

# Inventory and Comparison of For-Hire Data Collections in the Atlantic and Gulf of Mexico, 2016

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## Introduction and Statement of Purpose

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). The intent of data collection varies from reporting compliance to catch and effort monitoring. NOAA Fisheries 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 (MRIP 2008).

Current ACCSP standard survey elements for for-hire fisheries recommend the following for programs collecting data from this sector:

- Charter boat catch: Access Point Angler Intercept Survey
- Head boat catch: At-sea observers
- Effort: For-Hire Telephone Survey
- Effort validation: On-site validation sampling
- Special case: Southeast Headboat Survey: census of federally-permitted head boats in South Atlantic and Gulf regions

However, between state and federal agencies along the Atlantic and Gulf of Mexico coastline, more than 20 individual programs have been created that collect data from the for-hire sector. In addition to the programs outlined in the ACCSP standard survey elements, agencies have implemented programs to provide more detailed data for “rare event” fisheries that are not well represented in broad-based intercept surveys; to provide more focused information for fisheries that require intensive management; or to collect information that is not captured in existing surveys, but which agencies deem necessary for management or research purposes.

Many evaluations have explored issues related to duplicate reporting and ways to improve the sharing of data among these programs. In one of the oft-cited evaluation reports, the National Research Council (NRC 2006) recommended that charter boat, head boat and other for-hire recreational fishing operations should be required to maintain logbooks of fish landed and kept, as well as fish caught and released that should be verifiable, made available in a timely manner, and validated by on-board observers where possible.

A more recent project funded by the Marine Recreational Information Program (MRIP) assessed the feasibility of developing a common logbook for for-hire recreational fisheries in the Gulf of Mexico (Donaldson et al. 2013). Donaldson et al. offer several recommendations to develop such a program on a regional basis that are similar to the NRC findings, including a recommendation for electronic reporting, built-in quality controls, allowance for data entry at-sea to reduce recall bias, compliance enforcement, validation, and daily-based reporting submitted on a weekly basis at minimum.

The objective of this project is not to advocate for or against mandatory logbook reporting, but to explore how existing programs can use these recommendations to increase their capacity for data sharing, within the context of many of the same elements that both NRC and Donaldson et al. recommend. This report begins by updating information for the Atlantic and Gulf of Mexico that was initially presented in “Inventory of For-Hire Data Collections in the United States and U.S.

Territories” prepared by the For-Hire Workgroup of the Marine Recreational Information Program (MRIP 2008) and additional material presented in Chromy et al. 2009. These in-depth descriptions of regional data needs and collection programs are complemented by brief summaries of individual programs outlined within the context of standard program elements, followed by a comparison of elements from twenty-two identified for-hire reporting programs in the Gulf of Mexico and Atlantic. The contents of this report will be used as a basis for a May 2016 workshop to identify opportunities to promote data availability, improve data timeliness, and reduce the reporting burden of multiple data collection programs.

# Regional For-Hire Data Collection

## Region 5: Gulf of Mexico and Florida Keys (Texas to Florida)

Beverly Sauls and Gregg Bray

### For-Hire Fisheries

The U.S. Gulf of Mexico supports large and diverse for-hire fisheries, with effort concentrated in the eastern Gulf of Mexico (Alabama and west Florida). For-hire fisheries in the Gulf region target a mix of inshore species (such as seatrout and red drum), reef-associated bottom fishes (including snappers, groupers, grunts, porgies, jacks, and triggerfish), coastal pelagics (such as mackerels, dolphin, wahoo), and highly migratory species (including tunas, billfish and sharks). A large proportion of the fishery is composed of small guide boats and charter vessels that operate primarily in inland and nearshore waters managed by the five Gulf States (Texas, Louisiana, Mississippi, Alabama and Florida). For-hire vessels must have certain federal permits to target federally managed species in the Exclusive Economic Zone (EEZ), and these vessels are often subject to more stringent harvest restrictions as a condition of their permits.

Most large party head boats operating throughout the region are required by NOAA Fisheries to report trip-level catch for every trip via an electronic logbook reporting system, whereas charter vessels are monitored through various surveys conducted in each respective Gulf state. A pilot study of mandatory logbook reporting for federally permitted charter vessels was conducted in 2008 (Donaldson et al., 2013), and both the Gulf of Mexico Fishery Management Council and South Atlantic Fishery Management Council are currently considering logbook reporting requirements for federally permitted charter vessels. A joint Gulf of Mexico and South Atlantic Technical Subcommittee that convened in 2014 provided recommendations to the Councils for implementation of logbook reporting requirements (available at [http://gulfcouncil.org/council\\_meetings/BriefingMaterials/BB-01-2015/January2015Index.php](http://gulfcouncil.org/council_meetings/BriefingMaterials/BB-01-2015/January2015Index.php)). The Gulf Council is currently considering a reporting requirement that includes an on-board electronic vessel monitoring system (VMS); whereas, the South Atlantic Council is considering alternatives that do not require VMS.

### Management Jurisdictions

The Gulf of Mexico Fishery Management Council has management jurisdiction for federally managed fisheries in the EEZ waters adjacent to the five Gulf coastal States, excluding highly migratory species managed by the NOAA Fisheries Highly Migratory Species Division. In Texas and Florida, the EEZ jurisdictional boundary begins at 9 nautical miles from the coastline, and waters inshore of this boundary are managed by the two respective states. For the remaining three states (Louisiana, Mississippi, and Alabama), the Gulf Council recognizes 3 nautical miles as the EEZ jurisdictional boundary; however, in recent years some states have enacted their own legislation to extend fisheries management authority to 9 nautical miles. Recent Congressional legislation granted authority to all five Gulf States to manage Red Snapper and other reef fishes within 9 nautical miles (H.R. 2029, the Consolidated Appropriations Act of 2016, Section 110.b).

The Florida Keys is an important boundary for management of Gulf of Mexico and South Atlantic fish stocks, and for-hire fishing in this region may take place in either jurisdiction. The South Atlantic Fishery Management Council's jurisdiction begins east of the Florida Keys, and on the Atlantic coast of Florida the EEZ is defined by a boundary 3 nautical miles from shore (unlike the

Gulf coast of the Keys where the boundary is 9 nautical miles). To alleviate confusion in this region, the state of Florida recently adopted measures in state waters off the Gulf coast of the Keys that are in better compliance with federal regulations promulgated through the South Atlantic Fishery Management Council. When fishing within 9 nautical miles off the Gulf Coast of Monroe County, state regulations for the Atlantic coast (which generally match federal regulations for species managed by the South Atlantic Council, with some exceptions) apply. However, the Gulf Council maintains jurisdiction in the EEZ, and for-hire vessels fishing more than 9 nautical miles west of the Florida Keys must adhere to Gulf of Mexico regulations.

### Stock Assessments

Individual state resource management agencies assume responsibility for assessing stocks for all species that occur exclusively in state waters or that are otherwise not managed by a federal jurisdiction (i.e. a federal Council or the Highly Migratory Species Division). States also participate in interstate assessments for some nearshore stocks that extend across state boundaries, coordinated by the Gulf States Marine Fisheries Commission. All federally managed stocks in the Gulf of Mexico are assessed through the Southeast Data Assessment and Review (SEDAR), which may include data from any combination of federal, interstate, and individual state monitoring programs.

### Regional Data Needs

Minimum data needs for stock assessments from for-hire fisheries include:

- Annual landings estimates in both numbers and pounds by state (with estimates of error)
- Age and size distribution of landed fish by state
- Estimates of the numbers of fish discarded by state
- Size distribution of discards by state
- Measure of the condition of released fish, which may be used to estimate the magnitude of discard mortality.

Data needs for management are driven largely by the necessity for precise landings estimates to monitor annual catch limits (ACLs) for federally managed stocks (as required by the federal Magnuson Stevens Fishery Conservation and Management Act).

Since the Council has transitioned to management with ACLs, harvest seasons have become more restrictive and there has been an increased need for precise landings estimates over shorter timescales than some surveys currently provide. For example, the Gulf of Mexico federal season for Red Snapper has been shortened from six months to less than two weeks in recent years, and the MRIP survey continues to estimate landings over two-month waves. Consequently, there has been an increased demand in this region for specialized surveys that supplement the large-scale MRIP survey and provide more precise estimates over short seasons. Over the past two years, Texas, Mississippi, and Alabama have begun testing new supplemental surveys for their for-hire fisheries that may be certified for use as alternative estimates for Red Snapper.

Currently, large-capacity head boats constitute the only segment of the for-hire fishery in the region that is required to report trip-level catch through an electronic logbook reporting system. However, if approved, amendments currently working their way through the Council process will establish similar requirements for federally permitted charter vessels. Care should be taken during this process to avoid requirements that result in duplicate reporting to multiple jurisdictions (particularly in Florida where vessels may participate in Gulf and South Atlantic fisheries). A benchmark period



may also be required before federally permitted vessels can be removed from the MRIP survey, and this period should be clearly defined. To the extent practical, methods to minimize the reporting burden during the benchmark period should also be considered (for example, acceptance of logbook data in place of phone interviews).

As for-hire fisheries in the Gulf of Mexico are monitored through an increasing number of federal logbooks, federal surveys, individual state surveys, and supplemental state surveys, it is imperative that data collection is coordinated throughout the region. Data that are compatible and can be combined are particularly valuable because many of the species targeted by for-hire fisheries throughout the Gulf of Mexico are managed as single stocks.

Catch and effort statistics generated by the Texas Parks and Wildlife Division are not standardized with statistics generated for the remainder of Gulf States, creating difficulty for regional stock assessments and regional management. Texas estimates are based on two fishing seasons, a high-use and low-use season, and estimates are not generated monthly or on a calendar year. No data are collected on discarded fish in the Texas survey and estimates of numbers or species composition of discards are not available. The standard unit of effort in the Texas survey is a boat trip, compared to the angler trip used by the remainder of the region. For-hire fishing in EEZ waters may also be under-sampled in the Texas survey design.

To address these issues for for-hire fisheries, Gulf States Marine Fisheries Commission worked cooperatively with the states of Florida and Texas to pilot test a logbook reporting system that could be standardized across all states and potentially replace the incompatible methodologies currently in place (Donaldson et al. 2013). However, the pilot study ended after one year and since then there has been no progress towards regional-scale implementation. Currently, Texas is testing a voluntary electronic logbook reporting system (using a cell phone and tablet application called iSnapper, detailed later in this report) with field validation and adjustment for unreported catch, and if this method proves successful, it could provide estimates that are more compatible with those from other states.

In 2013, the state of Louisiana implemented a new survey that replaced the MRIP survey. The new LA Creel Survey produces weekly estimates of for-hire landings that can be rolled up into bi-monthly estimates that are compatible with MRIP. However, the new survey does not monitor discards and estimates of released catch are no longer available for Louisiana. The new state survey was benchmarked with the MRIP survey for one year in 2015; however, at least three years is desirable for calibrating the different time series.

The states of Mississippi, Alabama, and Florida all continue to participate in the MRIP Access Point Intercept Survey (APAIS) for Catch per Unit Effort (CPUE) and the For-Hire Telephone Survey for effort. However, as new supplemental surveys are developed to provide alternative estimates for Red Snapper and other species, a concerted effort will be necessary to ensure that those data are compatible.

There is a need in this region to separate landings in the Florida Keys by area fished (South Atlantic versus Gulf of Mexico or Florida Bay). This is a recurring issue for regional stock assessments since MRIP estimates for the Keys cannot be divided by area, and all fish from this region must be lumped in either the South Atlantic's or Gulf of Mexico's landings. This is also a recurring issue when applying fish landed in the Keys towards annual catch limits across Council jurisdictions.

Discards can far outnumber landed fish for many managed species in this region. There is a critical need for more precise estimates of numbers of fish discarded and the portion of discards that should be included in fishing mortality estimates. For example, in 2014 the combined estimated landings and discard mortalities for red snapper exceeded the annual catch limit, and no harvest season was allowed in 2015. Currently, fishery managers apply a mortality rate to red snapper discards based on the estimated extent that fish may suffer from barotrauma and other injuries. However, this percentage is estimated using limited information on the depths that red snapper are caught and released in the fishery (information that is not collected through the MRIP). Given the magnitude of discards for a fishery that is closed almost year-round, any improvement in precision of estimated discards and percent mortality translates to a large number of fish. Discards are particularly challenging for logbook reporting programs because they are more difficult for vessel operators to keep track of and report accurately and, unlike landed fish, discards cannot be observed during dockside validation checks. Length frequency data for discards is also a critical data need for stock assessments. Validating reported numbers of discards and collecting length frequency data for released catch requires at-sea methods, such as human observers or video monitoring systems, and is more costly than dockside sampling.

The Large Pelagic Survey is not conducted in the South Atlantic region, and since these species are rarely encountered in the general APAIS, MRIP estimates for highly migratory species have extremely high Coefficients of Variation (CV's). Alternative methods for surveying for-hire fishing for HMS were pilot tested by MRIP in Southeast Florida in 2008 (report available at [https://www.st.nmfs.noaa.gov/pims/main/public?method=DOWNLOAD\\_FR\\_PDF&record\\_id=434](https://www.st.nmfs.noaa.gov/pims/main/public?method=DOWNLOAD_FR_PDF&record_id=434)); however, methods to improve HMS estimates have yet to be implemented.

The MRIP survey should also be improved for inshore guide boats, which is an important data need for state-managed fisheries in this region. Guide boats are small, trailered vessels that are difficult to intercept for angler interviews or to validate reported fishing effort because they may be launched from a number of locations. The MRIP procedures were recently modified to allow guide boats to be intercepted during private boat and shore mode assignments; however, given the low numbers of guide boats relative to private boats, intercepts in the APAIS remain low.

Additional data needs for management include data for bag limit analyses, size limit analyses, seasonal closure analyses, fishing effort by species and state, and bag limit analyses for captain and crew (since current survey methods do not include captain and crew in estimates of total anglers fishing). It would be beneficial if surveys collected information on the number of captain and crew aboard a for-hire fishing trip and whether their bag limit was included in the anglers' harvest.

## Licensing and Reporting Requirements

### *Federal Permits and Reporting Requirements*

#### **Highly Migratory Species (HMS) Charter/Head Boat Permit**

A HMS Charter/Head boat Permit is required for any for-hire vessel in state or federal waters fishing for highly migratory species. In the Gulf of Mexico, highly migratory species that may be targeted by the for-hire industry include a variety of sharks (large coastal, small coastal and pelagic species groups); billfish, including blue and white marlin, swordfish and sailfish; and certain tunas, including yellowfin tuna. A complete list of species covered by the HMS Charter/Head boat Permit

can be found at [www.nmfs.noaa.gov/sfa/hms](http://www.nmfs.noaa.gov/sfa/hms). Sale of fish by charter/head boat permit holders is prohibited unless the vessel also has a limited access permit and the commercial fishing season is open.

Reporting requirements for this permit include an option for NOAA Fisheries to select a percentage of permit holders to complete a logbook report for each trip. Vessels may also volunteer to carry an observer to monitor catch and release of fish. For particular species, including billfish species and bluefin tuna (rare in the Gulf of Mexico for-hire fishery), permit holders are required to report landed fish to the NMFS within 24 hours of landing the fish via a 24 hour toll-free hotline or on-line at <http://www.hmspermits.gov/>. Enforcement of this reporting requirement is limited due to the 24 hour period in which harvesters are given to claim fish.

