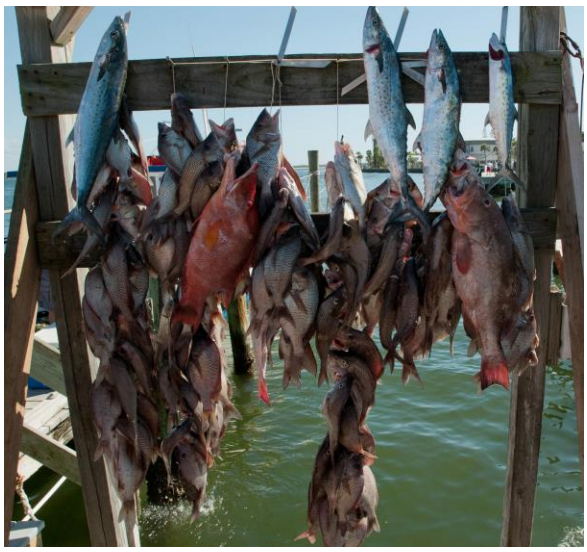
Modifications to Charter Vessel and Headboat Reporting Requirements



Generic Amendment to the Fishery Management Plans for the Reef Fish Resources of the Gulf of Mexico and Coastal Migratory Pelagic Resources in the Gulf of Mexico and Atlantic Region

**Including Environmental Assessment,
Fishery Impact Statement, Regulatory Impact Review,
and Regulatory Flexibility Act Analysis**

January 2017

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ENVIRONMENTAL ASSESSMENT COVER SHEET

Name of Action

Generic Amendment to the Fishery Management Plans for the Reef Fish Resources of the Gulf of Mexico and Coastal Migratory Pelagic Resources in the Gulf of Mexico and Atlantic Region: Modifications to Charter Vessel and Headboat Reporting Requirements

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Type of Action

( ) Administrative
(X) Draft

( ) Legislative
( ) Final

ABBREVIATIONS USED IN THIS DOCUMENT

ACL	annual catch limit
ACCSP	Atlantic Coastal Cooperative Statistics Program
AM	Accountability Measure
AP	Advisory Panel
Council	Gulf of Mexico Fishery Management Council
CEA	Cumulative Effect Analysis
CMP	Coastal Migratory Pelagic
DWG	deep-water grouper
EA	Environmental Assessment
EEZ	Exclusive Economic Zone
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EJ	Environmental Justice
ESA	Endangered Species Act
FMP	Fishery Management Plan
GMFMC	Gulf of Mexico Fisheries Management Council
GSMFC	Gulf States Marine Fisheries Commission
Gulf	Gulf of Mexico
GulfFIN	Gulf Fisheries Information Network
HAPC	Habitat Areas of Particular Concern
IFQ	individual fishing quota
Magnuson-Stevens Act	Magnuson-Stevens Fishery Conservation and Management Act
MMPA	Marine Mammal Protection Act
MRIP	Marine Recreational Information Program
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NOR	net operating revenue
NOS	National Ocean Service
OLE	Office of Law Enforcement
OY	Optimum Yield
PS	producer surplus
RA	Regional Administrator
RF	Reef Fish
RIR	Regulatory Impact Review
SAFMC	South Atlantic Fishery Management Council
Secretary	Secretary of Commerce
SEDAR	Southeast Data Assessment and Review
SEFSC	Southeast Fisheries Science Center
SMZ	Special Management Zone
SRD	Science and Research Director
SRHS	Southeast Region Headboat Survey
SSC	Scientific and Statistical Committee
SWG	shallow-water grouper

TPWD	Texas Parks and Wildlife Department
USCG	United States Coast Guard
VMS	vessel monitoring system

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1. INTRODUCTION

The Magnuson-Stevens Fishery Conservation and Management 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 information about catch, effort, and discards is necessary to achieve OY from federally managed fish stocks. The for-hire component of the recreational sector (i.e., charter vessels and headboats) harvests a substantial proportion of the annual catch limit (ACL) for several federally managed fish species in the Gulf of Mexico (Gulf). This amendment affects reporting requirements for vessels issued Gulf charter vessel/headboat permits under the Fishery Management Plans (FMPs) for Reef Fish Resources of the Gulf of Mexico (Reef Fish FMP) and Coastal Migratory Pelagic (CMP) Resources in the Gulf of Mexico and Atlantic Region (CMP FMP) (Figure 1.1.1).

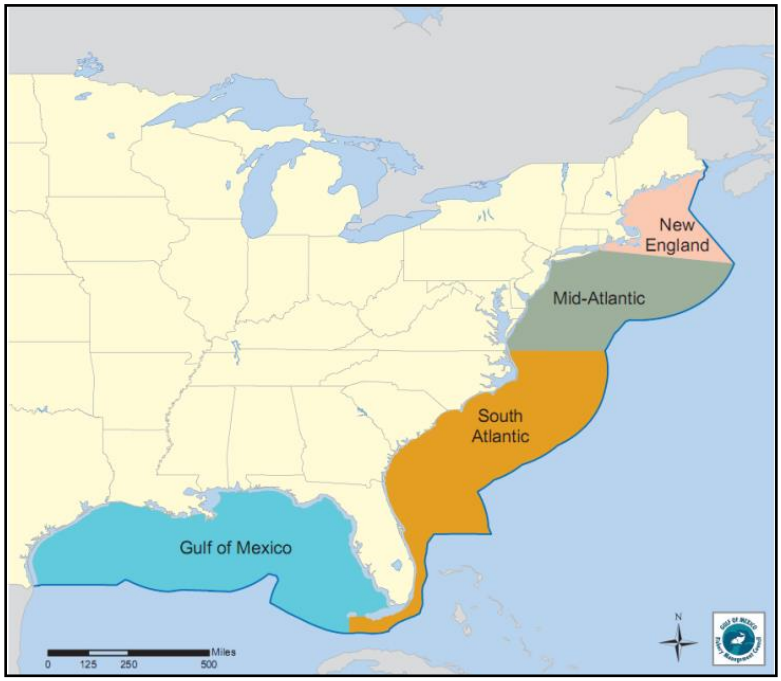


Figure 1.1.1. Jurisdictional boundaries of the Gulf (blue), South Atlantic (orange), Mid-Atlantic (green), and New England (peach) Fishery Management Councils.

1.1 Background

The Gulf of Mexico Fishery Management Council (Council) is considering alternatives that would require electronic reporting of information from for-hire vessels possessing Gulf charter/headboat reef fish or a Gulf charter/headboat CMP permit. The Council recognizes that improved data reporting in these fisheries could reduce the likelihood that ACLs are exceeded and accountability measures are triggered. Additional data elements could also be collected using electronic reporting that may improve estimates of bycatch and discard mortality rates.

Landings from for-hire vessels count towards the ACLs for reef fish and CMP species. The default system to estimate effort and harvest among charter vessels is the Marine Recreational Information Program (MRIP) For-Hire Survey. This survey includes a voluntary dockside intercept survey of landings and discards, while fishing effort is calculated based on a monthly phone sample of 10% of charter vessels operating in west Florida, Alabama, and Mississippi. Since 2014, Louisiana generates weekly estimates of catch and effort through their LA Creel program. Texas Parks and Wildlife Department conducts their own creel survey to estimate private and charter landings in Texas.

A subset of for-hire vessels that generally meet the criteria of a headboat (see below) are selected by the Science and Research Director (SRD) to report fisheries data via the Southeast Regional Headboat Survey (SRHS) administered by the Southeast Fisheries Science Center. This program focuses on the larger capacity for-hire vessels and collects vessel specific information about catch and effort. For the purpose of this amendment: Modifications to Charter Vessel and Headboat Reporting Requirements, **headboats** are federally permitted for-hire vessels that participate in the SRHS and **charter vessels** are federally permitted for-hire vessels that ***do not*** participate in the SRHS. This distinction is necessary as the generally accepted description of charter vessels do not adequately capture or describe all vessels participating in the for-hire sector. For example, the definitions noted above rely heavily on passenger capacity and payment method. In practice, some vessels with passenger capacity greater than six may operate as a charter vessel or headboat.

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 CFR. § 622.2"*

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 SRD to participate in the SRHS if it meets all, or a combination of, these criteria:

1) *Vessel licensed to carry greater than or equal to 15 passengers.*

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 vessels reporting landings to the SRHS by Gulf state between 2011 and 2015 are provided in Table 1.1.1. The number of vessels with a valid and renewable Gulf charter vessel/headboat permit (excluding vessels reporting landings to the SRHS) by homeport state from 2011 through 2015 are provided in Table 1.1.2.

Table 1.1.1. Number of vessels reporting landings to the SRHS by Gulf state, 2011-2015.

Year	AL	FL	LA	MS	TX	Total
2011	8	35	4	5	17	69
2012	8	35	4	5	16	68
2013	8	36	3	5	16	68
2014	7	37	2	5	16	67
2015	9	36	2	5	15	67

Source: NMFS SRHS database January 5, 2016.

Table 1.1.2. Number of vessels that held a valid and renewable Gulf charter vessel/headboat permit (excluding vessels reporting to the SRHS) by homeport state.

Year	AL	FL	LA	MS	TX	Non-Gulf	Total
2011	152	876	127	51	242	42	1421
2012	157	859	127	48	234	40	1397
2013	159	844	125	47	230	36	1373
2014	153	828	121	42	242	36	1355
2015	143	814	125	38	242	33	1328

Source: SERO SF-Permit Count database, March 2016. The SF-Permit Count database is updated yearly in March for the previous year. Note: The number of vessels is greater than the number of permits, as the database counts any vessel that held a permit of interest during that calendar year. The permits used to generate this query are the Gulf charter vessel /headboat permit for reef fish and coastal migratory pelagics, and the respective historical captain permits.

Recreational data collection and monitoring by MRIP is calculated in six, two-month 'waves' per year for all Gulf states except Louisiana and Texas. Texas reports recreational data in high (May 15 through November 20) and low (November 21 through May 14) activity periods and Louisiana reports weekly estimates of recreational catch and effort. This current combination of data collection and monitoring systems could be improved to assist with in-season monitoring of stocks with short recreational seasons. Increasing the reporting frequency along with enhanced data collection and validation could improve quota monitoring, stock assessments, and catch and discard estimates. The proposed changes in this amendment are expected to reduce uncertainty in catch (i.e., landings and discards) and effort data for for-hire component of the recreational sector, increasing the likelihood that OY would be achieved and ACL overages would be

avoided. The implementation of the electronic reporting program described in this document is contingent on NMFS obtaining sufficient funding for the program.

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 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

1.2 Purpose and Need

The *purpose* is to improve accuracy and timeliness of landings, discards, effort, and socio-economic data of federally permitted for-hire vessels participating in the Gulf reef fish and CMP fisheries.

The *need* for this action is to improve management and monitoring of the Gulf reef fish and CMP fisheries.

1.3 History of Management

Reef Fish Fishery

The following amendments to the Reef Fish FMP contain actions that pertain to the for-hire component of the recreational 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/Amendment 14 to the CMP FMP established a three-year moratorium on the issuance of charter vessel/headboat permits for Reef Fish and CMP in the EEZ of the Gulf. The purpose of this moratorium is to limit future expansion in the recreational for-hire fisheries while the Council monitors the impact of the moratorium and considers the need for a more comprehensive effort management system for the for-hire fleet. NMFS' promulgation of the regulations (67 FR 43558, June 28, 2002) implementing Reef Fish Amendment 20/CMP Amendment 14 established an effective date of December 26, 2002, for-hire operators in the Gulf EEZ to have a valid limited access "moratorium permit," in place of the prior open access charter vessel/headboat permit. From this date, limited access permits would be required for for-hire vessels to legally engage in fishing activities in the Gulf EEZ.

On December 17, 2002, NMFS published an **Emergency Rule** (67 FR 77193) that deferred implementation of the permit moratorium from December 26, 2002 until June 16, 2003, because the final rule implementing the permit moratorium contained an error regarding eligibility. This error needed to be resolved before the moratorium could take effect to ensure that no qualified participants were wrongfully excluded. The emergency rule deferred the date for charter vessels and headboats to have a "moratorium permit" aboard until June 16, 2003, automatically extending the expiration date of valid or renewable "open access" permits for reef fish and CMP until June 16, 2003. The emergency rule included additional measures that extended deadlines for issuance of "moratorium permits" and the appeal process.

Amendment 25 (2006) to the Reef Fish FMP/Amendment 17 to the CMP FMP established a limited access system on charter vessel/headboat permits for reef fish and CMP that extended the 3-year permit moratorium. 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) to the Reef Fish FMP required that all vessels with federal commercial or charter vessel/headboat permit for reef fish comply with federal reef fish regulations, if those regulations are more strict than state regulations, when fishing in state waters.

Amendment 34 (2012) to the Reef Fish FMP addressed crew size limits for dual-permitted vessels. Dual-permitted vessels are vessels with both a charter/headboat reef fish permit and a commercial reef fish permit. The amendment eliminated the earned income qualification requirement for the renewal of commercial reef fish permits and increased the maximum crew size, when operating as a commercial vessel, from three to four.

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

CMP Fishery

The following amendments to the CMP FMP contained actions that pertained to the for-hire sector including permit and reporting requirements.

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

Amendment 14 (2002) to the CMP FMP/Amendment 20 to the Reef Fish FMP established a 3-year moratorium on the issuance of charter vessel/headboat permits. See discussion above for Amendment 20 to the Reef Fish FMP, which describes the amendment and corresponding Emergency Rule.

Amendment 17 (2006) to the CMP FMP/Amendment 25 to the Reef Fish FMP established a limited access system on charter vessel/headboat permits for 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.

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

Amendment 20A (2014) to the CMP FMP prohibited the sale of recreationally caught king and Spanish mackerel with the following exceptions: 1) the sale of fish caught on for-hire trips on dual-permitted vessels in the Gulf region, and 2) the sale of fish caught in state-permitted tournaments in both the Gulf and Atlantic regions and donated to a state or federally permitted dealer, as long as the proceeds from the dealer sale are donated to charity.

CHAPTER 2. MANAGEMENT ALTERNATIVES

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

This action only applies to vessels for which a Gulf charter/headboat reef fish or CMP permit has been issued, that ***do not*** participate in the Southeast Regional Headboat Survey (SRHS).

Alternative 1: No Action. The owner or operator of a charter vessel for which a Gulf of Mexico (Gulf) charter/headboat reef fish or Gulf charter/headboat coastal migratory pelagic (CMP) permit has been issued, or whose vessel fishes for or harvests such reef fish or CMP species in or from state waters adjoining the applicable Gulf of Mexico or Gulf 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.

Alternative 2: Require that the owner or operator of a charter vessel for which a Gulf charter/headboat permit for reef fish or CMP has been issued submit fishing records to the SRD weekly, or at intervals shorter than a week if notified by the SRD, via electronic reporting (via National Marine Fisheries Service (NMFS) approved hardware/software). Weekly = by Tuesday following each fishing week.

Alternative 3: Require that the owner or operator of a charter vessel for which a Gulf charter/headboat permit for reef fish or CMP has been issued submit fishing records to the SRD daily via electronic reporting via electronic reporting (via NMFS approved hardware/software). Daily = by noon (local time) of the following day.

Preferred Alternative 4: Require that the owner or operator of a charter vessel for which a Gulf charter/headboat permit for reef fish or CMP has been issued submit fishing records to NMFS for each trip via electronic reporting (via NMFS approved hardware/software) prior to arriving at the dock.

Note: For **Alternatives 2**, **3**, and **Preferred Alternative 4**, it is the intent of the Gulf of Mexico Fishery Management Council (Council) 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 in the *Federal Register*, among other appropriate means. During catastrophic conditions, the RA also has the authority to waive or modify reporting time requirements. Regarding timely reporting, 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. Unless there is a permanently affixed hardware on the vessel that records location information, a no fishing report would be required if no fishing took

place during the reporting period. Under **Alternatives 2** or **3**, this report must submitted at the time interval specified in alternatives. For trip level reporting under **Preferred Alternative 4**, the permit holder would be required to submit an electronic report stating that no fishing activity occurred for each 24 hour period. Under **Alternatives 2**, **3**, and **Preferred Alternative 4**, no fishing activity reports could be submitted up to 1 month in advance. If, after submitting an advance no fishing report, the owner or operator of a charter vessel for which a Gulf charter/headboat permit for reef fish or CMP has been issued makes a for-hire trip, a report must be submitted for that trip. These provisions are similar to existing and proposed requirements for headboats in Action 2.

Discussion

Charter vessels are operationally defined as for-hire vessels that carry six or fewer passengers that also meet the requirements of U.S. Coast Guard. To date, no charter 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 from Louisiana through the west coast of Florida. Recreational data collection and monitoring by MRIP is calculated in 6, 2-month 'waves' per year for all Gulf states except Louisiana and Texas. Texas reports recreational data in high (May 15 through November 20) and low (November 21 through May 14) activity periods and Louisiana reports weekly estimates of recreational catch and effort. Charter vessel operators are required to report all trips taken during selected weeks (effort only) whenever they are selected to participate in the MRIP 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, voluntary 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 the 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 (effort estimates) of the MRIP 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. The number of vessel operators contacted by telephone varies by wave (i.e., MRIP 2-month sample period), state, and region. It

should be noted that the percent of selected vessels that are unable to be contacted by phone is quite high in some strata.

Charter vessel catch and effort data in Texas are monitored by the Texas Parks and Wildlife Department's (TPWD) Coastal Creel Survey. This 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.

It is the intent of the Gulf Council to require any owner or operator of a charter vessel for which a Gulf charter/headboat for reef fish or CMP permit has been issued submit fishing records to the SRD. This fishing record would at a minimum include species caught, number kept, and number released thus including state and highly migratory species as currently required by MRIP (Table 2.2.1).

Proposed **Alternatives 2, 3,** and **Preferred Alternative 4** would all require the owner or operator of a charter vessel that has been issued a charter vessel/headboat permit for Gulf reef fish or Gulf CMP to submit fishing records electronically via a NMFS-approved hardware/software device at the specified frequencies. This in itself would add technological complexity compared to the status quo (**Alternative 1**). However, it is anticipated to greatly improve landings estimates for annual catch limit (ACL) monitoring and improve law enforcement's ability to validate self-reported catch data with the actual landings.

Alternative 2 would require the owner or operator of a vessel with a charter vessel/headboat permit for Gulf reef fish or Gulf CMP to submit fishing records the Tuesday following each fishing week 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, landings and discard data would be available for inclusion into the science and management process faster than under **Alternative 1** (No Action), potentially reducing the likelihood of exceeding ACLs. **Alternative 2** could also improve data accuracy as reports would be completed shortly after each trip, potentially reducing problems associated with recall errors.

Alternative 3 would require vessel owners or operators with a charter vessel/headboat permit for Gulf reef fish or Gulf CMP to submit a report each day. This report would be submitted electronically and received by NMFS by noon local time the following day. **Alternative 3** could further reduce the likelihood of exceeding ACLs with reduced recall error compared to **Alternative 1** (No Action) and **Alternative 2**. However, **Alternative 3** would add additional burden and reduced flexibility for reporting compared to **Alternatives 1** (No Action) and **Alternative 2.**

Preferred Alternative 4 would require these owners or operators to submit a report for each trip. This report would need to be submitted electronically and received by NMFS prior to the vessel returning to the dock. If more than one trip occurred on a single day, an electronic report would need to be submitted before the vessel returns to the dock at the end of each trip. **Preferred Alternative 4** provides additional rigor to trip validation of catch and effort that is not possible with **Alternative 1** (No Action), **Alternative 2**, or **Alternative 3** by requiring reports to be submitted prior to arriving at the dock. In **Preferred Alternative 4**, the reported catch of a charter vessel can be verified by an enforcement or port agent when the vessel arrives at the

dock, reducing the likelihood of misreporting. However, **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. **Preferred Alternative 4** should improve data quality and accuracy, improve stakeholder confidence, and reduce uncertainty associated with these data when used in science or management applications. To accomplish trip level reporting, it anticipated that charter vessel operators would need to have a NMFS-approved electronic device on their vessel to submit the report.

The South Atlantic Fishery Management Council (South Atlantic Council) took final action at its December 2016 meeting on an amendment to require federally permitted charter vessels, while operating as a charter vessel to 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 and software). That amendment states that charter vessels possessing a Gulf charter vessel/headboat reef fish or CMP permit would be required to abide by the more stringent reporting requirements regardless of where the vessel is fishing (i.e., Gulf or South Atlantic waters). The intent of the South Atlantic Council is to prevent vessels from having to report to multiple systems. Because the Gulf reporting requirements would be for trip level reporting, the Gulf requirements would be more stringent and any vessel that possesses a Gulf charter vessel/headboat reef fish or CMP permit would be required to report in accordance to the Gulf reporting requirements, even if they are fishing in South Atlantic waters. However, Greater Atlantic Regional Fishery Office (GARFO) permitted vessels possessing a Gulf charter/headboat reef fish or CMP permit would be required to submit two fishing records: once in accordance with GARFO requirements and once in accordance with the Gulf charter/headboat reef fish or CMP permit reporting requirements. However, not many vessels travel the distance to fish in both areas. In the future the systems and fishing record requirements may become exchangeable but until such time these vessels would be required to report twice.

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

This action only applies to vessels for which a Gulf charter/headboat reef fish or CMP permit has been issued, that ***participate*** in the SRHS.

Alternative 1: No Action. The owner or operator of a headboat for which a Gulf charter/headboat reef fish or CMP permit has been issued, or whose vessel fishes for or harvests such reef fish or CMP species in or from state waters adjoining the applicable Gulf of Mexico or Gulf 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 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. Information to be reported is indicated on the form and its accompanying instructions.

Alternative 2: Require that the owner or operator of a federally permitted headboat for which a Gulf charter/headboat permit for reef fish or CMP has been issued submit fishing records to the SRD weekly, or at intervals shorter than a week if notified by the SRD, via electronic reporting (via National Marine Fisheries Service (NMFS) approved hardware/software). Weekly = by Tuesday following each fishing week.

Alternative 3: Require that the owner or operator of a federally permitted headboat for which a Gulf charter/headboat permit for reef fish or CMP has been issued submit fishing records to the SRD daily via electronic reporting via electronic reporting (via NMFS approved hardware/software). Daily = by noon (local time) of the following day.

Preferred Alternative 4: Require that the owner or operator of a federally permitted headboat for which a Gulf charter/headboat permit for reef fish or CMP has been issued submit fishing records to NMFS for each trip via electronic reporting (via NMFS approved hardware/software) prior to arriving at the dock.

Note: For **Alternatives 2**, **3**, and **Preferred Alternative 4**, it is the intent of the Council that during catastrophic conditions the use of paper forms for basic required reporting may be authorized by the RA through publication of timely notice in the *Federal Register*, among other appropriate means. During catastrophic conditions, the RA also has the authority to waive or modify reporting time requirements. Regarding timely reporting, 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. Unless there is a permanently affixed hardware on the vessel that records location information, a no fishing report would be required if no fishing took place during the reporting period. Under **Alternatives 2** or **3**, this

report must submitted at the time interval specified in alternatives. For trip level reporting under **Preferred Alternative 4**, the permit holder would be required to submit an electronic report stating that no fishing activity occurred for each 24 hour period. Under **Alternatives 2**, **3**, and **Preferred Alternative 4**, no fishing activity reports could be submitted up to 1 month in advance. If, after submitting an advance no fishing report, the owner or operator of a charter vessel for which a Gulf charter/headboat permit for reef fish or CMP has been issued makes a for-hire trip, a report must be submitted for that trip.

Discussion

Historically, headboats selected by the SRD submitted paper form fishing reports. Beginning January 1, 2013, headboat owners/operators that are selected by the SRD are required to submit electronic reports. Headboat owner or operators selected by the SRD 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. 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. The obligation to report, if selected by the SRD, is reinforced annually via certified letter to each permit holder.

The SRHS, which is administered by the NMFS Southeast Fisheries Science Center, currently includes 67 large capacity headboats operating in the Gulf for 2015 (i.e., Texas through west Florida). Vessels included in the SRHS are required to submit electronic fishing records of catch and effort data at weekly intervals to NMFS (Table 2.2.1). A federally permitted headboat owner must set up an account to report electronically through the approved NMFS SRHS reporting platform (https://srhselog.com). Once an account has been established the permit holder is able to submit trip reports via web portal or mobile application (cell phone or tablet).

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

If selected by the SRD, **Alternative 1** (No Action) would continue to require the owner or operator of a federally permitted headboat with a Gulf charter/headboat for reef fish or CMP permit to submit electronic fishing reports weekly (or at intervals less than a week if requested by the SRD), due 7 days after the end of each week (Sunday). This requirement was implemented through the Framework Action to Modify Headboat Reporting Requirements in the Gulf and South Atlantic (GMFMC 2013b).

Alternative 2 would require the owner or operator of a federally permitted headboat with a Gulf charter/headboat for reef fish or CMP permit to report weekly (or at intervals shorter than a week if notified by the SRD) via electronic reporting using NMFS approved hardware/software (see Action 4). The difference between **Alternative 1** (No Action) and **Alternative 2** is the difference in the delay between the end of the fishing week on Sunday in **Alternative 1** (No Action) and Tuesday in **Alternative 2** and report submission. **Alternative 1** (No Action) allows 7 days to prepare and submit reports while **Alternative 2** would allow only 2 days. **Alternative 2** is anticipated to improve landings and discard data compared to **Alternative 1**. Trip data would be available to the science and management process faster, potentially reducing the likelihood of exceeding ACLs. **Alternative 2** could also improve accuracy as reports would be completed sooner (as compared to **Alternative 1** (No Action)) after each trip, reducing problems associated with recall errors. However, **Alternative 2** would reduce the flexibility of headboat operators regarding the timing of report preparation and this could be burdensome during peak season when the number of trips, passengers, and catch are greatest.

Alternative 3 would require the owner or operator of a federally permitted headboat with a Gulf charter/headboat for reef fish or CMP permit to submit a daily, electronic report that would need to be received by NMFS by noon the day following fishing. **Alternative 3** could further reduce the likelihood of exceeding ACLs and reduce recall error compared to **Alternative 1** (No Action) or **Alternative 2**. However, **Alternative 3** would add additional burden and reduced flexibility in comparison to **Alternative 1** (No Action) or **Alternative 2.**

Preferred Alternative 4 would require the owner or operator of a federally permitted headboat with a Gulf charter/headboat for reef fish or CMP permit to submit an electronic report for each trip that would need to be received by NMFS prior to returning to the dock. **Preferred Alternative 4** would offer the greatest ability to prevent ACL overages and add additional rigor to trip validation of catch and effort that is not possible with **Alternative 1** (No Action), **Alternative 2**, or **Alternative 3**. In **Preferred Alternative 4**, the reported catch can be verified by an enforcement agent when the vessel arrives at the dock, reducing the likelihood of misreporting. However, **Preferred Alternative 4** offers headboat operators the least flexibility in how and when they prepare and submit their trip reports and could be burdensome during periods of peak activity or inclement weather. **Preferred Alternative 4** should improve data quality and accuracy, improve stakeholder confidence, and reduce uncertainty associated with these data when used in science or management applications.

2.3 Action 3: Trip Notification and Reporting Requirements

Alternative 1: No Action. There are currently no trip notification requirements. A reef fish dual-permitted vessel (i.e., possessing a federal commercial reef fish and a federal for-hire permit) is required to submit a trip notification and declare the intent of the trip.

Hail out

Preferred Alternative 2: Prior to departing for each for-hire trip, a vessel is required to declare (hail out) a trip including the expected return time and landing location. (Technical Committee Recommendation)

Preferred Option a: Charter vessels

Preferred Option b: Headboats

IPT Recommendation for Alternative 2: Prior to departing for any trip, the owner or operator of a vessel issued a charter vessel/headboat permit for Gulf reef fish or Gulf CMP is required to declare (hail out) the type of trip (e.g., for-hire or other trip). When departing on a for-hire trip they must include the expected return time and landing location.

Hail in

Preferred Alternative 3: Prior to arriving at the dock/port at the end of each for-hire trip, require the vessel operator to hail in and submit fishing records via electronic reporting. (Technical Committee Recommendation)

Preferred Option a: Charter vessels

Preferred Option b: Headboats

IPT Recommendation for Alternative 3: Prior to arriving at the dock/port at the end of each for-hire trip, the owner or operator of a vessel issued a charter vessel/headboat permit for Gulf reef fish or Gulf CMP is required to hail in and submit fishing records via NMFS approved hardware/software as determined in Action 4.

Note: The NMFS would develop the specific details of how the system would operate and would provide the Council the opportunity to have input into the system design. If the Council selects a vessel monitoring system (VMS) as preferred, the hail out reporting requirement could be accomplished using the VMS unless an alternative mechanism is approved by the NMFS. An approved emergency system would need to be developed if the VMS or any other selected system is non-operational. Based on the preferred alternative in Action 4, NMFS would need to determine an approved method.

Discussion

Action 3 considers adding a requirement to provide a notification to NMFS declaring the intent to initiate a for-hire trip, return from a for-hire trip, or both. This action is anticipated to provide better effort estimates and validation process than the current effort survey program for charter vessels (MRIP phone survey). This action is also anticipated to better inform law enforcement officers when a for-hire vessel is leaving the dock as well as the type of trip. Currently, federally permitted for-hire vessels do not have any trip notification requirements (**Alternative 1**). As

described in Actions 1 and 2, activity of federally permitted for-hire vessels are monitored via the SRHS (headboats), MRIP for-hire survey, LA Creel (Louisiana), and the TPWD for-hire survey (Texas).

Preferred Alternative 2 would require for-hire vessel operators to declare the type of trip they intend to take to NMFS prior to leaving the dock. **Preferred Alternative 2 Option a** would apply to charter vessels and **Preferred Alternative 2 Option b** would apply to headboats. **Preferred Alternative 2 Options a** and **b** would require for-hire vessel operators to declare an expected end time and landing location for each trip to NMFS prior to leaving the dock. If approved, it is anticipated that **Preferred Alternative 2 Options a** and **b** would provide a more accurate effort estimation than **Alternative 1** because it would validate fishing trips and trip length on an individual vessel basis (a census instead of an estimate). **Preferred Alternative 2** would provide a greater level of resolution for estimating fishing effort than the current data collection programs for charter vessels (**Option a**) and headboats (**Option b**). After calibration with catch data using the current methodology, this additional resolution could decrease uncertainty in the projected season lengths and aid the Council and NMFS in making better informed management decisions.

