

AP SUMMARY DOCUMENT
for
REGULATORY AMENDMENT 17
to the Fishery Management Plan for
Snapper Grouper Fishery
of the
South Atlantic Region
(Marine Protected Areas)

October 30, 2013

Snapper Grouper Advisory Panel Meeting
Charleston, SC
November 19-20, 2013

Background: At the March 2013 meeting, the Council approved the following motion:

MOTION #54: BRING THE MPA ISSUE BACK TO THE SNAPPER GROUPER COMMITTEE AT THE SEPTEMBER MEETING TO DEVELOP A PURPOSE AND NEED AND POTENTIALLY CONSIDER OPTIONS FOR RECONFIGURATIONS AND SPAWNING.

Spawning: Council staff reviewed the March 5-6, 2013 snapper grouper committee minutes to clarify which species “spawning” included. On pages 162-163 Mr. Hartig indicated that spawning referred to spawning speckled hind and Warsaw grouper. This was reiterated in discussion about the motion on page 169 of those minutes.

Type 1 versus Type 2: The issue of Type 1 (no fishing) versus Type 2 (no bottom fishing; no snapper grouper species) was discussed on page 148 of the March 5-6, 2013 committee minutes. The Expert Workgroup has recommend Type 1 while the committee/Council made the decision during the June 2012 meeting that these MPAs were going to be Type 2 MPAs. Note: There is disagreement among workgroup members on whether the recommendation for Type 1 is an “official” recommendation since it does not appear in the written report. Type 2 MPAs allow for pelagic trolling, however, no fishing for, possession, or retention of snapper grouper species is allowed. The use of shark bottom longline gear is prohibited. Vessels (both commercial and recreational) may transit (direct, non-stop progression) through the MPAs with snapper grouper species onboard with fishing gear appropriately stowed (see regulations for definition).

Purpose & Need: The Council approved the following wording at their September 2013 meeting. Council staff and the IPT are proposing some revisions.

AP ACTION:

1. Discuss/modify the Purpose & Need
2. Provide AP recommendations on the Purpose & Need

I. Purpose & Need (approved by Council at September 2013 meeting):

Purpose: Develop options to reduce bycatch of speckled hind and warsaw grouper by reconfiguration of deepwater MPAs (Amendment 14) and/or addition of new MPAs that contain evidence of occurrence and/or spawning of speckled hind or warsaw grouper. Develop and implement monitoring/evaluation/enforcement plans for any new marine protected areas.

Need: Protect speckled hind and warsaw grouper and their deepwater habitat from fishing and monitor and assess the effectiveness of MPAs, as outlined in a system management plan, in meeting the stated goals.

II. Purpose & Need (IPT recommended modifications):

Purpose: Reduce bycatch of speckled hind and warsaw grouper by reconfiguration of deepwater MPAs (Type 2; Amendment 14) and/or addition of new MPAs that contain evidence of occurrence and/or spawning of speckled hind or warsaw grouper. Develop and implement monitoring/evaluation/enforcement plans for any new marine protected areas.

Need: Reduce bycatch mortality of speckled hind and warsaw grouper and protect their deepwater habitat. Monitor and assess the effectiveness of MPAs, as outlined in a system management plan, in meeting the stated goals.

Discussion: Snapper Grouper Amendment 14 established a series of deepwater marine protected areas in the South Atlantic Exclusive Economic Zone. The amendment was approved by the Council during its June 2007 meeting and submitted to NOAA Fisheries for approval by the Secretary of Commerce on July 18, 2007. The Amendment was approved on January 13, 2009 and became effective February 12, 2009.

Points to help in developing the Purpose & Need: These are being provided for the Snapper Grouper AP's discussion/review and for the committee/Council in December; the Council also reviewed this material at the September 2013 meeting.

History of Management: Speckled hind and warsaw grouper regulations in the South Atlantic went from inclusion in the five grouper aggregate recreational bag limit in 1992 (56 FR 56016), to a commercial and recreational limit of one per vessel of each species with a commercial sale prohibition of these species in 1994 (59 FR 27242), to a complete harvest prohibition of both species in 2011 (75 FR 82280).

Stock Assessments:

"Warsaw grouper was assessed by catch curve analysis using data from 1988 and 1990 (Huntsman et al. 1992). Because warsaw grouper are infrequently caught, a single length frequency was constructed from several years (e.g., 1983-1988) for the assessment of the 1988 fishing year and 1989-1990 length samples were used for the 1990 fishing year. A limited age length key was applied to the length frequency to obtain catch-at-age data. No reproductive biology data were available; therefore, for SPR calculations the assumption for age-at-maturity was based on $\frac{1}{2} L_{\infty}$. Static SPR values for warsaw

grouper were 0.2% and 6% for 1988 and 1990 fishing years, respectively.” [SG Amendment 17B, section 3.3.9]

“Speckled hind was assessed for the 1988, 1990, 1996, and 1999 fishing years (NMFS 1991; Huntsman et al. 1992; Potts and Brennan 2001). Length frequencies for each fishing year assessed was constructed from that year’s data. Length samples came primarily from the commercial fishery. Lengths for 1996 and 1999 were limited by the management restriction of one speckled hind per trip. Age and growth data were available but there were no reproductive biology data. The assumption of $\frac{1}{2} L_{\infty}$ as the age of maturity was used for estimating the static SPR. SPR values were 25%, 12%, 8%, and 5% for 1988, 1990, 1996, and 1999 fishing years, respectively. ” [SG Amendment 17B, section 3.3.10]

Current Stock Status (NOAA Report to Congress): Note: Status of stocks report for 2012 lists red snapper, red grouper, speckled hind, and warsaw grouper as undergoing overfishing. Snowy grouper, red snapper, red grouper, and red porgy are listed as overfished.

Current Stock Status Conclusions from the April 2012 SSC Report: “It is possible that SH and WG are not undergoing overfishing, given all the regulations for associated species and the current analysis from the Regional Office; however, there is not sufficient evidence to indicate overfishing has ended. Additional closed areas could further decrease bycatch mortality beyond current levels. Based on the current info, the SSC cannot determine what benefits an additional closure will provide to the stocks of SH and WG, what amount of area closure is necessary to reduce bycatch mortality, or if additional closed areas are even necessary. Additional monitoring and data needs to be collected in order to be able to conduct an assessment of these species.”

Current level of bycatch (numbers of fish) from logbooks and observer programs: (see included graphs from Nick Farmer, NMFS SERO; Attachment B)

Bycatch	2011	2011	2012	2012
By Sector	Speckled Hind	Warsaw	Speckled Hind	Warsaw
Commercial	51	84	26	180
Headboat	31	33	28	22
Private/Charter	333	0	420	0
Total	415	117	474	202

Gulf & South Atlantic Fisheries Development Foundation Observer Project – concluded the bycatch level of speckled hind/warsaw grouper was too low to generate an estimate of bycatch for the South Atlantic commercial snapper grouper fishery.

Reconfigured/Spawning Sites: Council staff reviewed the recommended sites included in the MPA Expert Workgroup report dated 2/26/13 (version presented to the committee/Council at the March 2013 meeting) and prepared a set of tables (**Tables 1 & 2**). The first table (**Table 1**) represents our interpretation of which of the sites recommended by the Expert Workgroup (**Table 2**) are reconfigurations (including one reduction in size and one increase in size) and include spawning speckled hind and Warsaw grouper. Spawning of other snapper grouper species is also indicated. We also included the existing 8 MPAs established through Amendment 14 and the Oculina Experimental Closed Area. The Council's discussion on page 45 of the March 8, 2013 Council meeting minutes clarifies that staff are to provide a list of potential sites and the committee/Council would select the alternatives to include in Snapper Grouper Regulatory Amendment 17.

The committee/Council added "occurrence" to the Purpose and Need statement at the September 2013 meeting. This results in the list of sites shown in **Table 3**.

At the September 2013 meeting, the Council approved a motion directing staff to structure the actions/alternatives with one action per state and sub-alternatives, including No Action, for each state.

AP ACTION:

1. Discuss the Actions/Alternatives and the resulting lists of potential sites.
2. Provide AP input on Actions/Alternatives and the list of potential sites to be further analyzed.

Action 1. Retain and/or modify the existing Snowy Wreck MPA, and establish new MPAs off North Carolina (Type 2).

Note: Multiple sub-alternatives under an alternative may be chosen. The existing MPA site(s) would remain unless specifically modified or removed. The Alternatives progress from what is currently in place (No Action) to reconfigurations to existing MPAs, to sites with spawning, and then to sites with occurrence of speckled hind and/or warsaw grouper. If an alternative does not meet the spawning or reconfiguration criteria, then it is shown in yellow strike-thru. It is anticipated that the Council will choose one criteria for each state and then select one or more sub-alternatives for that alternative.

Alternative 1. No action. Snapper Grouper Amendment 14 (2007; regulations effective 2/12/09) established the 190 square mile Snowy Wreck MPA (Type 2) off North Carolina.

Alternative 2. Modify the existing Snowy Wreck MPA (Type 2) through reconfiguration.

