florida area due to having a different size limit in the South Atlantic and in Florida state waters off Monroe County. Preferred Alternative 2, which adopts a minimum size limit that is consistent with the South Atlantic size limit will ease enforcement in the south Florida area, but may complicate enforcement in the rest of Gulf where the state minimum size limit is 22 inches TL (unless the states adopt the same change in size limit). However, enforcement already addresses differing size limits between state and federal waters for other species such as red snapper, so any additional impacts on the administrative environment are expected to be minimal other than the effort it would take to change the regulations.

4.2 Action 2 – Black Grouper Recreational Minimum Size Limit

Alternative 1. No Action. The recreational minimum size limit for black grouper remains at 22 inches TL.

Preferred Alternative 2. Set the recreational minimum size limit for black grouper at 24 inches TL.

4.2.1 Direct and Indirect Effects on the Physical Environment

With respect to **Action 2**, fishery management actions that affect the physical environment mostly relate to the interactions of fishing with bottom habitat, either through gear impacts to bottom habitat or through the incidental harvest of bottom habitat as described in Section 3.1.1. The degree a habitat is affected by fishing gear depends largely on the vulnerability of the affected habitat to disturbance, and on the rate that the habitat can recover from disturbance (Barnette 2001). For example, the complex structure and vertical growth pattern of coral reef species makes reef habitat more vulnerable to adverse impacts from fishing gear and slower to recover from such impacts than is sand and mud bottom habitat (Barnette 2001). Juvenile black grouper are found were shallow rocky reef habitats which had either high vertical relief with crevices, caves, or small dispersed rocks while adult black grouper primarily caught along high relief areas in deeper waters.

In general, black grouper eggs and larvae are pelagic. Juvenile black grouper are found were shallow rocky reef habitats which had either high vertical relief with crevices, caves, or small dispersed rocks while adult black grouper primarily caught along high relief areas in deeper waters.

The primary effects of the recreational black grouper fishery on the physical environment generally result from fishing gear interactions with the sea floor. Most black grouper are caught

with hook-and-line fishing gear, although some spearfishing does occur. Fishing gear can damage or disturb bottom structures and occasionally incidentally harvest such habitat. Sections 3.1 (GMFMC (2004b)) describes the physical environment and habitat use by Black groupers. In general, eggs and larvae are pelagic. Virtually no information on the life history and distribution of young juveniles (age 0-1) black grouper is available. Black grouper spawning is presumed to occur, in the habitats in Florida (particularly in the Florida Keys) where these fish occur (presumably rocky habitats not presently sampled by the fishery independent program in Florida).

Alternative 1 (no action), would maintain the current 22-inch TL size limit and is not expected to affect recreational fishing for black grouper and would therefore not be expected to result in effects to the physical environment. Although the size limit increase to 24 inches TL in **Preferred Alternative 2**, is not expected to alter the overall execution of the reef fish fishery and therefore is not be expected to have any substantial effects on the physical environment.

4.2.2 Direct and Indirect Effects on the Biological/Ecological Environment

Black grouper are rarely caught in the Gulf north of Monroe County (although gag are sometimes misidentified as black grouper) (Table 4.2.4.1). Consequently, any biological/ecological effects outside of the waters off Monroe County would be insignificant.

Alternative 1, no action, leaves the black grouper recreational minimum size limit at 22 inches TL which is inconsistent with the South Atlantic minimum size limit which was set to 24 inches TL for both the recreational and commercial sector in 1999 (SAFMC 1999). However, it would be consistent with the commercial minimum size limit of 22 inches TL in the Gulf. Alternative 1, the no action alternative, is expected to allow the recreational fishery to operate year round, except for a fixed February-March shallow-water grouper closed season and would not be expected to have a greater negative impact on the black grouper stock as compared to **Preferred Alternative 2**.

Preferred Alternative 2 sets the black grouper recreational minimum size limit at 24 inches TL, which is consistent with the South Atlantic's minimum size limit and with the commercial minimum size limit in the Gulf. Florida (north of Monroe County), Alabama, Mississippi, and Louisiana have a 22-inch TL recreational minimum size limit in their state waters, while Texas has no size limit (Table 2.2.2). Black grouper reach 22 inches TL at just under 3 years and take about half a year to grow to 24 inches TL (Table 2.2.1). Increasing the minimum size limit will reduce the retained catch rate, but since the season is already open year-round (except for a February – March closure in waters less than 20 fathoms), there will be no effect on season length. Increasing the minimum size limit will increase regulatory discards and discard mortality. Given the speed at which black grouper grow from 22 inches to 24 inches, and a relatively low release mortality rate in shallow water, any increase in discard mortality from increasing the size limit should be fairly minor. However, Preferred Alternative 2 is also expected to result in more fish being discarded and increase the number of dead discards. No measures are proposed in this amendment to directly reduce the bycatch of other reef fish species. An increase in black grouper minimum size limit would be expected to increase recreational discards of

black grouper. The magnitude of these effects would depend on the length of the recreational fishing season, and the amount of effort shifting that occurs.

Alternative 1 (no action), would maintain the current 22-inch TL size limit and is not expected to affect recreational fishing for black grouper and would therefore not be expected to result in effects to the biological environment. Although the size limit increase to 24 inches TL in **Preferred Alternative 2**, is not expected to alter the overall execution of the reef fish fishery and therefore is not be expected to have any substantial effects on the biological environment.

4.2.3 Direct and Indirect Effects on the Economic Environment

This action considers increases in the recreational minimum size limit for black grouper.

Preferred Alternative 2 would increase the size limit to 24 inches TL. Alternative 1 (no action), which would maintain the current 22-inch minimum size limit, is not expected to affect recreational fishing for black grouper and would therefore not be expected to result in economic effects. Preferred Alternative 2 would increase the size limit for black grouper to be consistent with the size limit in the South Atlantic and with the size limit for gag in the Gulf of Mexico if the Council elects to set a 24-inch size limit in Action 1. An increase in the Gulf black grouper minimum size limit would be expected to result in a reduced retained catch rate, thereby resulting in adverse economic effects. By maintaining consistency across Councils and between gag and black grouper in the Gulf, Preferred Alternative 2 would also be expected to yield economic benefits. Due to the negligible number of sampled black grouper trips and limited black grouper recreational landings in the Gulf of Mexico (M. Larkin, pers. comm. 7/21/2015), potential net economic effects that would result from Preferred Alternative 2 are expected to be minimal.

4.2.4 Direct and Indirect Effects on the Social Environment

Usually, the minimum size limit for a stock is changed to address biological goals, such as decreasing dead discards. In this case, the recreational minimum size limit for black grouper would be modified to make it consistent with the South Atlantic Council's minimum size limit, which is larger than the current minimum size limit for black grouper in the Gulf.

Additional effects would not be expected from retaining the current 22-inch TL minimum size limit for black grouper (**Alternative 1**). However, this alternative would allow different minimum size limits to remain for the waters surrounding the Florida Keys, which is part of both the Gulf and South Atlantic Council jurisdictions. In this area, it can be confusing for anglers to comply with the appropriate minimum size limit, which is 22 inches TL in federal waters of the Gulf Council's jurisdiction, but 24 inches TL both in state waters of the Florida Keys and in federal waters of the South Atlantic Council's jurisdiction.

State and federal waters surrounding Monroe County, which includes the Florida Keys, is the only area for which the inconsistent regulations between Councils would affect anglers. In contrast with Gulf landings of gag (Action 1), more black grouper is landed in Monroe County

than from the rest of the Gulf combined (Table 1.1.2), although nearly all of these landings count towards the South Atlantic Council's ACL for black grouper. For anglers fishing for black grouper from Monroe County, some positive effects would be expected under **Preferred Alternative 2**, which would reconcile the different minimum size limits by increasing the Gulf minimum size limit to 24 inches TL. Anglers who are confused as to where each size limit applies would benefit by establishing a consistent minimum size limit with the South Atlantic Council. Some negative effects could potentially occur if the increase in the size limit restricts anglers in the Gulf Council's jurisdiction of Monroe County from being able to retain a legal size black grouper.

As stated, very little black grouper is landed outside of Monroe County. Thus, the effects from increasing the minimum size limit for black grouper (**Preferred Alternative 2**) would be expected to be minimal for anglers who land black grouper outside of Monroe County.

4.2.5 Direct and Indirect Effects on the Administrative Environment

The alternatives in Action 2 are expected to have minimal impacts to the administrative environment compared to no action. Alternative 1, which maintains the 22-inch TL minimum size limit, will continue to create enforcement complications in the south Florida area due to having a different size limit in the South Atlantic and in Florida state waters off Monroe County. Preferred Alternative 2, which adopts a minimum size limit that is consistent with the South Atlantic size limit will ease enforcement in the south Florida area, but may complicate enforcement in the rest of Gulf where the state minimum size limit is 22 inches TL (unless the states adopt the same change in size limit). However, enforcement already addresses differing size limits between state and federal waters for other species such as red snapper, so any additional impacts on the administrative environment are expected to be minimal other than the effort it would take to change the regulations.

4.3 Action 3 – Modifications to the Recreational Gag Fishing Season

4.3.1 Direct and Indirect Effects on the Physical Environment

The primary effects of recreational grouper fishing on the physical environment result from fishing gear interactions with the sea floor. Most grouper are caught with hook-and-line fishing gear, although some spearfishing does occur. Fishing gear can damage or disturb bottom structures and occasionally incidentally harvest such habitat. However, Barnette (2001) indicated the effects of these gears on the physical environment is much less than other gear types.

The degree a habitat is affected by fishing gear depends largely on the vulnerability of the affected habitat to disturbance and on the rate that the habitat can recover from disturbance (Barnette 2001). For example, the complex structure and vertical growth pattern of reef building coral species makes reef habitat more vulnerable to adverse impacts from fishing gear and slower to recover from such impacts than sand and mud bottom habitat (Barnette 2001). Juvenile gag are found in seagrass beds and oyster shell reefs, whereas adult gag primarily occur over mid-to-high relief natural reef habitat. Red grouper are also associated with hard bottom habitat, but tend to prefer lower relief habitat than gag. Adult black grouper are found over wrecks and rocky coral reefs. Scamp are associated with ledges and high relief hard bottoms. For yellowfin and yellowmouth grouper, information on habitat association is sparse, although juvenile yellowfin grouper have been documented in inshore seagrass beds, mangrove estuaries, lagoons, and larger bay systems (GMFMC 1998)

The alternatives in this action affect the amount of time and time of year that recreational fishermen can fish for gag in federal waters of the Gulf.

Alternative 1 retains the existing 155-day recreational gag season. Since the number of fishing days would not change from 2014, impacts from possible interaction between fishing gear and the bottom habitat as discussed above are not changed. Alternative 1, would also maintain the fixed closed season from February 1 through March 31 seaward of the 20-fathom boundary and would be expected to result in less negative impacts to the physical environment compared to **Preferred Alternative 2**, and **Alternatives 3** and **4**.

Preferred Alternative 2 removes the December 3 closure date and retains the single recreational gag season. If neither Alternative 3 nor Alternative 4 are selected in combination with Preferred Alternative 2, the actual season length would be from July 1 through the end of the year (184 days), or when the ACL is reached, whichever occurs first. Longer seasons imply a greater potential for gear interaction and negative physical impacts from the types of disturbances discussed above. There is overlap in the range of season lengths, but a clear progression exists in season length from Preferred Alternative 2 to Alternative 3 and 4.

Alternatives 3 and 4 would remove the January through June recreational season closure.

Alternative 3 would open the season on January 1 and close the season when the ACL is projected to be reached. Alternative 4 sets the opening date by back calculating the projected season length from December 31. Option 3a and Option 4a maintain the February 1 through March 31 closure beyond the 20-fathom boundary while allowing recreational fishing for gag

inshore of 20 fathoms (if the season is open during that period). Options 3b and 4b remove the 20-fathom boundary closure and allows fishing for gag at any depth (if the season is open during that period). Option 3c and 4c close the harvest of gag in all federal waters from February 1 through March 31. The numbers of days in the recreational gag season for Action 1, Preferred Alternative 2, and the Action 3 alternatives with the various options are described (Tables 2.3.1 and 2.3.2.) in conjunction with Action 3, Preferred Alternative 2. Option 3a or 4a would result in the longest season (343 days or 329 days) under all combinations of size limits, and would be expected to result in the most gear interaction and negative physical environment impacts, while Options 3c and 4c (306 days) would be expected to result in the shortest season and the least gear interactions, and less negative physical environment impacts than Options 3a, 3b, 3c, 4a, and 4b. Alternative 4 with a 22 inch TL size limit would result in the same number of days (218 days) for all options.

Preferred Alternative 2 may have indirect effects on the biological environment by allowing a longer season, however, it is not expected to alter the overall execution of the reef fish fishery and therefore is not be expected to have any substantial effects on the physical environment.

4.3.2 Direct and Indirect Effects on the Biological/Ecological Environment

Alternative 1 retains the existing 155 day recreational gag season from July 1 through December 2. **Preferred Alternative 2** removes the December 3 closure date and retains the single recreational gag season. The actual season length would be from July 1 through the end of the year (184 days), or when the ACL is reached, whichever occurs first. Longer seasons imply a greater potential for increased bycatch and discards. Alternatives 3 and 4 increase the recreational fishing season from 220-343 fishing days depending on the size limit, respectively. Although these alternatives will allow an increase in harvest relative to **Alternative 1**, they will still have positive biological effects on the gag stock by keeping harvest within the annual catch limit (ACL). In addition, fishermen targeting gag may have an incidental bycatch of other species. Hierarchical cluster analysis of recreational landings show that gag catches are associated most closely with red grouper, but also other groupers as well as other reef fish, particularly gray (mangrove) snapper (Farmer et al. 2010). Thus, a closure for all shallow-water grouper may be effective in reducing bycatch of gag in areas where red grouper are caught, but by catch of gag is likely to continue in areas where other reef fish are caught. Among the species caught in association with gag to a lesser extent, gray triggerfish and greater amberjack are currently classified as overfished and is in a stock rebuilding plan. Incidental bycatch by fishermen targeting gag could indirectly have a negative impact on the gray triggerfish and greater amberjack stock rebuilding. Gray triggerfish and greater amberjack currently have a fixed closed recreational season June 1 through July 31, and their recreational harvest is closed when the recreational ACT is reached.

Preferred Alternative 2 may have indirect effects on the biological environment by allowing a longer season, however, it is not expected to alter the overall execution of the reef fish fishery and therefore is not be expected to have any substantial effects on the biological environment.

4.3.3 Direct and Indirect Effects on the Economic Environment

This action considers alternatives to the current July 1 through December 2 annual gag recreational fishing season. **Preferred Alternative 2** would allow, if warranted, the recreational fishing season to be extended beyond December 2 by eliminating the December 3 to 31 fixed closed season. **Alternatives 3** and **4** would eliminate the January through June seasonal closure. **Alternative 3** would begin the season January 1 and close when the ACL is projected to be met. **Alternative 4** would set an opening date such that the ACL is projected to be met on or after December 31. For **Alternatives 3** and **4**, **Options a, b,** and **c** would maintain (**Option a**) or eliminate (**Option b**) the 20-fathom closure or prohibit fishing in the EEZ (**Option c**) between February 1 and March 31.

Alternative 1 (no action), which would maintain the July 1 to December 2 annual gag recreational fishing season is not expected to affect recreational fishing for gag and would therefore not be expected to result in economic effects. Preferred Alternative 2 does not propose a specific recreational fishing season but, within the limits determined by the ACL, would allow the fishing seasons proposed in Alternatives 3 and 4 to run beyond December 2. Therefore, Preferred Alternative 2 would be expected to result in positive economic effects if it is implemented in conjunction with an alternative that would set a recreational fishing season running past December 2, e.g., all options under Alternative 4. Economic effects, measured in changes in consumer surplus for the recreational sector were derived from a recreational decision tool developed by SERO (2015). As discussed in Section 3.3.2, changes in consumer surplus are determined based on a consumer surplus (CS)(2014 dollars) per gag. For Alternatives 3 and 4, Table 4.3.3.1 provides annual changes in CS for estimated gag recreational fishing seasons in the first year the action is fully implemented⁶, assuming accountability measures are in place and an in-season closure will occur when the ACT is projected to be reached. Table 4.3.3.2 provides the same information, assuming accountability measures are not in place and an in-season closure will occur when the ACL is projected to be reached. For subsequent years, a qualitative discussion of the economic effects expected to result from the management alternatives is provided.

⁶ The current expectation is that this framework action will be fully implemented in 2016.

Table 4.3.3.1 Estimated season length and changes in CS for alternative gag recreational fishing seasons assuming accountability measures are in effect*. Season length in days; CS in \$1,000 (2014 dollars).

| | | n Length ays) | Changes in Consumer Surplus (\$1,000) | | | |
|-----------------|---------|------------------|--|---------|--|--|
| | 22-inch | 24-inch | 22-inch | 24-inch | | |
| Alternative 1 | 155 | | | | | |
| Alternative 3-a | 227 | 306 | \$4,218 | \$3,974 | | |
| Alternative 3-b | 222 | 294 | \$4,112 | \$4,050 | | |
| Alternative 3-c | 181 | 275 | \$3,857 | \$3,954 | | |
| Alternative 4-a | 194 | 258 | \$3,790 | \$4,014 | | |
| Alternative 4-b | 194 | 258 | \$3,790 | \$4,014 | | |
| Alternative 4-c | 194 258 | | \$3,790 | \$4,014 | | |

Source: SERO - Gag Decision Tool 2015

Table 4.3.3.2 Estimated season length and changes in CS for alternative gag recreational fishing seasons assuming accountability measures are not in effect*. Season length in days; CS in \$1,000 (2014 dollars).

| | Season Length (days) | | Changes in Consumer Surplus (\$1,000) | | |
|-----------------|----------------------|---------|--|---------|--|
| | 22-inch | 24-inch | 22-inch | 24-inch | |
| Alternative 1 | 155 | | | | |
| Alternative 3-a | 239 | 343 | \$6,962 | \$7,064 | |
| Alternative 3-b | 235 | 334 | \$7,086 | \$7,050 | |
| Alternative 3-c | 220 | 306 | \$6,711 | \$6,534 | |
| Alternative 4-a | 218 | 329 | \$6,865 | \$7,077 | |
| Alternative 4-b | 218 | 316 | \$6,865 | \$7,064 | |
| Alternative 4-c | 218 | 306 | \$6,865 | \$6,534 | |

Source: SERO - Gag Decision Tool 2015

The changes in CS expected to occur under each of the season alternatives would stem from changes in the temporal distribution of harvests and effort, and the total number of gag estimated to be harvested. It is noted that the decision tool used to estimate changes in CS to the recreational sector does not account for potential effort shifts during the open months. It is important to note that CS may increase or decrease relative to changes in season length, based on the temporal distribution of harvests, as well as the total amount harvested by the recreational sector. This is because the recreational decision tool developed by SERO (2015) estimates the

^{*}When accountability measures are in effect due to a previous overage, in-season closures will be based on the ACT rather than the ACL.

^{*}When accountability measures are in effect due to a previous overage, in-season closures will be based on the ACT rather than the ACL.

number of fish harvested using heterogeneous wave-level daily catch rates and mean fish weights. CS, as estimated, is based only on the number of fish and not the size of fish, so the same number of pounds would be more valuable in a month with a low mean fish weight than with a high mean fish weight. Additionally, because the recreational decision tool simulates a quota closure in the day preceding the day on which an estimated overage would occur, the overall harvest is dependent on both the daily catch rate and the aggregate harvest through the estimated closure date. Relative to **Alternative 1** (no action), all options proposed in **Alternatives 3** and **4** would be expected to result in positive economic effects, as measured by increases in consumer surplus. With a 22-inch minimum size limit, increases in CS in the first year this action is fully implemented range approximately from \$3.79 million to \$4.22 million (2014 dollars) if accountability measures are in effect (Table 4.3.3.1) and from \$6.71 million to \$7.09 million if accountability measures are not in effect (Table 4.3.3.2).

In addition to changes to the structure of the gag recreational fishing season, this framework action considers adjustments to the gag minimum size limit. The combined economic effects that would be expected to result from changes to the season structure and increases in the minimum size limit for gag are discussed in this section. As previously indicated, economic effects expected to result from Preferred Alternative 2 would stem from allowing recreational seasons proposed in Alternatives 3 and 4 to be extended beyond December 2. The combined effects that would be expected to result from the size limit increase proposed (Action 1) and adjustments to the fishing seasons (Action 3; Alternatives 3 and 4) are presented in Table 4.3.3.1 and Table 4.3.3.2. In general, increasing the size limit would lengthen the fishing season by reducing the harvest rate. As discussed in this section, expected consumer surplus for the first year this action is fully implemented relative to the status quo, which was estimated using the recreational decision tool, could decrease or increase due to temporal variations in the average weight per gag. Relative to Alternative 1, increases in consumer surplus expected to result from combined changes to the size limit and to the season structure are estimated to range from \$3.95 million (Alternative 3-c) to \$4.01 million (Alternatives 4-a,4-b, and 4-c) (2014 dollars), assuming accountability measures are in effect (Table 4.3.3.1). If accountability measures are not in effect, the increases in consumer surplus relative to **Alternative 1**, resulting from the combined changes to the size limit and to the season structure, are estimated to range from \$6.53 million (Alternatives 3-c and 4-c) to \$7.08 million (Alternative 4a) (Table 4.3.3.2). Although the uncertainty associated with the decision tool increases as projections are made further out into the future, it is assumed that comparable positive net economic effects would continue to result from all proposed recreational gag fishing seasons combined with the establishment of a 24 inch size limit.

4.3.4 Direct and Indirect Effects on the Social Environment

Neither the recreational nor commercial sector has harvested its quota in recent years (Table 1.3.1), meaning that optimum yield is not being achieved. If the current recreational fishing season for gag is retained (**Alternative 1**), it would be expected that recreational landings would continue to remain below the ACL, and optimum yield would not be met.

Action 1 considers raising the minimum size limit for gag to make the size limit consistent with the South Atlantic Council's minimum size limit. Increasing the size limit to 24 inches TL

(Action 1, Preferred Alternative 2) would be expected to constrain the recreational harvest of gag and further decrease the likelihood of achieving optimum yield.

Preferred Alternative 2, **Alternative 3** and **Alternative 4** would modify the recreational fishing season for gag by revising the fixed closed season. If the gag minimum size limit is increased to 24 inches TL through Action 1, the alternatives analyzed here would increase the length of the fishing season compared with the season which would result if the existing minimum size limit is retained (Action 1, Alternative 1). Compared with **Alternative 1**, each the alternatives and options proposed in this action would result in greater direct positive effects by providing additional fishing opportunities to the recreational sector.

The fixed closed season of December 3-31 prevents NMFS from allowing the gag fishing season to remain open during this time, even if there is remaining quota available. Removing the December 3-31 fixed closed season (**Preferred Alternative 2**) would result in positive effects by removing this obstacle to achieving optimum yield. NMFS would continue to estimate the season length and prohibit further retention of gag when the ACL is projected to be met. Thus, the fixed closed season is not necessary.

Both Alternatives 3 and 4 would remove the January through June fixed closed season. As with Preferred Alternative 2, NMFS would continue to estimate the season length and prohibit further retention of gag when the ACL is projected to be met. Thus, the fixed closed season is not necessary. The alternatives differ for whether the season would begin on January 1 and last until NMFS projects the ACL will be met (Alternative 3), or the season would end on December 31, and NMFS would project backward in time for when the ACL is estimated to be met, and setting the season opening date at that time (Alternative 4). For all three alternatives, positive effects would be expected from removing the respective fixed closed seasons.

The same set of options are provided for Alternatives 3 and 4, which maintain (Options 3a and 4a) or remove (Options 3b and 4b) the February 1 through March 31 closed season on the recreational harvest of gag beyond the 20-fathom boundary. These fixed closed seasons were implemented to protect gag during the spawning season. Anglers generally support spawning season closures, recognizing the biological benefits of protecting a stock during reproductive activity. Thus, the options to maintain the spawning season closure (Options 3a and 4a) would be expected to result in some additional social benefits compared with removing the spawning season closure (Options 3b and 4b). Options 3c and 4c would extend the spawning season closure to all federal waters. In terms of angler support for spawning season closures, these options would be expected to provide some additional benefits than Options a and b.

On the other hand, just as removing the fixed closed seasons would allow for a longer fishing season, the options for modifying the spawning season closures affect the length of the season, as well. Greater benefits would be expected from a longer fishing season, as more fishing opportunities are available and the likelihood of achieving optimum yield would increase. Anglers generally prefer a winter fishing season for gag, when individuals move to shallower depths and are more available. Thus, the fishing season that would provide the greatest positive effects would balance the maximum number of winter fishing days with the longest fishing season overall.

For the options under **Alternatives 3** and **4**, Table 4.3.4.1 provides a comparison of the length of the fishing season and season openings and closures. The longest fishing seasons would result under **Alternative 3**, **Option a** if a 24-inch TL minimum size limit is adopted in Action 1, and **Alternative 4**, **Option a**, retaining the 22-inch TL minimum size limit. Under these alternatives and options, however, the fishing season would be closed for most of December (**Option 3a**, 24-inch TL minimum size limit) or closed for all of January through to May 28 (**Option 4a**, 22-inch TL minimum size limit). These alternatives and options would provide the most benefits for anglers who prefer the longest season, even if the season is closed during the winter months.

Table 4.3.4.1. Estimated gag recreational seasons based on the ACL under combinations of Action 1 size limits and Action 3, Alternatives 3 and 4 options. Assumes removal of the December 3-31 fixed closed season (Preferred Alternative 2).

| Actio | | IIACG | | | ` | | Jun | Jul | <u> </u> | Sep | | | l | # |
|--------------------------------------|--------|-------------------|----------------------|----------------|----------|----------|------|----------|----------|-----|-----|-----|-----|------|
| | Ontion | lan | Eab | Mar | Ap | Mari | | | A | - | Oot | Nov | Doo | |
| n 1 | Option | Jan | Feb | Mar | r | May | е | У | Aug | t | Oct | Nov | Dec | days |
| s TL | 3a | open | en <20 fathoms op | | | en | | C=2 7 | closed | | | 239 | | |
| inches | 3b | | open C=2 3 closed | | | | 235 | | | | | | | |
| 22 | 3c | open | closed open 6 closed | | | | sed | 220 | | | | | | |
| size limit of | 4a | O=2 closed 8 open | | | | | | 218 | | | | | | |
| size I | 4b | closed | | | | O=2 8 | open | | | | 218 | | | |
| Min. | 4c | O: | | | O=2 8 | open | | | | 218 | | | | |
| hes | 3a | open | <20 fathoms | | | | ор | en | C=9 | | | C=9 | 343 | |
| t inc | 3b | | open close d | | | | 334 | | | | | | | |
| of 2 . | 3c | open | clo | losed open | | | 306 | | | | | | | |
| size limit of 24 inches TL | 4a | close d | | eb 6; fath. | open | | | 329 | | | | | | |
| . size | 4b | close d | O=1 9 | | open | | | 316 | | | | | | |
| Min. | 4c | open | clo | sed | open | | | 306 | | | | | | |

The alternatives and options that provide the most fishing days during the winter months of December and January, when gag are more available closer to shore, would be **Alternative 3** and **4, Options c**, under a 24-inch TL minimum size limit. Both of these alternatives include closing the harvest of gag during the February-March spawning season closure. Thus, while providing fewer total days, these alternatives and options provide the longest winter fishing season with the spawning season closure supported by many anglers.

4.3.5 Direct and Indirect Effects on the Administrative Environment

The alternatives in Action 3 are expected to have minimal impacts to the administrative environment compared to no action. Any change to the regulations would create the additional burden on the administrative environment in the beginning; however, after the regulations are in effect **Preferred Alternative 2** is not expected to have additional impacts on the administrative

environment. Alternative 1 the status quo would have the least impact on the administrative environment, because the seasons would remain the same. Preferred Alternative 2, and Alternatives 3 and 4 are not expected to have impacts on the administrative environment beyond the initial season change. Increasing the recreational gag fishing season would be expected to increase the burden on law enforcement due to the number of days gag would be allowed to be harvested by the recreational sector.

4.4 Cumulative Effects Analysis (CEA)

Past actions affecting grouper fisheries are summarized in Section 1.4. The following list identifies more recent actions (Note actions taken prior to Amendment 30B are described in detail in that amendment (GMFMC 2008b) and incorporated here by reference). Amendment 30B was approved by the Secretary in January 2009 and a final rule has published (effective May 18, 2009), except for the "Edges" portion for area closures, which was effective June 24, 2009. The purpose of the amendment is to end overfishing of gag, revise red grouper management measures as a result changes in the stock condition, establish annual catch limits and AMs for gag and red grouper, manage shallow-water grouper to achieve optimum yield, and improve the effectiveness of federal management measures. In addition, Amendment 30B established management targets and thresholds for gag consistent with the requirements of the SFA, set the gag and red grouper TAC, and established interim allocations for the commercial and recreational gag and red grouper fisheries. Because regulations ending overfishing for gag were not expected to be implemented by January 1, 2009, the Council requested NMFS develop an interim rule to put in place such regulations for the 2009 fishing year. This interim rule published December 2, 2008, and was effective January 1, 2009. An emergency rule was requested by the Council restricting the bottom longline component of the reef fish fishery in the eastern Gulf to fishing outside of 50 fathoms until the deepwater grouper and tilefish quotas are filled. The quotas were filled in June 2009, at which point, the reef fish bottom longline component of the fishery was closed. The rule was effective May 18, 2009. Amendment 29 to the Reef Fish FMP was approved by the Secretary July 2009. This amendment establishes a grouper and tilefish individual fishing quota program for the commercial reef fish fishery. An interim rule to implement gag regulations by January 1, 2011, was requested by the Council to reduce gag overfishing. These measures included reducing the gag commercial quota to 100,000 pounds and closing the recreational sector. Another interim rule to implement gag regulations by June 1, 2011, was requested by the Council to reduce gag overfishing. Measures were based on a revised assessment update and allowed for a gag commercial quota of 430,000 pounds and a September 16-November 15 recreational fishing season.

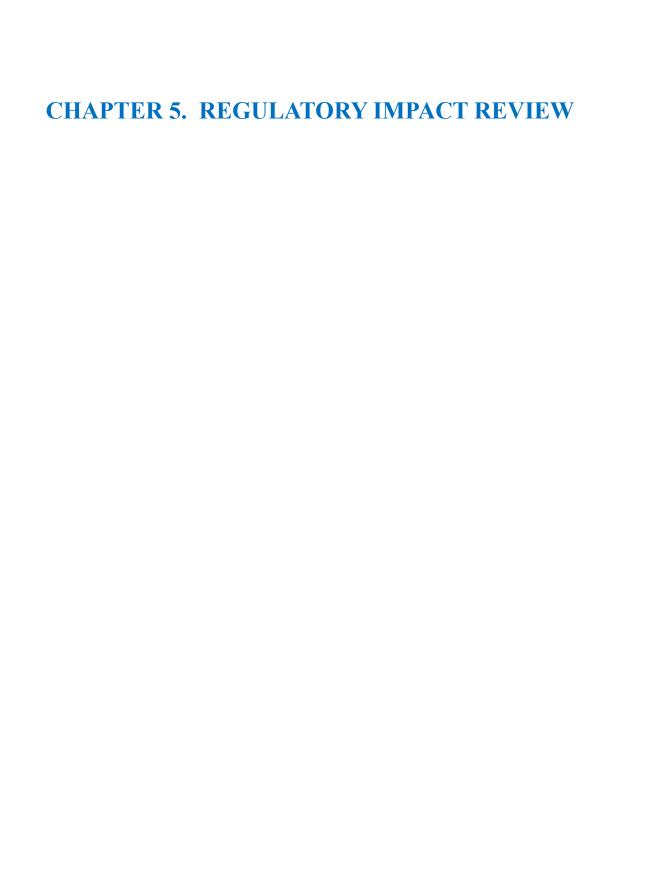
The affected area of this proposed action encompasses the state and federal water of the Gulf as well as Gulf communities dependent on reef fish fishing. The proposed actions would establish new recreational size limits for gag and black grouper and a new gag recreational fishing season. These actions are not expected to have significant beneficial or adverse cumulative effects on the physical, biological/ecological, social, and economic environments as it would minimally affect fishing practices (see Chapter 4). The short-term effects are expected to be compensated for by long-term management goals to rebuild the improve the gag and black grouper stocks and allow for more recreational opportunities. This action, combined with past and reasonable foreseeable future actions (RFFAs) is not expected to have substantial adverse effects on public health or safety. Because the reef fish fishery is a multispecies fishery, there are always fish to target throughout the year for the recreational sector to target such that the proposed actions, along with past and RFFAs, are not expected to substantially alter the manner in which the fishery is prosecuted.

Non-FMP actions affecting the reef fish fishery have been described in previous cumulative effect analyses (e.g., Amendment 32). Two important events include impacts of the Deepwater

Horizon MC252 oil spill and climate change. Impacts from the Deepwater Horizon MC252 oil spill are still being examined and peer-reviewed studies are now only just being published. The oil itself could also adversely affect adult gag, black grouper and other reef fish species. In a recent study, Weisberg et al. (2014) suggested the hydrocarbons associated with Deepwater Horizon MC252 oil spill did transit onto the Florida shelf and may be associated with the occurrences of reef fish with lesions and other deformities. However, Murawski et al. (2014) reported that the incidence of lesions on bottom dwelling fish had declined between 2011 and 2012 in the northern Gulf.

There is a large and growing body of literature on past, present, and future impacts of global climate change induced by human activities. Some of the likely effects commonly mentioned are sea level rise, increased frequency of severe weather events, and change in air and water temperatures. The Environmental Protection Agency's climate change web page provides basic background information on these and other measured or anticipated effects. In addition, the Intergovernmental Panel on Climate Change has numerous reports addressing their assessments of climate change (http://www.ipcc.ch/publications and data/publications and data.shtml). Global climate changes could affect the Gulf fisheries; however, the extent of these effects is not known at this time. Possible impacts include temperature changes in coastal and marine ecosystems that can influence organism metabolism and alter ecological processes such as productivity and species interactions; changes in precipitation patterns and a rise in sea level which could change the water balance of coastal ecosystems; altering patterns of wind and water circulation in the ocean environment; and influencing the productivity of critical coastal ecosystems such as wetlands, estuaries, and coral reefs (Kennedy et al. 2002). It is unclear how climate change would affect reef fishes, and likely would affect species differently. Burton (2008) speculated climate change could cause shifts in spawning seasons, changes in migration patterns, and changes to basic life history parameters such as growth rates. In addition, the distribution of native and exotic species may change with increased water temperature, as may the prevalence of disease in keystone animals such as corals and the occurrence and intensity of toxic algae blooms. Hollowed et al. (2013) provided a review of projected effects of climate change on the marine fisheries and dependent communities. Integrating the potential effects of climate change into the fisheries assessment is currently difficult due to the time scale differences (Hollowed et al. 2013). The fisheries stock assessments rarely accurately project for more than a few years, a time span that would preclude detectable climate change effects. While climate change may impact Gulf reef fish species in the future, the level of impacts cannot be quantified at this time, nor is the time frame known in which these impacts would occur. Conversely, the proposed action is not expected to significantly contribute to climate change through the increase or decrease in the carbon footprint from fishing.

The effects of the proposed actions are, and will continue to be, monitored through collection of landings data by NMFS, stock assessments and stock assessment updates, life history studies, economic and social analyses, and other scientific observations. Landings data for the recreational sector in the Gulf are collected through MRIP, the Southeast Headboat Survey, and the Texas Marine Recreational Fishing Survey. In addition, the Louisiana Department of Wildlife and Fisheries and the Alabama Department of Conservation and Natural Resources have instituted programs to collect recreational landings information in their respective states.



CHAPTER 6. REGULATORY FLEXIBILITY ACT ANALYSIS

CHAPTER 7. OTHER APPLICABLE LAW

The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) (16 U.S.C. 1801 et seq.) provides the authority for management of stocks included in fishery management plans in federal waters of the exclusive economic zone. However, management decision-making is also affected by a number of other federal statutes designed to protect the biological and human components of U.S. fisheries, as well as the ecosystems that support those fisheries. Major laws affecting federal fishery management decision-making are summarized below.

Administrative Procedure Act

All federal rulemaking is governed under the provisions of the Administrative Procedure Act (5 U.S.C. Subchapter II), which establishes a "notice and comment" procedure to enable public participation in the rulemaking process. Under the Act, the National Marine Fisheries Service (NMFS) is required to publish notification of proposed rules in the *Federal Register* and to solicit, consider, and respond to public comment on those rules before they are finalized. The Act also establishes a 30-day waiting period from the time a final rule is published until it takes effect.

Coastal Zone Management Act

Section 307(c)(1) of the federal Coastal Zone Management Act of 1972 (CZMA), as amended, requires federal activities that affect any land or water use or natural resource of a state's coastal zone be conducted in a manner consistent, to the maximum extent practicable, with approved state coastal management programs. The requirements for such a consistency determination are set forth in NOAA regulations at 15 CFR part 930, subpart C. According to these regulations and CZMA Section 307(c)(1), when taking an action that affects any land or water use or natural resource of a state's coastal zone, NMFS is required to provide a consistency determination to the relevant state agency at least 90 days before taking final action.

Upon submission to the Secretary of Commerce, NMFS will determine if this plan amendment is consistent with the Coastal Zone Management programs of the states of Alabama, Florida, Louisiana, Mississippi, and Texas to the maximum extent possible. Their determination will then be submitted to the responsible state agencies under Section 307 of the CZMA administering approved Coastal Zone Management programs for these states.

Data Quality Act

The Data Quality Act (Public Law 106-443) effective October 1, 2002, requires the government to set standards for the quality of scientific information and statistics used and disseminated by federal agencies. Information includes any communication or representation of knowledge such as facts or data, in any medium or form, including textual, numerical, cartographic, narrative, or audiovisual forms (includes web dissemination, but not hyperlinks to information that others disseminate; does not include clearly stated opinions).

Specifically, the Act directs the Office of Management and Budget to issue government wide guidelines that "provide policy and procedural guidance to federal agencies for ensuring and maximizing the quality, objectivity, utility, and integrity of information disseminated by federal agencies." Such guidelines have been issued, directing all federal agencies to create and disseminate agency-specific standards to: (1) ensure information quality and develop a predissemination review process; (2) establish administrative mechanisms allowing affected persons to seek and obtain correction of information; and (3) report periodically to Office of Management and Budget on the number and nature of complaints received.

Scientific information and data are key components of fishery management plans (FMPs) and amendments and the use of best available information is the second national standard under the Magnuson-Stevens Act. To be consistent with the Act, FMPs and amendments must be based on the best information available. They should also properly reference all supporting materials and data, and be reviewed by technically competent individuals. With respect to original data generated for FMPs and amendments, it is important to ensure that the data are collected according to documented procedures or in a manner that reflects standard practices accepted by the relevant scientific and technical communities. Data will also undergo quality control prior to being used by the agency and a pre-dissemination review.

Endangered Species Act

The Endangered Species Act (ESA) of 1973, as amended, (16 U.S.C. Section 1531 et seq.) requires federal agencies use their authorities to conserve endangered and threatened species. The ESA requires NMFS, when proposing an action for managed stocks that "may affect" critical habitat or endangered or threatened species, to consult with the appropriate administrative agency (itself for most marine species, the U.S. Fish and Wildlife Service (USFWS) for all remaining species) to determine the potential impacts of the proposed action. Consultations are concluded informally when proposed actions may affect but are "not likely to adversely affect" endangered or threatened species or designated critical habitat. Formal consultations, including a biological opinion, are required when proposed actions may affect and are "likely to adversely affect" endangered or threatened species or adversely modify designated critical habitat. If jeopardy or adverse modification is found, the consulting agency is required to suggest reasonable and prudent alternatives. NMFS, as part of the Secretarial review process, will make a determination regarding the potential impacts of the proposed actions.

On September 30, 2011, the Protected Resources Division released a biological opinion which, after analyzing best available data, the current status of the species, environmental baseline (including the impacts of the recent Deepwater Horizon MC 252 oil release event in the northern Gulf of Mexico), effects of the proposed action, and cumulative effects, concluded that the continued operation of the Gulf of Mexico reef fish fishery is also not likely to jeopardize the continued existence of green, hawksbill, Kemp's ridley, leatherback, or loggerhead sea turtles, nor the continued existence of smalltooth sawfish (NMFS 2011b).

On September 10, 2014, NMFS published a final rule listing as threatened 20 coral species under the Endangered Species Act. Four of the newly listed coral species are found in the Gulf of

Mexico. NMFS concurs with the effects determination that the continued authorization of the Gulf of Mexico Reef Fish Fishery Management Plan (Reef Fish FMP) is not likely to adversely affect the newly listed coral species. On September 10, 2014, NMFS published a final rule (79 FR 53852) listing as threatened 20 coral species under the Endangered Species Act. Four of the newly listed coral species are found in the Gulf of Mexico. In memos dated September 16, 2014, and October 7, 2014, NMFS determined that activities associated with the subject FMP will not adversely affect any of the newly listed coral species. In the October 7, 2014, memo NMFS also determined that although the September 10, 2014, Final Listing Rule provided some new information on the threats facing *Acropora*, none of the information suggested that the previous determinations were no longer valid.

Fish and Wildlife Coordination Act

Fish and Wildlife Coordination Act of 1934 (16 U.S.C. 661-667e) provides the basic authority for the USFWS's involvement in evaluating impacts to fish and wildlife from proposed water resource development projects. It also requires federal agencies that construct, license or permit water resource development projects to first consult with the Service (and NMFS in some instances) and State fish and wildlife agency regarding the impacts on fish and wildlife resources and measures to mitigate these impacts.

The fishery management actions in the Gulf of Mexico are not likely to affect wildlife resources pertaining to water resource development as the economic exclusive zone is from the state water boundary extending to 200 nm from shore.

National Historic Preservation Act

The National Historic Preservation Act (NHPA) of 1966, (Public Law 89-665; 16 U.S.C. 470 *et seq.*) is intended to preserve historical and archaeological sites in the United States of America. Section 106 of the NHPA requires federal agencies to evaluate the impact of all federally funded or permitted projects for sites on listed on, or eligible for listing on, the National Register of Historic Places and aims to minimize damage to such places.

Historical research indicates that over 2,000 ships have sunk on the Federal Outer Continental Shelf between 1625 to 1951; thousands more have sunk closer to shore in state waters during the same period. Only a handful of these have been scientifically excavated by archaeologists for the benefit of generations to come. Further information can be found at: http://www.boem.gov/Environmental-Stewardship/Archaeology/Shipwrecks.aspx

The proposed action does not adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places nor is it expected to cause loss or destruction of significant scientific, cultural, or historical resources. In the Gulf of Mexico, the *U.S.S. Hatteras*, located in federal waters off Texas, is listed in the National Register of Historic Places. Fishing activity already occurs in the vicinity of this site, but the proposed action would have no additional adverse impacts on listed historic resources, nor would they alter any regulations intended to protect them.

Marine Mammal Protection Act

The Marine Mammal Protection Act (MMPA) established a moratorium, with certain exceptions, on the taking of marine mammals in U.S. waters and by U.S. citizens on the high seas, and on the importing of marine mammals and marine mammal products into the United States. Under the MMPA, the Secretary of Commerce (authority delegated to NMFS) is responsible for the conservation and management of cetaceans and pinnipeds (other than walruses). The Secretary of the Interior is responsible for walruses, sea and marine otters, polar bears, manatees, and dugongs.

Part of the responsibility that NMFS has under the MMPA involves monitoring populations of marine mammals to make sure that they stay at optimum levels. If a population falls below its optimum level, it is designated as "depleted," and a conservation plan is developed to guide research and management actions to restore the population to healthy levels.

In 1994, Congress amended the MMPA, to govern the taking of marine mammals incidental to commercial fishing operations. This amendment required the preparation of stock assessments for all marine mammal stocks in waters under U.S. jurisdiction, development and implementation of take-reduction plans for stocks that may be reduced or are being maintained below their optimum sustainable population levels due to interactions with commercial fishing activities, and studies of pinniped-fishing activity interactions.

Under section 118 of the MMPA, NMFS must publish, at least annually, a List of Fisheries that places all U.S. commercial fishing activities into one of three categories based on the level of incidental serious injury and mortality of marine mammals that occurs in each fishing activity. The categorization of a fishing activity in the List of Fisheries determines whether participants in that fishing activity may be required to comply with certain provisions of the MMPA, such as registration, observer coverage, and take reduction plan requirements.

The proposed actions are not reasonably expected to have a substantial adverse effect on endangered or threatened species, their critical habitat, marine mammals, or other non-target species. Although the reef fish fishery as a whole has adverse effects on endangered and threatened species and marine mammals, the proposed action itself cannot reasonably be expected to adversely affect these species or their critical habitat because it is not expected to substantially alter the manner in which the fishery is conducted in the Gulf of Mexico

Migratory Bird Treaty Act

The Migratory Bird Treaty Act of 1918 (16 U.S.C. 703) protects migratory birds. The responsibilities of federal agencies to protect migratory birds are set forth in Executive Order 13186. The U.S. Fish and Wildlife Service (USFWS) is the lead agency for migratory birds. The birds protected under this statute are many of our most common species, as well as birds listed as threatened or endangered. A memorandum of understanding (MOU) between NMFS and the USFWS, as required by Executive Order 13186 (66 FR 3853, January 17, 2001), is to promote the conservation of migratory bird populations. This MOU focuses on avoiding, or where impacts cannot be avoided, minimizing to the extent practicable, adverse impacts on migratory

birds and strengthening migratory bird conservation through enhanced collaboration between NMFS and the USFWS by identifying general responsibilities of both agencies and specific areas of cooperation. Given NMFS' focus on marine resources and ecosystems, this MOU places an emphasis on seabirds, but does not exclude other taxonomic groups of migratory birds.

Typically, fishery management actions in the Gulf of Mexico are not likely to affect migratory birds. The proposed actions are not likely to change the way in which the fishery is prosecuted. Thus, no additional impacts are reasonably expected.

Paperwork Reduction Act

The Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.) regulates the collection of public information by federal agencies to ensure the public is not overburdened with information requests, the federal government's information collection procedures are efficient, and federal agencies adhere to appropriate rules governing the confidentiality of such information. The Act requires NMFS to obtain approval from the Office of Management and Budget before requesting most types of fishing activity information from the public. None of the alternatives in this amendment are expected to create additional paperwork burdens.

Prime Farmlands Protection and Policy Act

The Farmland Protection and Policy Act of 1981 (7 U.S.C. 4201) was enacted to minimize the loss of prime farmland and unique farmlands as a result of Federal actions by converting these lands to nonagricultural uses. It assures that federal programs are compatible with state and local governments, and private programs and policies to protect farmland.

The fishery management actions in the Gulf of Mexico are not likely to affect farmlands as the economic exclusive zone is from the state water boundary extending to 200 nm from shore.

National Wild and Scenic Rivers System

The National Wild and Scenic Rivers System of 1968 (Public Law 90-542; 16 U.S.C. 1271 et seq.) preserves certain rivers with outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and future generations. The Act safeguards the special character of these rivers, while also recognizing the potential for their appropriate use and development. It encourages river management that crosses political boundaries and promotes public participation in developing goals for river protection.

The fishery management actions in the Gulf of Mexico are not likely to affect wetland habitats as the economic exclusive zone is from the state water boundary extending to 200 nm from shore.

North American Wetlands Conservation Act

The North American Wetlands Conservation Act of 1989 (Public Law 101-233) established a wetlands habitat program, administered by the USFWS, to protect and manage wetland habitats for migratory birds and other wetland wildlife in the United States, Mexico, and Canada.

The fishery management actions in the Gulf of Mexico are not likely to affect wetland habitats as the economic exclusive zone is from the state water boundary extending to 200 nm from shore.

Executive Orders (E.O.)

E.O. 12630: Takings

The E.O. on Government Actions and Interference with Constitutionally Protected Property Rights that became effective March 18, 1988, requires each federal agency prepare a Takings Implication Assessment for any of its administrative, regulatory, and legislative policies and actions that affect, or may affect, the use of any real or personal property. Clearance of a regulatory action must include a takings statement and, if appropriate, a Takings Implication Assessment. The NOAA Office of General Counsel will determine whether a Taking Implication Assessment is necessary for this amendment.

E.O. 12866: Regulatory Planning and Review

E.O. 12866: Regulatory Planning and Review, signed in 1993, requires federal agencies to assess the costs and benefits of their proposed regulations, including distributional impacts, and to select alternatives that maximize net benefits to society. To comply with E.O. 12866, NMFS prepares a Regulatory Impact Review (RIR) for all regulatory actions that either implement a new fishery management plan or significantly amend an existing plan. RIRs provide a comprehensive analysis of the costs and benefits to society of proposed regulatory actions, the problems and policy objectives prompting the regulatory proposals, and the major alternatives that could be used to solve the problems. The reviews also serve as the basis for the agency's determinations as to whether proposed regulations are a "significant regulatory action" under the criteria provided in E.O. 12866 and whether proposed regulations will have a significant economic impact on a substantial number of small entities in compliance with the Regulatory Flexibility Analysis. A regulation is significant if it 1) Has an annual effect on the economy of \$100 million or more or adversely affects in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments and communities; 2) creates a serious inconsistency or otherwise interferes with an action taken or planned by another agency; 3) materially alters the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or 4) raises novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in this Executive Order.

E.O. 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations

This E.O. mandates that each federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories and possessions.

E.O. 12962: Recreational Fisheries

This E.O. requires federal agencies, in cooperation with states and tribes, to improve the quantity, function, sustainable productivity, and distribution of U.S. aquatic resources for increased recreational fishing opportunities through a variety of methods including, but not limited to, developing joint partnerships; promoting the restoration of recreational fishing areas that are limited by water quality and habitat degradation; fostering sound aquatic conservation and restoration endeavors; and evaluating the effects of federally-funded, permitted, or authorized actions on aquatic systems and recreational fisheries, and documenting those effects. Additionally, it establishes a seven-member National Recreational Fisheries Coordination Council (NRFCC) responsible for, among other things, ensuring that social and economic values of healthy aquatic systems that support recreational fisheries are considered by federal agencies in the course of their actions, sharing the latest resource information and management technologies, and reducing duplicative and cost-inefficient programs among federal agencies involved in conserving or managing recreational fisheries. The NRFCC also is responsible for developing, in cooperation with federal agencies, States and Tribes, a Recreational Fishery Resource Conservation Plan - to include a five-year agenda. Finally, the E.O. requires NMFS and the USFWS to develop a joint agency policy for administering the ESA.

E.O. 13089: Coral Reef Protection

The E.O. on Coral Reef Protection requires federal agencies whose actions may affect U.S. coral reef ecosystems to identify those actions, utilize their programs and authorities to protect and enhance the conditions of such ecosystems, and, to the extent permitted by law, ensure actions that they authorize, fund, or carry out do not degrade the condition of that ecosystem. By definition, a U.S. coral reef ecosystem means those species, habitats, and other national resources associated with coral reefs in all maritime areas and zones subject to the jurisdiction or control of the United States (e.g., federal, state, territorial, or commonwealth waters).

Regulations are already in place to limit or reduce habitat impacts within the Flower Garden Banks National Marine Sanctuary. Additionally, NMFS approved and implemented Generic Amendment 3 for Essential Fish Habitat (GMFMC 2005), which established additional habitat areas of particular concern (HAPCs) and gear restrictions to protect corals throughout the Gulf of Mexico. There are no implications to coral reefs by the actions proposed in this amendment.

E.O. 13132: Federalism

The E.O. on Federalism requires agencies in formulating and implementing policies, to be guided by the fundamental Federalism principles. The E.O. serves to guarantee the division of governmental responsibilities between the national government and the states that was intended by the framers of the Constitution. Federalism is rooted in the belief that issues not national in scope or significance are most appropriately addressed by the level of government closest to the people. This E.O. is relevant to FMPs and amendments given the overlapping authorities of NMFS, the states, and local authorities in managing coastal resources, including fisheries, and the need for a clear definition of responsibilities. It is important to recognize those components

of the ecosystem over which fishery managers have no direct control and to develop strategies to address them in conjunction with appropriate state, tribes and local entities (international too).

No Federalism issues were identified relative to the action to modify the management of the recreational harvest of gag. Therefore, consultation with state officials under Executive Order 12612 was not necessary. Consequently, consultation with state officials under Executive Order 12612 remains unnecessary.

E.O. 13158: Marine Protected Areas

This E.O. requires federal agencies to consider whether their proposed action(s) will affect any area of the marine environment that has been reserved by federal, state, territorial, tribal, or local laws or regulations to provide lasting protection for part or all of the natural or cultural resource within the protected area. There are several marine protected areas, HAPCs, and gear-restricted areas in the eastern and northwestern Gulf of Mexico. The existing areas are entirely within federal waters of the Gulf of Mexico. They do not affect any areas reserved by federal, state, territorial, tribal or local jurisdictions.

CHAPTER 8. LIST OF PREPARERS

PREPARERS

| Name | Discipline/Expertise | Role in EA Preparation | | |
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NMFS = National Marine Fisheries Service, SF = Sustainable Fisheries Division

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| Name | Discipline/Expertise | Role in EA Preparation | | |
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| Noah Silverman, SERO | NEPA Coordinator | NEPA Review | | |
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| Jessica Stephen, SERO | Biologist/Analyst | Scientific Review | | |
| Mathew Smith, NMFS/SEFSC | Biologist | Reviewer | | |
| Larry Perruso, Ph.D., SEFSC | Economist/Statistician | Reviewer | | |
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GC = General Counsel, SERO=Southeast Regional Office, NEPA=National Environmental Policy Act, HC = Habitat Conservation, SEFSC=Southeast Fisheries Science Center and PR = Protected Resources Division.

CHAPTER 9. LIST OF AGENCIES CONSULTED

Federal Agencies

Gulf of Mexico Fishery Management Council's

- Scientific and Statistical Committee
- Reef Fish Advisory Panel

National Marine Fisheries Service

- Southeast Fisheries Science Center
- Southeast Regional Office

U.S. Coast Guard

Environmental Protection Agency

State Agencies

- Texas Department of Wildlife and Fisheries
- Louisiana Department of Wildlife and Fisheries
- Mississippi Department of Marine Resources
- Alabama Department of Conservation and Natural Resources
- Florida Fish and Wildlife Conservation Commission

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APPENDIX A – ALTERNATIVES CONSIDERED BUT REJECTED

The Council considered increasing the gag ACLs and modifying the ACTs, but decided on no action due to concerns about low catch rates. In addition, the commercial ACT is used to calculate gag multi-use IFQ shares under the grouper IFQ program. Therefore, alternatives 2 through 5, which would have eliminated the commercial ACT, are not viable as written. See Section 1.4 for a more detailed explanation. The alternatives that were moved to considered but rejected are as follows.

Modifications to the Gag Annual Catch Limits and Annual Catch Targets

All weights are in million pounds gutted weight. The stock annual catch limit (ACL) is allocated 61% recreational, 39% commercial.

Alternative 1. No Action. Maintain the acceptable biological catch (ABC), ACL, and annual catch target (ACT) at the existing 2015 level.

| | | Recreation | Recreational | | cial |
|-------|---------------|------------|--------------|-------|----------|
| Year | ABC/Stock ACL | ACL | ACT | ACL A | CT/Quota |
| 2015+ | 3.12 | 1.903 | 1.708 | 1.217 | 0.939 |

Alternative 2. Set ACL and ACT mid-way between status quo and the projected equilibrium optimum yield. Set the recreational ACT buffer at 8% based on the ACL/ACT control rule, and do not use a commercial ACT.

| | | Recreation | al | Commercia | al |
|-------|-----------|------------|------|-----------|------|
| Year | Stock ACL | ACL | ACT | ACL/Quota | ACT |
| 2015+ | 3.80 | 2.32 | 2.13 | 1.48 | none |

Alternative 3 Set ACL and ACT based upon the projected equilibrium optimum yield. Set the recreational ACT buffer at 8% based on the ACL/ACT control rule, and do not use a commercial ACT.

| | | Recreational | | Commercial | |
|-------|-----------|--------------|------|------------|------|
| Year | Stock ACL | ACL | ACT | ACL/Quota | ACT |
| 2015+ | 4.46 | 2.72 | 2.50 | 1.74 | none |

Alternative 4. Set ACL and ACT based upon SSC recommendations for ABC, 2015-2017. Set a constant ACL at the lowest ABC recommended by the SSC. Set the recreational ACT buffer at 8% based on the ACL/ACT control rule, and do not use a commercial ACT.

| | | Recreational | | Commercial | |
|-------|-----------|--------------|------|------------|------|
| Year | Stock ACL | ACL | ACT | ACL/Quota | ACT |
| 2015+ | 4.57 | 2.79 | 2.57 | 1.78 | none |

Alternative 5. Set ACL and ACT based upon SSC recommendations for ABC, 2015-2017. Set the stock ACL = ABC for each year. Set the recreational ACT buffer at 8% based on the ACL/ACT control rule, and do not use a commercial ACT.

| | Recreational | | nal | Commercial | |
|-------|---------------|------|------|------------|-------|
| Year | ABC/Stock ACL | ACL | ACT | ACL/Quot | a ACT |
| 2015 | 5.21 | 3.18 | 2.93 | 2.03 | none |
| 2016 | 4.75 | 2.90 | 2.67 | 1.85 | none |
| 2017+ | 4.57 | 2.79 | 2.57 | 1.78 | none |

APPENDIX B – DESCRIPTION OF RECREATIONAL CLOSURE ANALYSIS

Estimates of recreational landings during closed months were necessary to make predictions of closure dates. This was difficult because the Gulf of Mexico gag fishery has experienced numerous closures over the past 10 years. Data from the 2009 were used as a proxy for future recreational landings for waves 1 through 3 (January to June). Landings from this year were chosen because this is the most recent year where the recreational sector was open during all three of these waves. Gag was open in Waves 1 through 3 in 2010 but there was a large cold water fish kill event in January of 2010, and a relatively large portion of the Gulf of Mexico was closed in 2010 due to the Deepwater Horizon oil spill. Therefore, 2009 landings were used instead of 2010 landings. Waves 1 and 2 of 2009 were not open the entire wave because of the seasonal closure of February 1st through March 31. Total wave 1 and 2 landings were calculated using the daily landings per day in 2009 from each individual wave, and multiplying it by the number of days in the entire wave. Wave 3 landings in 2009 did not have a closure and were not modified. Data from 2013 were used as a proxy for future recreational landings for waves 4 through 6 (July to December). Landings from this year were chosen because this is the most recent year where the recreational sector was open during all three of these waves. Landings for waves 4 and 5 in 2013 did not have a closure and were not modified. Wave 6 was not open the entire wave because of a closure from December 3rd to December 31st, 2013. Total wave 6 landings were calculated using the daily landings per day in 2013 from each individual wave and multiplying it by the number of days for the entire wave. Figure B-1 provides a visual representation of the landings.

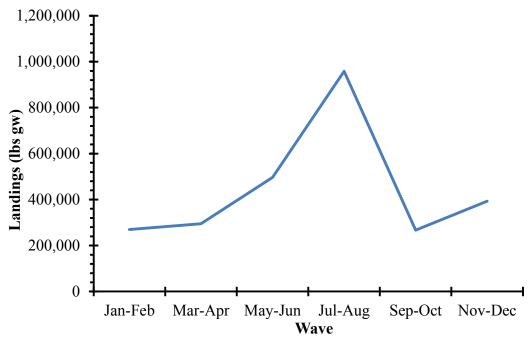


Figure B-1. Gulf of Mexico gag recreational landings by wave. Landings for waves 1 through 3 came from 2009 landings data, and landings from waves 4 through 6 came from 2013 landings. Landings are in pounds gutted weight (lbs gw).

Addressing 20 Fathom Closure

Recreational fishing for gag has been closed from February 1 through March 31 every year since 2009. However, there was a change to this closure in 2014 where a Framework Action continued a closure of harvest of gag from February 1 through March 31 but only at depths of 20 fathom and deeper. There are no relatively recent landings data with which to evaluate the impact the 20-fathom closure has had on gag landings. However, a fisheries dependent study (Sauls et al. 2014) surveyed Gulf of Mexico recreational fishermen and recorded gag catch by depth. The study collected data from 2009 through 2014 and determined 2.7% of headboat landings and 25.4% of charter boat landings of gag occurred at or deeper than 20 fathoms. No data are available on the private vessel landings and this component was assumed to have the same landings as the charter boat component. The impact the 20-fathom closure had on gag landings was to reduce the landings by 2.7% for headboats and 25.4% for charter boat and private vessel gag landings.

Size Limits

Percent reduction in landings from increasing the minimum size limit was calculated from the length data collected in the Marine Recreational Information Program(MRIP), Southeast Headboat Survey, and Texas Parks and Wildlife recreational landings survey (TPWD). The lengths were converted to weight using conversion equations defined in SEDAR 33. The

reductions were calculated in terms of weight. Additional information on the details on calculating the percent reductions can be found at SERO-LAPP-2012-02. MRIP and TPWD reductions were calculated for both private vessels and charter boats.

Decision Model

The landings and impacts of the 20-fathom closure were incorporated into a decision model that allows the user to pick closure dates, and then evaluate the landings results. The closure dates are chosen as the day before the landings exceed the annual catch limit (ACL), unless the ACL was exceeded in the previous year. In that case, the closure date is chosen as the day before the landings exceed the annual catch target (ACT). Details of a decision model can be found at SERO-LAPP-2012-03.

Economic Effects

Dynamic economic effects projections are built into the gag recreational decision tool (RDT). The estimates are displayed in 2014 dollars. Baseline economic values for the recreational gag fishery were estimated using the RDT with all options set to current management alternatives. For the recreational sector, economic effects are measured as changes in consumer surplus (CS) from the status quo. The RDT converts estimated pounds (gw) landed to number of fish using mean weights of gag from each wave of data. The number of fish projected to be harvested is then multiplied by the willingness to pay (WTP) to catch and keep an additional grouper⁷. This provides an estimate of the CS derived from harvesting gag, as discussed in Section 3.3.2 of the current framework action. The RDT displays the total change in CS from the status quo under any combination of ACL (or ACT) and season closure alternatives⁸. The alternatives considered in this action would increase the season length and/or the minimum size limit for gag, so they would be expected to result in a positive change in CS.

No estimates of producer surplus (PS) for the for-hire component of the recreational sector are provided. It is assumed that gag would be landed in addition to other species on a trip, including other types of grouper, and that the proposed action would have no effect on the number of recreational trips that would be expected to occur under the status quo. Therefore, no change in for-hire PS would be expected. This assumption is supported by analysis of the MRIP data at the trip level, which shows, on average (2010-2014), one gag and six other fish (including other grouper species) were landed on each trip that harvested gag. If the gag season were shortened, it would be expected that anglers would still fish for these other species, and if the season were lengthened, it would be expected that anglers would harvest gag that would have otherwise been discarded.

_

⁷ The WTP value is a scalar and does not depend on the size of each individual fish harvested.

⁸ Estimates of the change in CS by mode (Private, Headboat, Charter and Shore) are included under the

[&]quot;Economics" tab of the Excel spreadsheet.

For the reasons set out in the preamble, 50 CFR part 622 is proposed to be amended as follows:

PART 622--FISHERIES OF THE CARIBBEAN, GULF OF MEXICO, AND SOUTH ATLANTIC

1. The authority citation for part 622 continues to read as follows:

Authority: 16 U.S.C. 1801 et seq.

2. In § 622.34, paragraph (e) is revised to read as follows:

§ 622.34 Seasonal and area closures designed to protect Gulf reef fish.

* * * * *

(e) Seasonal closure of the recreational sector for gag. The recreational sector for gag, in or from the Gulf EEZ, is closed from January 1 through June 30. During the closure, the bag and possession limits for gag in or from the Gulf EEZ are zero.

* * * * *

3. In § 622.37, paragraphs (b)(1) and (b)(5)(ii) are revised to read as follows:

§ 622.37 Size limits.

* * * * *

- (b) * * *
- (1) Gag--(i) For a person not subject to the bag limit

Comment [SS1]: Action 3, Preferred Alt 2. This removes the current December 3 through December 31 closed period. The Jan through June gag closure remains but is contained in Alts 3 and 4 for Action 3. Note, the SWG closure (Feb 1-March 31), which also includes gag, is located at 622.34(d).

specified in § 622.38 (b)(2)--22 inches (55.9 cm), TL.

Comment [SS2]: Current commercial gag size limit. No change, only a paragraph restructure.

(ii) For a person subject to the bag limit specified in § 622.38(b)(2)--24 inches (61.0 cm), TL.

Comment [SS3]: Action 1, Preferred Alt 2. Gag recreational minimum size limit.

* * * * *

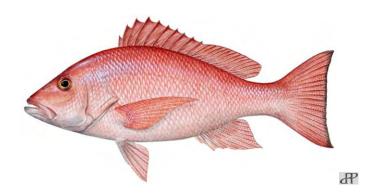
(5) * * *

(ii) For a person subject to the bag limit specified in § 622.38(b)(2)--24 inches (61.0 cm), TL.

Comment [SS4]: Action 2, Preferred Alt 2. Black grouper recreational minimum size limit. Commercial remains at 24 inches

* * * * *

Regional Management of Recreational Red Snapper



Public Hearing Draft for Amendment 39 to the Fishery Management Plan for the Reef Fish Resources of the Gulf of Mexico

October 2015





This is a publication of the Gulf of Mexico Fishery Management Council Pursuant to National Oceanic and Atmospheric Administration Award No. NA10NMF4410011.

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Gulf of Mexico Reef Fish Amendment 39 Draft Environmental Impact Statement (DEIS) Cover Sheet

Regional Management of Recreational Red Snapper Amendment 39 to the Fishery Management Plan for the Reef Fish Resources of the Gulf of Mexico.

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Type of Action

| () Administrative | () Legislative |
|--------------------|-----------------|
| (X) Draft | () Final |

Filing Dates with EPA

Notice of intent (NOI) to prepare EIS published: May 13, 2013 Draft environmental impact statement (DEIS) filed with EPA: DEIS comment period ended: EPA comments on DEIS:

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ABBREVIATIONS USED IN THIS DOCUMENT

ABC acceptable biological catch

ACL annual catch limit
ACT annual catch target

ALS Accumulated Landings System

AM accountability measure

CEP Conservation Equivalency Plan

Council Gulf of Mexico Fishery Management Council

EFH Essential Fish Habitat EFP exempted fishing permit

EIS Environmental Impact Statement

EJ Environmental Justice ESA Endangered Species Act FMP Fishery Management Plan

Gulf of Mexico

IFQ individual fishing quota

LDWF Louisiana Department of Wildlife and Fisheries

Magnuson-Stevens Act Magnuson-Stevens Fishery Conservation and Management Act

mp million pounds

MRFSS Marine Recreational Fisheries Survey and Statistics

MRIP Marine Recreational Information Program

MSST minimum stock size threshold NEPA National Environmental Policy Act NMFS National Marine Fisheries Service

NS National Standard OFL overfishing limit

PDF probability density function SAV submerged aquatic vegetation

SEAMAP Southeast Area Monitoring and Assessment Program

Secretary Secretary of Commerce

SEDAR Southeast Data Assessment and Review SEFSC Southeast Fisheries Science Center SERO Southeast Regional Office of NMFS SRHS Southeast Region Headboat Survey

SSB spawning stock biomass

SSC Scientific and Statistical Committee

SPR spawning potential ratio TAC total allowable catch

TL total length

TPWD Texas Parks and Wildlife Department

TRC Technical Review Committee
VEC valued environmental components

ww whole weight YPR yield per recruit

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EXECUTIVE SUMMARY

[To be completed for the DEIS.]

FISHERY IMPACT STATEMENT

[To be completed. Not a part of the DEIS.]

CHAPTER 1. INTRODUCTION

1.1 Background

Currently, the recreational harvest of red snapper in federal waters of the Gulf of Mexico (Gulf) is constrained by a 2-fish bag limit, 16-inch total length (TL) minimum size limit, and a fishing season that begins on June 1 and closes when the annual catch target (ACT) is projected to be caught. The federal regulations pertaining to recreational red snapper¹ are provided in Appendix G. Since 1996, the recreational fishing season for red snapper in federal waters has become progressively shorter. Despite annual increases in the recreational annual catch limit (ACL) since 2010 (Table 1.1.1), shorter federal seasons have continued as the quota continues to be caught in a shorter amount of time.

Regional Management

- Would allow regions (i.e., Gulf States) to specify some management measures for anglers' recreational harvest of red snapper.
- The **Delegation** provision in the Magnuson-Stevens Act can be used to provide authority to a state to regulate fishing vessels beyond their state waters, provided its regulations are consistent with the fishery management plan and rebuilding timeline. Delegation requires a ¾ vote of Council members to pass.
- Conservation equivalency refers to allowing individual regions to propose and establish varied regional management measures such that the aggregate harvest and impacts on the stock from all regions is equivalent to the conservation protections on the resource provided by Gulf-wide management measures.

Fishermen from different areas of the Gulf have requested more flexibility in recreational red snapper management so that regulations provide greater socioeconomic benefits to their particular area. The Gulf of Mexico Fishery Management Council (Council) is considering regional management as a way to provide greater flexibility in the management of recreational red snapper. In this amendment, regional management refers to allowing recreational regulations (specifically bag limits and season dates) to be different for identified regions of the Gulf, in contrast to uniform recreational regulations applied to all federal waters in the Gulf. This document considers two approaches for implementing regional management (Action 1): 1) *delegation* of limited authority to regions to specify management measures and 2) development of *conservation equivalency plans*, in which each region specifies the management measures to be used to constrain harvest to the region's portion of the recreational sector ACL. Under either approach, regionally specific management measures may be more appropriate to the fishing

¹ Recreational red snapper refers to red snapper harvested by the recreational sector.

preferences of local fishermen. For example, regional regulations could accommodate regional differences in tourist seasons or weather conditions, thereby optimizing fishing opportunities around the Gulf

Table 1.1.1. Recreational red snapper federal season lengths, quotas, and landings.

| Vaan | Season dates in federal waters | Number of | Recreational | Recreational |
|------|-------------------------------------|-----------|--------------|--------------|
| Year | | days open | Quotas | Landings |
| 1996 | January 1 – December 31 | 365 | 4.47 mp | 5.339 mp |
| 1997 | January 1 – November 27 | 330 | 4.47 mp | 6.804 mp |
| 1998 | January 1 – September 30 | 272 | 4.47 mp | 4.854 mp |
| 1999 | January 1 – August 29 | 240 | 4.47 mp | 4.972 mp |
| 2000 | April 21 – October 31 | 194 | 4.47 mp | 4.750 mp |
| 2001 | April 21 – October 31 | 194 | 4.47 mp | 5.252 mp |
| 2002 | April 21 – October 31 | 194 | 4.47 mp | 6.535 mp |
| 2003 | April 21 – October 31 | 194 | 4.47 mp | 6.105 mp |
| 2004 | April 21 – October 31 | 194 | 4.47 mp | 6.460 mp |
| 2005 | April 21 – October 31 | 194 | 4.47 mp | 4.676 mp |
| 2006 | April 21 – October 31 | 194 | 4.47 mp | 4.131 mp |
| 2007 | April 21 – October 31 | 194 | 3.185 mp | 5.809 mp |
| 2008 | June 1 – August 4 | 65 | 2.45 mp | 4.056 mp |
| 2009 | June 1 – August 14 | 75 | 2.45 mp | 5.597 mp |
| 2010 | June 1 – July 23; | 77 | 3.403 mp | 2.651 mp |
| | Oct 1 – Nov. 21 (Fri, Sat., & Sun.) | | | |
| 2011 | June 1 – July 18 | 48 | 3.866 mp | 6.734 mp |
| 2012 | June 1 – July 16 | 46 | 3.959 mp | 7.524 mp |
| 2013 | June 1 – June 28; Oct 1 – Oct 14 | 42 | 5.390 mp | 9.659 mp |
| 2014 | June 1 – June 9 | 9 | 5.390 mp | 3.867 mp |
| 2015 | June 1 – June 10 (private angling) | 10 | 7.01 mp | T.B.D. |
| | June 1 – July 14 (federal for-hire) | 44 | | |

Note: Quotas and landings are in millions of pounds (mp) whole weight. In 2014, the season length was estimated based on an ACT of 4.312 mp, reduced from the 5.390 mp quota. Source: Southeast Fisheries Science Center (SEFSC) annual catch limit dataset, including calibrated landings from the Marine Recreational Information Program (MRIP), Texas Parks and Wildlife Department (TPWD), and the Southeast Region Headboat Survey (SRHS) (May 2015).

Regional management would allow for certain management measures to vary around the Gulf, enabling the establishment of recreational red snapper management measures most suited to a given region. Regional management may not result in additional fishing days, particularly if a region establishes its season during periods of greatest fishing effort. However, providing flexibility to the regions to establish management measures is expected to result in social and economic benefits by providing optimal fishing opportunities for a region's portion of the recreational ACL (quota). Nevertheless, proposed regional management measures must achieve the same conservation goals as the current federal management measures (i.e., constrain the catches of participating fishermen to the region's allocated portion of the recreational sector ACL). Under regional management, red snapper would remain a federally managed species.

The Council and the National Marine Fisheries Service (NMFS) would continue to oversee management of the stock. This includes continuing to comply with the mandate to ensure the red snapper recreational ACL is not exceeded and that conservation objectives are achieved. The Council's Scientific and Statistical Committee would continue to determine the acceptable biological catch (ABC) for red snapper, while the Council and NMFS would determine the total recreational sector ACL which would be allocated among the regions, and potentially components, of the recreational sector. All federal regulations for the harvest of red snapper would remain effective. The existing bag limit and season start date would be designated the default federal regulations, and would be applied to a region not participating in regional management or to a region for which regional management is not active. NMFS would retain authority for the remaining management regulations including implementing ACL adjustments, regulating permits, and managing the commercial red snapper individual fishing quota (IFQ) program.

There are benefits and challenges to adopting regional management. The benefits include providing regional flexibility in the design of management measures, which may allow for greater social and economic benefits. For example, the distance from shore that anglers must travel to fish and the optimal times of year for fishing due to weather conditions or tourist seasons may vary, favoring different fishing seasons around the Gulf. Except if regions are allowed to establish closed areas in federal waters, enforcement may be simplified as there would no longer be inconsistent state-federal water fishing seasons, and enforcement would primarily be carried out dockside. The challenges of a regional management approach include a more complex regulatory program, because the recreational ACL (and potentially component ACLs, see next section), would need to be divided and managed separately for each region. Regional management also requires cooperation among federal and state marine resource managers. Effort shifting between regions may reduce the effectiveness of regionalized management. Also, the geographic distribution of the stock may change as the stock rebuilds, resulting in a pattern of landings that may not reflect the original allocation that is distributed. Monitoring catches on a regional level may be more costly than on a Gulf-wide level and require increased sample sizes for data collection.

ACL and **ACT** Designations for Regions and Components

Prior to the implementation of Amendment 40, red snapper catch levels were established as quotas that were functionally equivalent to an ACL. Amendment 40 formally adopted the language of ACLs for red snapper, such that in all regulatory actions for red snapper subsequent to Amendment 40, the quota for each sector shall be the ACL for that sector, and the sum of the quotas shall be the stock ACL (GMFMC 2014).

Amendment 40 also established two components within the recreational sector: a private angling and a federal for-hire component, and apportioned the recreational sector ACL between the components. The final rule specified component ACTs, which are reduced from the component ACLs (component quotas) by the established buffer. Thus, there are component ACLs (component quotas) and component ACTs.

If regional management is implemented, regional ACLs (and potentially regional component ACLs) will be established for each region's designated portion of the recreational sector ACL, such that the sum of the regional ACLs (and potentially regional component ACLs) is equal to the recreational sector ACL. Regional ACLs and reginal component ACLs will be reduced by the established buffer, resulting in respective regional ACTs and regional component ACTs. Regions will estimate the season length based on the regional ACT (or regional component ACTs, as appropriate).

History of Council Discussion on Regional Management

The Council has explored the concept of regional management for red snapper for several years. Regional management was discussed by the Ad Hoc Recreational Red Snapper Advisory Panel at its October 2008 meeting, and the Red Snapper Advisory Panel at its December 2009 meeting. Staff presented papers exploring red snapper regional management to the Council at the January 2009, August 2010, and October 2010 meetings.²

In June 2012, the Louisiana Department of Wildlife and Fisheries presented a proposal to the Council for a recreational red snapper regional management pilot program. The Council requested that Louisiana provide further details of their proposed regional management plan for red snapper, and instructed staff to begin developing a plan amendment for regional management of recreational red snapper. At the August 2012 meeting, the Council requested development of a scoping document for regional management of recreational red snapper, which was provided and discussed at the October 2012 meeting. Scoping meetings were held in January 2013 (Appendix C). The Council reviewed an options paper at its April 2013 meeting, and the initial public hearing draft at its June 2013 meeting. Public hearings were held around the Gulf in August 2013 and the comments were presented to the Council at its August 2013 meeting.

By the February 2014 meeting, the Council had selected preferred alternatives for all actions except for how to allocate the recreational red snapper quota among the regions. At its February 2014 meeting, Council staff was directed to postpone further work on the regional management document until progress is made on how to allocate the quota among the regions. In turn, the Council moved forward with Amendment 40 (GMFMC 2014) and approved the action at its October 2014 meeting. Amendment 40 established distinct private angling and federal for-hire components, allocated the recreational sector ACL between the components, and established separate in-season closure provisions for each component; the amendment also included a three-year sunset on the provisions established.

At its January 2015 meeting, the Council reviewed a revised set of actions for regional management reflecting the regulatory changes made to recreational red snapper management since work on the document was postponed. These changes included new accountability measures (AMs) and the establishment of separate components and quotas for the recreational harvest of red snapper. At its June 2015 meeting, the Council requested staff to hold an additional round of public hearings, to be held after the October 2015 Council meeting.

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² http://www.gulfcouncil.org/resources/briefing book archive.php

1.2 Purpose and Need

The **purpose** of this action is to provide flexibility in the management of the recreational sector's harvest of red snapper by restructuring the federal fishery management strategy to allow for the regional variation of management measures, and developing AMs for recreational overages to better account for biological, social, and economic differences among the regions of the Gulf.

The **need** is to adhere to the National Standards (NSs) of the Magnuson-Stevens Act and to reconsider fishery management within the context of the regions of the Gulf: to prevent overfishing while achieving, on a continuing basis, the optimum yield from the harvest of red snapper by the recreational sector (NS 1); take into account and allow for variations among, and contingencies in the fisheries, fishery resources, and catches (NS 6); and provide for the sustained participation of the fishing communities of the Gulf and to the extent practicable, minimize adverse economic impacts on such communities (NS 8).

1.3 History of Management

This history of management covers events pertinent to recreational red snapper and the Council's consideration of regional management for the recreational harvest of red snapper. A complete history of management for the fishery management plan is available on the Council's website.³

Prior to 1997, the recreational red snapper season was open year-round. Catch levels were controlled through minimum size limits and bag limits. The Sustainable Fisheries Act of 1996 required the establishment of quotas for recreational and commercial red snapper that, when reached, result in a prohibition on the retention of fish caught by each sector, respectively, for the remainder of the fishing year. From 1997 through 1999, NMFS implemented the recreational quota requirement through an in-season monitoring process that projected closing dates a few weeks in advance. For the years 1997 through 1999, the recreational red snapper season was closed earlier each year (Table 1.1.1). In 1999, an emergency rule temporarily raised the recreational red snapper minimum size limit from 15 to 18 inches TL towards the end of the season from June 4 through August 29 in an attempt to slow down the retained harvest rate. Without this emergency rule, the season would have closed on August 5. However, the rule resulted in a large increase in dead discards and the size limit was allowed to revert back to 15 inches TL the following year. Additional details regarding the seasons and regulation changes for red snapper are presented in Hood et al. (2007).

A February 2000 regulatory amendment (GMFMC 2000) replaced the system of in-season monitoring and closure projections with a fixed season based on a pre-season projection of when the recreational quota would be reached. The season for 2000 and beyond was initially set at April 15 through October 31, with a 16-inch TL minimum size limit, 4-fish bag limit, and zero bag limit of red snapper by the captain and crew of for-hire vessels. Shortly before the regulatory amendment was submitted to NMFS, the Council, at the request of representatives of the for-hire industry, withdrew the zero bag limit proposal for captain and crew. NMFS

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³ http://www.gulfcouncil.org/fishery management plans/reef fish management.php

recalculated the season length under the revised proposal, and as a result, implemented the regulatory amendment with a recreational fishing season of April 21 through October 31. This recreational fishing season remained in effect through 2007.

In 2008, Reef Fish Amendment 27/Shrimp Amendment 14 (GMFMC 2007) revised the rebuilding plan for red snapper. For the recreational sector, the rule implemented a June 1 through September 30 fishing season in conjunction with a 2.45 million pound (mp) recreational quota, 16-inch TL minimum size limit, 2-fish bag limit, and zero bag limit for captain and crew of for-hire vessels. The implementing regulations for this amendment created the June 1 through September 30 season by establishing fixed closed seasons of January 1 through May 31, and October 1 through December 31.

The amendment also addressed differences in shrimp and red snapper fishing effort between the western and eastern Gulf, and the impacts of fishing on the red snapper rebuilding plan. The Council considered options for modifying recreational red snapper fishing effort, including different season opening dates and weekend only or consecutive seasons, for the following regions: Texas and the rest of the Gulf; east and west of the Mississippi River; and maintaining consistent Gulf-wide regulations. The Council ultimately opted to maintain consistent Gulf-wide regulations, with a recreational season from June 1 through September 15. Early versions of the amendment proposed establishing regulations for commercial red snapper fishing for the eastern and western Gulf. The action was considered but rejected because establishing different regulations would compromise the objectives of the IFQ program and reduce the flexibility and efficiency of IFQ program participants.

The Southeast Data Assessment and Review (SEDAR) 7 red snapper assessment provided an option to set two regional total allowable catches with the Mississippi River as the dividing line (SEDAR 7 2005; SEDAR 7 Update 2009). These assessments assume there are two sub-units of the red snapper stock within this region, separated commercially by the Mississippi River (shrimp statistical grids 12 and 13) and recreationally at the Mississippi/Louisiana state line. The most information collected and developed thus far is based on the assessment process and follows this particular split, which is included as an alternative for regional management.

The Sustainable Fisheries Act required the NMFS Regional Administrator to close the recreational red snapper season when the quota is projected to be met. When Reef Fish Amendment 27/Shrimp Amendment 14 (GMFMC 2007) was submitted to NMFS, the Council requested that the five Gulf States adopt compatible regulations in state waters. Florida adopted a compatible 2-fish bag limit, but maintained its state red snapper fishing season of April 15 through October 31, 78 days longer than the federal fishing season. Texas also maintained its 4-fish bag limit and year-round fishing season in its state waters. Prior to the start of the 2008 season, NMFS recalculated its projections for the recreational red snapper season in light of the state regulations, and projected that there would be a 75% probability that the recreational quota would not be exceeded if the season closed on August 5. As a result, NMFS set the 2008 season to be June 1 through August 4. In 2009, NMFS again recalculated its projections for the season length prior to the start of the recreational season and announced that the recreational season would be June 1 to August 15.

A February 2010 regulatory amendment (GMFMC 2010) increased the total allowable catch from 5.0 mp to 6.945 mp, which increased the recreational quota from 2.45 mp to 3.403 mp. However, NMFS estimated that in 2009, the recreational sector overharvested its quota by approximately 75%. In recalculating the number of days needed to fill the recreational quota, even with the quota increase, NMFS projected that the 2010 season would need to be shortened to June 1 through July 24, and published notice of those dates prior to the start of the recreational fishing season.

In April 2010, the Deepwater Horizon MC252 deep-sea drilling rig exploded and sank off the coast of Louisiana. Because of the resulting oil spill, approximately one-third of the Gulf was closed to fishing for much of the summer months. The direct loss of fishing opportunities due to the closure, plus the reduction in tourism throughout the coastal Gulf, resulted in a much lower catch than had been projected. After the recreational season closed on July 24, NMFS estimated that 2.3 mp of the 3.4 mp recreational quota remained unharvested (NMFS 2010). However, due to the fixed October 1 through December 31 closed season, NMFS could not reopen the recreational season without an emergency rule to suspend the closure. Consequently, the Council requested an emergency rule to provide the NMFS Regional Administrator with the authority to reopen the recreational red snapper season. After considering various reopening scenarios, the Council requested that the season be reopened for eight consecutive weekends (Friday, Saturday and Sunday) from October 1 through November 21 (24 fishing days).

A January 2011 regulatory amendment (GMFMC 2011a) increased the red snapper total allowable catch to 7.185 mp, with a 3.521 mp recreational quota and a 3.664 mp commercial quota. The final rule also established a 48-day recreational red snapper season, running June 1 through July 19. On August 12, 2011, NMFS published an emergency rule that, in part, increased the recreational red snapper quota by 345,000 lbs for the 2011 fishing year and provided the agency with the authority to reopen the recreational red snapper season later in the year, if the recreational quota had not been filled by the July 19 closing date. However, based on available recreational landings data through June, NMFS calculated that 80% of the recreational quota had been caught. With the addition of July landings data plus Texas Parks and Wildlife Department survey data, NMFS estimated that 4.4 to 4.8 mp were caught, well above the 3.865 mp quota. Thus, no unused quota was available to reopen the recreational fishing season.

A March 2012 regulatory amendment (GMFMC 2012d) increased the commercial and recreational quotas and removed the fixed recreational season closure date of October 1. The recreational season opened June 1 through July 11. However, the north-central Gulf experienced extended severe weather during the first 26 days of the 2012 recreational red snapper fishing season, including Tropical Storm Debby. Because of the severe weather, NMFS extended the season by six days and closed on July 17.

A March 2013 framework action (GMFMC 2013a) increased the commercial and recreational red snapper quotas from a combined 8.08 mp to 8.46 mp. This was the result of new rebuilding projections based on the 2009 update assessment (SEDAR 7 Update 2009) that were revised to account for actual landings during 2009-2012. The resulting sector allocations were 4.315 mp (commercial) and 4.145 mp (recreational). NMFS published the final rule increasing the quota based on state-specific recreational red snapper seasons, which NMFS had implemented through

a March 2013 emergency rule, as requested by the Council. The emergency rule reduced the recreational red snapper season in federal waters off a Gulf State that implements less restrictive regulations for their state water seasons. This reduction of the federal season was to compensate for the additional harvest that would occur in state waters as a result of the inconsistent regulations. On May 31, 2013, the U.S. District Court in Brownsville, Texas voided the emergency rule, and the Gulf-wide federal recreational red snapper season was established from June 1 through June 28.

In July 2013, the Council reviewed a new benchmark assessment (SEDAR 31 2013) which showed that the red snapper stock was rebuilding faster than projected, partly due to strong recruitment in some recent years. Combined with a new method for calculating the ABC, the Council's Scientific and Statistical Committee increased the ABC for 2013 to 13.5 mp, but warned that the catch levels would have to be reduced in future years if recruitment returned to average levels.

After incorporating a buffer to reduce the possibility of having to later reduce the quota, the Council further increased the 2013 commercial and recreational quotas to a combined 11.0 mp (5.61 mp and 5.39 mp, respectively) (GMFMC 2013b). This increase occurred too late to extend the June recreational season, so the Council requested that NMFS reopen the recreational season. NMFS announced a supplemental season of October 1 through 14, 2013.

In 2014, NMFS initially announced a 40-day recreational season. However, in March 2014, as a result of a legal challenge, the U.S. District Court found that there was not an adequate system of AMs in place to prevent the recreational red snapper sector from exceeding its quota. To comply with the court decision, the Council approved the setting of a 20% buffer for the recreational sector catch. The Council also adopted a quota overage adjustment, such that if the recreational sector ACL is exceeded, the ACL will be reduced in the following year by the full amount of the overage. Following adoption of the new AMs, several States extended their season for recreational red snapper in state waters. The projected increase in state water caught red snapper reduced the amount of quota available to be caught in federal waters. As a result, the 2014 red snapper season in federal waters was shortened to 9 days.

Amendment 40 (GMFMC 2014) formally adopted the designation of ACLs for red snapper, established private angling and federal for-hire component ACTs for the years 2015-2017, and established separate in-season closure provisions for each component. The Council approved a framework action in April 2015 that increased the red snapper stock quota for the years 2015-2017. For 2015, the quota was increased from 11.0 mp to 14.3 mp. NMFS estimated the recreational red snapper fishing season length in federal waters for each component and established a 10-day season for private angling component and a 44-day season for the federal for-hire component (Appendix J).

CHAPTER 2. MANAGEMENT ALTERNATIVES

2.1 Action 1 – Regional Management

Alternative 1: No Action – Retain current federal regulations for management of recreational red snapper in federal waters of the Gulf of Mexico (Gulf).

Alternative 2: Establish a regional management program that <u>delegates</u> some management authority to a state or group of states (regions). Each region must establish the red snapper season structure and bag limit for the harvest of an assigned portion of the recreational sector annual catch limit (ACL). If a region elects to not participate or is determined to have a red snapper harvest plan that is inconsistent with the requirements of delegation, the recreational harvest of red snapper in the federal waters adjacent to such region would be subject to the federal default regulations for red snapper.

Alternative 3: Establish a regional management program in which a state or group of adjacent states (regions) submit proposals to <u>NMFS</u> describing the <u>conservation equivalency measures</u> the region will adopt for the management of its portion of the recreational sector ACL. The proposals must specify the red snapper season and bag limit. To be a conservation equivalency plan (CEP), the plan must be reasonably expected to limit the red snapper harvest to the region's assigned portion of the recreational sector ACL. If a region does not participate or its plan is determined by NMFS to not satisfy the conservation equivalency requirements, then the recreational harvest of red snapper in the federal waters adjacent to such region would be subject to the federal default regulations for red snapper.

<u>Preferred Alternative 4</u>: Establish a regional management program in which a state or group of adjacent states (regions) submit proposals to a <u>technical review committee</u> describing the <u>conservation equivalency measures</u> the region will adopt for the management of its portion of the recreational sector ACL. The proposals must specify the red snapper season and bag limit. To be a CEP, the plan must be reasonably expected to limit the red snapper harvest to the region's assigned portion of the recreational red snapper ACL. The technical review committee reviews and may make recommendations on the plan, which is either returned to the region for revision or forwarded to NMFS for final review. If a region does not participate or its plan is determined by NMFS to not satisfy the conservation equivalency requirements, then the recreational harvest of red snapper in the federal waters adjacent to such region would be subject to the federal default regulations for red snapper.

Alternative 5: Establish a provision to sunset regional management after:

Option a: 10 calendar years of the program.
Option b: 5 calendar years of the program.
Option c: 3 calendar years of the program.
Option d: 2 calendar years of the program.

Discussion:

Federal default regulations refer to the Gulf-wide regulations governing the recreational harvest of red snapper in the Code of Federal Regulations (50 CFR Part 622). To implement regional management by delegation or conservation equivalency plans (CEP), the current regulations in the Code of Federal Regulations (50 CFR Part 622) would need to be suspended while consistent delegation or an approved CEP is in effect. Federal default regulations for the recreational harvest of red snapper would be applied to the federal waters adjacent to the state waters of that region, in the event a region's delegation is inactive, its CEP is not approved, or if a region does not participate in regional management.

If the federal default regulations are implemented for a region, the National Marine Fisheries Service (NMFS) would publish a notice with the Office of the Federal Register announcing such an action. Currently, the federal regulations include a 2-fish bag limit, minimum size limit of 16 inches total length (TL), and a June 1 season opening; the season closes when the recreational annual catch target (ACT) is projected to be met. ⁴ These regulations have been established and revised over time through past actions, which considered a variety of alternatives that were analyzed as part of the decision-making process.

Alternative 1 (No Action) would retain current management measures for the recreational harvest of red snapper in federal waters of the Gulf of Mexico (Gulf). Currently, these measures include a 2-fish per angler per day bag limit and a June 1 fishing season start date. Alternative 2, Alternative 3, and Preferred Alternative 4 propose different approaches to regional management for recreational red snapper. Under all alternatives, red snapper would remain under federal management jurisdiction, subject to Gulf-wide closure when the recreational sector annual catch limit (ACL) is met. Essentially, while a State or States would be given some management authority to determine the regulations to be applied in their region, none of these alternatives provide the complete authority to manage red snapper advocated for by some supporters of regional management. Regions would be able to establish the season start and end dates, season structure, and bag limit at the regional level. However, all regions must adopt the federal minimum size limit selected in Action 4. Any management measures implemented for a region must adhere to the goals of the rebuilding plan and be consistent with federal and other applicable laws. This includes the requirement that season length estimates of the regions be based on the ACT, which is reduced by 20% from the ACL.

Under **Alternative 2**, regional management is defined as the delegation of limited management authority to a State or adjacent States, which would then establish appropriate management measures to constrain recreational harvest to the assigned portion of the recreational sector ACL. The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) allows for the delegation of management to a State to regulate fishing vessels beyond their state waters, provided its regulations are consistent with the fishery management plan (FMP; Appendix D). The delegation of management authority to the States (**Alternative 2**) requires a three-quarters majority vote of the voting members of the Gulf of Mexico Fishery Management Council (Council) members.

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⁴ Recreational red snapper management measures are codified as follows in the *Federal Register*: season opening 50 CFR 622.34(b) and bag limit 50 CFR 622.38(b)(3). The regulations are also provided in Appendix G.

Alternative 3 and Preferred Alternative 4 would adopt a process by which each region submits a CEP describing its intended management measures for the recreational harvest of red snapper. While Alternative 3 and Preferred Alternative 4 would grant less management authority directly to the States or regions than Alternative 2, all three alternatives provide comparable flexibility to the regions to modify the season structure and bag limit for the harvest of the region's designated portion of the red snapper recreational ACL.

Alternative 3 and Preferred Alternative 4 differ based on the review process for the CEPs. Under Alternative 3, regions would submit plans directly to NMFS for review while under Preferred Alternative 4, regions would first submit CEPs to a technical review committee, which will consist of one member from each State designated by the state fisheries director. The technical review committee would provide the initial review of the CEPs and may make recommendations on the plans, which are either returned to the regions for revision or forwarded to NMFS for final review and approval. Because of the additional time needed for the technical review committee to meet and review the CEPs, Preferred Alternative 4 would entail a longer process for consistency determination than under Alternative 3. On the other hand, the process under Preferred Alternative 4 provides for greater participation and input by state-level managers and stakeholders, increasing the involvement of local-level entities in the regional management process. The proposed process under Preferred Alternative 4 is more similar to the Mid-Atlantic Fishery Management Council's management of summer flounder than is Alternative 3.

Under Alternative 2, Alternative 3 and Preferred Alternative 4, it is possible that not all States will participate. Non-participating States or regions would be required to adhere to the federal default regulations, which would be applied to the State or region's adjacent federal waters for the recreational harvest of red snapper. Because participating States or regions would still receive their allocation (Action 6), a non-participating State/region's fishing season length would be determined based on the remaining balance of the recreational ACL after subtracting the regional ACLs for participating States/regions. Thus, a single non-participating State's season length would be projected based on the portion of the recreational sector ACL it would have received if participating in delegation.

Alternative 5 provides sunset options for ending regional management after a specified number of years (**Options a-d**) and may be selected with any of Alternatives 2-4. At the time of the sunset, all regulations associated with all actions in this plan amendment would expire, including any accountability measures (AMs; Action 7). Under Alternative 5, regional management would end after 10 calendar years (**Options a**), 5 years (**Options b**), 3 years (**Option c**), or 2 years (**Options d**). For all options, regional management would expire at the end of the tenth, fifth, third, or second calendar year of the program, regardless of the implementation date of this amendment. For example, if this amendment is implemented in May 2016 with **Option c** selected as preferred, regional management would end December 31, 2018.

If **Alternative 5** (with a corresponding option) is not selected as preferred, no sunset date will be established. Should **Alternative 5** be selected as preferred and the Council decides subsequently to continue regional management, the Council would need to extend regional management through the appropriate document and process.

Requirements of Delegation Provision (Alternative 2)

If delegation of red snapper management is adopted (**Alternative 2**), then the management measures delegated to the individual States or groups of States must be consistent with the Reef Fish FMP, including the rebuilding plan and the Magnuson-Stevens Act. Consistency with the FMP requires, among other things, preventing overfishing, rebuilding declining reef fish stocks, monitoring the reef fish fishery, conserving reef fish habitats and increasing fish habitats, and minimizing conflicts between user groups.

The Magnuson-Stevens Act (16 U.S.C. §1856(a)(3)) outlines the procedure for suspending the delegation if a State's regulations are not consistent with the FMP (Appendix D). If NMFS determines that a State's regulations are not consistent with the FMP, NMFS shall promptly notify the State and the Council of the determination and provide an opportunity for the region to correct any inconsistencies identified in the notification. If, after notice and opportunity for corrective action, the region does not correct the inconsistencies identified by NMFS, then the delegation to the region shall not apply until NMFS and the Council find that the region has corrected the inconsistencies.

In application, the response times between NMFS' determination of inconsistency and the implementation of corrective action by the State would be case specific. The timelines for correction of inconsistencies would be decided by NMFS on a case by case basis, as it determines whether inconsistencies exist. The timeline for the region's response would be dependent on the nature of the inconsistency. Due to the short season lengths and high catch rates for the recreational harvest of red snapper, the implementation of corrective actions may need to occur very quickly. Under such circumstances, the region would need to establish a process to implement corrective actions very quickly.

As a hypothetical example, if the region implemented the delegated management measures shortly before the season opened, any notification of inconsistency and the implementation of corrective action would need to occur quickly. To accomplish this, the region would need to have the authority to close the season and adjust the bag limit perhaps without having an opportunity to discuss the issue at a formal State commission meeting. Alternatively, if the region implemented regulations several months before the opening of the red snapper recreational season, then a longer response time would be possible. This scenario may also allow for the discussion of the issue at a formal State commission meeting. These scenarios exemplify the need for case-by-case timelines for the region's response to a notification of inconsistency.

A region may decide to opt out of delegation and request the federal default measures be applied to adjacent federal waters (Figure 2.1.1) for the recreational harvest of red snapper. To opt out of delegation, the region should send a letter to NMFS requesting the federal default regulations be applied to their region for the fishing year. A season length would be calculated by NMFS based on the region's ACL as apportioned in Action 6. Inherently, if only one region opts-out, then it would still essentially be constrained by the terms of delegation as per the regional area and quota apportionment.

Under delegation, federal waters could potentially remain open year-round, and anglers' access to harvesting red snapper from federal waters would be constrained by the management measures established for their region. Each region would prohibit further landings and possession of red snapper after its portion of the quota has been caught. Under certain conditions, the federal waters adjacent to a given region could be closed. To be consistent with National Standard 4 of the Magnuson-Stevens Act, these closures would apply to all recreational vessels.

Requirements of Conservation Equivalency (Alternative 3 and Preferred Alternative 4)

Under **Alternative 3**, each region would have the opportunity to submit a CEP to establish regionalized management measures, including season start and end dates, season structure, and bag limit, for the recreational harvest of red snapper on a yearly basis. These plans would be reviewed by NMFS to insure the proposed management measures are a conservation equivalent to the federal regulations. Table 2.1.1 provides an example timeline for the submittal and approval of the CEPs under **Alternative 3**. This process would be altered for the first year of the program if this action is implemented mid-year. In addition, revisions of this process may be implemented by NMFS as necessary. In this instance, NMFS would contact the states and notify them of any changes needed to make their plan a conservation equivalent to the federal regulations.

The timeline for the CEP review is specifically designed to allow the State or region an opportunity to use preliminary data from their monitoring plans and Wave 4 of MRIP prior to submitting their plan. In addition, the timeline allows the State or region an opportunity to submit a revised CEP for approval. If the proposed management measures extend beyond the range analyzed in this amendment, then NMFS may recommend preparing an appropriate documentation for the applicable laws to support the decision (ex. National Environmental Policy Act (NEPA) analysis). NMFS would collaborate with the state/region in developing the appropriate documentation with the understanding that the development of the document could delay NMFS' ability to approve the CEP and may need further Council action for implementation.

Under **Preferred Alternative 4**, the CEP would be submitted to the technical review committee and a separate timeline may be established by the committee. However, the established timeline may also be applied for this alternative (Table 2.1.1). The finalized plans with the technical review committee recommendation for approval would need to be submitted to NMFS by November 1st to allow time to publish a notice in the federal register by January 1st identifying States with approved CEPs. States without approved CEPs would be subject to the federal default regulations.

Table 2.1.1. Example timeline for the review of CEPs by NMFS or the Technical Review Committee for Alternative 3 and Preferred Alternative 4.

| Timeline | Description |
|-------------------------------------|--|
| July 1 st | The region provides a brief written description of its preliminary CEP |
| | for the following year (e.g., the regulations they hope to implement the |
| | following year if supported by the current year landings and effort |
| | data) to NMFS and the Council. At this time, NMFS may flag any |
| | high-level concerns or alternative process requirements (e.g., |
| | additional NEPA documentation required if the proposed regulations |
| | are outside the scope of analysis in Amendment 39 and documentation |
| | for other applicable laws). |
| September 1 st | The region submits the CEP to NMFS or the Technical Review |
| | Committee (TRC). |
| October 1 st | NMFS or the TRC responds to the region with the preliminary |
| | determination whether the plan is a conservation equivalent to the |
| | federal default regulations. At this time, NMFS or the TRC may |
| | approve the plan or request a revised CEP. |
| October 15 th | The region provides a revised CEP to NMFS or the TRC for approval, |
| | if necessary. |
| November 1 st | If applicable, the TRC provides the recommended regional CEPs to |
| | NMFS for final approval and processing. If the CEP was not |
| | approved or did not submit a CEP, then the region would be subject to |
| | the federal default regulations. |
| January 1 st (or sooner) | NMFS publishes a notice in the federal register identifying States or |
| | regions with approved CEPs. States without approved CEPs would be |
| | subject to the federal default regulations. |

Each CEP shall include the following:

- Point of Contact for the CEP
- Point of Contact with the authority to close the fishery
- Proposed CEP including season structure and bag limit.
- Specify if the CEP is intended to be applicable for one or two years. Prior to approving the second year of the plan, it would be evaluated based on data from the first year. The plan may require revisions based on the NMFS review.
- Analysis demonstrating the ability of the CEP to constrain recreational harvest of red snapper to the allocated quota with a description of the methodology.
- Summarize the previous year's performance (e.g., Was the harvest constrained at or below the regional quota?).
- Explain how the CEP will be enforced.
- If applicable, provide a description of the in-season monitoring program and plan to close the fishery if the quota is reached.
- If necessary, additional analysis and documentation supporting the proposed CEP which may include NEPA, Magnuson-Stevens Act, or other applicable laws. This would only apply for CEP management strategies beyond the range analyzed in Amendment 39.
- Any other supporting documentation for the CEP, such as scientific research.

Application of Federal Default Regulations

Under Alternative 2, Alternative 3, or Preferred Alternative 4, the selected suite of management measures to be established for a region could consist of numerous combinations and ranges. Although there is flexibility in the assemblage of management measures to be adopted for a region, each region <u>must</u> establish its season and bag limit. If a region does not establish a season and bag limit, then NMFS will deem the region's regulations inconsistent. If the inconsistency is not resolved and NMFS suspends the region's regional management, the federal default regulations will go into effect for the portion of federal waters adjacent to the region s(Figure 2.1.1), until the region receives approval by NMFS that the inconsistency has been remedied. Each region must also establish a minimum size limit that is consistent with the federal minimum size limit, or NMFS will deem the region's regulations inconsistent.

At any time, a region or regions could opt out and not participate in regional management. Although regional management would be inactive and such a region would fish under the federal default regulations, related actions in this amendment would remain effective. If one or more regions opt out of regional management, the regulations implementing the preferred alternatives selected under Actions 6 (apportioning the recreational ACL) and 7 (post-season AMs) would remain effective and applicable toward those regions until modified through a plan amendment.

If a region chooses to opt out of regional management, then federal default regulations would be necessary. A region may decide not to participate and request the federal default measures be applied to the region's adjacent federal waters for the recreational harvest of red snapper. This would constitute the region opting out. To opt out, the region would send a letter requesting the federal default regulations be applied to their region for the fishing year. NMFS would publish a notice in the Federal Register to implement the federal default regulations in the federal waters adjacent to the region (Figure 2.1.1). The season length would be calculated by NMFS based on the regional ACLs as apportioned in Action 6. Inherently, if only one region opts out, then the region would still essentially be constrained by the terms of regional management as per the regional area and recreational ACL apportionment. If more than one region opts out, the respective regional ACLs could be combined and NMFS would calculate the season for those areas of federal waters adjacent to the regions, which have opted out. It would be expected that these regions would adopt regulations consistent with the federal default regulations that would apply to all recreational vessels in federal waters off such region. In turn, if a region does not set the season and bag limit, or sets a different minimum size limit than that selected in Action 4, then it is assumed that the region is opting out of regional management and the federal default management measures would apply. As per the Magnuson-Stevens Act, it would still be necessary for NMFS to prohibit the recreational harvest of red snapper if or when the Gulf-wide recreational sector ACL is reached or estimated to have been met.

Boundary Description for Figure 2.1.1.

The boundaries in Figure 2.1.1 were agreed upon by the representatives from each state marine resource agency at the February 2013 Council meeting. All lines begin at the boundary between state waters and federal waters. Line A-B, defining federal waters off Texas, is already codified as a line from 29°32.1' N latitude, 93°47.7' W longitude to 26°11.4' N latitude, 92°53.0' W

longitude, which is an extension of the boundary between Louisiana and Texas (50 CFR 622.2). Likewise, line G-H, defining federal waters off Florida, is codified as a line at 87°31.1' W longitude extending directly south from the Alabama/Florida boundary (50 CFR 622.2). The other two lines have not been codified, but were agreed upon by the Council. Line E-F is a line at 88°23.1' W longitude extending directly south from the boundary between Alabama and Mississippi.

Line C-D is a line at 89°10.0' W longitude extending directly south from the South Pass Light in the Mississippi River delta in Louisiana. Unlike the other lines, this line is not based on the boundary between Louisiana and Mississippi because doing so would be impracticable. Louisiana has jurisdiction over the Chandeleur Islands, which extend into waters south of Mississippi. A line based on the state waters boundary just north of the islands could result in inequitable impacts on Mississippi anglers as it would identify federal waters that are off both Mississippi and Louisiana as being exclusively off Louisiana. A line based on the state land boundary would be even further west and would reduce the extent of federal waters off Louisiana. Therefore, this line was considered a fair compromise by representatives of both states.

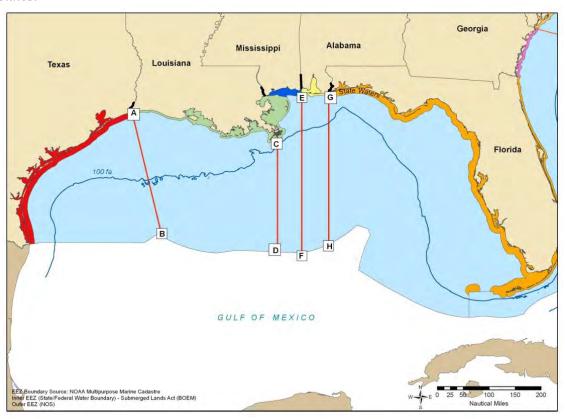
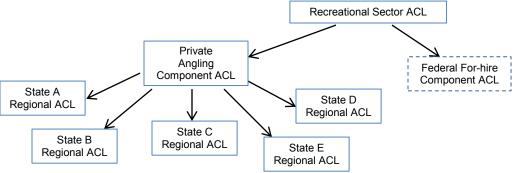


Figure 2.1.1. Map of state waters (shaded in color for each State) with established and proposed boundaries between states extending into federal waters. Federal waters adjacent to a State or region refer to the portion of federal waters bounded by the State or region's state waters and the boundary line(s) shown in the figure that separate federal waters off of each State.

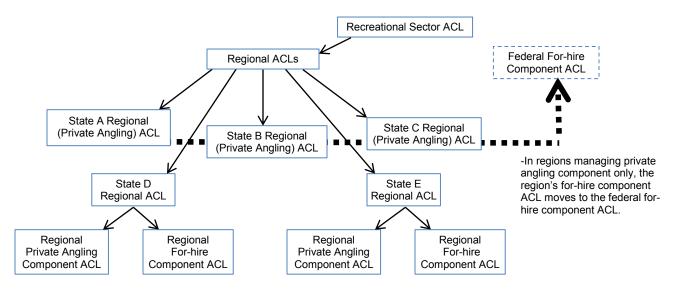
2.2 Action 2 – Regional Management and Sector Separation

Alternative 1: No Action – Retain current federal management of recreational red snapper in federal waters of the Gulf. For the years 2015-2017, establish separate component ACTs for the federal for-hire and private angling components as specified in Amendment 40.

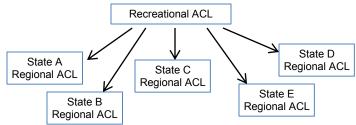
Alternative 2: <u>Extend</u> the separate management of federal for-hire and private angling components of the recreational sector. This amendment would <u>apply to the private angling component</u>, only. The private angling component would be managed by each region under regional ACLs based on the allocation selected in Action 6.



Alternative 3: Extend the separate management of the federal for-hire and private angling components of the recreational sector. This amendment could apply to both components. The recreational sector ACL will be divided into regional ACLs using the allocation selected in Action 6. The regional ACLs will be further divided into regional component ACLs (i.e., apply the allocation formula established through Amendment 40 to the region's average proportion of landings by each component). A region may manage both components or may opt to manage the private angling component only. If managing the private angling component only, the region's for-hire component ACL would become part of the federal for-hire component ACL.



Alternative 4: <u>End</u> the separate management of the federal for-hire and private angling components upon implementation of this amendment, and have this amendment <u>apply to the entire recreational sector</u>. The private angling and federal for-hire components would be managed as a single unit by each region under regional ACLs based on the allocation selected in Action 6.



Note: The sunset provision for sector separation is removed under Alternatives 2, 3, and 4. Regional ACLs and regional component ACLs, if applicable, will be reduced by the established buffer resulting in respective regional and regional component ACTs.

Discussion:

In October 2014, the Council took final action on Amendment 40 (GMFMC 2014) to apportion the recreational ACL between the federal for-hire and private angling components of the recreational sector for a period of three years (2015-2017). Action 2 is only applicable if this amendment is implemented while the separate components of the recreational sector are still in effect.

Assuming that five regions representing each Gulf State will be established under this amendment, the recreational sector ACL would be divided into a different number of regional ACLs, component ACLs, or regional component ACLs depending on the alternative selected. Currently (**Alternative 1**), the recreational sector ACL is divided into two component ACTs for the years 2015-2017 and will revert to a single recreational sector ACL at the start of 2018. **Alternative 1** would continue the separate management of the federal for-hire and private angling components until the end of 2017, as specified in Amendment 40 (GMFMC 2014). It is possible that this alternative would allow for the component ACTs to remain in place when regional management is implemented, only to be vacated at the specified time (the end of 2017). This may complicate the establishment of regional management measures prior to 2018.

Table 2.2.1 compares **Alternatives 2-4** by identifying whether the regions would manage the federal for-hire component and/or the private angling component, and how the recreational sector ACL would be divided. **Alternative 2** would remove the sunset provision specified in Amendment 40 upon implementation of this amendment and continue the separate management of the federal for-hire and private angling components. Under this alternative, regional management would apply only to the private angling component. Management of the federal for-hire component would be managed Gulf-wide, and options to modify the management of this component are currently under evaluation by the Council through Amendments 41 (charter vessels) and 42 (headboats). Under **Alternative 2**, six ACLs would be established: five regional ACLs from the private angling component ACL, and one federal for-hire component ACL.

Table 2.2.1. Comparison of management under Alternatives 2-4.

| | Component | Regions | Federal | Sector separation | Allocating the recreational sector ACL |
|---------------|------------------|---------------|---------------|---|---|
| Alternative | Private | X | | Continues. Management of the federal for-hire | 57.7% allocated among regional ACLs according to Action 6. |
| 2 | For-hire | | X | in Amendments 41 and 42. | 42.3% for the federal for- hire component ACL. |
| Alternative 3 | Private | X | | Continues. Regions may manage both components, or manage the private angling component, only. | Create regional ACLs based on Action 6, then regional component ACLs. Regions manage the private angling component ACL, and optionally, the for-hire component ACL. |
| | For-hire | X (Option) | X (Option) | | Federal for-hire component ACL in regions managing private angling component, only. |
| Alternative 4 | Private For-hire | X | | Ends when this amendment is implemented. | 100% allocated among regional ACLs according to Action 6. |

Like Alternative 2, Alternative 3 would remove the sunset provision specified in Amendment 40 upon implementation of this amendment and the for-hire and private angling components would continue to be managed separately in regions intending to manage both components. Alternative 3 differs from Alternative 2, by allowing each region to decide whether or not to manage the for-hire component in that region. If a region intends to manage both components, the region would specify the management measures to be applied to each component in its CEP or state regulations established for delegated management authority. Under Alternative 3, the recreational sector ACL would first be divided into regional ACLs based on the alternatives selected in Action 6. These regional ACLs would be further divided into regional component ACLs (regional private angling component ACLs and regional for-hire component ACLs) by applying the allocation formula in Amendment 40⁵ to each State/region's red snapper landings by each component. This would result in the recreational sector ACL being divided into ten ACLs (and corresponding ACTs) to represent each State/region and each component. For a region intending to manage the private angling component only, the respective regional for-hire component ACL would become part of the federal for-hire component ACL and be managed under a shared set of measures established for the federal for-hire component.

As with Alternatives 2 and 3, Alternative 4 would remove the sunset provision specified in Amendment 40. Alternative 4 would end the use of separate component ACLs (quotas) at the time this amendment is implemented, even if the three-year period of sector separation has not

⁵ 50% of the average proportion of historical landings from 1986-2013 and 50% of the average proportion of historical landings from 2006-2013, excluding landings from 2010.

expired. Regional ACLs would be established for each region, which encompass all recreational anglers and vessels of the region. Thus, adopting **Alternative 4** would apply regional management and the actions herein to each region's recreational sector as a whole. Under **Alternative 4**, five regional ACLs (and corresponding ACTs) would be established, representing each State/region; component ACLs would no longer be used.

Action 6 addresses the apportionment of the recreational sector ACL among the regions. For the alternatives in this Action 2, the allocations that would result from applying Preferred Alternatives 5 and 6 in Action 6 are provided in Table 2.2.2. Using the current recreational sector ACL of 7.01 million pounds (mp),⁶ the resulting number of pounds for the allocations is also provided. Regional ACLs (or component ACLs) would be reduced by 20% to establish regional ACTs (or component ACTs). Regions would estimate the fishing season length based on the regional ACT.