Preferred Alternative 3 Option a would apply to charter vessels and **Preferred Alternative 3 Option b** would apply to headboats, and would require notification and submission of the required fishing reports prior to arriving at the dock/port. The submission of the required fishing report could by itself meet the hail in requirement. A hail in requirement would improve validation and enforcement by verifying the operator of headboat or charter vessel went on a fishing trip as well as providing information on the length of the trip. **Preferred Alternative 3 Options a** and **b** provide an opportunity for law enforcement and port agents to plan when and where to conduct dock-side samples which is expected to improve validation and accuracy of landings reports. Under **Preferred Alternative 2** and **Preferred Alternative 3,** the reporting burden on vessel operators would be increased relative to **Alternative 1** (No Action); however, the Council's selection of **Alternative 2** and **3** as preferred could be used to aid in the prioritization of dock-side intercepts that could further improve catch and effort fishery data from for-hire vessels.

In 2016, there were 166 dual permitted vessels (i.e., issued both a Gulf commercial reef fish and a Gulf charter vessel/headboat permit for Gulf reef fish or Gulf CMP) in the Gulf. The following is an example of the hail out and hail in requirements for the owner or operator of vessel that has been issued a commercial permit for Gulf reef fish, regardless of whether the vessel has also been issued a charter vessel/headboat permit (referred to a dual-permitted vessel) and is under charter. The owner or operator of a vessel with a commercial reef fish permit must ensure that such vessel has an operating VMS, approved by NMFS for use in the Gulf reef fish fishery, on board at all times whether or not the vessel is underway, unless exempted by NMFS under the power-down exemption. Prior to departure for each commercial trip, an owner or operator must report to NMFS any fishery the vessel will participate in on that trip and the specific type(s) of fishing gear, using NMFS-defined gear codes, that will be on board the vessel. This information may be reported to NMFS using the toll-free number or via an attached VMS terminal. The owner or operator of a vessel landing individual fishing quota (IFQ) groupers or tilefishes is also responsible for ensuring that NMFS is contacted at least 3 hours, but no more than 24 hours, in advance of landing to report the time and location of landing, estimated grouper and tilefish

landings in pounds gutted weight for each share category, vessel identification number (Coast Guard registration number or state registration number), and the name and address of the IFQ dealer(s) where the groupers or tilefishes are to be received. The vessel must land within 1 hour after the time given in the landing notification.

2.4 Action 4: Hardware/Software Requirements for Reporting

Alternative 1: No Action. There are currently no hardware or software reporting requirements for federally permitted for-hire vessels. Headboats submit their electronic reports via an internet website and/or mobile application reporting platform although this does not require at-sea reporting or the use of specific device to submit the report.

Preferred Alternative 2: Require vessel operators to submit fishing records via NMFS approved hardware/software with minimum archived GPS capabilities that provides vessel position. (Technical Committee Recommendation).

Preferred Option a: Charter vessels
Preferred Option b: Headboats

IPT Recommendation for Alternative 2: Require vessel operators to submit fishing records via NMFS approved hardware/software with GPS capabilities that, at a minimum, archive vessel position data to NMFS. **The GPS portion of the hardware is permanently affixed to the vessel**.

Option a: Charter vessels
Option b: Headboats

Alternative 3: Require vessel operators to submit fishing records via NMFS approved hardware/software with minimum real-time GPS capabilities that provides vessel position.

Option a: Charter vessels
Option b: Headboats

IPT Recommendation for Alternative 3: Require vessel operators to submit fishing records via NMFS approved hardware/software with GPS capabilities that, at a minimum, provide real-time vessel position data to NMFS. **The GPS portion of the hardware is permanently affixed to the vessel**

Option a: Charter vessels
Option b: Headboats

Alternative 4: Require vessel operators to submit fishing records via NMFS approved vessel monitoring system hardware/software that provides vessel **position and is permanently affixed to the vessel**.

Option a: Charter vessels
Option b: Headboats

IPT Recommendation for Alternative 4: Require vessel operators to submit fishing records via NMFS approved vessel monitoring system hardware/software that provides vessel position data to NMFS. **The antenna and junction box are permanently affixed to the vessel.**

Option a: Charter vessels
Option b: Headboats

Note: NMFS would develop the specific details of how the system would operate and would provide the Council the opportunity to have input into the system design.

Discussion

The NMFS southeast region does not currently have any approved hardware/software for at-sea electronic reporting for federally permitted for-hire vessels, unless they are a dual-permitted vessel. However, numerous devices and reporting technology are available and have been used in pilot and experimental programs in the southeast region. Action 4 considers the types of devices that would be allowed to report fisheries data including the location data collected by the reporting device. A compilation of the costs, benefits, and considerations are in Figure 2.4.1.

Alternative 1 would maintain the current self-reporting systems in place; however, this would be more burdensome if fishing records must be submitted for each trip prior to arriving at the dock (Preferred Alternative 4 in Action 1 and Preferred Alternative 4 Action 2). Although headboats currently report via a web-based system, an onboard electronic device would be necessary to report before landing. This is possible once a federally permitted headboat owner sets up an account to report electronically through the approved NMFS SRHS reporting platform (https://srhselog.com); however, this process and platform has not been established for charter vessels. Therefore, **Alternative 1** (No Action) would not be a reasonable alternative for charter vessels and would not allow the same level of trip validation if a cell phone or tablet is used unless some portion of the hardware such as the antenna is permanently affixed to the vessel.

Preferred Alternative 2 would authorize the use of a NMFS-approved electronic device with archived GPS capabilities (e.g., cellular based device) to record and later transmit specific location information (latitude/longitude) along with required fisheries information prior to returning to the dock. The type of device envisioned in **Preferred Alternative 2** would be a cellphone or similar type instrument and would need to be compatible with the vessel's GPS device. However, some areas do not have cellular service even at the dock, so those vessels would likely need a satellite-enabled device to submit records before landing. **Preferred Alternative 2** sets a minimum standard for GPS capabilities; any NMFS approved electronic device that provides additional GPS capabilities (e.g., real-time GPS with VMS) could also be used. However, it is important to note that the greater number of device types allowed, the longer it would take to develop all the forms and delivery systems, and the more money it would potentially cost the agency. Further, vessels with a device that only archives location information would need some other means of submitting fishing records before landing, as required under Preferred Alternative 4 in Actions 1 and 2.

At the October 2016 Council meeting the Council selected **Alternative 2** as the preferred alternative. The Council determined that this alternative represents the minimum requirement as recommended by the Technical Committee and Ad Hoc Red Snapper Charter For-hire Advisory Panel. Therefore, if owners or operators of a charter vessel or headboat for which a Gulf charter/headboat for reef fish or CMP permit has been issued already possess a VMS (**Alternative 4**) then they can choose to use VMS hardware if it is on the approved NMFS list of devices.

Alternative 3 would require the use of a device that could record location data and report in real-time, worldwide if necessary. This could be a tablet or some other type of portable device that meets the minimum real-time location recording requirement. In comparison to **Preferred Alternative 2,** the device used under **Alternative 3** would provide enhanced reporting flexibility

and enhance safety at sea due to real time location information. However, this option could be more expensive than **Preferred Alternative 2**. Also, a device that is not affixed to the vessel could allow vessel operators to misrepresent their location; for example, the device could remain on land while the vessel is fishing, providing erroneous effort information and circumventing monitoring and validation. Like **Preferred Alternative 2**, any device that only transmits location information would require the vessel operator to have some other means of submitting fishing records before landing, as required under Preferred Alternative 4 in Actions 1 and 2.

Alternative 4 would require the use of a VMS unit that has the antennae and junction box permanently affixed to the vessel, similar to the units used on commercial vessels in the Gulf. The VMS unit could be used for hail out and hail in, as well as recording location. These units are the most expensive of the devices considered in this action but would be a robust and proven platform for at-sea reporting. Several VMS unit designs have already been approved by NMFS and some for-hire vessels already use VMS. Commercial reef fish vessels are required to a have VMS unit onboard for enforcement purposes; VMS units can also be used for pre-landing notifications to the IFQ system. The headboat collaborative used VMS units for reporting, and an example of how that VMS unit worked is in Appendix G. A VMS unit could be used to submit fishing records before landing, as required under Preferred Alternative 4 in Actions 1 and 2. As with the commercial sector, units must be powered on and functioning at all times, except that a power-down exemption would be developed for vessels in dock for long periods of time.

For **Alternatives 2-4, Option a** would require charter vessels to use a NMFS-approved hardware device and **Option b** would require use of this device for headboats. Currently, NMFS-approved electronic devices are not required for either fleet. Headboats report electronically through web-based system using a computer or other device connected to the internet. Once an account has been established, the permit holder is able to submit trip reports via web portal or mobile application (cell phone or tablet). Regardless of the type of device used to transmit catch and location data, all information received by NMFS would be confidential (see Magnuson-Stevens Section 402(d)).

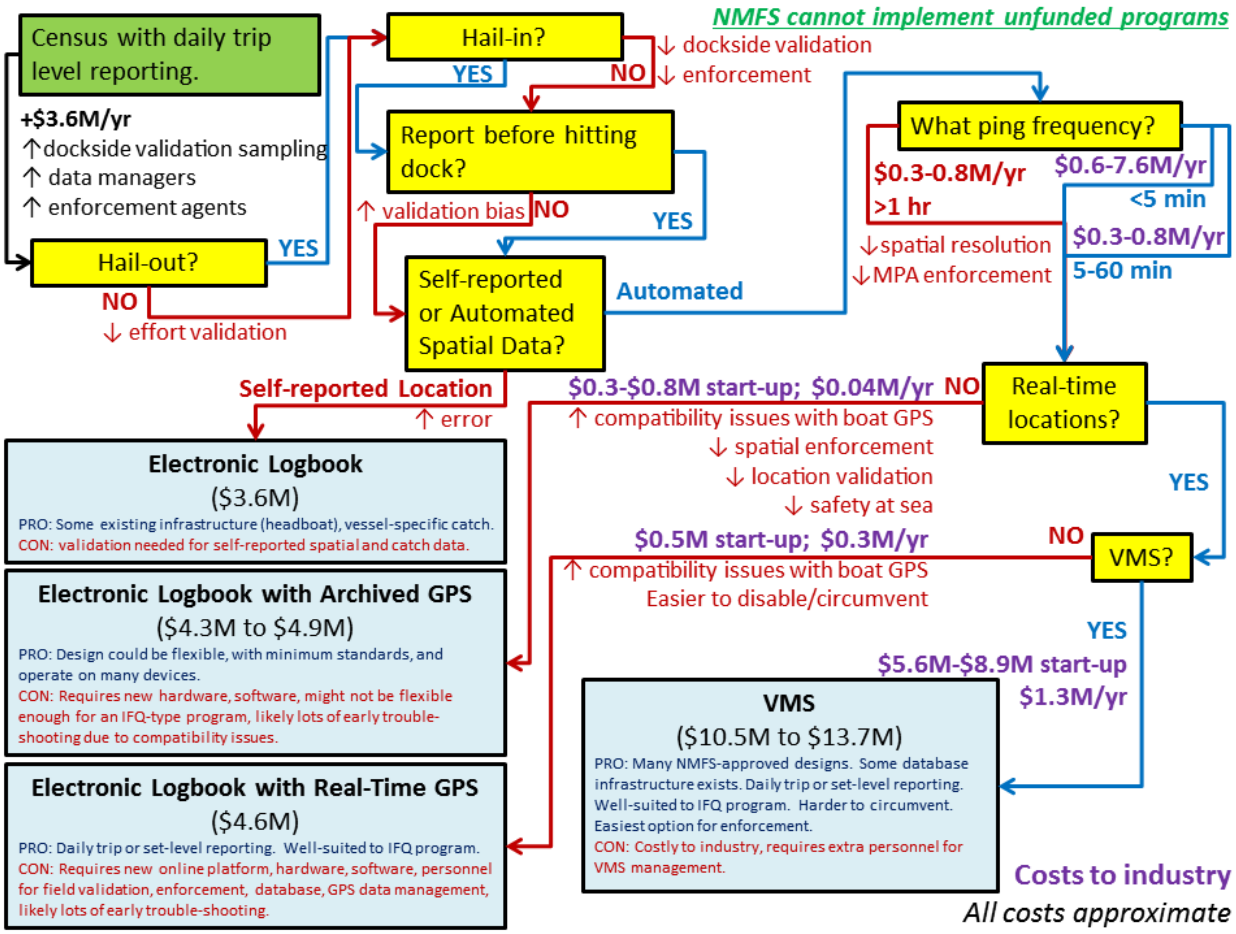


Figure 2.4.1. Flow chart of reporting options reflecting alternatives for hardware software requirements and estimated costs.

CHAPTER 3. AFFECTED ENVIRONMENT

3.1 Description of the Physical Environment

3.1.1 Reef Fish

Habitat for Reef Fish Species

The Gulf of Mexico (Gulf) has a total area of approximately 600,000 square miles (mi^2) (1.5 million square kilometers (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 2013) 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 Gulf of Mexico Fishery Management Council (GMFMC 2011) available at: http://www.gulfcouncil.org/docs/amendments/Final%20Generic%20ACL_AM_Amendment-September%209%202011%20v.pdf.

Essential Fish Habitat (EFH) for Reef Fish Species

Generic EFH Amendment 3 (GMFMC 2005) addressed EFH including the physical environment for Gulf reef fish and CMP species, Habitat Area of Particular Concern (HAPCs), and adverse effects of fishing in the following fishery management plans of the Gulf Reef Fish Resources, Red Drum, and Coastal Migratory Pelagics. Generic Amendment 3 (GMFMC 2005), is hereby incorporated by reference for addressing EFH, HAPCs, and adverse effects of fishing in the reef fish fishery. Further information describing environmental sites of special interest are discussed below in Chapter 3.1.3. Amendment 32 (GMFMC 2011b) also describes environmental sites of special interest relevant to the reef fish fishery including gear restricted areas, area closures, and HAPCs.

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 reef fish fishery. Further information describing environmental sites of special interest are discussed below in Chapter 3.1.3.

Amendment 32 (GMFMC 2011b) also describes environmental sites of special interest relevant to the reef fish fishery including gear restricted areas, area closures, and HAPCs. Gear restricted areas include the Longline/Buoy Gear Area Closure and Stressed Areas for Reef Fish; closed

areas such as Madison/Swanson and Steamboat Lumps Marine Reserves, The Edges seasonal area closure, and the Tortugas North and South Marine Reserves; and HAPCs such as the individual reef areas and bank HAPCs of the northwestern Gulf, the Middle Grounds HAPC, and the Pulley Ridge HAPC. There is one site listed in the National Register of Historic Places in the Gulf. This is the wreck of the *U.S.S. Hatteras*, located in federal waters off Texas.

3.1.2 Coastal Migratory Pelagics

The physical environment for coastal migratory pelagic species in this action is discussed below and in further detail in Amendment 18 (GMFMC and South Atlantic Fisheries Management Council (SAFMC) 2011). Amendment 18 discusses the Gulf and South Atlantic physical habitat for coastal migratory pelagics (CMP) species, and is hereby incorporated by reference. Amendment 18, is hereby incorporated by reference for addressing EFH, HAPCs, and adverse effects of fishing in the reef fish fishery. Further information describing environmental sites of special interest are discussed below in Chapter 3.1.3.

Essential Fish Habitat for CMP Species

The EIS for the original EFH and the FMP as revised in 2004 contains a description of the physical environments for CMP species. The physical environment for CMP species has been described in detail in the EIS for the Generic EFH Amendment. Generic Amendment 3 (GMFMC 2005), is hereby incorporated by reference for addressing EFH, HAPCs, and adverse effects of fishing in the reef fish fishery. Further information describing environmental sites of special interest are discussed below in Chapter 3.1.3.

Habitat Areas of Particular Concern (HAPC) for CMP Species

Generic Amendment 3 (GMFMC 2005), is hereby incorporated by reference for addressing EFH, HAPCs, and adverse effects of fishing for CMP species. Further information describing environmental sites of special interest are discussed below in Chapter 3.1.3.

3.1.3 Environmental Sites of Special Interest

The following area closures include gear restrictions that may affect targeted and incidental harvest of reef fish and CMP species.

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, and encompasses 72,300 square nautical miles (nm^2) or 133,344 km^2 (GMFMC 1989). Bottom longline gear is prohibited inshore of 35 fathoms (54.3 meters) during the months of June through August in the eastern Gulf (GMFMC 2009), but is not depicted in Figure 3.2.1.2.

Madison-Swanson and Steamboat Lumps Marine Reserves - No-take marine reserves (total area is 219 nm^2 or 405 km^2) sited based on gag spawning aggregation areas where all fishing is prohibited except surface trolling from May through October (GMFMC 1999; 2003).

The Edges Marine Reserve – All fishing is prohibited in this area (390 nm^2 or 1,338 km^2) from January through April and possession of any fish species is prohibited, except aboard a vessel in transit with fishing gear stowed as specified. The provisions of this do not apply to highly migratory species (GMFMC 2008).

Tortugas North and South Marine Reserves - No-take marine reserves (185 nm^2) cooperatively implemented by the state of Florida, National Ocean Service, the Gulf of Mexico Fishery Management Council (Council), and the National Park Service in Generic Amendment 2 Establishing the Tortugas Marine Reserves (GMFMC 2001). Only a small portion (13 nm^2) of the Tortugas North Marine Reserve is in federal waters while the entire Tortugas South Marine Reserve (54.5 nm^2) is in federal waters.

Reef and bank areas designated as HAPCs in the northwestern Gulf include - East and West Flower Garden Banks, Stetson Bank, and McGrail Bank. These are pristine coral areas protected by preventing the use of some fishing gear that interacts with the bottom and prohibited use of anchors (totaling 80.4 nm^2). Subsequently, three of these areas were established as marine sanctuaries (i.e., East and West Flower Garden Banks and Stetson Bank). Bottom anchoring and the use of trawling gear, bottom longlines, buoy gear, and all traps/pots on coral reefs are prohibited in the East and West Flower Garden Banks, McGrail Bank, and on significant coral resources on Stetson Bank (GMFMC 2005a). Sonnier Bank, MacNeil Bank, 29 Fathom, Rankin Bright Bank, Geyer Bank, Bouma Bank, Rezak Sidner Bank, Alderice Bank, and Jakkula Bank (totaling 183 nm^2) are other areas that have been designated as HAPCs but currently have no regulations associated with them. A weak link in the tickler chain of bottom trawls on all habitats throughout the Gulf exclusive economic zone (EEZ) is required. A weak link is defined as a length or section of the tickler chain that has a breaking strength less than the chain itself and is easily seen as such when visually inspected. An education program for the protection of coral reefs when using various fishing gears in coral reef areas for recreational and commercial fishermen was also developed.

Florida Middle Grounds HAPC - Pristine soft coral area (348 nm^2 or 644.5 km^2) that is protected by prohibiting the following gear types: bottom longlines, trawls, dredges, pots and traps (GMFMC and SAFMC 1982).

Pulley Ridge HAPC - A portion (101 nm^2) of the HAPC (2,300 nm^2 or 4,259 km^2) 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 is prohibited (GMFMC 2005a).

Alabama Special Management Zone - For vessels operating as a charter vessel or headboat, a vessel that does not have a commercial permit for Gulf reef fish, or a vessel with such a permit fishing for Gulf reef fish, fishing is limited to hook-and-line gear with no more than three hooks per line and spearfishing gear. Nonconforming gear is restricted to recreational bag limits, or for reef fish without a bag limit, to 5% by weight of all fish aboard (GMFMC 1993).

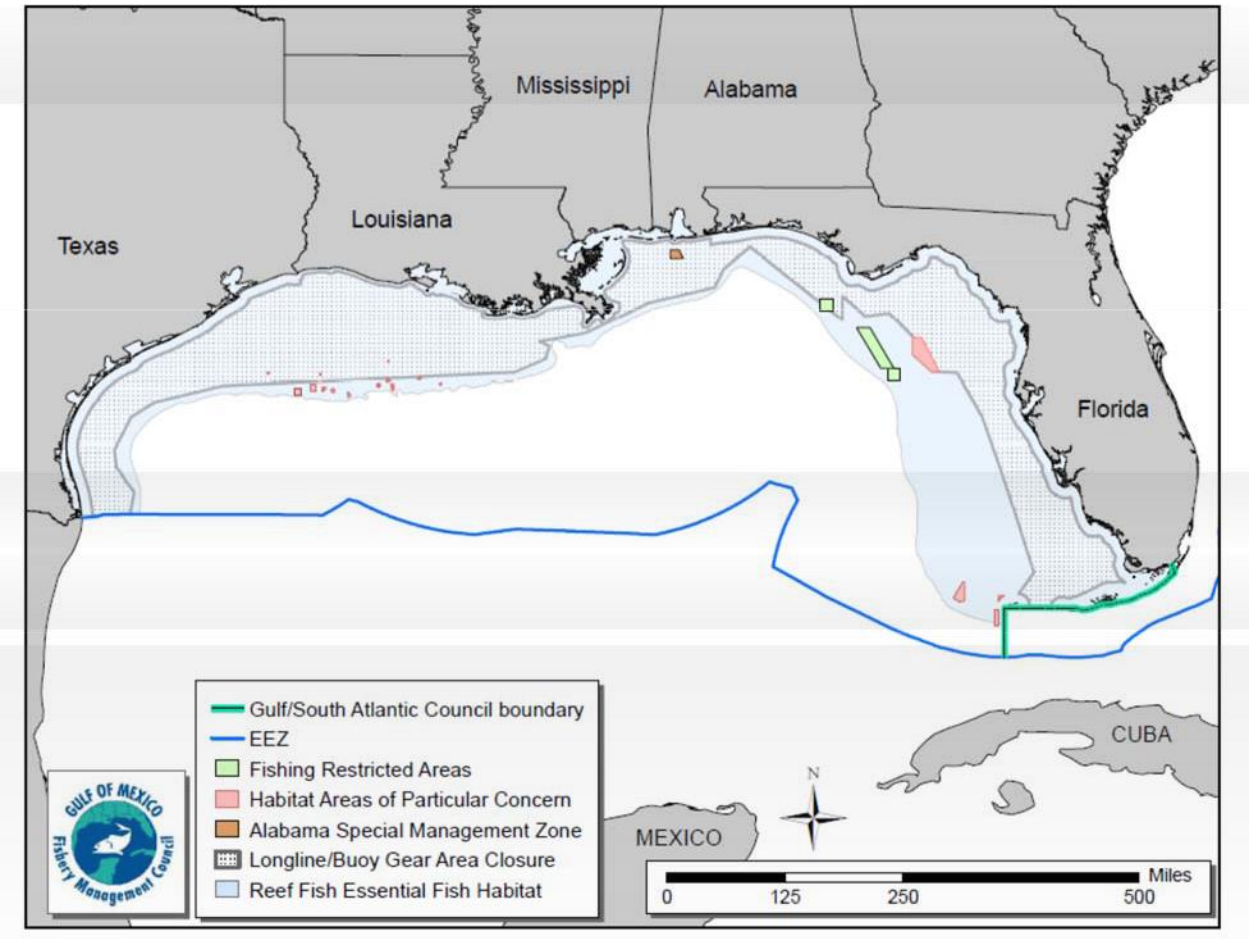


Figure 3.1.1. Composite map of most fishery management closed or gear restricted areas in the Gulf of Mexico.

Deepwater Horizon MC252 Oil Spill Incident

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 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 Deepwater Horizon 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.html.

3.1.4 Climate Change

Climate change projections show increases in sea surface temperature and sea level; decreases in sea ice cover; and changes in salinity, wave climate, and ocean circulation [Intergovernmental Panel on Climate Change (IPCC) http://www.ipcc.ch/]. These changes are likely to affect plankton biomass and fish larvae abundance that could adversely impact fish, marine mammals, seabirds, and ocean biodiversity. Kennedy et al. (2002) and Osgood (2008) have suggested global climate change could bring about temperature changes in coastal and marine ecosystems that, in turn, can influence organism metabolism; alter ecological processes, such as productivity and species interactions; change precipitation patterns and cause a rise in sea level that could change the water balance of coastal ecosystems; alter patterns of wind and water circulation in the ocean environment; and influence the productivity of critical coastal ecosystems such as wetlands, estuaries, and coral reefs. The National Oceanic and Atmospheric Administration's (NOAA) Climate Change Web Portal (http://www.esrl.noaa.gov/psd/ipcc/ocn/) indicates that the average sea surface temperature in the Gulf will increase by 1.2-1.4ºC for 2006-2055 compared to the average over the years 1956-2005. Burton (2008) speculated that climate change could cause shifts in spawning seasons, changes in migration patterns, and changes to basic life history parameters such as growth rates. The OceanAdapt model (http://oceanadapt.rutgers.edu/regional_data/) shows distributional trends both in latitude and depth over the time period 1985-2013. For some reef fish species such as the smooth puffer, there has been a distributional trend to the north in the Gulf. For other species such as red snapper and the dwarf sand perch, there has been a distributional trend towards deeper waters.

The distribution of native and exotic species may change with increased water temperature, as well as the prevalence of disease in keystone animals such as corals and the occurrence and intensity of toxic algae blooms. Hollowed et al. (2013) provided a review of projected effects of climate change on the marine fisheries and dependent communities. Integrating the potential effects of climate change into the fisheries assessment is currently difficult due to the time scale differences (Hollowed et al. 2013). The fisheries stock assessments rarely project through a time span that would include detectable climate change effects.

Greenhouse gases

The IPCC (http://www.ipcc.ch/) has indicated that greenhouse gas emissions are one of the most important drivers of recent changes in climate. Wilson et al. (2014) inventoried the sources of greenhouse gases in the Gulf from sources associated with oil platforms and those associated with other activities such as fishing. A summary of the results of the inventory are shown in Table 3.1.4.1. with respect to total emissions and from fishing. Commercial fishing and recreational vessels make up a small percentage of the total estimated greenhouse gas emissions from the Gulf (1.43% and 0.59%, respectively).

Table 3.1.4.1. Total Gulf greenhouse gas emissions estimates (tons per year) from oil platform and non-oil platform sources, commercial fishing and recreational vessels, and percent greenhouse gas emissions from commercial fishing and recreational vessels of the total emissions.*

Emission source	CO_2	Greenhouse CH4	Gas N_2O	Total CO_2e*
Oil platform	11,882,029	271,355	167	17,632,106
Non-platform	22,703,695	2,029	2,698	23,582,684
Total	34,585,724	273,384	2,865	41,214,790
Commercial fishing vessels	585,204	2	17	590,516
Recreational fishing vessels	244,483	N/A	N/A	244,483
% Commercial fishing vessels	1.69	> 0.01	0.59	1.43
% recreational fishing vessels	0.71	NA	NA	0.59

3.2 Description of the Biological/Ecological Environment

The biological environment in the areas affected in this amendment is defined by two components (Figure 3.2.1). Each component will be described in detail in the following sections.

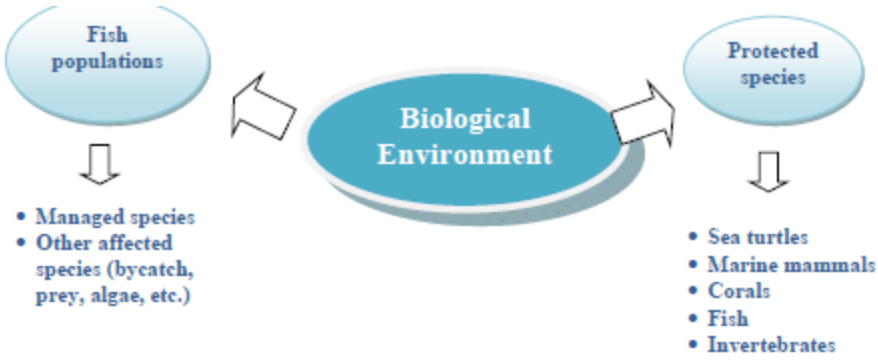


Figure 3.2.1. Two components of the biological environment described in this amendment.

3.2.1 Reef Fish

The species affected by this amendment are covered by the FMP for Reef Fish Resources. Many of the species in the Gulf 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.

Status of Reef Fish Stocks

The Reef Fish FMP currently encompasses 31 species (Table 3.2.1.1). Eleven other species were removed from the Reef Fish FMP in 2012 through the Generic Annual Catch Limit/Accountability Measures (ACL/AM) Amendment (GMFMC 2011c). Stock assessments and stock assessment reviews have been conducted for 13 species and can be found on the Council (www.gulfcouncil.org) and Southeast Data, Assessment and Review (SEDAR) (www.sefsc.noaa.gov/sedar) websites. The assessed species are:

- Red Snapper (SEDAR 7 2005; SEDAR 7 Update 2009; SEDAR 31 2013; SEDAR 31 Update 2014)
- Vermilion Snapper (Porch and Cass-Calay 2001; SEDAR 9 2006c; SEDAR 9 Update 2011a)
- Yellowtail Snapper (Muller et al. 2003; SEDAR 3 2003; O'Hop et al. 2012)
- Mutton Snapper (SEDAR 15A 2008; SEDAR 15A Update 2014)
- Gray Triggerfish (Valle et al. 2001; SEDAR 9 2006a; SEDAR 9 Update 2011b; SEDAR 43 2015)
- Greater Amberjack (Turner et al. 2000; SEDAR 9 2006b; SEDAR 9 Update 2010; SEDAR 33 2014b)
- Hogfish (Ault et al. 2003; SEDAR 6 2004b; SEDAR 37 2013)
- Red Grouper (NMFS 2002; SEDAR 12 2007; SEDAR 12 Update 2009; SEDAR 42 2015)
- Gag (Turner et al. 2001; SEDAR 10 2006; SEDAR 10 Update 2009; SEDAR 33 2014a)
- Black Grouper (SEDAR 19 2010)
- Yellowedge Grouper (Cass-Calay and Bahnick 2002; SEDAR 22 2011b)
- Tilefish (Golden) (SEDAR 22 2011a)
- Atlantic Goliath Grouper (Porch et al. 2003; SEDAR 6 2004a; SEDAR 23 2011)

The NMFS Office of Sustainable Fisheries updates its Status of U.S. Fisheries Report to Congress on a quarterly basis utilizing the most current stock assessment information. The most recent update can be found at: http://www.nmfs.noaa.gov/sfa/fisheries_eco/status_of_fisheries/). The status of both assessed and unassessed stocks as of the writing of this report is shown in Table 3.2.1.1.

Definition of Overfishing

In January 2012, the Generic ACL/AM Amendment (GMFMC 2011c) became effective. Under this amendment, in years when there is a stock assessment, overfishing is defined as the current fishing mortality rate reported in the assessment exceeding the maximum fishing mortality threshold. In years when there is no stock assessment, overfishing is defined as the catch exceeding the OFL. Because the overfishing threshold is now re-evaluated each year instead of

only in years when there is a stock assessment, this status for red grouper and other reef fish could change on a year-to-year basis.

Table 3.2.1.1. Species of the Reef Fish FMP grouped by family.

