STATEMENT OF WORK

INTERCEPT PORTION OF THE ATLANTIC COAST ACCESS POINT ANGLER INTERCEPT SURVEY 2009

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1. Background

The National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NMFS) is required to conduct a survey of marine recreational anglers, gathering information on (1) their participation, fishing effort, and catch in marine recreational fishing, and (2) their demographic, social, and economic characteristics.

Catch and effort data for marine recreational fisheries have been collected through the Marine Recreational Fisheries Statistics Survey (MRFSS) since 1979 and socio-economic data have been collected since 1987.

Catch, effort, and participation statistics are fundamental for assessing the influence of fishing on any stock of fish. The quantities taken, the fishing effort, and the seasonal and geographical distribution of the catch and effort are required for the development of rational management policies and plans. Continuous monitoring of catch, effort, and participation is needed to monitor trends, to evaluate the impacts of management regulations, and to project what impacts various management scenarios will have on a fishery.

Accurate, up-to-date catch, effort and socio-economic statistics collected over the range of a given fishery can be combined with information collected by associated biological studies to provide conservation agencies with the information necessary to manage the fishery for optimum yield. Recreational fisheries data are essential for NMFS, the Regional Fishery Management Councils, the Interstate Fisheries Commissions, State conservation agencies, recreational fishing industries, and others involved in the management and productivity of marine fisheries.

In recent years, fisheries managers, as well as partners in the recreational fishing community, increasingly raised concerns about the timeliness and accuracy of the MRFSS.

NMFS responded by requesting a thorough review by the National Academy of Sciences' National Research Council in 2005. In April 2006, a group of independent scientists announced their findings, recommending the agency collaborate with its state partners to dramatically redesign the angler survey program.

In addition, when Congress reauthorized the Magnuson-Stevens Fishery Conservation and Management Act in January 2007, it echoed many of the council's recommendations and included a provision requiring a new national saltwater angler registry.

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For these reasons, the nearly 30-year old MRFSS is being phased out as thoroughly updated angler surveys are phased in. The new Marine Recreational Information Program (MRIP) will improve the collection, analysis, and use of fishing data and eventually replace MRFSS.

The MRIP will be more than a one-size-fits-all survey. Rather, the program will be made up of an interconnected system of surveys, each targeted toward particular segments of the fishing community (for-hire, private anglers, and highly migratory species) and regions of the country. This allows NMFS, regional fishery management councils, interstate fisheries commissions, state agencies, and partners to most efficiently capture information from these important segments.

1.1 Access-point Angler Intercept Survey

The MRFSS is a nationwide program developed in the late 1970s to provide a database of marine recreational fishing activity. The MRFSS consists of several independent, yet complementary surveys. The principal components are the Coastal Household Telephone Survey (CHTS), which is designed to assess shore and private boat fishing effort by coastal county residents; the For-Hire Survey, which is designed to assess charter and head boat fishing effort; and the access-point angler intercept survey, which is designed to assess catch per unit effort in all fishing modes. Data from the component surveys are combined to estimate total fishing effort, participation, and catch by species.

The work specified in this Statement of Work (SOW) is for conduct of the Access-point Angler Intercept Survey (APAIS, or Intercept Survey). The Intercept Survey will be conducted through this contract in all states from Maine through Georgia in 2009.

Any questions or problems not covered in this statement of work should be directed to the National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Office of Science and Technology, Fisheries Statistics Division (F/ST1) through the Contract Officer.

1.2 Coastal Household Telephone Survey (CHTS)

The coastal household telephone survey (CHTS) is used to estimate the total number of marine recreational fishing trips taken by residents of coastal areas. Data from the CHTS and the Intercept Survey are combined to provide an estimate of the total catch of marine recreational anglers by species. Although the principle purpose of the Intercept Survey is to obtain catch data, there are several questions included that provide vital information for the expansion and precise estimation of effort produced by the CHTS.

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1.3 For-Hire Survey (FHS)

The For-Hire Survey (FHS) is a directory-based telephone survey of for-hire fishing vessels. Using state directories of for-hire vessels, vessels are categorized as either charter or head boats, and sampled weekly. Representatives from selected vessels are contacted by telephone to answer questions about their fishing effort in the previous week. The sample frame, or current list of active, eligible vessels, is used to expand the effort estimate obtained from the telephone survey.

It should be noted that the FHS overlaps with other monitoring programs of party and charter boats (state and federal logbooks), such as the Northeast (Maine-Virginia) Vessel Trip Reporting (VTR) Program and the Southeast Regional Head Boat Survey (SERHS). In most cases, these other programs do not include the entire universe of party and charter boat vessels in their applicable state or region and thus are unable to provide complete landings and effort statistics for the for-hire fleet.

1.4 Economic Surveys

Most fishery economics studies are conducted to collect data which are used to estimate economic impacts or net values of fishing activities. To efficiently collect economic data, supplemental questions are periodically added onto the Intercept Survey.

The objectives of the Supplemental Economic Surveys, broadly characterized, are as follows:

1. To collect demographic, social and economic data on the people who participate in marine recreational fishing in the various regions of the continental United States;

2. To collect data needed for the estimation of the net values of marine recreational fishing, either in general or for a specific species; and

3. To collect data needed to assess the economic impacts of management actions on communities.

2. General Requirements

The 2009 Intercept Survey contract will include conduct of four tasks: 1) the Intercept Survey on the Atlantic coast north of Florida, 2) FHS directory updates, 3) dockside validation of self-reported FHS data on the Atlantic coast north of Florida, and 4) the expenditure intercept add-on on the Atlantic Coast north of Florida. Additional questions may be added to the survey on an as-needed basis. The addition of these questions would be treated as a contract modification.

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The Intercept Survey Contractor shall be responsible for all data collection tasks under this contract, as well as conducting all data entry, data checking, and data editing according to NMFS specifications, including but not necessarily limited to:

- Hiring, training, testing, deployment, and supervision of interviewers;
- Survey administration, including selection and scheduling of specific sampling units;
- Maintenance of the Master Site Register (MSR) of all saltwater fishing access sites;
- Proper conduct of the collection of specified fishing effort, catch, and demographic information by interviewing marine recreational anglers at shore, private/rental boat and charter and head boat access sites;
- Determination of interviewing goals by state subregion, mode, month, and day type;
- Determination of numbers of site/date interviewing assignments needed in each sampling stratum to reach interviewing goals;
- Matching of site/date assignments with interviewers and tracking of interviewer progress in completing assignments and obtaining interviews, and reporting that progress to NMFS;
- Weekly monitoring of interviewing goals by state and mode;
- Providing updates to the charter and head boat directories each wave to the FHS Telephone Contractor;
- Collection of socio-economic and other topical management questions, if added to the survey;
- Dockside validation of self-reported trip data supplied by charter and head boat captains through the FHS;
- Telephone validation of at least 10% of each interviewer’s intercept interviews;
- Field quality control visits;
- Making modifications to data entry programs to accommodate changes to the questionnaires;
- Data entry and editing of every entered variable for possible coding or key-entry errors identifiable as out-of-range, illogical, or unreasonable and correcting all such errors identified in the databases to produce error-free (see Appendix B, Glossary) databases;
- Use of data distributions supplied by NMFS for outlier analyses as appropriate to the intercept surveys;
- Preparation and delivery of summary tables (as part of the wave reports) for use in checking, editing and reviewing the data at wave review meetings;
- Preparation and delivery of two-month progress reports (wave reports), as well as an annual final summary report of the data collection procedures, results and wave report tables according to the attached delivery schedule;
- Attendance and participation at three wave review meetings per year;
- Participation in bi-weekly conference calls with NMFS; and
- Delivery of error-free electronic databases to NMFS according to the attached delivery schedule.

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The Intercept Contractor’s responsibilities shall include coordination of the intercept survey tasks with NMFS, and the contractors responsible for the CHTS and FHS.

All Contractor personnel (office and field) are required to read NOAA Administrative Order (NAO) 216-100, Protection of Confidential Fisheries Statistics, and sign a statement of non-disclosure (see Appendix M). The Contractor must provide electronic copies of the signed statements to NMFS at the beginning of the year; copies for subsequent hires should be delivered to NMFS on an agreed-upon schedule. Proposals must address security measures to limit and/or control access to the data (by both office and field staff), including raw data, databases, and any password protection of websites.

All data collected during the performance of this contract shall be considered as “confidential and proprietary.” Any release of data to any individual or organization shall be subject to review and prior approval by the Contracting Officer and NMFS.

2.1 Intercept Survey

The Intercept Survey Contractor shall conduct the Intercept Survey in the Northeast Region (Maine through Virginia) and the Southeast Region (North Carolina through Georgia) in 2009.

The survey is conducted continuously on a 10-month basis (March through December or waves 2-6) on the Atlantic coast north of Florida, except for Maine and New Hampshire. The survey is conducted on a 6-month basis (May through October or waves 3-5) in Maine and New Hampshire for the shore, charter boat and private/rental boat modes. Sampling of party/head boat modes may occur in waves 2 (March/April) and/or 6 (November/December) in Maine and New Hampshire.

The Intercept Survey consists of interviews of marine recreational anglers at shore (SH), private/rental boat (PR), and charter boat (CH) access points, as specified by goals ordered by the NMFS by state, wave, and mode. Sampling in the head boat (HB) mode will include riding on the boats. Data collected through the intercept survey includes brief demographic data about the angler; trip details such as hours fished, area fished, and target species; and catch information, including species identification, and measurement of lengths and weights; and, when ordered, additional questions that vary by region and year to obtain economic data or address current issues.

2.2 For-Hire Survey (FHS)

Activities specific to the FHS include:

- Wave-by-wave deliveries of directory revisions to NMFS and/or the FHS contractor according to an agreed upon schedule, and

- Generation of a sample of boat/week/day assignments for dockside validation of effort reported by respondents to the FHS.

