SUPPORTING STATEMENT
U.S. Department of Commerce
National Oceanic & Atmospheric Administration
For-Hire Telephone Survey
OMB Control No. 0648-0709

B. Collections of Information Employing Statistical Methods

1.   Describe (including a numerical estimate) the potential respondent universe and any sampling or other respondent selection method to be used. Data on the number of entities (e.g., establishments, State and local government units, households, or persons) in the universe covered by the collection and in the corresponding sample are to be provided in tabular form for the universe as a whole and for each of the strata in the proposed sample. Indicate expected response rates for the collection as a whole. If the collection had been conducted previously, include the actual response rate achieved during the last collection.

The For-Hire Telephone Survey (FHTS) is a weekly telephone survey of for-hire fishing vessels. The survey, which estimates for-hire fishing effort, is conducted in all coastal states from Maine through Mississippi. The FHTS will be conducted for five, two-month reference waves (March/April – November/December) in the states along the Atlantic Coast, with the exceptions of Maine, New Hampshire, North Carolina and Florida. The survey will be conducted for three waves (May/June – September/October) in Maine and New Hampshire (except NH head boats are also sampled in March/April). In North Carolina and the Gulf States (including both coasts of Florida, the FHTS will be conducted for six reference waves (January/February – November/December). In North Carolina and the Gulf States, year-round for-hire fishing is covered by the FHTS, while due to seasonality, and for efficiency, the FHTS is conducted during the months when most for-hire fishing is occurring in the other Atlantic States.

The sample universe for the FHTS includes all for-hire fishing vessels that operate within the study area except headboats in NC, SC, GA, AL, MS, and FL. Headboats in those states are excluded from the FHTS to avoid overlap with the NOAA Fisheries Southeast Region Headboat Survey (OMB Control Number 0648-0016). Sampling is stratified by state and type of for-hire fishing vessel; charter boats are generally smaller vessels (6 or fewer passengers) that charge a fee for the entire fishing party, while headboats are larger vessels that charge a fee for each passenger. Each week, a simple random sample of vessels is selected within each stratum, and sampled vessels are contacted via telephone and asked to describe fishing activity during the preceding week.

Table 1 provides the sample universe (estimated total number of vessels), target weekly sample sizes (estimated sample sizes, with a minimum sample size of 3), expected response rates (rounded, 2019 FHTS response rates), and the rounded estimated number of completed weekly interviews for each stratum. That is, the estimated completed weekly interviews in each state and vessel type shown in table 1 is calculated by rounding the product of the estimated weekly sample size and the expected response rate. In the final row, the estimated completed weekly interviews (496) is calculated by multiplying the total of the estimated total number of vessels by the response rate (in this case, 64.2 percent) for the 2019 FHTS collection as a whole.

Table 1. Estimated number of for-hire vessels in the population, estimated number of vessels sampled each week, expected response rates, and estimated number of completed interviews per sample week for the For-Hire Telephone Survey.

State	Type of Fishing Vessel	Estimated Total Number of Vessels [a]	Estimated Weekly Sample Size [b]	Expected Response Rate (%)† [c]	Estimated Completed Weekly Interviews [d]=ROUND[b]x[(c/100)]
AL	Charter	313	31	88	27
CT	Charter	126	12	62	7
CT	Headboat*	6	3	62	2
DE	Charter	99	10	57	6
DE	Headboat	7	3	57	2
FL	Charter	2,252	225	56	126
GA	Charter	191	19	88	17
MA	Charter	977	100	59	59
MA	Headboat	35	3	59	2
MD	Charter	614	61	68	41
MD	Headboat	12	3	68	2
ME	Charter	183	18	87	16
ME	Headboat	9	3	87	3
MS	Charter	71	7	70	5
NC	Charter	731	73	72	53
NH	Charter	99	10	49	5
NH	Headboat	7	3	49	1
NJ	Charter	545	54	56	30
NJ	Headboat	26	3	56	2
NY	Charter	312	31	56	17
NY	Headboat	74	7	56	4
RI	Charter	179	18	53	10
RI	Headboat*	8	3	53	2
SC	Charter	561	56	61	34
VA	Charter	140	14	70	10
VA	Headboat	6	3	70	2
Total		7,583	773	64	496

*The minimum weekly sample size per type of fishing vessel is 3.
† Response rates (rounded) from the most recent annual (2019) administration of the FHTS.

Table 2 provides the estimated annual sample size, expected response rate (rounded, 2019 FHTS response rates), and estimated annual number of completed interviews for each state and vessel type. The estimated annual sample sizes shown in table 2 [a] are calculated by multiplying the rounded weekly sample sizes in Table 1 [b] by the number of surveying weeks shown in Table 3. The estimates of completed annual interviews shown in Table 2 [c] are calculated by rounding the product of the annual estimated sample size in Table 2 [a] and the expected response rate shown in Table 2 [b].