Sub-alternative 3a. Snowy Wreck MPA (Type 2) modified from 190 to 18 square miles.

Sub-alternative 3b. Snowy Wreck MPA (Type 2) modified from 190 to 4 square miles.

Sub-alternative 3c. Snowy Wreck MPA (Type 2) modified from 190 to 1 square miles.

Alternative 3. Establish the following new North Carolina MPAs (Type 2) based on documented occurrence of speckled hind and/or warsaw grouper.

Sub-alternative 2a. 780 Bottom MPA (Type 2; 22 square miles)

Sub-alternative 2b. South Cape Lookout MPA (Type 2; 72 square miles)

Sub-alternative 2c. Southern North Carolina MPA (Type 2; 89 square miles)

Alternative 4. Establish the following new North Carolina MPAs (Type 2) based on documented spawning of speckled hind and/or warsaw grouper. No new sites off North Carolina have documented spawning of speckled hind and/or warsaw grouper.

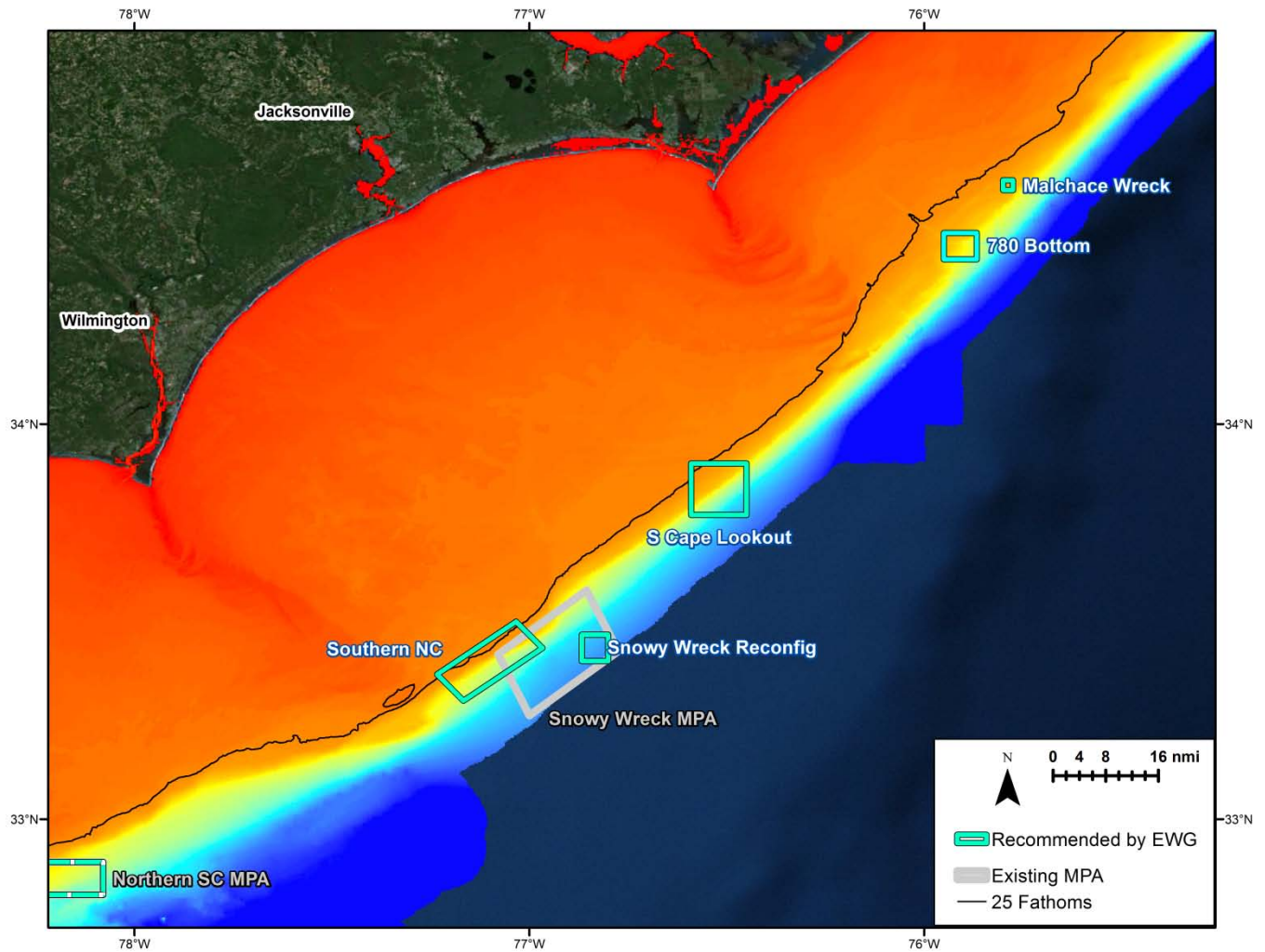


Figure 1. North Carolina MPA sites.
Source: Nick Farmer, NMFS SERO

Action 2. Retain and/or modify the existing Northern SC, Edisto, and Charleston Deep Artificial Reef MPAs, and establish new MPAs off South Carolina (Type 2).

Note: Multiple sub-alternatives under an alternative may be chosen. The existing MPA site(s) would remain unless specifically modified or removed. The Alternatives progress from what is currently in place (No Action) to reconfigurations to existing MPAs, to sites with spawning, and then to sites with occurrence of speckled hind and/or warsaw grouper. If an alternative does not meet the spawning or reconfiguration criteria, then it is shown in yellow strike-thru. It is anticipated that the Council will choose one criteria for each state and then select one or more sub-alternatives for that alternative.

Alternative 1. No action. Snapper Grouper Amendment 14 (2007; regulations effective 2/12/09) established the Northern SC MPA (Type 2; 67 square miles), the Edisto MPA (Type 2; 66 square miles), and the Charleston Deep Artificial Reef MPA (Type 2; 28 square miles) off South Carolina.

Alternative 2. Modify the existing Northern SC MPA and/or Edisto MPA (Type 2) through reconfiguration.

Sub-alternative 3a. Northern SC Extension MPA (Type 2; 13 square miles).

Sub-alternative 3b. Edisto Reconfiguration 3 MPA (Type 2; 81 square miles).

Alternative 3. Establish the following new South Carolina MPAs (Type 2) based on documented spawning of speckled hind and/or warsaw grouper.

Sub-alternative 4a. Northern SC Extension MPA (Type 2; 13 square miles).

Sub-alternative 4b. Devils Hole/Georgetown Hole MPA (Type 2; 27 square miles).

Alternative 4. Establish the following new South Carolina MPAs based on documented occurrence of speckled hind and/or warsaw grouper.

Sub-alternative 2a. Northern SC Extension MPA (Type 2; 13 square miles).

Sub-alternative 2b. Devils Hole/Georgetown Hole MPA (Type 2; 27 square miles).

Sub-alternative 2c. Edisto Reconfiguration 3 MPA (Type 2; 81 square miles).