Common Name	Scientific Name	Stock Status
Family Balistidae – Triggerfishes		
Gray Triggerfish	*Balistes capriscus*	Overfished, no overfishing
Family Carangidae – Jacks		
Greater Amberjack	*Seriola dumerili*	Overfished, and overfishing
Lesser Amberjack	*Seriola fasciata*	Unknown
Almaco Jack	*Seriola rivoliana*	Unknown
Banded Rudderfish	*Seriola zonata*	Unknown
Family Labridae - Wrasses		
Hogfish (West Florida Stock)	*Lachnolaimus maximus*	Not overfished, no overfishing
Family Malacanthidae - Tilefishes		
Tilefish (Golden)	*Lopholatilus chamaeleonticeps*	Not overfished, no overfishing
Blueline Tilefish	*Caulolatilus microps*	Unknown
Goldface Tilefish	*Caulolatilus chrysops*	Unknown
Family Serranidae - Groupers		
Gag	*Mycteroperca microlepis*	Not overfished, no overfishing
Red Grouper	*Epinephelus morio*	Not overfished, no overfishing
Scamp	*Mycteroperca phenax*	Unknown
Black Grouper	*Mycteroperca bonaci*	Not overfished, no overfishing
Yellowedge Grouper	**Hyporthodus flavolimbatus*	Not overfished, no overfishing
Snowy Grouper	**Hyporthodus niveatus*	Unknown
Speckled Hind	*Epinephelus drummondhayi*	Unknown
Yellowmouth Grouper	*Mycteroperca interstitialis*	Unknown
Yellowfin Grouper	*Mycteroperca venenosa*	Unknown
Warsaw Grouper	**Hyporthodus nigritus*	Unknown
**Atlantic Goliath Grouper	*Epinephelus itajara*	Unknown
Family Lutjanidae - Snappers		
Queen Snapper	*Etelis oculatus*	Unknown
Mutton Snapper	*Lutjanus analis*	Not overfished, no overfishing
Blackfin Snapper	*Lutjanus buccanella*	Unknown
Red Snapper	*Lutjanus campechanus*	Overfished, no overfishing
Cubera Snapper	*Lutjanus cyanopterus*	Unknown
Gray Snapper	*Lutjanus griseus*	Unknown
Lane Snapper	*Lutjanus synagris*	Unknown
Silk Snapper	*Lutjanus vivanus*	Unknown
Yellowtail Snapper	*Ocyurus chrysurus*	Not overfished, no overfishing
Vermilion Snapper	*Rhomboplites aurorubens*	Not overfished, no overfishing
Wenchman	*Pristipomoides aquilonaris*	Unknown

Notes: * In 2013 the genus for yellowedge grouper, snowy grouper, and warsaw grouper was changed by the American Fisheries Society from *Epinephelus* to *Hyporthodus* (Page et al. 2013).
**Atlantic goliath grouper is a protected grouper and benchmarks do not reflect appropriate stock dynamics. In 2013 the common name was changed from goliath grouper to Atlantic goliath grouper by the American Fisheries Society to differentiate from the Pacific goliath grouper, a newly named species (Page et al. 2013).

Bycatch

The reef fish fishery is multi-species and handlines are a popular gear type. Handline gear is not selective; therefore, the vulnerability of the reef fish fishery to bycatch is high. Bycatch can negatively impact the ability of a stock to maintain itself at a level where fishing can be optimized.

Population and ecosystem effects resulting from changes in the bycatch of other species of fish and invertebrates are difficult to predict. As discussed in Amendment 30B (GMFMC 2008), snappers, greater amberjack, gray triggerfish and other reef fishes are commonly caught in association with red grouper. Three of these species are in rebuilding plans (red snapper, gray triggerfish, and greater amberjack) with the stocks improving. Regulatory discards significantly contribute to fishing mortality in all of these reef fish fisheries.

Various studies to help gauge bycatch from the directed reef fish fishery (commercial or recreational) have been implemented over time, including use of logbooks, port sampling, observers and fishery independent studies.

3.2.2 Coastal Migratory Pelagics

Amendment 18 (GMFMC and SAFMC 2011) discusses the Gulf habitat for Coastal Migratory Pelagic (CMP) species, and is hereby incorporated by reference. A summary of this information is provided below in Chapter 3.2.2.1 and 3.2.2.2.

Both the Gulf and Atlantic king mackerel were assessed by the Southeast Data, Assessment, and Review (SEDAR) process in SEDAR 38 (2014). The SEDAR 38 assessment determined that Gulf and Atlantic king mackerel were not overfished and were not experiencing overfishing.

Both the Gulf and Atlantic Spanish mackerel were assessed in SEDAR 28 (2013c, d). The assessments determined that Gulf and Atlantic Spanish mackerel were not overfished and were not experiencing overfishing.

3.2.2.1 King Mackerel

King mackerel (*Scomberomorus cavalla*) is a marine pelagic species that is found throughout the western Atlantic from the Gulf of Maine to Brazil, including the Gulf and Caribbean Sea, and from the shore to 200 m (656 ft) depths. The habitat of adults is the coastal waters out to the edge of the continental shelf. Within the area, the occurrence of king mackerel is governed by temperature and salinity. They are seldom found in water temperatures less than 20°C and generally prefer higher salinity 36 parts per thousand (ppt) or less.

Adults are migratory, and the Fishery Management Plan for the Coastal Migratory Pelagic Resources of the Gulf of Mexico and Atlantic Region recognizes two migratory groups (Gulf and Atlantic). Typically, adult king mackerel are found in the southern climates (south Florida and extreme south Texas/Mexico) in the winter and farther north in the summer; however, some king mackerel overwinter in deeper waters off the mouth of the Mississippi River, and off the coast of

North Carolina. Food availability and water temperature are likely causes of these migratory patterns. King mackerel live up to 26 years for females and 23 years for males (GMFMC and SAFMC 1985; MSAP 1996; Brooks and Ortiz 2004).

Adults are known to spawn in areas of low turbidity, with salinity and temperatures of approximately 30 ppt and 27°C, respectively. There are major spawning areas off Louisiana and Texas in the Gulf (McEachran and Finucane 1979); and off the Carolinas, Cape Canaveral, and Miami in the western Atlantic (Wollam 1970; Schekter 1971; Mayo 1973). Spawning occurs generally from May through October with peak spawning in September (McEachran and Finucane 1979). Eggs are believed to be released and fertilized continuously during these months. Fifty percent of females are sexually mature between 450 to 499 mm (17.7 to 19.6 inches standard length (SL) in length and most are mature by the time they are 800 mm (35.4 inches SL, or by about age 4. Fifty percent of males are sexually mature at age 3, at a length of 718 mm SL (28.3 inches). Females in U.S. waters, between the sizes of 446 – 1,489 mm SL (17.6 to 58.6 inches) are estimated to release 69,000 – 12,200,000 eggs throughout the spawning season each year.

Larvae of king mackerel have been found in waters with temperatures between 26 – 31° C (79 – 88° F). This larval developmental stage has a short duration. King mackerel can grow up to 0.54 – 1.33 mm SL (0.02 to 0.05 inches) per day. This shortened larval stage decreases the vulnerability of the larvae, and is related to the increased metabolism of this fast-swimming species. Juveniles are generally found closer to shore than adults and occasionally in estuaries.

3.2.2.2 Spanish Mackerel

Spanish mackerel (*Scomberomorus maculatus*) are migratory and move into specific areas to spawn, and mature at age 1-2 years. They primarily eat other fish species (herring, sardines, and menhaden) and to a lesser extent crustaceans and squid at all life stages (larvae to adult). They are eaten primarily by larger pelagic predators like sharks, tuna, and bottlenose dolphin.

Spanish mackerel is also a pelagic species occurring in depths up to 75 meters (225 feet) but primarily found in depths of 20 meters (60 feet) or less. They occur in coastal zones of the western Atlantic from southern New England to the Florida Keys and throughout the Gulf of Mexico (Collette and Russo 1979). Adults usually are found from the low-tide line to the edge of the continental shelf, and along coastal areas. They inhabit estuarine areas (especially higher salinity areas) during seasonal migrations, but are considered rare and infrequent in many Gulf estuaries.

Spawning occurs along the inner continental shelf from April to September (Powell 1975). Eggs and larvae occur most frequently offshore over the inner continental shelf at temperatures between 20°C (68°F) and 32°C (89.6°F) and salinities between 28 and 37 ppt. They are found frequently in water depths from 9 meters (27 feet) to about 84 meters (252 feet), but are most common in < 50 meters (150 feet).

Juveniles are most often found in coastal and estuarine habitats and at temperatures greater than 25°C (77°F) and salinities greater than 10 ppt. Although they occur in waters of varying salinity,

juveniles appear to select marine salinity levels and generally are not considered estuarine-dependent. Like king mackerel, adult Spanish mackerel are migratory, generally moving from wintering areas of south Florida and Mexico to more northern latitudes in spring and summer. Spanish mackerel generally mature at age 1 to 2 and have a maximum age of approximately 11 years (Powell 1975).

Bycatch

The gillnet portion of the CMP fishery has no documented interaction with marine mammals; National Marine Fisheries Service (NMFS) classifies gillnet portion of the CMP fishery as Category II based on analogy (similar risk to marine mammals) with other gillnet fisheries.

Marine mammal stranding networks have been established in the Southeast Region. The NMFS Southeast Fisheries Science Center (SEFSC) is the base for the Southeast United States Marine Mammal Stranding Program (http://sero.nmfs.noaa.gov/protected_resources/marine_mammal_health_and_stranding_response_program/mmstranding_organizations/index.html). NMFS authorizes organizations and volunteers under the MMPA to respond to marine mammal stranding events throughout the United States. These organizations form the stranding network whose participants are trained to respond to, and collect samples from live and dead marine mammals that strand along southeastern United State beaches. The SEFSC is responsible for: coordinating stranding events; monitoring stranding rates; monitoring human caused mortalities; maintaining a stranding database for the southeast region; and conducting investigations to determine the cause of unusual stranding events including mass stranding events and mass mortalities (http://www.sefsc.noaa.gov/species/mammals/strandings.htm).

Fishing effort reductions have the potential to reduce interactions between the fishery and marine mammals and birds. The Bermuda petrel and roseate tern occur within the action area. Bermuda petrels are occasionally seen in the waters of the Gulf Stream off the coasts of North Carolina and South Carolina during the summer. Sightings are considered rare and only occurring in low numbers (Alsop 2001). Roseate terns occur widely along the Atlantic coast during the summer but in the southeast region, they are found mainly off the Florida Keys (unpublished USFWS data). Interaction with fisheries has not been reported as a concern for either of these species. Thus, it is believed that the CMP fishery is not likely to negatively affect the Bermuda petrel and the roseate tern.

Spanish mackerel are among the species targeted with gillnet in North Carolina state waters. Observer coverage for gillnet is up to 10% and provided by the North Carolina Division of Marine Fisheries, primarily during the fall flounder fishery in Pamlico Sound. Gillnets are also used from the North Carolina/South Carolina border and south and east of the fishery management council demarcation line between the Atlantic Ocean and the Gulf of Mexico. In this area gillnets are used to target finfish including, but not limited to king mackerel, Spanish mackerel, whiting, bluefish, pompano, spot, croaker, little tunny, bonita, jack crevalle, cobia, and striped mullet. The majority of fishing effort occurs in federal waters because South Carolina, Georgia, and Florida prohibit the use of gillnets, with limited exceptions, in state waters.

There is some observer coverage of CMP targeted trips by vessels with an active directed shark permit. The Shark Gillnet Observer Program is mandated under the Atlantic Highly Migratory Species FMP, the Atlantic Large Whale Take Reduction Plan (50 CFR Part 229.32), and the Biological Opinion for the Continued Authorization of the Atlantic Shark Fishery under Section 7 of the Endangered Species Act. Observers are deployed on any active fishing vessel reporting shark drift gillnet effort. In 2005, this program also began to observe sink gillnet fishing for sharks along the southeastern U.S. coast.

The shark gillnet observer program now covers all anchored (sink, stab, set), strike, or drift gillnet fishing by vessels that fish from Florida to North Carolina year-round. The observed fleet includes vessels with an active directed shark permit and fish with sink gillnet gear.

Research and monitoring is ongoing to understand the effectiveness of proposed management measures and their effect on bycatch. Approximately 20% of commercial fishermen from snapper grouper, dolphin wahoo, and CMP fisheries are asked to fill out discard information in logbooks. Recreational discards are obtained from the Marine Recreational Information Program (MRIP) and logbooks from the NMFS headboat program.

The Southeast Regional Office (SERO) and the SEFSC participate in a wide range of training and outreach activities to communicate bycatch related issues. The NMFS SERO issues public announcements, Southeast Fishery Bulletins, or News Releases on different topics, including use of turtle exclusion devices, bycatch reduction devices, use of methods and devices to minimize harm to turtles and sawfish, information intended to reduce harm and interactions with marine mammals, and other methods to reduce bycatch for the convenience of constituents in the southern United States. These are mailed out to various organizations, government entities, commercial interests and recreational groups. This information is also included in newsletters and publications that are produced by NMFS and the various regional fishery management councils. Announcements and news releases are also available on the internet and broadcasted over NOAA weather radio.

3.2.3 Protected Species

The Marine Mammal Protection Act (MMPA) and Endangered Species Act (ESA) provide special protections to some species that occur in the Gulf. Appendix E includes a very brief summary of these two laws and more information is available on NMFS Office of Protected Resources website (http://www.nmfs.noaa.gov/pr/laws/). All 22 marine mammals in the Gulf are protected under the MMPA. Two marine mammals (sperm whales and manatees) are also protected under the ESA. Other species protected under the ESA include sea turtle species (Kemp's ridley, loggerhead (the Northwest Atlantic Ocean distinct population segment (DPS)), green (North Atlantic DPS and South Atlantic DPS), leatherback, and hawksbill), three fish species (Gulf sturgeon, Nassau grouper, and smalltooth sawfish), and six coral species (elkhorn, staghorn, rough cactus, lobed star, mountainous star, and boulder star). Critical habitat designated under the ESA for smalltooth sawfish, Gulf sturgeon, and the Northwest Atlantic Ocean DPS of loggerhead sea turtles also occur in the Gulf, though only loggerhead critical habitat occurs in federal waters.

The following sections provide a brief overview of the marine mammals, sea turtles, and fish that may be present in or near areas where Gulf reef fish fishing occurs and their general life history characteristics. Since none of the listed corals or designated critical habitats in the Gulf are likely to be adversely affected by the Gulf reef fish fishery, they are not discussed further.

Marine Mammals

The 22 species of marine mammals in the Gulf include one sirenian species (a manatee), which is under U.S. Fish and Wildlife Service's jurisdiction, and 21 cetacean species (dolphins and whales), all under NMFS' jurisdiction. Manatees primarily inhabit rivers, bays, canals, estuaries, and coastal waters rich in seagrass and other vegetation off Florida, but can occasionally be found in seagrass habitats as far west as Texas. Although most of the cetacean species reside in the oceanic habitat ($\geq$ 200 m), the Atlantic spotted dolphin is found in waters over the continental shelf (20-200 m), and the common bottlenose dolphin (hereafter referred to as bottlenose dolphins) is found throughout the Gulf, including within bays, sounds, and estuaries; coastal waters over the continental shelf; and in deeper oceanic waters.

Sperm whales are one of the cetacean species found in offshore waters of the Gulf (>200m) and are listed endangered under the ESA. Sperm whales, are the largest toothed whales and are found year-round in the northern Gulf along the continental slope and in oceanic waters (Waring et al. 2013). There are several areas between Mississippi Canyon and De Soto Canyon where sperm whales congregate at high densities, likely because of localized, highly productive habitats (Biggs et al. 2005; Jochens et al. 2008). There is a resident population of female sperm whales, and whales with calves frequently sighted there.

Bryde's whales are the only resident baleen whales in the Gulf and are currently being evaluated to determine if listing under the ESA is warranted. Bryde's whales (pronounced "BREW-days") in the Gulf are currently restricted to a small area in the northeastern Gulf near De Soto Canyon in waters between 100 – 400 m depth along the continental shelf break, though information in the southern Gulf of Mexico is sparse (Waring et al. 2013). On September 18, 2014, NMFS received a revised petition from the Natural Resource Defense Council to list the Gulf Bryde's whale as an endangered Distinct Population Segment. On April 6, 2015, NMFS found the petitioned action may be warranted and convened a Status Review Team to prepare a status review report. NMFS will rely on the information status review report to make a 12-month determination as to whether or not listing as endangered or threatened the species is warranted, and if so, a proposed rule will be published in the *Federal Register*.

Although they are all the same species, **bottlenose dolphins** in the Gulf can be separated into demographically independent populations called stocks. Bottlenose dolphins are currently managed by NMFS as 36 distinct stocks within the Gulf. These include 31 bay, sound and estuary stocks, three coastal stocks, one continental shelf stock, and one oceanic stock (Waring et al. 2013). Additional climatic and oceanographic boundaries delineate the three coastal stocks such that the Gulf Eastern Coastal Stock ranges from 84^{o}W to Key West, FL, the Northern Coastal Stock ranges from 84^{o}W to the Mississippi River Delta, and the Gulf Western Coastal stock ranges from the Mississippi River Delta to the Texas/Mexico border. Marine Mammal

Stock Assessment Reports and additional information on these species in the Gulf are available on the NMFS Office of Protected Species website: http://www.nmfs.noaa.gov/pr/sspecies/.

Bottlenose dolphin adults range from 6 to 9 feet (1.8 to 2.8 m) long and weigh typically between 300 to 600 lbs (136 to 272 kg). Females and males reach sexual maturity between ages 5 to 13 and 9 to 14, respectively. Once mature, females give birth once every 3 to 6 years. Maximum known lifespan can be 50 years for males and greater than 60 years for females (Reynolds 2000).

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 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 List of Fisheries and the classification process can be found at: http://www.nmfs.noaa.gov/pr/interactions/fisheries/lof.html.

The NMFS classifies reef fish bottom longline/hook-and-line gear in the MMPA 2016 List of Fisheries as a Category III fishery (81 FR 20550). This classification indicates the annual mortality and serious injury of a marine mammal stock resulting from any fishery is less than or equal to 1% of the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum, sustainable population. Dolphins are the only species documented as interacting with these fisheries. Bottlenose dolphins are a common predator around reef fish vessels. They prey upon on the bait, catch, and/or released discards of fish from the reef fish fishery.

Sea Turtles

Green, hawksbill, Kemp's ridley, leatherback, and loggerhead sea turtles are all highly migratory and travel widely throughout the Gulf. Several volumes exist that cover the biology and ecology of these species (i.e., Lutz and Musick (eds.) 1997; Lutz et al. (eds.) 2003, Wynekan et al. (eds.) 2013).

Green sea turtle hatchlings are thought to occupy pelagic areas of the open ocean and are often associated with *Sargassum* rafts (Carr 1987; Walker 1994). Pelagic stage green sea turtles are thought to be carnivorous. Stomach samples of these animals found ctenophores and pelagic snails (Frick 1976; Hughes 1974). At approximately 20 to 25 cm carapace length, juveniles migrate from pelagic habitats to benthic foraging areas (Bjorndal 1997). As juveniles move into benthic foraging areas a diet shift towards herbivory occurs. They consume primarily seagrasses and algae, but are also known to consume jellyfish, salps, and sponges (Bjorndal 1980, 1997; Paredes 1969; Mortimer 1981, 1982). The diving abilities of all sea turtles species vary by their life stages. The maximum diving range of green sea turtles is estimated at 110 m (360 ft) (Frick 1976), but they are most frequently making dives of less than 20 m (65 ft.) (Walker 1994). The time of these dives also varies by life stage. The maximum dive length is estimated at 66 minutes with most dives lasting from 9 to 23 minutes (Walker 1994).

The **hawksbill's** pelagic stage lasts from the time they leave the nesting beach as hatchlings until they are approximately 22-25 cm in straight carapace length (Meylan 1988; Meylan and Donnelly 1999). The pelagic stage is followed by residency in developmental habitats (foraging

areas where juveniles reside and grow) in coastal waters. Little is known about the diet of pelagic stage hawksbills. Adult foraging typically occurs over coral reefs, although other hard-bottom communities and mangrove-fringed areas are occupied occasionally. Hawksbills show fidelity to their foraging areas over several years (van Dam and Diéz 1998). The hawksbill's diet is highly specialized and consists primarily of sponges (Meylan 1988). Gravid females have been noted ingesting coralline substrate (Meylan 1984) and calcareous algae (Anderes Alvarez and Uchida 1994), which are believed to be possible sources of calcium to aid in eggshell production. The maximum diving depths of these animals are not known, but the maximum length of dives is estimated at 73.5 minutes. More routinely, dives last about 56 minutes (Hughes 1974).

Kemp's ridley hatchlings are also pelagic during the early stages of life and feed in surface waters (Carr 1987; Ogren 1989). After the juveniles reach approximately 20 cm carapace length they move to relatively shallow (less than 50m) benthic foraging habitat over unconsolidated substrates (Márquez-M. 1994). They have also been observed transiting long distances between foraging habitats (Ogren 1989). Kemp's ridleys feeding in these nearshore areas primarily prey on crabs, though they are also known to ingest mollusks, fish, marine vegetation, and shrimp (Shaver 1991). The fish and shrimp Kemp's ridleys ingest are not thought to be a primary prey item but instead may be scavenged opportunistically from bycatch discards or discarded bait (Shaver 1991). Given their predilection for shallower water, Kemp's ridleys routinely make dives of 50 m or less (Soma 1985; Byles 1988). Their maximum diving range is unknown. Depending on the life stage a Kemp's ridleys may be able to stay submerged anywhere from 167 minutes to 300 minutes, though dives of 12.7 minutes to 16.7 minutes are much more common (Soma 1985; Mendonca and Pritchard 1986; Byles 1988). Kemp's ridleys may also spend as much as 96% of their time underwater (Soma 1985; Byles 1988).

Leatherbacks are the most pelagic of all ESA-listed sea turtles and spend most of their time in the open ocean. Although they will enter coastal waters and are seen over the continental shelf on a seasonal basis to feed in areas where jellyfish are concentrated. Leatherbacks feed primarily on cnidarians (medusae, siphonophores) and tunicates. Unlike other sea turtles, leatherbacks' diets do not shift during their life cycles. Because leatherbacks' ability to capture and eat jellyfish is not constrained by size or age, they continue to feed on these species regardless of life stage (Bjorndal 1997). Leatherbacks are the deepest diving of all sea turtles. It is estimated that these species can dive in excess of 1000 m (Eckert et al. 1989) but more frequently dive to depths of 50 m to 84 m (Eckert et al. 1986). Dive times range from a maximum of 37 minutes to more routines dives of 4 to 14.5 minutes (Standora et al. 1984; Eckert et al. 1986; Eckert et al. 1989; Keinath and Musick 1993). Leatherbacks may spend 74% to 91% of their time submerged (Standora et al. 1984).

Loggerhead hatchlings forage in the open ocean and are often associated with *Sargassum* rafts (Hughes 1974; Carr 1987; Walker 1994; Bolten and Balazs 1995). The pelagic stage of these sea turtles are known to eat a wide range of things including salps, jellyfish, amphipods, crabs, syngnathid fish, squid, and pelagic snails (Brongersma 1972). Stranding records indicate that when pelagic immature loggerheads reach 40-60 cm straight-line carapace length, they begin to live in coastal inshore and nearshore waters of the continental shelf throughout the U.S. Atlantic (Witzell 2002). Here they forage over hard- and soft-bottom habitats (Carr 1986). Benthic

foraging loggerheads eat a variety of invertebrates with crabs and mollusks being an important prey source (Burke et al. 1993). Estimates of the maximum diving depths of loggerheads range from 211 m to 233 m (692-764 ft.) (Thayer et al. 1984; Limpus and Nichols 1988). The lengths of loggerhead dives are frequently between 17 and 30 minutes (Thayer et al. 1984; Limpus and Nichols 1988; Limpus and Nichols 1994; Lanyon et al. 1989) and they may spend anywhere from 80 to 94% of their time submerged (Limpus and Nichols 1994; Lanyon et al. 1989).

All species of sea turtles discussed above are adversely affected by the Gulf reef fish fishery. Incidental captures are infrequent, but occur in all commercial and recreational hook-and-line and longline components of the reef fish fishery. Observer data indicate that the bottom longline component of the fishery interacts solely with loggerhead sea turtles. Captured loggerhead sea turtles can be released alive or can be found dead upon retrieval of bottom longline gear as a result of forced submergence. Sea turtles caught during other reef fish fishing with other gear are believed to all be released alive due to shorter gear soak. All sea turtles released alive may later succumb to injuries sustained at the time of capture or from exacerbated trauma from fishing hooks or lines that were ingested, entangled, or otherwise still attached when they were released. Sea turtle release gear and handling protocols are required in the commercial and for-hire reef fish fisheries to minimize post-release mortality.

NMFS has conducted Section 7 consultations under the ESA to evaluate potential effects from the Gulf reef fish fishery on sea turtles (as well as on other ESA-listed species and critical habitat). On September 30, 2011, the Southeast Regional Office completed a biological opinion (Opinion), which concluded that the continued authorization of the Gulf reef fish fishery is not likely to jeopardize the continued existence of any sea turtles (NMFS 2011). An incidental take statement was issued specifying the amount and extent of anticipated take, along with reasonable and prudent measures and associated terms and conditions deemed necessary and appropriate to minimize the impact of these takes. On September 29, 2016, NMFS reinitiated formal Section 7 consultation as the result of the removal of the range-wide and breeding population ESA listings of the green sea turtle and listing of 11 green sea turtle DPSs (two of which occur in the Gulf of Mexico), and the listing of Nassau grouper.

Fish

Historically, **smalltooth sawfish** in the U.S. ranged from New York to the U.S. - Mexico border. Their current range is poorly understood but believed to have contracted from these historical areas. Smalltooth sawfish primarily occur in the Gulf off peninsular Florida and are most common off Southwest Florida and the Florida Keys. Historical accounts and recent encounter data suggest that immature individuals are most common in shallow coastal waters less than 25 meters (Bigelow and Schroeder 1953; Adams and Wilson 1995), while mature animals occur in waters in excess of 100 meters (Simpfendorfer pers. comm. 2006). Smalltooth sawfish feed primarily on fish. Mullet, jacks, and ladyfish are believed to be their primary food resources (Simpfendorfer 2001). Smalltooth sawfish also prey on crustaceans (mostly shrimp and crabs) by disturbing bottom sediment with their saw (Norman and Fraser 1938; Bigelow and Schroeder 1953).

Smalltooth sawfish are also adversely affected by the Gulf reef fish fishery, but are interacted with to a much lesser extent than sea turtles. 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 anticipated to be incidentally caught every 3 years in the entire ref fish fishery, and none are expected to result in mortality (NMFS 2011). In the September 30, 2011, Opinion, NMFS concluded that the continued authorization of the Gulf reef fish fishery is not likely to jeopardize the continued existence of smalltooth sawfish (NMFS 2011). An incidental take statement was issued specifying the amount and extent of anticipated take, along with reasonable and prudent measures and associated terms and conditions deemed necessary and appropriate to minimize the impact of these takes. Fishermen in this fishery are required to follow smalltooth sawfish safe handling guidelines.

NOAA Fisheries has listed **Nassau grouper** as threatened under the Endangered Species Act due to a decline in its population. The species is in need of more conservation efforts given its population has not yet recovered. A final rule was published in the *Federal Register* on June 29, 2016 (81 FR 42268), and became effective on July 29, 2016.

This Nassau grouper listing does not change current fishing regulations in the U.S. (including federal waters in U.S. Caribbean territories), as harvest of this species is already prohibited in state, territorial, and federal waters. Commercial and recreational fishing for this species was first prohibited in U.S. federal waters in 1990 when it was listed as a Species of Concern.

The Nassau grouper possesses life history characteristics that increase vulnerability to harvest, including slow growth to a large size, late maturation, formation of large spawning aggregations, and occurrence in shallow habitat. Slow growth and late maturation expose sub-adults to harvest prior to reproduction. Sub-adult and adult Nassau grouper form large conspicuous spawning aggregations. These aggregations are often in shallow habitat areas that are easily accessible to fishermen and thus heavily exploited. Despite these life-history vulnerabilities, there are remaining spawning aggregations that, while reduced in size and number, still function and provide recruits into the population.

3.2.4 Northern Gulf of Mexico Hypoxic Zone

Every summer in the northern Gulf, a large, but variable in size hypoxic zone forms. It is the result of allochthonous materials and runoff from agricultural lands by rivers to the Gulf, increasing nutrient inputs from the Mississippi River, and a seasonal layering of waters in the Gulf (see http://www.gulfhypoxia.net). The layering of the water is temperature and salinity dependent and prevents the mixing of higher oxygen content surface water with oxygen-poor bottom water. For 2014, the extent of the hypoxic area was estimated to be 5,052 square miles and is similar the running average for over the past five years of 5,543 square miles Gulf (see http://www.gulfhypoxia.net/).

The hypoxic conditions in the northern Gulf directly impact less mobile benthic macroinvertebrates (e.g., polychaetes) by influencing density, species richness, and community

composition (Baustian and Rabalais 2009). However, more mobile macroinvertebrates and demersal fishes (e.g., red snapper) are able to detect lower dissolved oxygen levels and move away from hypoxic conditions. Therefore, although not directly affected, these organisms are indirectly affected by limited prey availability and constrained available habitat (Baustian and Rabalais 2009; Craig 2012). For red snapper, Courtney et al. (2013) have conjectured that the hypoxic zone could have an indirect positive effect on red snapper populations in the western Gulf. They hypothesize that increased nutrient loading may be working in 'synergy' with abundant red snapper artificial habitats (oil platforms). Nutrient loading likely increases forage species biomass and productivity providing ample prey for red snapper residing on the oil rigs, thus increasing red snapper productivity. Grouper and tilefish are less common in the northern Gulf, so the northern Gulf hypoxic zone influences these stock less.

