Tab F, No. 4

7/30/15

Modifications to Charter Vessel and Headboat Reporting Requirements

Generic Amendment to the Reef Fish Resources of the Gulf of Mexico, South Atlantic Snapper Grouper, South Atlantic Dolphin Wahoo, and Coastal Migratory Pelagic Resources of the Gulf of Mexico and South Atlantic

August 2015

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ENVIRONMENTAL ASSESSMENT COVER SHEET

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ABBREVIATIONS USED IN THIS DOCUMENT

ACL	Annual Catch Limit
ACCSP	Atlantic Coastal Cooperative Statistics Program
AM	Accountability Measure
AVHRR	Advanced Very High Resolution Radiometer
Council	Gulf of Mexico Fishery Management Council
CMP	Coastal Migratory Pelagics of the South Atlantic and Gulf of Mexico
EA	Environmental Assessment
EEZ	Exclusive Economic Zone
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
ELog	Electronic Logbook
EJ	Environmental Justice
E.O.	Executive Order
FMP	Fishery Management Plan
Gulf	Gulf of Mexico
MMPA	Marine Mammal Protection Act
MRIP	Marine Recreational Information Program
NAO	NOAA's Administrative Order
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
OY	Optimum Yield
RA	Regional Administrator
RFA	Regulatory Flexibility Act
RFAA	Regulatory Flexibility Act Analysis
RIR	Regulatory Impact Review
Secretary	Secretary of Commerce
SEDAR	Southeast Data Assessment and Review
SEFSC	Southeast Fisheries Science Center
SRD	Science and Research Director
SRHS	Southeast Region Headboat Survey

CHAPTER 1. INTRODUCTION

The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) requires the National Marine Fisheries Service (NMFS) and regional fishery management councils to end overfishing, rebuild overfished stocks, and achieve, on a continuing basis, the optimum yield (OY) from federally managed fish stocks. These mandates are intended to ensure fishery resources are managed for the greatest overall benefit to the nation, particularly with respect to providing food production, recreational opportunities, and protecting marine ecosystems.

Accurate fisheries information about catch, effort, and discards is necessary to achieve OY from federally managed fish stocks. The for-hire component of the recreational sector harvests a substantial proportion of the annual catch limit (ACL) for several federally managed fish species in the management areas for the Gulf of Mexico and South Atlantic Fishery Management Councils. The for-hire component of the recreational sector includes headboats and charter vessels. Headboats carry recreational anglers where passage is charged on a per angler, or per head, basis. Charter vessels also carry recreational anglers but fees are paid for chartering the vessel rather than paying individual angler fees. In general headboats are larger and carry 15 or more passengers whereas charter vessels generally carry six or fewer passengers.

1.1 Background

The Gulf of Mexico Fishery Management Council (Gulf Council) and South Atlantic Fishery Management Council (South Atlantic Council) are considering alternatives that would change the method, frequency, and required data elements of fishery data reporting by for-hire operators. The Councils are considering several changes that would require electronic reporting for the Reef Fish, Snapper Grouper, Dolphin Wahoo, and Coastal Migratory Pelagic (CMP) species for the for-hire operators. The Councils recognize that improved data reporting in these fisheries could reduce the likelihood that ACLs are exceeded and accountability measures are triggered. Additional data elements that could be collected could also improve estimates of discard mortality and species discarded as bycatch. These metrics are not currently well estimated or characterized under the current reporting requirements. The harvest from charter vessels contributes to recreational landings that count towards the recreational ACLs and quotas. Charter vessel landings and discards are monitored with the Marine Recreational Information Program a voluntary dockside intercept survey. Fishing effort is calculated based on a monthly phone sample (10%) of federally permitted charter vessels in each Councils jurisdiction. Headboats (catch and effort) are monitored through the Southeast Regional Headboat Survey (SRHS) administered by the Southeast Fisheries Science Center.

The current for-hire data collection and monitoring system is reported in 2-month waves for all Gulf and South Atlantic States, except Texas. Texas has an independent monitoring program that reports data in two activity periods (high and low). Texas landings are subsequently converted to waves for management use. This current combination of data collection and monitoring systems is inadequate for in-season monitoring for stocks with short recreational seasons, resulting in large ACL (quota) overruns. Also, the survey methods (i.e., catch and effort estimates) can be imprecise for some species leading to greater scientific and management

uncertainty that requires larger buffers to prevent ACL overages and may prevent the OY from consistently being achieved. The proposed changes could reduce uncertainty in catch (i.e., landings and discards) and effort data for this component of the recreational fishery increasing the likelihood that the OY will be achieved and ACL overages will be avoided.

Gulf of Mexico Fishery Management Council

- Responsible for conservation and management of fish stocks
- Consists of 17 voting members: 11 appointed by the Secretary of Commerce; 1 representative from each of the 5 Gulf states, the Southeast Regional Director of National Marine Fisheries Service (NMFS); and 4 non-voting members
- Responsible for developing fishery management plans and amendments, and recommends actions to NMFS for implementation

South Atlantic Fishery Management Council

- Responsible for conservation and management of fish stocks
- Consists of 13 voting members: 8 appointed by the Secretary of Commerce, 1 representative from each of the 4 South Atlantic states, the Southeast Regional Director of NMFS; and 4 non-voting members
- Responsible for developing fishery management plans and amendments, and recommends actions to NMFS for implementation

National Marine Fisheries Service

- Responsible for data needed by the Councils for management
- Responsible for conservation and management of fish stocks
- Approves, disapproves, or partially approves Council recommendations
- Implements regulations

This amendment affects headboat and charter vessel reporting requirements for species managed in the Fishery Management Plans (FMPs) for Reef Fish Resources of the Gulf of Mexico (reef fish), Snapper Grouper of the South Atlantic, Atlantic Dolphin and Wahoo and CMPs (Figure 1.1.1).

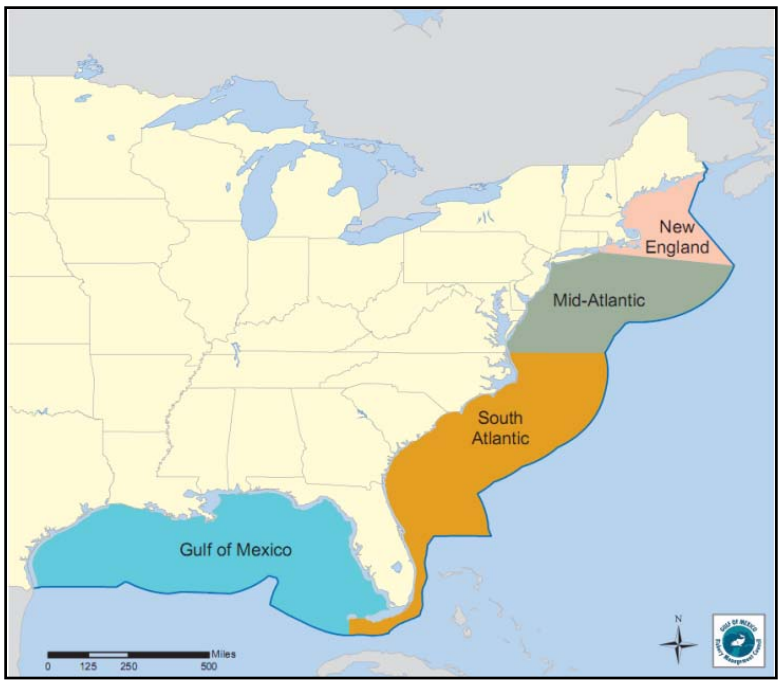

Figure 1.1.1. Jurisdictional boundaries of the Gulf of Mexico (blue), South Atlantic (orange), Mid-Atlantic (MAFMC; green), and New England (NEFMC; peach) Fishery Management Councils.

1.2 Purpose and Need

The *purpose* is to increase the accuracy and timeliness of landings, discards, effort and socio-economic data of federally permitted for-hire vessels participating in the Gulf of Mexico and South Atlantic managed fisheries.

The *need* for this action is to improve charter vessel and headboat fishery data used for management and to improve monitoring and compliance of federally permitted for-hire vessels in the Gulf of Mexico and South Atlantic managed fisheries.

1.3 What is a Charter Vessel?

A charter vessel is less than 100 gross tons (90.8 metric tons) that meets the requirements of the U.S. Coast Guard to carry six or fewer passengers on a for-hire trip and that engages in charter fishing at any time during the calendar year. 50 C.F.R. § 622.2

1.4 What is a Headboat?

Headboats are generally defined as vessels that hold a valid Certificate of Inspection issued by the U.S. Coast Guard to carry more than six passengers for hire. However, the SRHS includes only large capacity vessels that sell passage to recreational anglers primarily as headboats (i.e., charges by the "head"). Currently, a vessel is selected by the Science and Research Director (SRD) to participate in the SRHS if it meets all, or a combination, of these criteria:

1) Vessel licensed to carry ≥ 15 passengers (Gulf); > 6 (South Atlantic).
2) Vessel fishes in the exclusive economic zone (EEZ) or state and adjoining waters for federally managed species.
3) Vessel charges primarily per angler (i.e., by the "head").

The number of headboats surveyed in the SRHS by state between 2010 and 2015 is provided in **Table 1.4.1** (Gulf) and **Table 1.4.2** (South Atlantic).

Table 1.4.1. Total number of headboats in the Gulf of Mexico participating in the SRHS 2010-2015. Note: federal for-hire permits are under moratorium in the Gulf of Mexico.

Year	AL	FL	LA	MS	TX	Total
2010	7	38	4	3	16	68
2011	8	35	4	5	17	69
2012	9	34	4	5	16	68
2013	9	36	3	5	16	69
2014	9	37	2	5	16	69
2015	9	37	2	5	16	69

Source: NMFS, Southeast Regional Headboat Survey

Table 1.4.2. Total number of headboats in the South Atlantic participating in the SRHS 2010-2015.

Year	FL	GA	NC	SC	Total
2010	47	3	10	20	80
2011	43	3	10	21	77
2012	43	3	11	21	78
2013	44	3	11	18	76
2014	45	3	10	18	76
2015	46	3	9	18	76

Source: NMFS, Southeast Regional Headboat Survey

Note: Similar tables for charter vessels are under development.

1.5 History of Management

Gulf Reef Fish

The following amendments to the FMP for the Reef Fish Resources of the Gulf of Mexico contained actions that pertained to the for hire sector including permit and reporting requirements.

Amendment 11 (1996) to the Reef Fish FMP (implemented in 1996) required that charter vessels and headboats fishing in the Gulf exclusive economic zone (EEZ) have federal permits when fishing.

Amendment 20 (2002) to the Reef Fish FMP was submitted to NMFS in June 2001 and approved in May 2002. The amendment established a three-year moratorium on the issuance of charter vessel or headboat (for hire) permits for the reef fish fishery, coastal migratory pelagics in the EEZ of the Gulf. NMFS promulgated the charter moratorium regulations (67 FR, 43558, June 28, 2002) to implement Amendment 14 to the CMP FMP and Reef Fish FMP and Amendment 20 to the Reef Fish FMP. However, after reviewing the administrative record, NMFS determined that the amendments contained an error that did not correctly reflect the actions approved by the Council. Thus, the regulations implementing the amendments also contained this error, and not all persons entitled to receive charter vessel/headboat (for-hire) permits under the moratorium approved by the Council would be able to receive permits under the promulgated regulations.

Emergency Rule (2002)
The regulations promulgated under the charter vessel moratorium (67 FR 43558, June 28, 2002), also require all charter vessel/headboat operators in the Gulf EEZ have a valid limited access "moratorium permit," as opposed to the prior open access charter permit, beginning December 26, 2002. If these limited access permits had not been issued prior to this date, all legal fishing activities conducted by the recreational for-hire sector in the Gulf EEZ would have closed. Cessation of these fishing operations would have resulted in severe social and

economic disruption to the for-hire sector and those coastal communities dependent on these fisheries. To ensure that no qualified participants in the fisheries were wrongfully excluded under the moratorium, due to an error in the rule, and to fully comply with Magnuson-Stevens Act requirements, NMFS promulgated an emergency rule (67 FR 77193, December 17, 2002) that extended certain permit-related deadlines contained in the final rule implementing the charter vessel/headboat permit moratorium for reef fish and coastal migratory pelagic fish in the Gulf. The emergency rule: 1) deferred the date for having a "moratorium permit" aboard vessels operating in these fisheries until June 16, 2003; 2) automatically extended the expiration date of valid or renewable "open access" permits for these fisheries until June 16, 2003; 3) extended the deadline for issuance of "moratorium permits" to no later than June 6, 2003; and 4) extended the deadline for resolution of appeals to February 18, 2003, or 30 days after an oral hearing, if applicable. Additionally, the emergency rule allowed those persons who were ineligible under the promulgated regulations to receive their open access charter vessel/headboat permits until they can obtain a new permit under the revised moratorium eligibility criteria approved by the Council.

Amendment 25 (2006) established a limited access system on for-hire reef fish and CMP permits. Permits are renewable and transferable in the same manner as currently prescribed for such permits. The Council will have periodic review at least every 10 years on the effectiveness of the limited access system.

Amendment 30B (2009) required that all vessels with federal commercial or charter reef fish permits must comply with the more restrictive of state or federal reef fish regulations when fishing in state waters.

Amendment 34 (2012) addressed crew size limits for dually permitted vessels. Dually permitted vessels are vessels with both a charter for-hire permit and a commercial reef fish permit. The amendment eliminates the earned income qualification requirement for the renewal of commercial reef fish permits and increases the maximum crew size from three to four.

Framework Action (2013) modified the frequency of the headboat reporting to be on a weekly basis (or at intervals shorter than a week if notified by the SRD) via electronic reporting, and will be due by 11:59 p.m., local time, the Sunday following a reporting week. If no fishing activity occurs during a reporting week, and electronic report so stating must be submitted for that week.

Snapper Grouper FMP for the South Atlantic

The following amendments to the FMP for the Snapper-Grouper fishery of the South Atlantic contained actions that pertained to the for hire sector including permit and reporting requirements.

Amendment 4 (1991) established a permit requirement for for-hire vessels and specified data collection regulations. Amendment 4 also designated prohibited gear, defined overfishing and established rebuilding timeframes, established gear marking requirements for black sea bass traps, size limits, bag limits and spawning season closures.

Amendment 7 (1994) established dealer permits for both charter and headboats, allowed sale under specified conditions, and adjusted bag limits and crew specifications for charter and headboats. Amendment 7 also adjusted specified size limits for hogfish and mutton snapper, modified the management unit to include scup and specified allowable gear and made allowances for experimental gear.

Amendment 16 (2009) established a prohibition on captain and crew on for-hire trips retaining the bag limit of vermilion snapper and species within the 3-fish grouper aggregate. Amendment 16 also specified allocations for gag and vermillion snapper, required dehooking tools for sea turtle bycatch, established a spawning season closure for gag and a reduced bag limit and recreational closed season for vermillion. Directed commercial quotas were also established for both gag and vermillion snapper.

Amendment 15 B (2008) prohibited the sale of bag-limit caught snapper grouper species; reduced the effects of incidental hooking on sea turtles and smalltooth sawfish; adjusted commercial renewal periods and transferability requirements; implemented plan to monitor and assess bycatch; established reference points for golden tilefish; established allocations for snowy grouper (95% commercial & 5% recreational) and red porgy (50% commercial & 50% recreational).

Amendment 27 (2014) modified the restriction on retention of bag limit quantities of some snapper grouper species by captain and crew of for-hire vessels; established the South Atlantic Council as the responsible entity for managing Nassau grouper throughout its range including federal waters of the Gulf of Mexico; modified the crew member limit on dual-permitted snapper grouper vessels; minimized regulatory delay when adjustments to snapper grouper species' acceptable biological catch (ABC), ACLs, and annual catch targets (ACTs) are needed as a result of new stock assessments; and addressed harvest of blue runner by commercial fishermen who do not possess a South Atlantic Snapper Grouper Permit.

South Atlantic Dolphin Wahoo

The following amendments to the FMP for the Dolphin Wahoo fishery of the South Atlantic contained actions that pertained to the for hire sector including permit and reporting requirements.

The dolphin wahoo FMP was implemented in 2003 contained many management measures for the operation of the fishery such as minimum size limits, allowable gear, closed areas, and quotas. The FMP required owners of commercial vessels and/or charter vessels/headboats to have vessel permits and, if selected, submit reports and required dealers to have permits and, if selected, submit reports. In 2004, the FMP required that operators of commercial vessels, charter vessels and headboats that are required to have a federal vessel permit for dolphin and wahoo must display operator permits.

Amendment 6 (2014) to the Dolphin Wahoo FMP required electronic logbook reporting for headboat vessels fishing for dolphin wahoo.

CMP Fishery

The following amendments to the FMP for the CMP of the Gulf of Mexico and South Atlantic contained actions that pertained to the for hire sector including permit and reporting requirements.

Amendment 2 (1987) to the CMP FMP (implemented in 1987) required that charter vessels and headboats fishing in the EEZ of the Gulf or Atlantic for coastal migratory pelagic species have permits.

Amendment 14 (2002) to the CMP FMP (implemented 2002) established a 3-year moratorium on the issuance of charter vessel and head boat permits unless sooner replace by a comprehensive effort limitation system. The control date for eligibility was established as March 29, 2001. Also includes other provisions for eligibility, application, appeals, and transferability.

Amendment 17 to the CMP FMP (2006) established a limited access system on for-hire reef fish and CMP permits. Permits are renewable and transferable in the same manner as currently prescribed for such permits. The Council will have periodic review at least every 10 years on the effectiveness of the limited access system

CHAPTER 2. MANAGEMENT ALTERNATIVES

2.1 Action 1: Modify Frequency and Mechanism of Data Reporting for Charter Vessels

Alternative 1 (No Action). The owner or operator of a charter vessel for which a charter vessel/headboat permit for Gulf of Mexico (Gulf) or South Atlantic coastal migratory pelagic (CMP) species, Gulf reef fish, South Atlantic snapper grouper, or Atlantic dolphin and wahoo has been issued, or whose vessel fishes for or lands such CMP species, reef fish, snapper grouper, or Atlantic dolphin or wahoo in or from state waters adjoining the applicable Gulf, South Atlantic, or Atlantic exclusive economic zone (EEZ), and who is selected to report by the Science and Research Director (SRD) must maintain a fishing record for each trip, or a portion of such trips as specified by the SRD, on forms provided by the SRD. Completed fishing records must be submitted to the SRD weekly, postmarked no later than 7 days after the end of each week (Sunday). Information to be reported is indicated on the form and its accompanying instructions.

For South Atlantic snapper grouper, charter vessels selected to report by the SRD must participate in the National Marine Fisheries Service (NMFS) -sponsored electronic logbook and/or video monitoring program as directed by the SRD. Completed fishing records may be required weekly or daily, as directed by the SRD.

Note: The requirement to participate in a video monitoring program if selected is not changed by any of the alternatives in this amendment.

Alternative 2. Require that federally permitted charter vessels submit fishing records to the SRD weekly or at intervals shorter than a week if notified by the SRD via electronic reporting (via NMFS approved hardware/software). Weekly = Tuesday following each fishing week.

Alternative 3. Require that federally permitted charter vessels submit fishing records to the SRD daily via electronic reporting via electronic reporting (via NMFS approved hardware/software). Daily = by noon of the following day.

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.

Note: It is the intent of the Gulf of Mexico and South Atlantic Fishery Management Councils that during catastrophic conditions the use of paper forms for basic required reporting may be authorized by the Regional Administrator (RA) through publication of timely notice. During catastrophic conditions, the RA also has the authority to waive or modify reporting time requirements. An electronic report not received within the time specified is delinquent. A delinquent report automatically results in a prohibition on harvesting or possessing the applicable species by the permit holder, regardless of any additional notification to the delinquent permit owner and operator by NMFS. This prohibition is applicable until all required and delinquent

reports have been submitted and received by NMFS according to the reporting requirements. If no fishing activity took place during a reporting period, the permit holder would be required to submit an electronic report stating that no fishing activity occurred and this report must be submitted at the same time interval specified in the regulations (local time). A preliminary list of data elements for charter vessels participating in the MRIP For-Hire Survey is shown in Table 2.1.1.

Discussion

Charter vessels are operationally defined as for-hire vessels that carry six or fewer passengers that also meets the requirements of USCG. To date, none of these vessels have been selected by the SRD to submit fishing records as described in **Alternative 1**. Rather, these vessels have been monitored through the Marine Recreational Information Program (MRIP) For-Hire Survey (measures effort) and the MRIP dockside intercept survey (measures catch). The MRIP For-Hire Survey includes charter vessels operating in the Gulf of Mexico from Louisiana through the west coast of Florida, and those operating in the South Atlantic from eastern Florida through North Carolina. Charter vessel operators are required to report all trips taken during selected weeks (effort only) whenever they are selected to participate in the survey. Charter vessel operators are contacted by telephone (a weekly sample of 10% of the fleet) to collect these data (**Table 2.1.1)**. Catch data are collected in a separate dockside intercept survey of anglers. Adjustment factors for active charter vessels that are not in the sample frame (new to fleet, no contact information known, etc.) are produced from field intercept survey questions and applied to the raw effort estimate.

Table 2.1.1. Required data reporting elements for charter vessels participating in MRIP For-Hire Survey.

Reporting Elements
Area fished
Number of anglers who fished
Hours of actual fishing activity
Method of fishing
Target species (if any)

To enforce the mandatory reporting requirement for federally permitted charter vessels in the telephone component of the For-Hire Survey, permit holders who refuse to participate in the survey are notified by letter of their obligation to report as a condition for permit renewal. However, if a charter vessel operator cannot be contacted after five attempts for a selected week, the final interview status is "unsuccessful contact". It is impossible to identify permit holders who are deliberately evading the survey. Telephone contact rates vary by wave (i.e., MRIP 2-month sample period), state, and region, and the percent of selected vessels that are unable to be contacted by phone is quite high in some strata. Charter vessel catch and effort in Texas are monitored by the Texas Parks and Wildlife Survey. This survey is a field-intercept survey of boat-based fishing, including for-hire vessels. This survey estimates fishing effort and catch (harvest only) on a seasonal (high-use and low-use) basis.

Alternative 2 would require federally permitted charter vessels participating in the subject fisheries to submit fishing records weekly or at intervals shorter than a week via electronic reporting (via NMFS approved hardware/software). **Alternative 2** could improve fishery dependent data in several ways. For example, fishery data would be available for inclusion into the science and management process faster, potentially reducing the likelihood of exceeding annual catch limits (ACLs). **Alternative 2** could also improve data accuracy as reports would be completed shortly after each trip, potentially reducing problems associated with recall errors. However, **Alternative 2** would reduce the timing flexibility for report preparation by charter vessel operators and this burden could be acute during peak season when the number of trips taken, the number of passengers carried, and catch are greatest.

Alternative 3 would require charter vessels participating in the subject fisheries to submit a report for each day. As with **Alternative 2,** this report would be submitted electronically and received by NMFS (due noon the following day). **Alternative 3** could further reduce the likelihood of exceeding ACLs with reduced recall error compared to **Alternative 1** and **Alternative 2**. However, **Alternative 3** would add additional burden and reduced flexibility compared to **Alternatives 1** and **2.**

Gulf Preferred Alternative 4 would require federally permitted charter vessels participating in the subject fisheries to submit a report for each trip. This report would need to be submitted electronically and received by NMFS prior to returning to the dock and would require multiple fishing records per day if more than one trip occurred on a single day. Charter vessel operators would need to have access to a NMFS-approved electronic device on their vessel to submit a logbook prior to reaching the dock. This would add substantial complexity to the reporting protocol; however, it would greatly improve the ability to validate self-reported catch data with the actual landings. **Gulf Preferred Alternative 4** provides additional rigor to trip validation of catch and effort that are not possible with **Alternatives 1-3** because reports must be submitted prior to arriving at the dock. In **Gulf Preferred Alternative 4** the catch can actually be verified as reported by an agent when the vessels arrives at the dock, reducing the likelihood of mis-reporting. However, **Gulf Preferred Alternative 4** offers charter vessel operators the least flexibility in how and when they prepare and submit their fishing reports and could be burdensome during periods of peak activity or inclement weather. **Gulf Preferred Alternative 4** should improve data quality and accuracy, improved stakeholder confidence, and reduce uncertainty associated with these data when used in science or management applications.

The South Atlantic Council's intent is to have charter vessels, in fisheries managed by the Council, meet the minimum data elements currently collected for charter vessels and headboats in South Carolina (see Appendix C) and for federal headboats (see Table 2.2.1 and Appendix D).

Additional data that could be collected on a sample or voluntary basis from both charter vessels and headboats includes:

- releases/discards measured and specific location (depth) of release recorded
- retained catch at specific location (depth) recorded
- economic data (similar to what is currently being collected from commercial fishermen)
- social data

2.2 Action 2: Modify Frequency and Mechanism of Data Reporting for Headboats

Alternative 1 (No Action). The owner or operator of a headboat for which a charter vessel/headboat permit for Gulf or South Atlantic CMP species, Gulf reef fish, South Atlantic snapper grouper, or Atlantic dolphin and wahoo has been issued, or whose vessel fishes for or lands such CMP species, reef fish, snapper grouper, or Atlantic dolphin or wahoo in or from state waters adjoining the applicable Gulf, South Atlantic, or Atlantic EEZ, and who is selected to report by the SRD must submit an electronic fishing record for each trip of all fish harvested via the Southeast Region Headboat Survey. Electronic fishing records must be submitted at weekly intervals (or intervals shorter than a week if notified by the SRD) by 11:59 p.m., local time, the Sunday following a reporting week. If no fishing activity occurred during a reporting week, an electronic report stating so must be submitted for that reporting week by 11:59 p.m., local time, the Sunday following a reporting week.

During catastrophic conditions, the use of paper forms for basic required functions may be authorized by the Regional Administrator (RA) by publication of timely notice. During catastrophic conditions, the RA also has the authority to waive or modify reporting time requirements.

When an electronic report is not received within the time specified, it is delinquent. A delinquent report automatically results in a prohibition on harvesting or possessing the applicable species, regardless of any additional notification to the delinquent owner and operator by NMFS. This prohibition is applicable until all required and delinquent reports have been submitted and received by NMFS according to the reporting requirements.

For South Atlantic snapper grouper, headboats selected to report by the SRD must participate in the NMFS-sponsored electronic logbook and/or video monitoring program, as directed by the SRD. Completed fishing records may be required weekly or daily, as directed by the SRD.

Note: The requirement to participate in a video monitoring program if selected is not changed by any of the alternatives in this amendment.

Alternative 2. Require that headboats submit fishing records to the SRD weekly or at intervals shorter than a week if notified by the SRD via electronic reporting (via NMFS approved hardware/software). Weekly = Tuesday following each fishing week.

Alternative 3. Require that headboats submit fishing records to the SRD daily via electronic reporting (via NMFS approved hardware/software). Daily = by noon of the following day.

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.

Discussion

Historically, headboat vessels reported logbook information using paper forms. Beginning January 1, 2013, vessel owners\operators have been required to submit electronic logbooks. Vessel operators are required to report 100% of their vessel trips, regardless of whether the trips occur in the EEZ or in state waters. The current reporting requirements place the responsibility for submitting required information directly on the permit holder, and compliance is monitored and enforced as a condition for permit renewal. If a vessel is delinquent for any trips, an email reminder is sent to the vessel owner after the reporting week ends. If the vessel continues to be non-compliant, the Permit Office is notified to place the vessel permit renewal on hold. In some cases the vessel permit is not up for renewal for several months; if a vessel in this status remains non-compliant, law enforcement is notified to prohibit this vessel from harvesting and possessing federally managed species. The obligation to report is reinforced annually via certified letter to each permit holder.

The SRHS, which is administered by the NMFS Southeast Fisheries Science Center, includes approximately 140 large capacity headboats operating in the Gulf and South Atlantic from Texas through North Carolina. Vessels included in this survey are required to report catch and effort data weekly to NMFS (**Table 2.2.1**).

Table 2.2.1. Required data reporting elements for headboats participating in the SRHS.

Reporting Elements
Depart Date:Time
Return Date:Time
Vessel Name
Captain Name
Number of Anglers
Number of Paying Passengers
Number of Crew
Fuel used (gallons)
Price per gallon (estimate)
Minimum depth fished
Maximum depth fished
Primary depth fished
Latitude/Longitude Degrees
Latitude/Longitude Minutes
Species caught
Number kept
Number released

Alternative 1 requires headboats participating in Gulf Reef Fish, South Atlantic Snapper Grouper, Atlantic Dolphin Wahoo, or Gulf and South Atlantic CMP fisheries, if selected by the

SRD (Note: The headboat amendment required all headboats to report.), to submit electronic reports weekly (or at intervals less than a week if requested by the SRD) due seven days after the end of each week (Sunday).