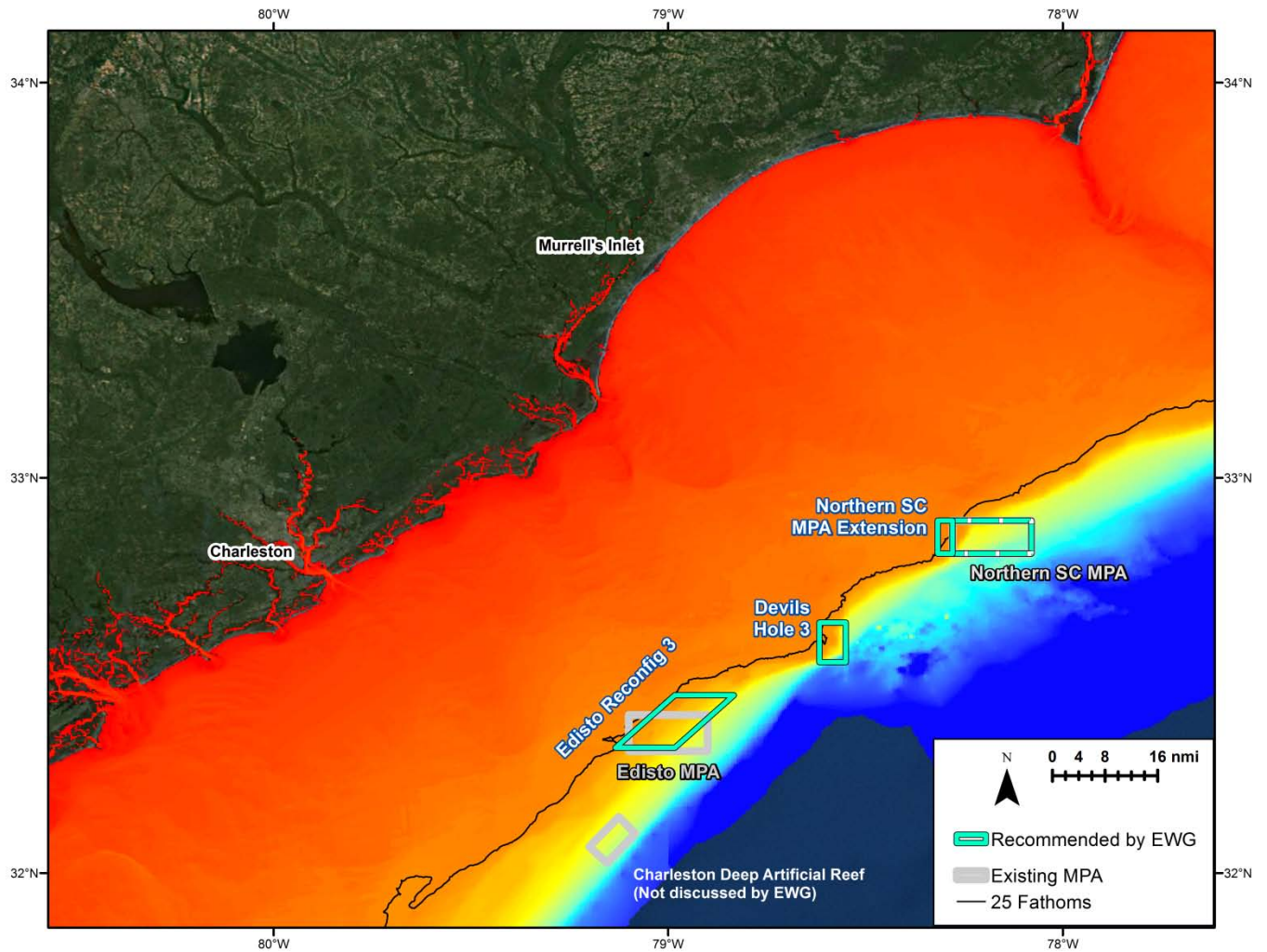


Figure 2. South Carolina MPA sites.
Source: Nick Farmer, NMFS SERO

Action 3. Retain and/or modify the existing Georgia MPA, and establish new MPAs off Georgia (Type 2).

Note: Multiple sub-alternatives under an alternative may be chosen. The existing MPA site(s) would remain unless specifically modified or removed. The Alternatives progress from what is currently in place (No Action) to reconfigurations to existing MPAs, to sites with spawning, and then to sites with occurrence of speckled hind and/or warsaw grouper. If an alternative does not meet the spawning or reconfiguration criteria, then it is shown in yellow strike-thru. It is anticipated that the Council will choose one criteria for each state and then select one or more sub-alternatives for that alternative.

Alternative 1. No action. Snapper Grouper Amendment 14 (2007; regulations effective 2/12/09) established the 102 square mile Georgia MPA (Type 2) off Georgia.

Alternative 2. Establish the following new Georgia MPAs (Type 2) based on documented occurrence of speckled hind and/or warsaw grouper.

Sub-alternative 2a. Georgia MPA Reconfiguration MPA (Type 2; 79 square miles)

Sub-alternative 2b. St. Simons Extension 2 MPA (Type 2; 45 square miles)

~~**Alternative 3.** Establish the following new Georgia MPAs (Type 2) based on reconfiguration of existing MPA sites. No new sites off Georgia are modifications of the existing Georgia MPA.~~

~~**Alternative 4.** Establish the following new Georgia MPAs (Type 2) based on documented spawning of speckled hind and/or warsaw grouper. No new sites off Georgia have documented spawning of speckled hind and/or warsaw grouper.~~

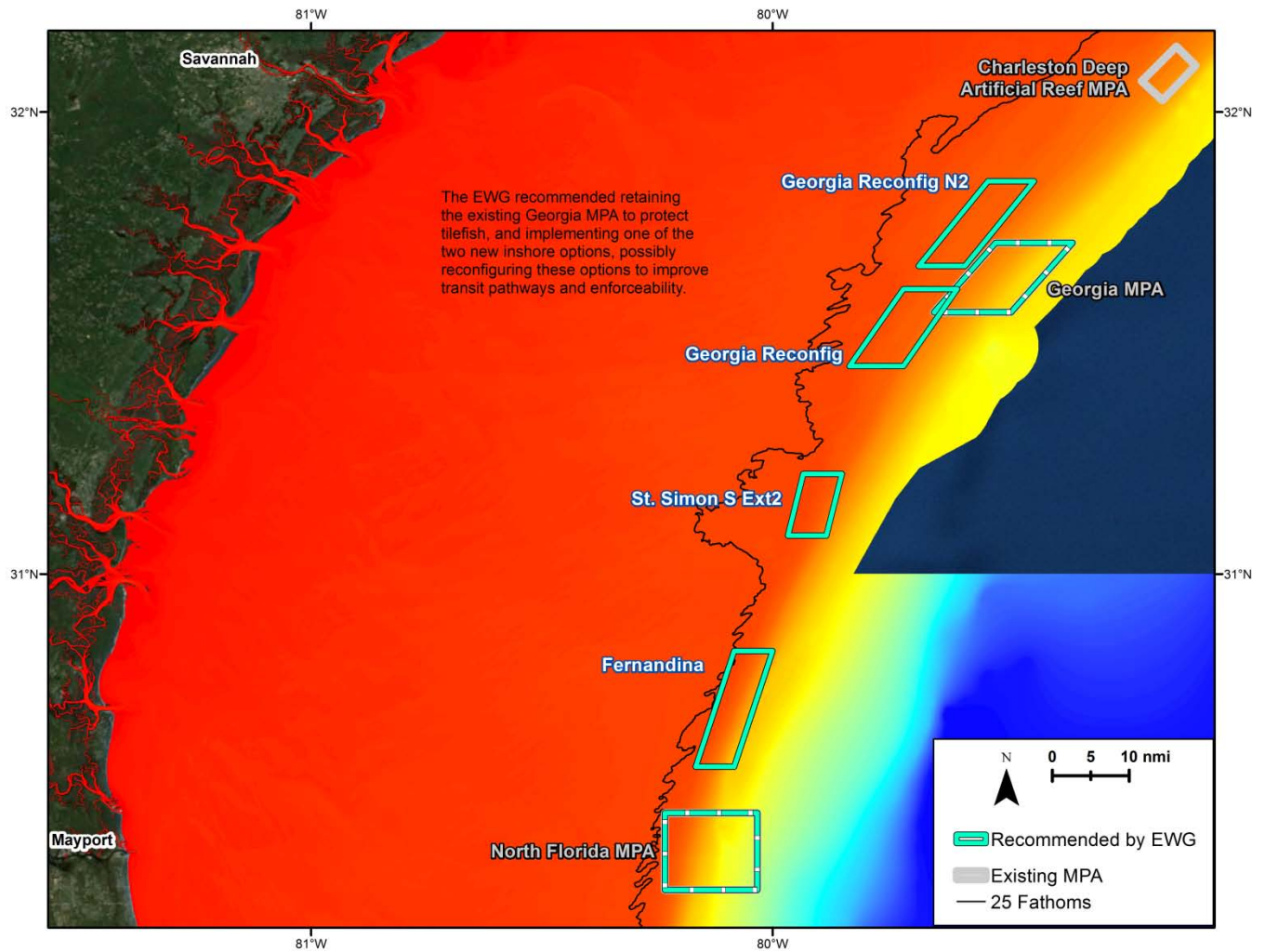


Figure 3. Georgia MPA sites.
Source: Nick Farmer, NMFS SERO

Action 4. Retain and/or modify the existing North Florida, St. Lucie Hump, and East Hump MPAs, and establish new MPAs off Florida (Type 2).

Note: Multiple sub-alternatives under an alternative may be chosen. The existing MPA site(s) would remain unless specifically modified or removed. The Alternatives progress from what is currently in place (No Action) to reconfigurations to existing MPAs, to sites with spawning, and then to sites with occurrence of speckled hind and/or warsaw grouper. If an alternative does not meet the spawning or reconfiguration criteria, then it is shown in yellow strike-thru. It is anticipated that the Council will choose one criteria for each state and then select one or more sub-alternatives for that alternative.

Alternative 1. No action. Snapper Grouper Amendment 14 (2007; regulations effective 2/12/09) established the North Florida MPA (Type 2; 137 square miles), the St. Lucie Hump MPA (Type 2; 9 square miles), and the East Hump MPA (Type 2; 66 square miles) off Florida. The Oculina Bank Experimental Closed area functions as a MPA and provides similar benefits as the other MPAs. The Oculina Bank CHAPC and the proposed Extension provide some protection by prohibiting bottom tending gear (e.g., bottom longline) and anchoring.

Alternative 2. Establish the Warsaw Hole MPA (Type 2; 2 square miles) as a new Florida MPA (Type 2) based on documented spawning of speckled hind and/or warsaw grouper.

Note: Spawning by warsaw grouper has been reported from this site but not speckled hind.

Alternative 3. Establish the following new Florida MPAs (Type 2) based on documented occurrence of speckled hind and/or warsaw grouper.