3.2.5 Deepwater Horizon MC252 Oil Spill

General Impacts on Fishery Resources

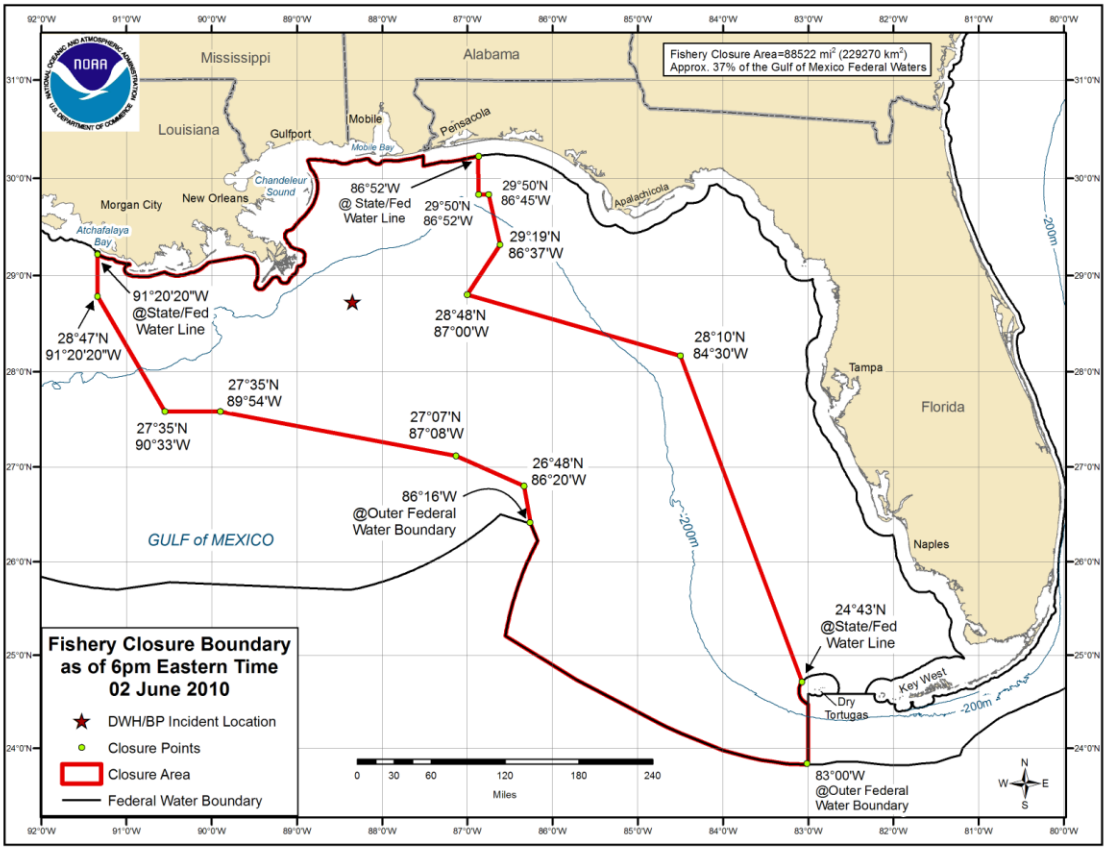
The presence of polyaromatic hydrocarbons (PAHs) in marine environments can have detrimental impacts on marine finfish, especially during the more vulnerable larval stage of development (Whitehead et al. 2011). When exposed to realistic, yet toxic levels of PAHs (1–15 µg/L), greater amberjack (*Seriola dumerili*) larvae develop cardiac abnormalities and physiological defects (Incardona et al. 2014). The future reproductive success of long-lived species, including red drum (*Sciaenops ocellatus*) and many reef fish species, may be negatively affected by episodic events resulting in high-mortality years or low recruitment. These episodic events could leave gaps in the age structure of the population, thereby affecting future reproductive output (Mendelssohn et al. 2012). Other studies have described the vulnerabilities of various marine finfish species, with morphological and/or life history characteristics similar to species found in the Gulf, to oil spills and dispersants (Hose et al. 1996; Carls et al. 1999; Heintz et al. 1999; Short 2003).

An increase in histopathological lesions were found in red snapper in the area affected by the oil, but Murawski et al. (2014) found that the incidence of lesions had declined between 2011 and 2012. The occurrence of such lesions in marine fish is not uncommon (Sindermann 1979; Haensly et al. 1982; Solangi and Overstreet 1982; Khan and Kiceniuk 1984, 1988; Kiceniuk and Khan 1987; Khan 1990). Red snapper diet was also affected after the spill. A decrease in zooplankton consumed, especially by adults (>400 mm TL) over natural and artificial substrates may have contributed to an increase in the consumption of fish and invertebrate prey, more so at artificial reefs than natural reefs (Tarnecki and Patterson 2015).

The effect of oil, dispersants, and the combination of oil and dispersants on fishes of the Gulf remains an area of concern. Marine fish species typically concentrate PAHs in the digestive tract, making stomach bile an appropriate testing medium. A study by Synder et al. (2015) assessed bile samples from golden tilefish (*Lopholatilus chamaeleonticeps*), king snake eel (*Ophichthus rex*), and red snapper for PAH accumulation over time, and reported concentrations were highest in golden tilefish during the same time period when compared to king snake eel and red snapper. These results suggest that the more highly associated an organism is with the sediment in an oil spill area, the higher the likelihood of toxic PAH accumulation. Twenty-first

century dispersant applications are thought to be less harmful than their predecessors. However, the combination of oil and dispersants has proven to be more toxic to marine fishes than either dispersants or crude oil alone. Marine fish which are more active (e.g., a pelagic species versus a demersal species) appear to be more susceptible to negative effects from interactions with weathered oil/dispersant emulsions. These effects can include mobility impairment and inhibited respiration (Swedmark et al. 1973). Another study found that while Corexit 9500A® and oil are similar in their toxicity, when Corexit 9500A® and oil were mixed in lab tests, toxicity to microscopic rotifers increased up to 52-fold (Rico-Martínez et al. 2013). These studies suggest that the toxicity of the oil and dispersant combined may be greater than anticipated.

As reported by NOAA's Office of Response and Restoration (NOAA 2010), the oil from the Deepwater Horizon MC252 spill is relatively high in alkanes, which can readily be used by microorganisms as a food source (Figure 3.2.5.1). As a result, the oil from this spill is likely to biodegrade more readily than crude oil in general. The Deepwater Horizon MC252 oil is also relatively much lower in PAHs, which are highly toxic chemicals that tend to persist in the environment for long periods of time, especially if the spilled oil penetrates into the substrate on beaches or shorelines. Like all crude oils, MC252 oil contains volatile organic compounds (VOCs) such as benzene, toluene, and xylene. Some VOCs are acutely toxic but because they evaporate readily, they are generally a concern only when oil is fresh.[1]



[1] Source: http://sero.nmfs.noaa.gov/deepwater_horizon/documents/pdfs/fact_sheets/oil_characteristics.pdf

Figure 3.2.5.1. Fishery closure at the height of the Deepwater Horizon MC252 oil spill.

In addition to the crude oil, over a million gallons of the dispersant, Corexit 9500A®, was applied to the ocean surface and an additional hundreds of thousands of gallons of dispersant was pumped to the mile-deep well head (National Commission 2010). No large-scale applications of dispersants in deep water had been conducted until the Deepwater Horizon MC252 oil spill. Thus, no data exist on the environmental fate of dispersants in deep water. However, a study found that, while Corexit 9500A® and oil are similar in their toxicity, when Corexit 9500A® and oil were mixed in lab tests, toxicity to microscopic rotifers increased up to 52-fold (Rico-Martínez et al. 2013). This suggests that the toxicity of the oil and dispersant combined may be greater than anticipated.

Deepwater Coral Communities

Deepwater corals are particularly vulnerable to episodic mortality events such as oil spills, since corals are immobile. Severe health declines have been observed in three deepwater corals in response to dispersant alone (2.3–3.4 fold) and the oil–dispersant mixtures (1.1–4.4 fold) compared to oil-only treatments (DeLeo et al. 2015). Increased dispersant concentrations appeared to exacerbate these results. As hundreds of thousands of gallons of dispersant were applied near the wellhead during the Deepwater Horizon MC252 oil spill, the possibility exists that deepwater corals may have been negatively impacted by the oil spill and subsequent spill remediation activities.

Several studies have documented declines in coral health or coral death in the presence of oil from the Deepwater Horizon MC252 oil spill (White et al. 2012; Hsing et al. 2013; Fisher et al. 2014). Sites as far as 11 km southwest of the spill were documented to have >45% of the coral colonies affected by oil (White et al. 2012; Hsing et al. 2013), and, though less affected, a site 22 km in 1900 m of water had coral damage caused by oil (Fisher et al. 2014). Coral colonies from several areas around the wellhead had damage to colonies that seemed to be representative of microdroplets as all colonies were not affected, and colonies that were affected had patchy distributions of damaged areas (Fisher et al. 2014). Because locations of deep-sea corals are still being discovered, it is likely that the extent of damage to deep-sea communities will remain undefined.

Outstanding Effects

As a result of the Deepwater Horizon MC252 oil spill, a consultation pursuant to ESA Section 7(a)(2) was reinitiated. As discussed above, on September 30, 2011, the Protected Resources Division released an Opinion, which after analyzing best available data, the current status of the species, environmental baseline (including the impacts of the recent Deepwater Horizon MC252 oil spill in the northern Gulf), effects of the proposed action, and cumulative effects, concluded that the continued operation of the Gulf reef fish fishery is not likely to jeopardize the continued existence of green, hawksbill, Kemp's ridley, leatherback, or loggerhead sea turtles, nor the continued existence of smalltooth sawfish (NMFS 2011). For additional information on the Deepwater Horizon MC252 oil spill and associated closures, see: http://sero.nmfs.noaa.gov/deepwater_horizon_oil_spill.htm.

3.3 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

Angler Effort

Estimates of the Gulf charter vessel angler effort (individual angler trips regardless of trip duration or species target intent or catch success) for 2011-2015 are provided in Table 3.3.2.1. These estimates are derived from the Marine Recreational Information Program (MRIP). Estimates of charter vessel angler effort for additional years, and measures of directed effort for individual species, are available at http://www.st.nmfs.noaa.gov/recreational-fisheries/access-data/run-a-data-query/queries/index.

Table 3.3.2.1. Number of Gulf charter vessel angler trips, by state, 2011-2015[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
2015	98,095	785,588	na[2]	42,422	926,105
Average	81,614	679,559	116,589[3]	18,529	841,818[3]

[1]Texas information unavailable because the MRIP survey is not conducted in Texas.
[2]Not available due to the implementation of the Louisiana Creel Survey.
[3]Average of 2011-2013.
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, and Louisiana beginning in 2014 due to the implementation of the Louisiana Creel Survey. The effort estimates provided in Table 3.3.2.1. are from all charter vessels in the respective states and thus include effort from both federally permitted vessels and charter vessels that only fish in state waters. Although the MRIP data allows estimation of effort in federal waters vessels that 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 in the Gulf for 2011-2015 are provided in Table 3.3.2.2. 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. The SRHS includes some vessels that do not possess a federal for-hire permit. Thus, the estimates of headboat angler days, like the estimates of effort on charter vessels, do not reflect effort for just federally permitted vessels.

Table 3.3.2.2. Gulf headboat angler days, by state, 2011–2015.

	Angler Days				
	West Florida	**Florida/Alabama[1]**	**Mississippi/Louisiana[2]**	**Texas**	**Total**
2011	79,722	77,303	3,657	47,284	207,966
2012	84,205	77,770	3,680	51,776	217,431
2013	94,752	80,048	3,406	55,749	233,955
2014	102,841	88,524	3,257	51,231	245,853
2015	107,910	86,473	3,587	55,135	253,105
Average	93,886	82,024	3,517	52,235	231,662

Source: SRHS.
West Florida = Florida from the Dry Tortugas through the Florida Middle Grounds, Florida/Alabama = northwest Florida and Alabama.
[1]For 2013, SRHS data was reported separately for NW Florida and Alabama, but has been combined here for consistency with previous years.
[2]Mississippi and Louisiana are combined for confidentiality purposes.

Permits

The for-hire sector is comprised of charter vessels and headboats. 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. Generally, 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.

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, if a vessel meets the selection criteria (see section 1.4) used by the SRHS and is selected to report by the Science and Research Director (SRD) of the SEFSC, it is determined to operate primarily as a headboat and is required to submit harvest and effort information to the SRHS. As of February 2016, 69 Gulf headboats were registered in the SRHS (K. Fitzpatrick, NMFS SEFSC, pers. comm.).

A federal charter/headboat (for-hire) vessel permit is required for fishing in federal waters for Gulf CMP species and Gulf reef fish (RF). On October 30, 2015, there were 1,375 vessels with at least one valid (non-expired) or renewable Gulf for-hire CMP or RF permit (including

historical captain 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. The Gulf for-hire permits are limited access permits. Most for-hire vessels possess more than one for-hire permit. Among the 1,375 vessels with at least one Gulf for-hire permit, 1,250 had both a CMP and RF for-hire permit, 69 had only a CMP for-hire permit, and 56 had only a RF for-hire permit. Additionally, 167 of these vessels had a Gulf commercial reef fish permit. Finally, 402 of the vessels with at least one Gulf for-hire permit had at least one for-hire permit required to fish for Atlantic dolphin/wahoo, Atlantic CMP species, or South Atlantic snapper-grouper species.

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, if a vessel meets the selection criteria (see section 1.4) used by the SRHS and is selected to report by the Science and Research Director (SRD) of the SEFSC, it is determined to operate primarily as a headboat and is required to submit harvest and effort information to the SRHS. As of February 2016, 69 Gulf headboats were registered in the SRHS (K. Fitzpatrick, NMFS SEFSC, pers. comm.).

Information on Gulf charter vessel and headboat operating characteristics is included in Savolainen et al. (2012) 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, are used as a proxy for PS. For vessels in the Gulf the estimated NOR value is $154 (2015 dollars) per charter angler trip (Liese and Carter 2011). The estimated NOR value per headboat angler trip is $53 (2015 dollars) (C. Liese, NMFS SEFSC, 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- and part-time 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 2014 are provided in Table 3.3.3. These estimates and additional details are available at

https://www.st.nmfs.noaa.gov/economics/publications/feus/fisheries_economics_2014/index. More recent information is not available at the time.

The estimates provided in Table 3.3.2.3. 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. As a result, estimation of the appropriate business activity coefficients for headboat effort has not been conducted. Beginning in August 2014, socio-economic data fields were added to the SRHS electronic logbook. However, these data refer to the vessel operation and not angler expenditures, which are the basis for estimating the business activity associated with the different recreational sector modes.

Table 3.3.2.3. 2014 business activity (thousands of 2014 dollars) associated with charter vessel trips in the Gulf. Output and value added impacts are not additive.

	Alabama	Florida	Louisiana	Mississippi	Texas
Output Impact	$49,799	$471,415	$70,164	$7,206	$99,716
Value Added Impact	$26,942	$286,678	$42,749	$3,520	$57,356
Jobs	570	4,409	633	90	948

Source:
https://www.st.nmfs.noaa.gov/economics/publications/feus/fisheries_economics_2014/index

3.4 Description of the Social Environment

The proposed actions in this amendment would be expected to affect federally permitted charter and headboat fishing businesses associated with the Gulf reef fish and CMP fisheries. A description of vessels participating in the SRHS is provided in the Framework Action for Headboat Electronic Reporting Requirements (GMFMC 2013b) and is incorporated here by reference. The current reporting requirements for charter vessels is provided in Section 2.1. The reporting requirements for participants of the SRHS is provided in Section 2.2, and a list of the information collected in the survey is provided in Table 2.2.1.

A federal Gulf charter/headboat reef fish or CMP permit for-hire permit is required for vessels to take paying passengers to fish for reef fish and CMP species in federal waters. The federal permits do not distinguish between charter vessels and headboats; there is a charter/headboat permit for reef fish, and a charter/headboat permit for CMP. In the Gulf, the charter/headboat permits for reef fish and CMP are limited access; existing permits may be renewed or transferred, but no new permits are available. The respective charter/headboat historical captain permits for reef fish and CMP are limited access and may be renewed by the permit holder. However, the historical captain permits may not be transferred to a new owner. They may only be transferred to another vessel owned or leased by the historical captain. Historical captain permits that are not renewed or transferred to another vessel are terminated.

A permit is valid for one year after it has been renewed or transferred. If the permit is not renewed or transferred before the end of the year it is valid, it stays in renewable status for one year; the permit may not be used for fishing, but the permit holder may still renew or transfer the permit during the year of renewable status. If the permit is not renewed or transferred by the end of the renewable period, the permit is terminated and may not be reissued. The annual application fee for these 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 provided in Table 3.4.1. Most federally permitted for-hire vessels that have a charter/headboat permit for reef fish also have the charter/headboat permit for CMPs (1,217 vessels, excluding historical captain permits). There are 32 vessels possessing a historical captain charter/headboat permit for both reef fish and CMPs. A dual-permitted vessel refers to a vessel possessing both a Gulf charter/headboat reef fish or CMP permit for-hire permit and a commercial reef fish permit. Currently, there are 167 vessels possessing at least one Gulf charter/headboat permit and a commercial reef fish permit.

For the purpose of analyzing the effects from the proposed actions (Sections 4.1.3, 4.2.3, and 4.3.3), for-hire vessels may be placed in one or more of the following three broad categories: 1) charter vessels participating in the MRIP For-hire Survey; 2) headboats participating in the SRHS; and 3) dual-permitted vessels (which may participate in the MRIP For-hire Survey and/or the SRHS). Charter vessels participating in the MRIP For-Hire Survey are randomly selected on a weekly basis to report the elements shown in Table 2.1.1. This survey is administered by telephone and 10% of charter vessels are selected each week. To date, these vessels have not been required to maintain and submit fishing reports under any timeline, although they would be required to do so if selected by the SRD). The 69 headboats currently participating in the SRHS have been required to submit trip reports electronically since January 1, 2013. The reports must be submitted at weekly intervals, with operators having seven days to submit a report for the previous fishing week. Table 2.2.1 provides the elements reported by headboats to the SRHS. Finally, dual-permitted vessels must satisfy the requirements of both the Gulf charter/headboat reef fish or CMP permit for-hire permit and the commercial reef fish permit, and report based on whether the vessel participates in the SRHS (headboats) or does not (charter vessels). Upon leaving port, dual-permitted vessels are required to make a trip declaration specifying whether the trip is commercial or for-hire. Vessels with a commercial reef fish permit are already required to have and use vessel monitoring system (VMS), one of the location recording device platforms under consideration for all for-hire vessels (**Action 3**).

Table 3.4.1. Unique number of federally permitted vessels possessing valid and renewable charter/headboat permits and commercial permits in the Gulf.

Number of Vessels	Federal Permit(s) held by vessels
1,274	Charter/Headboat for Reef Fish*
1,286	Charter/Headboat for CMP*
1,217	Charter/Headboat for Reef Fish ***and*** CMP
32	Charter/Headboat Historical Captain for Reef Fish ***and*** CMP
1	Charter/Headboat Historical Captain for CMP ***and*** Charter/Headboat for Reef Fish
	Dual-permitted vessels
161	Charter/Headboat for Reef Fish + Commercial Reef Fish
4	Charter/Headboat Historical Captain for Reef Fish ***and*** CMP + Commercial Reef Fish
2	Charter/Headboat for CMP + Commercial Reef Fish

*These vessels may have additional permits. Source: J. Dudley, SERO Permits Office, pers. comm. October 30, 2015.

For-Hire Fishing Communities

Detailed descriptions of communities engaged in the fishing industry along the Gulf coast 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. As there are no landings data at the community level for for-hire vessels not participating in the SRHS, the number of charter vessels possessing each type of for-hire permit is provided for the Gulf region by county in Tables 3.4.2 and 3.4.3. Table 3.4.2 provides the number and type of for-hire permits held by entities in Gulf coastal counties including permits for fishing in South Atlantic waters, and Table 3.4.3 provides the number and type of for-hire permits held by entities with an address in Monroe County, which includes the Florida Keys. Because a single vessel could possess multiple permits, the total number of permits for each county does not represent the number of unique vessels. The number of South Atlantic permits held by entities in the Gulf is also included; these permits are open access.

The number of permits is a crude measure of the reliance upon for-hire recreational fishing that is general in nature and not specific to a particular fishery or stock. Ideally, additional variables quantifying the importance of recreational for-hire 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.

Table 3.4.2. Number of valid and renewable permits held by charter vessels in the Gulf, 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**
	Gulf of Mexico Charter Permits				South Atlantic Charter Permits			

	Reef Fish	CMP	HC Reef Fish	HC CMP	Dolphin Wahoo	CMP	Snapper Grouper	**TOTAL**
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)	**1,068**	**1,047**	**28**	**29**	**280**	**293**	**287**	**3,032**

Source: SERO permits office. Note: HC = Historic Captain permits. All Gulf charter/headboat permits are limited access. The South Atlantic charter/headboat permits are open access.

Table 3.4.3. 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	**1,011**

Source: SERO permits office. Note: HC = Historic Captain 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 counties having a greater number of federal charter/headboat permits would also be the most likely to have an active for-hire fleet, and would be the communities most affected by this regulatory action. In the Gulf, the counties (and respective communities) with at least 50 federal for-hire permits include: Pinellas (Clearwater, Indian Rocks Beach, Largo, Madeira Beach, St. Petersburg, Tarpon Springs, among others), Okaloosa (Destin), Bay (Panama City, Panama City Beach, and Mexico Beach), and Collier (Naples and March Island), Florida; Baldwin (Orange Beach), Alabama; the Greater Houston area including Harris, Galveston, and Brazoria counties, and Nueces (Port Aransas and Corpus Christi), Texas (Table 3.4.2 and J. Dudley, SERO Permits Office, pers. comm.). The Florida Keys also have a large number of for-hire permits, although there are more South Atlantic permits held by vessels than Gulf for-hire permits (Table 3.4.3). Further, it is not possible to determine whether for-hire vessels in the Florida Keys are actively fishing in Gulf, South Atlantic, or Florida state waters. Although these counties, and the respective communities within, have been identified as the most likely to be affected, the effects from the proposed actions are expected to result in broad social benefits by improving the accuracy and timeliness

of data reporting (Sections 4.1.3, 4.2.3, and 4.3.3). 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).

Federally permitted for-hire fishing businesses participating in the Gulf reef fish and CMP fisheries may be affected by this proposed action. This action is expected to affect the administrative procedures of federally permitted for-hire businesses by requiring the submission of electronic reports and/or increasing the frequency for which fishing reports must be submitted. Any effects from the proposed actions are expected to be minimal to non-existent in the short term and beneficial in the long term (see Sections 4.1.3, 4.2.3, and 4.3.3, 4.4.3). No adverse effects would be expected to accrue to charter and headboat passengers, or associated businesses and communities including tribes or indigenous groups.

Information on race, ethnicity, and income status of federally permitted for-hire business owners, and the captains, crew, and other employees who work for these businesses is not available, because these data are not collected by NMFS or other agencies. Because the proposed actions affect the administrative procedures of for-hire businesses, any effects to low-income populations are unlikely, as owners of these businesses are not likely in poverty. Further, the proposed actions would not affect individuals differentially based on their race, ethnicity, or income status. Nevertheless, although no EJ concerns are expected to arise from the proposed actions, the lack of effects on EJ populations cannot be assumed.

3.5 Description of the Administrative Environment

3.5.1 Federal Fishery Management

Federal fishery management is conducted under the authority of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act; 16 U.S.C. 1801 et seq.), originally enacted in 1976 as the Fishery Conservation and Management Act. The Magnuson-Stevens Act claims sovereign rights and exclusive fishery management authority over most fishery resources within the U.S. exclusive economic zone (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 of Commerce (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 Gulf of Mexico Fishery Management Council (Council) is responsible for conservation and management of fishery resources in federal waters of the Gulf. These waters extend to 200 nautical miles offshore from the seaward boundary of the states Alabama, Florida, Louisiana, Mississippi, and Texas as those boundaries defined by law. The 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, U.S. Coast Guard, Department of State, and Gulf States Marine Fisheries Commission (GSMFC).

The Council has 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 Science 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 Reporting Requirements

Currently, the owner or operator of a vessel for which a Gulf charter/headboat reef fish or CMP permit for-hire permit has been issued, whose vessel fishes for or lands such CMP fish and reef fish in or from state waters adjoining the applicable Gulf, and 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. Completed records for charter vessels must be submitted to the SRD 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 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).

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 nautical 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 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.

3.5.3 Enforcement

Both the NOAA Fisheries Office for Enforcement (NOAA/OLE) and the United States Coast Guard (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 action 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), reducing the likelihood of overfishing, leading to healthier fish stocks. In addition, the data collected would be used to enhance stock assessments and in turn provide better scientific advice to fishery managers. **Alternative 1** (No Action) already requires that vessels, if selected, maintain a fishing record for each trip, or a portion of such trips as specified by the Science and Research Director (SRD), on forms provided by the SRD. If selected, completed fishing records must be submitted to the SRD weekly, postmarked no later than 7 days after the end of each week (Sunday). However, no charter vessels have been selected by the SRD. Charter vessels are currently 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 (Gulf) from Louisiana through the west coast of Florida. 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. This method of estimating charter vessels landings can result in a high degree of uncertainty. **Alternative 1** 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.

Alternatives 2,3, and **Preferred Alternative 4** could provide positive effects to managed stocks by increasing the frequency reporting, which can reduce the likelihood of exceeding the ACLs, thus reducing the likelihood of overfishing. However, especially for species under a rebuilding plan, simply lowering the ACL the following year 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. For overfished stocks, overages may also prevent achieving the rebuilding target and optimum yield. Red snapper, greater amberjack, and gray triggerfish are currently overfished, and any overages are deducted from the allowable harvest the following fishing year. Similarly, if Gulf gag or red grouper were determined to be overfished, any overage would be deducted from the

allowable harvest the following fishing year. These deductions would be applied in the following fishing year unless best scientific information available determines that an overage adjustment is not necessary.

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 **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 Southeast Fisheries Science Center (SEFSC) more frequently than the current requirements and electronically, resulting in positive indirect biological effects. **Preferred Alternative 4** would require electronic reporting for each trip, prior to arriving at the dock, and would therefore provide the opportunity for dock-side validation of actual catch which would reduce uncertainty in harvest data, resulting in a positive impact on managed stocks. **Alternatives 1-3** do not provide the opportunity for dock-side validation of harvest, and therefore would not provide as great of benefit when completing stock assessments or analyzing the harvest data as **Preferred Alternative 4**. **Preferred Alternative 4, Alternative 2,** and **Alternative 3** would provide an increased frequency of reporting compared to **Alternative 1,** and are not expected to result in any adverse effects to the physical, biological, or ecological environments.

Alternative 1, **2**, **3**, and **Preferred Alternative 4** are unlikely to result in any indirect adverse impacts on non-targeted species or protected species such as endangered or threatened whales, sea turtles, corals, or habitat areas of popular concern. All alternatives, including **Preferred Alternative 4**, would modify reporting requirements for the charter sector, but are not expected to change current fishing practices or result in any indirect adverse impacts. Modifying the reporting requirements is not expected to result in any changes to the amount of bycatch in the charter for-hire industry. It is unlikely any alternative would result in increased or modified fishing effort in the reef fish or coastal migratory pelagic (CMP) species; therefore, no adverse biological impacts on non-targeted species or protected species is expected from 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 of Gulf reef fish or CMP. 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 reporting 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 **Preferred Alternative 4** would require federally permitted charter vessels to submit fishing records via electronic reporting. The fishing records would be electronically submitted using National Marine Fisheries Service (NMFS) approved hardware/software. **Alternatives 2** and **3** would require weekly (or less than a week if notified by the SRD) and daily submissions, respectively. **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, **Preferred Alternative 4** could require multiple 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 **Preferred Alternative 4**. The costs expected to be borne by the agency to administer these data collection efforts as well as the costs expected to be borne by charter operators to acquire, operate, update and maintain the approved hardware and software would depend on the list of approved hardware and software selected. Costs expected to result from the data collection efforts considered are discussed in **Action 4**. Because 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, e.g., improved monitoring of quotas, **Preferred Alternative 4** would be expected to result in the greatest economic benefits, followed by **Alternative 3** and **Alternative 2**.

4.1.3 Direct and Indirect Effects on the Social Environment

This action would affect for-hire vessel operators who do not currently submit electronic fishing reports through the Southeast Region Headboat Survey (SRHS), which are referred to in this document as charter vessels. Under **Alternative 1** (No Action), any federally permitted charter vessel owner or operator in the Gulf is required to maintain a fishing record for each trip and submit the completed fishing records no later than seven days after the end of each week (Sunday), if selected by the SRD. No charter vessels have been selected by the SRD and under **Alternative 1**, 10% of these vessels would continue to be randomly surveyed on a weekly basis through MRIP's For-Hire Survey. However, the For-Hire Survey estimates effort, not catch. Further, it is likely that these charter vessels would continue to remain unselected to submit fishing records to the SRD, which include landings information, thereby forgoing the benefits of improved fishery-dependent data.

Alternative 2, 3, and **Preferred Alternative 4** would require all charter vessels with a Gulf for-hire permit to 1) submit fishing records to the SRD and 2) submit the reports electronically. Each of these alternatives would be expected to result in greater direct, short-term negative effects compared to **Alternative 1**, as charter vessel operators must initiate action to submit a fishing record to NMFS, and to do so electronically, requiring additional equipment. These negative effects would likely be associated with the added time and burden for operators to learn the reporting requirements and to become competent in using the associated equipment. The

extent of these negative effects in terms of added time and burden remain unknown, because the details of what must be included in a "fishing record" have not been defined. Although undefined, the elements required for a "fishing record" would be expected to be similar to those required for the SRHS (Table 2.2.1) and not be expected to vary among **Alternatives 2, 3,** and **Preferred Alternative 4**. Thus, similar effects would be expected from each of these alternatives in terms of the additional burden of information to report and the requirement to report electronically, compared to **Alternative 1**. These effects would be expected to last until charter operators become familiar with the reporting procedure and equipment, although the time to complete the reports would continue. These short-term negative effects are expected to be minimal, and would be mitigated through long-term benefits from increased accuracy of landings information.

The requirement for electronic reporting under **Alternatives 2, 3,** and **Preferred Alternative 4** may be expected to affect charter vessel owners and operators differently, as some already use computer systems in their businesses more than other charter operators. It is possible that some charter operators may not be familiar with computers or the internet, and some may 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, most charter vessel owners and operators are likely to be familiar with computer systems, as these are businesses that must book passengers. Many charter operators advertise on the internet or offer online bookings through their websites. It is also highly likely that a majority of charter vessel owners currently have a smartphone and are capable of using applications including those for weather reports and internet access. Thus, it is possible that some additional negative short-term effects could result from **Alternatives 2, 3,** and **Preferred Alternative 4** compared with **Alternative 1**, for those charter operators who must learn to use the required electronic format, at the same time they are beginning to submit trip reports for the first time.

Although the information to be provided in the fishing records is not yet defined, it may be assumed that the information collected would provide more fishery-dependent information than is currently collected through the MRIP For-Hire Survey. Thus, while short-term negative effects would be expected to result as operators must compile the required information and submit it electronically, under each of **Alternatives 2, 3,** and **Preferred Alternative 4**, the reported information would be expected to result in broad long-term social benefits by providing more complete information on for-hire fishing compared to **Alternative 1**. By extension, the required frequency of reporting would result in greater (**Preferred Alternative 4**) or fewer (**Alternative 2**) benefits in the long-term, which are inversely related to the added short-term burden from more frequent reporting.

As the frequency of reporting increases, so does the added time and burden (and thus greater short-term negative effects). These would be greatest under **Preferred Alternative 4** (reporting each trip before arrival at the dock), followed by **Alternative 3** (daily), and then **Alternative 2** (weekly reporting). Thus, while the greatest direct, short-term negative effects would be expected from the most frequent reporting requirement (**Preferred Alternative 4**), the data provided from electronic fishing records submitted before the vessel returns to the dock would be expected to be more accurate than electronic fishing records submitted less frequently.