Table 2. Estimated annual sample size, response rates and completed number of interviews for the For-Hire Telephone Survey.

State	Type of Fishing Vessel	Estimated Annual Sample Size [a]	Expected Response Rate (%) [b]	Estimated Completed Annual Interviews [c]=ROUND[a]x[(b/100)]
AL	Charter	1,612	88	1,419
CT	Charter	528	62	327
CT	Headboat	132	62	82
DE	Charter	440	57	251
DE	Headboat	132	57	75
FL	Charter	11,700	56	6,552
GA	Charter	836	88	736
MA	Charter	4,400	59	2,596
MA	Headboat	132	59	78
MD	Charter	2,684	68	1,825
MD	Headboat	132	68	90
ME	Charter	468	87	407
ME	Headboat	78	87	68
MS	Charter	364	53	193
NC	Charter	3,796	72	2,733
NH	Charter	260	49	127
NH	Headboat	105	49	51
NJ	Charter	2,376	56	1,331
NJ	Headboat	132	56	74
NY	Charter	1,364	56	764
NY	Headboat	308	56	172
RI	Charter	792	53	420
RI	Headboat	132	53	70
SC	Charter	2,464	61	1,503
VA	Charter	616	70	431
VA	Headboat	132	70	92
Total		36,115	64	23,114

Table 3 shows the number of weeks that surveys are conducted by state and vessel type each year.

Table 3. The number of weeks surveys are conducted per year for the For-Hire Telephone Survey by state and vessel type.

State	Type of Fishing Vessel	Number Weeks Surveys Conducted per Year
AL	Charter	52
CT	Charter	44
CT	Headboat	44
DE	Charter	44
DE	Headboat	44
FL	Charter	52
GA	Charter	44
MA	Charter	44
MA	Headboat	44
MD	Charter	44
MD	Headboat	44
ME	Charter	26
ME	Headboat	26
MS	Charter	52
NC	Charter	52
NH	Charter	26
NH	Headboat	35
NJ	Charter	44
NJ	Headboat	44
NY	Charter	44
NY	Headboat	44
RI	Charter	44
RI	Headboat	44
SC	Charter	44
VA	Charter	44
VA	Headboat	44

2. Describe the procedures for the collection of information

Sampling is stratified by sub-region, state, vessel type (headboat or charter boat), and sample week within each two-month wave. For the purposes of the survey, the sample week is Monday through Sunday. The sample frame is constructed from a continually updated directory of known for-hire vessels (called the FHTS directory, assumed to cover 100% of the for-hire vessel population) two weeks prior to the sampling wave. Vessel records in the FHTS directory contain a vessel identifier (vessel name or registration number); county and state (and site, if known) in which the vessel operates; contact information for the vessel representative (captain, owner, or proxy) including name, address and telephone number; vessel status; and the vessel's cooperation level. Vessel status is listed in the directory as active, (i.e. currently participates in for-hire fishing activities), inactive (i.e. does not currently participate in for-hire fishing activities; for example, a vessel would be considered inactive if is being repaired, or has switched to commercial fishing for a period of time) or ineligible (i.e. will no longer participate in for-hire activities). Cooperation levels are either cooperative, where the vessel representative responds to FHS telephone interviews, or non-cooperative, where the FHS vessel representative does not respond or refuses to participate outright. The FHS directory is updated regularly based on input from Access Point Angler Intercept Survey samplers, state FHTS coordinators, and vessel representatives. The directory can also be updated with information obtained during the telephone survey (e.g. if a vessel representative reports that a vessel will be inactive for a certain period of time, such information will be added to the directory).

To be included in the sample frame, a vessel must meet three criteria. First, the vessel's status must be active. Second, there must be complete contact information, including the vessel identifier and at least one telephone number for the vessel representative. Third, the county and state in which the vessel operates must be known. If the vessel does not meet these criteria, it remains in the vessel directory but is excluded from the sample frame. Sample selection is then systematically done without replacement at the stratum level (by vessel type, state, sample week, and by the implicit strata business county, vessel length, and permit type, from the sample frame sorting process). The FHS has a fixed sampling rate of 10% within strata. In addition, there is a minimum sample size requirement of three vessels from each stratum.

An advance letter is mailed to a representative of each sampled for-hire vessel one week prior to each reference week. The letter notifies the representative that the vessel has been selected for the survey, the week for which he or she will be asked to provide data, and the week in which the interview will take place. Representatives are also provided with an optional log sheet that they may or may not reference to facilitate their phone interview, as well as phone contact information for the survey. The optional log sheet includes a table to prepare answers to the reporting week's trip-level survey questions including the trip date, days fished, total anglers, origin of trip, trip start and end times, total hours fished, fishing method(s), primary fishing area, distance from shore, and target species. Representatives that choose to use the log sheet to prepare for their interview may spend time completing it prior to their interview but then spend less time on the phone because they have their responses ready. The estimated burden of 3.5 minutes per interview on average includes time to prepare the optional log sheet and complete the survey by phone.