Sub-alternative 2a. Fernandina MPA (Type 2; 85 square miles)

Sub-alternative 2b. St. Augustine 2 MPA (Type 2; 32 square miles)

Sub-alternative 2c. Daytona Ledge MPA (Type 2; 11 square miles)

Sub-alternative 2d. Daytona Steeples MPA (Type 2; 27 square miles)

Sub-alternative 2e. Oculina Bank CHAPC (Type 2; 279 square miles)

Sub-alternative 2f. Oculina Bank CHAPC Extension (Type 2; 242 square miles)

Sub-alternative 2g. Oculina Bank Experimental Closed Area (Type 2; 108 square miles)

Sub-alternative 2h. Push Button Hill MPA (Type 2; 9 square miles)

Sub-alternative 2i. Juno Beach MPA (Type 2; 4 square miles)

Sub-alternative 2j. Warsaw Hole MPA (Type 2; 2 square miles)

Alternative 4. Establish the following new Florida MPAs (Type 2) based on reconfiguration of existing MPA sites. No new sites off Florida are modifications of the existing Florida MPAs.

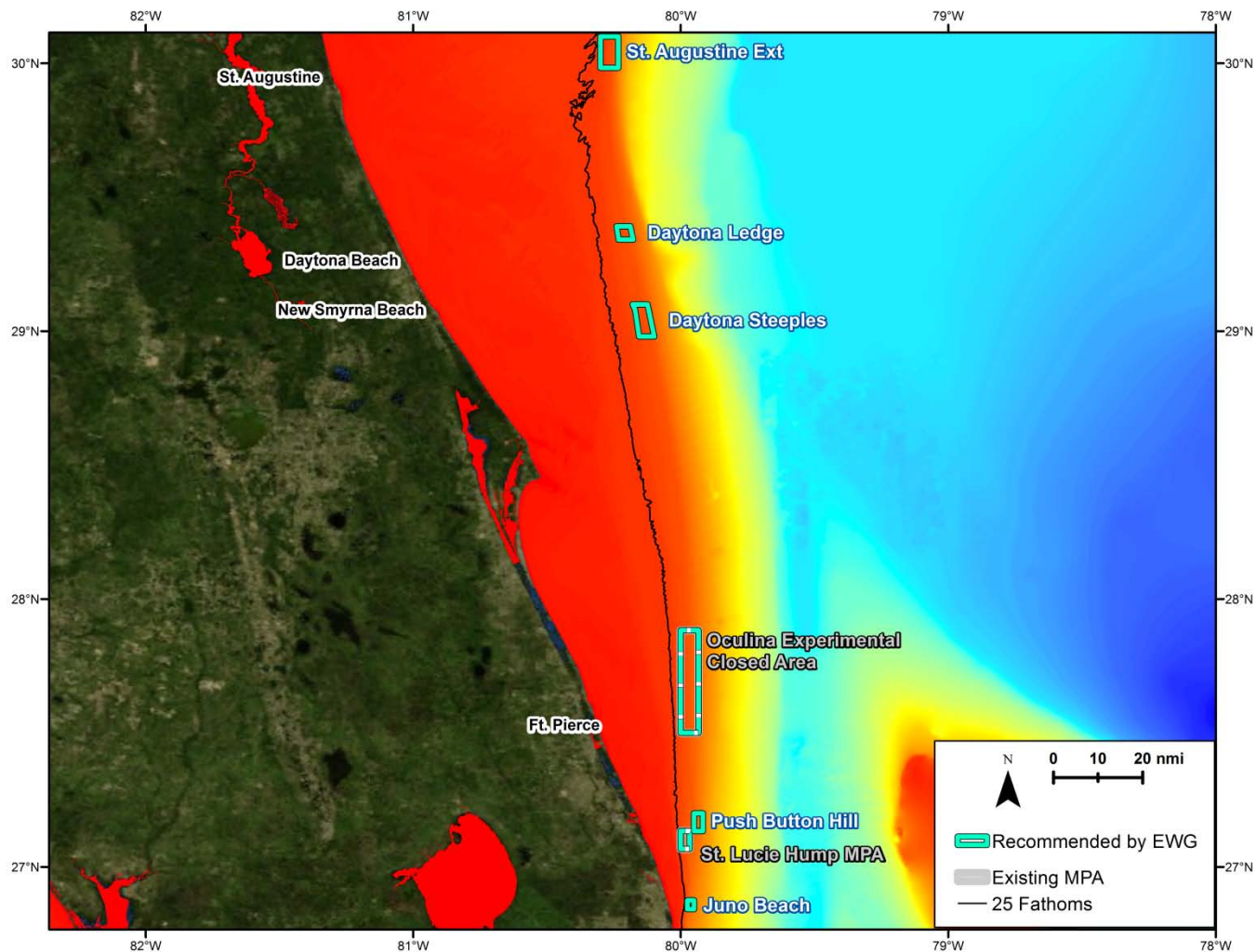


Figure 4. Mid to North Florida MPA sites.
Source: Nick Farmer, NMFS SERO

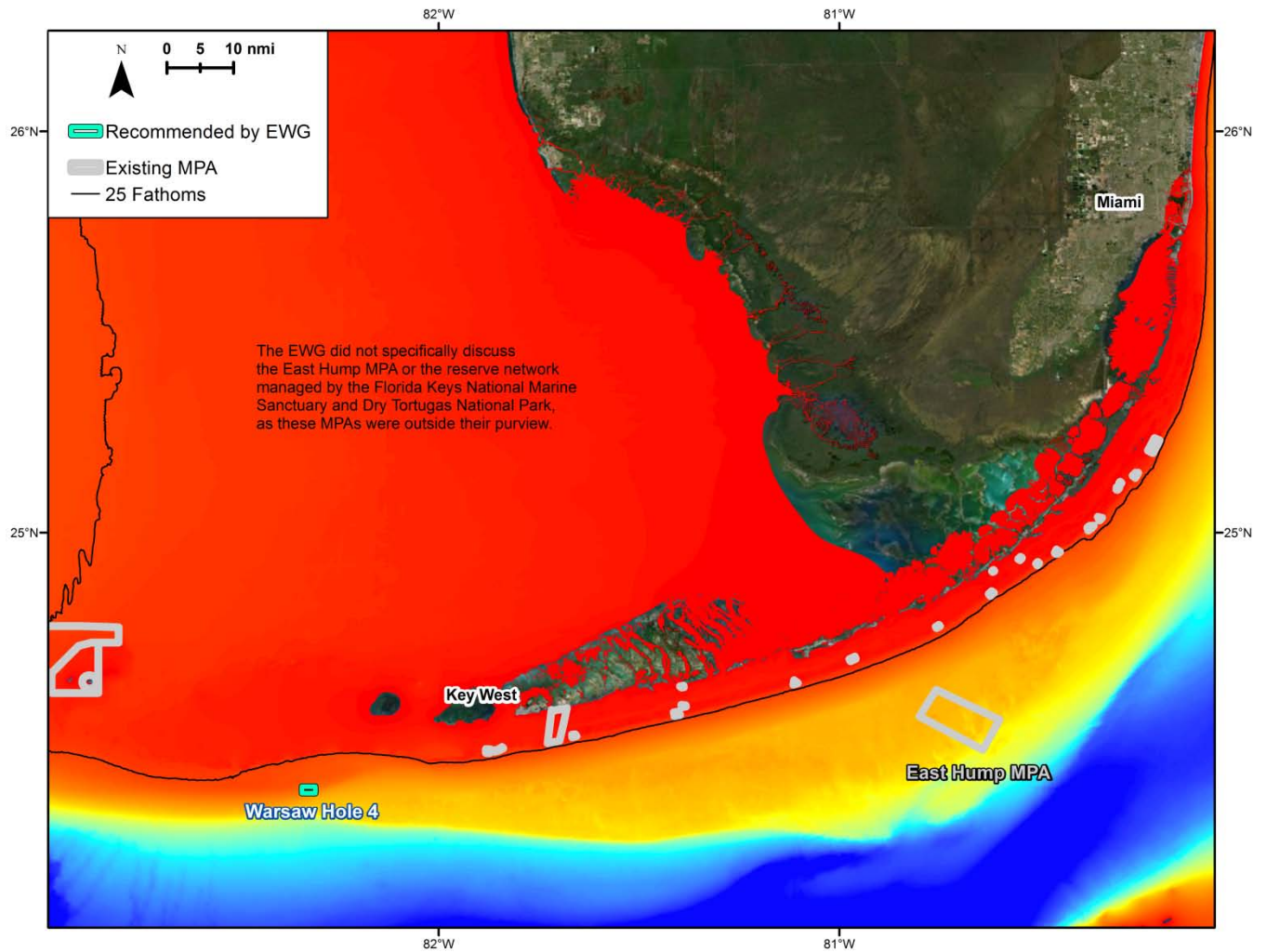


Figure 5. South Florida MPA sites.
Source: Nick Farmer, NMFS SERO

System Management Plan: The need for a monitoring/research plan and enforcement for existing and proposed MPAs was discussed by the committee in March 2013 (see pages 156-159 of the committee minutes). Research, Outreach, and Enforcement Needs were identified in Snapper Grouper Amendment 14 (MPAs; July 2007) (**Attachment A**). The Council has requested reports from Council Staff, Law Enforcement, MARMAP/SEAMAP/SAFIS, and the SEFSC on which of these needs have been met and which are still outstanding. Discussions during the Expert Workgroup meeting identified that we do not have a research/monitoring/evaluation plan for the existing 8 MPAs. A draft outline for a System Management Plan was included as Attachment 12 in the Background Information materials; Attachment 11 is the cover letter (see September 2013 Council Briefing Book).