#### **Gulf of Mexico Charter/Head boat Reef Fish Permit**

This federal permit is required for for-hire vessels that fish in federal waters for a variety of species in the federally managed reef fish complex, including snapper, grouper, amberjack, tilefish, hogfish and triggerfish species in the Gulf of Mexico. Vessels that fish exclusively in state waters may be excluded from this permit requirement, unless the state specifically requires it. If they are fishing for federally managed species, they are not excluded from certain reporting requirements. There is currently a moratorium on the sale of new permits; however, existing permits may be sold or transferred. Currently, approximately 1650 permits are in existence. The reporting requirement for this permit specifies that the permit holder must be cooperative in at least one of two data collection programs, the For-Hire Telephone Survey or the Southeast Headboat Logbook Program (descriptions of these data collection programs are given in a later section). Commercial sale of recreational bag limits caught from charter and head boats is permitted with an additional commercial permit.

#### **Gulf of Mexico Charter/Head boat Coastal Pelagics Permit**

This federal permit is required for for-hire vessels that fish in federal waters for a variety of species in the federally managed coastal pelagic species complex, which includes mackerel species, cobia, dolphin, little tunny and bluefish in the Gulf of Mexico. Vessels that fish exclusively in state waters may be excluded from this permit requirement, unless the state specifically requires it. There is currently a moratorium on the sale of new permits; however, existing permits may be sold or transferred. The reporting requirement for this permit is identical to the Gulf of Mexico Charter/Head boat Reef Fish Permit.

#### **Federally Prohibited Species**

One federally protected endangered species, smalltooth sawfish, is concentrated in southwest Florida. Gulf sturgeon, a subspecies of the Atlantic sturgeon, is listed as threatened and is found in the northern Gulf of Mexico. Other species that are prohibited from harvest due to overfishing include goliath grouper, Nassau grouper, and several species of large coastal sharks. There are no reporting requirements for incidental catches in the recreational fishery for any of these species.

#### **Texas**

A Fishing Guide License is required for any person who, for compensation, accompanies; assists; or transports any person engaged in fishing in the waters of the state. License categories are:

- operating as a resident or non-resident fishing guide in the fresh waters of Texas

- operating as a resident fishing guide in all public waters of Texas (salt water and/or fresh water)
- operating as a non-resident fishing guide in all public waters of Texas (salt water and/or fresh water)

A vessel operator's license is required from the U.S. Coast Guard (USCG) to carry for-hire passengers on waters designated as navigable by the USCG. It is the operator's responsibility to assure compliance with USCG regulations. No person operating a vessel or boat as a fishing guide on or in the salt waters of the state may be issued a Fishing Guide License unless the person presents documentation to the license deputy that the applicant possesses a valid and appropriate U.S. Coast Guard Operator's License.

### *Louisiana*

Charter Vessel Licenses in the state of Louisiana

- Charter boat Fishing Guide (up to 6 passengers)
- Charter boat Fishing Guide (more than 6 passengers)
- Mothership License (carrying up to 6 skiffs)
- Mothership License (carrying more than 6 skiffs)
- Charter Skiff License (per skiff) (2 persons per skiff limit)

All commercial licenses expire on December 31 each year, unless noted otherwise.

The Charter Vessel License in Louisiana does not cover the license requirements of passengers on board. Recreational anglers that fish from for-hire vessels must also possess a valid, individual saltwater angler license to fish in the state of Louisiana. For passengers that do not possess an individual fishing license that permits saltwater recreational fishing in Louisiana, anglers may purchase a limited three-day license specifically to fish from a guided or charter vessel.

Residents who fish from a charter vessel in saltwater areas of the state, with a licensed guide on board at all times may possess a Charter Passenger License which is valid for three consecutive days. Charter guide license number or mothership license must be provided when purchasing charter passenger licenses.

Nonresident anglers who fish from a charter vessel in saltwater areas of the state with a licensed guide on board at all times may possess a Charter Passenger License, which is valid for three consecutive days. Non-resident anglers fishing under the direction of a charter operation in a licensed charter skiff in saltwater areas of the state may possess a non-resident charter skiff three-day license and shall be valid for three consecutive days.

Charter guide license number or mothership license must be provided when purchasing charter passenger and non-resident charter skiff licenses.

Recreational anglers and charter captains are required to obtain a Recreational Offshore Landing Permit to possess tunas, billfish, swordfish, amberjacks, groupers, snappers, hinds, cobia, wahoo and dolphin. Minors (under 16) are not required to obtain a recreational offshore landing permit. Angling customers on a paid-for-hire charter trip also do not need a permit as the captain will cover them.

### *Mississippi*

All resident and nonresident vessels engaged in charter boat, party boat, head boat, and guide boat fishing must possess a valid Mississippi license. Crew members and customers of the licensed vessel are not required to purchase an individual resident or nonresident saltwater fishing license while sponsored by the licensed vessels.

All Charter boat and Charter boat Interstate Commerce licenses expire on June 30th of each year. Before resident boat licenses can be purchased, proof of residence must be shown along with valid boat registration/documentation.

### *Alabama*

Certified Commercial Party Boats are licensed by the following categories:

- Up to 6 people
- 7-25 people
- Over 25 people

Persons on board a licensed for-hire vessel may fish without an individual recreational fishing license.

### *Florida*

A Charter Captain or Boat License is required to carry paying customers (where a fee is paid directly or indirectly) for the purpose of taking, attempting to take, or possessing saltwater fish or organisms.

To be a saltwater fishing guide in Florida, you must comply with U.S. Coast Guard (USCG) requirements. The U.S. Coast Guard (USGC) requires all operators of for-hire vessels to have a Captain license.

Charter, head boat and saltwater fishing guide operations must have an FWC charter captain or boat license to cover their passengers, who are not required to hold a recreational saltwater fishing license. Customers authorized to fish under the vessel license are not required to hold a recreational saltwater fishing license.

**Dive charters:** Scuba divers engaged in fishing or lobstering must have an individual saltwater fishing license and all necessary permits if the vessel they are on does not have the necessary vessel license.

**Charter Captain License (allows a licensed captain to go from boat to boat):** A current Coast Guard License to Operate or Navigate Passenger Carrying Vessel License must be provided in order to purchase these licenses. License types include:

- Charter Captain – 4 or fewer customers
- Charter Captain – 10 or fewer customers
- Charter Captain – 11 or more customers
- Charter Snook Permit
- Charter Lobster Permit

Charter Boat License (may only be used on the boat designated on the license): These licenses are only available to vessels that are commercially registered. A commercial vessel registration or U.S. Coast Guard Certificate of Documentation (with a commercial designation) must be provided in order to purchase these licenses. License types include:

- Charter Boat – 4 or fewer customers
- Charter Boat – 6 or fewer customers
- Charter Boat – 10 or fewer customers (issued to Coast Guard inspected vessels only)
- Charter Boat – 11 or more customers (issued to Coast Guard inspected vessels only)
- Charter Snook Permit
- Charter Lobster Permit

The Charter Boat License covers an individual vessel which may have multiple captains. In order to purchase a Charter Boat License, a vessel must be registered as a commercial vessel and the vessel registration documentation is required. Individual counties may also require an occupational license. The Charter Captain License covers an individual captain who may operate multiple vessels. In order to purchase a Charter Captain License, a Coast Guard Captain's License is required.

### *Everglades National Park*

For-hire vessels operating in Everglades National Park are required to have a Commercial Use Permit to fish inside park boundaries. Documentation to receive this permit includes Coast Guard Captains License for all listed captains, Florida vessel registration, Florida Charter Permit, Business License, and proof of Liability Insurance. All permitted vessels are required to submit monthly catch logs to the National Park Service by the 15<sup>th</sup> of each following month. Catch logs may be submitted by email, electronically on the National Park Service website, or on paper log sheets via U.S. Mail.

## Region 6: South Atlantic (Florida to North Carolina)

Beverly Sauls and Gregg Bray

### For-Hire Fisheries

The South Atlantic region is characterized by a latitudinal gradient that transitions from tropical species in south Florida to a mix of sub-tropical and temperate species farther north. Some species, such as red drum and spotted seatrout, range throughout the South Atlantic region while others, such as king mackerel, migrate seasonally up and down the coast. As a result, for-hire fisheries throughout this region target varied species assemblages and are influenced by the seasonal presence or absence of species. Highly migratory species are also important in this region. North Carolina has a significant for-hire fishery targeting bluefin tuna, southeast Florida is an important area for swordfish and sailfish, and marlin are targeted throughout the south Atlantic.

A large segment of the fishery is composed of small guide boats and charter vessels that operate primarily in inland and nearshore waters managed by the four states (Florida, Georgia, South Carolina, and North Carolina). For-hire vessels must have federal permits to target certain species in the Exclusive Economic Zone (EEZ). Most large party head boats operating throughout the region are required by NOAA Fisheries to report trip-level catch for every trip via an electronic logbook reporting system, whereas charter vessels are surveyed through the MRIP. South Carolina also requires that charter vessels submit logbook trip reports to the state and is currently working with MRIP to develop validation methods for self-reported data that may eventually allow logbooks to replace MRIP estimates for for-hire effort and catch.

### Management Jurisdictions

States in the South Atlantic manage fisheries in inland waters and State Territorial Seas (up to 3 nautical miles from the coastline), and the EEZ jurisdictional boundary begins outside 3 nautical miles. The South Atlantic Fishery Management Council has management jurisdiction for federally managed fisheries in the EEZ waters adjacent to the four coastal States. An exception is highly migratory species that are managed by the NOAA Fisheries Highly Migratory Species Division. The state line between North Carolina and Virginia delineates the northern jurisdictional boundary for the South Atlantic Fishery Management Council. The Florida Keys serves as the boundary between the South Atlantic and Gulf of Mexico management jurisdictions. The South Atlantic Fishery Management Council has jurisdiction beyond 3 nautical miles east of the Florida Keys, and west of the Keys the Gulf of Mexico Fishery Management Council assumes jurisdiction beyond 9 nautical miles of the coast. To alleviate confusion in this region, the state of Florida recently adopted measures in state waters off the Gulf coast of the Keys that are in better compliance with federal regulations promulgated through the South Atlantic Fishery Management Council. When fishing within 9 nautical miles off the Gulf Coast of Monroe County, state regulations for the Atlantic coast (which generally match federal regulations for species managed by the South Atlantic Council, with some exceptions) apply. However, for-hire vessels fishing more than 9 nautical miles west of the Florida Keys must adhere to Gulf of Mexico federal regulations.

There are agreements between adjacent Councils to manage certain shared stocks. For example, king mackerel and cobia are managed jointly with the Gulf Council, and the Mid-Atlantic and New England Councils defer management of dolphin and wahoo in their jurisdictions to the South Atlantic Council. Therefore, changes in reporting requirements for these fisheries could impact for-hire participants subject to reporting requirements in other jurisdictions. For example, the South Atlantic Fishery Management Council is currently considering logbook reporting requirements for



all federally permitted charter vessels that could be implemented as early as 2017. This requirement could impact for-hire participants with federal dolphin and wahoo permits who may already report through logbook programs for individual states (such as South Carolina and Maryland) or the NOAA Fisheries Greater Atlantic Region Multispecies logbook (VTR). The South Atlantic Council is not considering any reporting system that would require an on-board electronic vessel monitoring system (VMS), whereas the Gulf Council is currently considering this as a requirement. Such differences could impact for-hire participants in Florida who may fish in both jurisdictions. A joint Gulf of Mexico and South Atlantic Technical Subcommittee was convened in 2014 to provide recommendations to both Councils for implementation of logbook reporting requirements (available at [http://gulfcouncil.org/council\\_meetings/BriefingMaterials/BB-01-2015/January2015Index.php](http://gulfcouncil.org/council_meetings/BriefingMaterials/BB-01-2015/January2015Index.php) ).

### Stock Assessments

Individual state resource management agencies assume responsibility for assessing stocks for all species that occur exclusively in state waters or that are otherwise not managed by a federal jurisdiction (i.e. a federal Council or the Highly Migratory Species Division). States also participate in interstate assessments for some nearshore stocks that extend across state boundaries, coordinated by the Atlantic States Marine Fisheries Commission. All federally managed stocks in the South Atlantic are assessed through the Southeast Data Assessment and Review (SEDAR), which may include data from any combination of federal, interstate, and individual state monitoring programs.

### Regional Data Needs

The Atlantic Coastal Cooperative Statistics Program (ACCSP) coordinates data collection in the South Atlantic. The general standard is that “the collection of for-hire modes of recreational catch statistics shall be accomplished via a combination of effort surveys; validation of effort, catch accounting via intercept surveys; and at-sea observation. Where appropriate, some segments may be evaluated as a census. Additional details are available at [http://www.accsp.org/sites/default/files/ACCSP\\_StandardsandAppendices2012\\_Final05082012.pdf](http://www.accsp.org/sites/default/files/ACCSP_StandardsandAppendices2012_Final05082012.pdf).

Minimum data needs for stock assessments from for-hire fisheries include:

- Annual landings estimates in both numbers and pounds by state (with estimates of error)
- Age and size distribution of landed fish by state,
- Estimates of the numbers of fish discarded by state
- Size distribution of discards by state,
- Some measure of the condition of released fish which may be used to estimate the magnitude of discard mortality.

Data needs for management are driven largely by the necessity for precise landings estimates to monitor annual catch limits (ACLs) for federally managed stocks (as required by the federal Magnuson Stevens Fishery Conservation and Management Act). Since the Council has transitioned to management with ACLs, harvest seasons have become more restrictive and there has been an increased need for precise landings estimates over shorter time scales than some surveys currently provide. For example, in recent years the federal recreational fishing season for Red Snapper in the South Atlantic has been opened as few as 0 to 8 days. The MRIP survey estimates landings over two-month waves and, during waves when the red snapper seasons took place, the MRIP APAIS survey often did not intercept any for-hire red snapper trips in some states. This resulted in for-hire mode landings estimates of zero fish, although harvested fish were observed during separate state-



initiated biological sampling efforts. Consequently, there has been an increased demand in this region for specialized surveys that supplement the large-scale MRIP survey and provide more precise estimates over short seasons.

Currently, large-capacity head boats are the only segment of the for-hire fishery in the region that is required to report trip-level catch through an electronic logbook reporting system. However, if approved, amendments currently working their way through the Council process will establish similar requirements for federally permitted charter vessels. Care should be taken during this process to avoid requirements that result in duplicate reporting to multiple jurisdictions, particularly in Florida where vessels may participate in both Gulf and South Atlantic fisheries. A benchmark period may also be required to overlap a new logbook reporting systems with the MRIP survey (for calibration over the two time-series), and this period should be clearly defined. To the extent practical, methods to minimize the reporting burden during the benchmark period should also be considered (for example, acceptance of logbook data in place of phone interviews).