Increased frequency in reporting under **Alternatives 2, 3,** and **Preferred Alternative 4** may have some direct negative effects on charter vessel owners and captains because businesses may need to assign additional time or staff to submit reports. The daily reporting requirement under **Alternative 3** and the pre-landing daily reporting requirement under **Preferred Alternative 4** would be more burdensome for charter vessels than the weekly reporting under **Alternative 2**. In terms of additional time and staff requirements, **Alternative 1** would be the least burdensome; currently, 10% of charter vessels are randomly selected to report if called (MRIP For-Hire Survey). Compared with **Alternative 1**, the burden of reporting would be greater under **Alternative 2** (Tuesday, or 2 days), which would require all charter vessels to report, and greater still under **Alternative 3** and **Preferred Alternative 4**, as the frequency of reporting increases. Greater long-term benefits would be expected from timelier reporting under **Alternative 3** or **Preferred Alternative 4**. Because **Preferred Alternative 4** would require trip reports to be submitted prior to landing, this alternative would have the greatest short-term direct effects in terms of operators learning the procedure and equipment, but would also result in the greatest long-term benefits, as landings data are reported virtually in real time, and it would be possible to monitor and validate reporting compliance through random dockside inspections. **Preferred Alternative 4** would be expected to result in greater direct effects on for-hire operators making more than one trip a day, as they would be required to make a report for each trip prior to landing.

Requiring all charter vessels to report electronically and more frequently (**Alternative 3** and **Preferred Alternative 4**) is expected to result in broad long-term social benefits. Many charter operators, along with others in the recreational sector, support improving the collection of landings data for timelier quota monitoring. Further, requiring all charter vessels to report would result in broad social benefits by increasing the sample size of landings reports compared with MRIP's estimates. The lag time in data collection and analysis of recreational landings is currently inadequate for monitoring quotas in-season. Assuming compliance from fishery participants, more frequent and timely reporting would be expected to contribute to improved quota monitoring in the long-term. Improvements in reporting could make it less likely that an ACL would be exceeded, triggering any associated AMs, which would negatively impact charter businesses and associated communities. However, improved reporting could also result in ACLs that are not being met now, being met in the future because of better reporting, and AMs being triggered. Triggering AMs can have significant direct and indirect effects on charter operators and fishermen because they usually impose some restriction on harvest, during either the current or the following season. Early closures and quota overage adjustments (AMs, which in turn increase the likelihood of an earlier closure in the following year) are directly linked to the limitations in NMFS's ability to close the harvest of a species quickly enough to avoid triggering an overage adjustment. Although 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 the proposed reporting requirements may not prevent AMs from being triggered, these requirements would be expected to provide additional information to better forecast in-season closures and to minimize the effects of post-season AMs.

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 **Preferred Alternative 4** would increase the administrative burden on NMFS staff as they would need to process electronic records submitted to the SRD. In order of administrative impacts to NMFS, **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** (status quo) would result in no increase in administrative burden on vessel owners.

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 permits and those permit holders who are delinquent in reporting would not be able to legally harvest or possess fish until their reporting was up to date. **Alternatives 2** and **3,** and **Preferred Alternative 4** would be expected to provide positive benefits to law enforcement to monitor and maintain reporting compliance.

The budgetary implications and potential costs to NMFS is discussed in Figure 2.4.1 of this document. Additionally, Appendix F, the Technical Subcommittee Report (2014), has further details of estimated costs to the agency. It is expected that **Alternatives 2**, and **3**, and **Preferred Alternative 4** would result in additional costs for monitoring compliance and validating trip activity. Additional infrastructure and personnel is expected to be necessary to maintain and process these data.

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 physical or biological environments, but does have an indirect effect. **Alternative 1** (No Action) requires the owner or operator of a headboat vessel for which a charter/headboat reef fish and Atlantic CMP permit has been issued, or whose vessel fishes for or lands such reef fish or CMP species in or from state waters adjoining the applicable Gulf or Gulf exclusive economic zone (EEZ) must submit an electronic fishing record for all fish harvested on each trip, via the SRHS, if selected by the SRD. 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.

For overfished stocks, overages may prevent achieving the rebuilding target and optimum yield (OY). **Alternative 2** would not be expected to provide additional benefits to the physical or biological environment compared to the **Alternative 1** (No Action), in that **Alternative 2** would require reports for the fishing week , which is defined as Monday through Sunday, be reported on Tuesday versus the current requirement to report by the following Sunday of the fishing week. **Alternative 3** and **Preferred Alternative 4** could provide positive effects to the stocks by increasing the frequency 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 if not otherwise accounted for in the next year with a reduction of the ACLs by the amount of the overage. However, for species under a rebuilding plan, simply lowering the ACL the following year 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. For greater amberjack and gray triggerfish, any overages are deducted from the allowable harvest the following fishing year. Similarly, if 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[2]. While red snapper are in the overfished status, as they currently are, any harvest overage will be reduced from the allowable harvest, unless best scientific information available determines that an overage adjustment is not necessary.

Preferred Alternative 4 provides the opportunity for dock-side validation of actual catch which would reduce uncertainty in harvest data, and provide for positive benefits. **Alternatives 1-3** do not provide the opportunity for dock-side validation of harvest, and therefore would not provide as great of benefit to harvest data quality as **Preferred Alternative 4**. **Preferred Alternative 4** would provide an increased frequency of reporting from the all the other **Alternatives (1-3),** and would not be expected to result in any adverse effects to the physical, biological, or ecological environments.

Alternative 1 (No Action), **Alternative 2**, **Alternative 3**, and **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 habitats of particular concern. All alternatives including **Preferred Alternative 4** would modify reporting requirements for headboats, but would not be expected to change current fishing practices or result in any indirect adverse impacts. Modifying the reporting requirements is not expected to result in any changes to the amount of bycatch in the charter industry. It is unlikely any alternative would result in increased or modified fishing effort in the reef fish or CMP fisheries; therefore, no adverse biological impacts on protected species would be expected from this action.

4.2.2 Direct and Indirect Effects on the Economic Environment

Alternative 1 (No Action**)** would not affect the harvest and customary uses of Gulf reef fish or CMP species 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 brief time lag in the collection of landings information. If the time lags result in delaying needed management measures, e.g., a timely

[2] Neither gag nor red grouper are currently overfished.

closure of a species, and adversely affects the stock, adverse indirect economic effects would be expected to result.

Alternatives 2, 3, and **Preferred Alternative 4** would require headboats to submit fishing records via electronic reporting at different time intervals than currently required. The fishing records would be electronically submitted using NMFS approved hardware/software. **Alternatives 2** and **3** would require weekly and daily submissions, respectively. **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, **Preferred Alternative 4** could require more than one submission 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 **Alternatives 2, 3,** and **Preferred Alternative 4**. The costs expected to be borne by headboat operators to acquire, operate, update, and maintain the approved hardware and software would be determined by the list of approved hardware and software selected. Additional costs expected to be borne by NMFS to administer these data collection efforts would be expected to increase as the volume of data collected increases. Because it is expected that shortening the reporting frequency from weekly to daily reporting (or reporting for each trip) would result in noticeable improvements in the data collected and that these improvements would result in more effective and timely management, **Preferred Alternative 4** would be expected to result in the greatest economic benefits, followed by **Alternative 3** then **Alternative 2**. The potential benefits that would be expected to result from the proposed changes are expected to outweigh the costs that would be incurred by the industry and NMFS. The net economic effects expected to result from these alternatives would be determined by the relative magnitude of benefits expected and costs incurred to implement and administer these data collection efforts.

4.2.3 Direct and Indirect Effects on the Social Environment

This action would directly affect the 69 headboat operations that participate in the SRHS. Since March 5, 2014, headboats have been required to submit trip reports electronically on a weekly basis. According to the final rule that increased the reporting frequency to a weekly basis, the time interval could be further decreased to less than a week if requested by the SRD. Although that authority already exists under **Alternative 1** (No Action), it is likely that these headboats would continue to be required by the SRD to submit trip reports on a weekly basis, thereby forgoing the potential long-term benefits of more timely landings information from an increase in reporting frequency.

Additional effects would not be expected from retaining **Alternative 1**, for which headboat operators have seven days to submit their electronic report following the previous week's fishing trips. The effects of increasing the frequency (or timeliness, under **Alternative 2**) of trip report submission on headboat operators would be similar to the expected effects on charter vessels, as described in Section 4.1.3, with the exception that headboats are already accustomed to maintaining trip reports and submitting the reports electronically. Increasing the frequency (**Alternative 3** and **Preferred Alternative 4**) and timeliness (**Alternative 2**) of reporting is likely to be less burdensome of a procedural change than learning to use the online system. In general, some negative effects would likely be associated with any added time and staff burden for headboat owners, operators, and crew to meet the increased timeliness to submit reports.

Comparing **Alternatives 2-3**, and **Preferred Alternative 4**, this reporting burden would be less under **Alternative 2**, which provides more time to report, intermediate under **Alternative 3**, and greatest under **Preferred Alternative 4**, which would require the most frequent reporting.

Compared with **Alternative 1**, requiring headboats to report sooner following fishing activities (**Alternatives 2-3**, and **Preferred Alternative 4**) is expected to result in broad social benefits by improving quota monitoring, as discussed in Section 4.1.3. Generally, headboat operators, along with many others in the recreational sector, support improving the collection of landings data for timelier quota monitoring. The lag time in data collection and analysis of recreational landings is currently inadequate for monitoring quotas in-season. Thus, for species with quotas managed separately for the for-hire and private angling components (i.e., red snapper), the improvements to the recreational data set would benefit headboat operators and their passengers in constraining catches for species with an accountability measure that includes in-season closures. Further, the less time that passes between fishing trips and the submission of trip reports would be expected to result in more accurate reporting, as headboat operators rely less on memory. Requiring headboats to submit a trip report electronically before arriving at the dock (**Preferred Alternative 4**) would be associated with positive direct effects by enabling trip validation using random dockside inspections, which is associated with an increase in compliance. However, this alternative would also correspond with the greatest short-term, direct negative effects, as the captain and crew of these large capacity vessels would need to complete the trip reports independent of dockside staff assistance, and submit the trip report using the NMFS-approved device while at sea.

4.2.4 Direct and Indirect Effects on the Administrative Environment

Alternative 1 (No Action) and **Alternative 2** would result in no increase in administrative burden on NMFS as this is the status quo of how data are currently collected. **Alternatives 3** and **Preferred Alternative 4** would increase the administrative burden on NMFS, and to reef fish and CMP federally permitted headboats as they would be required to submit electronic records to the SRD at a higher frequency. In order of administrative impacts to NMFS, **Preferred Alternative 4** would have the highest administrative impact with trip level reporting, then **Alternative 3** with daily reporting, and **Alternative 2** and **Alternative 1** (No Action) with mandatory weekly reporting. **Alternative 1** (No Action), the status quo alternative would result in no increase in administrative burden on NMFS.

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 frequency of electronic reporting under **Alternatives 3** and **Preferred Alternative 4**, it could be easier to track those who are not meeting the reporting requirements of their permits and those permits holder who are delinquent in reporting would not be able to legally harvest or possess those species. **Alternatives 2** and **3,** and **Preferred Alternative 4** would be expected to provide positive effects to law enforcement to monitor reporting compliance.

The reporting frequencies in Action 1 and Action 2 would increase the administrative burden if the Council selected different preferred alternatives for charter vessels and headboat vessels. By requiring the same reporting frequency for both types of vessels it would be expected to have

less of an administrative burden to the NMFS and Law Enforcement having to enforce one frequency requirement. .

4.3 Action 3: Trip Notification Requirements

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

The requirement to hail out or hail in 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. A start trip and landing notification requirement could be used to aid in the prioritization of staff to conduct dock-side intercepts more efficiently that could further improve the collection of catch and effort fishery data from for-hire vessels, as well as biological sampling.

Currently there is no trip notification requirement for vessels possessing a Gulf charter/headboat reef fish or CMP permit for-hire permit (**Alternative 1** No Action). However, as discussed in Chapter 2.3, any dual-permitted charter/headboat vessel with a commercial reef fish permit is required to notify NMFS when embarking on a fishing trip and prior to landing at the dock (when operating as a commercial fishing vessel). The notification requirements in **Preferred Alternative 2** and **Preferred Alternative 3,** and their **options** are expected to provide indirect biological benefits to reef fish and CMP species by providing more accurate data through a decrease in recall bias, and an increase in catch validation. These data collected would be used when conducting stock assessments, and analyzing season closures. Therefore, **Preferred Alternative 2** and **Preferred Alternative 3,** and their **options** would be expected have greater positive benefits than **Alternative 1 (**No Action**)**, by improving the data used in stock assessments and management decision tools. **Preferred Alternative 2** and **Preferred Alternative 3,** and their **options** would not alter the manner in which the reef fish or CMP fisheries are operated, and therefore would not be expected to result in any adverse impacts to the physical, biological or ecological environment, including target species, non-target species, and habitat.

4.3.2 Direct and Indirect Effects on the Economic Environment

Alternative 1 (No Action**)** would not require trip declarations (hail outs) or landing notifications (hail ins) and would not affect the harvest of Gulf reef fish or CMP species because it would maintain current reporting requirements for for-hire vessels. Therefore, **Alternative 1 (**No Action**)** would not be expected to result in direct economic effects. However, by failing to require landing notifications and trip declarations, **Alternative 1 (**No Action**)** would not contribute to improving data collection in the for-hire sector. Therefore, **Alternative 1 (**No Action**)** may result in delaying needed management measures such as timely closures of specific areas to fishing, and adversely affect the stock, thereby resulting in adverse indirect economic effects.

Preferred Alternative 2 would require federally permitted charter vessels (**Option a**) and headboats (**Option b**) to declare each trip and provide expected time of return and landing

location. **Preferred Alternative 3** would require federally permitted charter vessels (**Option a**) and headboats (**Option b**) to hail in and submit for each trip fishing records via electronic reporting using an approved hardware of software. Although **Preferred Alternatives 2** and **3** would constitute an additional burden for federally permitted operators, they could improve the effectiveness of dock-side intercepts by allowing agents to better prioritize resources. **Preferred Alternative 2** and **Preferred Alternative 3** could improve catch and effort data and therefore, result in economic benefits.

4.3.3 Direct and Indirect Effects on the Social Environment

Additional effects would not be expected from **Alternative 1** (No Action) as no changes would be made to the trip notification requirements. Currently, only for-hire vessels that also possess a commercial reef fish permit (i.e., dual-permitted) are required to notify NMFS before departing the dock indicating the purpose of the trip. If such a vessel indicates to NMFS that it is departing on a for-hire trip, these vessels are not required to hail-in upon their return.

Compared to **Alternative 1**, **Preferred Alternative 2** would result in some social effects for charter vessels (**Option a**) and headboats (**Option b**) should they be required to submit a trip notification before leaving the dock. These effects would likely be minimal and primarily short-term, as charter and headboat operators learn to use the as yet undetermined mechanism to accomplish the required hail-out. Typically, the burden involved in a hail out (**Preferred Alternative 2**) would be less than the burden involved to hail in (**Preferred Alternative 3**), which, in addition to the notification of arrival time and landing location, would require the operator to electronically provide a fishing record of the trip before reaching the dock. **Preferred Alternative 3** would require charter vessels (**Option a**) and headboats (**Option b**) to submit fishing records via electronic reporting before arriving at the dock. This regulatory change is already addressed for charter vessels (Action 1**, Preferred Alternative 4**) and headboats (Action 2**, Preferred Alternative 4**), and the effects are analyzed in the respective actions. Thus, the additional requirements of this action pertain to requiring for-hire operators to hail-in, are to specify the time of arrival at the dock and location of landing.

Although the information requirements of hailing out (**Preferred Alternative 2**) may be less than those of hailing in (**Preferred Alternative 3**), these alternatives are not comparable in the sense that one may be selected in place of the other; rather, they represent sequential steps in a trip notification.

4.3.4 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. **Preferred Alternative 2** and **Preferred Alternative 3,** and their **options** would result in an increase in administrative burden to NMFS as there is currently no application to accept this information, so a system would also have to be developed. **Preferred Alternative 3**, would also have a higher administrative burden to NMFS then **Preferred Alternative 2** as an electronic fishing records system would need to be

developed and maintained for charter vessels. **Alternative 1 (**No Action**)** would result in no increase in administrative burden.

Currently, as a condition of the permit, fishermen are required to meet the reporting requirements associated with their permit (CFR 50 Section 622.5). **Preferred Alternative 2** and **Preferred Alternative 3** are requiring a hail-in and hail-out be completed by the vessels. Notifying NMFS would provide the opportunity to track those vessels that are not meeting the reporting requirements and those permits holder who are delinquent in reporting would not be able to legally harvest or possess fish until their reporting was up to date. **Preferred Alternatives 2** and **3** would be expected to provide positive effects to law enforcement to monitor reporting compliance.

4.4 Action 4: Location Hardware/Software Reporting Requirements.

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

The requirement to record position of vessels possessing a Gulf charter/headboat reef fish or CMP permit for-hire permit is an administrative process for providing a means of collecting data from the industry, and does not directly affect the biological, ecological, or physical environments, but may have an indirect effect. A location tracking system requirement could be used to aid in the prioritization of staff to conduct dock-side intercepts more efficiently that could further improve catch and effort data from for-hire vessels. Vessel monitoring and location data could be used to reduce uncertainty during the analysis of fishing effort and catch data by having the tool to examine vessel speeds, travel times, and fishing times. Fishing effort plays a vital role in stock assessments, managing ACLs, and fishing season closures. By reducing uncertainty in data and data analysis it would be expected to result in positive benefits to the biological and physical environments, and especially federally managed fish stocks as fishery managers would have less uncertainty developing regulations and catch targets. Requiring location data from vessel operators would also be expected to provide positive benefits during analysis of fishing depth as it relates to population abundance and discard mortality rates.

Currently, there is no requirement to continuously record fishing locations of federally-permitted for-hire vessels (**Alternative 1)**. However, as discussed in **Chapter 2**, any dual-permitted charter/headboat vessel is required to have a VMS as a condition of their commercial reef fish permit. **Preferred Alternative 2** would require the vessel operator to maintain a GPS that submits archived vessel positions with the fishing record. **Alternative 3** would require the vessel operator to maintain a GPS that submits real-time vessel positioning with the fishing report. **Alternative 4** would require the vessel operator to maintain a VMS that continuously submits vessel positions to NMFS. The vessel location monitoring requirements in **Preferred Alternative 2, Alternative 3,** and **Alternative 4** to submit vessel position is expected to provide indirect biological benefits to reef fish and CMP species by providing more accurate data

through a system that automatically tracks fishing locations. The data collected would be used when developing stock assessments, and analyzing season closures. **Preferred Alternative 2, Alternative 3,** and **Alternative 4** would be expected have greater positive benefits than **Alternative 1 (**No Action**)**, by improving the data used in stock assessments and management decision tools. **Preferred Alternative 2, Alternative 3,** and **Alternative 4** would not alter the manner in which the reef fish or CMP fisheries are operated, and therefore would not be expected to result in any adverse impacts to the physical, biological or ecological environment.

4.4.2 Direct and Indirect Effects on the Economic Environment

Alternative 1 (No Action**)** would not specify hardware or software reporting requirements for federally permitted for-hire vessels. **Alternative 1 (**No Action**)** would not affect the harvest of Gulf reef fish or CMP species because it would maintain current reporting requirements for for-hire vessels. Therefore, **Alternative 1 (**No Action**)** would not be expected to result in direct economic effects. However, by failing to establish hardware and software reporting requirements for federally permitted for-hire vessels, **Alternative 1 (**No Action**)** would forego opportunities to improve data collection in the for-hire sector and expected biological benefits that would be expected to result from more accurate data, thereby, resulting in adverse indirect economic effects.

Preferred Alternative 2 and **Alternatives 3-4** would require vessel operators to submit fishing records using various NMFS approved hardware/software. Reporting requirements for charter vessels (**Option a**) and headboats (**Option b**) include electronic devices with archived GPS capabilities (**Preferred Alternative 2**), with real-time GPS capabilities (**Alternative 3**), and VMS systems permanently affixed to the vessels (**Alternative 4**). Although **Preferred Alternative 2** would improve data collection compared to the no action alternative, the use of devices with real-time GPS capabilities considered in **Alternative 3** and **Alternative 4** would noticeably improve data collection, particularly location data, relative to **Preferred Alternative 2**. In addition, **Alternatives 3** and **4** would be expected to improve safety at sea. The potential improvements to data collection and safety at sea would be expected to result in indirect economic benefits. Relative to **Alternative 1 (**No Action**)**, **Alternative 4** would be expected to result in greatest economic benefits followed by **Alternative 3**, then **Preferred Alternative 2**.

Costs expected to be associated with the design, establishment, and administration of an electronic data collection program with clearly specified reporting requirements would be incurred either by NMFS or by for-hire operators. These costs would include start-up expenditures at the inception of the program as well as reoccurring costs. Initial software development expenditures and salaries and benefits for enforcement agents are examples of start-up and reoccurring expenditures borne by the government, respectively. In addition to the burden on the vessel operators' time, examples of costs borne by the for-hire fleet would include the purchase and installation (if warranted) costs of the approved hardware units and associated annual service charges. Estimates provided by the Technical Sub-committee (Figure 2.4.1) approximate costs that may be incurred by the federally permitted for-hire industry. These estimates assume daily trip-level reporting from the entire fleet (census) and do not account for calibration and comparative testing (with the existing data collection program) that would be

required. As expected, the reporting option that would require a VMS unit permanently affixed to the vessel (**Alternative 4**) would be the most costly. Based on estimates provided by the Technical Sub-Committee, total costs associated with the reporting requirements considered in **Alternative 4** would range from a minimum of $10.5 million to a maximum of $13.7 million. Following the implementation of the data collection program, industry-wide reoccurring costs are estimated at $1.3 million annually. Costs that would be expected to result from the implementation of a program requiring the use of a tablet or portable GPS (**Alternative 3**) are estimated at $4.6 million, approximately. **Preferred Alternative 2**, which would require on devices with archived GPS capabilities, would be expected to result in costs ranging from $4.3 million to $4.9 million, approximately. Cost figures presented in this section are included to provide an order of magnitude for costs expected to be incurred. As NMFS and the Council refine the contours of the data collection program to implement, it is likely that these estimates would be revised.

4.4.3 Direct and Indirect Effects on the Social Environment

The effects from this action would pertain to the increased burden to purchase, learn to use, and maintain the selected NMFS-approved hardware/software. Additional effects would not be expected from **Alternative 1** (No Action), as there would be no increased burden on for-hire operators. However, if the Council requires for-hire operators to submit fishing records before reaching the dock (the current **Preferred Alternative 4** in Actions 1 and 2), then a mechanism is needed for submission of the records.

Each of **Alternatives 3**, **4**, and **Preferred Alternative 2** would require that the NMFS-approved hardware/software be used to submit the required fishing records. Thus, there is no difference among **Alternatives 3**, **4**, and **Preferred Alternative 2** relative to the requirement to submit fishing records. Additionally, the requirement to submit fishing records before landing has been addressed and analyzed in Action 1 for charter vessels (**Preferred Alternative 4**) and in **Action 2** for headboats (**Preferred Alternative 4**).

In general, the expected social effects would likely be associated with a financial burden on for-hire operators and businesses to purchase and maintain any required equipment. An analysis of the expected economic effects is provided in Section 4.4.2. As noted in Section 3.4, dual-permitted vessels with a commercial reef fish permit are already required to have VMS. Thus, for charter vessels or headboats that also hold a commercial reef fish permit, no additional burden would be expected from a requirement to purchase VMS equipment (**Alternative 4)**. Charter vessels and headboats that are not dual-permitted are unlikely to have an electronic location reporting device installed that would satisfy the requirement of **Alternative 4**, and would thus be subject to this financial burden.

There are some potential benefits to the fleet and other long-term broad social benefits from requiring location reporting devices (**Alternatives 3**, **4**, and **Preferred Alternative 2**). Recording location information on tablets, computers, phones, or VMS equipment would be expected to improve data collection, particularly for information that could be used to validate reporting data and to improve bycatch and discard estimates in stock assessments. On the other hand, there may be opposition to the required use of location reporting devices by some for-hire

operators who have expressed concern with how these data may be used and who would have access to the location data. For-hire operators have also expressed concern with how location data would be incorporated into improving fishery management beyond the required trip reporting. The potential benefits from use of location reporting data may not be realized, in which case, the financial burden to purchase and maintain the equipment would not be mitigated by long-term benefits to the fleet.

Reporting location information (**Alternatives 3**, **4**, and **Preferred Alternative 2**) would also potentially improve data collection on fishing behavior and important fishing grounds. For example, effects on for-hire vessels from a potential marine protected area could be clarified and quantified if data are available on the exact locations and time for-hire vessels spent in a particular area. VMS data are currently being used to understand how potential closed areas would impact the rock shrimp fishery in the South Atlantic, with accurate and verifiable information on rock shrimp fishing grounds to improve analysis of potential impacts. Nevertheless, the expected indirect benefits to the fleet and to the public would be somewhat reduced by any negative direct effects from the additional short-term and long-term costs to purchase and maintain equipment necessary to meet location reporting requirements under **Alternatives 3**, **4**, and **Preferred Alternative 2**. The difference among **Alternatives 3**, **4**, and **Preferred Alternative 2** pertains to the type of location device required on for-hire vessels, each of which would be NMFS approved. These negative direct effects would be greatest under the most expensive device (**Alternative 4**), which would require a permanently installed VMS unit. Costs, and resulting negative effects, would decrease under **Alternative 3**, followed by **Preferred Alternative 2**, in comparison with **Alternative 4.**

4.4.4 Direct and Indirect Effects on the Administrative Environment

The NMFS southeast region does not currently have any approved hardware/software for at-sea electronic reporting for federally permitted for-hire vessels, unless they are a dual-permitted vessel. However, numerous devices and reporting technology are available and have been used in pilot and experimental programs in the southeast region. Action 4 considers the types of devices that would be allowed to report fisheries data including the location data collected by the reporting device.

Implementation of location reporting requirements would directly affect the administrative environment, because it would require NMFS to develop and maintain a data collection system capable of analyzing and storing geographical location information.

Alternatives 3, 4, and **Preferred Alternative 2** would be expected to reduce law enforcement's burden related to prosecution of violations due to greater harvest reporting compliance once a location monitoring system was implemented. Similar to a hail-in and hail-out system (Action 3) he use of a VMS type system (**Alternative 4)** would enable enforcement to be at the dock prior to vessel landing for cooperative agency inspections of documented violations. Having VMS would provide the opportunity for enforcement to meet the vessel at the dock for landing inspection of catch to confirm the fishing activity they declared and confirm the catch on board for individual fishing quota (IFQ) management. Additionally, VMS can reduce costly at-sea enforcement for: 1) closed seasons because VMS can determine seasonal closure compliance (if

any) based upon VMS participants without the need for random surface or aerial patrols; 2) prior notice of landings; 3) closed areas because VMS can determine area closure compliance (such as marine protected areas or 50 fathom depth contour restrictions) based on VMS-IFQ participants automated responses without the need for random surface or aerial patrols; and 4) high grading because VMS allows surface patrols to locate vessels and randomly check boats for high grading. The administrative burden would be expected to decrease with **Alternative 3** and **Alternative 2**, respectively for both the vessel operator and NMFS.

4.5 Cumulative Effects

As directed by the National Environmental Policy Act (NEPA), federal agencies are mandated to assess not only the indirect and direct effects of their actions, but cumulative effects of those actions and other actions as well. Under regulations implementing NEPA, cumulative impact is defined 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" (40 CFR 1508.7).

Cumulative effects "can result from individually minor but collectively significant actions taking place over a period of time" (40 CFR 1508.7). Cumulative effects can either be additive or synergistic. A synergistic effect occurs when the combined effects are greater than the sum of the individual effects. The following are some past, present, and future actions that could impact the environment in the area where the Reef Fish and CMP fisheries are prosecuted, where the impacts of this amendment might be felt.

Past Actions

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 federally-permitted for-hire 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 Gulf of Mexico reef fish and migratory pelagic CMP species, and spiny lobster are likely to reduce the risk of future overfishing in those fisheries and foster sustainable fishing practices.

Environmental Influences
The *Deepwater Horizon* MC252 (DWH) oil spill in 2010 affected at least one-third of the Gulf of Mexico (Gulf) from western Louisiana east to the Florida Panhandle and south to the Campeche Bank of Mexico. Millions of barrels of oil flowed from the ruptured wellhead (www.restorethegulf.gov). The impacts of the DWH oil spill on the physical environment may be significant and long-term. Oil was dispersed on the surface, and because of the heavy use of dispersants (both at the surface and at the wellhead), oil was also suspended within the water column (Camilli et al. 2010; Kujawinski et al. 2011). Floating and suspended oil washed onto coastlines in several areas of the Gulf along with non-floating tar balls. Suspended and floating

oil degrades over time, but tar balls persist in the environment and can be transported hundreds of miles (Goodman 2003).

Surface or submerged oil during the DWH oil spill event could have restricted the normal processes of atmospheric oxygen mixing into and replenishing oxygen concentrations in the water column affecting the long-standing hypoxic zone located west of the Mississippi River on the Louisiana continental shelf (NOAA 2010). Microbial biodegradation of hydrocarbons in the water column may have occurred without substantial oxygen drawdown (Hazen et al. 2010). Residence time of hydrocarbons in sediments is also a concern. The indices developed for past oil spills (Harper 2003) and oil spill scenarios (Stjernholm et al. 2011) such as the "oil residence index" do not appear to have been used during the assessment of the DWH oil spill.

The effects on the environment on reef fish and CMP fisheries may not be known for several years when affected year classes of larval and juvenile fish enter the adult spawning population or fishery. The highest concern is that the oil spill may have impacted the spawning success of species that spawn in the summer months, either by reducing spawning activity or by reducing survival of the eggs and larvae. The oil spill occurred during spawning months for every species in the CMP FMP; however, most species have a protracted spawning period that extends beyond the months of the oil spill. The presence of hydrocarbons in marine environments have been shown to have detrimental impacts on marine finfish, especially during the more vulnerable larval stage of development (Whitehead et al. 2011). Embryos of bluefin tuna, yellowfin tuna, and amberjack exposed to environmentally realistic levels of hydrocarbons showed defects in heart function (Incardona et al 2014).

The results of the studies detecting impacts on recruitment should be available soon and will be taken into consideration in future SEDAR assessments. In addition to impacts on recruitment, adult reef fish may also have been negatively affected by the oil spill. For example, Weisberg et al. (2014) suggested the hydrocarbons associated with Deepwater Horizon MC252 oil spill did transit onto the Florida shelf and may be associated with the occurrences of reef fish with lesions and other deformities. The overall impact of the oil spill may not be realized for quite some time and study results are just now becoming available. Other studies of the effects of hydrocarbon are ongoing.

