Last updated: April 3, 2014

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Wave 1 Mid-Atlantic and Southern New England Data Collection Follow-Up: Final Report

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2 - Acronyms, Abbreviations, Etc.

ACCSP	- Atlantic Coastal Cooperative Statistics Program
CTHS	- Coastal Telephone Household Survey
FHS	- For-Hire Survey
MRIP	- Marine Recreational Information Program
NMFS	- National Marine Fisheries Service
VTR	- Vessel Trip Report

3 – Introduction and Summary Findings

This report constitutes the final report for the Marine Recreational Information Program (MRIP- http://www.st.nmfs.noaa.gov/recreational-fisheries/index) project entitled "Wave 1 Mid-Atlantic - Southern New England Data Collection Follow-Up Report." The objective of this project was to assess the magnitude of for-hire (charter and party/head boats) fishing activity during January and February (Wave 1) in the Mid-Atlantic and Southern New England to help determine whether data collection in marine recreational fisheries is necessary during this period.

Marine recreational fishing data is generally not collected during January and February in states from Virginia through Maine, as low fishing activity during these months has been assumed to produce negligible catches. These two months constitute "Wave 1"—the first of six two-month "waves" of annual marine recreational data collection. This project sought to explore this assumption by reviewing for-hire activity during January and February via several existing data sources and one new data source.

The project consisted of 3 parts:

1. Review of existing data previously collected for an Atlantic Coastal Cooperative Statistics Program (ACCSP) project;

2. Analysis of existing Vessel Trip Reports (VTRs) from Mid-Atlantic and Southern New England for-hire vessels; and

3. Analysis of effort activity as reported via additional For-Hire Surveys (FHS) conducted during Wave 1 (January-February) of 2012. The 2012 for-hire data was conducted using standard MRIP FHS protocols - instead of beginning in March of 2012 the surveys just began in January of 2012.

All parts of the project found very low levels of fishing activity and/or catch, especially when compared to total fishing activity during the rest of the year. Accordingly, given the cost of implementing surveys during Wave 1, and the need for precision improvements during times when the vast majority of catch occurs, resources may be better spent on improving data precision during the rest of the year. Pilot projects or reviews of existing data could estimate approximate Wave 1 catches for species of particular concern, and managers could set aside small amounts of quota to account for the relatively small Wave 1 catches.

4 - Background

In 2010, Random Digit Dialing (phone calling) was conducted in the Mid-Atlantic region to examine effort levels in January and February, or "Wave 1." Although very low participation rates were observed, accounts of directed fishing activity persist, particularly in the for-hire sector in the area from Virginia through Rhode Island. For example, these are excerpts from several online fishing reports that resulted from a very quick Google search in 2011:

> From Rhode Island on January 29, 2011:
> *"Capt. Mike reported a great day of local cod fishing with plenty of nice market cod and some better size fish as well…" (http://www.francesfleet.com/reports.html)*
>
> From New York on January 6, 2011:
> *"Great day of fishing with easy boat limit [cod] fish up to 18 lbs." (http://forums.noreast.com)*
>
> From Virginia on January 2, 2011:
> *"2011 is starting off as a great year for Striper fishing…Every boat limited out and the fish were nice sized too!" (link no longer functional)*

While low rates from Random Digit Dialing in Wave 1 were expected, this method may not be the most appropriate contact method where such low rates are expected. In addition, given the typical weather during Wave 1, the majority of marine fishing activity in Wave 1 may take place on for-hire vessels that specialize in cold-weather fishing. Accordingly, this project examines the extent and distribution of Wave 1 activity among the for-hire sector to help evaluate the current assumption that marine recreational catches during Wave 1 are negligible, especially in terms of for-hire fishing. The findings of each of the three parts of this project follow.

5 - Review of existing data previously collected for an Atlantic Coastal Cooperative Statistics Program (ACCSP) project

2010 Work

The Random Digit Dialing in 2010 revealed a very low prevalence rate of fishing by anglers in January and February of 2010 compared to average pooled data from Waves 2 and 6 (after and before Wave 1 and still relatively low participation Waves) of 2007-2009 (Table 1, below). The average number of angling trips per household varied from 1-8 for Wave 1 of 2010 and from 5-6 for the other waves (Table 2, below). As the low percentages would suggest, the number of fishing households contacted in each state was quite low (between 1-38) so these numbers are probably best thought of in a qualitative fashion, i.e. they are confirmatory that there is some but not much fishing occurring in Wave 1.

Table 1. Prevalence of Households with someone who fished during time period

	Prevalence of Households with someone who fished during time period	
	Wave 1 2010	Waves 2 and 6 (2007-2009) Pooled Average
Delaware	0.9%	3.3%
Maryland	0.6%	3.5%
New Jersey	0.9%	2.8%
New York	0.1%	1.2%
Virginia	1.3%	4.3%

Source: Personal Communication Tom Sminkey, National Marine Fisheries Service

Table 2. Average Number of Angling Trips Per *Household that Fished*

	Average Number of Angling Trips Per Household That Fished	
	Wave 1 2010	Waves 2 and 6 (2007-2009) Pooled Average
Delaware	4	6
Maryland	8	5
New Jersey	4	5
New York	1	6
Virginia	6	6

Source: Personal Communication Tom Sminkey, National Marine Fisheries Service

2011 Work

Exploratory sampling in 2011 revealed extremely low positive responses (i.e. "went fishing") from charter boats in Maryland and Virginia when they were surveyed about trips taken in January-February of 2011. No positive responses were received from charter boats in Delaware when they were surveyed about trips taken in January-February of 2011. The relatively low sample sizes again suggest this information should be viewed qualitatively but supports the assumption that very low marine fishing activity is occurring in Delaware, Maryland, and Virginia in Wave 1 (Jan-Feb).