There is a need in this region to separate landings in the Florida Keys by area fished (South Atlantic versus Gulf of Mexico or Florida Bay). This is a recurring issue for regional stock assessments since MRIP estimates for the Keys cannot be divided by area, and all fish from this region must be lumped in either the South Atlantic's or Gulf of Mexico's landings. This is also a recurring issue when applying fish landed in the Keys towards annual catch limits across Council jurisdictions. Having for-hire vessels report catch and effort by area fished in this region would alleviate this issue.

Discards can far outnumber landed fish for many managed species in this region, and there is a critical need for more precise estimates of numbers of fish discarded and the portion of discards that should be included in fishing mortality estimates. For example, in 2014 the combined estimated landings and discard mortalities for red snapper exceeded the annual catch limit, and no harvest season was allowed in 2015. Fishery managers applied mortality rate to estimated red snapper discards in 2014 to account for fish that may suffer from barotrauma and other injuries. However, the mortality rate was estimated using limited information on the depths that red snapper are caught and released in the fishery. This information is not collected through the MRIP (MRIP at-sea observers only record released alive, dead, harvested, used for bait but not the condition of those released alive), but in recent years has been collected independently by fishery observers on for-hire vessels in Florida (SEDAR41-DW33) and a reduced discard mortality rate has been recommended for use in the stock assessment that is currently ongoing (SEDAR41, 2015).

Given the magnitude of discards for a fishery that is closed almost year-round, any improvement in precision of estimated discards and percent mortality may translate to a large number of fish. Discards are particularly challenging for logbook reporting programs because they are more difficult for vessel operators to keep track of and report accurately and, unlike landed fish, discards cannot be observed during dockside validation checks. Length frequency data for discards is also a critical data need for stock assessments. Validating reported numbers of discards and collecting length frequency data for released catch requires at-sea methods, such as human observers or video monitoring systems, and is more costly than dockside sampling.

The Large Pelagic Survey is not conducted in the South Atlantic region, and since these species are rarely encountered in the general APAIS, MRIP estimates for highly migratory species have extremely high C.V.'s. Alternative methods for surveying for-hire fishing for HMS were pilot tested by MRIP in Southeast Florida in 2008 (report available

at [https://www.st.nmfs.noaa.gov/pims/main/public?method=DOWNLOAD\\_FR\\_PDF&record\\_id=434](https://www.st.nmfs.noaa.gov/pims/main/public?method=DOWNLOAD_FR_PDF&record_id=434)); however, methods to improve HMS estimates have yet to be implemented.

The MRIP survey should also be improved for inshore guide boats, which is an important data need for state-managed fisheries in this region. Guide boats are small, trailered vessels that are difficult to intercept for angler interviews or to validate reported fishing effort, due to the fact that they may be launched from a number of locations. The MRIP procedures were recently modified to allow guide boats to be intercepted during private boat mode and shore mode assignments; however, given the low numbers of guide boats relative to private boats, intercepts in the APAIS remain low.

Additional data needs for management include data for bag limit analyses, size limit analyses, seasonal closure analyses, fishing effort by species and state, and bag limit analyses for captain and crew (since current survey methods do not include captain and crew in estimates of total anglers fishing). It would be beneficial if surveys collected information on the number of captain and crew aboard a for-hire fishing trip and whether their catch was included in the anglers' catch.

## Licensing and Reporting Requirements

### *Federal Permits and Reporting Requirements*

#### Highly Migratory Species (HMS) Charter/Head boat Permit

A HMS Charter/Head boat Permit is required for any for-hire vessel in state or federal waters fishing for highly migratory species. In the south Atlantic, highly migratory species that may be targeted by the for-hire industry include a variety of sharks (large coastal, small coastal and pelagic species groups); billfish, including blue and white marlin, and a concentrated swordfish fishery in southeast Florida and the Keys; sailfish; and certain tunas, including a concentrated bluefin tuna fishery in North Carolina. A complete list of species covered by the HMS Charter/Head boat Permit can be found at [www.nmfs.noaa.gov/sfa/hms](http://www.nmfs.noaa.gov/sfa/hms). Sale of fish by Charter/Head boat Permit holders is prohibited unless the vessel also has a limited access permit and the commercial fishing season is open.

Reporting requirements for this permit include an option for NOAA Fisheries to select a percentage of permit holders to complete a logbook report for each trip. Vessels may also volunteer to carry an observer to monitor catch and release of fish. For swordfish, billfishes and bluefin tuna, permit holders are required to report landed fish to the NOAA Fisheries within 24 hours of landing the fish via a 24 hour toll-free hotline or on line at <http://www.hmspermits.gov/>. Enforcement of this reporting requirement is limited due to the 24 hour period in which harvesters are given to claim fish. North Carolina vessels landing bluefin tuna are exempt from this reporting requirement because they are required to participate in a state-managed reporting system (see North Carolina section below).

If a vessel owner that has an HMS Charter/Head boat permit also has a permit issued in a fishery that is required to report (e.g., NOAA Fisheries Greater Atlantic Region Multispecies logbook (VTR) or NOAA Fisheries Southeast Region Snapper/Grouper logbook), then commercial landings of swordfish, sharks and tunas must be reported through that logbook program. If the vessel owner only holds an HMS Charter/Head boat permit, NOAA Fisheries will notify the owner if they are selected to report commercial landings and cost earnings information in a logbook program.

### [Atlantic Charter Head boat Permit for Dolphin and Wahoo](#)

Charter and head boat vessels must be permitted to fish for dolphin and wahoo in federal waters of the Atlantic Ocean, including the jurisdictions of the South Atlantic, Mid-Atlantic, and North Atlantic. In addition, operators of charter and head boat vessels must have and display an operator's permit. Head boat operators are required to fill out daily trip reports (logbooks) and submit them to NOAA Fisheries as part of the Southeast Region Headboat Survey. There is no limited entry or moratorium on the issuance of new permits. See NOAA Fisheries Southeast Regional Office for details: [http://sero.nmfs.noaa.gov/operations\\_management\\_information\\_services/constituency\\_services\\_branch/permits/index.html](http://sero.nmfs.noaa.gov/operations_management_information_services/constituency_services_branch/permits/index.html)

### [South Atlantic Charter Head boat Permit for Pelagic Fish](#)

Charter and head boat operators must possess a charter/head boat vessel permit for Coastal Migratory Pelagics (cobia, king mackerel, and Spanish mackerel) when fishing in federal waters of the south Atlantic. Head boat operators are required to fill out daily trip reports (logbooks) and submit them to NOAA Fisheries as part of the Southeast Region Headboat Survey. There is no limited entry or moratorium on the issuance of new permits.

### [South Atlantic Charter Head boat Permit for Snapper and Grouper](#)

Charter and head boat operators must possess a charter/head boat vessel permit when fishing for species in the snapper/grouper management unit in federal waters of the south Atlantic. The snapper/grouper management unit includes 14 snapper, 19 grouper, 9 porgy, 3 triggerfish, 8 jack, 3 tilefish, 11 grunt, 3 sea basses, 2 wrasse, and 1 spadefish species. Head boat operators are required to fill out daily trip reports (logbooks) and submit them to NOAA Fisheries as part of the Southeast Region Headboat Survey. There is no limited entry or moratorium on the issuance of new permits.

### [Cape Canaveral National Seashore, National Parks Service](#)

Fishing guides operating within Cape Canaveral National Seashore must possess a Commercial Use Authorization Permit and must submit catch logs each month, even when no fishing occurred. Logbook trip reports collect information on hours fished in each area (even if no fish were caught); numbers of anglers/harvested (including guides and assistants who fished); and numbers of fish, shellfish, crabs and shrimp harvested and released.

## Florida

### [State License Requirements](#)

Charter, head boat and saltwater fishing guide operations must have a Florida Charter Captain or Charter Boat license to cover their passengers. The Charter Boat License covers an individual vessel which may have multiple captains. The Charter Captain License covers an individual captain who may operate multiple vessels. Anglers on a licensed for-hire vessel are not required to hold an individual recreational saltwater fishing license. Scuba divers engaged in fishing or lobstering must have an individual saltwater fishing license and all necessary permits if the vessel they are on does not have the necessary for-hire license.

### [State License Categories](#)

Charter Captain License (allows a licensed captain to go from boat to boat)

A Current Coast Guard License to Operate or Navigate Passenger Carrying Vessel License must be provided in order to purchase these licenses. License types include:

- Charter Captain – 4 or fewer customers
- Charter Captain – 10 or fewer customers
- Charter Captain – 11 or more customers
- Charter Snook Permit
- Charter Lobster Permit

**Charter Boat License** (may only be used on the boat designated on the license)

These licenses are only available to vessels that are commercially registered. A commercial vessel registration or U.S. Coast Guard Certificate of Documentation (with a commercial designation) must be provided in order to purchase these licenses. License types include:

- Charter Boat – 4 or fewer customers
- Charter Boat – 6 or fewer customers
- Charter Boat – 10 or fewer customers (issued to Coast Guard inspected vessels only)
- Charter Boat – 11 or more customers (issued to Coast Guard inspected vessels only)
- Charter Snook Permit
- Charter Lobster Permit

#### State Reporting Requirements

Currently, there are no mandatory trip reporting requirements and no moratorium on the issuance of new permits.

## Georgia

### *State License Requirement*

Any person engaged in the occupation of saltwater fishing guide conducting for-hire trips in marine waters of Georgia must possess a Georgia saltwater fishing guide license. This annual license covers the individual guide (not the vessel) conducting for-hire fishing trips from either a vessel or shore. An optional customer license is also available such that fee-paying anglers are exempt from individual state fishing license requirements while fishing with the guide.

All Georgia saltwater for-hire licenses expire March 31st and include the following (all customer licenses are optional, and a current US Coast Guard operator of passenger vessel license is required):

- Resident Saltwater Fishing Guide
- Non-resident Saltwater Fishing Guide
- Resident Customer License, up to 6 passengers
- Resident Customer License, unlimited passengers
- Non-resident Customer License, unlimited passengers

### *State Reporting Requirements*

Currently, there are no mandatory trip reporting requirements and no moratorium on the issuance of new permits.

## South Carolina

### *State License Requirement*

Owners or operators of charter fishing vessels in South Carolina must purchase an annual charter vessel license for *each* vessel. This license expires at the end of each SC state government fiscal year, June 30<sup>th</sup>.

### *State License Categories*

- Charter Vessel, 6 or less passengers
- Charter Vessel, 7 to 49 passengers
- Charter Vessel, 50 or more passengers

### *State Reporting Requirement*

SC Code of Laws requires all permitted charter vessels to submit daily trip reports for all trips to the Marine Resources Division on a monthly basis. Charter fishing vessels shall maintain a log of the number of persons carried each trip, number of hours engaged in fishing, number of fish by species caught each day, and other information considered necessary by the Department. The logs must be submitted to the Department monthly by the tenth day of the following month.

### *State Enforcement Authority*

A person licensed to operate a charter fishing vessel who fails to maintain or submit a log as required is guilty of a misdemeanor and, upon conviction, must be fined not less than twenty-five dollars nor more than five hundred dollars, or imprisoned for not more than thirty days, and a subsequent charter fishing vessel license must not be issued until the requirements of this subsection are met.

## North Carolina

### *State License Requirement*

All vessels engaged in for-hire fishing must be commercially registered with a For-Hire Endorsement or must have a Blanket or Non-Blanket For-hire Vessel License (described below). All for-hire vessels must have adequate liability insurance (adequate not yet defined) and knowledge of USCG vessel safety requirements (USCG safety requirements will be provided to licensees).

### *State License Categories*

#### Commercial Registration with For-Hire Endorsement

- <=18' \$1.00 ft
- >18-38' \$1.50 ft
- >38-50' \$3.00 ft
- >50' \$6.00 ft
- No additional cost for For-Hire Endorsement
- Anglers required to possess individual fishing license if captain does not possess a Blanket For-Hire Captain's License

### Blanket For-hire Captain's License

- \$250 to carry fewer than 6 passengers or \$350 to carry more than 6 passengers. Nonresident fees add \$100.
- USCG license required to purchase license
- Licensee can run for-hire trips on any commercially registered vessel with a For-Hire endorsement
- Anglers not required to possess individual fishing license

### Blanket For-hire Vessel License

- \$250 to carry fewer than 6 passengers or \$350 to carry more than 6 passengers. Nonresident fees add \$100.
- Any USCG licensed captain can operate the vessel
- Similar to current blanket Coastal Recreational Fishing License (CRFL) with exception of USCG licensing requirement
- Affirm adequate liability insurance on certification form (adequate not yet defined)
- Affirm knowledge of USCG vessel safety requirements on certification form (USCG safety requirements will be provided to licensees)
- Anglers not required to possess individual fishing license

### Non-Blanket For-hire Vessel License

- \$50 resident, \$100 nonresident
- Any USCG licensed captain can operate the vessel
- Affirm adequate liability insurance on certification form (adequate not yet defined)
- Affirm knowledge of USCG vessel safety requirements on certification form (USCG safety requirements will be provided to licensees)
- Intended for dive boat captains and folks who want a lower cost alternative to blanket license and don't care to provide the licensing service to customers
- Anglers must purchase their own license; this is not a blanket license.

### *State Reporting Requirements*

State legislative statute specifies logbook reporting shall be voluntary. A state reporting system has not been implemented at this time.

## Region 7: Mid-Atlantic (Virginia to New York)

Jason Didden

Note: Pennsylvania and North Carolina belong to the Mid-Atlantic Fishery Management Council but are not included in this description. North Carolina is included in the South Atlantic Region and while Pennsylvania is linked to the Mid-Atlantic marine environment through the Delaware River and Bay, Pennsylvania fishing guide services are more likely to focus on freshwater species (with the notable exception of the Delaware River shad fishery). Accordingly, this description includes the coastal states of Virginia through New York.

The area is influenced by many large coastal rivers and estuarine areas including Chesapeake Bay, the Delaware Bay, the Hudson River, Long Island Sound, and the nearly continuous band of estuaries behind the barrier beaches from southern Long Island to Virginia. The continental shelf (characterized by water less than 650 ft in depth) extends seaward approximately 120 miles off Cape Cod, narrows gradually to 70 miles off New Jersey, and is 20 miles wide at Cape Hatteras. The "Mid-Atlantic Bight" is the term used to describe the sandy, relatively flat, and gently sloping continental shelf from southern New England to Cape Hatteras, NC. Ocean water temperatures range from less than 33°F off New York in February to 80°F off Virginia in August.

### For-Hire Fisheries

For-hire captains/guides use a wide variety of vessels in the Mid-Atlantic region, including kayaks, jet-skis, center consoles, bay deadrises, inshore cabin cruisers, offshore sport fishermen, and large head boats/party boats. The species that are targeted are similarly varied, ranging from inshore fish like spot and croaker, to offshore pelagics like bluefin tuna, to deep water shelf species like tilefish. The methods employed are even more diverse.

Overall for 2014, the top species caught on for-hire trips in the Mid-Atlantic in 2014 were (in descending order of total numbers caught) summer flounder, black sea bass, bluefish, striped bass, Atlantic croaker, scup, spot, sea robins, cunners, and skates/rays.<sup>1</sup> The species composition of for-hire fleets can vary strongly from region to region. For example in 2014, in New Jersey, summer flounder, black sea bass, and bluefish were the top three, while in Maryland, with catches in the Chesapeake Bay influencing the mix, the top three species were spot, striped bass, and black sea bass. Effort also shifts strongly with the seasons, with effort generally low in the winter. That said, even in the coldest winter months there is some for-hire activity, especially for seabass, tautog, and tilefish.