If eggs and larvae were affected, impacts on harvestable-size Gulf king mackerel should begin to be seen when the 2010 year class becomes large enough to enter the fishery and be retained. The impacts would be realized as reduced fishing success and reduced spawning potential. King mackerel mature at age 3-4; therefore, a year class failure in 2010 could have been observed as early as 2013 or 2014. No data were available which demonstrated any such potential for year-class failure during SEDAR 38. Any new data generated since the completion of SEDAR 38 would need to be taken into consideration in the next SEDAR assessment of king mackerel. Therefore, due to a paucity of data, the impact of the DWH oil spill on Gulf king mackerel cannot be determined at this time. A similar conclusion is appropriate for Gulf Spanish mackerel, of which greater than 50% of both sexes reach reproductive maturity before one year of age (SEDAR 28 2013d). The SEDAR 28 stock assessment of Gulf Spanish mackerel (2013d) did not indicate an effect from the DWH oil spill; however, no research directed at determining such an effect was available.

Please refer to the Final Programmatic Damage Assessment and Restoration Plan and Final Programmatic Environmental Impact Statement completed by the National Marine Fisheries Service (Final PDARP/PEIS (2016)) for further details on the impacts from the Deepwater Horizon MC252 oil spill.

Hurricane season is from June 1 to November 30, and accounts for 97% of all tropical activity affecting the Atlantic Basin. These storms, although unpredictable in their annual occurrence, can devastate areas when they occur. However, while these effects may be temporary, those fishing-related activities which rely on access to the resource may be jeopardized if a hurricane strikes. It is reasonable to expect that access to fishery resources will be spatially and temporally reduced in hurricane-affected areas, which would result in negative short- to long-term social and economic effects. The spatially and temporally reduced harvest of fishery resources when a hurricane is present may result in negligibly positive biological effects, depending on the duration of the weather associated decrease in harvest. The action proposed in this document is not expected to alter the manner in which participating stakeholders respond to weather or other related safety-at-sea concerns, nor is it expected to result in any cumulative effect to the physical or biological environments.

Regulatory Influences

Participation in and the economic performance of the reef fish and CMP fisheries addressed in this document have been affected by a combination of regulatory, biological, social, and external economic factors. Regulatory measures have affected the quantity and composition of harvests of reef fish and CMP species, through the various size limits, seasonal restrictions, trip or bag limits, gear restrictions, and quotas.

The reader is referred to the History of Management in Chapter 1.3 of this document for past regulatory activity for reef fish and CMP species being impacted by this amendment. These include data reporting requirements for federally permitted vessels.

Present Actions

The South Atlantic Council is proposing mandatory electronic reporting for charter vessels. The South Atlantic Council is also proposing modifying the timing of headboat reporting by changing the day that reports must be submitted. Mandatory electronic reporting for charter vessels is expected to improve the data available for management and stock assessments, improve the accuracy and timeliness of data collection, and allow fishery managers to better monitor landings and discards, and more accurately assess the impacts of regulations on the for-hire industry fishing in federal waters. The South Atlantic Council proposes to implement the same reporting requirements for federally permitted charter vessels that currently exist for federally permitted headboats. Federally permitted charter vessels and headboats in the snapper grouper, dolphin wahoo, and coastal migratory pelagics (mackerel and cobia) fisheries along the Atlantic Coast would be affected.

Vessels possessing federal permits in both the South Atlantic and Gulf will required to report to the more stringent Gulf reporting requirements whether the vessel is fishing in South Atlantic or Gulf waters. Any vessel that possesses a Gulf charter/headboat reef fish or CMP permit will be

required to report in accordance to the more stringent Gulf reporting (once implemented) requirements.

This requirement will also be required of any Greater Atlantic Regional Fishery Office (GARFO) permitted vessels possessing a Gulf permit. In the case of GARFO permitted vessels possessing a Gulf permit the vessel will be required to report twice, once in accordance with GARFO requirements and once to the Gulf reporting requirements. In the future the systems and data may become exchangeable but until such time these vessels will be required to report twice.

Reasonably Foreseeable Future

Amendment 41 to the Reef Fish FMP is currently under development and will analyze the impacts of a range of alternatives for management actions to establish an allocation-based management program for the harvest of red snapper by vessels with a federal Gulf charter/headboat permit for reef fish that are not participating in the Southeast Regional Headboat Survey.

Amendment 42 to the Reef Fish FMP is currently under development with its purpose to reduce management uncertainty and improve economic conditions for Gulf reef fish headboat operators/owners, and provide flexibility by increasing fishing opportunities for their angler passengers through a management program for Gulf reef fish headboats participating in the Southeast Region Headboat Survey.

Amendment 29 to the CMP FMP is being developed and addresses issues associated with sector allocation sharing and recreational sector accountability measures for the Gulf migratory group of king mackerel.

Monitoring

Proposed management actions, as summarized in Section 2 of this document, establish an electronic (except when catastrophic conditions are present) reporting system for vessels to report landings information, and require the submission of "no fishing" 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. 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 would be expected to improve in-season estimations of when and if annual catch limits will be met, and could improve the timeliness of implementation of accountability measures designed to prevent overfishing from occurring. Requiring vessels to remain current as a requirement to continue harvesting 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, and help prevent overfishing from occurring.

Robust fish populations and sustainable fishing practices would promote long-term ecosystem health and resilience.

The proposed action relates to the harvest of an indigenous species in the Gulf, and the activity being altered does not itself introduce non-indigenous species, and is not reasonably expected to facilitate the spread of such species through depressing the populations of native species. Additionally, it does not propose any activity, such as increased ballast water discharge from foreign vessels, which is associated with the introduction or spread on non-indigenous species.

CHAPTER 5. LIST OF AGENCIES AND PERSONS CONSULTED

Name	Expertise	Responsibility	Agency
John Froeschke	Fishery biologist/statistician	Co-Team Lead - Amendment Development	GMFMC
Rich Malinowski	Fishery biologist	Co-Team Lead - Amendment Development	NMFS/SERO
Randy Blankenship	Southeast Branch Chief, Atlantic Highly Migratory Species Management Division	Reviewer	NMFS/SERO
Jennifer Cudney	Fish Biologist, SE Branch, Atlantic Highly Migratory Species Management Division	Reviewer	NMFS/SERO
Steven Atran	Fishery Biologist	Reviewer	GMFMC
Kenneth Brennan	Coordinator, Southeast Region Headboat Survey	Biological analyses	NMFS/SEFSC
Assane Diagne	Economist	Economic analyses	GMFMC
Nicholas Farmer	Fishery Biologist	Reviewer	NMFS/SERO
David Gloekner	Chief, Fisheries Monitoring Branch	Reviewer	NMFS/SEFSC
Stephen Holiman	Economist	Economic analyses	NMFS/SERO
Ava Lasseter	Anthropologist	Social analyses	GMFMC
Mara Levy	Attorney Advisor	Legal review	NMFS/GC
Carrie Simmons	Deputy Executive Director	Reviewer	GMFMC
Carolyn Sramek	Supervisory Management & Program Analyst	Reviewer	NMFS/SERO
Noah Silverman	Natural Resource Management Specialist	National Environmental Policy Act Review	NMFS/SERO

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

CHAPTER 6. REFERENCES

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APPENDIX A. OTHER APPLICABLE LAW

The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) (16 U.S.C. 1801 et seq.) provides the authority for management of stocks included in fishery management plans in federal waters of the exclusive economic zone. However, management decision-making is also affected by a number of other federal statutes designed to protect the biological and human components of U.S. fisheries, as well as the ecosystems that support those fisheries. Major laws affecting federal fishery management decision-making are summarized below.

Administrative Procedures Act

All federal rulemaking is governed under the provisions of the Administrative Procedure Act (5 U.S.C. Subchapter II), which establishes a "notice and comment" procedure to enable public participation in the rulemaking process. Under the Act, the National Marine Fisheries Service (NMFS) is required to publish notification of proposed rules in the *Federal Register* and to solicit, consider, and respond to public comment on those rules before they are finalized. The Act also establishes a 30-day waiting period from the time a final rule is published until it takes effect. NMFS can waive this waiting period under certain circumstances.

Coastal Zone Management Act

Section 307(c)(1) of the federal Coastal Zone Management Act of 1972 (CZMA), as amended, requires federal activities that affect any land or water use or natural resource of a state's coastal zone be conducted in a manner consistent, to the maximum extent practicable, with approved state coastal management programs. The requirements for such a consistency determination are set forth in National Oceanic and Atmospheric Administration (NOAA) regulations at 15 C.F.R. part 930, subpart C. According to these regulations and CZMA Section 307(c)(1), when taking an action that affects any land or water use or natural resource of a state's coastal zone, NMFS is required to provide a consistency determination to the relevant state agency at least 90 days before taking final action.

Upon submission to the Secretary of Commerce (Secretary), NMFS will determine if this plan amendment is consistent with the Coastal Zone Management programs of the states of Alabama, Florida, Louisiana, Mississippi, and Texas to the maximum extent possible. Their determination will then be submitted to the responsible state agencies under Section 307 of the CZMA administering approved CZMA programs for these states.

Data Quality Act

The Data Quality Act (Public Law 106-443) effective October 1, 2002, requires the government to set standards for the quality of scientific information and statistics used and disseminated by federal agencies. Information includes any communication or representation of knowledge such as facts or data, in any medium or form, including textual, numerical, cartographic, narrative, or audiovisual forms (includes web dissemination, but not hyperlinks to information that others disseminate; does not include clearly stated opinions).

Specifically, the Act directs the Office of Management and Budget to issue government wide guidelines that "provide policy and procedural guidance to federal agencies for ensuring and maximizing the quality, objectivity, utility, and integrity of information disseminated by federal agencies." Such guidelines have been issued, directing all federal agencies to create and disseminate agency-specific standards to: (1) ensure information quality and develop a pre-dissemination review process; (2) establish administrative mechanisms allowing affected persons to seek and obtain correction of information; and (3) report periodically to Office of Management and Budget on the number and nature of complaints received.

Scientific information and data are key components of fishery management plans (FMPs) and amendments and the use of best available information is the second national standard under the Magnuson-Stevens Act. To be consistent with the Act, FMPs and amendments must be based on the best information available. They should also properly reference all supporting materials and data, and be reviewed by technically competent individuals. With respect to original data generated for FMPs and amendments, it is important to ensure that the data are collected according to documented procedures or in a manner that reflects standard practices accepted by the relevant scientific and technical communities. Data will also undergo quality control prior to being used by the agency and a pre-dissemination review.

Endangered Species Act

The Endangered Species Act (ESA) of 1973, as amended, (16 U.S.C. Section 1531 et seq.) requires federal agencies use their authorities to conserve endangered and threatened species. The ESA requires NMFS, when proposing an action for managed stocks that "may affect" critical habitat or endangered or threatened species, to consult with the appropriate administrative agency (itself for most marine species, the U.S. Fish and Wildlife Service for all remaining species) to determine the potential impacts of the proposed action. Consultations are concluded informally when proposed actions may affect but are "not likely to adversely affect" endangered or threatened species or designated critical habitat. Formal consultations, including a biological opinion, are required when proposed actions may affect and are "likely to adversely affect" endangered or threatened species or designated critical habitat. If jeopardy or adverse modification is found, the consulting agency is required to suggest reasonable and prudent alternatives. NMFS, as part of the Secretarial review process, will make a determination regarding the potential impacts of the proposed actions.

Fish and Wildlife Coordination Act

Fish and Wildlife Coordination Act of 1934 (16 U.S.C. 661-667e) provides the basic authority for the Fish and Wildlife Service's involvement in evaluating impacts to fish and wildlife from proposed water resource development projects. It also requires Federal agencies that construct, license or permit water resource development projects to first consult with the Service (and the NMFS in some instances) and State fish and wildlife agency regarding the impacts on fish and wildlife resources and measures to mitigate these impacts.

The fishery management actions in the Gulf of Mexico are not likely to affect wildlife resources pertaining to water resource development as the economic exclusive zone is from the state water boundary extending to 200 nm from shore.

National Historic Preservation Act

The National Historic Preservation Act (NHPA) of 1966, (Public Law 89-665; 16 U.S.C. 470 *et seq.*) is intended to preserve historical and archaeological sites in the United States of America. Section 106 of the NHPA requires federal agencies to evaluate the impact of all federally funded or permitted projects for sites on listed on, or eligible for listing on, the National Register of Historic Places and aims to minimize damage to such places.

Typically, fishery management actions in the Gulf of Mexico are not likely to affect historic places with exception of the *U.S.S. Hatteras*, located in federal waters off Texas, which is listed in the National Register of Historic Places. The proposed actions are not likely to increase fishing activity above previous years. Thus, no additional impacts to the *U.S.S. Hatteras* would be expected.

Marine Mammal Protection Act

The Marine Mammal Protection Act (MMPA) established a moratorium, with certain exceptions, on the taking of marine mammals in U.S. waters and by U.S. citizens on the high seas, and on the importing of marine mammals and marine mammal products into the United States. Under the MMPA, the Secretary of Commerce (authority delegated to NMFS) is responsible for the conservation and management of cetaceans and pinnipeds (other than walruses). The Secretary of the Interior is responsible for walruses, sea and marine otters, polar bears, manatees, and dugongs.

Part of the responsibility that NMFS has under the MMPA involves monitoring populations of marine mammals to make sure that they stay at optimum levels. If a population falls below its optimum level, it is designated as "depleted," and a conservation plan is developed to guide research and management actions to restore the population to healthy levels.

In 1994, Congress amended the MMPA to govern the taking of marine mammals incidental to commercial fishing operations. This amendment required the preparation of stock assessments for all marine mammal stocks in waters under U.S. jurisdiction, development and implementation of take-reduction plans for stocks that may be reduced or are being maintained below their optimum sustainable population levels due to interactions with commercial fishing activities, and studies of pinniped-fishing activity interactions.

Under section 118 of the MMPA, NMFS must publish, at least annually, a List of Fisheries that places all U.S. commercial fishing activities into one of three categories based on the level of incidental serious injury and mortality of marine mammals that occurs in each fishing activity. The categorization of a fishing activity in the List of Fisheries determines whether participants in that fishing activity may be required to comply with certain provisions of the MMPA, such as registration, observer coverage, and take reduction plan requirements.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act of 1918 (16 U.S.C. 703) protects migratory birds. The responsibilities of Federal agencies to protect migratory birds are set forth in Executive Order 13186. US Fish and Wildlife Service is the lead agency for migratory birds. The birds protected under this statute are many of our most common species, as well as birds listed as threatened or endangered. A memorandum of understanding (MOU) between NMFS and U.S. Fish and Wildlife Service (FWS), as required by Executive Order 13186 (66 FR 3853, January 17, 2001), is to promote the conservation of migratory bird populations. This MOU focuses on avoiding, or where impacts cannot be avoided, minimizing to the extent practicable, adverse impacts on migratory birds and strengthening migratory bird conservation through enhanced collaboration between NMFS and FWS by identifying general responsibilities of both agencies and specific areas of cooperation. Given NMFS' focus on marine resources and ecosystems, this MOU places an emphasis on seabirds, but does not exclude other taxonomic groups of migratory birds.

Typically, fishery management actions in the Gulf of Mexico are not likely to affect migratory birds. The proposed actions are not likely to change the way in which the fishery is prosecuted. Thus, no additional impacts are reasonably expected.

Paperwork Reduction Act

The Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.) regulates the collection of public information by federal agencies to ensure the public is not overburdened with information requests, the federal government's information collection procedures are efficient, and federal agencies adhere to appropriate rules governing the confidentiality of such information. The Act requires NMFS to obtain approval from the Office of Management and Budget before requesting most types of fishing activity information from the public. The actions and alternatives are expected to increase the reporting burden on the public.

Prime Farmlands Protection and Policy Act

The Farmland Protection and Policy Act of 1981 (7 U.S.C. 4201) was enacted to minimize the loss of prime farmland and unique farmlands as a result of Federal actions by converting these lands to nonagricultural uses. It assures that federal programs are compatible with state and local governments, and private programs and policies to protect farmland.

The fishery management actions in the Gulf of Mexico are not likely to affect farmlands as the economic exclusive zone is from the state water boundary extending to 200 nm from shore.

National Wild and Scenic Rivers System

The National Wild and Scenic Rivers System of 1968 (Public Law 90-542; 16 U.S.C. 1271 et seq.) preserves certain rivers with outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and future generations. The Act safeguards the special character of these rivers, while also recognizing the potential for their appropriate use and

development. It encourages river management that crosses political boundaries and promotes public participation in developing goals for river protection.

The fishery management actions in the Gulf of Mexico are not likely to affect wetland habitats as the economic exclusive zone is from the state water boundary extending to 200 nm from shore.

North American Wetlands Conservation Act

The North American Wetlands Conservation Act of 1989 (Public Law 101-233) established a wetlands habitat program, administered by the United States Fish and Wildlife Service, to protect and manage wetland habitats for migratory birds and other wetland wildlife in the United States, Mexico, and Canada.

The fishery management actions in the Gulf of Mexico are not likely to affect wetland habitats as the economic exclusive zone is from the state water boundary extending to 200 nautical miles from shore.

Executive Orders (E.O.)

E.O. 12630: Takings

The E.O. on Government Actions and Interference with Constitutionally Protected Property Rights that became effective March 18, 1988, requires each federal agency prepare a Takings Implication Assessment for any of its administrative, regulatory, and legislative policies and actions that affect, or may affect, the use of any real or personal property. Clearance of a regulatory action must include a takings statement and, if appropriate, a Takings Implication Assessment. The NOAA Office of General Counsel will determine whether a Taking Implication Assessment is necessary for this amendment.

E.O. 12866: Regulatory Planning and Review

E.O. 12866: Regulatory Planning and Review, signed in 1993, requires federal agencies to assess the costs and benefits of their proposed regulations, including distributional impacts, and to select alternatives that maximize net benefits to society. To comply with E.O. 12866, NMFS prepares a Regulatory Impact Review (RIR) for all regulatory actions that either implement a new fishery management plan or significantly amend an existing plan. RIRs provide a comprehensive analysis of the costs and benefits to society of proposed regulatory actions, the problems and policy objectives prompting the regulatory proposals, and the major alternatives that could be used to solve the problems. The reviews also serve as the basis for the agency's determinations as to whether proposed regulations are a "significant regulatory action" under the criteria provided in E.O. 12866 and whether proposed regulations will have a significant economic impact on a substantial number of small entities in compliance with the Regulatory Flexibility Analysis. A regulation is significant if it: 1) Has an annual effect on the economy of $100 million or more or adversely affects in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments and communities; 2) creates a serious inconsistency or otherwise

interferes with an action taken or planned by another agency; 3) materially alters the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or 4) raises novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in this Executive Order.

E.O. 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations

This E.O mandates that each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories and possessions.

E.O. 12962: Recreational Fisheries

This E.O. requires federal agencies, in cooperation with states and tribes, to improve the quantity, function, sustainable productivity, and distribution of U.S. aquatic resources for increased recreational fishing opportunities through a variety of methods including, but not limited to, developing joint partnerships; promoting the restoration of recreational fishing areas that are limited by water quality and habitat degradation; fostering sound aquatic conservation and restoration endeavors; and evaluating the effects of federally-funded, permitted, or authorized actions on aquatic systems and recreational fisheries, and documenting those effects. Additionally, it establishes a seven-member National Recreational Fisheries Coordination Council (NRFCC) responsible for, among other things, ensuring that social and economic values of healthy aquatic systems that support recreational fisheries are considered by federal agencies in the course of their actions, sharing the latest resource information and management technologies, and reducing duplicative and cost-inefficient programs among federal agencies involved in conserving or managing recreational fisheries. The NRFCC also is responsible for developing, in cooperation with federal agencies, States and Tribes, a Recreational Fishery Resource Conservation Plan - to include a five-year agenda. Finally, the Order requires NMFS and the U.S. Fish and Wildlife Service to develop a joint agency policy for administering the ESA.

E.O. 13089: Coral Reef Protection

The E.O. on Coral Reef Protection requires federal agencies whose actions may affect U.S. coral reef ecosystems to identify those actions, utilize their programs and authorities to protect and enhance the conditions of such ecosystems, and, to the extent permitted by law, ensure actions that they authorize, fund, or carry out do not degrade the condition of that ecosystem. By definition, a U.S. coral reef ecosystem means those species, habitats, and other national resources associated with coral reefs in all maritime areas and zones subject to the jurisdiction or control of the United States (e.g., federal, state, territorial, or commonwealth waters).

Regulations are already in place to limit or reduce habitat impacts within the Flower Garden Banks National Marine Sanctuary. Additionally, NMFS approved and implemented Generic Amendment 3 for Essential Fish Habitat (GMFMC 2005), which established additional habitat

areas of particular concern (HAPCs) and gear restrictions to protect corals throughout the Gulf of Mexico. There are no implications to coral reefs by the actions proposed in this amendment.

E.O. 13132: Federalism

The E.O. on Federalism requires agencies in formulating and implementing policies, to be guided by the fundamental Federalism principles. The Order serves to guarantee the division of governmental responsibilities between the national government and the states that was intended by the framers of the Constitution. Federalism is rooted in the belief that issues not national in scope or significance are most appropriately addressed by the level of government closest to the people. This Order is relevant to FMPs and amendments given the overlapping authorities of NMFS, the states, and local authorities in managing coastal resources, including fisheries, and the need for a clear definition of responsibilities. It is important to recognize those components of the ecosystem over which fishery managers have no direct control and to develop strategies to address them in conjunction with appropriate state, tribes and local entities (international too).

In Amendment 30B, no Federalism issues were identified relative to the action to establish the 30B permit provision. Therefore, consultation with state officials under Executive Order 12612 was not necessary. In Council discussions regarding this framework action, the question of whether the 30B permit provision conflicts with state regulations has been discussed (see Section 1.1), but no determination was made that this constitutes a Federalism issue. Consequently, consultation with state officials under Executive Order 12612 remains unnecessary.

E.O. 13158: Marine Protected Areas

This E.O. requires federal agencies to consider whether their proposed action(s) will affect any area of the marine environment that has been reserved by federal, state, territorial, tribal, or local laws or regulations to provide lasting protection for part or all of the natural or cultural resource within the protected area. There are several marine protected areas, HAPCs, and gear-restricted areas in the eastern and northwestern Gulf. The existing areas are entirely within federal waters of the Gulf of Mexico. They do not affect any areas reserved by federal, state, territorial, tribal or local jurisdictions.

Essential Fish Habitat

The Magnuson-Stevens Act includes a habitat conservation provision that requires each existing and any new FMPs to describe and identify essential fish habitat (EFH) for each federally managed species, minimize to the extent practicable impacts from fishing activities on EFH that are more than minimal and not temporary in nature, and identify other actions to encourage the conservation and enhancement of that EFH. To address these requirements the Council developed, and NMFS approved, EFH Generic Amendment 3 (GMFMC 2005). Section 305(b)(2) requires federal agencies to obtain a consultation for any action that may adversely affect EFH.

APPENDIX B. 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 Q – Coastal Migratory Pelagic Resources (Gulf of Mexico and 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) 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 C. 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 Atlantic Coastal Cooperative Statistics Program (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 D. MINIMUM DATA ELEMENTS

Background

The Gulf Council (Council) is considering a generic amendment that would implement electronic reporting for federally permitted Gulf of Mexico for-hire vessels. The Council requested additional review and input from their Data Collection Technical Committee (Committee), specifically focusing on the recommended data elements that are necessary to improve fisheries and socioeconomic data in the Gulf of Mexico for-hire fishery. The Committee reviewed a list of data elements collected by 23 for-hire programs in the Gulf and Atlantic regions and a list of potential data elements for consideration in the Gulf of Mexico for-hire fishery. The meeting focused on the review and subsequent recommendations of this committee about the data elements to be included as part of the for-hire electronic logbook program. The discussions were guided by the Council objective to keep the reporting as simple as possible, but adequate to achieve a timely and accurate estimate of catch and effort from the for-hire fleet. The Committee reviewed a list of data elements that could be incorporated in a for-hire data collection program. The Committee categorized each element into one of the following categories: Essential, Recommended, or Not Recommended.

Essential Elements

The Committee characterized 21 variables as "Essential" meaning they are necessary to achieve the minimum objectives of the program. These minimum elements are presented in **Table 1**. The Committee emphasized that the reporting requirements should be as simple as possible to complete, noting vessel operators will need to submit the fishing report before completing each trip. Many of the elements necessary to identify an individual trip (e.g., permit number, vessel number, trip type, trip identifier, and hail-out time) could be auto-completed by the reporting software at the beginning of each trip (i.e., submitted via hail-out) and would require little effort by the vessel operator. This greatly improves data quality, validation, and vessel specific effort information. Several additional variables could be configured when the software is initially installed and rarely modified. For example 'trip type' could be defaulted to 'for-hire' and only changed occasionally when other trips types are made. These variables would be specified at the beginning of each trip and would not require action from the vessel operator for the remainder of the for-hire trip. Primary target species could also be auto-populated with a default to simplify reporting. This variable is essential for stock assessments and economic analysis. While target species may change during trip due to conditions on the water, bias may exist if defined after a trip (i.e., you targeted what you caught).

Variables reported at hail-out

Expected landing time, location, and the number of anglers were recommended as variables to be provided during the hail-out prior to initiating the trip. Expected landing time and location would support increased efficiency of dockside validation and increase the sample size of biological data that is used for stock assessments and management.

At-sea reporting

The Committee recommended five variables be included in the at-sea report: species harvested, number harvested, number released, disposition of released fish, and primary depth fished (Table 1). These variables comprise the most important elements necessary to estimate

harvest of the for-hire fleet. Disposition of released fish was only recommended for HMS species; this query could be automated to only appear when an HMS species was reported discarded. The reporting protocol would build upon existing software that would support fast, intuitive data entry that would be validated through dockside intercepts. The submission of these data would be provided during the hail-in for each trip and would complete the data submission requirements for each for-hire trip.

Recommended Data Elements

The Committee provided recommendations on a set of variables that were deemed important, yet, beyond the bare minimum need to achieve an estimate of catch and effort from the for-hire fleet. These recommended elements are available in Table 2 and generally considered supplementary (e.g., minimum and maximum depth fished) or provide additional socioeconomic information about the for-hire fishery. For example, fuel price, gallons used, and number of paying customers could be provided to better characterize economic and social impacts of for-hire fishing. However, some of these data may be collected more efficiently by a sample of the fleet (e.g., fuel price) and there was concern that too many fields may reduce reporting compliance and stakeholder support.

Data Elements Not Recommended

The Committee recommended that several data elements be removed from consideration as part of the for-hire reporting program. These elements are listed in Table 3. The rationale for removal was varied. Some elements were considered too burdensome to collect relative to the value added to the data (e.g., hook size, number of lines fished), potentially ambiguous (e.g., number of crew members fishing) or difficult to validate (e.g., charter fees). The Committee discussed that these variable could provide important information but again, was guided by the objective to focus on the minimum elements to characterize catch and effort of the fleet.

Table D1. List of essential data elements as recommended by the Technical Data Committee at their September 2016 meeting.

Variable	Description	Comments	Committee Recommended?	Submission Type
Permit Number	Federal for-hire permit number for the vessel	*Owner could configure initial account with all Permit Numbers; NMFS can links and validate to Vessel ID, which is easier for captain to report and easier for agent to validate*	Essential	Auto-complete
Vessel Number	USCG vessel id	*Provided by captain, could be prefilled or selected from drop down menu to save time.*	Essential	Auto-complete
Trip Type	Commercial/Headboat /Charter/Private/Other (incl. research trips)	*Helps law enforcement identify trip and associated regulations that apply*	Essential	Auto-complete with custom defaults
Trip Identifier	Unique identifier for current trip assigned at Hail-Out; cannot obtain new trip identifier until current trip's final logbook is received.	*Critical to maintain data integrity and to ensure trip reports are completed in timely manner.*	Essential	Auto-complete

Table D1 cont. List of essential data elements as recommended by the Technical Data Committee at their September 2016 meeting.

Landing Location	Location for vessel landing, transmitted to law enforcement	*Critical for dockside validation; will need call service for weekends*	Essential	Auto-complete with custom defaults
Landing Date	Date for vessel landing, transmitted to law enforcement	*Critical for dockside validation; will need call service for weekends*	Essential	Auto-complete with custom defaults
Landing Time	Time for vessel landing, transmitted to law enforcement	*Estimate provided at Hail-out, Actual potentially collected 30 min in advance of landing (1 hr: HBS Collaborative, 3 hr: Commercial - 1 hr window)*	Essential	Provide at hail-out
Primary Method of Fishing	Primary Method {troll, drift, bottom, spear} used on the trip	*Critical for accurate CPUE computations; gear impacts selectivity, discard rates*	Essential	Auto-complete with custom defaults

Table D1 cont. List of essential data elements as recommended by the technical data committee at their September 2016 meeting.

Variable	Description	Comments	Committee Recommended?	Submission Type
Anglers	Number of anglers fishing on the vessel (distinct from number of passengers and crew)	*Critical metric for CPUE computations ([anglers+fishing crew] X fishing hours = angler-hours)*	Essential	Provide at hail-out
Number of Crew	Number of crew on the boat	*Useful for economic analysis, bag limit analysis, etc.*	Essential, included in current SRHS	Auto-complete with custom defaults
Hours Fished	Hours spent fishing (avg. per angler)	*Effort metric for CPUE computations used for stock assessment indices of abundance*	Essential	Auto-complete with custom defaults
Primary Target Species	Primary species targeted on trip	*Critical metric for CPUE computations, as not all trips targeting a species land the species, but the effort is still effort directed towards the species.*	Essential for stock assessments and economic analysis; target species may change during trip due to conditions on the water; however, bias may exist if defined after a trip (i.e., you targeted what you caught). Might need a few aggregate fields like "Reef Fish," "Migratory Pelagics," "HMS Pelagic Species," "Coastal Sharks," "No Intended Target." Might be useful to have software auto-populate "default" target species or carry forward selected target species from previous trip.	Auto-complete with custom defaults

Table D1 cont. List of essential data elements as recommended by the technical data committee at their September 2016 meeting.

Species	Species caught on trip	*Critical for ACL monitoring*	Essential	At-sea report
Retained Catch	Number of each species caught on trip	*Critical for ACL monitoring*	Essential	At-sea report
Released Catch	Number of each species released on trip	*Critical for stock assessment*	Essential	At-sea report
Disposition	Status of discarded species	*Useful for stock assessment*	Essential for HMS targeted species (if HMS targeted species reported as discarded, this question pops up)	At-sea report

Table D1 cont. List of essential data elements as recommended by the technical data committee at their September 2016 meeting.