Alternative 2 would require headboats participating in the subject fisheries to report weekly or at intervals shorter than a week if notified by the SRD via electronic reporting (via NMFS approved hardware/software). The difference between **Alternative 1** and **Alternative 2** is the difference in delay between the end of the fishing week (Sunday) and report submission. **Alternative 1** allows 7 days to prepare and submit reports while **Alternative 2** would allow only 2 days. **Alternative 2** could improve fishery data in several ways. Fishery data would be available into the science and management process faster, potentially reducing the likelihood of exceeding ACLs. **Alternative 2** could also improve accuracy as reports would be completed soon after each trip reducing problems associated with recall errors. However, **Alternative 2** would reduce the flexibility of the headboat operators for the timing of report preparation and this could be acute during peak season when the number of trips, the number of passengers, and catch are greatest.

Alternative 3 would require headboats participating in the subject fisheries to submit a report for each day. This report would be submitted electronically and would need to be received by NMFS (by noon the following day). **Alternative 3** could further reduce the likelihood of exceeding ACLs and reduce recall error compared to **Alternative 1** or **Alternative 2**. However, **Alternative 3** would add additional burden and reduced flexibility in comparison to **Alternatives 1** or **Alternative 2.**

Gulf Preferred Alternative 4 would require headboats participating in the subject fisheries to submit a report for each trip. This report would need to be submitted electronically and would need to be received by NMFS prior to returning to the dock. **Gulf Preferred Alternative 4** would offer the greatest ability to prevent ACL overages and add additional rigor to trip validation of catch and effort that are not possible with **Alternatives 1-3**. In **Gulf Preferred Alternative 4** the catch can actually be verified as reported by an agent when the vessels arrives at the dock, reducing the likelihood of mis-reporting. However, **Gulf Preferred Alternative 4** offers headboat operators the least flexibility in how and when they prepare and submit their fisheries reports and could be burdensome during periods of peak activity or inclement weather. **Gulf Preferred Alternative 4** should improve data quality and accuracy, improved stakeholder confidence, and reduce uncertainty associated with these data when used in science or management applications.

2.3 Action 3: Modify Electronic Reporting Requirements to Require Vessel or Catch Location Reporting

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 nm^2 area).

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:

Sub-Alternative 2a. In the Gulf (headboat)
Sub-Alternative 2b. In the Gulf (charter vessel)
Sub-Alternative 2c. In the South Atlantic (headboat)
Sub-Alternative 2d. In the South Atlantic (charter vessel)

Alternative 3. Require federally permitted for-hire vessels in the Gulf to use a NMFS approved Vessel Monitoring System (VMS) to record vessel location at specified time intervals:

Sub-Alternative 3a. In the Gulf (headboat)
Sub-Alternative 3b. In the Gulf (charter vessel)

Alternative 4. Require federally permitted charters vessels in the South Atlantic to report location manually by latitude/longitude in degrees and minutes or by clicking on a geographic grid in the software of a NMFS-approved device or program.

Note: It is the South Atlantic (SA) Council's intent to extend the reporting requirements of this amendment through the Mid-Atlantic and New England Councils' areas for federally permitted for-hire vessels harvesting species managed in South Atlantic Council FMPs (Atlantic Dolphin and Wahoo, Coastal Migratory Pelagics, and South Atlantic Snapper Grouper). Further, it is the South Atlantic Council's intent not to have duplicate reporting by individual vessels; one report submitted to, for example, Atlantic Coastal Cooperative Statistics Program (ACCSP) would then be available to each agency needing the data. One issue to be resolved is the timing for reports: any SA permitted vessel would be required to report electronically via the charter vessel logbook the Tuesday following the end of the week (Sunday) whereas the vessel reports for the Greater Atlantic Region permitted vessels are currently due on or before 11:59 pm the Saturday following the end of the fishing week that is Sunday through Saturday

The NMFS Southeast Fisheries Science Center (SEFSC) will develop the specific details of how the system would operate and will provide the Councils the opportunity to have input into the system design. The system would include the following items as recommended by the Technical Sub-committee:

a) Logbook data collected via authorized platform, ex. web, tablet, phone, or VMS application
b) Data submitted to ACCSP or GulfFIN (Gulf Fisheries Information Network);
c) Data integrated by ACCSP or GulfFIN into single composite data set;
d) Composite data set distributed to appropriate agencies for analyses and use.

e) NMFS and/or ACCSP/GulfFIN are to develop a compliance tracking procedure that balances timeliness with available staff and funding resources.
f) NMFS is to use validation methods developed in the Gulf of Mexico logbook pilot study as a basis to ensure that the actual logbook report is validated and standardized validation methodologies are employed among regions.
g) NMFS is to require and maintain a comprehensive permit/email database of participants.
h) NFMS is to include procedures for expanding estimates for non-reporting.
i) NMFS is to allow multiple authorized applications or devices that can transmit data from sea to report data as long as they meet required data and transferability standards.

Discussion

Charter vessels that are surveyed using the MRIP For-Hire survey (i.e., 10% weekly) are asked to report area fished (i.e., area fished, state, or federal waters) in addition to the other elements listed in Table 2.1.1. **Action 3** considers changing the location reporting element for charter vessels and headboats from a self-reported system to an electronic system where location information is recorded passively by a device on board the vessel. **Alternative 1** would maintain the current self-reporting systems in place (i.e., report area fished if selected in the For-Hire survey (charter vessel) or latitude/longitude of area fished within 1 nm^2 area (headboat). **Alternative 2** would require the use of a NMFS approved electronic device to record and later transmit specific location information (latitude/longitude). Four sub-alternatives are considered that would require this for Gulf of Mexico headboats (**Sub-Alternative 2a**); Gulf charter vessels (**Sub-Alternative 2b**); South Atlantic headboats (**Sub-Alternative 2c**); or South Atlantic charter vessels (**Sub-Alternative 2d**). **Alternative 2** and **Sub-Alternatives 2a-2d** would permit improved accuracy, timeliness, and effort validation protocols relative to **Alternative 1**; they could also improve the estimates of bycatch mortality used in stock assessments as depth fished could be determined and is a primary factor in release mortality. **Alternative 3** would apply only to the Gulf of Mexico and would require the use of VMS technology to monitor and report location information. **Alternative 3** is expected to yield similar benefits to **Alternative 2** as compared to **Alternative 1**. VMS (**Alternative 3**, Gulf only) provides real time vessel location information and has been used to support law enforcement efforts. Requiring VMS generates a lot of negative comments and references to an "ankle bracelet" from the public. Public comments have been more supportive of requiring those breaking the law to use VMS but not for law abiding fishermen. On the other hand, use of a NMFS approved electronic device that automatically records vessel location is different in that the data are stored for later transmission and so are not readily available for law enforcement. These devices could include tablets with a GPS chip and/or smart phone or computers. The emphasis with the GPS enabled tablet type of technology is that is focuses on data collection and not enforcement as is the perception with VMS.

Alternative 4 would apply only to the South Atlantic and would require charter vessels to report location fished manually by latitude/longitude in degrees and minutes or by clicking on a geographic grid as is currently required for headboats in the South Atlantic and Gulf of Mexico. **Alternative 4** is expected to yield similar benefits to **Alternative 2** as compared to **Alternative 1**.

The South Atlantic Council is concerned about the extensive delays in tracking headboat catches even though headboats are required to report electronically every week beginning in 2014. The 2014 headboat data was not available until April of 2015. The current blueline recreational ACL versus recreational catches is currently unknown pending receipt of the first wave of MRIP data (should be available 45 days after the end of February) and any headboat catches. Part of the headboat delay is that the Council has specified the recreational ACL in pounds and this requires the numbers of fish to be converted to pounds. This adds an unspecified period of time after the MRIP data are released for the SEFSC to apply their conversion factors and provide a catch estimate. The South Atlantic Council is considering specifying recreational ACLs in numbers of fish so that the headboat sector (and the charter vessel sector once this amendment is approved) can be tracked weekly. Specifying the recreational ACL in numbers of fish will also reduce the delay in using the MRIP data to track recreational ACLs.

The system design addresses the following recommendations from the Technical Sub-Committee (Appendix E):
3. Development of compliance tracking procedures that balance timeliness with available staff and funding resources.

5. Use validation methods developed in the Gulf of Mexico logbook pilot study as a basis to ensure that the actual logbook report is validated and standardized validation methodologies are employed among regions.

8. Require and maintain a comprehensive permit/email database of participants.

10. Include procedures for expanding estimates for non-reporting.

11. Allow multiple authorized applications or devices to report data as long as they meet required data and transferability standards.

The subcommittee recommends a multi-faceted approach where a number of reporting platforms can be used so long as the minimum data standards and security protocols are met. Data standards would need to be developed and the subcommittee agreed that NOAA Fisheries, the GulfFIN, and ACCSP could work collaboratively to develop appropriate standards.
The subcommittee recommends this process for data storage and management:

1. Logbook data collected via authorized platform, ex. web, tablet, phone, or VMS application
2. Data submitted to ACCSP or GulfFIN;
3. Data integrated by ACCSP or GulfFIN into single composite data set;
4. Composite data set distributed to appropriate agencies for analyses and use.

This process could eliminate duplicate reporting for some participants (e.g., South Carolina headboats and charter vessels) so long as appropriate data standards are in place and the respective agencies agree to confidentiality standards, which would allow sharing and accepting one another's data for use. Elimination of duplicate reporting (e.g., separate state and federal reports) would be a substantial benefit to participants in this survey program and could mitigate any additional reporting requirements for comparison to the current MRIP survey program.

The technical subcommittee recommends building upon the validation methodology developed in the Gulf MRIP pilot study.

The subcommittee recommends use of an MRIP certified methodology for validation with the following elements: Gulf MRIP pilot study methodologies, including dockside validation of catch and vessel activity, and maintenance of site and vessel registries.

The subcommittee recommends dual survey methods (existing and new) for no less than three years. Data from the new program would not be expected to provide management advice during the first year of operation. Moreover, this would allow the possibility of an initial phase-in or limited implementation to identify and solve significant problems prior to implementation for all participants.

The subcommittee recommends that the Councils move forward with development of a reporting system that includes federally permitted for-hire vessels while also exploring ways to determine the impact of state permitted vessels on landings estimates of federally managed species. Long term, the subcommittee recommends that both state and federally permitted charter vessels participate in this census to include the entire fleet of charter vessels harvesting federally managed species.

Weekly electronic dealer and headboat reporting are fully implemented. However, there are still delays in having updated landings available to the public for their use in planning trips and to the Councils for monitoring ACLs. A solution, in the Atlantic, would be to have the raw weekly data fed to ACCSP and made available to the public via the ACCSP website. The "official" numbers for quota closures would continue to be the numbers maintained by NMFS and available on the NMFS website but this would provide more timely and useful updates to the public.

The result would be updated and current catch data available on a daily basis for the public, states, NMFS, and the Councils to use in monitoring ACLs and planning fishing trips.

The Councils feel it is important for the public to understand the timing of full implementation;

1. Councils approve document for formal review – late 2015/early 2016
2. Document review by NMFS and approved/partially approved/disapproved – mid to late 2016
3. Target implementation date – January 1, 2017. Charter vessels and headboats required to report minimum data elements according to the specifics in the final amendment. Begin collecting data submitted electronically.
4. Concurrent data collection period for charter vessels – for one to three years, the new charter vessel reporting system will be run at the same time as the old (MRIP) charter vessel reporting system is run to obtain comparisons. This is necessary to index the old data to the new data. The Technical Sub-Committee recommended 3 years and the actual timeframe will be determined by the NMFS SEFSC based on the results of the concurrent programs after year 1. The SEFSC will provide a report to the Councils based on the results of year 1 efforts and provide an opportunity for input prior to making a decision about continuing or ending the concurrent programs.

5. After the NMFS SEFSC concludes the results of the new system are sufficient, the current MRIP efforts sampling charter vessels will cease and MRIP will focus exclusively on the private recreational angler sector.

CHAPTER 3. AFFECTED ENVIRONMENT

3.1 Description of the Physical Environment

3.1.1 Gulf of Mexico Region

3.1.1.1 Reef Fish

Habitat for Reef Fish Species

The physical environment for reef fish has been described in detail in the Environmental Impact Statement (EIS) for the Generic Essential Fish Habitat (EFH) Amendment and is incorporated here by reference (GMFMC 2004).

The Gulf of Mexico (Gulf) has a total area of approximately 600,000 square miles (mi^2) (1.5 million km^2), 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 3.1.1). 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 83º F (23-28º C) including bays and bayous 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.

Information on the habitat utilized by species in the Reef Fish complex is included in GMFMC (2011) available at: http://www.gulfcouncil.org/docs/amendments/Final%20Generic%20ACL_AM_Amendment-September%209%202011%20v.pdf

Essential Fish Habitat for Reef Fish Species

Generic Amendment 3 (GMFMC, 2005), is hereby incorporated by reference for addressing EFH, habitat areas of particular concern, and adverse effects of fishing in the following fishery management plans of the Gulf: Reef Fish Resources, Red Drum, and Coastal Migratory Pelagics.

Habitat Areas of Particular Concern (HAPC) for Reef Fish

Generic Amendment 3 (GMFMC, 2005), is hereby incorporated by reference for addressing EFH, HAPCs, and adverse effects of fishing in the following fishery management plans of the Gulf: Reef Fish Resources, Red Drum, and Coastal Migratory Pelagics.

Environmental Sites of Special Interest Relevant to Reef Fish, and Coastal Migratory Pelagics (Figure 3.1)

Longline/Buoy Gear Area Closure – 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 (72,300 square nautical miles (nm^2) or 133,900 km^2. During June-August, bottom longline is prohibited inshore of 35 fathoms (64 meters) in the eastern Gulf.

Madison/Swanson and Steamboat Lumps Marine Reserves – No-take marine reserves sited on gag spawning aggregation areas where all fishing except for surface trolling during May through October is prohibited (219 nm^2 or 406 km^2).

The Edges – No-take area closure from January 1 to April 30. All commercial and recreational fishing or possession of fish managed by the Gulf of Mexico Fishery Management Council (Gulf of Mexico Council) is prohibited. The intent of the closure is to protect gag and other groupers during their respective spawning seasons. Possession is allowed when transiting the area if gear is stowed in accordance with federal regulations. This area is not shown in Figure 3.1 due to its recent implementation. The boundaries of the closed area are:

Northwest corner = 28º 51'N, 85º 16'W; Northeast corner = 28º 51'N, 85º 04'W; Southwest corner = 28º 14'N, 84º 54'W; Southeast corner = 28º 14'N, 84º 42'W.

Tortugas North and South Marine Reserves – No-take marine reserves cooperatively implemented by the state of Florida, National Ocean Service (NOS), the Gulf of Mexico Council, and the National Park Service (see jurisdiction on chart) (185 nm^2 or 343 km^2). In addition, Generic Amendment 3 for addressing EFH, HAPCs, and adverse effects of fishing prohibited the use of anchors in these areas.

Individual reef areas and bank HAPCs of the northwestern Gulf including: 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 use of some fishing gear that interacts with the bottom (263.2 nm^2 or 487.4 km^2). Subsequently, some of these areas were made a marine sanctuary by NOS and this marine sanctuary is currently being revised. 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 the significant coral resources on Stetson Bank.

Florida Middle Grounds HAPC – Pristine soft coral area protected from use of any fishing gear interfacing with bottom (348 nm^2 or 645 km^2).

Pulley Ridge HAPC – A portion of the HAPC where deep-water hermatypic coral reefs are found is closed to anchoring and the use of trawling gear, bottom longlines, buoy gear, and all traps/pots (2,300 nm^2 or 4,260 km^2).

Stressed Areas for Reef Fish – Permanent closure Gulf-wide of the near shore waters to use of fish traps, power heads, and roller trawls (i.e., "rock hopper trawls") (48,400 nm^2 or 89,637 km^2).

Alabama Special Management Zone (SMZ) – In the Alabama SMZ, fishermen are limited to hook-and-line gear with no more than three hooks under the following scenarios: (1) fishing as a charter vessel or head boat; (2) a vessel that does not have a commercial permit for Gulf of Mexico reef fish, or (3) a vessel with such a permit fishing for Gulf of Mexico reef fish, Nonconforming gear is restricted to bag limits, or for reef fish without a bag limit, to 5% by weight of all fish aboard.

3.1.1.2 Deepwater Horizon

The Deepwater Horizon MC252 oil spill in 2010 affected at least one-third 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 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 of Mexico 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.

Surface or submerged oil during the DWH MC252 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. In addition, microbes in the water that break down oil and dispersant also consume oxygen, which could lead to further oxygen depletion. Zooplankton that feed off algae could also be negatively impacted, thus allowing more of the hypoxia-fueling algae to grow.

For additional information on the Deepwater Horizon MC252 oil spill and associated closures, see:
http://sero.nmfs.noaa.gov/deepwater_horizon_oil_spill.htm.

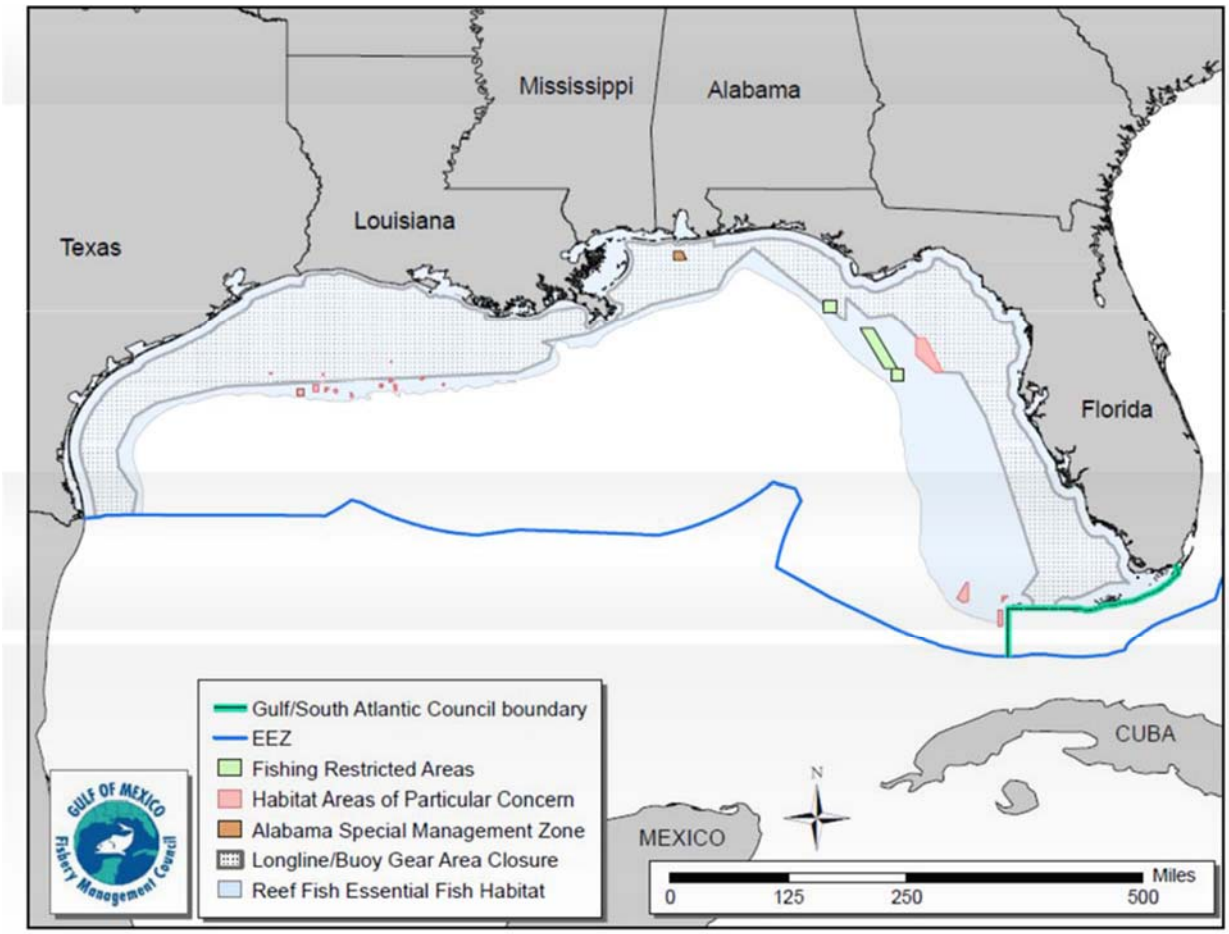

Figure 3.1. Composite map of most fishery management closed or gear restricted areas in the Gulf of Mexico.

3.1.2 South Atlantic Region

3.1.2.1 Snapper-Grouper

Habitat for Snapper-Grouper Species

Information on the habitat utilized by species in the Snapper Grouper Complex is included in Volume II of the Fishery Ecosystem Plan (FEP) (SAFMC 2009b) and incorporated here by reference. The FEP can be found at:
http://www.safmc.net/ecosystem/Home/EcosystemHome/tabid/435/Default.aspx

Essential Fish Habitat (EFH) for Snapper-Grouper Species

EFH is defined in the Reauthorized Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) as "those waters and substrates necessary to fish for spawning, breeding, feeding, or growth to maturity" (16 U.S. C. 1802(10)). Specific categories of EFH identified in the South Atlantic Bight, which are utilized by federally- managed fish and

invertebrate species, include both estuarine/inshore and marine/offshore areas. Specifically, estuarine/inshore EFH includes: Estuarine emergent and mangrove wetlands, submerged aquatic vegetation, oyster reefs and shell banks, intertidal flats, palustrine emergent and forested systems, aquatic beds, and estuarine water column. Additionally, marine/offshore EFH includes: Live/hard bottom habitats, coral and coral reefs, artificial and manmade reefs, *Sargassum* species, and marine water column.

EFH utilized by snapper grouper species in this region includes coral reefs, live/hard bottom, submerged aquatic vegetation, artificial reefs and medium to high profile outcroppings on and around the shelf break zone from shore to at least 183 meters [600 feet (but to at least 2,000 feet for wreckfish)] where the annual water temperature range is sufficiently warm to maintain adult populations of members of this largely tropical fish complex. EFH includes the spawning area in the water column above the adult habitat and the additional pelagic environment, including *Sargassum*, required for survival of larvae and growth up to and including settlement. In addition, the Gulf Stream is also EFH because it provides a mechanism to disperse snapper grouper larvae.

For specific life stages of estuarine dependent and near shore snapper grouper species, EFH includes areas inshore of the 30 meter (100 feet) contour, such as attached macroalgae; submerged rooted vascular plants (seagrasses); estuarine emergent vegetated wetlands (saltmarshes, brackish marsh); tidal creeks; estuarine scrub/shrub (mangrove fringe); oyster reefs and shell banks; unconsolidated bottom (soft sediments); artificial reefs; and coral reefs and live/hard bottom habitats.

HAPCs for Snapper-Grouper Species

Areas which meet the criteria for HAPCs for species in the snapper grouper management unit include medium to high profile offshore hard bottoms where spawning normally occurs; localities of known or likely periodic spawning aggregations; near shore hard bottom areas; The Point, The Ten Fathom Ledge, and Big Rock (North Carolina); The Charleston Bump (South Carolina); mangrove habitat; seagrass habitat; oyster/shell habitat; all coastal inlets; all state-designated nursery habitats of particular importance to snapper grouper (e.g., Primary and Secondary Nursery Areas designated in North Carolina); pelagic and benthic *Sargassum*; Hoyt Hills for wreckfish; the *Oculina* Bank Habitat Area of Particular Concern; all hermatypic coral habitats and reefs; manganese outcroppings on the Blake Plateau; and South Atlantic Council-designated Artificial Reef SMZs. Areas that meet the criteria for HAPCs include habitats required during each life stage (including egg, larval, postlarval, juvenile, and adult stages).

In addition to protecting habitat from fishing related degradation though fishery management plans (FMPs) regulations, the South Atlantic Council, in cooperation with National Marine Fisheries Service (NMFS), actively comments on non-fishing projects or policies that may impact essential fish habitat. The South Atlantic Council adopted a habitat policy and procedure document that established a four-state Habitat Advisory Panel and adopted a comment and policy development process. With guidance from the Advisory Panel, the South

Atlantic Council has developed and approved habitat policies on: energy exploration, development, transportation and hydropower re-licensing; beach dredging and filling and large-scale coastal engineering; protection and enhancement of submerged aquatic vegetation; and alterations to riverine, estuarine and near shore flows, offshore aquaculture, invasive estuarine species, and invasive marine species (available at www.safmc.net).

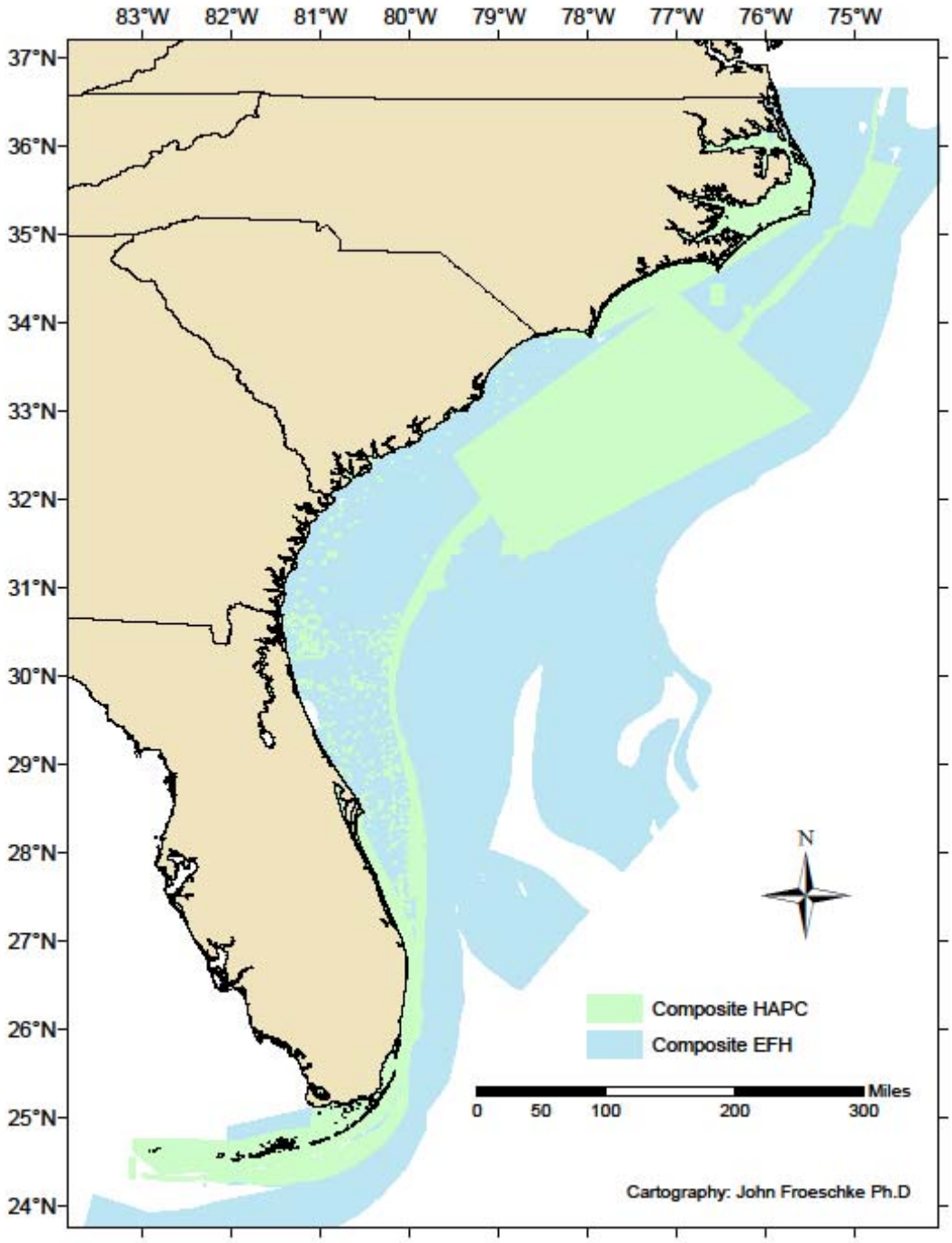

Figure 3.2. Composite map of HAPC and EFH in the South Atlantic Region.

3.1.2.2 Dolphin and Wahoo

Habitat for Dolphin and Wahoo

Information on the habitat utilized by dolphin and wahoo is included in Volume II of the Fishery FEP (SAFMC, 2009b) and incorporated here by reference. The FEP can be found at: http://www.safmc.net/ecosystem/Home/EcosystemHome/tabid/435/Default.aspx

EFH for Dolphin and Wahoo

EFH for dolphin and wahoo is the Gulf Stream, Charleston Gyre, Florida Current, and pelagic *Sargassum.* This EFH definition for dolphin was approved by the Secretary of Commerce on June 3, 1999, as a part of the South Atlantic Council's Comprehensive Habitat Amendment (SAFMC 1998) (dolphin was included within the Coastal Migratory Pelagics FMP). This definition does not apply to extra-jurisdictional areas.