⁶ The Council approved Amendment 28 at its August 2015 meeting. If implemented by the Secretary of Commerce, the recreational sector ACL will be 7.349 mp in 2016.

Table 2.2.2. Resulting allocations of the recreational sector ACL for the Action 2 alternatives, based on selection of Preferred Alternatives 5 and 6 in Action 6. The resulting number of pounds for the allocations is provided based on the current recreational sector ACL of 7.01 mp, an ACT buffer of 20%, and the corresponding number of days for the 2015 season based on SERO-LAPP-2015-04 projection scenarios A-C (Appendix J).

| Alternative 2: Regional ACLs and Federal For-hire Component ACL | | | | | | | | | |
|---|---|--------|--------|---------|--------|---------|--|--|--|
| | Federal Florida Alabama Mississippi Louisiana Texas | | | | | | | | |
| % Allocation | 42.3% | 21.80% | 18.20% | 1.80% | 8.90% | 7.00% | | | |
| ACL (mp) | 2.965 | 1.528 | 1.275 | 0.126 | 0.623 | 0.490 | | | |
| ACL (days) | 57-77 | 11-16 | 13-14 | 118-118 | 50-50 | 136-136 | | | |
| ACT (mp) | 2.372 | 1.2224 | 1.02 | 0.1008 | 0.4984 | 0.392 | | | |
| ACT (days) | 44-60 | 8-12 | 11-11 | 94-94 | 40-40 | 109-109 | | | |

| | Alternative 3: Regional Component ACLs (Private angling and For-hire) | | | | | | | | |
|--------------------|---|---------|---------|-------------|-----------|---------|--|--|--|
| | | Florida | Alabama | Mississippi | Louisiana | Texas | | | |
| | | (37.8%) | (31.6%) | (3.1%) | (15.4%) | (12.1%) | | | |
| | % Allocation | 15.50% | 18.70% | 2.90% | 9.70% | 3.30% | | | |
| | ACL (mp) | 1.084 | 1.309 | 0.2 | 0.681 | 0.229 | | | |
| Private Angling | ACL (days) | 7-11 | 14-14 | 188-188 | 54-54 | 63-63 | | | |
| / Mighing | ACT (mp) | 0.8672 | 1.0472 | 0.16 | 0.5448 | 0.1832 | | | |
| | ACT (days) | 6-9 | 11-11 | 150-150 | 43-43 | 51-51 | | | |
| | % Allocation | 22.30% | 12.90% | 0.20% | 5.70% | 8.80% | | | |
| _ | ACL (mp) | 1.566 | 0.906 | 0.017 | 0.398 | 0.619 | | | |
| For- hire | ACL (days) | 60-119 | 86-92 | 85-85 | 71-73 | 65-65 | | | |
| IIIIC | ACT (mp) | 1.2528 | 0.7248 | 0.0136 | 0.3184 | 0.4952 | | | |
| | ACT (days) | 47-94 | 67-72 | 68-68 | 57-58 | 49-50 | | | |

| Alternative 4: Regional ACLs | | | | | | | | | | |
|------------------------------|---|--------|---------|--------|--------|--|--|--|--|--|
| | Florida Alabama Mississippi Louisiana Texas | | | | | | | | | |
| % Allocation | 37.80% | 31.60% | 3.10% | 15.40% | 12.10% | | | | | |
| ACL (mp) | 2.649 | 2.215 | 0.217 | 1.079 | 0.848 | | | | | |
| ACL (days) | 15-24 | 21-21 | 171-171 | 59-60 | 64-65 | | | | | |
| ACT (mp) | 2.119 | 1.772 | 0.174 | 0.863 | 0.678 | | | | | |
| ACT (days) | 12-19 | 16-17 | 137-137 | 47-48 | 50-50 | | | | | |

Source: SERO-LAPP-2015-04, N. Farmer, pers. comm.

Notes: States are arranged in east to west geographical order. All catch rates are subject to high levels of uncertainty, especially Mississippi. Regional allocations remove landings from 2006 and 2010, while component allocations remove landings from 2010, only.

The following figures show the allocations provided in Table 2.2.2. Figure 2.2.1 provides each State's red snapper landings by its federal for-hire and private angling components, using the allocation formula in Amendment 40 (50% of the average proportion of historical landings from 1986-2013 and 50% of the average proportion of historical landings from 2006-2013, excluding landings from 2010). This serves as the basis for the regional component ACL allocations in **Alternative 3**. Figure 2.2.2 shows the proportion of the recreational sector ACL that would be allocated into regional ACLs, regional component ACLs, and a federal for-hire component ACL, as applicable for **Alternatives 2-4**. These figures provide the proportions of the recreational sector ACL which could be allocated among the regions. The regional ACLs will be reduced by 20% to provide the regional ACTs, and the regions would manage toward meeting the ACT.

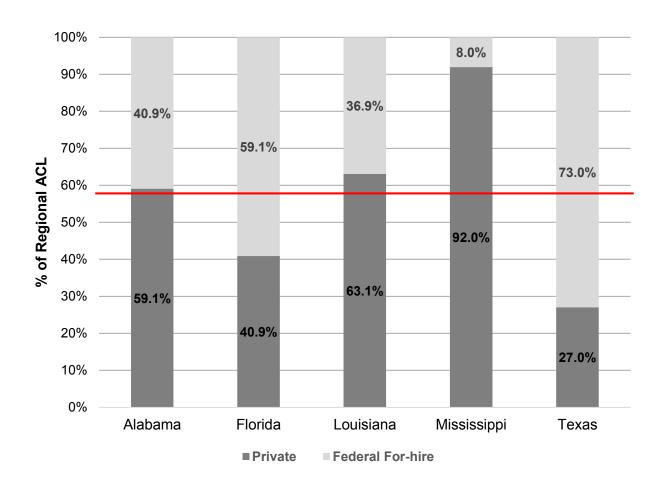


Figure 2.2.1. Federal for-hire and private angling components' proportion of red snapper landings by State, using the allocation formula established in Amendment 40. The red line represents the Gulf-wide average proportion of landings by each component.

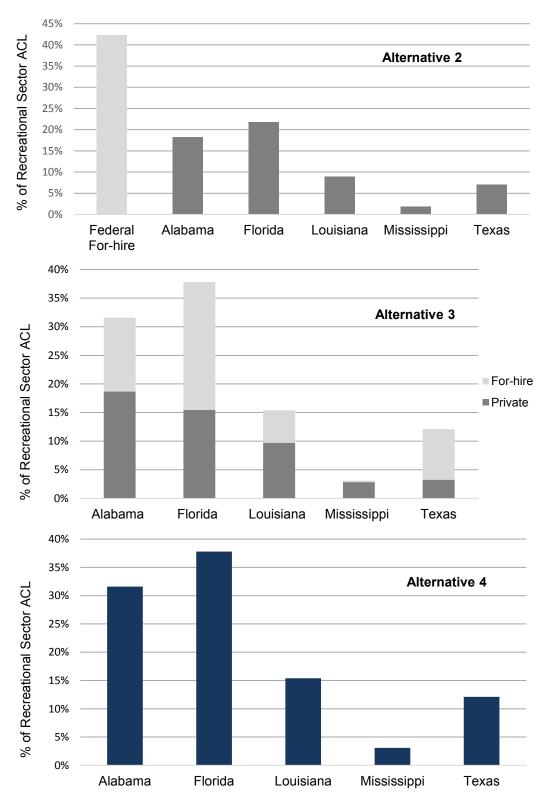


Figure 2.2.2. Proportions of the recreational sector ACL to be assigned to each State/region for Alternatives 2-4, using the preferred alternatives for regional apportionment in Action 6.

2.3 Action 3 – Establish Regions for Management

Alternative 1: No Action – Retain the current management of recreational red snapper in federal waters of the Gulf as one region.

Alternative 2: Establish an east (Florida, Alabama, Mississippi) and west (Louisiana, Texas) region and allow for different management measures for each region.

Alternative 3: Establish an east (Florida, Alabama) and west (Mississippi, Louisiana, Texas) region and allow for different management measures for each region.

Alternative 4: Establish five regions representing each Gulf State.

<u>Preferred Alternative 5</u>: Establish five regions representing each Gulf State, which may voluntarily form multistate regions with adjacent states.

Discussion:

Under **Alternative 1** (No Action), management measures would remain the same for the recreational harvest of red snapper in all federal waters of the Gulf. Currently those regulations include a June 1 fishing season start date, a 16-inch TL minimum size limit, and a 2-fish per angler per day bag limit. Additionally, captain and crew are prohibited from retaining a bag limit while under charter. These regulations apply Gulf-wide in federal waters. The remaining alternatives propose to divide the Gulf into regions, using the boundaries specified in Figure 2.1.1. The establishment of regions would allow for management measures to be established at the regional level.

Alternatives 2 and 3 would establish two regions: eastern and western Gulf. In both alternatives, Florida and Alabama make up the eastern region, and Louisiana and Texas make up the western region. The alternatives differ in that Mississippi is part of the eastern region under Alternative 2 and part of the western region under Alternative 3. Because Alternatives 2 and 3 include more than one state in a region, the states sharing a region would need to agree on the set of shared management measures and to close the region's red snapper season when the regional ACT (reduced from the regional ACL) is reached or projected to be reached.

The red snapper stock assessment assumes there are two sub-units of the Gulf red snapper stock, separated roughly at the Mississippi River. **Alternative 2** would divide the Gulf into regions that most closely approximate the eastern and western sub-units used in the red snapper stock assessment, thereby affording the possibility to adopt regional management measures based on the differences in biological abundance. The Red Snapper Benchmark Assessment (SEDAR 31 2013) estimated that the western Gulf sub-unit would carry a disproportionate burden of stock recovery. This is true for two reasons: first, because it is currently estimated to have higher stock biomass; and second, because the average fishing mortality rate at age is estimated to be lower in the western Gulf compared to the eastern Gulf (SEDAR 31 2013). Results from all plankton surveys (1986-2003) found red snapper larvae were more abundant and occurred in five

times more samples in the western Gulf compared to the eastern Gulf (Hanisko et al. 2007). A larval transport study in the northern Gulf examined the potential for repopulating the eastern Gulf stock through larval transport from the more populous western sub-unit (Johnson et al. 2009). The results of this study indicated while there is a larval transport pathway around the Mississippi River delta, the primary pathway is in deeper waters beyond the shelf break suggesting uncertainty about successful settlement of red snapper larvae in waters this deep (Johnson et al. 2009). Further the likelihood of larval transport to the west Florida shelf was much lower due to topographic impediments including the Mississippi Delta, DeSoto Canyon and the Apalachicola peninsula (Johnson et al. 2009). Therefore, the eastern and western sub-units of the red snapper stock are projected to rebuild at different rates based on current estimates of population abundance. However, the ultimate result of increasing fishing pressure on the eastern sub-unit compared to the western sub-unit is that the eastern sub-unit is projected to continue to be prosecuted on mostly small, young fish, which is projected to result in a truncated population age distribution.

A problem with using the eastern and western sub-units of the stock assessment is that the dividing line (the Mississippi River) used in the assessment does not fall precisely along a state boundary; the dividing line runs through Louisiana, which straddles both the eastern and western sub-units of the stock. Thus, there would be a difference in using the proportion of the red snapper stock suggested by the stock assessment that could be harvested from each sub-unit, and the proportion of aggregated states' landings coinciding with the selection of **Alternative 2**, which most closely approximates the boundary used in the stock assessment. This difference would be even greater if **Alternative 3** is selected as preferred, as the western region's boundary would also include Mississippi. Although the regional boundary under **Alternative 3** is further to the east than **Alternative 2** (and thus deviates further from the sub-units of the stock assessment), including Mississippi in the same region as Louisiana rectifies the issue that the eastern portion of Louisiana's state water boundary essentially obstructs Mississippi's access to federal waters from its state waters (Figure 2.1.1).

Alternative 4 would establish each Gulf State as its own region. This alternative would provide the most flexibility to individual states to determine their choice of management measures. Should a region fail to implement regional regulations consistent with the FMP, that region would harvest red snapper under the federal default management measures. Preferred Alternative 5 is most similar to Alternative 4, but would allow one or more regions to choose to form multistate regions with adjacent states. While this additional measure of flexibility could allow regions to pool their portions of the recreational quota, it would also require cooperation among states included in the region. For example, the region would need to agree on establishing a common set of management measures and close their entire region's waters once its portion of the recreational quota is reached. If one or more states are combined into a region (Alternatives 2, 3, and Preferred Alternative 5), then the outermost state boundaries would be used to define the geographic region (Figure 2.1.1). The Council could choose to establish new jurisdictional lines to define regions.

Generally, establishing more regions (such as under **Alternative 4** or **Preferred Alternative 5**) will mean a more subdivided ACL and entail more complicated management. For example, under current management, state and federal waters Gulf-wide are open during the federal red

snapper season. By allowing regions to set their own fishing seasons, one region could have an open fishing season while a neighboring region's fishing season is closed. Bag limits may also vary among regions. Therefore, enforcement will primarily be conducted dockside (regardless of the number of regions created). At-sea enforcement could be most complicated near the boundaries between regions with different management measures, as it could be difficult for enforcement agents to determine which region's jurisdiction applies to a recreational vessel. In these cases, enforcement agents would consider the most liberal of the regions' management measures in place at the time, to serve as guidelines for determining regulatory compliance. For example, if no region has a bag limit greater than four red snapper per person per day, then a vessel possessing red snapper in excess of this bag limit, regardless of where in federal waters it is fishing, could be in violation if stopped by enforcement agents.

There are also issues with using the Marine Recreational Information Program (MRIP) catch estimates for states where species are infrequently sampled. This may occur if a given species is rarely captured or if there are relatively few sample locations in a state. These situations increase proportional variability, resulting in additional scientific or management uncertainty that could affect the use of these data. These problems can be mitigated by increasing: 1) the intensity of sampling, 2) spatial extent of the sample frame (e.g., Gulf-wide variability is less than estimates for individual states), or 3) lengthening the time-period used to develop catch estimates (i.e., wave-length). In practice, each of these measures has impediments. For example, funding may be inadequate to support additional monitoring and temporal or spatial resolution may not match management needs. This should be considered when developing management frameworks.

In addition, Texas Parks and Wildlife Department (TPWD) uses its own survey for estimating catches, using a different methodology than MRIP. If regional management is established at the State level, this could create a question of whether the catch estimates for Texas are comparable to those of the other states. In 2013, the Louisiana Department of Wildlife and Fisheries (LDWF) began to use its own survey, the Louisiana Recreational Creel Survey (LA Creel), which ran alongside MRIP that year. In 2014, Louisiana withdrew from MRIP and landings estimates are only available from LA Creel; there are no 2014 MRIP landings estimates for Louisiana. Currently in 2015, LA Creel is running alongside MRIP in Louisiana in an attempt to validate and certify LA Creel.

2.4 Action 4 – Modify the Federal Minimum Size Limit

Alternative 1: No Action – Retain current federal regulations for the minimum size limit for recreational red snapper in federal waters of the Gulf. The federal minimum size limit is 16 inches TL.

Alternative 2: Reduce the federal minimum size limit to 14 inches TL.

Preferred Alternative 3: Reduce the federal minimum size limit to 15 inches TL.

Alternative 4: Increase the federal minimum size limit to 17 inches TL.

Alternative 5: Increase the federal minimum size limit to 18 inches TL.

Discussion:

The current minimum size limit for red snapper is 16 inches TL in the Gulf for recreational anglers (Alternative 1) and for all Gulf States except Texas. In state waters off Texas the recreational red snapper minimum size limit is 15 inches TL (Preferred Alternative 3). During early deliberations on regional management, the Council expressed their intent to establish limitations on the minimum size limits which may be adopted by the regions due to biological concerns associated with high-grading and discard mortality. Additionally, the Council felt varying the minimum size limit among regions may pose issues in terms of the stock assessment. Red snapper stock is still under a rebuilding plan and stock assessments must take into account minimum size limits for each sector and gear type. Ultimately, the Council decided that the regions would adhere to the federal minimum size limit and not adopt different regional size limits. The state or region will be able to establish bag and season management measures in Action 1; however, this action evaluates modifying the federal minimum size limit. For regional management to be effective in a region, that region must adhere to the federal minimum size limit. If regional management is inactive in a state or region, the federal minimum size limit would still apply to federal waters as part of the federal default regulations.

All of the minimum size limit alternatives considered in the action are estimated to be reproductively mature fish. All (100%) red snapper are estimated to be reproductively mature at age-2 (SEDAR 31 2013) at approximately 358 mm or 14 inches TL using the age-length equation in Szedlmayer and Shipp (1994). Due to age truncation in the red snapper stock smaller, younger fish are caught more quickly due to their disproportionately larger abundance when compared with older, larger fish. The smallest minimum size considered in this action is 14 inches TL (Alternative 2). Spawning potential ratio (SPR) is the spawning potential of the stock relative to the stock with no fishing mortality. Yield-per-recruit (YPR) addresses the fishing mortality rate that produces the maximum yield of the fishery. The YPR for red snapper is maximized at 15 inches TL (Preferred Alternative 3), based on the YPR and SPR analyses conducted by the Southeast Fisheries Science Center (SEFSC) in 2013 for the recreational sector, which used a discard mortality estimate of 10%. The largest minimum size limit considered in this action is 18 inches TL (Alternative 5) that resulted in the largest spawning potential for the stock. Due to the status of the red snapper stock and selectivity patterns, minimum size limits

from 13-18 inches TL are considered effective for managing red snapper because the YPR varies little between that size range. It should be noted that SPR increases for red snapper as the minimum size limit increases. If the management goal is to achieve a higher SPR, then increasing the minimum size to 17 inches TL (Alternative 4) or 18 inches TL (Alternative 5) would be beneficial. For example, it has been well documented that larger, older females produce more eggs and spawn more frequently throughout the season than younger, smaller red snapper (Collins et al. 2001; Porch et al. 2013: SEDAR 31-AW03). However, larger red snapper are targeted by recreational anglers, making release mortality a more important consideration than it might be for other snapper species. Thus, the SPR and YPR analyses reveal a trade-off between the two metrics. If the management goal is to maximize YPR, then **Preferred** Alternative 3 would be most appropriate; whereas, if the management goal is to maximize SPR, then Alternative 5 would most appropriate.

Discard mortality also plays an important role in considering minimum size limits in the Gulf. Recreational discard mortality of red snapper was estimated by eastern and western sub-region in SEDAR 7 (2005) and SEDAR 31 (2013). The assessments found a consistent, Gulf-wide trend among discard mortality data, where depth of capture and release mortality were positively correlated. The release mortality for recreationally caught red snapper was averaged by eastern and western Gulf and estimated at 21% (Table 6.5 in SEDAR 7 2005). The most recent stock assessment estimated discard mortality for the recreational sector at 10% for the eastern and western Gulf (SEDAR 31 2013), when circle hooks and venting tools were used. However, the data workshop report noted that release mortality was related less to region and more on a combination of factors including, but not limited to, depth, thermal stress, venting versus nonventing, and handling time.

Based on length-weight relationship of red snapper used during SEDAR 31 (2013), a 16-inch TL red snapper (Alternative 1) is estimated to weigh 1.8 lbs ww and an 18 inch TL (Alternative 5) red snapper is estimated to weigh 2.6 lbs ww (Figure 2.4.1). The average size of recreational red snapper landed in 2012 was 8 lbs ww and approximately 24 inches TL (SERO 2012b). The differences in the minimum size limits (Alternatives 2-5) and corresponding estimated landed weights range from 1.2 lbs ww at 14 inches TL and 2.6 lbs ww at 18 inches TL are expected to result in minimal differences in the rate at which fish are landed, as most recreational anglers are targeting larger "trophy" fish (Figure 2.4.1). Generally, lower minimum size limits result in the rapid harvest of higher numbers of smaller fish, thereby filling the quota more quickly. Higher minimum size limits typically result in the decelerated harvest of larger fish, thereby filling the quota more slowly and concurrently increasing the season length. Recently, the average landed weight of recreational red snapper has been estimated separately for the eastern and western Gulf due to differences in the data collection programs and by separate modes (i.e., headboats, charter vessels, and private anglers). In 2014, the average weight of landed red snapper in the eastern Gulf for private, charter vessel, and headboats were 7.5, 8.5, and 4.9 lb ww, respectively. The average weight of landed red snapper in the western Gulf for private, charter vessels, and headboats were 6.98, 10.0, and 5.4 lbs ww, respectively (SERO-LAPP-2015-04).

Amendment 39: Regional Management

 $^{^{7} \, \}underline{\text{http://gulfcouncil.org/docs/Presentations/Gulf\%20Red\%20Snapper\%20Size\%20Limit\%20Analysis\%20-} \\ \underline{\%20Presentation.pdf}$

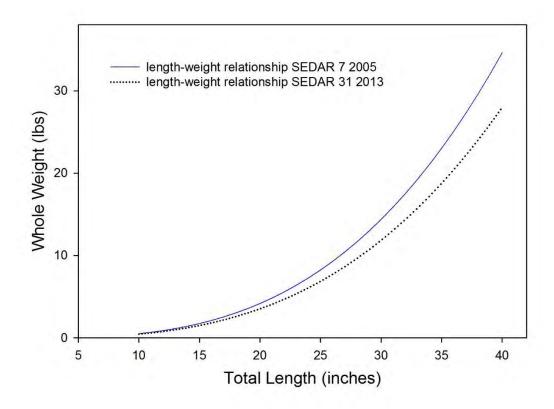


Figure 2.4.1. Red snapper length-weight relationship. Source: Conversion factors from SEDAR 7 (2005) and SEDAR 31 (2013).

2.5 Action 5 – Closures in Federal Waters of the Gulf

Alternative 1: No Action – Regions may not establish closed areas in federal waters adjacent to their region.

<u>Preferred Alternative 2</u>: A region may establish closed areas within federal waters adjacent to their region in which the recreational harvest of red snapper is prohibited.

Option 2a: Areas of the Gulf may be closed for up to six months of the year.

Option 2b: No more than 50% of the federal waters adjacent to a region may be closed

during the year.

Discussion:

Currently, each Gulf State has the authority to open and close its state waters to fishing, while the authority to open and close federal waters to fishing resides with NMFS. If regional management is implemented, the fixed recreational closed season for red snapper in federal waters would be removed and become part of the federal default regulations, applied in the event a region's delegation is inactive or its CEP is not approved. Removal of the fixed closed season would allow individual regions to establish their fishing season, during which anglers may harvest red snapper from the region's state waters and federal waters. To constrain landings to its portion of the recreational sector ACL, regions would establish the dates for the recreational harvest of red snapper based on its portion of the recreational ACT and enforcement would be carried out dockside. When a region closes its season, the region would prohibit further landings of red snapper in the region (i.e., close the season), but federal waters adjacent to the region could remain open, allowing anglers from other regions to fish for red snapper that they intend to land in during another region's open season. Thus under **Alternative 1**, it may be possible for federal waters to remain open year round to recreational red snapper fishing, and regions would control harvest by establishing when red snapper may be landed in the region.

A region may want to establish sub-regional fishing seasons for red snapper, such that the season is open in one part of the region while closed in another, and vice versa. A region would be able to do so under **Alternative 1**, provided the region's delegation or CEP is active. Establishing sub-regional fishing seasons is possible under **Alternative 1** because the region would specify where red snapper may be landed within the region, and where landings are prohibited; with active regional management, inconsistent regulations do not occur because the region's active delegation or approved CEP would authorize the region's regulations to apply to its anglers in both state and federal waters. As an example, Florida could propose different fishing seasons for the Panhandle and west Florida area, based on optimizing fishing opportunities for each sub-region based on different tourist seasons and times of rough weather. Federal waters adjacent to Florida would remain open during the respective closed season of each sub-region. Anglers fishing from a sub-region during the open season could fish in the state waters of the sub-region as well as adjacent federal waters, including federal waters adjacent to other regions. When a sub-region is closed to red snapper fishing, landings of red snapper would be prohibited in that sub-region. Thus, an angler fishing during the open season of the proposed Panhandle sub-

region could fish for red snapper anywhere in federal waters, provided that the angler lands the catch in the Panhandle sub-region.

Preferred Alternative 2 would allow a region to close areas within federal waters adjacent to its region. Because the States already have the authority to establish fishing closures and prohibit landings within their state waters, it is not necessary to close federal waters should a region establish sub-regional fishing seasons for red snapper. Thus, a region intending to close part(s) (**Preferred Alternative 2**) of the federal waters adjacent to its region may wish to do so to restrict the amount of red snapper harvested from federal waters, to allow a longer state water fishing season. Closing all or part of federal waters adjacent to a region would create inconsistent regulations between state and federal waters, raising enforcement concerns. These alternatives would not allow regions to establish marine protected areas within federal waters nor restrict commercial vessels from harvesting red snapper from these areas.

Closing areas of federal waters adjacent to a region (Preferred Alternative 2) could unintentionally allow, or prohibit, some harvest of red snapper to occur. These issues could be most problematic near state boundaries. For example, a region could propose to use this alternative to prohibit all recreational vessels from possessing red snapper from federal waters adjacent to the region (Figure 2.1.1) while allowing its state waters to remain open. The intent would be to provide a longer fishing season by constraining the harvest coming from part of the region's jurisdiction. To provide a hypothetical example, if Alabama closed federal waters adjacent to its state waters but allowed state waters to remain open, while Florida and Mississippi have both their state waters and portion of federal waters open (Figure 2.5.1), then vessels from Alabama could harvest red snapper from federal waters off Florida and Mississippi, and land in Alabama, provided they do not transit through Alabama's portion of federal waters. Although Alabama intended to extend its fishing season by constraining where harvest may occur in its own region (only in its state waters), the additional harvest from the federal waters off neighboring Mississippi or Florida could result in Alabama's regional ACL being caught faster. Conversely, vessels from Mississippi and Florida, where the red snapper season is open in both state and federal waters, would be prohibited from possessing red snapper from Alabama's portion of federal waters, even though those fish would only count against the regional ACL of the State where landed, i.e., Mississippi or Florida. Thus, this hypothetical use of the closed area alternative unintentionally allowed for greater landings by Alabama anglers and unintentionally restricted fishing opportunities for Mississippi and Florida's anglers.

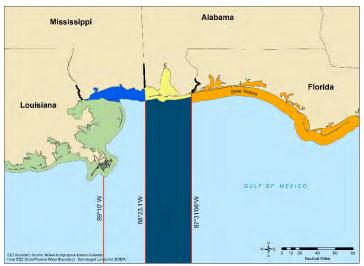


Figure 2.5.1. Visualization of the hypothetical example described for Preferred Alternative 2. The dark shaded area represents federal waters adjacent to Alabama's state waters (see Figure 2.1.1).

The options under **Preferred Alternative 2** would establish parameters for the potential areas of federal waters which may be closed. If no option is selected, the region could potentially close areas of federal waters year round, and the closed area could be the entire federal waters adjacent to the region's state waters. If **Option 2a** is selected, a region could establish closed areas within federal waters adjacent to its region for up to six months of the year. Selecting **Option 2b** would limit the extent of the area of federal waters that may be closed, to up to 50% of the federal waters adjacent to a region's state waters, but does not place restrictions on the number of areas which could be closed.

Should a region intend to use federal water closures as part of its regional management plan, such closures must be an approved part of the region's recreational management of red snapper, and may require additional review and analysis to ensure environmental compliance, potentially through an environmental assessment. To implement a closed area under a CEP, NMFS will likely need to do additional rule making.

2.6 Action 6 – Apportioning the Recreational ACL (Quota) among Regions

Alternative 1: No Action – Retain current federal regulations for allocating the recreational sector ACL between the private angling component and federal for-hire component for the years 2015-2017. Do not divide the recreational sector ACL among regions.

Alternative 2: Apportion the recreational sector ACL (or component ACLs) among the regions selected in Action 3 based on the average of historical landings for the years **1986-2013**.

Alternative 3: Apportion the recreational sector ACL (or component ACLs) among the regions selected in Action 3 based on the average of historical landings for the years **1996-2013**.

Alternative 4: Apportion the recreational sector ACL (or component ACLs) among the regions selected in Action 3 based on the average of historical landings for the years **2006-2013**.

<u>Preferred Alternative 5</u>: Apportion the recreational sector ACL (or component ACLs) among the regions selected in Action 3 based on 50% of average historical landings for the years 1986-2013 and 50% of average historical landings for the years 2006-2013.

<u>Preferred Alternative 6</u>: In calculating regional apportionments, exclude from the selected time series:

Preferred Option a: 2006 landings **Preferred Option b**: 2010 landings

Alternative 7: Apportion the recreational sector ACL into eastern and western regional ACLs (or component ACLs) divided approximately at the Mississippi River, based on regional biogeographical differences in the stock used in the stock assessments.

Alternative 8: Apportion the recreational sector ACL (or component ACLs) among the regions selected in Action 3 such that each region's allocation provides an equivalent number of fishing days.

Discussion:

The adoption of regional management for the recreational sector will require the recreational sector ACL (or component ACLs; see Action 2) to be apportioned, or allocated, among the selected regions to create regional ACLs. Allocation is an inherently controversial issue because a limited resource is divided among competing user groups, each of which benefits from receiving the largest portion possible. Allocation decisions should follow the Principles and Guidelines for Allocation adopted by the Council (Appendix E).

Alternative 1 (No Action) would continue to apportion the recreational sector ACL between the components established in Amendment 40 (GMFMC 2014) for the years 2015-2017 and would not apportion the recreational sector ACL among regions of the Gulf. Currently, there is no expressed state allocation; the proportion of the total recreational landings made up by each State varies from year to year, as shown in Table 2.6.1. These proportions are based on the Calibrated

MRIP landings. Actual landings are provided in Appendix F, and the report on the calibration of MRIP landings is provided in Appendix I.

Table 2.6.1. Percentage of annual recreational red snapper landings by state (1986-2014), based on whole weight (ww) of fish.

| Year | Alabama | Florida | Louisiana | Mississippi | Texas |
|------|---------|---------|-----------|-------------|-------|
| 1986 | 11.5% | 55.3% | 18.1% | 0.1% | 15.0% |
| 1987 | 18.5% | 43.7% | 13.5% | 2.6% | 21.7% |
| 1988 | 16.4% | 30.0% | 33.1% | 0.7% | 19.8% |
| 1989 | 18.5% | 12.3% | 24.1% | 11.7% | 33.3% |
| 1990 | 39.7% | 17.8% | 16.9% | 3.4% | 22.2% |
| 1991 | 30.1% | 15.1% | 33.2% | 6.2% | 15.5% |
| 1992 | 32.7% | 8.1% | 24.5% | 16.6% | 18.2% |
| 1993 | 29.3% | 17.5% | 22.7% | 12.7% | 17.9% |
| 1994 | 32.1% | 13.9% | 21.1% | 8.1% | 24.7% |
| 1995 | 31.9% | 10.3% | 28.3% | 2.9% | 26.6% |
| 1996 | 32.8% | 18.7% | 16.6% | 4.0% | 27.9% |
| 1997 | 39.1% | 14.8% | 16.8% | 9.8% | 19.5% |
| 1998 | 29.8% | 28.7% | 14.9% | 3.9% | 22.8% |
| 1999 | 39.7% | 28.6% | 15.8% | 4.1% | 11.8% |
| 2000 | 29.6% | 35.8% | 18.6% | 1.1% | 14.9% |
| 2001 | 42.3% | 39.9% | 6.0% | 2.1% | 9.7% |
| 2002 | 40.1% | 38.7% | 6.2% | 3.6% | 11.4% |
| 2003 | 37.9% | 36.3% | 8.9% | 6.0% | 10.9% |
| 2004 | 30.0% | 53.9% | 5.8% | 0.4% | 9.9% |
| 2005 | 29.1% | 48.0% | 10.4% | 0.1% | 12.5% |
| 2006 | 20.0% | 51.0% | 12.2% | 0.8% | 16.0% |
| 2007 | 19.5% | 56.7% | 15.6% | 0.1% | 8.0% |
| 2008 | 17.1% | 57.5% | 15.7% | 1.0% | 8.6% |
| 2009 | 21.6% | 47.0% | 18.8% | 0.8% | 11.8% |
| 2010 | 21.3% | 55.9% | 5.0% | 0.4% | 17.3% |
| 2011 | 53.6% | 29.3% | 8.9% | 1.0% | 7.2% |
| 2012 | 35.9% | 32.5% | 19.2% | 4.2% | 8.2% |
| 2013 | 45.8% | 39.1% | 5.6% | 4.4% | 5.1% |
| 2014 | 30.0% | 42.5% | 16.3% | 1.2% | 10.0% |

Source: Southeast Fisheries Science Center (SEFSC) annual catch limit dataset, including Calibrated MRIP, TPWD, LA Creel, and Southeast Region Headboat Survey (SRHS) landings. The Calibrated MRIP landings provided here were not used for management at the time (See Appendix I for the MRIP Calibration Workshop report). Alabama and the Florida Panhandle SRHS landings are initially reported to the same headboat fishing area. Landings have been assigned to each state based on the SRHS vessel landing records (May 2015). Actual landings are provided in the Appendix (Table F-1).

Alternatives 2-4 and Preferred Alternative 5 propose methods for apportioning the recreational ACL based on the average proportion of historical landings for different time series. Regardless of the alternative selected, in some years, each State's landings exceeds its average landings. This means that requiring the states to constrain their catches to a fixed percentage of the recreational sector ACL could restrict the fluctuations in annual landings that occur in some years.

Alternatives 2-5 present four ways to apportion the recreational sector ACL using averages of historical landings for varying time series (Table 2.6.2). **Preferred Alternative 6** provides options for excluding particular years from the historical landings averages, due to impacts that affected recreational fishing opportunities during or immediately preceding those years. The two years provided were discussed at a joint meeting of the five Gulf States' respective heads of their natural resource departments. Hurricane Katrina struck late in the fishing season of 2005, therefore landings from 2006 are proposed for exclusion. The Deepwater Horizon MC252 oil spill began in April 2010, prior to the opening of the 2010 recreational red snapper season (see Figure 3.3.1 for the extent of the fishing closures). **Preferred Option a** would exclude landings from 2006 from each time series (Table 2.6.3), and **Preferred Option b** would exclude landings from 2010 from the time series (Table 2.6.4). Resulting averages for landings if both options are selected are provided in Table 2.6.5. The exclusion of landings from 2006 (Preferred Option a), 2010 (Preferred Option b), or both (Preferred Options a and b) could be selected alongside any one of Alternatives 2-5. In Amendment 40, the Council chose to exclude landings from 2010 (**Preferred Option b**) from the allocation formula, but did not exclude landings from 2006 (Preferred Option a).

Table 2.6.2. Resulting proportions of the recreational ACL that could be apportioned to each state based on four options (Alternatives 2-5) of historical landings time series.

| Alternative | Years | Alabama | Florida | Louisiana | Mississippi | Texas |
|-------------|---|---------|---------|-----------|-------------|-------|
| 2 | 1986-2013 | 30.2% | 33.4% | 16.3% | 4.0% | 16.0% |
| 3 | 1996-2013 | 32.5% | 39.6% | 12.3% | 2.6% | 13.0% |
| 4 | 2006-2013 | 29.4% | 46.1% | 12.7% | 1.6% | 10.3% |
| 5 | 50% (1986- 2013), 50% (2006-2013) | 29.8% | 39.8% | 14.5% | 2.8% | 13.1% |

Note: Actual landings on which Tables 2.6.2 - 2.6.5 are based can be found in the Appendix (Table F-1).

Table 2.6.3. Resulting proportions of the recreational ACL that could be apportioned to each state based on four options (Alternatives 2-5) of historical landings time series, excluding landings from 2006.

| Alternatives 2 -5 | | | | | | |
|-------------------|-----------|---------|---------|-----------|-------------|-------|
| with Pref. Alt. 6 | | | | | | |
| Pref. Option a | Years | Alabama | Florida | Louisiana | Mississippi | Texas |
| Alternative 2 | 1986-2013 | 30.6% | 32.8% | 16.5% | 4.1% | 16.0% |
| Alternative 3 | 1996-2013 | 33.3% | 38.9% | 12.3% | 2.8% | 12.8% |
| Alternative 4 | 2006-2013 | 30.7% | 45.4% | 12.7% | 1.7% | 9.5% |
| Alternative 5 | 50%:50% | 30.6% | 39.1% | 14.6% | 2.9% | 12.7% |

Table 2.6.4. Resulting proportions of the recreational ACL that could be apportioned to each state based on four options (Alternatives 2-5) of historical landings time series, excluding landings from 2010.

| Alternatives 2-5 with Pref Alt. 6 Pref. Option b | Years | Alabama | Florida | Louisiana | Mississippi | Texas |
|--|-----------|---------|---------|-----------|-------------|-------|
| Alternative 2 | 1986-2013 | 30.5% | 32.6% | 16.7% | 4.2% | 16.0% |
| Alternative 3 | 1996-2013 | 33.2% | 38.6% | 12.7% | 2.8% | 12.7% |
| Alternative 4 | 2006-2013 | 30.5% | 44.7% | 13.7% | 1.7% | 9.3% |
| Alternative 5 | 50%:50% | 30.5% | 38.7% | 15.2% | 2.9% | 12.6% |

Table 2.6.5. Resulting proportions of the recreational ACL that could be apportioned to each state based on four options (Alternatives 2-5) of historical landings time series, excluding landings from 2006 and 2010.

| idiidiiigs iroiii 2000 diid | andings from 2000 and 2010. | | | | | | | |
|-----------------------------|-----------------------------|---------|---------|-----------|-------------|-------|--|--|
| Alternatives 2-5 | | | | | | | | |
| with Pref. Alt. 6 | | | | | | | | |
| Pref. Options | | | | | | | | |
| a & b | Years | Alabama | Florida | Louisiana | Mississippi | Texas | | |
| Alternative 2 | 1986-2013 | 31.0% | 31.9% | 16.9% | 4.3% | 16.0% | | |
| Alternative 3 | 1996-2013 | 34.0% | 37.8% | 12.7% | 2.9% | 12.5% | | |
| Alternative 4 | 2006-2013 | 32.3% | 43.7% | 14.0% | 1.9% | 8.1% | | |
| Pref. Alternative 5 | 50%:50% | 31.6% | 37.8% | 15.4% | 3.1% | 12.1% | | |

Table 2.6.6 provides estimates for a range of potential season lengths for managing to the ACT, based on the allocations provided by **Alternatives 2-6** (Table 2.6.5). The methodology for deriving the estimates is provided below the table. The catch rates are subject to high levels of uncertainty, especially for Mississippi, and should be viewed with caution.

Table 2.6.6. Projected range for length of regional recreational red snapper seasons (min-max days) as managed towards the ACT, based on allocations provided in Table 2.6.5. All catch rates

are subject to high levels of uncertainty, especially Mississippi.

| Alternatives 2-5 | | | | | |
|--|---------|---------|-----------|-------------|-------|
| with Pref. Alt. 6 Pref. Options a & b | Alabama | Florida | Louisiana | Mississippi | Texas |
| Alternative 2 | 10-16 | 16-16 | 183-183 | 50-50 | 73-73 |
| Alternative 3 | 12-19 | 18-18 | 123-123 | 37-38 | 57-57 |
| Alternative 4 | 14-21 | 17-17 | 80-80 | 41-42 | 37-37 |
| Pref. Alternative 5 | 12-19 | 16-17 | 132-132 | 46-46 | 55-55 |

Note: Range of projections based on scenarios A-C from SERO-LAPP-2015-04 (Appendix J): 1) Constant catch rates from Wave 3 2014 for charter boat with increasing average weights from regressions on 2007-2014 data, constant catch rates and average weights from 2014 June 1-9 data for private boats, and constant catch rates and average weights from June 2014 from headboats; 2) Constant catch rates and average weights from Wave 3 2014 for private and charter, constant catch rates and average weights from June 2014 from headboat; and 3) constant catch rates and average weights from June 1-9, 2014 for private and charter boats and constant catch rates and average weights from June 2014 for headboat.

Alternative 7 considers apportioning the recreational sector ACL based on the projected yields for the acceptable biological catch (ABC) for the eastern and western Gulf, as derived from the updated projections from the 2009 assessment (Linton 2012a), and may be selected as preferred if Alternatives 2 or 3 are selected as preferred in Action 3. The resulting apportionments of the ABC from that assessment would be 48.5% for the eastern and 51.5% for the western Gulf (Linton 2012a).

As discussed in Action 3, all the alternatives for creating regions fall along State boundaries. Although the eastern and western regions proposed under Action 3's Alternative 2 most closely approximate the eastern and western components used in the stock assessment, they do not overlap exactly. There would be a difference in using the proportion of red snapper suggested by the stock assessment that could be harvested from each sub-unit, and the proportion of aggregated states' landings coinciding with the selection of Action 2's Alternative 2.

Nevertheless, **Alternative 7** would provide a biologically based apportionment for regional management. Action 2's Alternative 3 would also divide the Gulf into eastern and western regions, but its regional boundary, between Mississippi and Alabama, deviates further from the eastern and western components of the stock assessment than Action 2's Alternative 2. The projected regional recreational red snapper seasons resulting from **Alternative 7** would be 9-12 days in the eastern region and 93 days in the western region. As stated for Table 2.6.6, these estimates are subject to high levels of uncertainty.

It is possible that one or more states may opt out and not participate in regional management. If only one state opts out, the remaining four states would still receive their portion of the ACL, as specified in the selected preferred alternative. This means that a single non-participating state's landings would be restricted to the remaining balance of the recreational ACL (or component ACL), equivalent to the portion of the ACL it would receive if participating in regional

management. Should more than one state choose to opt out, the participating states would still receive their respective portions of the recreational ACL. The regional ACL which would have been distributed to each non-participating state would be pooled and NMFS would estimate the length of the fishing season based on the aggregate amount of quota. Those states would then fish under the federal default regulations and a shared federal fishing season.

Alternative 8 would apport on the recreational sector ACL (or component ACLs) among regions such that the initial allocation provides an equivalent number of fishing days for each region, based on estimates for the 2015 fishing season. Assuming that all regions are participating in regional management, the expected number of initial days would be within the range of 18 to 22 days when managing towards the ACT. To calculate regional allocations such that an equivalent number of fishing days results for each region, three scenarios were analyzed. (This analysis was completed before Alabama announced its July 2015 state water season.) The first scenario is based on projected 2015 average fish weights and 2014 catch rates for-hire vessels, and 2014 catch rates and average fish weights for landings made from private angling vessels and headboats. The second scenario is based on the observed catch rates and average fish weights for all sectors and components using 2014 landings from Wave 3. The third scenario is based on the observed catch rates and average fish weights for all sectors and components during the June 1-9, 2014 federal red snapper fishing season. These projection methodologies are discussed in greater detail in SERO-LAPP-2015-04. Each scenario produces a slightly different allocation, as each scenario is based on different information, including landings by mode and time series. Thus, a range of potential allocations derived from the three scenarios is provided in Table 2.6.7. Under projected 2015 catch rates, eastern Gulf States would require more allocation and western Gulf States would require less allocation than currently provided under **Preferred Alternative 5**. This is primarily due to the rapid growth of eastern Gulf catch rates in recent years.

Table 2.6.7. Resulting proportions of the recreational sector ACL that could be apportioned to each state such that each region's allocation provides an equivalent number of fishing days (Alternative 8; 18 - 22 days) at the time of apportionment.

| (111ternative 0, 10 | 22 days) at the time of apportionment. | | | | | | | |
|---|--|------------|-----------|-------------|----------|--|--|--|
| State | Alabama | Florida | Louisiana | Mississippi | Texas | | | |
| Allocation range | 34.6-41.7% | 45.3-54.9% | 6.1-7.6% | 0.4-0.5% | 4.0-4.9% | | | |
| Projected range of season length | | 18-22 days | | | | | | |
| Difference from Table 2.6.5 Alt 5 | 3.0-10.1% | 7.5-17.1% | -9.37.8% | -2.72.6% | -8.17.2% | | | |

Source: SERO-LAPP-2015-04, N. Farmer, pers. comm.

Table 2.6.8. Projected range of 2015 regional red snapper season lengths (min-max days) for Alternatives 2-8, based on management towards regional ACTs.

| | Florida | Alabama | Mississippi | Louisiana | Texas |
|--------------------------------------|---------|---------|-------------|-----------|-------|
| Alternative 2 | 10-16 | 16-16 | 183-183 | 50-50 | 73-73 |
| Alternative 3 | 12-19 | 18-18 | 123-123 | 37-38 | 57-57 |
| Alternative 4 | 14-21 | 17-17 | 80-80 | 41-42 | 37-37 |
| Pref. Alternative 5 | 12-19 | 16-17 | 132-132 | 46-46 | 55-55 |
| Alternative 7 + Action 3, Alt. 2 | 9-12 | | | 93 | |
| Alternative 7 + Actions 3, Alt. 3 | 9-12 | | 93 | | |
| Alternative 8 | 18-22 | 18-22 | 18-22 | 18-22 | 18-22 |

Source: SERO-LAPP-2015-04, N. Farmer, pers. comm.

Note: States are arranged in east to west geographical order. All catch rates are subject to high levels of uncertainty, especially Mississippi. Landings from 2006 and 2010 (Preferred Alternative 6, Options a and b) have been removed for calculating Alternatives 2-5.

An additional issue may arise for individual regions to monitor and constrain catches to their apportioned regional ACL. NMFS regularly issues exempted fishing permits (EFPs) for activities that would otherwise be prohibited. Fish harvested under an EFP may be exempt from specific regulations such as bag limits, size limits, and fishing seasons. Because the fish landed under an EFP are normally accounted for in the stock assessment process, before any quotas or allocations are established, these fish are not deducted from the quota. However, there are instances where NMFS may determine that an EFP is specific to a fishing quota or allocation, and may require the regions to account for those fish during a fishing season. If a quantity of fish under an EFP is required to be monitored and accounted for by regions under regional management, the region will be responsible for accounting for these landings, along with their other monitoring to assure they do not exceed their portion of the ACL.

2.7 Action 7 – Post-Season Accountability Measures (AMs)

Alternative 1: No Action – Retain the current post-season AMs for managing overages of the recreational sector ACL in federal waters of the Gulf. While red snapper are overfished (based on the most recent Status of U.S. Fisheries Report to Congress), if the recreational sector ACL (quota) is exceeded, reduce the **recreational sector** ACL in the following year by the full amount of the overage, unless the best scientific information available determines that a greater, lesser, or no overage adjustment is necessary. The component ACTs for the years 2015-2017 will be adjusted to reflect the previously established percent buffer.

<u>Preferred Alternative 2</u>: While red snapper are overfished (based on the most recent Status of U.S. Fisheries Report to Congress), if the combined recreational landings exceed the recreational sector ACL, then reduce in the following year the <u>regional ACL</u> of any region that exceeded its regional ACL by the amount of the region's ACL overage in the prior fishing year. The recreational ACTs will be adjusted to reflect the previously established percent buffer.

Alternative 3: While red snapper are overfished (based on the most recent Status of U.S. Fisheries Report to Congress), if the combined recreational landings exceed the recreational sector ACL, then reduce in the following year the **component ACL** (federal for-hire and/or private angling) by the full amount of the respective component's overage. The regional ACLs will be adjusted to reflect the regional allocations and the recreational ACTs will be adjusted to reflect the previously established percent buffer.

Alternative 4: While red snapper are overfished (based on the most recent Status of U.S. Fisheries Report to Congress), if the combined recreational landings exceed the recreational sector ACL, in the following year: reduce the **component ACL**s by the full amount of a component's ACL overage; for the private angling component's ACL (or the federal for-hire component ACL, if federal for-hire regional ACLs are established), reduce the **regional ACL** of any region that exceeded its regional ACL by the amount of the region's ACL overage in the prior fishing year. The recreational ACTs will be adjusted to reflect the previously established percent buffer.

Note: For **Alternatives 2-4**, the overage adjustment would be applied, as specified in the alternative, <u>unless the best scientific information available determines that a greater, lesser, or no overage adjustment is necessary</u>. Also, if the total recreational landings from all regions and components, if applicable, do not exceed the Gulf-wide recreational sector ACL in that year, neither the recreational sector ACL nor the regional and/or component ACLs would be reduced to account for a regional or component ACL overage.

Discussion:

Section 407(d) of the Magnuson-Stevens Act requires that the Council ensure the FMP (and its implementing regulations) have conservation and management measures that establish a separate sector ACL for recreational fishing (private and for-hire vessels) and prohibit the possession of red snapper caught for the remainder of the fishing year once that sector ACL is reached. The National Standard 1 guidelines identify two types of AMs: in-season and post-season. These

AMs are not mutually exclusive and should be used together where appropriate. In 2014, the Council adopted an in-season AM to create an ACT determined by deducting 20% from the ACL. To correct or mitigate any overages during a specific fishing year (50 CFR 600.310(g)), the Council also adopted a post-season AM which would reduce the recreational sector ACL in the year following an overage by the full amount of the overage (**Alternative 1**) unless the best scientific information available determines that a greater, lesser, or no overage adjustment is necessary.

Alternative 1 (No Action), would continue to apply the recently adopted post-season AM Gulfwide. Although the possibility of triggering an overage adjustment would encourage regions to constrain harvest to the region's ACL, the Gulf-wide approach may be perceived as inequitable across regions. For example, if a particular region greatly exceeded their regional ACL, then the necessary overage adjustment may restrict the length of the following year's fishing season both in the region with the overage and the other regions which did not exceed their regional ACL. If this occurs, this may reduce the flexibility provided to the regions under regional management.

Preferred Alternative 2 would apply the post-season AM only to a region or regions which exceeded its portion of the recreational sector ACL. With the apportionment of regional ACLs, Preferred Alternative 2 would prevent the overage adjustment from affecting regions that do not exceed their regional ACL. However, if a region's overage is greater than the following year's regional ACL, then the region may not have a recreational red snapper season in the following year. The overage adjustments would need to be taken into account when regions develop their management strategy, including the length of the fishing season for the following year. Preferred Alternative 2 would encourage a region to constrain harvest to the regional ACL to ensure that the overage adjustment is not applied to the recreational season for the following year. Regardless of a region exceeding its ACL, an overage adjustment would only need to be applied if the Gulf-wide recreational sector ACL was exceeded.

Alternative 3 would apply the post-season AM to the component (for-hire or private angling) that exceeds its component ACL in the prior fishing year. In the event the Gulf-wide recreational sector ACL is exceeded, the component that exceeded its portion of the ACL would have its component ACL reduced in the following year by the amount of the overage. This alternative would prevent the overage adjustment from affecting a component of the recreational sector that does not exceed its component ACL.

Alternative 4 combines the overage adjustments of the region (Preferred Alternative 2) and component (Alternative 3) that exceeds its respective portion of the ACL, by applying the post-season AM to both a region and component that has exceeded its portion of the recreational ACL in the previous year. Although the possibility of triggering an overage adjustment would encourage the regions to constrain harvest to the respective ACLs, a region and sector-wide approach may be perceived as inequitable by the different regions and components should a region or component remain within its portion of the ACL, yet have its portion of the ACL reduced in the following year due to overages by other regions or component.

CHAPTER 3. AFFECTED ENVIRONMENT

The actions considered in this environmental impact statement (EIS) would affect recreational fishing for red snapper in federal and state waters of the Gulf of Mexico (Gulf). Descriptions of the physical, biological, economic, social, and administrative environments were completed in the EIS for Reef Fish Amendment 27/Shrimp Amendment 14 (GMFMC 2007), the Generic Essential Fish Habitat (EFH) Amendment (GMFMC 2004a), and the Generic Annual Catch Limits/Accountability Measures (ACL/AM) Amendment (GMFMC 2011b). Below, information on each of these environments is summarized or updated, as appropriate.

3.1 Description of the Fishery: Red Snapper

A description of the fishery and affected environment relative to red snapper was last fully discussed in joint Reef Fish Amendment 27/Shrimp Amendment 14 (GMFMC 2007). This section updates the previous description to include additional information since publication of that EIS.

General Features

Commercial harvest of red snapper from the Gulf began in the mid-1800s (Shipp 2001). In the 1930s, party boats built exclusively for recreational fishing began to appear (Chester 2001). Since 2007, the commercial sector has operated under an individual fishing quota (IFQ) program. In 2011, 362 vessels participated in the IFQ program (NMFS 2012a). The recreational sector operates in three modes, charter boats, headboats, and private vessels. In 2012, private vessels accounted for 70.1% of recreational red snapper landings, followed by charter boats (20.3%) and headboats (9.6%). On a state-by-state basis, Alabama accounted for the most landings (36.1%), followed by Florida (32.3%), Louisiana (19.2%), Texas (8.2%), and Mississippi (4.2%) (Table 3.1.1).

Table 3.1.1. Recreational red snapper landings in 2012 by state and mode.

| State | Charter | Headboat | Private | All Modes | % by State |
|-----------|-----------|----------|-----------|-----------|------------|
| FL (west) | 806,118 | 205,830 | 1,420,620 | 2,432,569 | 32.3% |
| AL | 445,816 | 71,482 | 2,197,377 | 2,714,675 | 36.1% |
| MS | 1,406 | 5,894 | 306,854 | 314,154 | 4.2% |
| LA | 236,145 | 21,199 | 1,188,763 | 1,446,106 | 19.2% |
| TX | 39,128 | 419,671 | 157,937 | 616,736 | 8.2% |
| Total | 1,528,613 | 724,077 | 5,271,550 | 7,524,239 | |
| % by Mode | 20.3% | 9.6% | 70.1% | | 100% |

Source: NMFS 2014

The red snapper stock has been found to be in decline or overfished in every stock assessment conducted, beginning with the first assessment in 1986 (Parrack and McClellan 1986). However, following the SEDAR 31 benchmark assessment (SEDAR 31 2013), the Scientific and Statistical Committee (SSC) concluded that, as of 2011, overfishing was no longer occurring (GMFMC 2013c). Based on an update assessment presented to the SSC in January 2015 (GMFMC 2015a) and landings data through 2014, the determination that overfishing is not occurring has continued through 2014. Implemented in 1990, Amendment 1 (GMFMC 1989) established the first red snapper rebuilding plan. From 1990 through 2009, red snapper harvest was managed through the setting of an annual total allowable catch (TAC), which has been divided into allocations of 51% commercial, and 49% recreational. Beginning in 2010, TAC was phased out in favor of an ACL. The red snapper rebuilding plan formally adopted the use of the term ACL in Amendment 40 (GMFMC 2014). Until that time, by allocating the acceptable biological catch (ABC) between the commercial and recreational sectors, and then setting quotas for each sector that do not exceed those allocations, the terminology and approaches used in the red snapper rebuilding plan were consistent with the use of ACLs, and optionally annual catch targets (ACTs) as discussed in the National Standard 1 guidelines. Such alternative terminology is allowed under the guidelines.

Also in 1990, Amendment 1 established a commercial red snapper quota of 2.65 million pounds (mp) whole weight (ww). There was no explicit recreational allocation specified, only a bag limit of 7 fish and a minimum size limit of 13 inches total length (TL). Based on the 51:49 commercial to recreational sector allocation, the commercial quota implied a TAC of about 6.0 mp in 1990, followed by explicit TACs of 4.0 mp in 1991 and 1992, 6.0 mp in 1993 through 1995, and 9.12 mp from 1996 through 2006. The TAC was reduced to 6.5 mp in 2007 and 5.0 mp in 2008 and 2009.

In 2010, the ABC was increased to 6.945 mp. In 2011, it was initially raised to 7.185 mp, and then increased in August by another 345,000 lbs (7.530 mp total) which was allocated to the recreational sector. In 2012 the ABC was raised to 8.080 mp. A scheduled increase in 2013 to 8.690 mp was cancelled due to an overharvest in 2012 by the recreational sector. After an analysis of the impacts of the overharvest on the red snapper rebuilding plan, the 2013 ABC was increased to 8.460 mp. In July 2013, the Council reviewed a new benchmark assessment (SEDAR 31 2013) which showed that the red snapper stock was rebuilding faster than projected, partly due to strong recruitment in some recent years. Combined with a new method for calculating the ABC, the Scientific and Statistical Committee (SSC) increased the ABC for 2013 to 13.5 mp, but warned that the catch levels would have to be reduced in future years if recruitment returned to average levels. After incorporating a buffer to reduce the possibility of having to later reduce the quota, the Gulf of Mexico Fishery Management Council (Council) further increased the 2013 commercial and recreational quotas to a combined 11.0 mp (5.61 mp and 5.39 mp respectively) (GMFMC 2013b). This increase occurred too late to extend the June recreational season, so the Council requested that the National Marine Fisheries Service (NMFS) reopen the recreational season on October 1 for whatever number of days would be needed to harvest the additional quota. NMFS estimated that the additional recreational quota would take 14 days to be caught, and therefore announced a supplemental season of October 1 through 14.

Table 3.1.2. Red snapper landings by sector, 1986-2014. Landings are in mp ww. Commercial quotas began in 1990. Recreational allocations began in 1991 and recreational quotas began in 1997. Summing the recreational allocation/quota and the commercial quota yields the total allowable catch (TAC) for the years 1991-2009 and the acceptable biological catch (ABC) for 2010-2014.

| | Recreationa | l | Commercia | l | Total | |
|------|----------------------|-----------------|-----------|-----------------|--------|-----------------|
| Year | Allocation/ Quota | Actual landings | Quota | Actual landings | Quota | Actual landings |
| 1986 | na | 3.491 | na | 3.700 | na | 6.470 |
| 1987 | na | 2.090 | na | 3.069 | na | 4.883 |
| 1988 | na | 3.139 | na | 3.960 | na | 6.528 |
| 1989 | na | 2.940 | na | 3.098 | na | 5.754 |
| 1990 | na | 1.625 | 3.1 | 2.650 | na | 4.264 |
| 1991 | 1.96 | 2.917 | 2.04 | 2.213 | 4.0 | 5.130 |
| 1992 | 1.96 | 4.618 | 2.04 | 3.106 | 4.0 | 7.724 |
| 1993 | 2.94 | 7.161 | 3.06 | 3.374 | 6.0 | 10.535 |
| 1994 | 2.94 | 6.076 | 3.06 | 3.222 | 6.0 | 9.298 |
| 1995 | 2.94 | 5.464 | 3.06 | 2.934 | 6.0 | 8.398 |
| 1996 | 4.47 | 5.339 | 4.65 | 4.313 | 9.12 | 9.652 |
| 1997 | 4.47 | 6.804 | 4.65 | 4.810 | 9.12 | 11.614 |
| 1998 | 4.47 | 4.854 | 4.65 | 4.680 | 9.12 | 9.534 |
| 1999 | 4.47 | 4.972 | 4.65 | 4.876 | 9.12 | 9.848 |
| 2000 | 4.47 | 4.750 | 4.65 | 4.837 | 9.12 | 9.587 |
| 2001 | 4.47 | 5.252 | 4.65 | 4.625 | 9.12 | 9.877 |
| 2002 | 4.47 | 6.535 | 4.65 | 4.779 | 9.12 | 11.314 |
| 2003 | 4.47 | 6.105 | 4.65 | 4.409 | 9.12 | 10.514 |
| 2004 | 4.47 | 6.460 | 4.65 | 4.651 | 9.12 | 11.111 |
| 2005 | 4.47 | 4.676 | 4.65 | 4.096 | 9.12 | 8.772 |
| 2006 | 4.47 | 4.131 | 4.65 | 4.649 | 9.12 | 8.780 |
| 2007 | 3.185 | 5.809 | 3.315 | 3.153 | 6.5 | 8.962 |
| 2008 | 2.45 | 4.056 | 2.55 | 2.461 | 5.0 | 6.517 |
| 2009 | 2.45 | 5.597 | 2.55 | 2.461 | 5.0 | 8.058 |
| 2010 | 3.403 | 2.651 | 3.542 | 3.362 | 6.945 | 6.013 |
| 2011 | 3.866 | 6.734 | 3.664 | 3.562 | 7.53 | 10.296 |
| 2012 | 3.959 | 7.524 | 4.121 | 4.000 | 8.08 | 11.524 |
| 2013 | 5.390 | 9.659 | 5.610 | 5.399 | 11.00 | 15.038 |
| 2014 | 5.390 | 3.867 | 5.054 | 5.016 | 10.444 | 8.883 |

Sources: For recreational landings, Southeast Fisheries Science Center (SEFSC) including landings from the Calibrated Marine Recreational Information Program (MRIP), LA Creel Survey, Texas Parks and Wildlife Department (TPWD), and the Southeast Region Headboat Survey (SRHS) (December 2014). The Calibrated MRIP landings provided here were not used for management at the time (See Appendix I for the MRIP Calibration Workshop report). For commercial landings, Southeast Data Assessment and Review (SEDAR) 31 Data Workshop Report (1990-2011), commercial quotas/catch allowances report from NMFS/Southeast Regional Office (SERO) IFQ landings website (2012 commercial): http://sero.nmfs.noaa.gov/sf/ifq/CommercialQuotasCatchAllowanceTable.pdf.

Commercial quotas/landings in gutted weight were multiplied by 1.11 to convert to ww. Data for 2014 provided by N. Farmer, pers. comm.

Both the commercial and recreational sectors have had numerous allocation overruns. Table 3.1.2 shows a comparison of quotas and actual harvests from 1990 through 2013. The recreational sector has had allocation overruns in 21 out of 23 years in which an allocation was specified, while the commercial sector has had overruns in 10 of 23 years. The commercial sector has not had overruns since 2005.

Recreational Red Snapper Sector

Red snapper are an important component of the recreational sector's harvest of reef fish in the Gulf. Recreational red snapper fishing includes charter boats, headboats (or party boats), and private anglers fishing primarily from private or rental boats. As with the commercial fishery, red snapper are primarily caught with hook-and-line gear in association with bottom structures. Recreational red snapper harvest allocations since 1991 have been set at 49% of the TAC, or 1.96 mp in 1991 and 1992, 2.94 mp for 1993 through 1995, and 4.47 mp from 1996 through 2006. In 2007, the recreational quota was reduced to 3.185 mp. It was reduced again to 2.45 mp in 2008 and 2009. Since 2010, the recreational quota has been increased each year: 3.403 mp in 2010, 3.866 mp in 2011, 3.959 mp in 2012, and 5.390 mp in 2013 (Table 3.1.3).

Before 1984, there were no restrictions on the recreational harvest of red snapper. In November 1984, a 12-inch fork length (FL) minimum size limit was implemented, but with an allowance for five undersized fish per person. In 1990, the undersized allowance was eliminated, the minimum size limit changed to 13 inches total length (TL) (approximately equal to 12 inches FL), and the recreational sector was managed through bag and size limits with a year-round open season. In 1997, the recreational red snapper allocation was converted into a quota with accompanying quota closure should the sector exceed its quota. Recreational quota closures occurred in 1997, 1998, and 1999, becoming progressively shorter each year even though the quota remained a constant 4.47 mp.

A fixed recreational season of April 21 through October 31 (194 days) was established for 2000 through 2007. However, NMFS returned to variable length seasons beginning in 2008. Under this management approach, due to a lag in the reporting of recreational catches, catch rates over the course of the season were projected in advance based on past trends and changes in the average size of a recreationally harvested red snapper. The recreational season opened each year on June 1 and closed on the date when the quota was projected to be reached. In 2008, the season length was reduced from 194 days to 65 days in conjunction with a reduction in quota to 2.45 mp. The season length then increased to 75 days in 2009. In 2010, the recreational red snapper season was originally projected to be 53 days. However, due to reduced effort and large emergency area closures resulting from the Deepwater Horizon MC252 oil spill, catches were below projections, and a one-time supplemental season of weekend only openings (Friday, Saturday, and Sunday) was established from October 1 through November 22. This added 24 fishing days to the 2010 season for a total of 77 days. In 2011, the season was reduced to 48 days despite an increase in the quota, due to an increase in the average size of a recreationally harvested fish. In 2012 the season was initially scheduled to be 40 days, but was extended to 46 days to compensate for the loss of fishing days due to storms (Table 3.1.3).

At the request of the Council at its February 2013 meeting, NMFS developed an emergency rule to adjust seasons off each Gulf State based on the extent to which their state-water seasons and bag limits were consistent with federal regulations. This was done to compensate for the additional harvest that would occur in state waters as a result of inconsistent regulations. A legal challenge was made to the emergency rule and it was subsequently set aside by the U.S. District Court. As a result, the federal recreational red snapper season continued to be the same in federal waters off all five Gulf States. Initially, NMFS set a 28-day season beginning on June 1 for the recreational sector. However, in September 2013, NMFS announced an increase in the TAC which added 1.245 mp to the recreational quota, and a supplemental 14-day season beginning October 1. This resulted in a total of 42 recreational fishing days.

In 2014, NMFS initially announced a 40-day recreational season. However, in March 2014, as a result of a legal challenge, the U.S. District Court found that there was not an adequate system of accountability measures in place to prevent the recreational red snapper sector from exceeding its quota. To comply with the court decision, the Council approved the setting of a 20% buffer for the recreational sector catch. Also in 2014, a 2-year project was initiated under an exempted fishing permit (EFP) to evaluate the ability of a collaborative of headboats to self-regulate themselves. A portion of the red snapper recreational quota (256,487 lbs) was allocated to the headboat collaborative. In addition, several States extended their season for recreational red snapper harvest in state waters. The projected increase in state water caught red snapper reduced the amount of quota available to be caught in federal waters. As a result, the 2014 red snapper season in federal waters was shortened to 9 days (Table 3.1.3). The headboat collaborative was allowed to continue fishing under the EFP, and headboat collaborative trips continued throughout the year, although the number of trips dropped off markedly after August⁸.

In 2015, Amendment 40 separated the recreational sector into a federal for-hire component and a private angling component, with the recreational sector ACL split between the two components. The headboat collaborative EFP's year-2 allocation of 215,027 lbs was deducted from the federal for-hire component's quota. Some States further increased their state water recreational seasons, which further reduced the amount of quota available to be caught in federal waters by the private angling component. Federally permitted vessels were unaffected by the expanded state seasons since they are prohibited from fishing in state waters when the federal season is closed. This resulted in a federal season of 44 days for the federally permitted for-hire component, and 10 days for the private angling component.

During the six years when the recreational harvest was an allocation, not a quota (1991 – 1996), actual recreational harvests in pounds of red snapper exceeded the allocation every year. During the period when the recreational harvest was managed as a quota (1997 – 2013), actual recreational harvest in pounds of red snapper exceeded the quota in 15 out of 17 years, including 5 of the last 6 years (Table 3.1.3). Historical recreational landings estimates have recently been revised to reflect changes in methodology under the Marine Recreational Information Program (MRIP).

⁸ Presentation from NMFS at the March 2015 Council meeting on a review of year 1 of the headboat collaborative EFP. Available on the Gulf Council website's briefing book archives for the March 2015 meeting under Reef Fish Committee.

Table 3.1.3. Red snapper recreational landings, allocation/quota, and days red snapper season was open in federal waters (1986-2014). Landings are in mp ww. Recreational allocations began in 1991, and became quotas in 1997.

| Year | Allocation/ | Actual | Days season open in |
|------|-------------|----------|---------------------|
| | Quota | landings | federal waters |
| 1986 | na | 2.770 | 365 |
| 1987 | na | 1.814 | 365 |
| 1988 | na | 2.568 | 365 |
| 1989 | na | 2.656 | 365 |
| 1990 | na | 1.614 | 365 |
| 1991 | 1.96 | 2.917 | 365 |
| 1992 | 1.96 | 4.618 | 365 |
| 1993 | 2.94 | 7.161 | 365 |
| 1994 | 2.94 | 6.076 | 365 |
| 1995 | 2.94 | 5.464 | 365 |
| 1996 | 4.47 | 5.339 | 365 |
| 1997 | 4.47 | 6.804 | 330 |
| 1998 | 4.47 | 4.854 | 272 |
| 1999 | 4.47 | 4.972 | 240 |
| 2000 | 4.47 | 4.750 | 194 |
| 2001 | 4.47 | 5.252 | 194 |
| 2002 | 4.47 | 6.535 | 194 |
| 2003 | 4.47 | 6.105 | 194 |
| 2004 | 4.47 | 6.460 | 194 |
| 2005 | 4.47 | 4.676 | 194 |
| 2006 | 4.47 | 4.131 | 194 |
| 2007 | 3.185 | 5.809 | 194 |
| 2008 | 2.45 | 4.056 | 65 |
| 2009 | 2.45 | 5.597 | 75 |
| 2010 | 3.403 | 2.651 | 53 + 24 = 77 |
| 2011 | 3.866 | 6.734 | 48 |
| 2012 | 3.959 | 7.524 | 46 |
| 2013 | 5.390 | 9.639 | 42 |
| 2014 | 5.390 | 3.867 | 9 |

Source: Southeast Fisheries Science Center (SEFSC) including calibrated landings from MRIP, LA Creel Survey, Texas Parks and Wildlife Department (TPWD), and the Southeast Region Headboat Survey (SRHS) (May 2015). The Calibrated MRIP landings provided here were not used for management at the time. See Appendix I for the MRIP Calibration Workshop report.

For-hire vessels have operated under a limited access system with respect to the issuance of new for-hire permits for fishing reef fish or coastal migratory pelagics since 2003. A total of 3,340 reef fish and coastal migratory pelagic charter/headboat permits were issued under the moratorium, and these permits are associated with 1,779 vessels. Of these vessels, 1,561 have both reef fish and coastal migratory pelagics permits, 64 have only reef fish permits, and 154

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have only coastal migratory pelagics permits. About one-third of Florida charter boats targeted three or less species; two-thirds targeted five or less species; and 90% targeted nine or less species. About 40% of these charter boats did not target particular species. The species targeted by the largest proportion of Florida charter boats were king mackerel (46%), grouper (29%), snapper (27%), dolphin (26%), and billfish (23%). In the eastern Gulf, the species receiving the most effort were grouper, king mackerel, and snapper. About 25% of Florida headboats targeted three or fewer species; 75% targeted four or fewer species; and 80% targeted five or fewer species. About 60% of headboats did not target any particular species. The species targeted by the largest proportion of Florida headboats are snapper and other reef fish (35%), red grouper (29%), gag grouper (23%), and black grouper (16%). In the eastern Gulf, the species receiving the most effort were snapper, gag, and red grouper (Sutton et al. 1999).

The majority of charter boats in Alabama, Mississippi, Louisiana, and Texas reported targeting snapper (91%), king mackerel (89%), cobia (76%), and tuna (55%). The species receiving the largest percentage of effort by charter boats in the four-state area were snapper (49%), king mackerel (10%), red drum (6%), cobia (6%), tuna (5%), and speckled trout (5%). The majority of headboat operators reported targeting snapper (100%), king mackerel (85%), shark (65%), tuna (55%), and amberjack (50%). The species receiving the largest percentage of total effort by headboats in the four-state area were snapper (70%), king mackerel (12%), amberjack (5%), and shark (5%) (Sutton et al. 1999).

Commercial Red Snapper Sector

In the Gulf, red snapper are primarily harvested commercially with hook-and-line and bandit gear, with bandit gear being more prevalent. Longline gear captures a small percentage of total landings (< 5%). Longline gear is prohibited for the harvest of reef fish inside of 50 fathoms west of Cape San Blas. East of Cape San Blas, longline gear is prohibited for harvest of reef fish inside of 20 fathoms, with a seasonal shift in the longline boundary to 35 fathoms during June through August to protect foraging sea turtles.

Between 1990 and 2006, the principal method of managing the commercial sector for red snapper was with quotas set at 51% of TAC and seasonal closures after each year's quota was filled. The result was a race for fish in which fishermen were compelled to fish as quickly as possible to maximize their catch of the overall quota before the season was closed. The fishing year was characterized by short periods of intense fishing activity with large quantities of red snapper landed during the open seasons rather than lower levels of activity with landings spread more uniformly throughout the year. The result was short seasons and frequent quota overruns (Table 3.1.4). From 1993 through 2006, trip limits, limited access endorsements, split seasons and partial monthly season openings were implemented in an effort to slow the race for fish. At the beginning of the 1993 season, 131 boats qualified for red snapper endorsements on their reef fish permits that entitled them to land 2,000 lbs of red snapper per trip.

In 2007, an IFQ program was implemented for the commercial red snapper sector. Each vessel that qualified for the program was issued an allocation of a percentage of the commercial quota based on historical participation. The allocations were issued as shares representing pounds of red snapper, which the fishermen could harvest, sell or lease to other fishermen, or purchase

from other fishermen. Beginning in 2007, the commercial red snapper season is no longer closed, but a commercial vessel cannot land red snapper unless it has sufficient allocation in its vessel account to cover the landing poundage. As a result, there have not been any quota overruns under the IFQ program (Table 3.1.4). The red snapper IFQ program is currently undergoing a 5-year review to determine if changes are needed to the program.

Table 3.1.4. Commercial red snapper harvest vs. days open, by sector, 1986-2014.

| Year | Quota | Actual landings | Days Open (days that open or close at noon are counted as half- days) ("+" = split season) |
|------|-------|-----------------|--|
| 1986 | na | 3.700 | 365 |
| 1987 | na | 3.069 | 365 |
| 1988 | na | 3.960 | 365 |
| 1989 | na | 3.098 | 365 |
| 1990 | 3.1 | 2.650 | 365 |
| 1991 | 2.04 | 2.213 | 235 |
| 1992 | 2.04 | 3.106 | $52\frac{1}{2} + 42 = 94\frac{1}{2}$ |
| 1993 | 3.06 | 3.374 | 94 |
| 1994 | 3.06 | 3.222 | 77 |
| 1995 | 3.06 | 2.934 | $50 + 1\frac{1}{2} = 51\frac{1}{2}$ |
| 1996 | 4.65 | 4.313 | 64 + 22 = 86 |
| 1997 | 4.65 | 4.810 | 53 + 18 = 71 |
| 1998 | 4.65 | 4.680 | 39 + 28 = 67 |
| 1999 | 4.65 | 4.876 | 42 + 22 = 64 |
| 2000 | 4.65 | 4.837 | 34 + 25 = 59 |
| 2001 | 4.65 | 4.625 | 50 + 20 = 70 |
| 2002 | 4.65 | 4.779 | 57 + 24 = 81 |
| 2003 | 4.65 | 4.409 | 60 + 24 = 84 |
| 2004 | 4.65 | 4.651 | 63 + 32 = 95 |
| 2005 | 4.65 | 4.096 | 72 + 48 = 120 |
| 2006 | 4.65 | 4.649 | 72 + 43 = 115 |
| 2007 | 3.315 | 3.183 | IFQ |
| 2008 | 2.55 | 2.484 | IFQ |
| 2009 | 2.55 | 2.484 | IFQ |
| 2010 | 3.542 | 3.392 | IFQ |
| 2011 | 3.664 | 3.594 | IFQ |
| 2012 | 4.121 | 4.036 | IFQ |
| 2013 | 5.610 | 5.399 | IFQ |
| 2014 | 5.054 | 5.016 | IFQ |

Source: SEDAR 31 Data Workshop Report (1990-2006), commercial quotas/catch allowances report from NMFS/Southeast Regional Office IFQ landings website (2007-2014): http://sero.nmfs.noaa.gov/sf/ifq/CommercialQuotasCatchAllowanceTable.pdf.

Commercial quotas/landings in gutted weight were multiplied by 1.11 to convert to ww.

3.2 Description of the Physical Environment

The Gulf has a total area of approximately 600,000 square miles (1.5 million km²), including state waters (Gore 1992). It is a semi-enclosed, oceanic basin connected to the Atlantic Ocean by the Straits of Florida and to the Caribbean Sea by the Yucatan Channel (Figure 3.2.1). Oceanographic conditions are affected by the Loop Current, discharge of freshwater into the northern Gulf, and a semi-permanent, anti-cyclonic gyre in the western Gulf.

The Gulf is both a warm temperate and a tropical body of water (McEachran and Fechhelm 2005). Based on satellite derived measurements from 1982 through 2009, mean annual sea surface temperature ranged from 73 through 83° F (23-28° C) including bays and bayous (Figure 3.2.1). In general, mean sea surface temperature increases from north to south depending on time of year with large seasonal variations in shallow waters (NODC 2012: http://accession.nodc.noaa.gov/0072888).

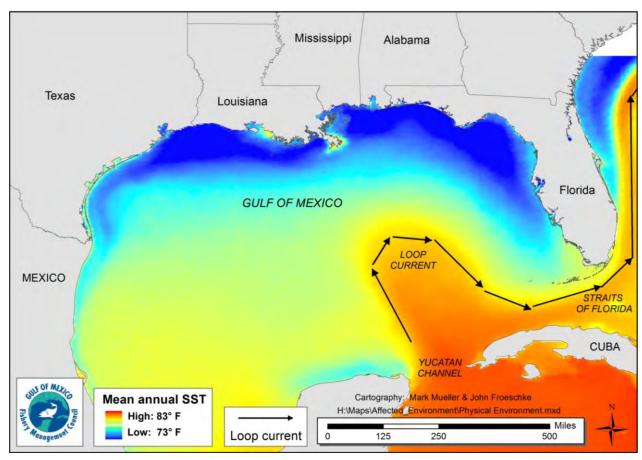


Figure 3.2.1. Physical environment of the Gulf including major feature names and mean annual sea surface temperature as derived from the Advanced Very High Resolution Radiometer Pathfinder Version 5 sea surface temperature data set (http://accession.nodc.noaa.gov/0072888).

Environmental Sites of Special Interest Relevant to Reef Fish species (Figure 3.2.2)

The following area closures include gear restrictions that may affect targeted and incidental harvest of reef fish species.

<u>Longline/Buoy Gear Area Closure</u> – Permanent closure to use of these gears for reef fish harvest inshore of 20 fathoms (36.6 meters) off the Florida shelf and inshore of 50 fathoms (91.4 meters) for the remainder of the Gulf, and encompasses 72,300 square nautical miles (nm²) or 133,344 km² (GMFMC 1989). Bottom longline gear is prohibited inshore of 35 fathoms (54.3 meters) during the months of June through August in the eastern Gulf (GMFMC 2009), but is not depicted in Figure 3.2.1.2.

<u>Madison-Swanson and Steamboat Lumps Marine Reserves</u> - No-take marine reserves (total area is 219 nm² or 405 km²) sited based on gag spawning aggregation areas where all fishing is prohibited except surface trolling from May through October (GMFMC 1999; 2003).

<u>The Edges Marine Reserve</u> – All fishing is prohibited in this area (390 nm² or 1,338 km²) from January through April and possession of any fish species is prohibited, except for such possession aboard a vessel in transit with fishing gear stowed as specified. The provisions of this do not apply to highly migratory species (GMFMC 2008b).

<u>Tortugas North and South Marine Reserves</u> - No-take marine reserves (185 nm²) cooperatively implemented by the state of Florida, National Ocean Service, the Gulf of Mexico Fishery Management Council (Council), and the National Park Service in Generic Amendment 2 Establishing the Tortugas Marine Reserves (GMFMC 2001). Only a small portion (13 nm²) of the Tortugas North Marine Reserve is in federal waters while the entire Tortugas South Marine Reserve (54.5 nm²) is in federal waters.

Reef and bank areas designated as Habitat Areas of Particular Concern (HAPCs) in the northwestern Gulf include - East and West Flower Garden Banks, Stetson Bank, and McGrail Bank, - Pristine coral areas protected by preventing the use of some fishing gear that interacts with the bottom and prohibited use of anchors (totaling 80.4 nm²). Subsequently, three of these areas were established as marine sanctuaries (i.e., East and West Flower Garden Banks and Stetson Bank). Bottom anchoring and the use of trawling gear, bottom longlines, buoy gear, and all traps/pots on coral reefs are prohibited in the East and West Flower Garden Banks, McGrail Bank, and on significant coral resources on Stetson Bank (GMFMC 2005b). Sonnier Bank, MacNeil Bank, 29 Fathom, Rankin Bright Bank, Geyer Bank, Bouma Bank, Rezak Sidner Bank, Alderice Bank, and Jakkula Bank (totaling 183 nm²) are other areas that have been designated as HAPCs but currently have no regulations associated with them. A weak link in the tickler chain of bottom trawls on all habitats throughout the Gulf exclusive economic zone (EEZ) is required. A weak link is defined as a length or section of the tickler chain that has a breaking strength less than the chain itself and is easily seen as such when visually inspected. An education program for the protection of coral reefs when using various fishing gears in coral reef areas for recreational and commercial fishermen was also developed.

Florida Middle Grounds HAPC - Pristine soft coral area (348 nm² or 644.5 km²) that is protected by prohibiting the following gear types: bottom longlines, trawls, dredges, pots and traps (GMFMC and SAFMC 1982).

Pulley Ridge HAPC - A portion (101 nm²) of the HAPC (2,300 nm² or 4,259 km²) where deepwater hermatypic coral reefs are found is closed to anchoring and the use of trawling gear, bottom longlines, buoy gear, and all traps/pots (GMFMC 2005b).

Alabama Special Management Zone – For vessels operating as a charter vessel or headboat, a vessel that does not have a commercial permit for Gulf reef fish, or a vessel with such a permit fishing for Gulf reef fish, fishing is limited to hook-and-line gear with no more than three hooks. Nonconforming gear is restricted to recreational bag limits, or for reef fish without a bag limit, to 5% by weight of all fish aboard (GMFMC 1993).

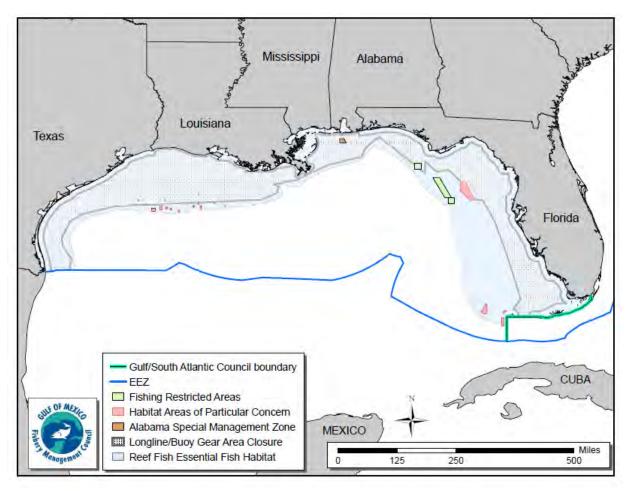


Figure 3.2.2. Map of most fishery management closed areas in the Gulf.

The Deepwater Horizon MC252 oil spill affected at least one-third of the Gulf from western Louisiana east to the Florida Panhandle and south to the Campeche Bank of Mexico. Oil flowed from the ruptured wellhead at a rate of 52,700 – 62,200 barrels/day for a total of 4,928,100 barrels (www.restorethegulf.gov 2010). The impacts of the Deepwater Horizon MC252 oil spill

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on the physical environment may be significant and long-term. Oil was dispersed on the surface, and because of the heavy use of dispersants (both at the surface and at the wellhead), oil was also documented as being suspended within the water column (Camilli et al. 2010; Kujawinski et al. 2011). Floating and suspended oil washed onto coastlines in several areas of the Gulf along with non-floating tar balls. Whereas suspended and floating oil degrades over time, tar balls are persistent in the environment and can be transported hundreds of miles (Goodman 2003).

Surface or submerged oil during the Deepwater Horizon MC252 oil spill event could have restricted the normal processes of atmospheric oxygen mixing into and replenishing oxygen concentrations in the water column, thus affecting the long-standing hypoxic zone located west of the Mississippi River on the Louisiana continental shelf (NOAA 2010). Research by Hazen et al. (2010), however, has indicated that microbial biodegradation of hydrocarbons in the water column may have occurred without substantial oxygen drawdown. Residence time of hydrocarbons in sediments is also a point of interest. Among the indices developed for past oil spills (Harper 2003) and oil spill scenarios (National Environmental Research Institute 2011) is the "oil residence index"; however, this index does not appear to have been utilized during the assessment of the Deepwater Horizon MC252 oil spill.

Most recently, the Associated Press reported on September 6, 2012 that researchers from Louisiana State University had linked oil discovered on Elmer's Island and Grand Isle to the Deepwater Horizon MC252 oil spill after the landfall and dissipation of Hurricane Isaac (Burdeau and Reeves 2012).

3.3 Description of the Biological/Ecological Environment

The biological environment of the Gulf, including the species addressed in this amendment, is described in detail in the final EIS for the Generic EFH Amendment (GMFMC 2004a) and is incorporated here by reference.

Red Snapper Life History and Biology

Red snapper demonstrate the typical reef fish life history pattern (Table 3.3.1). Eggs and larvae are pelagic while juveniles are found associated with bottom features or over barren bottom. Spawning occurs over firm sand bottom with little relief away from reefs during the summer and fall. Adult females mature as early as two years and most are mature by four years (Schirripa and Legault 1999). Red snapper have been aged up to 57 years. Until recently, most caught by the directed fishery were 2- to 4-years old (Wilson and Nieland 2001), but a recently completed stock assessment suggests that the age and size of red snapper in the directed fishery has increased in recent years (SEDAR 31 2013). A more complete description of red snapper life history can be found in the EIS for the Generic EFH Amendment (GMFMC 2004a).

Status of the Red Snapper Stock

Southeast Data Assessment and Review (SEDAR) 31 Benchmark Stock Assessment

Commercial harvest of red snapper from the Gulf began in the mid-1800s (Shipp 2001). In the 1930s, party boats built exclusively for recreational fishing began to appear (Chester 2001). The first stock assessment conducted by NMFS in 1986 suggested that the stock was in decline (Parrack and McLellan 1986) and since 1988 (Goodyear 1988) the stock biomass has been found to be below threshold levels.

The most recent benchmark red snapper stock assessment was completed in 2013 (SEDAR 31 2013). The primary assessment model selected for the Gulf red snapper stock evaluation assessment was Stock Synthesis (Methot 2010). Stock Synthesis is an integrated statistical catch-at-age model which is widely used for stock assessments in the United States and throughout the world. Commercial landings data included commercial handline and longline landings from the accumulated landings system from 1964 through 2011. For landings between 1880 and 1963, previously constructed historical landings were used. Total annual landings from the IFQ program for years 2007-2011 were used to reapportion 2007-2011 accumulated landings system data across strata. Recreational landings data included the MRIP/Marine Recreational Fishery Statistics Survey (MRFSS) from 1981-2011, Southeast Headboat Survey for 1981-2011, and Texas Parks and Wildlife Department survey. For the years 2004-2011, MRIP landings are available. For earlier years, MRFSS data were calibrated to MRIP estimates using a standardized approach for calculating average weight that accounts for species, region, year, state, mode, wave, and area.

Standardized indices of relative abundance from both fishery dependent and independent data sources were included in the model. The fishery dependent indices came from the commercial handline fleet, recreational headboats, and recreational private/for-hire sectors. Fishery independent indices came from the Southeast Area Monitoring and Assessment Program (SEAMAP) bottom trawl survey, SEAMAP reef fish video survey, NMFS bottom longline survey, and the SEAMAP plankton survey.

Red snapper discards in the Gulf were calculated from data collected by the self-reported commercial logbook data and the NMFS Gulf reef fish observer program. In addition to these directed fisheries discards, estimates of red snapper bycatch from the commercial shrimp fleet were also generated.

The results of the SEDAR 31 assessment, including an assessment addendum that was prepared after a review of the SEDAR Assessment Panel Report by the SEDAR Review Panel, was presented to the SSC in May 2013. Under the base model, it was estimated that the red snapper stock has been overfished since the 1960s.

Current (2011) stock status was estimated relative to two possible proxies for F_{MSY} : $F_{SPR26\%}$ (i.e., the fishing mortality rate that would produce an equilibrium spawning potential ratio (SPR) of 26%) and F_{MAX} , which corresponded to $F_{SPR20.4\%}$ (i.e., the fishing mortality rate that would produce an equilibrium SPR 20.4%). A proxy of $F_{SPR26\%}$ was previously used as the overfishing

and F_{MSY} proxy in SEDAR 7 and the SEDAR 7 update assessment in 2009. F_{MAX} was evaluated as an alternative proxy because at high spawner-recruit steepness values near 1.0, such as the value of 0.99 fixed in the red snapper assessment, F_{MAX} approximates the actual estimate of F_{MSY} . However, the actual estimate of F_{MSY} is sensitive to the parameters of the spawner-recruit relationship. The SSC did not have confidence in using the direct F_{MSY} estimate due to the fact that the spawner-recruit function is poorly estimated and data exist for a very limited range of potential spawning stock biomass (SSB) for the stock. In addition, the SSC felt that the equivalent SPR for F_{MAX} (20.4%) was inappropriately low for species with life history parameters similar to red snapper. The SSC felt that the $F_{SPR26\%}$ proxy, while still somewhat low for species with life history parameters similar to red snapper, was more realistic than the 20.4% SPR associated with F_{MAX} . Furthermore, the $F_{SPR26\%}$ proxy is consistent with the current fishery management plan (FMP) and rebuilding plan for red snapper.

Spawning stock biomass was estimated to remain below both the minimum stock size threshold (MSST) and the spawning stock size associated with maximum sustainable yield (SSB_{MSY proxy}) using either proxy described above. Therefore, the SSC concluded that the stock remains overfished. With respect to overfishing, the current fishing mortality rate (geometric mean of 2009-2011) was estimated to be below both F_{MSY} proxies. Therefore, the SSC estimated the stock is not currently experiencing overfishing.

SEDAR 31 Update Assessment

In January 2015, NMFS presented an update of the SEDAR 31 assessment to the SSC (GMFMC 2015a). The methods used were the same as SEDAR 31, except for instances when the assessment team was responding to specific terms of reference from the Council. The SEDAR 31 red snapper base model was used with data updated through 2013. Recreational catch data was adjusted using methods from the September 2014 MRIP Calibration workshop and the rescaled MRIP landings were used. A selectivity block (2011-2013) was applied on all recreational fleets to accommodate recent changes in fishing behavior that indicated a shift in in selectivity to older (heavier) fish in recent years. The revised recreational landings were generally 10% to 20% higher than in SEDAR 31, but the revised discards also showed proportionately higher rates than in SEDAR 31. The results of the update assessment indicated that Gulf-wide, the stock biomass estimates are continuing to increase, but remain below the management target of 26% SPR. Stock biomass is continuing to increase in the western Gulf, but in the eastern Gulf, stock biomass estimates have shown a slight downward trend in recent years, which resulted from strong year-classes exiting the stock, as well as recent low recruitment estimates.

The combined east and west stock biomass estimates, while increasing, remain below the minimum stock size threshold, indicating that the stock remains in an overfished condition. However, estimated fishing mortality remains below the maximum fishing mortality threshold, indicating that overfishing is not occurring.

Definition of Overfishing

In January 2012, the Generic ACL/AM Amendment (GMFMC 2011b) became effective. One of the provisions in this amendment was to redefine overfishing. In years when there is a stock assessment, overfishing is defined as the fishing mortality rate exceeding the maximum fishing mortality threshold. In years when there is no stock assessment, overfishing is defined as the catch exceeding the OFL. The update assessment indicates that, as of the terminal year of the assessment data, 2013, overfishing was not occurring. In 2014, both the recreational and commercial sector landings remained below their respective quotas (Table 3.1.2). Therefore, total landings remained below the OFL in 2014, and overfishing was again not occurring in the red snapper stock. Note that, because the overfishing threshold is now re-evaluated each year instead of only in years when there is a stock assessment, this status could change on a year-to-year basis.

General Information on Reef Fish Species

The National Ocean Service collaborated with NMFS and the Council to develop distributions of reef fish (and other species) in the Gulf (SEA 1998). The National Ocean Service obtained fishery-independent data sets for the Gulf, including SEAMAP, and state trawl surveys. Data from the Estuarine Living Marine Resources Program contain information on the relative abundance of specific species (highly abundant, abundant, common, rare, not found, and no data) for a series of estuaries, by five life stages (adult, spawning, egg, larvae, and juvenile) and month for five seasonal salinity zones (0-0.5, 0.5-5, 5-15, 15-25, and >25 parts per thousand). National Ocean Service staff analyzed these data to determine relative abundance of the mapped species by estuary, salinity zone, and month. For some species not in the Estuarine Living Marine Resources Program database, distribution was classified as only observed or not observed for adult, juvenile, and spawning stages.

In general, reef fish are widely distributed in the Gulf, occupying both pelagic and benthic habitats during their life cycle. Habitat types and life history stages are summarized in Table 3.3.1 and can be found in more detail in GMFMC (2004a). In general, both eggs and larval stages are planktonic. Larvae feed on zooplankton and phytoplankton. Exceptions to these generalizations include the gray triggerfish that lay their eggs in depressions in the sandy bottom, and gray snapper whose larvae are found around submerged aquatic vegetation (SAV). Juvenile and adult reef fish are typically demersal, and are usually associated with bottom topographies on the continental shelf (<328 feet; <100 m) which have high relief, i.e., coral reefs, artificial reefs, rocky hard-bottom substrates, ledges and caves, sloping soft-bottom areas, and limestone outcroppings. However, several species are found over sand and soft-bottom substrates. Juvenile red snapper are common on mud bottoms in the northern Gulf, particularly from Texas to Alabama. Also, some juvenile snappers (e.g. mutton, gray, red, dog, lane, and yellowtail snappers) and groupers (e.g. goliath grouper, red, gag, and yellowfin groupers) have been documented in inshore seagrass beds, mangrove estuaries, lagoons, and larger bay systems (GMFMC 1981). More detail on hard bottom substrate and coral can be found in the FMP for Corals and Coral Reefs (GMFMC and SAFMC 1982).

Table 3.3.1. Summary of habitat utilization by life history stage for species in the Reef Fish FMP.

| Common name | Eggs | Larvae | Early Juveniles | Late juveniles | Adults | Spawning adults |
|--------------------|-------------------|-------------------|--|--|--|--------------------------------|
| Red Snapper | Pelagic | Pelagic | Hard bottoms, Sand/ shell bottoms, Soft bottoms | · / | Hard bottoms, Reefs | Sand/ shell bottoms |
| Queen Snapper | Pelagic | Pelagic | Unknown | Unknown | Hard bottoms | |
| Mutton Snapper | Reefs | Reefs | Mangroves, Reefs, SAV, Emergent marshes Mangroves, Reefs, SAV SAV, Emergent marshes | | Shoals/ Banks, Shelf edge/slope | |
| Blackfin Snapper | Pelagic | | Hard bottoms | Hard bottoms | Hard bottoms, Shelf edge/slope | Hard bottoms, Shelf edge/slope |
| Cubera Snapper | Pelagic | | Mangroves, Emergent marshes, SAV | Mangroves, Emergent marshes, SAV | Mangroves, Reefs | Reefs |
| Gray Snapper | Pelagic, Reefs | Pelagic, Reefs | Mangroves, Emergent marshes, Seagrasses | Mangroves, Emergent marshes, SAV | Emergent marshes, Hard bottoms, Reefs, Sand/ shell bottoms, Soft bottoms | |
| Lane Snapper | Pelagic | | Mangroves, Reefs, Sand/ shell bottoms, SAV, Soft bottoms | Mangroves, Reefs, Sand/ shell bottoms, SAV, Soft bottoms | Reefs, Sand/ shell bottoms, Shoals/ Banks | Shelf edge/slope |
| Silk Snapper | Unknown | Unknown | Unknown | Unknown | Shelf edge | |
| Yellowtail Snapper | Pelagic | | Mangroves, SAV, Soft bottoms | Reefs | Hard bottoms, Reefs, Shoals/ Banks | |
| Wenchman | Pelagic | Pelagic | | | Hard bottoms, Shelf edge/slope | Shelf edge/slope |
| Vermilion Snapper | Pelagic | | Hard bottoms, Reefs | Hard bottoms, Reefs | Hard bottoms, Reefs | |

| Common name | Eggs | Larvae | Early Juveniles | Late juveniles | Adults | Spawning adults |
|-----------------------------|----------------------------------|---------|--|--|---|----------------------------|
| Gray Triggerfish | Reefs | | Drift algae, Sargassum | Drift algae, Reefs, Sargassum | Reefs, Sand/ shell bottoms | Reefs, Sand/ shell bottoms |
| Greater Amberjack | Pelagic | Pelagic | Drift algae | Drift algae | Pelagic, Reefs | Pelagic |
| Lesser Amberjack | | | Drift algae | Drift algae | Hard bottoms | Hard bottoms |
| Almaco Jack | Pelagic | | Drift algae | Drift algae | Pelagic | Pelagic |
| Banded Rudderfish | | Pelagic | Drift algae | Drift algae | Pelagic | Pelagic |
| Hogfish | | | SAV | SAV | Hard bottoms, Reefs | Reefs |
| Blueline Tilefish | Pelagic | Pelagic | | | Hard bottoms, Sand/ shell bottoms, Shelf edge/slope, Soft bottoms | |
| Tilefish (golden) | Pelagic, Shelf edge/ Slope | Pelagic | Hard bottoms, Shelf edge/slope, Soft bottoms | Hard bottoms, Shelf edge/slope, Soft bottoms | Hard bottoms, Shelf edge/slope, Soft bottoms | |
| Goldface Tilefish | Unknown | | | | | |
| Speckled Hind | Pelagic | Pelagic | | | Hard bottoms, Shelf edge/slope Reefs | |
| Yellowedge Grouper | Pelagic | Pelagic | | Hard bottoms | Hard bottoms | |
| Atlantic Goliath Grouper | Pelagic | Pelagic | Mangroves, Reefs, SAV | Hard bottoms, Mangroves, Reefs, SAV | Hard bottoms, Shoals/ Banks, Reefs | Reefs, Hard bottoms |
| Red Grouper | Pelagic | Pelagic | Hard bottoms, Reefs, SAV | Hard bottoms, Reefs | Hard bottoms, Reefs | |

| Common name | Eggs | Larvae | Early Juveniles | Late juveniles | Adults | Spawning adults |
|------------------------|---------|---------|-----------------------------------|-----------------------------------|---|-------------------------|
| Warsaw Grouper | Pelagic | Pelagic | | Reefs | Hard bottoms, Shelf edge/slope | |
| Snowy Grouper | Pelagic | Pelagic | Reefs | Reefs | Hard bottoms, Reefs, Shelf edge/slope | |
| Black Grouper | Pelagic | Pelagic | SAV | Hard bottoms, Reefs | Hard bottoms, Mangroves, Reefs | |
| Yellowmouth Grouper | Pelagic | Pelagic | Mangroves | Mangroves, Reefs | Hard bottoms, Reefs | |
| Gag | Pelagic | Pelagic | SAV | Hard bottoms, Reefs, SAV | Hard bottoms, Reefs | |
| Scamp | Pelagic | Pelagic | Hard bottoms, Mangroves, Reefs | Hard bottoms, Mangroves, Reefs | Hard bottoms, Reefs | Reefs, Shelf edge/slope |
| Yellowfin Grouper | | | SAV | Hard bottoms, SAV | Hard bottoms, Reefs | Hard bottoms |

Source: Adapted from Table 3.2.7 in the final draft of the EIS from the Generic EFH Amendment (GMFMC 2004a) and consolidated in this document.

Status of Reef Fish Stocks

The Reef Fish FMP currently encompasses 31 species (Table 3.3.2). Eleven other species were removed from the FMP in 2012 through the Generic ACL/AM Amendment (GMFMC 2011b). Stock assessments and stock assessment reviews have been conducted for 13 species and can be found on the Council (www.gulfcouncil.org) and SEDAR (www.sefsc.noaa.gov/sedar) websites. The assessed species are:

- Red Snapper (SEDAR 7 2005; SEDAR 7 Update 2009; SEDAR 31 2013; SEDAR 31 Update 2015)
- Vermilion Snapper (Porch and Cass-Calay 2001; SEDAR 9 2006a; SEDAR 9 Update 2011a)
- Yellowtail Snapper (Muller et al. 2003; SEDAR 3 2003; O'Hop et al. 2012)
- Mutton Snapper (SEDAR 15A 2008; SEDAR 15A Update 2015)
- Gray Triggerfish (Valle et al. 2001; SEDAR 9 2006b; SEDAR 9 Update 2011b)
- Greater Amberjack (Turner et al. 2000; SEDAR 9 2006c; SEDAR 9 Update 2010; SEDAR 33a 2014)
- Hogfish (Ault et al. 2003; SEDAR 6 2004a; SEDAR 37 2013)
- Red Grouper (NMFS 2002; SEDAR 12 2007; SEDAR 12 Update 2009)
- Gag (Turner et al. 2001; SEDAR 10 2006; SEDAR 10 Update 2009; SEDAR 33b 2014)
- Black Grouper (SEDAR 19 2010)
- Yellowedge Grouper (Cass-Calay and Bahnick 2002; SEDAR 22 2011a)
- Tilefish (Golden) (SEDAR 22 2011b)
- Atlantic Goliath Grouper (Porch et al. 2003; SEDAR 6 2004b; SEDAR 23 2011)

The NMFS Office of Sustainable Fisheries updates its Status of U.S. Fisheries Report to Congress on a quarterly basis utilizing the most current stock assessment information. The most recent update can be found at:

(<u>http://www.nmfs.noaa.gov/sfa/fisheries_eco/status_of_fisheries/</u>). The status of both assessed and unassessed stocks as of the writing of this report is shown in Table 3.3.2.

Table 3.3.2. Species of the Reef Fish FMP grouped by family.

| Common Name | Scientific Name | Stock Status |
|--------------------------|-------------------------------|--------------------------------|
| | | Stock Status |
| Family Balistidae – Trig | | 0 611 61: |
| Gray Triggerfish | Balistes capriscus | Overfished, no overfishing |
| Family Carangidae – Ja | | 0 611 61 |
| Greater Amberjack | Seriola dumerili | Overfished, no overfishing |
| Lesser Amberjack | Seriola fasciata | Unknown |
| Almaco Jack | Seriola rivoliana | Unknown |
| Banded Rudderfish | Seriola zonata | Unknown |
| Family Labridae - Wras | | |
| Hogfish | Lachnolaimus maximus | Unknown |
| Family Malacanthidae - | Tilefishes | |
| Tilefish (Golden) | Lopholatilus chamaeleonticeps | Not overfished, no overfishing |
| Blueline Tilefish | Caulolatilus microps | Unknown |
| Goldface Tilefish | Caulolatilus chrysops | Unknown |
| Family Serranidae - Gro | oupers | |
| Gag | Mycteroperca microlepis | Overfished, no overfishing |
| Red Grouper | Epinephelus morio | Not overfished, no overfishing |
| Scamp | Mycteroperca phenax | Unknown |
| Black Grouper | Mycteroperca bonaci | Not overfished, no overfishing |
| Yellowedge Grouper | *Hyporthodus flavolimbatus | Not overfished, no overfishing |
| Snowy Grouper | *Hyporthodus niveatus | Unknown |
| Speckled Hind | Epinephelus drummondhayi | Unknown |
| Yellowmouth Grouper | Mycteroperca interstitialis | Unknown |
| Yellowfin Grouper | Mycteroperca venenosa | Unknown |
| Warsaw Grouper | *Hyporthodus nigritus | Unknown |
| **Atlantic Goliath | Epinephelus itajara | Unknown |
| Grouper | | |
| Family Lutjanidae - Sna | appers | |
| Queen Snapper | Etelis oculatus | Unknown |
| Mutton Snapper | Lutjanus analis | Not overfished, no overfishing |
| Blackfin Snapper | Lutjanus buccanella | Unknown |
| Red Snapper | Lutjanus campechanus | Overfished, no overfishing |
| Cubera Snapper | Lutjanus cyanopterus | Unknown |
| Gray Snapper | Lutjanus griseus | Unknown |
| Lane Snapper | Lutjanus synagris | Unknown |
| Silk Snapper | Lutjanus vivanus | Unknown |
| Yellowtail Snapper | Ocyurus chrysurus | Not overfished, no overfishing |
| Vermilion Snapper | Rhomboplites aurorubens | Not overfished, no overfishing |
| Wenchman | Pristipomoides aquilonaris | Unknown |
| | | J |

Notes: * In 2013 the genus for yellowedge grouper, snowy grouper, and warsaw grouper was changed by the American Fisheries Society from *Epinephelus* to *Hyporthodus* (American Fisheries Society 2013).

^{**}Atlantic goliath grouper is a protected grouper and benchmarks do not reflect appropriate stock dynamics. In 2013 the common name was changed from goliath grouper to Atlantic goliath grouper by the American Fisheries Society to differentiate from the Pacific goliath grouper, a newly named species (American Fisheries Society 2013).

Protected Species

There are 29 different species of marine mammals that may occur in the Gulf. All 29 species are protected under the Marine Mammal Protection Act and seven are also listed as endangered under the Endangered Species Act (ESA) (i.e., sperm, sei, fin, blue, humpback, and North Atlantic right whales and the West Indian manatee). Other species protected under the ESA occurring in the Gulf include five sea turtle species (Kemp's ridley, loggerhead, green, leatherback, and hawksbill); two fish species (Gulf sturgeon and smalltooth sawfish), and two coral species (elkhorn coral and staghorn coral). Information on the distribution, biology, and abundance of these protected species in the Gulf is included in the final EIS to the Generic EFH Amendment (GMFMC 2004a) and the February 2005, October 2009, and September 2011 ESA biological opinions on the reef fish fishery (NMFS 2005; NMFS 2009; NMFS 2011a). Marine Mammal Stock Assessment Reports and additional information are also available on the NMFS Office of Protected Species website: http://www.nmfs.noaa.gov/pr/species/.

The Gulf reef fish fishery is classified in the Marine Mammal Protection Act 2013 List of Fisheries as a Category III fishery (78 FR 53336, August 29, 2013). This classification indicates the annual mortality and serious injury of a marine mammal stock resulting from any fishery is less than or equal to 1% of 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. Dolphins are the only species documented as interacting with these fisheries. Bottlenose dolphins prey upon on the bait, catch, and/or released discards of fish from the reef fish fishery. They are also a common predator around reef fish vessels, feeding on the discards.

All five species of sea turtles are adversely affected by the Gulf reef fish fishery. Incidental captures are relatively infrequent, but occur in all commercial and recreational hook-and-line and longline components of the reef fish fishery. Captured sea turtles can be released alive or can be found dead upon retrieval of the gear as a result of forced submergence. Sea turtles released alive may later succumb to injuries sustained at the time of capture or from exacerbated trauma from fishing hooks or lines that were ingested, entangled, or otherwise still attached when they were released. Sea turtle release gear and handling protocols are required in the commercial and for-hire reef fish fisheries to minimize post-release mortality.

Smalltooth sawfish are also affected by the Gulf reef fish fishery, but to a much lesser extent. Smalltooth sawfish primarily occur in the Gulf off peninsular Florida. Incidental captures in the commercial and recreational hook-and-line components of the reef fish fishery are rare events, with only eight smalltooth sawfish estimated to be incidentally caught annually, and none are expected to result in mortality (NMFS 2005). Fishermen in this fishery are required to follow smalltooth sawfish safe handling guidelines. The long, toothed rostrum of the smalltooth sawfish causes this species to be particularly vulnerable to entanglement in fishing gear.

On September 30, 2011, the Protected Resources Division released a biological opinion, which concluded that the continued operation of the Gulf reef fish fishery is not likely to jeopardize the continued existence of sea turtles (loggerhead, Kemp's ridley, green, hawksbill, and leatherback) or smalltooth sawfish (NMFS 2011a). An incidental take statement was issued specifying the

amount and extent of anticipated take, along with reasonable and prudent measures and associated terms and conditions deemed necessary and appropriate to minimize the impact of these takes. The Council addressed measures to reduce take in the reef fish fishery's longline component in Amendment 31 (GMFMC 2009). Other listed species and designated critical habitat in the Gulf were determined not likely to be adversely affected.

On December 7, 2012, NMFS published a proposed rule to list 66 coral species under the ESA and reclassify *Acropora* from threatened to endangered (77 FR 73220). In a memo dated February 13, 2013, NMFS determined the reef fish fishery was not likely to adversely affect *Acropora* because of where the fishery operates, the types of gear used in the fishery, and that other regulations protect *Acropora* where they are most likely to occur. None of the new information regarding population level concerns would affect those determinations.

Deepwater Horizon MC252 Oil Spill

Overview

On April 20, 2010 an explosion occurred on the Deepwater Horizon MC252 semi-submersible oil rig approximately 36 nautical miles (41 statute miles) off the Louisiana coast. Two days later the rig sank. An uncontrolled oil leak from the damaged well continued for 87 days until the well was successfully capped by British Petroleum on July 15, 2010. The Deepwater Horizon MC252 oil spill affected at least one-third of the Gulf area from western Louisiana east to the Florida Panhandle and south to the Campeche Bank in Mexico (Figure 3.3.1).

As reported by the National Oceanic and Atmospheric Administration Office of Response and Restoration (NOAA 2010), the oil from the Deepwater Horizon MC252 spill is relatively high in alkanes which can readily be used by microorganisms as a food source. As a result, the oil from this spill is likely to biodegrade more readily than crude oil in general. The Deepwater Horizon MC252 oil is also relatively much lower in polycyclic aromatic hydrocarbons. Polycyclic aromatic hydrocarbons are highly toxic chemicals that tend to persist in the environment for long periods of time, especially if the spilled oil penetrates into the substrate on beaches or shorelines. Like all crude oils, MC252 oil contains volatile organic compounds (VOCs) such as benzene, toluene, and xylene. Some VOCs are acutely toxic, but because they evaporate readily, they are generally a concern only when oil is fresh.⁹

In addition to the crude oil, over one million gallons of the dispersant, Corexit 9500A®, was applied to the ocean surface and an additional hundreds of thousands of gallons of dispersant was pumped to the mile-deep well head (National Commission 2010). No large-scale applications of dispersants in deep water had been conducted prior to the Deepwater Horizon MC252 oil spill.

Oil could exacerbate the development of the hypoxic "dead" zone in the Gulf, similar in effect as higher than normal input of water laden with fertilizer runoff from the Mississippi River basin. For example, oil on the surface of the water could restrict the normal process of atmospheric oxygen mixing into and replenishing oxygen concentrations in the water column. In addition,

⁹ Source: http://sero.nmfs.noaa.gov/sf/deepwater_horizon/OilCharacteristics.pdf

microbes in the water that break down oil and dispersant consume oxygen; this metabolic process further depletes oxygen in the adjacent waters.

General Impacts on Fishery Resources

The presence of PAHs in marine environments can have detrimental impacts on marine finfish, especially during the more vulnerable larval stage of development (Whitehead et al. 2011). When exposed to realistic yet toxic levels of PAHs (1–15 µg/L), greater amberjack (*Seriola dumerili*) larvae develop cardiac abnormalities and physiological defects (Incardona et al. 2014). The future reproductive success of long-lived species, including red drum (*Sciaenops ocellatus*) and many reef fish species, may be negatively affected by episodic events resulting in highmortality years or low recruitment. These episodic events could leave gaps in the age structure of the population, thereby affecting future reproductive output (Mendelssohn et al. 2012). Other studies have described the vulnerabilities of various marine finfish species, with morphological and/or life history characteristics similar to species found in the Gulf, to oil spills and dispersants (Hose et al. 1996; Carls et al. 1999; Heintz et al. 1999; Short 2003).

An increase in histopathological lesions were found in red snapper (*Lutjanus campechanus*) in the area affected by the oil, but Murawski et al. (2014) found that the incidence of lesions had declined between 2011 and 2012. The occurrence of such lesions in marine fish is not uncommon (Sindermann 1979; Haensly et al. 1982; Solangi and Overstreet 1982; Khan and Kiceniuk 1984, 1988; Kiceniuk and Khan 1987; Khan 1990). Red snapper diet was also affected after the spill. A decrease in zooplankton consumed, especially by adults (>400 mm TL) over natural and artificial substrates may have contributed to an increase in the consumption of fish and invertebrate prey- more so at artificial reefs than natural reefs (Tarnecki and Patterson 2015).

The effect of oil, dispersants, and the combination of oil and dispersants on fishes of the Gulf remains an area of concern. Marine fish species typically concentrate PAHs in the digestive tract, making stomach bile an appropriate testing medium. A study by Synder et al. (2015) assessed bile samples from golden tilefish (Lopholatilus chamaeleonticeps), king snake eel (Ophichthus rex), and red snapper for PAH accumulation over time, and reported concentrations were highest in golden tilefish during the same time period when compared to king snake eel, and red snapper. These results suggest that the more highly associated an organism is with the sediment in an oil spill area, the higher the likelihood of toxic PAH accumulation. Twenty-first century dispersant applications are thought to be less harmful than their predecessors. However, the combination of oil and dispersants have proven to be more toxic to marine fishes than either dispersants or crude oil alone. Marine fish which are more active (e.g., a pelagic species versus a demersal species) appear to be more susceptible to negative effects from interactions with weathered oil/dispersant emulsions. These effects can include mobility impairment and inhibited respiration (Swedmark et al. 1973). Another study found that while Corexit 9500A® and oil are similar in their toxicity, when Corexit 9500A® and oil were mixed in lab tests, toxicity to microscopic rotifers increased up to 52-fold (Rico-Martínez et al. 2013). These studies suggest that the toxicity of the oil and dispersant combined may be greater than anticipated.

Deepwater Coral Communities

Deepwater corals are particularly vulnerable to episodic mortality events such as oil spills, since corals are immobile. Severe health declines have been observed in three deepwater corals in response to dispersant alone (2.3–3.4 fold) and the oil–dispersant mixtures (1.1–4.4 fold) compared to oil-only treatments (DeLeo et al. 2015). Increased dispersant concentrations appeared to exacerbate these results. As hundreds of thousands of gallons of dispersant were applied near the wellhead during the Deepwater Horizon oil spill, the possibility exists that deepwater corals may have been negatively impacted by the oil spill and subsequent spill remediation activities.

Several studies have documented declines in coral health or coral death in the presence of oil from the Deepwater Horizon MC252 (White et al. 2011; Hsing et al. 2013; Fisher et al. 2014). Sites as far as 11 km southwest of the spill were documented to have >45% of the coral colonies affected by oil (White et al. 2011; Hsing et al. 2013), and, though less affected, a site 22 km in 1900 m of water had coral damage caused by oil (Fisher et al. 2014). Coral colonies from several areas around the wellhead had damage to colonies that seemed to be representative of microdroplets as all colonies were not affected, and colonies that were affected had patchy distributions of damaged areas (Fisher et al. 2014). Because locations of deep-sea corals are still being discovered, it is likely that the extent of damage to deep-sea communities will remain undefined.

Outstanding Effects

As a result of the Deepwater Horizon MC252 spill, a consultation pursuant to ESA Section 7(a)(2) was reinitiated. As discussed above, on September 30, 2011, the Protected Resources Division released a biological opinion, which after analyzing best available data, the current status of the species, environmental baseline (including the impacts of the recent Deepwater Horizon MC252 oil release event in the northern Gulf), effects of the proposed action, and cumulative effects, concluded that the continued operation of the Gulf reef fish fishery is not likely to jeopardize the continued existence of green, hawksbill, Kemp's ridley, leatherback, or loggerhead sea turtles, nor the continued existence of smalltooth sawfish (NMFS 2011a). For additional information on the Deepwater Horizon MC252 oil spill and associated closures, see: http://sero.nmfs.noaa.gov/deepwater_horizon_oil_spill.htm.