The FHS survey is conducted on a 10-month basis (March through December or waves 2-6) on the Atlantic coast north of Florida, except for Maine and New Hampshire, where it is conducted on an 8-month basis (March through October or waves 2-5). The FHS is partitioned into weeks and waves, and dockside validation occurs weekly within each wave. Dockside validation is necessary to document and correct for any error in reporting of fishing effort in the FHS.

2.2.1 FHS Vessel Directory Updates

The FHS vessel directory is continuously updated during the survey year. The Intercept Contractor will be expected to submit wave-by-wave vessel directory updates for all states north of Florida. Each wave, the Intercept Contractor will be responsible for submitting information on new vessels that enter the fleet, and updating missing information for vessels currently in the directory, which is usually obtained in the course of conduct of routine Intercept assignments.

Each vessel update shall include unique identifiers for that vessel (vessel name and/or vessel number (state registration) and any new contact information for vessel representatives (names, addresses and phone numbers). A principal “representative” is designated for each vessel in the directory. That principal representative may be the owner, one of the captains of the vessel, or some other person designated by the owner, who can report information about that vessel’s fishing activity.

Interviewers should provide updates to the directories for each wave to the Field Supervisors (Regional Representatives or RRs) on a continuing basis as new data become available. The Intercept Contractor shall deliver these updates electronically to NMFS at least four weeks prior to the start of the wave. The FHS Contractor will deliver the FHS Sample Frame (= ‘good list’), the Sample draws for all weeks of a given wave, and the ‘bad list’ (list of vessels with missing elements critical to inclusion in the sample frame) to the Intercept contractor at least three weeks prior to the start of each wave for use in scheduling dockside validation visits by interviewers, in coordination with their Intercept assignment schedules, and for use in coding the on/off frame intercept question (See Appendix I, Forms).

NMFS may consider the establishment of the FHS directories on a password-protected web site that allows appropriate updates by various partners (interviewers, RRs, and the Telephone and Intercept Contractors). NMFS allows that this might greatly facilitate the routine maintenance of the FHS directory. Should this be provided, the Intercept Contractor will use this method to make updates to vessel representative contact information and add new vessels to the directory. Proposals must address security measures to limit and/or control access to the directories.

2.2.2 FHS Dockside Validations

The 2009 Intercept Contractor will be expected to conduct dockside validation of the self-reported trip data collected from party (head) and charter boat operators through the FHS in the Northeast and Southeast Regions for 2009.

The FHS dockside validation consists of visiting the access sites for a subset of vessels that were selected for the FHS, and recording whether the vessel is docked or away. If the vessel is away from the dock, an attempt should be made to determine the vessel's activity. These visits should occur in conjunction with or on route to routine intercept assignments when possible. The dockside validation form may be found in Appendix I.

Charter and head boats that are selected for the FHS and are docked at public access marinas or sites in assigned slips or that are assigned to a permanent location in a storage shed **must** be validated during the week that they are sampled. Some charter vessels that are trailered to various boat access sites are difficult to validate and validation of those vessels is not required. All sampled vessels that can be validated should be validated at least once during the sample week. Multiple validations per vessel per week are encouraged when they can be done in conjunction with scheduled intercept sampling (but only one validation per vessel per day). Sites should be visited at a time of day when it would be likely that the vessel would be away from the dock on a for-hire fishing trip (e.g. 8 am - 5 pm). If vessels are known to do night fishing trips (e.g. 7 p.m. to 11 p.m.) then it would be feasible to conduct validations later in the evening.

Table 1 in Appendix S shows the number of weeks per wave. The 2007 sampling distribution of charter and head boat validations may be found in Table 4.

2.3 Economic Surveys

The 2009 Intercept Contractor will be expected to conduct economic surveys for the Atlantic coast in 2009. The Economic Surveys will consist of up to three independent surveys - an Add-On Economic Intercept Survey and one or two Economic Mail Surveys.

2.3.1 Add-On Economic Intercept Survey

The 2009 Add-On Economic Intercept Survey component will be similar to past years (see Appendix I, Forms). The intercept surveys will be conducted of intercepted anglers. Allocation of sampling effort corresponds to usual sampling procedures for the Intercept Survey. Sampling for the Intercept Survey is stratified by subregion, state, wave, and fishing mode. Maximum sample sizes for the Economic Survey will be determined by the base interview allocations for the Intercept Survey. The economic intercept surveys will occur during the same waves as the Intercept Survey. The economic intercept survey consists of 1) trip-related economic questions, and 2) asking intercept respondents if they would provide re-contact information for the purpose of participating in a detailed economic conjoint mail survey. The Economic Intercept Interview will be administered to each intercepted angler over 16 years of age who completes an Intercept Survey interview.

The Economic intercept questions will be added to obtain data on trip duration, boat ownership, opportunity cost of time, distance traveled, travel costs and/or trip-related expenditures associated with each intercepted angler's fishing day. NMFS will provide the final version of the intercept questions to the contractor prior to contract start-up.

2.3.2 Economic Conjoint Mail Surveys

NMFS plans to collect data to better understand saltwater anglers' preferences related to recreational fishing and associated regulations (such as bag limits and size limits) through up to two mail conjoint surveys – one for the Northeast and one for the Southeast (Mid-Atlantic states will be allocated to one of the surveys depending on species). The mail surveys will be sent to intercepted anglers who agree to participate in the mail survey, with the possible addition of non-intercepted anglers (such as respondents from the CHTS). The survey will directly ask the views of the angling community on important conservation and management issues related to key fisheries by asking about their fishing experiences. The economic conjoint survey will be conducted in two parts in conjunction with the Intercept Survey:

- Use of the "flexible" questions on the intercept interview to add a few short questions that are used to describe saltwater recreational fishing participants and to ask intercepted anglers to participate in a mail follow-up survey.
- A mail survey of respondents who agree to participate that asks about fishing related activities and which may include questions related to target species, fishing mode choices, expenditures, catch and release fishing, and preferences for different conservation management actions.

The conjoint surveys will be designed to collect data needed to estimate the net value of fishing resources and the change in value resulting from changes in management tools such as bag or size limits for specific fisheries.

Data elements to be collected could include the following:

- Boat ownership and expenses
- Fishing experience and mode preferences
- Motivations for fishing
- Preferences for keeping and releasing fish
- Attitudes about management - attitudes about specific fishery management regulations
- Fishing purpose - angler's definition of primary purpose as recreational or subsistence
- Satisfaction level - overall satisfaction with particular fishing trip

- Chosen trip from the trips described by the conjoint portion of the mail survey instrument

Other data elements may be added to allow for specific economic impact or evaluation studies related to particular selected target species. See Appendix I for examples pertaining to the most recent economic surveys. The surveys implemented in 2009 are expected to be similar.

2.3.2.1 Conjoint Mail Survey Design

An Economic mail survey will be administered to anglers who provide addresses during the Economic Intercept Interview. NMFS reserves the right to determine which of the regions (New England, Mid Atlantic, South Atlantic,) will participate in the Economic Mail Survey. The first portion of the Economic Mail Survey will ask ten to twenty questions to obtain additional social and/or economic information and to obtain their attitudes about fishing, fishing-related costs, and regulations. NMFS reserves the right to deliver the structure of these questions at a later date.

The second portion of the Economic Mail Survey will be an additional five to fifteen discrete choice paired comparison questions common in the conjoint literature. Each question will ask respondents to make a comparison between two hypothetical trip outcomes (see Appendix I for an example). Each trip outcome will have several associated attributes including, but not limited to, fish species and travel cost. For each trip comparison, the angler will also be given the choice to forego the saltwater fishing trip or target another saltwater species. The Contractor need only record the alternative chosen for each choice set.

The experimental design of the latter five to fifteen discrete choice paired comparison questions will be performed by NMFS using choice set and experimental design methods outlined in the literature. The final experimental design matrix will be produced once the instrument has made it through the focus group and pre-test procedures. NMFS will provide a datafile to the Contractor detailing attribute levels. This datafile will also contain identification codes for block and choice sets. To maximize the information obtained from the study, NMFS will choose approximately 20-70 blocks of conjoint questions with each block containing five to fifteen trip comparisons as outlined above. **NOT ALL RESPONDENTS WILL RECEIVE THE SAME QUESTIONS**. The Contractor will need to randomly assign blocks of questions over respondents. The contractor must maintain a database identifying the question block assigned to each respondent. The contractor must also include in the database a coding system that enables NMFS to link the Economic Mail Survey data with the Intercept data. The coding system should uniquely identify each individual. This coding system will also be used to identify individuals who have returned their survey. The Contractor need not deliver a file with the Intercept responses, Mail survey responses and Choice set design databases linked together, but the coding system must allow NMFS to link the three databases together by participant code. Additionally, once surveying effort is completed, all personal information including name, address, and phone number will be removed from the delivered data.

2.3.2.1.1 Sampling

All anglers administered the Economic Intercept Survey and who volunteer to participate in the Economic Mail Survey by giving their names and addresses are eligible to be contacted for the Economic Mail Survey. If sample size based on the intercepted anglers is too small, NMFS may request that additional survey respondents be identified through other sources and included in the mail survey. Because of differences in the types of species available in each region, NMFS reserves the right to provide alternative conjoint sections of the Economic Mail Survey instrument for selected regions.

It is difficult to predict the response rate for a mail survey; however, some pitfalls are avoided since each respondent agrees in the field to participate in the mail survey. NMFS conducted a similar mail survey in the Northeast during 2000, following the same methodology described here. Five thousand mail surveys were sent to anglers identified as willing to participate from the intercept survey, and NMFS received 2,761 completed questionnaires with only 150 bad addresses for an overall response rate of 55%. Therefore, it is believed that the mail response rate will be at least 50%.