HAPCs for Dolphin and Wahoo

HAPCs for dolphin and wahoo in the Atlantic include The Point, The Ten-Fathom Ledge, and Big Rock (North Carolina); The Charleston Bump and The Georgetown Hole (South Carolina); The Point off Jupiter Inlet (Florida); The Hump off Islamorada, Florida; The Marathon Hump off Marathon, Florida; The "Wall" off of the Florida Keys; and Pelagic Sargassum. This HAPC definition for dolphin was approved by the Secretary of Commerce on June 3, 1999 as a part of the South Atlantic Council's Comprehensive Habitat Amendment (dolphin was included within the Coastal Migratory Pelagics FMP).

3.1.3 Gulf of Mexico and South Atlantic Regions

3.1.3.1 Habitat for Coastal Migratory Pelagics

A description of the physical environment for coastal migratory pelagic (CMP) species is provided in Amendment 18 (GMFMC and SAFMC 2011), and is incorporated herein by reference.

EFH for Coastal Migratory Pelagics

A description of the EFH for CMP species is provided in Amendment 18 (GMFMC and SAFMC 2011), and is incorporated herein by reference. Essential Fish Habitat for CMPs include coastal estuaries from the US/Mexico border to the boundary between the areas covered by the GMFMC and the SAFMC from estuarine waters out to depths of 100 fathoms (GMFMC, 2004). In the South Atlantic, EFH for coastal migratory pelagic species includes sandy shoals of capes and offshore bars, high profile rocky bottom and barrier island ocean-side waters, from the surf to the shelf break zone, but from the Gulf Stream shoreward, including *Sargassum*. In addition, all coastal inlets, all state-designated nursery habitats of particular importance to coastal migratory pelagics (for example, in North Carolina this would include all Primary Nursery Areas and all

Secondary Nursery Areas).

For cobia, EFH also includes high salinity bays, estuaries, and seagrass habitat. In addition, the Gulf Stream is an essential fish habitat because it provides a mechanism to disperse coastal migratory pelagic larvae. For king and Spanish mackerel and cobia, essential fish habitat occurs in the South Atlantic and Mid-Atlantic Bights.

HAPCs for Coastal Migratory Pelagics

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

3.2 Description of the Biological/Ecological Environment

The biological environment in the areas affected by actions in this amendment is defined by two components (Figure 3.3). Each component will be described in detail in the following sections.

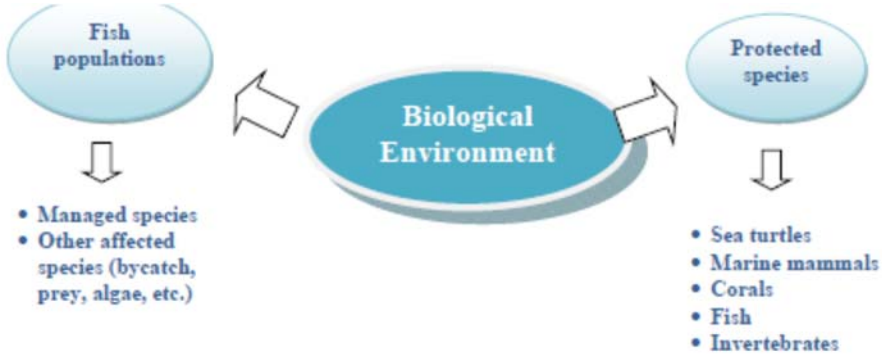

Figure 3.3. Two components of the biological environment described in this amendment.

3.2.1 Gulf of Mexico Region

3.2.1.1 Reef Fish

The species affected by this amendment are covered by the FMPs for Reef Fish Resources, and Coastal Migratory Pelagics. Many of the species in the Gulf of Mexico region are assessed through the Southeast Data, Assessment, and Review (SEDAR) process. A complete description of the life history characteristics of these species can be found in GMFMC (2011) available at:
http://www.gulfcouncil.org/docs/amendments/Final%20Generic%20ACL_AM_Amendment-September%209%202011%20v.pdf

3.2.1.2 Protected Species

There are 28 different species of marine mammals that may 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 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, *Acropora palmata* and staghorn, *A. cervicornis*). Information on the distribution, biology, and abundance of these protected species in the Gulf are included in the final EIS to the Gulf Council's Generic EFH amendment (GMFMC, 2004), the February 2005 ESA BiOp on the reef fish fishery (NMFS 2005), and the *Acropora* Status Review (*Acropora* Biological Review Team, 2005). Marine Mammal Stock Assessment Reports and additional species information is also available on the NMFS Office of Protected Species website:
http://www.nmfs.noaa.gov/pr/species/.

Because of the primary gear types used, the Gulf reef fish fishery is classified in the 2015 MMPA List of Fisheries as Category III fishery. This classification indicates the annual mortality and serious injury of a marine mammal stock resulting from the fishery is less than or equal to 1% of the potential biological removal[7]. Dolphins are the only species documented as interacting with this fishery. Bottlenose dolphins may predate and depredate on the bait, catch, and/or released discards of the reef fish fishery.

All five species of sea turtles may be adversely affected by the Gulf reef fish fishery via incidental capture in hook-and-line gear. Incidental captures of sea turtle species occur in all commercial and recreational hook-and-line components of the reef fish fishery, but recent observer data indicate they are most frequent in the bottom longline component of the reef fish fishery. On an individual set basis, incidental captures may be relatively infrequent, but collectively, these captures sum to a high level of bycatch. Observer data indicate loggerhead sea turtles are the species most affected by the bottom longline component of the reef fish fishery and that is why a more detailed description of this species. Mortality of sea turtles caught is particularly problematic in this fishery component, because many are dead or in poor condition upon retrieval of the gear as a result of forced submergence (i.e., drowning). All sea turtles caught on hook-and-line and released alive may later succumb to that were ingested, entangling, or otherwise still attached when they were released. Sea turtle release gear and handling protocols are required to reduce the amount of gear on released animals and minimize post-release mortality.

Smalltooth sawfish are also affected by the Gulf of Mexico reef fish fishery, but to a much lesser extent than hardshell sea turtles. Smalltooth sawfish primarily occur in the Gulf of Mexico off peninsular Florida. Although the long, toothed rostrum of the smalltooth sawfish causes this species to be particularly vulnerable to entanglement in fishing gear, incidental captures in the commercial and recreational hook-and-line components of the reef fish fishery are rare events. Only eight smalltooth sawfish are 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.

3.2.2 South Atlantic Region

3.2.2.1 Snapper-Grouper

Information on the biology of species in the Snapper Grouper Complex is included in Volume II of the FEP (SAFMC 2009b) and incorporated here by reference. The FEP can be found at:
http://www.safmc.net/ecosystem/Home/EcosystemHome/tabid/435/Default.aspx

3.2.2.2 Protected Species

There are 49 species, or distinct population segments (DPSs) of species, protected by federal law that may occur in the exclusive economic zone (EEZ) of the South Atlantic Region. Thirty-one of these species are marine mammals protected under the MMPA (Wynne and Schwartz 1999, Waring et al. 2013). The MMPA requires that each commercial fishery be classified by the number of marine mammals they seriously injure or kill. NMFS's List of Fisheries (LOF) classifies U.S. commercial fisheries into three categories based on the number of incidental mortality or serious injury they cause to marine mammals. More information about the LOF and the classification process can be found at: http://www.nmfs.noaa.gov/pr/interactions/lof/. Six of the marine mammal species (sperm, sei, fin, blue, humpback, and North Atlantic right whales) protected by the MMPA, are also listed as endangered under the Endangered Species Act (ESA). In addition to those six marine mammals, five species of sea turtles (green, hawksbill, Kemp's ridley, leatherback, and loggerhead); the smalltooth sawfish; five DPSs of Atlantic sturgeon; and six species of coral [elkhorn coral (*Acropora palmata*), staghorn coral (*A. cervicornis*) ("*Acropora*" collectively); lobed star coral (*Orbicella annularis*), mountainous star coral (*O. faveolata*), and knobby star coral (*O. franksi*) ("*Orbicella*" collectively); and rough cactus coral (*Mycetophylia ferox*)] are also protected under the ESA. Portions of designated critical habitat for North Atlantic right whales, the Northwest Atlantic DPS of loggerhead sea turtles, and *Acropora* corals occur within the South Atlantic Council's jurisdiction.

3.2.3 Gulf of Mexico and South Atlantic Regions

3.2.3.1 Coastal Migratory Pelagics

A description of CMP species biology is provided in Amendment 18 (GMFMC and SAFMC 2011), and is incorporated herein by reference.

3.2.4 Mid-Atlantic Region

3.2.4.1 Dolphin and Wahoo

Information on the biology of dolphin and wahoo is included in Volume II of the Fishery FEP (SAFMC, 2009b) and incorporated here by reference. The FEP can be found at: http://www.safmc.net/ecosystem/Home/EcosystemHome/tabid/435/Default.aspx

3.2.4.2 Protected Species

Protected species for the Gulf of Mexico and South Atlantic are discussed in Chapters 3.2.1.2 and 3.2.3.2.

3.2.5 Gulf of Mexico and South Atlantic Regions

3.2.5.1 Coastal Migratory Pelagics

A description of CMP species biology is provided in Amendment 18 (GMFMC and SAFMC 2011), and is incorporated herein by reference.

3.3 Description of the Economic Environment

3.3.1 Commercial Sector

The actions in this proposed amendment only pertain to the recreational for-hire sector (charter vessels and headboats). As a result a description of the economic environment for the commercial sector is not provided.

3.3.2 Recreational Sector

The actions in this proposed amendment would primarily apply to for-hire vessels operating in the Gulf and South Atlantic. However, management of the CMP species and dolphin/wahoo by the South Atlantic Council extends up the U.S. Atlantic coast. Because the proposed actions would primarily affect Gulf and South Atlantic for-hire vessels, the following discussion focuses on the characteristics of these fleets. Detailed information on the operation of the for-hire fleet in the mid- and northeast Atlantic is provided in Steinback and Brinson (2013) and is incorporated herein by reference.

Angler Effort

Estimates of the charter vessel angler effort (individual angler trips regardless of trip duration or species target intent or catch success) for 2011-2014 are provided in Tables 3.3.2.1 (Gulf) and 3.3.2.2 (South Atlantic). These estimates are derived from the Marine Recreational Information

Program (MRIP). Estimates of charter vessel angle effort for additional years, and measures of directed effort, are available at http://www.st.nmfs.noaa.gov/recreational-fisheries/access-data/run-a-data-query/queries/index.

Table 3.3.1. Number of Gulf charter vessel angler trips, by state, 2011-2014[1].

	Alabama	Florida	Louisiana	Mississippi	Total
2011	74,840	535,794	112,736	11,235	734,606
2012	58,661	699,102	114,664	11,491	883,919
2013	89,736	683,573	122,366	11,254	906,928
2014	86,736	693,740	na[2]	16,242	796,718
Average	77,493	653,052	116,587[3]	12,556	841,818[3]

[1]Texas information unavailable because the MRIP survey is not conducted in Texas.
[2]Not available; the MRIP survey was not conducted in Louisiana in 2014.
[3]Average of 2011-2013.
Source: MRIP database, NMFS, SERO.

Table 3.3.2. Number of South Atlantic charter vessel angler trips, by state, 2011-2014.

	Florida	Georgia	North Carolina	South Carolina	Total
2011	123,796	15,687	151,681	81,215	372,379
2012	143,663	19,920	160,097	24,662	348,342
2013	155,572	21,040	111,366	48,464	336,441
2014	192,504	22,342	102,419	79,186	396,452
Average	153,884	19,747	131,391	58,382	363,404

Source: MRIP database, NMFS, SERO.

As noted in Table 3.3.2.1, the Gulf estimates do not include Texas, which is not covered by the MRIP. The effort estimates provided in Tables 3.3.2.1 and 3.3.2.2 are from all charter vessels in the respective states and, thus, include both federally permitted vessels and charter vessels that only fish in state waters. Although the MRIP data allows estimation of effort in federal waters, for which respective vessels would require a federal permit (see the permits discussion below), federally permitted vessels also fish in state waters and are subject to federal regulations wherever they fish. As a result, it is not possible with available data to estimate the number of charter vessel angler trips by only federally permitted charter vessels. Therefore, the estimates provided in Table 3.3.2.1 exceed the angler effort on the vessels encompassed by the proposed actions in this amendment by an unknown number of trips.

Estimates of headboat angler effort for 2011-2014 are presented in Tables 3.3.2.3 (Gulf) and 3.3.2.4 (South Atlantic). These estimates are derived from the NMFS Southeast Region Headboat Survey (SRHS). 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.

Table 3.3.3. Gulf headboat angler days, by state, 2011–2014.

	Angler Days				
	West Florida	**Florida/Alabama***	**Mississippi/Louisiana****	**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.
*For 2013, SRHS data was reported separately for NW Florida and Alabama, but has been combined here for consistency with previous years.
**Mississippi and Louisiana are combined for confidentiality purposes.

Table 3.3.4. South Atlantic headboat angler days, by state, 2011–2014.

	Angler Days			
	Florida-Georgia*	**North Carolina**	**South Carolina**	**Total**
2011	124,041	18,457	44,645	187,143
2012	139,623	20,766	41,003	201,392
2013	165,679	20,547	40,963	227,189
2014	195,890	22,691	42,025	260,606
Average	156,308	20,615	42,159	219,083

Source: SRHS.
*Florida and Georgia are combined for confidentiality purposes.

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 charter/headboat (for-hire) vessel permit is required for fishing in federal waters for Gulf CMP species, Gulf reef fish, Atlantic dolphin/wahoo, Atlantic CMP species, and South Atlantic snapper-grouper species. On May 6, 2015, there were 1,333 valid (non-expired) or renewable Gulf for-hire CMP permits (including historical captain permits); 1,320 valid or renewable Gulf for-hire reef fish permits (including historical captain permits); 1,391 valid Atlantic CMP permits; 1,504 valid Atlantic dolphin/wahoo permits; and 1,400 valid South Atlantic snapper-grouper permits. A renewable permit is an expired limited access permit that may not be actively fished, but is renewable for up to one year after expiration. Only the Gulf for-hire permits are limited access permits. Most for-hire vessels possess more than one for-hire permit. An estimated 1,220 entities have at least one of the Gulf for-hire permits, 1,833 entities

have at least one of the South Atlantic for-hire permits, and 2,667 entities have at least one of the for-hire permits from either region. An estimated 386 entities have at least one for-hire permit from both regions. These totals for valid Atlantic CMP permits and valid Atlantic permits include vessels operating in the mid- and northeast Atlantic.

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 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 and 77 South Atlantic headboats were registered in the SRHS (K. Fitzpatrick, NMFS SEFSC, pers. comm.). It is unknown how many headboats in the mid- or northeast Atlantic have an Atlantic CMP or Atlantic dolphin/wahoo for-hire permit.

Information on Gulf and South Atlantic charter vessel and headboat operating characteristics is included in Savolainen et al. (2012) and Holland et al. (2012), respectively, and is incorporated herein by reference.

Economic Value

Economic value for for-hire vessels 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. For vessels in the Gulf, the estimated NOR value is $151 (2013 dollars) per charter angler trip (Liese and Carter 2011). The estimated NOR value per headboat angler trip is $52 (2013 dollars) (C. Liese, NMFS SEFSC, pers. comm.). For the South Atlantic, the comparable values are $160 per charter angler trip and $43 per headboat angler trip (C. Liese, NMFS SEFSC, pers. comm.). As previously noted, management by the SAFMC of the CMP species and dolphin/wahoo extends up the U.S. Atlantic coast and not just the South Atlantic region. The average NOR values per angler trip for for-hire vessels in the mid-Atlantic and Northeast region are $24 and $26, for charter vessels and headboats, respectively (S. Steinback, NMFS NEFSC, pers. comm.).

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 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 information provided below represents a distributional analysis only.

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 business activity (economic impacts) associated with recreational charter vessel angling in 2012 are provided in Tables 3.3.5 (Gulf) and 3.3.6 (South Atlantic). These estimates and additional details are available at http://www.st.nmfs.noaa.gov/economics/publications/feus/fisheries_economics_2012. More recent information is not available at the time.

The estimates provided in Tables 3.3.5 (Gulf) and 3.3.6 (South Atlantic) include only impacts 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 MRIP in the Gulf or South Atlantic. As a result, estimation of the appropriate business activity coefficients for headboat effort has not been conducted.

The estimates of business activity for the South Atlantic do not include the business activity associated with vessels that possess the appropriate South Atlantic Council mandated for-hire permits (CMP or dolphin/wahoo), but operate north of the South Atlantic states. This information is not available at this time.

Table 3.3.5. 2012 business activity (thousands of 2012 dollars) associated with charter vessel trips in the Gulf. Output and value added impacts are not additive.

	Alabama	Florida	Louisiana	Mississippi	Texas
Output Impact	$31,150	$436,676	$54,117	$4,510	$148,950
Value Added Impact	$21,326	$291,868	$37,230	$3,178	$97,195
Jobs	315	3,987	435	47	1,199

Source: http://www.st.nmfs.noaa.gov/economics/publications/feus/fisheries_economics_2012

Table 3.3.6. 2012 business activity (thousands of 2012 dollars) associated with charter vessel trips in the South Atlantic. Output and value added impacts are not additive.

	Florida	Georgia	North Carolina	South Carolina
Output Impact	$93,621	$7,717	$72,546	$13,601
Value Added Impact	$61,605	$5,420	$49,682	$9,349
Jobs	830	73	735	155

Source: http://www.st.nmfs.noaa.gov/economics/publications/feus/fisheries_economics_2012

3.4 Description of the Social Environment

The proposed actions in this amendment would be expected to affect charter fishing businesses associated with the Gulf reef fish and CMP fisheries, and the South Atlantic's snapper-grouper, CMP, and dolphin-wahoo fisheries, which are not already participating in the SRHS. A description of the current requirements for participants of the SRHS and a description of the

information collected in the survey are provided in Section 3.5.1.1 and in the Framework Action for Headboat Electronic Reporting Requirements (GMFMC 2013b). The proposed actions in this amendment do not pertain to the commercial sector. Therefore, a description of the social environment for the commercial sector is not provided.

Federal for-hire permits are currently required for vessels to take paying passengers to fish in federal waters. In the Gulf, the for-hire permits for reef fish, CMPs, and the respective historical captain permits are all limited access; existing permits may be renewed or transferred, but no new permits are available. In the South Atlantic, the for-hire permits for snapper-grouper, CMPs, and dolphin-wahoo are all open access; existing permits may not be transferred, but new permits may be issued. The annual application fee for these vessel permits is $25 for the first permit and $10 for each additional permit.

The number of unique vessels possessing valid or renewable for-hire permits is unknown, as NMFS does not collect vessel IDs when surveying, but only collect the vessel name. Because multiple vessels may share a name, this is inadequate to track permits through time. The number of charter vessels possessing each type of for-hire permit is provided for the Gulf of Mexico and South Atlantic regions by county in Tables 3.4.1-3.4.3. Because a single vessel could possess multiple permits, the total number of permits for each county does not represent the number of unique vessels.

Table 3.4.1. Number of valid and renewable permits held by charter vessels in the Gulf of Mexico, by coastal county as of May 28, 2015.

	Gulf of Mexico Charter Permits				South Atlantic Charter Permits			
	Reef Fish	CMP	HC Reef Fish	HC CMP	Dolphin Wahoo	CMP	Snapper Grouper	**TOTAL**
Texas TOTAL	217	223	5	5	37	35	34	**556**
Brazoria	30	30	1	1	1	1	1	**65**
Galveston	36	36	1	1	6	5	6	**91**
Harris	28	29			5	4	5	**71**
Nueces	58	60			12	10	8	**148**
Other Counties	65	68	3	3	13	15	14	**181**
Louisiana TOTAL	96	96	6	6	6	6	6	**222**
Jefferson	16	15	2	2	1	1	1	**38**
Lafourche	5	5						**10**
Orleans	6	5			1	1	1	**14**
Plaquemines	8	8			1	1	1	**19**
St Tammany	13	13						**26**
Terrebonne	19	18	4	4				**45**
Other Parishes	29	32	0	0	3	3	3	**70**
Mississippi TOTAL	38	38	3	3	1	2	1	**86**
Harrison	22	22	2	2	1	2	1	**52**
Jackson	10	10						**20**
Other Counties	6	6	1	1				**14**

Alabama TOTAL	120	115	2	2	20	28	26	**313**
Baldwin	81	79	2	2	15	19	19	**217**
Mobile	21	18			2	4	3	**48**
Other Counties	18	18	0	0	3	5	4	**48**
West Florida TOTAL	597	575	12	13	216	222	220	**1855**
Bay	77	74	1	1	23	23	22	**221**
Charlotte	11	13			6	6	6	**42**
Citrus	15	14			7	8	8	**52**
Collier	51	53	3	3	30	28	30	**198**
Escambia	34	34			3	3	3	**77**
Franklin	16	16	1	1	4	5	5	**48**
Gulf	16	16	3	3	2	2	2	**44**
Hernando	7	4			9	9	9	**38**
Hillsborough	18	17			9	9	9	**62**
Lee	37	37			18	18	19	**129**
Manatee	17	15			4	4	4	**44**
Okaloosa	93	91	2	2	8	8	8	**212**
Pasco	11	8		1	6	6	6	**38**
Pinellas	97	95	2	2	46	48	45	**335**
Santa Rosa	17	17			6	6	5	**51**
Sarasota	36	33			10	13	14	**106**
Wakulla	6	5			1	1	1	**14**
Walton	12	11			6	5	5	**39**
Other Counties	26	22	0	0	18	20	19	**105**
TOTAL GULF (No FL Keys)	**1068**	**1047**	**28**	**29**	**280**	**293**	**287**	**3032**

Source: SERO permits office. Note: HC = Historic Captain permits.

Table 3.4.2. Number of valid and renewable permits held by charter vessels in the Florida Keys (Monroe County) as of May 28, 2015.

	Gulf of Mexico Charter Permits				South Atlantic Charter Permits			
	Reef Fish	CMP	HC Reef Fish	HC CMP	Dolphin Wahoo	CMP	Snapper Grouper	**TOTAL**
Florida Keys TOTAL	73	77	0	0	282	279	300	**1011**

Source: SERO permits office. Note: HC = Historic Captain permits.

Table 3.4.3. Number of valid and renewable permits held by charter vessels in the South Atlantic, by coastal county as of May 28, 2015.

	South Atlantic Charter Permits			Gulf of Mexico Charter Permits		
	Snapper Grouper	Dolphin Wahoo	CMP	Reef Fish	CMP	**Total**
Florida East Coast TOTAL	**344**	**329**	**317**	**16**	**31**	**1037**
Brevard	58	60	58	0	2	**178**
Broward	46	45	43	2	5	**141**
Duval/Nassau	22	20	22		1	**65**
Indian River	23	22	23		1	**69**
Martin	15	13	14	1	1	**44**
Miami-Dade	50	39	33	1	1	**124**
Palm Beach	39	38	35		2	**114**
St Johns	22	21	22		2	**67**
St Lucie	14	14	14		1	**43**
Volusia	35	36	34		3	**108**
West Palm	13	14	12	1	1	**41**
Other Counties	7	7	7	11	11	**43**
Georgia TOTAL	**38**	**30**	**39**	**13**	**13**	**133**
Bryan	5	5	5			15
Camden	4		4			8
Chatham	15	14	16	1	1	47
Glynn	5	3	5			13
Other Counties	9	8	9	12	12	50
South Carolina TOTAL	**140**	**123**	**142**	**1**	**2**	**408**
Beaufort	31	21	33		1	86
Charleston	45	42	44			131
Georgetown	4	4	4			12
Horry	47	44	48			139
Other Counties	13	12	13	1	1	40
North Carolina TOTAL	**243**	**269**	**253**	**3**	**15**	**783**
Beaufort	5	5	5			15
Brunswick	36	37	37		1	111
Carteret	29	33	28		3	93
Dare	82	88	87		4	261
Hyde	5	5	5		1	16
New Hanover	27	30	28			85
Pender	7	7	7			21
Onslow	3	4	4		1	12
Wake	4	8	5			17
Other Counties	45	52	47	3	5	152
South Atlantic TOTAL	**765**	**751**	**751**	**33**	**61**	**2361**

Source: SERO permits office.

Charter For-Hire Fishing Communities

Detailed descriptions of communities engaged in the fishing industry along the South Atlantic and Gulf coasts can be found in Jepson et al. (2005) and Impact Assessment Inc. (2005a, 2005b, 2005c, 2005d, 2005e, 2005f, 2005g, and 2006) and are incorporated herein by reference. These descriptions include such elements as, but not limited to, the location of the community, history, employment, demographics, fishing infrastructure and services, and recreational licenses held by community members.

A spatial approach enables the consideration of fishing communities and of the importance of fishery resources to those communities, as required by National Standard 8. While there are no landings data at the community level for charter for-hire vessels not participating in the SRHS, Table 3.4.4 provides a ranking of Gulf communities based upon the number of charter permits and charter permits divided by population. The count includes both reef fish and coastal migratory pelagic for-hire permits. This is a crude measure of the reliance upon recreational fishing and is general in nature and not specific to a particular fishery or stock. Ideally, additional variables quantifying the importance of recreational charter fishing to a community would be included (such as the amount of charter 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 in the Gulf region 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.

Table 3.4.4. Average community rank by total number of charter permits by Gulf of Mexico community* and population.

Community	State	Charter Permits	Rank Charter Permits	Charter Permit/Pop	Rank Charter Permits/Pop	Average Rank
Orange Beach	AL	223	3	0.0358	6	5
Destin	FL	234	2	0.0186	16	9
Port Aransas	TX	96	8	0.0250	11	10
Steinhatchee	FL	44	23	0.0307	7	15
Dauphin Island	AL	44	23	0.0277	9	16
Apalachicola	FL	45	21	0.0204	15	18
Port O'Connor	TX	33	35	0.0306	8	22
Freeport	TX	78	10	0.0062	46	28
Carrabelle	FL	30	43	0.0244	13	28
Venice	LA	20	60	0.0862	2	31
Grand Isle	LA	27	44	0.0167	21	33
Panama City	FL	159	4	0.0043	62	33
Panama City Beach	FL	77	11	0.0053	55	33
Port Saint Joe	FL	27	44	0.0076	39	42
Cedar Key	FL	18	68	0.0184	17	43
Saint Marks	FL	13	81	0.0408	4	43
Panacea	FL	20	60	0.0116	32	46
Matagorda	TX	14	78	0.0184	18	48
Madeira Beach	FL	25	49	0.0058	51	50

Source: SERO permits database, 2008. ***** Total number of charter permits does not correspond to number of vessels; a vessel may have several different types of charter permits.

At this time, it is not possible to examine the intensity of charter fishing activity at the community level for a specific species. However, it is likely that the identified communities having a higher rank in terms of charter activity would be the communities most affected by this regulatory action. In the Gulf, the communities (and respective counties) that meet those criteria are: Destin (Okaloosa) and Panama City (Bay), Florida; Orange Beach (Baldwin), AL; Port Aransas, Texas; and Venice, Louisiana (Table 3.4.4). In the South Atlantic, communities(and respective counties) that meet the criteria include Morehead City/Atlantic Beach (Carteret), Hatteras (Dare), Wanchese (Dare), and Wilmington (New Hanover), North Carolina; Charleston/Mt Pleasant (Charleston), Hilton Head Island (Beaufort), and Myrtle Beach (Horry), South Carolina; Savannah/Tybee Island (Chatham) and Brunswick/St Simons Island (Glynn), Georgia; and Cocoa/Canaveral (Brevard), Merritt Island (Brevard), Jupiter (Palm Beach), St Augustine (St Johns), Ft Lauderdale (Broward), and Miami (Miami-Dade) Florida (Table 3.4.3). Although these communities have been identified as the most likely to be affected, the effects from the proposed actions are expected to result in broad social benefits to the communities, by improving the timeliness of data reporting and quota monitoring (Sections 4.1.4, 4.2.4, and 4.3.4). It should also be noted that for-hire businesses are associated with important tourism industries in these communities.

3.4.1. 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).

Gulf and South Atlantic federally permitted for-hire fishing businesses participating in the CMP and reef fish fisheries would be expected to be affected by this proposed action; however any impacts are expected to be minimal. This action is expected to impact the administrative procedures of federally permitted charter for-hire businesses and would require the submission of electronic reports. Information on race and ethnicity of federally permitted charter for-hire business owners and their employees is not available; however it is very unlikely that there would be a disproportionately high impact on businesses including members of minority populations, as direct impacts from adopting the new reporting requirements are expected to be minimal. Further, it is expected that there would be no impact to low-income populations as owners of these businesses are likely not in poverty. As discussed elsewhere in the document (such as in the Effects on the Social Environment section, Chapter 4, and Chapter 5) because the economic and social effects would be expected to be minimal to non-existent in the short-run (charter vessels are currently required to report if selected by the SRD, but to date, have not been selected) and positive in the long-run (more timely harvest reporting supporting improved management decisions), no adverse effects would be expected to accrue to charter vessel customers, or associated businesses and communities. Thus, no EJ concerns are expected to arise from this proposed action.