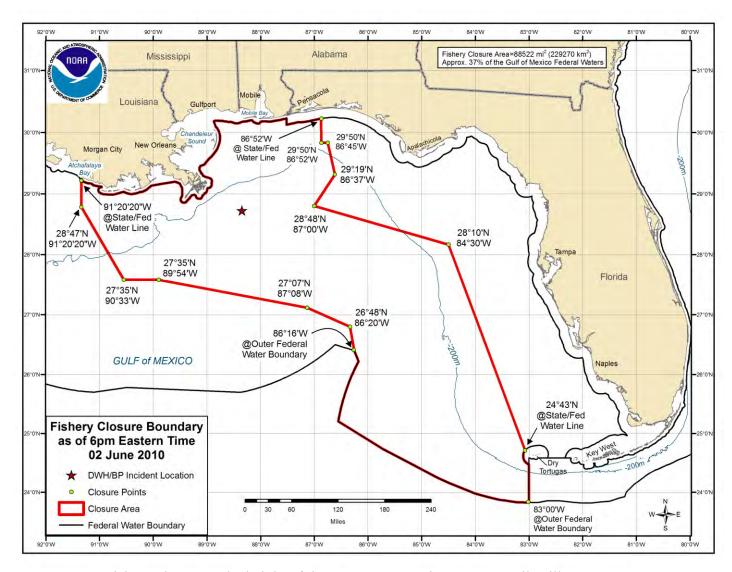


Figure 3.3.1. Fishery closure at the height of the Deepwater Horizon MC252 oil spill.

3.4 Description of the Economic Environment

3.4.1 Commercial Sector

A description of the commercial sector is provided in GMFMC (2013) and is incorporated herein by reference. Because this proposed amendment would only change management of the recreational sector, an update of the information on the commercial sector provided in GMFMC (2013) is not provided.

3.4.2 Recreational Sector

Angler Effort

Recreational effort derived from the Marine Recreational Information Program (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 Gulf, regardless of target intent or catch success.

Other measures of effort are possible, such as directed trips (the number of individual angler trips that either targeted or caught a particular species), among other measures. Estimates of the number of red snapper target trips and catch trips for the shore, charter, and private/rental boat modes in the Gulf for 2011-2014 are provided in Table 3.4.2.1 and Table 3.4.2.2. Estimates of red snapper target effort for additional years, and other measures of directed effort, are available at http://www.st.nmfs.noaa.gov/recreational-fisheries/access-data/run-a-data-query/queries/index.

Table 3.4.2.1. Number of red snapper recreational target trips, by state¹ and mode, 2011-2014.

| | Alabama | West Florida | Louisiana | Mississippi | Total |
|---------|---------|-----------------|---------------------|-------------|---------|
| | | | Charter Mo | ode | |
| 2011 | 19,010 | 29,642 | 1,424 | 0 | 50,076 |
| 2012 | 16,609 | 24,653 | 7,204 | 74 | 48,539 |
| 2013 | 23,638 | 32,689 | 7,191 | 38 | 63,556 |
| 2014 | 9,050 | 7,358 | 2 | 0 | nc |
| Average | 17,077 | 23,586 | 5,2733 | 28 | 45,964 |
| | | Pr | ivate/Rental | Mode | |
| 2011 | 116,886 | 113,021 | 19,900 | 16,790 | 266,597 |
| 2012 | 72,030 | 136,594 | 43,547 | 13,515 | 265,687 |
| 2013 | 222,245 | 461,349 | 24,691 | 21,586 | 729,871 |
| 2014 | 56,918 | 165,498 | 2 | 7,555 | nc |
| Average | 117,020 | 219,116 | 29,379 ³ | 14,862 | 380,377 |
| | | | All Mode | s | |
| 2011 | 135,896 | 142,663 | 21,324 | 16,790 | 316,673 |
| 2012 | 88,640 | 161,247 | 50,751 | 13,589 | 314,227 |
| 2013 | 245,883 | 494,038 | 31,882 | 21,624 | 793,427 |
| 2014 | 65,968 | 172,856 | 2 | 7,555 | nc |
| Average | 134,097 | 242,702 | $34,652^3$ | 14,890 | 426,341 |

Source: MRIP database, NMFS, SERO.

Note: These effort estimates have not been re-calibrated. Re-calibrated effort data are currently unavailable.

Note: There were no target trips recorded from the shore mode.

¹Texas information unavailable. ²The MRIP survey was not conducted in Louisiana in 2014.

³Average for 2011-2013.

nc – not computed because of the absence of Louisiana data.

Table 3.4.2.2. Number of red snapper recreational catch trips, by state¹ and mode, 2011-2014.

| | Alabama | West Florida | Louisiana | Mississippi | Total | | | | |
|---------|---------|-----------------|---------------------|-------------|-----------|--|--|--|--|
| | | Charter Mode | | | | | | | |
| 2011 | 43,550 | 101,500 | 3,066 | 221 | 148,336 | | | | |
| 2012 | 25,252 | 105,385 | 10,501 | 74 | 141,211 | | | | |
| 2013 | 52,331 | 107,466 | 12,321 | 38 | 172,157 | | | | |
| 2014 | 36,340 | 66,559 | 2 | 0 | nc | | | | |
| Average | 39,368 | 95,228 | 8,629 ³ | 83 | 143,308 | | | | |
| | | Pr | ivate/Rental | Mode | | | | | |
| 2011 | 130,500 | 203,567 | 31,957 | 6,169 | 372,193 | | | | |
| 2012 | 83,783 | 282,332 | 51,377 | 13,515 | 431,007 | | | | |
| 2013 | 227,889 | 537,469 | 55,679 | 29,250 | 850,287 | | | | |
| 2014 | 110,593 | 233,265 | 2 | 10,254 | nc | | | | |
| Average | 138,191 | 314,158 | 46,3383 | 14,797 | 513,484 | | | | |
| | | | All Mode | s | | | | | |
| 2011 | 174,050 | 305,067 | 35,023 | 6,390 | 520,530 | | | | |
| 2012 | 109,035 | 387,717 | 61,878 | 13,589 | 572,219 | | | | |
| 2013 | 280,221 | 644,935 | 68,000 | 29,288 | 1,022,444 | | | | |
| 2014 | 146,933 | 299,824 | 2 | 10,254 | nc | | | | |
| Average | 177,559 | 409,386 | 54,967 ³ | 14,880 | 656,792 | | | | |

¹Texas information unavailable.

nc – not computed because of the absence of Louisiana data.

Source: MRIP database, NMFS, SERO.

Note: These effort estimates have not been re-calibrated. Re-calibrated effort data are currently unavailable.

Note: There were no catch trips recorded from the shore mode.

Similar analysis of recreational effort is not possible for the headboat mode because headboat data are not collected at the angler level. Headboat angler effort is calculated as angler days, which are a standardized count of trips that result from the combination of partial-day, full-day, and multiple-day trips. Unlike the situation for charter vessels, the estimates of headboat angler days include just trips on federally permitted vessels. The stationary "fishing for demersal (bottom-dwelling) species" nature of headboat fishing, as opposed to trolling, suggests that most, if not all, headboat trips and, hence, angler days, are demersal or reef fish trips by intent. The distribution of headboat effort (angler days) by geographic area is presented in Table 3.4.2.3. For purposes of data collection, the headboat data collection program divides the Gulf into several areas.

²The MRIP survey was not conducted in Louisiana in 2014.

³Average for 2011-2013.

Table 3.4.2.3. Gulf headboat angler days, by state, 2011–2014.

| | | Angler Days | | | | | | | | |
|---------|--------------|------------------------------|------------------------------------|--------|---------|--|--|--|--|--|
| | West Florida | Florida/Alabama ¹ | Mississippi/Louisiana ² | Texas | Total | | | | | |
| 2011 | 79,722 | 77,303 | 3,657 | 47,284 | 207,966 | | | | | |
| 2012 | 84,205 | 77,770 | 3,680 | 51,776 | 217,431 | | | | | |
| 2013 | 94,752 | 80,048 | 3,406 | 55,749 | 233,955 | | | | | |
| 2014 | 102,841 | 88,524 | 3,257 | 51,231 | 245,853 | | | | | |
| Average | 90,380 | 80,911 | 3,500 | 51,510 | 226,301 | | | | | |

Source: (SRHS.

West Florida = Florida from the Dry Tortugas through the Florida Middle Grounds, Florida/Alabama = northwest Florida and Alabama.

Permits

The for-hire sector is comprised of charter vessels and headboats (party boats). Although charter vessels tend to be smaller, on average, than headboats, the key distinction between the two types of operations is how the fee is 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.

A federal for-hire vessel permit has been required for both types of vessels for reef fish since 1996 and is a limited access permit. On May 6, 2015, there were 1,320 valid (non-expired) or renewable Gulf Charter/Headboat Reef Fish permits, including historical captain permits. A renewable permit is an expired permit that may not be actively fished, but is renewable for up to one year after expiration. Although the for-hire permit application collects information on the primary method of operation, the permit itself does not identify the permitted vessel as either a headboat or a charter vessel and vessels may operate in both capacities. However, only federally permitted headboats are required to submit harvest and effort information to the NMFS Southeast Region Headboat Survey (SRHS). Participation in the SRHS is based on determination by the Southeast Fishery Science Center (SEFSC) that the vessel primarily operates as a headboat. As of May 6, 2015, 69 Gulf headboats were registered in the SRHS (K. Fitzpatrick, NMFS SEFSC, pers. comm.).

Information on Gulf charter boat and headboat operating characteristics is included in Savolainen et al. (2012) and is incorporated herein by reference.

There are no specific federal permitting requirements for recreational anglers to fish for or harvest reef fish. 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. For the for-hire sector, customers are authorized to fish under the charter or headboat vessel license and are not required to hold

¹For 2013, SRHS data was reported separately for NW Florida and Alabama, but has been combined here for consistency with previous years.

²Mississippi and Louisiana are combined for confidentiality purposes.

their own fishing licenses. As a result, it is not possible to identify with available data how many individual anglers would be expected to be affected by this proposed action.

Economic Value

Economic value can be measured in the form of consumer surplus (CS) per additional red snapper kept on a trip for anglers (the amount of money that an angler would be willing to pay for a fish in excess of the cost to harvest the fish). The estimated value of the CS per fish for a second red snapper kept on a trip is approximately \$79.72 (Carter and Liese 2012; values updated to 2013 dollars¹⁰).

With regards to for-hire businesses, economic value can be measured by producer surplus (PS) per passenger trip (the amount of money that a vessel owner earns in excess of the cost of providing the trip). Estimates of the PS per for-hire passenger trip are not available. Instead, net operating revenue (NOR), which is the return used to pay all labor wages, returns to capital, and owner profits, is used as a proxy for PS. The estimated NOR value is \$151 (2013 dollars) per charter angler trip (Liese and Carter 2012). The estimated NOR value per headboat angler trip is \$52 (2013 dollars) (C. Liese, NMFS SEFSC, pers. comm.). Estimates of NOR per red snapper target trip are not available.

Business Activity

The desire for recreational fishing generates economic activity as consumers spend their income on various goods and services needed for recreational fishing. This spurs economic activity in the region where recreational fishing occurs. It should be clearly noted that, in the absence of the opportunity to fish, the income would presumably be spent on other goods and services and these expenditures would similarly generate economic activity in the region where the expenditure occurs. As such, the analysis below represents a distributional analysis only.

Estimates of the business activity (economic impacts) associated with recreational angling for red snapper were derived using average impact coefficients for recreational angling for all species, as derived from an add-on survey to the Marine Recreational Fisheries Statistics Survey (MRFSS) to collect economic expenditure information, as described and utilized in NMFS (2011b). Estimates of the average expenditures by recreational anglers are also provided in NMFS (2011b) and are incorporated herein by reference.

Recreational fishing generates business activity (economic impacts). Business activity for the recreational sector is characterized in the form of full-time equivalent jobs, output (sales) impacts (gross business sales), and value-added impacts (difference between the value of goods and the cost of materials or supplies). Estimates of the average red snapper target effort (2011-2014) and associated business activity (2013 dollars) are provided in Table 3.4.2.5. West Florida experienced the highest level of business activity associated with recreational red snapper fishing for all the Gulf States¹¹, followed by Alabama.

¹⁰ Converted to 2013 dollars using the 2013 annual Consumer Price Index (CPI) for all US urban consumers provided by the Bureau of Labor and Statistics (BLS).

¹¹ Excludes Texas for which target effort data is unavailable.

The estimates provided in Table 3.4.2.5 only apply at the state-level. These numbers are not additive across the region. Addition of the state-level estimates to produce a regional (or national total) could either under- or over-estimate the actual amount of total business activity because of the complex relationship between different jurisdictions and the expenditure/impact multipliers. Neither regional nor national estimates are available at this time.

Estimates of the business activity associated with headboat effort are not available. Headboat vessels are not covered in the MRFSS/MRIP so, in addition to the absence of estimates of target effort, estimation of the appropriate business activity coefficients for headboat effort has not been conducted.

Table 3.4.2.5. Summary of red snapper target trips (2011-2014 average) and associated business activity (2013 dollars). The output, value added, and jobs impact estimates are not additive across states.

| cross states. | | | 1 | | | | | | | |
|-----------------------|--------------|---------------------|-------------|-------------|-------|--|--|--|--|--|
| | Alabama | West Florida | Louisiana | Mississippi | Texas | | | | | |
| | | Private/Rental Mode | | | | | | | | |
| Target Trips | 117,020 | 219,116 | 29,379 | 14,862 | * | | | | | |
| Output Impact | \$6,324,091 | \$11,848,997 | \$2,220,463 | \$523,061 | * | | | | | |
| Value Added Impact | \$3,422,393 | \$6,709,550 | \$1,067,020 | \$266,046 | * | | | | | |
| Jobs | 68 | 102 | 17 | 5 | * | | | | | |
| | | Cha | rter Mode | | | | | | | |
| Target Trips | 17,077 | 23,586 | 5,273 | 28 | * | | | | | |
| Output Impact | \$10,913,013 | \$17,296,265 | \$2,550,132 | \$11,340 | * | | | | | |
| Value Added Impact | \$7,468,284 | \$11,563,482 | \$1,753,524 | \$7,988 | * | | | | | |
| Jobs | 106 | 152 | 20 | 0 | * | | | | | |
| | | Al | ll Modes | | | | | | | |
| Target Trips | 134,097 | 242,702 | 34,652 | 14,890 | * | | | | | |
| Output Impact | \$17,237,104 | \$29,145,261 | \$4,770,595 | \$534,401 | * | | | | | |
| Value Added Impact | \$10,890,677 | \$18,273,032 | \$2,820,543 | \$274,034 | * | | | | | |
| Jobs | 174 | 254 | 37 | 5 | * | | | | | |

^{*}Because target information is unavailable, associated business activity cannot be calculated. Note: There were no target trips recorded from the shore mode.

Source: effort data from the MRIP, economic impact results calculated by NMFS SERO using the model developed for NMFS (2011b).

3.5 Description of the Social Environment

A description of the social environment for the commercial and recreational sectors' harvest of red snapper is provided in GMFMC (2013a). Amendment 40 (GMFMC 2014) and Amendment 28 (GMFMC 2015) include descriptions of the federal for-hire and private angling components of the recreational sector, a history of managing the recreational harvest of red snapper, and a discussion of communities engaged and reliant on red snapper or fishing in general. These documents are incorporated here by reference. This plan amendment would affect management of the recreational sector, only. Thus, a summary of the information provided in the referenced documents for the recreational sector is included here.

Red snapper is harvested recreationally in all five Gulf States. The proportion of total recreational landings by State for the years 1986 through 2014 is provided in Table 2.6.1. Landings by State are not constant; the proportion of the quota represented by each State's landings varies from year to year. Across time, the proportion of landings made up by the eastern Gulf States (Alabama and western Florida) has increased compared to the western Gulf States (Texas and Louisiana), as the rebuilding plan has proceeded and the stock has returned and expanded in the east.

Red snapper landings for the recreational sector are not available at the community level, making it difficult to identify communities as dependent on recreational fishing for red snapper. Data reflecting commercial landings of red snapper may or may not reflect areas of importance for recreational fishing of red snapper. It cannot be assumed that the proportion of commercial red snapper landings among other species in a community would be similar to its proportion among recreational landings within the same community because of sector differences in fishing practices and preferences.

While there are no landings data at the community level for the recreational sector, Table 3.5.1 offers a ranking of communities based upon the number of reef fish charter permits and reef fish charter permits divided by population. This is a crude measure of the reliance upon recreational reef fish fishing, is general in nature and not specific to red snapper. Ideally, additional variables quantifying the importance of recreational fishing to a community would be included (such as the amount of recreational landings in a community, availability of recreational fishing related businesses and infrastructure, etc.); however, these data are not available at this time. Because the analysis used discrete geo-political boundaries, Panama City and Panama City Beach had separate values for the associated variables. Calculated independently, each still ranked high enough to appear in the list suggesting a greater importance for recreational fishing in that region.

At this time it is not possible to examine the intensity of recreational fishing activity at the community level for a specific species. However, it is likely that those communities that have a higher rank in terms of charter for-hire activity and have a dynamic commercial fishery for red snapper will likely have a vigorous recreational red snapper fishery. The communities that meet those criteria include: Destin, Panama City and Panama City Beach, and Pensacola, Florida; Galveston and Freeport, Texas; and Venice and Grand Isle, Louisiana. Other communities that rank high for recreational fishing activity are located near one of the top 15 communities with

commercial landings of red snapper (Figure 3.4.1.1 in GMFMC 2015). These include Orange Beach and Dauphin Island, Alabama, near Bayou LaBatre and Grand Bay, Alabama, each of which ranks among the top 15 commercial red snapper communities. Within close proximity to one another, Port Aransas, Port O'Connor, and Corpus Christi, Texas each rank among the top communities for charter for-hire activity (Table 3.5.1), suggesting a dynamic recreational fishery in the area. Social effects resulting from actions taken in this plan amendment are likely to be greatest in these communities.

Table 3.5.1. Average community rank by total number of reef fish charter permits and divided

by community population.

| State | Community | Reef Fish charter permits | Permit Rank | Pop | Permit/Pop | Permit/Pop rank | Combined rank |
|-------|-------------------|---------------------------|----------------|---------|------------|--------------------|---------------|
| AL | Orange Beach | 105 | 2 | 5185 | 0.0203 | 3 | 5 |
| LA | Venice | 36 | 7 | 202 | 0.1782 | 1 | 8 |
| FL | Destin | 114 | 1 | 12307 | 0.0093 | 10 | 11 |
| AL | Dauphin Island | 19 | 12 | 1375 | 0.0138 | 5 | 17 |
| TX | Port Aransas | 33 | 9 | 3444 | 0.0096 | 9 | 18 |
| LA | Grand Isle | 14 | 17 | 597 | 0.0235 | 2 | 19 |
| TX | Freeport | 40 | 5 | 12183 | 0.0033 | 15 | 20 |
| TX | Port O'Connor | 15 | 15 | 1253 | 0.0120 | 7 | 22 |
| FL | Panama City | 60 | 3 | 36795 | 0.0016 | 20 | 23 |
| FL | Steinhatchee | 13 | 19 | 1047 | 0.0124 | 6 | 25 |
| FL | Pensacola | 43 | 4 | 52903 | 0.0008 | 22 | 26 |
| FL | Panama City Beach | 32 | 10 | 11364 | 0.0028 | 16 | 26 |
| FL | Apalachicola | 17 | 14 | 2357 | 0.0072 | 12 | 26 |
| FL | Naples | 35 | 8 | 20405 | 0.0017 | 19 | 27 |
| LA | Chauvin | 15 | 15 | 3220 | 0.0047 | 13 | 28 |
| TX | Galveston | 38 | 6 | 49990 | 0.0008 | 23 | 29 |
| FL | Cedar Key | 8 | 27 | 463 | 0.0173 | 4 | 31 |
| TX | Matagorda | 8 | 27 | 710 | 0.0113 | 8 | 35 |
| MS | Biloxi | 26 | 11 | 43921 | 0.0006 | 25 | 36 |
| FL | Mexico Beach | 9 | 25 | 1181 | 0.0076 | 11 | 36 |
| FL | Carrabelle | 10 | 23 | 2612 | 0.0038 | 14 | 37 |
| FL | Sarasota | 18 | 13 | 52877 | 0.0003 | 26 | 39 |
| FL | Madeira Beach | 11 | 21 | 4335 | 0.0025 | 18 | 39 |
| FL | Port St Joe | 10 | 23 | 3560 | 0.0028 | 17 | 40 |
| FL | Tarpon Springs | 14 | 17 | 23071 | 0.0006 | 24 | 41 |
| FL | St Petersburg | 12 | 20 | 245715 | 0.0000 | 27 | 47 |
| FL | Treasure Island | 8 | 27 | 6847 | 0.0012 | 21 | 48 |
| TX | Houston | 11 | 21 | 2068026 | 0.0000 | 29 | 50 |
| TX | Corpus Christi | 9 | 26 | 299324 | 0.0000 | 28 | 54 |

Source: Southeast Regional Office, 2012.

To better understand how these communities are engaged and reliant on fishing, indices were created using secondary data from permit and landings information for the commercial and recreational sectors (Jepson and Colburn 2013; Jacob et al. 2012). Fishing engagement is primarily the absolute numbers of permits, landings, and value. Fishing reliance has many of the same variables as engagement divided by population to give an indication of the per capita impact of this activity.

Using a principal component and single solution factor analysis each community receives a factor score for each index to compare to other communities. With the selected communities from both sectors, factor scores of both engagement and reliance were plotted onto bar graphs. Factor scores are denoted by colored bars and are standardized, therefore the mean is zero. Two thresholds of one and ½ standard deviation above the mean are plotted onto the graphs to help determine a threshold for significance. Because the factor scores are standardized a score above 1 is also above one standard deviation. Using the thresholds of fishing dependence of ½ and one standard deviation, Figure 3.5.1 suggests that several communities are substantially engaged, reliant, or both on recreational fishing, in general.

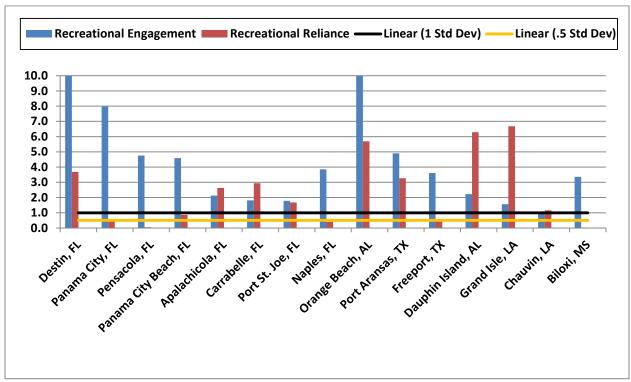


Figure 3.5.1. Top 15 recreational fishing communities' engagement and reliance. Source: Southeast Regional Office, social indicators database (2012).

3.5.1 Environmental Justice Considerations

Executive Order 12898 requires federal agencies conduct their programs, policies, and activities in a manner to ensure individuals or populations are not excluded from participation in, or denied the benefits of, or subjected to discrimination because of their race, color, or national origin. In

addition, and specifically with respect to subsistence consumption of fish and wildlife, federal agencies are required to collect, maintain, and analyze information on the consumption patterns of populations who principally rely on fish and/or wildlife for subsistence. The main focus of Executive Order 12898 is to consider "the disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories..." This executive order is generally referred to as environmental justice (EJ).

Recreational red snapper fishermen and associated businesses and communities along the coast may be affected by this proposed action. However, information on race, ethnicity, and income status for groups at the different participation levels (private anglers, for-hire captains, crew, and customers, and employees of recreational fishing businesses, etc.) is not available, because these types of data are not collected by NMFS or other agencies. To identify potential areas of EJ concern, this analysis uses a suite of indices created to examine the social vulnerability of coastal communities (Jepson and Colburn 2013). The three indices are poverty, population composition, and personal disruptions. The variables included in each of these indices have been identified through the literature as being important components that contribute to a community's vulnerability. Indicators such as increased poverty rates for different groups, more single female-headed households, households with children under the age of five, disruptions such as higher separation rates, higher crime rates, and unemployment all are signs of populations experiencing vulnerabilities. Communities that exceed the threshold for one or more of the indices would be expected to exhibit vulnerabilities to sudden changes or social disruption that might accrue from regulatory change, and greater vulnerability is suggested by exceeding the thresholds for multiple indices.

These indicators of vulnerability have been developed using secondary data at the community level because it does not exist for fishermen individually and is not collected through permit application or other programs that might be vehicles for this type of data. Because these types of data are not collected at the individual level by NMFS or other agencies, it is difficult to understand the social vulnerabilities that might exist on either a household or individual basis. Therefore, it is hard to recognize or attribute impacts that will directly affect individuals who are fishermen or work in a related business because what those specific vulnerabilities may be remains unknown. Therefore, this measure of vulnerability is a broader measure at the community level and not specific to fishermen or the related businesses and their employees.

The recreational communities most engaged and reliant on fishing in general are identified in Figure 3.5.1. Figure 3.5.1.1 provides the community scores for the three social vulnerability indices. The communities of Apalachicola, Carrabelle, and Panama City, Florida; Grand Isle, and Venice, Louisiana; Dauphin Island, Alabama; and Freeport, Texas exceed the threshold of ½ standard deviation above the mean for at least one of the social vulnerability indices. It would be expected that these communities may exhibit vulnerabilities to social or economic disruption because of regulatory change, and would be the communities most likely subject to EJ concerns. Those communities that exhibit several index scores exceeding the threshold would be the most vulnerable. These include Apalachicola and Carrabelle, Florida; and Freeport, Texas. Social effects resulting from action taken in this plan amendment are likely to be greatest in these communities.

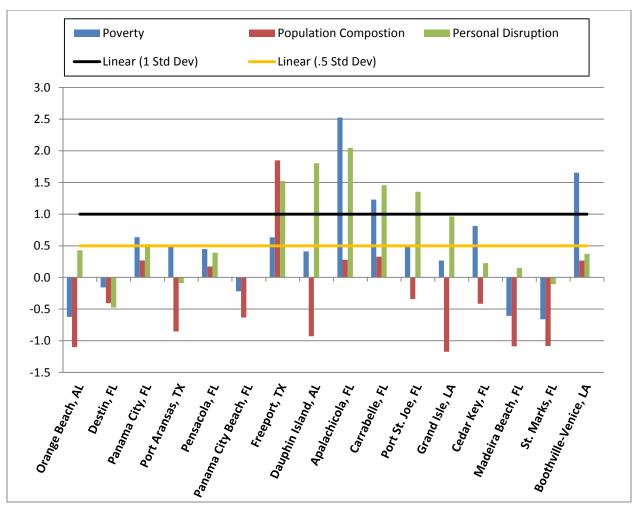


Figure 3.5.1.1. Social vulnerability indices for recreational fishing communities. Source: Southeast Regional Office, social indicators database (2012).

The actions in this amendment would implement a regional management program for the recreational management of red snapper in which states or regions will be authorized to adapt certain management measures to regional conditions. It is assumed that the flexibility provided to adopt management measures most appropriate to a given region would result in optimal fishing opportunities for local anglers which in turn, would result in benefits to local communities. As will be addressed in the social effects analysis for each action (Chapter 4), direct impacts are not expected to accrue to the social environment from most actions of this amendment, which establish the parameters of the program. However, indirect effects (positive or negative) may result due to 1) the specific regulations implemented in each region, 2) how any new regulations differ from existing regulations, and 3) the success or failure of cooperation under the new management regime. Disproportionate impacts to EJ populations are not expected to result from any of the actions in this amendment. Nevertheless, because the regulations to be implemented in each region remain unknown, the lack of impacts on EJ populations cannot be assumed. Finally, there are no known claims for customary usage or subsistence consumption of Gulf red snapper by any population including tribes or indigenous groups.

3.6 Description of the Administrative Environment

3.6.1 Federal Fishery Management

Federal fishery management is conducted under the authority of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) (16 U.S.C. 1801 *et seq.*), originally enacted in 1976 as the Fishery Conservation and Management Act. The Magnuson-Stevens Act claims sovereign rights and exclusive fishery management authority over most fishery resources within federal waters (the exclusive economic zone, or EEZ), an area extending 200 nautical miles from the seaward boundary of each of the coastal states, and authority over U.S. anadromous species and continental shelf resources that occur beyond federal waters.

Responsibility for federal fishery management is shared by the Secretary of Commerce (Secretary) and eight regional fishery management councils that represent the expertise and interests of constituent states. Regional councils are responsible for preparing, monitoring, and revising management plans for fisheries needing management within their jurisdiction. The Secretary is responsible for promulgating regulations to implement proposed plans and amendments after ensuring management measures are consistent with the Magnuson-Stevens Act and with other applicable laws summarized in Appendix B. In most cases, the Secretary has delegated this authority to NMFS.

The Council is responsible for fishery resources in federal waters of the Gulf. These waters extend to 200 nautical miles offshore from the nine-mile seaward boundary of the states of Florida and Texas, and the three-mile seaward boundary of the states of Alabama, Mississippi, and Louisiana. The length of the Gulf coastline is approximately 1,631 miles. Florida has the longest coastline of 770 miles along its Gulf coast, followed by Louisiana (397 miles), Texas (361 miles), Alabama (53 miles), and Mississippi (44 miles).

The Council consists of seventeen voting members: 11 public members appointed by the Secretary; one each from the fishery agencies of Texas, Louisiana, Mississippi, Alabama, and Florida; and one from NMFS. The public is also involved in the fishery management process through participation on advisory panels and through Council meetings that, with few exceptions for discussing personnel matters, national security, or litigation briefings, are open to the public. The regulatory process is also in accordance with the Administrative Procedures Act, in the form of "notice and comment" rulemaking, which provides extensive opportunity for public scrutiny and comment, and requires consideration of and response to those comments.

Regulations contained within FMPs are enforced through actions of the National Oceanic and Atmospheric Administration (NOAA) Office of Law Enforcement, the United States Coast Guard, and various state authorities. To better coordinate enforcement activities, federal and state enforcement agencies have developed cooperative agreements to enforce the Magnuson-Stevens Act. These activities are being coordinated by the Council's Law Enforcement Advisory Panel and the Gulf States Marine Fisheries Commission's Law Enforcement Committee, which have developed a 5-year "Gulf of Mexico Cooperative Law Enforcement Strategic Plan – 2008-2012."

The red snapper stock in the Gulf is classified as overfished, but no longer undergoing overfishing. A rebuilding plan for red snapper was first implemented under Amendment 1 (GMFMC 1989), and has undergone several revisions. The current rebuilding plan was established in Reef Fish Amendment 27/Shrimp Amendment 14 (GMFMC 2007), and calls for rebuilding the stock to a level capable of supporting maximum sustainable yield on a continuing basis by 2032. Periodic adjustments to the ACL and other management measures needed to affect rebuilding are implemented through amendments and framework actions.

3.6.2 State Fishery Management

The purpose of state representation at the Council level is to ensure state participation in federal fishery management decision-making and to promote the development of compatible regulations in state and federal waters. The state governments of Texas, Louisiana, Mississippi, Alabama, and Florida have the authority to manage their respective state fisheries. Each of the five Gulf States exercises legislative and regulatory authority over their respective state's natural resources through discrete administrative units. Although each agency is the primary administrative body with respect to the states' natural resources, all states cooperate with numerous state and federal regulatory agencies when managing marine resources. A more detailed description of each state's primary regulatory agency for marine resources is provided in Amendment 22 (GMFMC 2004b).

CHAPTER 4. ENVIRONMENTAL CONSEQUENCES

4.1 Action 1 – Regional Management

4.1.1 Direct and Indirect Effects on the Physical Environment

Direct and indirect effects on the physical environment by the red snapper fishery have been discussed in detail in Reef Fish Amendment 22 and Reef Fish Amendment 27/Shrimp Amendment 14 (GMFMC 2004b and 2007). The primary gear used by the recreational sector is hook-and-line. Hook-and-line gear has the potential to snag and entangle bottom structures. Each individual set has a very small footprint and thus only a small potential for impact, but the cumulative impacts from recreational fishing could result in a large amount of gear being placed in the water, increasing the potential for impact. The line and weights used by this gear type also can cause abrasions (Barnette 2001). Additionally, vessels used for hook-and-line fishing often anchor, adding to the potential damage of the bottom at fishing locations. If hook-and-line gear is lost, long-term indirect effects to habitat may occur if marine life becomes entangled in the gear or the gear is overgrown with algae (Hamilton 2000; Barnette 2001). Circle hooks are required in the reef fish fishery. Because of the design of circle hooks, this gear is less likely to snag bottom habitat than other hook types.

Action 1 would have no direct effect on the physical environment. This action is administrative because it determines who has the authority to set red snapper regulations in federal waters. This action could indirectly affect the physical environment in different areas or times of the Gulf of Mexico (Gulf) by redirecting how and when fishing is conducted between different Gulf States or regions. Alternative 1 (No Action) would continue Gulf-wide federal management of red snapper. Alternative 2 would delegate certain management measures to the regions. Depending on the deviation of the management measures from status quo, this may cause some spatial and temporal shift in the impacts to the physical environment. Alternative 3 and Preferred Alternative 4 would allow the regions to propose conservation equivalency plans (CEP) to harvest their portion of the red snapper annual catch limit (ACL). The regional regulations could indirectly effect the physical environment should remain similar to status quo regardless of the potential spatial and temporal shift of the impacts. Should different management regimes be implemented between regions under these alternatives, this could affect how fishing is conducted. For example, reducing the red snapper bag limit for one region could lead to a prolonged fishing season for that region. This could result in an increase in the number of red snapper fishing trips, and because red snapper is a part of a multispecies fishery, result in an overall increase in the amount of reef fish fishing, particularly if the ability to catch red snapper would encourage more reef fish fishermen to go fishing. Under this scenario, an increase in fishing in a particular area or over a particular time period would likely add to any adverse effects on the physical environment from fishing. Adverse effects to the physical environment would be lessened if resultant regional red snapper management measures developed by the regions (Alternative 2) or through CEPs (Alternative 3 and Preferred Alternative 4) resulted in a reduction in fishing effort for red snapper or reef fish. Alternative 5 would limit these effects to ten (Option a), five (Option b), three (Option c) or two (Option d) years, unless the Council decided to extend this program.

4.1.2 Direct and Indirect Effects on the Biological/Ecological Environment

Direct and indirect effects on the biological/ecological environment from the harvest of red snapper have been discussed in detail in Reef Fish Amendment 22 and Reef Fish Amendment 27/Shrimp Amendment 14 (GMFMC 2004b and 2007) as well as in the March 2013 Framework Action (GMFMC 2013a) and January 2015 Framework Action (GMFMC 2015b) and are incorporated here by reference. The impacts of the 2010 Deepwater Horizon MC252 oil spill on the biological/ecological environments in the Gulf are discussed in Section 3.3 Description of Biological/Ecological Environment. Red snapper management actions that affect the biological/ecological environment mostly relate to the impacts of fishing on a species' population size, life history, and species interactions within its habitat. Removal of fish from the population through fishing reduces the overall population size. Fishing gears have different selectivity patterns which refers to a fishing method's ability to target and capture organisms by size and species. Effects from different selectivities include the number of discards, mostly sublegal fish and fish caught during seasonal closures and the mortality associated with releasing these fish.

Because this action determines the Council's preferred method for establishing the authority to set recreational red snapper regulations in federal waters, direct effects are not expected to result on the biological/ecological environment. Indirect effects could result for the biological environment depending on the management measures (i.e., bag limits and seasons) established for each region. Without knowing the bag limits and seasons that each region would establish, the biological effects from **Alternatives 2**, **Alternative 3**, **and Preferred Alternative 4** remain unknown compared to **Alternative 1** (No Action). However, any biological effects from the alternatives would be expected to be minimal because the regulations established by each region would be limited to the region's apportionment of the recreational sector ACL, and any overages would be accounted for under the accountability measure selected in Action 7. Additionally, NMFS and the Council will remain involved with data collection and scheduling stock assessments for red snapper through the Southeast Data, Assessment, and Review (SEDAR) process to ensure the red snapper stock continues to recover.

Alternative 5 allows the Council the flexibility of establishing a sunset provision on the selected regional management approach to occur after two to ten years (**Options d-a**). Biological effects would not be expected to result from the adoption of a sunset provision for this action.

Stock assessments factor in the effects of management measures on stock status. Establishing different regional bag limits and seasons for the recreational sector could make the stock assessment process more burdensome, but are not expected to negatively impact the rebuilding plan. If a region's management measures are found to adversely affect the red snapper stock, the Council and NMFS would need to take action to address these effects. In addition, the red snapper stock is managed under sector ACLs and AMs to minimize the risk of overfishing. Recent advances in ecosystem modeling (e.g., Ecopath; B. Mahmoudi, pers. comm. 12) are providing some insights into the effects of populations in response to each other. However, the nature and magnitude of ecological effects such as competition and predator-prey interactions are

¹² Dr. Behzad Mahmoudi, Florida Fish and Wildlife Research Institute, St. Petersburg, Florida

difficult to predict with any accuracy. Thus, the relationships among species in marine ecosystems are still poorly understood. As development of these models progresses, the effects of management actions on the biological/ecological environment and the resulting ecosystem should be better understood.

4.1.3 Direct and Indirect Effects on the Economic Environment

Because the recreational red snapper management measures that might ultimately result from all of the actions and alternatives considered in this proposed amendment are unknown, the following assessment provides a qualitative discussion of the expected economic effects of this proposed action. Additionally, **Alternative 5** deals only with the duration of any regional management authorization adopted. As a result, **Alternative 5** is only comparable to **Alternative 1** and not **Alternative 2**, **Alternative 3**, or **Preferred Alternative 4**.

Most of the actions and alternatives considered in this proposed amendment address management considerations that progressively build upon previous actions. For example, Action 1 addresses the option to adopt a regional approach (through delegation or conservation equivalency) to the management of the recreational harvest of red snapper, Action 3 (Section 4.3) defines the regions, and Action 6 (Section 4.6) specifies the regional allocations. A decision to not adopt regional management (through delegation or conservation equivalency) would render the subsequent actions that define the scope and/or parameters of regional management moot. Alternatively, the effects of regionalization would be expected to vary by the scope of regionalization (number and/or geographic extent of regions) and the flexibility the regions would have to vary the red snapper recreational harvest regulations (season, bag, size limit, etc.). Thus, because these actions are progressively related, the net potential effects of one action will be determined by the decisions made for subsequent actions and vice versa. Although this interrelation does not prevent comparison of the expected effects of the alternatives considered under each action, the total effects that may ultimately accrue to an individual action and alternative are dependent on subsequent decisions for the other actions.

The underlying expectation for most of the actions considered in this proposed amendment is that the establishment of smaller "regulatory jurisdictions" (hereafter referred to as "regionalization") may be capable of providing the constituents (residents and tourists) in each region with red snapper recreational harvest regulations better suited to local preferences, resulting in increased benefits. These benefits may be economic, social, or biological. Discussion of the expected biological and social effects of each action is provided elsewhere in this document. The resultant management expected to collectively (from all states/regions) result from the proposed actions should be, at worst, biologically neutral compared to the status quo, i.e., the resultant management should not harm the biological status of the resource or compromise the biological progress and goals of current management. From this context, the following discussion of the expected economic effects of Action 1 and subsequent actions assumes that the biological status of the resource and progress toward the biological goals is not harmed by the proposed collective actions. As a result, discussion of the potential economic effects arising from any potential change in the biological status of red snapper will be limited to, where appropriate for this and subsequent actions, discussion of the reasonableness of maintaining this assumption (no biological harm) under the alternatives considered.

Action 1 would establish a structure that would allow, but not require, regions to exercise limited control of the recreational harvest of red snapper in federal waters. As a result, the adoption of any of the alternatives considered would allow certain subsequent actions or behaviors to occur, with associated economic consequences, but not require these actions or behaviors. For example, a region could be given authority to manage the harvest of red snapper by the recreational sector in federal waters but choose not to exercise that authority. Because Action 1 would allow, but not require, subsequent actions, all of the economic effects discussed below would be indirect effects. Additionally, because the potential authorities to act are discretionary and not mandatory, failure to exercise the authority would be expected to result in the foregone net increase in any benefits associated with regional management. These benefits would also be foregone under **Alternative 1** if the Council elects, in the future, to not establish regional management measures more attuned to local preferences, for which current authority exists, if sufficient justification can be developed.

To reiterate, regionalization would be expected to result in management measures better tailored to localized preferences. The greater the regulatory control by these regions, assuming no biological harm to the red snapper resource, the greater the potential gain in economic benefits. Depending on the form of regionalization adopted, certain responsibilities and conditions would apply that may affect management costs for the regions, specifically the costs of regulatory development and implementation, monitoring, and enforcement. Acceptance of delegation of authority (Alternative 2) would require each region to develop and undertake a process to identify and implement the management measures each region wishes to impose. This may result in increased management costs to the regions, depending on the extent that the regions established mirror current regulatory jurisdictions (for example, individual states versus multistate "unions;" see Section 4.3) and the existence and/or complexity of the processes these regions undertake to develop and implement current regulatory authority (individual states have processes to establish regulations in their state waters, whereas multi-state "unions" do not and would have to develop such). Additional discussion on these potential costs is provided in Section 4.3.3. Regardless of the current processes in place and/or similarity of current regulatory jurisdictions with the regions that may be established by this proposed amendment, the increased management authority of the regions would be expected to increase the regulatory development costs of the affected regions (broader regulatory authority would be expected to result in a more time-consuming and costly management process). For NMFS and the Council, the regulatory burden, and associated costs, may decline, particularly if the regions are effective in restraining harvest to their allocation. If the regions are not effective in restraining harvest, then the total management cost could increase. It cannot be determined whether the total management cost under Alternative 2 would be more than, less than, or equal to the cost under Alternative 1. This is also the case under Alternative 3 and Preferred Alternative 4, which would allow the states to adopt conservation equivalency management instead of receiving delegated authority. Thus, it may not be unreasonable to project that the management cost might not change. However, regardless of the relationship of the management costs of Alternative 3 and Preferred Alternative 4 (and Alternative 2) relative to Alternative 1, Preferred Alternative 4 would be expected to result in higher management costs than Alternative 3 because of the recurring costs associated with the technical review committee requirement.

It is noted that the management costs discussed in the previous paragraph refer only to the costs associated with the development of appropriate regulations. A key cost in the management of red snapper (and other species) is the cost of data collection and harvest monitoring. Regardless of the alternative chosen, the current NMFS data collection and harvest monitoring programs would continue. As a result, all costs associated with these programs will remain unchanged (except, as appropriate, as a result of programmatic budgetary changes to improve the general quality of these programs, budget appropriation changes, changes in methodology or technology, etc.). Although certain regulatory authority would be transferred to the specified regions under Alternatives 2-4, no region would be required to implement new data collection or harvest monitoring programs. Thus, duplication of data collection or harvest monitoring costs would not be required. However, the potential consequences of triggering the proposed AMs (see Action 7, Section 4.7.3) may motivate a region to take additional steps, beyond current monitoring procedures, to decrease the likelihood that they exceed their allocation. If enhanced monitoring occurs, the regional costs of harvest monitoring would increase. However, this would be a discretionary expense, and not a necessary outcome of this or other actions, and would only be expected to occur if the expected costs of enhanced monitoring were less than the expected costs of exceeding the allocation.

It is also noted that the importance of limiting harvest to the allocation cannot be overstated. Because of the popularity of red snapper as a target and harvest species, the suggested dependency of businesses on red snapper at certain times of the year, and the business and community needs of regular patronage, the red snapper recreational sector of the reef fish fishery needs both stable harvest amounts and fishing seasons. This means that, to maximize benefits, a region cannot be expected to rely on or thrive under feast and famine cycles, harvesting large overruns one year, followed by a payback the next. Although an overrun would be associated with increased business traffic and angler expenditures (and higher economic benefits because the harvest regulations should be better tailored to local constituent preferences), the subsequent payback would not be expected to satisfy constituent demand in the following year and may seriously jeopardize the ability of businesses to survive until the regions' allocation "recovers" (the payback ends). Thus, large annual harvest fluctuations should be avoided.

Under the regionalization envisioned under **Alternative 2**, **Alternative 3**, and **Preferred Alternative 4**, the red snapper management measures within each region would primarily be enforced dockside and not at sea. Exceptions to dockside enforcement would likely include if a fisherman is in possession of fish when federal waters are closed – either in part or in total, subject to the regulations established as a result of this proposed amendment (as a result of Action 5, or closure under default regulations, etc.) - to the harvest or possession of red snapper, or is in possession of fish that are in violation of the bag or minimum size limits of all regions. As a result, federal enforcement costs associated with the recreational harvest of red snapper could decline. Although this would not be expected to reduce the total federal enforcement costs (assuming an enforcement budget not driven by the needs of individual species, sectors, or fisheries), it may be possible to shift enforcement effort to other purposes and increase the economic benefits associated with these tasks/needs. With respect to regional enforcement costs, the total enforcement costs may increase. On-the-water enforcement by state agents would be expected to continue for other species/fisheries and marine activities. Thus, these costs may not change. However, shifting the enforcement of red snapper recreational harvest regulations to the

docks may require an increased dockside presence and associated costs. As a result, overall, enforcement costs under Alternative 2, Alternative 3, or Preferred Alternative 4 would be expected to be higher than the enforcement costs under Alternative 1. No differences in the enforcement costs between Alternative 2, Alternative 3, or Preferred Alternative 4, however, have been identified or would be expected.

Finally, discussion of the potential effects of the alternatives on the likelihood of the alternate management structures effectively restraining harvest to the regional allocations and preserving the biological goals deserves note. Increasing a regions' ability to tailor the red snapper recreational regulations to the preferences of local constituents would be expected to increase the difficulty of achieving these two goals (restraining harvest and preserving the biological goals) because demand for red snapper fishing would be expected to increase (because of the more favorable fishing regulations; although not a certainty, increasing the length of the season or increasing the bag limit would be expected to result in increased effort). As a result, the greater the regional flexibility, the greater the likelihood that targets will be exceeded, overages occur, paybacks be required, and economic benefits not maximized. Regions may attempt to have flexible seasonal end dates and expect to be capable of monitoring harvests in real-time, such that overages can be minimized. However, recreational data collection is expensive and harvest monitoring difficult. Further, the economic benefits of a "fixed" season would be reduced if the season is not allowed to occur as forecast (as a result of harvest monitoring leading to an earlier closure than forecast) and expectations that the season could be closed "early" increases the likelihood that trips are taken earlier in the season, thus causing deviation from historic effort (and harvest) patterns. This effect, combined with the potential general increase in demand because of the more favorable fishing regulations, increases the likelihood that the allocation would be exceeded. As a result, in practice, it may be more likely, at least in the short term, that fixed seasons are implemented, overages occur, and management in subsequent years continues to chase an elusive goal of limiting harvest to the allocation. If the resource is affected as this occurs, the adverse economic effects become compounded. Because the likelihood of these problems, and associated economic effects, would be expected to increase with greater regional flexibility, Alternative 1 (current common management throughout federal waters) would be expected to least likely precipitate these problems. The likelihood of these problems would be expected to be the same for Alternative 2, Alternative 3, and Preferred Alternative 4.

Other than the economic effects associated with the administrative and procedural costs of determining the adequacy of proposed conservation equivalent measures submitted by the regions, as previously discussed, **Alternative 3** and **Preferred Alternative 4** may be expected to vary in the expected economic effects if the associated alternative review processes vary in the likelihood that approved plans are adequate for controlling harvest, or that excessively conservative management plans (resulting in forgone benefits) are avoided. However, it is not obvious that these two alternatives will vary in these aspects. NMFS would make the ultimate determination of proposal adequacy under both alternatives, and would also be expected to be represented on the technical review committee required by **Preferred Alternative 4**. The access to expanded expertise through the use of a technical review committee (**Preferred Alternative 4**) could, in theory, result in more informed and better decisions. However, the expansion of participation in the review process could result in gridlock, delay decision making and effective management, and result in associated economic costs. If review authority is limited to NMFS, as

would occur under **Alternative 3**, and results in equivalent decisions made in a more timely and efficient manner, then the economic benefits of this alternative would be greater than those of **Preferred Alternative 4**

Alternative 4 differ only in their ability to be adopted/implemented. The ability to be adopted affects the likelihood that the associated expected economic benefits can be realized. Specifically, Alternative 2 (delegation) requires a three-quarters majority vote of the voting members of the Gulf Council members for adoption, whereas Alternative 3 and Preferred Alternative 4 only require a simple majority. This is a procedural difference, however, and not one with an economic dimension other than, as stated, how this difference affects the likelihood that the potential economic benefits of regional management will be realized. Thus, assuming that the management measures that would be implemented by the regions would be invariant to the regional management approach adopted (delegation vs. conservation equivalency), both Alternative 3 and Preferred Alternative 4 would be expected to have a higher likelihood of achieving increased economic benefits than Alternative 2.

Collectively, because the expected economic effects of the proposed alternatives cannot be quantified, it is difficult to conclude a ranking of the alternatives based on the expected economic effects given the uncertainties discussed above. However, if the biological status and recovery of red snapper is protected and the regional allocation overages are minimized, then the more control given to the regions, the greater the expected economic benefits. Thus, from this perspective, **Alternative 2**, **Alternative 3**, and **Preferred Alternative 4** would each be expected to result in higher economic benefits than **Alternative 1**. The differences between **Alternatives 2-4** may be marginal to non-existent. Each, although authorized under different structures (delegation versus conservation equivalency), could result in the same red snapper management measures. As a result, if equally adoptable, each could result in the virtually the same economic effects, with the differences potentially reduced to higher procedural and administrative costs associated with the function of the technical review committee under **Preferred Alternative 4** compared to **Alternative 2** and **Alternative 3**. **Alternative 2**, however, may result in the least likelihood of the potential economic benefits of red snapper regulations better tailored to local conditions being realized because of the higher threshold required for Council approval.

Alternative 5 would limit the duration of the regional management program. None of the proposed options would be expected to affect the expected economic effects of regional management. Although there are economic benefits of management stability (stability allows fishermen and businesses greater opportunity to plan their activities and maximize their benefits), none of the options would limit the ability of the Council to rescind or extend regional management authority beyond the specified period of the options. In actual practice, the only period of management stability that might occur (i.e., unchanged regional management authority) may be the period of time required to develop and implement a new plan amendment to change the appropriate authorities. This would be expected to take approximately two to three years, or less if interim regulation is justified. The only certain effect of the adoption of any sunset option, compared to Alternative 1, would be a requirement for Council action, with associated costs, to terminate the sunset. These costs would be expected to be minor, however, because management

of the recreational harvest of red snapper would be expected to continue to be a routine topic of Council discussion and deliberation under regional management.

4.1.4 Direct and Indirect Effects on the Social Environment

As discussed in the previous section, most of the actions and alternatives under consideration in this plan amendment relate to and build upon previous actions, meaning that the total effects that may ultimately result from this action will relate to and depend on decisions made in other actions. Furthermore, the actions and alternatives considered in this amendment establish the parameters for a regional management program, but the actual harvest restrictions that might ultimately result from each region's management plan are unknown. Thus, direct effects are not expected and indirect effects are difficult to predict. Given these uncertainties, the following assessment provides a qualitative discussion comparing the potential indirect effects of the alternatives.

In part, regional management is being considered as a management option because of private recreational anglers' frustrations with existing recreational red snapper management. For example, the fishing season continues to be shortened despite the progress of the rebuilding plan. Additional impacts are not expected from maintaining red snapper management measures under **Alternative 1** (No Action). However, regional management is being considered in response to growing frustrations with status quo federal management and indirect benefits to the social environment are expected from enabling regional modification of management measures.

Nevertheless, potential indirect benefits from the ability to establish regionally preferred management measures for red snapper would be undermined, and potentially eliminated, if the adopted suite of management measures in a region results in the quota being caught faster. Structuring management measures to maximize preferred fishing times and practices would be expected to result in a region's quota being caught in a shorter amount of time, thus shortening the season and increasing the likelihood of an allocation overage if quota monitoring is either not implemented or is ineffective. Because a longer season is generally preferred by fishermen, there is a trade-off between providing greater flexibility to establish locally preferred management measures and a resulting increase in effort as the management measures provide anglers access under optimal conditions.

This action provides two broad approaches for the structure of the program: delegation (Alternative 2) or conservation equivalency measures (Alternative 3 and Preferred Alternative 4). Under either approach, it is possible that the same suite of management measures could be adopted for the regions. The primary differences between the approaches concerns where management authority is held and the process for regions to establish their recreational management measures for red snapper. These differences would not be expected to result in direct or indirect social effects.

As a form of co-management, successful regional management requires cooperation and sharing of responsibilities between state and federal fisheries managers (Berkes 2009). Delegation (Alternative 2) would involve a devolution of some management controls from NMFS to the regions. Devolving control of management to a more local scale is reported to provide social

benefits by enabling greater participation and involvement of resource users, which in turn may lead to increased compliance (Jentoft et al. 1998). Under conservation equivalency measures (Alternative 3 and Preferred Alternative 4), authority for managing red snapper would remain with the Council and NMFS. Regions would provide their proposed management measures first to a review body, then to NMFS for final approval (Preferred Alternative 4), or directly to NMFS for review and approval (Alternative 3). Cooperation between state and federal level agencies would still be a critical component for successful regional management under the conservation equivalency model. Under all three alternatives, indirect effects would be expected to result from, and be in proportion to, the success or failure of the cooperation among managing institutions and the regions, which remains unknown at this time.

Establishing a fixed date when regional management would end (**Alternative 5**) has the potential to affect the social environment indirectly. If a sunset option is selected as preferred and regional management is functioning well, the Council would need to take action to continue regional management. Such action must be timely to avoid disruptions to the program which could occur if the sunset date is triggered before the respective action is implemented. On the other hand, if the program is meeting the needs of some regions but not others, inclusion of a sunset provision could prompt the Council to review the program and consider modifications in a timely manner to address the concerns of the dissatisfied regions. If the program is not functioning well, the Council may need to end the program sooner than the selected sunset option provides for, requiring development of the appropriate document. This may be most likely under the longest option for the sunset (10 years, **Option a**). Establishing a sunset on regional management after shorter periods of time (2 years, **Option d**; 3 years, **Option c**; or 5 years, **Option b**) would allow less time for evaluating the success or failure of regional management. Whether or not an option is selected as preferred, the Council retains the ability to modify or end the program by developing the appropriate plan amendment.

4.1.5 Direct and Indirect Effects on the Administrative Environment

Three alternatives for regional management programs are proposed through this action and could affect the administrative environment. Alternative 1 (No Action) would retain Gulf-wide management of red snapper the status quo and not apply regional management; full authority for managing the red snapper recreational fishery would remain the responsibility of the Council and NMFS; there would be no changes to the administrative environment if **Alternative 1** is selected. Alternative 2, Alternative 3, and Preferred Alternative 4 establish a regional management system where the regions are granted certain management authority for red snapper recreational management, and Alternative 5 could apply to any of Alternative 2, Alternative 3, and Preferred Alternative 4. As such, Alternative 5 would affect the administrative environment for different periods of time from 2 to 10 years; those effects would increase/decrease as the number of years increase. Alternative 2, Alternative 3, and Preferred Alternative 4 would be expected to reduce the administrative burden to the federal government and the Council, as limited management authority is transferred to specific regions. Alternatives 2 and Preferred Alternative 4 would further reduce the federal administrative burden compared to Alternative 3. Alternative 2 would put a greater administrative burden on the States/regions to provide administrative support for their management of the red snapper recreational season, and Preferred Alternative 4 would additionally put additional

administrative burden on a committee designated outside the federal system. However, both would reduce federal administrative burden of implementing management measures for the red snapper recreational fishing efforts. **Alternative 3** and **Preferred Alternative 4** could potentially increase the federal administrative burden because NMFS would need to review and approve each region's proposal, and negotiate with regions should the regions' proposals not be acceptable. However, this may or may not increase total administrative burden compared to the current federal management system. The enforcement administrative burden is not likely to change; however, if it may be necessary shift from off-shore enforcement, as most enforcement would be dockside. If an angler harvests red snapper in federal waters of a region with closed state waters, they could land the fish in a neighboring region with open waters.

4.2 Action 2 – Regional Management and Sector Separation

4.2.1 Direct and Indirect Effects on the Physical Environment

Section 4.1.1 describes the effects from fishing on the physical environment and are not repeated here. This action to determine how sector separation would apply or not apply to regional management would have no direct effect on the physical environment. This action could indirectly affect the physical environment if changes in allocation between components results in an increase or decrease in the amount of fishing gear used to harvest red snapper. As stated in Amendment 40 (GMFMC 2014), the private angling component seems to be less efficient in harvesting red snapper than the for-hire component based on bag limit analyses reported in SERO (2012). The analysis indicated that charter vessels tend to catch slightly more red snapper on average than private vessels or headboats. Therefore, any increase in the proportion of the recreational quota caught by the private angler component would be expected to require more effort to catch fish compared to the for-hire component. This would increase the amount of interaction between fishing gear and the physical environment.

Alternative 1 (No Action) would not change the current fishing conditions. Under Alternative 1, the recreational sector's quota allocation of 42.3% to the federal for-hire component and 57.7% to the private angling component expire after the 2017 fishing year. If sector separation expires and the component sub-quotas go away, it is possible that the proportion of red snapper harvested by the private angling component could increase similar to the harvest trend prior to Amendment 40 (GMFMC 2014). Alternatives 2 and 3 would maintain the recreational sector's quota allocation between the components, capping harvest (effort) by the components and are expected to continue the benefits to the physical environment described in Amendment 40. Alternative 4 would end the component sub-quotas implemented through Amendment 40 and allow regions to determine if separate management measures are needed between the private anglers and for-hire vessels. Therefore, with respect to effects on the physical environment, Alternatives 2 and 3 would be most beneficial to the physical environment by limiting the amount of fishing effort by the components and Alternative 1 would be the least beneficial because there could be a proportional increase in the private angling component harvest after Amendment 40's allocation expires. The effects of Alternative 4 would be intermediate to the other alternatives and would be dependent on the degree regions limit red snapper fishing by the private anglers.

It should be noted that effects on the physical environment from this action regardless of the alternative would likely be minimal. Red snapper are part of the multispecies reef fish management unit. Therefore, even if red snapper are not available for harvest, fishermen would still continue to fish for other species and overall fishing effort would be minimally affected. In addition, recreational fishing for red snapper is controlled by a quota that should not be exceeded. Thus, there is a limit on the amount of directed fishing effort regardless of who harvests red snapper.

4.2.2 Direct and Indirect Effects on the Biological/Ecological Environment

Section 4.1.2 describes the effects from fishing on the biological/ecological environment and is not repeated here. This action to determine how sector separation would apply or not apply to regional management would have no direct effect and few indirect effects on the biological/ecological environment. Red snapper are part of the multispecies reef fish management unit. Even if red snapper are not available for harvest, fishermen would still continue to fish for other species and overall fishing effort would be minimally affected. Therefore, indirect effects from this action on other species and species' habitat (including protected species) are likely negligible. For red snapper, the most likely indirect effect on the stock from this action would be on discard mortality. Regulatory discards are fish that are caught, but not kept because they are too small, would put a fisherman over the bag limit, or are caught out of season. A certain percentage of these fish die and are called dead discards. The most recent red snapper stock assessment (SEDAR 31 2013) estimated dead discard rates for the recreational sector at 10%. However, the number of discards relative to the landed fish may differ between the private angling and federal for-hire components. For example, the relative number of landed fish between the charter boat and private angling vessels over the time period 1981-2011 was 45% to 55%, respectively (Data Workshop Report Figure 4.11.1 in SEDAR 31 2013). But the relative number of discards over the same time period was much lower for charter boats (31%) than the private angling vessels (69%) (Data Workshop Report Figure 4.11.4 in SEDAR 31 2013). Thus, the relative number of discarded fish compared to landed fish is less for charter fishing than for private angling¹³.

Given the above, alternatives that would shift the proportion of recreationally harvested red snapper to the private angling component would likely increase the number of dead discards caught under the recreational quota. As mentioned in Section 4.2.1, **Alternatives 2 and 3** would continue the current recreational sector's quota allocation of 42.3% to the federal for-hire component and 57.7% to the private angling component that was implemented through Amendment 40 (GMFMC 2014). Therefore, the proportion of dead discards relative to the quota should remain constant. If the component allocations expire, as would occur under **Alternatives 1** (No Action) in 2017 and **Alternative 4** effective with the implementation of Amendment 39 rulemaking, then it is likely the proportion of dead discards relative to the quota will increase. This likelihood is based on trends noted in Amendment 40 (GMFMC 2015) of an increasing proportion of the recreational harvest being caught by the private angling component in recent years. Thus, **Alternatives 1** and **4** would likely have a more adverse effect on the red snapper

¹³ It should be noted that similar information was not available for headboat trips and so a similar comparison could not be made for this portion of the federal for-hire component.

stock relative to **Alternatives 2** and **3** because the number of red snapper dead discards is likely to increase. However, these effects would likely be minimal given that overall recreational red snapper fishing effort is limited by the recreational quota and that red snapper discards and associated discard mortality occur not only when red snapper fishing is open, but when the season is closed. During red snapper closures, fishermen targeting other reef fish species often catch red snapper as bycatch that cannot be landed.

4.2.3 Direct and Indirect Effects on the Economic Environment

Because the harvest restrictions that might ultimately result from all of the actions and alternatives considered in this proposed amendment are unknown, the following assessment provides a qualitative discussion of the expected economic effects of this proposed action. Portions of the discussion of the expected economic effects for Action 1 provided in Section 4.1.3 are relevant to the discussion of the economic effects expected to result from this action. Only some of the information provided in Section 4.1.3 is summarized in the following discussion and the reader is encouraged to read Section 4.1.3 for a full discussion of this information

This proposed action would determine the components of the recreational sector that would be subject to regional management. Because this action would only establish a structural component of the management system that would be allowed under regional management, the resultant economic effects that would subsequently be expected to accrue to anglers, fishing or other businesses, and associated communities would be indirect economic effects of the proposed alternatives.

As previously discussed, the foundation of this proposed amendment is that regional control of the recreational harvest of red snapper would result in increased economic benefits because regional management can result in the implementation of harvest regulations that better match the preferences of local constituents. As discussed in Section 4.3.3, the establishment of more regions would be expected to result in greater economic benefits than the establishment of fewer regions because of the increased opportunity for regulatory localization. Extending this determination, the broader the opportunity for localized management, the closer a region can tailor management to the preferences of their constituents, and the more economic benefits can be increased. Embedded in this conclusion, however, is the assumption, as previously stated for the other actions, that the resultant regulations meet the objectives of the FMP, which include, but are not limited to, limiting harvest to the allocation and not harming the resource or compromising resource recovery.

In the case of the current action, the concept "broader the opportunity" relates to the two recreational angler groups that harvest red snapper, as established by Amendment 40, the separate federal for-hire and private angler components. Alternative 1, Alternative 2, and Alternative 3 would continue the separate management of these two angler components (sectors), whereas Alternative 4 would end the separate management of the sectors. The duration of sector separation may vary under Alternative 1 compared to Alternative 2 and Alternative 3; the separation is scheduled to sunset in three years (i.e., in 2018) under Amendment 40 (though the sunset could be lifted through future action), while the sunset would

be eliminated and sector separation would continue until ended by subsequent Council action under **Alternative 2** and **Alternative 3**. Prolonging sector separation may result in more economic benefits from both the longer time period and the possibility that certain economically favorable management measures might not be adopted under a shorter time horizon (e.g., a region may be reluctant to implement measures that cannot be continued in subsequent years due to the sunset of sector separation). Ending sector separation (**Alternative 4**) would eliminate the ability of a region to manage the two groups differently; all anglers, regardless of whether they fished from private vessels or for-hire vessels would be subject to the same bag limits and seasons. Key to this discussion is the determination in Amendment 40 that, over all, sector separation is expected to result in an increase in economic benefits due to the enhanced ability to better tailor management measures to the needs of each sector and improved harvest monitoring capability. Thus, maintaining sector separation, as would occur under **Alternative 1**, **Alternative 2**, and **Alternative 3**, would be expected to result in more economic benefits than ending sector separation, as would occur under **Alternative 4**.

Alternative 3 would be expected to result in greater economic benefits than Alternative 2.

Alternative 3 would allow greater flexibility at the regional level, because both components would be included, to tailor red snapper recreational management measures to local preferences. Additionally, the Gulf-wide economic benefits of Alternative 3 would be expected to increase the more States are included (i.e., the greater the number of States that elect to manage both sectors as separate components).

Alternative 4 would be expected to result in the least economic benefits of the four alternatives considered because the benefits of sector separation would not occur.

4.2.4 Direct and Indirect Effects on the Social Environment

Under regional management, ACLs and annual catch targets (ACTs) would be created from the recreational ACL for each region, resulting in regional ACLs and regional ACTs. Regional ACLs would reflect the proportion of the recreational sector ACL apportioned to each region, and the regional ACT would be calculated based on the established buffer. However, the recreational sector ACL is currently divided into component ACTs for the years 2015-2017 (Alternative 1). This action determines the components of the recreational sector that would be subject to regional management, given that the recreational sector ACL is currently divided between the private angling and federal for-hire components.

Because this action establishes a structural element for regional management, any resulting social effects would be indirect and relate to whether flexibility for managing toward local preferences is increased or decreased from current management (**Alternative 1**). A central assumption underlying this proposed amendment is that social benefits would increase by allowing greater regional flexibility in the recreational harvest of red snapper, because management measures could be established that better match the preferences of local constituents. On the other hand, there may be a trade-off in terms of maximizing flexibility at the expense of an overly complex regulatory system. As the recreational sector ACL is divided into more pieces (regional and component ACLs), it may be more difficult to constrain landings within a greater number of smaller ACLs, increasing the likelihood of triggering a post-season

overage adjustment. Negative indirect effects would be expected from triggering an overage adjustment as the amount of fish that may be caught the following year is reduced.

The recreational components (private angling and federal for-hire) are being managed separately for the first time in 2015. Although each component is assigned a portion of the recreational sector ACL and are fishing under separate season closure provisions, all other management measures including the bag limit and season start date in federal waters remain the same for both components. The Council has initiated development of management plans for the federal for-hire component; Amendment 41 evaluates red snapper management for charter vessels and Amendment 42 evaluates reef fish management for headboats.

If **Alternative 1** (No Action) is selected and regional management is approved for final action prior to the end of 2017, the recreational sector ACL would continue to be divided between the two components of the recreational sector through 2017. Under **Alternative 1**, it would be unclear how the regional ACLs would be calculated, and to which component(s) of the recreational sector regional management would apply.

Alternatives 2-4 would remove the sunset on the separate management of the components of the recreational sector so the Council may specify whether regional management would apply to the private angling component only (Alternative 2), to the recreational sector as a whole (Alternative 4), or to let each region decide to manage its private angling component only or both components (Alternative 3).

Alternative 2 would apply regional management to the private angling component only and each region would be able to establish harvest restrictions deemed to be more appropriate for its private anglers. If this alternative is selected, it is assumed the Council would continue developing management plans for the federal for-hire component through Amendments 41 and 42. This alternative would be expected to balance regional flexibility with regulatory complexity, by allowing each region to establish preferred management measures for its private anglers, while management approaches most appropriate to federal for-hire vessels would be established through independent management plans.

Alternative 3 would allow each region to decide whether to manage its private angling component only, or to manage both the private angling and federal for-hire components separately within that region. This alternative would entail the greatest amount of both flexibility and regulatory complexity among the alternatives, as there could be up to 10 ACLs representing 10 different sets of management measures. For example, if each State is a separate region and each region establishes different seasons and bag limits for each component, flexibility would be maximized, but it may be difficult to enforce such a diverse regulatory landscape, and to constrain landings to within each regional and component ACL. In contrast to the Gulf-wide allocation between the private angling and federal for-hire components established in Amendment 40, Alternative 3 would use each region's landings by each component to establish the regional component ACL. Positive effects would be expected as the regional component ACLs would reflect each region's landings, more closely approximating local fishing activity than the Gulf-wide average.

Alternative 4 would be expected to provide more flexibility than Alternative 1, but less flexibility than Alternatives 2 and 3, as each region would establish management measures that apply to all recreational anglers in that region. Alternative 4 would also be expected to be the least complex from a regulatory perspective, as each region would manage its anglers under a single regional ACL.

4.2.5 Direct and Indirect Effects on the Administrative Environment

The application of regional management to the private angling and for-hire components is determined through this action. While the recent implementation of Amendment 40 divided the recreational sector into two components, a sunset provision will reunite the components in 2018 if the Council does not take further action. **Alternative 1** would apply regional management to the separate components for 2015-2017, and then manage them as one sector after the sunset. The effect of **Alternative 1**, on the administrative environment would be minimal. **Alternative 2** would extend the separate management of the components beyond the sunset and apply the provisions of this amendment only to the private angling component. This could result in additional rulemaking to address the management of the for-hire component and negatively affect the administrative environment. This may also result in additional rulemaking to develop management measures for the private anglers in regions increasing the burden on the States' administrative environment.

Alternative 3 and Alternative 4 would shift the administrative burden to the regions to develop management measures or CEPs for both components; this may increase the administrative burden for reviewing the CEPs. The indirect effects from this action would occur in terms of 1) increasing regulatory complexity; 2) a shift in the regulatory burden from the federal to regional level, and 3) impacts on enforcement. Indirect effects would require monitoring of the recreational harvest, enforcement of the harvesting rules, and developing management measures to minimize the risk of harvests by the components of exceeding the recreational quota. However, regardless of which alternative is selected, the indirect effects from each alternative would likely be similar.

4.3 Action 3 – Establish Regions for Management

4.3.1 Direct and Indirect Effects on the Physical Environment

Direct and indirect effects on the physical environment resulting from the harvest of red snapper by the reef fish fishery have been discussed in detail in Reef Fish Amendment 22, Reef Fish Amendment 27/Shrimp Amendment 14 (GMFMC 2004b and 2007), and in the February 2010 Regulatory Amendment (GMFMC 2010). Section 4.1.1 describes the effects from fishing on the physical environment and are not repeated here.

Action 3 would have no direct effect on the physical environment. This action is administrative because it determines how the Gulf would be partitioned for management of red snapper in federal waters. Similar to Action 1, this action could indirectly affect the physical environment by allowing for spatial and temporal variation from status quo in management measures in

different regions. Although the net effects from Alternatives 2 or 3 (2 regions), Alternative 4 (5 regions), or Preferred Alternative 5 (up to 5 regions) might not be different from Alternative 1 (No Action), there are likely to be differences in effects within particular regions, and these effects may change in time. If management measures that result from Alternatives 2, 3, 4, or Preferred Alternative 5 allow fishing effort within a region to increase compared to Alternative 1, then there would likely be an increase in adverse effects to the physical environment (as described in Section 4.1.1). However, if selecting Alternative 2, Alternative 3, Alternative 4, or Preferred Alternative 5 reduce the amount of fishing effort in the regional waters from management measures in comparison to Alternative 1, then adverse effects from fishing on the physical environment should be reduced.

4.3.2 Direct and Indirect Effects on the Biological/Ecological Environment

Section 4.1.2 describes the effects from fishing on the biological/ecological environment and is not repeated here. Action 3 would have no direct effect on the biological/ecological environment. This action is mainly administrative because it determines the partitioning of the Gulf for management of the recreational sector for harvest of red snapper in federal waters. Similar to Action 1, this action could indirectly affect the biological/ecological environment by allowing for different regional management measures. Although the net effects from Alternative 2 or 3 (2 regions), Alternative 4 (5 regions), or Preferred Alternative 5 (up to 5 regions) might not be different from Alternative 1 (No Action), there are likely to be differences in effects off the waters in particular regions. If management measures that result from Alternatives 2, 3, 4, or Preferred Alternative 5 allow fishing within a region to increase compared to what would be allowed under **Alternative 1**, then there would likely be an increase in adverse effects to the biological/ecological environment (as described in Section 4.1.2). However, if selecting Alternative 2, Alternative 4, or Preferred Alternative 5 reduce the amount of fishing effort in the regional waters from management measures in comparison to Alternative 1, then adverse effects from fishing on the biological/ecological environment should be reduced. Similar to Action 1, it is difficult to compare the alternatives because information is either incomplete or unavailable for use in comparisons. The management measures that may be implemented within any of the possible regions will not be known until after this amendment is finalized and those regions develop such management measures. It is not possible to analyze the numerous combinations/variations of management measures that the region(s) could implement to meet their respective ACLs. Therefore it is impossible to meaningfully analyze the potential effects to the biological/ecological environment that might arise from establishment of separate regions.

To minimize the risk to the biological/ecological environment, NMFS has been working to better understand the biological/ecological environment so that management uncertainty derived from either of these regional management alternatives may be determined in the future. This includes conducting stock assessments under SEDAR that incorporate changes in management to assess the condition of managed stocks and well as supporting the development of ecosystem models to provide some insights into the cascading effects of populations in response to each other. In addition, red snapper and other managed stocks are managed under ACLs and AMs to reduce the risk of overfishing.

4.3.3 Direct and Indirect Effects on the Economic Environment

Because the harvest restrictions that might ultimately result from all of the actions and alternatives considered in this proposed amendment are unknown, the following assessment provides a qualitative discussion of the expected economic effects of this proposed action.

Portions of the discussion of the expected economic effects for Action 1 provided in section 4.1.3 are relevant to the discussion of the economic effects expected to result from this action. Some of this information is summarized in the following discussion and the reader is encouraged to read Section 4.1.3 for the complete discussion. Similar to the discussion in Section 4.1.3, all the economic effects discussed below would be indirect effects because the proposed alternatives for this action would create a possible structure for management, but not require exercise of the associated authorities.

The primary conclusions from Section 4.1.3 relevant to the discussion of Action 3 are that economic benefits would be expected to increase under regionalization, but the costs associated with regulatory development (including implementation), harvest monitoring, and enforcement may increase as well. The economic benefits associated with the recreational harvest of red snapper would be expected to increase, because regions would have an increased ability to implement management measures preferred by their constituents. The expanded regulatory authority, however, may become complicated and increase the cost of the process of regulatory development and implementation. Attempts to reduce the likelihood of harvest overages could also increase monitoring costs, and dockside enforcement may increase enforcement costs. Overall, however, the increased economic benefits associated with better management measures would be expected to dominate potential increased management costs and result in a net increase in economic benefits.

With the conclusions provided in the previous paragraph as the baseline, the following discussion of the expected economic effects of the proposed alternatives evaluates the extent to which these benefits and costs would be expected to vary.

In general, the economic benefits of regulatory flexibility would be expected to increase as the opportunity for "localization" (locally tailored management) increases. This is concluded "in general" because it is possible to delegate authority at too diffuse a level, such that too many different management regimes are established. As an example, allowing community control over the recreational harvest of red snapper may create excessive confusion, conflict, and monitoring issues. However, because the proposed alternatives do not go below the state level, the issue of excessive localization is not expected to arise. Therefore, among the alternatives considered, the greater the regional authority, the greater the expected increase in economic benefits. From this perspective, **Alternative 4** (five regions) would be expected to result in the largest increase in economic benefits, followed by **Preferred Alternative 5** (five or fewer regions), **Alternative 2** and **Alternative 3** (two regions), and **Alternative 1** (one region). Although the state composition of each region would be different under **Alternative 2** and **Alternative 3**, each alternative would establish two regions. The economic effects of these two alternatives would be expected to be the same because no basis has been identified to support a conclusion that either state combination would be expected to be more or less capable of enacting the regulatory

flexibility enabled by this proposed amendment. The possible overlaps between certain alternatives should be noted. For example, Alternative 4 and Preferred Alternative 5 would be expected to result in the same economic effects if Preferred Alternative 5 results in independent state action (i.e., each state becomes a region). Similarly, Preferred Alternative 5 and Alternatives 2 and 3 would be expected to have the same economic effects if Preferred Alternative 5 results in common co-action by the respective states and the creation of the respective two regions that would be established under Alternative 2 or Alternative 3. It is also noted that, the functional outcomes of Alternatives 2-5 could be identical to those of Alternative 1 if the regions decide not to exercise the authority established by Action 1 and these alternatives (accepting regional management authority would be discretionary and not obligatory).

Evaluations of the considerations of management costs (regulatory development, monitoring, and enforcement) are less straight-forward. Although increasing the number of regions could be argued to result in duplicative regulatory development costs, thereby suggesting that the fewer the regions, the lower the regulatory development costs, it may be the case that the more regions there are, the easier it may be to identify a uniformly accepted set of regulations. As a result, it may involve less time and money to develop five regional plans than fewer "unified" plans that require more deliberation to reach agreement. Nevertheless, it is indeterminate which arrangement would be more or less costly.

With respect to the cost of harvest monitoring, the conclusions are more straight-forward. It is noted that this discussion refers only to any enhanced harvest monitoring that may be implemented. As discussed in Section 4.1.3, the current recreational harvest data collection programs would continue regardless of any regionalization decision or regional decisions to enhance their harvest monitoring capacity. Because of the costs that would be required, a mandatory, universal, census accounting of all harvest by all marine recreational fishermen in the Gulf is unlikely to ever be implemented. Even the development of a program that imposed mandatory reporting by just red snapper fishermen may not be practical. Instead, or until mandatory reporting is required, some form of survey and sampling program will likely continue to be used (and be subject to modification as budgets change and/or technology advances). Absent structural or other reasons that might make the survey and sampling program used in one state or region unsuitable in others, monitoring costs would be lower the fewer the number of regions because of the elimination of duplication. As a result, the cost to independently monitor five separate regions would be expected to be the highest and the cost would be expected to decline as the number of regions is reduced. Thus, the ranking, from most cost to least, would be expected to be Alternative 4, followed by Preferred Alternative 5, Alternative 2 and Alternative 3, and Alternative 1, noting the possible overlap of the potential number of separate regions under the different alternatives.

Finally, with respect to enforcement costs, because shore-side enforcement would be required at the state-level if a state becomes a separate region or joins with other states to become a region, the enforcement burden would not be expected to vary by the number of regions created. In a multi-state region, it would not be expected that common agents would or could be created who could enforce regulations in all states within their region. As a result, enforcement agents from each state would be responsible for dock-side enforcement within their state. Therefore, the

resultant increase in state enforcement costs would be determined by the number of states that accepted regional authority and not the number of resultant regions. Federal enforcement costs associated with the red snapper recreational harvest, recalling the discussion in Section 4.1.3, would be inversely proportional to the number of states that accept regionalization. Assuming all states accept regionalization, increased state enforcement costs associated with dockside enforcement would be the highest and federal at-sea enforcement costs the lowest for **Alternative 4**, followed by **Preferred Alternative 5**, **Alternative 2** and **Alternative 3**, and **Alternative 1**.

Consistent with the discussion in Section 4.1.3, because regionalization would be expected to result in a net increase in economic benefits, despite the potential increased management costs, **Alternative 4** would be expected to result in the highest increase in net economic benefits, followed by **Preferred Alternative 5**, **Alternative 2** and **Alternative 3**, and **Alternative 1**.

4.3.4 Direct and Indirect Effects on the Social Environment

As noted previously, the management measures that may ultimately result from the actions and alternatives considered in this proposed amendment remain unknown. Because most of the actions and alternatives relate to and build upon previous actions, the total effects that may ultimately result from this action will relate to and depend on decisions made in other actions. Thus, direct effects are not expected and indirect effects are difficult to predict. Given these uncertainties, the following assessment provides a qualitative discussion comparing the potential indirect effects of the alternatives.

Currently, federal management measures for recreational red snapper fishing are implemented Gulf-wide, meaning the Gulf is managed as a single region (Alternative 1). Additional impacts are not expected to result from maintaining red snapper management as a single region (Alternative 1). However, regional management is being considered in response to growing frustrations with Gulf-wide recreational management that does not allow for regional differences in red snapper abundance and optimal fishing seasons. Thus, indirect benefits to the social environment are expected from increasing management flexibility provided by establishing regional management.

Alternatives 2-5 propose the establishment of regions for which some management measures may vary. Generally, establishing more regions (Alternative 4 or Preferred Alternative 5) will enable greater flexibility at the local level than establishing fewer regions (Alternatives 2 or 3), which would require more agreement on shared management measures among the States sharing a region. Greater flexibility in the selection of management measures to provide optimal fishing opportunities to a region's constituents is expected to result in the greatest indirect social benefits

Preferred Alternative 5 would allow each Gulf State to determine whether to be an independent region or to join with another adjacent State or States into a shared region. **Preferred Alternative 5** could result in the creation of up to five regions, if each State decides to be its own region, making **Preferred Alternative 5** functionally equivalent to **Alternative 4**. In this case, any effects resulting from **Preferred Alternative 5** would be expected to be the same as

Alternative 4. Likewise, if **Preferred Alternative 5** resulted in two regions, the impacts would be expected to be similar to those under **Alternatives 2** or **3**. Under any of **Alternatives 2-5**, it is possible that multiple regions could adopt the same management measures, rendering the effects of these alternatives indiscernible to the social environment.

4.3.5 Direct and Indirect Effects on the Administrative Environment

Additional impacts are not expected from maintaining a single Gulf-wide region for recreational red snapper management (**Alternative 1**). Direct effects would not result from selecting the number of management regions (**Alternative 2**, **3**, **4**, or **Preferred Alternative 5**), because the management measures that might ultimately result in the selected regions are not specified in this action and remain unknown. Rather, the resulting number of regions could result in indirect effects in terms of 1) increasing regulatory complexity or requiring greater intra-region cooperation; 2) a shift in the regulatory burden from the federal to regional level, and 3) impacts on enforcement. This analysis provides a qualitative discussion of these potential effects to the administrative environment.

There may be a tradeoff in effects between creating more or fewer regions. Establishing more regions (**Alternative 4** or **Preferred Alternative 5**) could result in greater regulatory complexity due to involvement by more individual administrative units. On the other hand, selecting fewer regions (two under **Alternative 2** and **3**) would require greater cooperation among the States sharing a region. **Alternative 2** would also require the formation of a regional administrative entity to provide the venue for included States to agree on their shared set of management measures and harvest monitoring strategy.

Under regional management, there will be some transfer of the administrative burden from the federal level to the regional level. However, if Action 1 Preferred Alternative 3 or Alternative 4 were selected, then the burden on the federal administrative environment would be increased correlated with the number of regions pertaining to the review of CEPs. All alternatives (except No Action) propose regional boundaries that fall along State boundary lines. Each State currently has a process for establishing fishing regulations in state waters which could be used for the administrative needs of the region's red snapper management program. It is not possible to predict the extent of the effects from the transfer of this administrative burden, as it remains unknown how each region may execute its administrative duties.

The creation of individual regions would be expected to increase the difficulty of at-sea enforcement if each region adopts different management measures. The creation of more regions could make it more difficult for at-sea law enforcement to determine the management measures governing a vessel's harvest compared with fewer regions (**Alternatives 2** and **3**). Based on Council discussions, it is assumed that enforcement would primarily be dockside which could potentially mitigate some of these enforcement concerns.

Finally, while **Alternatives 2, 3,** and **4** specify the number of regions to be created, under **Preferred Alternative 5** there could be from two to five regions. Thus, it is not possible to compare the effects from this alternative with the other alternatives, as any effects would depend on the number of regions ultimately created if implemented.

4.4 Action 4 – Modify the Federal Minimum Size Limit

4.4.1 Direct and Indirect Effects on the Physical Environment

Section 4.1.1 describes the effects from fishing on the physical environment and are not repeated here. No direct or indirect effects on the physical environment are expected to occur from alternatives in Action 4. In general direct effects on the physical environment occur when fishing gear and anchors interact with the substrate. Recreational fishing gear is expected to have minimal impact on the substrate and attached organisms; however, setting a large amount of gear over one area or continued anchoring on fragile substrate is expected to increase the potential for negative impacts to the physical environment (Hamilton 2000). **Alternative 1** (No Action) would retain the current minimum size limit for the recreational harvest of red snapper and is not expected to result in any direct or indirect impacts. **Alternatives 2**, **4**, **5**, and **Preferred Alternative 3** provide a range of minimum size limits for red snapper. The gear types used by private anglers and anglers on for-hire vessels are the same for this size range of fish; thus, no additional impacts to the physical environment are expected.

4.4.2 Direct and Indirect Effects on the Biological/Ecological Environment

Action 4 would apply a uniform minimum size limit for the recreational sector across the Gulf, thereby making Southeast Data, Assessment, and Review (SEDAR) process easier since regional differences in minimum size limits are not being considered and thereby reducing uncertainty generated by accounting for multiple regional minimum size limits during estimation of selectivity patterns in the stock assessment process. Additionally, NMFS will continue data collection efforts, and the Council will continue to request stock assessments, to ensure the red snapper stock continues to recover from its "overfished" status. Therefore, Action 4 is expected to have minimal direct effects on the biological/ecological environment. This determination is further augmented by yield-per-recruit (YPR) and spawning potential ratio (SPR) analyses conducted by the Southeast Fisheries Science Center (SEFSC) in 2013 for the recreational sector. Minimum size limits from 13-18 inches TL are considered effective for managing red snapper because the YPR varies little between that size range. Spawning potential ratio was found to increase as minimum size limits are increased. ¹⁴ The Council is currently considering modifying the current 16-inch TL minimum size limit (Alternative 1) by decreasing the minimum size limit to 14 inches TL (Alternative 2) or 15 inches TL (Preferred Alternative 3) or increasing the minimum size limit to 17 inches TL (Alternative 4) or 18 inches TL (Alternative 5).

Recreational discard mortality of red snapper is currently estimated by eastern and western subregion (SEDAR 31 2013). The assessment found a consistent, Gulf-wide trend among discard mortality data, where depth of capture and release mortality were positively correlated. Discard mortality for the recreational sector was estimated at 10% Gulf-wide (SEDAR 31 2013). However, the data workshop report noted that release mortality was related less to region and more on a combination of factors including, but not limited to, depth, thermal stress, venting versus non-venting, and handling time.

 $[\]frac{^{14} \, http://gulfcouncil.org/docs/Presentations/Gulf\%20Red\%20Snapper\%20Size\%20Limit\%20Analysis\%20- \\ \%20Presentation.pdf$

Increases in regulatory discards due to a modification in the minimum size limit for the recreational sector are a concern, and could have minimal direct effects on the biological/ecological environment. However, modifications in fishing behavior due to reducing (Alternatives 2 and 3) or increasing (Alternatives 4 and 5) the minimum size limit compared to the status quo (16 inches TL, Alternative 1) are largely unknown. Many recreational anglers target larger "trophy" red snapper, making high-grading a concern for any minimum size limits currently being considered. The results of the SEDAR 31 Update Assessment completed for red snapper in January of 2015 with new data through 2013 attempted to accommodate recent changes in recreational fishing behavior by adding a selectivity block from 2011-2013 for all recreational fleets. The results indicated that recreational fleets in both the eastern and western Gulf have shifted to landing older age classes and therefore heavier fish (SEDAR 31 Update 2015 Presentation¹⁵. These results suggest any minimum size limit modification the Council considers (Alternatives 2-5) compared to Alternative 1 (No Action) would likely have minimal effects on the biological/ecological environment. The Council requested an interim rule during the 1999 recreational red snapper fishing season that increased the minimum size limit from 15 to 18 inches TL (64 FR 30455). The Council requested this increase in the recreational minimum size limit to slow harvest and increase the fishing season length by 24 days. The interim rule was initially supported by fishermen; however, the Council received numerous complaints from fishermen after the season about releasing dead red snapper. Consequently, since that time the Council has not considered raising the red snapper minimum size limit above 18 inches TL (Alternative 5).

4.4.3 Direct and Indirect Effects on the Economic Environment

As discussed in section 2.4, the recreational minimum size limit for red snapper is 16 inches TL in federal waters and all Gulf states except Texas, where the minimum size limit is 15 inches TL. This would continue under **Alternative 1**. For federal waters, this minimum size was adopted to best meet the biological needs of the species, consistent with the rebuilding plan, and the economic and social needs of the associated user groups. The inconsistency between the federal limit and the Texas limit may have had, and would continue to have, some adverse effect on economic benefits associated with the resource if the inconsistency reduced progress toward achieving recovery of the stock. However, these effects may have been, and may be expected to continue to be, minor because of the small amount of red snapper harvested in Texas waters compared to that harvested elsewhere in the Gulf, assuming the allowance of smaller red snapper in state waters has not resulted in smaller fish also being harvested in federal waters. Otherwise, the inconsistency in the minimum size limits may have only resulted in angler confusion or frustration with the need to be aware of and comply with the different standards.

Changing the minimum size limit may affect the harvest rate and status of the red snapper stock. Allowing the harvest of smaller fish (**Alternative 2** and **Preferred Alternative 3**) would be expected to both increase the harvest rate (the increase in fish numbers attributable to a reduction in the minimum size limit would be expected to exceed the decrease in average weight per fish and result in a net increase in the total harvest rate) and increase the harvest of fish that may

¹⁵ The presentation was made at the January 2015 SSC meeting: http://gulfcouncil.org/council_meetings/Briefing%20Materials/BB-01-2015/B%20-4%20SSC%20Summary.pdf

never spawn. As a result, total red snapper spawning could be reduced. Increasing the minimum size limit (Alternative 4 and Alternative 5) would be expected to have the opposite effects, decreasing the number of fish harvested and allowing more fish to spawn before they are harvested, yet increasing the average weight per fish. However, the availability of larger fish would be likely be more limiting than the availability of smaller fish, so, although the average weight per fish would be expected to increase with a higher minimum size, overall the catch rate would likely decline.

Increasing the catch rate (Alternative 2 and Preferred Alternative 3) would be expected to shorten the season, if monitoring or harvest projection methods are effective, or increase the likelihood the allocation is exceeded if quota monitoring is either not implemented or is ineffective. Decreasing the catch rate (Alternative 4 and Alternative 5) would be expected to lengthen the season and possibly decrease the likelihood that the allocation is exceeded (it may be possible to more effectively monitor longer seasons than short "flash" seasons). Generally, because it is believed that long seasons are economically more beneficial than short seasons (longer seasons afford more flexibility to schedule trips, for example), they are preferred by anglers and associated businesses. Also, as discussed in Section 4.7.3, limiting harvest to the allocation would be expected to result in greater economic benefits than exceeding the allocation and triggering AMs. With respect to the benefits of supporting increased spawning, it is logical to assume that allowing more fish to grow large enough to spawn at least once would be better than harvesting fish before they reach spawning size. This logic suggests that, if populations of smaller fish are not dominant and the release mortality too high, bigger minimum sizes would allow more fish to spawn than smaller minimum sizes. This suggests Alternative 4 and Alternative 5 might be expected to produce greater economic benefits than Alternative 2 and **Preferred Alternative 3** because of potentially enhanced spawning, more stable recruitment, and faster stock recovery. Finally, changing the size limit may result in stock effects by impacting the total fishing mortality (harvest mortality and bycatch mortality combined) independent of the effects of the total harvest or the harvest of fish capable of spawning. Specifically, increasing the minimum size limit (Alternative 4 and Alternative 5) would be expected to result in increased releases and associated release mortality. Regardless of the alternative selected, because red snapper is a popular target species and total recreational effort is unrestricted, all allowable harvest limits would be expected to be met. As a result, increasing the amount of release mortality would be expected to increase the total red snapper mortality. Overall, however, as discussed in Section 4.4.2, only minimal biological effects would be expected to result from any of the proposed changes in the minimum size limit.

Each of these effects would be expected to increase or decrease as the proposed minimum size increases or decreases. For example, compared to **Alternative 1**, **Preferred Alternative 3** would be expected to result in more small fish being harvested, fewer fish surviving long enough to spawn, and a shorter season. These effects would be expected to increase under **Alternative 2**, which would allow the harvest of even smaller fish. Similar comparisons exist between **Alternative 4** and **Alternative 5** (i.e., as the minimum size limit is increased, more fish would be expected to be able to spawn but total mortality increased).

Despite these considerations and general determinations, it is not possible with available data to rank these alternatives according to most to least net economic benefits.

4.4.4 Direct and Indirect Effects on the Social Environment

Maximum flexibility is assumed to correspond with positive social effects. Because a minimum size limit is part of the established suite of current management measures, the Council included the minimum size limit among the management measures which could be modified at the regional level. Following further discussions, however, the Council recognized that allowing different minimum size limits to be established by the regions would create problems for the red snapper stock assessment associated with the use of different regional recreational minimum size limits. Thus, it was determined that the Council would evaluate the federal minimum size limit in this action, and all regions must adopt the selected minimum size limit to satisfy the requirements of delegation or CEPs (Action 1). The minimum size limit selected will also be the minimum size limit in the federal default regulations.

Currently, the federal minimum size limit for red snapper is 16 inches TL. Additional effects would not be expected from retaining the federal minimum size limit (**Alternative 1**), as fishing practices and behavior in federal waters would not be affected. However, Texas has a 15-inch TL minimum size limit for red snapper in its state waters, while the remaining four Gulf States have established a 16-inch TL minimum size limit, consistent with federal regulations. If **Alternative 1** (No Action) is retained, as a region, Texas would need to adopt a 16-inch TL minimum size limit for its state waters, or would be ineligible to participate in regional management.

Alternative 2 and Preferred Alternative 3 would reduce the minimum size limit to 14 inches TL and 15 inches TL, respectively. Reducing the minimum size limit would be expected to allow more legal size fish to be caught, as more individuals in the red snapper population are above the size limit. Given that smaller red snapper are more frequently encountered in state waters in certain areas of the Gulf, reducing the minimum size limit may allow red snapper to be more accessible to some anglers who fish closer to shore. However, in general, direct effects on fishing behavior and activity would be negligible from decreasing the minimum size limit (Alternative 2 and Preferred Alternative 3), as anglers prefer and target larger fish, and there is no requirement to retain fish which are caught. Reducing the minimum size limit may result in an increase in dead discards from high-grading which has the potential for negative indirect effects if the rate of dead discards negatively affects the progress of the rebuilding plan. Because Texas already establishes a 15-inch TL minimum size limit (Preferred Alternative 3), this alternative would be less disruptive to the social environment, as it is a small change for four of the Gulf States, and Texas would not need to change its minimum size limit, compared with Alternative 2.

In recent years, the average size of a red snapper caught by a recreational angler has increased, demonstrating success in the rebuilding plan. Table 4.4.4.1 summarizes the average weight and length of red snapper caught in 2014 by anglers fishing from private vessels, charter vessels, and headboats. For all three modes, the average length of harvested red snapper is greater than either of the proposed increases to the minimum size limit of 17 inches TL (**Alternative 4**) and 18 inches TL (**Alternative 5**). Thus, increasing the size limit to either 17 inches TL or 18 inches TL would not be expected to affect the majority of anglers' fishing practice and behavior. Anglers who fish closer to shore and are less likely to encounter larger red snapper would be the most likely to be affected by an increase in the minimum size limit.

Table 4.4.4.1. Average weight and estimated size of red snapper caught in 2014 by region (eastwest) and mode.

| | Private angling | Charter vessels | Headboats | |
|--------------|-----------------|-----------------|-----------------|--|
| Eastern Gulf | 7.5 lbs | 8.5 lbs | 4.9 lbs | |
| | 25-26 inches TL | 26-27 inches TL | 22-23 inches TL | |
| Western Gulf | 6.98 lbs | 10.0 lbs | 5.4 lbs | |
| | 25-26 inches TL | 28-29 inches TL | 23-24 inches TL | |

Source: Red snapper total length to weight conversion from SEDAR 31 (2013).

4.4.5 Direct and Indirect Effects on the Administrative Environment

Retaining (Alternative 1) or modifying the minimum size limit (Alternatives 2 through 5) does not change the effects on the administrative environment for any enforcement activities; enforcement groups must enforce whatever size limit is in effect. Depending on the alternatives selected in Actions 1 and 2, the burden on the federal government and the Council should be reduced under a regional management scenario under any of the alternatives, as control of the red snapper recreational fishing season would now be under the authority of a region. Size limits would affect season lengths, but the regions would be establishing the seasons. The only administrative burden on the federal government or Council would be if a region opts out of regional management and NMFS would have an increased administrative burden to evaluate the effects of the default regulations in regard to a recreational fishing season for red snapper for the defaulted region. Enforcement and federal management would be similar to Alternative 1, but may be reduced slightly if the size limit is consistent for the federal and state waters.

The administrative burden on the regions is expected to increase under a regional management scenario. However there would be no expected differences in the administrative burden from enforcing and monitoring a 15 inch bag limit (**Preferred Alternative 3**) compared to say an 18 inch bag limit (**Alternative 5**), and therefore there is not likely to be any differences in direct or indirect effects to the administrative environment from choosing any of the various minimum size limits (**Alternatives 1 through 5**).

4.5 Action 5 – Closures in Federal Waters of the Gulfs

4.5.1 Direct and Indirect Effects on the Physical Environment

Section 4.1.1 describes the effects from fishing on the physical environment and are not repeated here. In general direct effects on the physical environment occur when fishing gear and anchors interact with the substrate. **Alternative 1** (**No Action**) would not allow regions to establish closed areas and is not expected to result in any direct or indirect impacts. However, **Preferred Alternative 2** would allow regions to establish closed areas. This could result in either positive or negative effects on the physical environment based on the geographic and temporal shift of fishing effort. If the fishing effort is confined to a smaller portion of the federal waters, then the adverse effects would be concentrated in that open area. In turn, it is likely to cause slight

benefits to the physical environment in the closed areas. By limiting the temporal length of the closure (**Option 2a**) and the spatial area of the closure (**Option 2b**), the direct and indirect effects would be more evenly distributed than **Preferred Alternative 2**. This Amendment, and the closed areas that could be established by a region (**Preferred Alternative 2**), only apply to the harvest of recreational red snapper. Recreational anglers (private or for-hire) would still be allowed to fish for other reef fish species within the possible closed areas (**Preferred Alternative 2**). Additionally, the actions within this amendment have no bearing on the commercial sector of the red snapper portion of the reef fish fishery, and commercial anglers will still be allowed to fish within the boundaries of any closed areas that could be established within a region. Therefore any effects to the physical environment from establishing a closed area within a region are likely to be minimal.

4.5.2 Direct and Indirect Effects on the Biological/Ecological Environment

Section 4.1.2 describes the effects from fishing on the biological/ecological environment and is not repeated here. This action considers allowing regions to establish closed areas in the adjacent federal waters. **Alternative 1 (No Action)** is not likely to have direct or indirect effects on the biological/ecological environment.

Preferred Alternative 2 would allow regions to establish closed areas in adjacent federal waters. The spatial and temporal extent of the closures could have both benefits and adverse effects to the biological/ecological environment based on the shift in fishing effort. For example, assuming that Florida and Alabama are separate regions, if Florida establishes a closed area in the federal and state waters in the Panhandle but the Alabama waters are still open, then it is reasonable to assume that fishermen may shift their effort from Florida state waters to Alabama state waters and concentrate the impacts on the biological/ecological environment. The concentration of effort could contribute to a localized depletion of the stock. On the other hand, the area closed by Florida would have less fishing effort due to the closure and benefit the localized stock. In addition, while the closed areas would restrict the harvest of red snapper, the most likely indirect effect on the stock from this action would be on discard mortality as anglers harvest other reef fish. During red snapper closures, fishermen targeting other reef fish species often catch red snapper as bycatch that cannot be landed. The temporal (Option 2a) and spatial (Option 2b) restrictions would decrease the shift of fishing effort and likely decrease the impact on the biological/ecological environment.

4.5.3 Direct and Indirect Effects on the Economic Environment

Because of the absence of sufficient data, details of the regional management measures that would be developed, specification of the closures that might be imposed, or the resultant fishing behavior and harvest rates that would develop under these conditions, none of the economic effects expected to occur under the proposed alternatives can be quantified. As a result, the following discussion is limited to a qualitative description of the expected economic effects of the alternatives for this proposed action.

Under **Alternative 1**, regions would not be able to close any portion of the federal waters in their region. As a result, the federal waters portion of any region would only close if the Gulf-wide

recreational quota has been harvested (or has been projected to have been harvested), resulting in Gulf-wide closure of the federal waters to red snapper harvest, or a region is subject to default regulations (because the region has elected to not accept regional management, or whose management plan is either inconsistent with the delegation or conservation equivalency requirements) and the federal waters are closed under these default regulations.

Under Alternative 1, regions would only have the authority to close their state waters and prohibit red snapper landings. This prohibition would extend, however, to red snapper legally harvested in Gulf federal waters, including the portion that exists within the region despite an inability to close the portion of federal waters that exist in the region. Despite the prohibition of landings in that region, red snapper could still be harvested in the federal waters portion of that region and landed in any neighboring region that remains open to landings. This would not affect the total amount of red snapper harvested by the Gulf recreational sector because total harvest would be quota-limited. However, continued red snapper harvest in the federal waters portion of a region that has prohibited landings could reduce the expected effects of the prohibition (e.g., the intent of the prohibition may be to reduce harvest pressure and improve harvest rates when the prohibition is lifted). Additionally, if a region has already landed its quota, the inability to close the federal waters within that region could result in continued red snapper harvest, landed in another region, which could result in localized resource depletion. Conversely, landing red snapper in a different region than it was harvested would reduce harvest pressure in the region of landing. These effects – increased/decreased harvest pressure and associated possible depletion/improved stock – could result in associated negative and positive economic effects due to, for example, reduced (or enhanced) catch rates and fishing quality, longer (or shorter) open seasons, and increased (or decreased) fishing demand.

Available data does not support a conclusion that fishing and harvest by anglers in one region results in greater economic benefits than such by anglers in any other region. As a result, overall, assuming neutral Gulf-wide biological effects (because total harvest would not be expected to exceed the quotas and biological targets), the economic effects expected to occur under Alternative 1 would only be distributional (any loss/gain to one region would be offset by a gain/loss to another), and no change in total net economic benefits would be expected. These effects, however, would not be expected to be uniformly distributed across all anglers or regions because of the non-uniform opportunity cross-regional effort transfer by anglers due to differences in geographic proximity. For example, if each state forms a separate region, it would be more practical for Mississippi fishermen to fish off Alabama than it would be for Texas anglers. Some areas are "better positioned" to attract anglers from multiple regions (e.g., Louisiana from portions of Texas, and all of Mississippi or Alabama; Alabama from Mississippi or portions of Florida; etc.), whereas the southern or mid-portions of Texas and Florida may primarily only attract anglers from other parts of their own state. Thus, neither the benefits, nor costs, of cross-regional fishing would be expected to be uniformly distributed across all anglers and regions in the Gulf.

The effects of partial or temporary closure of the regional portion of the federal waters (**Preferred Alternative 2**) would be expected to be less than those of total closure. Thus, although an alternative that would allow total closure has been proposed, the expected effects of total closure are discussed to provide context for the discussion of the effects of **Preferred**

Alternative 2, which will follow the discussion of the effects of a total closure of the regional portion of the federal waters.

Under total regional federal waters closure, anglers would not be able to harvest red snapper in the closed regional portion of the federal waters and land those red snapper in any region, regardless of the status of the regions' quota. The total (Gulf-wide) red snapper recreational harvest, and associated economic benefits, would not be affected because, as discussed under Alternative 1, total harvest would be quota limited. However, distributional economic effects would be expected to occur. Closing the federal waters to harvest would be expected to result in re-direction of effort to either state waters in the same region or, if the appropriate state permits/licenses are possessed, to the state or the federal waters portions of neighboring regions. If the effort and harvest is redirected to the state waters of the region with the federal waters closure, because catch rates are generally lower in state waters than in the federal waters, a longer open season for that region may occur, which may be economically preferable despite the increased cost to harvest the same quantity of fish (lower catch rates require more effort, and therefore higher costs, to harvest the same quantity of fish). If the effort is redirected to neighboring regions, the season length in the region with the federal waters closure may be unaffected, but harvest costs still increase because it may be more expensive to fish in a neighboring region than in the federal waters in the region with the closure. Fishing in a neighboring region and landing the fish in ones' own region would shorten the season in the landing region if the catch rates in the neighboring region are higher than in the federal waters of the region with the closure; however, if this were the case and the catch rate were a dominant factor in the fishing location decision, this effort would likely already be occurring in the neighboring region regardless of the own-region federal waters closure. Thus, in general, effort shift to a neighboring region in response to closure of the federal waters would not be expected to shorten the season in the region with the federal waters closure.

Effort shift may have localized stock effects. Although the resource (red snapper and other species co-harvested with red snapper) in the closed portion of the federal waters would be subject to reduced harvest pressure, the resource elsewhere may decline because of the effort shift. Although, as previously discussed, Gulf-wide any biological effects should be neutral, localized depletions could reduce fishing quality and, in turn, associated economic benefits. Thus, the region with the closed federal waters could benefit at the expense of any neighboring region that receives the shifted effort. This may occur even within a region if effort shifts from the federal waters to state waters; higher harvest pressure in state waters, which normally may already have lower stock densities for some species, and resultant increased harvest may cause stock densities and associated harvest rates to decline further, unless migration of fish from the closed federal waters results in stock replenishment sufficient to maintain, or enhance, the densities and harvest rates in state waters.

In the "effort recipient" neighboring regions, effort shift as a result of federal waters closure may result in degraded catch rates and a slower harvest pace, resulting in longer seasons to harvest the regional quota, similar to what might occur in the region(s) that establishes a federal waters closure. Thus, again, economic effects, which could be either positive or negative, could occur depending on the economic trade-off between better fishing and shorter seasons versus poorer fishing and longer seasons.

Because it is assumed that, Gulf-wide, any regional federal waters closure will be biologically neutral, all of the economic effects expected to occur would be expected to be short-term effects. Effort-shift related catch rate declines would not be expected to persist year to year because the impetus to shift would decline if fishing quality erodes as a result of higher fishing pressure. As the fishing quality erodes, less effort would be attracted from neighboring regions, fishing pressure would be reduced, and the resource would have the opportunity to recover. Thus, any associated economic effects would be cyclical.

Because Preferred Alternative 2, and options, would allow closures of smaller geographic scope and/or shorter duration than total closure, the economic effects would be expected to be less than the effects expected to occur under total closure. This determination applies to all aspects of the discussion of the expected economic effects under total closure. For example, the incentive to shift effort, regardless of whether the incentive is to shift to own-region state waters or to a neighboring region, would be less if the size or duration of a closure is reduced. If less effort shifts to another area (within the same region or into another region), the increased pressure on the resource in that area would be reduced. A smaller increase in fishing pressure would reduce any decline in harvest rate, the change in pace at which the quota is landed, and the potential for longer seasons. Thus, overall, any of the reduced economic benefits that might accrue to some anglers or regions under total closure, and increased benefits that might accrue to others, would be reduced under **Preferred Alternative 2**. The greater the ability to reduce the scope of the closure (size or duration) relative to a total closure, the more the economic effects would be reduced relative to those that would be expected to occur under a total closure. Thus, the greatest potential reduction of these effects would be expected to occur if both Option 2a (closure duration limit) and **Option 2b** (closure size limit) are adopted. It is not possible to rank the two options with respect to each other.

Although it is straightforward to conclude that the effects of **Preferred Alternative 2** would be expected to be less than those of a total closure, similar comparison with **Alternative 1** cannot be made. Despite the conclusion that the economic effects under each alternative will only be distributional with no change in total (Gulf-wide) net economic benefits, distributional effects have localized economic consequences. Thus, although none of the alternatives would be expected to result in a change in total net economic benefits, the effects of the alternatives may not be economically equivalent due to distributional effects and varying levels of significance. However, it is not possible to rank the alternatives, with or without the proposed options, because of the inability to forecast what closures may occur, how anglers may react, and how respective seasons may be affected.

4.5.4 Direct and Indirect Effects on the Social Environment

Currently, NMFS has the authority to open and close federal waters to fishing, and the Gulf States have the authority to open and close their respective state waters to fishing. The Gulf States do not have the authority to close areas within federal waters, nor would the regions that may be created through this amendment have the authority to close federal waters to the harvest of red snapper under **Alternative 1** (No Action).

Upon implementation of this amendment, federal waters would only be closed in the event the default regulations are applied to a particular region because 1) the region is not participating in regional management, or 2) the region does not have delegated authority or an approved CEP. In these cases, the portion of federal waters adjacent to such region would be closed to the recreational possession of red snapper, except during the default federal season. That portion of federal waters would be closed not just to anglers fishing from the adjacent region, but to all recreational vessels from any region. Thus, the decision to not participate in regional management by a region, or a region's failure to have active regional management would result in negative effects for anglers of other regions who would be prohibited from catching red snapper in some areas of federal waters. In other words, under regional management, the closure of federal waters adjacent to a region results in negative effects for anglers of other regions who would otherwise choose to fish in those federal waters. Anglers fishing near the border of a closed area would be most affected.

Except in the circumstances just described, federal waters would remain open to the harvest of red snapper year-round, and the regions would establish the season dates during which anglers may possess and land red snapper in the region. When a region is open, its anglers may catch red snapper from the region's state waters or from anywhere in federal waters. When that region is closed, anglers from regions with open seasons would be able to catch red snapper from anywhere in federal waters, including federal waters adjacent to the region in which red snapper fishing is closed.

Preferred Alternative 2 would allow for additional closures in federal waters to be established, beyond the circumstances just described. If a region establishes closed areas within federal waters adjacent to the region, negative effects would be expected to result in neighboring regions, especially for anglers who fish near the region that is establishing the closed areas.

It is not necessary for a region to close federal waters when its red snapper fishing season is closed; rather, the region would prohibit the possession and landing of red snapper in its region, or a portion of its region. A region that closes federal waters adjacent to its state waters would be prohibiting anglers from other regions from catching red snapper in the federal waters adjacent to its region. This would result in negative effects for anglers in other regions. A region may also close federal waters adjacent to its state waters to allow its state waters to remain open. This could potentially allow the region to have a longer fishing season, as fewer and smaller fish are generally caught closer to shore. Such restrictions on a region's anglers may be desirable, if the length of the season were to be longer, or undesirable, if anglers prefer to catch larger fish further offshore. However, establishing an at-sea boundary beyond which red snapper may not be caught while other fish may be caught poses problems for law enforcement, as it would be difficult to determine where the fish were caught. Further, such an at-sea boundary would be expected to be associated with a lack of compliance (accidental or deliberate) as it is not possible to visually mark the boundary line.

Just as it remains unknown how regions will apply the flexibility afforded to set regional bag limits and fishing seasons, it is also unknown how regions may use a provision to close areas of federal waters adjacent to the region. This makes it difficult to predict potential social effects. **Preferred Alternative 2** would allow a region to close an unspecified number of areas within

federal waters adjacent to its region without closing the entire area of federal waters adjacent to the region. Depending on the location of any resultant closed area, **Preferred Alternative 2** may increase or decrease the total social benefits for a respective region. If it is assumed that the closed areas under **Preferred Alternative 2** would be of a greater temporal extent than **Option 2a**, such that the areas are closed for over half of the year, negative effects would be expected to result for nearby anglers of bordering regions. Similarly, if a resultant closed area under **Preferred Alternative 2** is of greater spatial extent than **Option 2b**, negative effects would also be expected for nearby anglers of bordering regions.

Ultimately, for some regions, the proximity to other regions could render **Preferred Alternative** 2 an ineffective option and could enable unintended fishing activity to occur (see section 2.5), resulting in negative effects. For other regions, however, the ability to trade the benefits of harvest in the selected areas of federal waters for other management considerations could be expected to result in greater benefits than **Alternative 1** for that region. Nevertheless, the negative social effects of angler non-compliance and enforcement difficulties would be expected to be greater under **Preferred Alternative 2** than **Alternative 1**.

4.5.5 Direct and Indirect Effects on the Administrative Environment

Action 5 considers allowing regions to establish closed areas in adjacent federal waters. Alternative 1 (No Action) would not allow regions to establish closed areas in federal waters and is not likely to have any direct or indirect effects on the administrative environment. Preferred Alternative 2 would allow regions to establish closed areas in the adjacent federal waters and likely have both direct and indirect effects on the administrative environment. The direct adverse effects on the administrative environment including NMFS' Office of Law Enforcement, the United States Coast Guard, and state marine law enforcement operations. The enforcement of multiple closed areas would be increasingly complex with the increase in number of closed areas and season dates. Selecting Option 2a or 2b pertaining to the temporal and spatial extents of the closed areas would provide some limitation to the closed areas, but would also increase the complexity for enforcement in comparison to Alternative 1. This complexity would be reflected by the increased burden on enforcement. However, it is expected after individual regions establish their regional management measures and stakeholders educate themselves about these changes in regulations only indirect effects on the administrative environment are expected. In combination with the varying management measures set in each region, enforcement would be challenged with a broad range of regulations to enforce. It is likely that the administrative environment of the regions would be adversely affected by increasing notification of the closed areas to stakeholders. If the establishment of a closed area is deemed to require further analysis and rulemaking, then the burden on the administrative environment would increase and have indirect effects associated with the analysis and implementation.

4.6 Action 6 – Apportioning the Recreational ACL (Quota) among Regions

4.6.1 Direct and Indirect Effects on the Physical Environment

Section 4.1.1 describes the effects from fishing on the physical environment and are not repeated here. Action 6 is determines the apportioning of the recreational quota among the regions. While this action may seem administrative, it may have some indirect effects on the physical environment. While the overall Gulf recreational ACL would be the same for all Alternatives 1-8 direct effects on the physical environment over the Gulf as a whole are expected to be the same. However, this action could regionally affect the physical environment indirectly by redirecting the amount of red snapper fishing that can occur off different regions of the Gulf. Allocating based on historical landings (Alternatives 2, 3, 4 and Preferred Alternative 5) or by stock abundance (Alternative 7) could allow red snapper fishing to increase if a region receives an allocation greater than what landings would be under Alternative 1 (no action). Thus, there would likely be an increase in any adverse effects from fishing to the physical environment for these regions based on the spatial distribution of red snapper allocation throughout the Gulf. In contrast, regions whose allocations would be reduced compared to **Alternative 1** (No Action) would experience a reduction in any adverse effects from red snapper fishing. Alternative 8 would distribute the quota among regions to provide an equal number of fishing days. As this would equate to having a federal season of the same number of days for the entire Gulf, the effects are likely to be similar to Alternative 1. Preferred Alternative 6 (Preferred Option a and **Preferred Option b)** are not likely to have any effect on the physical environment.

To determine specific effects between alternatives is difficult to analyze quantitatively.

Alternatives 2, 3, 4 and Preferred Alternative 5 set allocations based on historical landings, the direction of the effect relative to other alternatives and options may be related to differences in allocation as provided in Tables 2.6.2 - 2.6.6 and the set allocations in Preferred Alternative 5. For example, if Alternative 2 was selected, the allocation of the quota awarded to Florida is 33.4% (Table 2.6.2). But, if Alternative 3 was selected instead, 39.6% would be awarded to Florida. This increase of 6.2% in allocation is likely to lead to more red snapper fishing off Florida under Alternative 3 compared to Alternative 2 which would likely increase any adverse effects on the physical environment. On the other hand, if Alternative 2 were selected over Alternative 3, Texas would have its allocation reduced by 3.0% (from 13.0% to 16.0%; Table 2.6.2), As a result, the amount of red snapper fishing off Texas would likely fall and any adverse effects from fishing on the physical environment would be reduced.