Dillman's Total Design Method (TDM) has been widely used in survey research as a way to increase response rates for mail surveys[1]. The major steps of the method are outlined below (see Table I). First, each respondent eligible for the Economic Mail survey must have agreed to participate in the survey at the time of the interview. This initial contact/agreement is used in place of the initial letter mailing prescribed by TDM. The Economic Mail survey should be sent to respondents within two weeks of receiving the frame from the intercept survey contractor. The survey packet will contain a cover letter (designed by NMFS) and the questionnaire. The questionnaire will be in a booklet format and will probably not exceed a total of 15 booklet pages. Metered or stamped mail is acceptable.

Table I. Modified Dillman method

Time	Activity
Within two weeks of field intercept	Mail survey packet
One week later	Follow-up Postcard
3 weeks later	Re-mail survey packet to non-respondents

One week after this mailing, a postcard will be sent to all Economic Mail Survey participants. It will motivate the study a bit more, and will thank respondents who have already responded and remind those that did not to respond. Three weeks after the

[1] See Don A. Dillman, Mail and Telephone Surveys: The Total Design Method. John Wiley and Sons, NY. 1978.

initial mailing, another follow-up mailing will be sent **only to non-respondents.** This will have the complete packet with a slightly modified cover letter and questionnaire. It is quite important that the contractor maintain an accurate and timely database of respondents to minimize mailing expense and to avoid potential burden on respondents. NMFS is willing to entertain suggestions from the Contractor if the Contractor believes that a different procedure than that described above will yield higher response rates. Contractor input is especially sought in questions of envelope size, questionnaire booklet layout and size, and motivational language on cover letters.

Since the sampling unit for the Intercept Survey and the Add-On Economic Intercept Survey is an individual angler fishing day, rather than an individual angler, anglers are eligible to be intercepted on more than one day during any given two-month wave of the Survey. Hence, every time that a given angler is intercepted and volunteers he/she should be contacted for the Economic Mail Survey. Anglers who are contacted more than once should be appropriately identified.

2.4 Computer Assisted Telephone Interviewing and Other Software Requirements

While the 10% validation of Intercept interviews does not require the use of Computer Assisted Telephone Interviewing (CATI) system, use of CATI is recommended. Validation data are not required to be submitted to the NMFS; however, the results of validation calls are required to be summarized in the wave and annual reports (see Section 10.2). CATI offers increased efficiencies over manual paper surveys and increased accuracy of coding through reduction of errors introduced by secondary data entry. CATI systems also increase accuracy through built-in probes, automated looping and skip patterns, and error checks. If CATI is used, the Intercept Contractor is responsible for purchasing and maintaining their own CATI system software and hardware (i.e., those costs should not be included in the cost of this contract, except as normally included in overhead costs).

The Intercept Contractor is responsible for maintaining and updating the questionnaire and all computer programs necessary for accurate data collection throughout the contract period, and for modifications to all quality checking programs when there are changes made in the questionnaire.

The intercept data entry program is government property and the most current version will be supplied to the Intercept Survey contractor. It must be maintained by the Intercept Survey contractor for use throughout the contract period (2009). Maintenance is necessary when the questionnaire is changed and when flexible/economic survey questions are used. It is estimated that maintenance will require approximately 20 hours per wave, based on past modifications to existing question layouts. The maintenance costs should be included on separate pricing sheets. Expected hours that would be required should also be included in the written proposal itemized by 1) modification to existing layout (e.g. changing the wording of a question on entry-screen and/or changing the name/format of the linked storage variable), 2) addition of a new variable (the question on entry-screen, linked storage variable & format, proper export to permanent file), and 3) addition of a new page and exported data file with up to 10 questions and variables. The estimated time of 20 hours per wave is based on performing only tasks 1, 2, or 3 (related to the Intercept Survey). Task 4 (related to the Economic Survey) would be ordered as an additional task beyond the standard maintenance. Actual hours for any work requested would be billed, and may exceed 20 hours in a given wave, but the 20 hour/wave estimate is provided for costing this task.

There currently is no data entry program for FHS pre-validation data. The Intercept Survey contractor may use any software they wish for these data, but the data must be delivered to NMFS in SAS data files.

The Intercept contractor will need a licensed copy of SAS software (Personal Computer (PC) or mainframe, version 9 or newer, including core, base, and statistical modules) in order to run government-supplied sample selection programs, and to produce the deliverable data files.

3. Sample Sizes

3.1 Base Sample Sizes

Tables 2 through 4 of Appendix S contain the approximate sample sizes that NMFS ordered in 2007, and expects to order during 2009 based on funding for the program. NMFS will issue delivery orders with actual sampling distributions at least one month prior to each sampling wave for the 2009 intercept survey.

3.1.1 Intercept Survey

In 2007, NMFS allocated approximately 27,000 intercept interviews among states in proportion to fishing effort, after allocating blocks of sample to each region based on historical fishing effort (Table 2). The base-level allocations for 2009 are expected to be similar to those of 2007. The allocations are expected to be about 16,000 in the Northeast Region (Maine through Virginia) and about 8,500 in the Southeast Region (North Carolina through Georgia) for a full year of sampling.

NMFS also allocated approximately 470 at-sea head boat trips (Table 3) from Maine through Georgia, with about 370 in the Northeast Region (Maine through Virginia) and 100 in the Southeast Region (North Carolina through Georgia).

3.1.2 FHS Dockside Validation

In 2007, NMFS allocated approximately 7,300 dockside validations of the charter and head boat fleet from Maine through Georgia (Table 4). The allocation is split with approximately 5,450 charter validations and 1,850 head boat validations. The allocation is also split with approximately 5,500 going to the Northeast Region (Maine through Virginia) and approximately 1,750 going to the Southeast Region (North Carolina through Georgia).

3.1.3 Intercept and Conjoint Economic Surveys

The sample sizes for the economic surveys generally are based on the total number of interviews specified or anticipated in the Intercept Survey for all modes, but are reduced by the age requirement and the respondents' willingness to participate. Maximum possible sample sizes are usually determined by the base intercept interview allocations plus any state or ACCSP add-on.

The economic survey questionnaires are only administered to anglers at least 16 years of age, which slightly reduces the number of follow-up interviews below the intercept goals. In addition, not all anglers asked to participate are willing to cooperate in the economic intercept portion of the survey. The initial conjoint survey sample size will be based on the number of addresses obtained from anglers participating in the economic intercept survey. Table 5 in Appendix S show past results of economic survey attempts and the reductions relative to base intercepts due to the minimum age, and willingness to cooperate. Response rate and other factors may vary during the 2009 sample year.

3.2 ACCSP Add-On Sample

In 2007, the Atlantic Coastal Cooperative Statistics Program (ACCSP) allocated funds to increase intercept sampling. This funding resulted in an increase of approximately 6,300 intercept samples in the CH and PR modes (Table 6). The allocation is also split with approximately 5,300 going to the Northeast Region (Maine through Virginia) and approximately 1,000 going to the Southeast Region (North Carolina through Georgia). The ACCSP also increased HB sampling by approximately 230 trips in 2007, with approximately 180 trips going to the Northeast Region and 40 trips to the Southeast Region (Table 7).

3.3 State Add-On Sample and Participation

In previous years, states and other organizations have participated in funding and conduct of the Intercept survey. In some cases, they have funded supplemental levels of sampling above those ordered by the NMFS to improve state-level estimates or to add supplemental questions for specific management needs. In other cases, states have sub-contracted with the Intercept Contractor to use state personnel to conduct intercept interviews and other survey tasks. These add-ons and subcontracts are extremely helpful to the program for a number of reasons: 1) add-ons improve the precision of the estimates and thus provide better data for management, 2) buy-in by states either through additional sampling or through conduct of the intercepts helps build the positive image and public credibility of the Survey, and 3) partnerships with states helps improve understanding of the survey purpose and design by scientists and the general public. Thus it is vital that the Intercept Contractor has the ability and commitment to work in a cooperative manner with states to implement add-ons and state subcontracts.

The Intercept Survey Contractor shall work with individual state agencies wishing to add to the sample size, and/or subcontract for intercept tasks. NMFS will provide the Intercept Survey Contractor with a list of contacts for state fishery agencies. States who funded add-ons in 2007 included Massachusetts, Rhode Island, Delaware, Virginia and North Carolina (see Tables 8 and 9 in Appendix S). States that are currently sub-contracting to use state personnel for the Intercept Survey include Maine, New Hampshire, Massachusetts (HB mode only), Connecticut, North Carolina, and Georgia. In Massachusetts, a mix of state and contract interviewers is used.

State subcontracts are negotiated directly between the Intercept Contractor and the interested states. The specific responsibilities of each party are determined by the Intercept Contractor and the state. NMFS requires that proposals for intercept data collection include a description of proposed state subcontract procedures, including formulas for calculating the maximum "pass-through" to the subcontracting state for conduct of intercept interviews or “hold-back” to cover the contractor’s administrative and operational costs (whichever is easiest), and assumptions concerning assignment of duties of the Contractor and the sub-contracting state. (Refer to Section H.12, Subcontracting with State Governments.) When the state is subcontracting to conduct the intercept tasks, the amount the Intercept Contractor keeps for their portion of work should primarily apply to the base level of sampling ordered by NMFS. Additional samples conducted with state funding and personnel are not expected to require the same levels of administration, and there should be economies of scale. This applies equally to additional sample ordered by the ACCSP. Therefore the proposals must also include separate costs for data entry and quality control of additional state and ACCSP samples. If a state chooses to participate by assuming the responsibilities for intercept data collection, they are required to fulfill identical Contractor responsibilities for survey conduct (field protocols, training, QA/QC, delivery schedules, etc), and must provide all necessary information to the Contractor to comply with Section F - Deliveries or Performance. Proposals must address how the Intercept Contractor will ensure adherence to contract requirements by state sub-contractors.