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 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 U.S. 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 the U.S. EEZ.

Responsibility for federal fishery management decision-making is divided between the U.S. 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 collecting and providing the data necessary for the Councils to prepare fishery management plans and for promulgating regulations to implement proposed plans and amendments after ensuring that 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 South Atlantic Council is responsible for conservation and management of fishery resources in federal waters of the U.S. South Atlantic. These waters extend from 3 to 200 miles offshore from the seaward boundary of the states of North Carolina, South Carolina, Georgia, and east Florida to Key West with the exception of two fishery management plans, Coastal Migratory Pelagics is managed from New York to Florida, and Dolphin-Wahoo is managed from Maine to Florida. The South Atlantic Council has thirteen voting members: one from NMFS; one each from the state fishery agencies of North Carolina, South Carolina, Georgia, and Florida; and eight public members appointed by the Secretary. There are two public members from each of the four South Atlantic States. Non-voting members include representatives of the U.S. Fish and Wildlife Service, U.S. Coast Guard (USCG), Department of State, and Atlantic States Marine Fisheries Commission (ASMFC).

The Gulf Council is responsible for conservation and management of fishery resources in federal waters of the Gulf. These waters extend from 9 to 200 miles offshore from the seaward boundary of the states Florida and Texas; and from 3 to 200 miles offshore from the seaward boundary of the states of Alabama, Mississippi, and Louisiana. The Gulf Council has seventeen voting members: one from NMFS; one each from the state fishery agencies of Florida, Alabama, Mississippi, Louisiana and Texas; and 11 public members appointed by the Secretary. Non-voting members include representatives of the U.S. Fish and Wildlife Service, USCG, Department of State, and Gulf States Marine Fisheries Commission (GSMFC).

Both the Gulf and South Atlantic Councils have adopted procedures whereby the non- voting members serving on the Council committees have full voting rights at the committee level but not at the full Council level. Council members serve three-year terms and are recommended by State Governors and appointed by the Secretary from lists of nominees submitted by state governors. Appointed members may serve a maximum of three consecutive terms.

Public interests also are involved in the fishery management process through participation on Advisory Panels and through Council meetings, which, with few exceptions, are open to the public. The Councils use Scientific and Statistical Committees to review the data and science being used in assessments and fishery management plans/amendments. In addition, the regulatory process is in accordance with the Administrative Procedures Act, in the form of "notice and comment" rulemaking.

3.5.1.1. Gulf of Mexico and South Atlantic Regions Reporting Requirements

Currently, the owner or operator of a vessel for which a charter vessel permit for Gulf coastal migratory pelagic fish, South Atlantic coastal migratory pelagic fish, Gulf reef fish, South

Atlantic snapper grouper, or Atlantic dolphin and wahoo has been issued, or whose vessel fishes for or lands such coastal migratory pelagic fish, reef fish, snapper grouper, or Atlantic dolphin or wahoo in or from state waters adjoining the applicable Gulf, South Atlantic, or Atlantic exclusive economic zone (EEZ), and who is selected to report by the Science and Research Director (SRD), must maintain a fishing record for each trip, or a portion of such trips as specified by the SRD, on forms provided by the SRD. Completed records for charter vessels must be submitted to the Science and Research Director weekly, postmarked no later than 7 days after the end of each trip (Sunday). Currently, all headboats are required to submit fishing records to the Science and Research Director (SRD) weekly or at intervals shorter than a week if notified by the SRD via electronic reporting (via computer or internet). Weekly = 7 days after the end of each week (Sunday).

Tables 3.5.1 and Table 3.5.2 summarize the Southeast's region reporting requirements by fishery management plan. Detailed information on electronic reporting requirements and the future implementation plan for the Southeast region can be found in the NOAA Fisheries Southeast Region Electronic Monitoring and Reporting Regional Implementation Plan. (NMFS 2015) and is hereby incorporated by reference.
http://sero.nmfs.noaa.gov/sustainable_fisheries/documents/pdfs/em_er_implementation_plan_southeast.pdf

Table 3.5.1. Summary of the existing monitoring tools currently implemented in commercial fisheries of the Southeast Region. Green cells indicate fisheries where electronic technologies have already been implemented and regulated programs are in place. Fisheries where additional Electronic Reporting (ER) and Electronic Monitoring (EM) could potentially be suitable are noted, and yellow cells indicate those fisheries that have been identified as the highest priority for implementation.

Region	Fishery	Current Requirements						Additional ER Potentially Suitable?	VMS or EM Potentially
		Vessel Electronic Reporting	Paper logbooks/reports	Electronic Logbooks/reports	VMS	Video	Observers		
Caribbean	Reef Fish	N	N	N	N	N	N	elogbook - pilot testing began in	
	Queen Conch	N	N	N	N	N	N		
	Spiny Lobster	N	N	N	N	N	N		
	Corals and Reef Associated Plants and	Harvest and possession prohibited except with Federal permit for scientific research, exempted fishing, or exempted educational activity							
Gulf of Mexico	Reef Fish	Y	Y	N	Y	N	Y	elogbook - pilot testing	EM for protected resource interactions; reef
	Shrimp	N	N	Y	N	N	Y		
	Aquaculture	Y	N	Y	N	N	N	Proposed regulations	
	Red Drum	Y	N	N	N	N	N		
	Corals	N	Y	N	N	N	N		
Gulf of Mexico and South Atlantic	Coastal Migratory	Y	Y	N	N	N	Y	elogbook - pilot testing	
	Spiny Lobster	Y	N	N	N	N	N		
	Snapper-Grouper	Y	Y	N	N	N	N	elogbook - pilot testing in 2015; wreckfish ITQ	Pingers or VMS in black sea bass pot fishery; EM for
Shrimp	Y - Rock Shrimp Only	N	N	Y - Rock Shrimp Only	N	N		EM for rock shrimp to link location specific catch/bycatch to VMS data	
Dolphin-Wahoo	Y	Y	N	N	N	N	elogbook - pilot testing in 2015		
Golden Crab	Y	Y	N	N	N	N	elogbook	Pingers for crab traps	
Sargassum	N	N	N	N	N	N			
Corals	N	Y	N	N	N	N			

Source: http://sero.nmfs.noaa.gov/sustainable_fisheries/documents/pdfs/em_er_implementation_plan_southeast.pdf

Table 3.5.2. Summary of the existing monitoring tools currently implemented in recreational fisheries of the Southeast Region. Green cells indicate fisheries where electronic technologies have already been implemented and regulated programs are in place. Fisheries where additional Electronic Reporting (ER) and Electronic Monitoring (EM) could potentially be suitable are noted, and yellow cells indicate those fisheries that have been identified as the highest priority for implementation.

Region	Fishery	Current Requirements					Additional ER Potentially Suitable?	EM Potentially Suitable?
		Paper logbooks/reports	Electronic Logbooks	VMS	Video	Observers		
Caribbean	Reef Fish	N	N	N	N	N		
	Queen Conch	N	N	N	N	N		
	Spiny Lobster	N	N	N	N	N		
	Corals and Reef Associated Plants and Invertebrates	Harvest and possession prohibited except with Federal permit for scientific research, exempted fishing, or exempted educational activity						
Gulf of Mexico	Reef Fish	Y - Headboat only	Y - Headboat only	N	N	N	eLogbooks for charter; pilot testing electronic apps for private sector	VMS, if used in conjunction with electronic reporting or catch share program; pilot testing VMS in Headboat Collaborative
	Shrimp	Shrimp are not recreationally harvested in the Gulf of Mexico EEZ						
	Aquaculture	Proposed for commercial purposes only.						
	Red Drum	N	N	N	N	N		
	Corals	Live rock harvested for commercial purposes. Harvest and possession of corals prohibited except with Federal permit for scientific research, exempted fishing, or exempted educational activity						
Gulf of Mexico and South Atlantic	Coastal Migratory Pelagics	Y - Headboat only	Y - Headboat only	N	N	N	eLogbooks for charter	
	Spiny Lobster	N	N	N	N	N		
South Atlantic	Snapper-Grouper	Y - Headboat only	Y - Headboat only	N	N	N	eLogbooks for charter	
	Shrimp	Shrimp are not recreationally harvested in the South Atlantic EEZ						
	Dolphin-Wahoo	Y - Headboat only	Y - Headboat only	N	N	N	eLogbooks for charter	
	Golden Crab	Golden crabs are not recreationally harvested in the South Atlantic EEZ						
	Sargassum	Sargassum is not recreationally harvested in the South Atlantic EEZ						
	Corals	Live rock harvested for commercial purposes. Harvest and possession of corals prohibited except with Federal permit for scientific research, exempted fishing, or exempted educational activity						

3.5.1.2. Greater Atlantic Region Reporting Requirements

The Greater Atlantic Region Fisheries Office requires that all federally-permitted vessels whether fishing in state or federal waters are required to report catch as described in Table 3.5.3 and the Instructions and the below.

Table 3.5.3. GARFO VTR requirements by vessel permit type.

	Frequency of reporting	Report deadline	If you did not fish…..
If a vessel is issued a permit for: *Atlantic herring; *Atlantic mackerel; *Illex squid; *Longfin squid/butterfish; *Northeast multispecies; *Ocean quahogs: *Surfclams	Then the owner/operator must submit trip reports weekly	Reports must be postmarked or received by midnight of the Tuesday following the reporting week (Sunday through Saturday). If a trip starts in one week, and offloads in the next, it should be reported in the week the catch was offloaded.	If subject to weekly reporting, you must submit a Did Not Fish report for each week that there is no fishing trip activity. If you know your vessel will be inactive, you may submit these reports electronically up to 3 months in advance.
If a vessel is issued a permit for: *Atlantic bluefish *Atlantic deep-sea red crab *Atlantic sea scallop *Black sea bass *Monkfish *Northeast skate *Scup *Spiny dogfish *Summer flounder *Tilefish	Then the owner/operator must submit trip reports monthly	Reports must be postmarked or received within 15 days of the end of the month. If a trip starts in one month, and offloads in the next, it should be reported for the month in which the catch was offloaded	If subject to monthly reporting, you must submit a Did Not Fish report for each month that there is no fishing trip activity. If you know your vessel will be inactive, you may submit these reports electronically up to 3 months in advance.
If a vessel is issued a permit for American lobster **and** no other Greater Atlantic Region vessel permit	Then the owner/operator is not required to submit trips reports (check with your state, which may require reporting).	--	--

Defining fishing trip activity that requires a VTR

If your vessel is issued any of the fishery permits with reporting requirements shown in the table above, you are required to complete a VTR for every fishing trip, whether the vessel is fishing in state or federal waters, or in another region of the country, such as Gulf of Mexico. This is true for all trips, no matter what species is being fished for or caught. Having an observer or at-sea monitor on board during a trip does not relieve you from this requirement. These instructions clarify that a VTR is required for any trip on a federally permitted vessel when you catch fish, or when your operations include activities that would support fishing, such as preparing to catch or harvest fish, or attempting to catch or harvest fish. All such fishing activities must be reported, even if no landings are made. The trip is the period of time during which these activities are conducted, beginning when the vessel leaves port and ending when the vessel returns to port.

There are only two instances where a VTR isn't required for a specific trip:

- **If you are transiting without any product onboard and don't engage in any fishing activity. For example, you're moving your vessel to a shipyard or you're returning to your home port.**
- **If you are operating under a scientific Letter of Acknowledgement**

You are required to report fishing trips even if no fish are caught or onboard if the following events occur:

- If you begin a fishing trip, but must return to port before setting or retrieving gear because of issues like bad weather or mechanical problems, then you must still complete a VTR. In this case, you must complete the information in VTR Fields 1-6, along with fields 24-27, and enter "No Effort" in the lower portion of the VTR.
- If you make a fishing trip just to set out gear you must still complete a VTR. Complete the information in VTR fields 1-6, along with fields 24-27, and enter "Set Only" in the lower portion of the VTR.
- If you make an unsuccessful trip, and don't catch any fish, you must still complete a VTR. In this case, you must complete all of the trip information in VTR Fields 1-16, and enter "No Catch" or "NC" in the species code field (#17).

Submitting a VTR if you conducted no fishing trip activity

As noted in the table, you must submit a VTR even if you did not use your vessel for any fishing activity for the entire reporting period, weekly or monthly, that is applicable to your permit types. In this case, you must fill out the "Did Not Fish" field at the top of the form, complete the vessel identification information in Fields 1-3, and sign and submit the form. However, we remind you that activity such as starting a fishing trip or preparing to catch fish is considered fishing activity. For example, if you start a fishing trip on Wednesday, but land and offload your catch the following Monday (i.e., after a trip of 6 days), the VTR must be submitted by midnight Tuesday of the third week and must provide all of the information about the trip. In this case, there is no week in which you "Did Not Fish".

Did Not Fish (DNF) reports may be submitted on the NMFS issued paper VTR or through our secure webpage, "Fish-On-Line" at https://www.greateratlantic.fisheries.noaa.gov/NMFSlogin

DNF reports submitted electronically through Fish-On-Line do not need to be mailed into NMFS. If you need your confidential vessel Personal Identification Number (PIN) or cannot access Fish-On-Line please contact NMFS at (978) 281- 9133 or by email at nmfs.gar.data.requests@noaa.gov

You must report all species caught (both kept and discarded), including all protected species. To report sea turtles or ESA-listed fish species (e.g., Atlantic salmon or sturgeon) incidentally caught, injured, or killed, enter the species code for each turtle or fish under the species code name column (#17) on the VTR. Enter the actual number (count) of sea turtles or listed fish caught in the discard column (#19). Under the vessel name column (#21), comment on the condition of the sea turtles or listed fish (e.g., alive, injured, or dead).

When an incidental mortality or injury of a marine mammal (seals, dolphins, porpoises, and whales) occurs during commercial fishing activities, you must also fill out and return the Marine Mammal Authorization Program Mortality & Injury Reporting Form within 48 hours of returning from the trip on which the incident occurred. You may obtain additional information, including a reporting form at: www.greateratlantic.fisheries.noaa.gov/prot_res/mmap/certificate.html or call 978-281-9328.

3.5.1.4. Highly Migratory Species Management Division Reporting Regulations for Charter Vessels and Headboats

Owners of vessels that carry passengers for-hire and fish for, possess, or retain Atlantic HMS (tunas, billfish, swordfish, and sharks) must obtain an annual Atlantic HMS Charter/Headboat permit and have a valid Merchant Marine License or Uninspected Passenger Vessel License. HMS charter vessels and headboats operate under different rules depending on whether they are on a "for-hire" or a "non-for-hire" trip, and the combination of permits held by the charter vessel/headboat.

If the vessel owner only holds an Atlantic HMS Charter/Headboat permit, that owner is required to report catch in the appropriate NOAA Fisheries logbook program, if selected. Entries on a day's fishing activities must be entered on the logbook form within 48 hours of completing the day's activities, or before offloading, whichever is sooner. The owner or operator must submit the logbook forms postmarked within 7 days of offloading all Atlantic HMS. If a selected vessel did not fish during a calendar month, then that vessel must submit a no-fishing form no later than 7 days after the end of the month. Atlantic HMS Charter vessels and headboats may also be selected for cost-earnings reporting.

If a vessel owner issued an HMS Charter/Headboat permit also has a permit issued in a non-HMS fishery that is required to report, any landings should be reported, as required, under the appropriate NOAA Fisheries Regional vessel logbook program.

All HMS Charter/Headboat vessel owners/operators must report all recreational landings (i.e., fish kept) of Atlantic billfish (blue marlin, white marlin, roundscale spearfish, and sailfish), swordfish, and bluefin tuna (landings *and* dead discards) to NOAA Fisheries within 24 hours of

landing at the dock (with the exception of fish landed in Maryland or North Carolina) either via a web-based reporting system or by calling the appropriate Reporting Hotline. Participation in surveys such as the LPS or MRIP does not fulfill recreational reporting obligations.
Please refer to the Charter/Headboat sections of the Atlantic HMS Commercial and Recreational Compliances guides for additional information on the Atlantic HMS Charter Headboat fleet: http://www.nmfs.noaa.gov/sfa/hms/compliance/guides/index.html

3.5.2 State Fishery Management

3.5.2.1 Gulf of Mexico States

The state governments of Louisiana, Mississippi, and Alabama, have the authority to manage fisheries that occur in waters extending three nautical miles, while west Florida and Texas authority is nine miles from their respective shorelines. Louisiana's marine fisheries are managed by the Louisiana Department of Wildlife and Fisheries. The Marine Resources Division of the Mississippi Department of Natural Resources regulates Mississippi's marine fisheries. Alabama's Department of Conservation and Natural Resources manages Alabama's marine fisheries. Texas' marine fisheries are managed by the Texas Department of Wildlife and Fisheries, and Florida's marine fisheries are managed by the Florida Fish and Wildlife Commission. Each Gulf of Mexico state fishery management agency has a designated seat on the Gulf of Mexico Council.

The Gulf of Mexico states are also involved in the management of marine fisheries through the GSMFC in management of marine fisheries. This commission was created to coordinate state regulations and develop management plans for interstate fisheries. The GSFMC does not possess any regulatory authority.

3.5.2.2 South Atlantic States

The state governments of North Carolina, South Carolina, Georgia, and the east coast of Florida have the authority to manage fisheries that occur in waters extending three nautical miles from their respective shorelines. North Carolina's marine fisheries are managed by the Marine Fisheries Division of the North Carolina Department of Environment and Natural Resources. The Marine Resources Division of the South Carolina Department of Natural Resources regulates South Carolina's marine fisheries. Georgia's marine fisheries are managed by the Coastal Resources Division of the Department of Natural Resources. The Marine Fisheries Division of the Florida Fish and Wildlife Conservation Commission is responsible for managing Florida's marine fisheries. Each state fishery management agency has a designated seat on the South Atlantic Council. 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 South Atlantic states are also involved in the management of marine fisheries through the ASMFC in management of marine fisheries. This commission was created to coordinate state regulations and develop management plans for interstate fisheries. It has significant authority, through the Atlantic Striped Bass Conservation Act and the Atlantic Coastal Fisheries

Cooperative Management Act, to compel adoption of consistent state regulations to conserve coastal species. The ASFMC also is represented at the Council level, but does not have voting authority at the Council level.

The NMFS' State-federal Fisheries Division is responsible for building cooperative partnerships to strengthen marine fisheries management and conservation at the state, inter-regional, and national levels. This division implements and oversees the distribution of grants for two national (Inter-jurisdictional Fisheries Act and Anadromous Fish Conservation Act) and two regional (Atlantic Coastal Fisheries Cooperative Management Act and Atlantic Striped Bass Conservation Act) programs. Additionally, it works with the ASMFC to develop and implement cooperative state-federal fisheries regulations.

3.5.3 Enforcement

Both the National Oceanic and Atmospheric Administration (NOAA) Fisheries Office for Enforcement (NOAA/OLE) and the USCG have the authority and the responsibility to enforce Gulf of Mexico and South Atlantic Council regulations. NOAA/OLE agents, who specialize in living marine resource violations, provide fisheries expertise and investigative support for the overall fisheries mission. The USCG is a multi-mission agency, which provides at sea patrol services for the fisheries mission.

Neither NOAA/OLE nor the USCG can provide a continuous law enforcement presence in all areas due to the limited resources of NOAA/OLE and the priority tasking of the USCG. To supplement at sea and dockside inspections of fishing vessels, NOAA entered into Cooperative Enforcement Agreements with all but one of the states in the Southeast Region (North Carolina), which granted authority to state officers to enforce the laws for which NOAA/OLE has jurisdiction. In recent years, the level of involvement by the states has increased through Joint Enforcement Agreements, whereby states conduct patrols that focus on federal priorities and, in some circumstances, prosecute resultant violators through the state when a state violation has occurred.

NOAA General Counsel issued a revised Southeast Region Magnuson-Stevens Act Penalty Schedule in June 2003, which addresses all Magnuson-Stevens Act violations in the Southeast Region. In general, this Penalty Schedule increases the amount of civil administrative penalties that a violator may be subject to up to the current statutory maximum of $120,000 per violation.

CHAPTER 4. ENVIRONMENTAL CONSEQUENCES

4.1. Action 1: Modify Frequency and Mechanism of Data Reporting for Charter Vessels

4.1.1 Direct and Indirect Effects on the Physical/Biological/Ecological Environment

The charter vessel reporting requirement is an administrative process for providing a means of collecting data from the industry, and does not directly affect the physical or biological environment, but does have an indirect effect. There would be positive indirect biological effects because having all charter vessels report electronically would make it easier to track landings in a timely manner. This would help prevent exceeding annual catch limits (ACLs), leading to healthier fish stocks by reducing the likelihood of overfishing. **Alternative 1 (No Action)** already requires that vessels, if selected, must maintain a fishing record for each trip, or a portion of such trips as specified by the SRD, on forms provided by the SRD; however, no charter vessels have been selected. Completed fishing records must be submitted to the SRD weekly, postmarked no later than 7 days after the end of each week (Sunday). **Alternative 1 (No Action)** could result in adverse impacts if landings are not reported in a timely fashion and allowable harvests are exceeded. Reporting provides a method to estimate mortality, which is then used to assess the stock conditions. Stock assessment results based on data with a high degree of uncertainty are not as useful for management purposes. Electronic reporting by charter vessels would reduce the likelihood of overages of the ACLs by providing a means for more timely reporting.

Alternative 2, Alternative 3 and Gulf Preferred Alternative 4 would provide positive effects to the stocks by increasing the frequency and mode of reporting, which can reduce the likelihood of exceeding the ACLs, thus reducing the likelihood of overfishing. Overages of the ACLs have an adverse effect to the stock and stock conditions. For many species in the South Atlantic as well as greater amberjack and gray triggerfish in the Gulf of Mexico region, any overages are deducted from the allowable harvest the following fishing year. Similarly, if Gulf of Mexico gag or red grouper are in a rebuilding plan, overages are deducted from the allowable harvest the following fishing year. In these instances, the adverse effects may be mitigated. However, especially for species under a rebuilding plan, simply lowering the following year ACL may not offset the adverse impacts of the overage. For example, the reduction in spawning potential of the stock due to exceeding the ACL is not fully compensated by an equivalent harvest reduction in the next fishing year.

In these cases overages may prevent achieving the rebuilding target and optimum yield. **Alternative 2** would give the option for reports to be submitted weekly or at intervals shorter than a week. **Alternative 3** would require daily electronic reporting and **Gulf Preferred Alternative 4** would require electronic reporting at the end of each trip prior to arriving at the dock. All of the action alternatives would require that data be submitted to the SEFSC more frequently than the current

requirements and electronically resulting in positive indirect biological effects. Currently, the Gulf Council has selected **Alternative 4** as their preferred alternative, which will require electronic reporting by trip prior to arriving at the dock. **Gulf Preferred Alternative 4** would provide an increased frequency of reporting from the status quo and **Alternatives 2 and 3.**

Currently, as a condition of the permit, fishermen are required to meet the reporting requirements associated with their permit (CFR 50 Section 622.5). With electronic reporting, it would be much easier to track those who are not meeting the reporting requirements of their permit and may result in a permit being invalid and the permit holder not being able to legally harvest or possess those species.

Alternative 1 (No Action), **Alternative 2**, **Alternative 3**, and **Gulf Preferred Alternative 4** are unlikely to result in any direct adverse impacts on protected species such as endangered or threatened whales, sea turtles, corals, or HAPCs. All alternatives including **Gulf Preferred Alternative 4** would modify reporting requirements for the charter sector, but overall, this would not change current fishing practices. Total harvest would still be restrained by the commercial and recreational ACLs, and AMs would still be used to help prevent overfishing. It is unlikely any alternative would result in increased or modified fishing effort in the dolphin wahoo, coastal migratory pelagic, or snapper grouper fishery; therefore, no adverse biological impacts on protected species or physical environment, or bycatch or prey species is expected as a result of this action.

4.1.2 Direct and Indirect Effects on the Economic Environment

Alternative 1 (no action) would maintain current reporting requirements for federally permitted charter vessels and would therefore not affect the harvest and customary uses of Gulf reef fish, South Atlantic snapper grouper, Atlantic dolphin wahoo, or coastal migratory pelagics. Consequently, **Alternative 1** would not be expected to result in direct economic effects. However, **Alternative 1** would continue to allow for a time lag in the collection of landings information. If the time lags result in delaying needed management measures, e.g., a timely closure of a fishery, and adversely affect fish stocks, adverse indirect economic effects would be expected to result. Additionally, the absence of logbook trip reports limits the information on which to base other management decisions (beyond the timing of quota closure) and restricts the management options available for implementation. These limitations may have economic implications for both this component of the recreational sector, the recreational sector as a whole, and the commercial sector. For example, better data would enable more accurate assessments of harvests, effort, and operational costs. This would support improved monitoring of quotas (as previously discussed), better ensuring overruns not occur, as well as improved forecasts of the expected biological, economic, and social effects of current and proposed regulations. As part of the larger recreational sector, circumstances that limit understanding of the performance of charter vessels by extension affects understanding of the performance of the recreational sector as a whole and the expected economic effects of proposed management measures. For example, a stock assessment that is adversely affected by poor harvest or effort data from charter vessels will have harvest and management implications on all users within the recreational sector as well as the commercial sector.

Alternatives 2, 3 and **Gulf Preferred Alternative 4** would require federally permitted charter vessels to submit fishing records via electronic reporting. The fishing records would be electronically submitted using NMFS approved hardware/software. **Alternatives 2** and **3** would require weekly and daily submissions, respectively. **Gulf Preferred Alternative 4** would require the submission of fishing records for each trip prior to returning to the docks. Because a majority of charter trips are half day trips, **Gulf Preferred Alternative 4** could require several submissions in a single day. Therefore, in terms of time necessary to complete the requests and associated costs, a ranking from least to most onerous would be **Alternative 2, 3,** and **Gulf Preferred Alternative 4**. The costs expected to be borne by charter operators to acquire, operate, update and maintain the approved hardware and software are not known at this time because a list of approved hardware and software has yet to be determined. Similarly, costs expected to be borne by the Agency to administer these data collection efforts cannot be determined. If it is assumed that shortening the reporting frequency from weekly to daily reporting (or reporting for each trip) would result in marked improvements in the data collected and that these improvements would result in more effective management, then **Gulf Preferred Alternative 4** would be expected to result in the greatest economic benefits, followed by **Alternative 3** then **Alternative 2**. However, the net economic effects expected to result from these alternatives cannot be determined at this time because the potential benefits that would be expected to result from the proposed changes and the costs of the hardware and software that would be approved by NMFS cannot be estimated at this time.

4.1.3 Direct and Indirect Effects on the Social Environment

Section 3.3 (Social Environment) includes detailed information about fishermen and communities that may be affected by changes to reporting requirements for for-hire permit holders. In general, negative social effects of charter vessel reporting requirements would likely be associated with any added time and financial burden for charter vessel operators to meet the requirements. Increased frequency in reporting under **Alternative 2, Alternative 3,** and **Gulf Preferred Alternative 4** may have some negative effects on charter vessel owners and captains because businesses would need to allocate additional time or staff to submit reports. The daily reporting requirement under **Alternative 3** and the potential for daily reporting requirement under **Gulf Preferred Alternative 4** would be more burdensome for charter vessels than the weekly reporting in **Alternative 2**. **Alternative 1 (No Action)** would not be expected to negatively impact charter vessels in terms of additional time and money requirements.

The requirement for electronic reporting under **Alternative 2, Alternative 3,** and **Gulf Preferred Alternative 4** would affect charter vessel owners and operators who do not already use computer systems in their businesses. Some fishermen are not familiar with computers or internet, and some may simply be more comfortable with paper fishing records. There may also be an increased risk of errors for electronic reporting by fishermen who typically do not use computers and internet in their businesses.

However, requiring all charter vessels to report electronically and more frequently (**Alternative 2, Alternative 3,** and **Gulf Preferred Alternative 4**) is expected to result in broad social benefits. Assuming compliance from fishery participants, more frequent and timely reporting would be expected to contribute to improved quota monitoring, with which it will be less likely

that an ACL would be exceeded and the associated Accountability Measures (AMs) would negatively impact charter businesses and associated communities. AMs can have significant direct and indirect effects on fishermen because they usually impose some restriction on harvest, during either the current season or the next. Early closures and paybacks (which in turn increase the likelihood of an earlier closure in the following year) are directly linked to the NMFS quota monitoring system and limitations in the agency's ability to close species quickly enough to avoid AMs. While the negative effects of AMs are usually short-term, they may at times induce other indirect effects through changes in fishing behavior or business operations that could have long-term social effects. Some of those effects are similar to other thresholds being met and may involve switching to other species or discontinuing fishing altogether. Although additional reporting requirements may not prevent AMs from being triggered, these requirements would be expected to provide additional information to better forecast early closures and minimize post-season AMs, such as "pay-backs." Under **Alternative 1 (No Action)**, there would be no improvements to monitoring as a result of more timely reporting, and it would be more likely that AMs would continue to impact charter businesses, communities, and customers.