However, the actions in the amendment and the apportioning of the recreational harvest of red snapper among regions, only applies to the recreational harvest of red snapper. The commercial harvest of red snapper and the recreational harvest of other reef fish species will continue to throughout the Gulf of Mexico and any regions that may be formed. Therefore, while there may be positive and negative effects to the physical environment from shifting the apportionment of recreational red snapper among the regions, these effects are likely to minimal given that they will only apply to the recreational sector harvesting a single species.

4.6.2 Direct and Indirect Effects on the Biological/Ecological Environment

Section 4.1.2 describes the effects from fishing on the biological/ecological environment and is not repeated here. Action 6 is administrative because it determines apportionment of the recreational quota among the regions. Therefore, this action would have no direct effect on the biological/ecological environment. Because the different allocations proposed in the alternatives would be based on the same quota, the overall indirect effects on the biological/ecological environment are expected to be the same for Alternatives 1-4 and Preferred Alternative 5. However, this action could indirectly affect different areas of this environment by redirecting the amount of red snapper fishing that can occur off different regions of the Gulf. Allocating based on historical landings (Alternatives 2, 3, 4, and Preferred Alternative 5) or by stock abundance (Alternative 7) could allow red snapper fishing to increase if a region receives an allocation greater than what landings would be under Alternative 1 (no action) because red snapper fishing would likely increase to harvest the additional fish. As a result, this would likely increase any adverse effects from fishing to the local red snapper population for these regions. In contrast, regions whose allocations would be reduced compared to **Alternative 1** (no action) would experience a reduction in any adverse effects from red snapper fishing. Alternative 8 would distribute the quota among regions to provide an equal number of fishing days. As this would equate to having a federal season of the same number of days for the entire Gulf, the effects are likely to be similar to Alternative 1. Preferred Alternative 6 (Preferred Option a and Preferred Option b) are not likely to have any effect on the biological/ecological environment

As described in Section 4.6.1 for the physical environment, although comparing allocations between alternatives may indicate some directionality of effects to the biological/ecological environment, these comparisons assume that fishing regulations remain the same between regions. For example, reducing the red snapper size limit could lead to a change in the local population's size structure that could have positive or negative implications to the productivity of that population. Any such changes could also affect the abundance of other reef fish species that compete with red snapper for shelter and food. Local predators of red snapper could increase if red snapper abundance is increased, while species competing for similar resources as red snapper could potentially decrease in abundance if less food and/or shelter are less available. Species likely to be affected by changes in red snapper abundance the most include vermilion snapper, gray triggerfish, and gag, which all co-occur with red snapper. Greater amberjack may also be affected as it is frequently caught on red snapper fishing trips. In addition, if a region gets more quota than under the No Action, then these stocks would potentially also experience greater harvest. These effects were explored in more detail in Reef Fish Amendment 27/Shrimp Amendment 14 (GMFMC 2007).

As with Action 1, it is difficult to compare the alternatives because information is either incomplete or unavailable for use in comparisons. To minimize the risk to the biological/ecological environment, NMFS has been working to better understand the biological/ecological environment so that management uncertainty derived from either of these State or regional management alternatives may be determined in the future. This includes conducting stock assessments under SEDAR that incorporate changes in management to assess the condition of managed stocks and well as supporting the development of ecosystem models to

provide some insights into the cascading effects of populations in response to each other. In addition, red snapper and other managed stocks are managed under ACLs and AMs to reduce the risk of overfishing.

4.6.3 Direct and Indirect Effects on the Economic Environment

The economic effects of a specific level of allowable harvest (ACL) depend on the manner in which the harvest is allowed to be taken. Estimates of the economic value of red snapper and red snapper trips are available (see Section 3.4). However, information is not available that might demonstrate how the economic value might vary by recreational component (for example, the value received by harvest by a private angler compared to by a charter angler), nor by state (for example, the value received as a result of harvest by a Florida angler compared to harvest by a Louisiana angler). As a result, current information simply supports an examination of how total economic value (Gulf-wide and all components) may change with changes in the total allowable harvest.

The foundation of the actions proposed in this amendment are, however, that the economic value varies at least by state or region such that for a given quantity of harvest, economic value can be increased if the manner (season, bag limit, size limit, etc.) in which the allowable harvest is taken can be changed to reflect localized (state or region) preferences. Accepting this foundation negates the use of a "common" economic value per fish, pound, or trip. As a result, because neither the management regulations that might ultimately result from this proposed amendment nor the associated economic values are known, the following assessment provides a qualitative discussion of the expected economic effects of this proposed action.

Portions of the discussion of the expected economic effects for Action 1 provided in Section 4.1.3 are relevant to the discussion of the economic effects expected to result from this action. Some of this information is summarized in the following discussion and the reader is encouraged to read Section 4.1.3 for the complete discussion. Unlike Action 1 and Action 3, which would establish the management structure, this action would determine the amount of harvest allotted to each region. As a result, the expected economic effects to anglers of establishing the regional allocations would be direct effects. Beyond the typical indirect shore-side effects associated with variable angler demand, no other indirect economic effects are expected.

This assessment assumes that the management measures implemented by each region to harvest their red snapper allocation will be invariant to the allocation received. Specifically, this assumption means that the bag limit or any measure to affect harvest by private anglers versus for-hire anglers will not vary with the amount of allocation received; the amount of allocation will only affect the length of the open season. From this perspective, for a given region, the larger the allocation, the more economic benefits would be expected to be received by anglers, businesses, and associated communities in that region. Because the allocation of the total quota across all regions is a zero-sum game, an increase in allocation for one (or more) region(s) relative to an alternative allocation must, by necessity, result in a decrease in allocation to one or more other regions. As a result, because estimates of the economic value by state or region are not available, it is not possible to determine whether the economic benefits associated with allocation gains to one or more region(s) exceed the losses to other regions. Thus, it is not

possible to determine, either quantitatively or qualitatively, the net economic effects of the proposed alternatives and associated options or rank them based on these effects.

It is noted, however, that even if a specific alternative would result in an allocation for a region that is lower than recent harvests (see Tables 2.6.1-2.6.5), it cannot be concluded that the economic benefits to that region would be reduced. By tailoring the management regulations to better meet the preferences of the constituents in that region, it is possible, and likely, that the lower allocation could still result in an increase in economic benefits relative to Alternative 1. Only in the event of a substantial reduction in allocation relative to normal harvest would a net reduction in economic benefits be expected to occur. This might be argued to be the case for Florida, which would, under the combination of Preferred Alternative 5 and Preferred Alternative 6 Preferred Options a and b, be allocated 37.8% of the ACL, whereas Florida harvested 42.5% of the total Gulf-wide ACL in 2014 (data for 2014, however, was not included in the apportionment alternatives). Similarly, for Alabama, although the preferred alternatives would result in a higher allocation, 31.6%, than was harvested in 2014, this allocation would be considerably lower than the proportion of the total Gulf-wide ACL harvested in 2011-2013 (35.9%-53.6%). Essentially, the issue comes down to what level of harvest is/should be considered normal, which is not an economic question and is a question that is difficult to answer because of the changing conditions of the stock (biomass growth and eastward range expansion) and the absence of stability in both the federal season and state regulations.

The economic effects of the alternatives considered under this action would not be expected to be affected by the form of regional management adopted under Action 1, nor the specification of regions adopted under Action 3.

4.6.4 Direct and Indirect Effects on the Social Environment

This action concerns how much of the recreational sector ACL would be apportioned among the regions selected in Action 3. The decision to allocate a scarce resource among user groups is controversial as participants from each region contend for the greatest allocation for their region. Negative effects would be minimized by establishing an allocation that most closely reflects actual participation and fishing effort. Assuming that participation and fishing effort remain constant, no discernible effects would be expected to result from establishing regional ACLs, as the proportion of landings represented by each region should remain the same. However, this assumption is not plausible, as many factors affect change in effort and participation. As shown in Table 2.6.1, the portion of total recreational landings by each State varies from year to year, meaning that the selection of any regional apportionment (Alternatives 2-9) could result in indirect effects by removing the flexibility of variable annual landings, compared to Alternative 1 (No Action). Such indirect impacts may also be expected relative to how each region's apportioned quota is adequate to satisfy status quo fishing behavior and effort. Another factor concerns the additional fishing opportunities provided by States in state waters when federal waters are closed. In recent years, the proportion of landings by some States has increased due to inclusion of fish caught under these additional fishing opportunities. Recreational anglers Gulf-wide did not have equal access to these opportunities.

While an underlying assumption of regional management holds that increased social benefits will result from providing greater flexibility in developing locally preferred harvest constraints, apportioning the recreational sector ACL into multiple regional ACLs will require increased monitoring of landings and potentially an increased likelihood of exceeding a regional ACL. Thus, there is a trade off in the flexibility afforded by regional management to assign locally appropriate management measures, and an increased need for monitoring and enforcement to accompany the requirement to constrain landings to a fixed portion of the recreational sector ACL.

Additional effects would not be expected from **Alternative 1** (No Action) as the landings among States are not required to remain within a specified proportion of the recreational sector ACL. Under **Alternative 1**, the private angling and federal for-hire components would continue to be managed under component ACTs for the years 2015-2017, and revert to a single recreational sector ACL in 2018. Thus, retaining **Alternative 1** would not be compatible with the other actions of this amendment which propose to manage the recreational sector ACL across regions and potentially, components as well.

Apportioning the recreational sector ACL among regions (Alternatives 2-9) would require each region to constrain landings to its fixed portion of the recreational sector ACL. The allocations proposed in Alternatives 2-4 and Preferred Alternative 5 are based on historical landings of different time series. The magnitude of any social effects would relate to the extent by which each region's average landings for an alternative's time series is greater or lesser than its current landings. The average landings by State correspond inversely with each other, such that the larger the proportion allocated to one region, the smaller the proportion that is, in turn, the allocation for another region. This means that positive and negative effects will result relative to, and in terms of how each apportioned quota is sufficient to satisfy fishing opportunities relative to status quo fishing effort and behavior. The magnitude of the effects would in part reflect changes in effort subsequent to the implementation of an allocation. Changes in effort are not likely attributable to this action. Under Alternatives 2-5, allocations based on longer time series (i.e., include earlier years) are more advantageous to the western Gulf States than shorter time series that include the most recent years. Shorter, more recent time series are more advantageous to the eastern Gulf States (Table 4.6.4.1).

Preferred Alterative 6 provides options for eliminating the years 2006 (**Preferred Option a**) and/or 2010 (**Preferred Option b**) from calculating the regional apportionments, based on the disruptions to fishing activity that occurred during those years. The Council was in agreement to remove these years from calculating the regional apportionments, despite the fact that not all States experienced the same degree of fishing disruption. Thus, some positive indirect effects may result from **Preferred Alternative 6**, as it is an expression of cooperation among the Gulf States.

Alternative 7 would apportion the recreational sector ACL (or component ACLs) into an eastern and western regional ACL, roughly representing the regional biogeographical differences in the stock. This alternative does not consider fishing effort, which is greater in the eastern States. Thus, **Alternative 7** will provide greater social benefits to anglers of western Gulf States and would negatively affect the fishing opportunities of anglers in the eastern Gulf States. On the

Alternative 7, because the recreational red snapper ACL would be divided into two parts instead of five. Thus, more than one state would be fishing within each apportionment of the quota and be able to share the effects from annual fluctuations in red snapper abundance and fishing effort. Establishing an allocation based on the most recent fishing activity and effort, such that each region would begin with an equivalent number of fishing days (Alternative 8), would provide the greater benefits to the eastern Gulf States and result in negative effects for the western Gulf States compared with Alternatives 2-6 (Table 4.6.4.1). Although Alternative 8 would provide the greatest short-term benefits to the eastern Gulf States of Alabama and Florida, which could receive up to 87% of the recreational ACL (Table 2.6.7), there is a downward projection for the eastern Gulf stock. Thus, if most of the allowable harvest continues to occur in the eastern Gulf, a redistribution of the stock could occur from east to west and could be exacerbated under Alternative 8. This could potentially result in some negative long-term social effects (see Section 3.2 and GMFMC 2015a).

Table 4.6.4.1. Ranking of allocation for each State in terms of the quota each would receive, assuming that each State will be its own region. For Alternatives 2-4 and Preferred Alternative 5, no years of landings are excluded. The row for Preferred Alternative 6 provides the rankings by State for Preferred Alternative 5, excluding landings from both 2006 and 2010 (currently the Council's preferred alternative).

| Southern's proteined diterinative). | | | | | | | | |
|-------------------------------------|---|---|----|----|----|----|--|--|
| Alternative | Intervals | AL | FL | LA | MS | TX | | |
| 2 | Longest time series | 4 | 6 | 1 | 1 | 1 | | |
| 3 | Intermediate time series | 2 | 4 | 5 | 4 | 3 | | |
| 4 | Most recent time series | 6 | 2 | 4 | 5 | 5 | | |
| Pref. 5 | Average of longest and most recent time series | 5 | 3 | 3 | 3 | 2 | | |
| Pref. 6 | Exclude years of environmental events | 3 | 5 | 2 | 2 | 4 | | |
| 7 | Projected yields for ABC for eastern and western Gulf | Not available by State; allocation to western Gulf would be greater than to eastern Gulf. | | | | | | |
| 8 | Same season length at time of apportionment | 1 | 1 | 6 | 6 | 6 | | |

4.6.5 Direct and Indirect Effects on the Administrative Environment

Action 6 considers approaches to apportion the recreational red snapper quota to the regions. Retaining a Gulf-wide recreational red snapper quota (Alternative 1) would not be likely to affect the administrative environment. However, selecting this alternative would not allow for implementation of a regional management program. The remaining alternatives determine the method by which the Gulf-wide quota will be divided among selected regions and would increase the burden on the administrative environment. Alternatives 2-4, and Preferred Alternative 5 and 6, and Alternative 8 would have minimal adverse effects by only requiring the initial calculations of apportionment. However, Alternative 7 would require additional analysis and possible updates based on the stock biogeographical differences and the future stock assessments. Preferred Alternative 6, Preferred Options a and b (eliminating specified years

from calculating the regional apportionments), are expected to have minimal effects to the administrative environment. It is not overly burdensome to include or exclude a specified year's data from the calculations

Indirect effects would include continued monitoring and assessment of the red snapper stock. Existing data collection and harvest monitoring programs would remain in place, which currently include state-level landings calculations. In addition, the indirect effect of adding complexity to the regulations would likely have adverse effects on the administrative environment including NMFS' Office of Law Enforcement, the United States Coast Guard, and state marine law enforcement operations.

4.7 Action 7 – Post-season Accountability Measures (AMs)

4.7.1 Direct and Indirect Effects on the Physical Environment

Section 4.1.1 describes the effects from fishing on the physical environment and are not repeated here. Action 7 establishes the post-season AMs for the recreational harvest of red snapper. The direct and indirect effects on the physical environment from this action would be related to changes in fishing effort. The effects on the physical environment resulting from **Alternative 1** are expected to be similar to current fishing conditions. No change in fishing effort is expected to occur because no new fishing regulations would be implemented; therefore, habitat-gear interactions are estimated to remain unchanged. **Preferred Alternative 2, Alternative 3**, and **Alternative 4** would provide slight benefits to reef fish habitat by reducing the fishing effort in the following year if the landings indicate the quota was exceeded. This would increase the likelihood of achieving the goals of the rebuilding plan and preventing overfishing. If the fishing effort is reduced and the amount of time spent fishing is reduced, then the decrease in fishing effort would indirectly benefit the physical environment by reducing habitat-gear interactions.

However, the actions in the amendment and the establishment of post-season accountability measures, only applies to the recreational harvest of red snapper. The commercial harvest of red snapper and the recreational harvest of other reef fish species will continue, regardless if AMs are implemented. Therefore, while there may be positive effects to the physical environment from establishing AMs in the event that the ACL for the harvest of recreational red snapper is exceeded, these effects are likely to be minimal given that they will only restrict the recreational harvest of a single species.

4.7.2 Direct and Indirect Effects on the Biological/Ecological Environment

Section 4.1.2 describes the effects from fishing on the biological/ecological environment and is not repeated here. The direct and indirect effects on the biological/ecological environments from this action would be related to changes in fishing effort. **Alternative 1** would continue the current direct and indirect effects on the biological/ecological environments. The effects are relative to the change in fishing effort which may result in over or under harvest. This alternative does not implement a reduction for the following recreational season's red snapper harvest in the case of the quota being exceeded which in turn, may increase the direct negative

effects to the biological/ecological environment in relation to the other alternatives. Should an overharvest occur, this alternative could adversely affect the red snapper stock; however, this has been the status quo for several years.

In contrast, **Preferred Alternative 2**, **Alternative 3**, and **Alternative 4** would adjust for any overage during the following year, thus minimizing the effects on the biological/ecological environments relative to the overage as discussed in Section 2.6. These alternatives result in a one-for-one reduction of the following year's quota for any overage if the landings exceed the Gulf recreational ACL. This reduces adverse effects on the biological/ecological environment that may occur from the overharvest. However, if the red snapper recreational season length is drastically reduced to account for an overage, then the likelihood of non-compliance of recreational anglers with the regulations increases as does the potential for derby fishing. These activities could have negative indirect effects that would lessen the benefits of the AM by increasing the harvest of red snapper as well as increasing bycatch and discards. The overages could also be evaluated by future stock assessments and review through the SSC. For Preferred Alternative 2 and Alternative 4, the effects would vary geographically as the reduction in regional quota would be applied only to that region which exceeds its apportioned quota. This could result in unevenly distributed effects depending on which regions exceed the quota and the associated AMs. It is possible that if a region exceeds its quota by over 100%, then the following year no harvest of red snapper in the region would be allowed unless the ACL is greatly increased. The effects of not allowing any harvest of recreational red snapper for a year in a specific area are not known; however, the issues would be considered in the future stock assessments.

4.7.3 Direct and Indirect Effects on the Economic Environment

Because the harvest restrictions that might ultimately result from all of the actions and alternatives considered in this proposed amendment are unknown, the following assessment provides a qualitative discussion of the expected economic effects of this proposed action. Portions of the discussion of the expected economic effects for Action 1 provided in Section 4.1.3 are relevant to the discussion of the economic effects expected to result from this action. Some of this information is summarized in the following discussion and the reader is encouraged to read Section 4.1.3.

This proposed action addresses the potential imposition of new recreational sector AMs. The current AMs would continue, in different forms of scope (more than, less than, or equal to the overage), under any of the alternatives adopted for this proposed action. These current AMs include harvest monitoring and closure of the federal waters if the red snapper recreational ACL is met, or is projected to have been met, and potential payback of harvest overages in the following year (subject to determination of the biological necessity of such payback). All of the proposed alternatives, including **Alternative 1**, would only require paybacks if the red snapper stock is overfished. AMs are a component of the management structure and their adoption is an administrative action. Because it is an administrative action, the adoption or change of an AM would not cause any direct economic effects. The direct economic effects of AMs occur only when the AMs are triggered, if such occurs, and harvest restrictions are imposed. For the current proposed action, the trigger event would be an ACL overage.

ACLs (either regional or summed across multiple regions or components) represent the amount of allowable harvest that has been estimated to be acceptable given the biological status of the resource, rates of natural and bycatch mortality, and management goals. These management goals may include growth, decline, or maintenance at the current level of biomass and stock composition. Embedded within the decision process of selecting these management goals, and the path and pace through which they are to be reached, are considerations of the economic and social (and ecosystem) consequences of the alternative options. In effect, the management decision that identifies the allowable harvest reflects a balance of the best biological, economic, and social outcomes.

From this "best" perspective, despite the uncertainties that exist in the estimation and forecast of future biological and environmental conditions processes, exceeding the red snapper recreational ACL would logically be expected to have an adverse effect on either or both the status of the resource and progress towards achieving the management goals. This, in turn, would be expected to have adverse economic effects. Assuming this is the case, it follows that overages should be avoided and, when they occur, an attempt should be made to minimize their effects. An overage payback is a reasonable tool to help minimize the adverse effects of an ACL overage. The intent of a payback would be to insure that the combined harvest over successive years does not exceed the combined ACLs for that period. This process keeps the stock's rebuilding more in line with the projections used to set the ACLs.

The proposed alternatives for this action only consider "following year" paybacks (i.e., a payback in the year following a quota overage) and not multiple-year considerations (e.g., only impose a payback if the quota is exceeded in consecutive years or in at least two of the most recent three consecutive years). It is beyond the scope of this analysis to evaluate which approach is better given the uncertainties associated with stock assessments in general, forecasting stock recovery, harvest projection and monitoring, etc. Sizeable harvest overages of the red snapper recreational quota have routinely occurred in recent years without apparent disruption of stock recovery. However, because of the lengthy time required to conduct a stock assessment, the potential cumulative harm of successive overages, and the potential of compounded payback effects on an already severely restricted open season (i.e., successive overages in a fishery with a very short open season could jeopardize the ability to have any open season when AMs are applied), annual correction (payback) may be more prudent and effective in minimizing the potential adverse economic effects of overages than multi-year considerations.

In general, it is expected that exceeding the recreational ACL and triggering AMs should be avoided. The economic benefits to fishermen, and associated businesses and communities, are expected to be greater when the ACLs, and associated seasons, are stable (or increasing), because this allows better personal and business planning and utilization of resources. Although anglers may have flexibility in their choice of recreational activity, businesses associated with the recreational fishing industry need regular customer traffic to meet monthly expenses. Paybacks are costly and disruptive in the short term because they disrupt this stability. Although a payback, in design if an overage does not repeat the second year, would result in a total two-year harvest equal to the sum of twice the normal annual ACL and increased benefits the first year due to the ACL overage, the decline in the ACL the second year, and likely associated

decline in angler demand for fishing services, could jeopardize the financial status of businesses that are dependent on the harvest of the subject species.

Additionally, a recreational ACL overage that harms the resource and adversely affects progress towards recovery goals could have adverse economic consequences for both the commercial and recreational industries and not just the recreational sector. Adverse stock effects would be expected to harm the total allowable harvest of the species. If the total allowable harvest is reduced as a result of an overage by the recreational sector, both sectors would experience harvest reductions and associated declines in economic benefits. Thus, in the long term, protection of the biological status of the resource and continued progress towards recovery goals, as provided by paybacks, would be expected to result in a net increase in economic benefits compared to no paybacks.

Alternative 1 would not change the current post-season AMs for managing red snapper recreational harvest overages in the Gulf federal waters. As a result, in the short term, no change in economic benefits to fishermen from either sector, or associated businesses, would be expected to occur. However, the current payback AM does not factor in the potential management configurations that may occur under the proposed regional management alternatives in this amendment. As a result, Alternative 1 may result in reduced economic benefits compared to the other alternatives because of how the payback burden would be distributed across the various regions and components.

For the other proposed alternatives, harvest overage paybacks would be required, but only if red snapper are overfished (as under **Alternative 1**) and the total red snapper recreational harvest ("combined recreational landings") from all regions and components exceed the combined ACLa (recreational sector ACL). Otherwise, the proposed alternatives vary by how the payback is shared regionally and/or by component.

With respect to sharing paybacks, the effects are less an issue of economics and more an issue of equity. As previously stated for other actions in this proposed amendment, available information does not support determination that red snapper valuation differs by region (i.e., anglers in one region value red snapper more than anglers in another region), or component. As a result, assuming red snapper are equally valued by all anglers across the Gulf, the magnitude of the economic effects to anglers would be unaffected by whether they are borne only by the region(s) responsible for the overage, or shared by all regions and components. Distributional effects would occur (i.e., a portion of the effects of a payback would be borne by regions or components where the overage did not occur if the payback is shared by all regions and components), but the total change in economic value would be unaffected. However, from an equity perspective, penalizing anglers, and associated businesses, in all regions/components for overages that only occur in others may be perceived as inequitable because it would result in re-distribution of economic benefits without apparent justification. Thus, from this perspective, Alternative 4 (reduce only the component in the region that exceeds its ACL) would be more equitable than Preferred Alternative 2 (reduce the regional ACL; both components would be affected) and Alternative 3 (reduce the Gulf-wide component ACL; all regions would be affected).

4.7.4 Direct and Indirect Effects on the Social Environment

In general, it is expected that exceeding the recreational sector ACL and triggering AMs should be avoided, because fishing opportunities would likely be reduced for the following season. Thus, direct effects are not expected from adopting or modifying a post-season AM, because the overage adjustment only results in effects if and when it is triggered. Indirect impacts would be expected from triggering the AM under any of the alternatives, as the available quota for the subsequent fishing season is decreased. For any of **Alternatives 1-4**, the post-season overage adjustment would only be triggered in the event the recreational sector ACL is exceeded, red snapper is classified as overfished based on the most recent Status of U.S. Fisheries Report to Congress, and the best scientific information available determines that a greater, lesser, or no overage adjustment is necessary.

Currently, if the red snapper recreational sector ACL is exceeded in a given year, the recreational sector ACL will be reduced the following year by the amount of the overage unless the best scientific information available determines that a greater, lesser, or no overage adjustment is necessary (Alternative 1). Usually, additional effects would not be expected from retaining Alternative 1 (No Action). However, if regional management is implemented and the recreational sector ACL is subsequently exceeded, all regional (or component) ACLs would be reduced in the following year, even if only one region's (or component's) landings caused the recreational sector ACL to be exceeded. In the event the recreational sector ACL is exceeded under Alternative 1, negative effects would result for regions (or components) that constrained landings to within the region's portion of the ACL. In turn, positive effects would result for a region (or component) that exceeded its portion of the ACL, as the reduction to the recreational sector ACL in the following year would be distributed among all regions. Thus, retaining Alternative 1 may be perceived as unfair in a region (or component) that successfully constrains landings to its regional ACL (or component ACL), but has its regional ACL reduced the following year due to an overage in the recreational sector ACL.

Alternatives 2-4 would modify the post-season AM such that it applies only to a region that exceeds its regional ACL (Preferred Alternative 2), or only to the component that exceeds its component ACL (if applicable, Alternative 3). If both regional ACLs and component ACLs are established, Alternative 4 would require the overage adjustment to be applied to the specific region and/or component that has exceeded its portion of the ACL. Regions (Preferred Alternative 2), a component (Alternative 3), or both regions and a component (Alternative 4) that constrain landings to within their respective portions of the ACL would not be affected by a reduced ACL in the following year, meaning that each of these alternatives would result in greater benefits to the respective region or component than Alternative 1. For a region or component's overage that causes the recreational sector ACL to be exceeded, the severity of the effects would relate to the extent of the quota overage, as fishing opportunities would be reduced in the following year to make up for the quota overage. It could be socially disruptive if large recreational sector ACL overages one year are followed by severe paybacks the next.

4.7.5 Direct and Indirect Effects on the Administrative Environment

The direct and indirect effects on the administrative environment from this action would be related to analyzing the landings data and applying the post-season AM. Alternative 1 would not change the administrative environment. However, this alternative results in continuously updating the yield stream to account for any overages and determine the acceptable biological catch (ABC) for red snapper each year, and developing a framework action to apply the revised ABC through updating the quotas. This maintains a burden on the administrative environment. These alternatives may indirectly affect the enforcement of the regulations negatively. By implementing adjustments for overages, the subsequent season may be shortened. Preferred Alternative 2, Alternative 3, and Alternative 4 could result in a closed season off a region if the previous year's regional quota was exceeded by over 100%. If the adjacent regions were open for the harvest of red snapper, then the increased complexity of the regulations may confuse fishermen and result in an increase in noncompliance and negative effects on enforcement and the administrative environment. The necessity to increase enforcement in a State or States without a recreational red snapper fishing season would increase the burden on the administrative environment

Preferred Alternative 2, **Alternative 3**, and **Alternative 4** would provide specific methods to determine the following years' quota and subsequent regional and component quotas. The direct effect may benefit the administrative environment if the quotas do not require a framework action to be implemented. However, the required calculations, landings analysis, and reports to determine the adjusted ACL if an overage occurs may increase the burden on the administrative environment.

These alternatives may indirectly affect the enforcement of the regulations negatively. By implementing adjustments for overages, the subsequent season may be shortened. In addition, if the SSC modifies the ABC due to an overage (Alternative 1) the season length could be reduced. Preferred Alternative 2, Alternative 3, and Alternative 4 could result in no fishing days for red snapper off a region if the previous year's regional quota was exceeded by over 100%. The increased complexity of the regulations may frustrate fishermen and result in an increase in noncompliance and negative effects on enforcement and the administrative environment. The necessity to increase enforcement in a State or States without a recreational red snapper fishing season would increase the burden on the administrative environment.

4.8 Cumulative Effects Analysis (CEA)

As directed by NEPA, federal agencies are mandated to assess not only the indirect and direct impacts, but cumulative impacts of actions as well. NEPA defines a cumulative impact as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time" (40 C.F.R. 1508.7). Cumulative effects can either be additive or synergistic. A synergistic effect is when the combined effects are greater than the sum of the individual effects.

This section uses an approach for assessing cumulative effects that was initially used in Amendment 26 to the Reef Fish FMP and is based upon guidance offered in CEQ (1997). The report outlines 11 items for consideration in drafting a CEA for a proposed action.

- 1. Identify the significant cumulative effects issues associated with the proposed action and define the assessment goals.
- 2. Establish the geographic scope of the analysis.
- 3. Establish the timeframe for the analysis.
- 4. Identify the other actions affecting the resources, ecosystems, and human communities of concern.
- 5. Characterize the resources, ecosystems, and human communities identified in scoping in terms of their response to change and capacity to withstand stress.
- 6. Characterize the stresses affecting these resources, ecosystems, and human communities and their relation to regulatory thresholds.
- 7. Define a baseline condition for the resources, ecosystems, and human communities.
- 8. Identify the important cause-and-effect relationships between human activities and resources, ecosystems, and human communities.
- 9. Determine the magnitude and significance of cumulative effects.
- 10. Modify or add alternatives to avoid, minimize, or mitigate significant cumulative effects.
- 11. Monitor the cumulative effects of the selected alternative and adapt management.

Cumulative effects on the biophysical environment, socio-economic environment, and administrative environments are analyzed below.

1. Identify the significant cumulative effects issues associated with the proposed actions and define the assessment goals.

The CEQ cumulative effects guidance states this step is accomplished through three activities as follows:

- I. The direct and indirect effects of the proposed actions (Section 4.1-4.7);
- II. Which resources, ecosystems, and human communities are affected (Section 3); and
- III. Which effects are important from a cumulative effects perspective (information revealed in this CEA).

2. Establish the geographic scope of the analysis.

The primary effects of the actions in this amendment would affect the social, economic, and administrative environments of the Gulf. The physical and biological/ecological environments would be less affected as described in Sections 3.1-3.3 & 4.1-4.7.

The geographic scope affected by these actions is described in detail in Reef Fish Amendments 22 and 27 (GMFMC 2004b and 2007) and pertains directly to the Gulf. Red snapper are one of the most sought after species in the reef fish fishery. This species occurs on the continental shelves of the Gulf and the U. S. Atlantic coast to Cape Hatteras, N. C. (Moran 1988). Eggs and

larvae are pelagic and juveniles are found associated with bottom features or bare bottom. In the Gulf, adults are found in submarine gullies and depressions; natural vertical relief structures such as coral reefs, rock outcroppings, and gravel bottoms; and artificial structures such as oilrigs and artificial reefs (GMFMC 2004a).

Commercial reef fish vessels and dealers are primarily found in Gulf States (GMFMC 2008b, 2013b). Based on mailing addresses or home ports given to the Southeast Regional Office (SERO) as of January 6, 2014¹⁶, 100% of historical charter captain reef fish, 97% of for-hire reef fish, 98.5% of commercial reef fish permitted vessels, and 100% of vessels with reef fish longline endorsements are found in Gulf States. For permitted reef fish dealers, 94.5% are found in Gulf States. All dealers who are able to process IFQ transactions are located in Gulf States (Section 3.5.1.3). With respect to eligible red snapper individual fishing quota shareholders actually holding red snapper shares, 98% have mailing addresses in Gulf States (GMFMC 2013b). According to NMFS (2013b), approximately 35% of trips and 42% of the catch in 2012 for U. S. marine recreational fishing trips occurred in the Gulf by approximately 3.1 million anglers catching 161 million fish.

3. Establish the timeframe for the analysis

The timeframe for this analysis is 1984 to 2017. Red snapper have been managed in the Gulf since the implementation of the Reef Fish Fishery Management Plan in **1984** which put in place a 13-inch minimum size limit total length (TL). The red snapper stock has been periodically assessed since 1988. The 2013 SEDAR 31 red snapper stock assessment was the last benchmark assessment. The assessment included reconstructed data for analysis for the commercial sector from 1872 through 1962 (Porch et al. 2004), data from 1963-2011 for commercial landings, and data from 1981-2011 for recreational landings (SEDAR 31 2013). In addition, catch effort for the Gulf shrimp fishery (SEDAR 31 2013), including reconstructed data from 1948-1972 (Porch and Turner 2004), was used to estimate juvenile red snapper discards from this fishery.

The following is a list of reasonably foreseeable future management actions. These are described in more detail in Step 4. Should new regulations be needed for the management of this stock, they will likely not be implemented until **2017** at the earliest, or the end of the timeframe discussed in this analysis.

- The next assessment for red snapper through SEDAR is a benchmark assessment is scheduled for 2015 (completed in 2016). Other reef fish species scheduled for assessments include: gag, greater amberjack, hogfish, and mutton snapper in 2014; red grouper, vermilion snapper, gray triggerfish, scamp, and black grouper in 2015; and gag, greater amberjack, yellowedge grouper, gray snapper, and yellowtail snapper in 2016.
- The Council is currently developing several actions that will affect the reef fish fishery. Actions affecting red snapper include:, Amendment 36 (IFQ program revision), Amendment 42 (charter vessel red snapper management), and a generic status determination criteria amendment (update ACL language). In addition, the Council is working on reef fish actions that update ACLs with new MRIP numbers, look at gag

 $^{{}^{16}}http://sero.nmfs.noaa.gov/operations_management_information_services/constituency_services_branch/freedom_of_information_act/common_foia/index.html$

regional management, and require electronic reporting for charter boats. These actions are described in more detail in Step 4 of this CEA.

- 4. Identify the other actions affecting the resources, ecosystems, and human communities of concern.
 - a. Past actions affecting red snapper fishing are summarized in Sections 1.3. The following list identifies more recent actions (Note actions taken prior to Amendment 32, the last EIS done for the Reef Fish FMP are described in detail in that amendment (GMFMC 2011a) and are incorporated here by reference).

The following are past actions specific to red snapper:

- In January 2011, the Council submitted a framework action (GMFMC 2011c) to NMFS to increase the red snapper total allowable catch to 7.185 mp, with a 3.521 mp recreational quota and a 3.664 mp commercial quota. The final rule from this action established a 48-day recreational red snapper season was June 1 through July 18.
- On August 12, 2011, NMFS published an emergency rule that, in part, increased the recreational red snapper quota by 345,000 pounds for the 2011 fishing year and provided the agency with the authority to reopen the recreational red snapper season later in the year, if the recreational quota had not been filled by the July 19 closing date. However, in August of that year, based on headboat data plus charter boat and private recreational landings through June, NMFS calculated that 80% of the recreational quota had been caught. With the addition of July landings data plus Texas survey data, NMFS estimated that 4.4 to 4.8 mp were caught, well above the 3.865 mp quota. Thus, no unused quota was available to reopen the recreational fishing season.
- On May 30, 2012, NMFS published a final rule to implement a framework action submitted by the Council to increase the commercial and recreational quotas and establish the 2012 recreational red snapper fishing season (GMFMC 2012a). The recreational season opened on June 1 through July 11. However, the north-central Gulf experienced extended severe weather during the first 26 days of the 2012 recreational red snapper fishing season, including Tropical Storm Debby. Because of the severe tropical weather, the season was extended by six days and closed on July 17.
- On May 29, 2013, NMFS published a final rule to implement a framework action submitted by the Council to increase the commercial and recreational quotas (GMFMC 2013c). The combined quotas were raised from 8.080 million pounds whole weight to 8.460 lbs whole weight. The recreational fishing season was set differently for waters off different States because of non-compatible regulations. However, a federal court ruled against different seasons, so the season for federal waters was from June 1 through July 5. Later in 2013, NMFS approved a framework action (GMFMC 2013a) to increase the combined quotas from 8.46 mp to 11 mp. This allowed an additional recreational fishing season from October 1 through October 15.
- An exempted fishing permit was given to the Gulf of Mexico Headboat Collaborative Pilot program that began on January 1, 2014. NMFS authorized the 2-year pilot program to assess the viability of an allocation-based management strategy for achieving conservation and economic goals more effectively than current management. The Headboat Collaborative was allocated a portion of the red snapper and gag

- recreational quotas based on historical landings data and participating headboats are able to use the allotted quota to harvest red snapper and gag outside the normal recreational fishing seasons.
- In response to a decision by the U.S. District Court for the District of Columbia (Court) in Guindon v. Pritzker, 2014 WL 1274076 (D.D.C. Mar. 26, 2014), NMFS took emergency action May 15, 2014 (79 FR 27768) to address recent recreational red snapper quota overages. At their April 2014 meeting, the Council requested an emergency rule to implement an in-season accountability measure for the recreational harvest of red snapper in the Gulf that would apply to the 2014 season that opened on June 1, 2014. The action set an ACT equal to 80% of the 5.390 mp quota (ACT = 4.312 mp). The resultant 9-day season was based on the ACT and has only a 15% probability of exceeding the quota.
- A framework action was implemented in March 2015 to establish a recreational red snapper ACT and overage adjustment as accountability measures for the recreational sector.
- In April 2015 Amendment 40 separated the recreational sector into a private angling component and a for-hire component for the harvest of red snapper.
- A framework action in April 2015 increased the TAC from 11.0 mp to 14.3 mp.

b. The following are recent reef fish actions not summarized in Section 1.3 but are important to the reef fish fishery in general (Note actions taken prior to Amendment 32 are described in detail in that amendment (GMFMC 2011a) and incorporated here by reference).

- A rule effective April 2, 2012, that adjusted the 2012 commercial quota for greater amberjack, based on final 2011 landings data. For 2011, the commercial quota was exceeded by 265,562 pounds. Therefore, NMFS adjusted the 2012 commercial quota to account for the overage resulting in a quota of 237,438 pounds.
- A temporary rule effective May 14, 2012, reduced the gray triggerfish annual catch limits and commercial and recreational annual catch targets. The temporary rule was put in place to reduce overfishing while the Council worked on long-term measures to end overfishing and rebuild the stock in Amendment 37.
- A framework action effective on November 19, 2012, eliminated the earned income
 qualification requirement for the renewal of Gulf commercial reef fish permits and
 increased the maximum number of crew members for dual-permitted (commercial and
 charter) vessels. The Council determined the existing earned income requirement in the
 reef fish fishery is no longer necessary and relaxing the number of crew on dualpermitted vessels increased the safety on commercial trips, particularly for commercial
 spear fishermen.
- Amendment 38 (GMFMC 2012b), effective March 1, 2013, allows NMFS to shorten the season for gag and red grouper if landings exceeded the catch limit in the previous year. The amendment also changed the trigger method for recreational accountability measures to an annual comparison of landings to the catch limit rather than using a three-year moving average. Finally, the amendment allows the establishment or modification of accountability measures through the faster framework procedure rather

- than through slower plan amendments.
- Amendment 37 (GMFMC 2012c), rulemaking effective June 10, 2013, was developed to end overfishing of gray triggerfish and rebuild the gray triggerfish stock. The amendment adjusted the commercial and recreational gray triggerfish annual catch limits and annual catch targets, established a 12-fish commercial gray triggerfish trip limit and a 2-fish recreational daily bag limit, established an annual fishing season closure from June 1 through July 31 for the commercial and recreational sectors, and established an overage adjustment for the recreational sector.
- A framework action effective July 5, 2013, adjusted the recreational gag season to July 1 through December 3, 2013, the time projected to harvest the recreational annual catch target of 1.287 mp. The framework action also restricted the geographical extent of the fixed February 1 through March 31 shallow-water grouper closed season to apply only to waters seaward of the 20-fathom boundary. This allows grouper fishing to occur year-round while providing some protection to species that spawn during February and March.
- A framework action effective September 3, 2013, set a 10-vermilion snapper bag limit within the 20-fish aggregate reef fish bag limit as a precautionary measure to reduce the chance of overfishing for this species. The action also increased the Gulf yellowtail snapper annual catch limit from 725,000 pounds to 901,125 pounds based on a recent stock assessment. Finally, the action eliminated the requirement to use venting tools when fishing for reef fish as 1) some scientific studies have questioned the usefulness of venting tools in preventing barotrauma in fish and 2) the action would give more flexibility to fishermen on when to vent or to use some other device like fish descenders.
- A framework action effective March 5, 2014, requiring headboats to report their logbooks electronically in the Gulf reef fish and coastal migratory pelagic fisheries.
- Accountability measures for red grouper and gray triggerfish were implemented. For red grouper recreational fishing, the bag limit was reduced from four to three fish on May 5, 2014, and a season closure was projected for September 16, 2014. For gray triggerfish, the recreational season was closed on May 1, 2014.

c. The following are reasonably foreseeable future actions (RFFA) important to red snapper and the reef fish fishery in general¹⁷.

- The Council is currently developing the following actions for red snapper.
 - Amendment 36 would revise the IFQ program based on recommendations from the red snapper IFQ program. These recommendations would be based on a review of the program completed in 2013 (GMFMC 2013b).
 - A generic status determination criteria amendment proposes to update the current red snapper quota-based language for setting commercial and recreational allocations with ACL-based language in accordance with the Magnuson-Stevens Act.
 - Amendment 41 and 42 were proposed by the Council to examine a charter/forhire management programs for red snapper and possibly other reef fish in the Gulf of Mexico.

¹⁷ Information on these developing actions can be found on the Council's website at www.gulfcouncil.org.

- The Council is working on other reef fish actions. These are as follows:
 - An amendment to require electronic reporting for charter boats to improve the quality and timeliness of landings data for this sector.
 - o A framework to modify gag and black grouper management measures.
 - o A framework to adjust the amberjack management measures.
- Congress has proposed HR 3099 and S 1161 which directs the Gulf States Marine
 Fisheries Commission to: (1) prepare and adopt a data collection strategy for the Gulf red
 snapper fishery, including interstate collaboration measures and a plan for annual stock
 assessments; and (2) prepare, adopt, and submit to the Secretary of Commerce a fishery
 management plan providing for the conservation and management of Gulf red snapper
 and describing the standards of compliance for Gulf coastal States to use in developing
 fishery management measures.

d. The following are non-FMP actions which can influence the reef fish fishery.

Amendment 30B (GMFMC 2008b) describes in detail non-FMP actions relating liquefied natural gas terminals, hurricanes, fuel prices, and imports and were reiterated in Amendment 32. To summarize:

- Some liquefied natural gas terminals use sea water to heat the gas back to its gaseous phase. For open systems, high volumes of sea water are required and are likely to result in large mortalities of marine organism eggs and larvae.
- For hurricanes, direct losses to the fishing industry and businesses supporting fishing activities occur ranging from loss of vessels to destruction of fishery infrastructure (Walker et al. 2006). However, although these effects may be temporary, those fishing-related businesses whose profitability is marginal may be put out of business should a hurricane strike.
- Rising fuel costs have negative impacts on communities by increasing business costs and lowering profits.
- Most seafood consumed in the United States is imported and the quantity of imports has been steadily increasing. The effects of imports on domestic fisheries can cause fishermen to lose markets through commercial sector closures as dealers and processors use imports to meet demand, and limit the price fishermen can receive for their products through competitive pricing of imports.

In addition, Amendment 32 (GMFMC 2011a) discussed in detail a 2005 red tide event on the west-Florida shelf and the resultant oil spill from the explosion on the Deepwater Horizon MC252 oil rig. The red tide event may have affected reef fish, including red snapper populations. It has only been in the last 10 years that mortalities of higher vertebrates have been indisputably demonstrated to be due to acute red tide blooms and their brevetoxins (Landsberg et al. 2009). The extent of this event and possible effects of fish community structure has been described in Gannon et al. (2009).

Millions of barrels of oil were released into the Gulf from the Deepwater Horizon MC252 event (see http://response.restoration.noaa.gov/deepwaterhorizon). The effects on the environment on reef fish and the reef fish fisheries may not be known for several years when affected year classes of larval and juvenile fish enter the adult spawning population or fishery. For red

snapper, this occurs at approximately 3 years of age, so a year class failure in 2010 may not be detected in the spawning populations or by harvesters of red snapper until 2013 at the earliest. The results of the studies detecting these impacts on recruitment should be available soon and will be taken into consideration in the next SEDAR assessment. In addition to impacts on recruitment, adult reef fish may also have been negatively affected by the oil spill. For example, Weisberg et al. (2014) suggested the hydrocarbons associated with Deepwater Horizon MC252 oil spill did transit onto the Florida shelf and may be associated with the occurrences of reef fish (including red snapper) with lesions and other deformities. The overall impact of the oil spill may not be realized for quite some time and study results are just now becoming available.

There is a large and growing body of literature on past, present, and future impacts of global climate change induced by human activities (Kennedy et al. 2002). Some of the likely effects commonly mentioned in relation to marine resources are sea level rise, ocean acidification, coral bleaching, increased frequency of severe weather events, and change in air and water temperatures (Kennedy et al. 2002; Osgood 2008). The Environmental Protection Agency's climate change Web page provides basic background information on these and other measured or anticipated effects. In addition, the Intergovernmental Panel on Climate Change has numerous reports addressing its assessments of climate change (http://www.ipcc.ch/publications and data/publications and data.shtml). Additional reports are

(http://www.ipcc.ch/publications and data/publications and data.shtml). Additional reports are provided on the Global Climate Change website http://climate.nasa.gov/scientific-consensus.

Global climate changes could affect Gulf fisheries; however, the extent of these effects is not known at this time. Possible impacts include temperature changes in coastal and marine ecosystems that can influence organism metabolism and alter ecological processes such as productivity and species interactions; changes in precipitation patterns and a rise in sea level which could change the water balance of coastal ecosystems; altering patterns of wind and water circulation in the ocean environment; and influencing the productivity of critical coastal ecosystems such as wetlands, estuaries, and coral reefs (Kennedy et al. 2002; Osgood 2008). An area of low oxygen, known as the dead zone, forms in the northern Gulf each summer, and has been increasing in recent years (see Section 3.3). Climate change may contribute to this increase by increasing rainfall that in turn increases nutrient input from rivers. This increased nutrient load causes algal blooms that, when decomposing, reduce oxygen in the water (Needham et al. 2012; Kennedy et al. 2002). It is unclear how climate change would affect reef fishes and likely would affect species differently. Climate change can affect factors such as migration, range, larval and juvenile survival, prey availability, and susceptibility to predators. Burton (2008) speculated climate change could cause shifts in spawning seasons, changes in migration patterns, and changes to basic life history parameters such as growth rates. In addition, the distribution of native and exotic species may change with increased water temperature, as may the prevalence of disease in keystone animals such as corals and the occurrence and intensity of toxic algae blooms. Hollowed et al. (2013) provided a review of projected effects of climate change on the marine fisheries and dependent communities. Integrating the potential effects of climate change into the fisheries assessment is currently difficult due to the time scale differences (Hollowed et al. 2013). The fisheries stock assessments rarely project through a time span that would include detectable climate change effects. Climate change may significantly affect Gulf reef fish species in the future, but the level and time frame of these effects cannot be quantified at this time.

Actions from this amendment are not expected to significantly contribute to climate change through the increase or decrease in the carbon footprint from fishing.

5. Characterize the resources, ecosystems, and human communities identified in scoping in terms of their response to change and capacity to withstand stress.

This step should identify the trends, existing conditions, and the ability to withstand stresses of the environmental components. According to the CEQ guidance describing stress factors, there are two types of information needed. The first are the socioeconomic driving variables identifying the types, distribution, and intensity of key social and economic activities within the region. The second are the indicators of stress on specific resources, ecosystems, and communities

Reef Fish Fishery

Data used to monitor commercial reef fish effort includes the number of vessels with landings, the number of trips taken, and trip duration. Declines in effort may be a signal of stress within the fishery. For the red snapper component of the commercial sector, the number of vessels and trips did decline after the red snapper IFQ program was first implemented. However, the number of vessels and trips with red snapper landings have increased from 2007 to 2012 (GMFMC 2013b). These trends are described in Sections 3.1, 3.4, 5.0, 6.0 and in GMFMC (2013b). The commercial IFQ program recently underwent a 5-year review (GMFMC 2013b). The stated goals of this program, implemented through Amendment 26 (GMFMC 2006) were to reduce overcapacity and eliminate problems associated with overcapacity. The review found the program was moderately to highly successful in meeting the program goals; however, further improvements were identified regarding overcapacity, discard mortality price reporting, and social and community impacts. Therefore, the red snapper component of the commercial sector does not seem to be stressed.

Within the commercial reef fish sector as a whole, the number of commercial vessels has been declining as evidenced by the number of permits (Table 4.8.1). The number of permits has declined from 1,099 in 2008 to 917 in 2012 and the number landing at least one pound of reef fish has declined from 681 to 557 over the same time period. Although this could be an indicator of stress in the fishery, the commercial sector has undergone several changes in the past few years with the IFQ programs for red snapper, grouper, and tilefish. Given that a primary goal of these programs is to reduce overcapacity, the reduction in permits may just reflect this expected change.

Table 4.8.1. Number of Gulf of Mexico reef fish commercial (landing at least one pound of reef fish), for-hire, and historical captain permits by year.

| | <u>Year</u> | | | | |
|--------------------|-------------|-------------|-------------|-------------|-----------|
| Sector | 2008 | <u>2009</u> | <u>2010</u> | <u>2011</u> | 2012 |
| Commercial | 1099 (681) | 998 (696) | 969 (580) | 952 (561) | 917 (557) |
| For-hire | 1458 | 1417 | 1385 | 1353 | 1336 |
| Historical captain | 61 | 56 | 47 | 43 | 42 |

Source: Southeast Regional Office, Limited Access Permit Program Branch.

Table 4.8.2. Number of Gulf of Mexico reef fish commercial trips catching at least one pound of reef fish and the number of offshore angler trips for the charter and private angling components of the reef fish recreational sector for the years 2008-1012.

| | Year | | | | |
|----------------|-----------|-----------|---------|---------|-----------|
| Sector | 2008 | 2009 | 2010 | 2011 | 2012 |
| Commercial | 8,079 | 8,177 | 5,991 | 6,541 | 6,629 |
| Charter | 326,868 | 319,768 | 229,679 | 300,668 | 355,413 |
| Private angler | 1,434,875 | 1,011,948 | 767,080 | 782,989 | 1,017,007 |

Sources: Commercial trip data from the Southeast Regional Office, Limited Access Permit Program Branch and recreational angler trip data from NOAA Office of Science and Technology's Recreational Fisheries Statistics web page at https://www.st.nmfs.noaa.gov/recreational-fisheries/index.

For the reef fish recreational sector, the number of angler trips in offshore waters are used as a proxy for recreational reef fish fishing and show a decline in 2010 from 2008 and 2009 values followed by an increase in trips in 2011 and 2012. This suggests the sector is recovering from the 2010 Deepwater Horizon MC252 oil spill. Within the for-hire component, the number of for-hire and historical captain permitted vessels has declined from 2008 to 2012 and could be viewed as an indicator of stress. However, the number of offshore trips by the charter component has increased above 2008 and 2009 values suggesting economic conditions for this component were improving. However, as pointed out in Chapter 1, pounds landed and trips taken by for-hire vessels relative to private anglers were lower in 2013, likely as a consequence of state waters during extend State seasons being closed to federally permitted for-hire vessels when the federal red snapper recreational season was closed.

Red Snapper

Major stresses to the red snapper stock have primarily come from overfishing, which has been occurring at least since the first stock assessment in 1988 and overfishing only recently ended. It is likely that quota overruns by both commercial and recreational sectors have slowed the recovery of the stock. Trends in landings and the status of red snapper stock are based on NMFS and SEDAR stock assessments (summarized in Sections 3.1 and 3.3) and incorporated here by reference. The most recent stock assessment indicates the stock is continuing to rebuild. It is likely the red snapper stock was adversely affected by the Deepwater Horizon MC252 oil spill in 2010; however, these effects are only just being realized (see step 4d). A recommendation in the 2013 stock assessment (SEDAR 31 2013) is that future assessments of Gulf red snapper should be conducted with the explicit goal of attempting to model any enduring oil spill effects and their effect on the stock. At this point, it is unclear if and how climate change is affecting red snapper stocks. Burton (2008) speculated climate change could cause shifts in spawning seasons, changes in migration patterns, and changes to basic life history parameters such as growth rates in Gulf fish stocks, but changes to such patterns have not been observed for red snapper.

Ecosystem

With respect to stresses to the ecosystem from actions in this amendment, changes in the red snapper allocation are not likely to create additional stress. Handline gear, the primary gear used

by the fishery, and longlines can damage habitat through snagging or entanglement; however, as described in Section 4.1.1, these impacts are minimal. Changes in the population size structure as a result of shifting red snapper fishing selectivities and increases in stock abundance could lead to changes in the abundance of other reef fish species that compete with red snapper for shelter and food. Predators of red snapper could increase if red snapper abundance is increased, while species competing for similar resources as red snapper could potentially decrease in abundance if food and/or shelter are less available. Efforts to model these interactions are still ongoing [e.g., Ecopath (Walters et al. 2006) and Atlantis¹⁸), and so predicting possible stresses on the ecosystem in a meaningful way is not possible at this time. As described in Part 4d of this cumulative effects analysis, the Deepwater Horizon MC252 incident has affected more than onethird of the Gulf area from western Louisiana east to the panhandle of Florida and south to the Campeche Bank in Mexico. The impacts of the oil spill on the physical and biological environments are expected to be significant and may be long-term. Stressors to the ecosystem could include such factors as year-class failures and damage to reef fish EFH. Climate change may also be a stressor to the ecosystem, but is poorly understood. Hollowed et al. (2013) outlined the difficulties in understanding the effects of climate change and developed a conceptual pathway of direct and indirect effects of climate change and other anthropogenic factors on marine ecosystems. They suggest integrated interdisciplinary research teams be used better understand the effects. At this time, climate change does not appear to be a stressor on the reef fish fishey. However, it could be in the future. The National Ocean Service (2011) indicated that 59% of the Gulf coast shoreline is vulnerable to sea level rise. This means coastal communities that support this fishery could be impacted in the future from higher storm surges and other factors associated with sea level rise. These communities do appear to be somewhat resilient given their ability to recover after the 2004 and 2005 hurricane seasons as well as from the Deepwater Horizon MC252 oil spill (see step 4).

Administrative Environment

The stresses to the administrative environment from these actions would likely focus on the setting of annual quotas, ACTs, as well as monitoring landings to determine if AMs have been triggered. However, these stresses are not expected to significantly differ from the current stresses. In 2013, several States established recreational red snapper regulations that were inconsistent with federal regulations. This caused additional stress on the administrative environment requiring additional regulations, analysis, presence of law enforcement, and increased confusion among the fishing public. The actions in this amendment would allow regions to adjust regulations to meet their regional needs while maintaining consistency with the FMP and likely reduce stress in this environment. It is unknown whether the regions would be able to constrain harvest to the quota. However, with the current federal management, the recreational sector has exceeded the allocation in 14 of 22 years in which an allocation was specified. The stock could likely withstand some overages without jeopardizing the rebuilding plan; however, continuous overages could result in a change of the stock status. However, the regions have indicated they intend to establish new monitoring procedures, which could improve the estimations for landings, but the SEFSC would need to review the sampling designs and data to insure compatibility with the current methods.

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¹⁸ NOAA's Integrated Ecosystem Assessment Program (https://www.st.nmfs.noaa.gov/iea/gulfofmexico.html)

6. Characterize the stresses affecting these resources, ecosystems, and human communities and their relation to regulatory thresholds.

This section examines whether resources, ecosystems, and human communities are approaching conditions where additional stresses could have an important cumulative effect beyond any current plan, regulatory, or sustainability threshold (CEQ 1997). Sustainability thresholds can be identified for some resources, which are levels of impact beyond which the resources cannot be sustained in a stable state. Other thresholds are established through numerical standards, qualitative standards, or management goals. The CEA should address whether thresholds could be exceeded because of the contribution of the proposed actions to other cumulative activities affecting resources.

Reef Fish Fishery

As indicated above, both commercial and for-hire fisheries are subject to stress as a result of increases in fishing costs, increases in harvesting efficiency, more restrictive regulations (particularly for red snapper), and changes in the stock status of certain species (effort shifting). Reductions in dollars generated by these entities would likely be felt in the fishery infrastructure. For the reef fish fishery, an indicator of stress would be a decline in the number of permitted vessels. For the commercial sector, the number of vessels and trips landing red snapper initially declined after the IFQ program went into effect in 2007 (419 vessels and 4,714 trips in 2006 compared to 319 vessels and 2,578 trips in 2007; GMFMC 2013b). However, the number of vessels and trips landing red snapper has increased in recent years (368 vessels and 3,389 trips in 2011) demonstrating that conditions in commercial red snapper sector are improving. GMFMC (2013b) also cites other factors such as pricing, fleet and effort consolidation, and market conditions that also support an improved socioeconomic environment. As mentioned in Step 5 of this CEA, the number of vessels in the commercial sector has declined; however, with the shift towards IFQ management, it is difficult to determine if this reflects stress in the sector or is a result of overcapacity reduction - an expected result of IFQ management. Five-year reviews similar to the one conducted for red snapper are planned for the grouper and tilefish IFQ programs after the 2014 fishing year (year 5 of the) is complete.

Analyses conducted on the effects of a limited access program for for-hire vessels indicated operations were generally profitable (GMFMC 2005a). However, testimony from for-hire operators in light of recent red snapper regulations have suggested some for-hire operators may go out of business, particularly in the northeastern Gulf. Other reasonably foreseeable actions listed in Step 4c of this analysis are not expected to adversely affect the for-hire component and so should not place additional stress to the recreational sector. Non-FMP actions (see Step 4d) may place added stress on the for-hire component of the recreational sector (e.g., hurricanes and higher fuel costs). However, timing and magnitude of the potential negative cumulative the effects from these events are difficult to predict.

Little information is available on the stresses on the private angler sector. Because private angling is an optional activity, likely factors that affect a person's involvement are likely economic. Therefore, costs such as fuel, marina fees, and boat upkeep are likely to affect a person's decision to go red snapper fishing or not, particularly within the current short recreational red snapper season. As a result, more red snapper trips could be taken if there are

gains in pounds for this component. Other reasonably foreseeable actions listed in Step 4c of this analysis are not expected to adversely affect the private angling component and so should not place additional stress to the recreational sector as a whole. Non-FMP actions (see Step 4d) may place added stress on the private angling component (e.g., hurricanes, higher fuel costs, and climate change). However, timing and magnitude of the potential negative cumulative the effects from these events are difficult to predict (see steps 4 and 6).

Red Snapper

Amendment 1 to the Reef Fish FMP (GMFMC 1989), implemented in 1990 before the Sustainable Fisheries Act (SFA) was passed, established the minimum spawning stock biomass at 20 percent SPR for all reef fish species. A 1991 regulatory amendment (GMFMC 1991) established a commercial quota and a 1997 regulatory amendment established a recreational quota. The quotas were set based on the 51:49 commercial:recreational allocation being applied to the total allowable catch. The Generic Sustainable Fisheries Act (SFA) Amendment (GMFMC 1999) proposed SFA definitions for optimum yield, minimum stock size threshold and maximum fishing mortality threshold for three reef fish species and generic definitions for all other reef fish. The definition of maximum fishing mortality threshold for red snapper, F_{26%SPR}, was approved and implemented. Definitions for optimum yield and minimum stock size threshold were disapproved because they were not biomass-based. ACLs were not implemented for red snapper as the commercial and recreational quotas were considered functional equivalents; however, ACLs are currently being defined by the Council in a Generic Status Determination Criteria Amendment (see 4c of this CEA).

A benchmark assessment was conducted for red snapper in 2013 under the SEDAR stock assessment process (see Section 3.3 for a summary of the assessment). Based on the parameter estimates through 2011, the red snapper stock was found to be overfished, but that overfishing had ended. A brief description of the stock and its status can be found in Section 3.3 and step 5 of this CEA. Measures proposed in this amendment are not likely to adversely affect the red snapper stock status as long as landings do not exceed the OFL. This is because the actions would affect the allocation of red snapper between components and not how many red snapper can be caught. At this time, it is unclear how climate change may affect these regulatory thresholds (see steps 4 and 5).

Ecosystem

The stresses associated with the proposed actions in relation to regulatory thresholds are not likely to cause beneficial or adverse effects on the ecosystem. The actions would not change the way the reef fish fishery as a whole is prosecuted. Actions in the amendment would affect red snapper recreational fishing and not fishing for the other 30 reef fish species. Thus, significant effects on the ecosystem are not expected. The overall Gulf-wide fishing effort would remain constrained by the recreational quotas and annual catch limits. Climate change is likely to affect the Gulf ecosystem; however, as described in steps 4 and 5, these effects are poorly understood.

Administrative Environment

The stresses associated with the proposed actions in relation to regulatory thresholds are not likely to cause beneficial or adverse effects on the administrative environments. Activities such as monitoring landings, setting quotas, and enforcing fisheries regulations will continue as

before. If the creating two components of the recreational sector result in more satisfying management measures for each component, this should reduce stresses on managers to respond complaints by stakeholders on red snapper management.

7. Define a baseline condition for the resources, ecosystems, and human communities.

The purpose of defining a baseline condition for the resource and ecosystems in the area of the proposed actions is to establish a point of reference for evaluating the extent and significance of expected cumulative effects.

Reef Fish Fishery

As noted in Section 3.1, a description of the fishery and affected environment relative to red snapper was last fully discussed in joint Reef Fish Amendment 27/Shrimp Amendment 14 (GMFMC 2007). Red snapper landings for the recreational sector are not available at the community level, making it difficult to identify communities as dependent on recreational fishing for red snapper. Data reflecting commercial landings of red snapper may or may not reflect areas of importance for recreational fishing of red snapper. It cannot be assumed that the proportion of commercial red snapper landings among other species in a community would be similar to its proportion among recreational landings within the same community because of sector differences in fishing practices and preferences. Thus, in addition to communities with the greatest commercial red snapper landings, the referenced analysis identifies communities with the greatest recreational fishing engagement, based on numbers of: 1) federal for-hire permits, 2) vessels designated recreational by owner address, and 3) vessels designated recreational by homeport, plus availability of recreational fishing infrastructure. The Gulf communities to score highest for recreational fishing engagement based on the described analysis Section 3.5.

Information is lacking on the social environment of these fisheries, although some economic data are available, although primarily for the commercial sector. Fishery-wide ex-vessel revenues are available dating to the early 1960s, and individual vessel ex-vessel revenues are available from 1993 when the logbook program was implemented for all commercial vessels.

Red Snapper

The first stock assessment of red snapper was conducted in 1986 and has been assessed periodically since then (see Section 3.1). The most recent assessment (see Section 3.3 for a summary) occurred in 2013 through the SEDAR process and included data through 2011. The assessment shows trends in biomass, fishing mortality, fish weight, and fish length dating to the earliest periods of data collection. For this assessment, reliable commercial landings data were estimated back to 1963 and projected landings were estimated back to 1872 (Porch et al. 2004). Recreational data were available since 1981. Beginning with the 1988 assessment (Goodyear 1988), red snapper have been considered overfished and undergoing overfishing. However, the most recent assessment (SEDAR 31 2013) showed that overfishing had ended and that the stock condition, although still overfished, was improving. An update assessment was completed in 2014 and presented to the Council's SSC in January 2015. At this time, it is unknown what affects non-FMP actions (beneficial or adverse) such as the Deepwater Horizon MC252 oil spill or climate change may have on the health of red snapper stocks. Long-term monitoring of reef fish stocks relative to the Deepwater Horizon MC252 oil spill are ongoing.

Ecosystem

A baseline for analysis of the physical environment, as discussed in Section 3.2, was conducted in the EIS for the Generic EFH Amendment (GMFMC 2004a). Detailed information pertaining to the closures and preserves is provided in the February 2010 Regulatory Amendment (GMFMC 2010). In the Gulf, fish habitat for adult red snapper consists of submarine gullies and depressions; natural vertical relief structures such as coral reefs, rock outcroppings, and gravel bottoms; and artificial structures such as oilrigs and artificial reefs (GMFMC 2004a). Many of these vertical relief areas are identified as protected areas.

Other species in the ecosystem are discussed in Section 3.3. The Reef Fish FMP currently encompasses 31 species (Table 3.3.2). Eleven other species were removed from the FMP in 2012 through the Generic ACL/AM Amendment (GMFMC 2011b). Stock assessments and stock assessment reviews have been conducted for 13 species and can be found on the Council (www.gulfcouncil.org) and SEDAR (www.sefsc.noaa.gov/sedar) websites.

Administrative Environment

The administrative environment is described in Section 3.6. Responsibility for federal fishery management is shared by the Secretary of Commerce (Secretary) and the Council for the federal waters of the Gulf. These waters extend to 200 nautical miles offshore from the nine-mile seaward boundary of the States of Florida and Texas, and the three-mile seaward boundary of the States of Alabama, Mississippi, and Louisiana. The State governments of Texas, Louisiana, Mississippi, Alabama, and Florida have the authority to manage their respective State fisheries. Each of the five Gulf States exercise legislative and regulatory authority over their respective State's natural resources through discrete administrative units. Although each agency is the primary administrative body with respect to the States' natural resources, all States cooperate with numerous State and federal regulatory agencies when managing marine resources.

Regulations contained within FMPs are enforced through actions of NOAA's Office of Law Enforcement, the United States Coast Guard, and various State authorities. To better coordinate enforcement activities, federal and State enforcement agencies have developed cooperative agreements to enforce the Magnuson-Stevens Act. These activities are being coordinated by the Council's Law Enforcement Advisory Panel and the Gulf States Marine Fisheries Commission's Law Enforcement Committee, which have developed a 5-year "Gulf of Mexico Cooperative Law Enforcement Strategic Plan – 2008-2012."

The ability of the regions to constrain harvest causes uncertainty surrounding the effects of implementing regional management. The federal management has experienced overages of the quota or allocation in 14 of the last 22 years. However, the methods for estimating landings and projecting the season have improved consistently over time. The question remains if regions could constrain the harvest within the regional quotas; however, the regions have indicated they intend to improve monitoring for their specific regions under this plan, which should ameliorate any concerns about overages being worse. Nevertheless, NMFS would need to continue analyzing the catch rates and landings to determine whether the regional management measures constrain the harvest. If the quota is exceeded for Gulf recreational red snapper harvest, then

NMFS would be required to prohibit harvest in the federal waters regardless of the regional management plans.

8. Identify the important cause-and-effect relationships between human activities and resources, ecosystems, and human communities.

Cause-and-effect relationships are presented in Tables 4.4.3.

Table 4.8.3. The cause and effect relationship of fishing and regulatory actions for red snapper

within the time period of the CEA.

| Time periods | Cause | Observed and/or expected effects |
|--------------|--|--|
| 1800-2016 | Climate change | Changes ocean acidity and temperature modifies fish and prey distributions and productivity; threaten fishing communities through sea level rise and changing weather patterns |
| 1962-1983 | Growth and recruitment overfishing | Declines in mean size and weight |
| 1984 | 13-inch minimum size limit for the recreational and commercial fisheries | Slowed rate of overfishing |
| 1990 | 3.1 mp quota for commercial fishery and 7 fish bag limit | Further slow rate of overfishing |
| 1991-1992 | 2.04 mp commercial quota | Continue to slow rate of overfishing |
| 1992 | Establish red snapper Class 1 and 2 endorsements and respective trip limits | Begin derby fishery |
| 1993-1998 | 3.06 mp commercial quota | Continue to slow rate of overfishing |
| 1994 | Increase minimum size to 14 inches in the commercial and recreational fisheries | Increase yield per recruit, increase the chance for spawning, and slow rate of overfishing |
| 1995-1997 | Increase minimum size to 15 inches in the commercial and recreational fisheries and reduce the bag limit to 5 fish | Increase yield per recruit, increase the chance for spawning, and slow rate of overfishing |
| 1997-2005 | Reduce recreational season length | Constrain harvest in recreational fishery |
| 1998 | Shrimp trawls in the EEZ required to use NMFS-certified BRDs west of Cape San Blas | Reduce fishing mortality rate on age 0 and age 1 red snapper |
| 1998-2005 | Reduce bag limit to 4 fish | Reduce fishing mortality rate in recreational fishery |
| 1999-2005 | Raise total quota to 9.12 mp | Reduce rebuilding rate for fishery |
| 2000-2014 | Raise recreational minimum size limit to 16 inches | Increase yield per recruit, increase the chance for spawning, slow rate of overfishing |
| 2004 | Shrimp trawls in the EEZ required to use NMFS-certified BRDs east of Cape San Blas | Further reduce fishing mortality rate on age 0 and age 1 red snapper |
| 2004 | Implement red snapper rebuilding plan | Provide mechanism to monitor harvest for rebuilding |
| 2007-2016 | Commercial- Established Individual Fishing Quota Program (IFQ) | Constrain commercial harvests within the limits set by the rebuilding plan; IFQ to further control commercial sector to prevent overages; increase in administrative work to manage the IFQ. |

| 2007-2014 | Recreational - Reduction of bag limit to 2 fish and adjustment of season length | Constrain recreational harvest to the quota. Progressively shorter seasons as average size of landed fish increases. |
|-----------|---|---|
| 2013-2016 | Overfishing has ended, but the stock remains overfished. | Continue stock rebuilding |

9. Determine the magnitude and significance of cumulative effects.

The primary objectives of this amendment and associated EIS is to provide flexibility in the management of the recreational harvest of red snapper by restructuring the federal fishery management strategy to allow for regional variation and developing accountability measures to address overages. The short- and long-term direct and indirect effects of each these actions are provided in Section 4.

To examine the magnitude and significance of the cumulative effects, important valued environmental components (VECs) were identified for the overall actions to be taken with this amendment. VECs are "any part of the environment that is considered important by the proponent, public, scientists and government involved in the assessment process. Importance may be determined on the basis of cultural values or scientific concern" (EIP 1998). For purposes of this analysis, an initial 22 VECs were identified, and the consequences of each alternative proposed in this amendment on each VEC were evaluated. Some of these VECs were combined into a revised VEC because many of the past, current, and reasonably foreseeable future actions (RFFA) were similar. Based on this analysis, six VECs were determined to be the most important for further consideration. Note that because 163 vessels have both commercial and for-hire reef fish permits, commercial vessels were included in the analysis of vessel owner, captain, and crew. The six VECs are shown in Table 4.8.4.

VECs not included for further analysis were sharks, protected resources, and Wholesale/retail. Many longline vessels that target reef fish also target sharks. However, sharks were not considered as an important VEC because, as shark stocks have declined, the shark fishery has become more and more regulated, limiting the effects of this fishery and the stock on reef fish stocks. There may be some effort shifting from the shark fishery to the reef fish fishery due to increased restrictions, however, this effect will likely be minor because only a minority of vessels have dual federal reef fish and shark permits. Protected resources were also eliminated from further analyses in this section. As described in Section 3.3, biological opinions have concluded the primary reef fish gear (longline and hook-and-line) were not likely to jeopardize sea turtles or small tooth sawfish. Because actions considered in this amendment are not expected to change how reef fish fishing gear is used in the prosecution of the reef fish fishery, any take associated with reef fish fishing should not exceed that considered in biological opinions. All other Endangered Species Act (ESA)-listed species heave been found not likely to be adversely affected or not affected by the reef fish fishery. For marine mammals, gear used in the reef fish fishery were classified in the as Category III fisheries (see Section 3.3). This means this fishery has minimal impacts on marine mammals. Dealers and consumers (wholesale/retail) were eliminated because this action affects the recreational sector of the reef fish fishery. The actions in this amendment will not change the IFQ programs and commercial quotas the

| wholesale/retail business relies on. Thus, pounds needed to support dealers and the consumers who rely on obtaining their seafood from dealers should not be affected. | | | | | |
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Table 4.8.4. VECs considered, consolidated, or not included for further evaluation.

| VECs considered for further | VECs consolidated for | VECs not included for further | |
|--------------------------------|-----------------------------------|-------------------------------|--|
| evaluation | further evaluation | evaluation | |
| Habitat | Hard bottom | | |
| | EFH | | |
| Managed resources | Red snapper | Sharks | |
| - red snapper | Other reef fish | Protected species | |
| - other reef fish species | Prey species | | |
| | Competitors | | |
| | Predators | | |
| Vessel owner, captain and crew | Vessel owner | | |
| - Commercial | Captain | | |
| - For-hire | Crew | | |
| | | Wholesale/retail | |
| | | Dealers and consumers | |
| Anglers | | | |
| | | | |
| Infrastructure | Fishing Communities | | |
| | Fishing support businesses (ice | | |
| | and gear suppliers, marinas, fuel | | |
| | docks) | | |
| Administration | Federal Rulemaking | | |
| | Federal Permitting | | |
| | Federal Education | | |
| | State Rulemaking/Framework | | |
| | State Education | | |

The following discussion refers to the effects of past, present, and RFFAs on the various VECs.

Habitat

Essential fish habitat, as defined in the GMFMC (2004a), for the Reef Fish FMP consists of all Gulf estuaries; Gulf waters and substrates extending from the US/Mexico border to the boundary between the areas covered by the Gulf of Mexico and the South Atlantic fishery management councils from estuarine waters out to depths of 100 fathoms. Section 3.2 and GMFMC (2004a) describe the physical environment inhabited by red snapper as well as reef fish in general. Red snapper is a carnivorous bottom dweller, generally associated (as adults) with hard-bottom substrates, submarine gullies and depressions, and oilrigs and other artificial structures (GMFMC 2004a). Eggs and larvae are pelagic while juveniles are found associated with bottom features or over barren bottom.

From fishing, the most sensitive gear/habitat combinations include EFH for reef fish species. These include fish otter trawls, shrimp otter trawls, roller frame trawls, and pair trawls over coral reefs; crab scrapes over coral reefs; oyster dredges over submerged aquatic vegetation (SAV), oyster reefs, or coral reefs; rakes over coral reefs; and patent tongs over SAV, oyster reefs, or coral reefs (GMFMC 2004a). Some of these gear/habitat interactions are unlikely to occur in actual practice (e.g., shrimp trawls towed through hard bottom areas can destroy shrimp nets and so are avoided). In general, gears that are actively fished by towing have the highest potential to alter habitats. However, some habitats, such as coral reefs and hard bottoms are sensitive to interactions with passive gears (e.g. traps) as well. Most directed reef fish fishing activities, as

described in Section 4.1.1, use longlines and handlines, although a few fish are taken by spearfishing gear. These have low levels of impacts compared to other gears.

In the past, some fishing practices have had detrimental effects on the physical environment. Gears such as roller trawls and fish traps damaged habitats while harvesting fish species. As a result of these effects, the Council developed stressed areas to reduce these impacts. Further protections have been developed, primarily by either prohibiting fishing or limiting fishing activities that can occur within certain areas. Detailed information on the the closures and preserves is provided in the February 2010 Regulatory Amendment (GMFMC 2010). In addition, regulatory changes through Generic EFH Amendment 3 (GMFMC 2005b; implemented in 2006) prohibited bottom anchoring and the use of trawling gear, bottom longlines, buoy gear, and all traps/pots to protect coral reefs in several HAPCs, and required a weak link in the tickler chain of bottom trawls on all habitats throughout the Gulf federal waters to minimize damage done to habitats should the chain get hung up on natural bottom structures.

Current allowable gear types can adversely affect hard bottom areas; however, these impacts are not considered great (See Section 4.1.1). Handline gear and longlines used in the reef fish fishery can damage habitat through snagging or entanglement. Longlines can also damage hard bottom structures during retrieval as the line sweeps across the seafloor. Additionally, anchoring over hard-bottom areas can also affect benthic habitat by breaking or destroying hard bottom structures. However, these gears are not believed to have much negative impact on bottom structures and are considerably less destructive than other commercial gears, such as traps and trawls, which are not allowed for reef fish fishing.

Damage caused from reef fish fishing, although minor, is associated with the level of fishing effort (see Section 4.1.1). Therefore, actions reducing levels of effort would result in greater benefits to the physical environment because fishing related interactions with habitat would be reduced. Thus, actions described in steps 3 and 4 of this CEA which have reduced fishing effort for some species, and possibly the fishery on the whole, have had a positive effect on hard bottom habitats. RFFAs, such as Amendments 28 and 40, should also benefit these habitats as they would also reduce or limit fishing effort. As described in Section 4, effects on the physical environment from the proposed actions would likely be minimal because prosecution of the fishery should not be changed.

Reef fish EFH, particularly coral reefs and SAVs, are particularly susceptible to non-fishing activities (GMFMC 2004a). The greatest threat comes from dredge-and-fill activities (ship channels, waterways, canals, and coastal development). Oil and gas activities as well as changes in freshwater inflows can also adversely affect these habitats. As described in Step 4d of this cumulative effects analysis, the potential harm to reef fish habitat was highlighted by the Deepwater Horizon MC252 incident (http://response.restoration.noaa.gov/deepwaterhorizon). Essential fish habitat and HAPC designations cited in Section 3.2, GMFMC (2005b), and GMFMC (2010) and are intended to promote careful review of proposed activities that may affect these important habitats to assure that the minimum practicable adverse impacts occur on EFH. However, NMFS has no direct control over final decisions on such projects. The cumulative effects of these alternatives depend on decisions made by agencies other than NMFS, as NMFS and the Gulf Council have only a consultative role in non-fishing activities. Decisions

made by other agencies that permit destruction of EFH in a manner that does not allow recovery, such as bulkheads on former mangrove or marine vegetated habitats, would constitute irreversible commitments. However, irreversible commitments should occur less frequently as a result of EFH and HAPC designations. Accidental or inadvertent activities such as ship groundings on coral reefs or propeller scars on seagrass could also cause irreversible loss.

At this time, it is unclear what effects climate change will have on red snapper EFH. Factors associated with climate change such as ocean acidification could negatively affect important biotic components of red snapper EFH such as corals (IPCC 2014). Hollowed et al. (2013) has identified important ecosystem paths that deserve future study to determine climate change cause and effects.

Managed Resources

There are 31 species of reef fish managed in the Gulf federal waters, and of the species where the stock status is known, four of the eleven species are considered overfished (gag, greater amberjack, gray triggerfish, and red snapper; see Section 3.3). Recent actions for these overfished stocks have ended overfishing and set or continued rebuilding plans (e.g., Amendments 27, 32, 35, and 37).

In the past, the lack of management of reef fish allowed many stocks to undergo both growth and recruitment overfishing. This has allowed some stocks to decline as indicated in numerous stock assessments (Section 3.3). Red snapper have been considered overfished since the first stock assessment in 1986. For red snapper, management measures including a minimum size limit, commercial quota, and aggregate bag limit were put in place as part of the initial Reef Fish FMP or Amendment 1 (Section 3.1). None of these measures halted increases in landings. However, over time, management measures have become more restrictive and held landings more closely to the quotas.

The present harvest levels are based on a rebuilding plan put in place by Amendment 27 which shifted the plan from a constant catch to a constant fishing mortality plan. The current plan, after an initial reduction in the total allowable catch from 9.12 mp to 5 mp, has allowed harvests to increase as the stock rebuilds. These measures have also limited the red snapper harvest sufficiently to end overfishing on the stock. In addition, the red snapper IFQ program has successfully held landings by the commercial sector below its quota. However, these measures, along with other IFQ programs for grouper and tilefish (Amendment 29) may have, at least for the commercial sector, redirected effort towards other non-IFQ managed reef fish species such as gray triggerfish and greater amberjack by fishermen without IFQ shares or allocation. Landings of these non-IFQ managed species are closely managed to prevent them from exceeding their ACLs and protects them from overharvest. In fact, measures for gray triggerfish and greater amberjack allow the fishery to be closed if the harvest is projected to meet their respective commercial and recreational quotas.

Fishery management RFFAs are expected to benefit managed species. These actions are expected to manage the stocks at OY per National Standard 1 and are described in steps 3 and 4 of this CEA. Although this amendment and Amendments 28, 36, and 39 do not specifically

address overfishing of red snapper, they are intended to improve the management of the commercial and recreational sectors in ways that are likely to better keep harvests within the quotas. Other RFFAs described in steps 3 and 4 similarly do not specifically address overfishing but are intended to improve the management of reef fish stocks either through revising ACLs, improving data reporting, or allowing more flexibility in management.

Non-fishing activities are likely to adversely affect reef fish stocks as listed in Step 4d. For example, LNG facilities are being proposed in the western and northern Gulf. As described in Step 4d, these facilities can have a negative effect on species with pelagic larvae, like most reef fish species. To mitigate the effects of these facilities, closed-rather than open-loop systems are being called for. At this time, the effect of LNG facilities is unknown and is likely to be less for reef fish species than other more coastal species such as red drum. Other factors such as climate change, hurricanes, and oil and gas extraction could have detrimental effects on reef fish species, but these effects are poorly understood.

Vessel Owner, Captain, and Crew (Commercial and For Hire)

Adverse or beneficial effects of actions on vessel owners, captains, and crew are tied to the ability of a vessel to make money. In commercial fisheries, these benefits are usually derived from shares awarded after fishing expenses are accounted for. The greater the difference between expenses and payment (revenue) for harvested fish, the more profit is generated by the fishing vessel. For-hire businesses generate revenue by selling either at the vessel level (charter businesses) or passenger level (headboats).

The commercial fishery has benefited from past actions in the reef fish fishery relative to this action. Prior to 1990, entry into the reef fish fishery was unhindered by regulation. To constrain harvest in order to prevent overexploitation of reef fish in general and red snapper specifically, the Council implemented size limits, quotas, seasonal closures, and a permit moratorium. These measures have produced limited success. For red snapper, the commercial quota was overrun 10 times until the IFQ program established in 2007 (Table 3.1.2).

Current management measures have had an overall positive, short-term impact on the red snapper component of the commercial sector. Landing restrictions were needed to keep the commercial red snapper harvest within its quota and primarily took the form of short miniseasons (Hood et al. 2007). The mini-seasons kept many commercial vessels from taking more fishing trips during these years limiting fishing effort. With the advent of the IFQ program, fishermen with red snapper allocation were able to have flexibility in when and where they could fish. It also stopped the commercial quota from being exceeded. However, this program adversely affected fishermen who did not qualify for the initial distribution of IFQ shares. These fishermen have been required to purchase IFQ shares or allocation if they wished to harvest red snapper.

For other overfished reef fish stocks other than red snapper, rebuilding measures required to end this condition and rebuild stocks have constrained the harvest for these species over the short-term and likely increased competition within the commercial sector to harvest other stocks.

However, by using constant fishing mortality rebuilding plans, harvests have been allowed to increase as the stocks recover.

Non-FMP factors have adversely affected the reef fish commercial and for-hire fleets. Imports can cause fishermen to lose markets when fishery closures occur as dealers and processors use imports to meet consumer demand. Consumer comfort with imports can then limit the price fishermen receive when harvest is allowed. Other factors that have had an adverse effect on the commercial fishery include hurricanes and increases in fishing costs, such as fuel, which may have pushed marginal fishing operations out of business (see step 4d). Hurricanes are unpredictable and localized in their effects. Increases in fishing costs, unless accompanied by an increase in prices or harvest quantity, decrease the profitability of fishing.

The for-hire component has benefited from past actions in the reef fish fishery relative to this action. This increase has been fueled by increased interest by the public to go fishing (i.e., more trips sold) as evidenced by an almost three-fold increase in recreational fishing effort since 1986 (SEDAR 12 2007). To constrain harvest in order to prevent overexploitation of reef fish in general and red snapper specifically, NMFS, through the Council, implemented minimum size and bag limits for most species prior to 2000. In addition, a recreational red snapper quota was implemented in 1997 and a permit moratorium to constrain the recreational effort from the for-hire industry in 2003. These measures have met with limited success toward ending overfishing.

Current management measures may have had a negative, short-term impact on the for-hire component of the reef fish fishery. Landing restrictions have been needed to keep the recreational red snapper harvest within its quota. These restrictions include a reduced bag limit and seasonal closures. These measures may have reduced interest by the public to take for-hire fishing trips and possibly resulted in a reduction in the number of trips taken, as shown in Table 4.4.2 (although the Deepwater Horizon MC252 oil spill may also be partly responsible for the decrease in trips). In addition, the restriction requiring a person aboard a federally-permitted Gulf for-hire reef fish vessel to comply with federal regulations for reef fish species regardless of where the fish are harvested (GMFMC 2008b), may have reduced the ability of federally permitted for-hire operators to sell trips because of longer non-compliant State fishing seasons. However, as discussed in Section 4, the creation of the two recreational components may allow for more federal fishing days for the federal for-hire component. Other factors that have had an adverse effect on the for-hire component of the reef fish fishery include increases in fishing costs, such as fuel, and hurricanes which may have pushed marginal fishing operations out of business (see step 4d). However, these factors may be less important than may seem apparent. For the red snapper for-hire component, reductions in charter fishing from more restrictive regulations, increased costs, and effects from hurricanes were claimed by the industry (GMFMC 2007). But red snapper data for 2007 found only lingering effects of the 2005 hurricanes; annual average effort for 2004 through 2005 were only slightly greater than in 2007. Although the available data cannot address claims of severe economic losses by individual entities, this data does not support contentions of widespread industry harm. However, for red snapper, effort may have shifted to other species or other charter businesses.

As mentioned in Section 2 and the economic and social effects analyses in Section 4, Magnuson-Stevens Act §407(d)(1) requires recreational or commercial red snapper fishing to end when a

sector catches its quota. The recreational sector includes both the federal for-hire and private angling components. Thus, if the private angling component exceeds its allocation of the recreational quota to such an extent that the overall recreational quota is projected to be met, the federal for-hire component would also be prohibited from retaining red snapper regardless of whether there is remaining quota available for that component. Reduced season lengths in the following year for the federal for-hire components could be further exacerbated by overage adjustments from exceeding the quota and non-compatible State fishing seasons. However, the likelihood of overages is reduced because each component's season will be based on the lower recreational ACT rather than the recreational quota.

Many RFFAs are likely to have a short-term negative impact on the for-hire component. Red snapper, gray triggerfish, greater amberjack, and gag have experienced overfishing, are considered overfished, and are being managed under stock rebuilding plans. Measures required to end overfishing and rebuild these stocks have constrained the harvest for these species. If these measures result in less interest by the fishing public to take fishing trips on for-hire vessels, then this will adversely affect this sector. However, as mentioned above, this effect has not been apparent for red snapper because the for-hire component has the ability to shift to other species. The ability to shift to other species would be expected to continue in response to subsequent RFFAs, though the flexibility would be reduced the more species that become subject to increased restrictions. Some short-term beneficial actions include an increase in TAC and relaxation of management measures for red grouper and vermilion snapper, as these stocks have recovered from overfishing and harvest restrictions have been relaxed.

Because many management RFFAs are designed to manage stocks at OY, these actions should be beneficial to the for-hire component. Stocks would be harvested at a sustainable level, and at higher levels for those stocks being rebuilt. If allocation between components, as proposed in this amendment, favors the for-hire component, this could provide additional red snapper fishing days and allow for more trips for this component. Specific to red snapper fishing, Amendments 28, 41, and 42 evaluate changing the commercial and recreational red snapper allocation and implementing some type of regional management of the recreational sector, respectively. In Amendment 28, the alternatives for shifting the allocation would decrease the commercial percentage and increase the recreational percentage of the stock ACL. Depending how these shifts are put in place, they could adversely affect the commercial sector if the commercial quota is reduced. The recreational sector, including the federal for-hire component, would benefit from increased quotas. Regional management would affect the recreational sector only in Amendment 39. Depending on how the recreational quota is allocated among States and the management measures implemented by the States, the effects on the federal for-hire component could be beneficial or adverse depending on where a vessel operator fishes.

Non-management-related RFFAs that could affect the for-hire component include hurricanes, oil and gas extraction, and increases in fishing costs. Hurricanes are unpredictable and localized in their effects. Oil spills, which are also unpredictable, can have extensive adverse impacts over large areas as evidenced by the Deepwater Horizon MC252 spill. Increases in fishing costs, unless accompanied by an increase in the price charged per trip or the number of trips, decrease the profitability of fishing.

Anglers

It is estimated that 3.1 million residents of Gulf States participated in marine recreational fishing (NMFS 2013a). Red drum and spotted sea trout are the species most commonly reported as target species by these anglers, with approximately 35% and 33% of interviewed anglers reporting targeting these species, respectively. The most commonly caught non-bait species across all waters of the Gulf were spotted seatrout, red drum, sand seatrout, Atlantic croaker, and gray snapper. In federal waters, the most commonly harvested species are white grunt, red grouper, red snapper, gag, and yellowtail snapper. As summarized in Holiman (2000), the typical angler in the Gulf is 44 years old, male (80%), white (90%), and employed full-time (92%). They have a mean income of \$42,700, and have fished in the State for an average of 16 years. The average number of trips taken in the 12 months preceding the interview was about 38 and these were mostly (75%) one-day trips with average expenditure of less than \$50. Seventy-five percent of interviewed anglers reported that they held salt-water licenses, and 59 percent owned boats used for recreational saltwater fishing. More recent comparable statistics are not available.

The effects of various past, present, and RFFAs on anglers are measured through levels of participation in the fishery. Measures that reduce participation are negative and measures that increase participation are positive. However, it is difficult to assess what affects past and present management measures have had on anglers because available data indicates the amount of effort by the private anglers has increased. This increase has been from approximately 6.8 million trips in 1981 to over 14 million trips from in 2003 to 2009 (Rios 2013). The number of angler trips declined from 14,356,523 angler trips in 2009, to 13,548,899 in 2010, and 13,874,314 in 2011. The decline in 2010 and 2011 is likely due to the Deepwater Horizon MC252 oil spill. The effects of various management measures on the participation by anglers is likely similar to the effects on the for-hire industry discussed above with the exception that private anglers are not subject to permit restrictions on where they can fish that federally permitted for-hire vessel operators are (see above section). However, as discussed in Sections 4.1.3 and 4.1.4, the creation of the two recreational components may further restrict the number of federal fishing days for the private angling component due to non-compatible State season lengths. Factors unrelated to management, such as hurricanes and increasing fuel and other costs, likely affect private anglers similar to for-hire fishermen. It should be noted that a possible effect of the proposed action could be constraining most of the private angling to state waters if State non-compatible seasons continue. If the private angling allocation is too low, then a greater proportion of private angling fish would be caught in state waters, reducing the days available to fish in federal waters.

As mentioned above in the discussion of the vessel owner, captain, and crew above as well as in Section 2 and the economic and social effects analyses in Section 4, Magnuson-Stevens Act §407(d)(1) requires recreational or commercial red snapper fishing to end when a sector catches its quota. The recreational sector includes both the federal for-hire and private angling components. Thus, if the federal for-hire component exceeds its allocation of the recreational quota to such an extent that the overall recreational quota is projected to be met, the private angling component would also be prohibited from retaining red snapper regardless of whether there is remaining quota available for that component. Reduced federal season lengths for the private angling component in the following year could be further exacerbated by overage

adjustments if the quota is exceeded and non-compatible State fishing seasons. However, the likelihood of this occurring is reduced because each component's season will be based on the lower recreational ACT rather than the recreational quota.

Two RFFAs specific to red snapper fishing, Amendments 41 and 42 evaluate changing the management for the for-hire sector of the fishery. Amendment 41 would provide management measures for the charter for-hire vessels regarding the harvest of red snapper. percentage and increase the recreational percentage of the stock ACL. Amendment 42 would provide management measures for the headboats participating in the Southeast Region Headboat Survey.

Non-management-related RFFAs that could affect anglers include hurricanes, oil and gas extraction, and increases in fishing costs. Hurricanes are unpredictable and localized in their effects. Oil spills, which are also unpredictable, can have extensive adverse impacts over large areas as evidenced by the Deepwater Horizon MC252 spill. Increases in fishing costs as well as lost fishing opportunities would likely reduce the amount of angler effort.

Infrastructure

Infrastructure refers to fishing-related businesses and includes marinas, rentals, snorkel and dive shops, boat dockage and repair facilities, tackle and bait shops, fish houses, and lodgings related to recreational fisheries industry. This infrastructure is tied to the commercial and recreational fisheries and can be affected by adverse and beneficial economic conditions in those fisheries. Therefore, the effects of past, present, and RFFAs should reflect responses by the fisheries to these actions. Past actions allowing the recreational and commercial fisheries to expand have had a beneficial effect providing business opportunities to service the need of these industries. Present actions which have constrained the commercial fisheries likely have had an adverse effect because lower revenues generated from the fishery would be available to support the infrastructure. However, as conditions improve for the fishery as described above through RFFAs, similar benefits should be accrued by the businesses comprising the infrastructure. For the recreational sector, as stated above, it is difficult to assess the impact of present and RFFAs since angler participation has increased until recently. Actions enhancing this participation should also be beneficial to the infrastructure. However, it should be noted the Council has been receiving public testimony that participation may be declining as fuel prices increase and may be reflected in the decline in the number of angler trips. It should be noted that non-FMP factors such as the Deepwater Horizon MC252 oil spill (IAI 2012) and climate change (http://www.nefsc.noaa.gov/ecosys/climate_change/implications.html) may adversely affect fishing communities, particularly those communities considered more vulnerable.

Administration

Administration of fisheries is conducted through federal (including the Council) and State agencies which develop and enforce regulations, collect data on various fishing entities, and assess the health of various stocks. As more regulations are required to constrain stock exploitation to sustainable levels, greater administration of the resource is needed. The NMFS Office of Law Enforcement, in cooperation with State agencies, would continue to monitor regulatory compliance with existing regulations and NMFS would continue to monitor both

recreational and commercial landings to determine if landings are meeting or exceeding specified quota levels. Further, stock status needs to be periodically assessed to ensure stocks are being maintained at proper levels. Some present actions have assisted the administration of fisheries in the Gulf. In 2007, an IFQ program was implemented for the commercial red snapper fishery, requiring NMFS to monitor the sale of red snapper IFQ shares. Recordkeeping requirements for IFQ shares have improved commercial quota monitoring and prevent or limit overages from occurring. A vessel monitoring system was also implemented for all commercial reef fish vessels in 2007 and is helping enforcement identify vessels violating various fishing closures. The recent implementation of ACLs and AMs for most federally managed species has required close monitoring of landings. For some species, harvest is closed if landings are projected to exceed the ACL within the season. For others, quotas or ACLs need to be adjusted during the following season to account for any ACL overages that occur in the preceding year.

10. Modify or add alternatives to avoid, minimize, or mitigate significant cumulative effects.

The objective of regional management is to provide flexibility to the regions to establish management measures that account for the differences between regions while maintaining conservation equivalent measures in comparison to the current regulations. It is reasonably expected the effects on the physical environment would not change under the current management regime. It is more likely cumulative effects from this action would occur in the biological environment for red snapper stock to be overfished. Overfishing the stock would jeopardize the goals of the rebuilding plan. Changing from one to potentially five management regions through these actions could potentially lead to overharvesting the stock if proper controls on fishing are not implemented. While NMFS would still oversee the management strategies of each region to determine consistency, the regions would have authority establish various regulations. In order to avoid, minimize, or mitigate significant cumulative effects; the amendment includes Action 4 and Action 7. The alternatives in Action 4 establish a Gulf-wide minimum size limit which will simplify the regulations for enforcement. The alternatives in Action 7 provide post-season accountability measures to mitigate for a region not constraining harvest to the apportioned regional quota. The States have indicated they will implement additional monitoring programs to better estimate the recreational harvest during the open season. Action 6 minimizes and mitigates for the overharvest of red snapper by accounting for the potential overharvest and constraining harvest.

11. Monitor the cumulative effects of the selected alternative and modify management as necessary.

The implementation of regional management would require NMFS to continue monitoring the harvest of red snapper and analyzing the landings. Monitoring the harvest is necessary to determine if the quota is exceeded and to prohibit further harvest to insure the OFL is not also exceeded. It is uncertain if the regions would be able to constrain harvest within their quotas and whether the monitoring data would provide timely data to prevent overages. The timing of the data may be critical for NMFS to determine is the quota has been met. At this time, the MRIP data is provided at two month intervals. This is problematic for analysis when the recreational red snapper season is shorter than two months. The States have indicated they will implement

additional monitoring programs to provide more timely data for landings. However, to integrate new datasets into the stock assessment, the SEFSC would need to determine the monitoring programs would be compatible.

The effects of the proposed actions are, and will continue to be, monitored through collection of landings data by NMFS, stock assessments and stock assessment updates, life history studies, economic and social analyses, and other scientific observations. Landings data for the recreational sector in the Gulf of Mexico is collected through MRIP, NMFS' Headboat Survey, and the Texas Marine Recreational Fishing Survey. MRIP replaced an older system (MRFSS), and is designed to improve the monitoring of recreational fishing. Commercial data is collected through trip ticket programs, port samplers, and logbook programs; for red snapper commercial data is collected in near real-time through the IFQ system. The most recent SEDAR assessment of Gulf red snapper was in May 2014 and the next is scheduled for 2015.

Unavoidable Adverse Effects

Unavoidable adverse effects are described in detail in the cumulative effects analysis of Amendment 30B (GMFMC 2008b) and 32 (GMFMC 2011a) and is incorporated here by reference. Catch quotas, minimum size limits, bag limits, and seasonal closures, are generally effective in limiting total fishing mortality, the type of fish targeted, the number of targeted fishing trips, and/or the time spent pursuing a species. However, these management tools have the unavoidable adverse effect of creating regulatory discards. Discard mortality must be accounted for in a stock assessment as part of the allowable biological catch, and thus restricts total allowable catches.

Many of the current participants in the reef fish fishery may never recuperate losses incurred from the more restrictive management actions imposed in the short-term to end overfishing of red snapper. Because red snapper is but one of the reef fish species managed in the Reef Fish FMP, short-term losses are not expected to be significant, and other species may be substituted to make up for losses to the fishery. With the anticipated recovery of the stock, future participants in the reef fish fishery will benefit. Overall, short-term impacts of actions would be offset with much higher allowable catch levels as the stock recovers and is rebuilt.

The actions considered in this amendment should not have an adverse effect on public health or safety because these measures should not alter actual fishing practices, just which recreational sector can harvest what percentage of the overall recreational quota. Unique characteristics of the geographic area are highlighted in Section 3. Adverse effects of fishing activities on the physical environment are described in detail in Section 4.1.1. This section concludes the impact on the physical environment should be minor from actions proposed in this document. Uncertainty and risk associated with the measures are described in detail in the same sections as well as assumptions underlying the analyses.

Until now, the Council has constrained recreational harvest of red snapper by establishing catch quotas, minimum size limits, bag limits, and seasonal closures which are generally effective in limiting total fishing mortality, the type of fish targeted, the number of targeted fishing trips, and/or the time spent pursuing a species. However, these management tools have the

unavoidable adverse effect of creating regulatory discards. Discard mortality must be accounted for in a stock assessment as part of the allowable biological catch, and thus restricts total allowable catches. By delegating management measures to the regions, it will be more difficult to estimate these adverse effects. The alternatives considered in this amendment for the delegated management measures provide a range for the minimum size and bag limits. However, the management measures set by the region will either directly or indirectly affect the bycatch and discards. In addition, if regions establish varying seasons, then fishing effort shift may occur. This would need to be considered for the catch and fishing effort.

Actions considered in this amendment should not have adverse effects on public health or safety because these measures should not alter actual fishing practices, just how, when, and where activities can occur. This could have indirect effects if a region selected an open season that was more impacted by non-fishing events, such as weather (i.e., winter seasons with strong cold fronts and high seas, or a core fishing season during prime Gulf hurricane season). Unique characteristics of the geographic area are highlighted in Chapter 3. Adverse effects of fishing activities on the physical environment are described in detail in Section 3.2. This section concludes little impact on the physical environment should occur from actions proposed in this document as it will not change the way in which the fishery is prosecuted. Uncertainty and risk associated with the measures are described in detail in the same sections as well as assumptions underlying the analyses.

Relationship between Short-term Uses and Long-term Productivity

The primary objective of this amendment and associated EIS is to facilitate management of the recreational red snapper component in the reef fish fishery by reorganizing the federal fishery management strategy to better account for biological, social, and economic differences among the regions of the Gulf. The relationship between short-term economic uses and long-term economic productivity are discussed in the preceding section. However, because red snapper is but one species in the reef fish complex, these effects may be mitigated through effort shifting to other species and may not be significant.

The alternatives being considered are not likely to have short-term negative effects. However, if regional management is established and the regions cannot constrain harvest of red snapper to the apportioned quota, then long-term negative effects on the biological environment could occur from overharvests. In addition, corrective action to constrain harvest could have negative impacts on the social and economic environments. The range of alternatives has varying degrees of economic costs and administrative burdens. In general, some alternatives have relatively small short-term economic costs and administrative burdens, but would also provide smaller and more delayed long-term benefits. Other alternatives have greater short-term costs, but provide larger and more immediate long-term benefits.

Mitigation, Monitoring, and Enforcement Measures

Mitigation, monitoring and enforcement measures are described in detail in the cumulative effects analysis of Amendment 30B (GMFMC 2008b) and is incorporated here by reference.

Developing regional management for the harvest of recreational red snapper is expected to be a conservation equivalent to the current management strategy concerning the impacts on the physical and biological environments. The apportionment of the recreational quota to the regions (Action 6) would mitigate for overharvest by maintaining the total harvest to the Gulfwide recreational ACL even though it is divided between regions. The minimum size limit for red snapper (Action 4) would establish a consistent minimum size throughout the Gulf for the recreational harvest of red snapper and aid enforcement. The impacts of the management strategies established by the regions would be further mitigated by specifying the range for the delegated management measures. The post-season accountability measures (Action 7) intend to mitigate the potential overharvest of recreational red snapper by encouraging the regions to constrain harvest each year to prevent a reduction of their quota for the following year.

To ensure the red snapper stock recovers to a level that supports harvests at the optimum yield, periodic reviews of stock status are needed. These reviews are designed to incorporate new information and to address unanticipated developments in the respective fisheries and would be used to make appropriate adjustments in the reef fish regulations should harvest not achieve optimum yield objectives. The details for how assessments are developed, reviewed, and applied are described in Amendment 30B, as are the rule-making options the Council and NMFS have for taking corrective actions (GMFMC 2007).

Providing regions flexibility to establish management measures is expected to benefit the social and economic environments. This action may slightly increase resources needed by the administrative environment through the increased complexity of the enforcement. This complexity develops from each region setting regulations for season, bag limit, and size limit. In contrast, the current management sets a Gulf-wide season for federal waters. Most States have previously established seasons consistent with the federal season, excluding Texas. However, Florida and Louisiana had inconsistent regulations in 2012. Thus, the current management system could increase the degree of State inconsistency. Regardless, the effects of the actions are not likely to require mitigation.

Current reef fish regulations are labor intensive for law enforcement officials. NMFS law enforcement officials work cooperatively with other federal and state agencies to keep illegal activity to a minimum. Violators are penalized, and for reef fish commercial and reef fish forhire operators, permits required to operate in their respective fisheries can be sanctioned.

Reef fish management measures include a number of area-specific regulations where reef fish fishing is restricted or prohibited in order to protect habitat or spawning aggregations of fish, or to reduce fishing pressure in areas that are heavily fished. To improve enforceability of these areas, the Council has established a vessel monitoring system program for the commercial reef fish sector to improve enforcement. Vessel monitoring systems allows NMFS enforcement personnel to monitor compliance with these area-specific regulations, and track and prosecute violations.

Irreversible and irretrievable Commitments of Resources

There are no irreversible or irretrievable commitments of agency resources proposed herein. The actions establishing regional management are changeable by the Council at any time in the future. In addition, there are provisions for regions to opt out of regional management. These actions should better account for biological, social, and economic differences among the regions of the Gulf and provide social and economic benefits while maintaining conservation equivalent management.

Any Other Disclosures

CEQ guidance on environmental consequences (40 CFR §1502.16) indicates the following elements should be considered for the scientific and analytic basis for comparisons of alternatives. These are:

- a) Direct effects and their significance.
- b) Indirect effects and their significance.
- c) Possible conflicts between the proposed actions and the objectives of federal, regional, state, and local (and in the case of a reservation, Indian tribe) land use plans, policies and controls for the area concerned.
- d) The environmental effects of alternatives including the proposed action.
- e) Energy requirements and conservation potential of various alternatives and mitigation measures.
- f) Natural or depletable resource requirements and conservation potential of various alternatives and mitigation measures.
- g) Urban quality, historic and cultural resources, and the design of the built environment, including the reuse and conservation potential of various alternatives and mitigation measures.
- h) Means to mitigate adverse environmental impacts.

Items a, b, d, e, f, and h are addressed in Chapters 2 and 3, and Sections 4.1-4.7. Items a, b, and d are directly discussed in Sections 2 and 5. Item e is discussed in the economic analyses. It is unknown if these actions would result in energy conservation through fewer fishing trips; however, it is more likely to be an energy conservation equivalent. Item f is discussed throughout the document as fish stocks are a natural and depletable resource. A goal of this amendment is to make these stocks sustainable resources for the nation. Mitigations measures are discussed in Section 5.11. Item h is discussed in Chapters 3 and 5, with particular mention in Section 5.12. (further update after RIR is provided)

The other elements are not applicable to the actions taken in this document. Because this amendment concerns the management of a marine fish stock, it is not in conflict with the objectives of federal, regional, state, or local land use plans, policies, and controls (Item c). Urban quality, historic and cultural resources, and the design of the built environment, including the reuse and conservation potential of various alternatives and mitigation measures (Item g) is not a factor in this amendment. The actions taken in this amendment will affect a marine stock and its fishery, and should not affect land-based, urban environments. The exception would be

the *U.S.S. Hatteras*, located in federal waters off Texas, which is listed in the National Register of Historic Places. The proposed actions are not likely to increase fishing activity and so no additional impacts to the *U.S.S. Hatteras* would be expected

With regards to the Endangered Species Act (ESA) the biological opinion (opinion) for the Reef Fish FMP, completed September 30, 2011, concluded that the continued operation of the Gulf reef fish fishery would not affect ESA-listed marine mammals or corals, and is not likely to jeopardize the continued existence of green, hawksbill, Kemp's ridley, leatherback, or loggerhead sea turtles, or smalltooth sawfish (NMFS 2011b). On July 10, 2014, the National Marine Fisheries Service (NMFS) published a final rule (79 FR 39855) that designated 38 occupied marine areas within the Atlantic Ocean and Gulf as critical habitat for the Northwest Atlantic Ocean loggerhead sea turtle Distinct Population Segment. These areas contain one or a combination of nearshore reproductive habitat, winter area, breeding areas, and migratory corridors, or contain *Sargassum* habitat. NMFS concluded in September 16, 2014, memos that activities associated with the subject FMP will not adversely affect any of the aforementioned critical habitat units. The fishery managed by the FMP will either have no effect on the critical habitat due to location or methods, or will have discountable or insignificant effects that will not adversely affect the habitat's ability to perform its function.

On September 10, 2014, NMFS published a final rule to list 22 coral species under the ESA (79 FR 53851). Four of the newly listed species occur in the federal waters in the Gulf (*Mycetophyllia ferox, Orbicella annularis, O. faveolata, and O. franksi*); all were listed as threatened. In memos dated September 16, 2014, and October 7, 2014, NMFS concluded that activities associated with the subject FMP will not adversely affect any of the newly listed coral species. Threats to corals from fishing identified in the species status review included trophic effects, human-induced physical damage, and destructive fishing practices. However, given the species targeted by the fishery and the gear and methods used to harvest reef fish, NMFS determined that adverse effects to the newly listed coral species (*Acropora palmata* and *A. cervicornis*) remain protected as threatened. In the October 7, 2014, memo NMFS also determined that although the September 10, 2014, final listing rule provided some new information on the threats facing *Acropora*, none of the information suggested that the previous determinations were no longer valid.

With regards to the Marine Mammal Protection Act, fishing activities under the Reef Fish Fishery Management Plan should have no adverse impact on marine mammals (See Section 3.2). The proposed actions are not expected to substantially change the way the fishery is currently prosecuted (e.g., types of methods, gear used, etc.). Gear used by the reef fish fishery was still classified in the 2014 List of Fisheries as a Category III fishery (79 FR 14418, April 14, 2014) because it is prosecuted primarily with longline and hook-and-line gear. This classification indicates the annual mortality and serious injury of a marine mammal stock resulting from any fishery is less than or equal to one percent of 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.

CHAPTER 5. REGULATORY IMPACT REVIEW

[This review is completed after selection of all preferred alternatives.]

CHAPTER 6. REGULATORY FLEXIBILITY ACT ANALYSIS

[This analysis is completed after selection of all preferred alternatives.]

CHAPTER 7. LIST OF PREPARERS

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| | | Economic analyses, Regulatory Impact | |
| | | Review, Regulatory Flexibility Act | |
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| Mara Levy | Attorney | Legal review | NOAA GC |
| Jason Brand | Law enforcement | Law enforcement review | USCG |

GMFMC = Gulf of Mexico Fishery Management Council; NOAA GC = National Oceanic and Atmospheric Administration General Counsel; SEFSC = Southeast Fisheries Science Center; SERO = Southeast Regional Office of the National Marine Fisheries Service; USCG = United States Coast Guard

CHAPTER 8. LIST OF AGENCIES, ORGANIZATIONS AND PERSONS TO WHOM A COPY OF THE EIS WAS SENT

National Marine Fisheries Service

- Southeast Fisheries Science Center
- Southeast Regional Office
- Office for Law Enforcement
- Endangered Species Division
- Domestic Fisheries Division

NOAA General Counsel

Environmental Protection Agency (Region 4 and 6)
United States Coast Guard
United States Fish and Wildlife Services
Department of Interior. Office of Environmental Policy and Compliance
Department of State, Office of Marine Conservation,
Marine Mammal Commission

Texas Parks and Wildlife Department
Alabama Department of Conservation and Natural Resources/Marine Resources Division
Louisiana Department of Wildlife and Fisheries
Mississippi Department of Marine Resources
Florida Fish and Wildlife Conservation Commission

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APPENDIX A. ALTERNATIVES CONSIDERED BUT REJECTED

The Gulf of Mexico Fishery Management Council (Council) began development of Amendment 39 in 2012. Since then, this amendment has experienced several iterations. Several actions were added and removed to meet the focus of the purpose and need. Below, in chronological order, is an outline of the changes to the amendment.

REMOVED AT APRIL 2013 COUNCIL MEETING:

• Two alternatives from Action 2 – Establish Regions for Management

Alternative 3: Establish an east (Florida, Alabama) and west (Mississippi, Louisiana, Texas) region and allow for different management measures for each region.

* ALTERNATIVE 3 (ABOVE) SUBSEQUENTLY REPLACED IN ACTION 2 AT OCTOBER 2013 COUNCIL MEETING.

Alternative 4: Establish three regions representing the west (Texas), north (Louisiana, Mississippi, Alabama), and east (Florida) region and allow for different management measures for each region.

<u>Rationale:</u> The Council examined several options to establish regions. Eventually, the Council added **Alternative 3** back into **Action 3** and developed **Preferred Alternative 5** in **Action 3** to allow for adjacent States to join into multistate regions.

• Remove entire Action 7:

Action 7 – In-Season Accountability Measure Establishing Regional Closures in the EEZ *Note: Both Alternative 2 and Alternative 3 could be selected as Preferred Alternatives.

Alternative 1: No action. When the recreational red snapper quota is reached, or is projected to be reached, the National Marine Fisheries Service (NMFS) files a notification with the Office of the Federal Register that prohibits the recreational harvest of red snapper in the economic exclusive zone (EEZ) for the remainder of the fishing year.

Alternative 2: If a region, as defined in Action 2, establishes an approved regional regulations, NMFS has the authority to alter the recreational red snapper season in the EEZ off those states (including a zero-day season) by the amount necessary to compensate for the additional harvest that would occur in state waters as a result of the region's regulations. (Boundaries for the EEZ off each state are in Figure 1.2.1.)

Alternative 3: If a region, as defined in Action 2, does not have an approved regional regulations and establishes regulations inconsistent with federal red snapper regulations, NMFS has the authority to adjust the recreational red snapper season in the EEZ off those states (including a zero day season) by the amount necessary to compensate for the additional harvest that would

occur in state waters as a result of the region's inconsistent regulations. (Boundaries for the EEZ off each state are in Figure 1.2.1.)

Discussion:

Under current management, state and federal waters Gulf wide are open during the red snapper season. If the regions, as defined in Action 2, set their own fishing seasons through an approved management plan or inconsistent regulations, some areas of the Gulf could be open while other areas are closed. This action allows the Council to extend boundary lines of state waters into the EEZ, to correspond with the regions. These boundaries would enable NMFS to close federal waters off of a region when its regional quota has been reached. Or, the boundaries could be used to close a portion of the EEZ off a state or region that establishes inconsistent regulations. This in-season accountability measure would help prevent the annual catch limit from being exceeded. The in-season and post-season (Action 6) accountability measures are not mutually exclusive and could be used together where appropriate. Further information on accountability measures is described in the Generic ACL/AM Amendment in Section 2.8 (GMFMC 2011).

In March 2013, NMFS implemented a temporary emergency rule that gives NMFS the authority to set separate closure dates for the recreational red snapper season in federal waters off individual Gulf states (Figure 1.2.1). This action was requested by the Council to provide a fairer and more equitable distribution of recreational red snapper fishing opportunities among anglers in all the Gulf states for the 2013 season. Although a temporary emergency rule will be in effect for the 2013 season, it will not be used as the analytical baseline. The temporary emergency rule, even if extended, would not be effective for the 2014 red snapper recreational fishing season.

Alternative 1 would continue the current method of determining the closure date for the recreational red snapper season and apply that date to all federal waters of the Gulf. NMFS determines the length of the season based on the quota, average weight of fish, and estimated catch rates. Because NMFS must ensure the entire stock harvest does not exceed the quota, including harvest in state waters, if states establish less restrictive regulations, the federal season must be adjusted to account for the additional expected harvest. For example, when calculating the projected 27-day 2013 season length, NMFS adjusted the mean catch rate to account for the year-round open season in state waters and 4-fish bag limit in Texas (SERO 2012). In addition, Louisiana has proposed an 88-day season with a 3-fish bag limit and Florida has proposed a 44-day season with a 2-fish bag limit in state waters. Based on the estimated catch rate with those regulations in the three state waters, the 2013 federal recreational red snapper season could be reduced to 22 days (SERO 2013). After the 22-day season, the entire EEZ would be closed for the recreational harvest of red snapper.