Estimates of for-hire recreational fishing effort (in numbers of angler trips) are generated for each state on a bi-monthly and annual basis by NOAA Fisheries. Effort estimates from 2000-2014 indicate an average of 1.2 million for-hire angler trips occurred in the mid-Atlantic from Virginia to New York each year. The number of trips in 2014 (1.3 million) was similar to 2000 (1.1 million), though there was a peak in 2007 at 1.7 million trips and a low point in 2010 at 0.9 million trips.

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<sup>1</sup> Unless otherwise noted, the data described in this section come from the MRIP query tool, available at: <http://www.st.nmfs.noaa.gov/recreational-fisheries/access-data/run-a-data-query/queries/index>



In 2014 for Mid-Atlantic for-hire trips, 41% originated from New Jersey, 35% originated from New York, 17% originated from Maryland, 4% originated from Virginia, and 3% originated from Delaware.

States are required to document and provide contact information to the Marine Recreational Information Program (MRIP) for the for-hire vessels in their state. In 2016, there were 2,211 for-hire vessels identified in Virginia through New York by MRIP (836 in New Jersey, 577 in Maryland, 515 in New York, 171 in Virginia, and 112 in Delaware). Capacities are not known for many vessels, but the majority of vessels reporting capacities in each state are in the 5-10 person category. Most for-hire vessels fall into a 26 foot to 39.9 foot category in all states except for Maryland, where vessels less than 16 feet are most numerous, and vessels 40 feet to 64.9 feet also outnumber (slightly) those in the 26 foot to 39.9 foot category.

For-hire fishing accounted for less than 9% of total recreational fishing effort in 2014 in the Mid-Atlantic (state-level: VA: 2%, MD: 9%, DE: 11%, NJ: 11%, NY: 11%). Although the number of for-hire trips is small relative to shore and private boat angler trips, the annual total catch and harvest estimates for some species of fish is greatly influenced by for-hire anglers (Table 1).

Table 1. Percent of fish harvested by for-hire anglers in 2014 for top five species landed by for-hire vessels, Mid-Atlantic States (VA-NY) combined.

	<b>For Hire Harvest</b>	<b>Private Harvest (Boat and Shore)</b>	<b>Percent Landed by For-Hire</b>
Black Sea Bass	542,039	456,482	54%
Atlantic Croaker	472,854	4,745,202	9%
Bluefish	467,661	2,748,567	15%
Summer Flounder	415,713	1,580,775	21%
Striped Bass	384,348	904,071	30%

## Licensing and Reporting Requirements

### *Federal Permits and Reporting Requirements*

Highly Migratory Species (HMS) Charter/Head boat Permit Owners/operators of charter/head boat vessels fishing for and/or retaining regulated Atlantic Highly Migratory Species (Atlantic tunas, sharks, swordfish and billfish) in the Atlantic Ocean, including the Gulf of Mexico and Caribbean Sea, must obtain an Atlantic Highly Migratory Species (HMS) permit. To be eligible for this permit category there must be a licensed Coast Guard Captain onboard the vessel during ALL HMS fishing activities regardless if they are commercial, recreational, or fee based in nature. U.S. Coast Guard Safety Gear Regulations may apply. This permit will also allow a vessel to fish in registered recreational HMS fishing tournaments. Restrictions on sale of HMS fish and reporting requirements are summarized

at [http://www.nmfs.noaa.gov/sfa/hms/compliance/guides/documents/8\\_rec\\_compliance\\_guide\\_charter.pdf](http://www.nmfs.noaa.gov/sfa/hms/compliance/guides/documents/8_rec_compliance_guide_charter.pdf).



### Atlantic Charter Head boat Permit for Dolphin and Wahoo

Charter and head boat vessels must be permitted to fish for dolphin and wahoo in federal waters of the Atlantic Ocean. See NOAA Fisheries Southeast Regional Office for details: [http://sero.nmfs.noaa.gov/operations\\_management\\_information\\_services/constituency\\_services\\_branch/permits/index.html](http://sero.nmfs.noaa.gov/operations_management_information_services/constituency_services_branch/permits/index.html)

### Other Federal Permits – Species Managed by Regional Councils

There are charter permits required to fish in the EEZ for (grouped by permit) 1) northeast multispecies groundfish (e.g. cod and haddock), 2) summer flounder, 3) scup, 4) black sea bass, 5) squid, Atlantic mackerel, and butterfish, and 6) tilefish (golden and blueline). For-hire vessels with one or more of these permits must submit federal Vessel Trip Reports (VTRs). Efforts are currently underway to streamline federal VTR reporting with any state reporting requirements via an app for mobile devices. Additional Mid-Atlantic Federal permitting details may be found at: <http://www.greateratlantic.fisheries.noaa.gov/aps/permits/fishing/index.html>.

### State Licensing

To avoid anglers having to get Federal Saltwater Fishing Registrations, all of the Mid-Atlantic States maintain registries of their for-hire vessels and provide contact information for those vessels to NOAA Fisheries for data-collection purposes. Since state registration/license information and associated reporting requirements may change, links are provided below for each state. If an angler is on a for-hire vessel, that angler does not need their own license.

Virginia: <http://mrc.virginia.gov/charterfishing.shtm>

Maryland: [http://dnr.maryland.gov/service/fishing\\_license.asp](http://dnr.maryland.gov/service/fishing_license.asp)

Delaware: <http://www.dnrec.delaware.gov/fw/fisheries/pages/newfishinglicense.aspx>

New Jersey: <http://www.nj.gov/dep/saltwaterregistry/index.html>

New York: <http://www.dec.ny.gov/outdoor/100607.html>

### Data Requirements and Future Data Needs

The Atlantic Coastal Cooperative Statistics Program (ACCSP) coordinates data collection in the Mid-Atlantic. The general standard is that “The collection of for-hire modes of recreational catch statistics shall be accomplished via a combination of effort surveys; validation of effort, catch accounting via intercept surveys; and at-sea observation. Where appropriate, some segments may be evaluated as a census. Additional details are available at [http://www.accsp.org/sites/default/files/ACCSP\\_StandardsandAppendices2012\\_Final05082012.pdf](http://www.accsp.org/sites/default/files/ACCSP_StandardsandAppendices2012_Final05082012.pdf).

Data collected on for-hire fishing trips is used in some way in the management and assessment of nearly all marine species managed at the federal, regional, or state levels. Currently data collected from for-hire fisheries enters into science and management primarily in two ways. First, dockside catch surveys (voluntary) sample trips to determine catch rates per trip. Then, the results of the for-hire phone survey (voluntary) are used to determine effort. The two are statistically combined to estimate catch. If vessels submit federal Vessel Trip Reports (VTRs), the effort estimates from those reports are incorporated into final effort estimates (<https://www.mafmc.org/s/For-Hire-Fact-Sheet.pdf>). Total catches recorded by for-hire vessels via VTRs/logbooks are less frequently used in management.

There are a variety of efforts underway to increase the ability to use logbook catch data collected from for-hire fisheries, but completeness, compliance, and validation are key issues. To get to where MRIP can certify a method for using for-hire electronic logbooks, there is follow-up work going on related to pilot studies done in the Gulf as part of MRIP ([http://www.st.nmfs.noaa.gov/Assets/New-MRIP/newscasts/2013-5-9%20Newscast\\_Electronic%20Logbook%20Pilot%20Study.pdf](http://www.st.nmfs.noaa.gov/Assets/New-MRIP/newscasts/2013-5-9%20Newscast_Electronic%20Logbook%20Pilot%20Study.pdf)).

The ACCSP is currently developing a Marine Recreational Information Program (MRIP) Regional Implementation Plan to identify regional needs and priorities for data collection. Priorities may include increasing precision, increasing coverage (Wave 1, tidal rivers, rare event species) and shortening data turn around (1-month waves versus 2-month waves). Additional resources would be required to address these and other “management needs” issues. Collecting additional details on trips (economic information, trip characteristic details) could also be useful for management but would require additional resources to develop and implement. Excessive data collection may also discourage vessel participation in data collection activities.

Stock assessment needs vary by the species being assessed, but generally for landed fish include annual landings estimates in both numbers and pounds (by state or region), estimates of precision, and age/size distribution of landed fish by fishing mode and state/region. Important data needs for released fish include depth fished, condition of released fish, reason for discard (undersized, bag limit met, etc.), change in survival rate with depth, and age/size distribution of discarded fish.

## Region 8: North-Atlantic (Connecticut to Maine)

Gary Shepherd

### For-Hire Fisheries

The region can be partitioned into two biogeographical areas separated by Cape Cod, with colder water species to the north in the Gulf of Maine and warmer water species to the south. Bluefish, Atlantic cod<sup>2</sup> and striped bass are important target species in the charter boat industry while cod, haddock and scup are dominant species in the head boat fishery. Scup is primarily targeted in waters south of Cape Cod while groundfish species such as cod and haddock are targeted by head boats in the Gulf of Maine. Movement among areas is common as vessels originating in southern New England may fish in the north by transiting the Cape Cod Canal into the Gulf of Maine. There are also head boat trips to Georges Bank targeting groundfish species such as cod and haddock. Charter trips targeting tunas (bluefin, yellowfin, etc.) are also an important component of for-hire fisheries and are captured in the large pelagics survey.

Estimates of recreational fishing effort (in numbers of angler trips) are generated for each state on a bi-monthly and annual basis by NOAA Fisheries, with the exception of wave 1 which is not sampled. Effort estimates from 2012-2015 (2015 based on preliminary data) indicate an average of 413,506 for-hire angler trips occur in the north Atlantic each year, ranging from 515,547 in 2013 to 260,535 in 2015 (based on preliminary data, a year in which cod fisheries were significantly curtailed). Massachusetts accounted for nearly 40% of these trips (Table 2).

Table 2. Average number of for-hire angler trips annually by state in the North Atlantic, 2012-2015

Connecticut	46,316
Maine	26,494
Massachusetts	202,321
New Hampshire	80,598
Rhode Island	46,199
2015 based on preliminary data. Source: MRIP data query, April 20, 2016.	

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<sup>2</sup> Note that the Atlantic cod recreational fishery in the Gulf of Maine was closed in 2015.

For-hire fishing accounted for 7% of total recreational fishing effort (trips) in 2014 but the percent and number can vary greatly by individual state. Although the number of for-hire trips is small relative to shore and private boat angler trips, the annual total catch and harvest estimates for some species of fish are greatly influenced by for-hire anglers (Table 3).

Table 3. Percent of fish landed by charter and guide boat anglers in 2014, all states combined.

	Number of Fish Landed in 2014		% Landed by Charter and Guide Boat Anglers
	Charter and Guide Boat Anglers	Shore and Private Boat Anglers	
Scup	890,565	2,280,533	28.1%
Atlantic Mackerel	389,448	2,873,574	11.9%
Atlantic Cod	150,051	133,822	56.9%
Black Sea Bass	190,974	887,373	17.7%
Bluefish	198,640	674,861	22.7%

For-hire fisheries in this region operate primarily between the months of March-October, with relatively little activity during the winter months. Many of the targeted species such as bluefish, striped bass, sea bass, and summer flounder are seasonal migrants to the area and are generally not available until May. Early season for-hire fisheries in the Gulf of Maine generally target cod and haddock and recently in southern New England effort has increased in a fishery to offshore wrecks targeting black sea bass and cod.

## Licensing and Reporting Requirements

### *Federal Permits and Reporting Requirements*

Federal permits are required for charter/head boats fishing in federal waters for (i) Bluefish, (ii) Black Sea Bass, (iii) Summer Flounder, (iv) Scup, (v) Northeast Multi-species, and (vi) Squid, Mackerel, and Butterfish. Vessels with these permits are required to submit fishing vessel trip reports (paper logbook) for each trip (Northeast VTRs). Federal permits are required for charter/head boats fishing for highly migratory species, including billfish, certain tunas, and certain sharks. Additionally, charter and head boat permit owners/operators of charter/head boat vessels fishing for and/or retaining regulated Atlantic Highly Migratory Species (Atlantic tunas, sharks, swordfish and billfish) in the Atlantic Ocean must obtain an Atlantic Highly Migratory Species (HMS) permit as described in earlier sections.

### State Licensing

To avoid anglers having to get Federal Saltwater Fishing Registrations, most states maintain registries of their for-hire vessels and provide contact information for those vessels to NOAA Fisheries for data-collection purposes. If a vessel is registered through a state system or holds a federal permit, they are automatically enrolled in the Saltwater Registry framework. Since state registration/license information and associated reporting requirements may change, links are provided below for each state. If an angler is on a for-hire vessel, that angler does not need their own license.

Maine: <http://www.maine.gov/dmr/license/index.htm>

New Hampshire: <http://www.wildlife.state.nh.us/marine/licenses.html>

Massachusetts: <http://www.mass.gov/eea/agencies/dfg/dmf/recreational-fishing/recreational-saltwater-permits.html>

Rhode

Island: <http://www.dem.ri.gov/programs/bpoladm/manserv/hfb/boating/commfish.htm>

Connecticut: [http://www.ct.gov/deep/cwp/view.asp?a=2696&q=322716&deepNav\\_GID=1630#MarineLic](http://www.ct.gov/deep/cwp/view.asp?a=2696&q=322716&deepNav_GID=1630#MarineLic)

## Data Requirements

The Atlantic Coastal Cooperative Statistics Program (ACCSP) coordinates data collection in the North Atlantic. The general standard is that “the collection of for-hire modes of recreational catch statistics shall be accomplished via a combination of effort surveys; validation of effort, catch accounting via intercept surveys; and at-sea observation. Where appropriate, some segments may be evaluated as a census.” Additional details are available at [http://www.accsp.org/sites/default/files/ACCSP\\_StandardsandAppendices2012\\_Final05082012.pdf](http://www.accsp.org/sites/default/files/ACCSP_StandardsandAppendices2012_Final05082012.pdf).

Accurate recreational catch information is required for many of the stock assessments in the Northeast including cod, haddock, summer flounder, bluefish, striped bass, scup and winter flounder. Dockside intercepts provide biological sampling to characterize the size distribution of the landed fish. Increased landing restrictions for many species result in potential increases in the number of released fish. Consequently, data pertaining to B2s (caught and released alive) becomes increasingly important, particularly length frequency data. At-sea sampling of catches provides an opportunity to sample released fish that would not be available dockside. Additionally, the mortality of released fish continues to be the focus of research as well as outreach efforts to encourage proper handling and use of release devices to reduce barotrauma in released fish.

Several species are comprised of different stocks within the region (i.e. winter flounder stocks include Gulf of Maine, Georges Bank and southern New England). Information about intercept location is necessary to partition landings and discards into the appropriate stock, although state landed may not always reflect the stock from which the landings occurred since multiple stock areas may be fished from a given port. In the Northeast, federally permitted for-hire vessels are required to submit Vessel Trip Reports (VTRs) which provide catch location and is used to supplement the information collected in dockside interview. As more states consider use of logbook systems, particularly electronic logs, coordination among agencies will be required to produce vessel logs that collect the required information and avoid duplication. Logbooks are a particularly important source of information for fisheries occurring in wave 1 (January/February) when MRIP sampling is not active.