4.1.4 Direct and Indirect Effects on the Administrative Environment

Alternative 1 (No Action) would result in no increase in administrative burden on NMFS as this is the status quo of how data are currently collected. **Alternatives 2, 3, and Gulf Preferred Alternative 4** would increase the administrative burden on NMFS, as all federally permitted vessels would be required to submit electronic records to the SRD. There is currently no application to accept this information, so a database would also have to be developed. These costs could be minimized by having the data submitted to ACCSP/GulfFIN. In order of administrative impacts to the agency, **Gulf Preferred Alternative 4** would have the highest administrative impact with trip level reporting, then **Alternative 3** with daily reporting, and **Alternative 2** with mandatory weekly reporting.

Alternative 1, the status quo alternative would result in no increase in administrative burden on vessel owners**. Gulf Preferred Alternative 4** would result in an increased burden to vessel owners as they would be required to report at a trip level compared to daily in **Alternative 3**, and weekly in **Alternative 2.**

4.2. Action 2: Modify Frequency and Mechanism of Data Reporting for Headboats

4.2.1 Direct and Indirect Effects on the Physical/Biological/Ecological Environment

The headboat vessel reporting requirement is an administrative process for providing a means of collecting data from the industry, and does not directly affect the biological environment, but does have an indirect effect. **Alternative 1 (No Action)** requires the owner or operator of a headboat for which a charter vessel/headboat permit for Gulf or South Atlantic coastal migratory pelagic (CMP) species, Gulf reef fish, South Atlantic snapper grouper, or Atlantic dolphin and wahoo has been issued, or whose vessel fishes for or lands such CMP species, reef fish, snapper

grouper, or Atlantic dolphin or wahoo in or from state waters adjoining the applicable Gulf, South Atlantic, or Atlantic EEZ, and who is selected to report by the SRD (Note: The headboat amendment specified that all headboats must report.) must submit an electronic fishing record for each trip of all fish harvested via the Southeast Region Headboat Survey (SRHS). Electronic fishing records must be submitted at weekly intervals (or intervals shorter than a week if notified by the SRD) by 11:59 p.m., local time, the Sunday following a reporting week. If no fishing activity occurred during a reporting week, an electronic report stating so must be submitted for that reporting week by 11:59 p.m., local time, the Sunday following a reporting week. The action alternatives would modify the frequency of reporting and would require that any vessel operating under a headboat permit must report electronically, not just those headboat selected by the SRD. **Alternative 1 (No Action)** could result in adverse impacts if landings are not reported in a timely fashion and allowable harvests are exceeded. Reporting provides a method to estimate mortality, which is then used to assess the stock conditions. Stock assessment results based on data with a high degree of uncertainty are not as useful for management purposes. Electronic reporting by headboats would reduce the likelihood of overages of the ACLs by providing a means for more timely reporting.

Alternative 2, Alternative 3, and **Gulf Preferred Alternative 4** would provide positive effects to the stocks by increasing the number of vessels in the survey and frequency of reporting (**Alternative 3 and Gulf Preferred Alternative 4)**, which can reduce the likelihood of exceeding the ACLs, thus reducing the likelihood of overfishing. Overages of the ACLs have an adverse effect to the stock and stock conditions. **Alternative 2** would give the option for reports to be submitted weekly or at intervals shorter than a week, if notified by the SRD. **Alternative 3** would require daily electronic reporting and **Gulf Preferred Alternative 4** would require electronic reporting at the end of each trip prior to arriving at the dock. **Alternative 3** and **Gulf Preferred Alternative 4** would require that data be submitted to the SEFSC more frequently than the current requirements and electronically resulting in positive indirect biological effects. **Gulf Preferred Alternative 4** would provide an increased frequency of reporting from the status quo and **Alternative 2.**

Currently, as a condition of the permit, fishermen are required to meet the reporting requirements associated with their permit (CFR 50 Section 622.5). With increased electronic reporting, it would be much easier to track those who are not meeting the reporting requirements of their permit and may result in a permit being invalid and the permit holder not being able to legally harvest or possess those species.

Alternative 1 (No Action), **Alternative 2**, **Alternative 3**, and **Gulf Preferred Alternative 4** are unlikely to result in any direct adverse impacts on protected species such as endangered or threatened whales, sea turtles, corals, or HAPCs. All alternatives including **Gulf Preferred Alternative 4** would modify reporting requirements for the headboat sector, but overall, this would not change current fishing practices. Total harvest would still be restrained by the commercial and recreational ACLs, and AMs would still be used to help prevent overfishing. It is unlikely any alternative would result in increased or modified fishing effort in the dolphin wahoo, coastal migratory pelagic, reef fish, or snapper grouper fishery; therefore, no adverse biological impacts on protected species or physical environment, or bycatch or prey species, are expected under this action.

4.2.2 Direct and Indirect Effects on the Economic Environment

Alternative 1 would not affect the harvest and customary uses of Gulf reef fish, South Atlantic snapper grouper, Atlantic dolphin wahoo, or coastal migratory pelagics because it would maintain current reporting requirements for headboats. Therefore, **Alternative 1** would not be expected to result in direct economic effects. However, **Alternative 1** would continue to allow for a time lag in the collection of landings information. If the time lags result in delaying needed management measures, e.g., a timely closure of a fishery, and adversely affects the stock, adverse indirect economic effects would be expected to result.

Alternatives 2, 3, and **Gulf Preferred Alternative 4** would require all headboats to submit fishing records via electronic reporting at different times. The fishing records would be electronically submitted using NMFS approved hardware/software. **Alternatives 2** and **3** would require weekly and daily submissions, respectively. **Gulf Preferred Alternative 4** would require the submission of fishing records for each trip prior to returning to the docks. Because most headboats predominantly run half day trips, **Gulf Preferred Alternative 4** could require several submissions in a single day. Therefore, in terms of time necessary to complete the requests and associated costs to headboats, a ranking from least to most onerous would be **Alternative 2, 3,** and **Gulf Preferred Alternative 4**. The costs expected to be borne by headboat operators to acquire, operate, update, and maintain the approved hardware and software are not known at this time because a list of approved hardware and software has yet to be determined. Similarly, costs expected to be borne by the Agency to administer these data collection efforts cannot be determined. If it is assumed that shortening the reporting frequency from weekly to daily reporting (or reporting for each trip) would result in marked improvements in the data collected and that these improvements would result in more effective management, then **Gulf Preferred Alternative 4** would be expected to result in the greatest economic benefits, followed by **Alternative 3** then **Alternative 2**. However, the net economic effects expected to result from these alternatives cannot be determined at this time because the potential benefits that would be expected to result from the proposed changes and the costs of the hardware and software that would be approved by NMFS cannot be estimated at this time.

4.2.3 Direct and Indirect Effects on the Social Environment

Section 3.3 (Social Environment) includes detailed information about fishermen and communities that may be affected by changes to reporting requirements for for-hire permit holders with headboat businesses. The effects of reporting requirements on headboat businesses would be similar to expected effects on charter vessels, as described in Section 4.1.3 (Action 1 Social Effects). In general, negative social effects of headboat reporting requirements would likely be associated with any added time and financial burden for headboat owners and crew to meet the requirements. Increased frequency in reporting under **Alternative 2, Alternative 3,** and **Gulf Preferred Alternative 4** may have some negative effects on headboat owners and captains because businesses would need to allocate additional time or staff to submit reports. The daily reporting requirement under **Alternative 3** and the potential for daily reporting requirement under **Gulf Preferred Alternative 4** would be more burdensome for headboats than the weekly reporting in **Alternative 2**. **Alternative 1 (No Action)** would not be expected to negatively impact the for-hire sector in terms of additional time and money requirements. The

requirement for increased electronic reporting under **Alternative 2, Alternative 3,** and **Gulf Preferred Alternative 4** would affect vessel owners who do not already use computer systems in their businesses, or could result in errors. However, requiring all headboats to report electronically and more frequently (**Alternative 3,** and **Gulf Preferred Alternative 4**) is expected to result in broad social benefits by improving quota monitoring, as discussed in **Section 4.1.3**.

4.2.4 Direct and Indirect Effects on the Administrative Environment

Alternative 1, the no action alternative, would not be expected to result in an increase in administrative burden to NMFS. This is the status quo of how data are collected for fishery quota monitoring. **Alternatives 2, 3,** and **Gulf Preferred Alternative 4,** would increase the administrative burden on NMFS, as all federally permitted vessels would be required to submit records to the SRD. There is currently no application to accept this information, so a database would also have to be developed. These costs could be minimized by having the data be submitted to ACCSP/GulfFIN.

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Alternative 1, the status quo alternative would not be expected to result in any increase in administrative burden on vessel owners**. Gulf Preferred Alternative 4** would result in more burden to the vessels owners as they would be required to report at a trip level compared to weekly (or shorter than a week) in **Alternative 2**, and daily in **Alternative 3.**

4.3 Action 3: Modify Electronic Reporting Requirements to Require Vessel or Catch Location Reporting

4.3.1 Direct and Indirect Effects on the Physical/Biological/Ecological Environment

The requirement to report the location of area fished is an administrative process for providing a means of collecting data from the industry, and does not directly affect the biological or physical environment but may have an indirect effect. It is expected that with more complete location information, managers will be able to make better decisions about future management.

Alternative 2 would require federally permitted for-hire vessels to have a NMFS-approved electronic device with a GPS chip and send/receive data capabilities. Assuming NMFS approves many electronic devices, this would cover many smartphones and tablet computers currently available. Software would need to be developed to produce an application that would work on these devices on several platforms. Costs could be minimized by using a system developed through ACCSP. **Alternative 3** requires federally permitted for-hire vessels in the Gulf of Mexico to have aboard a VMS system. Currently, there are 307 vessels in the Gulf for-hire fleet that have VMS. **Alternative 4** would require manual reporting of latitude/longitude in degrees and minutes or by clicking on a geographic grid for charter vessels fishing in the South Atlantic.

4.3.2 Direct and Indirect Effects on the Economic Environment

All of the sub-alternatives under **Alternative 2** would require federally permitted for-hire vessels to have a NMFS-approved electronic device with a GPS chip and send/receive data capabilities. Assuming NMFS approves many electronic devices, this would cover many smartphones and tablet computers currently available. Software would need to be developed to produce an application that would work on these devices on several platforms. Costs could be minimized by using a system developed through ACCSP. Costs associated with **Alternative 2** sub-alternatives would be those associated with application development, associated data transmission costs, and for those vessels needing to purchase one, an approved device. Without a list of NMFS-approved electronic devices and a count of the number of vessels that need to purchase hardware, there is no way to estimate the cost. Application development and maintenance costs would need to be factored in, as well as data transmission, either through a data plan presumably through a mobile telephone carrier, or via another access provider to the Internet. Costs could be minimized by using a system developed through ACCSP. The Councils could choose any, or all of the four **Sub-alternatives 2a – 2d** as preferred sub-alternatives with the potential direct negative economic effects increasing based on the number of sub-alternatives increases.

Alternative 3 requires federally permitted for-hire vessels in the Gulf of Mexico to have aboard a VMS system. Currently, there are 307vessels in the Gulf for-hire fleet that have VMS. Of those vessels not having VMS, and assuming there are still funds available in the NMFS OLE VMS Fund, for-hire vessel owners will not be required to buy a unit. If no funds are available in the NMFS OLE VMS Fund, for-hire vessel owners will be required to purchase a NMFS-approved VMS unit. **Table 4.3.1** lists the NMFS-approved VMS units and their cost. The vessels needing to install VMS units would have to pay for the installation, maintenance, and communications charges associated with having a VMS (communications charges are shown in **Table 4.3.2**).

Table 4.3.1. NMFS-approved VMS units and cost.

Brand and Model	Cost
Boatracs FMCT-G	$3,095
Thrane and Thrane TT-3026D	$2,495
Faria Watchdog KTW304	$3,295
CLS America Thorium TST	$3,095

Source: Data provided by NMFS Office of Law Enforcement, July 2012.
Note: After September 30, 2015, CLS America Thorium TST and SkyMate mobile transceiver units will no longer be type-approved for compliance with vessel monitoring system (VMS) requirements in United States federal fisheries

Table 4.3.2. Communication costs associated with some NMFS-approved VMS units.

1. Qualcomm (for Boatracs units) $30/mo satellite fee, $.30/message, $.006 per character for messaging (average price estimated $35/month which includes 24/7 operations center support)
2. Telenor (for Thrane units) $.06 per position report or $1.44 per day for 1 hour reporting. If in the "In Harbor" mode, then $.36 per day. Messaging costs $.24 per e-mail. ($30/mo average)
3. Iridium/Cingular Wireless (for Faria units) $50.25 per month which includes 12,000 Iridium bytes and 35,000 GSM bytes for email and e-forms reporting.
4. Iridium (for CLS America units) $45 per month for hourly reporting, $1.75 per Kbyte for e-mail or forms submission.

Source: Data provided by NMFS Office of Law Enforcement, July 2012.

Installation costs are approximately $300 per unit depending upon location of the vessel and installer assuming the vessel is already equipped with a wheelhouse or some other structure on the vessel that would protect the parts of the gear that must not be exposed to the elements. Vessels that do not have a wheelhouse or other weatherproofed area would face the additional cost of adding such a space to their vessel. The number of vessels needing such modifications or the cost of those modifications cannot be estimated. Such modifications would significantly increase the $300 per unit installation cost for those vessels. Maintenance costs cannot be estimated with existing information. Communication costs for each of the models average from $35 to $80 per month, depending on owner data usage, and are provided in (**Table 4.3.2)**.

Assuming all XX Gulf headboat vessels under **Sub-Alternatives 3a** need to buy their units and choose the lowest price Thrane unit at $2,495 each, the cost of the units is expected to be $XXX,XXX. The additional cost of installation would be approximately $XX,XXX, for a total minimum cost of $XXX,XXX to purchase the least expensive necessary hardware for the Gulf headboat fleet. Assuming all XX Gulf charter vessels under **Sub-Alternative 3b** need to buy their units and choose the lowest price Thrane unit at $2,495 each, the cost of the units is expected to be $XXX,XXX. The additional cost of installation would be approximately $XX,XXX, for a total minimum cost of $XXX,XXX to purchase the least expensive necessary hardware for the Gulf charter fleet. The Councils could choose both **Sub-alternatives 3a** and **3b** as preferred sub-alternatives. If they do, the direct negative economic effects of the two sub-alternatives would be additive.

As **Alternative 1 (No Action)** is the status quo and no requirement is in place to require charter vessel or catch location reporting, it is expected not to have any additional economic effects. If the Councils choose as preferred alternatives/sub-alternatives for the South Atlantic, **Alternative 2**, **sub-alternative 2c** and/or **2d** would have increased direct negative economic effects for for-hire fishing vessel operators in the South Atlantic Region compared to **Alternative 1 (No Action)**. If the Councils choose as preferred alternatives/sub-alternatives for the Gulf of Mexico, **Alternative 2**, **sub-alternative 2a** and/or **2b** would have increased direct negative economic effects for for-hire fishing vessel operators in the Gulf of Mexico Region compared to

Alternative 1 (No Action). For the Gulf of Mexico only, because the basic cost of VMS units is substantially higher than the basic cost of a smartphone or tablet computer, as well as associated costs (installation, maintenance, data transmission costs), it is assumed that the sub-alternatives under **Alternative 3** would have higher direct negative economic effects for those vessels compared to **Alternative 1 (No Action)** or **Alternative 2** sub-alternatives.

4.3.3 Direct and Indirect Effects on the Social Environment

Section 3.3 (Social Environment) includes detailed information about fishermen and communities that may be affected by location reporting requirements for for-hire permit holders. In general, the expected social effects would likely be at the individual level and would be associated with a financial burden on fishermen to purchase and maintain any required equipment. Detailed analysis of the expected economic effects is included in **Section 4.3.2** (economic effects).

There are some expected benefits to the fleet and other long-term broad social benefits from the location reporting requirements under **Alternatives 2** and **3**. Recording location information on tablets, computers, and phones (**Alternative 2**) or VMS equipment (**Alternative 3**) would be expected to improve data collection, particularly for information that could be used to validate reporting data and to improve bycatch and discards estimates in stock assessments.

Reporting location information under **Alternatives 2** and **3** would also improve data collection on fishing behavior and important fishing grounds. For example, impacts on for-hire vessels from a potential marine protected area would be clarified and quantified if data are available on exact locations and time spent in a particular area. VMS data are currently being used to understand how potential closed areas would impact the rock shrimp fishery, with accurate and verifiable information on rock shrimp fishing grounds to improve analysis of potential impacts. Location data could also be used in broader long-term studies to better understand fleet dynamics and environmental factors affecting fishing decisions.

Overall, the expected benefits to the fleet and to the public will be reduced by the negative impacts from the additional short-term and long-term costs to purchase and maintain equipment necessary to meet location reporting requirements under **Alternatives 2** and **3**.

4.3.4 Direct and Indirect Effects on the Administrative Environment

Alternative 1, the no action alternative would not be expected to result in an increase in administrative burden to NMFS as this alternative does not change how data are currently collected. **Alternatives 2** would require the use of a device to transit vessel position location through electronic means. As of now, there are no systems in place in the southeast to collect this information. Such a system would need to be developed and tested. This alternative would also require education and outreach towards fishermen to ensure that they understand the functionality. **Alternative 3** would require VMS, which has been used and tested in many fisheries in the South Atlantic (rock shrimp and HMS only) and Gulf of Mexico. The administrative burden associated with **Alternative 3** would be related to getting fishery participants equipped with the VMS units and have VMS technicians on hand to collect and

process the information. **Alternative 4** would have the least administrative burden in that it would merely extend the current headboat requirement to report latitude and longitude to charter vessels fishing in the South Atlantic. Since this system is already in place and being utilized, collecting information from charter boats would not add much to the administrative burden.

Alternative 1, the status quo alternative would not be expected to result in any increase in administrative burden on vessel owners**. Alternative 2, 3,** and **4** would result in more burden to the vessels owners as they would be required to report location specific data compared to weekly in **Alternative 1.**

4.4 Cumulative Effects Analysis

As directed by the National Environmental Policy Act (NEPA), federal agencies are mandated to assess not only the indirect and direct impacts, but the cumulative impacts of proposed 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.

4.4.1 Cumulative Biological Impacts

1. **Identify the significant cumulative effects issues associated with the proposed action and define the assessment goals.**

The Center for Environmental Quality cumulative effects guidance states that this step is done through three activities. The three activities and the location in the document are as follows:

I. The direct and indirect effects of the proposed actions (Section 4);
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 cumulative Effects Analysis (CEA)).

2. **Establish the geographic scope of the analysis.**

The immediate impact area would be the federal 200-mile limit of the Atlantic coast from North Carolina to Florida (including the Mid-Atlantic Fishery Management Council (MAFMC) area for coastal migratory pelagic species and New England Fishery Management Council/MAFMC for dolphin-wahoo), and the Gulf of Mexico (Gulf) from Florida to Texas. The extent of boundaries also would depend upon the degree of fish immigration/emigration and larval transport whichever has the greatest geographical range. The ranges of affected species and the essential fish habitat designation and requirements for species affected by this amendment are described in Sections 3.1 and 3.2.

3. Establish the timeframe for the analysis.

NMFS has collected annual commercial landings data since the early 1950s, recreational harvest data since 1979, and in 1984 initiated a dockside interview program to collect additional data on commercial harvest. These landings data have been used to support various fishery management regimes in Gulf and South Atlantic fisheries. Landings data will continue to be collected for each federally-managed species, and that data will continue to be used to inform current and future fishery management decisions into the foreseeable future.

4. Identify the other actions affecting the resources, ecosystems, and human communities of concern (the cumulative effects to the human communities are discussed in Section 4).

Listed are other past, present, and reasonably foreseeable actions occurring in the South Atlantic and Gulf regions. These actions, when added to the proposed management measures, may result in cumulative effects on the biophysical environment.

I. Fishery-related actions affecting federally-managed species:

A. Past

The reader is referred to Sections 1.3.1 and 1.3.2 Gulf of Mexico Fishery Management Council's (Gulf Council) History of Management and South Atlantic Fishery Management Council's (South Atlantic Council) History of Management, respectively, for past regulatory activity for the species being impacted by this amendment. These include data reporting requirements, conditions for transferring permits and endorsements, and requirements for federally permitted fishermen to only sell fish to federally permitted vessels.

B. Present

The Gulf of Mexico and South Atlantic Councils' recently implemented annual catch limits (ACLs) and accountability measures (AMs) to prevent and correct ACL overages for all federally-managed species. Improvements in vessel reporting requirements are currently needed to improve in-season monitoring of the newly established ACLs, and to facilitate the expeditious implementation of AMs for federally-managed species when needed. More effective in-season monitoring efforts for dolphin and wahoo, Gulf of Mexico reef fish, South Atlantic snapper grouper, dolphin-wahoo, and, coastal migratory pelagic species, are likely to reduce the risk of future overfishing in those fisheries and foster sustainable fishing practices.

C. Reasonably Foreseeable Future

Though several amendments to the Gulf and South Atlantic Councils' fishery management plans (FMPs) are under development or review, none are likely to contribute to or reduce the cumulative impacts of actions contained in this generic vessel reporting amendment, because none of the actions would affect vessel reporting requirements.

II. Non-Council and other non-fishery related actions, including natural events affecting federally-managed species.

In terms of natural disturbances, it is difficult to determine the effect of non-Council and non-fishery related actions on stocks of Gulf and South Atlantic Councils' federally-managed fish species. Annual variability in natural conditions such as water temperature, currents, food availability, predator abundance, etc. can affect the abundance of young fish, which survive the egg and larval stages each year to become juveniles (i.e., recruitment).

Furthermore, natural factors such as storms, red tide, cold water upwelling, etc. can affect the survival of juvenile and adult fish, shrimp, crabs, and lobster; however, it is very difficult to quantify the magnitude of mortality these factors may have on a stock. Alteration of preferred habitats for commercially important southeastern marine species could affect survival at any stage in their life cycles. However, estimates of the abundance of marine species, which utilize any number of preferred habitats, as well as, determining the impact habitat alteration may have on these species, are difficult to ascertain.

The Gulf and South Atlantic ecosystems include many species, some of which occupy the same habitat at the same time. For example, black sea bass co-occur with vermilion snapper, tomtate, scup, red porgy, white grunt, red snapper, red grouper, scamp, gag, and others.

Therefore, many fish species are likely to be caught and suffer some mortality when regulated since they will be incidentally caught when fishermen target other co-occurring species. Other natural events such as spawning seasons, and aggregations of fish in spawning condition can make some species especially vulnerable to targeted fishing pressure.

How global climate changes will affect managed species and the associated ecosystem is unclear. Climate change can impact marine ecosystems through ocean warming by increased thermal stratification, reduced upwelling, sea level rise, increases in wave height and frequency, loss of sea ice, and increased risk of disease in marine biota. Decreases in surface ocean pH due to absorption of anthropogenic carbon dioxide emissions may impact a wide range of organisms and ecosystems, particularly organism that absorb calcium from surface waters, such as corals and crustaceans (IPCC 2014, and references therein).

The Deepwater Horizon MC252 oil spill event, which occurred in the Gulf on April 20, 2010, did not impact fisheries operating the South Atlantic. Oil from the spill site has not been detected in the South Atlantic region, and did not likely to pose a threat to the species addressed in this amendment. The effects of Deepwater Horizon MC252 in the Gulf of Mexico is discussed in Section 3.1.1.3.

Improvements to vessel reporting requirements and the vessel permitting system for federally-permitted vessels in the Gulf and South Atlantic regions are not likely to result in significant biological impacts on federally managed fish stocks managed in the southeast.
However, more efficient vessel reporting would facilitate improved in-season monitoring of ACLs, which could help prevent future overfishing.

5. Characterize the resources, ecosystems, and human communities identified in scoping in terms of their response to change and capacity to withstand stress.

The species most likely to be impacted by actions in this vessel reporting amendment are federally –managed fish species in the Gulf and South Atlantic. A description of the southeast marine ecosystem and the affected species found therein is included in Section 3.1 of this document. In summary, implementing a more rigorous vessel reporting regime is likely to benefit the southeast marine ecosystem by facilitating timely corrective actions that would prevent overfishing from occurring, which is likely to promote healthy predator-prey relationships, balanced sex ratios for spawning fish populations, and prevent fishery-related habitat degradation.

A description of the communities identified through scoping for this amendment and their ability to adapt to and withstand stress resulting from the cumulative impacts of this and other fishery management actions are discussed in Section 3.4 of this document. In the long-term, actions in this amendment and others mentioned in this CEA are likely to benefit the affected communities by promoting sustainable harvests levels, which would support steady market conditions and allow fishermen who are heavily vested in federal fisheries to continue fishing into the future.

6. Characterize the stresses affecting these resources, ecosystems, and human communities and their relation to regulatory thresholds.

Issues such as climate change, the regulatory environment, manmade and natural disasters, and economic factors are all considered stressors that affect fishing resources, ecosystems, and the communities, which rely on them. Global climate changes could have significant effects on Atlantic 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 (IPCC 2014; Kennedy et al. 2002).

The Gulf and South Atlantic fisheries are heavily regulated, which impacts the human communities. The social and cultural environment is described in Section 3.4. Cumulative impacts on the socioeconomic environment are included in Section 4.4.2 of this CEA. Man-made disasters such as oil spills, and non-point source pollution are always potential stressors on the natural environment. As long as humans are utilizing resources and conducting activities in and around the areas where federal fisheries are prosecuted, there exists a risk that some unintended harm to the resources fishery participants rely on could occur.

7. Define a baseline condition for the resources, ecosystems, and human communities.

The purpose of defining a baseline condition for the resource, ecosystems, and human communities in the area of the proposed action is to establish a point of reference for evaluating the extent and significance of expected cumulative effects. The Southeast Data, Assessment, and Review (SEDAR) assessments show trends in biomass, fishing mortality, fish weight, and

fish length going back to the earliest periods of data collection. All species assessed through the SEDAR process and their assessment reports are incorporated by reference and may be found online at: http://www.sefsc.noaa.gov/sedar/. The baseline condition of the species and habitat affected by this amendment is contained in Section 3.1 and Section 3.2 of this document. The baseline condition of the communities most impacted by this amendment is contained in Section 3.4 of this document.

8. Identify the important cause-and-effect relationships between human activities and resources, ecosystems, and human communities.

Cause-and-effect relationships between fishery management regulations and resources, ecosystems, and human communities are discussed in the respective histories of management for Mexico and the South Atlantic in Sections 1.3.1 and 1.3.2 of this document.

9. Determine the magnitude and significance of cumulative effects.

Proposed management actions, as summarized in Section 2 of this document, would designate a single vessel permit for all vessels wishing to purchase federally-managed fish species, establish an electronic (except when catastrophic conditions are present) weekly reporting system for vessels to report landings information, and require the submission of "no purchase" forms in order to maintain their vessel permit. These management measures are intended to increase efficiency in the vessel permitting system as well as increase the frequency and accuracy of vessel reported data. The number of fishery-specific vessel permits would be significantly reduced and the process by which vessels would obtain and report landings would be streamlined. Building efficiency into the vessel permitting and reporting system is likely to result in improved monitoring efforts, which would result in long-term benefits to federally- managed marine species in the southeast region.

Requiring vessels to report landings on a trip-level, daily, or weekly basis would improve in-season estimations of when and if ACLs will be met, and would improve the timeliness of implementation of AMs designed to prevent overfishing from occurring. Requiring vessels to remain current on purchase reports and non-purchase reports as a requirement to continue purchasing federally-managed species is anticipated to improve reporting compliance, which would also help improve in-season monitoring efforts. Combined, these actions are likely to improve overall management of federally-managed marine species in the Gulf of Mexico and the South Atlantic, and help prevent overfishing from occurring. Robust fish populations and sustainable fishing practices would promote long-term ecosystem health and resilience.

10. Modify or add alternatives to avoid, minimize, or mitigate significant cumulative effects.

The cumulative effects on the biophysical environment are expected to be positive. Avoidance, minimization, and mitigation are not applicable.

11. Monitor the cumulative effects of the selected alternative and adopt management.

The effects of the proposed action are, and will continue to be, monitored through collection of data by NMFS, states, stock assessments and stock assessment updates, life history studies, and other scientific observations.

CHAPTER 7. BYCATCH PRACTICABILITY ANALYSIS

Background/Overview

The Gulf of Mexico Fishery Management Council (Gulf Council) and South Atlantic Fishery Management Council (South Atlantic Council) are required by the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) §303(a) (11) to establish a standardized bycatch reporting methodology for federal fisheries and to identify and implement conservation and management measures to the extent practicable and in the following order: 1) minimize bycatch and 2) minimize the mortality of bycatch that cannot be avoided. The Magnuson-Stevens Act defines bycatch as "fish which are harvested in a fishery, but which are not sold or kept for personal use, and includes economic discards and regulatory discards. The definition does not include fish released alive under a recreational catch-and-release fishery management program" (Magnuson-Stevens Act §3(2)). Economic discards are fish that are discarded because they are undesirable to the harvester. This category of discards generally includes certain species, sizes, and/or sexes with low or no market value.