Both Alternative 2 and Alternative 3 would use regions developed in Action 2 to establish boundaries and allow NMFS to set different closure dates for the red snapper recreational season in the EEZ adjacent to each Gulf state. If the Council chooses to delegate management to the regions in Action 1 and Action 4, then there may be a review process to assess if the region's management plan is consistent with the goals of the FMP and red snapper rebuilding plan. A specific process would need to be established for plan approval. Alternative 2 would apply to regions with approved management plans. If the region has an approved management plan, but

the regional quota is determined to be met before the planned season closure, then NMFS could close the harvest in federal waters to prevent overharvest. Alternative 3 would apply to regions that do not have an approved management plan and establishes regulations inconsistent with the federal regulations. If a region were to set red snapper regulations that were not less restrictive than federal regulations, NMFS would calculate the red snapper recreational season within those boundaries using an adjusted catch rate, to account for a longer season or larger bag limit in state waters. In some cases, this could allow the EEZ off regions with consistent regulations to have more days than if the season for the entire Gulf was adjusted. For example, if the 2013 federal season was reduced off Texas, Louisiana, and Florida to account for inconsistent regulations in those waters, the federal seasons could be as follows: Texas = 12 days, Louisiana = 8 days, Mississippi = 28 days, Alabama = 28 days, and Florida = 21 days (SERO-LAPP-2013-2). If increased catch from a region with inconsistent regulations exceeds its sub-quota regardless of the adjacent EEZ being closed, then NMFS may need to adjust the federal season in other regions to account for harvest. Conversely, if a state were to implement regulations in state waters that were more restrictive than federal regulations, the federal season in the EEZ off that state could potentially be increased. The Council could choose both Alternative 2 and Alternative 3 to address situations where a region or state may or may not have an approved management plan.

If the current regulations are maintained (**Alternative 1**), they could confound the goals of regional management. If regions set varying seasons, it is possible the activities of one or more regions could exceed the recreational sector quota before another region's season occurs. In turn, NMFS would close the remainder of the season to prevent over-fishing. When the total recreational quota is met, all recreational harvest of red snapper would be prohibited regardless of whether one or more regions have reached their respective apportionments. By establishing varying closed areas, the enforcement issues would likely increase. Recreational fishermen would need to abide by the area closures and be mindful of transiting through closed areas. Provisions for transit through closed areas may need to be considered. If the EEZ was closed off a region due to inconsistent regulations (**Alternative 3**), then a clear definition of the state/federal boundary would help recreational fishermen to insure compliance. Currently, this boundary is the 9-nautical mile buffer off of Texas and Florida, and 3-nautical mile buffer off or Alabama, Mississippi, and Louisiana.

REMOVED AT OCTOBER 2014 COUNCIL MEETING:

Options a and b from Alternatives 2, 3, and 4, in Action 6: Post-Season Accountability Measures (AMs) Adjusting for Regional Overages

Option a: Apply the quota adjustment beginning one year after the implementation of the plan. **Option b:** Apply the quota adjustment beginning two years after the implementation of the plan.

<u>Rationale:</u> The removed Action 7 was reintroduced as **Action 7** in the current version of the amendment to address the accountability measures. However, it was altered to incorporate the separate recreational components established in Amendment 40. The current action focuses on post-season accountability measures. In addition the options for delaying the quota adjustment

were removed because they are now less restrictive than the overage adjustment recently adopted in the Framework Action to Set Accountability Measures for Red Snapper (GMFMC 2014).

• Restructuring of the Actions and Alternatives

Following the October 2014 Council meeting, the document was restructured to incorporate the ability for regions to establish conservation equivalent management measures. In addition, with the implementation of Amendment 40 in April 2015, the alternatives were revised to reflect the separation of the recreational sector to establish a private angling component and a for-hire component.

References cited in rejected sections

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APPENDIX B. OTHER APPLICABLE LAW

The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) (16 U.S.C. 1801 et seq.) provides the authority for fishery management in federal waters of the exclusive economic zone. However, fishery management decision-making is also affected by a number of other federal statutes designed to protect the biological and human components of U.S. fisheries, as well as the ecosystems that support those fisheries. Major laws affecting federal fishery management decision-making are summarized below.

Administrative Procedures Act

All federal rulemaking is governed under the provisions of the Administrative Procedure Act (APA) (5 U.S.C. Subchapter II), which establishes a "notice and comment" procedure to enable public participation in the rulemaking process. Under the APA, the National Marine Fisheries Service (NMFS) is required to publish notification of proposed rules in the *Federal Register* and to solicit, consider, and respond to public comment on those rules before they are finalized. The APA also establishes a 30-day waiting period from the time a final rule is published until it takes effect.

Coastal Zone Management Act

Section 307(c)(1) of the federal Coastal Zone Management Act of 1972 (CZMA), as amended, requires federal activities that affect any land or water use or natural resource of a State's coastal zone be conducted in a manner consistent, to the maximum extent practicable, with approved state coastal management programs. The requirements for such a consistency determination are set forth in NMFS regulations at 15 C.F.R. part 930, subpart C. According to these regulations and CZMA Section 307(c)(1), when taking an action that affects any land or water use or natural resource of a state's coastal zone, NMFS is required to provide a consistency determination to the relevant state agency at least 90 days before taking final action.

Upon submission to the Secretary, NMFS will determine if this plan amendment is consistent with the Coastal Zone Management programs of the States of Alabama, Florida, Louisiana, Mississippi, and Texas to the maximum extent possible. Their determination will then be submitted to the responsible state agencies under Section 307 of the CZMA administering approved Coastal Zone Management programs for these States.

Data Quality Act

The Data Quality Act (DQA) (Public Law 106-443) effective October 1, 2002, requires the government to set standards for the quality of scientific information and statistics used and disseminated by federal agencies. Information includes any communication or representation of knowledge such as facts or data, in any medium or form, including textual, numerical, cartographic, narrative, or audiovisual forms (includes web dissemination, but not hyperlinks to information that others disseminate; does not include clearly stated opinions).

Specifically, the DQA directs the Office of Management and Budget to issue government wide guidelines that "provide policy and procedural guidance to federal agencies for ensuring and maximizing the quality, objectivity, utility, and integrity of information disseminated by federal agencies." Such guidelines have been issued, directing all federal agencies to create and disseminate agency-specific standards to: 1) ensure information quality and develop a pre-dissemination review process; 2) establish administrative mechanisms allowing affected persons to seek and obtain correction of information; and 3) report periodically to Office of Management and Budget on the number and nature of complaints received.

Scientific information and data are key components of fishery management plans (FMPs) and amendments and the use of best available information is the second national standard under the Magnuson-Stevens Act. To be consistent with the Act, FMPs and amendments must be based on the best information available. They should also properly reference all supporting materials and data, and be reviewed by technically competent individuals. With respect to original data generated for FMPs and amendments, it is important to ensure that the data are collected according to documented procedures or in a manner that reflects standard practices accepted by the relevant scientific and technical communities. Data will also undergo quality control prior to being used by the agency and a pre-dissemination review.

Endangered Species Act

The Endangered Species Act (ESA) of 1973, as amended, (16 U.S.C. Section 1531 et seq.) requires federal agencies use their authorities to conserve endangered and threatened species. The ESA requires NMFS, when proposing a fishery action that "may affect" critical habitat or endangered or threatened species, to consult with the appropriate administrative agency (itself for most marine species, the U.S. Fish and Wildlife Service for all remaining species) to determine the potential impacts of the proposed action. Consultations are concluded informally when proposed actions may affect but are "not likely to adversely affect" endangered or threatened species or designated critical habitat. Formal consultations, including a biological opinion, are required when proposed actions may affect and are "likely to adversely affect" endangered or threatened species or adversely modify designated critical habitat. If jeopardy or adverse modification is found, the consulting agency is required to suggest reasonable and prudent alternatives.

On September 30, 2011, the Protected Resources Division released a biological opinion which, after analyzing best available data, the current status of the species, environmental baseline (including the impacts of the recent Deepwater Horizon MC 252 oil release event in the northern Gulf of Mexico), effects of the proposed action, and cumulative effects, concluded that the continued operation of the Gulf of Mexico reef fish fishery is also not likely to jeopardize the continued existence of green, hawksbill, Kemp's ridley, leatherback, or loggerhead sea turtles, nor the continued existence of smalltooth sawfish (NMFS 2011). On December 7, 2012, NMFS published a proposed rule to list 66 coral species under the ESA and reclassify *Acropora* from threatened to endangered (77 FR 73220). In a memorandum dated February 13, 2013, NMFS determined the reef fish fishery was not likely to adversely affect *Acropora* because of where the fishery operates, the types of gear used in the fishery, and that other regulations protect *Acropora* where they are most likely to occur.

Marine Mammal Protection Act

The Marine Mammal Protection Act (MMPA) established a moratorium, with certain exceptions, on the taking of marine mammals in U.S. waters and by U.S. citizens on the high seas, and on the importing of marine mammals and marine mammal products into the United States. Under the MMPA, the Secretary of Commerce (authority delegated to NMFS) is responsible for the conservation and management of cetaceans and pinnipeds (other than walruses). The Secretary of the Interior is responsible for walruses, sea and marine otters, polar bears, manatees, and dugongs.

Part of the responsibility that NMFS has under the MMPA involves monitoring populations of marine mammals to make sure that they stay at optimum levels. If a population falls below its optimum level, it is designated as "depleted," and a conservation plan is developed to guide research and management actions to restore the population to healthy levels.

In 1994, Congress amended the MMPA, to govern the taking of marine mammals incidental to commercial fishing operations. This amendment required the preparation of stock assessments for all marine mammal stocks in waters under U.S. jurisdiction, development and implementation of take-reduction plans for stocks that may be reduced or are being maintained below their optimum sustainable population levels due to interactions with commercial fisheries, and studies of pinniped-fishery interactions.

Under Section 118 of the MMPA, NMFS must publish, at least annually, a List of Fisheries that places all U.S. commercial fisheries into one of three categories based on the level of incidental serious injury and mortality of marine mammals that occurs in each fishery. The categorization of a fishery in the List of Fisheries determines whether participants in that fishery may be required to comply with certain provisions of the MMPA, such as registration, observer coverage, and take reduction plan requirements. The primary gears used in the Gulf of Mexico reef fish fishery are classified in the updated 2012 MMPA List of Fisheries as Category III fishery (74 FR 73912). The conclusions of the most recent List of Fisheries for gear used by the reef fish fishery can be found in Section 3.3.

Paperwork Reduction Act

The Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3501 et seq.) regulates the collection of public information by federal agencies to ensure the public is not overburdened with information requests, the federal government's information collection procedures are efficient, and federal agencies adhere to appropriate rules governing the confidentiality of such information. The PRA requires NMFS to obtain approval from the Office of Management and Budget before requesting most types of fishery information from the public. Action 2 adds reporting and monitoring requirements to the list of post-season accountability measures that can be implemented or changed under the framework procedure and may have PRA consequences.

Executive Orders

E.O. 12630: Takings

The Executive Order on Government Actions and Interference with Constitutionally Protected Property Rights that became effective March 18, 1988, requires each federal agency prepare a Takings Implication Assessment for any of its administrative, regulatory, and legislative policies and actions that affect, or may affect, the use of any real or personal property. Clearance of a regulatory action must include a takings statement and, if appropriate, a Takings Implication Assessment. The National Oceanic and Atmospheric Administration Office of General Counsel will determine whether a Taking Implication Assessment is necessary for this amendment.

E.O. 12866: Regulatory Planning and Review

Executive Order 12866: Regulatory Planning and Review, signed in 1993, requires federal agencies to assess the costs and benefits of their proposed regulations, including distributional impacts, and to select alternatives that maximize net benefits to society. To comply with E.O. 12866, NMFS prepares a Regulatory Impact Review (RIR) for all fishery regulatory actions that either implement a new fishery management plan or significantly amend an existing plan (See Chapter 5). RIRs provide a comprehensive analysis of the costs and benefits to society of proposed regulatory actions, the problems and policy objectives prompting the regulatory proposals, and the major alternatives that could be used to solve the problems. The reviews also serve as the basis for the agency's determinations as to whether proposed regulations are a "significant regulatory action" under the criteria provided in E.O. 12866 and whether proposed regulations will have a significant economic impact on a substantial number of small entities in compliance with the Regulatory Flexibility Analysis. A regulation is significant if it a) has an annual effect on the economy of \$100 million or more or adversely affects in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments and communities; b) creates a serious inconsistency or otherwise interferes with an action taken or planned by another agency; c) materially alters the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or d) raises novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in this Executive Order.

E.O. 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations

This Executive Order mandates that each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories and possessions. The Executive Order is described in more detail relative to fisheries actions in Section 3.5.1.

E.O. 12962: Recreational Fisheries

This Executive Order requires federal agencies, in cooperation with States and tribes, to improve the quantity, function, sustainable productivity, and distribution of U.S. aquatic resources for increased recreational fishing opportunities through a variety of methods including, but not limited to, developing joint partnerships; promoting the restoration of recreational fishing areas that are limited by water quality and habitat degradation; fostering sound aquatic conservation and restoration endeavors; and evaluating the effects of federally-funded, permitted, or authorized actions on aquatic systems and recreational fisheries, and documenting those effects. Additionally, it establishes a seven-member National Recreational Fisheries Coordination Council (Council) responsible for, among other things, ensuring that social and economic values of healthy aquatic systems that support recreational fisheries are considered by federal agencies in the course of their actions, sharing the latest resource information and management technologies, and reducing duplicative and cost-inefficient programs among federal agencies involved in conserving or managing recreational fisheries. The Council also is responsible for developing, in cooperation with federal agencies, States and Tribes, a Recreational Fishery Resource Conservation Plan - to include a five-year agenda. Finally, the Order requires NMFS and the U.S. Fish and Wildlife Service to develop a joint agency policy for administering the ESA.

E.O. 13132: Federalism

The Executive Order on Federalism requires agencies in formulating and implementing policies, to be guided by the fundamental Federalism principles. The Order serves to guarantee the division of governmental responsibilities between the national government and the States that was intended by the framers of the Constitution. Federalism is rooted in the belief that issues not national in scope or significance are most appropriately addressed by the level of government closest to the people. This Order is relevant to FMPs and amendments given the overlapping authorities of NMFS, the States, and local authorities in managing coastal resources, including fisheries, and the need for a clear definition of responsibilities. It is important to recognize those components of the ecosystem over which fishery managers have no direct control and to develop strategies to address them in conjunction with appropriate State, tribes, and local entities (international, too).

E.O. 13158: Marine Protected Areas

This Executive Order requires federal agencies to consider whether their proposed action(s) will affect any area of the marine environment that has been reserved by federal, State, territorial, tribal, or local laws or regulations to provide lasting protection for part or all of the natural or cultural resource within the protected area. There are several marine protected areas, habitat areas of particular concern, and gear-restricted areas in the eastern and northwestern Gulf of Mexico.

Essential Fish Habitat

The amended Magnuson-Stevens Act included a new habitat conservation provision known as essential fish habitat (EFH) that requires each existing and any new FMPs to describe and identify EFH for each federally managed species, minimize to the extent practicable impacts from fishing activities on EFH that are more than minimal and not temporary in nature, and identify other actions to encourage the conservation and enhancement of that EFH. To address these requirements the Council has, under separate action, approved an Environmental Impact Statement (GMFMC 2004) to address the new EFH requirements contained within the Magnuson-Stevens Act. Section 305(b)(2) requires federal agencies to obtain a consultation for any action that may adversely affect EFH. An EFH consultation will be conducted for this action.

References

GMFMC. 2004. Final environmental impact statement for the generic essential fish habitat amendment to the following fishery management plans of the Gulf of Mexico: shrimp fishery of the Gulf of Mexico, red drum fishery of the Gulf of Mexico, reef fish fishery of the Gulf of Mexico, stone crab fishery of the Gulf of Mexico, coral and coral reef fishery of the Gulf of Mexico, spiny lobster fishery of the Gulf of Mexico and South Atlantic, coastal migratory pelagic resources of the Gulf of Mexico and South Atlantic. Gulf of Mexico Fishery Management Council. Tampa, Florida.

http://www.gulfcouncil.org/Beta/GMFMCWeb/downloads/Final%20EFH%20EIS.pdf

NMFS. 2011. Biological opinion on the continued authorization of Reef Fish fishing under the Gulf of Mexico Reef Fish Fishery Management Plan. September 30, 2011. Available at: http://sero.nmfs.noaa.gov/pr/esa/Fishery%20Biops/03584%20GOM%20Reef%20Fish%20BiOp%202011%20final.pdf

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APPENDIX C. SUMMARIES OF PUBLIC COMMENTS RECEIVED

Scoping workshops were held from January 14 - 22, 2013. Public hearings were held from August 1 - 15, 2013.

Written comments submitted in response to Reef Fish Amendment 39 can be found here: https://docs.google.com/spreadsheet/ccc?key=0Atgbk2rxQkqhdFViUTB3VERSX2ZwcXJmckl1 QTBXZkE#gid=0

Scoping workshops were held in the following locations:

January 14, 2013

Baton Rouge, Louisiana DoubleTree by Hilton 4964 Constitution Ave. Baton Rouge, LA 70808

January 14, 2013

(225) 925-1005

Texas City, Texas

Holiday Inn Express 2440 Gulf Freeway Texas City, TX 77591 (409) 986-6700

January 15, 2013

Corpus Christi, Texas

Hilton Garden Inn 6717 S. Padre Island Dr. Corpus Christi, TX 78412 (361) 991-8200

January 15, 2013

Biloxi, Mississippi

Four Points by Sheraton 940 Beach Blvd. Biloxi, MS 39530 (228) 546-3100

January 16, 2013

Orange Beach, Alabama

Hilton Garden Inn 23092 Perdido Beach Blvd. Orange Beach, AL 36561 (251) 974-1600

January 17, 2013

Destin, Florida

Destin Community Center 101 Stahlman Ave. Destin, FL 32541 (850) 654-5184

January 22, 2013

St. Petersburg, Florida

Hilton St. Petersburg Carillon Park 950 Lake Carillon Dr. St. Petersburg, FL 33716 (727) 540-0050

Summaries of Scoping Workshops

Baton Rouge, Louisiana January 14, 2013

Council and Staff
Campo Matens
Ryan Rindone

32 members of the public attended.

Joe Macaluso - www.theadvocate.com

The big issue is that the federal government is ignoring the fishermen. How do the federal fisheries managers know which survey, either the Texas Parks and Wildlife or MRIP, is correct? Red snapper can be caught in less than 25 meters of water. Also, how is funding for data collection going to be shared with the states who take on regional management? Allocation should be based on biological criteria. There is a disparity between how recreational and commercial catches figure into the overall red snapper quota. Louisiana's issue with respect to regional management is Florida: Florida has all the people, and Louisiana has all the fish.

George Huye - CCA

Regional management should be done by state, with each state constituting its own region. States should not have to share authority with other states with less resources.

Mike Montalbano - CCA

Regulations are intentionally cumbersome. The Gulf Council should pursue regional management. The Gulf Council should remove as many regulations from the fishery as possible.

Austin Johnson - Private recreational angler

Supports regional management.

Trey Williams - CCA

There are lots of red snapper out there. A 27-day season is not sufficient. Anyone with a boat can catch red snapper. The current system is broken. State-level red snapper is the way to go.

Rawlston Phillips - Private recreational angler

Regional management is the way to go. The money spent by Louisiana on the fishery goes much further than the money spent by the federal government.

Rad Trascher - CCA

Supports regional management. LDWF has a better sense of the red snapper fishery than the federal government and can better manage catch data and conduct stock assessments. Regional management is a step in the right direction.

Larry Hooper - Our Freedom Charters

Will regional management lead to catch shares? Catch share programs haven't worked well anywhere. Supports regional management. Let states handle their own fisheries. Would like to

see the charter for-hire industry recognized as its own business. We pay for everything and get punished for it. Regional management should be conducted at the state level. Red snapper should be assessed using numbers of fish instead of pounds. Scientists need to count all the fish.

Andrew Roberts - CCA

Supports regional management, with Louisiana acting as its own region and governed by LDWF.

Ben Graham - CCA

There are tons of red snapper. Supports regional management of red snapper at the state level. States can do a better job than the federal government. Allocation should be based on biological criteria.

Chris Moran - Marina operator

Supports regional management of red snapper at the state level. Louisiana has the best red snapper fishery and the smallest number of fishermen. There should be shorter seasons as you go from the western Gulf of Mexico to the eastern Gulf of Mexico. Allocation should be based on biological criteria. States could do a better job with sampling funding.

Jim McDowell - Private recreational angler

Supports regional management of red snapper at the state level, with Louisiana managed by LDWF. Allocation should not be based on landings.

David Cresson -CCA Executive Director, LA

The Gulf Council proposed regional management plan is different from the Louisiana proposal. One goal was to show that Louisiana can count fish better than the federal government. In favor of management at the lowest possible level. In favor of regional management as proposed by LDWF.

Texas City, Texas January 14, 2013

Council and Staff
Patrick Riley
Emily Muehlstein

30 members of the public attended.

Bubba Cochrane - Charter, commercial, and recreational angler; Good News Charters and Southern Seafood LLC

What is happening with red snapper management right now isn't working and regional management should be pursued. He likes the idea of managing with 3 regions. Bubba does not want the states to manage red snapper without a regional system.

Shane Cantrell - Charter; Fishin' Addiction Charters and Charter Fishing Association Shane is a young captain and he believes that regional management has a lot of potential as long as states can agree with one another. He would like to see regional management because it may be a way to increase accountability for the recreational sector.

Tom Hilton - Private recreational angler

The Council is working backwards and should identify fishing effort first. He thinks that an offshore boat permit would solve a lot of issues. The charter for-hire industry already has their own permit and the private recreational anglers should, too. An offshore recreational permit would allow for better determination of what the recreational sector is catching without the time lag associated with MRIP. The permit could also solve the problem of National Standard 4 that disallows discrimination between residents of different states by charging different fees for resident and nonresident fishermen. The real solution is an honest stock assessment that gives full credit to the fish on artificial structure in the Gulf. He could really get behind a regional management system if the regions actually had control, but not if this is just a way to further micromanage the fishery.

John Thomas - Private recreational angler

He echoes Tom Hilton's perspective. He sees that there is more snapper out there than ever, and even though he is allergic to fish he wants the system to be fixed.

Jonathan McKay - Private recreational angler

Jonathan suggests that permitting or buying a license that gives a certain number of fish to each angler would be a good idea. A tag system should be considered; this could be considered using regional management or it could be done Gulf-wide. Ultimately, Jonathan is worried about what the overpopulation of snapper is doing to the other fish.

Roger Dickert - Private recreational angler

Roger would not want to trade more days for a smaller bag limit. He supports a tag system because he would like to be given the opportunity to fish when he wants to so he doesn't have to risk unsafe seas. Regional management would be better because the local folks in control would better be able to make management judgments for their region.

David Conrad - Charter; Circle H Charter

David supports the idea of using a tag system. He likes the idea of regional management and would like to see the idea developed a little more.

Bill Platt - Charter boat captain and tournament angler

Bill likes the idea of a regional management system and he really wants accountability in the recreational sector to be improved. 20 years ago there were way more offshore fishermen and there are a lot less now. A tag system is a reasonable idea for Texas because better accountability should let them fish longer.

Scott Hickman - Charter Captain; Circle H Charters

One size fits all management doesn't work in the Gulf of Mexico. He would rather fish red snapper in the fall, and he supports regional management on a state-by-state level so that they

have the authority to come up with their own system under the federal quota and federal accountability measures. Regional management will allow us to get to the accountable fishery quicker than the federal fishery would allow. The status quo system does not work; 27 days is ridiculous, and Texas may as well not have a federal season with the bad weather. Texas Parks and Wildlife could do better for their fishermen and he applauds the Council for trying to give the recreational fishermen a solution.

Tyler Walker - For-hire deckhand and recreational fisherman.

Tyler has seen how the fish population has grown and he supports the idea of moving forward with a regional management program.

Billy Woolsey - Private recreational angler

Billy thinks regional management is a good idea. He wants accountability to be better and believes that a tag system is a reasonable solution to the problem we're facing. We need to do something different.

Johnny Williams - Owner, Williams Party Boats

Jonny believes there needs to be some safeguards because management has potential to become a derby where the state that opens first gets to catch their fish and the rest of the states are punished when the quota is caught. If a state wants to participate in the program, then it should have to agree that it will close its own state waters, not just the federal waters off the state if the individual region's allocation is reached. He thinks that NMFS should relinquish federal control of snapper completely and allow the states to manage it.

Buddy Guindon - Commercial fisherman; Katie's Seafood

Regional management and accountability would be good but he wants to ensure that the people out there can continue to make a living taking people fishing.

Johnny Walker - Charter owner

Johnny thinks the states can better manage the fishery than the federal government. If the Council can put in place measures that ensure one state's harvest does not cut into another, then regional management is a good idea. He also believes that a tag system is a reasonable solution to the recreational season problems.

Todd Hanslik - Private recreational angler

He supports the idea of regional management and would like the Council to give the states a shot at incremental management of this fishery. It will be very complex to develop the regional management program and Todd would like to be sure that the Council continues to involve fishermen in the development of the program by sharing information and inviting people to comment. He wants to pass on the ability for future generations to fish, and he fears that the fishery is slowly migrating to a liberal system that is similar to that of Canada where you must pay someone to take you bluefin tuna fishing. He would really like the state to have the opportunity to manage snapper on their own.

Gary Graham - Texas Sea Grant

He thinks tags should be considered because it is a potentially viable system that works in the hunting world. He would like to discuss density-dependent allocation because population is limited by habitat.

Corpus Christi, Texas January 15, 2013

Council and Staff
Doug Boyd
Emily Muehlstein

37 members of the public attended.

Mary Ann Heimann – South Bay Marina

It's a good idea that the states take control of the fishery but she thinks that the states should be given full control.

Russell Sanguinet - Charter; Dolphin Dock Inc.

Council can't allocate based on the number of licenses because we can't use historical licenses to determine it; people have not been buying licenses and won't until there is something to catch. He wonders how we are going to differentiate between federally permitted vessels and state-permitted for-hire vessels if the state of Texas gets regional control? Would federal permits be allowed to fish in state waters? The whole purpose of this idea should be to make each state responsible for their own fishery and not be managed by another mismanaged fishery (NMFS).

Jackie Romeyn - Charter; Fisherman's Wharf

She would like to know what the distinction would be between the federal and state waters. She does not currently have a federal permit and wonders what the distinction will be under regional management. Jackie likes the idea of state-based regions or even smaller regions because she believes it will allow for better scientific information, better allocation, and better local regulations if the states are given more responsibility.

Troy Williamson - CCA

The concept of regional management has been developed because of frustration toward federal management. Red snapper are more abundant than ever and management has worked, but it's time to reap the benefits of success. The CCA supports driving management to the lowest level of government possible. The states should manage with as little federal influence as possible. NMFS is "rewarding" anglers with a 27-day season and a 2-fish bag limit after they have sacrificed to rebuild the stock. This short season will result in a wide-spread revolt to fisheries management. The transfer of responsibility will be no easy task; enforcement, monitoring, etc. will be difficult to control. The states should have the ability to manage both commercial and recreational harvest of red snapper.

Mike Nugent - Port Aransas Boatman Association and Charter operator

They have been asking to split the Gulf for 10 years. This is the first time the Council has responded and he hopes that people keep moving forward to get this plan to work. Each state should get their allocation from historical landings and it's really important that each state is independent from the others. The mistakes other regions make should not affect each region. The problems with MRIP could be solved by dividing it into other states who can take more control of their data collection programs. Regional management is desperately needed and would take away the state vs. federal permit issues.

Mike Miglini - Charter; Out to Sea Adventures

He would like allocation to be based on biological abundance of the fish. He supports regional management because local folks can make better regulations for local needs. He sees problems with Reef Fish Amendment 30b and section 407 of MSA which will kill charter boats and headboats. Credit should be given for artificial reef and restocking programs when determining abundance. He would like people to look at tags for recreational boats, and if that's good for private recreational boats he would like to see something for for-hire boats that would allow anglers to fish the days they want; they could use an AB tag system to stay in business.

Mike O'Dell - Charter; A Fishing Fantasy Guide Service

He supports regional management because the states can make better regulations than NMFS can.

Dennis Lug - Retired charter, now private recreational angler.

Would like to see some sort of regional management system worked out.

Steve Hardy - Private recreational angler

We are here because federal fisheries management is not working and it's time for something different. He supports any plan that has Texas as their own region. Boundaries would extend into the EEZ. We are not managing licenses, we are managing fish, so allocation should be based on abundance of fish. There are multiple stocks of red snapper based on habitat and reefs. He is worried that we are having a discussion about how we divide the pie but we are saying nothing about how to make the pie bigger. We need to do something about structure offshore.

Jim Smarr - RFA Texas

RFA believes in state management and has for 17 years. We should use the longest data set possible (historical landings) so that Texas can be treated fairly. It should be a biological abundance decision, period. The SEDAR-style stock assessments should be conducted regionally so that Texas can fish their own stock; monitored and determined by Texas. Management guidelines should not be established by the Council; the state should be given full control of their allocation. There needs to be an amendment to the MSA that cures the system that allows the other states to be affected by another region's overrun of their own allocation.

Brett Casey - For-hire; Port Aransas Boatman Association

Out of all the discussion, it still boils down to NMFS still monitoring the red snapper, and if one state catches the whole allocation, we're still back to square one. We need to figure out what we

need to do to limit this. Texas should be given their own allocation and each region's behavior should not affect what the other regions do. It's time to make a change for the good.

Tim Oestreich – Headboat Captain; Dolphin Dock Inc.

The federal limit seems to mainly limit the for-hire folks with federal permits. Some kind of separation should be made for someone who owns a business, because as it is, private fishermen can catch 4 fish all year-round, while federally permitted for-hire boats have a real short season. It would be very helpful if the season can stretch.

Biloxi, Mississippi January 15, 2013

Council and Staff
Dale Diaz
Ryan Rindone

23 members of the public attended.

Johnny Marquez - CCA Executive Director, MS

Local managers can do a better job of managing fisheries for constituents. Concerned about how regions will be defined. Want fair and equitable access to the fishery. How would state management entities be funded to conduct regional management?

Tom Becker - Charter for-hire captain

Red snapper are very abundant. Concerned about what Mississippi will get with respect to allocation. Want to know who makes up the catch numbers.

J.R. Titmus - Private recreational angler, artificial reef builder

Louisiana is claiming 9 nautical miles for state waters. Has no idea how recreational catch data are calculated. Would like to see state control out to 9 nautical miles in Mississippi, and the federal government can control beyond that. It is not possible to fish all 27 days of the proposed 27-day red snapper season; it's just too expensive.

Tim Knighten - Private recreational angler

Does not understand how the stock assessments work. It is hard to catch triggerfish because there are so many red snapper. Red snapper are eating everything. Doesn't trust the federal government or federally generated data. Supports state management of red snapper.

Gary Smith - Gulf Council Red Snapper Advisory Panel

There is a major issue with counting the recreational catch. The entire process is a joke, and the federal government is screwing the recreational sector. Flew from Mississippi to Florida to count the number of boats fishing to prove it. Mississippi needs regional management. What happens when Texas removes all of the oil rigs?

Keith Cuevas - Marine Biologist, Gulf Coast Research Lab

Mississippi needs regulations extended into federal waters. Allocation should account for this. Other states have shallow water oil rigs and Mississippi does not. The Gulf Council needs to get involved in the rigs-to-reef process. Juvenile red snapper recruit to the oil rigs. Supports regional management authorities, based on good communication. If states pursue regional management individually, then their independent harvests could have a domino effect on the other states.

Orange Beach, AL January 16, 2013

Council and Staff
Bob Shipp
Ryan Rindone

125 members of the public attended.

Pat Willingham - Private recreational angler

Has seen a four- to fivefold increase in red snapper over the last 40 years. All of the fish are in the 9-25 pound range. Divers tell him that the juvenile fish of other reef species are almost gone due to the red snapper. The Gulf Council needs to consider the impact of large red snapper on reefs.

Tom Steber - Charter for-hire captain

Need to look at regional management. The big issue will center around how the lines are drawn. The overarching issue is the Magnuson-Stevens Act. Fishermen need to rally together to get MSA redone or fixed. Alabama has the best reef zone in the world.

Kevin Sinyard - Private recreational angler

Watched the bag limit drop from five fish to two. It costs a fortune to go fishing for red snapper now.

Dale Ruckle - Private recreational angler

Can't even get a charter to go out fishing for red snapper. Bag limits are too low. Local businesses are losing tourism business as a result.

Troy Frady - Charter for-hire captain

Concerned about how to make a living. Bag limits have plummeted. Cautious about regional management of recreational red snapper. Is regional management going to extend the season or increase the creel limits? Is Alabama going to manage the fishery better than the National Marine Fisheries Service? The regulations are affecting our livelihood.

Gary Malin - Private recreational angler

Fished only a few days last season and limited out on red snapper each time. Red snapper are eating everything. Regional management should be done with a break between Florida and Alabama; this would be more fair for Alabama. Current fisheries regulations don't make sense.

John Kemper - Private recreational angler from Minnesota Alabama anglers should fight for their rights.

Tim Wilson - Private recreational angler

Fishing is an inalienable right. There are plenty of fish in the ocean. The charter for-hire fleet is afraid of the federal government. Fishermen need to protect their rights. Government has taken all of those rights away. Shorter seasons make it less likely that people will fish. Local control of fisheries is better.

Tom Ard - Charter for-hire captain

The best idea so far for red snapper is regional management. Alabama does a great job counting fish. Each region should be held accountable for their allocation. Would fish tags be used? How might regional management apply to grouper in the future? Use historical biological data for setting the allocation and adjust it periodically. Fears noncompliance by states like Texas and Louisiana

Ben Fairey - Charter for-hire captain

The fisheries management process takes too long. Regions will all fight for allocation. Alabama should not be grouped with Florida. Alabama only has 3 nautical miles worth of state waters, while other Gulf states have more. Wants assurance from the Alabama Gulf Council representatives that Alabama will be cared for in this process.

Bill Coursen - Private recreational angler, Pensacola, FL

Whenever the government takes anything over, they mess it up. Fishing rights are being denied. Caught 76 red snapper last year, and discarded close to 400. Hopes that some regions won't be unjustly shorted on their allocation.

Matt McLeod - Charter for-hire captain

There is a disparity between the number of fish caught and the reported landings. Both are total unknowns. Supports states all going noncompliant. NMFS's red snapper management plan will crumble with noncompliance, and NMFS will have to do what the fishermen want.

Chris Sherrill - Restaurateur

There will be economic problems if the season length drops to zero. He depends on recreational fishermen eating at his restaurant during the summer; no red snapper, no customers.

Gary Bryant - Charter for-hire captain

Red snapper season should last 180 days at a 4-fish per person bag limit. Supports regional management by individual states with accountability measures provided by the Gulf Council. Likes the idea of fish tags. The charter for-hire industry could receive their annual allotment of tags at the beginning of each year, and the private recreational anglers could get tags to catch red snapper at will. Harder to find more desirable fish.

Rashley - Private recreational angler

The federal government is over-managing. Flawed management affects everything.

Alan Taylor - Private recreational angler

Supports regional management of recreational red snapper by state.

Dwain Sanders - Private recreational angler

There are thousands of red snapper off Alabama. The charter for-hire industry is ruined. Commercial fishermen are paying lobbyists to raise the price of red snapper.

Robert Turpin - Escambia County Marine Resources, Private recreational angler Supports regional management of recreational red snapper with allocation based on biomass. NMFS is currently trying to rebuild red snapper to a threshold that is too high. Will never be able to meet the rebuilding threshold.

Destin, Florida January 17th, 2013

Council and Staff
Pam Dana
Ryan Rindone

104 members of the public attended.

Candy Hansard - Private recreational angler

The portion of Amendment 30B requiring CFH fishermen to adhere to the strictest regulations needs to be eliminated. States shouldn't be penalized for other states exceeding their allocation. Regional management is needed. Need to solve fisheries problems, not manage them. Need more artificial reefs. The Gulf Council needs to look into private artificial reef construction.

George Eller - Charter for-hire captain

Regional management of recreational red snapper may have merit under some conditions. There are too many unanswered questions right now. Need to table the amendment until the next assessment is completed. Until the CFH portion of Amendment 30B is gone, competition will be unfair. Texas is in violation of current regulations. Louisiana extending their state waters will take an act of Congress.

Matt McLeod - Charter for-hire captain

Been coming to these meetings for ten years. Lots of false hope. System has failed the fishermen. The regions would be fighting over a constantly shrinking pie. Supports states all going noncompliant. Fishermen need leverage against NMFS. States could grossly exceed the TAC set by NMFS, and the NMFS's red snapper management plan would crumble. Fishermen could then demand that NMFS work with them. The problem won't be solved by anything less.

BJ Burkhead - Charter for-hire captain

Opposed to regional management; table the amendment.

Stewart Miller - Charter for-hire captain

Opposed to regional management; table the amendment. Too many unanswered questions.

Chuck Guilford - Charter for-hire captain

Opposed to regional management. Opposes all management without consideration of ecosystem variations. Opposes any separation between the CFH and private recreational fishing groups.

Tom Adams - Charter for-hire captain, www.mexicobeachcharters.com The Gulf Council should appoint new people to the Advisory Panels.

Dr. Rain - Private recreational angler, Destin resident

Has quit fishing deepwater outside of the red snapper season because red snapper are all you can catch when you go out there. Huge red snapper off of Destin. Fisheries management needs to focus on the data collection.

Brant Kelly - Charter for-hire captain, www.relentlesscharterfishing.com Opposed to regional management. Table the amendment.

St. Petersburg, Florida January 22, 2013

Council and Staff
Martha Bademan
John Sanchez
Ava Lasseter

24 members of the public attended.

Capt. Bob Bryant - Charter

In considering regional management, once again we are trying to manage something that we don't know what we're managing; we don't know the numbers. The stock assessment fails to get a huge percentage of the fish from oil rigs and artificial reefs. The majority of the stock assessment is based on natural structure that NMFS knows. The majority of fishermen are going to artificial structures and we are not capturing fish from those places. Stock assessments are useless without this, making catch data useless, too. There are more problems than benefits in regional management and it seems to be a backdoor to sector separation. What we need to do is to unite fishermen and provide good data to NMFS and have them provide good data to the fishermen in return.

Bo Gorham - Private recreational angler

For-hire operators do a great service, but private anglers put money into economy and so have an important voice. He works weekdays so only had 12 days possible to fish red snapper during last year's season, and was only able to go fishing four times. Investing in gas and boat wear and tear for a derby fishery is not sustainable. Upon hearing this year's estimated 27-day season, he started running his own numbers. He compared MRIP's effort data and number of fish caught a day and the numbers don't work out. If effort data stays constant, it shows they didn't overfish last year but came out right at quota. If that's true, he should have 42-day season again this year. But it's a crap shoot because we don't know the stock. He does agree that taking management to the regional level now is crazy; the data are not there now to manage as a whole. Dividing into

five ways creates new bureaucracy that taxpayers will have to pay for. The states don't cooperate now. It's a way to avoid the hard part which is to validate what is going on in the fishery. Data is the key.

Capt. Mark Hubbard - Hubbard's marina, John's Pass.

He is strongly against splitting up amongst the states and echoes Bo Gorham's comments. He doesn't want another layer of bureaucracy on this fishery, especially since the Council can't manage fishery now. Plus, taxpayers can't afford it; it's more and bigger government. The plan takes away from state powers and discriminates between for-hire, federal, and state permit holders. It discriminates between the states, and appears to move toward sector separation. It uses fatally flawed data to micromanage a fishery that is already screwed up. It seems to divide and conquer the Gulf of Mexico. He is against regional management now, but would have supported it with a 6-month season. A full benchmark assessment needs to be done on red snapper. The fishery needs more days for open access fishing. It's the opportunity to fish that drives our economy, and a 27-day season is just silly with all the fish out there. Resources are being spent on assessing smaller reef fish instead of the important species.

Before considering regional management of gag, a full benchmark stock assessment is needed. The Council is restricting the gag fishery based on a flawed stock assessment. The gag fishery is huge and more reliable data are needed. There aren't as many boats fishing now because they must spend so much money to go out. Ten years ago, there would be 15 boats at the Middle Grounds, but that doesn't happen anymore. The pressure isn't on the fishery the way NMFS and the Council say it is.

Concerning state boundaries and allocation of red snapper, if states get allocated pounds, could those allocations start to migrate over from the commercial fishery? If that was the case, he wants the commercial allocation that moves into the recreational sector to stay in the recreational sector. He doesn't want the commercial sector to buy out of the recreational sector. That would give them some protection, in case catch shares take hold in the recreational fishery.

Stephen Furman - Tampa CCA

He hasn't fished offshore much lately; fuel prices keep him in his kayak. He knows others don't do it as much anymore either, so offshore effort has gone down. He thinks people understand regional management would allow states to manage the fishery and they can do a better job. But it sounds to him like the feds would spread the 27-day season among the 5 states and each gets a 5-day season and that's not appealing. He thinks a 4-day weekend season would help spread out the days so people could fish longer. Concerning how to get better data, he supports the idea of an offshore permit for collecting data from fishermen, and says it's easy to do and is already done for migratory game bird hunting.

Dennis O'Hern - FRA

This plan appears to increase uncertainty and it is uncertainty applied to allowable catch that is hurting them. The idea for regional management, regional cooperation, is a great concept, but it's called the Gulf Council and you already have that. The problem seems like the Council is told what they have to do. He is not sure where regional management is coming from; it looks like sector separation. He doesn't want to give NMFS more power to close a fishery arbitrarily.

For greater amberjack, they closed the season in 5 days, in-season, based on MRFSS data which is not supposed to be used for in-season quota monitoring. The MRIP data is still just random telephone surveys; Florida is starting new data collection but it's not making it to the top.

It's been 10 years since having a full stock assessment on red snapper. The current one is a modified benchmark assessment, and it should be a full assessment; the Council needs to make some more noise about that. These plans take away state powers; if state waters are managed by the states, anyone can fish in state waters, permit or no permit. The feds cannot come in and chain you to that federal rule. That is for all the charter guys.

They had clamped down on red grouper even though they were thick as flies, and they won a lawsuit against the regulations. The same thing has been going on with red snapper and gag; the clamp is staying on it. Roy Crabtree is clamped by certain rules, as is the Council, but we threw off slavery and other rules and putting up with this is just plain wrong. The spring shallow-water grouper closure is not needed, and he can't believe it isn't done (the rule making), so Mark Hubbard and his employees cannot access what is known to be a healthy fishery. There is no reason the closure can't be rescinded. If Dr. Crabtree can close amberjack in five days, he can open shallow-water grouper. The analyses have already been done. There will be an online petition up by tomorrow to address the 2-month closure, because it would be a half million dollar bump to the fishing economy.

Libby Fetherston - Ocean Conservancy

She lauds the goal on increasing flexibility for recreational fishermen, but is concerned that regional management isn't the way to go. There are issues with monitoring and enforcement and it is unclear where from the federal budget enforcement funds would come from. Without additional funds for monitoring, they would need a bigger uncertainty buffer and she doesn't see that happening because it would further reduce the season. She is uncertain how much flexibility states would have; it may be limited to when they have their seasons and the bag limit. She doesn't see this as a mechanism for optimizing recreational fishing opportunities.

As with all their comments on scoping documents, she feels that the Council and NMFS should analyze a wide range of options that address this issue. She is concerned about how federally permitted charter operators would be affected by regional management, and that warrants further analysis. NMFS must ensure that this is consistent with federal law and the rebuilding goals for red snapper. She predicts the assessment will show great progress has been made in rebuilding red snapper, but that they aren't there yet.

Vance Tice - FRA, Minnows and Monsters

He is still very upset that no Council member attended the last public hearing and he is concerned that Council members did not receive their testimony. He had a tackle shop that is closed because of draconian measures; 60% of his business was offshore fishing and there is no more offshore fishing. He's against catch shares but they keep trying to slide it in there; the majority in Florida is against catch shares. Congress has addressed it but they move on with it. The way effort is calculated is a big problem. He has called a lot of businesses and they report that business is down, but the data show effort is up so there is a problem there. At the boat ramps, you don't see the big trailers anymore, you see smaller bay boats. He knows guys who

have sold their offshore boats because it isn't worth it anymore. When FWC goes out and does mortality studies that show that the data are way off, their studies are ignored. Bob Shipp's paper says there is way more red snapper than the Gulf Council wants to admit. It's hard to feel a part of management when what they see is 180 degrees from what is being shoved down their throats. For red snapper, they used to have a 192-day season, 4-fish bag limit, and they never overfished the limit. Now with a 40 day season and 2 fish limit, they've somehow miraculously overfished the limit. Factors like weather, price of gas, and the economy are not taken into account. People are struggling. You're not just affecting people who fish, you're affecting every Florida citizen because when you take that money out of the state, the state still needs money to run.

Scott Moore

We don't even know how many people are fishing in federal waters. He doesn't like fishing licenses, but he knows why you have to have them. Magnuson was enacted to get information from the states on who was fishing in federal waters and he can't understand how to do this without knowing how many people are fishing in federal waters. He suggests that Florida implement the same thing as fish and wildlife did with federal regulations on migratory birds. The permits should be free because you're collecting the data and the feds should pay the states to do this. That's the first thing that should have been enacted. Just because a guy catches grouper onshore doesn't mean he fishes in federal waters. The only way to get this right is to permit the data. Another thing is poundage; Florida never went by pounds; they went by individual catch. Poundage is way too confusing, you want to simplify as much as possible. There are a lot of fish out there in trouble. There's no fishery in the world that has ever collapsed fishing on a slot [limit]; he feels slot limits should be used more.

Frank Bacheler - Captain, Hubbard's Marina

Since he came back to the area he's noticed an overwhelming change in the laws that have been imposed. For groupers, there's a big change in what you can't keep in federal waters. He gets gags year round and is not seeing the population decline like everyone is talking about. Out in 130 feet of water, red snapper are everywhere, and doesn't understand how people are getting these numbers. The FWC guys are there and they're awesome, but they are counting the number of runts coming on their boat, rather than figuring out other stuff out with their time. We're so limited with the season and we need to figure out what we're doing here. He's listening to everyone out here saying the way they collect the data is wrong, and everyone here at this meeting is against everything that's going on. No one here supports the 27-day season, they need better data.

Public Hearings were held in the following locations:

Thursday, August 1, 2013

Call-in session

Monday, August 5, 2013

Courtyard Marriott 11471 Cinema Drive D'Iberville, MS

Wednesday, August 7, 2013

Holiday Inn Select 2001 N. Cove Boulevard Panama City, FL

Thursday, August 8, 2013

Renaissance Mobile Riverview Plaza Hotel 64 South Water Street Mobile, AL Monday, August 12, 2013

Hilton St. Petersburg Carillon Parkway 950 Lake Carillon Drive St. Petersburg, FL

Monday, August 12, 2013

Hilton Garden Inn 6717 South Padre Island Drive Corpus Christi, TX

Tuesday, August 13, 2013

Hampton Inn & Suites 2320 Gulf Freeway South League City, TX

Wednesday, August 14 2013

DoubleTree 4964 Constitution Avenue Baton Rouge, LA

Summaries of Public Hearings

Call-in Session August 1, 2013

Council/Staff

Kevin Anson Ava Lasseter Emily Muehlstein Charlene Ponce

17 members of the public attended.

Tom Hilton - Recreational

Mr. Hilton believes that regional management puts the cart before the horse. The council is pushing for a concept that uses knowingly-flawed data that overestimates recreational landings by at least 70%. It would be better for the Council to help the Gulf states implement a state-based data collection system modeled after the existing Louisiana offshore landings permit. Second, the concept of sector separation has been slipped into the regionalization concept. It is irresponsible for the Council to give that type of decision-making power over to the states rather than tackle the issue Gulf-wide.

Dennis O'Hern- Fishing Rights Alliance

Mr. O'Hern wonders if there is no accountability measure for the recreational sector what is the 28-day season. The recreational sector is managed after the fact, due to the horrible mismanagement of data by NMFS. He also mentioned that people often submit false information to the Council and he asked for follow-up regarding the law and any past prosecutions under said law. He also expressed concerned that regional management was based on data that the Council knows to be wrong. The Gulf Council should be the management tool that we want, but NMFS influence and control over the Council must be removed. He stated that the Council should be run by the states with constituent input, and the members of the Council should be appointed by the Governors; not hand-picked by NMFS.

B.J. Burkette - Charter; Florida

Mr. Burkette does not think that regional management is going to help because the NMFS data is still a problem. There is no need to be so restrictive with the amount of fish and regional management won't solve that problem.

George McKinney - Commercial, For-Hire, Private; Pensacola, Florida

Mr. McKinney wondered how enforcement would work in a place like Pensacola, Florida with Perdido Pass so close. He would like to see some sort of regional management. He wants small boats and private recreational anglers who are limited in days to be able to safely and effectively fish in the Gulf.

Bob Gill - Former Council member; Crystal River, Florida

Mr. Gill recommended that the Council require the states to come to full agreement on all points relative to regional management prior to the Council taking further consideration or action. He added that the Council ought to table the amendment until the states agree on all the issues. New issues seem to be cropping up and it's going to be very difficult for the Council to find an endpoint if the states do not agree with every action and alternative.

<u>Action 4</u> - Council should give serious consideration to a slot limit for red snapper. Spawning success is greater for large fish and preserving the older fish in the truncated population may have some merit. Mr. Gill acknowledges the discard problem and still believes a slot will be useful.

Bill Teehan - Former Council member; Tallahassee, Florida

Mr. Teehan thinks the entire concept is very interesting. He supports <u>Action 4</u>'s <u>Alternative 7</u> which would allow individual regions to establish sub-allocations for for-hire and private anglers.

Corpus Christi, Texas August 12, 2013

Council/Staff

Robin Riechers Lance Robinson Emily Muehlstein Charlotte Schiaffo

20 members of the public attended (mostly Texas Parks and Wildlife and Harte Research Institute staff; about eight were members of the fishing public).

Cliff Strain - Port Aransas Boatmen Association

Mr. Strain commented that he understood the current data collection but believed that people were unsatisfied with the federal government because the regulations were not in line with what the people are seeing. He added that if a move toward regionally adjusting the data was not made, then regional management would not have the punch or be as effective as anglers wanted it to be. He noted that Texas had the structure and ability to manage red snapper, and while he did not think there needed to be a year round season which could deplete the resource, he did want to see a longer fishing season. He stated that he had not had to spend more than 30 minutes fishing to limit out. He expressed concern that eventually, the destruction of habitat would have an effect on fish populations and encouraged the Council to do what it could to control the removal of rigs. He stated that his association wants to support regional management.

Ron Moser - Port Aransas Boatmen Association

Mr. Moser favored individual states having control over their waters (<u>Action 2</u>, <u>Alternative 3</u>). He added that the data collected should be adjusted to account for the biomass of fish in the state of Texas, as Texas seemed to be penalized more than other states because of this not being taken into account. He supported <u>Action 3</u>, <u>Alternative 1</u>; do not apportion the quota based on historical landings. On <u>Action 4</u>, he recommended the <u>Preferred Alternative 4</u>, to allow individual regions to set recreational red snapper season start and end dates and season structure. On <u>Action 5</u>, he believes that for-hire vessels and federal permit restrictions should be left to Texas to manage the resource. On <u>Action 6</u>, he agreed a 2-year grace period (<u>Option b</u>) would be best so that the new program had opportunity for error without penalizing fishermen while the program adjusts.

Pat Harris - Private recreational angler

Mr. Harris would like to see as much effort from the Gulf Council to increase habitat quality as they did in forcing regulations on anglers. He added that trying to improve everything instead of concentrating on improving the fishery was the wrong path for the Council to take.

League City, Texas August 13th, 2013

Council/Staff

Robin Riechers Lance Robinson Emily Muehlstein Charlotte Schiaffo

21 members of the public attended.

Kristen McConnell - Senior Conservation Manager Environmental Defense Fund Ms. McConnell expressed concern about the regional management proposal. She is cautiously supportive because Environmental Defense Fund agrees with the idea of increasing access and flexibility for anglers but finds it difficult to support an idea with so many outstanding issues. Regional management will present challenges to law enforcement; it may have unforeseen impacts on other species due to effort shifting. It is hard to move forward without a better understanding of what the states will do. States should provide details on what direction they will take and their proposals should include accountability measures in case of a quota overage. She fails to see the relative benefit of regional management for private and for-hire anglers in the long term because the concept simply promotes the use of the same management tools with the same pitfalls. A real solution that potentially uses regional management is needed, but the current amendment does not seem to provide that solution.

Bill Bahr - Charter Captain

Mr. Bahr is largely concerned with the health of the snapper fishery and properly assessing that population. He is a Texas native and he has confidence that Texas Parks and Wildlife will be able to manage red snapper. He is concerned about the discrepancy between Louisiana and NMFS landings data, and he would support <u>Action 6</u>, <u>Option b</u> which would create a 2-year grace period for the regions to establish their own programs without having the NMFS numbers shoved down their throats.

Scott Hickman - Charter Captain and owner of Commercial Red Snapper IFQ Status quo is not working. The commercial IFQ program can be credited for success of some of the red snapper recovery and he would like a similar tool to be considered for the for-hire sector. Mr. Hickman can't participate in his own state waters, so he supports Action 5, Alternative 2 to remove the requirement for for-hire vessels to adhere to the strictest regulations. Mr. Hickman also supports Action 4, Alternative 7 which would allow for a separate sub-allocation for the private for-hire industry. Amendment 39 has a lot of holes in it and he is afraid that Texas will have a weekend season or something that will shut out the charter industry. He is tentative about supporting the amendment and wants the charter boat fleet to have assurance before he can move forward.

Paul Bitner - Charter Captain

There are a lot of holes in how the landings are calculated and he would like to see greater accountability in how those numbers are collected. Mr. Bitner does not think we can get a grip

on the numbers without implementing a tag program to keep better track of the fish. Mr. Bitner has limited days to catch fish and make business work and the current management does not allow for success. He supports <u>Action 4</u>, <u>Alternative 7</u> because he would like the private and forhire fishermen to be managed separately.

Johnny Williams - Headboat owner/operator

Mr. Williams thinks there are going to be winners and losers under a regional management program, and we are in a situation where we don't know who those winners or losers will be. Texas landings have decreased but it's not because the fishing is getting worse; he predicts that under status quo, the Texas proportion of the harvest will continue to decrease. He supports states' rights and wants the federal entities to stay out of his business. Mr. Williams has a hard time supporting the amendment without a better understanding of what the program would look like if delegation were given to Texas. He would be opposed to a situation where the red snapper fishing would be open only on Saturdays during the summer and he does not know where the State stands.

Tom Hilton

The data is showing that headboats are landing 68% of all the red snapper, so headboat operators have nothing to worry about. Mr. Hilton wants to Council to get a hard handle on exactly what we are doing before jumping off into the unknown using flawed data to determine allocation percentages in Action 3. There are no regional assessments of biomass and the feds have taken control of the commercial fishery without regional control. Off Texas the working allocation is not 51% commercial and 49% recreational. There are far more commercial harvesters off Texas, and here it may be closer to 70% commercial and 30% recreational. He says that there is nothing regional about this concept because the federal agencies will still hold critical control points. The Louisiana offshore landings permit should be a sounding bill for every Gulf state to implement their own data collection system. Louisiana didn't believe the feds and they proved them wrong. In Mr. Hilton's opinion, it is a dereliction of duty for all involved to move forward with this amendment with this flawed data.

He proposes a better solution:

- 1. Implement a data collection system across the Gulf for each state modeled after the Louisiana offshore permit.
- 2. Implement an 11 million pound annual catch limit over the next 3 years.
- 3. Give any increase in quota to the recreational fishermen because their season and bag limit has been slashed while commercial folks have had full access to their quota.
- 4. Reinstate the 149-day season.

Steve Cunningham - Charter Captain

Mr. Cunningham shares the other speakers' opinions. Caution is important and using only fishery dependent data needs to change. 30B needs to be removed so he can be successful as a charter operator. Mr. Cunningham supports Action 2, Alternative 4 which would create 5 regions, one for each state. He supports Action 3, Alternative 3 which would remove landings from 2006 and 2010 from the allocation decisions. He made it clear that biomass data needs to be included somehow even if it's not given the weight that the historical landings are given. We know there are more fish in the western Gulf and that needs to be accounted for. He supports Action 5, Alternative 2 which would create a 2-year grace period. A 3-year period may be even

better. He is slightly leaning towards having more faith in Texas than he does in NMFS. There are a lot of issues in the document so before any radical changes are made, we need to look at this idea very carefully. The fishermen on charter boats are recreational anglers and they, along with seafood consumers, are important contributors to the fishery.

Shane Cantrell - Charter owner/operator

Mr. Cantrell is disappointed that regional management does not allow for planning or provide for additional methods of data collection. He would prefer a multispecies IFQ program for the charter industry. The commercial program works well for commercial fishermen and he understands that changes would be made to accommodate his industry. He wants the real time accountability. He thinks harvest tags would work out very well for the private recreational anglers. As it is proposed, regional management is just a reshuffling of the deck with the same management tools and he would rather new novel approaches to management be considered.

David Conrad- Charter Captain

He fully supports <u>Action 5</u>, <u>Alternative 2</u> to allow for-hire boats to participate in the state season. 30B needs to go away because recreational fishermen on their boat should be allowed to fish just like recreational boat owners. He sees issues with allocation for the states. He needs to see what's in the details before fully supporting this document.

Baton Rouge, Louisiana August 14, 2013

Council/Staff

Camp Matens Emily Muehlstein Charlotte Schiaffo

24 members of the public attended.

Chris Macaluso - Theodore Roosevelt Conservation Partnership

As an organization, they are trying to work within the system to better manage the recreational fisheries. Trying to manage red snapper to a total allowable catch is destined for failure because the Marine Recreational Information Program does not reflect an accurate count of the fish that are being caught or how many people are fishing. For <u>Action 3</u> he is concerned with basing the quotas on historical landings. Historical landings from Alabama and Florida will reflect more landings but that is a measure of fishing pressure not abundance of fish. He does not want to restrict pressure but if the target in MSA is to end overfishing and the Council allows states with less biological availability to out fish the areas with greater availability, we are going to fail. Managing the red snapper as one stock may be a problem. The fish don't migrate from west to east; there are fish in each region. Allowing an area with less fish to harvest more of the fish will not end overfishing. The only way we will successfully end this problem is to allow more fishing where there is more biological availability and less where there are less fish.

Ed Fike - Environmental Consultant and private recreational angler

He is supportive of what he has heard this evening. He is happy that Louisiana is taking the charge and that NMFS is working with fish. Biological availability of the fish is very important and he thinks that needs to be considered during allocation (<u>Action 3</u>). During the fall supplemental season, he fished every weekend and never saw anyone at one of the key landings sites. Based on his observations, he does not think that fishing is that important here in the fall.

Kenny Acostu - Private recreational angler

Mr. Acostu likes the opportunity to go fishing and he enjoys it, but opening June 1st with 2-3 foot waves is hard on him. Let the states manage using the weekend season and if it's recreational that's great because it will benefit him. There is no reason to go fishing for anything outside of red snapper season because you can't catch anything but red snapper; it makes his other fishing less enjoyable. He wants to fish without feeling like he is being wasteful and killing something by accident.

George Huye – CCA; Private Recreational Angler

He is in favor of regional management. For <u>Action 3</u> he is concerned about the use of historical landings data because it does not fix the problem of inaccurate fisheries dependent data and it doesn't make much sense to perpetuate the current system forward. He sees enough alternatives for the Council to be able to make good decisions here. Regional management will give the people of Louisiana a better opportunity to have a chance to catch what they may have had in the past. We know the stocks are strong and this will give the Louisiana fishermen an opportunity to put their trust and faith in their own resource management department.

Rebecca Triche - Louisiana Wildlife Federation

Ms. Triche noted that red snapper is a hot topic for her members. The Federation submitted comment in January already. She would like to see a regional approach because the Louisiana Department of Wildlife and Fisheries has the capability to assess the stocks. She wants limits to be set based on biological availability because the western region can sustain more harvest than the east. There was lots of activity in legislation regarding the passion Louisiana anglers have. She urges the Council to continue moving forward with this idea to acknowledge the frustrations of recreational anglers.

Rad Trashe - CCA Louisiana

Mr. Trashe expressed his full support for regional management. We all know that we've had faulty science and poor management. This is an opportunity to do what everyone wants; what's best for the resource and what's better for the fishermen. The Department of Louisiana Wildlife has proven that they do better science than NMFS. This year there was someone at the ramp every single day. We should put the power in Louisiana's hands and let them run with it.

D'Iberville, MS August 5, 2013

Council/Staff

Dale Diaz Corky Perret Ava Lasseter

7 members of the public attended.

Tom Becker - Mississippi Charter Captains Association

The Association discussed this the other night and decided that they need to go along with this and see what happens. There are problems with the data because they were never checked to see what they're catching on his headboat. He wants to see someone checking landings more often instead of telling him when they can get there. The Department of Natural Resources is hurting for people. There are so many places to unload your fish and that's what's happening.

Gary Smith - Recreational

Mr. Smith's first concern is the legality of regional management. There needs to be a non-biased person looking into it, in case in a couple of years it's determined they did something they shouldn't have done. He doesn't have a problem with regional management, but it needs more thought about how to divide the quota. Texas, the largest state, only got 12%, but Florida landed so much [2012 landings]; what's going to happen as the population changes? There are a lot of areas that need to be addressed: will there be annual adjustments, what process will be required, what happens when Texas demands more? The biggest issue is how you're going to count/estimate the data. Everyone agrees the data is flawed, but we're not addressing that. To fix it, got to count the number of boats. Don't worry about the number of fishermen, just the number of boats. Then each state could require a boat permit and you couldn't have red snapper aboard until you have the boat permit. Looking at Mississippi's data, it comes up to 22,000 fish they could catch. He has counted the number of boats and has never counted more than 50 boats. The most he's ever counted was 88; the boats just aren't there. You'll be back to 21 days even with regional management. Counting the boats is how you have got to correct the problem.

John Marquez Jr. - CCA Mississippi

He supports regional management and wants management taken to the state level, which allows them to control the fishery, best for their anglers. CCA wants to see the states have the ability to manage the commercial red snapper quota and be allowed to allocate among sectors. They would like red snapper removed from the reef fish FMP, as has been done for misty grouper and other species. He echoes Mr. Smith's comment that any plan needs to contain flexibility to allow for change within the states over time. Mississippi has concerns about how this would be funded, as they have a different sort of funding mechanism for data collection.

Panama City, FL August 7, 2013

Council/Staff

Martha Bademan Ava Lasseter Ryan Rindone

7 members of the public attended.

Chris Niquet - Commercial

He noted the differences between the percentage of red snapper landed by state since the oil spill and the allocation under <u>Alternative 4</u>, which would be based on the ABCs [separate east Gulf and west Gulf stock assessments]. So recreational allocations would be 48.5% for the eastern Gulf and 51.5% for the western Gulf, which lands the least recreationally. He thinks this seems backward. It seems like Florida and Alabama would get the bulk of the ABC.

Bart Niquet - Commercial

He feels the charter and headboats are stepchildren in all of this; they get no consideration from the commercial side or the recreational, side and they are being put out of business. They need their own sector and own bag limits. For red snapper, the recreational sector should go to 60 days with a 2-fish limit and set that in stone. He thinks they should be given something they can depend on so they can make a living.

Bob Zales, II - Charter Captain

He is speaking for himself, as the PCBA has not taken a position yet. He is conditionally supportive of regional management if it is only being discussed for the recreational sector, and will have no impact on the commercial sector. He supports the preferred alternatives in Actions 1 and 2. For Action 3, he supports Alternative 2 Option d, which doesn't benefit Florida the most out of all the options, but seems like a fair allocation. For Action 4 he supports only the Preferred Alternatives 2, 3, and 4. He is a little confused by Action 5; he wants the provision removed so supports that. But even if regional management does not go forward, he wants this action to go forward and be finalized before the 2014 season. For Action 6, he prefers Preferred Alternative 3, Option b, to allow the longest grace period to adapt to the change in management. He's confused by Action 7 because he doesn't see how it's going to work. Under the Magnuson-Stevens Act, the fishery must be closed when the quota is met. What happens if Mississippi fishes a lot? They could effectively cause the closure of the rest of the Gulf. He recommends rescinding 406b of Magnuson-Stevens Act that includes that requirement. It may have been necessary in 1996; it's clearly no longer necessary. Finally, as a for-hire operator, he emphasized that his passengers are private recreational anglers, just like those fishing on their own boats.

Jim Clements - Commercial

Although CCA and RFA have criticized the IFQ program, Mr. Clements supports regional management if it will help the recreational fishers catch more fish and have more days to fish. But, this must not affect the commercial red snapper fishery.

Mike Eller – Charter and Commercial

Mr. Eller is speaking for himself and his own for-hire vessel. For <u>Action 1</u> he prefers <u>Alternative 3</u> [Council-implemented regional management]; for <u>Action 2</u>: he supports the preferred alternative for 5 regions. <u>Action 3</u>, he supports <u>Alternative 2 Option d</u>, combining the long and short time series.

Regional management is a slippery slope that could result in benefits or could turn into a total fiasco. He is asking himself, can his state can do a better job than what is going on now? If the states get together and make a big advance on data collection, it could be better. But if they don't do that first, then this is putting the cart in front of the horse. This is hard for him to support when he doesn't know the long-term ramifications. His state will make decisions dependent on the current political persuasion at the time. What if his state chooses to adopt a weekends only season? That would really hurt the for-hire fleet. At least with the Council, you have diverse opinions represented. He would like the individual states to have leeway in setting opening season dates, but maybe not to set different size limits. He supports increased flexibility but it is a slippery slope. He wants to see the regional plan for each state before he supports it and they don't have that yet because it is still new. He wants to hear from a state how it would actually manage red snapper better than the NMFS. He does not want the commercial sector to be impacted by this.

He supports the preferred alternative in <u>Action 5</u> and thinks the 30B provision is unfair and unconstitutional. In <u>Action 4</u>, he supports <u>Preferred Alternatives 2, 3, 4, 5, and 7</u>. Anglers that fish on for-hire vessels should be protected and shouldn't be lumped in with private anglers who fish differently. He feels there should be the possibility for sub-allocations. In <u>Action 6</u>, he supports <u>Alternative 4</u>, <u>Option b</u>; establish a 2-year grace period before implementation of overage adjustments.

Don Whitecotton - Charter

We have all looked at how we are going to protect the life of the fish, but we are putting our industry at risk by setting the season in the middle of hurricane season. Even if the weather is bad, charter boats have to go out to make a living. We need a way for the for-hire boats to go out, and this is a big socio-economic issue. They have been lucky nothing has happened on the headboats yet [accidents]. He suggests a year round season with a number of days you can go out to fish. We can surely regulate ourselves [when we go out] if we can regulate these fish.

Warner Foster - Recreational

He is very interested in the quota issue and wants to know how they get the quota. He hears they just pull it out of somewhere. He has never had his fish counted and weighed checked on his boat. Commercial guys have to weigh in all their fish, but no one is ever at the ramp asking him what he caught. With the size of his boat, he's not going to go out in the rough weather and get beat up. The June 1 season start was during rough weather and they couldn't get out most of the season.

*The following comments were received in Panama City on August 6, 2013 at a hearing on Coastal Migratory Pelagics.

BJ Burkett - Charter and commercial

Capt. Burkett thinks the whole program is going to be a logistical nightmare. Red snapper isn't being managed appropriately now, but they're going to throw 5 more leaders into it? It's going to be very complicated because the regulations change so often. On all the actions, except Action 5, he wants no action. He does not want regional management. The issue we should be fixing is the flawed data. Regional management will make regulations based on incorrect data instead of tackling the issue of getting more days. He has heard we're never going to get back to where we were just a few years ago [longer season], but that's what people want. Regional management might leave them with 25-30 day seasons, which doesn't take us anywhere close to what people want. Therefore, he doesn't see the benefit of doing it. Maybe one state can fish a few days longer, or keep one fish more than another region's bag limit, but he does not see benefits to the whole Gulf and for all anglers.

Randall Akins - Recreational, retired charter captain

Capt. Akins has a historical captain permit that he can't transfer to his children and that's not the way of doing things in America. His children should be able to receive his permit. When he was in the Coast Guard, he was told you couldn't sell permits, but now you can so he is confused. At least 50% of the time he has broken the law because he has to throw back red snapper that are not at least 16". He has to throw them back and the dolphins get them. Feeding dolphins is against the law and he knows someone who was fined for feeding dolphins. This can be solved by keeping the season open year round and you can keep your first five fish. He was told that would be culling the fish, but that's what he's doing now. He doesn't support setting seasons or size limits.

Mobile, AL August 8, 2013

Council/Staff

Kevin Anson Chris Blankenship Ava Lasseter Ryan Rindone

11 members of the public attended

Palmer Whiting - Recreational, Alabama CCA Chairman

Mr. Whiting thinks the state has done a good job of managing its inshore fisheries and can do a good job with offshore fisheries. They built this habitat and they can manage it. Alabama has a lot of habitat and a lot of snapper. CCA members are in favor of that and having it on a more local level, with local scientists, who are more than capable. Bring management down to the state level is preferred.

Captain Mike Thierry - Charter

Capt. Thierry thinks states can manage it better. The inconsistency of allocations needs to be addressed so everyone is on the same playing field, and the number of days each state is allowed to fish is not impacted because of another state's regulations. Basing allocations on landings when some states who were open while Alabama was closed is like rewarding them for not playing by the rules. Sub-allocations are needed because one size does not fit all. The weekends-only season that private vessel anglers prefer would not work for the charter fleet. There should be no more restrictions than the for-hire fleet already has compared to the private recreational anglers. He supports the states taking over management and feels they are up to the job. He would like to have states do their own stock assessment. They are here locally every day and could do a better job. Each region needs to be accountable to its own quota. For example, Destin's rodeo is in October and they'd like to have the season open then. We'd like our own rodeo season in July; so one size doesn't fit all. Texas wants to be open in the winter as it's a good time for them. Alabama has got some of the best people in the world working on this stuff right here.

Skipper Thierry - Charter

He supports state management of red snapper and the ability of a state to establish suballocations. He would like for the state to conduct its own stock assessment, eventually. He wants the accountability measure, but they need to be flexible because landings often fluctuate annually for all kinds of reasons beyond our control.

> St. Petersburg, FL August 12, 2013

Council/Staff

Martha Bademan Ava Lasseter Ryan Rindone Doug Gregory

8 members of the public attended.

Buddy Bradham - Recreational Fishing Alliance, retired charter and commercial fisherman The RFA has a lot of problems with this so for right now, they prefer No Action be taken on all actions. They're behind on getting data sets in place. Florida is working on it but it is unknown when this will be available. There is the potential for going over the quota. The season dates would have to come from each state. There was a meeting on Friday morning where it was said it may cost 2.5 million dollars per year, and that's funding Florida doesn't have. These are problems that need to be solved before we go into regional management. If the improved data collection is in place, they would support regional management with the following preferred alternatives:

<u>Action 1</u>: prefer no action until data is fixed. <u>Action 2</u>: support the preferred alternative of 5 regions. For the quota (<u>Action 3</u>), they have a big problem with the data sets that may be used.

Louisiana has just proved how bad the NMFS estimates are: 70% off from their catches. They would like any new data program to run for 3 years then base the quota allocations on that. Action 4: they support the Preferred Alternatives 2, 3, and 4. But, they strongly speak out against Preferred Alternative 7, as this is a form of sector separation. They are still against it and feel the Council is trying to push it into this amendment. For Action 5, they support the preferred alternative. They don't support 30B at all and it should be completely removed, not just for red snapper but also for all reef fish. For Action 6, they prefer Alternative 3, Option b, allowing a 2-year grace period. For Action 7, they support Preferred Alternative 3 for a state that opts out.

Libby Fetherston - Ocean Conservancy

The Ocean Conservancy supports the Council's attempt to consider alternative management for the recreational sector. They do not take positions on allocation decisions. They think data collection and validation is critical to the success of any regional management plan and will need minimum data standards. They encourage the Council to think about ways that the restoration funds could support these goals in terms of quality and quantity of sampling. They also encourage the use of ACTs because they provide a reasonable buffer based on past performance and warrant consideration.

Sharon McBreen - Pew Charitable Trusts

Pew recommends revising the amendment's purpose and need to reflect that rebuilding red snapper is the top priority. They recommend that the amendment include the following three key components needed for the program's success:

- 1. AMs are safeguards and should include payback provisions, to maintain rebuilding. So they support the preferred alternative in <u>Action 6</u>. They also encourage the states to set up a system to constrain catches to within their quota. They do not oppose the <u>Option a</u> for a 1-year grace period, to allow state programs time to adjust their management process. This will be a learning process between NOAA and the states.
- 2. The states will need to retool their data collection systems to avoid triggering AMs. States should consider the use of ACTs to build in a margin of error to avoid triggering AMs, especially while adjusting to the new management system. This includes the option to use an ACT.
- 3: They support <u>Action 4's Preferred Alternative 7</u>: establish sub-allocations. If a state chooses that this is right for them, they should be allowed to pursue it.

Stephen Furman - CCA Florida, Tampa chapter

CCA supports regional management. He found the example of regional management for king mackerel an interesting example, because it is a migratory fish, and red snapper is not migratory. We had no red snapper off this coast for a long time but they came back because of Hurricane Katrina. This is a good start but the states would do a good job figuring it out if the feds would step away from the table. The states should have that authority, and the data and law enforcement is available. NOAA is paying FWC for nice boats to patrol offshore and there is no reason to stop that.

APPENDIX D. DELEGATION PROVISION

Magnuson-Stevens Fishery Conservation and Management Act 16 U.S.C. §1856(a)(3), (b)

- (3) A State may regulate a fishing vessel outside the boundaries of the State in the following circumstances:
- (A) The fishing vessel is registered under the law of that State, and (i) there is no fishery management plan or other applicable Federal fishing regulations for the fishery in which the vessel is operating; or (ii) the State's laws and regulations are consistent with the fishery management plan and applicable Federal fishing regulations for the fishery in which the vessel is operating.
- (B) The fishery management plan for the fishery in which the fishing vessel is operating delegates management of the fishery to a State and the State's laws and regulations are consistent with such fishery management plan. If at any time the Secretary determines that a State law or regulation applicable to a fishing vessel under this circumstance is not consistent with the fishery management plan, the Secretary shall promptly notify the State and the appropriate Council of such determination and provide an opportunity for the State to correct any inconsistencies identified in the notification. If, after notice and opportunity for corrective action, the State does not correct the inconsistencies identified by the Secretary, the authority granted to the State under this subparagraph shall not apply until the Secretary and the appropriate Council find that the State has corrected the inconsistencies. For a fishery for which there was a fishery management plan in place on August 1, 1996 that did not delegate management of the fishery to a State as of that date, the authority provided by this subparagraph applies only if the Council approves the delegation of management of the fishery to the State by a three-quarters majority vote of the voting members of the Council.
 - (C) [Pertains to Alaska, only.]

(b) EXCEPTION.—

- (1) If the Secretary finds, after notice and an opportunity for a hearing in accordance with section 554 of title 5, United States Code, that—
- (A) the fishing in a fishery, which is covered by a fishery management plan implemented under this Act, is engaged in predominately within the exclusive economic zone and beyond such zone; and
- (B) any State has taken any action, or omitted to take any action, the results of which will substantially and adversely affect the carrying out of such fishery management plan; the Secretary shall promptly notify such State and the appropriate Council of such finding and of his intention to regulate the applicable fishery within the boundaries of such State (other than its internal waters), pursuant to such fishery management plan and the regulations promulgated to implement such plan.
- (2) If the Secretary, pursuant to this subsection, assumes responsibility for the regulation of any fishery, the State involved may at any time thereafter apply to the Secretary for reinstatement of its authority over such fishery. If the Secretary finds that the reasons for which he assumed such regulation no longer prevail, he shall promptly terminate such regulation.
- (3) If the State involved requests that a hearing be held pursuant to paragraph (1), the Secretary shall conduct such hearing prior to taking any action under paragraph (1).

APPENDIX E. FISHERY ALLOCATION POLICY

Gulf of Mexico Fishery Management Council Fishery Allocation Policy

This allocation policy was developed by the Gulf of Mexico Fishery Management Council to provide principles, guidelines, and suggested methods for allocation that would facilitate future allocation and reallocation of fisheries resources between or within fishery sectors.

Issues considered in this allocation policy include principles based on existing regulatory provisions, procedures to request and initiate (re)allocation, (re)allocation review frequency, tools and methods suggested for evaluating alternative (re)allocations.

1. Principles for Allocation

a. Conservation and management measures shall not discriminate between residents of different states.

b. Allocation shall:

- (1) be fair and equitable to fishermen and fishing sectors;
 - (i) fairness should be considered for indirect changes in allocation
 - (ii) any harvest restrictions or recovery benefits be allocated fairly and equitably among sectors
- (2) promote conservation
 - (i) connected to the achievement of OY
 - (ii) furtherance of a legitimate FMP objective,
 - (iii) promotes a rational, more easily managed use
- (3) ensure that no particular individual, corporation, or other entity may acquire an excessive share.
- c. Shall consider efficient utilization of fishery resources but:
 - (1) should not just redistribute gains and burdens without an increase in efficiency
 - (2) prohibit measures that have economic allocation as its sole purpose.
- d. Shall take into account: the importance of fishery resources to fishing communities by utilizing economic and social data in order to:
 - (1) provide for the sustained participation of fishing communities
 - (2) minimize adverse economic impacts on fishing communities.

- e. Any fishery management plan, plan amendment, or regulation submitted by the Gulf Council for the red snapper fishery shall contain conservation and management measures that:
 - (1) establish separate quotas for recreational fishing (including charter fishing) and commercial fishing.
 - (2) prohibit a sector (i.e., recreational or commercial) from retaining red snapper for the remainder of the season, when it reaches its quota.
 - (3) ensure that the recreational and commercial quotas reflect allocation among sectors and do not reflect harvests in excess of allocations.

2. Guidelines for Allocation

- a. All allocations and reallocations must be consistent with the Gulf of Mexico Fishery Management Council's principles for allocation.
- b. An approved Council motion constitutes the only appropriate means for requesting the initiation of allocation or reallocation of a fishery resource. The motion should clearly specify the basis for, purpose and objectives of the request for (re)allocation.
- c. The Council should conduct a comprehensive review of allocations within the individual FMPs at intervals of no less than five years.
- d. Following an approved Council motion to initiate an allocation or reallocation, the Council will suggest methods to be used for determining the new allocation. Methods suggested must be consistent with the purpose and objectives included in the motion requesting the initiation of allocation or reallocation.
- e. Changes in allocation of a fishery resource may, to the extent practicable, account for projected future socio-economic and demographic trends that are expected to impact the fishery.
- f. Indirect changes in allocation, i.e., shifts in allocation resulting from management measures, should be avoided or minimized to the extent possible.

3. Suggested Methods for Determining (Re)Allocation

- a. Market-based Allocation
 - (1) Auction of quota
 - (2) Quota purchases between commercial and recreational sectors
 - (i) determine prerequisites and conditions:
 - (a) quota or tags or some other mechanism required in one or both sectors
 - (b) mechanism to broker or bank the purchases and exchanges

- (c) annual, multi-year, or permanent
- (d) accountability for purchased or exchanged quota in the receiving sector

b. Catch-Based (and mortality) Allocation

- (1) historical landings data
 - (i) averages based on longest period of credible records
 - (ii) averages based on a period of recent years
 - (iii) averages based on total fisheries mortality (landings plus discard mortality) by sector
 - (iv) allocations set in a previous FMP
 - (v) accountability (a sector's ability to keep within allocation)

c. Socioeconomic-based Allocation

- (1) socio-economic analyses
 - (i) net benefits to the nation
 - (ii) economic analysis limited to direct participants
 - (iii) economic impact analysis (direct expenditures and multiplier impacts)
 - (iv) social impact analysis
 - (v) fishing communities
 - (vi) participation trends
 - (vii) "efficiency" analysis
 - (a) lowest possible cost for a particular level of catch;
 - (b) harvest OY with the minimum use of economic inputs

d. Negotiation-Based Allocation

- (1) Mechanism for sectors to agree to negotiation and select representatives
- (2) Mechanism to choose a facilitator
- (3) Negotiated agreement brought to Council for normal FMP process of adoption and implementation.

APPENDIX F. RECREATIONAL RED SNAPPER LANDINGS BY STATE

Table F-1. Annual recreational red snapper landings by state (1986-2014), based on whole

weight of fish.

| Year | Alabama | Florida | Louisiana | Mississippi | Texas | Total |
|------|-----------|-----------|-----------|-------------|-----------|-----------|
| 1986 | 401,123 | 1,929,702 | 631,294 | 3,482 | 525,242 | 3,490,843 |
| 1987 | 387,077 | 912,826 | 281,413 | 54,031 | 454,200 | 2,089,547 |
| 1988 | 516,328 | 940,254 | 1,038,395 | 21,783 | 622,380 | 3,139,140 |
| 1989 | 544,007 | 362,359 | 708,400 | 345,009 | 980,565 | 2,940,340 |
| 1990 | 644,860 | 289,177 | 274,815 | 55,440 | 360,243 | 1,624,535 |
| 1991 | 877,662 | 439,237 | 968,807 | 179,601 | 451,819 | 2,917,126 |
| 1992 | 1,510,823 | 372,642 | 1,129,185 | 764,794 | 840,845 | 4,618,289 |
| 1993 | 2,095,900 | 1,250,350 | 1,626,283 | 907,243 | 1,281,487 | 7,161,263 |
| 1994 | 1,950,457 | 846,569 | 1,284,747 | 491,146 | 1,502,841 | 6,075,760 |
| 1995 | 1,742,758 | 565,356 | 1,543,765 | 156,083 | 1,455,780 | 5,463,742 |
| 1996 | 1,752,107 | 998,533 | 885,325 | 212,843 | 1,490,081 | 5,338,889 |
| 1997 | 2,660,697 | 1,007,177 | 1,145,689 | 664,884 | 1,325,782 | 6,804,229 |
| 1998 | 1,446,734 | 1,391,640 | 721,783 | 189,014 | 1,104,926 | 4,854,097 |
| 1999 | 1,975,892 | 1,422,359 | 784,324 | 201,749 | 588,084 | 4,972,408 |
| 2000 | 1,405,596 | 1,701,732 | 881,480 | 53,551 | 707,746 | 4,750,105 |
| 2001 | 2,221,042 | 2,095,911 | 316,993 | 108,454 | 509,885 | 5,252,285 |
| 2002 | 2,620,872 | 2,528,289 | 404,563 | 238,011 | 743,411 | 6,535,146 |
| 2003 | 2,315,502 | 2,213,246 | 544,732 | 365,829 | 666,136 | 6,105,445 |
| 2004 | 1,937,219 | 3,484,522 | 376,281 | 25,571 | 636,651 | 6,460,244 |
| 2005 | 1,361,826 | 2,242,440 | 484,250 | 5,222 | 582,181 | 4,675,919 |
| 2006 | 826,956 | 2,106,536 | 504,844 | 32,808 | 659,988 | 4,131,132 |
| 2007 | 1,134,694 | 3,295,292 | 908,429 | 3,399 | 466,981 | 5,808,795 |
| 2008 | 695,131 | 2,332,926 | 638,159 | 39,193 | 350,466 | 4,055,875 |
| 2009 | 1,207,914 | 2,630,439 | 1,054,595 | 43,574 | 660,335 | 5,596,857 |
| 2010 | 564,655 | 1,482,108 | 133,601 | 10,834 | 459,653 | 2,650,851 |
| 2011 | 3,606,453 | 1,975,772 | 600,358 | 69,478 | 482,046 | 6,734,107 |
| 2012 | 2,701,304 | 2,445,940 | 1,446,107 | 314,154 | 616,737 | 7,524,242 |
| 2013 | 4,424,247 | 3,777,371 | 545,532 | 422,529 | 489,112 | 9,658,791 |
| 2014 | 1,158,780 | 1,644,842 | 632,095 | 45,118 | 385,696 | 3,866,531 |

Source: Southeast Fisheries Science Center annual catch limit dataset, including the Calibrated Marine Recreational Information Program (MRIP) landings, LA Creel Survey, Texas Parks and Wildlife Department, and Southeast Headboat Survey landings. Headboat landings from Alabama and the Florida Panhandle are initially reported to the same headboat fishing area. Landings have been assigned to each state based on the survey's vessel landing records (May 2015).

APPENDIX G. GULF OF MEXICO RED SNAPPER FEDERAL REGULATIONS RELEVANT TO REEF FISH AMENDMENT 39

Current as published in the Federal Register as of **May 5, 2015** (Regulations in §§ 622.39 and 622.41 effective as of **June 1, 2015**)

§ 622.20 Permits and endorsements.

(b)(3) If Federal regulations for Gulf reef fish in subparts A or B of this part are more restrictive than state regulations, a person aboard a charter vessel or headboat for which a charter vessel/headboat permit for Gulf reef fish has been issued must comply with such Federal regulations regardless of where the fish are harvested.

§ 622.34 Seasonal and area closures designed to protect Gulf reef fish.

(b) Seasonal closure of the recreational sector for red snapper. The recreational sector for red snapper in or from the Gulf EEZ is closed from January 1 through May 31, each year. During the closure, the bag and possession limit for red snapper in or from the Gulf EEZ is zero.

§ 622.37 Size limits.

(a) Snapper--(1) Red snapper--16 inches (40.6 cm), TL, for a fish taken by a person subject to the bag limit specified in § 622.38 (b)(3) and 13 inches (33.0 cm), TL, for a fish taken by a person not subject to the bag limit.

§ 622.38 Bag and possession limits.

(b)(3) *Red snapper*--2. However, no red snapper may be retained by the captain or crew of a vessel operating as a charter vessel or headboat. The bag limit for such captain and crew is zero.

§ 622.39 Quotas.

- (a)(2)(i) Recreational quota for red snapper. (A) Total recreational quota (Federal charter vessel/headboat and private angling component quotas combined).
 - (1) For fishing year 2015--7.007 million lb (3.178 million kg), round weight.
 - (2) For fishing year 2016--6.840 million lb (3.103 million kg), round weight.
- (3) For fishing year 2017 and subsequent fishing years--6.733 million lb (3.054 million kg), round weight.
- (B) Federal charter vessel/headboat component quota. The Federal charter vessel/headboat component quota applies to vessels that have been issued a valid Federal charter vessel/headboat permit for Gulf reef fish any time during the fishing year. This component quota is effective for only the 2015, 2016, and 2017 fishing years. For the 2018 and subsequent fishing years, the applicable total recreational quota specified in § 622.39(a)(2)(i)(A) will apply to the recreational sector.
 - (1) For fishing year 2015--2.964 million lb (1.344 million kg), round weight.
 - (2) For fishing year 2016--2.893 million lb (1.312 million kg), round weight.
 - (3) For fishing year 2017--2.848 million lb (1.292 million kg), round weight.

- (C) Private angling component quota. The private angling component quota applies to vessels that fish under the bag limit and have not been issued a Federal charter vessel/headboat permit for Gulf reef fish any time during the fishing year. This component quota is effective for only the 2015, 2016, and 2017 fishing years. For the 2018 and subsequent fishing years, the applicable total recreational quota specified in § 622.39(a)(2)(i)(A) will apply to the recreational sector.
 - (1) For fishing year 2015--4.043 million lb (1.834 million kg), round weight.
 - (2) For fishing year 2016--3.947 million lb (1.790 million kg), round weight.
 - (3) For fishing year 2017--3.885 million lb (1.762 million kg), round weight.
- § 622.41 Annual catch limits (ACLs), annual catch targets (ACTs), and accountability measures (AMs).
- (q)(2) Recreational sector. (i) The AA will determine the length of the red snapper recreational fishing season based on when recreational landings are projected to reach the applicable recreational ACT specified in paragraph (q)(2)(iii) of this section, and announce the closure date in the Federal Register. This will serve as an in-season accountability measure. On and after the effective date of the recreational closure notification, the bag and possession limit for red snapper is zero. The recreational ACL is equal to the applicable total recreational quota specified in § 622.39(a)(2)(i).
- (ii) In addition to the measures specified in paragraph (q)(2)(i) of this section, if red snapper recreational landings, as estimated by the SRD, exceed the applicable recreational ACL (quota) specified in § 622.39(a)(2)(i), and red snapper are overfished, based on the most recent Status of U.S. Fisheries Report to Congress, the AA will file a notification with the Office of the Federal Register to reduce the recreational ACL (quota) by the amount of the quota overage in the prior fishing year, and reduce the applicable recreational ACT specified in paragraph (q)(2)(iii) of this section (based on the buffer between the ACT and the quota specified in the FMP), unless the best scientific information available determines that a greater, lesser, or no overage adjustment is necessary.
- (iii) Recreational ACT for red snapper. (A) Total recreational ACT (Federal charter vessel/headboat and private angling component ACTs combined).
 - (1) For fishing year 2015--5.606 million lb (2.543 million kg), round weight.
 - (2) For fishing year 2016--5.472 million lb (2.482 million kg), round weight.
- (3) For fishing year 2017 and subsequent fishing years--5.384 million lb (2.442 million kg), round weight.
- (B) Federal charter vessel/headboat component ACT. The Federal charter vessel/headboat component ACT applies to vessels that have been issued a valid Federal charter vessel/headboat permit for Gulf reef fish any time during the fishing year. This component ACT is effective for only the 2015, 2016, and 2017 fishing years. For the 2018 and subsequent fishing years, the applicable total recreational quota specified in § 622.39(a)(2)(i)(A) will apply to the recreational sector.
 - (1) For fishing year 2015--2.371 million lb (1.075 million kg), round weight.
 - (2) For fishing year 2016--2.315 million lb (1.050 million kg), round weight.
 - (3) For fishing year 2017--2.278 million lb (1.033 million kg), round weight.
- (C) *Private angling component ACT*. The private angling component ACT applies to vessels that fish under the bag limit and have not been issued a Federal charter vessel/headboat permit for Gulf reef fish any time during the fishing year. This component ACT is effective for

only the 2015, 2016, and 2017 fishing years. For the 2018 and subsequent fishing years, the applicable total recreational quota specified in \S 622.39(a)(2)(i)(A) will apply to the recreational sector.

- (1) For fishing year 2015--3.234 million lb (1.467 million kg), round weight.
- (2) For fishing year 2016--3.158 million lb (1.432 million kg), round weight.
- (3) For fishing year 2017--3.108 million lb (1.410 million kg), round weight.

APPENDIX H. BYCATCH PRACTICABILITY ANALYSIS

Introduction

Bycatch is defined as fish harvested in a fishery, but not sold or retained for personal use. This definition includes both economic and regulatory discards, and excludes fish released alive under a recreational catch-and-release fishery management program. Economic discards are generally undesirable from a market perspective because of their species, size, sex, and/or other characteristics. Regulatory discards are fish required by regulation to be discarded, but also include fish that may be retained but not sold.

Agency guidance provided at 50 CFR 600.350(d)(3) identifies ten factors to consider in determining whether a management measure minimizes bycatch or bycatch mortality to the extent practicable. These are:

- 1. Population effects for the bycatch species;
- 2. Ecological effects due to changes in the bycatch of that species (effects on other species in the ecosystem);
- 3. Changes in the bycatch of other species of fish and the resulting population and ecosystem effects;
- 4. Effects on marine mammals and birds;
- 5. Changes in fishing, processing, disposal, and marketing costs;
- 6. Changes in fishing practices and behavior of fishermen;
- 7. Changes in research, administration, and enforcement costs and management effectiveness;
- 8. Changes in the economic, social, or cultural value of fishing activities and non-consumptive uses of fishery resources;
- 9. Changes in the distribution of benefits and costs; and
- 10. Social effects.

The Regional Fishery Management Councils are encouraged to adhere to the precautionary approach outlined in Article 6.5 of the Food and Agriculture Organization of the United Nations Code of Conduct for Responsible Fisheries when uncertain about these factors.

Bycatch practicability analyses of the reef fish fishery have been provided in several reef fish amendments and focused to some degree on the component of the fishery affected by the actions covered in the amendment. For red snapper, bycatch practicability analyses were completed for Amendments 22, 27, and 40 to the Fishery Management Plan (FMP) for the Reef Fish Resources of the Gulf of Mexico (GMFMC 2004a, 2007, 2014a). Other bycatch practicability analyses were conducted in the following amendments (component of the fishery affected by the actions): Amendment 23 (vermilion snapper; GMFMC 2004b), Amendment 30A (greater amberjack and gray triggerfish; GMFMC 2008a), Amendment 30B (gag, red grouper, and other shallow-water grouper; GMFMC 2008b), Amendment 31 (longline sector; GMFMC 2009), Amendment 32 (gag and red grouper; GMFMC 2011a), Amendment 35 (greater amberjack; GMFMC 2012a);

Amendment 37 (gray triggerfish; GMFMC 2012b), and Amendment 38 (shallow-water grouper; GMFMC 2012c). In addition, a bycatch practicability analysis was conducted for the Generic Annual Catch Limits/Accountability Measures Amendment (GMFMC 2011b) that covered the Reef Fish, Coastal Migratory Pelagics, Red Drum, and Coral FMPs. In general, these analyses found that reducing bycatch provides biological benefits to managed species as well as benefits to the fishery through less waste, higher yields, and less forgone yield. However, in some cases, actions are approved that can increase bycatch through regulatory discards such as increased minimum sizes and closed seasons. In these cases, there is some biological benefit to the managed species that outweighs any increases in discards.

Red Snapper Bycatch

The Gulf of Mexico (Gulf) reef fish fishery directed at red snapper has been regulated to limit harvest in order that the stock can recover from an overfished condition. Regulations for the recreational sector include catch quotas, minimum size limits, bag limits, and seasonal closures. These are used to limit the harvest to levels allowed under the rebuilding plan. For the commercial sector, regulations previously included catch quotas, minimum size limits, seasonal closures, and trip limits. Now the sector is managed under an individual fishing quota (IFQ) program that was established in 2007. The program eliminates the need for seasonal closures and trip limits. Red snapper regulations have been generally effective in limiting fishing mortality, the size of fish targeted, the number of targeted fishing trips, and/or the time fishermen spend pursuing a species. However, these management tools have the unavoidable adverse effect of creating regulatory discards, which makes reducing bycatch challenging, particularly in the recreational sector.

An important aspect to red snapper bycatch is the penaeid shrimp fishery as previously described in Amendment 27/14 (GMFMC 2007). The shrimp fishery catches primarily 0-2 year old red snapper. To reduce red snapper bycatch, the Gulf of Mexico Fishery Management Council (Council) implemented regulations requiring the use of bycatch reduction devices (GMFMC 2002) and setting bycatch reduction targets (currently a 67% reduction from the baseline years 2001-2003; GMFMC 2007). Between the use of bycatch reduction devices and reductions in shrimp effort due to economic factors (Figure 7.1), the target reductions have been met.

Although red snapper bycatch in the shrimp fishery is an important source of mortality for this stock, this bycatch practicability analysis will focus on the directed reef fish fishery managed under the Fishery Management Plan for Reef Fish Resources of the Gulf of Mexico. Bycatch from the shrimp fishery has been and will be analyzed in the Fishery Management Plan for the Shrimp Fishery of the Gulf of Mexico, U.S. Waters.

Figures 7.2 and 7.3 show the relative number of discards for the recreational and commercial sectors as estimated by SEDAR 31 (2013). For the recreational sector, open season discards estimated through the Marine Recreational Information Program (MRIP) (charter and private angler) declined around 2007 as the recreational season got shorter due lower quotas. This trend is also apparent in the headboat data for the western Gulf of Mexico (Gulf). However, with shorter seasons of the past few years, the number of discards during the longer closed seasons increased (Figure 7.2). For the commercial sector, discards in the eastern handline and longline

sectors have increased since the implementation of the IFQ program relative to the western Gulf. This may reflect a shift in fishing effort that has resulted in the program. Note that for the commercial sector, closed season discards after the IFQ program was implemented refers to vessels with little or no red snapper allocation (see SEDAR 31 2013).

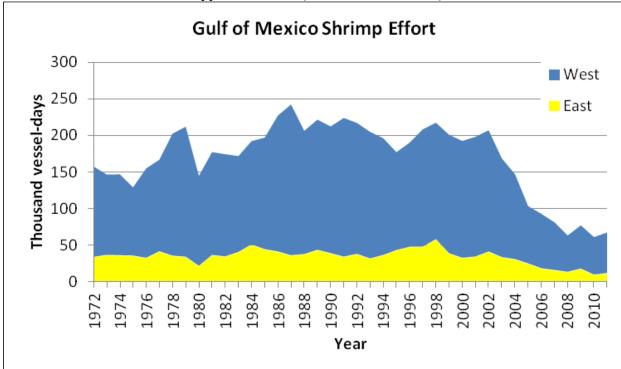


Figure 7.1. Gulf shrimp fishery effort (thousand vessel-days) provided by the National Marine Fisheries Service Galveston Lab. The reported effort does not include the average effort values used to fill empty cells. Source: Linton 2012b.

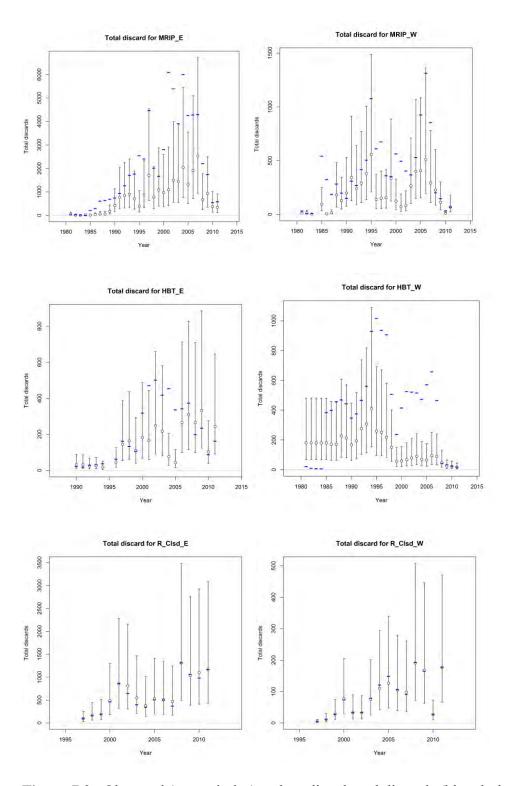


Figure 7.2. Observed (open circles) and predicted total discards (blue dashes) of red snapper from the private angler open season (top), headboat open season (middle), and recreational closed season in the eastern (left) and western (right) Gulf, 1997-2011. Source: SEDAR 31 2013.

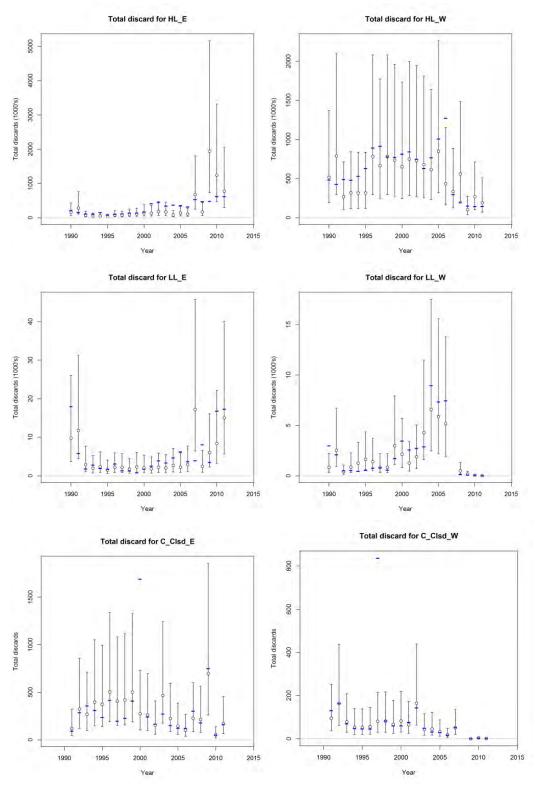


Figure 7.3. Observed (open circles) and predicted total discards (blue dashes) of red snapper from the commercial handline open season (top), longline open season (middle), and commercial

closed season in the eastern (left) and western (right) Gulf, 1997-2011. Source: SEDAR 31 2013.

Campbell et al. (2012) identified several causes of red snapper discard mortality in their review of release mortality in the directed reef fish fishery. These included hooking injuries, thermal stress, and barotrauma. Campbell et al. (2012) reviewed 11 studies that listed discard (release) mortality rates ranging from 0 to 79%. They reported that mortality tended to increase with capture depth, increasing water depth, or from some compounding effect of these two factors. Burns et al. (2004) and Burns and Froeschke (2012) examined the feeding behavior of red snapper and found red snapper quickly chew and swallow their prey. As a result, there is less time to set a hook while fishing, resulting in greater probability of hooking related injuries. Burns et al. (2004) concluded hook-related trauma accounted for a greater portion of release mortality than depth, despite catching red snapper at depths ranging from 90 to 140 feet.

Although Campbell et al. (2012) did not specifically address surface interval and predation, these factors were identified in GMFMC (2007) as contributing to release mortality. Burns et al. (2002) found survival of red snapper increased the faster red snapper were returned to the water, thus they considered any reductions in surface interval/handling time an important way to reduce release mortality. Several studies have documented predation on released red snapper. Dolphins and pelicans are the two most commonly observed predators and are known to pursue released fish, as well as fish before they are landed (SEDAR 7 2005). Several studies, which assessed release mortality through surface observations, accounted for predation when estimating release mortality (Patterson et al. 2001; Burns et al. 2004; Wilson et al. 2004).

A variety of release mortality rates have been used in different stock assessment. The 1999 red snapper stock assessment (Schirripa and Legault 1999) assumed release mortality rates of 33 percent for the commercial fishery and 20 percent for the recreational fishery. These release mortality rates were derived from the literature and were determined by the Council's Reef Fish Stock Assessment Panel to be the best available estimates at the time (RFSAP 1999). During development of the 2005 red snapper stock assessment, the SEDAR 7 data workshop panel (SEDAR 7 2005) reviewed available information on depth of fishing and release mortality by depth to produce fishery specific release mortality rates by region (eastern and western Gulf), season (open and closed), and by sector (commercial and recreational). Estimates of release mortality rates ranged 15% for recreationally caught and released red snapper in the eastern Gulf to 88% for commercially caught and released red snapper in the western Gulf caught during a season closure (Table 7.1).

Table 7.1. Mean/median depth of fishing and corresponding release mortality rates for red snapper by fishery, region, and season.

| Fishery | Region | Season | Depth of Capture | Release Mortality |
|--------------|--------|--------------------|---------------------|-------------------|
| Commercial | East | Open 180 ft (55 m) | | 71% |
| | East | Closed | 180 ft (55 m) | 71% |
| | West | Open | 190 ft (58 m) | 82% |
| | West | Closed | 272 ft (83 m) | 88% |
| Recreational | East | Open | 65-131 ft (20-40 m) | 15% |
| | East | Closed | 65-131 ft (20-40 m) | 15% |
| | West | Open | 131 ft (40 m) | 40% |
| | West | Closed | 131 ft (40 m) | 40% |

Source: SEDAR 7 2005.

In the most recent benchmark stock assessment (SEDAR 31, 2013), a meta-analysis was used to estimate red snapper release mortality using the 11 studies reviewed by Campbell et al. (2012). A venting/no venting component was added to account for the requirement to vent reef fish put in place through Amendment 27 (GMFMC 2007) as well as a gear component. For the commercial sector, average depths at which discards occurred for each gear (handline or long line), region (eastern or western Gulf), and season (open or closed) were calculated using commercial observer program data. Consistent with how commercial discards have been treated in other parts of the assessment, discards from trips with IFQ allocation were considered open season discards, while discards from trips with no IFQ allocation were considered closed season discards. For the recreational sector, average depths at which discards occurred for each region (eastern or western Gulf) and season (open or closed) were calculated using self-reported data from the iSnapper program. Estimated release mortality rates ranged from 10 to 95% with commercial release mortality rates greater than recreational release mortality rates (Tables 7.2 and 7.3).

SEDAR 31 (2013) estimated the total number of fish killed (landed and discarded dead) by the commercial and recreational sectors from 1983 to 2011 (Table 7.4). For the recreational sector, the percentage of dead discards to total fish killed has declined since a peak in 2001. However, it was not until 2007 that the number of dead discards was consistently less than the number of landed fish. For the commercial sector, the percentage of dead discards peaked in 2000, but it was not until 2010 that the number of dead discards declined less than 40% of the total fish killed.

Since 1996, more red snapper have been landed in the eastern Gulf than the western Gulf by the recreational sector (Table 7.5). A drop in the percentage of dead discards relative to the total number of fish killed occurred in both regions in 2008. The percentage of dead discards fell from 49.4% to 36.7% between 2007 and 2008 for the eastern Gulf and from 50.0% to 20.3% between 2007 and 2008 in the western Gulf. For the commercial sector, in the eastern Gulf the number of dead discards has generally been above 50% indicating that there are more discards were killed than landed (Table 7.5). In contrast, in the western Gulf there has been a falling off in the percentage of dead discards relative to the total number of killed fish since 2006 to well below 50%.

Table 7.2. Average depths and associated discard mortality rates for commercial discards of red snapper in the Gulf.

| Gear | Handline | | | | Longline | | | |
|------------------------|----------|------|--------|------|----------|------|--------|------|
| Region | East | | West | | East | | West | |
| Season | Closed | Open | Closed | Open | Closed | Open | Closed | Open |
| Average Depth (m) | 24 | 45 | 84 | 53 | 66 | 62 | 132 | 104 |
| Disc Mort - no venting | 0.74 | 0.75 | 0.87 | 0.78 | 0.82 | 0.81 | 0.95 | 0.91 |
| Disc Mort - venting | 0.55 | 0.56 | 0.74 | 0.60 | 0.66 | 0.64 | 0.88 | 0.81 |

Source: SEDAR 31 2013.

Table 7.3. Average depths and associated discard mortality rates for recreational discards of red snapper in the Gulf.

| Gear | | Recreation | onal | |
|------------------------|------|------------|------|--------|
| Region | Ea | East | | |
| Season | Open | Closed | Open | Closed |
| Average Depth (m) | 33 | 34 | 36 | 35 |
| Disc Mort - no venting | 0.21 | 0.21 | 0.22 | 0.22 |
| Disc Mort - venting | 0.10 | 0.10 | 0.11 | 0.10 |

Source: SEDAR 31 2013.

Table 7.4. Estimates of the total number of red snapper landed, the number of dead discards, and percent dead discards for all killed fish for the recreational and commercial sectors by year in the Gulf.

| in the Gui | | Recreation | al | Commercial | | | | | |
|------------|-----------|------------|--------------|------------|-----------|----------|--|--|--|
| | | Dead | Percent dead | | Dead | | | | |
| Year | Landed | Discards | discards | Landed | Discard | discards | | | |
| 1983 | 3,314,185 | 8,599 | 0.3% | 4,559,794 | 80,758 | 1.7% | | | |
| 1984 | 1,232,024 | 2,699 | 0.2% | 2,775,042 | 33,579 | 1.2% | | | |
| 1985 | 1,427,026 | 255,716 | 15.2% | 1,234,986 | 351,105 | 22.1% | | | |
| 1986 | 1,265,955 | 223,079 | 15.0% | 875,494 | 304,026 | 25.8% | | | |
| 1987 | 1,022,844 | 271,426 | 21.0% | 661,469 | 277,787 | 29.6% | | | |
| 1988 | 1,241,859 | 302,800 | 19.6% | 950,904 | 366,876 | 27.8% | | | |
| 1989 | 1,060,456 | 289,201 | 21.4% | 742,388 | 296,024 | 28.5% | | | |
| 1990 | 625,933 | 270,824 | 30.2% | 703,020 | 549,250 | 43.9% | | | |
| 1991 | 1,060,610 | 353,327 | 25.0% | 691,943 | 635,961 | 47.9% | | | |
| 1992 | 1,609,040 | 434,448 | 21.3% | 995,013 | 817,581 | 45.1% | | | |
| 1993 | 2,202,931 | 581,455 | 20.9% | 1,011,914 | 781,941 | 43.6% | | | |
| 1994 | 1,615,241 | 695,102 | 30.1% | 869,075 | 796,390 | 47.8% | | | |
| 1995 | 1,384,049 | 1,008,873 | 42.2% | 698,404 | 767,187 | 52.3% | | | |
| 1996 | 1,180,361 | 859,431 | 42.1% | 1,011,328 | 1,120,205 | 52.6% | | | |
| 1997 | 1,547,317 | 1,342,121 | 46.4% | 1,122,447 | 1,674,115 | 59.9% | | | |
| 1998 | 1,235,683 | 679,689 | 35.5% | 1,167,877 | 949,481 | 44.8% | | | |
| 1999 | 1,031,284 | 549,708 | 34.8% | 1,190,580 | 1,063,684 | 47.2% | | | |
| 2000 | 1,002,899 | 985,281 | 49.6% | 1,088,667 | 2,065,579 | 65.5% | | | |
| 2001 | 1,075,115 | 1,792,155 | 62.5% | 1,030,580 | 1,214,566 | 54.1% | | | |
| 2002 | 1,372,415 | 1,586,095 | 53.6% | 1,145,169 | 1,171,069 | 50.6% | | | |
| 2003 | 1,224,547 | 1,204,754 | 49.6% | 1,080,662 | 996,171 | 48.0% | | | |
| 2004 | 1,365,946 | 1,677,071 | 55.1% | 1,036,860 | 1,027,510 | 49.8% | | | |
| 2005 | 1,024,641 | 1,433,508 | 58.3% | 973,109 | 1,170,293 | 54.6% | | | |
| 2006 | 1,196,183 | 1,533,800 | 56.2% | 1,193,134 | 1,343,644 | 53.0% | | | |
| 2007 | 1,397,237 | 1,370,519 | 49.5% | 851,537 | 903,242 | 51.5% | | | |
| 2008 | 821,804 | 417,509 | 33.7% | 671,979 | 481,599 | 41.7% | | | |
| 2009 | 979,945 | 339,988 | 25.8% | 656,148 | 772,463 | 54.1% | | | |
| 2010 | 447,991 | 170,959 | 27.6% | 833,253 | 472,930 | 36.2% | | | |
| 2011 | 670,910 | 220,515 | 24.7% | 808,582 | 533,198 | 39.7% | | | |

Source: Recreational data is from MRIP; headboat and commercial data is from the logbook and SEDAR 31 2013; Jacob Tetzlaff, pers. comm. Southeast Fisheries Science Center, Miami, Florida.

Table 7.5. Estimates of the total number of red snapper landed the number of dead discards, and percent dead discards for all killed fish for the recreational and commercial sectors by year and region of the Gulf.

| | Recreational | | | | | | | | | Comm | ercial | | |
|------|--------------|-----------------|-----------------------------|-----------|-----------------|-----------------------------|--|-----------|-----------------|-----------------------------|-----------|-----------------|--------------------------|
| | | East | | | West | | | East | | | West | | |
| Year | Landed | Dead Discard | Percent dead discards | Landed | Dead Discard | Percent dead discards | | Landed | Dead Discard | Percent dead discards | Landed | Dead Discard | Percent dead discards |
| 1983 | 1,055,691 | 4,455 | 0.4% | 2,258,494 | 4,144 | 0.2% | | 1,851,965 | 23,983 | 1.3% | 2,707,829 | 56,775 | 2.1% |
| 1984 | 192,098 | 332 | 0.2% | 1,039,926 | 2,367 | 0.2% | | 1,077,487 | 5,872 | 0.5% | 1,697,555 | 27,707 | 1.6% |
| 1985 | 482,587 | 51,497 | 9.6% | 944,439 | 204,219 | 17.8% | | 575,540 | 109,179 | 15.9% | 659,446 | 241,926 | 26.8% |
| 1986 | 574,495 | 63,839 | 10.0% | 691,460 | 159,240 | 18.7% | | 237,499 | 31,193 | 11.6% | 637,996 | 272,833 | 30.0% |
| 1987 | 548,813 | 129,871 | 19.1% | 474,031 | 141,555 | 23.0% | | 179,088 | 35,679 | 16.6% | 482,381 | 242,108 | 33.4% |
| 1988 | 524,591 | 137,182 | 20.7% | 717,268 | 165,618 | 18.8% | | 197,784 | 72,004 | 26.7% | 753,120 | 294,872 | 28.1% |
| 1989 | 474,670 | 147,657 | 23.7% | 585,786 | 141,544 | 19.5% | | 166,355 | 59,518 | 26.4% | 576,033 | 236,506 | 29.1% |
| 1990 | 314,036 | 161,286 | 33.9% | 311,897 | 109,538 | 26.0% | | 208,799 | 169,101 | 44.7% | 494,221 | 380,150 | 43.5% |
| 1991 | 548,912 | 202,238 | 26.9% | 511,698 | 151,089 | 22.8% | | 156,339 | 187,293 | 54.5% | 535,604 | 448,669 | 45.6% |
| 1992 | 886,594 | 272,181 | 23.5% | 722,446 | 162,267 | 18.3% | | 155,044 | 294,315 | 65.5% | 839,969 | 523,266 | 38.4% |
| 1993 | 1,336,961 | 366,226 | 21.5% | 865,970 | 215,229 | 19.9% | | 160,428 | 346,349 | 68.3% | 851,486 | 435,592 | 33.8% |
| 1994 | 819,900 | 379,092 | 31.6% | 795,341 | 316,010 | 28.4% | | 161,842 | 341,927 | 67.9% | 707,233 | 454,464 | 39.1% |
| 1995 | 664,786 | 547,997 | 45.2% | 719,263 | 460,876 | 39.1% | | 47,994 | 234,693 | 83.0% | 650,411 | 532,493 | 45.0% |
| 1996 | 608,817 | 519,005 | 46.0% | 571,544 | 340,426 | 37.3% | | 66,458 | 384,466 | 85.3% | 944,870 | 735,739 | 43.8% |
| 1997 | 966,914 | 992,702 | 50.7% | 580,403 | 349,419 | 37.6% | | 52,616 | 231,911 | 81.5% | 1,069,832 | 1,442,204 | 57.4% |
| 1998 | 814,811 | 485,790 | 37.4% | 420,872 | 193,899 | 31.5% | | 112,125 | 271,377 | 70.8% | 1,055,751 | 678,104 | 39.1% |
| 1999 | 788,097 | 413,395 | 34.4% | 243,187 | 136,313 | 35.9% | | 148,788 | 407,417 | 73.2% | 1,041,792 | 656,267 | 38.6% |
| 2000 | 741,378 | 753,560 | 50.4% | 261,521 | 231,721 | 47.0% | | 169,886 | 1,375,667 | 89.0% | 918,781 | 689,912 | 42.9% |
| 2001 | 858,210 | 1,559,948 | 64.5% | 216,905 | 232,208 | 51.7% | | 209,036 | 487,449 | 70.0% | 821,544 | 727,118 | 47.0% |
| 2002 | 1,137,262 | 1,374,869 | 54.7% | 235,153 | 211,226 | 47.3% | | 300,706 | 459,631 | 60.5% | 844,463 | 711,438 | 45.7% |
| 2003 | 956,693 | 992,640 | 50.9% | 267,854 | 212,113 | 44.2% | | 281,921 | 459,040 | 62.0% | 798,741 | 537,130 | 40.2% |
| 2004 | 1,128,710 | 1,429,531 | 55.9% | 237,236 | 247,540 | 51.1% | | 251,425 | 392,841 | 61.0% | 785,435 | 634,669 | 44.7% |
| 2005 | 759,036 | 1,071,240 | 58.5% | 265,605 | 362,268 | 57.7% | | 220,412 | 352,853 | 61.6% | 752,697 | 817,440 | 52.1% |
| 2006 | 839,855 | 1,076,677 | 56.2% | 356,328 | 457,123 | 56.2% | | 212,766 | 329,879 | 60.8% | 980,368 | 1,013,764 | 50.8% |

| 2007 | 1,087,060 | 1,059,975 | 49.4% | 310,177 | 310,544 | 50.0% | 311,729 | 626,004 | 66.8% | 539,808 | 277,238 | 33.9% |
|------|-----------|-----------|-------|---------|---------|-------|---------|---------|-------|---------|---------|-------|
| 2008 | 642,570 | 371,930 | 36.7% | 179,233 | 45,579 | 20.3% | 284,937 | 366,341 | 56.2% | 387,042 | 115,258 | 22.9% |
| 2009 | 773,394 | 303,722 | 28.2% | 206,551 | 36,266 | 14.9% | 302,568 | 682,585 | 69.3% | 353,579 | 89,878 | 20.3% |
| 2010 | 360,404 | 162,119 | 31.0% | 87,587 | 8,840 | 9.2% | 413,808 | 384,519 | 48.2% | 419,445 | 88,411 | 17.4% |
| 2011 | 552,878 | 192,184 | 25.8% | 118,032 | 28,331 | 19.4% | 423,809 | 445,771 | 51.3% | 384,773 | 87,427 | 18.5% |

Source: Recreational data is from MRIP; headboat and commercial data is from the logbook and SEDAR 31 2013; Jacob Tetzlaff, pers. comm. Southeast Fisheries Science Center, Miami, Florida.