6 - Vessel Trip Reports (VTRs)

2002-2011 data from VTRs by for hire vessels were examined to evaluate what information might be available regarding Wave 1 landings from Rhode Island through Virginia. Table 3 summarizes the results of that data analysis for species where at least 1,000 fish ("key species") were reported kept per year on average. Whether these quantities are significant or not would have to be determined by managers but the numbers are likely minimum estimates since only federally permitted vessels have to submit VTRs and VTR compliance is not 100% even for those vessels. Table 4 describes where the fish in Table 3 were generally caught from. While the data can be broken down more finely if needed, these two tables illustrate the species and locations that have at least some substantial reported catch in Wave 1 by federally-permitted for-hire vessels, and managers for those species could explore the data further if desired (black sea bass, cod, and tautog would likely the species of highest concern).

Table 3. Average VTR Catch 2002-2011, Jan-Feb, For-Hire Vessels

Key Species	Kept Per Year (number of fish)	Discards Per Year (number of fish)
Mackerel	46,803	70
Black Sea Bass*	22,990	2,368
Red Hake	10,788	122
Cod	10,317	7,347
Scup	2,879	443
Tautog	2,405	2,346
Herring	1,408	261

Source: Unpublished National Marine Fisheries Service Northeast Vessel Trip Report Date *Black Sea Bass was closed in Wave 1 of 2011.

Table 4. Distribution of Catch (kept+discarded) from Table 3.

STATE	Number of Key Species Caught Per Year
NJ	73,892
NY	29,417
RI	4,302
VA	1,172
CT	810
DE	598
MD	355

Source: Unpublished National Marine Fisheries Service Northeast Vessel Trip Report Date

7 - 2012 Wave 1 Data - For-Hire Survey

Background

The For-Hire Survey (FHS) was developed to provide a more efficient method of sampling for-hire fishing activity and to address under-coverage of fishing effort by charter and party boat anglers in the Coastal Telephone Household Survey (CTHS). The CHTS collects information about fishing effort (angler trips) through randomly dialed phone calls to coastal households. Since the CHTS only calls coastal counties, it misses a substantial amount of fishing effort among anglers who take trips on for-hire boats but do not live in coastal counties. The potential shortcomings of the CHTS are evidenced by the finding that in 2011 close to half of for-hire intercept interviews from Rhode Island through Virginia were with individuals who lived out of the state of the interview or in non-coastal counties (based on raw MRIP data, available at http://www.st.nmfs.noaa.gov/recreational-fisheries/access-data/data-downloads/index).

Prior to implementation, a series of pilot studies were conducted in North Carolina, Maine, and the Gulf of Mexico (Louisiana to West Florida) to obtain fishing effort information directly from for-hire vessel operators. In 2000, after several years of testing, the FHS was implemented as the 'official' methodology for collecting charter fishing effort data in the Gulf of Mexico. This FHS design was then pilot tested against a logbook program and the CHTS in South Carolina in 2000 and included head boats as well as charter boats. In January 2005, the FHS was implemented for all Atlantic Coast states from Maine through Georgia. It overlaps other charter and headboat monitoring programs, including the Northeast (Maine-Virginia) Vessel Trip Reporting (VTR) Program, the Southeast Regional Headboat Survey, various state logbook programs, and the ongoing CHTS (http://www.st.nmfs.noaa.gov/recreational-fisheries/quick-links/survey-materials).

Unlike the CHTS, which uses the household as its sampling unit, the FHS collects fishing effort data from individual for-hire vessels. The sample frame is constructed from a theoretically comprehensive directory of for-hire boats for all states, from Maine through Georgia. Each record in the vessel directory includes: a vessel identifier (vessel name or registration number); the name, address, and telephone number of an identified vessel representative (captain or owner); and a variety of accessory information, such as eligibility, activity, and cooperation status.

Within each two-month sampling wave, sampling is stratified by vessel type (head boat and charter boat), state, and week. Currently, 10% of vessels within each stratum are sampled, with a minimum sample size of 3 vessels. Data collection is conducted on a weekly basis during all weeks within each wave and is completed during the week following the specified sample week of fishing. In addition to reporting fishing activity for the prior week, respondents are asked to provide information on the 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, including an interactive website, a fax number, and a phone contact for respondent-initiated interviewing.

Effort estimates are based on the average number of angler-trips per vessel-type per week relative to 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 field intercept survey questions and applied to the raw effort estimates.