The National Marine Fisheries Service (NMFS) outlines at 50 CFR §600.350(d) (3) (i) ten factors that should be considered in determining whether a management measure minimizes bycatch or bycatch mortality to the extent practicable.

Guidance provided at 50 CFR 600.350(d)(3) identifies the following ten factors to consider in determining whether a management measure minimizes bycatch or bycatch mortality to the extent practicable:

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.
10. Social effects.

The 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.

Commercial Discard Rates

The increase in frequency of vessel reporting may increase the amount of discards for species that have reached their commercial sector annual catch limit (ACL). By having vessels report on daily or weekly basis versus the current basis, managers have the ability to close the sector in timelier manner. A season closure could result in an increase in bycatch for those fishermen that continue to fish; however, the overall level of fishing mortality would be expected to decrease. For species that have not reached their ACL, no change in discards is expected as a result of the increase in frequency of vessel reporting as these species would most likely be retained.

Recreational Discard Rates

For species that have a sector specific recreational allocation, no change in the amount of discards is expected as a result of the increase in commercial reporting. Those species that only have a stock ACL and do not have a recreational sector ACL would be expected have an increase in the amount of discards when the ACL is reached and the season is closed.

Sea Turtles, Smalltooth Sawfish, and Other Protected Species Bycatch

No change in sea turtle, smalltooth sawfish, or other potential protected species bycatch is expected as a result of the increase in commercial vessel reporting. The proposed action is unlikely to alter fishing in ways that would jeopardize the continued existence of any endangered or threatened species under the jurisdiction of NMFS or result in the destruction or adverse modification of critical habitat. Protected resources are discussed in Sections 3.2.1.2 and 3.2.2.2 of the Environmental Assessment (EA); the biological impacts are discussed in Sections 4.1.1, 4.2.1, and 4.3.1.

Alternatives Being Considered to Minimize Bycatch

Reductions in dead discards can be accomplished either by reducing the number of fish discarded or reducing the release mortality rate of discards. To reduce the number of discards, management measures must limit fishing effort or change the selectivity of fishing gear in such a way that reduces the harvest of sub-legal fish. To reduce the discard mortality rate, ACLs must not be exceeded or fishing seasons closed.

Practicability Analysis

Criterion 1: Population effects for the bycatch species

This amendment discusses the harvest and reporting of 111 species, and thus the net population effects on bycatch is undeterminable. However, season closures could potentially increase the amount of bycatch. A commercial season closure resulting from landings exceeding their ACL could result in an increase in the amount of bycatch should fishers continue fishing for co-occurring species. Bycatch due to management measures such as fixed closed seasons, in-season closures, and ACL payback conditions could result in loss of yield. However, better data

reporting that prevents ACLs overages and allows for a species to be closed when an ACL is reached, would be expected to reduce the overall level of fishing mortality.

Criterion 2: Ecological effects due to changes in the bycatch of managed species (on other species in the ecosystem)

Relationships among species in marine ecosystems are complex and poorly understood, making the nature and magnitude of ecological effects difficult to predict. Reductions in bycatch and fishing mortality would allow stocks to increase in abundance, resulting in increased competition for prey with other predators. Consequently, it is possible that forage species and competitor species could decrease in abundance in response to in season closures resulting from ACLs being reached or exceeded. However, actions in the amendment that allow for better data reporting to prevent ACL overages and allow for a species to be closed when an ACL is reached, would be expected to reduce the overall level of fishing mortality. Thus, positive ecological effects are expected from the actions proposed in this amendment.

Criterion 3: Changes in the bycatch of other species of fish and invertebrates and the resulting population and ecosystem effects

The biological environment would benefit by the increase in the frequency of vessel reporting. Fish populations, spiny lobsters, golden crabs, and overall habitat are expected to be affected in a positive manner through this amendment. The increase in the frequency of vessel reporting would assist managers in determining when species are approaching their ACL. By managing landings below their ACL, populations would be healthier and provide for a more stable environment.

Positive impacts to the biological environment include implementing accountability measures to prevent overfishing and maintain stocks at healthy levels in a consistent and structured manner across all fishery management plans.

Criterion 4: Effects on marine mammals and birds

No effects on marine mammals and birds are expected as a result of the increase in vessel reporting. The proposed action is unlikely to alter fishing in ways that would jeopardize the continued existence of any marine mammal and bird species under the jurisdiction of NMFS or result in the destruction or adverse modification of critical habitat. Protected resources are discussed in Sections 3.2.1.2 and 3.2.2.2 of the EA; the biological impacts are discussed in Sections 4.1.1, 4.2.1, and 4.3.1.

Criterion 5: Changes in fishing, processing, disposal, and marketing costs

Reporting landings more frequently may affect costs associated with fishing operations. Implementing in-season closures would have direct impacts to fishermen. Fishermen would incur losses in revenue due to season closures and would incur greater losses in consumer surplus resulting from a seasonal closure.

Criterion 6: Changes in fishing practices and behavior of fishermen

Seasonal closures could alter angler effort, at least initially, and may affect decisions about when and where to fish. Shifts or changes in fishing locations and seasons could have an effect on fishing behavior and practices that may potentially affect the bycatch.

Criterion 7: Changes in research, administration, and enforcement costs and management effectiveness

Establishing more timely reporting requirements for vessels would be expected to increase enforcement costs and management effectiveness. The increase in the frequency of reporting would be expected to result in more opportunities for non-compliance. This may result in an increasing the burden to law enforcement.

Criterion 8: Changes in the economic, social, or cultural value of fishing activities and non-consumptive uses of fishery resources

Economic and social effects from this proposed amendment are discussed in Section 4.1.

Criterion 9: Changes in the distribution of benefits and costs

The actions in this amendment would increase costs associated with vessel reporting to the actual vessels themselves. As a result of increasing the amount of vessel reporting the fishing industry should benefit by not exceeding its ACLs as often, which in turns leads to closed seasons and overage paybacks.

Criterion 10: Social effects

Social effects of additional vessel permit requirements would likely be associated with any added time and financial burden for vessels and seafood businesses to meet reporting requirements that will be part of the permit responsibilities.

CONCLUSIONS

Analysis of the ten bycatch practicability factors indicates there are potential negative impacts to bycatch and bycatch mortality. However, the benefits of reducing harvest, ending overfishing, and rebuilding the stocks is estimated to outweigh the benefits of further reducing discard mortality.

The Gulf and South Atlantic Councils will need to consider the practicability of implementing the bycatch minimization measures discussed above with respect to the overall objectives of the fishery management plans, the Magnuson-Stevens Act, and the Endangered Species Act.

Bycatch is currently considered to be reduced to the extent practicable in all fisheries subject to this amendment. However, increasing the frequency of reporting may impact bycatch. The precise impacts of these limits are currently unknown, but any potential increase in bycatch is believed to be outweighed by the benefits associated with enforcing ACLs. Better vessel reporting, and the ability to prohibit harvest when the ACL is met is expected to decrease the overall level of fishing mortality for a species. For species that have not reached their ACL, no change in discards is expected as a result of the increase in frequency of vessel reporting as these species would most likely be retained. Further, bycatch levels and associated implications will continue to be monitored in the future and issues will be addressed based on new information.

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NMFS = National Marine Fisheries Service
SAFMC = South Atlantic Fishery Management Council
GMFMC = Gulf of Mexico Fishery Management Council
SEFSC = Southeast Fisheries Science Center
SERO = Southeast Regional Office
GC = General Counsel

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APPENDIX A

Relevant Federal Regulations

Code of Federal Regulations: Title 50
§ 622.2 Definitions and acronyms.

Charter vessel means a vessel less than 100 gross tons (90.8 mt) that is subject to the requirements of the USCG to carry six or fewer passengers for hire and that engages in charter fishing at any time during the calendar year. A charter vessel with a commercial permit, as required under § 622.4(a)(2), is considered to be operating as a charter vessel when it carries a passenger who pays a fee or when there are more than three persons aboard, including operator and crew, except for a charter vessel with a commercial vessel permit for Gulf reef fish or South Atlantic snapper-grouper. A charter vessel that has a charter vessel permit for Gulf reef fish and a commercial vessel permit for Gulf reef fish or a charter vessel permit for South Atlantic snapper-grouper and a commercial permit for South Atlantic snapper-grouper (either a South Atlantic snapper-grouper unlimited permit or a 225-lb (102.1-kg) trip limited permit for South Atlantic snapper-grouper) is considered to be operating as a charter vessel when it carries a passenger who pays a fee or when there are more than four persons aboard, including operator and crew. A charter vessel that has a charter vessel permit for Gulf reef fish, a commercial vessel permit for Gulf reef fish, and a valid Certificate of Inspection (COI) issued by the USCG to carry passengers for hire will not be considered to be operating as a charter vessel provided–-

(1) It is not carrying a passenger who pays a fee; and

(2) When underway for more than 12 hours, that vessel meets, but does not exceed the minimum manning requirements outlined in its COI for vessels underway over 12 hours; or when underway for not more than 12 hours, that vessel meets the minimum manning requirements outlined in its COI for vessels underway for not more than 12-hours (if any), and does not exceed the minimum manning requirements outlined in its COI for vessels that are underway for more than 12 hours.

Headboat means a vessel that holds a valid Certificate of Inspection (COI) issued by the USCG to carry more than six passengers for hire.

(1) A headboat with a commercial vessel permit, as required under this part, is considered to be operating as a headboat when it carries a passenger who pays a fee or--

(i) In the case of persons aboard fishing for or possessing

South Atlantic snapper-grouper, when there are more persons aboard than the number of crew specified in the vessel's COI; or

(ii) In the case of persons aboard fishing for or possessing coastal migratory pelagic fish, when there are more than three persons aboard, including operator and crew.

(2) However a vessel that has a headboat permit for Gulf reef fish, a commercial vessel permit for Gulf reef fish, and a valid COI issued by the USCG to carry passengers for hire will not be considered to be operating as a headboat provided--

(i) It is not carrying a passenger who pays a fee; and

(ii) When underway for more than 12 hours, that vessel meets, but does not exceed the minimum manning requirements outlined in its COI for vessels underway over 12 hours; or when underway for not more than 12 hours, that vessel meets the minimum manning requirements outlined in its COI for vessels underway for not more than 12-hours (if any), and does not exceed the minimum manning requirements outlined in its COI for vessels that are underway for more than 12 hours.

Science and Research Director (SRD), for the purposes of this part, means the Science and Research Director, Southeast Fisheries Science Center, NMFS (see Table 1 of § 600.502 of this chapter).

SUBPART B—-REEF FISH RESOURCES OF THE GULF OF MEXICO

§ 622.20 Permits and endorsements.

(b) Charter vessel/headboat permits. For a person aboard a vessel that is operating as a charter vessel or headboat to fish for or possess Gulf reef fish, in or from the EEZ, a valid charter vessel/headboat permit for Gulf reef fish must have been issued to the vessel and must be on board.

(1) Limited access system for charter vessel/headboat permits for Gulf reef fish. No applications for additional charter vessel/headboat permits for Gulf reef fish will be accepted. Existing permits may be renewed, are subject to the restrictions on transfer in paragraph (b)(1)(i) of this section, and are subject to the renewal requirements in paragraph (b)(1)(ii) of this section.

(i) Transfer of permits--(A) Permits without a historical captain endorsement. A charter vessel/headboat permit for Gulf reef fish that does not have a historical captain endorsement is fully transferable, with or without sale of the permitted vessel.

(B) Permits with a historical captain endorsement. A charter vessel/headboat permit for Gulf reef fish that has a historical captain endorsement may only be transferred to a vessel operated by the historical captain and is not otherwise transferable.

(C) Procedure for permit transfer. To request that the RA transfer a charter vessel/headboat permit for Gulf reef fish, the owner of the vessel who is transferring the permit and the owner of the vessel that is to receive the transferred permit must complete the transfer information on the reverse side of the permit and return the permit and a completed application for transfer to the RA. See § 622.4(f) for additional transfer-related requirements applicable to all permits issued under this part.

(ii) Renewal. (A) Renewal of a charter vessel/headboat permit for Gulf reef fish is contingent upon the permitted vessel and/or captain, as appropriate, being included in an active survey frame for, and, if selected to report, providing the information required in one of the approved fishing data surveys. Surveys include, but are not limited to--

(1) NMFS' Marine Recreational Fishing Vessel Directory Telephone Survey (conducted by the Gulf States Marine Fisheries Commission);

(2) NMFS' Southeast Headboat Survey (as required by § 622.26(b)(1));

(3) Texas Parks and Wildlife Marine Recreational Fishing Survey; or

(4) A data collection system that replaces one or more of the surveys in paragraph (b)(1)(ii)(A),(1),(2), or (3) of this section.

(B) A charter vessel/headboat permit for Gulf reef fish that is not renewed or that is revoked will not be reissued. A permit is considered to be not renewed when an application for renewal, as required, is not received by the RA within 1 year of the expiration date of the permit.

(iii) Requirement to display a vessel decal. Upon renewal or transfer of a charter vessel/headboat permit for Gulf reef fish, the RA will issue the owner of the permitted vessel a vessel decal for Gulf reef fish. The vessel decal must be displayed on the port side of the deckhouse or hull and must be maintained so that it is clearly visible.

(iv) Passenger capacity compliance requirement. A vessel operating as a charter vessel or headboat with a valid charter vessel/headboat permit for Gulf reef fish, which is carrying more passengers on board the vessel than is specified on the permit, is prohibited from harvesting or possessing the species identified on the permit.

(2) A charter vessel or headboat may have both a charter vessel/headboat permit and a commercial vessel permit. However, when a vessel is operating as a charter vessel or headboat, a person aboard must adhere to the bag limits. See the definitions of "Charter vessel" and "Headboat" in § 622.2 for an explanation of when vessels are considered to be operating as a charter vessel or headboat, respectively.

(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.

§ 622.26 Recordkeeping and reporting.

(b) Charter vessel/headboat owners and operators--(1) General reporting requirement--(i) Charter vessels. The owner or operator of a charter vessel for which a charter vessel/headboat permit for Gulf reef fish has been issued, as required under § 622.20(b), or whose vessel fishes for or lands such reef fish in or from state waters adjoining the Gulf EEZ, who is selected to report by the SRD must maintain a fishing record for each trip, or a portion of such trips as specified by the SRD, on forms provided by the SRD and must submit such record as specified in paragraph (b)(2) of this section.

(2) Reporting deadlines--(i) Charter vessels. Completed fishing records required by paragraph (b)(1)(i) of this section for charter vessels must be submitted to the SRD weekly, postmarked no later than 7 days after the end of each week (Sunday). Information to be reported is indicated on the form and its accompanying instructions.

SUBPART I--SNAPPER-GROUPER FISHERY OF THE SOUTH ATLANTIC REGION

§ 622.170 Permits and endorsements.

(b) Charter vessel/headboat permits--(1) South Atlantic snapper-grouper. For a person aboard a vessel that is operating as a charter vessel or headboat to fish for or possess, in or from the EEZ, South Atlantic snapper-grouper, a valid charter vessel/headboat permit for South Atlantic snapper-grouper must have been issued to the vessel and must be on board. A charter

vessel or headboat may have both a charter vessel/headboat permit and a commercial vessel permit. However, when a vessel is operating as a charter vessel or headboat, a person aboard must adhere to the bag limits. See the definitions of "Charter vessel" and "Headboat" in § 622.2 for an explanation of when vessels are considered to be operating as a charter vessel or headboat, respectively.

§ 622.176 Recordkeeping and reporting

(b) Charter vessel/headboat owners and operators--(1) General reporting requirement--(i) Charter vessels. The owner or operator of a charter vessel for which a charter vessel/headboat permit for South Atlantic snapper-grouper has been issued, as required under § 622.170(b)(1), or whose vessel fishes for or lands such snapper-grouper in or from state waters adjoining the South Atlantic EEZ, who is selected to report by the SRD must maintain a fishing record for each trip, or a portion of such trips as specified by the SRD, on forms provided by the SRD and must submit such record as specified in paragraph (b)(2) of this section.

(iii) Electronic logbook/video monitoring reporting. The owner or operator of a vessel for which a charter vessel/headboat permit for South Atlantic snapper-grouper has been issued, as required under § 622.170(b)(1), or whose vessel fishes for or lands such snapper-grouper in or from state waters adjoining the South Atlantic EEZ, who is selected to report by the SRD must participate in the NMFS-sponsored electronic logbook and/or video monitoring program as directed by the SRD. Compliance with the reporting requirements of this paragraph (b)(1)(iii) is required for permit renewal.

(2) Reporting deadlines--(i) Charter vessels. Completed fishing records required by paragraph (b)(1)(i) of this section for charter vessels must be submitted to the SRD weekly, postmarked no later than 7 days after the end of each week (Sunday). Completed fishing records required by paragraph (b)(1)(iii) of this section for charter vessels may be required weekly or daily, as directed by the SRD. Information to be reported is indicated on the form and its accompanying instructions.

SUBPART M--DOLPHIN AND WAHOO FISHERY OFF THE ATLANTIC STATES

§ 622.270 Permits.

(b) Charter vessel/headboat permits. (1) For a person aboard a vessel that is operating as a charter vessel or headboat to fish for or possess Atlantic dolphin or wahoo, in or from the Atlantic EEZ, a valid charter vessel/headboat permit for Atlantic dolphin and wahoo must have been issued to the vessel and must be on board. (See paragraph (c)(1) of this section for the requirements for operator permits in the dolphin and wahoo fishery.)

(2) A charter vessel or headboat may have both a charter vessel/headboat permit and a commercial vessel permit. However, when a vessel is operating as a charter vessel or headboat, a person aboard must adhere to the bag limits. See the definitions of "Charter vessel" and "Headboat" in § 622.2 for an explanation of when vessels are considered to be operating as a charter vessel or headboat, respectively.

§ 622.271 Recordkeeping and reporting.

(b) Charter vessel/headboat owners and operators--(1) General reporting requirement--(i) Charter vessels. The owner or operator of a charter vessel for which a charter vessel/headboat permit for Atlantic dolphin and wahoo has been issued, as required under § 622.270(b)(1), or whose vessel fishes for or lands Atlantic dolphin or wahoo in or from state waters adjoining the Atlantic EEZ, who is selected to report by the SRD must maintain a fishing record for each trip, or a portion of such trips as specified by the SRD, on forms provided by the SRD and must submit such record as specified in paragraph (b)(2) of this section.

(2) Reporting deadlines--(i) Charter vessels. Completed fishing records required by paragraph (b)(1)(i) of this section for charter vessels must be submitted to the SRD weekly, postmarked no later than 7 days after the end of each week (Sunday). Information to be reported is indicated on the form and its accompanying instructions.

SUBPART Q—-COASTAL MIGRATORY PELAGIC RESOURCES (GULF OF MEXICO AND SOUTH ATLANTIC)

§ 622.370 Permits.

(b) Charter vessel/headboat permits. (1) For a person aboard a vessel that is operating as a charter vessel or headboat to fish for or possess, in or from the EEZ, Gulf coastal migratory pelagic fish or South Atlantic coastal migratory pelagic fish, a valid charter vessel/headboat permit for Gulf coastal migratory pelagic fish or South Atlantic coastal migratory pelagic fish, respectively, must have been issued to the vessel and must be on board.

(i) See § 622.373 regarding a limited access system for charter vessel/headboat permits for Gulf coastal migratory pelagic fish.

(ii)

(ii) A charter vessel or headboat may have both a charter vessel/headboat permit and a commercial vessel permit. However, when a vessel is operating as a charter vessel or headboat, a person aboard must adhere to the bag limits. See the definitions of "Charter vessel" and "Headboat" in § 622.2 for an explanation of when vessels are considered to be operating as a charter vessel or headboat, respectively.

§ 622.374 Recordkeeping and reporting.

(b) Charter vessel/headboat owners and operators--(1) General reporting requirement--(i) Charter vessels. The owner or operator of a charter vessel for which a charter vessel/headboat permit for Gulf coastal migratory pelagic fish has been issued, as required under § 622.370(b)(1), or whose vessel fishes for or lands Gulf or South Atlantic coastal migratory fish in or from state waters adjoining the Gulf or South Atlantic EEZ, who is selected to report by the SRD must maintain a fishing record for each trip, or a portion of such trips as specified by the SRD, on forms provided by the SRD and must submit such record as specified in paragraph (b)(2)(i) of this section.

(2) Reporting deadlines--(i) Charter vessels. Completed fishing records required by paragraph (b)(1)(i) of this section

for charter vessels must be submitted to the SRD weekly, postmarked no later than 7 days after the end of each week (Sunday). Information to be reported is indicated on the form and its accompanying instructions.

APPENDIX B

Considered but Rejected

2.4 Action 4: Amend the Gulf Reef Fish, South Atlantic Snapper Grouper, Coastal Migratory Pelagics, and Atlantic Dolphin and Wahoo Fishery Management Plans to Specify Certain Aspects of Reporting for For-Hire Vessels

Alternative 1 (No Action). There is no specified time for data to be made available to the public and to the Councils.

Alternative 2. Specify the following data flow via electronic reporting:

a) Logbook data collected via authorized platform, ex. web, tablet, phone, or VMS application
b) Data submitted to ACCSP or GulfFIN;
c) Data integrated by ACCSP or GulfFIN into single composite data set;
d) Composite data set distributed to appropriate agencies for analyses and use.

Sub-alternative 2a. Apply to charter vessels reporting.
Sub-alternative 2b. Apply to headboat reporting.

Alternative 3. Specify the following aspects of electronic reporting:

a) NMFS and/or ACCSP develop a compliance tracking procedure that balances timeliness with available staff and funding resources.
b) NMFS is to use validation methods developed in the Gulf of Mexico logbook pilot study as a basis to ensure that the actual logbook report is validated and standardized validation methodologies are employed among regions.
c) NMFS is to require and maintain a comprehensive permit/email database of participants.
d) NFMS is to include procedures for expanding estimates for non-reporting.
e) NMFS is to allow multiple authorized applications or devices to report data as long as they meet required data and transferability standards.

Sub-alternative 3a. Apply to charter vessel reporting.
Sub-alternative 3b. Apply to headboat reporting.

Discussion

The technical subcommittee recommends a multi-faceted approach where a number of reporting platforms can be used so long as the minimum data standards and security protocols are met. Data standards would need to be developed and the subcommittee agreed that NOAA Fisheries, the GulfFIN, and ACCSP could work collaboratively to develop appropriate standards.
The subcommittee recommends this process for data storage and management:

1. Logbook data collected via authorized platform, ex. web, tablet, phone, or VMS application
2. Data submitted to ACCSP or GulfFIN;
3. Data integrated by ACCSP or GulfFIN into single composite data set;
4. Composite data set distributed to appropriate agencies for analyses and use.

This process could eliminate duplicate reporting for some participants (e.g., South Carolina headboats and charter vessels) so long as appropriate data standards are in place and the respective agencies agree to confidentiality standards, which would allow sharing and accepting one another's data for use. Elimination of duplicate reporting (e.g., separate state and federal reports) would be a substantial benefit to participants in this survey program and could mitigate any additional reporting requirements for comparison to the current MRIP survey program.

The South Atlantic Council is concerned about the extensive delays in tracking recreational catches. The current South Atlantic blueline tilefish recreational ACL versus recreational catches is currently unknown pending receipt of the first wave of MRIP data (should be available 45 days after the end of February) and any headboat catches. Part of the delay is that the Council has specified the recreational ACL in pounds and this requires the numbers of fish to be converted to pounds. This adds an unspecified period of time after the MRIP data are released for the SEFSC to apply their conversion factors and provide a catch estimate. The South Atlantic Council is considering specifying recreational ACLs in numbers of fish so that the headboat sector (and the charter vessel sector once this amendment is approved) can be tracked weekly. Specifying the recreational ACL in numbers of fish will also reduce the delay in using the MRIP data to track recreational ACLs.

Action 4 addresses the following recommendations from the Technical Sub-Committee:

- Development of compliance tracking procedures that balance timeliness with available staff and funding resources.
- Use validation methods developed in the Gulf of Mexico logbook pilot study as a basis to ensure that the actual logbook report is validated and standardized validation methodologies are employed among regions.
- Require and maintain a comprehensive permit/email database of participants.
- Include procedures for expanding estimates for non-reporting.
- Allow multiple authorized applications or devices to report data as long as they meet required data and transferability standards.

The technical subcommittee recommends building upon the validation methodology developed in the Gulf MRIP pilot study.

The technical subcommittee recommends use of an MRIP certified methodology for validation with the following elements: Gulf MRIP pilot study methodologies, including dockside validation of catch and vessel activity, and maintenance of site and vessel registries.

The technical subcommittee recommends dual survey methods (existing and new) for no less than three years. Data from the new program would not be expected to provide management advice during the first year of operation. Moreover, this would allow the possibility of an initial phase-in or limited implementation to identify and solve significant problems prior to implementation for all participants.

The technical subcommittee recommends that the Councils move forward with development of a reporting system that includes federally permitted for-hire vessels while also exploring ways to determine the impact of state permitted vessels on landings estimates of federally managed species. Long term, the subcommittee recommends that both state and federally permitted charter vessels participate in this census to include the entire fleet of charter vessels harvesting federally managed species.

Weekly electronic dealer and headboat reporting are fully implemented. However, there are still delays in having updated landings available to the public for their use in planning trips and to the Councils for monitoring ACLs. A solution, in the Atlantic, would be to have the raw weekly data fed to ACCSP and made available to the public via the ACCSP website. The "official" numbers for quota closures would continue to be the numbers maintained by NMFS and available on the NMFS website but this would provide more timely and useful updates to the public.

The result would be updated and current catch data available on a daily basis for the public, states, NMFS, and the Councils to use in monitoring ACLs and planning fishing trips.

APPENDIX C

South Carolina Logbook Report

ATTACHMENT 1

DNR
www.dnr.sc.gov

SOUTH CAROLINA HEADBOAT LOG

Section 50-5-1915 of the South Carolina Code of Laws requires all licensed headboats to maintain a trip log, copies of which must be submitted monthly to the South Carolina Department of Natural Resources. **A report must be received even if no trips were made during the month. To submit a no trips report, write "No Business For (month) in the middle of a report form. (For example, No Business For January).** Date and sign the report.

To fulfill both the mandatory reporting of the NMFS and the requirements of state law without an undue burden on the permit holder, South Carolina will use the existing NMFS Headboat logbook. The white copy should be mailed or faxed to the address below so it is received no later than the 10th of the month following the report month. For example, June reports should reach our office by 10 July. The yellow copy should be retained for the NMFS representative, and the pink copy should be retained for your records. Complete a separate form for each trip. Should you need more reports, attach a note to your reports or call our office.

Please mail or FAX the white copies to the:

SCDNR - Fisheries Statistics Program
P.O. Box 12559
Charleston, SC 29422-2559
TELEPHONE: (843) 953-9313 **FAX**: (843) 953-9362

INSTRUCTIONS

To complete a trip report, record the following information in the proper blanks:

VESSEL: Enter vessel name and SC Charterboat Permit Number.
DATE: Enter the date(s) of the trip.
DEPART TIME: Enter the time of departure from the dock.
ARRIVE TIME: Enter the time of arrival back at the dock.
OPERATOR'S LICENSE NUMBER: Enter the vessel USCG or state documentation #.
FULL DAY, 3/4 DAY, ETC.: Check the appropriate box for the length of trip.
NIGHT: Check 1st if the trip departed between 6:00PM and midnight. Check 2nd if the trip departed after 12:00 midnight.
DISTANCE FROM SHORE: Check the appropriate box.
PAY TYPE: Check the appropriate box.
LOCATION: Please enter the location code for your fishing area using the grid printed inside the flip cover.

Example: Refer to the grid and the small block marked **X** in grid 32-78 (lat/long) . Read up or down the column to determine the letter code (C in this example) . Read left or right across the row to determine the number code (1 in this example). This location code entry would be **32-78-C1**. Each individual small square is 10 miles long by 10 miles wide or roughly 100 square miles.

NUMBER OF ANGLERS: Enter the number of passengers who went to fish.
NUMBER OF ANGLERS WHO FISHED: Enter the number of passengers who actually fished.

CATCH INFORMATION

SPECIES: Use blank lines to list additional species caught.
NUMBER AND WEIGHT: Enter the total number and weight (to the nearest whole pound) of all species retained in the NUMBER CAUGHT and TOTAL WEIGHT columns.
NUMBER RELEASED: Regardless of disposition, ALL FISH must be reported. Please enter the number of each species released in the appropriate column. DO NOT include releases in the number caught or total weight columns.