Other Bycatch

Species incidentally encountered by the directed red snapper fishery include sea turtles, sea birds, and reef fishes. The primary gears of the Gulf reef fish fishery (longline and vertical line) are classified in the proposed List of Fisheries for 2015 (79 FR 77919) as Category III gear. This classification indicates the annual mortality and serious injury of a marine mammal stock resulting from any fishery is less than or equal to one percent of 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.

The most recent biological opinion for the Reef Fish Fishery Management Plan was completed on September 30, 2011 (NMFS 2011a). The opinion determined the continued authorization of the Gulf reef fish fishery managed under this fishery management plan is not likely to adversely affect Endangered Species Act-listed marine mammals or coral, and would not likely jeopardize the continued existence of sea turtles (loggerhead, Kemp's ridley, green, hawksbill, and leatherback), or smalltooth sawfish. However, in the past, actions have been taken by the Council and NMFS to increase the survival of incidentally caught sea turtle and smalltooth sawfish by the commercial and recreational sectors of the fishery. These include the requirements for permitted vessels to carry specific gear and protocols for the safe release in incidentally caught endangered sea turtle species and smalltooth sawfish (GMFMC 2005) as well as restrictions on the longline portion of the commercial sector. Restrictions for longlines in the reef fish fishery include a season-area closure, an endorsement to use longline gear, and a restriction on the total number of hooks that can be carried on a vessel (GMFMC 2009).

Three primary orders of seabirds are represented in the Gulf, Procellariiformes (petrels, albatrosses, and shearwaters), Pelecaniformes (pelicans, gannets and boobies, cormorants, tropic birds, and frigate birds), and Charadriiformes (phalaropes, gulls, terns, noddies, and skimmers) (Clapp et al., 1982; Harrison, 1983) and several species, including: piping plover, least tern, roseate tern, bald eagle, and brown pelican (the brown pelican is endangered in Mississippi and Louisiana and delisted in Florida and Alabama) are listed by the U.S. Fish and Wildlife Service as either endangered or threatened. Human disturbance of nesting colonies and mortalities from birds being caught on fishhooks and subsequently entangled in monofilament line are primary factors affecting sea birds. Oil or chemical spills, erosion, plant succession, hurricanes, storms, heavy tick infestations, and unpredictable food availability are other threats. There is no evidence that the directed red snapper fishery is adversely affecting seabirds. However, interactions, especially with brown pelicans consuming red snapper discards and fish before they are landed, are known to occur (SEDAR 7 2005).

Other species of reef fish are also incidentally caught when targeting red snapper. In the western Gulf, vermilion snapper and some deep-water groupers are incidentally caught as bycatch when harvesting red snapper. In the eastern Gulf, various species of shallow-water grouper and vermilion snapper are the primary species caught as bycatch when targeting red snapper. Vermilion snapper are not overfished or undergoing overfishing (SEDAR 9 Update 2011a) and bycatch is not expected to jeopardize the status of this stock. Deep-water groupers are caught both in the eastern and western Gulf primarily with longline gear (> 80 percent). The deep-water grouper fishery was managed with a 1.02 million pound quota. From 2004 until the

implementation of the grouper/tilefish IFQ program in 2010 (SERO 2012a), the fishery met their quota and closed no later than July 15 each year. Deep-water grouper closures during this time period may have resulted in some additional discards of grouper by longliners targeting red snapper. Since the IFQ program was implemented, deep-water grouper species are landed year-round by holders of IFQ allocation and the quota has not been exceeded. Longliners account for approximately 5% of the annual commercial red snapper landings since 2000 (SEDAR 31 2013). It is unknown how increases in closed season discards might have affected the status of deep-water grouper stocks or the change to an IFQ managed sector. An updated assessment for yellowedge grouper found the stock was not overfished or undergoing overfishing (SEDAR 22 2011a).

Red grouper and gag are the two most abundant shallow-water grouper species in the Gulf and primarily occur on the west Florida shelf. Gag was recently assessed (SEDAR 10 Update 2009) and determined to be overfished and undergoing overfishing. A rebuilding plan that takes into account gag dead discards was implemented through Amendment 32 (GMFMC 2011c). Red grouper were found not to be in an overfished condition and not undergoing overfishing (SEDAR 12 Update 2009). Within the reef fish fishery, discards represent a large and significant portion of mortality for gag and red grouper. In the past, these species were managed under a shallow-water grouper quota which was met prior to the end of the 2004 and 2005 fishing years. For the recreational sector, shallow-water grouper including gag and red grouper are managed with size limits, bag limits, and season and area closures. The recreational gag season begins July 1 and extends until the catch target is projected to be caught. Since 2010, the commercial harvest of gag, red grouper, and other shallow-water grouper are managed under an IFQ program and the commercial sector has not exceeded its quota under the program. Prior to the IFQ program, quota closures at the end of the year have likely resulted in some additional commercial discards when the red snapper fishery is open. However, most commercial landings of red snapper occur in the western Gulf where gag and red grouper are less abundant or infrequently caught.

Practicability of current management measures in the directed red snapper fishery relative to their impact on bycatch and bycatch mortality.

The bycatch practicability analysis in Amendment 27 (GMFMC 2007) indicated directed fishery bycatch was believed to have a greater effect on red snapper stock recovery than the shrimp fishery. Although shrimp bycatch still accounts for a majority of bycatch, bycatch from the directed fishery is now known to have a greater effect on stock recovery. A quota, 16-inch total length (TL) minimum size limit, 2-fish bag limit, closed season, and gear restrictions are presently used to manage the recreational fishery. The commercial fishery is managed with an IFQ program, a quota, a 13-inch TL minimum size limit, and gear restrictions. Prior to 2007 when the red snapper IFQ program was implemented, the commercial fishery was also managed with closed seasons and trip limits. The following discusses current and historic management measures with respect to their relative impacts on bycatch with particular reference to specific management measures considered in Action 4 - Regional Management Measures.

Closed Seasons

Prior to 1997, the recreational sector was able to fish for red snapper year round. To prevent the recreational quota from being exceeded, recreational fishing for red snapper was closed on November 27, 1997, September 30, 1998, and August 29, 1999. In 2000, an April 21 through October 31 red snapper season was established. This was modified to a June 1 through October 31 season in 2008 by Amendment 27 (GMFMC 2007). Currently, the recreational directed red snapper fishery is closed in the exclusive economic zone from January 1 through May 31 each year through a 2012 framework action. However, since 2008, the sector has been closed early when the quota is projected to be caught. In addition, since 2008, the length of time red snapper fishing has been open has become increasingly shorter such that for 2011, 2012, and 2013, the season length has shrunk to 48, 46, and 42 days, respectively. With these shorter seasons, the number of released fish has decreased during the open season, but the number of releases during the closed season has increased (Figure 2; SEDAR 31 2013). Reflected in this trend is that although the estimated number of dead discards has decreased during the fishing season, the number of dead discards has increased during the longer closed periods (Figure 4). For 2014, the season length was decreased to 9 days. This was in response to a decision by the U.S. District Court for the District of Columbia (Court) in Guindon v. Pritzker, 2014 WL 1274076 (D.D.C. Mar. 26, 2014). NMFS, at the request of the Council, took emergency action to implement an inseason accountability measure for the recreational harvest of red snapper in the Gulf. The action set an annual catch target (ACT) equal to 80% of the 5.390 mp quota (ACT = 4.312 mp). The resultant 9-day season was based on the ACT and has only a 15% probability of exceeding the quota.

With the implementation of the IFQ program, there is no closed season for the commercial sector. However, commercial vessels with little or no red snapper allocation cannot land red snapper on most or all their trips. Thus, they effectively operate under closed season conditions. SERO (2013b) indicated most discards were likely due to insufficient allocation, rather than the minimum size limit, especially in the longline fleet. Most of these discards were recorded as released alive.

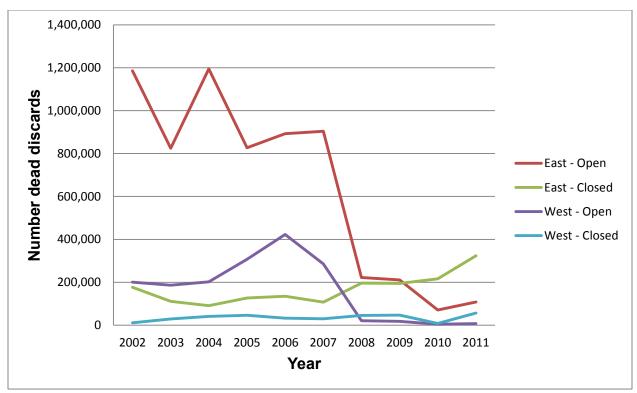


Figure 7.4. The number of Gulf red snapper dead discards from the recreational sector by year and by area. Source: Jakob Tetzlaff., pers. comm. Southeast Fisheries Science Center, Miami, Florida.

Bag Limits

The recreational fishery is regulated by a 2-red snapper daily bag limit per person. Red snapper discards while harvesting the daily bag limit are a result of incidental capture of undersized fish prior to reaching the bag limit and targeting of other reef fish residing in similar habitat as red snapper after bag limits have been reached. SERO (2012c) reported for-hire anglers, on average, landed 1.23 red snapper per trip and private anglers landed 1.58 red snapper per trip when the season is open. Based on average catch rates, the current two red snapper bag limit is not a limiting factor for many trips. Therefore, the release of undersized fish while harvesting the bag limit is still an important factor contributing to discards in addition to the release of legal-sized red snapper after the bag limit is reached.

Size limits

The 16-inch recreational and 13-inch commercial TL minimum size limits are important factors when considering bycatch in the directed fishery. Size limits are intended to protect immature fish and reduce fishing mortality. The recreational minimum size limit is above the size at 50% maturity and the commercial size limit is near the size at 50% maturity. Size-at-maturity varies by region, with 75% of eastern Gulf female red snapper mature by 12 inches TL and 50% of western Gulf red snapper mature by 13-14 inches TL (Fitzhugh et al. 2004).

Several yield-per-recruit (YPR) analyses have previously been conducted to identify the size that balances the benefits of harvesting fish at larger sizes against losses due to natural mortality. Goodyear (1995) concluded YPR was maximized in the red snapper fishery between 18 and 21 inches TL, assuming 20 and 33% release mortality in the recreational and commercial red snapper fisheries, respectively. A subsequent yield per recruit (YPR) analysis by Schirripa and Legault (1997) indicated increasing the minimum size limit above 15 inches TL would result in no gains in yield. Analyses of minimum size limits run for Amendment 27 (GMFMC 2007) indicated red snapper projected recovery rates are slightly faster if the commercial minimum size limit is reduced or eliminated, but increasingly slowed by smaller recreational minimum size limits (Porch 2005). Decreasing the recreational and commercial minimum size limits was projected to increase stock recovery slightly over the short term, but stock recovery would be increasingly slowed if the recreational size limit were lowered over the long term (Porch 2005). However, as discussed in Amendment 27, changes in spawning potential and the rate of stock recovery were found to be negligible for recreational size limits ranging from 13 to 15 inches TL. An YPR analysis conducted by SERO (2006), using current fishery selectivities and release mortality rates from SEDAR 7 (2005) supported Porch's (2005) findings. SERO (2006) examined four commercial minimum size limits (12, 13, 14, and 15 inches TL) and five recreational minimum size limits (6, 13, 14, 15, and 16 inches TL). Based on the range of size limits analyzed, YPR was maximized at 16 inches TL in both the eastern and western Gulf recreational fisheries, 12-inches TL in the western Gulf commercial fishery, and 15-inches TL in the eastern Gulf commercial fishery. However, there was virtually no difference in maximum YPR (< 0.3 percent) for any of the eastern Gulf commercial size limits analyzed. In a study by Wilson et al. (2004) aboard commercial vessels using bandit rigs, 61% of red snapper released were greater than 13 inches and 86% were greater than 12 inches.

For this amendment, an YPR analysis was applied to the recreational sector (SERO 2013). This analysis indicates the Gulf-wide YPR is maximized at a recreational size limit of 15 inches TL. However, there was not much of a change in YPR between lengths of 13 and 18 inches TL. Thus, if the minimum size limit were changed from 16 to 15 inches TL, any gain in YPR would be minimal. SERO (2013) also showed than any increase in the minimum size limit would reduce the number of fish landed. This would probably result in more regulatory discards and an increase in the number of dead discards.

Given the above discussion, a larger recreational minimum size limit is considered to be more effective than a similar sized commercial minimum size limit because of lower release mortality rates in the recreational fishery (Tables 7.2 and 7.3). High release mortality rates in the commercial fishery provide little, if any, protection to the stock because the released fish mostly die rather than contribute to filling the quota. In contrast, the current 16-inch TL minimum recreational size limit was found to afford some protection to the stock, because a greater percentage of discarded fish will survive to spawn and later contribute to the quota as larger animals.

Area closures

Although the Council has not developed area closures specifically for red snapper, the Council has created areas to protect other species. For example, two restricted fishing areas were

developed to specifically protect spawning aggregations of gag in 2000 (GMFMC 1999). The Madison-Swanson and Steamboat Lumps marine restricted fishing areas are located in the northeastern Gulf at a depth of 40 to 60 fathoms. Both areas prohibit bottom fishing. Bottom fishing is also prohibited in the Tortugas North and South marine reserves in the southern Gulf near the Dry Tortugas. Marine reserves and time/area closures benefit fish residing within reserve boundaries by prohibiting their capture during part or all of the year. Within marine reserves, fish that are undersized potentially have an opportunity to grow to legal size and are no longer caught as bycatch. If these fish emigrate from the marine reserve (i.e., spillover effect), then they may be caught as legal fish outside the reserve, thereby reducing bycatch. However, anglers and commercial fishermen may redistribute their effort to areas surrounding the area closure. If fishing pressure in these areas is increased, then any benefits of reduced bycatch of fish in the marine reserve will likely be offset by increases in bycatch of fish residing outside the marine reserve. Within restricted fishing areas or time/area closures, fishing is allowed under restrictions that are intended to protect certain components of the populations within the area (e.g., prohibitions on bottom fishing gear), or to protect populations during a critical phase of their life history, such as during spawning.

The Council did develop a season area closure to reduce bycatch of sea turtles for the longline component of the commercial sector. The use of longlines had been prohibited from waters less than 20 fathoms east of Cape San Blas, Florida, and 50 fathoms west of Cape San Blas; however, due to higher estimates of sea turtles caught in longline gear, measures were put in place through Amendment 31 (GMFMC 2009) to reduce this bycatch. One of these measures was the prohibition of the use of bottom longline gear in the Gulf reef fish fishery, shoreward of a line approximating the 35-fathom contour east of Cape San Blas, Florida from June through August. Most sea turtle takes by longline occur during the summer months.

Allowable gear

Vertical hook-and-line gear (bandit rigs, manual handlines) is the primary gear used in the commercial fishery fishing for red snapper (> 96% of annual landings). Longlines, spears, and fish traps account for a small portion of the commercial harvest (< 5%). Longlines account for only a small fraction of red snapper dead discards as most of the landings come from handline-caught fish (Table 6). In addition, longlines are fished in deeper water, particularly in the west, and select for larger, legal-sized red snapper. Longline vessels east of Cape San Blas, Florida are also restricted to carrying 1,000 hooks onboard (only 750 rigged for fishing at any given time) as part of a suite of measures put in place through Amendment 31 (GMFMC 2009) to reduce sea turtle bycatch.

Rod-and-reel is the primary gear used in the recreational fishery. Recreational anglers also use spears to capture red snapper. Spearfishing does not affect discard mortality since all fish caught are killed. Only undersized red snapper mistakenly killed while spearfishing would contribute to discard mortality. During the red snapper recreational fishing season, discards are primarily due to the recreational size limit; however, allowable gears can affect discard mortality rates.

Fishermen in both the commercial and recreational sectors are required to use non-stainless steel circle hooks, if using natural baits, to reduce discard mortality. The size of circle hooks used in the fishery varies by manufacturer, gear type, and species targeted (i.e., if targeting vermilion snapper, smaller circle hooks may be used). Although circle hooks may not work as well to reduce red snapper discard mortality, they are effective in reducing mortality in other species such as red grouper (Burns and Froeschke 2012).

In addition to the circle hook requirement, Amendment 27 (GMFMC 2007) also put in place requirements for both commercial and recreational fishermen in the reef fish fishery to carry onboard dehooking devices. These gears are all intended to reduce bycatch and discard mortality. A dehooking device is a tool intended to remove a hook embedded in a fish. It reduces the handling time releasing a fish from a hook and allows a fish to be released with minimum damage.

IFQ program

The commercial sector was previously regulated by 2,000-lb and 200-lb trip limits. With the establishment of the red snapper IFQ program, red snapper discards after a trip limit was reached are no longer a factor. However, reef fish observer data since the IFQ program was implemented indicate a large proportion of legal-sized red snapper continue to be discarded by both the handline and longline fleets (GMFMC 2013). Discard rates do vary by gear. In 2011, 3.5 red snapper were landed for every fish released in the vertical line fleet compared to a 0.5 red snapper landed for each fish released in the longline fleet (SERO 2012b). Discard rates greatly varied by region. In 2011, 87% of observed red snapper caught in the Florida Panhandle were landed, compared to 79% off Louisiana and Texas, and 47% off the Florida Peninsula. There was also a noticeable difference in the size of red snapper caught, with red snapper along the Florida Peninsula (mostly19-24-inches TL) generally larger than fish caught in other areas of the Gulf (mostly 15-21-inches TL). Most discards were estimated to be released alive, regardless of gear type used. Discards were likely due to insufficient allocation, rather than the minimum size limit, especially in the longline fleet. In a study by Wilson et al. (2004) aboard commercial vessels using bandit rigs, 61% of red snapper released were greater than 13-inches TL, the minimum size limit.

Table 6. Commercial red snapper landings and dead discards in the Gulf by year and area.

| | c o. Comme | | n Gulf | | Western Gulf | | | | | |
|------|------------|----------|-----------|----------|--------------|----------|---------------|----------|--|--|
| | Land | ings | Dead d | iscards | Land | ings | Dead discards | | | |
| Year | Handline | Longline | Handline | Longline | Handline | Longline | Handline | Longline | | |
| 1983 | 1,646,550 | 205,415 | 1,587 | 1,237 | 2,698,740 | 9,089 | 56,690 | 85 | | |
| 1984 | 949,341 | 128,146 | 309 | 388 | 1,625,800 | 71,755 | 27,160 | 547 | | |
| 1985 | 550,063 | 25,477 | 79,906 | 2,239 | 608,624 | 50,822 | 233,753 | 8,173 | | |
| 1986 | 222,738 | 14,761 | 21,314 | 646 | 564,277 | 73,719 | 261,093 | 11,740 | | |
| 1987 | 168,788 | 10,300 | 20,091 | 743 | 412,668 | 69,713 | 229,400 | 12,708 | | |
| 1988 | 186,924 | 10,860 | 51,433 | 738 | 686,680 | 66,440 | 285,429 | 9,443 | | |
| 1989 | 156,071 | 10,284 | 32,961 | 1,714 | 531,066 | 44,967 | 230,318 | 6,188 | | |
| 1990 | 198,778 | 10,021 | 94,242 | 4,552 | 482,224 | 11,997 | 377,444 | 2,706 | | |
| 1991 | 152,971 | 3,368 | 79,800 | 1,647 | 527,667 | 7,937 | 332,927 | 1,905 | | |
| 1992 | 153,940 | 1,104 | 54,930 | 484 | 837,699 | 2,270 | 380,571 | 460 | | |
| 1993 | 157,367 | 3,061 | 57,447 | 843 | 849,065 | 2,421 | 375,085 | 471 | | |
| 1994 | 160,369 | 1,473 | 87,448 | 568 | 705,354 | 1,879 | 412,546 | 407 | | |
| 1995 | 46,528 | 1,466 | 54,453 | 658 | 648,399 | 2,012 | 491,941 | 501 | | |
| 1996 | 65,129 | 1,329 | 62,736 | 925 | 941,768 | 3,102 | 695,812 | 699 | | |
| 1997 | 51,767 | 849 | 79,005 | 515 | 1,066,360 | 3,472 | 713,290 | 729 | | |
| 1998 | 111,068 | 1,057 | 99,004 | 494 | 1,052,750 | 3,001 | 605,570 | 522 | | |
| 1999 | 147,499 | 1,289 | 102,825 | 340 | 1,032,070 | 9,722 | 602,380 | 1,564 | | |
| 2000 | 168,301 | 1,585 | 107,368 | 556 | 899,899 | 18,882 | 634,841 | 3,146 | | |
| 2001 | 207,257 | 1,779 | 278,236 | 894 | 809,218 | 12,326 | 658,252 | 2,334 | | |
| 2002 | 297,471 | 3,235 | 319,910 | 1,555 | 830,146 | 14,317 | 584,024 | 2,481 | | |
| 2003 | 279,295 | 2,626 | 235,502 | 1,190 | 782,006 | 16,735 | 492,094 | 2,618 | | |
| 2004 | 247,833 | 3,592 | 251,909 | 1,633 | 741,737 | 43,698 | 598,933 | 8,157 | | |
| 2005 | 216,596 | 3,816 | 230,654 | 2,081 | 725,819 | 26,878 | 785,721 | 6,686 | | |
| 2006 | 209,704 | 3,062 | 221,631 | 1,394 | 955,637 | 24,731 | 992,193 | 6,781 | | |
| 2007 | 308,237 | 3,492 | 949,770 | 14,520 | 521,931 | 17,877 | 231,164 | 443 | | |
| 2008 | 277,716 | 7,221 | 660,738 | 24,096 | 381,349 | 5,693 | 115,150 | 108 | | |
| 2009 | 299,480 | 3,088 | 748,261 | 10,548 | 347,913 | 5,666 | 89,641 | 68 | | |
| 2010 | 398,806 | 15,002 | 1,111,727 | 53,620 | 415,081 | 4,364 | 85,851 | 56 | | |
| 2011 | 408,346 | 15,463 | 1,274,735 | 60,252 | 382,630 | 2,143 | 86,460 | 18 | | |

Source: SEDAR 31 2013; Jacob Tetzlaff, pers. comm. Southeast Fisheries Science Center, Miami, Florida)

Alternatives being considered and bycatch minimization

The actions in this amendment can indirectly affect bycatch in the Gulf reef fish fishery. These actions are administrative and would develop regional management for red snapper recreational fishing. Action I would give states or regions the ability to establish what types of measures could be used in regional management to constrain the recreational harvest to a region's allocation. Action 4 would evaluate different federal minimum size limits that would act as a default rather than the current 16-inch minimum size limit. Depending on how these measures are applied, as discussed above, they could either reduce or increase bycatch in the reef fish fishery. The impacts of changing these measures from status quo will need to be evaluated if changed.

Practicability Analysis

Criterion 1: Population effects for the bycatch species

This action establishes a red snapper regional management system for the recreational sector and so does not directly affect bycatch minimization. However, management measures that result from regional management are expected to affect bycatch. These include regional changes to fishing seasons, bag limits, size limits, and area closures. Longer fishing seasons, higher bag limits, smaller minimum size limits, and larger area closures can all minimize bycatch. However, constraining the harvest to a certain regional quota (allocation) could result in measures that work against each other in terms of reducing bycatch (e.g., a higher bag limit would require a shorter fishing season). Therefore, it is difficult to predict how regional management would affect bycatch.

As described above, the Council and NMFS have developed a variety of management measures to reduce red snapper bycatch and these measures are thought to benefit the status of the stock. These include bycatch reduction devices and effort targets in the shrimp fishery, size limit reductions and the IFQ program for the commercial sector, and gear requirements, such as dehooking devices and the use of circle hooks by the reef fish fishery. In addition, any increases in bycatch resulting from proposed management actions are accounted for when reducing directed fishing mortality. Any reductions in bycatch not achieved must be accounted for when setting the annual catch limits; the less bycatch is reduced, the more the annual catch limits must be reduced.

Criterion 2: Ecological effects due to changes in the bycatch of red snapper (effects on other species in the ecosystem)

The relationships among species in marine ecosystems are complex and poorly understood, making the nature and magnitude of ecological effects difficult to predict with any accuracy. The most recent red snapper stock assessment (SEDAR 31 2013) indicated the stock is rebuilding. Consequently, it is possible that forage species and competitor species could decrease in abundance in response to an increase in red snapper abundance. Changes in the bycatch of red snapper are not expected to directly affect other species in the ecosystem. Although birds,

dolphins, and other predators may feed on red snapper discards, there is no evidence that any of these species rely on red snapper discards for food.

Criterion 3: Changes in the bycatch of other species of fish and invertebrates and the resulting population and ecosystem effects

Population and ecosystem effects resulting from changes in the bycatch of other species of fish and invertebrates are difficult to predict. As discussed in Amendment 27 (GMFMC 2007), groupers, snappers, greater amberjack, gray triggerfish and other reef fishes are commonly caught in association with red snapper. Many of these species are in rebuilding plans (gag, gray triggerfish, and greater amberjack) with the stocks improving. Regulatory discards significantly contribute to fishing mortality for all of these reef fish species, with the exceptions of gray triggerfish and vermilion snapper.

No measures are proposed in this amendment to directly reduce the bycatch of other reef fish species. Bycatch minimization measures implemented through Amendment 18A, Amendment 27, and Amendment 31 are expected to benefit reef fish stocks, sea turtles, and smalltooth sawfish. As mentioned, this action establishes a red snapper regional management system for the recreational sector and so would indirectly affect bycatch depending on which management measures are used in specific regions. For species with quotas (greater amberjack, gray triggerfish, red grouper, and gag, this could lead to a shift in fishing effort during red snapper season closures and negatively impact reef fish stocks not currently constrained by annual quotas or IFQ programs. The magnitude of this impact would depend on the size of the particular quota, the length of the closure, and the amount of effort shifting that occurs. Annual catch limits and accountability measures are now in effect for species not considered undergoing overfishing or overfished, thus potential for effort shifting and changes in bycatch may be lessened for these species.

Criterion 4: Effects on marine mammals and birds

The effects of current management measures on marine mammals and birds are described above. Bycatch minimization measures evaluated in this amendment are not expected to significantly affect marine mammals and birds. There is no information to indicate marine mammals and birds rely on red snapper for food, and measures in this amendment are not anticipated to alter the existing prosecution of the fishery, and thus interactions with marine mammals or birds.

Criterion 5: Changes in fishing, processing, disposal, and marketing costs

The proposed management measures in this amendment would not be expected to result in any changes in fishing, processing, disposal, or marketing costs of commercially harvested red snapper because the measures only apply to the harvest of red snapper by the recreational sector. Red snapper that are harvested by the recreational sector in the Gulf may not be sold.

Criterion 6: Changes in fishing practices and behavior of fishermen

It is not possible to determine whether bycatch, including the amount of regulatory discards, will be affected following implementation of this action. The proposed measures of this amendment will enable each Gulf State or region to establish management measures for its assigned portion of the recreational red snapper quota. However, this action does not establish what those management measures will be, which remains unknown. Thus, it also remains unknown how the management measures that will be adopted by the regions will differ from the current regulations for red snapper and thus, how newly established regional regulations will differ from current fishing practices and affect fishermen behavior. It is possible that bycatch could be reduced if a region adopts a recreational red snapper season that is contemporaneous with periods of highest fishing activity. However, it is also likely that fishing activity will continue after the fishing season, and regulatory discards will occur. The amount of red snapper quota to be harvested by each State should theoretically approximate the catch that has been landed in that region, historically. Thus, it is possible that the amount of regulatory discards remains more or less the same.

Criterion 7: Changes in research, administration, and enforcement costs and management effectiveness

Proposed management measures are not expected to significantly impact administrative costs at the federal level, but could increase costs at the regional level. Size limits, bag limits, quotas, and closed seasons are currently used to regulate the recreational sector harvesting red snapper. All of these measures will require additional research to determine the magnitude and extent of impacts to bycatch and bycatch mortality. None of the measures are expected to affect research, administration, or enforcement of the commercial sector.

Criterion 8: Changes in the economic, social, or cultural value of fishing activities and non-consumptive uses of fishery resources

The establishment of a regional management program is not expected to affect the economic, social, or cultural value of red snapper fishing. Red snapper is a highly desirable target species and the proposed measures are intended to support the adoption of fishing regulations that better satisfy the preferences of local constituents. This would be expected to improve fishing opportunities, thereby increasing the economic and social benefits for fishermen and associated coastal businesses and communities. No effects would be expected on the non-consumptive uses of the fishery resources.

Criterion 9: Changes in the distribution of benefits and costs

The net effects of the proposed management measures in this amendment on bycatch are unknown because the resultant management measures that will be enacted by the respective regions are unknown. The proposed management measures would not be expected to affect the amount of red snapper harvest normally harvested by anglers in each region as the allocation of the overall recreational quota should reflect regional harvests. However, the ability of each region to enact management measures that better match the preferences of local constituents would be expected to increase the benefits, and possibly decrease the costs, associated with the

recreational harvest of red snapper. Because the commercial sector is not affected by this action, there should be no change in the distribution of benefits and costs to this sector.

Criterion 10: Social effects

Bycatch is considered wasteful by fishermen and it reduces overall yield obtained from the fishery. Minimizing bycatch to the extent practicable will increase efficiency, reduce waste, and benefit stock recovery, thereby resulting in net social benefits for the recreational sector. It is assumed that if regions establish a red snapper fishing season to coincide with regionally preferred fishing times, the social effects will be positive.

Conclusion

Analysis of the ten bycatch practicability factors indicates there would be positive biological impacts associated with further reducing bycatch and bycatch mortality in the reef fish fishery. The main benefits of reducing red snapper bycatch are less waste and increased yield in the directed fishery. Reducing discards and discard mortality rates would result in less forgone yield.

When determining reductions associated with various management measures, release mortality is factored into the analyses to adjust the estimated reductions for losses due to dead discards. The increases in discards associated with each of these management measures varies and is contingent on assumptions about how fishermen's behavior and fishing practices will change. In this action, establishing a regional recreational red snapper management system would indirectly affect discards and bycatch. Discards and bycatch would be affected depending on the application of regional management measures allowed under Action 1.

The Council needed to consider the practicability of implementing the bycatch minimization measures discussed above with respect to the overall objectives of the Reef Fish Fishery Management Plan and Magnuson-Stevens Fishery Conservation and Management Act. Therefore, given actions in this amendment combined with previous actions, management measures, to the extent practicable, minimize bycatch and to the extent bycatch cannot be avoided, minimize the mortality of that bycatch.

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APPENDIX I. MRIP CALIBRATION WORKSHOP II - FINAL REPORT

SEDAR41-RD55 March 24, 2015 Available at:

 $\underline{http://sedarweb.org/docs/wsupp/S41_RD55_Carmichael\%26VanVoorhees2015_MRIPCali_brationII.pdf}$

MRIP Calibration Workshop II - Final Report

John Carmichael and Dave Van Vorhees, Editors

SEDAR41-RD55

24 March 2015



MRIP Calibration Workshop II

September 8 – 10, 2014 North Charleston SC

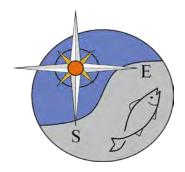
Final Report

Hosted by

NOAA Fisheries, Office of Science and Technology, MRIP and

SEDAR: Southeast Data, Assessment and Review

John Carmichael and Dave Van Vorhees, Editors





Introduction

The Second Marine Recreational Information Program (MRIP) Calibration workshop convened September 8 – 10, 2014, in North Charleston, SC to address potential impacts on catch resulting from changes in the Access Point Angler Intercept Survey (APAIS). Changes were implemented in the APAIS component of MRIP during 2013 and 2014 as the next step in ongoing efforts by the program to address issues raised by the 2006 National Research Council (NRC) review of recreational catch sampling.

While revised survey methods changes are believed to improve survey performance and reliability, implementing such changes results in survey outputs such as catch estimates that are now based on a different method than those same outputs from prior years. This creates a break in the time series of estimates that affects stocks assessments which rely up on long time series of data. It also creates an issue for management specifications and Accountability Measures (AMs) tied to catch levels, since the current catch estimates used to evaluate a fishery are based on a different survey method than the catch estimates used to develop those management specifications and AMs. Similar concerns were cited in the justification for the first Calibration workshop, held March 27 – 29, 2012, in Raleigh, NC, to address re-estimation 2004-2011 catch.

The goals of this workshop were to determine if changes made to the APAIS component of MRIP provide catch estimates that differ from prior values and how best to adjust survey estimates to maintain a valid time series of catch estimates.

Workshop outcomes include recommendations that calibration is necessary, that three alternative approaches should be considered and a list of steps to follow when dealing with future survey changes. Calibration alternatives are discussed in general in the workshop report, with detailed steps provided in Appendix 1. Because considerable time and effort will be required to fully develop and evaluate these alternatives, an interim approach was developed by a subset of workshop participants for application in assessments conducted while the 3 primary approaches are pursued. The interim methods is described in Appendix 2.

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Workshop Terms of Reference

- 1. Review the calibration approaches recommended by the MRFSS/MRIP Calibration Workshop held March 27-29, 2012, in Raleigh NC.
- 2. Review analyses performed to evaluate potential effects of the 2013 change in the APAIS sampling design on MRIP catch statistics.
- 3. Evaluate the feasibility of separating the effects of changes in the APAIS sampling design from the effects of changes in the fishery during the affected years.
 - Use red snapper as a case study and review evidence for major changes in the fishery that could account for observed changes in catch statistics.
- 4. Recommend appropriate calibration approaches to adjust the catch statistics (point estimates and variance) for the years prior to 2013. Discuss the key factors that the calibration approaches must take into account and how they should be modified as more years of APAIS data are collected with the new sampling design.
- 5. Discuss how future MRIP survey design changes should be evaluated with respect to possible needs for calibration and adjustments to past catch statistics, addressing how any APAIS design change calibration would best be integrated with any future calibrations.
- 6. Prepare a consensus report providing complete documentation of workshop activities and recommendations.

Proceedings and Recommendations

1. Review the calibration approaches recommended by the MRFSS/MRIP Calibration Workshop held March 27-29, 2012, in Raleigh NC.

The Workshop Panel received a presentation summarizing the approach and findings of the first Calibration workshop. The panel did not raise objections to the approaches recommended by the first calibration workshop. Discussion centered around regional implementation of recommended calibration approaches. Representatives of the Northeast and Southeast Fisheries Science Centers were asked to provide the following summaries of implementation activities in their respective areas.

Northeast Fisheries Science Center
(Bullets addressing calibration implementation: Paul/Jon)
Southeast Fisheries Science Center
(Bullets addressing calibration implementation: Steve/Vivian)

2. Review analyses performed to evaluate potential effects of the 2013 change in the APAIS sampling design on MRIP catch statistics

The second overview presentation addressed specific changes in the APAIS. Topics discussed included the need to change methods, findings of a pilot study conducted to evaluate method changes, and examples of how the change in methods may have impacted survey estimates. The panel recognized the need for a change in survey design and agreed that the updated methods are an improvement.

- 3. Evaluate the feasibility of separating the effects of changes in the APAIS sampling design from the effects of changes in the fishery during the affected years.
 - Use red snapper as a case study and review evidence for major changes in the fishery that could account for observed changes in catch statistics.

Several workshop presentations addressed this Term of Reference. Collectively they provided a detailed evaluation of survey, evidence that survey changes affected catch estimates in 2013 and 2014, and alternatives for calibrating survey estimates in response to method changes. The third presentation addressed changes made in 2013, evaluation of those changes with regard to improving sampling productivity, and further changes made in 2014. This led into the fourth presentation, addressing MRIP staff efforts to describe how the changes in survey methods impacted survey estimates. These investigations centered around year effects and design change effects, with the goal

of determining whether there was evidence that design changes impacted survey estimates. Evidence that design changes have an impact on survey estimates or catch or effort provides justification to calibrate those estimates for periods prior to the design changes. The fifth workshop presentation provided information on the variation in survey change impacts on landings, details on observed changes in Gulf of Mexico red snapper estimates and introduced an approach for calibration.

Following these presentations, the Panel agreed there was evidence that survey estimates changed in response to changes in methods. Therefore, adjustment or calibration should be made to the survey estimates to ensure that estimates are comparable over time. Because the new survey methods are considered necessary and preferable to the prior survey methods, the panel agreed that calibration should be applied to the earlier estimates. There was also discussion of calibrating the more recent estimates to historical estimates to allow tracking of catches relative to ACLs established using prior survey methods, until such time that ACLs can be revised. The overall goal of calibration is to adjust the earlier values to be in line with what they would have been had the new survey methods been in place previously. If no calibration or adjustment is applied changes in catch estimates observed between years before and after method changes are applied, that are due to the survey changes, will be erroneously attributed to fishery, environmental or regulatory changes, and can lead to ACLs being met sooner or later depending on the directionality of change in landings estimates.

Recommendation: Calibration is required

- Discontinuity in time series of estimates is a concern for assessment and management efforts
- It is not appropriate to compare estimates based on the new survey design to management parameters such as Annual Catch Limits (ACL) based on old design.
- While there may be a need in the short-term to calibrate new estimates to align with existing estimates, this panel recommends that the appropriate long-term solution is to calibrate existing estimates to the new survey method estimates.
- Addressing existing management and assessment deadlines will require some interim calibrations. These should be based on the best insights and information available at the time required.
- 4. Recommend appropriate calibration approaches to adjust the catch statistics (point estimates and variance) for the years prior to 2013. Discuss the key factors that the calibration approaches must take into account and how they should be modified as more years of APAIS data are collected with the new sampling design.

Having reached agreement that survey method changes affected survey estimates, and that an adjustment in pre-change values is necessary to ensure valid comparison of results across time, the Panel began deliberations on appropriate calibration approaches. A single, most-appropriate calibration recommendation could not be reached during the workshop. Rather, the panel recognized and described three potential approaches: a simple ratio adjustment, a complex ratio adjustment, and a model-based approach. Each varies in data requirements and assumptions. In addition, while the ratio methods are fairly simple and may provide the most timely results, the model-based approach is more complex, time consuming, and may not work as theoretically envisioned. Therefore, the panel provided the following recommendations that address the methods proposed and provided guidance on their application, evaluation and final selection.

Recommendation: Pursue 3 alternative calibration approaches.

- The most appropriate calibration approach can only be determined following application and evaluation of the three proposed methods.
- The ratio methods should be applied in the short term, to address the most time sensitive management and assessment needs.
 - Apply the ratio methods to Gulf of Mexico red grouper and red snapper by October 15.
 - This is a preliminary, interim approach recommended to address the time constraints posed by upcoming assessments.
- The model based approach requires the most time and effort to implement, and is therefore unlikely to be ready in the short term for immediate management or assessment use. This option will also benefit from including additional (future) years of data in the analysis.
- All of the proposed methods key on temporal changes in survey coverage, which is considered potentially the most influential change in methods.
- Consider simulations to evaluate temporal change and sample cap effects and give some insight into the effects of each change.
- The complex ratio adjustment considers more detail of the temporal design than the simple ratio adjustment. Ratio methods vary in assumptions, and may vary by region or other factors. All assumptions for any adjustment must be checked and verified.
- Regional assistance, ideally obtained through a subset of this workshop panel, will be needed to develop and evaluate these calibration approaches.

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Recommendation: Thoroughly evaluate the 3 methods before selecting the most appropriate.

- Criteria to consider when evaluating the most appropriate calibration method should be identified in advance, and include measures of variance and ability to meet assumptions.
- Calibration methods should be applied to data from the NC Pilot Study to test their performance.
- Full application of all three methods should be completed by early 2015 so that calibrated values are available for stock assessment and management use.

Recommendation: Include this workshop panel in final selection

- This workshop panel, with its broad regional representation and varied expertise, should be involved in evaluating the calibration approaches and making final recommendations.
- 5. Discuss how future MRIP survey design changes should be evaluated with respect to possible needs for calibration and adjustments to past catch statistics, addressing how any APAIS design change calibration would best be integrated with any future calibrations.

The workshop panel considered lessons learned through the first calibration workshop, the NC pilot study of recent APAIS changes, and the situation described in the presentations of this workshop to develop recommendations for managing future survey changes. These recommendations are offered as a series of sequential events to apply to future changes.

- 1. Consider calibration needs when designing survey changes.
 - Ideally, apply existing and new methods side-by-side for an appropriate period of time.
 - If full side by side comparisons are not feasible due to time or budget constraints, conduct representative side by side comparisons that measure the scale and magnitude of potential biases and enables evaluating each method change before full implementation or replacement of existing methods.
 - Pilot studies should be distributed according to a valid statistical design to address known variation in survey estimates, rather than applied to a single area or year that may not be representative of the fishery
 - Use simulations (sample new data to simulate old method) to develop understanding of potential impacts from method changes.
 - Consider interactions with previous changes and maintain access to original estimates, to avoid "calibrating calibrations".
 - Consider impacts on stock assessment, monitoring and management activities prior to implementing changes in survey methods.

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- Consider the trade-offs between making incremental changes, with increased opportunities to ascribe changes in results to changes in methods and responds to new ideas and approaches, and clustered changes, which will reduce overall calibration burdens and provide more points of consistency in survey methods.
- Preserve the ability to calculate estimates consistent with "old" survey methods until calibration and adjustment methods are developed, peer reviewed and approved to address changes in estimates due to "new" survey methods.
- 2. Conduct outreach and education throughout the development, implementation and evaluation of survey changes and subsequent calibration of estimates.
- 3. Continue reporting survey estimates based on existing methods while developing and evaluating calibration and adjustment criteria for new methods, and securing peer review of new estimates. Design new methods with sufficient components to replicate status quo methods, and maintain the ability to replicate status quo methods as long as necessary to conduct the steps described here.
- 4. Conduct a peer review of calibration methods and applications.
- 5. Finally, revise time series of survey estimates and make them available to update stock assessments and management parameters.
 - Provide both sets of estimates until all managed species have updated catch limits and assessments

6. Prepare a consensus report providing complete documentation of workshop activities and recommendations.

This report documents the workshop proceedings and panel recommendations. It also includes, through several appendices, the result of efforts following the workshop to fully document the 3 proposed calibration methods as well as the interim approach offered for short-term assessment needs.

Further development and evaluation of the proposed calibration methods will be documented through subsequent reports, thereby allowing the work of this workshop panel to conclude.

Documents and Presentations

Supporting Documents

- Boreman, J. 2012. Consultant's Report: Summary of the MRFSS/MRIP Calibration Workshop. NMFS/S&T/MRIP, Silver Spring, MD.
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Workshop Presentations

- 1. Salz, R. and D. Van Vorhees. MRIP/MRFSS Calibration Workshop #1 Key Findings and Outcomes.
- 2. Van Vorhees, D. A New Design for the Access Point Angler Intercept Survey. 2010 North Carolina Pilot Study.
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- 4. Foster, J. Evaluation of APAIS 2013 Design Changes. Descriptive Analysis Part 1: Methods and Results for Temporal Distributions and Effort Components.
- 5. Foster, J. Evaluation of APAIS 2013 Design Changes. Descriptive Analysis Part 2: Results for Catch Rates, Quasi Design-based Approach for Calibration.

Workshop Participants

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Appendix 1. Detailed Implementation Steps for the Calibration Methods Proposed During the Workshop.

Summary Report: NOAA Calibration Methods Workshop - Charleston, SC
September 8-10, 2014
Lynne Stokes, Ken Pollock, Ginny Lesser
December 18, 2014

The new MRIP Access point survey has replaced the original MRFSS Access Point Survey. A variety of design changes have been made. One major consequence is that the new survey covers the fishing day more effectively than the original MRFSS Access Point Survey. Because the time series of recreational catch rate estimates form the basis of so many important fisheries stock assessments, there is the need to develop methods which "calibrate" the original time series of MRFSS estimates to the new time series of MRIP estimates. This is a difficult statistical estimation and prediction issue because both surveys were not run in parallel in any years (except for one pilot test in NC). The new estimates can be very different from the old estimates causing an abrupt change in the time series.

The purpose of this document is to outline the steps involved in implementing several model dependent calibration approaches to re-estimate catch that were discussed at the Charleston workshop. In addition, we discuss their assumptions. The first two methods use ideas of ratio estimation and assume that the major changes between the two surveys are due to a better temporal coverage of the fishing day in the new MRIP survey. The third method is a regression prediction modeling approach that will take longer to develop. None of these methods incorporate any analysis of spatial patterns or include time series methods, which might improve estimates. This would be worth exploring to determine if time series or small area estimation techniques for this short time series might provide improved estimates.

1. Direct Catch Ratio Adjustment

- Steps in approach (for each subregion, state, mode, species.):
 - i. Define peak period for each of the domains (excluding species). Peak period is defined using two criteria: 1) the contiguous range of hours during which weighted hourly proportions of total trips in the MRFSS years (prior to 2013) were greater than or equal to the corresponding weighted hourly proportions of total trips in 2013, and 2) the peak period accounted for at least 75% of the intercept data (trips) in the MRFSS years.
 - ii. Estimate peak and total catch using the 2013 data based on the MRIP survey method where both the peak and total fishing periods were sampled adequately. Denote these by $c_{p,2013}$ and $c_{total,\,2013}$, respectively.

- iii. Calculate the ratio $R_{2013} = c_{total,w2013}/c_{p,2013}$. This estimate and its large sample variance, based on standard Taylor series methods, can be calculated from survey sampling software packages such as SAS.
- iv. Denote the estimator of catch based on the MRFSS method during the peak period in earlier year y (e.g., y = 2012, 2011, etc.) by $c_{p,y}$. Then the estimator of adjusted total catch for year y (i.e., a prediction of what would have been obtained if MRIP had been run) will be calculated as the product of the ratio from year 2013 and the catch for the peak period in year y; i.e.,

$$C_{tot,y} = R_{2013} * C_{p,y}$$
.

iv. The variance of the adjusted catch $c_{tot,y}$ can be calculated using the expression for the variance of a product of two independent random variables introduced by Goodman (1960): .

$$var(c_{tot,y}) = var(R_{2013})(c_{p,y})^2 + var(c_{p,y})(R_{2013})^2 - var(R_{2013})var(c_{p,y})$$

By substituting estimates for each of the components in this equation, the variance can be estimated.

- Assumptions:
 - i. Relative distribution of catch throughout day (i.e., between peak and total) is constant between 2013 and the year that is being adjusted for each domain
- Advantages:
 - i. Simple to apply.
- Disadvantages:
 - i. Information that is available for non-peak hours are not used.
- Two variations of this approach:
 - i. Keep a fixed peak time the same (note this will vary by state and mode)
 - ii. Use different peak times (allow this to vary by state, mode and year since this was allowed to vary in these groups)
- 2. Complex Ratio Method Based on Fishing Effort Distributions
 - Steps in approach (for each subregion, state, mode, species etc.):
 - i. The 2013 daily relative distribution of total fishing effort is obtained and also the relative distribution of total fishing effort data for the year to be compared to (for example, for y = 2012, 2011, etc.). Total fishing effort is estimated as the fishing effort estimate from separate telephone surveys (CHTS, FHS) that is subsequently expanded by coverage correction factors estimated from APAIS.

ii. The 2013 sampling weights are then adjusted (up or down weighted) so that the 2013 relative distribution matches the year y relative distribution. This is to be done by using discrete temporal bins with the exact bin widths yet to be determined.

The adjustments made to the 2013 sample weights are a ratio style adjustment of the form:

$$w_{dti|y} = w_{dti} * \frac{\hat{p}_{dt,y}}{\hat{p}_{dt,2013}}$$

where w_{dti} is the unadjusted 2013 sample weight for angler-trip i

in time bin t in subregion, state, mode domain d,

 $\hat{p}_{dt,2013}$ is the original 2013 weighted proportion for time bin t of total trips in domain d.

 $\hat{p}_{dt,y}$ is the year y weighted proportion for time bin t of total trips in domain d, and $w_{dti|y}$ is the 2013 sample weight for angler-trip i in time bin t in domain d adjusted to year y.

From initial evaluations of bin width, it appears that a 3-hour bin is the smallest bin that results in no data gaps or mismatches in 2013 (data present in a bin in a prior year but not in 2013) for all state by mode domains. However, additional work could be done to fine tune bin widths for each domain cell.

- iii. Use the MRIP survey method to estimate catch for the complete 2013 data and denote it by c_{2013} . Also calculate catch for the 2013 data weighted to match the truncated distribution of effort for year y data (step ii above), and denote this estimator by $c_{tr,2013}$
- iv. Calculate the ratio of 2013 complete to truncated catch based on the MRIP survey; i.e., $R_{c/tr,2013} = c_{2013}/c_{tr,2013}$.
- v. Multiply this ratio by the year y estimate of catch c_y to obtain the adjusted year y catch estimate (i.e. what would have been obtained if MRIP survey had been run) $c_{y,adj} = R_{c/tr,2013} * c_y$.
- vi. A similar approach can be used to adjust all other years one by one or alternately down weight 2013 compared to the pooled temporal distribution of all other years and get one overall ratio which can be used to adjust all the years.
- vii. Explore computation of the variances of the calibrated estimates by either using a bootstrap or delta method.
- Assumptions:

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| i. | Assumptions for this approach, such as constant relative distribution of trip/catch characteristics between years in the comparison/adjustment, must be investigated to determine if assumptions are met and will lead to consistent estimators. |
|----|--|
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Advantages:

i. Information that is available for non-peak hours are used unlike in the previous method.

Disadvantages:

- i. Information from non-peak hours will be limited and may be highly variable or impacted by incomplete coverage compared to information from peak hours.
- ii. The assumptions under which this estimator will be consistent (that is, will provide an unbiased estimate for a sufficiently large sample size) are unknown at this time. For example, if the (strong) assumption needed for Method 1 is assumed, the estimator will still not necessarily be consistent.

Other ideas to consider as variations of above

- i. Recalculate catch after effort has been readjusted. Therefore, both catch and effort are readjusted. The calibration methods make use of the MRIP public-use or micro datasets. The records included in these datasets come from APAIS. However, the sample weights in these datasets include a post-stratification adjustment such that the sum of the sample weights equals the MRIP estimate of total effort in domain cells defined by year, subregion, state, wave, mode, and area. To more fully approximate the effect of temporal coverage changes on catch, the MRIP estimates of total effort must be recalculated since they also include coverage correction factors estimated from APAIS. Once total effort has been recalculated, sample weights may be post-stratified to the new effort totals, and then revised catch estimates may be calculated as weighted sums using sample weights that have been adjusted to both a prior year daily distribution of effort as well as the resultant new effort total.
- ii. Apply temporal distribution either year-by-year or as an average across a range of years (say 2004-2012). Then multiply this ratio by MRFSS estimates of catch in previous years. NOTE: If use each year separately, then there is no assumption that the relative distribution of catch is constant throughout the day across years, only the two years that are compared. So if only one year violates this assumption, then conducting an aggregate analysis could bias the estimator for the other years, while if it was done separately, only it would be biased by that assumption violation. Conversely, using a multi-year average distribution may work to smooth results in cases where annual level distributions may be more variable.

3. Regression Model-Based Approach

- Steps in approach:
 - i. Develop a regression model using 2013 intercept data (perhaps other years as well) to predict and classify trips into either morning, peak, or evening as predicted from

their characteristics, such as type of catch and other demographic and behavior characteristics of the anglers that are available from the intercept questionnaire. Cross-validation could be used to check the model. For example, one could use approximately 75% of the data to develop the model. Then Bayes' Information Criterion (or other model fit statistic) could be used to develop the best fitting model. Once the model is built, the remaining 25% of the data could be used to predict the response variable. A statistic, such as the Press statistic, could be calculated to document how well the model is predicting the response categories. A replication approach might also be considered to look at model robustness or stability.

- ii. Use the model to predict Morning, Peak and Evening trips for 2012, 2011, etc.

 These classifications won't be "true" morning, peak, and evening categories, since they won't be aiming to identify when the trip took place. Rather, they will be trying to predict when a trip is similar, based on catch and demographic and behavior characteristics of anglers, to trips in 2013 in those categories.
- iii. Determine the proportion of Morning, Peak, and Evening trips in 2013. Adjust the 2012, 2011, data so that the Morning, Peak, Evening proportions are identical to the 2013 data. These are adjusted proportions. In addition to 2013 data, control proportions for prior years may be developed using trip time data from the CHTS and FHS effort surveys, which would be available for a range of years prior to 2013.
- iv. This new weight, the inverse of the 'adjusted proportions', is multiplied by the existing weights for 2012, 2011, etc. to create the adjusted weight.
- v. Data are now analyzed using the adjusted weights.
- vi. A bootstrap method could be used to calculate variances.

Assumptions:

- i. Reasonable predictive model can be developed using 2013 data to reasonably predict catch period type (i.e., Morning, Peak, and Evening).
- ii. The demographic characteristics of the angler/catch predict the characteristics of the catch through a "label" we are assigning about time of day.
- iii. Assumes that true time and latent time are identical in 2013 (see below for definition of latent.)

Disadvantages:

i. More work is required to develop the prediction model. The model is not designed to predict the observable characteristic (time of day), but is rather predicting whether the trip "resembles" a trip made during that time of day, which is a latent variable. Because of this, the model checking done on the 2013 data to see how well the model works is not like the target years, since we can't observe the latent variable even for 2013. It may be that some of the trips

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made in the morning in 2013 do not resemble morning trips, and yet the model will be examined for its accuracy in predicting true time. If we were really interested in predicting true time, we would simply use the true time as a predictor in previous years!

Advantages

- i. A number of important explanatory variables can be incorporated in the model to better predict trips.
- ii. Approach incorporates the calibration into the sample weights, which maintains the current usability of MRIP public-use datasets for analysts.

Other comments:

i. As more data is collected using the MRIP design, the model development should be repeated to improve prediction.

Catch can also be added to model, but need to be careful of applying 2013 year affects to previous years.

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Appendix 2. Recommended Interim Calibration Approach, suggested for use in Assessments Conducted in Winter 2014/15.

October 30, 2014

Summary Report: Recommended NOAA Calibration Method Lynne Stokes, Ken Pollock, Ginny Lesser

<u>Introduction</u>

The new MRIP Access Point Angler Intercept Survey (APAIS) has replaced the original MRFSS Access Point Survey. A variety of design changes have been made. One major consequence is that the new survey covers the fishing day more effectively than the original MRFSS Access Point Survey. Because the time series of recreational catch rate estimates form the basis of so many important fisheries stock assessments, there is the need to develop methods which "calibrate" the original time series of MRFSS estimates to the new time series of MRIP estimates. This is a difficult statistical estimation and prediction issue because the two surveys were not run in parallel in any years (except for one pilot test in NC). The new estimates can be very different from the old estimates causing an abrupt change in the time series. Three methods of producing a calibration were suggested at the workshop in Charleston, SC held in September. Since that time, the statistical consultants have worked on investigating the properties of the three methods, and John Foster has implemented two of the three methods for some areas/species, in order to see how they perform. The purpose of this document is to describe our recommended method and to explain our choice.

Our recommendation

Our recommendation at this time is to use the method that was referred to as "Method 1" at the workshop. Our decision is based on two main factors. One is that the method is the easiest to explain and to understand of the three methods. It is based on an assumption that the ratio of catch in the peak period to total catch is stable over time. The method referred to as "Method 2" at the workshop is also a ratio method, but it is more complex (a negative feature) and uses the data from prior years more fully (a positive feature). Our reluctance to recommend Method 2 at this time is that we have not yet been able to determine the assumptions under which this estimator is consistent. For example, the strong assumptions required for consistency of the method 1 estimator are not sufficient to ensure consistency Amendment 39: Regional Management 267 Appendix I. MRIP Calibration Workshop II

of the method 2 estimator. It is also clear that the method 2 estimator requires estimation of more parameters than Method 1. As a result, we are not confident that the one year of new MRIP APAIS estimates available at this time will be sufficient. Finally, Method 3 considered at the conference is a regression prediction modeling approach that will take longer to develop and also need more data. (It is the one method not yet applied to any of the data by John Foster.)

Description of the method

Here we describe the basic assumption used to justify Method 1, and then outline the steps required for implementation. First, the justification of the method requires the assumption that in years previous to 2013, there is a period of the day that can be considered to have been fully covered by the MRFSS survey, and that the bias in its estimates occurs due to undercoverage in the non-peak periods. This is a very strong, but necessary assumption for this method. Second, the method requires the assumption that the ratio of peak catch to total catch stays constant across years for subregion, state, mode, and species. So for each of these domains, the calibrated total catch for year y is made as

$$\hat{C}_{tot,y} = \hat{R}_{2013} \hat{C}_{p,y} \tag{1}$$

where $\hat{C}_{p,y}$ is the estimated peak-period catch for year y calculated from reweighted MRFSS data and $\hat{R}_{2013} = \hat{C}_{tot,2013} / \hat{C}_{p,2013}$ is the ratio of the total to peak catch for year 2013, which is calculated from MRIP data. $C_{tot,y}$ is thus our estimate of the catch total for the domain that would have been estimated if MRIP

had been conducted in year y.

The steps in producing this estimate are outlined below.

Step 1. Define peak period for each of the domains (subregion, state, mode). In the pilot implementation by John Foster, peak period was defined using two criteria: 1) the contiguous range of hours during which weighted hourly proportions of total trips in the MRFSS years (prior to 2013) were greater than or equal to the corresponding weighted hourly proportions of total trips in 2013, and 2) the peak period accounted for at least 75% of the intercept data (trips) in the MRFSS years.

Step 2. Calculate $\hat{C}_{p,y}$, the catch in the peak period for all years y < 2013 for which calibration is needed. Step 3. Estimate peak and total catch using the 2013 data based on the MRIP survey method where both the peak and total fishing periods were sampled adequately. Calculate its ratio \hat{R}_{2013} .

Step 4. Calculate the estimator $\hat{C}_{tot, y}$ shown in (1).

The variance of this estimator can be calculated using standard statistical methods.

Discussion

There are at least three substantial criticisms possible for this method. First is that the method uses none of the data collected outside the peak period in years prior to 2013. The second is that the method requires an assumption that the ratio of catch in the peak period to total catch is constant across years. We are not sure if this is defensible from a scientific point of view. Third, the method assumes that the estimate of total catch for the peak period made from the reweighted MRFSS data in years prior to 2013 is unbiased. On the other hand, some type of unverifiable assumption will be necessary in order to carry out any calibration because of the lack of side-by-side data collection for the MRIP and MRFSS APAIS sampling designs.

Some variations on Method 1 are possible. For example, the choice of how the peak period is defined will affect the estimates. Peak can be determined individually for each year or based on

an aggregation of years and/or domains. We believe that this definition will be difficult to specify in advance, and must be based on characteristics of the data.

We recommend that investigation continue on the remaining two methods. It is possible that one of them will be determined to be better at some future date.

APPENDIX J. 2015 GULF OF MEXICO RED SNAPPER RECREATIONAL SEASON LENGTH ESTIMATES

SERO-LAPP-2015-4 April 20, 2015 Available at:

http://sero.nmfs.noaa.gov/sustainable_fisheries/lapp_dm/documents/pdfs/2015/rs 2015 rec quota projection.pdf

2015 Gulf of Mexico Red Snapper Recreational Season Length Estimates NOAA Fisheries, Southeast Regional Office

Executive Summary

The Gulf of Mexico (Gulf) red snapper recreational fishing season in federal waters opens each year on June 1 and closes when the recreational quota is met or projected to be reached. Prior to June 1 each year, NOAA Fisheries projects the season closing date based on previous years of data, and notifies the public of the closing date for the upcoming season. On April 1, 2015, NOAA Fisheries published a letter seeking comments on changes to the red snapper quota in response to an updated stock assessment. If this quota increase is implemented, the recreational annual catch target (ACT) in 2015 would be 5.608 mp ww. On April 10, 2015, the Secretary of Commerce approved Amendment 40 to the Fishery Management Plan for the Reef Fish Resources of the Gulf of Mexico (RF-40). RF-40 allocates 2,372,184 lb ww (42.3%) of the recreational ACT to the for-hire sector and 3,235,816 lb ww (57.7%) to the private sector (including state-licensed charter vessels). The purpose of this report is to project the 2015 federal fishing season length based on the proposed 2015 recreational ACTs with and without the implementation of RF-40's sector-specific sub-quotas, and with and without compatible fishing seasons in Gulf state waters. In 2014, with incompatible state seasons and a 9-day federal season, approximately 3.853 mp ww of red snapper were recreationally landed in the Gulf (89% of the 2014 ACT). For 2015 projections, a similar approach was followed. The analysis projected Eastern and Western Gulf catch rates and average weights by mode of fishing using the previous year's landings, the mean of the past two years, and regression modeling incorporating uncertainty in landings estimates from the various recreational fishing surveys used to provide information on harvest of Gulf red snapper during the federal season. A range of projection scenarios were used to encompass uncertainty in catch rates due to uncertainty in recreational catch estimates, potential reductions in the rate of average weight increase, changes in state seasons and catch rates. For 2015, projections showed that states adopting incompatible seasons could reduce the federal season length by 22-30% in the absence of RF-40, and by 29-45% for private and state-licensed charter vessels if RF-40 is implemented. In the absence of RF-40, the federal season in 2015 was projected to be between 9-21 days (up to 2.3

times longer than 2014). The implementation of RF-40 allows a much longer federal season for federally-permitted for-hire vessels (40-67 days; median = 46 days), with private seasons between 5-16 days, depending on catch rates and state compatibility. Several issues emerged during the regression modeling process incorporating the 2004-2014 data, including poor or insignificant model fits and potentially unrealistic trends. To address this uncertainty, projections scenarios were developed using only 2013-2014 data. Mean season lengths for projections based on recent data only, assuming RF-40 is implemented and state seasons are incompatible, were 44 days for for-hire and 10 days for private vessels.

Introduction

Red snapper are managed in Gulf of Mexico (Gulf) federal waters from the west coast of Florida to Texas by the Gulf of Mexico Fishery Management Council (Council). On October 1, 2013, NOAA Fisheries published a final rule (78 FR 57314) implementing an 11 million pound whole weight (mp ww) total allowable catch for Gulf red snapper. On April 20, 2015, a final rule (80 FR 06294) will establish a red snapper recreational annual catch target (ACT) by applying a buffer to the recreational quota, which is based on the Council's annual catch limit (ACL)/ACT control rule developed in the Generic ACL Amendment (76 FR 82044). The ACL/ACT control rule used to determine the appropriate target catch levels that account for management uncertainty to maintain catches at or below the ACL (quota).

For the recreational sector, the control rule specifies a 20% buffer to constrain landings below the quota. In 3 of the last 4 years landings have exceeded the recreational quota. This final rule (80 FR 06294) also revises the procedure for determining the recreational season length (closure date). The red snapper recreational season closure date will be based on when the recreational ACT will be met or projected to be reached instead of when the recreational quota will be met. Using the ACT to set the season length serves as an in-season accountability measure (AM) and reduces the probability of exceeding the recreational quota during a fishing year from 50 percent to 15 percent. This final rule also revises the recreational AMs to include a quota overage adjustment (payback). If red snapper are overfished and the recreational quota is exceeded, then in the year following the overage, the recreational quota will be reduced by the amount of the recreational quota overage in the prior fishing year, unless the best scientific information available determines that a greater, lesser, or no overage adjustment is necessary. If the quota is adjusted, the recreational ACT will also be reduced to maintain the 20-percent buffer between the ACT and the adjusted quota.

The red snapper recreational fishing season opens each year on June 1 and closes when the recreational quota is met or projected to be reached. Prior to June 1 each year, NOAA Fisheries projects the season closing date based on previous years of data, and notifies the public of the closing date for the upcoming season. If subsequent data indicate that the quota has not been reached, NOAA Fisheries may re-open the season. In 2014, the red snapper ACL was 5.390 mp ww, and the ACT was 4.312 mp ww. The federal season was open for 9 days, from June 1-June

9 (<u>SERO-LAPP-2014-04</u>). Additionally, the state of Texas had a year round (365 day) state waters season with a 4-fish bag limit and 15-inch minimum size limit (MSL). The state of Louisiana had 286-day state water season (3-day weekends Feb 21-Apr 13, all days Apr 14-Dec 31). The state of Florida had a 52-day state water season (May 24-July 15). The state of Alabama had a 21-day state water season (June 1-9; 3-day weekends in July). The state of Mississippi had a 36-day state water season (June 1-9; 3-day weekends in July and Oct-Nov 2). Alabama, Florida, Mississippi, and Louisiana also had a 2-fish bag limit and a 16-inch MSL.

On April 1, 2015, NOAA Fisheries published a letter seeking comments on changes to the red snapper quota (FB15-025) in response to an updated stock assessment (SEDAR-31 Update 2014). The proposed quota would increase to 14.30 mp ww, the highest ever for Gulf red snapper, and would be allocated 51% (7.293 mp ww) to the commercial sector and 49% (7.007 mp ww) to the recreational sector. If this quota increase is implemented, the recreational ACT in 2015 would be 5.608 mp ww. On April 10, 2015, the Secretary of Commerce approved Amendment 40 to the Fishery Management Plan for the Reef Fish Resources of the Gulf of Mexico (RF-40; FB15-006). This rulemaking provides a basis for increased flexibility in future management of the recreational sector, and reduce the chance for recreational quota overruns, which could jeopardize the rebuilding of the red snapper stock. The rule would establish sub- quotas for federally permitted for-hire vessels and private anglers who fish for red snapper for a three-year period beginning in 2015. The federal for-hire component would be comprised of all for-hire operators with a valid or renewable federal reef fish charter vessel/headboat permit. The private angling component would be comprised of private recreational anglers and other for-hire operators who do not have a federal reef fish charter vessel/headboat permit. The rule would implement subquotas using RF-40's allocation of 42.3% to the federal for-hire component and 57.7% to the private angling component. RF-40 allocates 2,372,184 lb ww (42.3%) to the for-hire sector and 3,235,816 lb ww (57.7%) to the private sector (including state-licensed charter vessels). The purpose of this report is to project the 2015 recreational red snapper federal fishing season length based on the proposed 2015 recreational ACTs with and without the implementation of RF-40's sector-specific sub-quotas, and with and without compatible fishing seasons in Gulf of Mexico state waters.

State Regulations

In 2015, as in previous years, Texas will have a 365-day state waters red snapper season with 4-fish bag limit and a 15-inch total length MSL. Louisiana will have a 287-day season from March 20 through December 31. The Florida Fish and Wildlife Commission has approved a 70-day state waters fishing season beginning Memorial Day weekend (May 23) and ending on July 12 with Labor Day weekend (Sept 5-7) and two-day weekends in Sept-Oct open as well. Mississippi has yet to specify their season length. Analyses herein presume Mississippi will have a similar season as they did in 2014.. This analysis assumes Alabama will implement regulations consistent with the federal season implemented by NOAA Fisheries, and seasons, bag limits, and size limits for other Gulf states will be consistent with those summarized in **Table 1** below.

Table 1. Potential Gulf state water recreational red snapper regulations for 2015. Cells highlighted in gray indicate regulations incompatible with 2015 federal regulations.

| State | Size Limit | Bag Limit | Season | Days Open | |
|--------------|------------|-----------|-----------------------------|-------------------------|--|
| | | | Open May 23 - July 12, | | |
| | | | resume Sept. 5-7 and finish | | |
| Florida | 16" TL | 2-fish | with Saturdays and | 70 | |
| | | | Sundays throughout Sept | | |
| | | | Oct., closes Nov. 1. | | |
| Alabama* | 16" TL | 2-fish | Same as federal season | Same as federal season | |
| Mississippi* | 16" TL | 2-fish | Open federal season, 3- | Federal season plus ~24 | |
| Mississippi* | 10 11 | 2-11511 | day weekends July, Oct | days | |
| Louisiana | 16" TL | 2-fish | Opens March 20 | 287 | |
| Texas | 15" TL | 4-fish | Jan 1-Dec 31 | 365 | |

^{*}Not finalized

Data Sources

Recreational red snapper landings were obtained from four data sources (Table 2):

- 1. Marine Recreational Information Program (MRIP), including the For-hire charter survey.
- 2. Southeast Region Headboat survey (SRHS).
- 3. Louisiana Department of Wildlife and Fisheries (LDWF) creel survey.
- 4. Texas Parks and Wildlife Department (TPWD) charter and private/rental creel survey.

MRIP and for-hire red snapper landings are estimated using a combination of dockside intercepts (landings data) and phone surveys (effort data). Landings are estimated in both numbers and whole weight (lbs) by two-month wave (e.g., Wave 1 = Jan/Feb, ..., Wave 6 = Nov/Dec), area fished (inland, state, and federal waters), mode of fishing (charter, private/rental, shore), and state (west Florida, Alabama, Mississippi, and Louisiana). Uncertainty in MRIP mean estimates in average weights, numbers of fish landed, and pounds of fish landed are expressed as percent standard error (PSE). MRIP has replaced the Marine Recreational Fisheries Statistics Survey program as the primary methodology for collecting and estimating recreational catches in the Gulf. In 2013, MRIP implemented changes to the Access Point Angler Intercept Survey (APAIS). These changes to APAIS required a recalibration of historical landings to account for biases in sampling time period; these re-calibrated landings were incorporated into the SEDAR-31 Update (2014) stock assessment and were used to generate the inputs for the 2015 season length projections in this report. These recalibrated landings were distributed to waves using proportions from MRIP data in the Southeast Fisheries Science Center (SEFSC) Recreational Data (accessed Feb 2015). MRIP data for 2014 were obtained both for Wave 3 and for June 1-9 (federal season only).

Headboat landings are collected through logbooks completed by headboat operators and submitted to the SRHS. Landings (lbs ww) are reported by vessel, day/month, and statistical reporting area (i.e., area 18 = Dry Tortugas off west coast of Florida, ..., area 27 = Southeast Texas). Landings from vessels participating in the 2015 Headboat Collaborative Exempted Fishing Permit (http://gulfheadboat.com/) were deducted from the projection inputs, and their harvest was also deducted from the recreational for-hire sub-quota (http://sero.nmfs.noaa.gov/sustainable_fisheries/gulf_fisheries/reef_fish/2013/headboat_efp/).

No estimates of uncertainty are generated by the SRHS. Headboat landings were obtained through 2013 from the SEFSC Recreational ACL Dataset (accessed Feb 2015) and 2014 landings were obtained directly from SRHS staff.

Louisiana's quota monitoring survey was designed to estimate the number of red snapper landed in Louisiana during the 2014 recreational season. Dockside interviews were conducted by state personnel at sites commonly reporting offshore species. To estimate fishing effort of private anglers, LDWF personnel contacted a random portion of those anglers holding a Louisiana Recreational Offshore Landing Permit by phone and/or email on a weekly basis. Permit holders were asked if they fished offshore, how many trips were taken the previous week, if they landed at a public site, what time they returned to the dock, and whether they fished on a paid charter. The randomly selected permit holders were notified by e-mail each Wednesday of their selection to be surveyed. Those selected permit holders had the option to answer the effort survey questions by reply e-mail. If an e-mail was not received, they were contacted by phone. Charter captains holding a Louisiana Recreational Offshore Landing Permit were also contacted by LDWF weekly to collect information on the total number of red snapper caught the previous week. Charter captains had the option to respond via e-mail prior to LDWF personnel contacting them via phone. Estimated landings were produced based on observed catch rates, average weights, and estimated fishing effort (as adjusted for persons not possessing an offshore landing permit). Weekly estimates of uncertainty in LDWF survey average weights, numbers of fish landed, and pounds of fish landed are expressed as PSE. There was no MRIP sampling in Louisiana in 2014.

The TPWD creel survey generates estimates of landings in numbers for private/rental boats and charter vessels fishing off Texas. Landings are reported in numbers by high (May 15-November 20) and low-use time periods (November 21-May 14), area fished (state versus federal waters), and mode of fishing (private versus charter). To convert TPWD landings in numbers to landings in pounds, red snapper average lengths by mode, wave, and area fished are converted to weights using a length-weight conversion formula. High- and low-use estimates of uncertainty in TPWD numbers of fish landed are expressed as PSE and were obtained from TPWD staff for this analysis. TPWD landings were not available for the high-use period in 2014; 2013 high-use data were used as a proxy.

Table 2. Data inputs used in projections.

| Source | Time Period | Details |
|---|-------------|---|
| Marine Recreational | 2004-2014 | Landings and PSE by wave, recalibrated for |
| Information Program (MRIP) | 2004-2014 | changes in angler intercept survey |
| Texas Parks and Wildlife Department (TPWD) | 2004-2014 | Landings by wave from SEFSC Recreational ACL dataset, with 2013 used as a proxy for May-Dec 2014; CVs (define)from TPWD staff |
| Louisiana Department of Wildlife and Fisheries (LDWF) | 2013-2014 | Weekly landings and error estimates from LDWF staff |
| Southeast Region Headboat Survey (SRHS) | 2004-2014 | Monthly landings through 2013 from SEFSC Recreational ACL Data (Feb 2015) and 2014 landings from SRHS staff |
| SEFSC Recreational ACL Dataset | 2004-2014 | Average weights by year and mode of fishing |

Methods

2014 Landings and Retrospective

Landings from 2014 were obtained from the various data sources described in **Table 2**. Federal in-season catch rates were determined using MRIP, LDWF, SRHS, and TPWD estimates. These were compared to federal season catch rates projected in <u>SERO-LAPP-2014-04</u>.

2015 Projections: Average Weights and Catch Rates

A tiered projection approach was taken for forecasting recreational red snapper average weight and in-season catch rates in the Gulf of Mexico for 2015. Average weights and in-season catch rates were computed using the same methodology as 2013 projections (see SERO-LAPP-2013-02 Addendum). Since 2007, the recreational fishing season has decreased from 194 days to 9 days (2014 season length). Because federal waters were only open in June 2014, only federal in-season catch rates, expressed as landings per open day, from June 2004-2014 were used as regression inputs. Because the Eastern and Western Gulf states have differing data collection programs, average weights and catch rates were projected separately for the Eastern and Western Gulf. Different projections were done for Headboat, Charter, and Private modes to account for differences in the effort dynamics of these modes, the potential implementation of RF-40, and the availability and completeness of data.

Generalized linear regression models were implemented using R (R Core Team 2014). The best-fitting models for each of the model scenarios in <u>SERO-LAPP-2013-10</u> were identified based on significance of parameter terms, adjusted Akaike information criterion (AICc; Burnham & Anderson 2002), and Bayesian information criterion (Schwarz 1978). Parametric bootstrapping

techniques were applied, where the mean and variance per year were used to define a distribution of possible values at each observed point. This extension allowed different variance estimates at each point, directly incorporating variance estimates from the surveys (e.g., MRIP, LDWF, and TPWD) into the projection framework. Because catch rates and average weights for many region-mode combinations appeared stabilized over the 2013-2014 period, additional sensitivity runs were performed using the mean of 2013-2014, 2014 (June 1-9 only), and 2014 (Wave 3) catch rates and average weights.

To generate a mean estimate with variance for 2015 Eastern and Western Gulf average weights for the Private and Charter modes, 1,000 bootstrapped time series were generated around the mean in-season average weights for the Eastern and Western Gulf, by mode of fishing. These bootstrapped time series incorporated uncertainty using weighted mean percent standard error (PSE) for red snapper average weights from the Eastern and Western Gulf. State- and mode-specific average weight PSE estimates were obtained from the MRIP website (www.countmyfish.noaa.gov), LDWF, and TPWD staff. PSE estimates were weighted by landings in pounds when aggregated to the region-mode level. Generalized linear model regressions with a Gaussian distribution were fit to each of the 1,000 bootstrapped time series and forecast to 2015. Residual diagnostics were used to verify goodness-of-fit. Each time series considered multiple input streams (e.g., 2004-2014, 2007-2014) with AIC and significance of parameter estimates used to guide selection of the appropriate input time series.

To generate a mean estimate with variance for 2015 Eastern and Western Gulf red snapper catch rates in numbers of fish for the Private and Charter modes, 1,000 bootstrapped time series were generated around the mean in-season catch rates in numbers for the Eastern and Western Gulf. These bootstrapped time series incorporated uncertainty using weighted mean Eastern Gulf MRIP and Western Gulf MRIP/LDWF/TPWD PSEs. For the Eastern Gulf, statespecific PSE estimates for landings (in numbers) were obtained from the MRIP website (www.countmyfish.noaa.gov) and weighted by landings in numbers. For the Western Gulf, MRIP (2004-2012), LDWF (2013-2014) and TPWD (2004-2013) survey estimates of landed (numbers of fish) PSE were weighted by landings in numbers. Generalized linear model regressions with a log-linked negative binomial distribution were fit to each of the 1,000 bootstrapped time series and forecast to 2015. Predictive covariates considered were modelestimated and model-projected spawning stock biomass (from the SEDAR-31 Update stock assessment), annual mean fuel prices (http://www.eia.gov/petroleum/data.cfm#prices), and annual per capita Gross Domestic Product (GDP; http://data.worldbank.org/country/unitedstates). Trends in these covariates are shown in Figure 1. Spawning stock biomass (SSB) was included to potentially account for changes in stock size (and corresponding availability) as the population rebuilds. Mean fuel prices were included because they are believed to have an influence on the ability of recreational fishermen to fish offshore where higher catch rates of red snapper are possible. Per Capita GDP was included because it is an indicator of the economic status of the United States overall, which may predict the ability of recreational anglers to afford to take trips for red snapper. For simplicity, 2015 projections assumed fuel prices and per capita GDP would remain stable at 2014 levels. Residual diagnostics were used

to verify goodness of fit. Each time series considered multiple input streams (e.g., 2004-2014, 2007-2014) with AIC and significance of parameter estimates used to guide selection of the appropriate input time series and inclusion of covariates.

Mean and variance estimates for 2015 Eastern/Western Gulf catch per day (in pounds per day), by mode, were computed by running summary statistics on the product of the 1,000 bootstrapped forecasts for 2015 average weight and the 1,000 bootstrapped forecasts for 2015 catch rate in numbers for both the Eastern and Western Gulf.

Uncertainty estimates are not generated for headboat survey catches. Due to differences in observed trends, it was still useful to project the changes in average weight and catch rate in numbers separately, then combine them for a forecast of catch rate in pounds. To generate a mean estimate with variance for 2015 Eastern/Western Gulf headboat average weights, a generalized linear regression model with a Gaussian distribution was fit to input data for 2007-2014 and forecast to 2015 for both regions. To generate a mean estimate with variance for 2015 Eastern/Western Gulf headboat catch rate in numbers, a generalized linear regression model with a Gaussian distribution was fit to input data for 2007-2014 and forecast to 2015 for both regions. Landings from Headboat Collaborative vessels were excluded from input data before fitting regression models. To appropriately express the combined uncertainty in the projected average weight and catch rate in numbers to generate a catch rate in pounds per day, 1,000 bootstrapped time series were generated around the mean projected 2015 average weight and catch rate in numbers for the Eastern and Western Gulf. These bootstrapped time series incorporated uncertainty using the standard error in the forecast from the regression model.

Mean and variance estimates for 2015 Eastern/Western Gulf headboat catch per day (in pounds per day) were computed by running summary statistics on the product of the 1,000 bootstrapped forecasts for 2015 average weight and the 1,000 bootstrapped forecasts for 2015 catch rate in numbers for both the Eastern and Western Gulf.

Because several Gulf states had adopted or suggested they might have fishing seasons for red snapper in state waters that would be incompatible with the federal season, separate out-of-season catch rates were computed for each state and mode using the most recent available data. For Alabama, Florida, and Mississippi, catch rates during Waves 2 and 4-5 in 2014 were used as proxies for catch rates in those waves in 2015. For Wave 3, catch rates from June 10-30, 2014, were used as proxies for out-of-season catch rates in Wave 3 of 2015. None of these states are anticipated to have openings in Waves 1 or 6 of 2015. For Louisiana, LDWF weekly catch rates from 2014 were used as proxies for out-of-season catch rates in 2015. For Texas, TPWD catch rates reported for Waves 1-2 2014 and Waves 4-6 of 2013 were used as proxies for those Waves in 2015, and state waters catch rates from Wave 3 2013 were used as a proxy for out-of-season landings that might take place outside the federal season during Wave 3 2015.

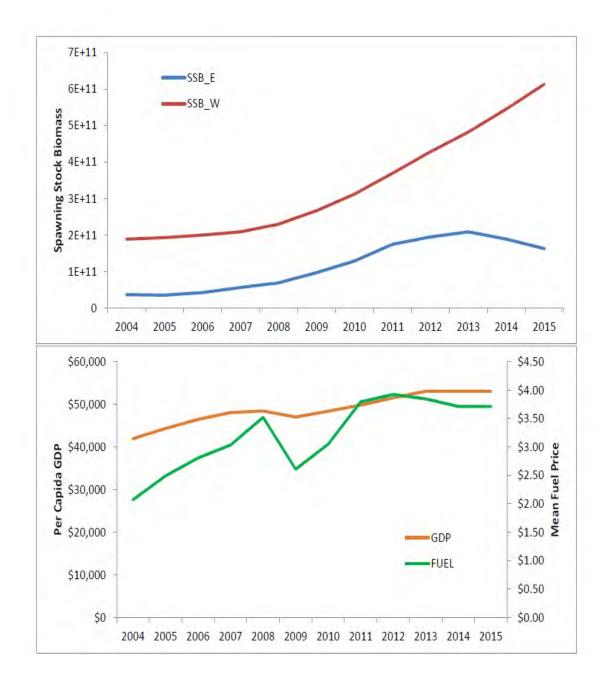


Figure 1. *Projection covariates.* Top: Spawning stock biomass (SSB) estimates, in billions of eggs, from SEDAR-31 Update (2014) stock assessment model for Eastern (blue) and Western (red) Gulf of Mexico red snapper stock, Bottom: U.S. Gross Domestic Product (orange) and mean unleaded fuel price (green).

Additionally, in 2014 NOAA Fisheries approved the Gulf Headboat Collaborative exempted fishing permit (EFP). In 2015, this EFP authorizes participating vessels to harvest 279,657 lb ww of the red snapper quotaHeadboats participating in the program could harvest red snapper beginning January 1. NOAA Fisheries is actively tracking landings (in numbers) in near real time and landings are being converted to pounds based on dockside sampling estimates. Projections accounted for the red snapper to be landed by the Headboat Collaborative. When estimating 2015 catch rates and average weights for headboats, historical landings by Collaborative vessels were removed from catch per day and average weight computations.

2015 Projections: Season Length

Forecasts of catch rates and average weights from best-fitting models were incorporated, along with their variance, into an Excel-based season length projection model to determine the federal season length under each scenario. This model accounted for out-of-season catch rates and state incompatibility with federal season length as described previously. Scenarios evaluated are presented in **Table 3**.

Table 3. Season length projection scenarios (A-F) evaluated. 'PRJ' denotes projected.

| | Mode | Ā | В | С | D | F | F |
|----------------|---------|------|------|------|--------------|----------------|--------------|
| | IVIOGE | | Ь | C | <u> </u> | <u> </u> | • |
| ره عا | Charter | 2014 | 2014 | 2014 | Avg. 2013-14 | PRJ (June 1-9) | PRJ (Wave 3) |
| Catch Rate | Private | 2014 | 2014 | 2014 | Avg. 2013-14 | PRJ (June 1-9) | PRJ (Wave 3) |
| 0 | НВ | 2014 | 2014 | 2014 | Avg. 2013-14 | PRJ | PRJ |
| . ± | Charter | PRJ | PRJ | 2014 | PRJ | PRJ (June 1-9) | PRJ (Wave 3) |
| Avg. Veight | Private | 2014 | PRJ | 2014 | Avg. 2013-14 | PRJ (June 1-9) | PRJ (Wave 3) |
| A | НВ | 2014 | PRJ | 2014 | Avg. 2013-14 | PRJ | PRJ |

Note: "June 1-9" denotes use of MRIP June 1-9 2014 federal season data, "Wave 3" denotes use of all Wave 3 data from 2014 to as input for MRIP 2014 catch rates and average weights.

Results

2014 Landings and Retrospective

Approximately 3.853 mp ww of red snapper were recreationally landed in the Gulf in 2014 (**Table 3**). These landings represented approximately 89% of the ACT and 71% of the ACL. The mean projected federal catch rate in 2014 was 226,011.4 lb ww per federal day. The observed federal catch rate in 2014 was 233,958.3 lb ww (a 3.5% overestimate). This level of forecasting precision was well within the uncertainty in observed federal catch rates.

Table 3. 2014 preliminary totals for Gulf recreational red snapper landings (pounds whole weight), by wave (1-6) and sector/mode.

| Source | Sector | 1 | 2 | 3 | 4 | 5 | 6 | Total |
|------------|----------|--------|--------|-----------|---------|---------|--------|-----------|
| MRIP | Private | 0 | 14,173 | 2,017,009 | 320,215 | 5,034 | 0 | 2,356,431 |
| IVINIP | For-Hire | 0 | 0 | 190,239 | 63,927 | 0 | 0 | 254,166 |
| LA-DWF | Private | 0 | 58,995 | 280,491 | 90,665 | 71,611 | 26,467 | 528,229 |
| Creel | For-Hire | 17,266 | 0 | 70,342 | 3,674 | 799 | 1,043 | 93,124 |
| 0.00. | Private | 5,089 | 3,562 | 100,385 | 48,521 | 24,270 | 21,267 | 203,094 |
| TPWD Creel | For-Hire | 644 | 854 | 15,157 | 7,418 | 8,253 | 3,073 | 35,399 |
| HBS | For-Hire | 39,180 | 46,230 | 189,127 | 93,887 | 8,425 | 5,444 | 382,293 |
| | Private | 5,089 | 76,730 | 2,397,885 | 459,400 | 100,916 | 47,734 | 3,087,754 |
| Total | For-Hire | 57,090 | 47,084 | 464,865 | 168,905 | 17,477 | 9,560 | 764,982 |

All Modes 62,179 123,814 2,862,750 628,306 118,393 57,294 3,852,736

MRIP: Marine Recreational Information Program (from Feb 2015 SEFSC ACL Dataset); LA-DWF Creel: Louisiana Department of Wildlife and Fisheries Creel Survey; TPWD Creel: Texas Parks and Wildlife Department Creel Survey.

Note: TPWD landings for Waves 3-6 2014 were not available at the time this report was prepared; 2013 used as proxy.

2015 Projections: Average Weights and Catch Rates

The bootstrapped distribution of average weights input into the projection model is shown in **Figure 2**. Generalized linear regression model fits to mean average weights, by mode and region, are shown in **Figure 3**.

In 2014, average weights for private, charter, and headboat in the Eastern Gulf were 7.50, 8.50, and 4.90 lb ww, respectively. Projected average weights for 2015 for private, charter, and headboat in the Eastern Gulf were 9.08, 8.85, and 5.48 lb ww, respectively (**Figure 3**: Top). In 2014, average weights for private, charter, and headboat in the Western Gulf were 6.98, 10.0, and 5.40 lb ww, respectively. Projected average weights for 2015 for private, charter, and headboat in the Western Gulf were 8.61, 10.56, and 6.98 lb ww, respectively (**Figure 3**: Bottom). Both Eastern and Western Gulf private and headboat model fits to 2014 data were overestimated, suggesting projected private and headboat 2015 average weights might be overestimates.

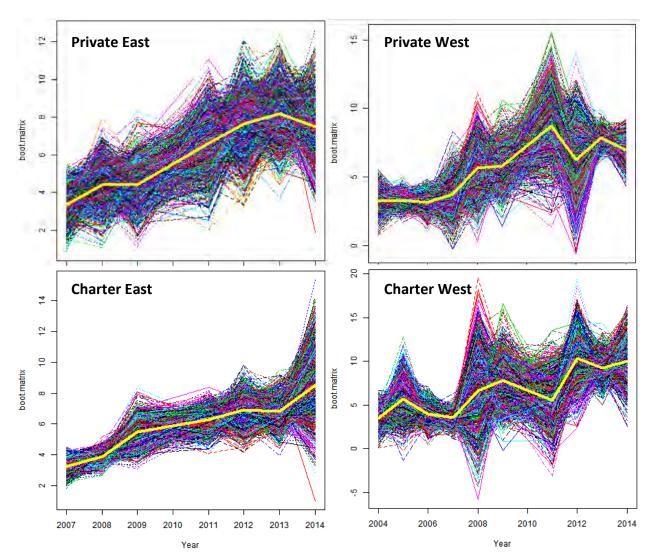


Figure 2. Average weight uncertainty. Bootstrapped distribution of average weights for recreational red snapper sampled by MRIP/LA Creel/TPWD in the Eastern and Western Gulf, with mean (yellow line) and time series generated using PSE (other colors).

The 2004-2014 observed private, charter, and headboat catch rates are shown in **Figure 4**. Not surprisingly, dividing Wave 3 landings by 9 open days resulted in higher catch rate estimates (**Figure 4**: red circles) for 2014 than doing the same to landings estimates from just June 1-9, 2014 (**Figure 4**: blue circles). The bootstrapped distribution of private and charter catch per day (in numbers) input into the projection model is shown in **Figure 5**. Uncertainty was high for private Eastern Gulf 2014 catch rates. Charter Eastern Gulf catch rates in 2014 were much lower than observed in 2013. Generalized linear regression model fits to mean catch per day (in numbers), by region, are shown in **Figure 6**.

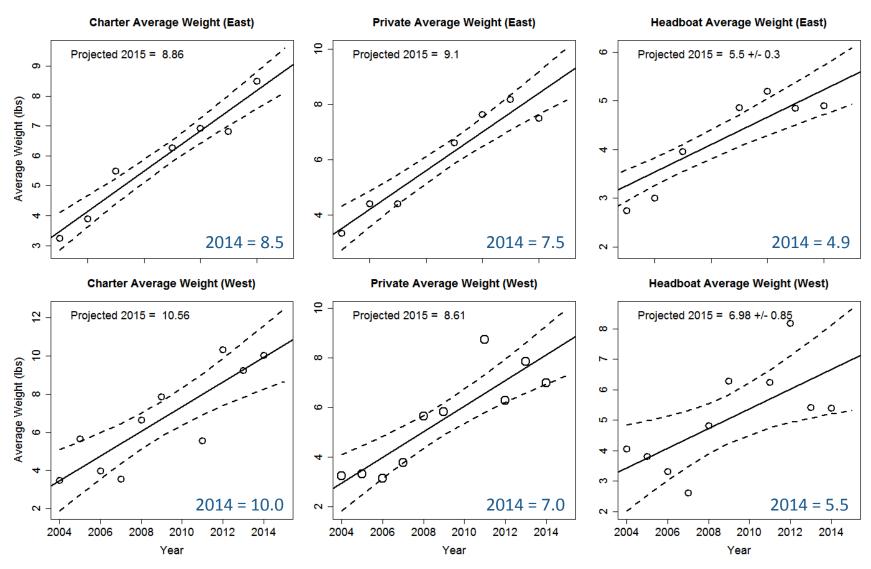


Figure 3. Average weight projections. Generalized linear regression fits to mean average weights for recreational red snapper sampled by MRIP/LA Creel/TPWD in the Eastern and Western Gulf. Dashed lines denote 95% confidence limits.

In 2014, in-season catch per federal day (in numbers) for private, charter, and headboat in the Eastern Gulf were 24,673, 1,848, and 1,120 fish/day, respectively, using June 1-9 post-stratified MRIP data. Using Wave 3 2014 MRIP data, the private catch rate increased to 31,581 fish/day, and the charter catch rate increased to 3,178 fish/day. Using June 1-9 post stratified MRIP input data for 2014, projected 2015 catch (in numbers) per day for Eastern Gulf private, charter, and headboats were 38,176, 945 and 1,268 fish/day, respectively (Figure 6). Eastern Gulf private catch rate projections included mean fuel prices as a significant predictor explaining 49.9% of the marginal deviance. This regression showed a dramatic increase. Eastern Gulf charter catch rate projections included SSB and GDP as significant predictors, explaining 47.9% and 37.4% of the marginal deviance, respectively. This regression showed a very steep decline. Eastern Gulf headboat catch rate regressions had no significant predictors, and the model fits were above the observed values in the final three years of the regression. In 2014, catch rates for private, charter, and headboats in the Western Gulf were 2,073, 483 and 1,574 fish/day, respectively. Projected 2015 catch (in numbers) per day for Western Gulf private was 2,503 fish/day (Figure 6). Western Gulf private catch rate model fits were above observed values in the final two years of the time series. No statistically significant regressions could be fit to Western Gulf charter or headboat catch rates.

The product of the bootstrapped distributions for average weights and catch (in numbers) per day yielded a distribution of projected catch (in pounds) per day. The distribution of projected 2015 catch (in pounds) per day for the private/charter sector in the Eastern and Western Gulf is shown in Figure 7. Table 4 summarizes mean estimates of federal season catches per day from bootstrapped projections, by region and mode for the scenarios presented in Table 2. Estimated federal season lengths under different catch rate and average weight scenarios (A-F) and regulatory assumptions (with and without RF-40 implementation, with and without compatible state seasons) are presented in **Table 5**. In the absence of RF-40, the federal season in 2015 was projected to be between 9-21 days (up to 2.3 times longer than 2014). The median season length in the absence of RF-40 was projected at 13 days with states adopting incompatible seasons; 44% longer than the 2014 season. The implementation of RF-40 allows a much longer federal season for federally-permitted for-hire vessels (40-67 days; Figure 8: top), with private seasons between 5-16 days, depending on catch rates and state compatibility. Under RF-40, states adopting compatible seasons would gain 2-5 days of fishing in federal waters for private and state-licensed charter vessels, extending the federal season by 29-45% (Table 5, Figure 8: middle). In the absence of RF-40, states adopting compatible seasons would gain 2-4 days of fishing in federal waters for all vessels, extending the federal season by 22-30% (Table 5, Figure 8: bottom).

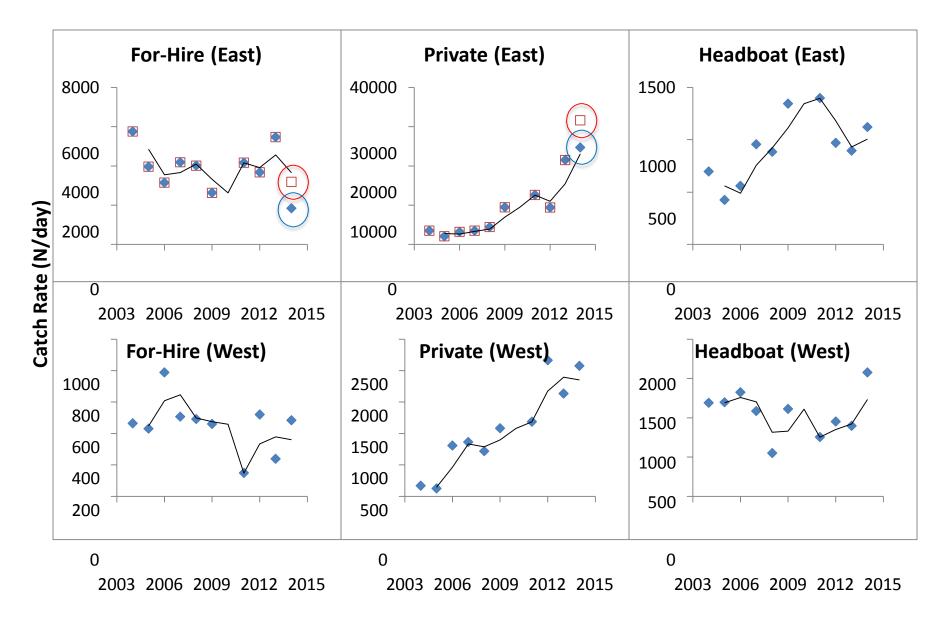


Figure 4. Observed catch federal season catch rates. Catch rates (catch in numbers per open federal day) from June 2004-2014 by mode and region are shown, with emphasis on differences between MRIP Wave 3 (red circles) and MRIP June 1-9 (blue circles).

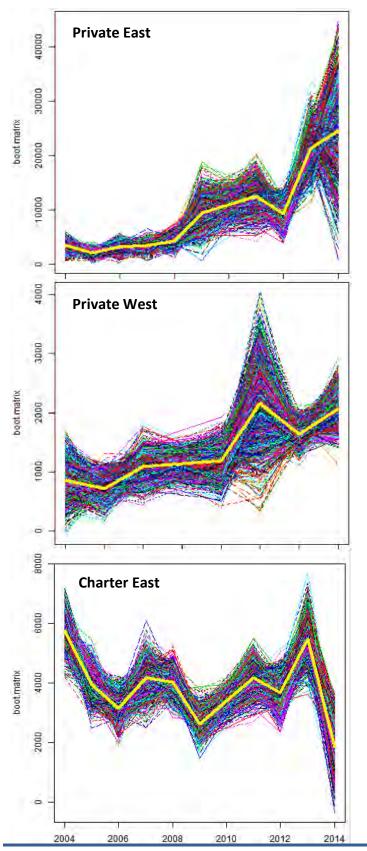


Figure 5. Uncertainty in catch rates. Bootstrapped distribution of catch (in numbers) per day, for recreational red snapper sampled by MRIP/LA Survey/TPWD in the Eastern and Western Gulf, with mean (yellow line) and time series generated using PSE (other colors). Note no significant regression fits were possible for Charter West.

Amendment 39: Regional Management

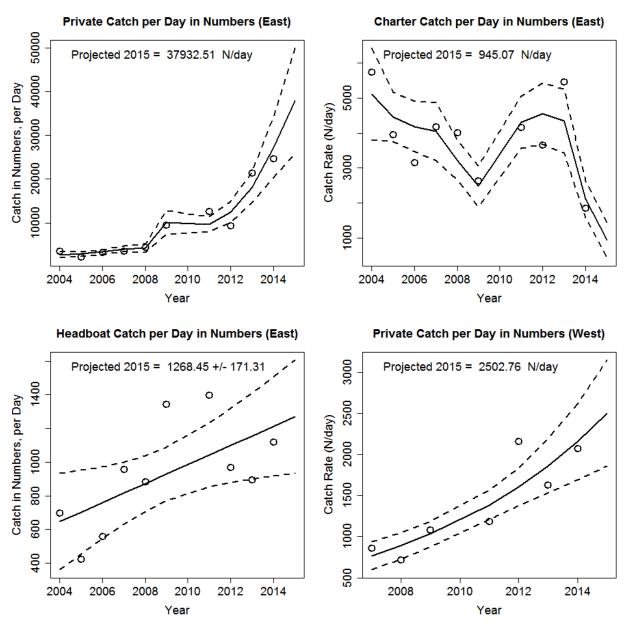


Figure 6. Catch rate projections. Generalized linear regression fits to mean catch (in numbers) per day for recreational red snapper sampled by MRIP/LA Creel/TPWD in the Eastern and Western Gulf. Note that headboat regressions incorporate spawning stock biomass as a predictive covariate. Dashed lines denote 95% confidence limits.

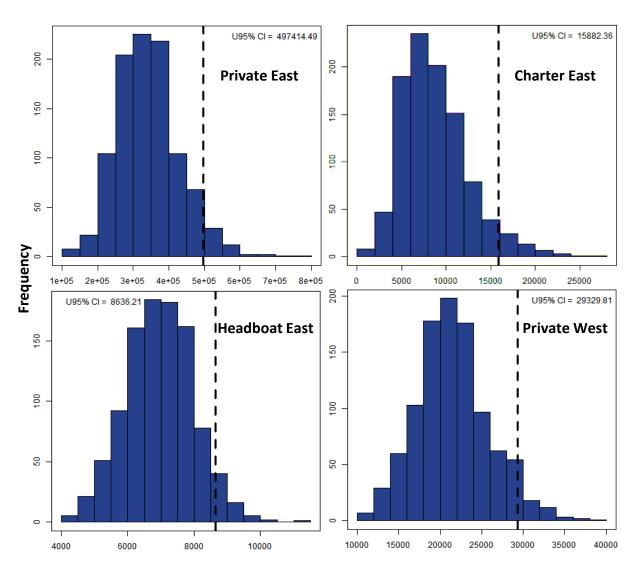


Figure 7. *Projected catch (in pounds) per federal day.* Projected catch rates from generalized linear regression fits to 1,000 bootstrapped distributions of average weight and catch (in numbers) per day for recreational red snapper in the Eastern and Western Gulf, by mode. Dashed lines denote 95% confidence limits. Note there were no significant regression fits for charter or headboat catch rates in the Western Gulf.

Table 4. Projected average weights (lb/fish) and catch rates (in numbers and lb ww) under different projection scenarios, by mode and region.

| EAST | Mode | Α | В | С | D | E | F |
|------------------|---------|---------|---------|---------|---------|---------|---------|
| Catch (N/day) | Charter | 3,178 | 3,178 | 3,178 | 4,319 | 1,003 | 1,767 |
| Cat (N/c | Private | 24,673 | 31,581 | 31,581 | 23,070 | 38,176 | 43,738 |
| Avg. Weight | Charter | 8.85 | 8.85 | 8.50 | 8.85 | 8.85 | 8.85 |
| A We | Private | 7.50 | 9.08 | 7.50 | 7.84 | 9.08 | 9.08 |
| ау) | Charter | 28,124 | 28,124 | 27,007 | 38,215 | 8,879 | 15,636 |
| Catch ww/day) | Private | 184,951 | 286,896 | 236,740 | 180,876 | 346,803 | 397,339 |
| qı) | НВ | 5,486 | 5,486 | 5,486 | 4,905 | 6,959 | 6,957 |

| WEST | Mode | Α | В | С | D | E | F |
|------------------|---------|--------|--------|--------|--------|--------|--------|
| Catch (N/day) | Charter | 483 | 483 | 483 | 360 | 483 | 483 |
| Cat (N/c | Private | 2,073 | 2,073 | 2,073 | 1,853 | 2,509 | 2,509 |
| Avg. Weight | Charter | 10.56 | 10.56 | 10.04 | 10.56 | 10.56 | 10.56 |
| Avg. Weigh | Private | 6.98 | 8.61 | 6.98 | 7.41 | 8.61 | 8.61 |
| ау) | Charter | 5,102 | 5,102 | 4,852 | 3,804 | 5,102 | 5,102 |
| Catch ww/day) | Private | 14,466 | 17,845 | 14,466 | 13,736 | 21,601 | 21,601 |
| q _I) | НВ | 8,504 | 8,504 | 8,504 | 6,677 | 10,987 | 10,987 |

Table 5. Projected Gulf red snapper recreational season lengths (days) under different catch and average weight scenarios (A-F) and different assumptions regarding the implementation of Amendment 40 to the Reef Fish Fishery Management Plan (RF-40: "Sector Separation") and the compatibility of state seasons with the federal season in 2015.

| State Seasons | RF-40 | Sector | Α | В | С | D | E | F | Mean | Median | Mode |
|---------------|-----------------|----------|----|----|----|----|----|----|------|--------|------|
| Compatible | Implemented | For-Hire | 45 | 45 | 46 | 40 | 67 | 55 | 50 | 46 | 45 |
| Compatible | Implemented | Private | 16 | 9 | 12 | 16 | 8 | 7 | 11 | 11 | 16 |
| Compatible | Not implemented | All | 21 | 15 | 18 | 21 | 13 | 11 | 17 | 17 | 21 |
| Incompatible | Implemented | For-Hire | 45 | 45 | 46 | 40 | 67 | 55 | 50 | 46 | 45 |
| | | Private | 11 | 7 | 9 | 11 | 6 | 5 | 8 | 8 | 11 |
| Incompatible | Not implemented | All | 17 | 12 | 14 | 17 | 10 | 9 | 13 | 13 | 17 |

Note: "Incompatible" state seasons assumes states implement seasons presented in Table 1.

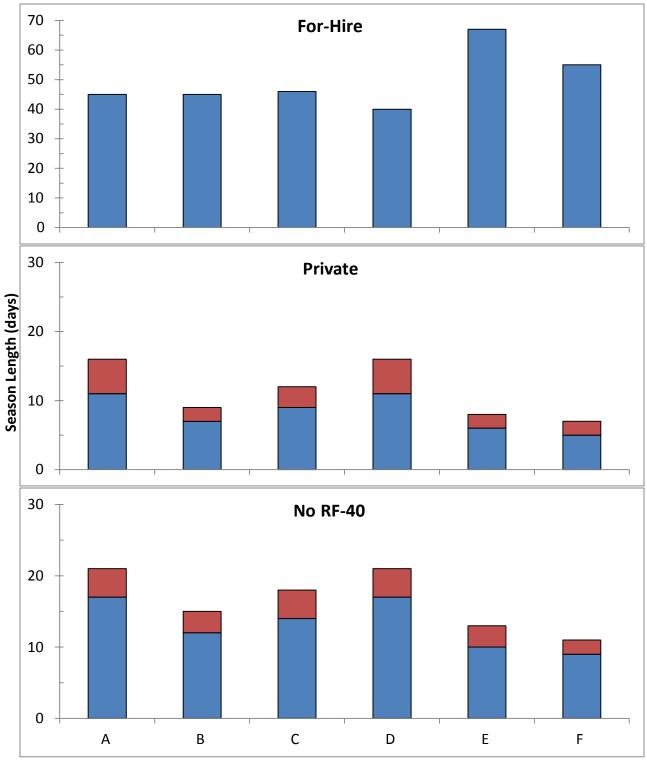


Figure 8. Projected Gulf red snapper recreational season lengths (days), by sector, under different catch and average weight scenarios (A-F) without (blue) and with (red) compatible

seasons from the Gulf states. Bottom figure shows season lengths without implementation of Reef Fish Amendment 40. Note vertical axis scale is different in top figure.

Discussion

In previous years, the Gulf recreational red snapper quota has been exceeded for a variety of reasons, including challenges with predicting angler behavior and landing rates, inconsistent state regulations, and rapidly increasing fish sizes. Projection assumptions have been refined to better account for increases in landings per day and changes in average weights. These refinements have led to increasingly more accurate predictions as described in SERO-LAPP-2014-04, and this document's retrospective analysis. Additionally, the implementation of a 20% buffer between the ACL and ACT has accounted for management uncertainty inherent in a protracted fishing season where the majority of landings are estimated by surveys.

There is considerable uncertainty in 2015 out-of-season state waters catch rates for the season length projection scenarios presented. Limited data exist to inform this uncertainty, so the most recent data (2014: FL-LA, 2013/14: TX) were used as a proxy for anticipated 2015 out-of-season catch rates. If daily out-of-season catches in state waters are higher in 2015 than in previous years, the season lengths presented in Table 6 may be overestimates. This could happen if more anglers participate in state seasons or if red snapper population rebuilding results in higher catch rates in state waters. States adopting incompatible seasons could reduce the federal season length by 22-30% (2-4 days) in the absence of RF-40, and by 29-45% (2-5 days) for private and state-licensed charter vessels if RF-40 is implemented. RF-40 would result in a much longer federal fishing season for federally-permitted for-hire vessels (median = 46 days), with a median private season length of 11 days if states adopt compatible seasons and 8 days if states adopt the seasons presented in **Table 2**.

As with any projection model, the approaches discussed herein are dependent upon assumptions that historical data are accurately estimated and that historical trends are representative of future dynamics. Previous evaluations of Gulf recreational red snapper catch rates have indicated that effort compression (i.e., fishing pressure intensifies during open days as the season shortens) is occurring in the fishery (SERO-LAPP-2012-01). These dynamics are implicitly incorporated into the generalized linear regression approaches described by this document. Regression modeling approaches for the 2014 season (SERO-LAPP-2014-04) generated a catch rate estimate that was within 3.5% of the observed 2014 federal catch rate.

Although regression models for red snapper catch rates have provided compelling results in previous reports, several issues emerged during the regression modeling process incorporating the 2014 data. Western Gulf charter and headboat catch rate models failed to provide significant regression fits. The Western Gulf private catch rate model overestimated the final two years in the time series. The Eastern Gulf headboat catch rate model had no significant predictors and overestimated the final three years in the time series. The Eastern Gulf private



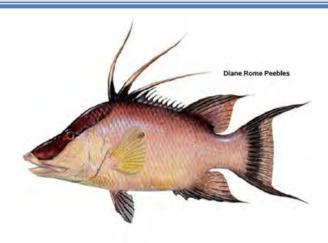
Several sensitivity runs used 2013 and 2014 data as predictors for 2015 (i.e., Scenarios A-D). Visual inspection of the catch rates presented in **Figure 4** suggested some stabilization in catch rates between the 2013-2014 seasons. This may be due to trends in red snapper recruitment to the recreational sector, reductions in the Eastern Gulf population (see **Figure 2**), or possible saturation in effort compression in the 2014 season, which was only 9 days long. Additionally, state seasons in 2013 and 2014 were longer than the federal season, which may have decelerated effort compression in the federal season. In general, season lengths based on regression models were longer for for-hire and shorter for private modes than those based on

2013-2014 data. For Scenarios A-D, under RF-40 and assuming states implement the seasons presented in **Table 2**, mean season lengths were 44 days for for-hire and 10 days for private.

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Hogfish Stock Definition, Status Determination Criteria, and Annual Catch Limit



Options Paper for an Amendment

to the Fishery Management Plan for the Reef Fish Resources of the Gulf of Mexico

October 2015





This is a publication of the Gulf of Mexico Fishery Management Council Pursuant to National Oceanic and Atmospheric Administration Award No. NA15NMF4410011.

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CHAPTER 1. INTRODUCTION

1.1 Background

In 2004, a hogfish stock assessment (SEDAR 6) was prepared by the University of Miami under contract to the Florida Fish and Wildlife Conservation Commission (FWC). However, when it was submitted to a SEDAR review panel, several errors in the analyses were discovered, and the assessment was not accepted.

The 2015, FWC conducted a new benchmark assessment for hogfish (SEDAR 37). This assessment divided hogfish into three stocks based upon genetic analysis. The three stocks were defined as:

- West Florida stock.
- East Florida/ Florida Keys stock.
- Georgia through North Carolina stock

Although hogfish occur throughout the Gulf of Mexico (Gulf), they are caught primarily off the Florida coast. Only small amounts of commercial and recreational hogfish landings have been reported from the other Gulf states (SEDAR 37 2014). Therefore, the west Florida stock will be considered to be the Gulf of Mexico stock.

The assessment evaluated stock status as of 2012 relative to several reference points: F_{MSY} , $F_{30\%}$ SPR, $F_{35\%}$ SPR, and $F_{40\%}$ SPR. The Gulf hogfish stock has a maximum fishing mortality threshold (MFMT) of $F_{30\%}$ SPR, but the minimum stock size threshold (MSST) is currently undefined. SEDAR 37 determined the status of the three hogfish stocks as follows:

- West Florida shelf (Gulf) stock: Under all reference points the stock is not overfished. The stock is experiencing overfishing at the F_{40% SPR} reference point, but is not experiencing overfishing under the other reference points.
- East Florida/Florida Keys stock: Under all reference points, the stock is overfished and experiencing overfishing.
- Georgia-North Carolina stock: The stock is overfished under all of the reference points except the F_{MSY} point. Under all reference points, the stock is experiencing overfishing.

A small portion of the east Florida/Florida Keys stock extends into the Gulf Council's jurisdiction in south Florida, and will need to be included in the rebuilding plan that will be established by the South Atlantic Fishery Management Council. When the Scientific and Statistical Committee (SSC) reviewed the hogfish stock assessment, it felt that the South Atlantic SSC should take the lead in setting the overfishing limit (OFL) and acceptable biological catch (ABC) for that stock, and focused on the west Florida shelf stock. The assessment projections produced annual yields for OFL and ABC for the stock for 2016 through 2026 based on an overfishing threshold of F_{30% SPR}, but due to increasing uncertainty with long-range projections, the SSC only provided OFL and ABC yields for three years, 2016 through 2018.

The OFL is the yield when the stock is fished at the F_{MSY} proxy, and is the yield beyond which overfishing is occurring, and is determined as part of the stock assessment output. However, there is always scientific uncertainty as to the true value of OFL. Consequently, ABC is a yield set below the OFL to take into account the scientific uncertainty. To determine the ABC yield, the SSC used the ABC control rule developed in the Generic Annual Catch Limits/Accountability Measures Amendment (GMFMC 2011). For the hogfish stock, the level for probability of overfishing (P*) was set at 0.4 based on the results of the tier 1 analysis in the control rule, and a coefficient of variance (CV) of 0.37 was used based on the results of pooled assessments compiled by the Pacific Fishery Management Council for stocks in their jurisdiction. The resulting annual OFL and ABC yields plus the equilibrium yields are shown in Table 1.1:

Table 1.1.1. OFL and ABC for west Florida shelf stock of hogfish for 2016-2018, plus equilibrium yields

| Year | OFL | ABC |
|-------------|----------------|----------------|
| 2016 | 257,100 lbs ww | 240,400 lbs ww |
| 2017 | 229,400 lbs ww | 216,800 lbs ww |
| 2018 | 211,000 lbs ww | 200,800 lbs ww |
| Equilibrium | 161,900 lbs ww | 159,261 lbs ww |

Source: Summary report of the May 20, 2015 meeting of the SSC.