Data collection for each reference week begins on the first day immediately following the reference week and continues for a period of seven days. Interviews are conducted by trained Interviewers utilizing a Computer Assisted Telephone Interviewing (CATI) system to log call attempts and survey results, schedule call-back interviews, and ensure that dialing protocols are satisfied for each sampled

number. The CATI is used to navigate the interview through complex skip patterns and identifies suspect or illogical responses at the point of data entry for verification or correction.

Up to ten call attempts are conducted to reach a representative for each sampled vessel. When each number is dialed, the telephone is allowed to ring five times before being classified as a "no answer." Telephone calls are distributed among weekend/weekday and day/evening, such that the following criteria are satisfied:

- All initial attempts are made on the day immediately following the end of the reference week.
- Three out of four call attempts are at night for each sampled vessel. The time delineating day and night is 5:00 PM local time.
- Calling is completed before 9:00 PM local time.

Once a vessel representative has been contacted, the Interviewer uses the CATI to collect data on the vessel's activity during the reference week including detailed information about each for-hire fishing trip that occurred during the reference week. In the event that the interview cannot be completed at the time of the initial contact future calls to that individual are made on an appointment basis.

Estimation Procedure

The estimation weights for the FHTS are formed in stages. The first stage is the creation of a base weight for the sampled vessel, which is the inverse of the selection probability. The second stage is a non-response adjustment, which is applied at the stratum level.
Estimates of total for-hire fishing effort ($\hat{Y}_f$) are produced using these nonresponse adjusted weights.

$$\widehat{Y}_f = \sum_{h=1}^{H} \sum_{i=1}^{n_h} \omega_{hi}^{\lrcorner} y_{hi}$$

where $\omega_{hi}^{\lrcorner}$ and y_{hi} are the final, nonresponse adjusted weight and reported number of recreational fishing trips, respectively, for vessel i of stratum h.

Chromy *et al.* (2009) provides support for FHTS methods and historical response rates. The authors indicated that, as an alternative to the FHTS, "if the best practice of using log books can be implemented, then the [FHTS] should be phased out". Full coverage through log book programs has yet to be implemented. "Until then …" as Chromy *et al.* stated, the FHTS is "appropriate given resource and legal constraints."

3. Describe methods to maximize response rates and to deal with issues of non-response. The accuracy and reliability of information collected must be shown to be adequate for intended uses. For collections based on sampling, a special justification must be provided for any collection that will not yield "reliable" data that can be generalized to the universe studied.

The FHTS utilizes a multi-faceted approach to maximize response rates and minimize potential nonresponse bias. First, advance letters are mailed to notify vessel representatives their vessel was selected for the survey. Second, intensive interviewer training and tested methodological approaches are employed to maximize response. Interviewers are tested for skills in effective communication with potential respondents, and/or accurate coding of responses before they are hired for training. Training familiarizes interviewers with a procedures manual, develops interviewing skills through role-playing exercises and builds interviewer confidence. Supervision and additional training of interviewers occurs during the conduct of all telephone surveys. Supervisors monitor in-progress interviews and provide immediate feedback and additional training as needed.

Finally, residual nonresponse will be handled through nonresponse weighting adjustment. Specifically, the weights of non-responding vessels will be transferred to respondents within adjustment cells. Generally, nonresponse adjustment cells will be defined at the stratum level.

4. Describe any tests of procedures or methods to be undertaken. Testing is encouraged as an effective means of refining collections of information to minimize burden and improve utility. Tests must be approved if they call for answers to identical questions from 10 or more respondents. A proposed test or set of tests may be submitted for approval separately or in combination with the main collection of information.
NOAA Fisheries staff examines sampling allocations in an effort to optimize data collection. No additional studies are planned.

5. Provide the name and telephone number of individuals consulted on statistical aspects of the design and the name of the agency unit, contractor(s), grantee(s), or other person(s) who will actually collect and/or analyze the information for the agency.

John Foster (301-427-8130) is the current NMFS contact for the FHTS. Data collections are performed under grants, while NOAA Fisheries staff performs the statistical analyses. Current grants support interstate commission and partner state agency FHTS data collection.

References

Chromy. J. R., S. M. Holland, and R. Webster (2009) Consultant's Report: For-Hire Recreational Fisheries Surveys. https://www.st.nmfs.noaa.gov/pims/main/public?method=DOWNLOAD_FR_PDF&record_id=451