Additional data that are not routinely collected includes economic information. Evaluation of alternative management plans often requires consideration of additional costs imposed on a fishery. Without adequate information from the for-hire fisheries, the economic impact cannot be fully evaluated. Collection of data such as trip costs (fuel costs, bait, etc.) would vastly

improve these economic analyses. The advent of electronic logbooks may provide an opportunity to collect this additional information from for-hire vessels.

## Synopsis of Current Data Collection Programs

### For-Hire Telephone Survey

*Purpose:* The NOAA For-Hire Telephone Survey was initiated in 2005 to provide fishing effort as a companion to the APAIS catch data for for-hire vessels.

*Sample Frame:* This program samples head boats (7 passengers or more) and charter vessels (6 passengers or less) from a directory of for-hire boats for all states, from Maine through Georgia. Charter boats only are included from Florida to Louisiana.

*Sample Selection:* Sampling is stratified by vessel type (head boat and charter boat), state, and week, within each two-month sampling wave.

*Data Collection Procedures:* Data collection is conducted on a weekly basis. Respondents are asked to report vessel fishing activity for the prior week, and then asked to profile each for-hire fishing trip. Information obtained for each trip includes area fished, number of anglers who fished, hours of actual fishing activity, method of fishing, and target species, if any. Advance notice of selection is mailed to each selected vessel representative and alternative reporting modes are provided for the Atlantic coast respondents, including an interactive website, a fax number, and a phone contact for respondent-initiated interviewing. Effort estimates are produced from the average number of angler-trips per vessel-type per week and the number of vessels per vessel-type in the sampling frame. Adjustment factors for active for-hire fishing boats that are not in the sample frame (new to fleet, no contact information known, etc.) are produced from APAIS questions and applied to the raw effort estimate. Negative trips (no fishing activity) are required to be reported. The survey does not collect information on catches.

*Data Validation:* APAIS dockside intercepts verify if vessels are in port or not during the week when any vessel is contacted for the For-Hire Telephone survey.

*Quality Control:* Standard data entry QA/QC is conducted.

*Databases and Record Formats:* Data are managed in SAS and Excel.

*MRIP Use and Overlap:* Overlaps with Northeast Vessel Trip Reporting Program (VTR), the Southeast Regional Head boat Survey (SRHS), various state logbook programs, and in rare circumstances with the ongoing Coastal Household Telephone Survey (although CHTS surveys anglers, not charter captains). Data reported in the VTRs for NOAA Fisheries-permitted vessels are obtained from Northeast Fisheries Science Center. The VTR data are not used for preliminary wave-by-wave estimates, but they are included at the end of the year when the VTR data are most complete. The total trips reported in the VTRs are used to produce an unadjusted number of angler trips. These boats are treated as a separate “VTR boats” stratum within each for-hire boat mode. All FHS data obtained for those vessels are removed, and FHS estimates of the numbers of angler trips on non-VTR boats are re-run for each wave using the remaining FHS data.

### Access Point Angler-Intercept Survey (APAIS)

*Purpose:* The NOAA Fisheries Access Point Angler-Intercept Survey (APAIS) began in 1981 to identify catch (Harvest and Discard). No effort data are derived from APAIS, just catch per trip and discard enumeration.

*Sample Frame:* APAIS covers head boats (7 passengers or more) and charter (6 passengers or less) vessels operating in all waters from Maine to Mississippi. This encompasses 204 head boats (Maine – South Carolina), and an unknown number of charter boats.



*Sample Selection:* The survey utilizes a vessel directory (for head boats) and the MRIP Site Register (for charter). The vessel directory is updated bi-monthly and the site register on an ongoing basis. A site sample selection table is used to select sampling sites.

*Data Collection Procedures:* Trip-level reporting is through paper records; all participation by vessel operators and anglers is voluntary. The survey collects information on harvest, discard, and biological length. Anglers with no catch are included but negative trips are not. All species are required to be reported. Interviewer-collected data are transmitted monthly to NOAA Fisheries and preliminary data are available 45 days following reporting. Raw results are expanded to the entire fishery.

*Data Validation:* No validation is conducted.

*Quality Control:* APAIS has interviewer verification via validation telephone calls to interviewed anglers to measure interviewer performance, but no independent validation of collected angler interview data. Field supervisors also conduct unannounced QC visits.

*Databases and Record Formats:* Data are stored and managed with SAS.

*MRIP Use and Overlap:* APAIS data provide catch estimates. Discard length frequencies are available in the Northeast Atlantic region as part of the program (official discard length frequencies in the Southeast region are collected through other programs, although some raw data may be available through APAIS). Data are shared with program partners and duplicate reporting does occur.

## Large Pelagic Survey

*Purpose:* The NOAA Fisheries Large Pelagic Survey (LPS) began in 1992 as a specialized survey for rare event HMS species in support of domestic management and international treaties and to support reporting compliance (supporting for-hire license or species fishing permits). The survey collects information to identify fishing effort and catch (harvest and discard).

*Sample Frame:* The LPS is conducted along the Atlantic Coast from Maine through Virginia, covering charter (6 passengers or less) vessels in all waters holding HMS permits (Angling, Charter/Head boat, and Atlantic Tuna General). Approximately 3000 vessels are covered. The frame is updated bi-monthly.

*Sample Sizes/Selection:* Approximately 10% of the vessels are selected for the telephone survey and about 3 to 5% for dockside interviews.

*Data Collection Procedures:* The LPS is a combination telephone and dockside survey collecting trip-level information via paper and electronic entry. Data are collected on effort, harvest, discard, biological length, and other trip specifics including: target species, hours fished, methods used, miles offshore, fishing location, lines used, etc. for tunas, sharks, billfish, swordfish, dolphin, and wahoo for the previous week's fishing activity. Participants are required to report zero catches if selected for the dockside survey and zero trips if selected for the telephone survey. Monthly estimates are produced with a 1-month lag and raw results are expanded to the entire fishery.

*Data Validation/ Quality Control:* Dockside intercepts are validated by calling the respondent as a quality control measure on interviewer performance. Field supervisors also conduct unannounced QC visits.

*Databases and Record Formats:* Data records are managed using SAS.

*MRIP Use and Overlap:* The LPS data are shared with partners and are integrated for purposes of domestic management and assessment of HMS and reporting to the International Convention for



the Conservation of Atlantic Tunas (ICCAT). Duplicate reporting may occur with the VTR reporting and HMS reporting for bluefin tuna and billfish landings.

### Southeast Region Headboat Survey

*Purpose:* The Southeast Region Headboat Survey is designed to provide reporting compliance for supporting state and for-hire license or species fishing permits, identifying fishing effort and catch (whether landed or released) and identifying number of discarded (not landed) fish. Data from the survey supports the SEDAR process and monitoring of Annual Catch Limits (ACLs).

*Sample Frame:* Included in the survey are vessels licensed to carry 7 or more passengers in the South Atlantic and 15 or more in the Gulf of Mexico, that charge per person (per "head") and fish for federally managed species. All vessel types are included. The sampling frame is updated as needed if vessels enter or leave the fishery. The survey encompasses vessels fishing for federally-managed species in state or federal waters from the North Carolina/Virginia border south to the Texas/Mexico border.

*Sample Selection:* This survey is a complete census; no subsampling occurs.

*Sample Sizes:* At present (March 2016), 73 vessels from the South Atlantic and 69 in the Gulf of Mexico participate in this program.

*Data Collection Procedures:* All species are required to be reported. Trips on which no fish are caught are required in reporting. Data are collected at the trip level, and reports are submitted weekly. Catch estimates are calculated to provide bi-monthly and annual estimates. Lengths and weights are recorded for landed fish only. From 2004-2013 the SRHS collected the number of fish released alive and dead by species. In 2013 the survey converted to electronic reporting and stopped collecting disposition and now collects only the number of fish released.

*Data Validation:* Validation is performed through observer, dockside sampling, phone calls, head boat websites, Facebook and physical observations on trip, catch, effort, harvest, and discard estimates. Validations are used as a correction factor for each of these data elements and for reporting compliance

*Quality Control:* The program tracks reporting compliance as a measure of quality control.

*Databases and Record Formats:* Data are stored in SQL Databases, SAS, Excel and Oracle. Data are shared electronically with agency partners.

*MRIP Use and Overlap:* The data are currently used by MRIP to provide estimates of head boat landings and effort and are combined with MRIP estimates to summarize overall recreational landings. These are used to monitor ACLs in the recreational sector. Data overlap at-sea sampling measures on "kept" and "released" at the angler level. The SRHS dockside sampling measures "kept" at the angler level.

### HMS Catch Card Census

*Purpose:* The HMS Catch Card Census program began in 1998 for reporting compliance (supporting for-hire license or species fishing permits), and to identify catch (harvest and discard).

*Sample Frame:* This program covers head boats (7 passengers or more) and charter vessels (6 passengers or less) fishing in all waters from Maryland and North Carolina holding a HMS Charter/head boat permit (also covers HMS private boat angling permit holders).

*Sample Selection:* This program is a census, so no subsampling occurs.

*Sample Sizes:* About 500 HMS charter/head boat permitted vessels are registered in Maryland and North Carolina.

*Data Collection Procedures:* This program involves mandatory self-reporting of permitted vessels fishing for federally-managed species (bluefin tuna, blue marlin, white marlin, sailfish, swordfish, and federally managed sharks). Paper catch cards must be filled out when a fish is landed and then submitted at a reporting station in return for a landing tag. Fish must have an attached landing tag prior to removal from the vessel. Data elements collected include reporting station identification, angler name, date, landing tag number, permit number, vessel name, species landed, fish length, and tournament participation. Neither negative trip reports nor negative catch reports are required. Preliminary data are available within 1-2 weeks of reporting. Raw results are not expanded to the entire fishery.

*Data Validation:* No information was provided.

*Quality Control:* Any off-loaded catch card species observed without an attached landing tag indicates a violation.

*Databases and Record Formats:* Data are managed in SAS and Excel.

*MRIP Use and Overlap:* Data are not currently incorporated into MRIP. In some instances a captain may need to report a catch card species to the Large Pelagic Survey or MRIP survey in addition to the Catch Card program. Some captains must also fill out VTRs.

### Recreational Bluefin Tuna Landings

*Purpose:* The Recreational Bluefin Tuna Landings program is used to identify catch (harvest and discard).

*Sample Frame:* This program operates from Maine through Texas and the Caribbean territories, covering head boats (7 passengers or more) and charter vessels (6 passengers or less) holding Atlantic HMS Charter/head boat vessel permits (issued annually) in federal waters. The sample frame is updated daily.

*Sample Selection:* This program is a complete census and no subsampling occurs.

*Sample Sizes:* Approximately 3,500 permits are issued.

*Data Collection Procedures:* Trip-level reporting on a daily basis is conducted electronically. Neither negative trips nor negative catches are required. Data on fishing effort, harvest, discard, and biological length are collected for bluefin tuna, billfish and swordfish. Data are available within one day of reporting.

*Data Validation:* No information was provided.

*Quality Control:* There is no tracking of reporting compliance.

*Databases and Record Formats:* Data are managed and stored in a SQL Database.

*MRIP Use and Overlap:* Data are not shared with agency partners and are not included in MRIP. Some duplicate reporting may be occurring with other programs.

### CT Party and Charter Vessel Black Sea Bass Program

*Purpose:* The Connecticut Party and Charter Vessel Black Sea Bass Program was started in 2013 to identify harvest only in the state's black sea bass fishery.

*Sample Frame:* This program covers all state-licensed head boats (7 passengers or more) and charter vessels (6 passengers or less) fishing for black sea bass in Connecticut. Each year vessel owners/operators must opt into the program in order to possess black sea bass. The frame is updated as vessels opt into the program.

*Sample Selection:* This is a complete census; no subsampling occurs.

*Sample Sizes:* Ninety-seven vessels are currently opted into the program.

*Data Collection Procedures:* Trip-level reporting on paper records for effort and harvest are submitted monthly by owner/operators in the program. Reports are due by the 10th of the following month. Negative trip reports are required but negative catch reports are not. Preliminary data are available by March of the following year.

*Data Validation:* No validation is conducted.

*Quality Control:* Reporting compliance is tracked.

*Databases and Record Formats:* Data are stored and managed in SAS and Excel.

*MRIP Use and Overlap:* Data are not shared with agency partners and are not included in MRIP. Duplicate reporting may occur for operators holding federal permits.

### NJ Striped Bass Bonus Program

*Purpose:* The New Jersey Party/Charter Boats Striped Bass Bonus Program started in 1997 to identify fishing effort and catch (harvest and discard) in the striped bass fishery. The program ended in 2012.

*Sample Frame:* The program incorporated mandatory reporting from head boats (7 passengers or more) and charter vessels (6 passengers or less) participating in New Jersey's Striped Bass Bonus Program. The sampling frame was updated annually.

*Sample Selection:* Mandatory reporting of all striped bass caught in the bonus program.

*Sample Sizes:* None provided.

*Data Collection Procedures:* Paper reports were required to be submitted by the 15th of January of the following calendar year reporting trip-level effort, harvest, discard and biological length. Preliminary data were available several weeks following submission of reports. Although striped bass were required to be reported through the program, reporting of all species caught during a trip was encouraged. Negative trips and negative catches were not required to be reported. Raw reports were not expanded to the entire fishery.

*Data Validation:* No information provided.

*Quality Control:* There was no compliance reporting or monitoring.

*Databases and Record Formats:* Data are stored and managed in Excel.

*MRIP Use and Overlap:* Data are shared electronically with agency partners but not included in MRIP. Duplicate reporting was known to occur.

### TX Marine Sport Harvest Survey

*Purpose:* The Texas Marine Sport Harvest Survey began in 1974. It is a trip-ending intercept survey at boat ramps and marinas to identify fishing effort and harvest (landed only) that are used to calculate semi-annual estimates.

*Sample Frame:* Texas is the only state covered in this survey. All waters and all species are covered and the survey collects information from charter (6 passengers or less) vessels. The sampling frame is updated weekly.

*Sample Selection:* This is an intercept survey; vessels are selected as they return to port.

*Sample Sizes:* No information provided.

*Data Collection Procedures:* The survey collects information on effort, harvest, and length from landed fish. Reporting of negative trips and negative catches is not required.

*Data Validation:* No information provided.

*Quality Control:* No information provided

*Databases and Record Formats:* Data are maintained in Sybase and are shared with partners.

*MRIP Use and Overlap:* There is no overlap with MRIP.

### LDWF LA Creel Survey For-Hire

*Purpose:* The Louisiana Creel Survey For-Hire began in 2014 to identify fishing effort.

*Sample Frame:* The survey covers Louisiana only, all waters and all species for head boats (7 passengers or more) and charter vessels (6 passengers or less). The sampling frame is updated weekly.

*Sample Selection:* Captains fishing for offshore species are required to obtain a free recreational offshore landing permit (ROLP); 30% of that list and 10% of the non-ROLP holders are contacted each month. Most captains that have an ROLP are also federally permitted. Captains are randomly drawn each week to provide trip level information.