SC DAILY CATCH (HEADBOAT)

ATTACHMENT 1 4-2004

Vessel: _____ Date: _____ Depart Time: _____ Arrive Time: _____

Operator's License No.: _____ Full Day: ☐ Night: ☐ 1st ☐ 2nd

Location: _____ 3/4 Day: ☐ Overnight: ☐

Number of Anglers: _____ 1/2 Day: ☐ AM ☐ PM

Number of Anglers Who Fished: _____ Other: _____

Distance from Shore: > 3 miles ☐ ≤ 3 miles ☐ Inland ☐

Pay Type: Per Person ☐ Per Group ☐ No Charge ☐

AGENCY USE ONLY

1 2 3 4 5 6 — Yr Mo Day

7 — ■

8 9 — Area

10 11 12 13 14 15 — Lat Lon CA CN

16 17 — Trip Type

18 19 20 — Anglers

21 — VT

22 23 24 — Vessel

44 — PT

45 46 47 — Ang Fished

48 — DFS

25-27	Fish Species	Number Caught 28-31	Total Weight 32-37	# Released Alive 38-40	# Released Dead 1-43
	GROUPERS				
29	Gag				
30	Scamp				
20	Speckled Hind				
21	Snowy Grouper				
22	Red Grouper				
23	Warsaw Grouper				
26	Rock Hind				
31	Yellowfin Grouper				
27	Red Hind				
39	Yellowfin Grouper				
88	Graysby				
	SEA BASSES				
33	Black Sea Bass				
34	Bank Sea Bass (Yellow)				
38	Sand Perch				
	GRUNTS				
50	White Grunts				
51	Tomtate (Redmouth)				
54	Bluestriped Grunt				
53	Margate				
35	Porkfish				
	PORGIES				
01	Red Porgy				
02	Whitebone Porgy				
03	Knobhead Porgy				
04	Spottail Pinfish				
05	Jolthead Porgy				
06	Littlehead Porgy				
08	Scup (Northern)				
83	Pinfish				
	SHARKS				
230	Sharpnose Shark				
234	Sandbar Shark				
231	Blacktip Shark				
119	Smooth Dogfish				
250	Nurse Shark				
232	Dusky Shark				
140	Remora				
	TRIGGERFISHES				
77	Gray Triggerfish				
82	Queen Triggerfish				

25-27	Fish Species	Number Caught 28-31	Total Weight 32-37	# Released Alive 38-40	# Released Dead 1-43
	SNAPPERS				
10	Vermilion Snapper				
11	Red Snapper				
12	Silk Snapper				
14	Blackfin Snapper				
15	Yellowtail Snapper				
16	Lane Snapper				
17	Cubera Snapper				
18	Gray Snapper				
19	Mutton Snapper				
	MACKERELS				
74	King Mackerel				
56	Spanish Mackerel				
	JACKS				
60	Greater Amberjack				
62	Almaco Jack				
123	Banded Rudderfish				
97	Blue Runner				
57	Rainbow Runner				
90	African Pompano				
87	Crevalle Jack				
	TUNAS, etc.				
79	Bluefish				
55	Cobia				
117	Dolphin				
133	Wahoo				
116	Little Tunny (Bonito)				
126	Blackfin Tuna				
147	Yellowfin Tuna				
121	Great Barracuda				
	REEF FISHES				
78	Squirrelfish				
98	Bigeye (Toro)				
86	Short Bigeye				
80	Hogfish (Hog Snapper)				
47	Spadefish				
72	Inshore Lizardfish				
	TILEFISHES				
40	Blueline Tilefish (Gray)				
44	Sand Tilefish				
	OTHER FISH				

Signature _____

Revised 4/2004

SOUTH CAROLINA CHARTERBOAT LOGBOOK

ATTACHMENT 2
Revised 4-2012

Vessel (Please Print): _____ Date: _____ Permit No.: _____

Number of Anglers: _____ Trip Start Time: _____ Actual Hours Fished: _____ Location: _____
Example: 32-78-C1 (see map)

Trip Start Location: _____ Artificial Reef Name: _____ Target Species: _____
(Please specify)

Locale: ☐ Estuarine ☐ 0 – 3 miles ☐ Offshore

Method: ☐ Troll ☐ Bottom ☐ Cast / Fly ☐ Dive ☐ Gig

Water Depth: Shallowest: _____ feet
Deepest: _____ feet

MAIL OR FAX REPORT BY THE 10TH OF THE MONTH TO:
SCDNR Fisheries Statistics Section, P.O. Box 12559, Charleston, SC 29422-2559
FAX: (843) 953-9362 Phone: (843) 953-9313

AGENCY USE ONLY

Yr	Mo	Day	Permit #	Location	Locale	Area#	Meth

Target Sp.	Hrs.	Reef	Trip Start	Shallowest	Deepest

	Species	# Kept	Lbs Kept	# Released Alive	# Released Dead
1050	Dolphin				
4710	Wahoo				
4655	Yellowfin Tuna				
4658	Blackfin Tuna				
3026	Sailfish				
2177	White Marlin				
2179	Blue Marlin				
1940	King Mackeral				
3840	Spanish Mackeral				
4653	Little Tunny				
0330	Bonita				
4654	Skip Jack				
0180	Barracuda				
3810	Spadefish				
0030	Amberjack				
0870	Crevalle Jack				
0230	Bluefish				
0570	Cobia				
4350	Tarpon				
	Other Fish				
	(Specify)				

Captain's Notes:

Signature: _____

Print Name: _____

	Species	# Kept	Lbs Kept	# Released Alive	# Released Dead
1423	Gag				
1424	Scamp				
1414	Snowy Grouper				
1416	Red Grouper				
1410	Other Grouper				
	(Specify)				
3302	Red Porgy (Pinks)				
3295	Other Porgies				
	(Specify)				
3764	Red Snapper				
3765	Vermilion Snapper				
3360	Black Sea Bass				
3314	Spottail Pinfish				
1441	White Grunt				
1440	Other Grunts				
	(Specify)				
4560	Triggerfish				
1082	Red Drum				
1081	Black Drum				
3447	Spotted Seatrout				
3446	Weakfish				
1209	Flounder				
3560	Sheepshead				
4410	Ladyfish				
1970	Whiting				
2670	Inshore Pinfish				
3518	Sharpnose Shark				
3495	Blacktip Shark				
3483	Bonnethead Shark				
3521	Spiny Dogfish				
3511	Smooth Dogfish				
3508	Other Sharks				
	(Specify)				
2860	Stingrays				

ATTACHMENT 2

SOUTH CAROLINA CHARTERBOAT LOG

Section 50-5-1915 of the South Carolina Code of Laws requires all permitted charter vessels to submit daily trip reports for all trips to the Marine Resources Division on a monthly basis. These reports must specify: 1) the number of persons fishing, 2) the number of hours fished, 3) the number of fish of each species caught, and 4) their total weight. Subsequent charter vessel permits will not be issued unless these requirements are met.

Please complete a logsheet for each trip following the instructions below. If you made two or more trips on a particular date, complete a separate report for each trip. Trip reports are required even if no fish were caught. Mail or FAX the white copy to the address below by the 10th of the following month. Retain the yellow copy for your records.

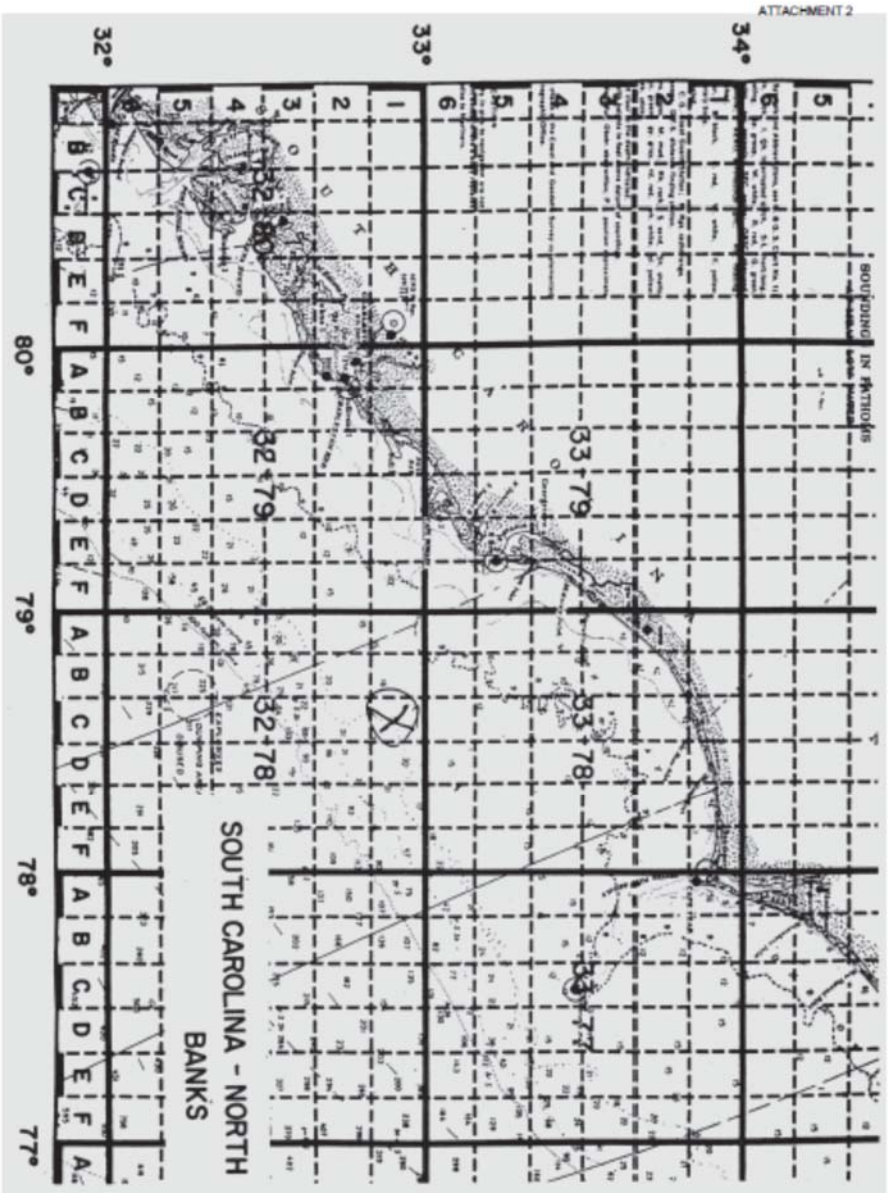
SCDNR - Fisheries Statistics Program
P.O. Box 12559
Charleston, SC 29422-2559
TELEPHONE - (843) 953-9313 **FAX** - (843) 953-9362

A report must be received even if no trips were made during the month. To submit a no trip report, write "No Business For The Month Of (month) on the middle of a report form. Date and sign the report.

The Captain's Notes space may be used to record trip data such as weather, fuel, addresses, etc.

INSTRUCTIONS

- **VESSEL:** Enter the name of your vessel. If unnamed, enter the registration number of your boat, e.g. SC-1234-AB.
- **DATE:** Enter the date of the trip.
- **PERMIT NO.:** Enter your SC charter vessel permit number (number provided on your license).
- **# ANGLERS:** Enter the number of persons who fished, not including crew.
- **TRIP START TIME:** Enter the time the boat left the dock or landing, e.g. 11:30 AM, 1:00 PM, 3:30 PM, etc.
- **HOURS FISHED:** Enter the number of hours actually fished to the nearest hour, not including travel time.
- **LOCATION:** Enter the location code where MOST of your fishing took place. Refer to the map printed on the inside of the flip cover and the following example. If you fished in the grid marked **X**, Grid 32-78, read up or down the column to determine the letter code (C here). Read left or right across the row to determine the number code (1 here). The proper entry for this location is **32-78-C1**.
- **TRIP START LOCATION:** Enter the marina/boat landing name where this trip originates/end (i.e. where you pick up/drop off customers).
- **ARTIFICIAL REEF:** If you fished at an artificial reef, enter the reef name in the blank.
- **TARGET SPECIES:** Enter the name of the species you were MOST interested in catching, whether any were caught or not. Enter ANY if you had no preference.
- **LOCALE:** Check the appropriate zone fished.
- **METHOD:** Check the fishing method.
- **WATER DEPTH:** Enter the shallowest water depth and deepest water depth (in feet) that were fished.
- **CATCH INFORMATION:** Enter the number of each species kept and their weight to the nearest whole pound in the appropriate spaces. Enter the number of each species released in the proper columns. Additional species may be added on the blank spaces or if additional space is needed, you may cross out an existing name and add the new species.


ATTACHMENT 2
SOUNDING IN FATHOMS
SOUTH CAROLINA - NORTH
BANKS
32°
33°
34°
80°
79°
78°
77°

APPENDIX D

Southeast Region Headboat Survey Forms

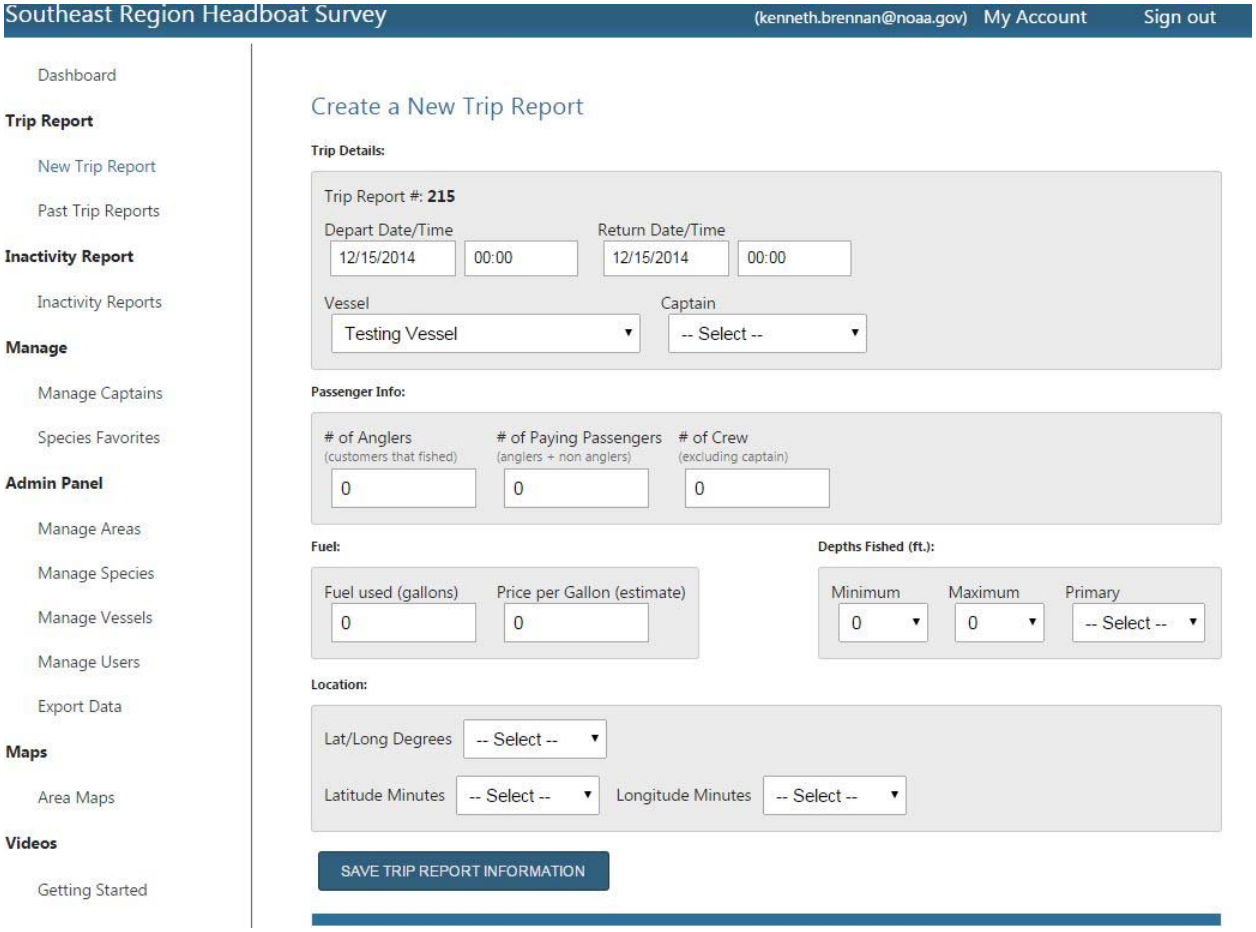


Figure D1. Example Southeast Region Headboat Survey trip report form for headboats.

Catch Information

☐ Show Species Grid
☐ Show All Species
☐ Order Species By Most Reported

Species: -- Select -- Number Kept: 0 Number Released: 0

SAVE CATCH INFORMATION

	Species Name	Number Kept	Number Released	
Edit	ALMACO JACK	5	0	Delete
Edit	BANDED RUDDERFISH	7	0	Delete
Edit	ATLANTIC SHARPNOSE SHARK	0	14	Delete
Edit	BLACK SEABASS	25	300	Delete
Edit	GAG	2	1	Delete
Edit	LITTLE TUNNY	2	0	Delete
Edit	RED PORGY	11	38	Delete
Edit	RED SNAPPER	0	21	Delete
Edit	REMORA	0	3	Delete
Edit	SPOTTAIL PINFISH	45	0	Delete
Edit	GRAY TRIGGERFISH	77	0	Delete
Edit	VERMILION SNAPPER	132	48	Delete

Figure D2. Example Southeast Region Headboat Survey catch report form for headboats.

APPENDIX E

11/26/2014

Technical Subcommittee Report to the South Atlantic and Gulf of Mexico Fishery Management Councils: Recommendations for Electronic Logbook Reporting

November 2014

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Abbreviations used in this Document

ACCSP	Atlantic Coastal Cooperative Statistics Program
EEZ	Exclusive Economic Zone
FHS	For-hire-survey
FWC	Florida Fish and Wildlife Conservation Commission
FIN	Fisheries Information Network
GulfFin	Gulf of Mexico Fisheries Information Network
GMFMC	Gulf of Mexico Fishery Management Council
GSMFC	Gulf States Marine Fisheries Commission
GPS	Global Positioning System
HMS	Highly Migratory Species
MRIP	Marine Recreational Information Program
NOAA	National Oceanic and Atmospheric Administration
NCDENR	North Carolina Department of Environment and Natural Resources
NRC	National Research Council
PPS	Proportional Probability Sampling
SAFMC	South Atlantic Fisheries Management Council
SCDNR	South Carolina Department of Natural Resources
SERO	Southeast Regional Office
SRHS	Southeast Region Headboat Survey
SEFSC	Southeast Fisheries Science Center
TPWD	Texas Parks and Wildlife Department
VMS	Vessel Monitoring System

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EXECUTIVE SUMMARY

Catch from recreational anglers comprises a substantial proportion of total catch for many species in the regions managed by the Gulf of Mexico and South Atlantic Fishery Management Councils. For-hire charter vessels are an important component of the recreational fishery both in terms of fishing effort and harvest. There is a need to improve data collection practices for charter vessels to address evolving needs of science and management and to capitilze on the improvements of emerging electronic reporting technologies. The Gulf of Mexico and South Atlantic Fishery Mangement Councils are considering changes in management for these purposes and formed a technical subcommittee to provide recomendations to implement electronic logbook reporting for charter vessels in the Gulf of Mexico and South Altantic Fishery Management Councils respecitve jurisdictions.

Currently, for-hire data collection programs gather information on fishing effort and catch by marine recreational anglers fishing on professionally licensed for-hire vessels (including charter, guide, and large party boats). NOAA Fisheries, in coordination with the states, ACCSP, and FINS, support regional programs to collect these statistics, with the ultimate goal of building a system of data collection programs that are responsive to regional needs and are coordinated at the national level to provide standard data elements for both regional and national assessments of fish stocks and associated fisheries management.

The technical subcommittee was formed from state and federal biologists and resource managers that have the requisite experience to develop best practices for an improved for-hire data collection program. The technical subcommitte was instructed to provide these recommendations by December 1, 2014 and this report reflects these recommendations. The group met May 27-28, 2014 and drafted initial reccommendations for the Gulf of Mexico and South Atlantic Fishery Management Councils' review. This guidance has been integrated into the report to the extent practibable yet, the recommendations remain those of the technical subcommittee.

The subcommittee recommends a census style, electronic reporting system that builds upon the Gulf of Mexico electronic logbook pilot program, the electronic reporting program for headboats, and the recently implemented electronic dealer reporting program. A brief overview of the recommendations is below:

- Complete census of all participants;
- Mandatory, trip level reporting with weekly electronic submission. Give flexibility to require submission more frequently than weekly if necessary. Give flexibility to declare periods of inactivity in advance;
- Development of compliance tracking procedures that balance timeliness with available staff and funding resources;
- Implementation of accountability measures to ensure compliance;

- Use validation methods developed in the Gulf of Mexico logbook pilot study as a basis to ensure that the actual logbook report is validated and standardized validation methodologies are employed among regions;
- Minimize reporting burden to anglers by reducing (or preferably eliminating) paper reporting and eliminating duplicate reporting;
- Maintain capability for paper-based reporting during catastrophic conditions;
- Require and maintain a comprehensive permit/email database of participants;
- Develop and implement the program in close coordination with MRIP, SERO, SEFSC, HMS, state agencies, ACCSP, and GulfFIN;
- Include procedures for expanding estimates for non-reporting; and,
- Allow multiple authorized applications or devices to report data as long as they meet required data and transferability standards.

The technical subcommittee has provided these recommendations within the framework of finite fiscal and personnel resources with consideration of reporting burden and technology requirements for charter vessel operators. The recommended program should be flexible enough to accomodate changes in technology or funding availability without compromising the integrity of the long-term data series. The technical subcommittee also realizes that advances in data collection technologies will continue and the program will require evaluation, and likely subsequent improvement to meet the evolving needs of science and management.

SECTION 1. BACKGROUND

Catch from recreational anglers comprises a substantial proportion of total catch for many species in the regions managed by the Gulf of Mexico and South Atlantic Fishery Management Councils (GMFMC, SAFMC). For-hire data collection programs gather information on fishing effort and catch by marine recreational anglers fishing on professionally licensed for-hire vessels (including charter, guide, and large party boats). NOAA Fisheries, in coordination with the states, ACCSP, and FINs, supports regional programs to collect these statistics, with the ultimate goal of building a system of data collection programs that are responsive to regional needs and are coordinated at the national level to provide standard data elements for both regional and national assessments of fish stocks and associated fisheries management.

Recreational harvest from for-hire vessels in the Southeast Region are monitored through a combination of effort and dockside intercept surveys. The Marine Recreational Information Program's (MRIP) for-hire survey (FHS) and the Southeast Region Headboat Survey. The FHS estimates charter vessel catches of state and federally managed species off the U.S. Atlantic and Gulf coast states, with the exception of Texas and more recently Louisiana. The Texas Parks and Wildlife Department conducts their own creel survey to estimate private and charter landings. Since 1993, South Carolina has administered a paper-based logbook reporting program for every licensed six-pack charter operator. These data are primarily used for state management and quota monitoring for federally managed species occurs as part of the MRIP for-hire survey. North Carolina is also developing an electronic logbook system for their own use with the goal of supplanting the MRIP for-hire survey once fully operational and compatible with MRIP. In recent years, interest by constituents and the Councils has been growing to implement electronic reporting requirements in the for-hire sector. There is general distrust of MRIP landings estimates for the for-hire survey and managers and fishermen have expressed a need for more timely and accurate data to support fishery monitoring, science, and management. Additionally, the National Research Council's (NRC) review of recreational survey methods concluded that in most cases charter boats should be required to maintain logbooks of fish landed and kept. These factors led to an electronic logbook pilot study of Texas and Florida charter vessels in 2010-11 and new electronic reporting regulations for headboats in 2014. Four additional projects have also been funded by MRIP or the National Fish and Wildlife Foundation in 2014 to test new approaches for monitoring charter vessel catch and effort. The GMFMC and SAFMC have also passed motions at recent meetings expressing their interest in electronic reporting by charter vessels and they formed this technical subcommittee to develop recommendations for the Councils' consideration by December 1, 2014, on how to best achieve an electronic reporting system for charter vessels. The technical subcommittee met May 27-28, 2014 to develop recommendations to the Councils. The technical subcommittee reached consensus of several aspects on a proposed program and identified a framework for implementation.

SECTION 2. OBJECTIVES

The Councils appointed this technical subcommittee (membership list below) to develop recommendations to implement an improved data collection program to support the needs of science, fisheries management, and address stakeholder concerns about data quality and redundancy in reporting. Specifically, the technical subcommittee was charged with developing recommendations to implement electronic reporting for charter vessels in the Gulf of Mexico and US South Atlantic in support of the following objectives:

- Increasing the timeliness of catch estimates for in-season monitoring;
- Increasing the temporal (and/or spatial) precision of catch estimates for monitoring;
- Providing vessel-specific catch histories for management;
- Reducing biases associated with collection of catch statistics; and,
- Increasing stakeholder trust and buy-in associated with data collection.

SECTION 3. TECHNICAL SUBCOMMITTEE MEMBERS

3.1 Membership

- Gregg Bray – GSMFC
- Ken Brennan – SEFSC
- Mike Cahall – ACCSP
- Mike Errigo – SAFMC
- Mark Fisher - TPWD
- John Froeschke – GMFMC
- Eric Hiltz – SCDNR
- Doug Mumford – NCDENR
- Ron Salz – MRIP
- Beverly Sauls – FWC
- George Silva – HMS
- Andy Strelcheck – SERO

3.2 Timeline

- May 2014 – Technical subcommittee meeting in Tampa, Florida
- June 2014 - Provide meeting summary to Councils for review and guidance;
- July 2014 - Technical subcommittee conference call to discuss Councils' review and guidance;
- September 2014 - Technical subcommittee webinar to discuss items needed to complete the report;
- November 2014 - Draft report sent to subcommittee for review;
- December 1, 2014 - Provide report to Gulf and South Atlantic Councils.

SECTION 4. RECOMMENDATIONS

The technical subcommittee discussed trade offs and limitations of potential modifications to fisheries reporting in for-hire fisheries. The subcommittee agreed (by consensus) on preferred approaches for several aspects and discussed barriers to implementation of a new program. The subcommittee solicited and received preliminary input from both Councils following the May 27-28 meeting. This guidance has been integrated into the report to the extent practibable yet, the recommendations remain those of the technical subcommittee.

The subcommittee emphasized that the program should ***not*** be designed around a single species, and should be flexible enough to accommodate different reporting requirements for different segments of the for-hire fleet. For example, if federally permitted vessels were required to report more frequently during the recreational red snapper season, other vessels that do not participate in this fishery should be able to continue reporting at their normal frequency. Similarly, an electronic reporting system should be able to accommodate vessels already required to carry VMS units for participation in commercial fisheries without necessarily requiring all for-hire vessels to report through VMS. Although not currently required, the Gulf Council expressed interest in using VMS and hail-out, hail-in protocols to improve effort estimates. This practice certainly could improve the quality of effort estimation in the for-hire fleet, although, implemenation would not be without challenges. The cost of a VMS program both in terms of vessel equipment and agency staff/infrastructure would require additional, long-term funding (see section about costs). This may be beyond current resource availability. Rather than recommend fleet-wide implementation of VMS and hail-out, hail-in requirements, the subcommittee recommends structuring the charter fishery monitoring program such that it is scaleable and expandable as management needs, technology, and funding availability change. This recommendation would allow improved data collection in the near term building on the recently implemented electronic reporting system for southeast region headboats (i.e., weekly, electronic reporting) and the MRIP charter vessel pilot program, yet would not require full implemention of VMS to move beyond the current process.

The current survey methodology was deemed inadequate to meet the objectives posed to the group (although not necessarily the original intent of the charter vessel survey). Specifically, timeliness, bias reduction, and stakeholder buy-in could be improved with an electronic reporting system without the inherant expense and time for implementation of VMS technology in the charter fleet (of course, the introduction of new biases is possible). These improvements are necessary given the requirement to establish annual catch limits for federally managed species and close the fishery when the target harvest level has been caught each year. This requirement for in-season quota monitoring is far beyond the management needs when the original charter vessel survey was designed and implemented and the guidance herein attempts to match the data collection effort to the needs of the current and future fisheries management.

4.1 Mandatory or voluntary participation

The technical subcommittee discussed participation in any new charter vessel monitoring program. Specifically, the subcommittee considered if participation in the program by charter vessel owner/operators could be voluntary or if mandatory participation is necessary. Voluntary

reporting programs can be advantageous in that reporting burden is reduced (or absent) from participants that do not wish to participate. This would also reduce the number of reports that require processing for catch and effort estimation. However, in absence of a complete sample, estimation procedures are necessary. Estimation procedures can be accurate and robust in a well-designed survey, however, likely at the expense of reduced timeliness. Developing estimates of total catch from a volunteer program is problematic as the proportion of participants may be highly variable through time or across the survey area and volunteer participants may not be representative of all possible participants in this survey. This pattern has been demonstrated previously (e.g., angler avidity) in other studies of volunteer programs and will bias estimates when expanded to the total sector. Voluntary programs would also require careful consideration of the characteristics of the participants and those who choose not to participate as it is impossible to compare catch patterns with participants and non-participants; and an assumption that they are identical is necessary but likely inaccurate. The subcommittee agreed that the potential for bias is too great to recommend any voluntary reporting program and suggested that any program (i.e., census or survey) require reporting from participants be mandatory if selected (e.g., Southeast Region Headboat Survey (SRHS)).