Any proposed modifications by states or other entities to the survey must be approved by the NMFS COTR in writing in advance of implementation (this includes any add-on questions).

Any add-on questions or additional sampling paid for by an entity other than NMFS, and collected through the Intercept Contract shall be included in the databases provided to NMFS. NMFS will not accept add-on samples obtained by any contractor other than the Intercept Survey Contractor.

4. Survey Sample Frames

4.1 Intercept Survey Sample Frame

The sampling frame for the intercept survey includes all fishing access sites along the Atlantic Coast of the United States north of Florida (the Master Site Register (MSR), see Appendix G for an example.) The selection probability for each site is weighted by the expected fishing pressure, such that sites with higher pressure are drawn more frequently than sites with lower pressure.

4.1.1 Master Site Register (MSR)

The MSR includes identified access sites for marine recreational fishing in each state, including sites in tidal areas where marine fishes are caught. The MSR has been continuously updated using historical data and input from intercept interviewers, field supervisors, and state fisheries personnel over the last 25 years. The Intercept Contractor is responsible for maintaining and updating the MSR for the Atlantic coast north of Florida continuously during the period of contract award, and providing updated site lists in SAS format to NMFS each wave. NMFS will provide the successful Contractor with the most current MSR for the Atlantic coast (Maine through Georgia).

Each site is assigned a unique identification code, which remains the same over time. For example, a marina that changes its name through new ownership will keep the same site code. Codes for inactive, closed, or destroyed sites will not be reassigned to other sites.

The site ID code is comprised of a two-digit state code (FIPS code), a three-digit county code (FIPS code), and a unique four-digit site code. NMFS staff will distribute site ID codes to the Intercept contractor as needed, upon receipt of all MSR information for the proposed new site, and confirmation the site is not already in the MSR. The estimated fishing pressure by mode, day type, and month is entered in discrete variables (refer to Appendix H, Dataset Variables and Formats). Location information includes a site name variable, two site description fields, and the city or town the site is located in or nearest. The city or town name must be a valid name recognized by the postal service. The description fields should include a street address, if available, and general directions to the site such that anyone coming from any direction would be able to find the site from the nearest major highway or interstate; nearest cross streets and landmarks are highly recommended. Additional existing fields include the name and phone number of a primary contact person who supervises the site, the shore mode present (or not applicable (NA) if no shore fishing is available or allowed at the site) and indicator variables to code hostile or inactive sites (‘hostile’ and ‘delete’, respectively; see Appendix B, Glossary). Latitude and longitude are expressed as degrees, minutes and seconds. Global Positioning Satellite (GPS) units should be used to collect accurate location coordinates for any new sites added to the MSR. The specific location where the GPS coordinates were obtained (such as at the entrance of a pier, the northernmost boundary of the beach/bank site, or on the launch ramp itself) should be noted in the second description field or the notes field.

Other variables in the MSR include information on:

- whether the site is public or private access;
- the presence/absence of night fishing;
- whether or not the site is safe to interview at night;
- whether or not a commercial fee is charged for using the site;
- if there is permission to interview;
- if use of the site is affected by the tide;
- a date variable to indicate when a modification to the site record was made (this must be updated whenever any variable's value is changed - it provides a record indicating when a site descriptor/pressure was last modified);
- variables to indicate the number of head boats and charter boats present at the site; and
- a field to add comments, such as how a site is affected by the tide (see Appendix H, Dataset Variables and Formats).

In the SAS format, additional variables can easily be added and will not affect printing of hard copies or producing the intercept assignment draws. The contractor may add such fields at their convenience. For example, the best times of day for sampling at each site could be added if the field staff would find that useful. Since interviewers are expected to ride head boats, it also may be desirable to add a field for current per person head boat fees and seasonal schedules.

Each interviewer must be given a current MSR for his/her state or county(s) of coverage. A new MSR must be issued for each wave and supplied to NMFS in an electronic format according to the attached delivery schedule.

4.1.1.1 MSR Maintenance Tasks

The Intercept Contractor shall be responsible for maintaining and updating the MSR continuously during the period of contract award, and delivering updated site lists, as a SAS dataset, to NMFS each wave, according to the attached delivery schedule. The Contractor shall review and update the information regarding fishing pressure for each site before each wave, and shall ensure that every site is physically inspected at least once a year (including hostile sites) to update the MSR, regardless of whether or not that site was assigned during the year. Any site that contains a pressure of "8" (unknown) must be visited as soon as possible, so that a valid pressure ("0-7" or "9") can be assigned. This inspection visit can also be used to verify and update for-hire vessel information and should be done during good weather (i.e. summer or fall) in order to collect accurate information.

Since sites to be sampled are selected relative to their estimated fishing pressure, it is imperative that the MSR contain the best information possible. The MSR is not static, since fishing activity is constantly changing. It must be updated at least once a wave based on information obtained from interviewers and RRs. Interviewers and RRs provide information to the Intercept Contractor to add sites, delete sites, or change data about an existing site on the MSR.

The MSR is updated using the Site Description Form (see Appendix I, Forms). These forms are completed during intercept assignments. Updates for sites that are not scheduled to be visited during the current wave (when updating is occurring for the next wave) may be done by interviewers while driving to nearby sites or whenever the opportunity exists.

The site register updates must be completed before the assignment draw for each wave, which generally occurs approximately three weeks before the wave begins. This allows enough time to schedule assignments and inform interviewers of their schedule. The updated SDFs are submitted to the RRs who scan through multiple SDFs for a unique site and develop a general consensus pressure score for each site. This information is then forwarded to the Intercept Contractor for updating of the MSR for the next wave. Therefore updated SDFs should be provided to RRs approximately four weeks prior to the beginning of the next wave.

If more than one set of pressure estimates for a site are submitted by different interviewers, RRs must make the final determination of the appropriate values to use in updating the Site Register. More weight should be placed on pressure estimates for waves during which sites were visited and empirical data were gathered, as opposed to pressures estimated up to a year in advance during a routine “site inspection”. RRs should also consider the experience of interviewers submitting pressure estimates for the same site. While data from newer interviewers may not be as reliable due to lack of experience, sometimes newer interviewers are able to view the situation with a “fresh eye”.

Sites are NEVER removed from the Site Register. Inactive sites are kept on the Site Register (with the historical pressures left intact) but variable ‘delete’ is coded ‘D’ which should be printed on hardcopies of the Site Register in **bold** type. This is done to prevent an interviewer from visiting the site as an alternate site, as well as to allow for re-activation of the site in the future and to keep site codes unique to a geographic site. Interviewers should inform their RRs if they learn that a previously inactive site has become active.

As new sites are added to the site register, each will be assigned a new and unique four-digit code from a master list of available numbers which is maintained by the NMFS biologist. The Contractor shall be responsible for obtaining new site numbers from the NMFS biologist when needed.

The interviewing results summarized in the Assignment Summary Data files may be useful for evaluating the site-specific fishing pressure categories provided in the MSR.

4.2 FHS Dockside Validations Sample Frame

The sample draws for all weeks of a given two-month sampling wave that are supplied by the FHS Telephone Contractor serve as the frame for FHS dockside validations. The Intercept contractor should check the vessels in the weekly draws and use their port and site codes to schedule dockside validation visits by interviewers. If possible, these validation visits should be scheduled with routine intercept assignment schedules, and the vessel access site can be visited en route to or from an assigned site or during non-productive sampling periods at an assigned site.

5. Sample Allocation Tasks

The approximate NMFS allocations of intercept survey interviews by state, mode, and wave for 2007 are shown in Tables 2 – 9 of Appendix S. NMFS will issue delivery orders providing the sample goals by state, wave, and mode, at least one month before the start of a wave.

The Contractor shall be responsible for ensuring that the temporal and geographic distributions of sampling within a given wave for each state and fishing mode are representative of the true distributions of marine recreational fishing effort. Therefore, angler trip interviews should be distributed in a representative manner between the two months of the wave, across an entire month, among the different day types of each month, and among different geographic areas within each state.

The contractor shall ensure that at least two coastal residents (see Appendix B, Glossary) are interviewed in each State/wave/mode (cell). Toward the end of the wave, if no coastal residents have been intercepted in a particular state and mode, roving assignments can be attempted (see Section 5.1.2). Interviewers on roving assignments may conduct interviews at any site within the State and mode of concern until two coastal residents have been successfully interviewed; however, all intercepted anglers must still be interviewed regardless of residence.

The MSR serves as the database for approximating the relative distribution of fishing activity between months. The separate categorizations of fishing pressure at each site for each month can be used to approximate the expected distribution of total fishing pressure between months. NMFS will provide a SAS program that uses the monthly pressure ratings in the MSR to determine the appropriate distribution of interviews for each state/mode/wave stratum between months.

Before generating a sample of site/date interviewing assignments, the Contractor must determine appropriate interviewing goals by state, wave, fishing mode, month, and day type (weekend vs. weekday). The interviewing goals for each state, wave, and fishing mode shall be set as minimum goals by NMFS. However, the distributions of those minimum goals between months and day types, and across geographic areas of a state must be determined based on the most current data available on the expected distributions of angler fishing trips.

In some low activity waves when fishing activity changes greatly between the two months of a wave, it may be desirable to establish different interviewing goals for the first and second half of a given month. For example, in Wave 6 the fishing activity in Connecticut drops off considerably after the first two weeks of November. In order to obtain a representative distribution of interviews, it would be desirable to get most of the interviews during this two-week period. In such cases, it will be possible to allocate the wave goal of interviews among the four half-months of the wave and draw assignments accordingly. In order to accurately assess such abrupt shifts in fishing pressure within a month, information on such shifts should be added to the MSR on a site-by-site basis.