1.2 Purpose and Need

The purpose of this action is to consider redefining the geographic range of the Gulf of Mexico hogfish stock while allowing the East Florida/Florida Keys stock to be managed as a single unit throughout its range, setting status determination criteria (maximum fishing mortality threshold, minimum stock size threshold, and maximum sustainable yield proxy), annual catch limits, and annual catch targets based on a recent stock assessment (SEDAR 37) for the Gulf of Mexico hogfish stock.

The need is to establish a stock definition that is consistent with the best scientific information available, to prevent overfishing, and to adjust annual catch limits to be consistent with the requirements of the Magnuson-Stevens Fishery Conservation and Management Act.

CHAPTER 2 - ACTIONS AND ALTERNATIVES

2.1 Action 1 – Definition of the Management Unit

Alternative 1: No Action – The hogfish management unit in the Reef Fish FMP remains defined as all hogfish found in the Gulf of Mexico north and west of the GMFMC/SAFMC jurisdictional boundary.

Alternative 2: South of Cape Sable. The hogfish management unit in the Reef Fish FMP is defined as the west Florida shelf (or Gulf of Mexico) stock of hogfish. The geographical range of this unit is all waters of the Gulf of Mexico north of a line extending west from **25° 09' north latitude** to the outer boundary of the EEZ and northward and westward throughout the rest of the Gulf of Mexico.

Alternative 3: Shark Point. The hogfish management unit in the Reef Fish FMP is defined as the west Florida shelf (or Gulf of Mexico) stock of hogfish. The geographical range of this unit is all waters of the Gulf of Mexico north of a line extending west from **25° 23' north latitude** to the outer boundary of the EEZ and northward and westward throughout the rest of the Gulf of Mexico.

Alternative 4: Monroe/Collier county line. The hogfish management unit is the west Florida shelf (or Gulf of Mexico) stock of hogfish. The geographical range of this unit is defined as all waters of the Gulf of Mexico north of a line extending west from **25° 48' north latitude** to the outer boundary of the EEZ and northward and westward throughout the rest of the Gulf of Mexico.

Note: Under **Alternative 2** or **Alternative 3**, the Council will request the Secretary of Commerce designate the South Atlantic Fishery Management Council as the responsible Council for hogfish below the demarcation line.

Discussion:

The Reef Fish FMP includes a list of stocks in the management unit, but currently it does not explicitly define the geographic range of the management unit for each stock. Rather, for each stock listed the management unit includes all individuals in the Gulf of Mexico. This implies that all of the individual fish are part of a single stock. However, the SEDAR 37 hogfish stock assessment (SEDAR 37 2014) identified three stocks based upon recent genetic analyses; Georgia/North Carolina, east Florida/Florida Keys, and west Florida shelf. The division between the west Florida shelf stock and the east Florida/Florida Keys stock occurs somewhere between Naples and the Florida Keys (Seyoum et al. 2014). The assessment used the Monroe/Collier county line, which is 21 nm south of Naples, as the dividing line between the west Florida shelf stock and the east Florida/Florida Keys stock. The assessment concluded that the west Florida shelf hogfish stock was neither overfished nor undergoing overfishing (except under the most conservative overfishing threshold of F_{40% SPR}). The east Florida/Florida Key stock, however, was overfished and undergoing overfishing, and in need of a rebuilding plan.

Alternative 1 leaves the hogfish stock as all individuals in the Gulf of Mexico. The jurisdictional boundary between the Gulf and South Atlantic councils follows in part along 24° 35' north latitude. This is 73 nautical miles (nm) south of the Monroe/Collier county line, which was the demarcation used in the SEDAR 37 stock assessment between the west Florida and east Florida/Florida Keys stocks. This alternative continues the implicit assumption that all hogfish in the Gulf are part of a single stock. This is inconsistent with the SEDAR 37 (2014) stock assessment, which determined that there are two hogfish stocks off the coast of Florida, with a dividing line south of Naples. While the west Florida shelf hogfish stock was found to be neither overfished nor undergoing overfishing (except under the most conservative overfishing threshold), the east Florida/Florida Keys stock was found to be both overfished and undergoing overfishing. This will require different management strategies and a rebuilding plan for those hogfish that comprise the east Florida/Florida Keys stock.

Alternatives 2, 3, and 4 define a boundary off southwest Florida below which the Gulf of Mexico stock is undefined. Hogfish in this region will not be part of the Reef fish fishery management unit, and will not be subject to management under the Reef Fish FMP. It is the intent of the Council that under Alternatives 2, 3, and 4, the Council will request the Secretary of Commerce to designate the South Atlantic Fishery Management Council as the responsible Council for hogfish below the demarcation line.

Alternative 2 defines the boundary for the hogfish management unit in the Gulf of Mexico off Florida at 25° 09' north latitude, which is just south of Cape Sable on the west coast of Florida. It is 38 nm south of the Monroe/Collier county line. This line is currently used by the Florida Fish and Wildlife Conservation Commission (FWC) as a regulatory boundary for state managed species such as permit. It is also considered by FWC to be far enough north of the Keys and far enough south of Naples and Marco Island so that regulatory issues are not simply shifted north to Collier County. However, this creates a discontinuity with the SEDAR 37 stock assessment, which used the Monroe/Collier county line as the demarcation between hogfish stocks. The further south from the Monroe/Collier county line the boundary is set, the greater the discontinuity between the assessment and management, and the greater the likelihood that part of the east Florida/Florida Keys stock will be under Gulf Council jurisdiction rather than South Atlantic Council.

Alternative 3 defines the boundary for the hogfish management unit in the Gulf of Mexico off Florida at 25° 23' north latitude, which corresponds to the Shark Point reference point in the Everglades on the west coast of Florida. It is 25 nm south of the Monroe/Collier county line. According to information provided by Council members, fishing trips originating south of this boundary rarely travel north of the boundary, and trip originating north of the boundary rarely travel south. Therefore, this boundary serves as a natural demarcation for fishermen, although there is some discontinuity with the stock assessment boundary. As with the previous alternative, this boundary creates a discontinuity with the SEDAR 37 stock assessment, which used the Monroe/Collier county line as the demarcation between hogfish stocks. However, the discontinuity is not as great (25 nm vs. 38 nm).

Alternative 4 defines the boundary for the hogfish management unit in the Gulf of Mexico off the Monroe/Collier County line, which is consistent with the boundary used by the SEDAR 37

(2014) stock assessment. Commercial ALS, Florida trip ticket, MRFSS, and MRIP landings can all be resolved to the county level, allowing landings reports to be consistent with the stock boundary.

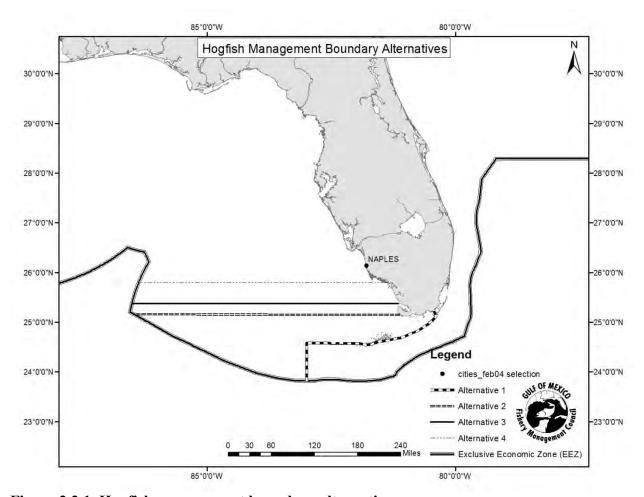


Figure 2.2.1. Hogfish management boundary alternatives

2.2 Action 2 – Define Status Determination Criteria for Hogfish

Alternative 1: No Action – MSY is undefined, MSST is undefined, and MFMT = $F_{30\% SPR}$.

Alternative 2: MSY = the point estimate of MSY in the most recent stock assessment.

 $MFMT = F_{MSY}$ in the most recent stock assessment

MSST =

Option a: $(1-M)*SSB_{MSY}$, where M = 0.179

Option b: $0.75*SSB_{MSY}$ Option c: $0.50*SSB_{MSY}$

Alternative 3: MSY = equilibrium yield at $F_{30\% SPR}$

 $MFMT = F_{30\% SPR}$

MSST =

Option a: $(1-M)*SSB_{30\% SPR}$, where M = 0.179

Option b: 0.75*SSB_{30% SPR} Option c: 0.50*SSB_{30% SPR}

Alternative 4: MSY = equilibrium yield at $F_{40\% SPR}$

 $MFMT = F_{40\% SPR}$

MSST =

Option a: $(1-M)*SSB_{40\% SPR}$, where M = 0.179

Option b: $0.75*SSB_{40\% SPR}$ Option c: $0.50*SSB_{40\% SPR}$

Discussion:

The formula will be the controlling factor for defining the status determination criteria. The point values may change if a new stock assessment provides additional information, but as of SEDAR 37, the point values for each of the above alternatives are shown in Table 2.2.1.

Table 2.2.1 Status determination criteria values for several MSY proxies.

| | Alt. 1 | Alt. 2 | Alt. 3 | Alt. 4 |
|-------------------|--------------|-----------|---------|---------|
| | Proxy undef. | Model MSY | 30% SPR | 40% SPR |
| MSY (1000 lb ww) | n/a | 169 | 162 | 146 |
| MFMT | 0.095 | 0.150 | 0.095 | 0.062 |
| MSST (1000 lb ww) | n/a | 844 | 1,299 | 1,809 |

Source: SEDAR 37, Table 11.2.7.1.1. MSY for Alternatives 3, and 4, Dustin Addis, pers. comm.

MSY is defined in the National Standard Guidelines as the largest long-term average catch or yield that can be taken from a stock or stock complex under prevailing ecological, environmental conditions and fishery technological characteristics (e.g., gear selectivity), and the distribution of catch among fleets. MSY can usually be calculated within a stock assessment, but a confident estimate requires a strong stock-recruit relationship. If the spawner-recruit relationship is weak or uncertain, which is often the case, then a proxy can be used.

Alternative 1 leaves MSY and MSST undefined. MFMT was defined under the Sustainable Fisheries Act Generic Amendment (GMFMC 1999). These status determination criteria are required under the National Standard 1 guidelines for each stock being managed. If left undefined in this amendment, these criteria can be defined in the Minimum Stock Size Threshold Amendment which is currently under development.

Alternative 2 uses the model generated estimate of MSY. This produces the highest yield levels but at the lowest level of spawning stock biomass. The SEDAR 37 assessment did not make a recommendation as to whether the stock-recruit relationship was strong enough to use the estimated MSY. However, the assessment noted that the model produced relatively stable SSB levels predicted throughout the model period. This lack of contrast in stock-recruit data additionally led to a relatively flat likelihood profile for steepness in this stock and the sensitivity run where the steepness prior was removed led steepness to be estimated near the upper bounds of h=.9999. Under these conditions there is essentially no discernable relationship between stock and recruitment, and an MSY proxy is generally used.

Alternative 3 sets the MSY proxy at conservative level of the yield at 30% SPR. This is the proxy used with most stocks, and with the current maximum fishing mortality threshold (MFMT) for hogfish. Hogfish currently have a maximum fishing mortality threshold of F_{30% SPR}, which was set in 1999 under the Generic Sustainable Fisheries Act Amendment (GMFMC 1999). However the minimum stock size threshold (MSST) and a MSY proxy proposed in that amendment were rejected by NMFS and are currently undefined. The SSC usually recommends MSY proxies in the 30% to 40% SPR range. This alternative would make the MSY proxy and MSST consistent with the MFMT.

Alternative 4 sets the MSY proxy at conservative level of the yield at 40% SPR. This is at the upper end of the range of SPR proxies recommended by the SSC, but is more commonly used as a proxy for optimum yield than for MSY. If this alternative is adopted, then based on the SEDAR 37 stock assessment, the current fishing mortality rate for hogfish exceeds $F_{40\% SPR}$, and the stock is therefore experiencing overfishing. The SSC would need to reevaluate its ABC recommendation, and the Council would likely be required to take action to end overfishing.

Under Alternatives 2, 3, and 4, three options are provided for determining MSST.

Option a sets MSST at (1-M) times the SSB_{MSY} or proxy. For hogfish, the SEDAR 37 assessment used a natural mortality rate that varied with age, but with a cumulative target M=0.179. Therefore, option a sets MSST at 82% of the SSB_{MSY} or proxy. **Option b** sets MSST at 75% of the SSB_{MSY} or proxy. **Option c** sets MSST at 50% of the SSB_{MSY} or proxy, which is the lowest level allowed under the Magnuson-Stevens Act and National Standard Guidelines.

Setting MSST close to SSB_{MSY} or proxy, as in **Option a**, allows a stock to be declared overfished and put under a rebuilding plan at an early stage of its decline. However, it may also result in spurious overfishing determinations due to natural year-to-year fluctuations in stock biomass. A wider buffer such as **Option c** allows greater management flexibility to reverse a decline before the stock becomes overfished, but if the stock does fall below MSST, it will have a greater amount to rebuild and may require a more restrictive rebuilding plan. **Option b** is an intermediate level that provides some additional flexibility but still results in an overfishing determination at a level that's more conservative than **Option c**.

The Council is working on a separate amendment to define MSST for all stocks. The MSST options in this action mirror those in the MSST amendment.

2.3 Action 3 – Annual Catch Limit for Hogfish

Alternative 1: No Action. ACL = 208,000 lbs ww, and ACT = 179,000 lbs. ww

Alternative 2: ACL equals the ABC for each year 2016-2018. The ACL for years following 2018 will then revert to the equilibrium ABC yield until modified by rulemaking.

2016 ACL = 240,400 lbs ww 2017 ACL = 216,800 lbs ww 2018 ACL = 200,800 lbs ww 2019+ ACL = 159,300 lbs ww

Option a: ACT will not be defined

Option b: ACT will be set based on the ACL/ACT control rule at 87% of the ACL:

2016 ACT = 209,100 lbs ww 2017 ACT = 188,600 lbs ww 2018 ACT = 174,700 lbs ww 2019+ ACT = 138,600 lbs ww

Alternative 3: A constant catch ACL is set at xxx based on the constant catch ABC recommendation for the years 2016-2018 of the SSC. The ACL for years following 2018 will then revert to the equilibrium ABC yield of 159,300 lbs ww until modified by rulemaking.

Option a: ACT will not be defined

Option b: ACT will be set based on the ACL/ACT control rule at 87% of the ACL: xxx for the years 2016-2018. The ACL for years following 2018 will then revert to the equilibrium ABC yield of 138,600 lbs ww until modified by rulemaking.

Alternative 4: A constant catch ACL is set at the equilibrium ABC level of 159,300 lbs ww. This ACL will remain in place in subsequent years until modified by rulemaking.

Option a: ACT will not be defined

Option b: ACT will be set based on the ACL/ACT control rule at 87% of the ACL: 138,600 lbs ww. This ACT will remain in place in subsequent years until modified by rulemaking.

Discussion:

Under **Alternative 1**, the hogfish ACL and ACT will remain at the levels established in 2012 under the Generic Annual Catch Limits/Accountability Measures Amendment. These catch levels were set using ABC control rule tier 3a, a data poor method. The mean catch from 1999-2008 was calculated (mean = 143,500 lbs ww, range – 84,500-288,600 lbs ww) and a standard deviation was calculated. The ACT was set at the mean plus one standard deviation (179,000 lbs ww) and the ACL was set at the mean plus two standard deviations (272,000 lbs ww). This allowed the stock some leeway to fluctuate above the mean landings. However, the landings exceeded the ACL in 2012 and 2013, triggering a season closure on both recreational and commercial fishing in 2013 (Table 2.3.1).

Table 2.3.1. Hogfish landings relative to ACL and closing date, 2012-2014. Landings are in lbs ww.

| Year | Recreational | Commercial | Total | ACL | Percent of | Season |
|------|--------------|------------|----------|---------|------------|---------------------|
| | Landings | Landings | Landings | | ACL | Closing Date |
| 2014 | 159,982 | 35,930 | 195,912 | 208,000 | 94% | |
| 2013 | 217,759 | 24,787 | 242,546 | 208,000 | 117% | 12/2/13 |
| 2012 | 250,128 | 42,989 | 293,117 | 208,000 | 141% | n/a |

Source: NMFS Southeast Regional Office

Alternative 2 sets an annual ABC for each year from 2016 through 2018 based on the annual yield projections recommended by the SSC when fishing at a constant fishing mortality rate. The overfishing limit (OFL) was set at the yield when fishing at a fishing mortality rate of F_{30% SPR}, and the ABC was set a level below OFL to reduce the probability of overfishing to 40* (P* = 0.40). The ACL is set at ABC. If the Council chooses to set an MFMT other than $F_{40\% SPR}$, the SSC will need to reevaluate its ABC recommendation. The stock spawning stock biomass is currently above its maximum sustainable yield (MSY) level, so this rate of fishing is projected to would gradually reduce the stock to slightly above its MSY level. If there is no new stock assessment by 2018 (no assessment is currently planned), the ABC and ACL will revert to the equilibrium ABC level of 159, 300 lbs ww. This is because, although the SSC recommended only three years of ABCs, the projected yield trend continues downward for several years (Figure 2.3.1). Maintaining the 2018 ABC and ACL indefinitely in the absence of a new assessment would likely to result in overfishing. For that reason, the SSC recommended at its September 2015 meeting that, if at the end of an ABC projection period, no new assessment is available, and the equilibrium ABC is below the ABCs for the projected period, ABC should revert to the equilibrium ABC.

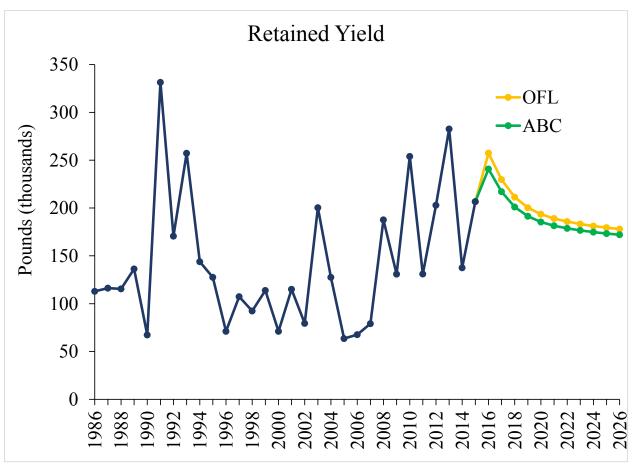


Figure 2.3.2. West Florida shelf hogfish stock OFL and ABC yield trends

The ACT, if set, is at 87% of the ACL based on the ACL/ACT control rule. **Option a** would not set the ACT, while **Option b** would set the ACT. The accountability measure for hogfish (which is the default accountability measure for most reef fish) states that, if the ACL is exceeded in a given year, the following year the season will be closed when the ACL is projected to be reached. There are no actions or accountability measures related to the ACT for hogfish. Therefore, the ACT for hogfish serves no functional purpose.

Alternative 3 sets a constant catch ACL for a specified number of years based on an alternative constant catch ABC recommended by the SSC. This ABC has the same conservation equivalency as the constant F ABC yield stream in Alternative 2. As with Alternative 2, if there is no new stock assessment by 2018 (no assessment is currently planned), the ABC and ACL will revert to the equilibrium ABC level of 159, 300 lbs ww Option a and Option b regarding the ACT are the same as described for Alternative 1. The Council requested that the SSC provide a constant catch ABC at its August meeting. In September, the SSC agreed on a process for determining the constant catch ABC. The results of that process will be available at the January 2016 SSC meeting.

Alternative 4 sets a constant catch ACL at the equilibrium ABC of 159,300 lbs ww. This is the level at which the yield is projected to remain constant without further declines in the stock level

if fished over a long period of time. Overfishing is unlikely to occur at this level, and future adjustments to the ACL should theoretically be unnecessary. However, due to uncertainties in the data and likely fluctuations in recruitment which cannot be predicted, a new assessment should still be conducted periodically and the equilibrium ABC recalculated.

Option a and **Option b** regarding the ACT are the same as described for the above alternatives.

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Modifications to Gulf Reef Fish and South Atlantic Snapper Grouper Fishery Management Plans



REVISED Draft Joint Generic Amendment on South Florida Management Issues

October 2015







This is a publication of the Gulf of Mexico Fishery Management Council Pursuant to National Oceanic and Atmospheric Administration Award No. NA15NMF4410011.

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COVER SHEET

Name of Action

Draft Joint Generic Amendment to the Fishery Management Plan for the Reef Fish Resources of the Gulf of Mexico and to the Fishery Management Plan for the Snapper-Grouper Fishery of the South Atlantic Region

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CHAPTER 1. INTRODUCTION

1.1 Background

Currently, some recreational and commercial fishing regulations for south Florida species differ between the Gulf and South Atlantic Council waters and in some cases, state and adjacent federal waters (**Tables 1** and **2**). This makes it difficult for fishermen to abide by different regulations in the south Florida area, particularly the Florida Keys, where anglers can fish in multiple jurisdictions on a single trip (**Figure 1**). The goal of the of this document and the Joint Council Committee on South Florida Management Issues (Joint Council Committee) is to provide guidance in determining the best solutions for fisheries management issues that are unique to south Florida, ultimately leading to similar regulations across the south Florida region.

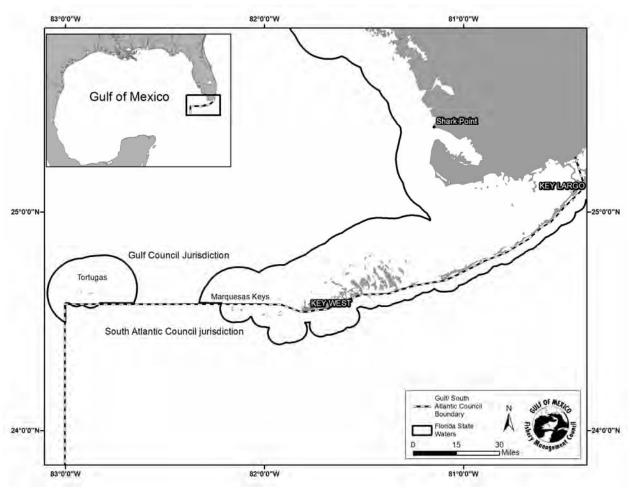


Figure 1. Inter-Council jurisdiction boundary in southern Florida, Florida Keys and Monroe County between the Gulf of Mexico and South Atlantic Councils. A full description of the inter-Council boundary can be found: 61 FR 32540, June 24, 1996, as amended at 63 FR 7075, February 12, 1998 or (CFR 600.105).

Table 1. Recreational fishing regulations for reef fish species in State waters of the Gulf/South Atlantic and federal waters of the Gulf of Mexico and South Atlantic. Minimum size limits are all in total length (TL); bag limits are per person per day; "S-G" stands for "Snapper-Grouper".

| Species | Recreational | Florida State Waters | Federal Waters Gulf of | Federal Waters South |
|------------------|---------------|---------------------------------------|---|---------------------------------------|
| Species | Regulations | Tiorida State (Tatels | Mexico | Atlantic |
| Mutton | Size Limit | | 16" TL | 12424424 |
| Snapper | Bag Limit | | 10 snapper aggregate | |
| FF | Closed season | | None None | |
| | Closed season | | TYONE | |
| Yellowtail | Size Limit | | 12" TL | |
| Snapper | Bag Limit | 10 snappe | 20 S-G aggregate | |
| | Closed season | | None | |
| | | | | |
| Black Grouper | Size Limit | Atlantic: 24" TL / Gulf: 22" TL | 22" TL | 24" TL |
| Grouper | Bag Limit | 1 gag or black | 4 grouper aggregate | 1 gag or black |
| | Closed season | Jan 1-Apr 30 | Feb 1-Mar 31 seaward 20 fathoms | Jan 1-Apr 30 |
| | | | | |
| Gag | Size Limit | Atlantic: 24" TL / Gulf: 22" TL | 22"TL | 24"TL |
| | Bag Limit | 1 gag or black | 2 person within 4 grouper aggregate | 1 gag or black |
| | Closed season | Jan 1-Apr 30 | Jul 1-Dec 2 | Jan 1-Apr 30 |
| | | | | |
| Red | Size Limit | | 20" TL | |
| Grouper | Bag Limit | 3 per person within grouper aggregate | 2 per person within 4 grouper aggregate | 3 per person within grouper aggregate |
| | Closed season | Jan 1-Apr 30 | Feb 1-Mar 31 seaward 20 fathoms | Jan 1-Apr 30 |
| | | | | |
| Scamp | Size Limit | Atlantic: 20" TL / Gulf: 16" TL | 16" TL | 20" TL |
| | Bag Limit | Atlantic: 3 / Gulf: 4, per person | 4 per person within grouper aggregate | 3 per person within grouper aggregate |
| | Closed season | Jan 1-Apr 30 | Feb 1-Mar 31 seaward 20 fathoms | Jan 1-Apr 30 |
| | | | | |
| Yellowfin | Size Limit | | 20" TL | |
| Grouper | Bag Limit | Atlantic: 3 / Gulf: 4, per person | 4 per person within grouper aggregate | 3 grouper/person grouper aggregate |
| | Closed season | Jan 1-Apr 30 | Feb 1-Mar 31 seaward 20 fathoms | Jan 1-Apr 30 |
| | | | | |
| Yellowmouth | | 20" TL | None | 20" TL |
| Grouper | Bag Limit | Atlantic: 3 / Gulf: 4, per person | 4 per person within grouper aggregate | 3 grouper/person grouper aggregate |
| | Closed season | Jan 1-Apr 30 | Feb 1-Mar 31 seaward 20 fathoms | Jan 1-Apr 30 |

Table 2. Commercial fishing regulations for reef fish species in State waters of the Gulf/South Atlantic and federal waters of the Gulf of Mexico and South Atlantic. Minimum size limits are

all in total length (TL).

| Species | Commercial Regulations | Florida Gulf/South Atlantic State Waters | Federal Waters Gulf of Mexico* | Federal Waters South Atlantic |
|-------------|---------------------------|---|-----------------------------------|---|
| Mutton | Size Limit | | 16" TL | |
| Snapper | Trip Limit | | None | |
| | Closed season | | None | |
| | Bag Limit | May-June: Restricted to 10 fish/person/day or trip (most restrictive) | | May-June: Restricted to 10 fish/person/day or trip (most restrictive) |
| Yellowtail | Size Limit | | 12" TL | |
| Snapper | Trip Limit | | None | |
| Snapper | Closed season | | None | |
| | Closed season | | None | |
| Black | Size Limit | | 24" TL | |
| Grouper | Trip Limit | | None | |
| Grouper | Closed season | Jan 1-Apr 30** | None | Jan 1-Apr 30 |
| | Closed season | 3an 1 74pi 30 | Trone | 3411 1 14pt 30 |
| Gag | Size Limit | 22"TL/24" TL | 22" TL | 24"TL |
| | Trip Limit | No | ne | 1,000 lbs gw |
| | Closed season | Jan 1-Apr 30** | None | Jan 1-Apr 30 |
| | | | | |
| Red | Size Limit | 18"TL/ 20" TL | 18" TL | 20" TL |
| Grouper | Trip Limit | | None | |
| • | Closed season | Jan 1-Apr 30** | None | Jan 1-Apr 30 |
| | | | | |
| Scamp | Size Limit | 16" TL / 20" TL | 16" TL | 20" TL |
| • | Trip Limit | | None | |
| | Closed season | Jan 1-Apr 30** | None | Jan 1-Apr 30 |
| | | | | |
| Yellowfin | Size Limit | | 20" TL | |
| Grouper | Trip Limit | | None | |
| • | Closed season | Jan 1-Apr 30** | None | Jan 1-Apr 30 |
| | | | | |
| Yellowmouth | Size Limit | 20" TL | None | 20" TL |
| Grouper | Trip Limit | | None | |
| • | Closed season | Jan 1-Apr 30** | None | Jan 1-Apr 30 |

^{*}All shallow-water grouper species in federal waters of the Gulf of Mexico are managed under an Individual Fishing Quota (IFQ) system, and do not have trip limits or closed seasons.**This closure applies only to South Atlantic state waters and Monroe County.

History of Gulf of Mexico and South Atlantic Councils Efforts

The Joint Council Committee was formed in response to a South Atlantic Fishery Management Council (South Atlantic Council) motion in June 2011 and the Gulf of Mexico Fishery Management Council (Gulf Council) agreeing to work together on this effort. The group was first convened in January of 2014 to begin discussing management needs of south Florida species, which refers to those areas adjacent to the Floridian peninsula and primarily south of 28° North latitude. The actions and alternatives currently considered in this document are recommendations from the Joint Council Committee. The Joint Council Committee has meet three times and over the course of these meetings several actions and alternatives have been moved to the considered, but rejected section (Appendix A). The Gulf and South Atlantic Councils have only reviewed and made recommendations regarding this document during their respective March 2015 meetings.

The Gulf and South Atlantic Councils and Florida Fish and Wildlife Conservation Commission (Florida FWC) are responding to various suggestions for addressing the inconsistencies in management across the three jurisdictions (Gulf Council, South Atlantic Council, and State of Florida) in south Florida. The Joint Council Committee is currently considering a suite of management alternatives to address stakeholder concerns, and to more efficiently respond to necessary regulatory changes as they arise. One of the major changes to management structure that the Joint Council Committee is considering is delegation of management to Florida FWC for yellowtail snapper, mutton snapper, and recreational management of black grouper. These species are primarily caught and landed off the State of Florida. Because the Gulf Council currently manages commercial black grouper via the Individual Fishing Quota (IFQ) program, delegation to Florida FWC is only currently being considered for recreational management. The Joint Council Committee has also added actions and alternatives to consider addressing differences in grouper regulations in the south Florida region including species compositions, seasonal closures, bag limits, and minimum size limits. For differences in recreational and commercial regulations for grouper and snapper species see Tables 1 and 2 respectively.

Prior to the Joint Council Committee meetings Florida FWC held a series of South Florida workshops in August of 2013. Some of the ideas proffered by the public that the Joint Council Committee is not currently considered are listed below. The complete summary of these workshops can be found in Appendix C.

Separate South Florida Council

Establishing a separate Council for South Florida would be time consuming, expensive, and duplicate already existing management authority. Requirements would include congressional establishment of a new Council, appointment of staff, office space, equipment needs, etc. Also, this would introduce yet a fourth management body with which affected fishermen and the general public would need to work. The Councils concluded this is was not an efficient or effective approach.

Secession by Florida from the Gulf and South Atlantic Councils

Similar to creating a separate "South Florida Council", a change such as this approach would require legislation to enact, and would require a significant amount of time and resources. If the

State of Florida was successful in this effort, then a commensurate set of regulations would still have to be developed and fishermen would still be operating under three management jurisdictions. The Councils concluded this was not an efficient or effective approach.

Streamlining management measures in South Florida

During the spring of 2014, the South Atlantic Council held port meetings in south Florida as part of their visioning project to develop a long-term vision and strategic plan for the snapper-grouper fishery. Stakeholder input received at these meetings echoed the sentiment heard during the Joint South Florida Issues workshops held by Florida FWC in August 2013. Stakeholder concerns during the port meetings included, but were not limited to: inconsistent regulations between Florida and the two federal jurisdictions (size limits, bag limits, and seasons); spawning season closures; circle hook requirements; and species specific concerns about black grouper, yellowtail snapper, and mutton snapper. Based upon growing stakeholder concern and feedback, the Joint Committee moved forward with development of an amendment that would address the aforementioned concerns.

Delegation Requirements and Considerations

Delegation to Florida FWC would require their agreement to accept responsibility of management of various species throughout their range, or species management could be limited to waters off the State of Florida, if other Gulf and South Atlantic States prefer to manage those species in federal waters. The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) allows for the delegation of management to a state to regulate fishing vessels beyond their state waters, provided its regulations are consistent with the fishery management plan (FMP; Appendix B). The delegation of management authority to the states requires a three-quarters majority vote of the voting members of both the Gulf Council and the South Atlantic Council (Appendix B).

The Magnuson-Stevens Act (16 U.S.C. §1856(a)(3)) outlines the procedure in the case of a state's regulations not being consistent with the FMP (Appendix B). If NMFS determines that a state's regulations are not consistent with the FMP, NMFS shall promptly notify the state and the Council of the determination and provide an opportunity for the region to correct any inconsistencies identified in the notification. If, after notice and opportunity for corrective action, the region does not correct the inconsistencies identified by NMFS, then the delegation to the region shall not apply until NMFS and the Gulf and South Atlantic Councils find that the region has corrected the inconsistencies. In application, the response times between NMFS' determination of inconsistency and the implementation of corrective action by the State of Florida would be case specific.

Structure of the Current Document

During the second meeting, the Joint Council Committee reviewed a draft document organized by type of action with sub-alternatives for each species involved (management-oriented actions), but found this approach to be unnecessarily complicated. The Joint Council Committee then changed their approach to the discussions and organized the actions by species and addressed each type of action that applied to that particular species. The Joint Council Committee directed

staff to further develop the actions/alternatives using species-oriented structure. This structure facilitates the development of specific management alternatives for each species throughout the south Florida region.

The organizational structure was again discussed during the third meeting. NOAA General Counsel thought the document would be improved if the actions/alternatives were organized by type of action with sub-alternatives for each species (management-oriented actions). However, the Joint Council Committee was more comfortable with the current structure organized by species and also thought the public would better understand the proposed alternatives with this structure. The Joint Council Committee directed staff to maintain the current structure (species-oriented actions).

The Joint Council Committee has pursued the approaches outlined in this document in an effort to harmonize fisheries regulations, where possible, throughout the south Florida region and in some cases even throughout the Gulf and South Atlantic Council jurisdictions. Several species occurring in this region do not occur in comparable abundance elsewhere in Gulf or South Atlantic waters. This regional concentration of socially and economically important species creates an opportunity for the Councils to develop consistent recreational and commercial regulations. Current regulations for yellowtail snapper, mutton snapper, and shallow-water grouper complexes in the Gulf and South Atlantic are being considered in this amendment and proposed management alternatives aim to simplify existing fishing regulations across jurisdictions.

1.2 Purpose and Need

Revised Purpose:

The purpose of this amendment is to provide consistent fisheries management measures to reef fish species unique to the south Florida region which are currently managed by different regulatory agencies in the Gulf of Mexico, South Atlantic, and State of Florida waters.

APPROVED BY GMFMC

APPROVED BY SAMFC

Staff proposed need based on Councils' discussions:

The need for this amendment is to facilitate fishermen's compliance, provide clarity to law enforcement efforts, and reduce administrative burdens by reconciling different regulations from separate regulatory agencies across adjacent bodies of water (i.e., Gulf of Mexico, South Atlantic, and State of Florida waters), thereby improving the efficacy with which fishery resources in South Florida are managed.

CHAPTER 2. DRAFT MANAGEMENT ALTERNATIVES

Action 1 &2 pertain exclusively to yellowtail snapper.

Action 1: Partial Delegation of Commercial and/or Recreational Management of Yellowtail Snapper to the State of Florida for Federal Waters Adjacent to the State of Florida

Note: Under this action, the Councils will remain responsible for setting annual catch limits and determining appropriate accountability measures. Alternatives in this Action may be selected in conjunction with those in Action 2.

Alternative 1: No action. Do not delegate management of yellowtail snapper in the Reef Fish Resources and Snapper Grouper Fishery Management Plans for the Gulf and South Atlantic Councils, respectively.

<u>Gulf and South Atlantic Preferred Alternative 2</u>: Determine specific <u>recreational</u> management items for delegation to the State of Florida for yellowtail snapper:

Option 2a: Size limits Option 2b: Seasons Option 2c: Bag limits

<u>South Atlantic Preferred</u> Alternative 3: Determine specific <u>commercial</u> management items for delegation to the State of Florida for yellowtail snapper:

Option 3a: Size limits Option 3b: Seasons Option 3c: Trip limits

Motion: Direct Staff/IPT to develop a reasonable range of alternatives for recreational and commercial size limits, bag limits, seasons, and trip limits for yellowtail snapper for Action 1 to bound the range of actions the State of Florida may consider

APPROVED BY GMFMC APPROVED BY SAMFC

Discussion

This action considers partial delegation of the management of yellowtail snapper to the State of Florida for the recreational (**Alternative 2**) and/or commercial (**Alternative 3**) fisheries. It is the Joint Council Committees' preference that the Councils remain responsible for establishing and implementing ACLs and AMs. The harvest of yellowtail snapper is almost entirely from waters adjacent to the State of Florida (**Tables 3** and **4**). The Councils would remain responsible for setting acceptable biological catch (ABC) and annual catch limit (ACL) values, and for establishing accountability measures (AMs). Any existing permit requirements would remain in effect for fishing in the respective jurisdictions. The Magnuson-Stevens Act allows for the

delegation of management to a state to regulate fishing vessels beyond their state waters, provided its regulations are consistent with the FMP (Appendix B). The delegation of management authority to the states requires a three-quarters majority vote of the voting members of both the Gulf of Mexico Fishery Management Council (Gulf Council) and the South Atlantic Fishery Management Council (South Atlantic Council) (Appendix B).

The Magnuson-Stevens Act (16 U.S.C. §1856(a)(3)) outlines the procedure in the case of a state's regulations not being consistent with the FMP (Appendix B). If National Marine Fisheries Service (NMFS) determines that a state's regulations are not consistent with the FMP, NMFS shall promptly notify the state and the Councils of the determination and provide an opportunity for the region to correct any inconsistencies identified in the notification. If, after notice and opportunity for corrective action, the region does not correct the inconsistencies identified by NMFS, then the delegation to the region shall not apply until NMFS and the Gulf and South Atlantic Councils find that the region has corrected the inconsistencies. In application, the response times between NMFS' determination of inconsistency and the implementation of corrective action by the State of Florida would be case specific.

In **Alternative 1**, all management of yellowtail snapper would be retained by the Councils. The regulations outlined in **Tables 1** and **2** would remain in effect, along with season opening and closing dates and current permissible gears. Currently, the yellowtail snapper season opens for both Councils on January 1.

Gulf and South Atlantic Preferred Alternative 2 would determine specific <u>recreational</u> management items for delegation to the State of Florida for yellowtail snapper, including: Option 2a- size limits; Option 2b- seasons; and Option 2c- bag limits. Multiple options may be selected as preferred for this alternative, thereby delegating one or multiple facets of recreational fisheries management to the State of Florida. It is the Joint Council Committees' preference that the Councils remain responsible for establishing and implementing ACLs and AMs.

South Atlantic Preferred Alternative 3 would determine specific <u>commercial</u> management items for delegation to the State of Florida for yellowtail snapper, including: **Option 3a**- size limits; **Option 3b**- seasons; and **Option 3c**- tip limits. Multiple options may be selected as preferred for this alternative, thereby delegating one or multiple facets of commercial fisheries management to the State of Florida. It is the Joint Council Committees' preference that the Councils remain responsible for establishing and implementing ACLs and AMs.

Table 3. Mean percent of recreational landings (lb ww) by species and state, 2009-2013.

| Species | FL | AL | GA | LA | MS | NC | SC | TX |
|--------------------|-------|------|------|------|------|------|-------|------|
| yellowtail snapper | 99.9% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.1% | 0.0% |
| mutton snapper | 99.9% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.1% | 0.0% |
| black grouper | 94.8% | 5.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.01% | 0.2% |

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Table 4. Mean percent of commercial landings (lb ww) by species and state, 2009-2013.

| Species | FL | AL | GA | LA | MS | NC | SC | TX |
|--------------------|-------|------|------|------|------|------|------|------|
| yellowtail snapper | 99.9% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| mutton snapper | 97.5% | 0.0% | 0.1% | 0.0% | 0.0% | 0.7% | 1.7% | 0.0% |
| black grouper | 93.2% | 0.6% | 1.1% | 0.6% | 0.0% | 0.2% | 2.1% | 2.2% |

Action 2: Establish and Consolidate ABCs and ACLs for Yellowtail Snapper

Note: Alternatives in this Action may be selected in conjunction with those in Action 1, meaning delegation to the State of Florida could be selected and yellowtail snapper could be managed with an overall ABC, with or without sector ACLs.

Alternative 1. No action. Maintain the current commercial and recreational ACLs for yellowtail snapper based on the South Atlantic Council's Snapper Grouper Fishery Management Plan and maintain the current total ACL for yellowtail snapper in the Gulf based on the Reef Fish FMP.

Alternative 2: Manage yellowtail snapper as a single unit with an overall combined multijurisdictional acceptable biological catch (ABC) and annual catch limit (ACL).

<u>South Atlantic Preferred Alternative 3</u>: Manage yellowtail snapper as a single unit with an overall combined multijurisdictional acceptable biological catch (ABC) and annual catch limit (ACL). Allocate the ACL according to one of the following formulas:

South Atlantic Preferred Option 3a: Use the following sector allocation formula: divide the sector allocations based on the ratio of landings with 50% of the weighting given to the mean of the landings from 1993-2008, and 50% on the mean of the landings from 2009-2013.

Option 3b: Base sector allocations on average landings from 2009-2013 **Option 3c:** Base sector allocations on average landings from 2004-2013

Discussion

This action considers establishing and combining Gulf and South Atlantic annual catch limits (ACLs) for yellowtail snapper into one Southeastern U.S. acceptable biological catch (ABC) and ACL. The NMFS would continue to monitor the landings and notify the Councils when the ACL is met or projected to be met. The respective Scientific and Statistical Committees (SSC) for each Council would meet jointly to review stock assessment information, and would collectively determine appropriate values for the overfishing limit (OFL) and ABC for yellowtail snapper. Although yellowtail snapper has been managed as two separate stocks for regulatory purposes, the stock assessment considered yellowtail snapper from the Gulf and South Atlantic to be a single biological stock (SEDAR 27 2013). For the purposes of management of yellowtail snapper, the ACL could be set equal to the ABC since the stock is not currently overfished or undergoing overfishing (SEDAR 27 2013). Currently, only landings data are being used to determine allocations for this amendment. The Councils are considering other criteria in addition to landings data, such as social and economic considerations, for determining allocations in the future.

Currently, each Council's SSC agrees to an ABC for yellowtail snapper based on yield projections from the most recent stock assessment (SEDAR 27 2013). The current jurisdictional apportionment is based on the Florida Keys (Monroe County) jurisdictional boundary between

the Gulf and South Atlantic Councils for yellowtail snapper ABC. The jurisdictional split of the ABC was established by using 50% of catch history from 1993-2008 + 50% of catch history from 2006-2008 resulting in 75% of the ABC going to the South Atlantic, 25% of the ABC going to the Gulf. This methodology was established in the Generic Gulf of Mexico and Comprehensive South Atlantic ACL and AM Amendments (GMFMC 2011; SAFMC 2011) (Alternative 1).

Alternative 2 would use both Councils' agreed upon ABC for management of yellowtail snapper as a single unit with an overall combined ACL. Currently each Council's SSC agrees to an ABC for yellowtail snapper from the most recent stock assessment. A similar method would be used for this alternative and for Alternative 3. The method of management in Alternative 2 could still have within it recreational and commercial fishing allocations. However, neither sector would close in a fishing year so long as the overall ACL had not been met, if that accountability measure (AM) was selected as preferred.

South Atlantic Preferred Alternative 3 would use both Councils' agreed upon ABC for yellowtail snapper and allocate the commercial and recreational ACLs for the Gulf and South Atlantic using one of the time period options. When determining the resultant sector allocations for Options 3a – 3c, sector landings will be capped at their respective sector ACLs (where appropriate), to ensure that overfishing in some years does not result in biased allocation ratios. South Atlantic Preferred Option 3a would divide the sector allocations based on the ratio of landings with 50% of the weighting given to the mean of the landings from 1993-2008, and 50% on the mean of the landings from 2009-2013. **Option 3b** would base sector allocations for waters off the State of Florida on average landings from 2009-2013. Option 3c would base sector allocations for waters off the State of Florida on average landings from 2004-2013. Table 5 outlines the resultant allocations for Options 3a – 3c of Alternative 3, based on the recreational and commercial landings in Table 6. Sector allocation options were determined with landings constrained to be no higher than the ACL for each respective sector in each Council's jurisdiction. For yellowtail snapper, the respective ACLs were not exceeded; however, in 2012 the commercial sector landed 90% of their ACL. Subsequently a new stock assessment showed that the ABC could be increased permitting an increase in ACLs for both Councils.

Table 5. Sector allocation options for yellowtail snapper for South Atlantic Preferred Alternative 3 of Action 2. Percentages were derived from landings in whole weight.

| Yellowtail Snapper Sector ACL Options | | | | | | | |
|---------------------------------------|---------------------------------------|-----|--|--|--|--|--|
| Option | Option Commercial Recreational | | | | | | |
| Option 3a | 76% | 24% | | | | | |
| Option 3b | 80% | 20% | | | | | |
| Option 3c | 73% | 27% | | | | | |

Landings Data Description

The following methods were used to partition landings of yellowtail snapper, mutton snapper, and black grouper between the Gulf and South Atlantic Councils by sector. Commercial landings are

assigned to sub-region (Gulf of Mexico or South Atlantic) based on fisher-reported catch area. For example, landings reported north of U.S. 1 are considered to be within the Gulf of Mexico jurisdiction and south of U.S. 1 landings are considered to be within the South Atlantic jurisdiction. Headboats based from Texas to Gulf-based in Monroe County are within the Gulf of Mexico jurisdiction, and headboats from North Carolina to the Florida Keys are within the South Atlantic jurisdiction. Marine Recreational Fisheries Statistics Survey (MRFSS) data was post-stratified to break the Florida Keys out from the Gulf of Mexico landings. The MRFSS landings from the Florida Keys were re-assigned to the South Atlantic Council, because most legal sized yellowtail snapper, black grouper, and mutton snapper are likely caught in South Atlantic waters (GMFMC CL/AM Amendment 2011).

Table 6. Commercial and recreational landings of yellowtail snapper in the Gulf of Mexico and South Atlantic for 1993-2013. Landings are reported in pounds whole weight. Gulf commercial landings data for 1993 are confidential.

| | Com | mercial | Recreational | | |
|------|--------------|----------------|--------------|----------------|--|
| Year | Gulf | South Atlantic | Gulf | South Atlantic | |
| 1993 | Confidential | 1311367 | 51015 | 1189637 | |
| 1994 | 1344942 | 860543 | 11762 | 880763 | |
| 1995 | 591074 | 1265856 | 3434 | 660358 | |
| 1996 | 485120 | 973815 | 2854 | 554130 | |
| 1997 | 218384 | 1455496 | 2008 | 702997 | |
| 1998 | 341479 | 1183074 | 4965 | 487063 | |
| 1999 | 601027 | 1245345 | 39260 | 288951 | |
| 2000 | 388984 | 1203154 | 4781 | 395845 | |
| 2001 | 246849 | 1174008 | 7045 | 328458 | |
| 2002 | 341823 | 1069057 | 7782 | 407848 | |
| 2003 | 463743 | 948886 | 11472 | 510314 | |
| 2004 | 478221 | 1002309 | 17937 | 698058 | |
| 2005 | 510437 | 814899 | 31176 | 576247 | |
| 2006 | 542237 | 694958 | 21477 | 560320 | |
| 2007 | 350079 | 628608 | 19726 | 786399 | |
| 2008 | 460569 | 910323 | 6056 | 746313 | |
| 2009 | 891925 | 1085281 | 19250 | 348536 | |
| 2010 | 569275 | 1126231 | 8783 | 434259 | |
| 2011 | 769730 | 1125220 | 25560 | 390998 | |
| 2012 | 630984 | 1439586 | 5087 | 493409 | |
| 2013 | 728387 | 1305002 | 6991 | 666026 | |

Source: SERO ALS Database (commercial landings) and MRIP (recreational landings)

Landings indicate that the yellowtail snapper fishery has historically been dominated by the commercial fishery. It is important to note that during the time periods considered in Alternative 3, neither the commercial nor the recreational sector exceeded their respective ACLs in the South Atlantic waters and the Stock ACL in the Gulf waters.

Actions 3-4 pertain exclusively to mutton snapper

Action 3: Partial Delegation of Commercial and/or Recreational Management of Mutton Snapper to the State of Florida in Federal Waters Adjacent to the State of Florida

Note: Under this action, the Councils will remain responsible for setting annual catch limits and determining appropriate accountability measures. Alternatives in this Action may be selected in conjunction with those in Actions 4.

Alternative 1: No action. Retain management of Mutton Snapper in the Reef Fish Resources and Snapper Grouper Fishery Management Plans for the Gulf and South Atlantic Councils, respectively.

<u>Gulf and South Atlantic Preferred Alternative 2</u>: Determine specific <u>recreational</u> management items for delegation to the State of Florida for Mutton Snapper:

Option 2a: Size limits Option 2b: Seasons Option 2c: Bag limits

<u>South Atlantic Preferred Alternative 3:</u> Determine specific <u>commercial</u> management items for delegation to the State of Florida for Mutton Snapper:

Option 3a: Size limits Option 3b: Seasons Option 3c: Trip limits

Motion: Direct Staff/IPT to develop a reasonable range of alternatives for recreational and commercial size limits, bag limits, seasons, and trip limits for mutton snapper for Action 3 to bound the range of actions the State of Florida may consider

APPROVED BY GMFMC APPROVED BY SAMFC

Discussion

This action considers partially delegating the management of mutton snapper to the State of Florida for the recreational (**Gulf and South Atlantic Preferred Alternative 2**) and/or commercial (**South Atlantic Preferred Alternative 3**) fisheries. The harvest of mutton snapper is almost entirely from Florida (**Tables 3** and **4**). The Councils would remain responsible for setting ACLs and for establishing AMs. Any existing permit requirements would remain in effect for fishing in the respective jurisdictions. Additionally, prior to implementing any changes in management items delegated herein, the Joint Council Committee recommended that the State of Florida be required to submit a management plan outlining changes for review and approval by the Gulf and South Atlantic Councils. This may not be required based on the Magnuson-Stevens Act delegation provision (16 U.S.C. §1856(a)(3)). The Magnuson-Stevens Act allows

for the delegation of management to a state to regulate fishing vessels beyond their state waters, provided its regulations are consistent with the FMP (Appendix B). The delegation of management authority to the states requires a three-quarters majority vote of the voting members of both the Gulf Council and the South Atlantic Council (Appendix B).

The Magnuson-Stevens Act (16 U.S.C. §1856(a)(3)) outlines the procedure in the case of a state's regulations not being consistent with the FMP (Appendix B). If National Marine Fisheries Service (NMFS) determines that a state's regulations are not consistent with the FMP, NMFS shall promptly notify the state and the Council of the determination and provide an opportunity for the region to correct any inconsistencies identified in the notification. If, after notice and opportunity for corrective action, the region does not correct the inconsistencies identified by NMFS, then the delegation to the region shall not apply until NMFS and the Gulf and South Atlantic Councils find that the region has corrected the inconsistencies. In application, the response times between NMFS' determination of inconsistency and the implementation of corrective action by the State of Florida would be case specific.

In **Alternative 1**, all management of mutton snapper would be retained by the Councils. The regulations outlined in **Tables 1** and **2** would remain in effect, along with season opening and closing dates and current permissible gears. Currently, the mutton snapper season opens for both Councils on January 1.

Gulf and South Atlantic Preferred Alternative 2 would determine specific <u>recreational</u> management items for delegation to the State of Florida for mutton snapper, including: **Option 2a**- size limits; **Option 2b**- seasons; and **Option 2c**- bag limits. Multiple options may be selected as preferred for this alternative, thereby delegating one or multiple facets of recreational fisheries management to the State of Florida. It is the Joint Council Committees' preference that the Councils remain responsible for establishing and implementing ACLs and AMs.

South Atlantic Preferred Alternative 3 would determine specific <u>commercial</u> management items for delegation to the State of Florida for mutton snapper, including: **Option 3a**- size limits; **Option 3b**- seasons; and **Option 3c**- trip limits. Multiple options may be selected as preferred for this alternative, thereby delegating one or multiple facets of commercial fisheries management to the State of Florida. It is the Joint Council Committees' preference that the Councils remain responsible for establishing and implementing ACLs and AMs.

Action 4: Establish and Consolidate ABCs and ACLs for Mutton Snapper

Note: More than one alternative may be selected as preferred in this action.

Alternative 1. No action. Maintain the current commercial and recreational ACLs for mutton snapper based on the South Atlantic Councils Snapper Grouper Fishery Management Plan and maintain the current total ACL for mutton snapper in the Gulf based on the Reef Fish Resources FMP.

Alternative 2: Manage mutton snapper as a single unit with an overall combined multijurisdictional acceptable biological catch (ABC) and annual catch limit (ACL).

<u>South Atlantic Preferred Alternative 3</u>: Manage mutton snapper as a single unit with an overall combined multijurisdictional acceptable biological catch (ABC) and annual catch limit (ACL).

South Atlantic Preferred Option 3a: Use the following sector allocation formula: divide the sector allocations based on the ratio of landings with 50% of the weighting given to the mean of the landings from 1993-2008, and 50% on the mean of the landings from 2009-2013.

Option 3b: Base sector allocations on average landings from 2009-2013 **Option 3c**: Base sector allocations on average landings from 2004-2013

Discussion

This action considers establishing and combining Gulf and South Atlantic ACLs for mutton snapper into one Southeastern U.S. ABC and ACL. The NMFS would continue to monitor the landings and notify the Councils when the ACL is met or projected to be met. The respective SSC for each Council would meet jointly to review stock assessment information, and would collectively determine appropriate values for the OFL and ABC for mutton snapper. Although mutton snapper has been managed as two different stocks for regulatory purposes, the stock assessment (SEDAR 15A 2008) and recent update assessment (2015 SEDAR 15A Update) considers mutton snapper from the Gulf and South Atlantic to be a single biological stock. For the purposes of management the ACL could be equal to the ABC, since mutton snapper are not presently overfished or experiencing overfishing (SEDAR 15A 2008). Currently, only landings data are being used to determine allocations for this amendment. The Councils are considering other criteria in addition to landings data, such as social and economic considerations, for determining allocations in the future.

Currently, each Council's SSC agrees to an ABC for mutton snapper based on yield projections from the most recent stock assessment (SEDAR 15A 2008). The current jurisdictional apportionment is based on the Florida Keys (Monroe County) jurisdictional boundary between the Gulf and South Atlantic Councils for mutton snapper ABC. The jurisdictional split of the ABC was established by using 50% of catch history from 1990-2008 + 50% of catch history

from 2006-2008 resulting in 82% of the ABC going to the South Atlantic and 18% of the ABC going to the Gulf. This methodology was established in the Generic Gulf of Mexico and Comprehensive South Atlantic ACL and AM Amendments (GMFMC 2011; SAFMC 2011) (**Alternative 1**).

Alternative 2 would manage mutton snapper as a single unit with an overall combined multijurisdictional ABC and ACL. This method of management could still have within it recreational and commercial fishing allocations. However, neither sector would be closed in a fishing year so long as the overall ACL had not been met, if that accountability measure (AM) was selected as preferred.

South Atlantic Preferred Alternative 3 would use both Councils' agreed upon acceptable biological catch (ABC) for mutton snapper and allocate the commercial and recreational ACLs for the Gulf and South Atlantic using one of the time period options. When determining the resultant sector allocations for **Options 3a - 3c**, sector landings will be capped at their respective sector ACLs (where appropriate), to ensure that overfishing in some years does not result in biased allocation ratios. South Atlantic Preferred Option 3a would divide the sector allocations based on the ratio of landings with 50% of the weighting given to the mean of the landings from 1993-2008, and 50% on the mean of the landings from 2009-2013. The current years used for the jurisdictional apportionment for mutton snapper are established by using 50% of catch history from 1990-2008 instead of 1993. The Councils used 50% of the catch history from 1993-2008 for the yellowtail snapper jurisdictional apportionment. **Option 3b** would base sector allocations for waters off the State of Florida on average landings from 2009-2013. Option 3c would base sector allocations for waters off the State of Florida on average landings from 2004-2013. Table 7 outlines the resultant allocations for Options 3a – 3c of Alternative 3, based on the recreational and commercial landings in **Table 8**. Sector allocation options were determined with landings constrained to be no higher than the ACL for each respective sector in each Council's jurisdiction. For mutton snapper, the respective ACLs were not exceeded.

Table 7. Sector allocation options for mutton snapper for Alternative 3 of Action 4. Percentages were derived from landings in whole weight.

| Mutton Snapper Sector ACL Options | | | | | |
|-----------------------------------|------------|--------------|--|--|--|
| Option | Commercial | Recreational | | | |
| Option 3a | 32% | 68% | | | |
| Option 3b | 25% | 75% | | | |
| Option 3c | 27% | 73% | | | |

Table 8. Commercial and recreational landings of mutton snapper in the Gulf of Mexico and South Atlantic for 1993-2013. Landings are reported in pounds whole weight. Gulf commercial landings data for 1993-1996 are confidential. For explanation of landings data see Action 2 discussion.

| •• | Commercial | | Recreational | |
|------|--------------|----------------|--------------|----------------|
| Year | Gulf | South Atlantic | Gulf | South Atlantic |
| 1993 | Confidential | 169112 | 4664 | 540658 |
| 1994 | Confidential | 176022 | 4946 | 399568 |
| 1995 | Confidential | 196265 | 2767 | 458726 |
| 1996 | Confidential | 207243 | 20493 | 314405 |
| 1997 | 69841 | 221674 | 2303 | 339350 |
| 1998 | 73343 | 282490 | 10665 | 312690 |
| 1999 | 84854 | 168141 | 3583 | 266928 |
| 2000 | 80146 | 124475 | 1717 | 340501 |
| 2001 | 99960 | 133047 | 4077 | 302430 |
| 2002 | 101446 | 132219 | 2705 | 422465 |
| 2003 | 124508 | 144109 | 9891 | 555855 |
| 2004 | 201938 | 145861 | 13296 | 396210 |
| 2005 | 140947 | 96298 | 2243 | 466909 |
| 2006 | 214115 | 74839 | 1976 | 631323 |
| 2007 | 133086 | 88550 | 34047 | 748118 |
| 2008 | 81391 | 76705 | 20281 | 822520 |
| 2009 | 43689 | 78132 | 5766 | 436032 |
| 2010 | 54242 | 74737 | 1541 | 569471 |
| 2011 | 94238 | 66158 | 1391 | 281247 |
| 2012 | 88695 | 77122 | 7156 | 477022 |
| 2013 | 107814 | 73392 | 4960 | 481731 |

Source: SERO ALS Database (commercial landings) and MRIP (recreational landings)

Landings indicate that the mutton snapper fishery has historically been dominated by the recreational fishery. It is important to note that during the time periods considered in **South Atlantic Preferred Alternative 3**, neither the commercial nor the recreational sector exceeded their respective ACLs.

Action 5. Modify Mutton Snapper Recreational Bag Limit in Gulf of Mexico and South Atlantic

Action 6. Modify Mutton Snapper Commercial Trip Limit in the Gulf of Mexico and South Atlantic

Motion: Move Actions 5 & 6 to the Councils' amendments that will implement the new mutton snapper ABC/ACL.

APPROVED BY GMFMC

APPROVED BY SAMFC

At the Joint June 11, 2015 Council Session no Gulf or South Atlantic Committee motions were addressed after Action 6.

Actions 7 & 8 pertain exclusively to black grouper

Action 7: Partial Delegation of Recreational Management of Black Grouper to the State of Florida in Federal Waters Adjacent to the State of Florida

Note: Under this action, the Councils will remain responsible for setting annual catch limits and determining appropriate accountability measures. Alternatives in this Action may be selected in conjunction with those in Actions 8, 9, and 10.

Alternative 1: No action. Retain recreational management of black grouper in the Reef Fish Resources and Snapper Grouper Fishery Management Plans for the Gulf and South Atlantic Councils, respectively.

Alternative 2: Determine specific recreational management items for delegation to the State of Florida for black grouper:

Option 2a: Size limits Option 2b: Seasons Option 2c: Bag limits

Option 2d: Minor modifications to existing allowable gear

Committee motions from June meeting:

The Gulf Reef Fish Committee recommends, and I so move: Motion: To have Action 7 apply to the waters adjacent to the State of Florida.

Motion carried.

The Gulf Reef Fish Committee did not see a need to specify any additional minor modifications to the existing allowable gear for delegation to the State of Florida for recreational management. The Gulf Reef Fish Committee recommends, and I so move: In Action 7, Alternative 2d be moved to considered but rejected.

Motion carried.

Discussion

This action considers alternatives that would partially delegate the management of black grouper to the State of Florida for the recreational (Alternative 2) sector. Tables 3 and 4 reveal that harvest of black grouper is almost entirely from Florida with a very low percentage of landings occurring from other Gulf and South Atlantic States. Delegation of commercial management measures for black grouper is not currently being considered by the Joint Council Committee because it is currently part of the shallow-water grouper Individual Fishing Quota (IFQ) program in the Gulf of Mexico. The Magnuson-Stevens Act allows for the delegation of management to a state to regulate fishing vessels beyond their state waters, provided its regulations are consistent with the FMP (Appendix B). The delegation of management authority to the states requires a

three-quarters majority vote of the voting members of both the Gulf Council and the South Atlantic Council (Appendix B). The Councils' would remain responsible for setting annual catch limit (ACL) values and for establishing accountability measures (AMs) as outlined by the Joint Council Committee. Any existing permit requirements would remain in effect for fishing in the respective jurisdictions. Additionally, prior to implementing any changes in management items delegated herein, the State of Florida will be required to submit a management plan outlining changes for review and approval by the Gulf and South Atlantic Councils. This may not be required based on the Magnuson-Steven Act delegation provision (16 U.S.C. §1856(a)(3)).

The Magnuson-Stevens Act (16 U.S.C. §1856(a)(3)) outlines the procedure in the case of a state's regulations not being consistent with the FMP (Appendix B). If National Marine Fisheries Service (NMFS) determines that a state's regulations are not consistent with the FMP, NMFS shall promptly notify the state and the Council of the determination and provide an opportunity for the region to correct any inconsistencies identified in the notification. If, after notice and opportunity for corrective action, the region does not correct the inconsistencies identified by NMFS, then the delegation to the region shall not apply until NMFS and the Gulf and South Atlantic Councils find that the region has corrected the inconsistencies. In application, the response times between NMFS' determination of inconsistency and the implementation of corrective action by the State of Florida would be case specific.

In **Alternative 1**, all management of black grouper would be retained by the Councils. The regulations outlined in **Tables 1** and **2** would remain in effect, along with season opening and closing dates and current permissible gears. Currently, the black grouper season is open from May 1 through December 31 in the South Atlantic for both the commercial and recreational sectors. In the Gulf the recreational sector open year round, if fishing shoreward of the 20 fathom depth contour from February 1 through March 31.

Alternative 2 would determine specific <u>recreational</u> management items for delegation to the State of Florida for black grouper, including: **Option 2a**- size limits; **Option 2b**- seasons; **Option 2c**- bag limits; and **Option 2d**- minor modifications to existing gear. Multiple options may be selected as preferred for this alternative, thereby delegating one or multiple facets of recreational fisheries management to the State of Florida. It is the Joint Council Committees' preference that the Councils remain responsible for establishing and implementing ACLs and AMs.

Action 8: Establish and Consolidate ABCs and ACLs for Black Grouper

Note: Alternatives in this Action may be selected in conjunction with those in Actions 7, 9, and 10. More than one alternative may be selected as preferred in this action.

Alternative 1. No action. Maintain the current recreational ACLs based on the Reef Fish Resources and Snapper Grouper Fishery Management Plans for the Gulf and South Atlantic Councils, respectively.

Alternative 2: Manage black grouper as a single unit with an overall combined multijurisdictional acceptable biological catch (ABC) and annual catch limit (ACL).

Alternative 3. Use both Councils' agreed upon ABC for black grouper and allocate the recreational ACLs for the Gulf and South Atlantic:

Option 3a: Combine the current recreational allocations (i.e., 63.12% of the ACL for the South Atlantic and 27% of the ACL for the Gulf) for black grouper into a single recreational allocation.

Option 3b: Use the following sector allocation formula: divide the sector allocations based on the ratio of landings with 50% of the weighting given to the mean of the landings from 1993-2008, and 50% on the mean of the landings from 2009-2013.

Option 3c: Base sector allocations on average landings from 2009-2013 **Option 3d**: Base sector allocations on average landings from 2004-2013

No Gulf Reef Fish Committee motions were made regarding Action 8.

Discussion

This action considers establishing and combining the Gulf and South Atlantic ABCs and ACLs for black grouper in the Southeastern U.S. The NMFS would continue to monitor the landings and notify the Councils when the ACL is met or projected to be met. The respective SSCs for each Council would meet jointly to review stock assessment information, and would collectively determine appropriate values for OFL and ABC for black grouper. Although black grouper has been managed as two different stocks for regulatory purposes, the stock assessment (SEDAR 19 2010) considered black grouper from the Gulf and South Atlantic to be a single biological stock. For the purposes of management of black grouper, the ACL could be set equal to the ABC, since black grouper are not currently overfished or undergoing overfishing (SEDAR 19 2010). Currently, only landings data are being used to determine allocations for this amendment. The Councils are considering other criteria in addition to landings data, such as social and economic considerations, for determining allocations in the future.

Currently, each Council's SSC agrees to an ABC for black grouper based on yield projections from the most recent stock assessment (SEDAR 19 2010). The current jurisdictional apportionment is based on the Florida Keys (Monroe County) jurisdictional boundary between the Gulf and South Atlantic Councils for black grouper ABC. The jurisdictional split of the ABC was established by using 50% of catch history from 1986-2008 + 50% of catch history

from 2006-2008 resulting in 47% of the ABC going to the South Atlantic and 53% of the ABC going to the Gulf. This methodology was established in the Generic Gulf of Mexico and Comprehensive South Atlantic ACL and AM Amendments (GMFMC 2011; SAFMC 2011) (**Alternative 1**).

Alternative 2 would manage black grouper as a single unit with an overall combined multijurisdictional ABC and ACL. This method of management could still have within it recreational and commercial fishing allocation. However, neither sector would be closed in a fishing year so long as the overall ACL had not been met, if that AM was selected as preferred.

Alternative 3 would use both Councils' agreed upon acceptable biological catch (ABC) for black grouper and allocate the commercial and recreational ACLs for the Gulf and South Atlantic using one of the time period options. When determining the resultant sector allocations for Options 3b – 3d, sector landings will be capped at their respective sector ACLs (where appropriate), to ensure that overfishing in some years does not result in biased allocation ratios. Option 3a would combine the current recreational allocations (i.e., 63% of the ACL for the South Atlantic and 27% of the ACL for the Gulf) for black grouper into a single recreational allocation. The respective commercial allocations for each Council would continue to be managed directly by the responsible Council. This option may be inherently problematic for several reasons, first the recreational portion of the Gulf black grouper ACL and annual catch target (ACT) is undefined because there is no defined allocation of recreational harvest, instead black grouper is included in the shallow-water grouper complex (GMFMC 2011). The ACL for the shallow-water groupers is determined using black grouper as the indicator species for the complex. This means that the Gulf recreational allocation for black grouper is undefined and would need to be revisited.

Option 3b would divide the sector allocations based on the ratio of landings, with 50% of the weighting given to the mean of the landings from 1993-2008, and 50% on the mean of the landings from 2009-2013. **Option 3c** would base sector allocations for waters off the State of Florida on average landings from 2009-2013. **Option 3d** would base sector allocations for waters off the State of Florida on average landings from 2004-2013. **Table 19** outlines the resultant allocations for **Options 3a – 3c** of **Alternative 3**, based on the recreational and commercial landings in **Table 20**. Sector allocation options were determined with landings constrained to be no higher than the ACL for each respective sector in each Council's jurisdiction. For black grouper, the respective ACLs were not exceeded.

Table 18. Sector allocation options for black grouper for Alternative 3 of Action 8. Percentages were derived from landings in whole weight.

| Black Grouper Sector ACL Options | | | | | |
|----------------------------------|--|--------------|--|--|--|
| Option | Commercial | Recreational | | | |
| Option 3a | Would vary annually based on yield projections | | | | |
| Option 3b | 62% 38% | | | | |
| Option 3c | 48% 52% | | | | |
| Option 3d | 58% | 42% | | | |

Table 19. Commercial and recreational landings of black grouper in the Gulf of Mexico and South Atlantic for 1993-2013. Landings are reported in pounds whole weight.

| Year | Commercial | | Recreational | |
|------|------------|----------------|--------------|----------------|
| Gulf | | South Atlantic | Gulf | South Atlantic |
| 1993 | 515679 | 146214 | 13903 | 169438 |
| 1994 | 431911 | 131164 | 26451 | 217951 |
| 1995 | 309725 | 201737 | 63266 | 177669 |
| 1996 | 306206 | 190494 | 29489 | 372712 |
| 1997 | 185267 | 169530 | 54740 | 465053 |
| 1998 | 254355 | 174739 | 138058 | 272127 |
| 1999 | 362967 | 128968 | 43216 | 66471 |
| 2000 | 416218 | 122650 | 14505 | 107069 |
| 2001 | 389736 | 136082 | 30654 | 154036 |
| 2002 | 334195 | 149681 | 16054 | 130980 |
| 2003 | 389081 | 151382 | 18404 | 234406 |
| 2004 | 372206 | 147167 | 8352 | 189348 |
| 2005 | 217295 | 115345 | 45363 | 164478 |
| 2006 | 225776 | 81753 | 1555 | 124960 |
| 2007 | 137965 | 95501 | 20413 | 193300 |
| 2008 | 67007 | 52722 | 4583 | 179112 |
| 2009 | 38649 | 46726 | 23154 | 137771 |
| 2010 | 27537 | 44057 | 391 | 36186 |
| 2011 | 50526 | 62407 | 667 | 51898 |
| 2012 | 54165 | 50813 | 30718 | 149353 |
| 2013 | 63400 | 54075 | 3815 | 99096 |

Source: SERO ALS Database (commercial landings) and MRIP (recreational landings)

Landings indicate that the black grouper fishery has historically been dominated by the commercial fishery. However, recreational landings have increased in the more recent time series (2009-2013), resulting in the ratio of landings between the sectors to slightly favor the recreational sector. It is important to note that during the time periods considered in **Alternative** 3, neither the commercial nor the recreational sector exceeded their respective ACLs.

Actions 9 & 10 pertain to seasonal closures in the shallow-water grouper fisheries of the Gulf of Mexico and the South Atlantic. Seasonal closures are time-based closures to fishing effort to conserve or protect fish stocks from harvest during periods of increased vulnerability, such as during spawning seasons.

Action 9. Modify Shallow-water Grouper Species Compositions and Seasonal Closures in the Gulf and South Atlantic

Note: Alternatives in this action may be selected in conjunction with those in Actions 7, 8, and 10. Currently, more than one alternative may be selected as preferred for this action.

Alternative 1: No action. Retain the existing respective shallow-water grouper species compositions and seasonal closures in the Gulf and South Atlantic Councils. (SAFMC SG AP)

Alternative 2: Remove the shallow-water grouper closure for all affected grouper species in the Gulf of Mexico and the South Atlantic:

Option 2a: from the Dade/Monroe County line on the east coast of Florida to Shark Point on the west coast of Monroe County, Florida.

Option 2b: Throughout each Council's jurisdiction.

Alternative 3: Establish identical regulations for shallow-water grouper species compositions for the Gulf and South Atlantic from the Dade/Monroe County line on the east coast of Florida to Shark Point on the west coast of Monroe County, Florida:

Option 3a: Adopt the Gulf shallow-water grouper species composition for the Gulf and South Atlantic.

Option 3b: Adopt the South Atlantic shallow-water grouper species composition for the Gulf and South Atlantic.

Option 3c: Specify a new and identical shallow-water species complex for the Gulf and South Atlantic.

Alternative 4: Establish identical regulations for the shallow-water grouper seasonal closures in the Gulf and South Atlantic from the Dade/Monroe County line on the east coast of Florida to Shark Point on the west coast of Monroe County, Florida:

Option 4a: Adopt the Gulf shallow-water grouper seasonal closures for the Gulf and South Atlantic.

Option 4b: Adopt the South Atlantic shallow-water grouper seasonal closures for the Gulf and South Atlantic.

Option 4c: Establish new and identical regulations for shallow-water grouper seasonal closures in the Gulf of Mexico and the South Atlantic.

Alternative 5: Establish identical regulations for the shallow-water grouper seasonal closures throughout the Gulf and South Atlantic:

Option 5a: Adopt the Gulf shallow-water grouper seasonal closures for the Gulf and South Atlantic

Option 5b: Adopt the South Atlantic shallow-water grouper seasonal closures for the Gulf and South Atlantic.

Option 5c: Establish new and identical regulations for shallow-water grouper seasonal closures in the Gulf of Mexico and the South Atlantic.

Alternative 6: Modify the shallow-water grouper seasonal closure off Monroe County, Florida to allow harvest of other shallow-water grouper species and only close harvest of gag.

No Gulf Reef Fish Committee motions were made regarding Action 9.

Discussion:

In the Gulf of Mexico, a separate recreational gag season was developed as part of the gag rebuilding plan (GMFMC 2012). Because other SWG stocks are considered healthy, the utility of the SWG closure was questioned. In addition, much of the dominant gag spawning grounds are now protected by time-area closures. In response to this, the Gulf Council submitted a framework action that among other things, eliminated the February 1 through March 31 SWG closure shoreward of 20 fathoms in the Gulf of Mexico (GMFMC 2012). These new regulations were adopted and implemented in 2013. The SWG closure is still enforced in the exclusive economic zone in the Gulf for waters seaward of 20 fathoms (~36.5 m, or 120 feet). It should be noted that the SEDAR 33 stock assessment, in combination with additional analyses as requested by the Gulf Council's SSC, determined that the Gulf of Mexico gag population was rebuilt at their June 2014 meeting.

The January-April commercial and recreational spawning season closure for South Atlantic SWG was put into place through the final rule for Amendment 16 to the Snapper Grouper FMP (SAFMC 2008). Off the southeastern United States, gag spawn from December through May, with a peak in March and April (McGovern et al. 1998). There is some evidence that spawning may occur earlier off Florida compared to other more northern areas. Gag may make annual late-winter migrations to specific locations to form spawning aggregations, and fishermen know many of these locations. McGovern et al. (2005) found gag were capable of extensive movement and suggested some large scale movement may be related to spawning. In 1998, the South Atlantic Council took action to reduce fishing mortality and protect spawning aggregations of gag and black grouper. Actions included a March-April spawning season closure for the commercial sector. While a March-April commercial closure may offer some protection to spawning aggregations including the selective removal of males, the January-April spawning season closure provided greater protection. Although gag spawn from December through May, aggregations are in place before and after spawning activity (Gilmore and Jones 1992). Therefore, males can be removed from spawning aggregations early in the spawning season, and this could affect the reproductive output of the aggregation if there were not enough males present in an aggregation for successful fertilization of eggs. Amendment 16 (SAFMC 2008) also established a provision to close other SWG including black grouper, red grouper, scamp, red hind, rock hind, yellowmouth grouper, yellowfin grouper, graysby, and coney, which are also known to spawn during January-April. Further protection for gag and SWG were provided through the establishment of ACLs and AMs in Amendment 17B to the Snapper Grouper FMP (SAFMC 2010b) and the Comprehensive ACL Amendment (SAFMC 2011), respectively. Thus,

the seasonal closure provides protection to SWG during their spawning season when SWG species may be exceptionally vulnerable to fishing pressure, and ACLs and AMs are in place to help ensure overfishing does not occur. Information on SWG in the South Atlantic is provided in **Table 21**.

Alternative 1 would retain the existing respective shallow-water grouper species compositions and seasonal closures in the Gulf and South Atlantic Councils. Alternative 2 would remove the shallow-water grouper closure for all affected grouper species in the Gulf of Mexico and the South Atlantic either from the Dade/Monroe County line on the east coast of Florida to Shark Point on the west coast of Monroe County, Florida (Option 2a) or throughout each Council's jurisdiction (Option 2b). Law enforcement personnel have commented that the geographic boundaries proposed in Alternative 2, Option 2a may be easier to abide by and enforce. The Dade/Monroe County line in the east is a well-known and acknowledged boundary, and the waters west of Shark Point on the west coast of Monroe County do not constitute heavily used fishing grounds.

Alternative 3 would establish identical regulations for shallow-water grouper species compositions for the Gulf and South Atlantic from the Dade/Monroe County line on the east coast of Florida to Shark Point on the west coast of Monroe County, Florida by adopting either the Gulf shallow-water grouper species composition (Option 3a) or the South Atlantic shallowwater grouper species composition (Option 3b) for the Gulf and South Atlantic, or by specifying a new and identical shallow-water species complex for the Gulf and South Atlantic (**Option 3c**). Developing identical regulations for shallow-water grouper species compositions in both Councils' jurisdictions would simplify management for fishermen, especially those who may fish in both Councils' jurisdictions on a single trip. Alternative 4 would establish identical regulations for the shallow-water grouper seasonal closures in the Gulf and South Atlantic from the Dade/Monroe County line on the east coast of Florida to Shark Point on the west coast of Monroe County, Florida by adopting the Gulf shallow-water grouper seasonal closures (**Option** 4a) or the South Atlantic shallow-water grouper seasonal closures (Option 4b) for the Gulf and South Atlantic, or by establishing new and identical regulations for shallow-water grouper seasonal closures in both Councils' jurisdictions (Option 4c). Alternative 5 would establish identical regulations for the shallow-water grouper seasonal closures in the same manner and with the same options as Alternative 4, except that the resultant regulations would be applicable throughout the Gulf and South Atlantic. Alternative 6 would modify the shallow-water grouper seasonal closure off Monroe County, Florida to allow harvest of other species and only close harvest of gag. Alternative 6 would allow fishermen to pursue shallow-water grouper species determined in Alternative 3 (if Alternative 3 is selected as preferred), while protecting the recovery of gag in the South Atlantic.

Spawning season closures were established by both Councils based on the effects of fishing pressure on the reproductive characteristics of shallow-water grouper (SWG) are most often seen in the average size of fish landed, and in changes in sex ratios over time (Coleman et al. 1996; Koenig et al. 2000). Long-term effects can include decreases in fecundity, population abundance, and concomitantly, catch limits. Commercially and recreationally important SWG species which would be subject to additional exploitation, such as red grouper (*Epinephelus morio*), black grouper (*Mycteroperca bonaci*), gag (*M. microlepis*), yellowfin grouper (*M.*

venenosa), yellowmouth grouper (*M. interstitialis*), and scamp (*M. phenax*), all of which are protogynous species (Shapiro 1987, Böhlke and Chaplin 1993) attracted to high-relief sites. Gag, scamp, and black grouper form predictable, localized, and seasonal spawning aggregations, increasing their vulnerability to exploitation (Gilmore and Jones 1992; Coleman et al. 1996; Coleman et al. 2000; Brule et al. 2003). Yellowfin and yellowmouth groupers may be similarly vulnerable; however, substantially less empirical life history information is available for these two species (**Table 20**).

Table 20. Gulf of Mexico shallow-water grouper spawning information and recreational season closures. The shallow-water grouper complex applies to both the recreational and commercial sector in the Gulf of Mexico; however, the commercial sector is managed with an individual fishing quota system so the season closures listed below only apply to the recreational sector.

| Gulf of Mexico Shallow-Water Grouper Complex | | | | | |
|--|------------------------------------|--------------------|--------------------|-------------------------------|---|
| Species | Current Recreational Closure | Spawning Season | Spawnin g Depth | Northernmost Distribution | Data Source(s) |
| Gag | 1/1-6/30 and 12/4-12/31 | January-May | 50-120 m | Northern Florida Panhandle | SEDAR 33 |
| Black Grouper | 2/1- 3/31 > 20-fath | February- April | ≥ 30 m | Middle Grounds/Big Bend | SEDAR 19 |
| Red Grouper | 2/1- 3/31 > 20-fath | March-May | 25-120 m | Northern Florida Panhandle | SEDAR 12, 2009 SEDAR 12 Update |
| Scamp | 2/1- 3/31 > 20-fath | January-May | 30-100 m | Gulf-wide | Heemstra and Randall 1993, Coleman et al. 2011 |
| Yellowfin Grouper | 2/1- 3/31 > 20-fath | February- April | 30-40 m | Gulf-wide | Nemeth et al. 2006 |
| Yellowmouth Grouper | 2/1- 3/31 > 20-fath | March-May | ≤ 150 m | Gulf-wide | Heemstra and Randall 1993; Bullock and Murphy 1994 |

Table 21. South Atlantic shallow-water grouper complex spawning information. The shallow-water complex applies to both the commercial and recreational sectors in the South Atlantic.

| Species | Current Rec & Comm Closure | Peak Spawning Season | General Spawning Depth | Data Source(s) |
|------------------------|----------------------------|-----------------------------------|------------------------------|--|
| Gag | January-April | January-May | 24-117 m | McGovern et al. 1998; SEDAR 10 |
| Black Grouper | January-April | January-March | ≥ 30 m | Crabtree and Bullock 1998; SEDAR 19 |
| Red Grouper | January-April | February-April | 30-90 m | Williams and Carmichael 2009; SEDAR 19 |
| Scamp | January-April | March-May | 33-93 m | Williams and Carmichael 2009; Harris et al. 2002 |
| Yellowfin Grouper | January-April | March in FL Keys | | Taylor and McMichael 1983 |
| Yellowmouth Grouper | January-April | March-May in Gulf | | Bullock and Murphy 1994 |
| Red Hind | January-April | December-February in Caribbean | | Thompson and Munro 1978 |
| Rock Hind | January-April | January through March off Cuba | | García-Cagide et al. 1994; Rielinger 1999 |
| Graysby | January-April | March, May-July in Caribbean | | Erdman 1976 |
| Coney | January-April | November to March off Puerto Rico | | Figuerola et al. 1997 |

Action 10. Modify Black Grouper Fishery Closures and Bag Limits in the Gulf of Mexico and the South Atlantic.

Note: Alternatives in this action may be selected in conjunction with those in Actions 7, 8, and 9.

Alternative 1: No Action – Do not modify black grouper recreational closures in the Gulf of Mexico or recreational and commercial closures in the South Atlantic. Maintain currently established seasonal bag limits in both the Gulf of Mexico and the South Atlantic, with black grouper included as a component of the shallow-water grouper and reef fish aggregate bag limits.

Alternative 2: Remove black grouper from the shallow-water grouper closures of the recreational season in the Gulf and of the recreational and commercial seasons in the South Atlantic

Alternative 3: Establish a recreational seasonal closure for black grouper for the Gulf and the South Atlantic. (*Multiple options may be chosen*)

Option 3a: January Option 3b: February Option 3c: March

Alternative 4: Remove black grouper from the shallow-water grouper closures of the recreational season in the Gulf of Mexico and the recreational and commercial seasons in the South Atlantic in federal waters off Florida.

Alternative 5: Remove black grouper from the shallow-water grouper closures of the recreational season in the Gulf of Mexico and the recreational and commercial seasons in the South Atlantic in federal waters off Monroe County, Florida.

Alternative 6: Remove black grouper from recreational aggregate bag limits in the Gulf of Mexico.

Alternative 7: Remove black grouper from recreational aggregate bag limits in the South Atlantic.

Alternative 8: Establish a recreational bag limit for black grouper.

Option 8a: One fish/person/day Option 8b: Two fish/person/day Option 8c: Three fish/person/day Option 8d: Four fish/person/day

Option 8e: Apply this bag limit only to the following area(s):

Sub-option 8a: Off Monroe County

Sub-option 8b: In federal waters off Florida

Sub-option 8c: In federal waters of the Gulf and the South Atlantic

Alternative 9: Modify the commercial seasonal closure for black grouper in the Gulf of Mexico and the South Atlantic.

Option 3a: January Option 3b: February Option 3c: March

Added by the South Atlantic Council. This addition is not supported by the Gulf Council.

The South Atlantic Council wants to include discussion and a new alternative considering changes to commercial black grouper management, including seasonal closures and trip limits. These changes would affect the Gulf shallow-water grouper IFQ program. The Gulf Council does not support the inclusion of this discussion.

The Gulf Reef Fish Committee recommends, and I so move: To remove Actions 10 and 11 in the Options Paper and replace them with Actions 6, 7 and 8 in the Restructured Document.

Motion carried.

From proposed restructured document:

Action 6: Standardize <u>Recreational Seasonal Closures</u> for Grouper in the South Florida Management Area within the Gulf of Mexico and South Atlantic Councils' Jurisdictions

- **Alternative 1**: No action. Retain the existing respective shallow-water grouper recreational seasonal closures in the Gulf and South Atlantic Councils' areas of jurisdiction.
- **Alternative 2:** Remove the shallow-water grouper recreational closures for all affected grouper species.
- **Alternative 3:** Adopt the Gulf Council's recreational shallow-water grouper seasonal closure (excluding gag) of February 1 March 31 outside the 20 fathom depth contour.
- **Alternative 4:** Adopt the South Atlantic Council's recreational shallow-water grouper seasonal closure of January 1 April 30.
- **Alternative 5:** Establish a gag recreational season closure for any of the following months in the South Florida management area:

Option 5a: January Option 5b: February Option 5c: March

Alternative 6: Establish a <u>black grouper</u> recreational season closure for any of the following months in the South Florida management area:

Option 6a: January Option 6b: February Option 6c: March **Alternative 7:** Establish a <u>red grouper</u> recreational season closure for any of the following months in the South Florida management area:

Option 7a: January Option 7b: February Option 7c: March

Action 7: <u>Recreational Grouper Bag Limits</u> in the South Florida Management Area within the Gulf of Mexico and South Atlantic Councils' Jurisdictions

Note: Multiple Alternatives and Options may be selected as preferred.

Alternative 1: No Action. Maintain currently established bag limits in the Gulf of Mexico and South Atlantic, with black grouper included as a component of the shallow-water grouper and reef fish aggregate bag limits.

Alternative 2: Standardize black grouper recreational bag limits.

Option 2a: 1 fish per person per day – current South Atlantic bag limit (black or gag) **Option 2b**: 2 fish per person per day – current Gulf of Mexico bag limit (part of shallow-water grouper aggregate bag limit)

Alternative 3: Standardize gag recreational bag limits.

Option 3a: 1 fish per person per day – current South Atlantic bag limit (black or gag) **Option 3b**: 2 fish per person per day – current Gulf of Mexico bag limit

Alternative 4: Standardize <u>red grouper</u> recreational bag limits.

Option 4a: 3 fish per person per day – current South Atlantic aggregate bag limit **Option 4b**: 2 fish per person per day – current Gulf of Mexico bag limit

Alternative 5: Standardize scamp, yellowmouth, and yellowfin grouper recreational bag limits.

Option 5a: 3 fish per person per day – current South Atlantic aggregate bag limit

Option 5b: 4 fish per person per day – current Gulf of Mexico aggregate bag limit

Action 8: Modify <u>Recreational Grouper Size Limits</u> in the South Florida Management Area within the Gulf of Mexico and South Atlantic Councils' Jurisdictions

Note: *Multiple Alternatives may be selected as preferred.*

Alternative 1: No action – Retain the current respective jurisdictional size limits for species in shallow-water grouper complexes.

Alternative 2: Adopt one of the following recreational minimum size limits for <u>black grouper</u>.

Option 2a: 24 inches TL – current South Atlantic size limit

Option 2b: 22 inches TL – current Gulf of Mexico size limit

Alternative 3: Adopt one of the following recreational minimum size limits for gag. **Option 3a**: 24 inches TL – current South Atlantic size limit

Option 3b: 22 inches TL – current Gulf of Mexico size limit

Alternative 4: Maintain <u>red grouper</u> recreational minimum size limits or consider another size limit.

Option 4a: 20 inches TL – current South Atlantic limit **Option 4b**: 20 inches TL – current Gulf of Mexico limit

Alternative 5: Standardize <u>scamp</u>, <u>yellowmouth</u>, and <u>yellowfin grouper</u> recreational size limits.

Option 5a: 20 inches TL – current South Atlantic size limit for all three species

Option 5b: 16 inches TL for scamp – current Gulf of Mexico size limit;

20 inches TL for yellowfin – current Gulf of Mexico size limit; No size limit for yellowmouth – current Gulf of Mexico size limit

Discussion

Modifying the current black grouper closures in the Gulf of Mexico and the South Atlantic could provide or remove protections to spawning aggregations, especially during peak spawning activity in January through March. The protection of spawning aggregations has shown to be beneficial to other heavily-targeted protogynous groupers (see Gulf of Mexico gag, SEDAR 33). Also, modifying the inclusion of black grouper in recreational bag limits in the Gulf of Mexico and the South Atlantic could provide additional harvest capacity for the recreational sector in the south Florida region, and may increase removals of other shallow-water groupers which may be under rebuilding plans. Removal of black grouper from the shallow-water grouper aggregate bag limit could permit the additional harvest of other shallow-water grouper species still included in bag limit. The same can be said about the potential additional harvest of other reef fish species included in the reef fish aggregate bag limit.

Alternative 1 would retain the current black grouper recreational closure in the Gulf of Mexico, and the recreational and commercial closures in the South Atlantic. Currently established seasonal bag limits in both the Gulf of Mexico and the South Atlantic would also remain the same, with black grouper included as a component of the shallow-water grouper and reef fish aggregate bag limits.

Alternative 2 would remove black grouper from the shallow-water grouper closure of the recreational season in the Gulf and of the recreational and commercial seasons in the South Atlantic, thus allowing harvest throughout the South Florida region year-round. Alternatively,

Alternative 3 would establish a recreational seasonal closure for black grouper during January only (Option 3a), during February only (Option 3b), or during March only (Option 3c). Multiple months can be selected for Alternative 3 if a closure is determined necessary for multiple months.

Alternative 4 would remove black grouper from the shallow-water grouper closures of the recreational season in the Gulf of Mexico and the recreational and commercial seasons in the South Atlantic in federal waters off Florida. This would open black grouper up to recreational

fishing effort beyond 20 fathoms in Gulf waters off Florida during February and March, and to recreational and commercial fishing effort in Atlantic waters off Florida from January through April.

Alternative 5 would have the same effects as **Alternative 4**, except that **Alternative 5** would only apply to those waters off Monroe County, Florida.

Alternative 6 would remove black grouper from recreational aggregate bag limits in the Gulf of Mexico, and Alternative 7 would do the same in the South Atlantic. Alternatives 6 and 7 have the potential to result in increased harvest capacity for those species remaining in the shallow-water grouper aggregate bag limits, as black grouper would no longer account for some portion of those bag limits. Such a removal would permit the harvest of additional fish still included within those respective aggregate bag limits.

Alternative 8 would establish a recreational bag limit for black grouper, with one of the following options: Option 8a: One fish/person/day; Option 8b: Two fish/person/day; Option 8c: Three fish/person/day; and Option 8d: Four fish/person/day. Option 8e of Alternative 8 would apply the bag limit option selected from Options 8a-8d only to the following area(s): Sub-option 8a: Off Monroe County or Sub-option 8b: In federal waters off Florida; or Sub-option 8e: In federal waters of the Gulf and the South Atlantie. Due to a paucity of data, it is not possible to conduct a thorough analysis of this alternative for Gulf waters. An analysis of Alternative 8 for South Atlantic waters is provided in Appendix E.

The following action pertains to harmonizing size and bag limits for shallow-water grouper species. Any changes selected in Action 9 will directly impact which species are included in the following action.

Action 11: Harmonize bag and size limits for species in shallowwater grouper complex seasonal closures in Federal Waters Adjacent to Monroe County, Florida.

Alternative 1: No action – Retain the current bag and size limits for species in shallow-water grouper complex seasonal closures in federal waters adjacent to Monroe County, Florida.

Alternative 2: Harmonize the <u>bag</u> limits for species included in the shallow-water grouper seasonal closures in the exclusive economic zone of the Gulf of Mexico and the South Atlantic in federal waters adjacent to Monroe County, Florida.

Alternative 3: Harmonize the <u>size</u> limits for species included in the shallow-water grouper seasonal closures in the exclusive economic zone of the Gulf of Mexico and the South Atlantic in federal waters adjacent to Monroe County, Florida.

Modified by the South Atlantic Council. These alternatives are not supported by the Gulf Council in April 2015

Note: Species included in the shallow-water complex considered for Action 11 will be subject to the preferred alternatives selected in Action 9.

IPT Note: The wording approved by the South Atlantic Council for Alternatives 2 and 3 (in strikethrough) needs to be amended to reflect that Action 11 addresses only federal waters adjacent to Monroe County, Florida.

SAFMC SG AP MOTION: Adopt Alternatives 2 &3 in Action 12 (now number 11 above) with the wording: In Federal Waters Adjacent to Monroe County Florida. Approved by SAFMC SG AP (14/0)

Action 12. Changes to Circle Hook Requirement in Gulf and South Atlantic Jurisdictional Waters

The Gulf Council is addressing commercial gear requirements for yellowtail snapper in a separate framework action.

Action 13 pertains exclusively to accountability measures. Accountability measures are used by the Councils to compensate for overages in a given fishing year, to decrease the probability that deleterious impacts to fisheries will persist for long time periods.

Action 13: Specify Accountability Measures for South Florida Species

Note: Under some circumstances more than one alternative could be selected as preferred.

Alternative 1: No action. Maintain the current recreational and commercial accountability measures (AMs) for yellowtail snapper, mutton snapper, and black grouper based on the Reef Fish Resources and Snapper Grouper Fishery Management Plans for the Gulf and South Atlantic Councils, respectively.

South Atlantic: Commercial AM – In-season closure when the ACL is expected to be met and ACL reduced in following fishing season if species is overfished and ACL is exceeded. Recreational AM – if ACL is exceeded, monitor landings in following season for persistence in landings and reduce the length of the following fishing season, if necessary.

Gulf: For Yellowtail Snapper and Mutton Snapper, if the combined commercial and recreational landings exceed the stock ACL, in–season AMs are in effect for the following year. If the combined landings reach or are projected to reach the stock ACL, both sectors will be closed for the remainder of that fishing year. For black grouper, this AM applies to the ACL for the other shallow-water grouper aggregate (black grouper, scamp, yellowmouth grouper, and yellowfin grouper).

Alternative 2: If the sum of the commercial and recreational landings exceeds the stock ACL, then during the following fishing year, if the sum of commercial and recreational landings reaches or is projected to reach the stock ACL, then the commercial and recreational sectors will be closed for the remainder of that fishing year. On and after the effective date of a closure, all sales, purchases harvest or possession of this species in or from the EEZ will be prohibited.

Option 2a: For yellowtail snapper Option 2b: For mutton snapper Option 2c: For black grouper

Alternative 3: If commercial landings as estimated by the Science and Research Director reach or are projected to reach the commercial ACL, NMFS the Regional Administrator shall publish a notice to would close the commercial sector for the remainder of the fishing year. On and after the effective date of such a notification, all sale or purchase is prohibited and harvest or possession of this species in or from the EEZ would be limited to the recreational bag and possession limit. Additionally, if the commercial ACL is exceeded, NMFS the Regional Administrator shall publish a notice to would reduce the commercial ACL in the following fishing year by the amount of the commercial overage, only if the species is overfished and the total ACL (commercial ACL and recreational ACL) is exceeded.

Option 3a: For yellowtail snapper **Option 3b:** For mutton snapper

Option 3c: For black grouper

Alternative 4: If recreational landings, as estimated by the Science and Research Director, exceed the recreational ACL, then during the following fishing year, recreational landings will be monitored for a persistence in increased landings. If necessary, NMFS the Regional Administrator shall publish a notice to would reduce the length of fishing season and the recreational ACL in the following fishing year by the amount of the recreational overage, only if the species is overfished and the total ACL (commercial ACL and recreational ACL) is exceeded. The length of the recreational season and recreational ACL will not be reduced if NMFS the Regional Administrator determines, using the best scientific information available, that a reduction is unnecessary.

Option 4a: For yellowtail snapper **Option 4b:** For mutton snapper **Option 4c:** For black grouper

Alternative 5: If recreational landings reach or are projected to reach the recreational annual catch limit ACL, NMFS would National Marine Fisheries Service will file a notification with the Office of the Federal Register to close the recreational sector for the remainder of the fishing year, unless, using the best scientific information available, NMFS determines that a closure is unnecessary.

Option 5a: If the species is overfished

Sub-option 5a(1): For yellowtail snapper **Sub-option 5a(2):** For mutton snapper **Sub-option 5a(3):** For black grouper

Option 5b: Regardless of stock status

Sub-option 5b(1): For yellowtail snapper **Sub-option 5b(2):** For mutton snapper **Sub-option 5b(3):** For black grouper

Alternative 6: The Councils would jointly set the ACL for the recreational and commercial sector. If the combined recreational ACL and commercial ACL is met or expected to be met, NMFS would close both sectors for the remainder of the fishing year.

Option 6a: yellowtail snapper Option 6b: mutton snapper Option 6c: black grouper

The Gulf Reef Fish Committee deferred discussion of the accountability measures action until the Joint Session on Thursday based on decisions made in the earlier actions and alternatives. However, there was not adequate time to discuss this action at the joint Council session.

Discussion

Alternative 2 follows the AMs that are in place for Gulf species; whereas, Alternatives 3-5 follow AMs that are being considered for snapper-grouper species in the Comprehensive AM and Dolphin Allocation Amendment. Alternative 6 would close the areas covered by a joint ABC and ACL to fishing for the species selected in the associated options only when the overall

ACL is met. **Alternative 6** would require each Council to establish recreational and commercial ACLs for the preferred options.

Compared to **Alternative 1** (**No Action**), **Alternatives 2-6** would benefit the biological environment to varying degrees based on the sub-alternatives chosen under each alternative. For the recreational sector, the most biologically beneficial option is likely **Alternatives 5**. For the commercial sector, the most biologically beneficial option compared to **Alternative 1** (**No Action**) is likely to be **Alternative 3**. None of the alternatives considered under this action would significantly alter the way in which the fisheries are prosecuted in the South Atlantic EEZ. No adverse impacts on endangered or threatened species are anticipated because of this action; nor are any adverse impacts on essential fish habitats or habitat areas of particular concern including corals, sea grasses, or other habitat types.

For the commercial sector, the alternatives may be ranked from lowest to highest probability of paybacks and short-term adverse economic effects as follows: **Alternative 1** (**No Action**), **Alternatives 2**, **Alternatives 6**, and **Alternative 3**. The likelihood that a species would be affected by this action is based primarily on the probability that its total ACL would be reached, and whether or not the species is overfished.

For the recreational sector, **Alternative 4** would be less likely to cause short-term direct economic effects compared to **Alternatives 5** and **6** because any closure would not occur until the second year of overages. However, **Alternatives 5** and **6** would be more likely to prevent long term, direct economic effects compared to **Alternative 4**.

For the commercial sector, maintaining the current AMs under **Alternative 1** (**No Action**) would not be expected to result in additional negative effects on the commercial fleets of these fisheries, but could also negate benefits to the commercial sectors by not allowing flexibility in the payback provisions, such as those in **Alternatives 3** and **6**. **Alternative 3** would provide the most flexibility for triggering the payback AM, in that the most critical conditions must be met before the payback is triggered, and would be expected to be most beneficial to commercial fishermen in that it would be less likely that a payback is required for an overage. Additionally, **Alternative 3** would be more consistent with AMs for other species such as king mackerel and Spanish mackerel in the South Atlantic.

For the recreational sector, maintaining the current AMs under **Alternative 1** (**No Action**) would not be expected to result in additional negative effects on recreational fishermen and for-hire businesses, other than inconsistency in AMs among all species. For many of these species, establishment of a payback provision without a post-season AM under **Alternative 4** would create an increased likelihood that an overage of the recreational ACL could reduce fishing opportunities in the following year. However, **Alternatives 4** provides some flexibility in how a post-season payback would be triggered. The in-season closure AM for the recreational sector in **Alternatives 5** and **6** could have negative effects on recreational fishing opportunities and for-hire businesses for the stocks that do not have a recreational in-season AM in place. However, **Alternative 6** would reduce the likelihood of a recreational in-season closure.

Alternatives 2-6 may be associated with slight changes to the administrative environment based on the frequency with which each of the AM options for the commercial sector would be

triggered. The payback provision under **Alternatives 3** and **4** would be triggered less frequently given that the species must be overfished and the total ACL exceeded, resulting in the lowest direct effects on the administrative environment. The administrative impacts associated with **Alternative 2** are largely the same as those under **Alternative 4**, with the addition of continued monitoring for persistence of increased landings when a species' recreational ACL has been exceeded. **Alternatives 3** and **4** are the least likely to be triggered. Overall, the administrative impacts of all the alternatives considered under this action, compared to **Alternative 1** (**No Action**), are expected to be minimal.

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APPENDIX A. CONSIDERED BUT REJECTED ACTIONS AND ALTERNATIVES

Action 1: Modifications to the Fishery Management Plans of the Gulf and South Atlantic Fishery Management Councils

Alternative 1: No action. Do not modify the Reef Fish and Snapper Grouper Fishery Management Plans for the Gulf and South Atlantic Councils, respectively.

Alternative 2: Delegate management of any of the species listed below to the State of Florida.

Option 2a: yellowtail snapper Option 2b: mutton snapper

Option 2c: black grouper recreational fishery only

Note: Alternative 2 would delegate all management including ABC, ACLs, management measures, etc.

Alternative 3: Manage each stock as a single unit with an overall combined multijurisdictional annual catch limits (ACLs).

Suggested wording from FWC Staff from minutes pages 125-127: The Gulf and South Atlantic Councils will agree to manage any of the species listed below with an overall ABC and an overall ACL. Each Council would agree to a recreational and commercial split. Both Councils will close their jurisdictions when the overall ACL is met.

Option 3a: yellowtail snapper Option 3b: mutton snapper Option 3c: black grouper

Alternative 4: Remove any of the species listed below from the Reef Fish and Snapper Grouper Fishery Management Plans for the Gulf and South Atlantic Councils, respectively.

Option 4a: yellowtail snapper Option 4b: mutton snapper Option 4c: black grouper

Alternative 5: Remove any of the species listed below from the Reef Fish Fishery Management Plan of the Gulf Council and request the Secretary of Commerce designate the South Atlantic Council as the responsible Council.

Option 5a: yellowtail snapper Option 5b: mutton snapper

Alternative 6: Remove any of the species listed below from the Snapper Grouper Fishery Management Plan of the South Atlantic Council and request the Secretary of Commerce designate the Gulf Council as the responsible Council.

Option 6a: yellowtail snapper Option 6b: mutton snapper

Rationale: Action 1 was removed by the Committee, and the alternatives therein were merged within other remaining Actions in the document.

Action 3: Allocate Yellowtail Snapper Sector Annual Catch Limits to the State of Florida and Create a Landings Allowance for other Gulf and South Atlantic States

Alternative 2. Use both Councils agreed upon ABC for yellowtail snapper and allocate the commercial and recreational ACLs for the Gulf and South Atlantic:

Option 2a: Use the South Atlantic Council's current sector allocation formula (bowtie approach): divide the sector allocations based on the ratio of landings with 50% of the weighting given to the mean of the landings from 1986-2008, and 50% on the mean of the landings from 2006-2008.

Alternative 3. Use both Councils' agreed upon ABC for yellowtail snapper and create Gulf commercial and recreational sector ACLs from the current ABC jurisdictional split: 75% of the ABC for South Atlantic Council jurisdictional waters, and 25% for Gulf Council jurisdictional waters. Gulf sector allocations would be derived from one of the options below, and the subsequent Gulf and South Atlantic sector allocations would be combined to create sector allocations off Florida:

Option 3a: Use the South Atlantic Council's current sector allocation formula: divide the sector allocations based on the ratio of landings with 50% of the weighting given to the mean of the landings from 1986-2008, and 50% on the mean of the landings from 2006-2008

Option 3b: Use the following sector allocation formula: divide the sector allocations based on the ratio of landings with 50% of the weighting given to the mean of the landings from 1993-2008, and 50% on the mean of the landings from 2009-2013.

Option 3c: Base sector allocations for waters off Florida on average landings from 2008-2012

Option 3d: Base sector allocations for waters off Florida on average landings from 200x-20xx

Option 3e: Employ some other allocation formula

Alternative 4. Create a landings allowance for yellowtail snapper in the other Gulf (TX, LA, MS, AL) and other South Atlantic States (GA, SC, NC).

Option 4a: Adjust ABC by 1% to address landings in the other Gulf and South Atlantic States.

Option 4b: Adjust ABC by 2% to address landings in the other Gulf and South Atlantic States.

<u>Rationale</u>: Alternative 2a was removed after a mathematical bias was identified with the proposed "bowtie" approach. Alternative 3 was removed in favor of Alternative 2, and because

changes in the current jurisdictional split would require revisiting sector allocations in the future. Alternative 4 was removed because it was not deemed necessary to accomplish stated management goals.

Action 4: Delegate Commercial and Recreational Management of Mutton Snapper to the State of Florida

Alternative 2: Determine specific <u>recreational</u> management items for delegation to the State of Florida for Mutton Snapper:

Option 2a: Size limits Option 2b: Seasons Option 2c: Bag limits

Option 2d: Minor modifications to existing allowable gear

Option 2e: Fishing year

Alternative 3: Determine specific <u>commercial</u> management items for delegation to the State of Florida for Mutton Snapper:

Option 3a: Size limits Option 3b: Seasons

Option 3c: Commercial trip limits

Option 3d: Minor modifications to existing allowable gear

Option 3e: Fishing year

Rationale: Alternatives 2e and 3e were removed after the Committee determined that setting the fishing year should remain a Council responsibility, in conjunction with determining ABCs, ACLs, and AMs.

Action 5: Allocate Mutton Snapper Sector Annual Catch Limits to the State of Florida and Create a Bycatch Allowance for other Gulf and South Atlantic States

Alternative 2. Use both Council agreed upon ABC for mutton snapper and allocate the commercial and recreational ACLs for the Gulf and South Atlantic:

Option 2a: Use the South Atlantic Council's current sector allocation formula (bowtie approach): divide the sector allocations based on the ratio of landings with 50% of the weighting given to the mean of the landings from 1986-2008, and 50% on the mean of the landings from 2006-2008.

Alternative 3. Use both Councils' agreed upon ABC for mutton snapper and create Gulf commercial and recreational sector ACLs from the current ABC jurisdictional split: 82% of the ABC for South Atlantic Council jurisdictional waters, and 18% for Gulf Council jurisdictional waters. Gulf sector allocations would be derived from one of the options below, and the

subsequent Gulf and South Atlantic sector allocations would be combined to create sector allocations off Florida:

Option 3a: Use the South Atlantic Council's current sector allocation formula: divide the sector allocations based on the ratio of landings with 50% of the weighting given to the mean of the landings from 1986-2008, and 50% on the mean of the landings from 2006-2008.

Option 3b: Use the following sector allocation formula: divide the sector allocations based on the ratio of landings with 50% of the weighting given to the mean of the landings from 1993-2008, and 50% on the mean of the landings from 2009-2013.

Option 3c: Base sector allocations for waters off Florida on average landings from 2008-2012

Option 3d: Base sector allocations for waters off Florida on average landings from 200x-20xx

Option 3e: Employ some other allocation formula

Alternative 4. Create a landings allowance for mutton snapper in the other Gulf (TX, LA, MS, AL) and other South Atlantic States (GA, SC, NC).

Option 4a: Adjust ABC by 1% to address landings in the other Gulf and South Atlantic States.

Option 4b: Adjust ABC by 2% to address landings in the other Gulf and South Atlantic States.

Rationale: Alternative 2a was removed after a mathematical bias was identified with the proposed "bowtie" approach. Alternative 3 was removed in favor of Alternative 2, and because changes in the current jurisdictional split would require revisiting sector allocations in the future. Alternative 4 was removed because it was not deemed necessary to accomplish stated management goals.

Action 8: Delegate Recreational Management of Black Grouper to the State of Florida

Alternative 2: Determine specific recreational management items for delegation to the State of Florida for black grouper:

Option 2a: Size limits Option 2b: Seasons Option 2c: Bag limits

Option 2d: Minor modifications to existing allowable gear

Option 2e: Fishing year

<u>Rationale</u>: Alternative 2e was removed after the Committee determined that setting the fishing year should remain a Council responsibility, in conjunction with determining ABCs, ACLs, and AMs.

Action 9: Allocate Black Grouper Recreational Annual Catch Limits to the State of Florida and Create a Recreational Bycatch Allowance for other Gulf and South Atlantic States

Alternative 2. Use both Councils agreed upon ABC for black grouper and allocate the recreational ACLs for the Gulf and South Atlantic:

Option 2b: Use the South Atlantic Council's current sector allocation formula (Bowtie approach): divide the sector allocations based on the ratio of landings with 50% of the weighting given to the mean of the landings from 1991-2008, and 50% on the mean of the landings from 2006-2008.

Alternative 3. Use both Councils' agreed upon ABC for black grouper and create Gulf commercial and recreational sector ACLs from the current ABC jurisdictional split: 47% of the ABC for South Atlantic Council jurisdictional waters, and 53% for Gulf Council jurisdictional waters. Gulf sector allocations would be derived from one of the options below, and the subsequent Gulf and South Atlantic sector allocations would be combined to create sector allocations off Florida:

Option 3a: Use the South Atlantic Council's current sector allocation formula: divide the sector allocations based on the ratio of landings with 50% of the weighting given to the mean of the landings from 1991-2008, and 50% on the mean of the landings from 2006-2008.

Option 3b: Use the following sector allocation formula: divide the sector allocations based on the ratio of landings with 50% of the weighting given to the mean of the landings from 1993-2008, and 50% on the mean of the landings from 2009-2013.

Option 3c: Base sector allocations for waters off Florida on average landings from 2008-2012

Option 3d: Base sector allocations for waters off Florida on average landings from 200x-20xx

Option 3e: Employ some other allocation formula

Alternative 4. Create a recreational landings allowance for black grouper in the other Gulf (TX, LA, MS, AL) and other South Atlantic States (GA, SC, NC).

Option 4a: Adjust ABC by 1% to address landings in the other Gulf and South Atlantic States.

Option 4b: Adjust ABC by 2% to address landings in the other Gulf and South Atlantic States

Option 4c: Adjust ABC by 3% to address landings in the other Gulf and South Atlantic States

Option 4d: Adjust ABC by 4% to address landings in the other Gulf and South Atlantic States.

Rationale: Alternative 2b was removed after a mathematical bias was identified with the proposed "bowtie" approach. Alternative 3 was removed in favor of Alternative 2, and because changes in the current jurisdictional split would require revisiting sector allocations in the future.

Alternative 4 was removed because it was not deemed necessary to accomplish stated management goals.

Action 10: Specify Accountability Measures for South Florida Species

Alternative 3: If commercial landings as estimated by the Science and Research Director reach or are projected to reach the commercial ACL, the Regional Administrator shall publish a notice to close the commercial sector for the remainder of the fishing year. On and after the effective date of such a notification, all sale or purchase is prohibited and harvest or possession of this species in or from the EEZ is limited to the bag and possession limit. Additionally,

Option 3a: If the commercial ACL is exceeded, the Regional Administrator shall publish a notice to reduce the commercial ACL in the following fishing year by the amount of the commercial overage, <u>only if the species is overfished.</u>

Option 3b: If the commercial ACL is exceeded, the Regional Administrator shall publish a notice to reduce the commercial ACL in the following fishing year by the amount of the commercial overage, <u>only if the total ACL (commercial ACL and recreational ACL)</u> is exceeded.

Option 3c: If the commercial ACL is exceeded, the Regional Administrator shall publish a notice to reduce the commercial ACL in the following fishing year by the amount of the commercial overage, <u>only if the species is overfished and the total ACL</u> (commercial ACL and recreational ACL) is exceeded.

Alternative 4: If recreational landings, as estimated by the Science and Research Director, exceed the recreational ACL, then during the following fishing year, recreational landings will be monitored for a persistence in increased landings.

Option 4a: If necessary, the Regional Administrator shall publish a notice to reduce the length of fishing season and the recreational ACL in the following fishing year by the amount of the recreational overage, <u>only if the species is overfished</u>. The length of the recreational season and recreational ACL will not be reduced if the Regional Administrator determines, using the best scientific information available, that a reduction is unnecessary.

Option 4b: If necessary, the Regional Administrator shall publish a notice to reduce the length of fishing season and the recreational ACL in the following fishing year by the amount of the recreational overage, only if the total ACL (commercial ACL and recreational ACL) is exceeded. The length of the recreational season and recreational ACL will not be reduced if the Regional Administrator determines, using the best scientific information available, that a reduction is unnecessary.

Option 4c: If necessary, the Regional Administrator shall publish a notice to reduce the length of fishing season and the recreational ACL in the following fishing year by the amount of the recreational overage, only if the species is overfished **and** the total ACL (commercial ACL and recreational ACL) is exceeded. The length of the recreational season and recreational ACL will not be reduced if the Regional Administrator determines, using the best scientific information available, that a reduction is unnecessary.

Rationale: Alternatives 3a, 3b, 4a, and 4b were removed after a recommendation from the South Atlantic Council, which recently passed updated accountability measures in Snapper Grouper Amendment 34. Amendment 34 is currently undergoing regulatory review.

Action 13. Changes to Circle Hook Requirement in Gulf and South Atlantic Jurisdictional Waters

Alternative 3: Remove the requirement to use circle hooks when fishing with natural bait for all reef fish south of 28° North latitude in the exclusive economic zone of the Gulf of Mexico.

Option 3a: For the recreational fishing sector

Option 3b: For the commercial fishing sector

Rationale: Alternative 3 was because of the documented positive biological effects identified for red snapper, which have shown decreased hooking mortality when caught with circle hooks. Because red snapper are undergoing rebuilding in the Gulf, the Committee elected to remove this alternative, so as to not jeopardize the rebuilding timeline for red snapper by potentially introducing additional discard mortality.

APPENDIX B. DELEGATION PROVISION

Magnuson-Stevens Fishery Conservation and Management Act 16 U.S.C. §1856(a)(3), (b)

- (3) A State may regulate a fishing vessel outside the boundaries of the State in the following circumstances:
- (A) The fishing vessel is registered under the law of that State, and (i) there is no fishery management plan or other applicable Federal fishing regulations for the fishery in which the vessel is operating; or (ii) the State's laws and regulations are consistent with the fishery management plan and applicable Federal fishing regulations for the fishery in which the vessel is operating.
- (B) The fishery management plan for the fishery in which the fishing vessel is operating delegates management of the fishery to a State and the State's laws and regulations are consistent with such fishery management plan. If at any time the Secretary determines that a State law or regulation applicable to a fishing vessel under this circumstance is not consistent with the fishery management plan, the Secretary shall promptly notify the State and the appropriate Council of such determination and provide an opportunity for the State to correct any inconsistencies identified in the notification. If, after notice and opportunity for corrective action, the State does not correct the inconsistencies identified by the Secretary, the authority granted to the State under this subparagraph shall not apply until the Secretary and the appropriate Council find that the State has corrected the inconsistencies. For a fishery for which there was a fishery management plan in place on August 1, 1996 that did not delegate management of the fishery to a State as of that date, the authority provided by this subparagraph applies only if the Council approves the delegation of management of the fishery to the State by a three-quarters majority vote of the voting members of the Council.
 - (C) [Pertains to Alaska, only.]