*Sample Sizes:* Approximately 800 vessels are covered under this program.

*Data Collection Procedures:* Captains are contacted each Monday to provide data for fishing activity in the preceding week. Information is collected on effort, harvest, biological length, and weight. Reporting of negative trips or catches is not required. Estimates are expanded to the entire fishery. Data are available within 1-2 weeks of reporting.

*Data Validation:* Telephone calls are made to captains and dockside sampling is conducted to validate responses.

*Quality Control:* Tracking of reporting compliance is maintained.

*Databases and Record Formats:* Data are stored in an SQL database.

*MRIP Use and Overlap:* Louisiana no longer participates in the MRIP program. Data from this program will be used in the estimation process for Louisiana Creel which is in the process of obtaining certification through MRIP.

### Alabama Snapper Check

*Purpose:* Alabama's Snapper Check began in 2014 to identify fishing effort and harvest (landed only). Fishing effort is measured in vessel and angler trips, not hours fished. Snapper Check reports are only required when red snapper are landed.

*Sample Frame:* This program covers Alabama only. All vessels landing red snapper are required to report, including head boats (7 passengers or more) and charter (6 passengers or less).

*Sample Selection:* This program is a complete census; no subsampling occurs.

*Sample Sizes:* Approximately 120 for-hire vessels reported through this program in 2015.

*Data Collection Procedures:* Most data are collected electronically for trip-level data. Although the number of dead red snapper discarded during the fishing trip is a question on the report, trips with dead red snapper discards where no red snapper harvest occurred are not required to be reported. Data are collected for fish lengths and weights of landed fish. Negative trips or catches are not required to be reported. Raw data are expanded to the entire fishery and used to calculate weekly estimates. Electronic reports are available immediately upon submission; where paper reports are submitted, those are available within three days of submission. Rates of reporting compliance can be available within one week of field collection.

*Data Validation:* Dockside validation is conducted for trip, harvest and discard data as part of the program and is used as a correction factor for estimates.

*Quality Control:* Reporting compliance is tracked.

*Databases and Record Formats:* Data are maintained in SQL Database, SAS, and Excel.

*MRIP Use and Overlap:* Data are not shared with partners. Currently, data from Snapper Check are not used in the MRIP estimation process; however, the program is going through the MRIP review process for certification. For-hire participants also report under Vessel Directory Telephone Survey and head boats report in the NOAA Fisheries Headboat Survey and Pilot Gulf Headboat Collaborative Program as appropriate.

#### MRIP Headboat At-Sea Discard Observer Program

*Purpose:* The MRIP At-Sea Headboat Observer Program began in 2005 to identify harvest and discards and to provide length data for regulatory discards. It is conducted Maine through Florida although the state of Florida collects additional data elements. In Maine through Virginia, CPUE is used to generate expanded catch estimates while North Carolina through Florida, the Southeast Headboat Survey provides official catch estimates, and this survey is used to validate logbook reports and contributes to stock assessments.

*Sample Frame:* This program collects data from federally-permitted head boats (7 passengers or more) and/or those listed on the SEFSC Head boat Vessel List. The frame is updated monthly. There are approximately 48 vessels in this program.

*Sample Sizes:* Data are collected from approximately half of all vessels in any given sampling period.

*Data Collection Procedures:* Trip level data are recorded on paper data sheets. All species observed are recorded; reporting of negative trips and negative catches is not required. Data elements are collected for effort, harvest, discard, biological length, and biological weight. Raw results are expanded to the entire fishery.

*Data Validation:* Validation is conducted on trip, catch, harvest, and discard through observers, and used as a correction factor.

*Databases and Record Formats:* Data are stored in SQL and SAS.

*MRIP Use and Overlap:* Data are shared with agency partners and are used by MRIP to validate the Southeast Headboat study. Duplicate reporting may occur with the Southeast Headboat Survey.

#### iSnapper

*Purpose:* The iSnapper project began 2011. Data collected include fishing effort, catch (landed or released), harvest (landed only), discard numbers, and socioeconomic data for multiple purposes, including supporting state and for-hire license or species fishing permits compliance.



*Sample Frame:* iSnapper is used in the Gulf of Mexico although most of reporting occurs in a single state (Texas) due to several states having their own programs. Data are collected from all waters and all species (although red snapper is the primary target species for this program) on head boats (7 passengers or more) and charter vessels (6 passengers or less). The sampling frame is updated daily (or as trips occur) for catch data. License and permit information is only collected at registration or as they change

*Sample Sizes:* Approximately 400 vessels participate in this program.

*Sample Selection:* Data are self-reported as fishing trips occur.

*Data Collection Procedures:* Data are collected on fishing effort, harvest, and discard, as well as depth and location fished at the trip level and socioeconomic information. Fish length is recorded on both landed and discarded fish. Trips with no catch are reported or when vessels are not fishing (e.g., mechanical issues). Catch disposition (e.g., released, landed, kept, regulatory release, etc.) and discard condition (some measure of health of the fish that is released) are both collected. Data are collected electronically and submitted daily (before docking). Estimates can be generated on any timeframe (daily, weekly, monthly, annual, etc.) and raw reports are expanded to represent an entire fishery. Data are not currently shared but the capabilities are embedded into program for doing so.

*Data Validation:* Validation is conducted through dockside sampling on trips, catch, harvest, and effort and is used to verify the utility of self-reported data.

*Databases and Record Formats:* Data are managed in Excel.

*MRIP Use and Overlap* Data from this program are not used by MRIP. Duplicate reporting may occur through for-hire reports required by Texas Parks and Wildlife, creel surveys, and other Gulf data collection programs.

### Northeast VTR (GARFO)

*Purpose:* The Northeast Vessel Trip Reporting (VTR) began with reliable data in 1996 to identify fishing effort and catch (harvest and discard) in for-hire vessels in the North and Mid-Atlantic. The program is conducted by NOAA Fisheries.

*Sample Frame:* The program collects data from head boat (7 passengers or more) and charter vessels (6 passengers or less) with a federal Party and/or Charter endorsement operating from Maine to North Carolina. The frame is updated annually.

*Sample Selection:* This is a complete census; no subsampling occurs.

*Sample Sizes:* There are 815 permitted for-hire vessels that are required to report.

*Data Collection Procedures:* This is mainly paper-based reporting although certified electronic reporting mechanisms are increasing in use. Trip-level reporting of all species is required. Until 2015, “Did Not Fish” reports were required but this is now discontinued. Data elements on harvest and effort are collected. Reporting is weekly for some species (Tuesday following the reporting week) and monthly (the 15th of the following month) for most. Preliminary data are available generally within one day of receipt. Raw results are not expanded to the entire fishery.

*Data Validation:* Trip validation is conducted via telephone calls.

*Quality Control:* Reporting compliance is not tracked.

*Databases and Record Formats:*

*MRIP Use and Overlap:* Data are shared with agency partners and used by MRIP to augment phone\interview surveys. Overlap may occur with other trip reporting mandates of state agencies.

### Atlantic HMS Non-tournament Reporting

*Purpose:* The Atlantic HMS Non-tournament Reporting began in 2002 for reporting of swordfish and billfish landings and bluefin tuna landings and dead discards. The objective is not to identify catch because billfish and swordfish releases (live or dead) are not required to be reported and bluefin tuna live releases are not required to be reported.

*Sample Frame:* Head boats (7 passengers or more) and charter (6 passengers or less) holding an Atlantic HMS Charter/Head boat permit or Atlantic HMS Angling permit are represented in this survey. The frame is updated daily.

*Sample Selection:* This program is a complete census of permit holders; no subsampling is done.

*Sample Sizes:* Approximately 28,000 vessels but this varies annually.

*Data Collection Procedures:* Data are collected electronically. Lengths are collected on landed and discarded fish, weights only on landed fish. Catch disposition (e.g., released, landed, kept, regulatory release, etc.) and discard condition (alive or dead) are also recorded. Negative trip reports and negative catch reports are not required. Data are available immediately upon reporting, and calculations provide monthly bluefin tuna and swordfish landings, monthly bluefin tuna dead discards, and quarterly (every three months) estimates for billfish landings.

*Data Validation:* No validation.

*Quality Control:* No tracking of compliance

*Databases and Record Formats:* Data are managed using Excel

*MRIP Use and Overlap:* Data are not incorporated into MRIP. Duplicate reporting occurs only if a vessel is surveyed by the Large Pelagic Survey or MRIP, which is rare.

### NY VTR

*Purpose:* The New York State DEC Vessel Trip Reporting started in 2008 for reporting compliance (supporting state and for-hire license or species fishing permits), identifying fishing effort, catch (harvest and discard), and collecting biological samples.

*Sample Frame:* This program collects data from all head boats (7 passengers or more), and charter vessels (6 passengers or less) holding New York State Charter Permits fishing in any waters. The frame is updated annually.

*Sample Selection:* This is a complete census and no subsampling occurs.

*Sample Sizes* Currently, 475 vessels hold charter permits and are included in the program.

*Data Collection Procedures:* Data are submitted on paper forms or electronically, encompassing all species and all waters. Data elements provide for determination of effort, harvest, discard, biological length, and in some cases include the collection of some hard parts for biological data. Reports are submitted monthly (by the 15th of following month) and preliminary data are available within 6 months. Raw data are not expanded to the entire fishery.

*Data Validation:* No information was provided.

*Quality Control:* Tracking of compliance is conducted as part of this program.

*Databases and Record Formats:* Data are stored and managed in SQL and Excel.

*MRIP Use and Overlap:* Data are not currently used by MRIP. Duplicate reporting may occur with FHS & State/Federal VTRs. Data are shared electronically with agency partners.

### SAFIS eTrips

*Purpose:* The ACCSP SAFIS (Standard Atlantic Fisheries Information System) eTrips is a data reporting tool for state fisheries management agencies that began in 2008 for reporting compliance

(supporting state and for-hire license or species fishing permits), identifying fishing effort, catch (landed or released), harvest (landed only), and discard numbers (not landed).

*Sample Frame:* This program covers all federal waters of the Atlantic Coast and state waters for MA, RI, CT, NY, NJ, MD, SC and GA. Head boats (7 passengers or more) and charter (6 passengers or less) vessels are included in the program. Species lists and data elements are customized to each agency's needs. Negative trips are required to be reported. The frame is updated continually.

*Sample Selection and Sample Size:* Varies with each agency application.

*Data Collection Procedures:* Trip-level reports are submitted on paper or electronically before or at docking, daily, weekly, or monthly. Raw reports are not expanded to the entire fishery. Fishing effort, discard numbers, catch, and harvest numbers are recorded. Biological length and biological weight are collected on landed and discarded fish. Catch Disposition (e.g., released, landed, kept, regulatory release, etc.) is also collected. Preliminary data are available in real time for electronically reported data and at varying times for trips reported on paper forms (specific to each agency).

*Data Validation:* Electronic validation occurs automatically for electronically submitted tickets. Additionally audits are performed nightly as part of the program. Some dockside validation may be conducted by specific agency users.

*Quality Control:* Tracking of reporting compliance is conducted.

*Databases and Record Formats:* Data are stored and managed in SQL.

*MRIP Use and Overlap:* This program shares data with partners. Data collection generally does not overlap with other programs except Department of Public Health collection in Massachusetts.

#### RI DFW eTRIPS and eLogbook

*Purpose:* The Rhode Island Department of Natural Resources eTrips and eLogbook began in 2012 and uses the eTrips/Mobile and eLogbook tools available to all ACCSP partners. It is used for reporting compliance (supporting state and for-hire license or species fishing permits) and allows for the development of specialized bag limit for some species if captains report electronically.

*Sample Frame:* Data are collected from head boats (7 passengers or more) and charter vessels (6 passengers or less) contained in a Vessel registration list (Coastguard or State). Captains use their USCG merchant marine number for eTrips/Mobile account set up (in lieu of a state P/C license number). The frame is updated annually.

*Sample Selection:* This program is a complete census and no subsampling occurs.

*Sample Sizes:* Between 250 and 300 vessels hold Rhode Island licenses (are part of the program).

*Data Collection Procedures:* Reports are submitted electronically on a daily basis. The program collects effort and harvest information and is used for reporting tautog in the fall period (after October 15) for the state program to provide trip level reports. Negative trips and negative catches are not required to be reported. Data are available in real time.

*Data Validation:* No information was provided.

*Quality Control:* Reporting compliance is tracked.

*Databases and Record Formats:* Data are stored and managed in Excel.

*MRIP Use and Overlap:* Data are not shared with agency partners and are not included in MRIP. Duplicate reporting may occur with the NOAA VTRs as many party/charter captains have federal permits.



### Maryland Charter Fisheries Logbook

*Purpose:* The Maryland DNR charter logbook began in 1995. Data are used for reporting compliance supporting state and for-hire license or species fishing permits) and to identify fishing effort and catch (landed or released).

*Sample Frame:* This program is conducted in a single state (Maryland) in all waters (Chesapeake Bay and Atlantic coast) covering all species and fishing activity on head boats (7 passengers or more) and charter (6 passengers or less) vessels holding Chesapeake Bay & Coastal Sport Charter Boat License, Maryland Commercial Fishing Guide License, and/or Maryland Unlimited Tidal Fish License. The sample frame is updated daily.

*Sample Selection:* This program is a complete census; no subsampling occurs.

*Sample Sizes:* Approximately 677 vessels.

*Data Collection Procedures:* This program collects variables to determine fishing effort, and harvest, including weights from landed fish and catch disposition (e.g., released, landed, kept, regulatory release, etc.) Negative trips and negative catches are required. Reports are submitted on paper or electronic format. Vessel operators are required to report daily with submission of reports on a weekly basis, producing trip level reports on a weekly basis. Preliminary data are available 2-4 weeks after a reporting period and are used to develop monthly estimates. Reports are not expanded to cover the entire fishery.

*Data Validation:* None.

*Quality Control:* Reporting compliance is tracked.

*Databases and Record Formats:* Data are managed in MS Access and shared electronically with partners.

*MRIP Use and Overlap:* Maryland has an agreement with NOAA/MRIP to provide trip data to MRIP from vessels they select. Every wave, MRIP submits a list of vessels for each week during the wave and is provided with the trip information (date, number of trips, location, and number of anglers) by the 29<sup>th</sup> of the month after the wave (May 29, July 29, Sept 29, etc.). There is no overlap with other programs although ocean-side operators may also be required to submit VTRs to NOAA.

### South Carolina For-Hire Logbook

*Purpose:* The South Carolina Department of Natural Resources Charter Logbook Program began in 1993 and is used for reporting compliance (supporting state and for-hire license or species fishing permits), identifying fishing effort, catch (landed or released), harvest (landed only), and discard numbers (not landed). The logbook is required by law.

*Sample Frame:* This program covers all waters and all species in South Carolina for activity by all charter (6 or less passengers) vessels licensed in South Carolina. The frame is updated as often as possible, but usually bi-weekly.

*Sample Selection:* This program is a complete census; no subsampling occurs.

*Sample Sizes:* 445 vessels/licenses are currently enrolled in the program.