As new estimation methods are implemented over the next few years, NMFS may choose to further stratify sampling for some states into specified state subregions to improve sampling distributions. NMFS will work with the contractor to develop procedures to ensure that samples are allocated in a representative way among these state subregions.

5.1 Sample Draw

Intercept survey site assignments are selected in proportion to expected fishing activity. With the exception of extremely low-pressure sites (categories 0 and 1), each site will be assigned a weight equal to its minimum expected fishing pressure. Low pressure sites are assigned a weight that is equal to ½ of the minimum expected fishing pressure. This is done to reduce the probability of drawing assignments for sites with an expected number of interviews less than the traditional minimum target of 8 (one per hour) for a typical 8-hour interviewing assignment.

In the SH, PR, and CH modes, NMFS will order a specific number of **interviews** to be obtained, while in the HB mode NMFS will order a specific number of **boat trips** to be completed. For this reason, fishing pressure codes for the SH, PR, and CH modes reflect the expected number of angler trips per day, while fishing pressure codes for the HB mode reflect the expected number of boat trips per week.

The SAS program to be used for drawing site/day assignments in SH, PR, and CH modes will be supplied to the Contractor by NMFS at least two months prior to the first wave of interviewing. This program will draw sites using systematic sampling of a list of sites ordered by county and sorted randomly within counties. Each site will be replicated in the list as many times as needed to reflect its relative probability of selection. The number of replicates of each site will be equal to two times the weight assigned to the site. In other words, the list will include one entry for each category 0 site, 5 entries for each category 1 site, 18 for each category 2 site, 26 for each category 3 site, 40 for each category 4 site, 60 for each category 5 site, 100 for each category 6 site, and 160 for each category 7 site. The replicate entries of the same site remain clustered together within the random sorting of all sites in a county. For each round of sampling, a sampling interval *n*, equal to the size of the total list divided by the number of site assignments to be drawn, will be used and systematic sampling of the list will start at a randomly selected start point between 0 and *n*. The sample will be drawn by selecting every n^{th} entry on one complete pass through the list. If there are any sites that are replicated in the list more than *n* times the number of available assignment dates, they will be removed from the list prior to the draw and automatically selected for the maximum number of times. The remaining site assignments would then be drawn from the remaining list of sites after adjusting the sample size and recalculating the sampling interval.

The site sampling program will be set up to draw a specified number of assignments in three rounds (fixed, flexible, and reserve assignments). Each selected site assignment will be assigned a unique control number that will reflect the round in which it was selected. Site assignments will be prioritized according to the round in which they were selected. Therefore, priority should always be given to completing assignments drawn in earlier rounds (i.e. fixed) over assignments drawn in later rounds (i.e. flexible and reserve).

Assignments should be drawn separately for each fishing mode, month, day type, and state (or state subregion). All of the assignments for a given wave of interviewing should be drawn at least one month prior to the start of the wave.

The Intercept Contractor must estimate the number of sampling assignments required to obtain the interviewing goals in each state/mode/wave/month/day type/subregion sampling stratum and draw assignments accordingly. Historical interviewer productivity data should be used for this purpose. Such data are available in past Assignment Summary files. NMFS will provide a SAS program to the Intercept Contractor prior to contract start-up.

The minimum number of assignments needed to achieve a specified sample of angler trip interviews for any given sampling stratum can be approximated by dividing the historical mean number of interviews per assignment into the number of interviews established as the goal. For example, if the mean number of interviews per assignment over the last three years of the survey has been 5.5 for a given mode/month/day type/state stratum and the sampling goal is 200 interviews, then the minimum number of assignments needed would be calculated as follows:

minimum number of assignments = (200 interviews needed) / (5.5 interviews/assignment)
= 36.4, which rounds up to 37 assignments

In any given year, the actual number of completed assignments needed to reach the sampling goal may be higher or lower than the minimum estimate based on historical productivity, because levels and distributions of actual interviewing productivity can vary from year to year for a variety of reasons. Therefore, it may be necessary to draw some additional assignments above the estimated minimum needed to assure that all interviewing goals can be reached. On the other hand, drawing too many assignments can lead to a situation where interviewing goals would be greatly exceeded and unnecessary costs incurred that NMFS would not cover. Therefore, it is important to balance the potential costs of too many assignments against the potential costs of too few.

Once the minimum number of assignments has been estimated, this number should be increased by some amount to set the number of assignments to be drawn and issued to interviewers. The site sampling program will draw this number of assignments in the first two separate rounds of sampling, with each site assignment coded to reflect the round in which it was selected. Assignments drawn in the first round will be “fixed assignments” that will be given priority over the “flexible assignments” drawn in the second round. All fixed assignments must be scheduled and completed even if interviewing goals are reached before the end of a month or wave. All flexible assignments must be scheduled, and should be completed unless interviewing goals for the month or wave have been reached or are projected to be exceeded if all scheduled assignments are completed. Once interviewing goals for a month or wave have been reached, or are expected to be exceeded, the Contractor may cancel any unneeded flexible assignments for that month or wave, but must still complete any remaining fixed assignments. Assignments drawn in the third round will be assignments held in reserve, to be used when all fixed and flexible assignments have been exhausted (see Section 5.1.1) without the sampling goals being met. Reserve assignments should not exceed 50% of the total assignments (fixed + flexible) originally issued.

Each type of assignment (fixed, flexible, and reserve) should make up 1/3 of the total number of assignments. For example, if it’s expected that 70 assignments are needed to reach the interview goal in a specific state, wave, and mode, and 50% of the expected (=35) will be drawn for reserves, then 35 of those assignments will be drawn in the first round (“fixed”), 35 in the second round (“flexible”), and an additional 35 in the third round (“reserve”). Under no circumstances should more than 50% of the assignments be held in reserve. This applies to all modes, including HB.

The HB draw is similar to the standard intercept site draw, with the following exceptions: boat/day assignments are drawn rather than site/days, assignments are not broken out into rounds. Assignments are drawn from the for-hire vessel directory which is maintained by the FHS contractor (the vessel directory is the sampling frame). The sampling pool for each month and state consists of all possible (eligible) boat/day combinations, replicated based on the weight (expected activity level). The draw is made by simple random sampling of the pool. The HB draw program excludes vessels with pressures of zero and vessels labeled as not cooperative to ride along assignments. Head boats that are expected to make more trips per week are drawn more frequently (in proportion to fishing effort).

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As indicated above, the Contractor shall assure a representative distribution of sampling throughout the two months of each sampling wave. Therefore, the Contractor should avoid drawing so many assignments that interviewing goals are exceeded within the first month of a wave or within the first couple of weeks of a given month. Although such an approach would seem to be the most cost-effective one, because remaining assignments could be cancelled once goals were exceeded, it would most certainly result in temporal distributions of interviews that would not be representative of true distributions of fishing effort. Excessive “front-loading” of intercept survey sampling without any consideration for the accuracy of resulting sampling distributions will be considered unacceptable by NMFS.

The draw of fixed, flexible, and reserve assignments should be conducted at least one month prior to the start of a given wave of sampling. The assignment sampling program will require inputs of the numbers of initial (fixed and flexible) and reserve assignments to be drawn for each state/mode/wave/month/day-type/state-subregion stratum. Individual site/date assignments will be assigned a unique control number that reflects the type of assignment (fixed, flexible, or reserve) and the order in which the assignment was drawn. The control number can be used to track the ultimate outcome of the assignment, and must be retained in the assignment summary file and assignment completion file.

5.1.1 Reserve Assignments

The Contractor should determine an additional number of assignments to draw for each month beyond the minimum number estimated to meet the sampling goals. These additional assignments can then be drawn during the third round of the assignment draw and held in reserve. If interviewing productivity is running lower than expected during the first two weeks of the month or during the first month of the wave, “reserve assignments” can be issued to provide additional sampling coverage for the remainder of the month or wave, but should be assigned to samplers in the same order as they were drawn. For example, control number 2010 would be assigned before control number 2020. If the date of the assignment has already passed the date may be changed according to the protocols described in section 5.2.1, Re-Scheduling of Assignments). Overuse of reserve assignments could also lead to temporal distributions of interviews that would not be representative of true distributions of fishing effort. Therefore, the number of reserve assignments should be minimized and should not exceed 1/3 of the total assignments originally issued. Under no circumstances should reserve assignments be issued in place of flexible assignments.

5.1.2 Roving Assignments

The design of the survey requires that at least two interviews be obtained with coastal residents in each cell (state/wave/mode). In the event that sampling for a particular state/mode/wave stratum fails to produce a minimum of two angler trip interviews with coastal county residents within the first seven weeks of the two-month wave, then the Contractor should ask NMFS for approval to designate remaining assignments for that stratum as “roving assignments”. A roving assignment has no upper limit on the number of alternate sites that can be visited to seek interviews.

Rover assignments are mode-specific. That is, an interviewer might be asked to do a SH or a PR Rover. On a Rover assignment, the objective is to obtain interviews in the target mode from coastal anglers. Coastal anglers are those whose state and county of residence are the state of intercept and a county located within 25 or 50 miles of saltwater in that state, depending on the wave and state. The Intercept Contractor will either designate a starting site or ask the interviewer to suggest a starting site -- a site known to be active. While that site must be visited first, other "standard" on-site procedures do not have to be followed. Instead, these special Rover assignment procedures should be followed:

- If the interviewer cannot obtain interviews with coastal residents at the assigned site, he/she can visit any alternate site in the state with the assigned mode. The alternate site(s) do not have to be the next nearest or within a one-hour drive of the starting site. If the starting site has only beach, bank, or natural shoreline fishing, the interviewer is not restricted to beach/bank interviews.

- There is no three site limit. The interviewer can visit as many sites as he/she wishes so long as there is a possibility of meeting the Rover objective.