(b) EXCEPTION.—

- (1) If the Secretary finds, after notice and an opportunity for a hearing in accordance with section 554 of title 5, United States Code, that—
- (A) the fishing in a fishery, which is covered by a fishery management plan implemented under this Act, is engaged in predominately within the exclusive economic zone and beyond such zone; and
- (B) any State has taken any action, or omitted to take any action, the results of which will substantially and adversely affect the carrying out of such fishery management plan; the Secretary shall promptly notify such State and the appropriate Council of such finding and of his intention to regulate the applicable fishery within the boundaries of such State (other than its internal waters), pursuant to such fishery management plan and the regulations promulgated to implement such plan.
- (2) If the Secretary, pursuant to this subsection, assumes responsibility for the regulation of any fishery, the State involved may at any time thereafter apply to the Secretary for reinstatement of its authority over such fishery. If the Secretary finds that the reasons for which he assumed such regulation no longer prevail, he shall promptly terminate such regulation.
- (3) If the State involved requests that a hearing be held pursuant to paragraph (1), the Secretary shall conduct such hearing prior to taking any action under paragraph (1).

APPENDIX C. FLORIDA FWC PUBLIC WORKSHOP SUMMARIES

South Florida Workshops Summary

Florida Fish and Wildlife Conservation Commission

Workshop Attendance:

Dania Beach - 23

Key Largo - 15

Key Colony Beach - 19

Key West - 50

Marco Island - 15

FWC Staff Present: Martha Bademan, Jessica McCawley, John Hunt, Tony Bresnen, Mason Smith (except Marco Island and Key Largo)

Council Members Present: Gulf - John Sanchez (except Marco Island); South Atlantic - Ben Hartig, John Jolley (Dania Beach only)

General Comments

- State should require everyone with any charter license to report their data electronically, modeled after the national parks system that works well
- More recreational fishery data needs to be captured
- Strengthen reporting requirements for commercial fishermen
- Need consistency between state and federal rules, on both coasts if possible
- Close down known fish spawning areas
- Several comments about selling fish from charters some in favor, some against
- Several commenters would like to see more law enforcement presence on the water in the Keys
- Commercial fishermen would like to see drones used by law enforcement to stop poaching
- Keep species open all year (no spawning closures), just decrease the bag limit to protect the populations
- Encourage development of marine hatcheries and grow out facilities
- FWC needs to be more proactive with water quality

FKNMS process

- Many commenters spoke against the idea of having any new area closures within the Florida Keys National Marine Sanctuary
- Proposals could heavily impact the Keys community
- Closed areas would only benefit lionfish expansion



Regional management comments

- · Need regional management of species like yellowtail snapper
- Several commenters liked the idea of creating a Florida Keys Regional Fishery Management Council
- Many commenters felt that the Keys don't get representation in fisheries management and would like someone from the Keys on one of the Councils
- South Florida and the Florida Keys is a unique ecosystem not found anywhere in the Gulf or South Atlantic
- Council management works fine for some species, but the population of red grouper in the keys is different from the population in North Carolina
- Think about island FMPs like is being done in the Caribbean Council could keys be added to the Caribbean Council?
- · Make all of the keys either Gulf or South Atlantic
- Regulations too complex now, a Florida Keys management plan would help simplify things
- Possible south Florida regional management area from Jupiter Inlet south through the Kevs
- · Manage based on species, not boundary lines

Barracuda

- Barracuda are concentrated on artificial structures around Jupiter Inlet, no longer on natural reefs
- Commercial harvest of barracuda seems dangerous commonly carry ciguatera
- Barracuda are being shipped up to Miami and sold as food
- Charterboats target barracuda for mounts
- Species not as abundant since 2009 freeze
- End commercial harvest of barracuda
- Make barracuda catch and release only
- Need to protect declining barracuda stocks

Grouper, Gag

- Gag groupers were overfished in south Florida, Atlantic grouper closure allowed gags to back a comeback
- One commenter from Key Largo stated that gags aren't in this area, so why did the January – April closure also happen here?
- Atlantic closure hurts fishing for other species such as red grouper
- Groupers are available in the Keys when they are closed winter the best time to grouper fish in the keys
- Several commenters suggested that they would like to see the Atlantic grouper closure reduced in length/eliminated. Suggestion: have January and February to fish

- for groupers, and let groupers be closed in May (January April closure would become March May)
- In SW FL gags move inshore and are easier to catch in the winter months would like gags to be open in state waters from December through February

Grouper, Goliath

- Goliaths are more valuable alive than dead and should remain closed
- Way too many goliath grouper now
- Eat many important reef fish and lobster
- Allow harvest through a tag system require that to get another tag, you turn in data from the first tag
- Consider using a catch and release tagging system to collect more data for assessments
- Protecting this species while fishing down others has created an imbalance in the ecosystem

Grouper, Snowy

- Several commenters upset with the recreational snowy grouper closure (Atlantic federal waters)
- Snowy grouper are common in the Keys, species not in trouble
- If you want to close snowy grouper, need to close all deepwater species can't avoid snowy grouper
- If the species is open commercially, it should be open recreationally
- Make regulations 1 per person with no size limit
- Hard to distinguish between a large snowy and small warsaw grouper

Hogfish

- Hogfish abundant in no spearing zones, absent from spearing areas
- If you increase the minimum size limit for hogfish, it could encourage people to shoot smaller ones

<u>Jacks</u>

- Quotas for the jacks complex are too low and do not make biological sense (some abundant species have low quotas)
- Misidentification of some species of jacks could throw off landings data

Lionfish

Try fish traps for lionfish

Lobster/Stone crab

- One commenter would like to be able to transfer or sell crawfish dive permits
- · Number of crawfish dive permits needs to fall; don't end the moratorium on permits
- Concerns about trap line entanglements with endangered or protected species
- Increase penalties for violators
- One commenter wanted a recreational spiny lobster trap fishery

Pelagics (Mackerels, Cobia, Dolphin, and Wahoo)

- Several commenters suggested that federal rules need to be fixed to allow pelagics to be filleted (like snapper and grouper) when returning from the Bahamas
- Confusion between Bahamian and U.S. rules is a problem
- Eliminate minimum size limit for dolphin impossible to measure without killing them
- Don't need 10 dolphin per person
- Would like to see the king mackerel commercial limits increased from 1,250 to 3,000 pounds and transit through state waters
- Expand the Spanish mackerel fishery

Sea cucumbers

- Concerns about declining populations
- Only seen on the Gulf side
- Markets for export as food to Japan and China developing
- Unsure of what limits should be; maybe 200 per vessel?
- · People in Asian markets will buy them by the thousands
- Make a trip limit before it gets out of hand

<u>Sharks</u>

- Overpopulated in the Keys, hurting fishing for many reef species
- Too many species protected from harvest
- Learned behavior associate boat noise with a free meal

Snapper, Mangrove

- Differences between state and federal rules are not logical
- Make state and federal regulations the same
- Use the federal regulations 10 fish bag limit 12" TL
- May be difficult to catch 12" mangrove snappers in Florida state waters

Snapper, Mutton

- Several commenters suggested close mutton snapper during spawning (May and June)
- Too easy to catch mutton snapper during spawning
- Reduce bag limit to 2-3 per person, 10 per person is too many
- Make a vessel limit of 15-20 per vessel
- Other commenters suggested that bag limit reductions with no spawning closure would be the best option
- Another commenter suggested that populations are healthy and there is no need for a closure

Snapper, Red

- Red snapper becoming more common in south Florida. Can catch big ones in state waters
- The mini-season on the Atlantic could cause safety issues, need to discourage derby fishing
- Spillover of the species due to rebuilding of the stock can now be seen in the Keys

Snapper, Vermilion

- No problem with the species fishing is great
- Would like to see vermilion made part of the snapper aggregate, and increase the aggregate from 5 to 10

Snapper, Yellowtail

- · Yellowtail snapper fishing is the best it's ever been, species not in any trouble
- FWC should take over management of the species
- Manage as a joint-stock
- J hooks can reduce discard mortality of the species
- A few commenters in favor of circle hook requirements, and don't want to see exemption

<u>Tarpon</u>

· Make tarpon a federal gamefish species

APPENDIX D. BLACK GROUPER ANALYSIS

Black Grouper Recreational Closure and Bag Limit Analysis for Action 11 of the Draft Joint Generic Amendment on South Florida Management Issues

This analysis focused on the South Atlantic region. This is because the Gulf of Mexico region had a low number of trips that sampled black grouper in the recreational surveys. From 2011 to 2013 there were only 56 trips (3 MRIP and 53 Headboat trips) in the Gulf of Mexico region. Therefore, there are not enough samples to do a meaningful analysis.

Additionally, the recreational black grouper landings in the Gulf of Mexico have been relatively low. Black grouper are included in the shallow water grouper complex in the Gulf of Mexico which has had landings below the ACL in the past three years (2012, 2013, and 2014). This complex consists of black, scamp, yellowmouth, and yellowfin grouper. From 2011 to 2013 black grouper contributed to only about 7% of the total shallow water grouper landings.

In June of 2009, South Atlantic Snapper-Grouper Amendment 16 established a *recreational closed season for South Atlantic black grouper from January 1st to April 30th.* Action 11 of the Draft Joint Generic Amendment on South Florida Management Issues proposes to eliminate or modify this closure and modify the bag limit. Predictions of closure dates are required to determine if landings will exceed the black grouper ACL if the closed season and bag limit are modified.

Estimating Future Landings

Data from the most recent years of complete landings (2012 and 2013) and preliminary 2014 landings were used as a proxy for future recreational landings for waves 3 through 6 (May to December). Landings from all three years of 2012 to 2014 were used, instead of just using the most recent year of landings, because landings were quite different in each of these years (Figure 1). Using all three years of data provides a range of different predictions for future landings. At the present time 2014 Headboat landings and MRIP landings for wave 6 (November to December) of 2014 are not available. Headboat landings from 2013 were used as a proxy for 2014 Headboat landings, and 2013 wave 6 MRIP landings were used as a proxy for 2014 wave 6 MRIP landings.

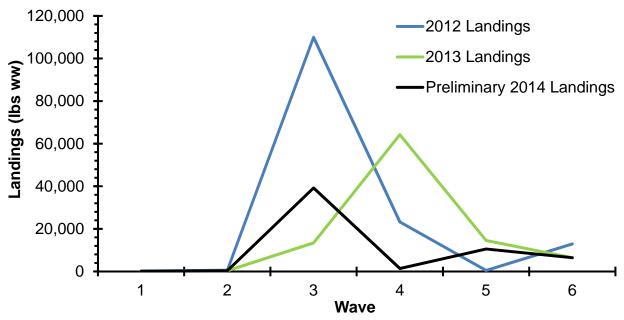


Figure 1. South Atlantic black grouper recreational landings by wave for 2012 and 2013, and preliminary landings for 2014.

Alternative 2: Remove the January to April Closure in the South Atlantic

Action 11 proposes to eliminate (Alternative 2) or modify (Alternatives 3 and 4) the current closure from January to April. Estimates of future recreational landings during the January to April closure were necessary to make predictions of closure dates. Two different scenarios were conducted to predict future landings for January through April (waves 1 and 2). Both scenarios determined wave 1 and 2 landings from the historical proportional relationship with wave 3 landings. Scenario 1 determined the proportional relationships using only Headboat landings because Headboat landings were estimated by a logbook program which is less vulnerable to sampling variability during low-effort fishing months. The second scenario determined the proportional relationship using both Headboat and MRIP landings. The closure was implemented in 2009; therefore, landings from 2007 and 2008 were used to determine the historical proportional relationship. Figure 2 displays the 2007 and 2008 recreational landings for waves 1 to 3. A 2-year average of the proportion was used to smooth the variability of black grouper landings from the two years. The average of the 2007 and 2008 Headboat landings proportion between waves determined the relationship between waves 1 and 3 was 1.2 (Standard Deviation = 0.98), and the relationship for waves 2 and 3 was 0.88 (Standard Deviation = 0.96). The average of the 2007 and 2008 Headboat and MRIP landings proportion determined the relationship between waves 1 and 3 was 2.96 (Standard Deviation = 1.82), and the relationship for waves 2 and 3 was 0.89 (Standard Deviation = 0.30). Since applying the proportion to wave 3 landings has the potential to overinflate wave 1 and 2 landings there was a landings cap placed on waves 1 and 2. The cap for wave 1 was 123,695 pounds whole weight (lbs ww) and 46,053 lbs ww for wave 2. These landings caps were the maximum landings for these two waves over

the past ten years. Figure 3 provides a visual representation of the landings for the two scenarios.

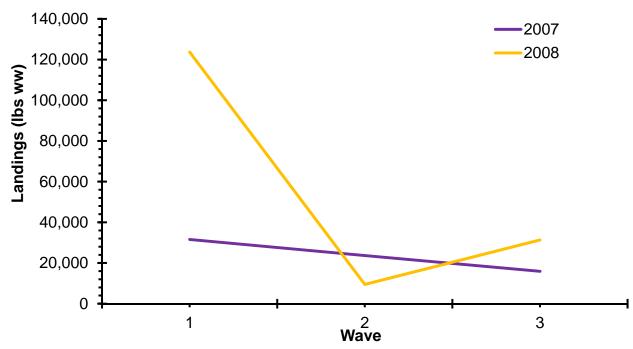


Figure 2. South Atlantic black grouper recreational landings by wave for 2007 and 2008.

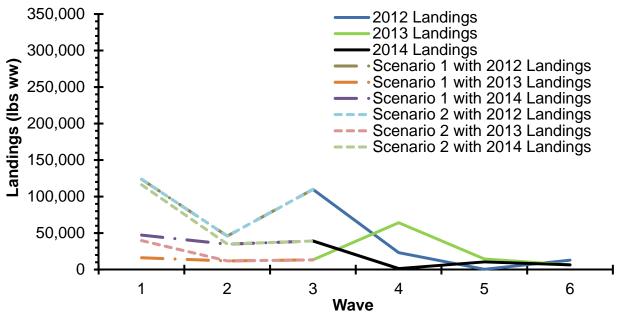


Figure 3. South Atlantic black grouper recreational landings by wave. Two scenarios were used to predict landings in waves 1 and 2. Scenario 1 used historical proportional relationships of Headboat landings for wave 1 to wave 3, and wave 2 to wave 3 to estimate wave 1 and wave 2

landings. Scenario 2 used historical proportional relationships of Headboat and MRIP landings for wave 1 to wave 3, and wave 2 to wave 3 to estimate wave 1 and wave 2 landings. Landings for waves 3 to 6 came from 2012, 2013, or 2014 landings.

Once the landings for each wave were established for each scenario then it was assumed that each month (Headboat) or wave (MRIP) had uniform distributions of landings by day. The landings by day were cumulatively summed and compared to the ACL to predict closure dates. The current South Atlantic recreational ACL is 165,750 lbs ww.

Whether the stock exceeds the ACL or not is dependent on how representative 2012, 2013, or 2014 landings are to future landings (Table 1). If the future landings are similar to the 2012 landings then the recreational sector will be closed in season. However, if future landings are similar to 2013 landings then the recreational sector will be open for the entire year. The landings in 2014 were low which results in no closure for scenario 1, but there was a closure in scenario 2 due to the relatively higher 2014 wave 3 landings.

Table 1. Alternative 2 predicted annual recreational landings and closure dates for black grouper under two landings scenarios. Alternative 2 proposes to remove the January to April closure in the entire South Atlantic region, and the ACL is 165,750 lbs ww. Scenario 1 used historical proportional relationships of Headboat landings for wave 1 to wave 3, and wave 2 to wave 3 to estimate wave 1 and wave 2 landings. Scenario 2 used historical proportional relationships of Headboat and MRIP landings for wave 1 to wave 3, and wave 2 to wave 3 to estimate wave 1 and wave 2 landings. Landings for waves 3 to 6 came from 2012, 2013, and 2014 landings.

| and wave a landing | 55. Eunamgs for waves 5 to 6 came nom 2012, 2013, and 2011 famonings. | | | | |
|--------------------|---|--------|---------------------------------------|-----------------|--|
| | Scenario 1 | | Scenario 2 | | |
| | Predicted Annual Closure Landings (lbs ww) Date | | Predicted Annual Landings (lbs ww) | Closure Date | |
| 2012 Landings | 316,382 | 25-Apr | 316,382 | 25-Apr | |
| 2013 Landings | 126,841 | None | 150,495 | None | |
| 2014 Landings | 139,868 | None | 208,985 | 23-May | |

Alternative 3 and 4: Modify the Recreational Seasonal Closure

Alternatives 3 and 4 of Action 11 propose to modify the seasonal closure. An analysis of Alternatives 3 and 4 was conducted using the same estimates of future landings and scenarios that were used to analyze Alternative 2. The different options for Alternatives 3 and 4 were analyzed by assuming there were no landings during the month or months of a closure. This assumption is supported by the fact that landings during the closure months are typically 200 pounds or less.

Table 2 summarizes the analysis of landings and closure dates for the different options of Alternatives 3 and 4. Again, predictions of whether the stock exceeds the ACL or not are dependent on how 2012, 2013, or 2014 landings are representative of future landings. If the future landings are similar to the 2012 landings then the recreational sector will be closed in

season. However, if future landings are similar to 2013 or 2014 landings then the recreational sector will be open for the entire year.

Table 2. Alternatives 3 and 4 predicted annual recreational landings and closure dates for black grouper under two landings scenarios. The South Atlantic recreational ACL is 165,750 lbs ww. Scenario 1 used historical proportional relationships of Headboat landings for wave 1 to wave 3, and wave 2 to wave 3 to estimate wave 1 and wave 2 landings. Scenario 2 used historical proportional relationships of Headboat and MRIP landings for wave 1 to wave 3, and wave 2 to wave 3 to estimate wave 1 and wave 2 landings. Landings for waves 3 to 6 came from 2012, 2013, or 2014 landings.

| | Scenario 1 | | Scenario 2 | |
|---------------|---------------------------------------|-----------------|---------------------------------------|-----------------|
| | Predicted Annual Landings (lbs ww) | Closure Date | Predicted Annual Landings (lbs ww) | Closure Date |
| | January | to March Clos | sure | |
| 2012 Landings | 194,739 | 21-Jul | 194,961 | 20-Jul |
| 2013 Landings | 104,580 | None | 104,607 | None |
| 2014 Landings | 76,501 | None | 76,580 | None |
| | Jan | uary Closure | | |
| 2012 Landings | 307,405 | 31-May | 399,610 | 7-Mar |
| 2013 Landings | 118,332 | None | 129,587 | None |
| 2014 Landings | 116,685 | None | 149,570 | None |
| | Febr | ruary Closure | | |
| 2012 Landings | 314,151 | 29-Apr | 416,186 | 30-Jan |
| 2013 Landings | 119,156 | None | 131,611 | None |
| 2014 Landings | 119,090 | None | 155,482 | None |
| | Ma | arch Closure | | |
| 2012 Landings | 327,400 | 21-Apr | 520,959 | 30-Jan |
| 2013 Landings | 120,773 | None | 144,399 | None |
| 2014 Landings | 123,816 | None | 191,174 | 20-Jun |

Results for Alternatives 2, 3 and 4

Action 11 proposes to eliminate (Alternative 2) or modify (Alternatives 3 and 4) the current closure from January to April. Table 3 summarizes the results of the analysis of landings and closure dates for both Alternative 2 and Alternative 3.

Table 3. Predicted annual recreational landings and closure dates for black grouper under two landings scenarios for Alternatives 2, 3, and 4. The South Atlantic recreational ACL is 165,750 lbs ww. Scenario 1 used historical proportional relationships of Headboat landings for wave 1 to wave 3, and wave 2 to wave 3 to estimate wave 1 and wave 2 landings. Scenario 2 used historical proportional relationships of Headboat and MRIP landings for wave 1 to wave 3, and wave 2 to wave 3 to estimate wave 1 and wave 2 landings. Landings for waves 3 to 6 came from 2012, 2013, or 2014 landings.

| 2012, 2013, 01 201 | Scenario 1 | | Scenario 2 | |
|--------------------|---------------------------------------|-----------------|---------------------------------------|-----------------|
| | Predicted Annual Landings (lbs ww) | Closure Date | Predicted Annual Landings (lbs ww) | Closure Date |
| | Alternative 2 | : No Seasonal | Closure | |
| 2012 Landings | 377,109 | 21-Mar | 570,897 | 30-Jan |
| 2013 Landings | 126,841 | None | 150,495 | None |
| 2014 Landings | 139,868 | None | 208,985 | 23-May |
| | Alternatives 3 and 4 Op | tion a: Januar | y to March Closure | |
| 2012 Landings | 194,739 | 21-Jul | 194,961 | 20-Jul |
| 2013 Landings | 104,580 | None | 104,607 | None |
| 2014 Landings | 2014 Landings 76,501 | | 76,580 | None |
| | Alternatives 3 and | 4 Option b: Ja | nuary Closure | |
| 2012 Landings | 307,405 | 31-May | 399,610 | 7-Mar |
| 2013 Landings | 118,332 | None | 129,587 | None |
| 2014 Landings | 116,685 | None | 149,570 | None |
| | Alternatives 3 and 4 | 4 Option c: Fe | bruary Closure | |
| 2012 Landings | 314,151 | 29-Apr | 416,186 | 30-Jan |
| 2013 Landings | 119,156 | None | 131,611 | None |
| 2014 Landings | 119,090 | None | 155,482 | None |
| | Alternatives 3 and | 4 Option d: M | March Closure | |
| 2012 Landings | 327,400 | 21-Apr | 520,959 | 30-Jan |
| 2013 Landings | 120,773 | None | 144,399 | None |
| 2014 Landings | 123,816 | None | 191,174 | 20-Jun |

There has been a decline in total annual recreational black grouper landing from 2012 to 2014 (Figure 1). The lowest total landings for all three years took place in 2014. If black grouper landings continue to decrease then the probability of exceeded the ACL will be decreased.

Alternative 5: Remove black grouper from the shallow-water grouper closure of the recreational season in the South Atlantic in Federal waters off Monroe County, Florida.

Alternative 5 was analyzed by applying the same method used for the analysis for Alternatives 2, 3, and 4 but only the Federal waters of Monroe County, Florida did not have the January to April closure. Therefore, the analysis only allowed January to April landings to occur in Federal waters of Monroe County. The landings were assumed to be zero from January to April for the rest of the South Atlantic region. Table 4 provides predicted landings and closure dates for Alternative 5.

Table 4. Alternative 5 predicted annual recreational landings and closure dates for black grouper under two landings scenarios. Alternative 5 proposes to remove the January to April closure only in Monroe County, Florida. The South Atlantic recreational ACL is 165,750 lbs ww. Scenario 1 used historical proportional relationships of Headboat landings for wave 1 to wave 3, and wave 2 to wave 3 to estimate wave 1 and wave 2 landings. Scenario 2 used historical proportional relationships of Headboat and MRIP landings for wave 1 to wave 3, and wave 2 to wave 3 to estimate wave 1 and wave 2 landings. Landings for waves 3 to 6 came from 2012, 2013, or 2014 landings.

| | Scenario 1 | | Scenario 2 | | |
|---------------|---------------------------------------|-----------------|---------------------------------------|-----------------|--|
| | Predicted Annual Landings (lbs ww) | Closure Date | Predicted Annual Landings (lbs ww) | Closure Date | |
| 2012 Landings | 238,902 | 11-Jun | 238,902 | 11-Jun | |
| 2013 Landings | 105,299 | None | 110,842 | None | |
| 2014 Landings | 132,089 | None | 194,665 | 14-Jun | |

Alternative 6: Remove black grouper from the recreational aggregate bag limit in the Gulf of Mexico

Black grouper are included in the Gulf of Mexico aggregate bag limit which is set at 4 grouper per angler. The aggregate bag limit contains black, gag, red, yellowfin, scamp, and yellowmouth grouper. Alternative 6 of Action 11 proposes to remove black grouper from the Gulf of Mexico aggregate bag limit. An examination of the 2011-2013 catch records for all grouper in the aggregate is shown in Figure 4. Less than 1% (n=255 trips) of the trips reached or exceeded the bag limit of 4 grouper per angler. Also, trips that harvested black grouper from 2011-2013 (n=56 trips) accounted for less than 1% of the total Gulf of Mexico trips sampled that harvested any of the aggregate grouper species (n=28,700 trips). Therefore, the other grouper species should not be impacted by removing black grouper from the aggregate group as the 4 grouper per angler aggregate is not currently constraining angler harvest.

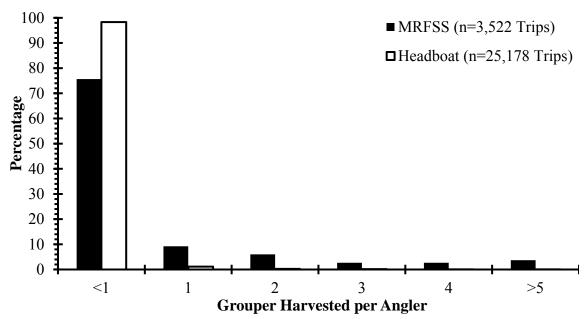


Figure 4. Distribution of Gulf of Mexico grouper harvested per angler included in the grouper aggregate bag limit from the two recreational datasets (MRIP and Headboat) from 2011 to 2013. This aggregate includes the species of black, gag, red, yellowfin, scamp, and yellowmouth grouper.

Alternative 7: Remove black grouper from the recreational aggregate bag limit in the South Atlantic

Black grouper are included in the South Atlantic grouper aggregate bag limit which is set at 3 grouper per angler, however only one grouper can be a black or gag grouper. The aggregate bag limit contains black, gag, red, red hind, rock hind, coney, graysby, yellowfin, scamp, and yellowmouth grouper. Alternative 7 of Action 11 proposes to remove black grouper from the South Atlantic aggregate bag limit. An examination of the 2011-2013 catch records for all grouper in the aggregate is shown in Figure 5. Less than 1% (n=15 trips) of the trips sampled reached or exceeded the bag limit of 3 grouper per angler. Therefore, the other grouper species should not be impacted by removing black grouper from the aggregate group as the 3 grouper aggregate is not currently constraining angler harvest.

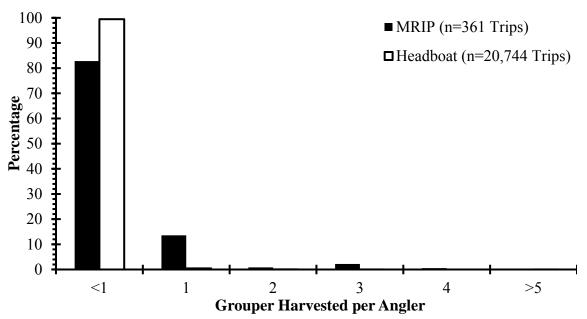


Figure 5. Distribution of South Atlantic grouper harvested per angler included in the grouper aggregate bag limit from the two recreational datasets (MRIP and Headboat) from 2011 to 2013. This aggregate includes the species of black, gag, red, red hind, rock kind, coney, graysby, tiger, scamp, yellowfin, and yellowmouth grouper.

Alternative 8: Modify the recreational bag limit for black grouper in the South Atlantic

Alternative 8 proposes to increase the bag limit to two, three, or four black grouper per angler. The South Atlantic catch and effort files for the last 3 years of complete data (2011-2013) were explored. The South Atlantic region had 2,451 trips (41 MRIP and 2,410 Headboat trips) that reported black grouper in the South Atlantic. This region currently has a one fish bag limit for black grouper. This is reflected in the catch and effort files with 99% of the South Atlantic trips harvesting one black grouper or less per angler (Figure 6).

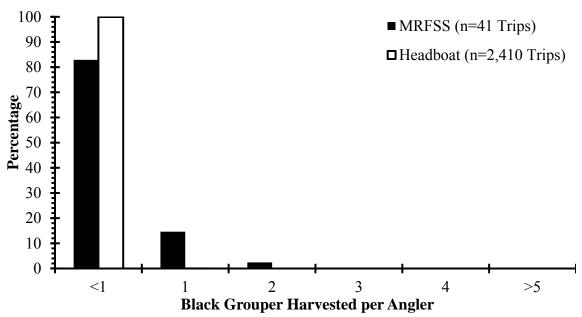


Figure 6. Distribution of South Atlantic black grouper harvested per angler from the two recreational datasets (MRIP and Headboat) from 2011 to 2013.

In February of 1999 South Atlantic Snapper-Grouper Amendment 9 changed the black grouper bag limit from five to two fish. Then in June of 2009 South Atlantic Snapper-Grouper Amendment 16 changed the black grouper bag limit from two to one fish. Landings data from 1996 to 1998 were reviewed to determine catch rates of black grouper per person during a time when anglers had the option of keeping up to five black grouper. Figure 7 provides the black grouper harvested per person from 1996 to 1998. Also, the stock was not overfished from 1996 to 1998 according to the latest black grouper assessment (SEDAR 19). The options to increase the bag limit were analyzed by first calculating the proportion of trips that caught two, three, and four black grouper relative to the number of trips that caught one black grouper. The proportions were calculated to be 6% for two fish, 3% for three fish, and 1% for four fish relative to the trips that harvested one black grouper. Percent increases in landings from increasing the bag limit were calculated by applying the proportions to the trips that harvested one black grouper from 2011 to 2013. Table 5 provides the percent increase in landings by dataset (MRIP and Headboat). Percent increases in landings by mode or by month were not possible because of small sample sizes (n<30).

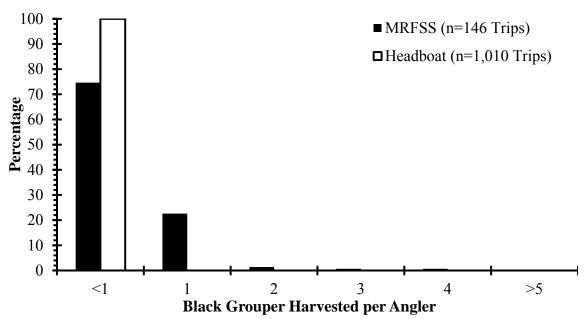


Figure 7. Distribution of South Atlantic black grouper harvested per angler from the two recreational datasets (MRIP and Headboat) from 1996 to 1998.

Table 5. Percent increases in landings for various bag limits applied to South Atlantic recreational landings for the years 2011 and 2013. The increases were calculated in terms of numbers of fish with respect to dataset (MRIP and Headboat).

| Bag Limit | MRIP | Headboat |
|-----------|------|----------|
| 1 | 0 | 0 |
| 2 | 2.9% | < 1% |
| 3 | 3.2% | < 1% |
| 4 | 3.4% | < 1% |

The bag limit percent increases in landings were applied to landings Scenarios 1 and 2 of the 2014 landings. Figure 3 from above displays the landings scenarios for the 2014 landings. Alternative 8 also proposed to modify the bag limit for all of the South Atlantic region, only in waters off Monroe County, only in Federal waters off Florida, and only in Federal waters of the South Atlantic. The 2014 landings were separated by County, State, and Federal waters to analyze all of the bag limit options in Alternative 8, and Table 6 reveals the breakdown of those landings. The same landings were provided for the two categories of only in Federal waters off of Florida and only in Federal waters of the South Atlantic. This is because there were no additional black grouper 2014 landings outside of Florida that were declared in Federal waters of the South Atlantic. The percent increases in landings were applied to the appropriate body of water to analyze the options in Alternative 8. Table 7 provides the predicted annual landings and closure dates for the analytical results. It should be noted that because of low sample sizes, it was not possible to calculate bag limit increases for specific water bodies (county, State, Federal)

and the same overall region-wide increase in harvest relating to the bag limit was used for all options considered.

Table 6. Two landings scenarios of 2014 recreational landings separated by water body. Scenario 1 used historical proportional relationships of Headboat landings for wave 1 to wave 3, and wave 2 to wave 3 to estimate wave 1 and wave 2 landings. Scenario 2 used historical proportional relationships of Headboat and MRIP landings for wave 1 to wave 3, and wave 2 to wave 3 to estimate wave 1 and wave 2 landings. Following the options in Alternative 8 the landings were separated into the four water body categories of: 1) all of the South Atlantic region, 2) only in waters off Monroe County, 3) only in Federal waters off Florida, and 4) only in Federal waters of the South Atlantic.

| | Scenario 1 | | | Scenario 2 | | | |
|----------|---|--|---------|------------|---|--|---------|
| | Only Monroe County | Remaining Landings | Total | | Only Monroe County | Remaining Landings | Total |
| Landings | 117,211 | 22,658 | 139,869 | Landings | 175,583 | 33,403 | 208,986 |
| Percent | 84 | 16 | 100 | Percent | 84 | 16 | 100 |
| | Only Federal Waters off Florida | Remaining South Atlantic Landings | Total | | Only Federal Waters off Florida | Remaining South Atlantic Landings | Total |
| Landings | 110,503 | 29,367 | 139,870 | Landings | 169,538 | 39,448 | 208,986 |
| Percent | 79 | 21 | 100 | Percent | 81 | 19 | 100 |
| | Only Federal Waters of the South Atlantic | Remaining South Atlantic Landings | Total | | Only Federal Waters of the South Atlantic | Remaining South Atlantic Landings | Total |
| Landings | 110,503 | 29,367 | 139,870 | Landings | 169,538 | 39,448 | 208,986 |
| Percent | 79 | 21 | 100 | Percent | 81 | 19 | 100 |

Table 7. Predicted closure dates for Alternative 8 options using the two landings scenarios for 2014 recreational landings. Following the options in Alternative 8 the bag limit increases were applied to the four water body categories of: 1) all of the South Atlantic region, 2) only in waters off Monroe County, 3) only in Federal waters off Florida, and 4) only in Federal waters of the South Atlantic. The ACL is 165,750 lbs ww.

| | Scenario 1 | | Scenario 2 | |
|--------------|---------------------------------------|------------------|---------------------------------------|-----------------|
| Bag Limit | Predicted Annual Landings (lbs ww) | Closure Date | Predicted Annual Landings (lbs ww) | Closure Date |
| | All of South Atlanti | c Region (Fed | deral and State waters) | |
| 1 Fish | 139,868 | None | 208,985 | 23-May |
| 2 Fish | 143,737 | None | 214,858 | 16-May |
| 3 Fish | 144,137 | None | 215,465 | 15-May |
| 4 Fish | 144,404 | None | 215,870 | 15-May |
| | Option 8e: Sub-option | on 8e(i): Off N | Monroe County, Florida | |
| 1 Fish | 139,868 | None | 208,986 | 23-May |
| 2 Fish | 143,269 | None | 214,078 | 17-May |
| 3 Fish | 143,620 | None | 214,605 | 16-May |
| 4 Fish | 143,855 | None | 214,956 | 16-May |
| | Option 8e: Sub-option | n 8e(ii): In Fe | deral Waters off Florida | |
| 1 Fish | 139,869 | None | 208,986 | 23-May |
| 2 Fish | 143,074 | None | 213,903 | 17-May |
| 3 Fish | 143,405 | None | 214,411 | 16-May |
| 4 Fish | 143,626 | None | 214,750 | 16-May |
| | Option 8e: Sub-option 8e | e(iii): In Feder | ral Waters in South Atlantic | |
| 1 Fish | 139,869 | None | 208,986 | 23-May |
| 2 Fish | 143,074 | None | 213,903 | 17-May |
| 3 Fish | 143,405 | None | 214,411 | 16-May |
| 4 Fish | 143,626 | None | 214,750 | 16-May |

Predictions of whether the stock exceeds the ACL or not are dependent which landings scenario is representative of future landings. If the future landings are similar to scenario 1 then the recreational sector will be open for the entire year. However, if future landings are similar to scenario 2 then the recreational sector will close in May.

The highest predicted landings and shortest season came from applying the increased bag limit options to the 2014 scenario 2 landings for the entire South Atlantic region. This is because this option applies the increased bag limit to the largest geographic area. The second highest predicted landings came from applying the increased bag limit options to the 2014 scenario 2

landings for the waters off Monroe County. This occurred because most of the black grouper landings (84%) in the 2014 landings occurred in Monroe County.

This analysis attempted to bracket the possible range of future landings considering with and without recreational season closures. Uncertainty exists in these projections, as economic conditions, weather events, changes in catch-per-unit effort, fisher response to management regulations, and a variety of other factors may cause departures from the predictions. Also, the majority of the landings estimates generated for each wave had proportional standard error values greater than 50%. This indicates high variability around the landings estimates and therefore low precision. This must be considered when evaluating the effects of bag limits and season closures.

References

SEDAR 19. 2009. Stock assessment of black grouper. Available from the SEDAR website: www.sefsc.noaa.gov/sedar/

Remaining Gulf Reef Fish Committee Motions on South Florida Document from June 9th, 2015 Committee Report Johnny Greene-Chair

Remaining Gulf Committee motions regarding the South Florida Document (**Tab B, No. 8a**).

Action 7 – Partial Delegation of Recreational Management of Black Grouper to the State of Florida in Federal Waters Adjacent to the State of Florida

The Gulf Reef Fish Committee recommends, and I so move: Motion: To have Action 7 apply to the waters adjacent to the State of Florida.

Motion carried.

The Gulf Reef Fish Committee did not see a need to specify any additional minor modifications to the existing allowable gear for delegation to the State of Florida for recreational management. The Gulf Reef Fish Committee recommends, and I so move: In Action 7, Alternative 2d be moved to considered but rejected.

Motion carried.

Option 2d: Minor modifications to existing allowable gear

Action 8 - Establish and Consolidate ABCs and ACLs for Black Grouper

No Gulf Reef Fish Committee motions were made regarding Action 8.

Action 9 – Modify Shallow-water Grouper Species Compositions and Seasonal Closures in the Gulf and South Atlantic

No Gulf Reef Fish Committee motions were made regarding Action 9.

Action 10 – Modify Black Grouper Fishery Closures and Bag Limits in the Gulf of Mexico and South Atlantic

Action 11 – Harmonize bag and size limits for species in shallow-water grouper complex seasonal closures in Federal Waters Adjacent to Monroe County, Florida

The Gulf Reef Fish Committee discussed Actions 10 and 11 in the current draft options paper as well as the proposed restructured actions (Tab B, No 4c). Based on staff's explanation of the overlapping nature of the current alternatives, without the needed specific information required for further analysis of how to harmonize bag and size limits management measures, the committee

made the following motion. NOAA General Counsel requested that the "South Florida Management Area" in the proposed restructured actions be defined. Staff suggested this be defined during the Joint Council session on Thursday.

The Gulf Reef Fish Committee recommends, and I so move: To remove Actions 10 and 11 in the Options Paper and replace them with Actions 6, 7 and 8 in the Restructured Document. *Motion carried.*

From proposed restructured document action titles:

Action 6: Standardize Recreational Seasonal Closures for Grouper in the South Florida Management Area within the Gulf of Mexico and South Atlantic Councils' Jurisdictions

Action 7: Recreational Grouper Bag Limits in the South Florida Management Area within the Gulf of Mexico and South Atlantic Councils' Jurisdictions

Action 8: Modify Recreational Grouper Size Limits in the South Florida Management Area within the Gulf of Mexico and South Atlantic Councils' Jurisdictions

Action 12 – Changes to Circle Hook Requirements in the Gulf and South Atlantic Jurisdictional Waters

No Gulf Reef Fish Committee motions were made regarding Action 12.

Action 13 – Specify Accountability Measures for South Florida Species.

The Gulf Reef Fish Committee deferred discussion of the accountability measures action until the Joint Session on Thursday based on decisions made in the earlier actions and alternatives.

Mr. Chairman, this concludes my report.



South Atlantic Council Motions Regarding South Florida Document

September 14-18, 2015 Meeting

MOTION: DIRECT STAFF TO WORK ON A SEPARATE SOUTH ATLANTIC/GULF AMENDMENT TO ADDRESS ACTIONS 2 (CONSOLIDATE YELLOWTAIL ABC/ACL) AND 13 (ACCOUNTABILITY MEASURES FOR YELLOWTAIL) FROM THE JOINT SOUTH FLORIDA AMENDMENT AND HAVE THE SOUTH ATLANTIC BE ADMINISTRATIVE LEAD APPROVED BY COUNCIL.



Gulf of Mexico Fishery Management Council

Mutton Snapper Management Alternatives



Life History & Biology

- Considered a single stock- south Florida
- Sand/grass habitats as juveniles; reefs as adults
- Max observed age: 40 years
- Max length aged: 975 mm TL (~38.5" TL)
- Max observed weight: 15.6 kg (~34 lbs) approx.
 - age-3
- Aggregate spawners
- Peak spawning May June

Update Assessment- SEDAR 15A

- Not overfished: SSB₂₀₁₃/SSB_{MSY} = 1.13
- Not undergoing overfishing: F_{Current}/F_{MSY} = 0.65
 F_{Current} = geometric mean of F in 2011-2013
- Current stock apportionment from Generic ACL/AM Amendment (2011): South Atlantic = 82% of ABC and Gulf = 18% of ABC (Using 50% of catch history from 1990-2008 + 50% from 2006-2008).

Gulf SSC Review

- Determined the assessment represented the "best scientific information available" and suitable for management advice
- Concurred with South Atlantic Council's SSC on OFL and ABC recommendations as adopted by the SAFMC SSC for the years 2016-2020

SSC OFL and ABC Determinations

| Year | OFL | ABC |
|------|---------|---------|
| 2016 | 713,492 | 692,000 |
| 2017 | 751,711 | 717,200 |
| 2018 | 793,823 | 746,800 |
| 2019 | 835,318 | 774,400 |
| 2020 | 850,077 | 798,300 |

Yield streams are in pounds whole weight (ww)

Gulf Apportionment 18% of ABC

| Year | ABC |
|------|---------|
| 2016 | 124,560 |
| 2017 | 129,096 |
| 2018 | 134,424 |
| 2019 | 139,392 |
| 2020 | 143,694 |

Yield streams are in pounds whole weight (ww)

Action 1: Establish Mutton snapper Gulf apportioned ACLs

Based on the ACL/ACT Control Rule Buffer 12%

Alternative 1: No action stock ACL = 203,000 lbs ww.

| Year | ABC | ACL = ABC (Alternative 2) | ACL @ 88% of ABC (Alternative 3) |
|------|---------|---------------------------|----------------------------------|
| 2016 | 124,560 | | 109,613 |
| 2017 | 129,096 | ACI - ADC | 113,605 |
| 2018 | 134,424 | ACL = ABC | 118,293 |
| 2019 | 139,392 | | 122,665 |
| 2020 | 143,694 | | 126,451 |





Recent Mutton Snapper Landings – No Sector Allocations

| Year | Rec | Com | Total |
|------|-------|---------|---------|
| 2012 | 7,156 | 88,695 | 95,851 |
| 2013 | 4,960 | 107,814 | 112,774 |
| 2014 | 7,156 | 134,536 | 139,575 |

Landings are in whole weight (ww)

Source: NMFS ACL monitoring page accessed September 11, 2015

Action 2 –Mutton Recreational Bag Limits

Alternative 1 – No Action. Mutton snapper is part of the aggregate 10 snapper bag limit in the Gulf of Mexico.

Alternative 2 – Remove mutton from aggregate bag limit, establish regular (July – April) and spawning (May – June) bag limits:

Option 2a: 10 fish/person/day regular season, 2 fish/person/day spawning season

Option 2b: *5 fish/person/day* regular season, *2 fish/person/day* spawning season

Option 2c: 4 fish/person/day regular season, 2 fish/person/day spawning season

Action 2 – continued

Alternative 3 – Retain mutton within aggregate bag limit, but specify regular (July – April) and spawning (May – June) bag limits within the aggregate bag limit:

Option 3a: 10 fish/person/day regular season 2 fish/person/day spawning season

Option 3b: 5 fish/person/day regular season 2 fish/person/day spawning season

Option 3c: 4 fish/person/day regular season 2 fish/person/day spawning season

Estimated percent reductions in landings from South Atlantic recreational landings from 2011-2013

| Pos | | MRIP | | | Headboat | | |
|--------------|---------|---------|----------|---------|-------------|-------------|--|
| Bag Limit | Jul-Apr | May-Jun | All Year | Jul-Apr | May- Jun | All Year | |
| 10 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| 9 | 0.2 | 1.3 | 0.4 | 0.3 | 0.4 | 0.3 | |
| 8 | 0.4 | 2.5 | 0.9 | 0.7 | 8.0 | 0.7 | |
| 7 | 1.3 | 3.8 | 1.8 | 1.3 | 2.0 | 1.5 | |
| 6 | 2.3 | 5.1 | 2.9 | 2.9 | 3.8 | 3.1 | |
| 5 | 3.5 | 6.3 | 4.1 | 5.5 | 6.2 | 5.7 | |
| 4 | 5.1 | 8.4 | 5.8 | 9.4 | 9.7 | 9.5 | |
| 3 | 8.5 | 12.7 | 9.3 | 15.3 | 14.7 | 15.2 | |
| 2 | 14.1 | 20.3 | 15.3 | 25.0 | 21.7 | 24.2 | |
| 1 | 29.3 | 34.2 | 30.3 | 37.5 | 32.4 | 36.3 | |

Action 3 – Mutton Snapper Commercial Trip Limits

Alternative 1: No Action. Do not establish a commercial bag or trip limit for mutton snapper in the Gulf of Mexico during the spawning season.

Alternative 2: Specify a trip limit for mutton snapper for the <u>commercial sector</u> during the spawning season (May and June) in the Gulf of Mexico.

Option 2a: 5 fish/person/day

Option 2b: 10 fish/person/day

Action 3 – continued Commercial Trip Limits by gear type

Alternative 3: Specify a trip limit for mutton snapper for the <u>vertical line component</u> of the commercial sector during the spawning season (May and June) in the Gulf of Mexico

Option 3a: 5 fish/person/day

Option 3b: 10 fish/person/day

Alternative 4: Specify a trip limit for mutton snapper for the bottom longline component of the commercial sector during the spawning season (May and June) in the Gulf of Mexico

Option 4a: 500 pounds whole weight trip limit

Option 4b: 50 pounds whole weight trip limit

Commercial Landings (lbs ww) by Gear Type

| Year | Vertical | Longline | Traps | Diving |
|------|----------|----------|-------|--------|
| 2004 | 34,944 | 161,006 | 5,166 | 822 |
| 2005 | 20,634 | 115,772 | 2,952 | 1,271 |
| 2006 | 25,345 | 186,193 | 994 | 1,029 |
| 2007 | 20,335 | 110,979 | 631 | 612 |
| 2008 | 14,745 | 65,227 | 647 | 759 |
| 2009 | 12,258 | 29,589 | 847 | 811 |
| 2010 | 18,262 | 35,294 | NA | 358 |
| 2011 | 28,227 | 64,412 | NA | 729 |
| 2012 | 27,013 | 59,375 | NA | 568 |
| 2013 | 19,782 | 86,277 | NA | 1,073 |

Monthly distribution of commercial mutton snapper landings from 2009 through 2013

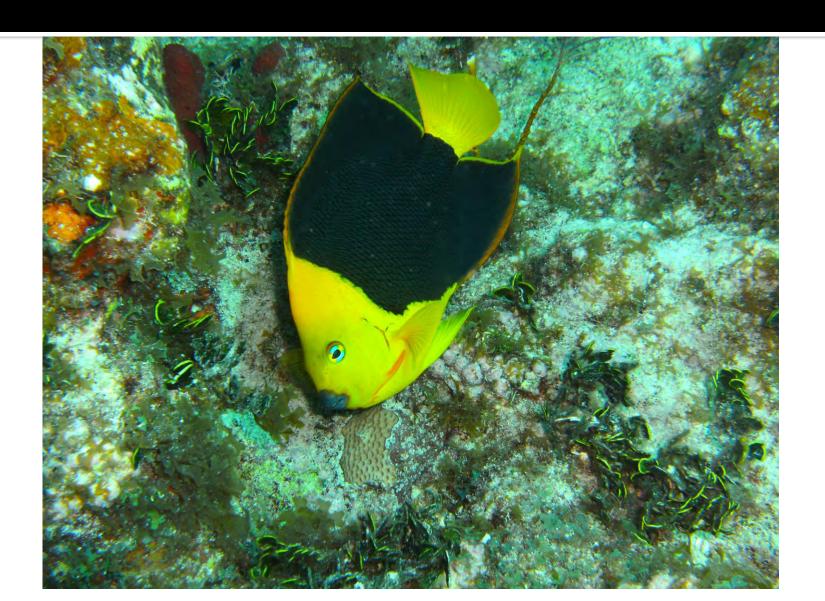
| Month | Logbooks | Dealer |
|-----------|----------|--------|
| January | 6.1% | 5.4% |
| February | 11.3% | 10.3% |
| March | 7.1% | 7.5% |
| April | 8.2% | 7.6% |
| May | 11.6% | 11.9% |
| June | 7.1% | 7.4% |
| July | 13.7% | 13.9% |
| August | 6.7% | 6.5% |
| September | 6.7% | 6.7% |
| October | 8.3% | 9.2% |
| November | 5.7% | 5.7% |
| December | 7.5% | 7.9% |

Source: commercial logbooks and dealer reported accumulative landings system

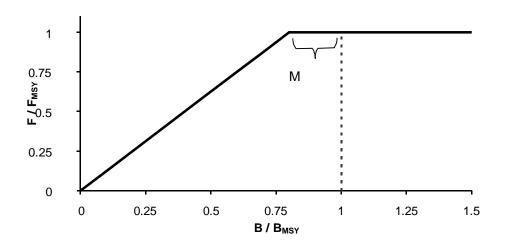
Action 3- Estimated % reduction or increase in landings for alternatives

| Alternative | Option | Gulf of Mexico | |
|---------------|---|----------------|--|
| Alternative 2 | Option 2a: 5 fish | -14% | |
| | Option 2b: 10 fish | -12% | |
| Alternative 3 | Option 3a: 5 fish, Vertical line gear | -3% | |
| | Option 3b: 10 fish, Vertical line gear | -2% | |
| Alternative 4 | Option 4a: 500 lbs ww, Longline gear | 4% | |
| | Option 4b: 50 lbs ww, Longline gear | -12% | |

Questions?



Minimum Stock Size Threshold (MSST) and Maximum Sustainable Yield (MSY) Proxy for Reef Fish Stocks



Options Paper for an Amendment

to the Fishery Management Plan for the Reef Fish Resources of the Gulf of Mexico

October 2015





This is a publication of the Gulf of Mexico Fishery Management Council Pursuant to National Oceanic and Atmospheric Administration Award No. NA10NMF4410011.

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ABBREVIATIONS USED IN THIS DOCUMENT

Council Gulf of Mexico Fishery Management Council

FMP Fishery Management Plan

GMFMC Gulf of Mexico Fishery Management Council

Gulf of Mexico

M Instantaneous Rate of Natural Mortality

Magnuson-Stevens Act Magnuson-Stevens Fishery Conservation and Management Act

MFMT Maximum fishing mortality threshold

MSST Minimum stock size threshold
MSY Maximum sustainable yield
NMFS National Marine Fisheries Service
NS1 National Standard 1 guidelines

OY Optimum yield

SEDAR Southeast Data, Assessment and Review

SPR Spawning potential ratio

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CHAPTER 1. INTRODUCTION

1.1 Background

What Actions Are Being Proposed?

This Amendment to the Fishery Management Plan for the Reef Fish Fishery of the Gulf of Mexico proposes to modify the definition of minimum stock size threshold (MSST) for select reef fish species with a low (less than 0.10, 0.15, 0.20, or 0.25) natural mortality rate, and to consider setting a default definition of MSST for all stocks in the reef fish fishery management unit.

Who is Proposing the Action?

The Gulf of Mexico Fishery Management Council (Council) is proposing the action. The Council develops the amendment and submits it to the National Marine Fisheries Service (NMFS) who publishes a rule to implement the amendment on behalf of the Secretary of Commerce. NMFS is an agency in the National Oceanic and Atmospheric Administration within the Department of Commerce.

Why are the Council and NMFS Considering Action?

This amendment would define (or re-define) the MSST for select reef fish species with low natural mortality rates to reduce the likelihood of the stock entering an overfished status due to normal year-to-year fluctuations in biomass levels. MSST is a biomass level set below the level corresponding to maximum sustainable yield (MSY) to allow for fluctuations in abundance while maintaining the capability to produce MSY on a continuing basis. The current definition of MSST used by the Council for most stocks where it has been defined is (1-M)*B_{MSY} (or proxy for B_{MSY}) or 0.5* B_{MSY} (or proxy), whichever is greater. M is the natural mortality rate and B_{MSY} (or proxy) is the biomass or biomass proxy when the stock is at the maximum sustainable yield (MSY) level and considered to be rebuilt. This can be measured in terms of female spawning stock biomass, total (male plus female) spawning stock biomass, or estimated spawning stock egg production. Using this formula, the buffer between MSY and MSST is very small for long-lived stocks that have a low M. Such stocks tend to have smaller natural fluctuations in abundance than high-M stocks, but even small fluctuations in biomass due to natural variations not related to fishing mortality may cause a stock to vary between an overfished or not overfished condition based on current definitions. When a species is identified as overfished, the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) requires that a plan be implemented to rebuild the stock. Redefining MSST for species with low natural mortality rates would help to prevent unnecessary overfished designations when small drops in biomass are due to natural variation in recruitment or other

environmental variables, and ensure that rebuilding plans are applied to stocks when truly appropriate.

This amendment would also consider establishing a default MSST for all reef fish stocks in the management unit. A previous attempt was made to define MSST as a certain spawning potential ratio (SPR) level for all reef fish species in the Generic Sustainable Fisheries Act Amendment (GMFMC 1999) was rejected by NMFS. Subsequent to that action, the Council began to define MSST and other status determination criteria for stocks as they were assessed, but only if needed in order to establish a rebuilding plan for overfished stocks. MSSTs have not been set for stocks without assessments or assessed stocks that were not in need of a rebuilding plan. Consequently, MSST has been defined for only 5 of the 31 species in the reef fish fishery management unit (Table 1.2).

Gulf of Mexico Fishery Management Council

- Responsible for conservation and management of fish stocks
- Consists of 17 voting members, 11 of whom are appointed by the Secretary of Commerce, the National Marine Fisheries Service Regional Administrator, and 1 representative from each of the 5 Gulf states marine resource agencies
- Responsible for developing fishery management plans and amendments, and for recommending actions to National Marine Fisheries Service for implementation

National Marine Fisheries Service

- Responsible for conservation and management of fish stocks
- Responsible for compliance with federal, state, and local laws
- Approves, disapproves, or partially approves Council recommendations
- Implements regulations

1.2 Purpose and Need

The purpose for the action is set MSST for reef fish stocks taking into consideration natural mortality rates, and to establish MSST for all stocks in the reef fish fishery management unit.

The need for the proposed action is to comply with the National Standard 1 guidelines requiring that stocks have an MSST while giving consideration to preventing reef fish stocks with low natural mortality rates from frequently alternating between overfished and non-overfished conditions due to natural variation in recruitment and other environmental factors.

1.3 History of Management

Following passage of the Sustainable Fisheries Act of 1996, the National Marine Fisheries Service (NMFS) published updated National Standard Guidelines that included the introduction of status determination criteria. The updated guidelines for National Standard 1 (NS1) described maximum fishing mortality threshold (MFMT) to determine when overfishing is occurring, and minimum stock size threshold (MSST) to determine when a stock is overfished. The NS1 guidelines further required that each fishery management plan (FMP) must specify, to the extent possible, objective and measurable status determination criteria for each stock or stock complex covered by that FMP and provide an analysis of how the status determination criteria were chosen and how they relate to reproductive potential.

In 1999, the Council submitted its Generic Sustainable Fisheries Act Amendment (GMFMC 1999), in which it attempted to define MSST and MFMT along with other biological reference points of maximum sustainable yield (MSY) and optimum yield (OY) for stocks under management. All of the definitions were based on static spawning potential ratio (SPR). For reef fish stocks, the amendment proposed the following MFMT and MSST definitions (Table 1.1).

_

¹ SPR is a measure of reproductive capability, but is measured in two different ways. Static SPR is a measure of spawning-per-recruit relative to the level of spawning-per recruit that would occur in the absence of fishing. It is analogous to yield-per-recruit and is the level of spawning that would occur at equilibrium if fishing occurred at the same rate and selectivity pattern. Transitional SPR is a measure of spawning production per recruit in a given year relative to the spawning production that would have occurred in that year if there had been no fishing. Static SPR is directly related to fishing mortality and can be used as a measure of overfishing. Transitional SPR can be used to indicate how close the age structure of a stock is to being rebuilt, but does not necessarily correlate to absolute biomass levels (GMFMC 1996). Although these terms have fallen out of common use, phrases such as "a mortality rate of 30% SPR" or "yield when fishing at 30% SPR" refer to static SPR.

Table. 1.1. Proposed MSY, OY, MFMT, and MSST definitions in the Generic Sustainable Fisheries Amendment.

| Stock | MSY | OY | MFMT | MSST |
|--|-------------------|-------------------|---|--|
| Nassau grouper Jewfish (goliath grouper) | 50% static SPR | 50% static SPR | Fishing mortality rate equivalent to 50% static SPR | To be implemented by framework measure as estimates |
| Red snapper | 26% static SPR | 36% static SPR | Fishing mortality rate equivalent to 26% static SPR | of BMSY and MSST are developed by NMFS, the Reef |
| All other reef fish stocks | 30% static SPR | 40% static SPR | Fishing mortality rate equivalent to 30% static SPR | Fish Stock Assessment Panel, and the Council. |

On November 17, 1999, NMFS notified the Council that, while it approved the definitions of MFMT based on static SPR, it disapproved all SPRs submitted as proxies for MSY, OY and MSST because SPR is not biomass-based and is not an acceptable proxy for biomass reference points.

All stocks have an MFMT from the Generic Sustainable Fisheries Act Amendment or as later modified. Other status determination criteria and biological reference points were adopted on a stock-by-stock basis as stocks were assessed, but only if the stock was determined to be in need of a rebuilding plan. Stocks for which MSST has been adopted are shown in Table 2.1.

Table 1.2. Stocks with status determination criteria assigned.

| Stock | MFMT | MSST | MSY | Source |
|----------------------|-----------------------------|---|---------------------------|--|
| Gag | F_{MAX} | (1-M)*femaleSSB _{MAX} (M = 0.15) | | Amendment 30B (GMFMC 2008a) |
| Red grouper | F _{30% SPR} | (1-M)* SSfemale gonad wt _{MSY} (M = 0.2) | | Secretarial Amendment 1 (GMFMC 2004a) |
| Red snapper | F _{26%} SPR | $(1-M)*B_{MSY}$ (M = 0.094277) | | Amendment 27 (GMFMC 2007) |
| Vermilion snapper | F _{MSY} (no proxy) | $(1-M)*B_{MSY}$ (M = 0.25) | Yield at F _{MSY} | Amendment 23 (GMFMC 2004b) |
| Gray triggerfish | F _{30% SPR} | $(1-M)*eggSSB_{30\% SPR}$ (M = 0.27) | | Amendment 30A (GMFMC 2008b) |
| Greater amberjack | F _{30%} SPR | $(1-M)*B_{MSY}$ (M = 0.25) | | Secretarial Amendment 2 (GMFMC 2002) |

Note: Amendment 23 did not define an MSY proxy for vermilion snapper. It specified that SDC were to be based on the actual MSY estimate. The proxy SEDAR 9 and SEDAR 9 update assessments, however, used a proxy based on 30% SPR.

Several other reef fish species have had stock assessments, but were not in need of rebuilding plans (or in the case of goliath grouper, harvest was already prohibited), and therefore were not assigned status determination criteria. These stocks include mutton snapper, lane snapper, yellowedge grouper, goliath grouper, black grouper, tilefish, and hogfish.

CHAPTER 2. MANAGEMENT ALTERNATIVES

2.1 Action 1 – Define (or re-define) Minimum Stock Size Threshold for Species in the Reef Fish Fishery Management Unit

Alternative 1: No Action. MSST for species that have a defined specification will not be changed. MSST will remain undefined for species that do not have a definition specified.

Alternative 2: $MSST = (1-M)*B_{MSY}$ (or proxy)

Alternative 3: MSST = $(1-M)*B_{MSY}$ (or proxy) or $0.75*B_{MSY}$ (or proxy), whichever is less.

Alternative 4: MSST = $0.75*B_{MSY}$ (or proxy), for all stocks.

Alternative 5: MSST = $0.50*B_{MSY}$ (or proxy), for all stocks.

Discussion:

Stocks with a low natural mortality rate can end up with an MSST that is only slightly below the BMSY (or proxy) spawning stock biomass level. In such situations it can be difficult to determine if a stock is actually below MSST due to imprecision and accuracy of the data. In addition, natural fluctuations in stock biomass levels around the BMSY level may temporarily drop the spawning stock biomass below MSST, although analysis from the Southeast Fisheries Science Center (SEFSC) suggests that this is unlikely except at very low natural mortality rates (see below). Setting a wider buffer between BMSY or proxy) and MSST can avoid these issues. In addition, setting a wider buffer can allow a greater opportunity for management to end a decline in a stock that is approaching an overfished condition and rebuild the stock without the constraints imposed by a rebuilding plan that is required if the stock drops below MSST and is declared overfished. However, if a stock does drop below MSST and is declared overfished, a more restrictive rebuilding plan may be needed than if there were a narrower buffer between BMSY and MSST. Thus, the decision of where to set MSST requires a balance between conservation and management flexibility.

Under **Alternative 1**, only six of the 31 stocks in the Reef fish Fishery Management Plan currently have MSST defined. Those stocks are: gag, red grouper, red snapper, vermilion snapper, gray triggerfish, and greater amberjack (Table 1.2) For each of these stocks, MSST = (1-M)*B_{MSY} (or proxy). The natural mortality rate (M) for these stocks ranges from 0.09 to 0.25, so the resulting MSST values range from 75% to 91% of the B_{MSY} proxy. For the remaining 25 stocks, MSST is undefined and would need to be established on a case by case basis.

Alternative 2 sets MSST for all stocks at (1-M)*B_{MSY} (or proxy). This is often the de facto MSST used to determine overfished status, but has been formally adopted in an FMP amendment only for stocks in need of a rebuilding plan. Stock that have not been assessed, and stock that have been assessed and found not to be in need of a rebuilding plan, have not had the MSST established. Natural mortality rates have been estimated for 14 of the 31 reef fish stocks in the

Gulf of Mexico (Table 2.1). These estimates range from a low of 0.073 (yellowedge grouper) to a high of 0.28 (greater amberjack), , so the resulting MSST values range from 72% to 91% of the BMSY (or proxy). An additional 14 stocks have natural mortality estimates from other regions, either in the published literature or in SEDAR assessments done for South Atlantic stocks (Table 2.2). The SEFSC and the SSC would need to determine if these estimates are applicable to the Gulf stocks or if separate Gulf estimates are needed. Three stocks have no published estimates of natural mortality (Table 2.2).

Alternative 3 sets MSST at $0.75*B_{MSY}$ (or proxy) for all stocks that have M=0.25 or less. Stocks with M greater than 0.25 would use the $(1-M)*B_{MSY}$ formula, which would result in a wider buffer between B_{MSY} and MSST for those stocks with M greater than 0.25.

| Mutton snapper (M=0.11) | Vermilion snapper (M=0.25) | Black grouper (M=0.136) |
|------------------------------|------------------------------|-------------------------|
| Red snapper (M=0.094) | Yellowedge grouper (M=0.073) | Gag (M-0.134) |
| Lane snapper (M=0.11-0.24) | Goliath grouper (M=0.12) | Tilefish (M=0.13) |
| Yellowtail snapper (M=0.194) | Red grouper (M=0.14) | Hogfish (M=0.179) |

In addition, there are 14 reef fish stocks that have natural mortality rates estimated from regions other than the Gulf and 3 stocks that have no estimate of natural mortality (Table 2.2). Until estimates of natural mortality for the Gulf of Mexico are available, these stocks will be considered to have an unknown mortality in this region and will be included in the low mortality category. These stocks include:

| Queen snapper (M=0.33-0.843) | Speckled hind (M=0.15-0.20) | Goldface tilefish (M=n/a) |
|--------------------------------|-----------------------------------|----------------------------|
| Blackfin snapper (M=0.23-0.73) | Warsaw grouper (M=0.08) | Blueline tilefish (M=0.10) |
| Cubera snapper (M=0.15) | Snowy grouper (M-0.12) | Lessor amberjack (M=n/a) |
| Gray snapper (M=0.18-0.43) | Yellowmouth grouper (M=0.14-0.24) | Almaco jack (M=n/a) |
| Silk snapper (M=0.19-0.86) | Scamp (M=0.14-0.15) | Banded rudderfish (M=0.41) |
| Wenchman (M=0.44) | Yellowfin grouper (M=0.20) | |

All of the above stocks (29 of 31) would have MSST = $0.75*B_{MSY}$ (or proxy). The only stocks not subject to this level are gray triggerfish (M=0.27) and greater amberjack (M-0.28). For these stocks, MSST would be equal to $0.73*B_{MSY}$ and $0.72*B_{MSY}$ respectively.

Alternative 4 sets MSST 0.75*B_{MSY} (or proxy) for all reef fish stocks. This would set MSST at the 0.75 level for all 31 stocks in the FMP including gray triggerfish and greater amberjack.

Alternative 5 sets MSST 0.75*B_{MSY} (or proxy) for all reef fish stocks. This would set MSST at the 0.75 level for all 31 stocks in the FMP.

If any species are added to the management unit, or if the estimate of M is changed in a peer-review report or SEDAR assessment for any existing species in the management unit, the intent of this action is that MSST will be set based on the most recent estimate of M and the preferred alternative specified in this action.

Evaluation of the Likelihood of Stocks Falling Below MSST Due to Natural Fluctuations

The SEFSC evaluated the probability that spawning stock will fall below the MSST in the absence of overfishing when MSST = $(1-M)*B_{MFMT}$ versus other MSST reference points (Appendix A). This analysis was requested by the interdisciplinary planning team during preparation of this amendment. The analysis modeled three stocks using different proxies for MFMT (F_{MSY} for bluefin tuna, F_{MAX} for vermilion snapper and $F_{30\%}$ spr for gray triggerfish). For these stocks, estimated natural mortality (M) ranged from 0.14 to 0.27. In the model, abundance was varied randomly while the stock was fished at MFMT. Results showed that fewer than 5% of the model runs resulted in spawning stock levels below MSST at either $(1-M)*B_{MFMT}$ or $0.75*B_{MSY}$. None of the model runs resulted in spawning stock levels below MSST at $0.50*B_{MSY}$. These results indicate that for the stocks examined, $(1-M)*B_{MFMT}$ appears to be a sufficient buffer against stocks dropping below MSST due to natural fluctuations. However, lower values of M did result in higher probabilities of the stock dropping below MSST despite not experiencing overfishing. As a result, the relationship may breakdown for very small levels of M less than 0.1, in which case adopting an MSST of at least $0.9*B_{MFMT}$ may be appropriate for stocks with M less than 0.1.

Table 2.1. Reef fish species with natural mortality estimates from stock assessments for the Gulf of Mexico stock.

| Common Name | Scientific Name | M | Source | | | |
|--------------------|---------------------------|-----------|-----------------------|--|--|--|
| | Snappers | | | | | |
| Mutton snapper | Lutjanus analis | 0.11 | SEDAR 15A (2008) | | | |
| Red snapper | Lutjanus campechanus | 0.094277 | SEDAR 31 (2013) | | | |
| Lane snapper* | Lutjanus synagris | 0.30 | Ault et al. (2005) | | | |
| | | 0.11-0.24 | Johnson et al. (1995) | | | |
| Yellowtail snapper | Ocyurus chrysurus | 0.194 | O'Hop et al. (2012) | | | |
| Vermilion snapper | Rhomboplites aurorubens | 0.25 | SEDAR 9 (2006a) | | | |
| | Groupers | | | | | |
| Yellowedge grouper | Hyporthodus flavolimbatus | 0.073 | SEDAR 22 (2011a) | | | |
| Goliath grouper | Epinephelus itajara | 0.12 | SEDAR 23 (2011b) | | | |
| Red grouper | Epinephelus morio | 0.14 | SEDAR 12 (2007) | | | |
| Black grouper | Mycteroperca bonaci | 0.136 | SEDAR 19 (2010) | | | |
| Gag | Mycteroperca microlepis | 0.134 | SEDAR 33 (2014a) | | | |
| | Tilefishes | | | | | |
| Tilefish | Lopholatilus | 0.13 | SEDAR 22 (2011c) | | | |
| | chamaeleonticeps | | | | | |
| Other Species | | | | | | |
| Hogfish | Lachnolaimus maximus | 0.179 | Cooper et al. (2013) | | | |
| Greater amberjack | Seriola dumerili | 0.28 | SEDAR 33 (2014b) | | | |
| Gray triggerfish | Balistes capriscus | 0.27 | SEDAR 9 (2006b) | | | |

^{*} Lane snapper: Ault et al. (2005) estimated M=0.30 for lane snapper in the Florida Keys. Johnson et al. (1995) reported a range of M estimates from 0.11 to 0.24 for lane snapper from the northern Gulf of Mexico.

Table 2.2. Reef fish species with no estimate of Gulf of Mexico natural mortality. Natural mortality estimates, where shown, are for stocks from other regions, primarily the Florida Keys, U.S. south Atlantic, or Caribbean.

| Common Name | Scientific Name | M | Source | | |
|----------------------|-----------------------------|------------|--------------------------|--|--|
| Common Name | · | IVI | Source | | |
| Snappers 1.14 (1992) | | | | | |
| Queen snapper | Etelis oculatus | 0.843 | Murray and Moore (1992) | | |
| DI I @ | 7 11 | 0.33-0.76 | Bryan et al. (2011) | | |
| Blackfin snapper | Lutjanus buccanella | 0.23 | Ault et al. (1998) | | |
| G 1 | | 0.73 | Tabash and Sierra (1996) | | |
| Cubera snapper | Lutjanus cyanopterus | 0.15 | Ault et al. (1998) | | |
| Gray (mangrove) | Lutjanus griseus | 0.25 | Ault et al. (2005) | | |
| snapper | | 0.18-0.43 | Burton (2000) | | |
| Silk snapper | Lutjanus vivanus | 0.23 | Ault et al. (1998) | | |
| | | 0.19-0.86 | Bryan et al. (2011) | | |
| | | 0.86 | Tabash and Sierra (1996) | | |
| Wenchman | Pristipomoides aquilonaris | 0.44 | Froese and Pauly (2014a) | | |
| | Groupers | | | | |
| Speckled hind | Epinephelus drummondhayi | 0.20 | Ault et al. (1998) | | |
| | | 0.15 | Ziskin (2008) | | |
| Warsaw grouper | Hyporthodus nigritus | 0.08 | Ault et al. (1998) | | |
| Snowy grouper | Hyporthodus niveatus | 0.12 | SEDAR 36 (2013) | | |
| Yellowmouth | Mycteroperca interstitialis | 0.14-0.24* | Burton et al. (2014) | | |
| grouper | | | | | |
| Scamp | Mycteroperca phenax | 0.15 | Potts and Brennan (2001) | | |
| | | 0.14 | Ault et al. (2005) | | |
| Yellowfin grouper | Mycteroperca venenosa | 0.20 | Ault et al. (2005) | | |
| Tilefishes | | | | | |
| Goldface tilefish | Caulolatilus chrysops | n/a | | | |
| Blueline tilefish | Caulolatilus microps | 0.10 | SEDAR 32 (2013) | | |
| Jacks | | | | | |
| Lesser amberjack | Seriola fasciata | n/a | | | |
| Almaco jack | Seriola rivoliana | n/a | | | |
| Banded rudderfish | Seriola zonata | 0.41 | Froese and Pauly (2014b) | | |

^{*} For Yellowmouth grouper, Burton et al. (2013) gave age specific natural mortality rates calculated three ways, but did not provide an average. The values in this table are the range of average values for each method for the adult age groups (ages 3 to 31).

2.2 Action 2 – MSY Proxies

Alternative 1: No Action.

Alternative 2: MSY proxy = the yield when fishing at $F_{30\% SPR}$, except for those stocks listed in Alternative 4 (if selected).

Alternative 3: MSY proxy = the yield when fishing at $F_{40\% SPR}$, except for those stocks listed in Alternative 4 (if selected).

Alternative 4: Regardless of the alternative selected above, the following stocks shall have MSY defined as shown below.

Exceptions:

Gag: MSY proxy = the yield when fishing at F_{MAX} . (Amendment 30B)

Red grouper: MSY proxy = the yield when fishing at $F_{30\%}$ SPR. (Secretarial Amendment 1)

Red snapper: MSY proxy = the yield when fishing at $F_{26\%}$ SPR. (Amendment 27)

Vermilion snapper: MSY proxy = the yield when fishing at F_{MSY} . (SEDAR 9 Update Assessment) Gray triggerfish: MSY proxy = the yield when fishing at $F_{30\%}$ SPR. (Amendment 30A) Greater amberjack: MSY proxy = the yield when fishing at $F_{30\%}$ SPR. (Secretarial Amendment 2)

Goliath grouper: MSY proxy = the yield when fishing at $F_{50\% SPR}$. (SEDAR 23)

Discussion:

Alternative 1 leaves the MSY undefined except for the six stocks listed in Table 1.2 (gag, red grouper, red snapper, vermilion snapper, gray triggerfish, and greater amberjack). The MSY proxy for the remaining stocks would need to be established on a case by case basis as an assessment is conducted or sufficient biological information is attained to allow a specification of MSY of MSY proxy.

Note: for vermilion snapper, Amendment 23 (2004) specified that the actual MSY estimate was to be used rather than a proxy. However, the most recent vermilions snapper assessments (SEDAR 9 2006b and SEDAR 9 Update 2011) used a proxy of yield at F_{30% SPR}. Under **Alternative 1** there would be no proxy for vermilion snapper; the actual estimate of MSY would be used as specified in Amendment 23. **Alternatives 2 and 3** would adopt a proxy of yield at F_{30% SPR} or F_{40% SPR} unless vermilion snapper is retained as an exception under **Alternative 4**.

Alternative 2 sets the MSY proxy at the yield when fishing at F_{30% SPR}. This would apply to all reef fish stocks except those listed in Alternative 4 (if that alternative is adopted along with **Alternative 2**). Under the Generic Sustainable Fisheries Act Amendment (GMFMC 1999), and MFMT overfishing threshold of F_{30% SPR} was adopted for most reef fish stocks. Those stocks with a different MFMT are listed in **Alternative 4**. **Alternative 3**, if adopted in conjunction with **Alternative 4**, would set MSY proxies that are consistent with the current MFMT proxies.

Alternative 3 sets the MSY proxy at the yield when fishing at F_{40% SPR}. This would apply to all reef fish stocks except those listed in **Alternative 4** (if that alternative is adopted along with

Alternative 3). Under the Generic Sustainable Fisheries Act Amendment (GMFMC 1999), and MFMT overfishing threshold of $F_{30\% SPR}$ was adopted for most reef fish stocks. Those stocks with a different MFMT are listed in **Alternative 4**. **Alternative 3** is inconsistent with most of the current MFMT proxies. It would result in an MSY proxy and MSST that are more conservative than the MFMT at $F_{30\% SPR}$. An additional action to re-define MFMT for most reef fish stocks would be needed to restore consistency between MFMT, MSST, and MSY proxies.

Alternative 4 is intended to be adopted in combination with either **Alternative 2** or **Alternative 3**. It defines specific stocks that have a different MSY proxy that was either defined in an earlier amendment or utilized in a recent SEDAR stock assessment. **Alternative 4** would assure that those proxies are retained.

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APPENDIX A.

A Preliminary Analysis of the Probability that the Spawning Stock will Fall Below the Minimum Stock Size Threshold in the Absence of Overfishing

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The Interdisciplinary Planning Team charged with developing a Minimum Stock Size Threshold amendment to the Reef Fish FMP requested an analysis be conducted to determine the likelihood of stock biomass levels falling below the minimum stock size threshold (MSST) for reasons other than overfishing. This document presents the results of preliminary analyses based on the assessments of three stocks with very different life history strategies: vermilion snapper, gray triggerfish and western Atlantic Bluefin tuna. These stocks were chosen because the forecasting software used in those assessments was easily modified to accommodate the request, however more species will be analyzed as time permits.

The basic approach to quantifying the probability that a stock would fall below a prescribed level of MSST without undergoing overfishing involves stochastic projections of the long-term abundance of the stock when it is subject to fishing at the maximum fishing mortality threshold (MFMT) used to define the overfishing limit (FMSY for Bluefin, FMAX for vermilion snapper and F30% for gray triggerfish). Stochasticity was introduced by incorporating estimates of parameter uncertainty and lognormally-distributed random deviations in recruitment as specified in the assessment documents referenced below. Populations were found to reach a dynamic equilibrium within 150 years, therefore it was safe to assume that any transient effects resulting from the stock starting somewhere above or below MSST would be negligible by the final year of the projection. The fraction of the projections where the biomass in the final year falls below the biomass at MSY (or proxy) was then tabulated in the form of cumulative frequency distributions (Figure 1).

In all three examples fewer than 5% of the runs resulted in spawning stock levels below the fraction (1-M) of the long-term spawning biomass level associated with MFMT (B_{MFMT}). In these examples M ranges between 0.14 and 0.27, so it was also true that 5% or fewer of the runs resulted in spawning stock levels below 0.75*B_{MFMT}. None of the runs resulted in spawning stock levels below 0.5*B_{MFMT}.

The probability of classifying a stock as overfished when MSST is defined as (1-M)* B_{MFMT} appears to change inversely with M. For example, if the value of M assumed for vermilion snapper is increased from 0.25 to 0.5, the probability that the stock would be classified as overfished decreased from 4% to near zero (Figure 2). Conversely, if the value of M assumed for vermilion snapper is decreased from 0.25 to 0.05, the probability that the stock would be classified as overfished increased to 37%.

In conclusion, the MSST definition (1-M)* B_{MFMT} appears to be a sufficient buffer against classifying any of the three stocks examined as overfished merely as a consequence of natural

fluctuations in year-class strength. Only a small percentage of the projections resulted in levels of spawning biomass below this level. The reason for this is that the extent to which year-class fluctuations result in fluctuations in spawning biomass generally decreases with the number of year classes in the population, and the number of year-classes in the population in turn generally increases with decreasing M. This relationship may breakdown for very small levels of M < 0.1, in which case one might wish to adopt a definition for MSST that does not exceed $0.9*B_{MFMT}$, e.g.,

 $MSST = MIN[1-M, 0.9]*B_{MFMT}$.

The present analysis could be expanded to allow for fluctuations in the natural mortality rate, growth and other population parameters, in which case it might be expected that the probability of dipping below any given level of MSST due to natural fluctuations would increase. This implies that a somewhat larger buffer might be appropriate. The levels mentioned during the IPT discussions included 0.75*BMFMT and 0.5*BMFMT (the latter being the lowest level allowed under the current NS1 guidelines). While further analyses are needed to indicate the level of natural variability required to support buffers as low as 0.5*B_{MFMT} in general, the current work suggests that at least for longer-lived stocks (low M) the degree of uncertainty would need to increase a great deal for such a low threshold to be appropriate. Ortiz et al. (2010) point out that setting a limit well below B_{MFMT}, while having the desirable quality of increased statistical power for detecting whether a stock has been overexploited, also carries with it the danger of extended time periods for management actions required for rebuilding. The current requirement under Magnuson-Stevens Fishery Conservation and Management Act to take immediate actions to stop overfishing should mitigate against this danger of falling too far below BMFMT, or to put it another way, causes buffers as low as 0.5*BMFMT to have no meaningful effect on the management of long-lived animals

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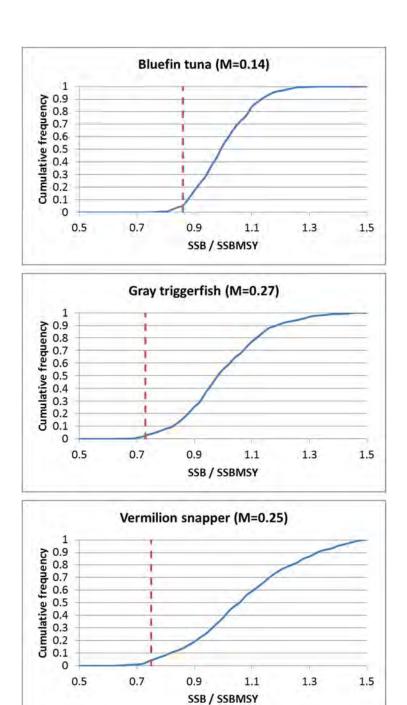
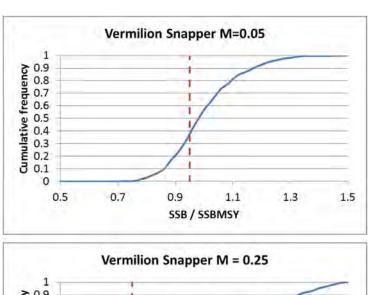
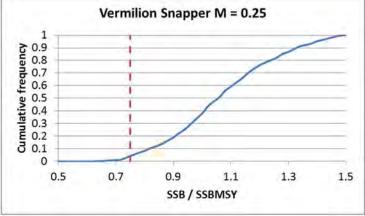


Figure 1 (**Appendix A**). Cumulative probability distributions of the spawning biomass in the last year of the projection relative to the equilibrium spawning biomass associated with MFMT for each of the three species. The dashed vertical line represents the quantity 1-M.





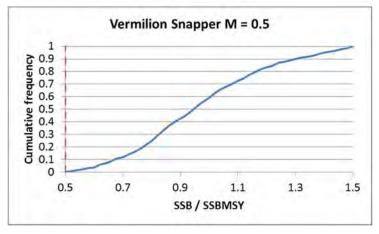


Figure 2 (Appendix A). Cumulative probability distributions of the spawning biomass in the last year of the projection relative to the equilibrium spawning biomass associated with MFMT for vermilion snapper assuming 3 different levels of M. The dashed vertical line represents the quantity 1-M.



Reef Fish Advisory Panel Summary Gulf of Mexico Fishery Management Council Gulf Council Conference Room Tampa, Florida September 16-17, 2015

Reef Fish AP members present:

| Martin Fisher, Chair | Jane Black | Buddy Guindon | Tom Turke |
|----------------------|----------------|---------------|-----------------------|
| Troy Frady, V. Chair | Jim Clements | Scott Hickman | Ed Walker |
| Ralph Allen | Jason DeLaCruz | George Huye | James Whitfield |
| Pam Anderson | F.J. Eicke | Chris Jenkins | Troy Williamson, III* |
| Patrick Bennett | James Eliason | Mike Thierry | Jim Zurbrick |

| Gulf Council Staff: | Council Member: | NMFS Staff: | Public: |
|--------------------------|------------------------|-------------------|----------------|
| Steven Atran | Doug Boyd | Steve Branstetter | Jeff Barger |
| John Froeschke | | Sue Gerhart | Mike Colby |
| Karen Hoak | | Peter Hood | Bob Gill |
| Morgan Kilgour (webinar) | | Rich Malinowski | Cathleen Gill |
| Ava Lasseter | | Christina Package | Sharon McBreen |
| Ryan Rindone | | | Chris McHan |
| Carrie Simmons | | | Tom Wheatley |

^{*} AP member was unable to attend the second day of the meeting. Three AP members could not attend out of 23 AP members.

The Reef Fish AP convened at 8:30 a.m. on September 16-17, 2015. Martin Fisher was elected the Chair and Troy Frady was elected the Vice Chair by acclamation. The meeting summaries of the Reef Fish AP and Red Snapper AP were approved without modifications.

Public Hearing Draft Amendment 39 – Regional Management of Recreational Red Snapper

Staff reviewed the actions and alternatives in the regional management document, highlighting the Council's current preferred alternatives. The AP discussed several actions which built upon one another to establish regional management before beginning to make recommendations.

AP members discussed Action 4, which would modify the federal minimum size limit for red snapper. Following an initial motion which failed to recommend support for the preferred alternative, AP members passed the following modified motion. AP members acknowledged the enforcement issues involved in their recommendation, but wanted to express their support for reducing bycatch and the conservation of the stock.

By a vote of 18 to 0 and 2 abstentions, the AP recommends in Action 4, to recommend to the Council a 15-inch TL minimum size limit and the retention of all legal fish caught up to the bag limit.

Returning to Action 1, AP members suggested that a review of the regional management program be required rather than the Council adopting a sunset provision. AP members moved to recommend Preferred Alternative 4 as the AP's preferred, with a substitute motion to make Alternative 1 the preferred. Following failure of the substitute motion, the AP recommended another alternative as preferred. AP members thought that for regional management to succeed, it should pass with a larger majority of Council member support than the simple majority required for other votes.

By a vote of 10 to 7, the AP recommends that the preferred alternative be Alternative 2.

Alternative 2: Establish a regional management program that <u>delegates</u> some management authority to a state or group of states (regions). ...

AP members discussed the alternatives of Action 2, extensively. Some members expressed concern with state management while others expressed concern with federal management. A couple of AP members expressed concerns relative to Magnuson-Stevens Act section 407(d), which requires the prohibition on further harvest of red snapper by the entire recreational sector when the ACL is reached. It is possible that a particular region's (or component's) landings exceed its portion of the ACL enough to trigger such a closure for the entire recreational sector. It was also noted that Alternative 3 would result in the ACL being divided into 10 regional and component ACLs, making the monitoring of landings more difficult than if the ACL was divided into fewer pieces. After an initial motion to recommend Alternative 4 as preferred, AP members passed the following substitute motion.

By a vote of 12 to 6, the AP recommends in Action 2, to recommend Alternative 2 as the preferred alternative.

Alternative 2: Extend the separate management of federal for-hire and private angling components of the recreational sector. This amendment would apply to the private angling component, only. ...

In Action 3, the AP supported the Council's current preferred alternative and passed the following motion:

By a unanimous vote, in Action 3, the AP recommends Preferred Alternative 5 as the panel's preferred alternative.

Preferred Alternative 5: Establish five regions representing each Gulf State, which may voluntarily form multistate regions with adjacent states.

For Action 5, AP members discussed various scenarios in which regions may want to close areas of federal waters. AP members noted the problems with enforcing closed areas in federal waters

while state waters are open. Following discussion, the AP passed the following motion after a substitute motion to recommend Preferred Alternative 2 failed.

By a vote of 14 to 2, the AP recommends in Action 5, that Alternative 1 be the preferred alternative.

Alternative 1: No action – Regions may not establish closed areas in federal waters adjacent to their region.

AP members discussed Action 6 that addresses allocating the red snapper recreational quota among the regions. An initial motion to recommend Alternative 7 as preferred failed. AP members passed a subsequent motion, recommending the Council's current preferred alternatives for the action, as follows:

By a vote of 18 to 0 and 1 abstention, the AP recommends in Action 6, to recommend Preferred Alternatives 5 and 6 as the preferred alternatives.

Preferred Alternative 5: Apportion the recreational sector ACL (or component ACLs) among the regions selected in Action 3 based on **50%** of average historical landings for the years **1986-2013** and **50%** of average historical landings for the years **2006-2013**.

Preferred Alternative 6: In calculating regional apportionments, exclude from the selected time series:

Preferred Option a: 2006 landings **Preferred Option b**: 2010 landings

AP members discussed the accountability measures provided in Action 7. Staff noted that these alternatives may be reworked such that each alternative could apply to any alternative selected in Action 2. Some AP members asked about the various State's new data collection programs for red snapper and how and when those could be implemented and replace MRIP. Staff stated these programs would need to run side by side for a period of time and then be certified, but eventually State red snapper data collection programs were expected to replace MRIP. Further, improved data collection programs could eventually reduce the size of the buffer on regional ACLs. After an initial motion recommending the Council's current Preferred Alternative 2, AP members offered the following substitute motion. AP members noted their rationale was to have the overage adjustment apply to any group's ACL that is exceeded and to not penalize any group (region or component) that does not exceed its ACL.

By a vote of 15 to 4, the AP recommends in Action 7, to recommend adopting Alternative 4 as the preferred alternative.

Alternative 4: While red snapper are overfished ..., if the combined recreational landings exceed the recreational sector ACL, in the following year reduce the **component ACL**s by the full amount of a component's ACL overage; ... [and] reduce the **regional ACL** of any region that exceeded its regional ACL by the amount of the region's ACL overage in the prior fishing year. ...

Review of Gray Triggerfish SEDAR 43 Stock Assessment

The SEDAR 43 gray triggerfish assessment was conducted as a standard assessment. Staff summarized the differences between a benchmark, standard, and update assessment. A benchmark assessment is used the first time a stock is assessed or when a new model is used. It consists of three workshops (Data, Assessment, and Review) and is peer-reviewed by a panel that includes reviewers from the Center for Independent Experts. A standard assessment is used when the same model is being used, but new data sources are available or there are major changes to the inputs. It uses a combined Data/Assessment workshop, and the peer review is conducted by the Scientific and Statistical Committee (SSC). Update assessments do not permit any changes to the model, except for adding the most recent years of data to the data streams. Update assessments are also peer reviewed by the SSC.

Staff reviewed the gray triggerfish assessment and the recommendations and motions made by the SSC. The assessment indicated that the gray triggerfish spawning stock biomass has continued to decline even though the fishing mortality rate has been below the maximum fishing mortality threshold for nearly a decade. The SSC noted concerns with several of the assumptions made in the assessment, and felt it was not useful for management advice. However, the assessment methodologically was done correctly and thus was accepted as the best available science. Some AP members then questioned if the assessment was considered best available science because it was the only available science. Staff noted that the motion made by the SSC was split, 12 to 8, because some members felt it was not possible to give management advice based on the assessment. Therefore, the SSC recommended maintaining the existing 305,300-lb ww ABC until a new benchmark assessment is conducted. However, it was noted that, even if the directed fishery is closed completely, the stock will not recover by the end of the 10-year rebuilding period in 2017.

Some AP members suggested that landings in the western Gulf were low in comparison to the eastern Gulf, not only because the center of abundance is in the east, but also because fishers in the west typically do not want gray triggerfish. Other AP members observed that, while gray triggerfish may have disappeared for a few years, in recent years they have become more abundant.

AP members suggested that the relationship between stock success and the increasing abundance of red snapper and lionfish needs to be evaluated. In addition, gray triggerfish are associated with *Sargassum* during their first 4 to 7 months of life, and it was suggested that measurements of *Sargassum* coverage be collected and added to the model. Staff responded that this was being looked at for the next assessment. The circle hook requirement in 2008 made it more difficult to catch gray triggerfish, and AP members questioned if this had been taken into consideration. Staff replied that the assessment document stated that analysis of unpublished data indicated the implementation of circle hook regulations resulted in a reduction in the catchability of gray triggerfish by a factor of 2.14. Panel members suggested that the change in the minimum size limit in 2008 from 12 inches total length to 14 inches fork length was a bigger change than it appears due to filaments in the tail. AP members suggested that other factors such as the 2010 BP oil spill should be evaluated to see if there was any impact on the stock.

By a vote of 16 to 1 the AP requests further analysis on impacts on gray triggerfish by red snapper and lionfish, the BP spill, and the abundance of *Sargassum*, and to add additional information to the standard assessment in order for the SSC to make a decision on the OFL and ABC.

An AP member suggested that management should move toward a full retention policy for gray triggerfish. As a first step the AP suggested gray triggerfish be included in the Amendment 33 reef fish IFQ program. This would allow a more accurate count of the commercial catch. Staff noted that gray triggerfish were on the list of potential species to be included in the Amendment 33 IFQ document, but development of the amendment had been postponed by the Council in April 2012.

By a vote of 16 to 1 and 1 abstention, the AP recommends that the Council revisit Amendment 33 (IFQ) to include gray triggerfish in the fishery management plan.

By a vote of 13 to 2 and 3 abstentions, the AP recommends that the Council untable Amendment 33 and move it forward.

AP members noted that the commercial sector did not reach its quota in 2014 and was currently below 50% of its quota as of September 2015. They thought that the commercial trip limit of 12 gray triggerfish may be too restrictive, because they are discarding fish. AP members suggested the Council should consider increasing the commercial trip limit to allow the commercial sector to fill its quota each year.

By a vote of 11 to 2 with 2 abstentions, the AP recommends to the Council analysis be done to optimize maximum yield for the commercial industry for gray triggerfish to reach quota via increase in bag limit (trip limit).

For the recreational sector, which has exceeded its quota and the fishing season has closed early in recent years, AP members suggested reducing the bag limit to 1 fish to help extend the season and increase fishing opportunities. Initially, some AP members suggested combining the bag limit decrease with an increase in the recreational minimum size limit to 15 inches FL, but the size limit increase was withdrawn after other AP member's raised concerns about the effect on discard mortality.

By a vote of 15 to 1, the AP recommends that for gray triggerfish, in the recreational fishery, there be a 1 fish bag limit, and a 14 inch FL minimum size limit, to maximize yield for the recreational fishery.

Under Other Business, AP members expressed concern that the Council might reduce the gray triggerfish stock-ACL below its current level. Given their observations that the stock seems to be in greater abundance in recent years, they passed the following motion.

By a unanimous vote the AP recommends to the Council to maintain the SSC's recommendation for the TAC for gray triggerfish at 305,300 lbs ww.

Public Hearing Draft – Joint Amendment to Require Electronic Reporting for Charter Vessels and Headboats

The Reef Fish AP reviewed the Modifications to Charter Vessel and Headboat Reporting Requirements document including the current preferred alternatives for the three actions. The AP reviewed Action 1 changes to charter vessel reporting requirements. There was some discussion that current reporting requirements are adequate for management needs; however, the majority of the AP concurred that improvements in data timeliness and accuracy afforded by electronic reporting would offset any potential cost and convenience concerns. Electronic, real-time reporting has been used successfully in commercial fisheries and for-hire reporting pilot programs. Similar results are expected for federally permitted Gulf charter vessels.

By a vote of 16 to 3 with one abstention, the AP recommends in Action 1 that Alternative 4 be the preferred alternative:

Gulf Preferred Alternative 4. Require that federally permitted charter vessels submit fishing records to the SRD for each trip via electronic reporting (via NMFS approved hardware/software) prior to arriving at the dock.

Trip-level reporting as proposed in Gulf Preferred Alternative 4 would allow improved validation routines and reduce recall bias. This is expected to improve accuracy and confidence in these data, thereby facilitating their use in science and management.

The AP also discussed Action 2 that includes alternatives to change the reporting frequency for federally permitted headboats. Electronic reporting has previously been implemented for headboats that report through the Southeast Regional Headboat Survey. However, electronic reporting is weekly with a week long delay between the end of the fishing week and report submission. The current Gulf Preferred Alternative 4 would require headboats to report each trip electronically, prior to arriving at the dock. The rationale and expected benefits from Alternative 4 are the same as those discussed for Action 1 (charter vessels).

By a vote of 17 to 3, the AP recommends adopting the preferred alternative in Action 2, Gulf Preferred Alternative 4, as the preferred.

Gulf Preferred Alternative 4. Require that headboats submit fishing records to the SRD for each trip via electronic reporting (via NMFS approved hardware/software) prior to arriving at the dock.

The AP reviewed Action 3 that considers alternatives to require vessel or catch location reporting. If selected as part of the For-Hire survey, charter vessels are required to report area fished (inshore, state, or federal waters). Headboats participating in the Southeast Regional Headboat Survey are required to report latitude and longitude of area fished (degrees and minutes only; within 1 nm² area). Some AP members felt this reporting requirement is adequate for science and management and that additional requirements could be costly and burdensome. However, concerns about non-compliance and potential negative effects on all participants in the fishery were also discussed. A motion was offered to retain Alternative 1 with the additional

modification to require vessel monitoring systems (VMS) on vessels found in violation of regulations in a closed or protected area; however, after some discussion the following substitute motion was passed:

By a vote of 16 to 2, the AP recommends in Action 3, to adopt Alternative 2 as the preferred alternative.

Gulf Preferred Alternative 2. Require federally permitted for-hire vessels to use a NMFS approved electronic device that automatically records vessel location at specified time intervals for later transmission:

Gulf Preferred Sub-Alternative 2a. In the Gulf (headboat)
Gulf Preferred Sub-Alternative 2b. In the Gulf (charter vessel)

Staff also noted that additional information regarding this program is necessary regarding administration, timing, costs, and integration of new data collection streams with historical data. This information is being requested from NMFS and may be discussed with the Data Collection AP after further development of the document.

The AP also discussed that the Gulf and South Atlantic Councils have different preferences for reporting in their respective regions. In contrast to the Gulf, the South Atlantic favors weekly reporting similar to the current headboat reporting requirements for both headboats and charter vessels. The AP thought weekly reporting would not realize the benefits of timeliness, validation protocols, and data accuracy that were necessary to best manage the Gulf for-hire industry. To avoid any delays in implementation of an improved data collection program, the AP recommended splitting the document into separate Gulf and South Atlantic documents.

By a vote of 17 to 2, the AP recommends that the Council proceed independently from the South Atlantic on the Joint S. Atlantic/Gulf For-Hire Electronic Reporting Requirements, and move forward with a Gulf only document.

Options Paper – Framework Action to set Gag Recreational Season and Gag and Black Grouper Minimum Size Limits

Staff reviewed the actions and alternatives in the gag framework action options paper. Regarding Action 1, gag minimum size limit, and Action 2, black grouper minimum size limits several AP members stated that while they were not opposed to increasing the size limit to 24 inches total length (TL) because only about 1% of gag landings in the Gulf occur in Monroe County (Table 1). The AP thought that there was not enough gag caught in that area to justify changing the size limit, affecting the majority of Gulf anglers, for the sake of consistency with South Atlantic regulations. Staff pointed out that while the percentage of total gag caught may be low, on a poundage basis the amount of gag landed in Monroe County was comparable to the amount of black grouper landed (Figure 1).

Table 1. Percentage of gag recreational landings made in each region of the Gulf coast of Florida out of all recreational landings of gag. MRIP landings of gag are counted as South Atlantic landings.

| % of Gag Recreational Landings by Florida Region | | | | | | | |
|--|-------|-------|-------|-------|-------|-------|--|
| Region | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | |
| Monroe County | 0.3% | 0.1% | 0.4% | 0.4% | 5.9% | 1.6% | |
| Panhandle | 21.4% | 25.0% | 17.7% | 20.1% | 24.7% | 18.2% | |
| West Central | 78.3% | 74.9% | 81.9% | 79.6% | 69.4% | 80.2% | |

Source: NMFS-SERO.

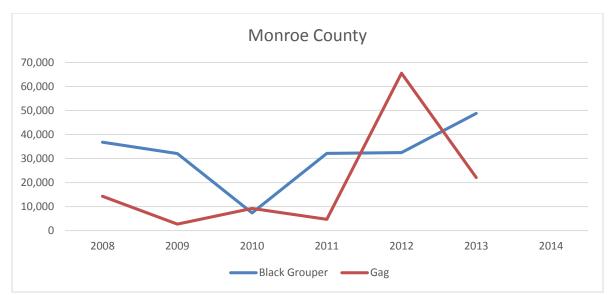


Figure 1. Pounds of gag and black grouper recreational landings in Monroe County 2008-2013. Source: NMFS-SERO

AP members asked how a size limit increase would affect discard mortality. One member expressed concern that it would be inconsistent to have previously recommended a precautionary approach to setting the ACL, while at the same time recommending an action that might increase discard mortality. Staff noted that the overall recreational gag release mortality was estimated at 14%, although that varied by depth. Staff also noted that it only took a 22 inch TL gag about six months to grow to 24 inches TL.

By a vote of 18 to 2, the AP recommends in Action 1, to adopt Preferred Alternative 2 as the AP's preferred.

Preferred Alternative 2. Set the recreational minimum size limit for gag at 24 inches TL.

By unanimous vote, the AP recommends in Action 2, to adopt Preferred Alternative 2 as the AP's preferred.

Preferred Alternative 2. Set the recreational minimum size limit for black grouper at 24 inches TL.

For Action 3, AP members from southwest Florida indicated that a winter fishery, November to March, was the best time for them, particularly if it included the Thanksgiving and Christmas holidays. With respect to the options in Alternatives 3 and 4 on how to handle the February-March closed season in waters beyond 20 fathoms, one AP member suggested that if an effort validation system was in effect, it would provide more accurate information on how much recreational effort occurs beyond 20 fathoms. The AP also discussed the number of estimated fishing days, with the increase in minimum size limit and selection of Alternative 4, Option c, the recreational sector is expected to have 306 fishing days.

By unanimous vote, the AP recommends in Action 3, Preferred Alternative 2 with Alternative 4, Option 4(c) as the Preferred Alternatives.

Preferred Alternative 2: Remove the December 3-31 fixed closed season. The recreational gag season will remain open through the end of the year or until a projection that the ACL will be reached sooner¹. Note Alternative 3 or 4 may also be selected in combination with this alternative.

Alternative 4: Remove the January through June gag seasonal closure. Set an opening date for the recreational gag season such that the ACL is projected to be reached on or after December 31 (based on the 2016 ACL).

Option 4c. Open January 1 through 31, close February 1 through March 31 to recreational harvest of gag in all federal waters, and re-open on the date such that the 2016 ACL is projected to be reached on or after December 31.

AP members expressed concern about the inequity of having a 24 inch TL recreational minimum size limit for gag, while the commercial minimum size limit is 22 inches TL. Staff noted that the commercial size limit had recently been reduced from 24 to 22 inches TL, because the commercial sector fished in deeper waters where discard mortality was greater. However, a panel member responded that majority of gag beyond 20 fathoms are larger than 24 inches TL and the commercial sector catches mostly larger fish. Although commercial size limits are not part of this framework action, AP members thought that the commercial and recreational sectors should have a consistent size limit.

By unanimous vote, the AP recommends in the event that the recreational minimum size limit is raised to 24 inches TL, then the AP recommends to the Council, by framework action, to increase the commercial minimum size limit of gag to 24" TL.

Draft Framework Action – Modify Gear Restrictions for Yellowtail Snapper

Staff presented the framework action to modify gear restrictions for yellowtail snapper. Gulf anglers are required to use circle hooks when catching reef fish with natural bait. The same is true for South Atlantic anglers, but only north of 28° 0' North latitude. Yellowtail snapper in the southeastern US are harvested almost exclusively in south Florida by both sectors. Landings in

9

¹ The recreational season closing date for gag is normally based on when the date when the ACL is projected to be reached. However, under the accountability measures for shallow-water grouper, if the recreational landings for gag exceed the ACL, then in the following year the season will close based on when the ACT is projected to be reached.

the Gulf are dominated by the commercial sector (over 97%), primarily from west and northwest of the Florida Keys.

AP members noted an increase in the abundance of yellowtail snapper off Texas and Tampa Bay. The method of cane-poling used by south Florida fishermen was not seen as a practical fishing method off Tampa Bay, because the fish further north are typically larger than those landed in the Keys. AP members also stated that they did not think it wise to open the entire Gulf of Mexico up to fishing with j-hooks, especially in light of the documented benefits of circle hooks to certain reef fish species (like red snapper) with respect to post-release mortality. The AP was in agreement that a gear exemption allowing the use of j-hooks by commercial yellowtail snapper fishermen was most appropriate for Monroe County fishermen and provided the following recommendation to the Council.

By a unanimous vote, the AP recommends that the Council select Alternative 4 as preferred.

Alternative 4: Remove the requirement to use circle hooks when commercial fishing with natural bait for yellowtail snapper south of 25° 23' North latitude on the west coast of Monroe County, Florida south to the Gulf Council jurisdictional boundary.

The AP was informed that Florida Fish and Wildlife Commission (FWC) may bring up a different boundary line suggestion for this document and for hogfish management. Florida FWC may suggest a line at 25° 09' North latitude around Cape Sable seen as a better, more enforceable boundary line. Generally, the AP thought since this line is further south and the restriction on commercial gear for yellowtail snapper should be limited primarily to Monroe County, this boundary line would also be acceptable.

Options Paper – Amendment to Define West Florida Shelf Hogfish Stock, and set ACL and Status Determination Criteria

Staff reviewed the actions and alternatives in the hogfish options paper. In Action 1 – Definition of the Management Unit there are currently three alternatives (GMFMC/SAFMC boundary, Shark Point, and Monroe/Collier County line). Florida FWC requested consideration of an additional alternative to place the hogfish management unit boundary at 25° 09' north latitude, just south of Cape Sable. Florida FWC requested this alternative because it is an existing regulatory boundary line for other stocks. Staff noted the stock assessment used the Monroe/Collier County line as the boundary between the Gulf stock and the East Florida/Florida keys stock. AP members stated that they did not want to overlap the healthy Gulf stock with the overfished East Florida/Florida Keys stock, and thought that the Council should accept the science used in the assessment.

By unanimous vote, the AP recommends to the Council that Action 1, Alternative 3 (Alternative 4 in the Council briefing book²) be the preferred alternative.

Alternative 3 (4 in the Council briefing book): The hogfish management unit is the west Florida shelf (or Gulf of Mexico) stock of hogfish. The geographical range of this unit is defined as all waters of the Gulf of Mexico north of a line extending west from the Monroe/Collier County line (25° 48' north latitude) to the outer boundary of the EEZ and westward throughout the rest of the Gulf of Mexico.

Action 2 – Define Status Determination Criteria for Hogfish. Staff noted that the Magnuson-Stevens Act and National Standard 1 Guidelines require that stocks have definitions for maximum sustainable yield (MSY) or proxy, maximum fishing mortality threshold (MFMT), and minimum stock size threshold (MSST). Hogfish currently have a definition for MFMT of F_{30% SPR}, but do not have formal definitions for MSY proxy or MSST. The alternatives in this action define MSY, MFMT, and MSST as a group since they are related to each other. The MSST definition contains three options for setting the size of the buffer between MSST and the stock size at the MSY proxy. This mirrors alternatives that are in a separate proposed amendment to define MSST for low natural mortality reef fish stocks and other stocks. AP members thought that the unofficial proxy was the best choice for official status determination criteria because it was based on fishing mortality at 30% SPR.

By unanimous vote, the AP recommends that the Council adopts Action 2, Alternative 3 as the preferred alternative.

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Alternative 3: MSY = equilibrium yield at F_{30\% SPR}

MFMT = F_{30\% SPR}

MSST =

Option a: (1-M)*SSB_{30\% SPR}, where M = 0.179

Option b: 0.75*SSB_{30\% SPR}

Option c: 0.50*SSB_{30\% SPR}
```

For the MSST option, AP members thought that the definition should error on the side of caution.

By unanimous vote, the AP recommends in Action 2, Alternative 3, Option (a) as the preferred option.

Option a: $(1-M)*SSB_{30\%} SPR$, where M = 0.179

Staff noted in Action 3 – Annual Catch Limit for Hogfish, that in addition to a constant fishing mortality ABC, where the ABC declines each year, the Council had requested a constant catch ABC where the ABC would remain fixed for the three years (2016-2018). That constant catch ABC will not be available until January. Staff also noted that one of the alternatives had an

² In the Council briefing book version of the options paper, the Cape Sable alternative has been added, and the alternatives renumbered so that they appear in geographical order from south to north. As a result, Alternative 3 that was recommended by the AP (Monroe/Collier County line) is now Alternative 4.

incorrect value. Consequently, AP members thought that they could not make a recommendation on Action 3 at this time, and asked how urgent it was that this amendment be implemented. Staff responded that the definition of the management unit was a priority so that the South Atlantic Council could establish a rebuilding plan for the East Florida/Florida Keys stock throughout its range. Definition of the status determination criteria is less urgent, but it needs to be done in a full amendment along with the definition of the management unit. Increasing the ACL is not urgent and could be done as a separate framework action once the values for all of the alternatives are known.

By unanimous vote the AP recommends to the Council that they create a plan amendment to manage hogfish and to establish the geographic boundary line and status determination criteria. In addition, separate Action 3 from the current options paper for hogfish.

AP members had recommendations for additional management actions that were not in the options paper. One AP member observed that recreational landings of hogfish are increasing while commercial landings have remained steady. He felt that a commercial: recreational allocation is needed.

By a vote of 16 to 0 with 2 abstentions the AP recommends that the Council divide the Gulf hogfish stock between a commercial allocation and a recreational allocation.

AP members thought that the current 12 inch FL minimum size limit was too small and should be increased to 14 inch FL. One AP member suggested that 15 inch FL would be preferable, but 14 inches FL was acceptable. Another AP member was concerned that, since the stock is not overfished, fishermen might not support an increase, but other AP members felt that there would be public support³ for such a size limit increase.

By unanimous vote the AP recommends that the Council increase the size limit of Gulf hogfish to 14 inch FL for both the commercial and recreational sectors.

Draft Options Paper – Modify Mutton Snapper ACLs and Establish Commercial and Recreational Management Measures

The AP did not have adequate time to discuss this agenda item.

Review of Coral Habitat Areas of Particular Concern (HAPC)

Staff presented the synopsis from the May, 2015 Coral SSC/AP meeting and Council conclusions. The AP discussed potential areas that could be of concern. Pulley Ridge is an area that is used by bottom longliners, and the northwestern Gulf had areas that were of concern. To prevent duplication of effort on areas in the northwestern Gulf, it was recommended that staff work with the Flower Garden Banks National Marine Sanctuary. Staff informed the AP that it was currently analyzing VMS data for inclusion in determining areas that could affect reef

³ The SEDAR 37 assessment states that 50% of females are mature between 151.1 to 192.7 mm FL (6 to 7.5 inches FL), and that 50% of females transition to males between 416 to 426 mm FL (16 to 18 inches FL).

fisheries and requested additional information on fisheries that may not be covered by VMS data

By a unanimous vote, the AP recommends to the Council that they form a working group of coral scientists, charter, recreational, bottom, and vertical line commercial fishers to identify new and existing coral areas that need boundary revisions.

A potential charge for the working group was discussed and the AP wanted to "minimize the restriction of access to all the appropriate fisheries by identifying the exact location of important coral structures and limiting the boundaries to the bases of those structures and where critical habitat exist."

South Florida Management Issues Document

The AP did not have adequate time to discuss this agenda item.

Review of SEDAR Schedule

The AP reviewed the SEDAR Schedule and asked questions about the next red snapper assessment.

Other Business

Out of concern for other reef fish species managed by the Council and their potential competitive and predatory interactions with lionfish, the AP passed the following motion:

By unanimous vote, the AP requests that the Council address the lionfish issue with video surveys and data collection on the reefs and collection of information from divers for the purpose of determining a way to eradicate or significantly decrease the presence of lionfish on the reefs.

Out of concerns for the red snapper stock recovery and changes in recreational anglers' fishing behaviors based on changes in management, the AP passed the following two motions:

By a vote of 11 to 3 with 2 abstentions, the AP recommends the Council request that the SEFSC run additional red snapper projections using the recalibration methodology out to 2032, using a wider range of reasonable assumptions for selectivity and recreational discard mortality including but not limited to selectivity. Range should include no change, consistent increase, consistent decrease, and fluctuation every 5 years between today and 2032. Recreational discard mortality range should include 0 to 100% in 25% increments. The results of these projections should be made available to the public and reviewed by the SSC. The SSC analysis should then be presented to the Council as soon as possible.

By a vote of 11 to 3 the AP recommends that all future Council decisions that are based on recalibrations be made only when all recalibration methods are evaluated and reviewed by the SSC in their entirety.

The AP Chair explained he would attend the upcoming October Council meeting. Staff would present the summary report and the AP Chair would be available for questions and to provide additional information to the Council as needed. The AP Chair agreed with the staff procedure, but the AP passed the following motion.

By a vote of 14 to 3 the AP recommends that the Reef Fish AP Chair present the AP's recommendations to the Council at the October meeting.

Other motions on – Reef Fish Amendment 39

Motion: To table discussion of Action 1 until the end.

Motion carried

Motion: to untable discussion of Action 1.

Motion carried

Motion: In Action 4, to recommend to the Council Preferred Alternative 3. Preferred Alternative 3: Reduce the federal minimum size limit to 15 inches TL. Motion failed 9 to 9.

Motion: In Action 1, to recommend the Council adopt alternative 4 as the preferred.

<u>Preferred Alternative 4</u>: Establish a regional management program in which a state or group of adjacent states (regions) submit proposals to a <u>technical review committee</u> describing the <u>conservation equivalency measures</u> the region will adopt for the management of its portion of the recreational sector ACL. ...

Substitute motion: To recommend Alternative 1 as the preferred alternative.

Alternative 1: No Action – Retain current federal regulations for management of recreational red snapper in federal waters of the Gulf of Mexico (Gulf).

Motion failed 6 to 11.

Motion: In Action 2, to recommend Alternative 4 as the preferred alternative.

<u>Alternative 4: End</u> the separate management of the federal for-hire and private angling components upon implementation of this amendment, and have this amendment <u>apply to the entire recreational sector</u>. The private angling and federal for-hire components would be managed as a single unit by each region under regional ACLs based on the allocation selected in Action 6.

(Substitute motion carried; thus, no vote taken on this motion.)

Substitute motion: In Action 5, to recommend to the Council that Preferred Alternative 2 be the preferred alternative.

<u>Preferred Alternative 2</u>: A region may establish closed areas within federal waters adjacent to their region in which the recreational harvest of red snapper is prohibited. Motion failed 3 to 14. (Main motion carried, 14 to 2, to recommend Alternative 1.)

Motion: In Action 6, to recommend Alternative 7 as the preferred alternative.

<u>Alternative 7</u>: Apportion the recreational sector ACL into eastern and western regional ACLs (or component ACLs) divided approximately at the Mississippi River, based on regional biogeographical differences in the stock used in the stock assessments. (Motion failed 7 to 10.)

Motion: In Action 7, to recommend adopting Preferred Alternative 2.

Preferred Alternative 2: While red snapper are overfished (based on the most recent Status of U.S. Fisheries Report to Congress), if the combined recreational landings exceed the recreational sector ACL, then reduce in the following year the regional ACL of any region that exceeded its regional ACL by the amount of the region's ACL overage in the prior fishing year. The recreational ACTs will be adjusted to reflect the previously established percent buffer. (Substitute motion carried; thus, no vote taken on this motion.)

Other motions on – Electronic Reporting for Charter Vessels and Headboats

Motion: In Action 2, to recommend adopting alternative 1 as the preferred alternative Motion failed for lack of a second

Motion: In Action 3, to adopt alternative 1 as the preferred alternative, with an addition that for those who are found violating regulations in a closed or protected area, a VMS may be a required tool for future participation in the fishery. Alternative 1 (No Action). Charter vessels participating in the For-Hire survey are required to report area fished (inshore, state, or federal waters), if selected as part of the survey. Headboats participating in the SRHS are required to report latitude and longitude of area fished (degrees and minutes only; within 1 nm² area). The substitute motion carried for this action.

The AP adjourned at 12:10 p.m. on September 17th.