At the September 2013 meeting, the Council approved a motion directing staff/IPT to work on a System Management Plan for the existing 8 MPAs.

Timing: During the September 2013 meeting, the Council discussed timing and approved the following motion:

MOTION #6: DIRECT STAFF TO PREPARE A DRAFT REGULATORY AMENDMENT 17 DOCUMENT FOR REVIEW AT THE DECEMBER 2013 MEETING; APPROVE FOR SCOPING (ASSUMING AN ENVIRONMENTAL IMPACT ASSESSMENT IS NECESSARY) AT THE DECEMBER 2013 MEETING; CONDUCT IN-PERSON SCOPING MEETINGS IN JANUARY 2014; REVIEW SCOPING COMMENTS AT THE MARCH 2014 MEETING TO PROVIDE GUIDANCE FOR MORE COMPLETE ANALYSES; REVIEW ANALYSES AND APPROVE FOR PUBLIC HEARINGS AT THE JUNE 2014 MEETING; CONDUCT PUBLIC HEARINGS IN AUGUST 2014; REVIEW COMMENTS AT THE SEPTEMBER 2014 MEETING TO APPROVE ACTIONS; AND FINAL REVIEW TO APPROVE FOR SECRETARIAL REVIEW AT THE DECEMBER 2014 MEETING.

APPROVED BY COMMITTEE

APPROVED BY COUNCIL

Table 1. Sites from the Expert Workgroup list that meet the Council's criteria of reconfiguration and targeting speckled hind/warsaw grouper.

These sites meet the Council's criteria of reconfiguration and spawning for speckled hind/warsaw grouper.								
Site #	Location (Type 2 MPAs)	Size (sq. mi.)	Existing	New	Reconfiguration	Include Spawning Sites		
						SpHind	Warsaw	Others
	North Carolina							
1a	<i>Snowy Wreck MPA</i>	190	X					X
1b	Snowy Wreck MPA Reconfiguration	190->18->4->1			X			X
	South Carolina							
2	<i>Northern SC</i>	67	X			X	X	X
3a	<i>Edisto MPA</i>	66	X					X
3b	<i>Edisto Reconfiguration 3</i>	81			X			X
4	<i>Charleston Deep Artificial Reef MPA</i>	28	X					
5	Devils Hole/Georgetown Hole	27		X			X	X
6	Northern SC Extension	13			X	X		X
	Georgia							
7	<i>Georgia MPA</i>	102	X					
	Florida							
8	<i>North Florida MPA</i>	137	X					
9	<i>St. Lucie Hump MPA</i>	9	X					
10	<i>East Hump MPA</i>	66	X					
11	<i>Oculina Experimental Closed Area*</i>	108		X				X
12	Warsaw Hole	2		X			X	
	<i>Green Italics</i> = existing MPA							
	Green* = Oculina Experimental Closed Area - no SG fishing							

Table 2. Sites suggested by the Expert Workgroup.

Sites suggested by the Expert Workgroup.								
Site #	Location (Type 1 MPAs)	Size (sq. mi.)	Existing	New	Reconfiguration	Include Spawning Sites		
						SpHind	Warsaw	Others
North Carolina								
1	<i>Snowy Wreck MPA</i>	190->18->4->1	X		X			X
2	780 Bottom	22		X				X
3	Malchace Wreck	2.47		X				X
4	South Cape Lookout	72		X				X
5	Southern NC	89		X				X
South Carolina								
6	<i>Northern SC</i>	67	X			X	X	X
7	<i>Edisto Reconfiguration 3</i>	81	X		X			X
8	Devils Hole/Georgetown Hole	27		X			X	X
9	Northern SC Extension	13			X	X		X
Georgia								
10	<i>Georgia MPA</i>	102	X					
11	Georgia MPA Reconfiguration	79		X				X
12	Georgia MPA Reconfiguration N2	74		X				
13	St. Simons Extension 2	45		X				X
Florida								
14	<i>North Florida MPA</i>	137	X					
15	<i>St. Lucie Hump MPA</i>	9	X					
16	Fernandina	85		X				X
17	St. Augustine 2	32		X				
18	Daytona Ledge	11		X				
19	Daytona Steeples	27		X				
20	Oculina Bank CHAPC	279		X				
21	Oculina Bank CHAPC Extension	242		X				
22	<i>Oculina Experimental Closed Area*</i>	108	X					X
23	Push Button Hill	9		X				X
24	Juno Beach	4		X				
25	Warsaw Hole	2		X			X	
26	FKNMS SPAs and ERs	247		X				
<i>Green Italics</i> = existing MPA								
<i>Green*</i> = Oculina Experimental Closed Area - no SG fishing								
27	The workgroup is not recommending dropping the East Hump MPA							
28	The workgroup is not recommending dropping the Charleston Deep Artificial Reef MPA							

Table 3. Sites from the Expert Workgroup list that meet the Council's criteria of occurrence.

Sites suggested by the Expert Workgroup.										
Site #	Location (Type 1 MPAs)	Size (sq. mi.)	Existing	New	Reconfiguration	Include Spawning Sites			Occurrence of	
						SpHind	Warsaw	Others	SpHind	Warsaw
	North Carolina									
1	<i>Snowy Wreck MPA</i>	190->18->4->1	X		X			X	X	X
2	780 Bottom	22		X				X	X	
3	Malchace Wreck	2.47		X				X		
4	South Cape Lookout	72		X				X	X	
5	Southern NC	89		X				X	X	
	South Carolina									
6	<i>Northern SC</i>	67	X			X	X	X	X	X
7	<i>Edisto Reconfiguration 3</i>	81	X		X			X	X	
8	Devils Hole/Georgetown Hole	27		X			X	X	X	X
9	Northern SC Extension	13			X	X		X	X	
	Georgia									
10	<i>Georgia MPA</i>	102	X							
11	Georgia MPA Reconfiguration	79		X				X	X	X
12	Georgia MPA Reconfiguration N2	74		X						
13	St. Simons Extension 2	45		X				X	X	
	Florida									
14	<i>North Florida MPA</i>	137	X						X	X
15	<i>St. Lucie Hump MPA</i>	9	X							
16	Fernandina	85		X				X	X	X
17	St. Augustine 2	32		X					X	X
18	Daytona Ledge	11		X					X	X
19	Daytona Steeples	27		X					X	
20	Oculina Bank CHAPC	279		X					X	
21	Oculina Bank CHAPC Extension	242		X					X	X
22	<i>Oculina Experimental Closed Area*</i>	108	X					X	X	X
23	Push Button Hill	9		X				X		X
24	Juno Beach	4		X						X
25	Warsaw Hole	2		X			X			X
26	FKNMS SPAs and ERs	247		X						
27	The workgroup is not recommending dropping the East Hump MPA									
28	The workgroup is not recommending dropping the <i>Charleston Deep Artificial Reef MPA</i>									

SNAPPER GROUPE AMENDMENT 14 (MPAs) JULY 2007

1.3 Purpose and Need

Recent stock assessments indicate snowy grouper, golden tilefish, vermilion snapper, and black sea bass are experiencing overfishing (NMFS 2005b). Snowy grouper, black sea bass, and red porgy are overfished (NMFS 2005b). While we do not know the status of all snapper grouper species, it is a safe presumption based on the data we do have that the size, age, and genetic structure of many snapper grouper species has been altered by fishing pressure. Amendment 13C included management measures that end overfishing of snowy grouper, golden tilefish, vermilion snapper, and black sea bass. Amendment 15 will specify rebuilding plans for snowy grouper, black sea bass, and red porgy.

Many snapper grouper species are vulnerable to overfishing because they are long-lived (e.g., snowy grouper, golden tilefish, red snapper, gag, scamp, red grouper, and red porgy), protogynous, i.e., change sex usually from female to males as they grow older/larger (e.g., snowy grouper, speckled hind, Warsaw grouper, yellowedge grouper, gag, scamp, red porgy, and black sea bass), form spawning aggregations (e.g., snowy grouper, gag, scamp, and red snapper), and suffer high release mortality in deepwater. Deepwater species (snowy grouper, golden tilefish, speckled hind, Warsaw grouper, blueline tilefish, and misty grouper) are most vulnerable to overfishing because they live for longer than 50 years, do not survive the trauma of capture, and are protogynous (groupers) or exhibit sexual dimorphism, i.e., males and females grow at different rates (tilefishes). Data deficiencies make it difficult for fishery scientists and managers to develop management measures that can be trusted to sustain stocks over time, particularly for those species that are very vulnerable to overfishing while attempting to minimize, to the extent practicable, the adverse socioeconomic impacts of management measures on fishing communities.