Area	Area fished at set intervals from real-time or archived GPS track	*Important for evaluation of barotrauma, assignment of fishing to jurisdiction, evaluation of spatial management, understanding impacts of climate change on stock distribution, safety at sea*	Essential (Auto-populated)	Auto-complete
Primary Depth Fished	Self-reported Primary depth fished in feet (what depth was your gear? – this is the critical question for barotrauma, not the depth of the bottom)	*Critical to evaluation of barotrauma and associated release mortality*	Essential; Min, Max, and Primary Depth collected by SRHS starting in 2013.	At-sea report
Hail-out Time	Time vessel leaves dock		Required by Council	Auto-complete
Hail-in Time	Time vessel returns to dock		Required by Council	Auto-complete

Table D1 cont. List of essential data elements as recommended by the technical data committee at their September 2016 meeting.

Trip Duration	Duration of Trip (hours)	*Easily computed from Hail-Out and Hail-In, but less useful than Hours Fished for CPUE computations*	Could be easily calculated from Hail-in and Hail-out if needed [add Hail-in time and Hail-out time to database]; essential for continuity of data for trip type assignments for SRHS	Auto-complete; Based on hail-out/hail-in times

Table 2. Data elements recommended by the Technical Data Committee at their September 2016 meeting.

Variable	Description	Comments	Committee Recommended?	Submission Type
Secondary Target Species	Secondary species targeted on trip	*Some vessels may target multiple species, especially vessels making multi-day trips.*	Recommended	Auto-complete with custom defaults
Min Depth Fished	Self-reported Min depth fished in feet	*Critical to evaluation of barotrauma and associated release mortality*	Recommended	At-sea report
Max Depth Fished	Self-reported Max depth fished in feet	*Critical to evaluation of barotrauma and associated release mortality*	Recommended	At-sea report
Vessel Length	Length of vessel in feet	*Owner could configure account with information for all vessels, NMFS can link and validate.*	Recommended (auto-populated)	Auto-complete
Fuel Quantity	Estimated gallons of fuel used on trip	*Useful to assess economics of the for-hire sector*	Recommended, included in current SRHS. May be possible to compute from VMS track rather than require operator to report.	Recommended, included in current SRHS. May be possible to compute from VMS track rather than require operator to report.
Fuel Price	Price per gallon paid for fuel used on trip	*Useful to assess economics of the for-hire sector*	Recommended, included in current SRHS. Secondary data sources exist for this information.	Recommended, included in current SRHS. Secondary data sources exist for this information.

Table 2 cont. Data elements recommended by the Technical Data Committee at their September 2016 meeting.

Variable	Description	Comments	Committee Recommended?	Submission Type
Passengers	Number of passengers (not including crew)	*Used to compute total trip fee (website posted headboat cost/person X passengers), essential for bag limit analysis*	Recommended; note some passengers may not have paid, which introduces some bias in the economic analysis	Recommended; note some passengers may not have paid, which introduces some bias in the economic analysis
Secondary Method of Fishing [optional]	Secondary Method {troll, drift, bottom, spear} used on the trip; field not required, optional if applicable to the trip	*Critical for accurate CPUE computations; gear impacts selectivity, discard rates*	Suggested as "Optional" field	Select from list

Table 3. Data elements not recommended by the Technical Data Committee at their September 2016 meeting.

Variable	Description	Comments	Committee Recommended?
Number of Hooks	Mean number of hooks in the water	*Useful for CPUE, difficult for large boats with many anglers*	Not recommended
Pay Type	Per person, per group, or no charge (mixed pay types defaults to per person)	*Useful to assess economics of the for-hire sector; and delineation of for-hire sub-sectors*	Not recommended
Hook Manufacturer	Manufacturer of hooks used to catch each species (if hook gear reported)	*Useful for CPUE computations; hook size impacts selectivity - hook sizes vary by manufacturer*	Not recommended
Hook Number	Number of hooks used	*Useful to convert angler-hours to hook-hours for CPUE computations*	Not recommended
Hook Size	Size of hook used	*Useful for CPUE computations; hook size impacts selectivity - hook sizes vary by manufacturer*	Not recommended
# of Crew Fishing	Number of crew that were fishing on the boat	*Critical metric for CPUE computations ([anglers+fishing crew] X fishing hours = angler-hours)*	Not Recommended - Difficult to define – what if a crew member deploys the line and the angler lands the fish?

Table 3 cont. Data elements not recommended by the Technical Data Committee at their September 2016 meeting.

Variable	Description	Comments	Committee Recommended?
Number of Lines	Mean number of lines being fished	Useful for CPUE, difficult for large boats with many anglers	Not recommended for Headboat; Potentially useful for Charter – if vessel is trolling this is probably a more accurate measure of effort than number of anglers
Charter Fee	Total for-hire fees collected from all passengers for this trip	Critical for ANY economic analysis/assessment	Not recommended in eLogbook, but highly recommended for Separate survey. Can also be obtained online. Vessel operator may not have this information available prior to hitting dock.
Crew Pay	Total compensation received by hired crew for this trip	Useful to assess economics of the for-hire sector	Not recommended in eLogbook, but highly recommended for Separate survey. Requesting tip information may reduce compliance. Vessel operator may not have this information available prior to hitting dock.

APPENDIX E. SOUTHEAST REGION HEADBOAT SURVEY FORMS

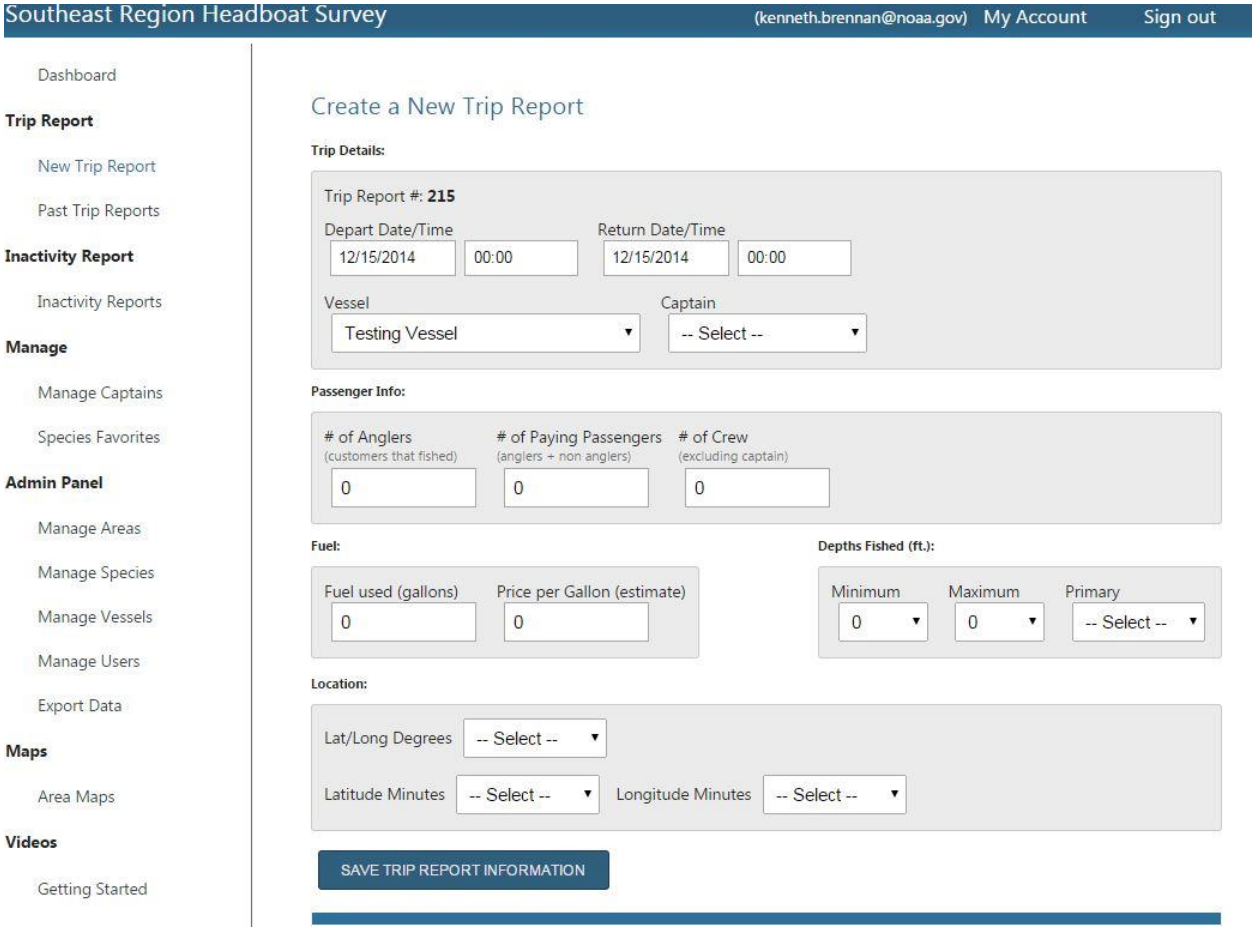

Figure D1. Example Southeast Region Headboat Survey trip report form for headboats.

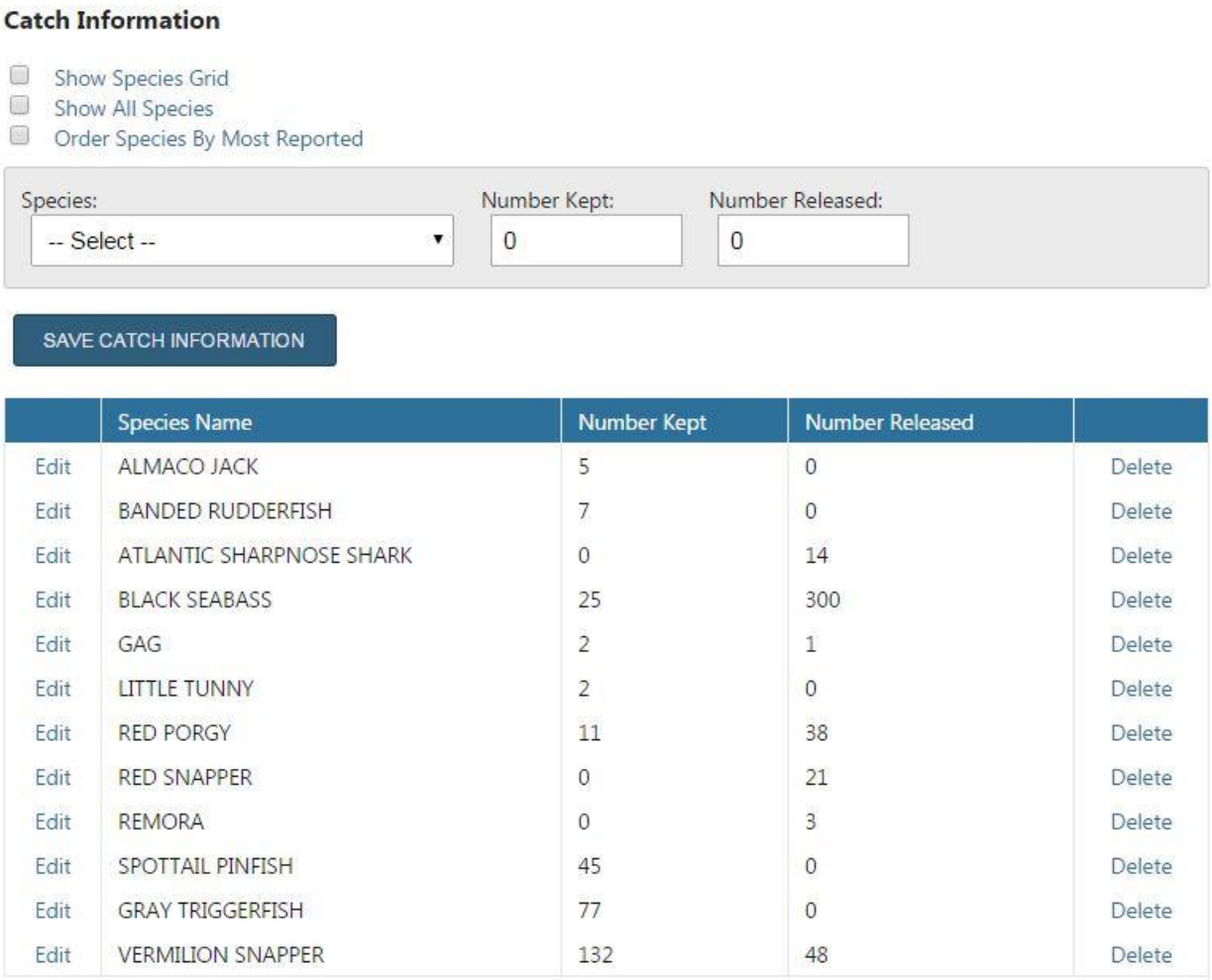

Figure D2. Example Southeast Region Headboat Survey catch report form for headboats.

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
ELB	electronic logbook
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
HMS	highly migratory species
MRIP	Marine Recreational Information Program
NOAA	National Oceanic and Atmospheric Administration
NCDENR	North Carolina Department of Environment and Natural Resources
NFWF	National Fish and Wildlife Foundation
NMFS	National Marine Fisheries Service
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

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 Management 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). National Oceanic and Atmospheric Adminstration Fisheries, in coordination with the states, Atlantic Coastal Cooperative Statistics Program, and Fisheris Information Network, 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 Marine Recreational Information Program, Southeast Regional Office, Southeast Fisheries Science Center, highly migratory species, state agencies, Atlantic Coastal Cooperative Statistics Program, and Gulf Fisheries Information Network;
- 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). National Oceanic Atmospheric Adminstration (NOAA) Fisheries, in coordination with the states, Atlantic Coastal Cooperative Statistics Program (ACCSP), and Fisheries Information Network (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 (SRHS). 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 (TPWD) 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 (ELB) 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 ELB 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 (NFWF) 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 Gulf of Mexico and South Atlantic Fishery Management 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 vessel monitoring system (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 Marine Recreational Information Program (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 Gulf of Mexico Fishery Management Council (GMFMC) and South Atlantic Fishery Management Council (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 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 National Oceanic and Atmospheric Administracion (NOAA) Fisheries, the Fulf of Mexico Fisheries Information Network (GulfFIN), and Atlantic Coastal Cooperative Statistics Program (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 Marine Recreational Information Program (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 National Marine Fishery Service (NMFS) Southeast Regional Office (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 for-hire-survey (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 Gulf of Mexico Fishery Management Council (GMFMC), 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 National Marine Fisheries Service (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, Southeast Regional Office (SERO), Southeast Fisheries Science Center (SEFSC), highly migratory species (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.

Current and Pilot Study Program Costs

The 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 (ELB) 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 Region Headboat Survey (SRHS) 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 ELB 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 National Marine Fisheries Service 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 Marine Recreational Information Program (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 Exclusive Economic Zone (EEZ) or adjacent state waters until previous 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 National Oceanic and Atmospheric Administration (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.

APPENDIX G. VMS SCREENSHOTS FOR THE HEADBOAT COLLABORATIVE PILOT STUDY

Headboat Collaborative Background

On August 26, 2013, NOAA Fisheries announced approval and issuance of the EFP for the Headboat Collaborative (HBC) EFP pilot study. The purpose of the HBC pilot program was to evaluate the viability of an allocation-based management strategy for improving the conservation of marine resources and economic stability and performance of the headboat sector. Headboats participating in the pilot program were authorized to harvest red snapper and gag using quota allocation outside the designated recreational fishing seasons (e.g., red snapper begins June 1 and gag begins July 1). The EFP proposed evaluating the efficacy of an allocation-based management system using a limited number of headboats in a 2-year pilot study. Since the EFP was neither a fishery management plan (FMP) nor a plan amendment, and was based on legal authority independent from the FMP, NOAA Fisheries determined that it was not subject to referendum requirements.

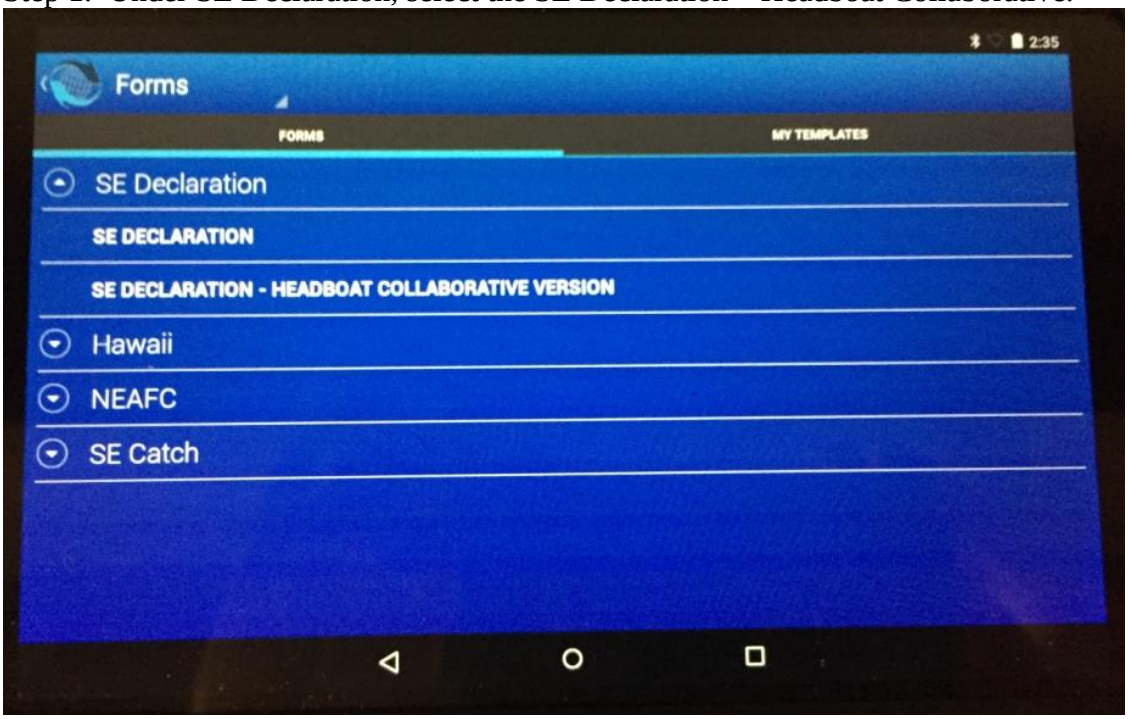
To ensure 100% catch accountability and to enable a transparent monitoring system, HBC vessels adhered to strict protocols to track each fish caught and landed during a trip. Each vessel had an operational vessel monitoring system (VMS) that allows NOAA Fisheries to track the vessel while at sea. Vessel owners were responsible for purchasing VMS units ($1,799 per unit), coordinating installation with the vendor, and paying for monthly service costs (~$60 per month). All vessels used the CLS America VMS unit with the Thorium tablet. CLS America built customized software forms so that HBC participants could have a simple and fast way to enter information. HBC participants submitted a VMS declaration (hail-out) through the VMS unit prior to departing on every trip, regardless of whether or not red snapper or gag were the intended target species. Participants submitted a landing notification (hail-in) through the VMS unit at least one hour prior to returning to port regardless of whether or not red snapper or gag were landed. Hail-ins contained the vessel name, landing location, time of landing, and the number of red snapper and gag landed. The hail-in requirement was intended to provide law enforcement agents/officers and port agents the opportunity to be present at the point of landing so they can monitor and enforce the HBC EFP requirements dockside. Landing conditions required that HBC vessels only land at approved landing locations. Approved landing locations ensure sites actually exist and law enforcement officers and port agents can access these sites. Landing locations must be publicly accessible by land and water.

VMS Screenshots of the HBC declaration and landing notification forms

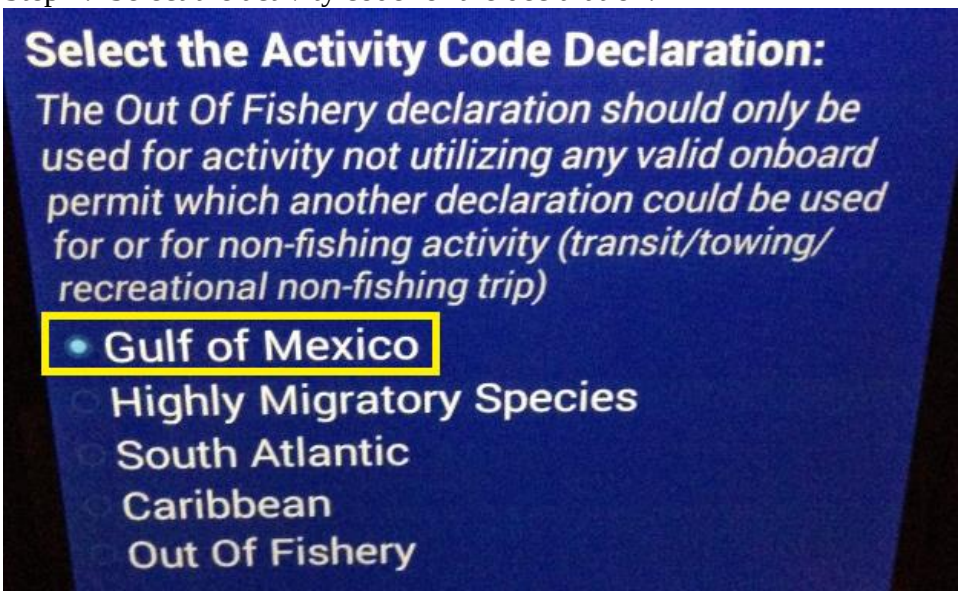
The HBC pilot study used a single VMS vendor, which created the declaration (hail-out) and landing notification (hail-in) forms based on requirements in the EFP and input from NMFS.

Declaration Screens

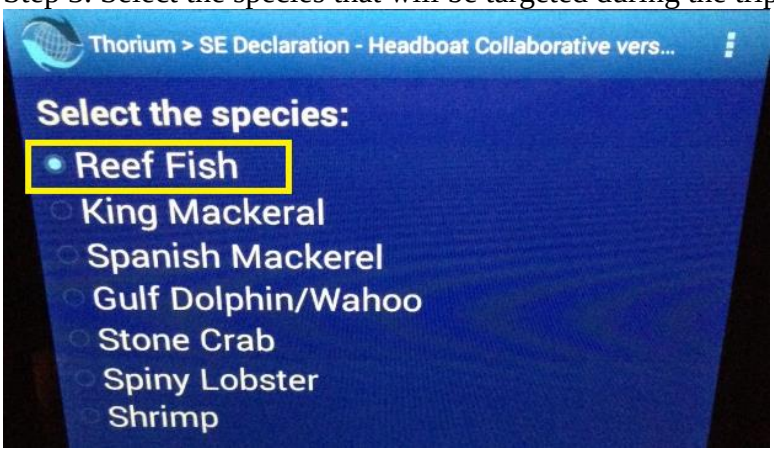
Step 1. Under SE Declaration, select the SE Declaration – Headboat Collaborative.



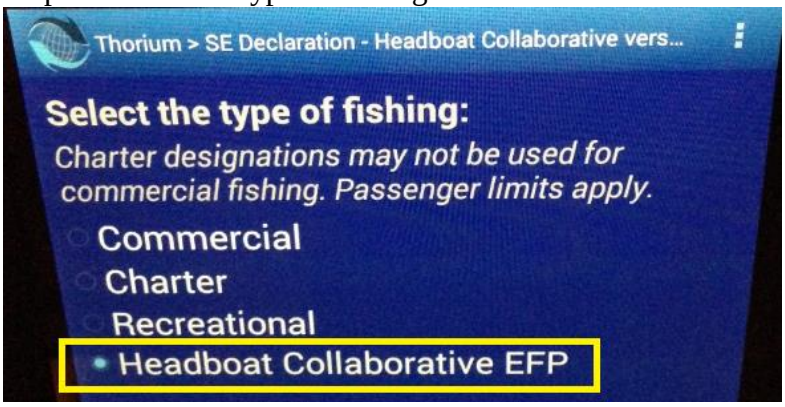
Step 2. Select the activity code for the declaration.



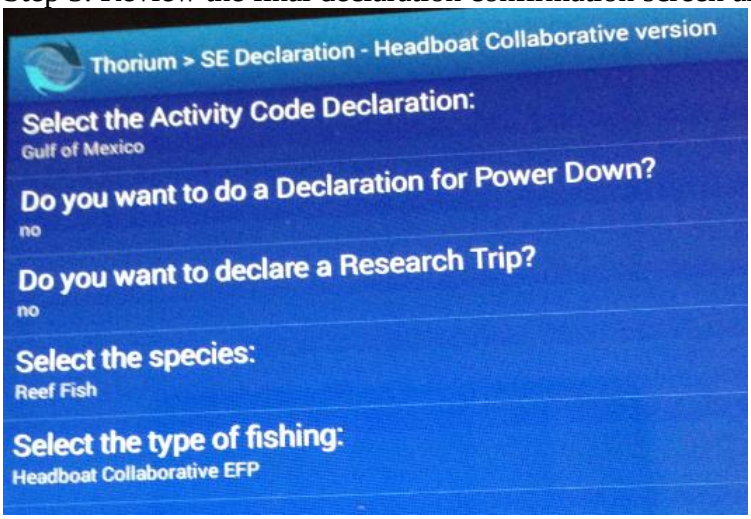
Step 3. Select the species that will be targeted during the trip.



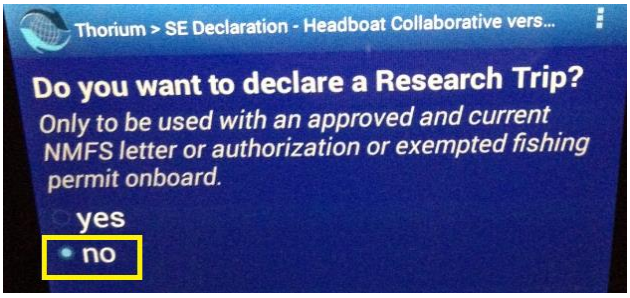
Step 4. Select the type of fishing

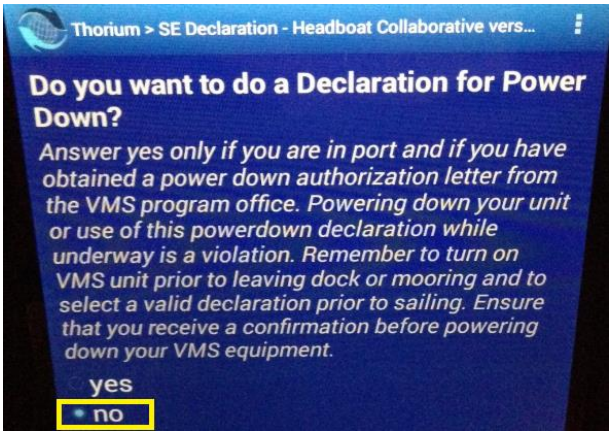


Step 5. Review the final declaration confirmation screen and select Submit.

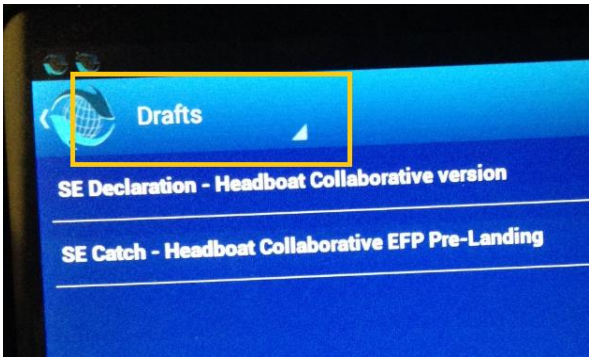


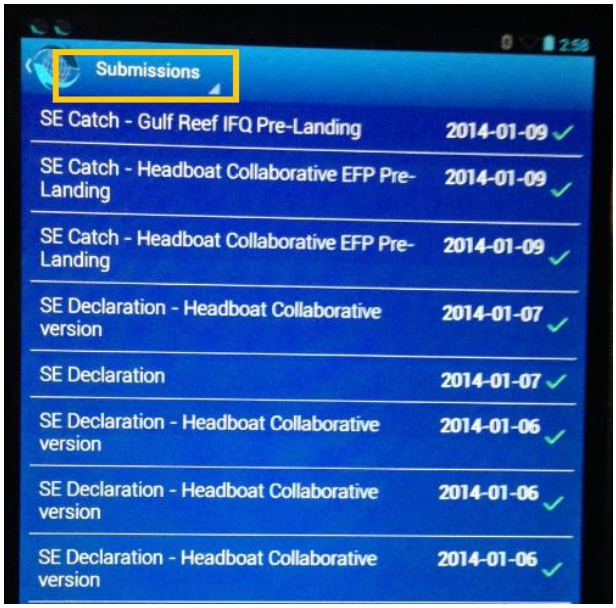
Additional screens: Power Down exemption screen, Research trip declaration, and review submissions.





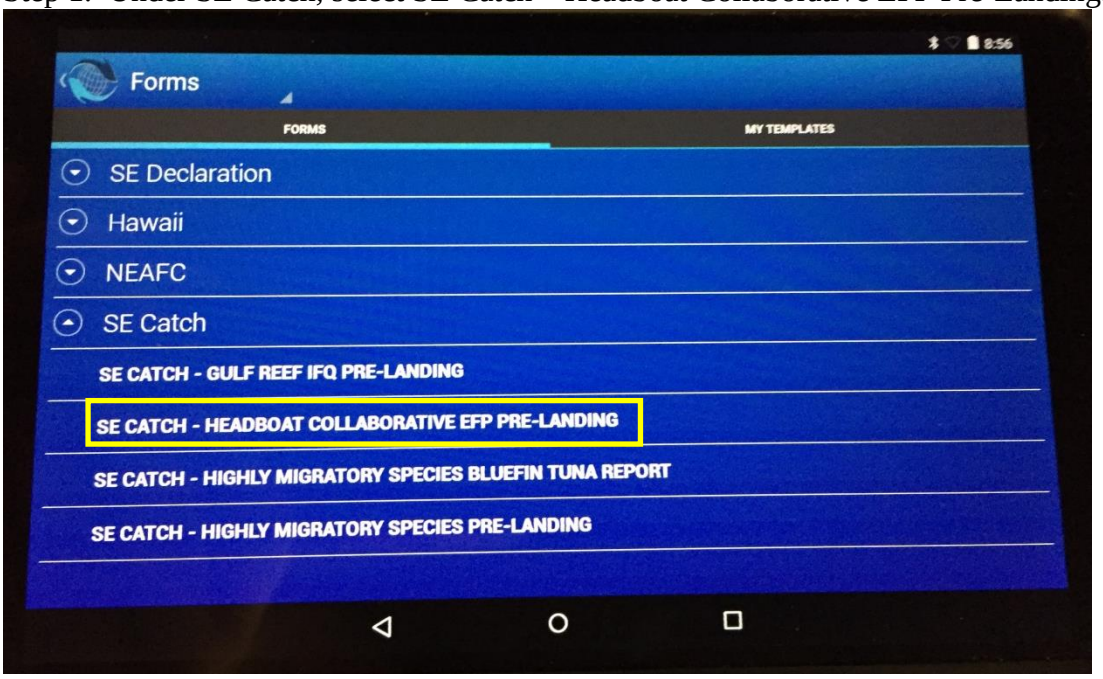
Review Submissions: Users have the ability to view unsent declarations or landing notifications. Under Submissions a green check mark will indicate if the transmission was successfully sent. If a transmission failed, a red X will be displayed.