The subcommittee agreed that the potential for bias is too great to recommend any voluntary reporting program and mandatory participation is necessary for vessel/owneroperators selected. This is recommended to best achieve the overarching objectives of the proposed program.

4.2 Survey or census

Both census and statistical surveys can (and are) used to estimate catch and effort in marine fisheries. Surveys are beneficial in that a representative sample of anglers (as opposed to the entire "population" of anglers in the fishery) and their catch is used to estimate the total catch. However, management often requires these estimates over relatively small areas, short-time scales, or for rare event species. In these situations, survey estimates sometimes lack the precision necessary or desired for management decisions.The common remedy is to increase sample effort (i.e., sample size) to achieve desired precision levels, however, the necessary sample size may exceed program resources. An additional challenge of surveys is that the strata (e.g., area, time-period) require complete coverage before making an estimate. In practice, this means that surveys generally have a longer lag between the time fishing occurs and when the resulting data are available for use.

A census provides a sum of the total effort and catch by tabulating these metrics from all participants in the fishery. In theory, reporting and subsequent use of these data in management can be rapid as no additional estimation procedures are necessary and the report submission frequency can be established (e.g., weekly) to balance management needs with reporting burden on fishery participants. In practice, estimating catch and effort from a census can be challenging if some participants do not report their catch and effort data within the specified reporting periods. In this event, the census is incomplete and requires an expansion factor to calculate the total catch and effort. As with any survey design, this estimation routine requires additional time, resources, and reduces precision of the estimate. In extreme cases, expanding an incomplete census to a total estimate can be difficult or impossible if the proportion of non-compliant

participants is large or if the non-compliant participants are markedly different than those that are reporting as required. Nonetheless, this capability is essential in a real-world census and is important to consider when developing reporting requirements (frequencies and accountability measures) and minimum acceptable lag-time for use in fisheries management.

The technical subcommittee recommends the development and implementation of a electronic logbook *census* program to estimate catch and effort for southeast region charter vessels, including procedures for expanding for non-reporting. This recommendation was based in part on the inability of the current survey to meet the needs of science and management applications and the requirement of timeliness beyond which is readily achievable through a survey approach.

4.3 Reporting frequency

The subcommittee discussed how often reports need to be submitted to provide timely data for science and management. Frequent reporting has at least two benefits. Reporting as frequently as practicable reduces recall error/bias when producing catch reports. Frequent reporting also can make these data available for use sooner. Currently, the GMFMC and SAFMC require electronic reporting on a weekly basis for commercial seafood dealers and federally permitted headboat operators. Similarly, the subcommittee recommends mandatory weekly reporting, or at shorter intervals if necessary (e.g., The Gulf Council may want to require daily logbook submission during the recreational red snapper season) for a new charter vessel program. A second recommendation was that reports be due from the prior fishing week as soon as practicable. Commercial seafood dealer reports must be submitted by the Tuesday following the previous fishing week (Monday through Sunday). This was considered preferable over the headboat reporting requirements where trip reports are due one week after the end of the fishing week. The reduced lag addresses both advantages identified above.

The technical subcommittee recommends trip level reporting with weekly submission due the Tuesday following each fishing week. This would include no activity reports that could be submitted in advance if periods of inactivity are known. The technical subcommittee discussed that a daily reporting requirement may not be feasible or enforceable, however, reporting systems and user interfaces should be designed to encourage "real-time" at-sea reporting of catch and catch related data elements (e.g. fishing location, fishing method, target species).

4.4 Data collection

A variety of software applications are available for data collection and submission including web, smart phone, and tablet based technology. Web-based software provide the capability to report fisheries data after completing the trip. Smart phone or tablet technology could be used for at-sea or real time reporting of catch and effort. This approach may limit the complexity of reporting options but could provide enhanced validation methods because catch and effort data could be submitted before returning to port allowing enhanced dockside validation. Smart phone and tablet technology can also allow for data input without a current

network connection and are also capable of recording vessel positions during a trip via global positioning system (gps) (a far cheaper technology than VMS, but not in real-time).

The subcommittee recommends a multi-faceted approach where a number of reporting platforms can be used so long as the minimum data standards and security protocols are met. Data standards would need to be developed and the subcommittee agreed that NOAA Fisheries, the GulfFIN, and ACCSP could work collaboratively to develop appropriate standards.

These recommendations encompass two overarching objectives of the monitoring program: 1) Flexibility for specific regions, species, or time periods; 2) A flexible framework to allow incorportion of improved technologies as they become available. Electronic monitoring and reporting capabilities are rapidly evolving and the options available in the near-future may far exceed the current suite of tools. It is necessary to allow (and encourage) this developement such that in can be leveraged effectively to meet the needs of fisheries management.

4.5 Data storage and management

The subcommittee discussed data storage and management that would be necessarily expanded from the status quo in a census based monitoring program. The ACCSP and GulfFIN expressed willingness to handle these raw data and indicated this could be accomplished with extant resources.

The subcommittee recommends this process:

1. Logbook data collected via authorized platform, ex. web, tablet, phone, or VMS application
2. Data submitted to ACCSP or GulfFIN;
3. Data integrated by ACCSP or GulfFIN into single composite data set;
4. Composite data set distributed to appropriate agencies for analyses and use.

This process could eliminate duplicate reporting for some participants so long as appropriate data standards are in place and the respective agencies agree to confidentiality standards, which would allow sharing and accepting one another's data for use. Elimination of duplicate reporting (e.g., separate state and federal reports) would be a substantial benefit to participants in this survey program and could mitigate any additional reporting requirements for comparison to the current MRIP survey program.

4.6 Validation and estimation

A successful electronic for-hire program will require adequate validation of catch and effort data and will require collaboration among state, federal, and fishery information network (FIN) programs. A census is likely to be incomplete and estimation procedures for adjusting catch estimates will need to be developed in cooperation with MRIP. The time lag necessary to expand an incomplete census to an estimate (of harvest or effort) should be built into the

timeliness need for science and management applications. The Gulf MRIP pilot program tested new validation procedures and provided guidance on improvements necessary before full implementation. The pilot program was successful in that electronic reporting was used (almost exclusively) and supported many of the goals (e.g., more timely, simplified reporting process) yet, many participants failed to submit reports within the required time frame complicating the use of these data for management. The rates of compliance increased over the length of the pilot study period and similar result would be expected with full implementation highlighting the need for validation and an estimation procedure to calculate total catch and effort.

The technical subcommittee recommends building upon the validation methodology developed in the Gulf MRIP pilot study. An overview of the proposed methodolgy is below.

Dockside Validation of Logbook Trip Reports (Catch and Effort)

Validation procedures are critical to assessing the accuracy and completeness of submitted logbook reports. Critical components of validation include the creation and review of a site and vessel registry, and methods to validate catch and effort of self-reported data. There is currently a MRIP funded project; *Pilot Project; Validation Methods for Headboat Logbooks,* which is testing dockside sampling methods that could be used to validate headboat logbooks. Results from this project will be available in the spring of 2015.

Site and Vessel Registry

A registry of all vessels required to report via logbooks should include detailed docking location information for each vessel. The port city and mailing address for owners of all federally permitted vessels (both active and non-active) is available from the permit frame maintained by NMFS SERO, and may be used as a starting point for indentifying where vessels are located. A regularly updated list of all active charter vessels (both federal and state permitted) with docking site information is also maintained in states where the MRIP FHS is administered. From the vessel registry, a list of all known docking locations should be generated and each site should be given a unique identification code. Information contained in the site list should also include site location descriptions, site telephone numbers, contact person at the site, GPS location coordinates, and the total number of vessels located at the site. The site registry should be used to randomly select sites for dockside validation assignments (described below).

Validation of Catch

Dockside assignments for validating harvest should be randomly selected from the site registry and stratified by region (e.g. state or sub-region within large states) using probability proportional to size (PPS) sampling with replacement, with the size measure being the number of vessels at each site. This method is used in statistical sampling designs where sample clusters (e.g. sites where charter vessels dock) differ widely with respect the number of sample units (charter vessels) contained within. PPS sampling selects sites with a higher number of vessels more frequently and prevents potential sample bias by insuring that vessels at low pressure sites do not have a higher probability for selection. Sample days should be distributed across weeks and across weekend/weekday strata, and more weight should be given towards high fishing activity periods (summer and weekends). It is recommended that the site selection program be run monthly by a regional coordinating entity, such as GSMFC, who provides draw files to local

coordinators (states or other entities). Local coordinators should report tallies for the number of completed assignments and successful interviews to the regional entity weekly.

During an assignment, field samplers should arrive at the assigned site at least one hour before half-day charter fishing trips are expected to return. For sites where overnight fishing trips take place, field staff should call or visit the site the day before the assignment to determine if overnight trips are returning and arrive on site early if necessary to intercept those vessels. Upon arrival, samplers should survey the site and attempt to locate each vessel listed on the vessel register for that site. Each vessel at the site should be recorded on an Assignment Summary Form and coded as one of the following:

1 = vessel in
2 = vessel out, charter fishing (this must be verified)
3 = unable to validate (vessel sold, moved to unknown location, etc.)
4 = vessel out, NOT charter fishing (this must be verified)
5 = vessel out, fishing status unknown (use when unable to verify the fishing status)

For vessels coded as 2 (out charter fishing), the field sampler should attempt to verify the expected return time and record this time on the Assignment Summary Form. As each vessel returns from fishing, the sampler should record on a separate Dockside Intercept Survey Form the vessel name, vessel ID number, and the return date and time. Samplers should first approach the vessel operator for permission to weigh and measure all harvested fish, and the sampler should then observe the harvested catch and record the total number of fish for each species, as well as length at the mid-line (mm) and weight (kg) of whole fish that can be measured. After the catch is inspected, the field sampler should then conduct an interview in person with a crew member (captain and/or mate). It is important to conduct interviews directly with vessel operators, rather than with charter vessel clients, since the purpose of the dockside validation is to measure recall error and bias in trip data recorded by vessel operators on logbook trip reports. During the in-person interview, the following information should be recorded:

- Departure date
- Departure and return time
- Number of passengers (fishing and non-fishing, not including crew)
- Number of anglers (total number of passengers that fished at any time during the trip)
- Number of crew, including captain
- Target species
- Primary area fished (crew should be asked to identify the statistical area where the majority of fishing took place during the trip using statistical maps provided)
- The minimum and maximum depths (in feet) fished for the trip
- The percent of fishing time spent fishing in federal waters, state waters, and inland waters
- Primary fishing methods (bottom fishing, drifting, trolling, spear fishing)

- Hours fished (number of hours spent with gear in the water)
- For each species released or could otherwise not be observed by the field sampler, the total number released for each disposition:

  1 – Thrown back alive

  3 – Eaten/plan to eat

  4 – Used for bait/plan to use for bait

  5 – Sold/plan to sell

  6 – Thrown back dead/plan to throw away

  7 – Other purpose

Samplers should remain on site until the last vessel known to be out fishing has returned (with the exception of overnight trips).

Validation of Vessel Activity and Inactivity (Effort)

Validation of vessel activity (or inactivity) is critical to determining compliance with logbook reporting requirements. Information on whether or not a vessel is in or out of port on a particular day can be matched with logbook records or hail out/hail in requirements to determine if vessel activity was accurately reported. To validate vessel activity and inactivity before reporting in the logbook reporting system, sites should be clustered into groups of sufficient size that all sites within the selected region may be visited within a 6 to 8 hour time period, including driving time. Site clusters should be selected each week within a month using simple random sampling, without replacement. For small states where all sites may be visited in a single day, sites may all be included in a single cluster that is validated each week.

During a scheduled vessel activity validation assignment, the field sampler should visit all sites within a selected vessel activity validation region and attempt to verify the fishing status for all vessels at each site within that region. The sampler should record the fishing status and time for each vessel on a Vessel Status Validation Form using the following codes:

1 – Vessel in

2 – Vessel out, charter fishing (must be verified)

3 – Unable to validate

4 – Vessel out, not charter fishing (must be verified)

5 – Vessel out, status unknown

If possible, the sampler should verify the fishing status with someone at the dock or in the booking booth. If unable to verify the fishing status of a vessel, the sampler should use code 5.

Dockside validation will also serve the secondary, and essential, function of collecting biological samples from the for-hire fishery. These samples are necessary to characterize the

catch for use in stock assessments and to monitor the health of the stocks. If practicable, the subcommittee recommends using observers on six-pack charter vessels. Additionally, VMS in conjunction with hail-out, hail-in to improve validation could be considered to improve validation and data quality, although at the expense of additional cost and reporting burden.

The subcommittee recommends use of an MRIP certified methodology for validation with the following elements: Gulf MRIP pilot study methodologies, including dockside validation of catch and vessel activity, and maintenance of site and vessel registries.

The following additional elements should also be considered:

- At-sea observer coverage; and,
- Fine-scale discard data, depths of capture, area fished, release mortality.

If VMS and hail in/hail out requirements are implemented, methods for validation could be modified as VMS technicians could validate when trips occur through vessel position coordinates.

4.7 Accountability measures

Procedures to ensure timely and accurate reporting of data are essential to the success of any program. Late or missing reports can reduce accuracy (recall bias), increase uncertainty (e.g., requires procedure to estimate catch from missing reports), and can prevent timely use of these data for science and management. The Councils recently began requiring electronic submission of reports from commercial seafood dealers. Dealer reports and the associated problems with late or missing reports were discussed at length by the Councils. The Councils now require timely submission (weekly, with reports submitted by the Tuesday following the previous fishing week) and that seafood dealers are *only* authorized to purchase seafood if they are up to date on previous reports. A similar procedure should be developed for charter vessels requiring submission of previous reports to maintain a valid charter vessel permit and take passengers on for-hire trips. The subcommittee recognizes that accountability will be challenging and costly to implement due to the mobility, turnover and sheer number of charter vessels.

The principle objective is to encourage compliance without issuing fines and/or penalties. However, the full range of potential accountability measures should be enumerated in consultation with NOAA General Counsel through development of management regulations and penalty schedules. Similar (or identical) reporting requirements should be established between the South Atlantic and Gulf of Mexico management regions that will ease reporting burden and aid in compliance. Extensive outreach, training (as necessary), positive messaging, and industry participation in the design of the data collection system should aid in reporting compliance and meeting the goals of the program.

The subcommittee recommends accountability measures and reporting requirements similar to those implemented for commercial seafood dealers in the southeast

region (i.e., weekly submission of trip level reports, including periods of no activity due Tuesday following each week). A charter vessel owner/operator would only be authorized to harvest or possess federally managed species if previous reports have been submitted by the charter vessel owner/operator and received by NMFS (NMFS) in a timely manner. Any delinquent reports would need to be submitted and received by NMFS before a charter vessel owner/operator could harvest or possess federally managed species from the EEZ or adjacent state waters.

4.8 Calibration with existing survey

Transitioning into the proposed program will require an upstart period of at least one year to conduct outreach and ensure a high level of compliance. **The subcommittee recommends dual survey methods (existing and new) for no less than three years.** This overlap in survey periods will provide a basis to calibrate the new census results to the historical catch and effort data from the existing charter vessel survey. Historical catch data are critical inputs for science (e.g., stock assessments) and management (e.g., season length) and implementation of a new system without calibration would compromise the value of the historical catch information. Additionally, implementation of the new program is likely to have start-up difficulties that require modification, as such, the *existing survey would not be expected to provide the best scientific information available (at least for the first year)* until the new program is deemed operational.

Data from the new program would not be expected to provide management advice during the first year of operation. Moreover, this would allow the possibility of an initial phase-in or limited implementation to identify and solve significant problems prior to implementation for all participants.

4.9 Should state permitted for-hire vessels be required to participate?

The subcommittee discussed the objectives of the proposed program (i.e., improved estimates of catch both in terms of timeliness and accuracy), as well as the importance of mandating participation from state permitted for-hire vessels. The possibility of state vessels landing federally managed species in state waters does exist but the magnitude of those landings is unknown at this time, but expected to be relatively small for most federally managed species. The difficulties in establishing rules to mandate state vessel participation may be too great and should not be a barrier to developing a reporting program for federally permitted vessels. However, incorporation of state vessels into the program should be a long-term objective that would aid in timeliness and accuracy of data from the entire for-hire fleet and could simplify validation protocols that would not require distinguishing between state and federally permitted vessels.

The subcommittee recommends that the Councils move forward with development of a reporting system that includes federally permitted for-hire vessels while also exploring ways to determine the impact of state permitted vessels on landings estimates of federally

managed species. Long term, the subcommittee recommends that both state and federally permitted charter vessels participate in this census to include the entire fleet of charter vessels harvesting federally managed species.

4.10 Program coordination

The subcommittee discussed that the success of the program requires a smooth and well-coordinated program throughout the region. This is to meet timeliness needs, improve accuracy (and precision), and minimize duplication of effort.

To this end, the subcommittee recommends that GulfFIN and ACCSP committees work jointly with end users (i.e., MRIP, SERO, SEFSC, HMS, and state agencies) to coordinate this new reporting program. Both quality control and quality assurance units in the program to ensure data meets required standards. A timeline for program implementation must be developed with the Councils, states, and other agencies.

4.11 Budgetary implications

The vision of the subcommittee is that the proposed census program may be funded through MRIP and incorporate MRIP certified validation and estimation procedures but operation would be decentralized from MRIP to regional and state entities through their FINs**. It is expected that the census approach recommended by this subcommittee would result in additional costs for monitoring compliance and validating trip activity. Additional infrastructure and personnel may be necessary to maintain and process these data.**

Electronic Logbook Costs

Cost estimates are an important component to the development of any new reporting program, and provide resource managers and scientists with a sense of how much funding is needed to support both implementation and maintenance of a program. Costs for electronic reporting may include: software development, reporting and/or monitoring hardware, monthly service fees, and personnel for data management, validation, and estimation. Costs are incurred both by the government, as well as fishermen who report these data. The following provides a summary of estimated costs for the electronic reporting program developed by the Technical Subcommittee. Cost estimates from existing programs and pilot studies, such as MRIP, the Southeast Headboat Survey, the commercial coastal logbook program, and the MRIP electronic logbook pilot study, are also provided for comparative purposes. Implementation of a new reporting program would require side-by-side comparative testing for calibration purposes, and those costs are not considered herein. Costs for observer coverage are also not included. Rather, costs are focused on the initial implementation, ongoing administration, data management, and statistical estimation of an electronic reporting program in the Gulf of Mexico and South Atlantic.

<u>Current and Pilot Study Program Costs</u>
The Marine Recreational Information Program (MRIP) is the primary source of charter for-hire data in the Southeast Region. MRIP collects catch and effort data from both state-licensed and

federally-permitted charter vessels from North Carolina through Mississippi. Charter vessel catch and effort data are also collected by the Louisiana Department of Fish and Wildlife and Texas Parks and Wildlife Department through creel surveys, and side-by-side comparison testing is planned for Louisiana in 2015. Annually, MRIP spends approximately $4.3 million dollars to conduct dockside sampling and validation in the Southeast Region (North Carolina to Louisiana) for both private and charter vessels. Costs for specifically conducting charter sampling were not estimated, as those costs are difficult to estimate due to a combination of factors (survey procedures, contractual pricing, fixed costs and staffing/administrative considerations), but obviously would be less than the overall costs indicated above. An additional $600 thousand dollars is spent conducting the for-hire telephone survey annually. A total of 3,920 charter vessels are currently included in the MRIP for-hire survey frame.

Headboat catch for 145 vessels is monitored through electronic logbooks by the SEFSC. A total of 13 federal, state, and contract personnel are involved in administering the program and monitoring fishing activity from North Carolina to Texas, including biological sampling and validation of reports of landings and effort. Costs for the program include salaries and benefits, vehicles, travel, supplies, and software development and maintenance. Total funding for the Southeast Headboat Survey is approximately $888 thousand dollars, which equates to $6,124 per vessel annually.

The SEFSC coastal logbook program for commercial fisheries is a paper-based logbook program, which obtains data from about 3,000 permit holders (vessels). Annually, the SEFSC spends $775 thousand dollars for data entry, personnel, printing, storage, software maintenance, and overhead for this program. These costs do not include Trip Interview Program sampling, which is used for validation and biological sampling of commercial landings. The costs also do not include compliance enforcement.

Lastly, MRIP conducted an electronic logbook pilot study in 2011. The study included 410 vessels from the Florida Panhandle and Port Aransas, Texas. Costs for the pilot program included $213.5 thousand dollars for start-up expenses, including a stakeholder workshop, software development, certified letters, outreach meetings, and working group meetings. Project expenses for logbook reporting and validation for one-year totaled $385.6 thousand dollars. These expenses included salaries and overhead for a full-time coordinator, a database manager, and four field staff. Expenses were also included for travel and training expenses, equipment, printing costs, at-sea observer passenger fares, and GSMFC administrative costs. The average cost per vessel was $1,340 for Texas vessels and $658 for Florida vessels. Many more vessels were concentrated in a small geographic area in the Florida Panhandle, resulting in lower costs relative to Texas. In-kind contributions from NMFS and state employees were not included for many staff who served on the project team for the pilot study and conducted analyses, customer service, and database management. Therefore costs presented in the final report are less than the true costs of the project. On average, the cost per vessel as reported in the pilot study was $911 after excluding observer passenger fares and paper-based logbook printing.

Table 1. Estimated Costs for an Electronic Logbook Program. Estimates are based on 2,555 federally permitted charter vessels. Headboat vessels are excluded from cost estimates, as well as vessels already possessing a commercial reef fish permit and VMS unit.

Activity	Cost Type	Estimated Expenses	Comments/Source
Software Development	Start-up (gov't)	$100,000	Costs for Web site/app development. These costs could be reduced if existing software applications (SE Headboat Survey or iSnapper) are used instead of any new software developed. However, modifications of data fields, data storage and data export procedures would be required to accommodate the increased number of vessels.
Hardware/database infrastructure	Start-up (gov't)	$25,000	Purchase of a server to store data.
Hardware/database maintenance	Reoccurring (gov't)	$20,000	There would be reoccurring costs for hardware/software and database maintenance.
Database manager(s) and administration	Reoccurring (gov't)	$150,000	Salaries and administrative costs for database management.
Certified Letters	Start-up, with period reoccurring compliance letters (gov't)	$15,858	2,643 vessels @ $6 per letter
Stakeholder Outreach Workshops	Start-up (gov't)	$30,000	15 meetings @ $2,000 per meeting
Field Samplers – Salaries, Benefits, and Overhead	Reoccurring (gov't)	$3,392,000	53 port agents @ 50 vessels per port agent. $64,000 for salary, benefits, and overhead per port agent – source SE Headboat Survey. If costs per vessel ($658-$1,340) from MRIP pilot study are used, then total costs range from $1.74 to $3.54 million.
Data Analyst(s) – Salary and Benefits	Reoccurring (gov't)	$215,000	1 Gulf and 1 South Atlantic analyst @ GS-13 salary + benefits
Training, Travel, and Equipment for Field Samplers	Reoccurring (gov't)	$158,700	~$60 per vessel – source MRIP pilot study; costs are higher for more remote areas vs. ports with large concentrations of vessels.
Enforcement and Compliance Monitoring – Enforcement officer salaries, benefits, and overhead.	Reoccurring (gov't)	$800,000	Data timeliness is critical for a logbook program. Additional compliance monitoring and enforcement for misreporting and non-compliance with reporting will be required. To properly conduct compliance an increase of 5 Enforcement Officers and 1 Supervisory Enforcement Officer are estimated to be needed.

VMS units (if required)	Start-up (gov't or industry)	$5,750,000 (low estimate) $7,750,000 (high estimate) (Reimbursement to fishermen for the purchase of VMS units may be available from NOAA Fisheries' Electronic Monitoring Grant Fund, but this money is currently not in hand and OLE would need to request funds through the budgetary process)	Currently 107 charter for-hire vessels have a commercial reef fish permit and VMS unit and another 145 vessels participate in the SE Headboat Survey. Approximately 2,500 charter for-hire vessels would need to obtain a VMS, if required. Costs for VMS units range from $2,300 to $3,800. Up to $3,100 is currently authorized for reimbursement.
VMS installation	Start-up (industry)	$500,000 (low estimate) $1,500,000 (high estimate)	2,500 vessels x $600 for marine technician to install VMS unit. Installation costs range from $200 to $600 depending upon proximity of vessel to marine electrician.
VMS personnel	Reoccurring (gov't)	$530,000	Salary and benefits for five VMS technical staff (monitor 500+ vessels each) and one OLE Helpdesk person.
VMS annual service charges	Reoccurring (industry)	$1,800,000	$60 per month per vessel; $720 annually per vessel x 2,500 vessels
VMS unit software	Reoccurring (gov't)	$50,000	If VMS units will report any unique information, units will need to have initial and periodically updated software installed at a cost up to $50,000.
Total Costs (w/o VMS)		$170,858 (Start-up) $4,735,700 (Reoccurring) $4,906,558 (Start-up + reoccurring)	
Total Costs (w/ VMS)		$6,420,858 (Start-up – low est.) $9,420,858 (Start-up – high est.) $7,115,700 (Re-occurring) $13,536,558 (Total – low est.) $16,536,558 (Total – high est.)	If VMS is required, some expenses for port sampling validation of fishing effort and enforcement compliance may be reduced.

SECTION 5. CHALLENGES

5.1 Calibration with existing survey

The subcommittee recommends the use of dual survey methods (existing and new) for no less than three years. This overlap in survey periods will provide a basis to calibrate the new census results to the historical catch and effort data from the existing charter vessel survey. Historical catch data are critical inputs for science (e.g., stock assessments) and management (e.g., season length) and implementation of a new system without calibration would compromise the value of the historical catch information. Additionally, implementation of the new program is likely to have start-up difficulties that require modification, as such, the *proposed census would not be expected to provide the best scientific information available (at least for the first year)* until the new program was deemed operational.

5.2 Reporting burden

Although frequent reporting with as short as practicable lags between end of fishing period and report submission is desirable, the burden of reporting on vessel operators is an important concern. Wherever feasible, the reporting burden should be minimized. Implementation of this new program would require additional reporting burden over the status quo. To mitigate this requirement, the subcommittee recommends reducing duplicate reporting (submission of reports to multiple agencies, possibly in different formats) to ease reporting requirements. For example, charter vessels selected for the current For-Hire telephone survey should be able to submit their data electronically satisfying the submission requirements for both programs.

5.3 Compliance

Ensuring compliance is likely the biggest barrier to achieving the objectives for this program; more timely data with improved accuracy and stakeholder confidence. The MRIP Gulf logbook pilot project was negatively affected by late or missing reports from participants. In a census program, this is detrimental to both timeliness and accuracy as complete catch estimates cannot be generated with missing reports. Late reporting also affects accuracy because of recall bias (i.e., difficult to remember what was caught several weeks earlier). In addition, an incomplete census will require an estimation procedure to account for un-reported landings that requires time and adds uncertainty to the final catch and effort estimates.

Adequate accountability measures are essential to achieving high compliance rates (i.e., 100% timely reporting). The subcommittee recommended an approach similar to the accountability measures recently developed for commercial seafood dealers and headboats. Briefly, commercial seafood dealers are only authorized (i.e., possess valid permit) to purchase seafood if their weekly purchase reports have been submitted. As is the case with headboat reporting, charter boats would not be allow to harvest or possess federally managed species from the EEZ or adjacent state waters untilprevious trip (including no activity) reports have been submitted. The effectiveness of this accountability measure is dependent of the capability of law

enforcement to enforce reporting requirements. **The subcommittee recommends consultation with the Office of Law Enforcement and NOAA General Counsel to explore the selection of appropriate and enforceable accountability measures.**

5.4 Collaboration with states

Individual States would be tasked with data collection and validation within their collective states. State requirements vary regarding reporting of fishery data with some states (e.g., South Carolina) requiring the submission of paper-based reporting. Other states (e.g., North Carolina) are progressing rapidly toward electronic logbooks with the other states within this range. **Long term**, **the subcommittee recommends that both state and federally permitted charter vessels participate in this census to include the entire fleet of charter vessels harvesting federally managed species.** In the near-term, implementation of electronic logbook reporting for the federally permitted for-hire fleet would substantially improve the data collection program but not depend on delays and uncertainties associated with requiring similar regulations for state-permitted vessels at this time. Consideration of only federally permitted vessels would ease the implementation of this process with the caveat that a large proportion of charter vessels would not be included in the census and their catch (and effort) would have to be estimated via other means that would reduce effectiveness of the census program. However, for state-permitted vessels, requiring electronic reporting without duplicate paper reporting may require legislative changes in some states (e.g., South Carolina) and there is uncertainty if or when this could be accomplished.