The primary purpose of these actions is to employ a collaborative approach to identify MPA sites with the potential to protect a portion of the population (including spawning aggregations) and habitat of long-lived, slow growing, deepwater snapper grouper species (speckled hind, snowy grouper, Warsaw grouper, yellowedge grouper, misty grouper, golden tilefish, and blueline tilefish) from directed fishing pressure to achieve a more natural sex ratio, age, and size structure within the proposed Type 2 MPAs, while minimizing adverse social and economic effects. The proposed Type 2 MPAs are the most effective fishery management tool that allows deepwater snapper grouper species to reach their natural size and age, protect spawning locations, and provide a refuge for early developmental stages of fish species.

To determine alternatives for the location, size, and orientation of the MPAs, the Council considered the specific goals of: (1) Utilizing a collaborative process to select MPAs; (2) Maximizing the biological benefits; (3) Minimizing the adverse social and economic effects; (4) Maximizing MPA enforceability; and (5) Maximizing monitoring capabilities. The goals are statements of a desired outcome in terms of MPA location,

size, and orientation from biological, social, economic, and enforcement perspectives. Objectives include criteria the Council considered when trying to achieve these goals. The goals and objectives were developed through discussions among various interest groups, Council committees, Advisory Panels (e.g., snapper grouper, law enforcement), scientific committees, and the public. The alternative comparison summaries in Section 2 of this amendment summarize the degree that each proposed site meets each goal.

Goals and Objectives

Goal 1: Utilize a collaborative process to select MPAs

Objective A. *Utilize input from scientists, fishermen, and the public to select proposed MPAs.* During the selection of the proposed Type 2 MPAs, a process was employed that involved scientists, fishermen, and the public. An Advisory Panel, consisting of scientists and fishermen, assembled known data to identify locations that would provide the greatest biological benefit to snapper grouper species. Experts on MPAs traveled throughout the southeast coast and discussed the benefits of MPAs with the public. Public input during the scoping process and the informational public hearings revealed that closure of certain sites would generate intense public disapproval. The Council realized implementation of those sites would create a degree of controversy that could impede implementation of the MPAs and compliance. Following public input, the Council employed a “bottom up” process where stakeholders proposed sites that could still achieve the biological objectives. As an example, the Council worked with fishermen in the Florida Keys following the Council’s proposed placement of an MPA on the popular location referred to as the “Islamorada Hump”. This proposal generated intense controversy due to the popularity of fishing for such fish as billfish, dolphin, wahoo, and mackerel at this site. The Council worked with the local fishing community to propose a nearby site that would achieve the biological objectives (of the MPA designation) but would not have the degree of impact and controversy as the original proposal.

Goal 2: Maximize biological benefits

Objective B. *Protect some habitat known to support deepwater snapper and grouper species. Utilize hardbottom locations to provide locations suitable to satisfy the need for these MPAs.* The Southeast Area Monitoring and Assessment Program (SEAMAP) has surveyed bottom habitat type and obtained additional data from numerous sources. This information, in part, was used to site the Type 2 MPAs to maximize the biological benefits.

Submersible work and fishery-independent surveys have documented habitat in some proposed Type 2 MPAs that hold species such as vermilion snapper, red porgy, gag, scamp, and others. Therefore, additional benefits include: protecting the size and age structure of species that suffer high release mortality at depths greater than 165 feet (50 meters) (e.g., vermilion snapper, red porgy, gag, scamp, red snapper, red grouper, gray triggerfish, black sea bass, and others) and protecting areas where commercially important reef fish species are known to spawn (e.g., red porgy, vermilion snapper, gray

triggerfish, red snapper, scamp, gag, red grouper, gray triggerfish, and others).

Objective C. *Protect some areas where spawning activity of snapper grouper has been recorded.* The Marine Resources Monitoring, Assessment, and Prediction Program (MARMAP) has noted locations where fish (e.g., snowy grouper, golden tilefish, speckled hind, red porgy, vermilion snapper, gray triggerfish, red snapper, scamp, gag, red grouper, gray triggerfish, and others) were caught in spawning condition. This information, in part, was used to site the MPAs to maximize the biological benefits.

Objective D. *Protect some areas known to be nursery areas for deepwater species.* Submersible work has documented the presence of age-0 snowy grouper in shelf edge (170 to 220 feet) habitat in many of the proposed Type 2 MPAs. Fishery-independent data, fishery-dependent data, and submersible work have documented the presence of juvenile speckled hind and Warsaw grouper in the same shelf edge habitat. The greatest abundance of speckled hind is currently in shelf edge habitat. This information, in part, was used to site the Type 2 MPAs to maximize the biological benefits to deepwater species.

Goal 3: Minimize adverse social and economic effects

Objective E. *Minimize impact on fishermen in MPAs that do not target snapper grouper species.* Many of the locations appropriate for protecting snapper grouper species are also popular fishing sites for pelagic species such as dolphin, wahoo, and mackerel. The Council felt it important to minimize the negative social and economic impacts MPAs could have on individuals fishing for non-snapper grouper species and promote stakeholder buy-in, while providing protection to the species most vulnerable to overfishing (deepwater snapper grouper species). Therefore, the alternatives proposed in this amendment are Type 2 MPAs where the harvest and possession of snapper species are prohibited within their borders (however, the prohibition on possession does not apply to a person aboard a vessel that is in transit with fishing gear appropriately stowed as defined in Appendix F).

Objective F. *Orient the MPAs in a manner that provides consideration to the way that fishermen fish.* Many commercial fishermen fish along the continental shelf break, which is parallel to the shoreline. Alternatives are provided that include closed areas parallel to the shelf break to minimize disruption to fishing activity when undergoing transit to different locations.

Objective G. *Consider boater safety when designating proposed closed areas.* The Council avoided detailed consideration of sites that would significantly affect boater safety. Overly large sites and the placement of sites adjacent to major fishing ports were avoided, as both would hinder a vessel's return to port during adverse weather.

Goal 4: Maximize MPA enforceability

Objective H. *Consider the seven criteria from the Law Enforcement AP's report when determining suitable MPA sites.* The Council's Law Enforcement Advisory Panel, in 1998, submitted a report (**Appendix B**) that outlined criteria that should be considering when determining attributes of MPA. These included: (1) a marine reserve should be configured in a square or rectangle; (2) the bigger the better; (3) the boundaries should be delineated in latitude and longitude; (4) must be in an acceptable format to be included and identified on NOAA charts; (5) allowable activities in the marine reserve should be limited; (6) locate marine reserves away from highly populated areas; and (7) provide for on-site enforcement capability. To maximize the efforts of law enforcement and fishermen compliance, the Council considered these criteria when developing the Type 2 MPAs.

Goal 5: Maximize research and monitoring capabilities

Objective I. *Utilize available fishery-independent and fishery-dependent data to provide locations suitable to satisfy the need for MPAs.* Closing areas to snapper grouper fishing is expected to result in changes in the community structure, species composition, sex ratio, reproductive potential, and size/age structure of species within the closed areas. Some proposed Type 2 MPAs have been sampled annually by fishery-independent surveys. More recently, additional baseline data from within proposed Type 2 MPAs have been collected using ROVs, submersible, and from commercial fishermen through cooperative funding. Documented information on the presence of snapper grouper species was considered when siting the Type 2 MPAs to maximize the biological benefits. It is anticipated that existing, long-term fishery independent surveys will continue in the proposed Type 2 MPAs to document any changes that occur.

Objective J. *Utilize traditional knowledge, in part, to provide locations suitable to satisfy the need for MPAs.* As fishery independent data are often scarce and fishery dependent information is collected on a large spatial scale, the Council frequently relied on local knowledge of fishermen and state agency personnel to propose suitable locations. Information on spawning locations of deepwater snapper and grouper species is also limited and utilization of anecdotal knowledge is appropriate. While data has been collected in most of the proposed Type 2 MPAs, the extent of available habitat, particularly for deep-water species, is not known. It is anticipated that additional sampling will be conducted to better map available habitat and document species composition within the proposed Type 2 MPAs so that changes in community structure, sex ratio, and size/age structure can be documented. This effort would include commercial fishermen who may have knowledge of hard bottom locations. Through cooperative research, fishermen and scientists would work together to map available habitat within the proposed Type 2 MPAs and identify species composition. It is anticipated that additional funding would be provided to map the Type 2 MPAs with side scan sonar and visit potential hardbottom locations with ROV and submersible. Once additional hardbottom habitat is located, it would be monitored through fishery independent and fishery-dependent efforts.

4.11 Research Needs

Mapping needs

- Map the proposed Type 2 MPAs.

Research and monitoring needs

- Model coupled biological and physical properties as well as relevant chemical/nutrient and physiological characteristics.
- Determine and monitor the effect of the Type 2 MPAs on deepwater snapper grouper species' distribution and status.
 - Assess spawning aggregations of deepwater snapper grouper species.
 - Track fish movement.
 - Identify fish population demographics (e.g., size and age structure, sex ratio, etc.) within the Type 2 MPAs.
 - Determine pre-closure distribution of dominant harvested species in and outside the Type 2 MPAs, in order to provide historical context for subsequent assessments.
 - Determine age distribution, nursery grounds, migratory patterns, and mortality rates for dominant harvested fish stocks.
- Identify stressors affecting the Deepwater Type 2 MPAs.
 - Identify natural and anthropogenic stressors (i.e., disease, gear impacts, poaching, enforcement, etc.)
- Identify key trophodynamic functional groups.
 - Identify food web structure and dynamics.
 - Determine impact of lionfish invasion on recovery potential of deepwater snapper grouper species within the Type 2 MPAs.