*Data Collection Procedures:* Vessel operators are required to submit paper reports by the 10th of the month after trips occur (e.g., July trip reports are due August 10<sup>th</sup>). Weight is collected for the combined weight of landed fish by species. Catch disposition (kept, released live, and released dead) and discard condition (some measure of health of the fish that is released), as well as deepest and shallowest depths fished (which could potentially help with released mortality estimates) are recorded. Negative trip and negative catch reports are required, with raw reports being expanded to cover the entire fishery. Reports are at the trip level and since this is designed

to be a census, estimates can be developed at any temporal level. Data are available 2 months after the trip occurs.

*Data Validation:* Dockside sampling is used for validation, but validation is not currently used for correction. MRIP surveys are currently being used as a comparison.

*Quality Control:* QA/QC of submitted reports is conducted.

*Databases and Record Formats:* Data are stored and managed in SQL following data entry.

*MRIP Use and Overlap:* Data from this program are not incorporated into MRIP estimates. A pilot study is currently underway with NOAA Fisheries to directly compare MRIP interviews with the logbooks. Duplicate reporting/overlap may occur with ongoing red snapper sampling during the reduced seasons.

## Comparison of Atlantic and Gulf Coast For-Hire Programs

Identifying commonalities among and differences between programs can help to highlight initial starting points for improving the capabilities for sharing data between these programs. While these “opportunities for convergence” are presented below within defined categories (e.g., Framework, Validation, Data Elements, etc.) they must be fully considered within the overall context of each program. Where information is available, it is helpful to consider these program areas as they have been evaluated in previous recommendations of for-hire reporting mechanisms (specifically, Donaldson et al. 2013 and NRC 2006) to integrate the knowledge that these efforts have contributed to the desired objectives of improved compatibility and better data.

### Sampling Framework (Table 4)

The sampling framework of any program is the universe of participants that are providing, or potentially could provide, data and typically includes attributes related to licensing/registration, area (and/or waters) covered, types of vessels covered, etc. Donaldson et al. (2013) included recommendations that a framework consist of a regional program excluding non-federally permitted vessels unless each state has the authority to require reporting and a mechanism to enforce timely reporting. The report also emphasized that the complete universe of known vessels be identified before implementation.

### Commonalities

Among the programs in this analysis, the majority cover fishing activity taking place in federal waters (only four do not). Additionally, there is significant overlap across the programs in the states that are covered. Sixteen of the programs cover both head boats and charter boats.

### Major Differences

One of the most significant differences in the sampling frames of the programs in this analysis is that nearly half only cover fishing activity in a single state (due to the state-based nature of the program). While this is a limitation to the coastal application of those specific programs, the data from them could still fit within the overall context of a coastwide collaborative network of sampling (or logbook) programs. Another key difference in sampling frames is the disparity of frame update frequency, ranging from real time/daily to annual updates. Depending on the attributes of the fisheries which these different programs represent, this difference could make it difficult to develop convergence between programs (note that each case would need to be evaluated separately to determine the impact of frame update frequency on bringing various programs together under a collaborative structure). The species-specific nature of some programs (e.g., striped bass, black sea bass, etc.) could also limit the contributions of some programs to an overall network, although it must be noted that a species-specific focus is likely to provide in-depth data on priority fisheries that would not be available from broad-based sampling or logbook programs.

### Opportunities for Convergence

Note: The “opportunities for convergence” discussed here are presented solely in the context of sampling frame and do not reflect other factors that must be considered.

Significant geographic overlap exists between the sampling and logbook programs that were analyzed. Some of this overlap is due to species-specific nature of several programs designed to capture “rare event” fisheries that are not adequately captured in general sampling programs or to focus on priority species that may be managed more intensively than others. Some opportunities exist to explore the value in developing an infrastructure to perhaps utilize all of these data through a shared information system. The same is true for the categories of “head boat and charter boat” where 16 of the programs collect information from both (while 6 are only one or the other).

Table 4. Sampling Framework of For-Hire Data Collection Programs in the Atlantic and Gulf of Mexico Waters.

	Objectives 1	<u>Single State or Range</u>	States Covered	Waters Covered	Vessels Covered 1	Sampling Frame 1	Frame Update Frequency	<u>Census or Survey</u>	Species Covered	
1	Atlantic HMS Non-Tournament Reporting	H	R	Maine to Texas and U.S. Caribbean	Federal	H,C	F	Daily	C	Billfish and swordfish landings; bluefin tuna landings & dead discards
2	Recreational Bluefin Tuna Landings	H	R	Maine - Texas; U.S. Caribbean	Federal	H,C	F	Daily	C	bluefin tuna, billfish, swordfish
3	Access Point Angler-Intercept Survey (APAIS)	H	R	Maine-Mississippi	All	H,C	F,S	Bi-monthly	S	All
4	For-Hire Telephone Survey	FE	R	Georgia to Maine; Gulf (charter only)	All	H,C	V,F	Bi monthly	S	All
5	Large Pelagic Survey	FE,H,O	R	Maine through Virginia	All	C	F	Bi-monthly	S	Tunas, sharks, billfish, swordfish, dolphin, wahoo, amberjack
6	GARFO Vessel Trip Reporting	FE,H,O	R	Maine to North Carolina	State and Federal	H,C	F	Annual	C	All
7	HMS Catch Card Census Program	CO,FE,H	R	Maryland and North Carolina	All	H,C	F		C	Bluefin tuna, billfish, sharks
8	Southeast Region Headboat Survey (SRHS)	CO,FE,H,O	R	NCVA border to TX\Mexico border	All	H	F,O	As needed	C	All
9	eTRIPS	CO,FE,H	R	Atlantic Coast except DE, NC, FL	All	H,C	V,S,F,0	Real-time		State, Federal
10	RIDFW eTrips/eLog	CO,O	R	Rhode Island	State	H,C	V	Annual	C	Tautog
11	CT-Party and Charter Vessel Black Sea Bass Program	H	S	Connecticut	State	H,C	S	As vessels opt in	C	Black sea bass

Table 4 (continued)

	Objectives 1	Single State or Range	States Covered	Waters Covered	Vessels Covered 1	Sampling Frame 1	Frame Update Frequency	Census or Survey	Species Covered	
12	NYSDEC	CO,FE,H,O	S	New York	All	H,C	S	Annual	C	All
13	NJ- Party/Charter Boats participating in the Striped Bass Bonus Program	FE,H	S	New Jersey	State	H,C		Annual	Survey	Striped bass; other
14	Delaware Headboat and Charter Boat Logbook Program (authorized; not implemented)	CO,FE,H	S	Delaware	State	H,C	S	Daily	C	All
15	Maryland Charter Fisheries Logbook	CO,FE,H	S	Maryland	All	H,C	S	Daily	C	All
16	South Carolina Department of Natural Resources Charter Logbook Program	CO,FE,H	S	South Carolina	All	C	S	Bi-weekly	C	All
17	Snapper Check	H	S		All	H,C	N/A	N/A	C	Red snapper
18	iSnapper	CO,FE,H,O	R	Gulf of Mexico	All	H,C	V	Daily	S	All
19	LDWF LA Creel Survey For-Hire	FE	S	Louisiana	All	H,C	S	Weekly	S	All
20	Texas Marine Sport-Harvest Survey	FE,H	S	Texas	All	C	O	Weekly	S	All
21	MRIP At Sea Headboat Discard Program: ME-VA	H,O	R	ME - VA	All	H		Monthly	S	All
22	MRIP At Sea Headboat Discard Program: NC-FL	H,O	S	NC, GA, FL	All	H	V,F	Monthly	S	All

## Key to Codes in Heading

Objectives: CO=Compliance; FE=Fishing Effort; H=Harvest; O=other.

Vessels Covered: H=Headboat; C=Charter

Sampling Frame: V=vessel registration; S=state permit; F=federal permit; O=other; S=Site List

## Program Attributes (Table 5)

The term “Program Attributes” loosely defines attributes of the reporting infrastructure for each program, including timing of report submission, what is included in (or excluded from) those reports, method used for submitting reports, and other features. Donaldson et al. (2013) included recommendations that 1) timely reporting should be required and requirement should be enforceable, 2) selected reporting frequency and required reporting accuracy should be considered both in terms of cost and necessity for management/ assessment and 3) weekly reporting frequency combined with a daily reporting requirement is recommended as the most feasible both in terms of cost and minimizing recall bias for a census.

## Commonalities

Nearly all programs in this analysis require trip level reporting which would satisfy the recommendation for daily level reporting for a large percentage of the trips covered in the charter boat and head boat fisheries. All but four of the programs include provisions for weekly or daily (including immediate) reporting frequencies. Twelve of the programs offer an aspect of electronic reporting, presenting an opportunity to more readily share data if desired.

## Major Differences

A disparity in the time periods of data availability is evident among the programs in this analysis. These time periods range from immediate availability to 3 months or more before preliminary data are available in other programs. This disparity could hinder attempts to develop a collaborative information system depending on the intended purposes of such a system. Further, two of the most significant areas of divergence include the requirement (or lack thereof) of reporting negative (zero) catches and reporting during periods when no trips were taken (negative trips). Some programs also differ in the ability (and/or desirability) to expand data from each program to the entire fishery. These aspects represent significant hurdles to bringing together data from these programs, although they should not be considered insurmountable without additional in-depth analysis.

## Opportunities for Convergence

Note: The “opportunities for convergence” discussed here are presented solely in the context of Attributes and do not reflect other factors that must be considered.

The “commonalities” noted above should be viewed as the starting point for exploring the convergence of programs into a collaborative infrastructure. The fact that nearly all programs already capture trip-level information reportable at a weekly (or less) timeframe suggests that opportunities exist to share data. The differences in reporting attributes (e.g., reporting negative trips, catches, etc.) would still need to be reconciled between programs that were part of any such data sharing system.



Table 5. Attributes of Data Collection Programs of For-Hire Vessels Conducted in Atlantic and Gulf of Mexico Waters

		# of Vessels in fishery	# of Permits or licenses in fishery	Raw reports expanded to entire fishery	Negative trips required	Paper or Electronic report submission	Trip level reporting?	Data Reporting Frequency (Immediate, Daily, Weekly or Monthly)	Preliminary data availability after reporting
1	Atlantic HMS Non-Tournament Reporting	~ 28,000 (varies annually.	Vessels permitted, not persons.	No	No	E	Yes		Immediate
2	Recreational Bluefin Tuna Landings	3500	3500	No	No	E	Yes	D	1 day
3	Access Point Angler-Intercept Survey (APAIS)	204 head boats (ME to SC), unknown number charter boats		Yes	No	P	Yes		45 days
4	For-Hire Telephone Survey	10,000		Yes	Yes	P,E	Yes	W	2-3 months
5	Large Pelagic Survey	~ 3000 ME-VA	Vessels permitted, not persons.	Yes	Yes	P,E	Yes	W	1-2 Months
6	GARFO Vessel Trip Reporting	815	815	No	No	P	Yes	W,M	1 day
7	HMS Catch Card Census Program	~ 500 vessels in MD and NC		No	No	P	No	I	2 weeks
8	Southeast Region Headboat Survey (SRHS)	South Atlantic = 73 Gulf of Mexico = 69	SA = 57; GOM=67	Yes	Yes	E	Yes	W	2-3 months
9	eTRIPS			No	Yes	P,E	Yes	I,D,M	Immediate
10	RIDFW eTrips/eLog	250 -300 vessels	250 -300 vessels	No	No	E	Only fall tautog	D	
11	CT-Party and Charter Vessel Black Sea Bass Program	97	97	No	Yes	P	Yes	M	March of following year
12	NYSDEC	475	475	No	Yes	P,E	Yes	M	6 months
13	NJ-Party/Charter Boats participating in the Striped Bass Bonus Program			No	No	P	Yes		Several weeks
14	Delaware Headboat and Charter Boat Logbook Program (authorized; not implemented)			No	Yes	P	Yes	M	
15	Maryland Charter Fisheries Logbook	677		No	Yes	P,E	Yes	W	2-4 weeks

Table 5 (continued)

		# of Vessels in fishery	# of Permits or licenses in fishery	Raw reports expanded to entire fishery	Negative trips required	<u>P</u> aper or <u>E</u> lectronic report submission	Trip level reporting?	Data Reporting Frequency (Immediate, <u>D</u> aily, <u>W</u> eekly or <u>M</u> onthly)	Preliminary data availability after reporting
16	South Carolina Department of Natural Resources Charter Logbook Program	445	Vessels permitted, not persons.	Yes	Yes	P,E	Yes	M	2 months
17	Snapper Check	~ 120 vessels		Yes	No	P,E	Yes	I	ommediate-3days
18	iSnapper	~ 400	est. 25	Yes	Yes	E	Yes	I,D	
19	LDWF LA Creel Survey For-Hire		800	Yes	No	E	Yes	W	1-2 weeks
20	Texas Marine Sport-Harvest Survey				No				
21	MRIP At Sea Headboat Discard Program: ME-VA			Yes	No	P	No		
22	MRIP At Sea Headboat Discard Program: NC-FL	35	35	Yes	No		No		1 month

## Data Validation (Table 6)

Validation refers to measures taken to ensure that the data provided to a program are accurately reported and recorded. In their report, Donaldson et al. (2013) included the following validation recommendations:

- 1) Validation methods need to measure and account for incomplete reporting,
- 2) A combination of dockside and at-sea validation methods should be employed for harvested catch,
- 3) At-sea validation methodology should be applied for measures or released catch.

## Commonalities

Only a minority of the programs analyzed incorporate any measures of validation in their surveys. All of those that did validated “trip information” at a minimum.

## Major Differences

Less than half of the programs included validation in their surveys. Eight validated trip information; five validated catch, effort, and/or harvest; and three validated discard metrics. Four programs reported some measure of validation for all categories.

## Opportunities for Convergence

If the recommendations of the MRIP pilot study are to be followed, implementing validation of data protocols in the existing programs could be a substantial challenge. Dockside and at-sea validation in particular are very costly and time intensive. However, opportunities may exist to explore either utilizing the validation efforts of other programs or developing correction factors for closely-related programs using a program that does conduct validation as a proxy. As with other opportunities, these potential options would need to be explored in depth to determine the feasibility and practicality of any such action.

Table 6. Validation of Data in For-Hire Data Collection Programs in the Atlantic and Gulf of Mexico (blank indicates no validation occurring).