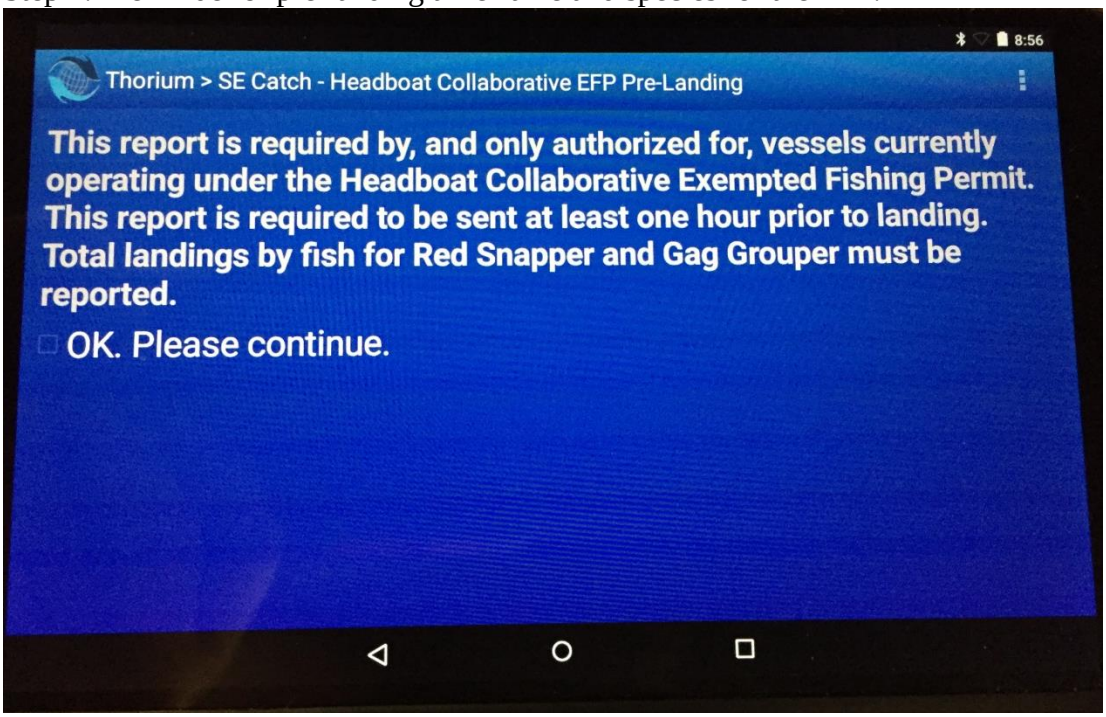


Landing Notifications Screens

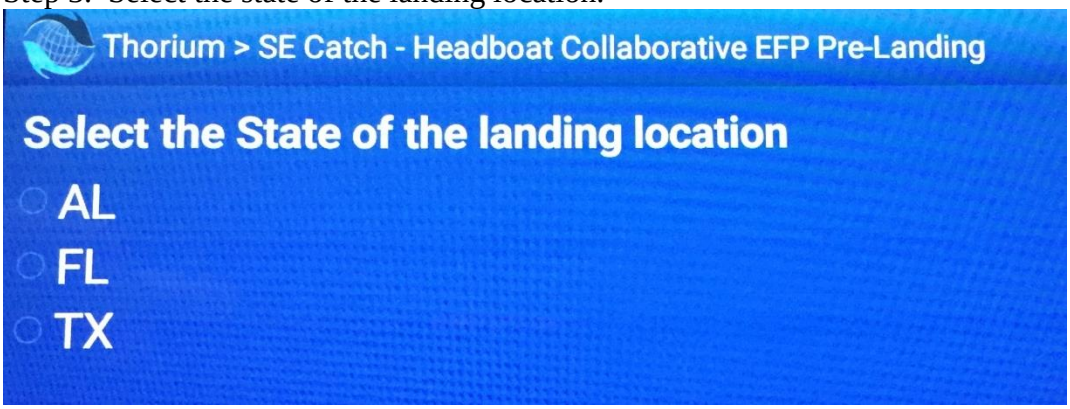
Step 1. Under SE Catch, select SE Catch – Headboat Collaborative EFP Pre-Landing.



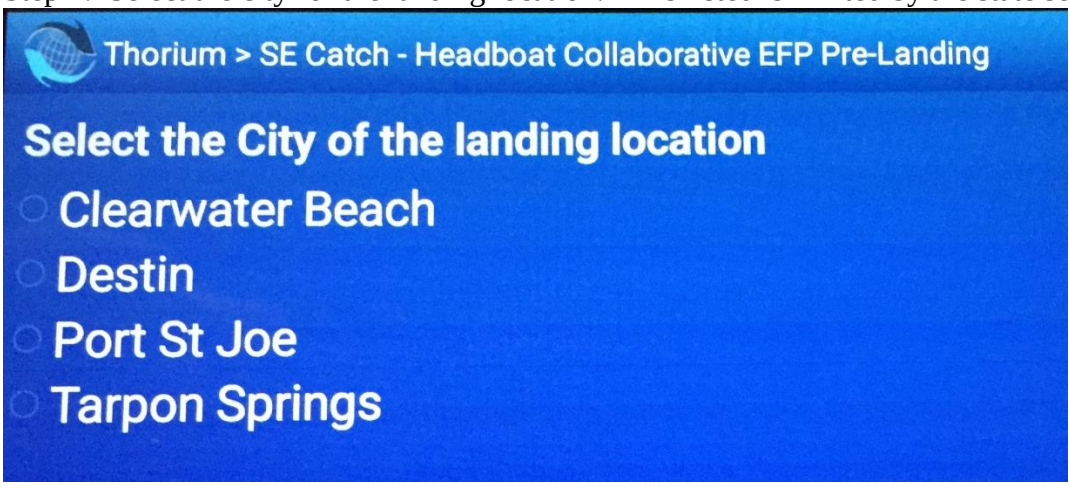
Step 2. Reminder of pre-landing timeframe and species for the EFP.



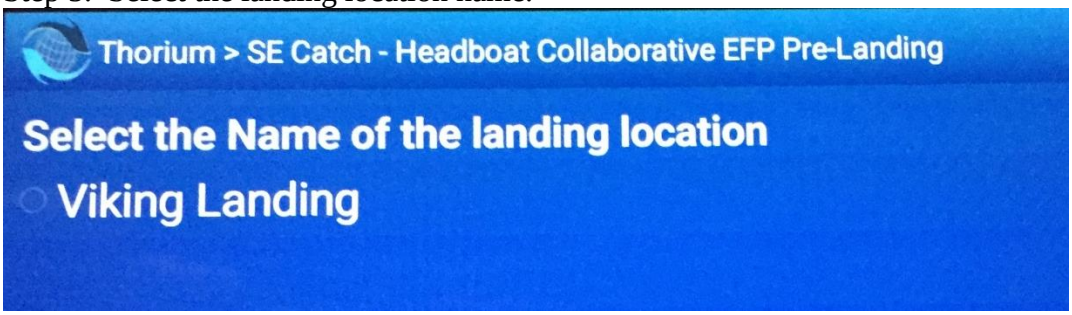
Step 3. Select the state of the landing location.



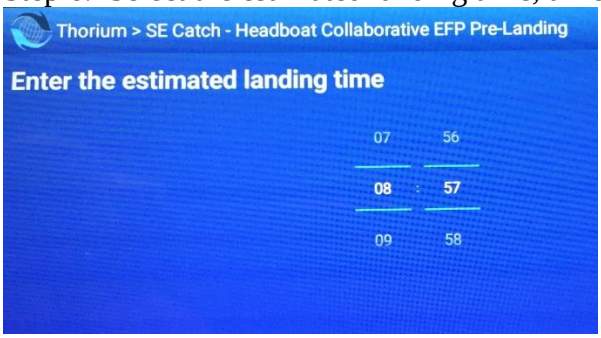
Step 4. Select the city for the landing location. This listed is limited by the state selected.

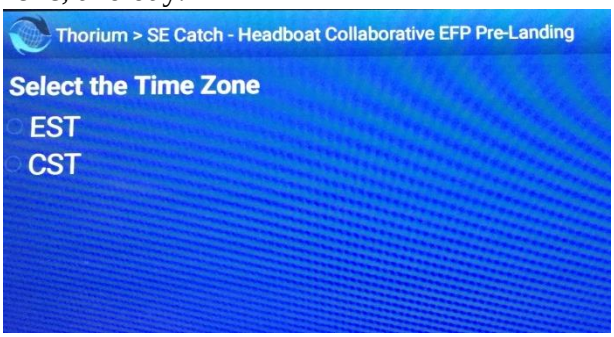


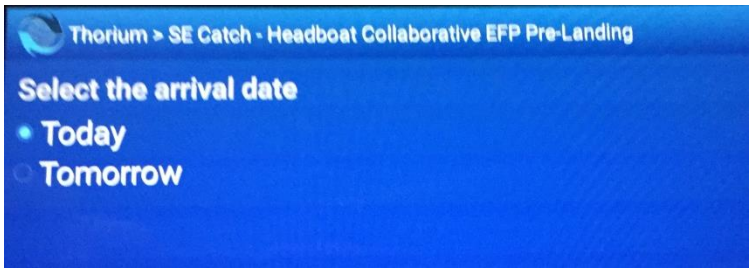
Step 5. Select the landing location name.



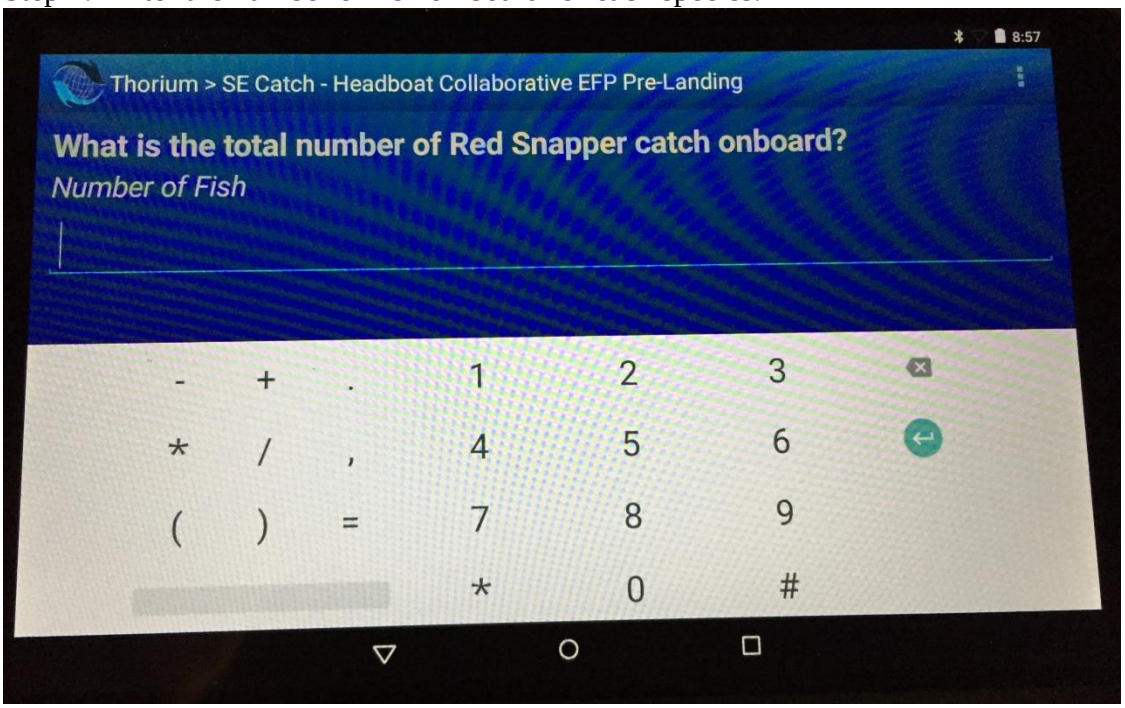
Step 6. Select the estimated landing time, time zone, and day.



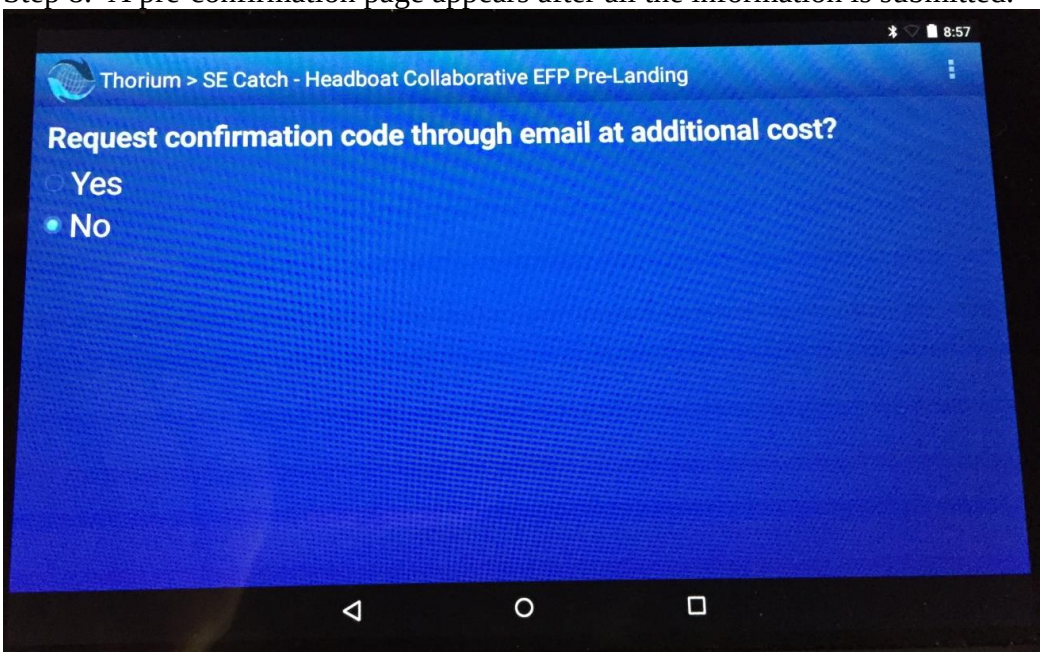




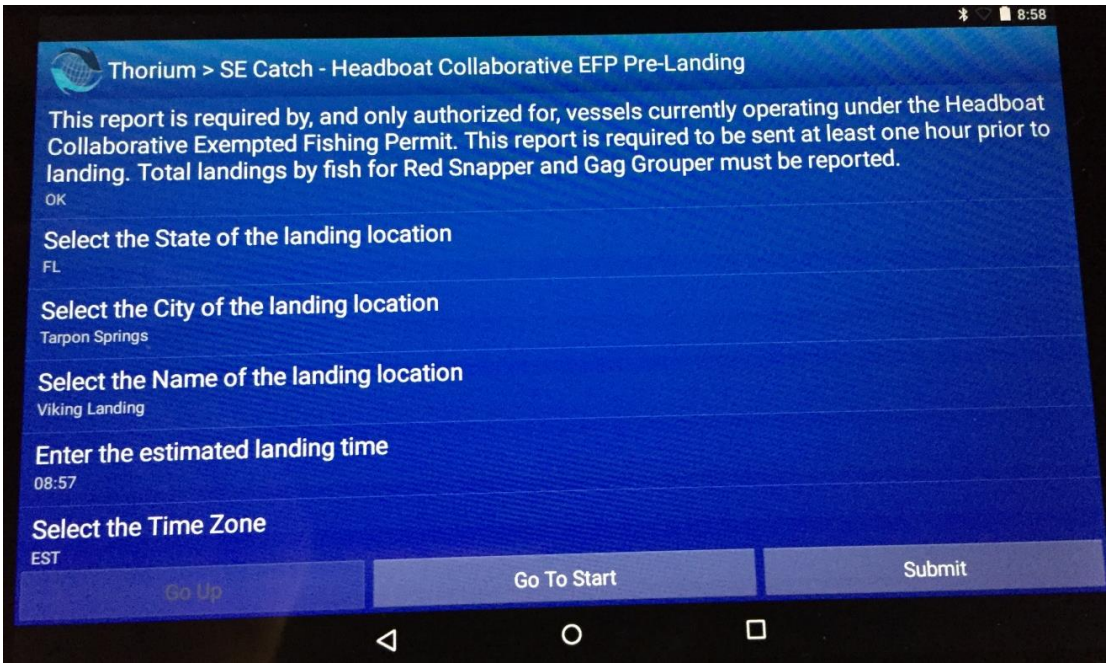
Step 7. Enter the number of fish on board for each species.



Step 8. A pre-confirmation page appears after all the information is submitted.



Step 9. The information collected is summarized and submit after the Submit button has been selected.



APPENDIX H. SUMMARY OF PUBLIC COMMENTS RECEIVED

Webinar Public Hearing Summary
Framework Action: Modifications to Charter Vessel and Headboat Reporting Requirements
December 17, 2015

Council/Staff
Greg Stunz
John Froeschke
Emily Muehlstein
Bernie Roy

31 Members of the public attended.

Bob Zales
The Council should not take final action on the use of VMS or electronic reporting until the many questions about the logistics of the program are answered. For example, what types of VMS would be used? What type of device could you report with? If your unit fails can you leave the dock on a scheduled trip? Commercial fishermen who are required to use VMS leave the dock on the way to make money. Charter fishermen already have their customer's payment when they leave the dock. Unit failure is much worse for charter businesses than commercial businesses because it prevents customers from taking a trip and forces captains to refund money and find a different vessel for their customers. The Government Accountability Office just finished a report on NMFS that shows that the service does not properly communicate about their data program so, fishermen don't know what the science center is going to do once the Council gives them carte blanch control of implementing a program.

Tom Adams
The for-hire sector in his area (north Florida) would vote that VMS is the least desirable system possible. If someone has a smartphone that works for reporting you'll be able to fish no matter what. He's heard of a voluntary VMS program where fishermen won't put the machines on their boats even when they're free. If you can't get it done for free on a voluntary basis then there obviously isn't much support for VMS. The SPOT tracker does the same thing as VMS for much cheaper. He doesn't even know why it's useful to collect position information. A hail-in and hail-out system is a better idea. If you put these burdens on federal captains you can't assume state charters will follow suit. This is being pushed through too fast and we don't even know what we're trying to accomplish.

Mike Miglini

People should be allowed to choose from several different devices including cellphones and a webpage so that people aren't stuck on the dock if VMS doesn't work. We should improve data reporting because federal for-hire captains have their own allocation of fish and they would like to show that they can manage their allocation well despite the fact that there are other anglers that don't report. This would also set a good precedent and non-reporting anglers might follow suit. Requirement for reporting should be developed along with a new management plan like in Amendment 41. If the for-hire industry has better reporting they should benefit from better management as well. Even if the Council decided not to take action on this then NMFS can still move forward with data collection but reporting and management should be developed together. Reporting should be done before a vessel hits the dock. It would be better to have a system that ensures people can't mess with information and miss report.

Daryl Carpenter
The Council needs to table this or take no action on all these items. This is being pushed through way too fast. This action would give the science center the ability to implement this program in any way without input from the public. This is mostly targeted at effort validation and catch reporting. Many of the states are coming up with their own systems so electronic reporting may not be necessary. NMFS does not have the staff or infrastructure to handle the data from a program like this. The Council hasn't discussed logistics of the program and control should not be given to the Science Center. It seems like the Council is moving towards a system like what the commercial fishermen have. He won't be able to give good notice before ending a trip and law enforcement wouldn't be able to meet him when he lands. Also, he doesn't want to name a homeport because fishermen have to move marinas.

Josh Ellender
Take no action on this amendment. This is being rushed through without a real plan and giving the science center complete control is not okay. There is so much diversity in the charter fishing world ranging from a 60 ft headboats to a small center console boats all operating in different areas of the Gulf making it hard to force everyone to use the same system.

Kevin Bellington
The Council should take no action on all three actions. Additionally, there are lots of recreational anglers and it's not possible to collect data from those people. If you compare those people to the 1300 permitted for-hire vessels, the data you're collecting from this increased reporting is such a small part of the fishing pressure. Making this mandatory for just the charter boats is wasting time and effort for little reward. Even though it will be good data it's just such a small part of the fish that are harvested in the Gulf so, there is little benefit to collecting the information.

Shane Cantrell
This document isn't limited to a VMS. Dually permitted vessels should be allowed to use VMS because they already have one but, not everyone feels that way. Smartphone reporting should be an option. We're not ready for this amendment right now. You should report before landing at the dock for both charter vessels and headboats. There needs to be a variety of technology options for Action 3. The Council and NMFS needs to work together to come up with solutions. The Science Center should not be given free reign over the logistics of the program. The

fishermen should contribute to the process so they can develop a program that will work for them. Let's be sure we design a system that works for good and will fit for future management.

Mike Colby
He supports the preferred alternative for both Actions 1 and 2. The Bluefin reporting program had such low compliance because it was web-based and required the angler to go home and log catch on the computer once a trip is over. He knows that reporting after the fact doesn't work because you're not going to go home and report after trip so you may as well get it out of the way as a part of your trip. For vessel location reporting Action 3 he supports the preferred alternative. He would like the Council to discuss all the options for vessel monitoring. He is a part of the VMS electronic monitoring program to see if fishermen will use it and if it makes sense. The information coming out of that program will help to inform the Council to the feasibility of the program. There are way too many assumptions made by the fishermen about the reporting program. The Council doesn't know what the monitoring platform should be. Catch is validated from what you enter and through dockside monitoring. Effort is monitored by location and that information is best collected with a VMS because using GPS on your phone might not be valid. For-hire fishermen are not commercial fisherman and any monitoring program put on the charter industry will look much different than the commercial program because the needs of the program are different.

Modifications to Charter Vessel and Headboat Reporting Requirements

Summary of Written Comments
February 2014 - January 22, 2016

- The cost of electronic reporting equipment will be too much for vessel owners to bear and could put some out of business.
- Opposed to submitting reports prior to returning to the dock. Reporting while underway creates a safety issue as the distraction of the crew away from keeping watch and tending to customers is compromised. Sometimes a charter will go out and have to head back in due to
- Don't mind reporting data, but the added cost is a burden.
- Support the use of ELB and VMS to report landings inasmuch as it is the best way to streamline data collection for the CFH industry.
- Supports weekly reporting online but does not support requiring vessel or catch location reporting. Frequent reporting via electronic reporting devices is cost prohibitive.
- Opposed to electronic reporting. Has no knowledge on how to use any kind of technology, including email, but would be happy to submit a logbook.
- Professional for-hire fishermen are responsible and the Coast Guard already knows where they fish so they shouldn't have to hail out and hail in.

- Already participate in the phone surveys and anything more would be a burden – it's hard enough to make money as it is, adding the expense of electronic equipment would make it harder.
- Support if there is no cost to for-hire owners/operators.
- Need more information. Is there a cost? How much? Is there a monthly subscription fee? Etc. Many cannot afford these costs, particularly part-time CFH.
- Support Action 1, Alternative 2 as long as reporting requirements are only for days fishing occurred and the format is user-friendly. No to VMS. Support Act 1, Alternative 4; Action 2, Alternative 4; and Action 3, Alternative 2. The headboat pilot worked very well.
- VMS would drain the batteries on the smaller boats. The Federal Reef Fish Permit is a double-edged sword since they cannot fish in state waters when Federal waters are closed.
- Support Action 1, Alternative 2; Action 2, Alternative 2; and Action 3, Alternative 1. Consider adding an Action that requires the weighing o fish via fish kiosk weigh system.
- Implement trip limits on the Commercial sector. Also, red snapper should be closed to all anglers in June and July for spawning, and it should be opened weekends only April, May, September, and October.
- Six pack operators usually operate single handedly, making it a burden to submit reports while in transit to the dock, inasmuch as they are undertaking other responsibilities, like safety and tending to customers.
- Support No Action on all three actions. All three are too broad and only establishes a "blanket rule" that will be sent to a committee to be designed with no stakeholder or Council input.
- VMS/Electronic Reporting OR fish tags are the only way to collect real-time data for the for-hire fleet. Fish tags would be the easiest to implement.
- VMS will not work for Venice, LA captains, but electronic logbooks would.
- This is a huge opportunity to provide timely and accurate data while increasing accountability.
- Any modifications to reporting should be paired with Amendments 41 and 42.
- VMS is too much, too fast.
- Support Alternative 4 in actions 1 and 2, but No Action in Alternative 3 – No VMS.
- Support for weekly reporting via smartphone.
- There are enough regulations – leave the regulations alone.
- Support electronic reporting.

Modifications to Charter Vessel and Headboat Reporting Requirements
Summary of Webinar Public Hearing
September 28, 2016

Council/Staff
Dr. Greg Stunz
Myron Fischer

Dr. John Froeschke
Dr. Carrie Simmons
Emily Muehlstein
Bernadine Roy

23 Members of the public attended

Sam Young – Charter Captain

For Action 1, he supports the no action alternative. There is no template for what he will have to report and he doesn't support moving forward without that information. He would like the opportunity to weigh-in on what needs to be reported. He does not support reporting before he arrives at the dock and equates it to texting and driving. He operates without a deckhand and believes it would be a safety risk to report while operating his vessels with customers onboard. He also wants to ensure that he only has to report the days he fishes; as a part-time charter operator it would be burdensome for him to have to indicate whether or not he is fishing every day.

For Action 2, he supports the no action alternative because captains shouldn't be asked to report prior to arriving at the dock.

For Action 3, he supports the no action alternative. There is no benefit to hail in or hail out. Further, it's difficult to predict when he'll finish a trip. If the bite is on, he'll stay out much longer than anticipated.

For Action 4, he supports the no action alternative. He doesn't see the scientific benefits of location reporting and doesn't believe that NMFS has the bandwith to handle that information.

Sam cautions the Council against making comparisons between charter and commercial fishermen. The two industries are very different and shouldn't be compared.

Scott Hickman – Charter Captain

For years, the charter industry has been begging the Council for better data. This document is an opportunity to collect real landings data in a sector that has overfished 18 of the last 20 seasons. He is glad that the Council is working towards better science. iSnapper, a data reporting phone app that was piloted, worked really well and the spatial data in that program was used in the most recent red snapper stock assessment. Currently, GCFI is running a project with small VMS units. He has one affixed to his 30 foot center console boat. There are 40 charter vessels in Texas that have these units and are already data reporting. Better science will lead to more access and it's time for the charter industry to give back.

Tommy Williams – Dual Permitted Charter and Commercial Captain

He already has VMS, and it is not a problem. It takes less than a minute to enter complete catch data for his commercial trips. His fees for the unit are only $50 a month. He supports the use of VMS on charter boats (Action 4, Preferred Alternative 4) because he wants the charter industry to have better data.

Summary of Written Comments
January 23 - October 11, 2016

Action 1

- Support for no action.
    - The MRIP program is sufficient for charter vessels.
    - It is illegal to text and drive. Asking charter vessels to report before returning to the dock is a safety risk.
    - The industry is already over regulated.
- Support for Alternative 2.
    - Reporting is important but daily reporting or reporting before returning to the dock is too burdensome.
- Support for Preferred Alternative 4.
    - There is no reason why a charter vessel can't report.
- It will be difficult to report prior to arriving at the dock while customers are still on the boat especially if boats don't have a deckhand. Reporting after landing would be much easier.
- Daily reporting is too much to ask especially when charters have back to back fishing days.
- Reporting isn't the problem, the frequency, mechanism, and cost are the main concerns.
- Operators shouldn't be required to report on days they don't operate.

Action 2

- Support for no action.
    - Headboats are already reporting all the data necessary.
- Support for Preferred Alternative 4.
    - In the headboat pilot program reporting worked out great as an enforcement tool and a data collection tool

Action 3

- Support for no action.
- Support for Preferred Alternatives 2a and 2b.
- Support for Preferred Alternatives 3a and 3 b
- There is concern that landings locations would be limited and operators would have to land to be checked at an official location rather than their own private dock.

Action 4

- If the Council requires VMS on for-hire vessels it should also be required on private vessels because they make up a huge portion of the fishing effort.
- Support for Preferred Alternative 4:
    - For-hire boats will be prevented from fishing commercially while operating as a charter
- Adding an electronic device to a small charter is a financial burden.

- VMS systems will drain or weaken batteries.
- There is no room on a small charter boat for the required equipment.
- Preferred Alternative 4 is the most invasive of all the alternatives.
- There is no scientific reason to collect location data.
- VMS units would need to be as small and unobtrusive as possible.

Other Amendment Specific Comments

- There should not be more restrictions placed on for-hire vessels. The cost of permits and other restrictions are too much already.
- Private anglers do more damage and should have more restrictions than for-hire anglers.
- Fisheries managers should take on the burden of collecting data. It is burdensome and costly for small business operators.
- Data reporting programs should be voluntary.
- Charter boats are not the problem, private anglers are.
- This will only work if all vessels are in the program.
- This should have been done a long time ago to ensure better data is collected so better management decisions can be made.
- This amendment needs to be approved quickly and implemented by 2017.
- A near to real time estimate of effort, catch and discards and timely evaluation are critical to our management process.
- These data reporting changes should be implemented along with Amendments 41 and 42.
- Even with these requirements there will still be boats that operate as illegally.
- Resources should be directed toward fisheries independent sampling rather than catch data.
- The phone survey and, more importantly, the at-the-dock survey and fish measuring and counting, are going to be as good as it gets. Fishermen do not feel that they should have to deal with any additional burden to our overburdened business. The only thing that will be accomplished by this monitoring system will be bad feelings and false data.

Other Comments

- American families deserve red snapper. The season is too short and it's very expensive.
- Commercial fishermen have too much influence on the Council.
- Federal permit holders are not fishermen and for-hire anglers did not suffer a loss of fishing opportunities because they have access to state water charters.
- Grouper should be closed to everyone during spawning in February and March.
- Over regulation has caused red snapper to be out of natural order with too many large fish.
- Louisiana should have more red snapper days.
- Enforcement on non-federally permitted charter vessels fishing in federal waters needs to improve.

Full text of comments received can be accessed at:
https://docs.google.com/spreadsheets/d/1BhlmE1RcpIS4B_qo4mI8rCx0puaqXTlhVMCTQYFI5RM/edit#gid=664521063

http://gulfcouncil.org/fishery_management_plans/Public%20Comment/Electronic%20Charter%20Vessel%20Reporting/comments.pdf