Assessment needs

- Determine the effect of management measures in the Type 2 MPAs on the status of deepwater snapper grouper fishery stocks:
 - Characterize deepwater snapper grouper species within the Type 2 MPAs compared to reference sites (including distribution and abundance patterns, size and age distribution, spawning aggregation presence, sex ratios, etc.).
 - Characterize fish communities, inside and out, including habitat utilization patterns, trophic interactions, ontogenetic changes, predator prey relationships, etc.
 - Connectivity to the broader seascape (larval sources and sinks, spill-over effects).
- Determine how oceanographic conditions and episodic events affect fish stock condition, reproduction, and growth:
 - Quantify the extent, intensity, and frequency of episodic events (upwelling, storms, etc.).

- Assess the impact of episodic events (upwelling, storms, etc).

4.12 Outreach Needs

The list of outreach needs included in this section is modified from the outreach component of the Council's 2005 Oculina Experimental Closed Area (OECA) Evaluation Plan. For additional information about the OECA Evaluation Plan and efforts used to develop the outreach component of the plan, visit:

<http://www.safmc.net/HabitatManagement/DeepwaterCorals/Oculina/tabid/246/Default.aspx>.

The Council will solicit input from its Information and Education Advisory Panel and the Information and Education Committee in reviewing these needs and possibly developing further recommendations. As with the outreach component of the Oculina Experimental Closed Area Evaluation Plan, the Council acknowledges the need to work closely through partnerships to achieve these outreach needs. Possible partners in outreach efforts include, but are not limited to: Sea Grant, NOAA Fisheries, NOAA National Undersea Research Center at the University of North Carolina – Wilmington (NURC/UNCW), NOAA Office for Law Enforcement, individual state marine resources and law enforcement agencies, NOAA National Marine Sanctuary Program, Harbor Branch Oceanographic Institution, Centers for Ocean Sciences Education Excellence (COSEE) in South Carolina and Florida, Project Oceanica, and others.

GOAL: Increase awareness and understanding of the Deepwater Type 2 MPAs among fishermen, citizens, and visitors in the South Atlantic region and the U.S. public.

Project 1: Provide SAFMC regulation brochures to area fishermen.

- *Tasks:* reprint updated federal regulation brochure to include the Type 2 MPAs and distribute to federal, state, and local law enforcement offices for distribution.
- *Justification:* the regulations brochure will provide a summary of regulations and information for the Type 2 MPAs as well as an identification chart for snapper/grouper species found in the area.

Project 2: Work with fishing chart manufacturers (both printed and electronic) and/or vendors to improve available information for the Deepwater Type 2 MPAs

- *Tasks:* identify manufacturers of more commonly used fishing charts in South Atlantic, contact manufacturers and coordinate methods to update products.
- *Justification:* fishermen have expressed concerns that charts commonly used do not currently portray the coordinates and restrictions for new Type 2 MPAs.

Project 3: Develop and distribute news releases (coordinating with local contacts) to focus on law enforcement activities, research and monitoring projects, and the ecological importance of the Type 2 MPAs.

- *Tasks:* work closely with law enforcement agencies (state and federal) to highlight law enforcement activities and cases; create science-based news releases relevant to ongoing research and monitoring activities with focus on habitat, snapper grouper

species, and links to ecosystem-based management. Coordinate releases with ongoing activities and strive to provide high resolution photos and graphics to media.

- *Justification:* increase awareness of all activities in the Type 2 MPAs.

Project 4: Develop Powerpoint presentations about Deepwater Type 2 MPAs; distribute on CD, post at Web site, and present to fishing clubs, environmental groups, local governments, etc.

- *Tasks:* design and create a PowerPoint presentation using existing photos, video, maps, and other information to highlight Type 2 MPAs, history of management, research and monitoring activities, law enforcement, etc.
- *Justification:* provides a quick method to distribute information for use by various audiences, can be readily updated.

Project 5: Develop and distribute posters and rack cards/informational brochures at area bait and tackle shops, marinas, fish houses, boating stores, fishing tournaments, boat shows, etc.

- *Tasks:* contract design layout and printing for poster and complimentary rack cards and/or brochure, distribute to targeted businesses and fishing tournament directors.
- *Justification:* effectively designed poster and brochures and/or rack cards would draw attention to the Type 2 MPAs and provide quick access to general information about habitat, fish species, maps, regulations, and law enforcement contacts.

Project 6: Expand the Council's web site to provide comprehensive education and outreach products (e.g., regulations, publications, research and monitoring information, law enforcement activities, news releases, high resolution video and photographs, maps, etc.). Publicize availability of information by having links posted on other fishing/Non-Governmental Organizations/tourism related web sites.

- *Tasks:* enhance the Council website and integrate materials, including links to other relevant sites. Publicize the availability of web-based information.
- *Justification:* The Web site is the best media for maintaining comprehensive, dynamic content and imagery. The availability of this information can be publicized from other existing high-profile Web sites.

Project 7: Develop education products for teachers (K-12) and informal educators, post on SAFMC Web site, and develop packet for distribution to science teachers.

- *Tasks:* Identify, develop, and produce education products
- *Justification:* This was identified as a need at area constituent meetings held to address outreach needs for the OECA Evaluation Plan and determined a priority item by the Information and Education Advisory Panel. Initial ground work will be needed to identify local education needs.

Project 8: Develop TV documentaries working with environmental TV outlets (e.g., Discovery Channel, Public TV, and independent media contractors).

- *Tasks:* produce documentaries for television that feature the Type 2 MPAs; possibly tie in with interest in the proposed Deepwater Coral Habitat Areas of Particular Concern and the Council's approach to ecosystem-based management through the

Fishery Ecosystem Plan and Comprehensive Amendment.

- *Justification:* TV is number one way to reach the public.

4.13 Enforcement Needs

There are two very large obstacles facing enforcement of these proposed Type 2 MPAs. The first is the great distance that the majority of these Type 2 MPAs are located from shore. The second is the fact that these are Type 2 areas which allow certain fishing activities to exist. Consequently, occasional flyovers by enforcement aircraft would not be an effective tool; therefore, an on-site enforcement presence will be necessary in order to determine whether the fishing activity is lawful or not.

Law Enforcement Advisory Panel Members representing the member States have evaluated their assets and categorized their ability to effectively patrol each MPA as either HIGH, MODERATE, or LOW. **This rating is based solely on the individual states assets and does not include the assets that their Federal partners may or may not have.**

A “**HIGH**” rating means that the area is easily accessible with the assets and personnel already in place. Such an area may already be patrolled and would not require additional assets. Additional funding *may* be required to maintain adequate enforcement patrols.

A “**MODERATE**” rating indicates that with some additional assets, or the relocation of existing assets, patrols could be conducted from time to time and during targeted details. Additional funding *will likely* be required to increase the ability rating to “HIGH”.

A “**LOW**” rating means that patrols of the area would only occur during an organized enforcement detail with Federal partners such as NMFS or USCG. The States do not have the assets or personnel with the proper training to patrol the area. Additional funding will be *essential* to increase the ability rating.

Each proposed Type 2 MPA is listed below by State. Comments on location options are listed as well as the ability of patrol rating.

Florida

- | | | |
|---------------------------|-----------------------|---------------------------------|
| 1) North Florida: | No option preference. | Enforceability: LOW |
| 2) Sea Bass Rocks: | No location option. | Enforceability: MODERATE |
| 3) East Hump: | No location option. | Enforceability: MODERATE |

Georgia

- | | | |
|------------------------|-----------------------|----------------------------|
| 4) Georgia MPA: | No option preference. | Enforceability: LOW |
|------------------------|-----------------------|----------------------------|

South Carolina

- | | | |
|-----------------------------|---------------------|----------------------------|
| 5) South Carolina A: | Location option #3. | Enforceability: LOW |
| 6) South Carolina B: | Location option #2. | Enforceability: LOW |
| 7) Deep Reef: | No location option. | Enforceability: LOW |

North Carolina

8) **Snowy Wreck:** No location option Enforceability: **LOW**

Meeting even the LOW rating will only be accomplished at the expense of some other enforcement priority. To accomplish any increase in the enforcement rating/presence would require a substantial funding increase to include:

- Hire, train, and equip additional law enforcement personnel
- Administrative support
 - o Personnel
 - o Equipment
- Acquire several fully equipped large offshore patrol vessels
- Recurring operational costs
 - o Fuel
 - o Maintenance
 - o Dockage
 - o Etc.
- Aircraft surveillance support costs