	Trip			Catch			Effort			Harvest			Discard			Telephone, Observation, or Dockside validation	Tracking of reporting compliance	Other Uses
	Validated	Part of program	Correction factor	Validated	Part of program	Correction factor	Validated	Part of program	Correction factor	Validated	Part of program	Correction factor	Validated	Part of program	Correction factor			
1 Atlantic HMS Non-Tournament Reporting																	No	Dockside prevalidation of For-hire Telephone Survey
2 Recreational Bluefin Tuna Landings																	No	
3 Access Point Angler-Intercept Survey (APAIS)																	No	
4 For-Hire Telephone Survey	X	X	X				X	X	X								T	No
5 Large Pelagic Survey				X	X												O,T	Yes
6 GARFO Vessel Trip Reporting	X																T	No
7 HMS Catch Card Census Program																		No
8 Southeast Region Headboat Survey (SRHS)	X	X	X	X	X	X	X	X	X	X	X	X	X		X	O,D,T, Other	Yes	Reporting compliance; SRHS validates logbook discards data using MRIP At-Sea Headboat discard data.
9 eTRIPS	X	X		X	X		X	X								O, Electronic	Yes	
10 RIDFW eTrips/eLog																	Yes	
11 CT-Party and Charter Vessel Black Sea Bass Program																	Yes	
12 NYSDEC																	Yes	
13 NJ-Party/Charter Boats participating in the Striped Bass Bonus Program																	No	
14 Delaware Headboat and Charter Boat Logbook Program (authorized; not implemented)																	No	
15 Maryland Charter Fisheries Logbook																	Yes	
16 South Carolina Department of Natural Resources Charter Logbook Program	X															D, MRIP	Yes	
17 Snapper Check	X	X	X					X	X	X	X	X			X	D	Yes	
18 iSnapper	X	X		X	X		X	X		X	X			X		D	Yes	Verify utility of self-reported data
19 LDWF LA Creel Survey For-Hire								X								O,D	Yes	
20 Texas Marine Sport-Harvest Survey																		
21 MRIP At Sea Headboat Discard Program: ME-VA	X	X	X		X	X	X	X	X		X	X		X	X	O	No	
22 MRIP At Sea Headboat Discard Program: NC-FL				X		X				X	X		X	X		O		

## Trip, Vessel, Effort, and Catch Information (Tables 7a-c)

The purpose of each program determines the information collected and dictates the methods that can be used to collect the information. In this analysis, data elements are grouped as those that provide information on the vessel participating in the program, elements that describe the effort applied to the fishing activity, and elements that describe the outcomes (catch) of those efforts.

### Commonalities

Nearly all programs in this analysis include “Harvest” as an attribute that is collected, and the majority of programs include a measure of “Effort.” A significant overlap is evident in the vessel identification fields. Most programs collect information on number caught (14), disposition (12) number kept or discarded (9 and 8 respectively), biological length (13), weight (9), and discard condition (8). Specific to effort, 17 programs include number of anglers and 14 include number of hours.

### Major Differences

Beyond vessel identification, there appears to be a wide disparity in the amount of vessel-specific information collected. Additionally, very few programs collect information specific to the gear or methods used (e.g., hook types, number of lines, fishing method, etc.) Only one program includes a question on the degree of cooperation/overlap with another reporting program.

### Opportunities for Convergence

The significant overlap in the base data elements collected (as noted above) presents opportunities for converging data infrastructure among programs. In addition to those elements, most programs include a metric to identify fishing area, distance from shore, latitude/longitude, and/or other geographic identifier. Opportunities likely exist to develop consistency between them. However, defining the standards behind the definition of any particular element is likely to cause some consternation which can be overcome. Where programs do not already include data elements that a majority of other programs do, the lacking program(s) can likely benefit from the work of others by adopting already-defined data elements that will also lead to additional consistency between programs.

Table 7a. Trip Information Fields Collected in For-Hire Data Collection Programs in the Atlantic and Gulf of Mexico.

	Trip ID (or program VTR number)	Trip Start Date/Time	Trip End Date/Time	Trip Number	Trip Type (Headboat, Charter, Guide)	Gear Types	Targeted Species	Tournament Participant	Fishing Area (Inland, Bays, Ocean)	Waterbody or Grid Identifier	Distance from Shore	Latitude/ Longitude	Surface Water Temperature	Depth Fished <b>A</b> verage; <b>S</b> hallowest; <b>D</b> eeppest
1 Atlantic HMS Non-Tournament Reporting		X	X		X	X		X						
2 Recreational Bluefin Tuna Landings		X	X		X	X		X						
3 Access Point Angler-Intercept Survey (APAIS)		X	X		X	X	X		X		X			
4 For-Hire Telephone Survey	X	X	X	X	X	X	X				X	X		
5 Large Pelagic Survey	X	X	X	X	X	X	X	X			X	X	X	A
6 GARFO Vessel Trip Reporting	X	X	X		X	X			X			X		
7 HMS Catch Card Census Program		X	X		X			X						
8 Southeast Region Headboat Survey (SRHS)	X	X	X	X	X				X			X		A,S,D
9 eTRIPS	X	X	X	X	X	X	X		X	X	X	X	X	A
10 RIDFW eTrips/eLog		X	X	X	X									
11 CT-Party and Charter Vessel Black Sea Bass Program		X			X				X					
12 NYSDEC	X	X	X	X	X	X	X		X	X		X		A
13 NJ-Party/Charter Boats participating in the Striped Bass Bonus Program		X							X				X	
14 DE Headboat and Charter Boat Logbook Program (authorized; not implemented)														
15 MD Charter Fisheries Logbook		X	X	X					X	X				
16 SC DDNR Charter Logbook Program	X	X		X	X	X	X		X	X	X			S,D
17 Snapper Check	X		X		X									
18 iSnapper	X	X	X	X	X		X		X	X	X	X		A,S,D
19 LDWF LA Creel Survey For-Hire		X	X	X										
20 Texas Marine Sport-Harvest Survey			X						X					
21 MRIP At Sea Headboat Discard Program: ME-VA	X	X	X		X		X	X	X	X	X			
22 MRIP At Sea Headboat Discard Program: NC-FL		X	X		X	X	X		X	X	X	X		A,S,D

Table 7b. Vessel Information Fields Collected in For-Hire Data Collection Programs in the Atlantic and Gulf of Mexico

	Captain/ Operator Name	Vessel Name	State Registration Number	Coast Guard Registration Number	HMS Permit Number	Primary Port Site (state, county, port)	Landing Port Site	Company/Owner Address	Contact Phone Number	Eligibility of Vessel (Active/Inactive)	Seasonal or Year-round Operation	Frequency of Operation (Daily/ Weekly/ Monthly)	Degree of Cooperation with VDTs	# of Crew on Trip
1	Atlantic HMS Non-Tournament Reporting													
2	X	X	X	X	X	X	X	X	X					
3	Recreational Bluefin Tuna Landings													
4					X		X							
5	Access Point Angler-Intercept Survey (APAIS)													
6							X							
7	X	X	X	X		X		X	X					
8	For-Hire Telephone Survey													
9	X	X	X	X	X	X	X	X	X					
10	Large Pelagic Survey													
11	X	X	X	X		X		X	X					X
12	GARFO Vessel Trip Reporting													
13	X	X	X	X	X		X							X
14	HMS Catch Card Census Program													
15	X	X		1	1	1		1	1	1	1	1	1	X
16	Southeast Region Headboat Survey													
17	X	X	X	X	X	X			X					X
18	eTRIPS													
19	X	X	X	X			X							X
20	RIDFW eTrips/eLog													
21	X	X	X	X										
22	CT-Party/Charter Vessel Black Sea Bass Program													
23	X	X	X	X				X	X					X
24	NYSDEC													
25		X					X	X						
26	NJ-Party/Charter Boats participating in the Striped Bass Bonus Program													
27	Delaware Headboat and Charter Boat Logbook Program (authorized; not implemented)													
28	X	X	X	X				X	X					
29	Maryland Charter Fisheries Logbook													
30	X	X	X	X				X	X	X				
31	South Carolina Department of Natural Resources Charter Logbook Program													
32			X	X		X	X							
33	Snapper Check													
34		X	X	X	X		X	X		X	X	X		
35	iSnapper													
36	X							X		X				
37	LDWF LA Creel Survey For-Hire													
38			X				X							
39	Texas Marine Sport-Harvest Survey													
40		X	X	X			X	X	X					
41	MRIP At Sea Headboat Discard Program: ME-VA													
42		X					X			X				X
43	MRIP At Sea Headboat Discard Program: NC-FL													

1. not collected on the logbook, but maintained in the vessel eLog account and SRHS vessel directory





## Data Management and Use (Table 8)

“Data Management and Use” outlines the program attributes related to the storage and management of data and how data are applied, with emphasis on the incorporation of data into the MRIP structure and the overlap of data with other programs (and associated duplicate reporting burden on for-hire operators).

### Commonalities

A majority of programs (12) indicate that their program overlaps with other reporting efforts, presumably placing duplicate reporting burdens on the for-hire operators. The vast majority of program data are managed on three common platforms: SAS, SQL, and Excel.

### Major Differences

Ten programs reported that data are not shared electronically with other agencies.

### Opportunities for Convergence

In essence, the information reported for “data management and use” outline the motivations behind this analysis; a significant amount of duplicate reporting is apparently occurring. This presents an opportunity for agencies to evaluate program attributes identified in earlier sections and implement changes to reduce this burden. Only five of the programs indicate that their data are integrated into MRIP, providing an opportunity for MRIP to carefully evaluate each program’s current data offerings for its utility to enhance current MRIP data. Likewise, individual programs have an opportunity to evaluate changes that could be implemented to better integrate with the MRIP structure and needs. Collaboration can be achieved through several means including establishing an online exchange portal or another similar exchange mechanism that could serve the data needs of multiple programs without undermining the utility of each program in serving its originally defined purpose.

Table 8. Overview of For-Hire Data Collection Programs in the Atlantic and Gulf of Mexico.

		Program Start	Program End	Data storage	Electronic sharing with agencies?	If no, are there plans to share?	Funding source	Data used by MRIP?	If yes, how is MRIP utilizing?	Data collected from	Is duplicate reporting occurring ?	If yes, which programs?
1	Atlantic HMS Non-Tournament Reporting	2002	Ongoing	Excel, Oracle	No		Federal	No		Captains/ Operators	Yes, No	Only if vessel surveyed by Large Pelagic Survey or MRIP, which is rare.
2	Recreational Bluefin Tuna Landings		Ongoing	SQL	No		Federal	No		Captains/ Operators	Yes	
3	Access Point Angler-Intercept Survey (APAIS)	1981	Ongoing	SAS	Yes		Federal	Yes	Catch and effort estimates; discard length frequencies in Northeast.	Both	Yes	
4	For-Hire Telephone Survey	2005	Ongoing	SAS, Excel	Yes		Federal	Yes	Fishing Effort Survey companion to APAIS.		Yes	Many state and federal surveys
5	Large Pelagic Survey	1992	Ongoing	SAS	Yes		Federal	Yes	Domestic management / assessment of HMS; reporting to ICCAT	Captains/ Operators	Yes	VTR reporting, HMS reporting for bluefin tuna and billfish landings
6	GARFO Vessel Trip Reporting	1996	Ongoing		Yes		Federal	Yes	Augment phone\ intercept surveys	Captains/ Operators	Yes	Trip reporting
7	HMS Catch Card Census Program	1998	Ongoing	SAS, Excel	Yes		Federal	No		Captains/ Operators	Yes	May need to report a catch card species to the Large Pelagics Survey, VTRs, or MRIP.

cTable 8 (continued)

		Program Start	Program End	Data storage	Electronic sharing with agencies?	If no, are there plans to share?	Funding source	Data used by MRIP?	If yes, how is MRIP utilizing?	Data collected from	Is duplicate reporting occurring ?	If yes, which programs?
8	Southeast Region Headboat Survey (SRHS)	1972	Ongoing	SQL, SAS, Excel, Oracle	Yes		Federal	Yes	Headboat landing and effort estimates included in MRIP database	Captains/ Operators	No	At-sea headboat observer coverage (angler level vs vessel level)
9	eTRIPS	2008	Ongoing	SQL Database	Yes		Federal			Both	Yes	dept public health form
10	RIDFW eTrips/eLog	2012	Ongoing	Excel	No		State	No		Captains/ Operators	Yes	NOAA VTR
11	CT-Party and Charter Vessel Black Sea Bass Program	2013	Ongoing	SAS, Excel	No	No	State	No		Captains/ Operators	Yes	Federal Permit holders must report twice.
12	NYSDEC	2008	Ongoing	SQL, Excel	Yes		State, Federal	No		Both	Yes	FHS & State/ Federal VTRs
13	NJ-Party/Charter Boats participating in the Striped Bass Bonus Program	1997	2012	Excel	Yes		State, Federal	No		Both	No	
14	Delaware Headboat and Charter Boat Logbook Program (authorized; not implemented)	Legislated but never initiated										
15	Maryland Charter Fisheries Logbook	1995	Ongoing	MS Access	Yes		State	Yes	Trip information for selected vessels for each week for the wave.	Captains/ Operators	Yes	Ocean trips may also be required to submit federal VTRs.
16	South Carolina Department of Natural Resources Charter Logbook Program	1993	Ongoing	SQL	No		Federal	No		Captains/ Operators	No	

cTable 8 (continued)

	Program Start	Program End	Data storage	Electronic sharing with agencies?	If no, are there plans to share?	Funding source	Data used by MRIP?	If yes, how is MRIP utilizing?	Data collected from	Is duplicate reporting occurring ?	If yes, which programs?
17	Snapper Check	2014 Ongoing	SQL, AAS, Excel	No		State, Federal	No		Captains/ Operators	No	Vessel Directory Telephone Survey; Headboats: Beaufort Headboat Survey, Pilot Gulf Headboat Program.
18	iSnapper	2011 2015 unless funded	Excel	Yes	That feature is embedded but not active	Federal	No	tbd - still in 1st pilot phase for private rec anglers	Captains/ Operators	Yes	In the for-hire pilot; headboats required duplicate reporting
19	LDWF LA Creel Survey For-Hire	2014 Ongoing	SQL Database	Yes		State	No		Captains/ Operators	No	
20	Texas Marine Sport-Harvest Survey	1974 Ongoing	Sybase	Yes		State, Federal			Captains/ Operators	No	
21	MRIP At Sea Headboat Discard Program: ME-VA	Not sure Ongoing	MRIP	Yes		State, Federal	Yes		Both	Yes	MRIP and Southeast headboat
22	MRIP At Sea Headboat Discard Program: NC-FL	2005 Ongoing	SQL	Yes		Federal	Yes	Validation of catch in Headboat pilot study	Both	No	

## Summary

In summary, this report provides a comprehensive review of current state and federal for-hire survey programs on the Atlantic coast and the Gulf of Mexico. The Comparison of Atlantic and Gulf Coast For-Hire Programs Section offers a more in depth analysis of commonalities and differences of each of the programs presented in this report. This type of analysis will provide the platform at which state and federal partners will converge on May 5<sup>th</sup>, 2016 in Alexandria, VA to discuss the opportunities available to reduce duplicate reporting for for-hire captains and the capabilities of for-hire programs to shift to electronic reporting. Below are the Terms of Reference for the For-Hire Inventory Workshop:

## Terms of Reference

1. Present and discuss overlapping Program goals of for-hire data collection programs.
2. Discuss the summary of the updated “Inventory and Comparison of For-Hire Data Collections in the Atlantic and Gulf of Mexico, 2016”.
3. Compare and contrast timeliness of reporting and data elements collected in for-hire data collection programs. Document relevant group discussion, action items and recommendations.
4. Discuss the capabilities of existing programs moving to electronic reporting.
5. Identify opportunities for any for-hire data collection program to reduce duplicate reporting on users in the Atlantic and Gulf Coasts. Document relevant group discussion, action items and recommendations.
6. Post Workshop: Develop a final report document summarizing recommendations on standards development and improvements of for-hire data collection programs.

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