- On a Rover assignment it is permissible to interview non-coastal and out-of-state anglers. It is also permissible to interview anglers from other modes. However, the main objective is to get interviews with coastal residents in the target mode. If two interviews with coastal residents are obtained before the maximum of 20/30 "good" interviews are obtained in the mode the interviewer must stop at 30. However, the interviewer can keep interviewing beyond the 30 person maximum until such time as two interviews are obtained with coastal residents.

Since Rover assignments are given out one at a time in a specific mode, the outcome of each Rover must be known as soon as possible. Interviewers who are asked to take a Rover assignment must call their designated contact the business day following the Rover. The interviewer should be prepared to report on the number of "good" interviews obtained in each mode and the state and county of residence of all anglers intercepted.

Since an unlimited number of sites may be visited during a Rover assignment there will not be room to code all sites visited on the original Assignment Summary Form (ASF). Interviewers should record alternate sites (in excess of 2) on additional blank ASFs in the order they are visited and staple them to the original ASF.

5.2 Sample Distribution

The sampling distribution and schedule shall be the responsibility of the Contractor and subject to approval by NMFS. The complete draw as well as the schedule of site/date interviewing assignments for each wave must each be submitted as SAS datasets to NMFS prior to its distribution to interviewers. The schedules must be delivered no later than two weeks after delivery of the draw. NMFS will have three working days to review and approve each.

Once the sample of site/date interviewing assignments has been drawn for a given wave of interviewing, the Contractor is responsible for issuing those assignments to individual interviewers, tracking the completion of those assignments in the Assignment Completion File, and reporting weekly progress made toward meeting the established interviewing goals.

The first step of implementing the sampling schedule is matching the schedule of assignments with individual interviewers. “Fixed” assignments should always be given priority over “flexible” assignments, and both fixed and flexible assignments should be given priority over any “reserve” assignments issued during the wave. Assignments may be matched with interviewers to minimize travel costs, but all issued assignments must be covered regardless of interviewer proximity or availability. The staffing of interviewers must assure coverage of all fixed and flexible site/date assignments.

Assignments should not be rescheduled to accommodate the preferred schedules of interviewers. If necessary, new interviewers must be hired and trained to assure that assignments are covered on the assigned dates. The interviewing staff should be geographically distributed such that coverage of all sites is assured. Under no circumstances should fixed or flexible assignments not be issued because “no interviewer is available” to cover the assignment.

During periods of low fishing activity, it may be feasible to schedule two assignments for one interviewer on the same day. Employment of this strategy would depend on NMFS approval of a workable implementation plan proposed by the Contractor. Such a proposal should attempt to minimize potential clustering effects in the temporal and geographic distributions of sampling.

5.2.1 Re-Scheduling of Assignments

Assignments may periodically need to be rescheduled due to unforeseen circumstances. Every attempt should be made to reschedule the assignment to the same day of the following week. If that is not possible, the assignment may be rescheduled to a different day as long as the day type is the same as originally drawn (i.e., assignments drawn for weekdays must be completed on weekdays, and assignments drawn for weekend days must be completed on weekend days.)

Fixed and flexible assignments may be rescheduled due to bad weather or unexpected interviewer problems. If the weather on the assigned date is so bad that no fishing is likely to occur at the assigned site, then the assignment may be rescheduled to the same day of the week in a subsequent week of the same month. If the assignment could not be completed on the assigned date because the assigned interviewer became ill, had car trouble, or failed to visit the site for some other reason, then the assignment may also be rescheduled according to the same procedures. Interviewer failures to complete issued assignments on the assigned dates should be minimized, and unreliable interviewers should be replaced as needed with reliable ones. Any failed assignments initially assigned to the last week of a month should be cancelled because they cannot be rescheduled to a later week. Some rescheduling of sampling assignments may be necessary to prevent overlaps with samplers working to conduct interviews for other surveys. This is of particular concern when the Large Pelagics Survey (LPS) is conducted, typically from June through October in the mid-Atlantic (Virginia through New York), and July through October in the North Atlantic (Connecticut through Maine). NMFS Program staff will provide LPS assignment schedules to the Intercept Contractor prior to their issuing of assignments. In the event that an intercept interviewer arrives at a site and finds an LPS interviewer on-site, or an LPS interviewer arrives at a site and finds an intercept interviewer on-site, the intercept interviewer takes precedence unless: 1) the site is an alternate site for the intercept interviewer (i.e., not originally assigned), in which case the intercept interviewer should relocate to another alternate site; OR 2) the site is the only one in the LPIS cluster, in which case the intercept interviewer should relocate to an alternate site.

5.2.2 FHS Dockside Validations

At the beginning of each wave, contractor personnel should identify sampled vessels that operate out of access sites that have been assigned for intercept interviewing, or are on the travel route to or from intercept assignments. The intercept interviewers would then be assigned dockside validations to perform with specific assignments. If necessary, separate assignments (travel to sites solely for the purpose of validating FHS-selected for-hire boats), that specify dates, sites and vessels to be validated may be scheduled.

5.3 Sample Tracking and Reporting

Once interviewing assignments have been issued to interviewers, the Contractor's staff must monitor progress in completing those assignments. For each completed assignment, the Contractor is responsible for reporting the number of interviews obtained in each fishing mode in a timely manner so that NMFS can monitor progress toward sampling goals.

A record must be maintained of any re-assignments of interviewers or re-scheduling of dates such that the fates of all originally issued assignments can be reliably tracked through completion or cancellation (i.e., ultimate disposition). Reasons must be recorded and provided to NMFS for all failed assignments that are either rescheduled or cancelled. The Contractor must maintain a complete accounting of the fates of all assignments drawn for each wave. This information must be provided to NMFS as the Assignment Completion File according to the attached delivery schedule.

The Contractor shall also be responsible for taking appropriate control and administrative measures to ensure that the entire sampling goal set by NMFS is met for each and every state/mode/wave stratum. The Contractor shall require all interviewers to report the numbers of assignments completed and the numbers of interviews obtained on those assignments each week. **Weekly tallies of assignments completed, rescheduled, or cancelled, as well as weekly tallies of interviews obtained in each fishing mode must be delivered to the NMFS Contracting Officer's Technical Representative (COTR) in spreadsheet format by Tuesday of the following week to allow accurate tracking of progress toward reaching sampling goals.** NMFS will provide the program to the Intercept Contractor prior to contract start-up. NMFS will consider the posting of this information on a password protected website as acceptable, but information for all states must be available through a single query. Proposals must include the proposed method of notification.

During a sampling wave, the Contractor must also track the distributions of interviews obtained relative to the established sampling goals by month, day type and state subregion to determine whether or not it may be necessary to either issue reserve assignments to assure that interview goals and/or distribution goals will be met, or to cancel some or all of the remaining flexible assignments (in order by control number) to prevent unnecessary overages. Tables showing how interviewing distributions compare with the established interview distribution goals for each wave must be included in the Wave report (see Section 10.2).

Within each month, sampling effort should be distributed evenly and monitored on a weekly and sometimes daily basis to prevent clustering of samples at the beginning or end of the month. This clustering could be caused by meeting the monthly goals too early in a month, or by trying to catch up and finish the goal at the end of a month.

Monthly allocations of interviews are set as sampling goals and are not to be treated as monthly quotas. However, large deviations from the monthly distribution goals could potentially be considered by NMFS as an indication of poor performance.

6. Assignment Procedures

Intercept interviewers are responsible for a variety of tasks associated with each intercept sampling assignment. While preparing for an assignment, interviewers are responsible for:

- Determining best sampling times;
- Determining if the weather is adequate;
- Calibrating scales, and
- Ensuring that all forms and equipment will be on hand.

While on assignment, interviewers are responsible for:

- Courtesy notification of site manager on arrival;
- Completing a site description form (SDF);
- Starting the assignment at the assigned site;
- Choosing alternate sites correctly (if needed);
- Conducting screening for eligible anglers;
- Reading a brief statement regarding the Privacy Act of 1974;
- Conducting intercept interviews of eligible anglers;
- Examining the catch for species identification and enumeration;
- Weighing and measuring the catch;
- Asking socio-economic questions, if applicable;
- Gathering updated information for the FHS vessel directory;
- Conducting FHS dockside validations, and
- Tallying people who are not interviewed (i.e., tallied by activity).

After an assignment is completed, interviewers are responsible for:

- Completing the ASF;
- Cleaning and storing equipment for the next assignment;
- Calling in weekly tallies;
- Ensuring all forms are complete and accurate, and
- Sending all forms to the RRs or the Intercept Contractor.

6.1 Before the Assignment

Before each assignment, interviewers should make sure they have adequate supplies of all necessary manuals and forms and that all needed equipment is in useable condition. All interviewers must have the required materials listed above in their physical possession when on site. Interviewers should not leave required materials in the car.

Manuals:

- Marine Recreational Fisheries Statistics Survey Procedures Manual – The contractor should supply all interviewers with a copy of the manual (the current version is available at ftp://cusk.nmfs.noaa.gov/mrfss/tmp/)

- Coding manual: A list of all codes used on the various forms should be supplied to interviewers and taken on all assignments (the current version is available at ftp://cusk.nmfs.noaa.gov/mrfss/tmp/)

Forms: The following forms and informational materials should be supplied to all interviewers:

- Letter to anglers – a letter on NMFS letterhead giving a brief description of the survey, including information required by the Paperwork Reduction Act and the Privacy Act of 1974, and contact information for the NMFS Program Manager (Appendix J, Letter to Anglers);
- Brochures and other informational materials – Informational materials (brochures, web cards, videos, etc.) will be provided periodically by NMFS to the Intercept Contractor in volumes suitable for wide-spread issuance to all interested respondents and other parties interviewers may encounter;
- Site Description Form – the form used to update information about the assignment site (Appendix I, Forms);
- Screening Introduction – a series of questions used to determine an angler's eligibility for the survey;
- Intercept Questionnaires – the questionnaire used for collecting angler, trip, and catch information (Appendix I, Forms); and
- Assignment Summary Form – the form used to summarize the hours worked at the site, number of people by activity, and other relevant information (Appendix I, Forms).