ATTACHMENT B

**SAFMC SPECKLED HIND AND WARSAW GROUPE LANDINGS & DISCARDS
JULY 30, 2013
PROVIDED BY NICK FARMER, NMFS SERO**

July 30, 2013

SAFMC SPECKLED HIND AND WARSAW GROUPER LANDINGS AND DISCARDS

NOAA FISHERIES SERVICE, SOUTHEAST REGIONAL OFFICE

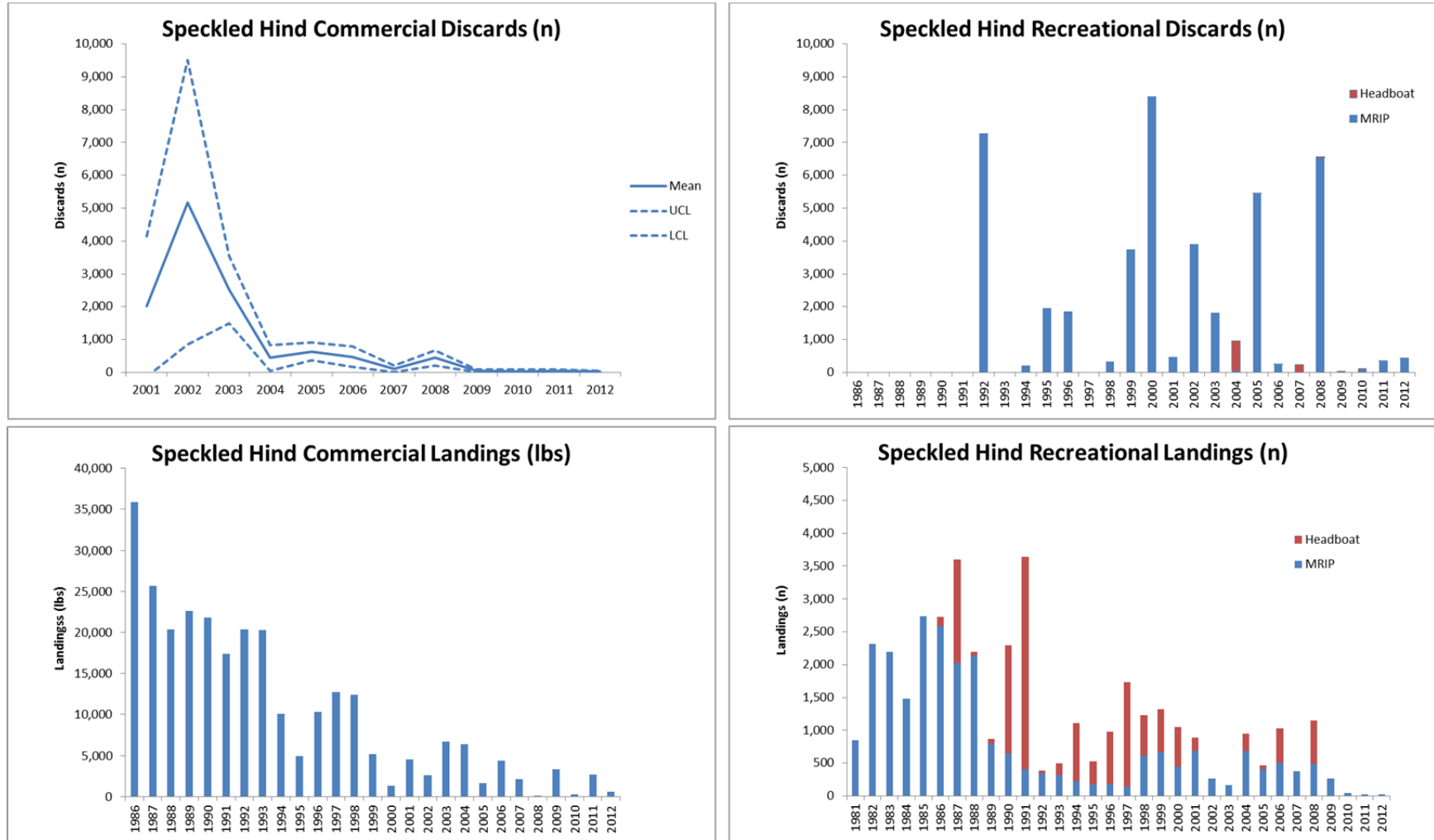


Figure 1. Trends in speckled hind commercial discards (2001-2012), recreational headboat and MRIP private/charter discards (1986-2012), commercial landings (1986-2012), and recreational headboat and private/charter landings (1986-2012) in the SAFMC's jurisdiction.

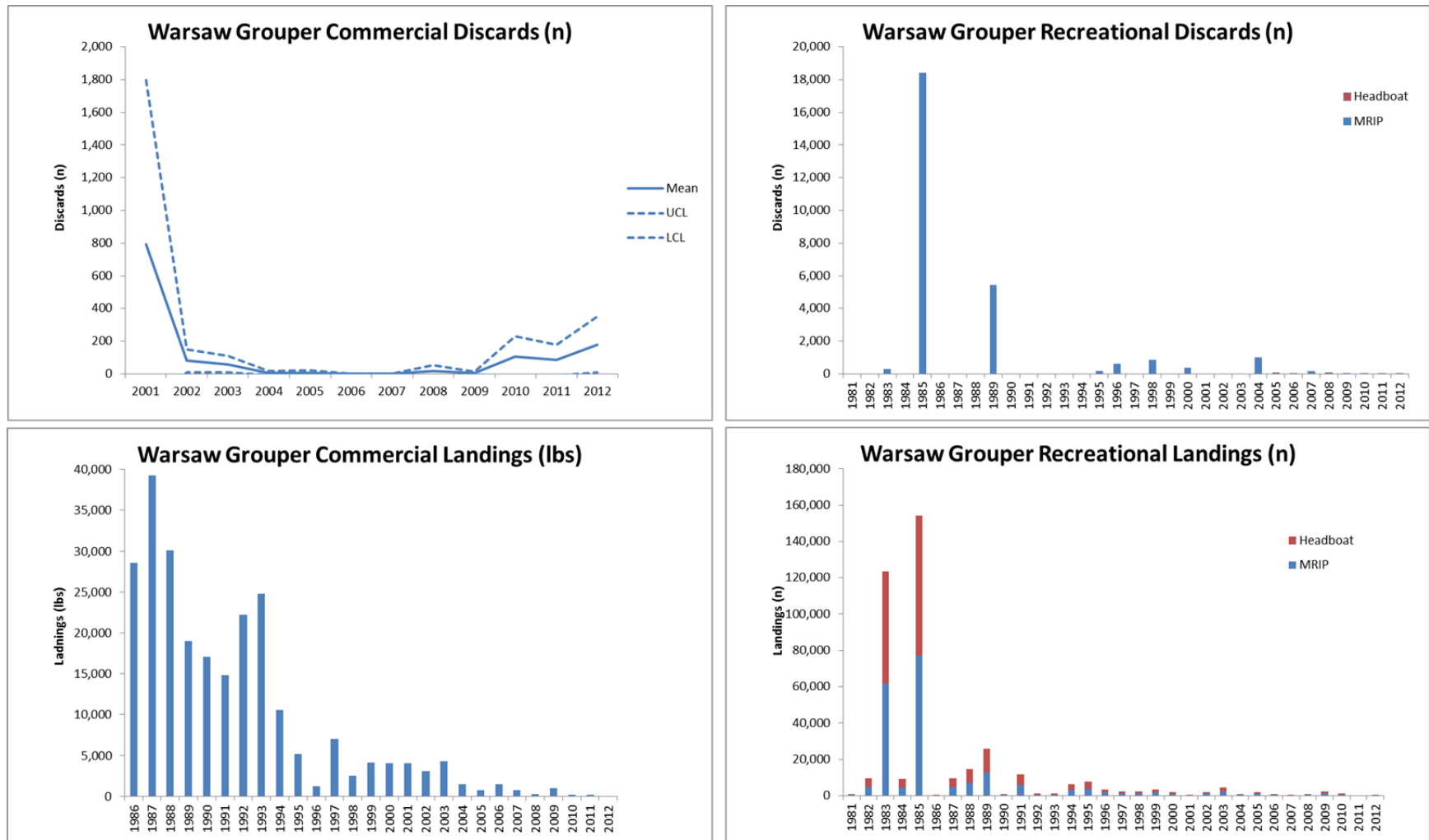


Figure 2. Trends in warsaw grouper commercial discards (2001-2012), recreational headboat and MRIP private/charter discards (1986-2012), commercial landings (1986-2012), and recreational headboat and private/charter landings (1986-2012) in the SAFMC's jurisdiction.

July 30, 2013

Sources: MRIP Private/Charter data from SEFSC Recreational ACL Dataset (May 2013), Headboat data from SEFSC Headboat Logbook CRNF files (expanded; May 2013), Commercial landings data from SEFSC Commercial ACL Dataset (July 10, 2013) with discard estimates from expanded SEFSC Commercial Discard Logbook (Jun 2013). Note commercial discard estimates are for vertical line gear only.

Note: Discard estimates for commercial are computed by expanding commercial discard logbook observed discard rates by total SAFMC effort; vessels which never report discards (for any stock) are excluded from discard rate computations.