The effort estimates generated from the FHS are combined with catch rates generated from the access-point survey to generate catch estimates. The access-point survey involves interviewing anglers on-site to determine catch rates per trip. Catch reported on VTRs is not currently used for catch rate estimation in any fashion. Access point interviews from patrons of for-hire vessels are used to develop for-hire catch rates. For vessels that submit VTRs, the FHS is used for preliminary effort estimates, but their VTRs are incorporated at the end of the year for final effort information - the FHS is used for a preliminary estimate for vessels that submit VTRs and then the VTR data replaces their FHS effort data (and only their effort data) at the end of the year.

Project Goals

Normally on the East Coast from Virginia through Maine, the FHS is not conducted in Wave 1 (Jan-Feb). The access point survey is also not conducted, so for these states there are no estimates of effort, catch rate, or total catch. This part of the project implemented the FHS (effort only) to examine for-hire effort levels from Virginia through Rhode Island during Wave 1 of 2012. Again, the overall goal was to assist evaluations of whether assuming that Wave 1 catch is negligible is reasonable, especially from the for-hire perspective.

Results

The FHS collects information on three kinds of for-hire trips: A) normal paid-for trips, B) trips where the owner goes fishing by themselves with no paying customers, and C) "other" trips that do not involve any fishing (e.g. nature cruise). Table 5 describes the number of Wave 1 (Jan-Feb) fishing trips ("A" and "B") generated by the 2012 FHS. The number of trips reported through VTR trips is also included for comparison purposes. Conversations with National Marine Fisheries Service (NMFS) Northeast Regional Office staff suggest that it is not clear whether for-hire vessels are reporting (via VTRs) fishing trips with no paying customers or not, and the VTR instructions are not specific on this issue.

The FHS sample frame for each wave includes vessels that are expected to be active during the survey wave. The determination of vessel activity (active or inactive) is made directly by vessel operators, who describe the activity of their vessel during the course of FHS interviews, or by MRIP dockside samplers, who collect information about vessel activity during dockside interviews.

Table 5. FHS expanded trip estimates and VTR trip reports for Wave 1, 2012.

State	FHS Trip Estimate - Paying Trips (A)	FHS Trip Estimate - Private Trips (B)	VTR Trips
RI	0	0	70
CT	0	0	4
NY	0	63	187
NJ	180	62	332
DE	0	0	18
MD	96	82	29
VA	330	23	145

Note: Black sea bass fishing was open during Wave 1 of 2012.

The findings of zero FHS trips compared to a few trips from the VTR data (Rhode Island, Connecticut, and Delaware) are not surprising given the low sampling rate (25 vessels per week in this pilot) and FHS frame incompleteness. For example, one vessel accounted for all 4 Connecticut VTR trips but was not included in the vessel frame for Connecticut in the FHS. In Delaware, 7 vessels reported Wave 1 activity through VTRs, but with a list of 72 Charter vessels it is possible that the active vessels were not called, did not respond, or provided inaccurate information in the weeks that they were active. There was also one Delaware VTR vessel that was not on the FHS frame.

The finding of significantly more activity in Maryland and Virginia via the FHS versus the VTRs is also not surprising since many Chesapeake Bay vessels would not need federal permits (and therefore are not required to submit VTRs). Even vessels fishing in the ocean do not need permits if they stay within 3 miles of shore (and striped bass, a key winter target in Virginia may not be fished for or landed beyond 3 miles). However, the estimated 531 combined 2012 Wave 1 trips for these states, resulting in fewer than 1,000 angler trips, is very small compared to the 170,000 annual angler trips on for-hire vessels averaged for 2010-2012 in these states (2010-2012 data from on-line query at http://www.st.nmfs.noaa.gov/recreational-fisheries/access-data/run-a-data-query/index).

In New Jersey, FHS estimates and VTR reports are roughly similar, however the substantially higher number of VTR reported trips compared to the FHS in New York was unexpected. Preliminary investigation did not suggest that frame issues were to blame for this finding and the wide discrepancy may warrant future investigation by NMFS Science and Technology Office staff.

8 - Conclusion/Discussion

The results of this project indicate that, in general, Wave 1 fishing activity appears to be a relatively minor component of annual for-hire fishing effort from Virginia through Rhode Island. While a variety of information sources suggest that some for-hire fishing (and catching) is occurring in Virginia through Rhode Island, the level of significance to management is not known.

With unlimited resources it would be optimal to have catch estimates for Wave 1, but improvements to data collection in the months with high catches may have greater impacts on catch estimates than trying to estimate the low level of catches in January and February, i.e. Wave 1. Also, the low prevalence of fishing would likely lead to relatively high uncertainty on any Wave 1 estimates. Given the findings of this pilot study and the limited resources for surveying of catch and effort data, it may be more practical to concentrate limited resources in the more active waves first. Managers could consider additional "management uncertainty buffers" or a "Wave 1 set-aside" for those species that are caught with some frequency during Wave 1. Data from VTRs and/or one-time pilot studies focused on species/locations of concern could be used to determine an appropriate way to account for the relatively low levels of activity that take place during Wave 1. If conditions change (access to other fisheries, climate, etc.) then it is also possible that catch in Wave 1 could grow in importance in the future.