Equipment: All interviewers will receive the following Contractor-provided materials and will be responsible for maintenance and proper usage:

- Chatillon brass spring scales (2 kg and 12.5 kg) – Interviewers should always carry both scales since they cannot predict the size of the fish they may encounter; digital scales are not recommended
- Measuring board;
- Tape measure;
- Fish Guides and Keys, including but not limited to Peterson's *A Field Guide to Atlantic Coast Fishes of North America* and a dichotomous fish identification key appropriate to each area;
- Legal-sized clipboard;
- Plastic bags – food storage size for weighing small fish and large-sized bags to protect the scales when they are not in use; and
- Cloth rags or towel – these are useful for wiping hands between fish handling and form handling.

Other Assignment Materials: Prior to each wave of interviewing, the Intercept Contractor should send each active interviewer the following which should also be carried on all assignments:

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- Site assignment list – a listing of assignments for each individual interviewer;
- Current Site Register – a list of all known saltwater fishing sites in the state with pressures for the current wave (an example is shown in Appendix G).

Interviewers should not attempt an assignment if the weather is such that there will be no anglers. For example, if there are small craft warnings, interviewers should not go out on a boat assignment. There may be shore fishing activity even though boats are not active. The interviewer should pay close attention to the weather in his/her area, and call his/her RR or the Contractor no later than the day after the assignment to reschedule “weathered-out” assignments.

Each assignment specifies an assigned mode, starting site, and date. However, a starting time will not be specified, so it is up to each interviewer to select an appropriate starting time for the assignment. This should be done with the understanding that an assignment can last up to eight hours, and that anglers must be interviewed at the completion of their fishing trips. The interviewer should plan on being at the site during its peak hours in terms of angler activity; however, some coverage of non-peak hours should occur to prevent any bias. Bias could occur if anglers that return during non-peak hours fish differently than those returning at peak hours (for example, if they fish for different target species, have different catch rates or catch different sizes, etc.). New interviewers should review their proposed starting time with their RRs prior to finalizing the schedule.

The time of day selected for sampling should reflect the time that most anglers complete their fishing trips. For example, if anglers typically use a shore fishing site at high tide only, then that should be the time of day for conducting intercepts. Also, if night fishing pressure is high (e.g., on a lighted pier), then some interviewing should be done at night, as long as it is safe to do so. Most anglers return to boat launching and mooring areas in early morning from night trips and mid to late afternoon or early evening for other trips. Again it is the responsibility of the interviewer to ascertain the optimum time for achieving the best intercept results for each sample site. Sampling hours should not be influenced by the interviewer’s other obligations, such as another job.

Selecting an appropriate time of arrival at a site is essential to determine the likelihood of obtaining at least one interview per hour. During the first two hours of on-site time, interviewers should determine whether they will be able to obtain at least one interview per hour for the entire interviewing day. If the activity is low, then during the first two hours of the assignment the interviewer should also visit two alternate sites.

Interviewers **must** start their assignments at the assigned site, and must give priority to obtaining interviews at the assigned site in the assigned mode. When possible, they should do some advance checking with the person in charge at that site before going on an assignment. This is especially important for assignments at private marinas and charter boat docks, etc. where it is important to know the hours of operation. A contact name and phone number is included on the site register whenever possible. When phone numbers are not provided, the interviewer should use his/her phone directory to find a listing for the site. Any revisions or additions should be noted on the Site Description Form and on the interviewer's own copy of the Site Register.

While scales should be calibrated at least once or twice a year using a set of certified standard weights, interviewers should also prepare for every assignment by ensuring that their scales are zeroed properly. Most instances of improper zeroing result in rather small errors of between 0.1 - 0.2 kg. This amount may seem insignificant, but when catch estimates are expanded from raw data, these "small" errors can cause a large and undesirable weight bias. For example, suppose an interviewer frequently encounters a small species of fish which rarely exceeds weights of 0.2 kg. If a scale is not set properly, and reads 0.1 kg light, then they would under-report the biomass of those fish by as much as one-half the actual value. Of course, the more out of adjustment the scale, the more significant the error becomes. It is important that interviewers realize that even apparently minute maladjustments can cause bias. Figure 6.1 shows how to properly calibrate Chatillon spring scales.

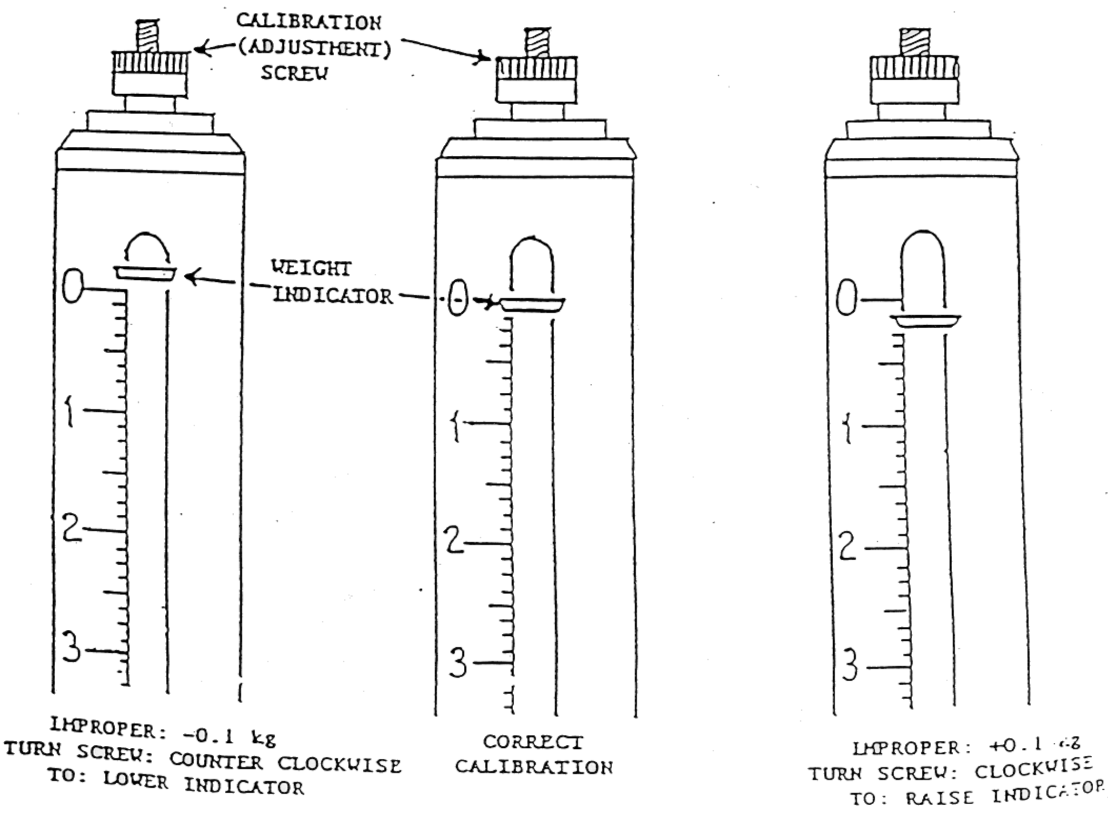


Figure 6.1 Calibration of Chatillon Scale

Over time, springs inside the scales may stretch and measure inaccurately. If interviewers feel their scale(s) is weighing improperly, they should find an object of known weight (preferable a standard weight, but a meat or deli package with the actual weight marked on it and minimal packaging would also work) and test it on the instrument to see if it conforms to the expected weight. If it does not, then the interviewer should not use that scale and should contact his/her RR for a new, verified unit as soon as possible.

6.2 During the Assignment

Upon arriving at the site, interviewers should first check in with the person in charge (or the person previously contacted). Many sites, especially public boat ramps, will have no such person, but privately owned or closely supervised public operations will have a manager in charge. Both for permission and as a courtesy, the interviewer should introduce him or herself and give a summary of the purpose of the survey. Copies of the letter from NMFS (Appendix J), and the informational materials should be provided to substantiate the legitimacy of the survey and encourage cooperation, especially at new sites. These should be given out as needed. These letters also contain language that is required by the Paperwork Reduction Act and the Privacy Act of 1974 to be available to survey respondents upon request.

NOTE: The importance of these letters cannot be over-stressed. They are a direct link from NMFS to the anglers and should be distributed freely. All business facilities, privately–owned facilities, and monitored public facilities should be given a copy for their files and bulletin boards. Interviewers should always have some copies available when on assignment.

Inquiries from the public that require detailed responses about the program should **never** be addressed by the interviewers. Instead, the interviewer should attempt to obtain contact information which should then be forwarded to NMFS through the Contractor.

At some fishing sites, especially shore fishing sites, it is possible and advisable to build a rapport with the people fishing prior to conducting any interviews. All anglers approached should be told the interviewer's name and that the survey **is being conducted under contract for NMFS. At no time should an interviewer claim to be an employee of NMFS.** Anglers who have had the opportunity to meet the interviewer and discuss the survey tend to be more cooperative when asked for an interview at the end of a fishing trip. A key factor in gaining the respondent’s initial cooperation and confidence in the study lies in assuring the respondent that the interviewer is not part of any enforcement effort and informing the respondent about the basic research nature of the survey. When explicitly given the purpose and scope of the survey very early in the introduction, an angler’s initial reluctance and misgivings usually dissolve and the interview will proceed in an atmosphere of confidence and cooperation.

The canvassing introduction is a useful tool for interviewers to determine the most productive time and place to conduct interviews. By determining in advance the estimated times that individuals anticipate their fishing trips will be completed, interviewers can decide if it will be necessary to visit alternate sites.

The canvassing process should be very informal and as unobtrusive as possible. The conversation might begin with: “Catch anything?” or “How’s the fishing?” While canvassing, the interviewer might mention the desire to identify, weigh, and measure the fish caught. This alone often provides an incentive for the interview.

For each assignment, the primary goal is to obtain 20 to 30 “good” intercept interviews in the assigned mode. In the Northeast region, the maximum is 20 interviews in the assigned mode. In the Southeast, the maximum is 30 interviews in the assigned mode. While there is no maximum number of interviews on HB assignments, the goal is to get at least 20 “good” interviews. “Good” interviews are interviews in which all key data are obtained. Key questions that must be completed are marked with an asterisk on the intercept form. This includes: fishing mode; water fished; three/ten mile limit for ocean fishing; state and county of residence; questions related to the fish caught and the anglers who contributed to the catch; whether or not the vessel is on the FHS vessel directory; and the total number of anglers on the boat.

There are no set on-site time limits for obtaining interviews; however, the contractor may set a limit for the sake of efficiency as long as the resulting interviews are representative of the fishing activity at that site on that day. Interviewers should strive for efficiency and should not sit at sites where there is no expectation that an average of at least one interview per hour could be obtained. Generally interviewers should try to obtain the maximum number of good interviews good interviews in an 8-hour assignment, although they may not visit more than three sites during one assignment, and sometimes will not reach 20/30.

Some sites may periodically have many more than 20/30 anglers using the site. In these cases the goal is not to obtain the maximum number of interviews in the shortest time period. Upon arriving at the site, the interviewer should obtain a rough estimate of the number of anglers fishing (through a visual survey) as well as an estimate of the number of additional anglers that might arrive later in the day, and subsample from the total number of anglers expected to use the site. For example, if the interviewer believes that a total of 90 anglers will use the site over the 8 hours s/he will be there, the interviewer would interview every 3rd angler (but not every 3rd *group* of anglers).

6.2.1 Alternate Sites

It is acceptable for interviewers to conduct interviews at sites other than the assigned site. However, for each state and wave, at least fifty percent of any mode’s interviews during a wave should be collected during assignments drawn for that mode and at the assigned site.

Statement of Work

While the goal is to obtain 20 (or 30) “good” interviews per assignment, interviewers may not always be able to meet this goal. Interviewers may need to visit one or two alternate sites before completing an assignment; however, an interviewer must **always** visit his/her assigned site FIRST. There are only a few exceptions to this rule, including:

- An interviewer is unable to locate the assigned site, or
- The assigned site is an official tournament weigh station.

There may be very rare occasions when the interviewer will be unable to locate the assigned site, and is unable to reach the RR for assistance. When this happens, the interviewer should select an alternate site as close as possible to where the assigned site was thought to be located. This site would be treated as a starting site, and up to two alternate sites may still be visited. The interviewer must contact his/her RR afterwards to locate the site and include better descriptive information in the Site Register.

Interviewers are prohibited from interviewing at tournament weigh-in sites, as participating anglers are likely to bring in the largest fish, therefore biasing the data. In addition, the type of tournament will dictate catch per unit of effort because of targeted species and the recent evolution of tag and release events. Assigned sites and dates are randomly selected without regard to what might be happening at each site. If an assigned site turns out to be the official weigh station for a tournament, the interviewer should note the activity on the ASF but select an alternate site as close as possible to where the assigned site is located. This site should be treated as a starting site, and up to two alternate sites may still be visited. In other words, an interviewer can go to three sites in addition to the official weigh station for a tournament. An angler who has participated in a tournament, but is intercepted at a site other than the tournament weigh station is eligible to be interviewed.

Interviewers should not leave their assigned site if they encounter another intercept interviewer at the assigned site. Unless an error was made during scheduling, the interviewer will be the only one assigned to that site on that day. The other interviewer may have selected the assigned site as an alternate site, and should leave as soon as he/she completes any interviews in progress.

Some examples of when it would be appropriate for interviewers to visit alternate sites include:

- If there is no fishing activity (no anglers at a shore site or no boat trailers at a boat ramp) in the assigned mode at the assigned site;
- If fishing activity is low and a preliminary canvass shows that it will be quite a while before any anglers will be finished for the day (e.g., if the interviewer checks with the marina operator or charter boat booking agents and they don’t expect any boats in for 4 or 5 hours); and
- If the interviewer has reason to believe that an average of at least one interview per on-site hour cannot be obtained.

Statement of Work

The following rules apply when selecting alternate sites:

- Any alternate site(s) selected must be in the same state, county and mode, and must be the nearest to the assigned site, but not further than a one hour drive;
- The site must have fishing activity in the assigned mode. The pressure estimate listed on the site register for that particular site and for the assigned mode must range from “0” to “7”; and
- If the assigned site for a SH assignment is a beach, bank or natural shoreline, then any alternate site(s) visited must also be a beach, bank or natural shoreline area. Interviewers cannot select a pier, bridge, jetty or other man-made structure as an alternate site in this situation. The reverse is not true, however. If the assigned site is a man-made structure, then interviewers may select any shore site, including a beach or bank site, as an alternate site.
- Only two alternate sites (or a total of three sites) may be visited on one assignment. The only exception to this rule is if an alternate site is an official tournament weigh station, or if another interviewer is already at the site.
- If the assignment is a HB trip, the interviewer should first attempt to get on another boat **at that same site.** If there are no other head boats available for sampling on the assigned date at that site, then the interviewer may attempt to sample another head boat trip at the next nearest site.
- Interviewers may select a hostile site as an alternate site if it meets the above mentioned requirements; however, they are not *required* to do so. If such a site is visited and permission to interview is granted, the site must be updated in the MSR as no longer hostile.

Continually visiting the same highly productive sites as alternates is “hot-spotting”, which introduces bias and must be discouraged.

A newly discovered site may not be used as an alternate site. The Intercept Contractor will assign codes for these new sites and they must be added to the Site Register in accordance with the instructions in Section 4.1.1.1.

It is not necessary to obtain all the interviews at one site. If three sites are visited, interviews may be conducted at any or all of these sites (but at least 50% of the interviews must come from the assigned site, as stated earlier). In addition, interviewers may return to previously visited sites at any time if they have information from local anglers or marina operators that eligible anglers may be present later in the day. It is important to remember that the site code recorded on the intercept form must be for the site where the interview was actually conducted (not necessarily the code for the assigned site).

Interviewers should number the intercept forms consecutively, starting with “01” for the first interview on an assignment, regardless of where this interview was completed (assigned or alternate site). In other words, interviewers should **not** begin numbering the intercept interviews with “01” at each site they visit.

6.2.2 Alternate Modes

Alternate mode interviewing is not allowed. If an interviewer has reason to believe that the assigned mode would not be active within a one hour drive of the assigned site **prior** to going out on the assignment, the interviewer should postpone the assignment, and reschedule the assignment to a date agreed upon by the field supervisor.

6.2.3 Two Assignments in One Day

Occasionally an interviewer will be asked to take two assignments on the same day. The interviewer should use his/her best judgment to determine which assignment should be worked first. Once that determination is made, the interviewer must completely work that assignment before the second assignment is attempted. In other words, before beginning the second assignment, the interviewer must either obtain 20 (or 30) "good" interviews in the target mode or visit the maximum of three sites to determine that one interview per hour in the target mode is no longer possible on the first assignment. An interviewer cannot just visit the starting site and call it "quits" on the first assignment before the maximum number of “good” interviews is obtained in the target mode.

If time permits after the first assignment is completely worked, the second assignment should be attempted. If the second assignment happens to be in the same assigned mode as the first assignment, the interviewer should not repeat any of the sites used on the first assignment. If needed, different alternate site(s) should be selected. If the second assignment happens to be in a different mode and no interviews were obtained in that mode on the first assignment, then it is permissible to use the same sites as alternates if those are the next nearest with the target mode. If it is not possible to work both assignments on the same day, the interviewer should call their RR to reschedule the incomplete assignment.

Both assignments should be treated as separate assignments. Each should have its own ASF and SDF. In addition, the assignment should be labeled as a second assignment on the ASF and on the intercept forms.

6.2.4 Mode-Specific On-Site Procedures

For all modes, interviewers should **not** station themselves next to a fish cleaning stand, weigh station, or hoist if that would prevent them from intercepting anglers without catch. Only anglers who caught fish will stop at those areas, and the sample will be biased towards anglers with catch. Anglers without catch must be given the same priority as those with catch.

Interviewers must not engage in fishing activity while on assignment. This includes time spent between interviews, or while waiting for anglers to complete their fishing for the day. This is considered both unprofessional and unproductive.

The on-site procedures differ slightly for each mode of fishing. The following subsections describe the typical procedures for each mode.

6.2.4.1 Shore (SH) Mode

If the assigned mode is a **pier**, **jetty**, or **bridge**, the interviewer should station himself/herself at a point of access (entry-exit) to the site. The station should be such that all anglers leaving the site can be easily seen and approached. If all anglers are actively engaged in fishing, the interviewer should canvass the area to inform them about the survey, solicit their cooperation, and point out where he/she will be stationed.

When a **beach** or **bank** site is assigned, the interviewer will typically have to cover a rather extensive stretch of coastline with anglers scattered along the fishing area. If there is a predominant exit point from the site (e.g., a central parking facility), the interviewer should position him- or herself there. If no such point exists, the interviewer should position him- or herself such that the majority of anglers are within sight and easily accessible. Close observation of the fishing activity is required since the interviewer must be alert to those anglers leaving the site. If no suitable observation spot can be found and the angler's completion times are undetermined, a drifting method is acceptable, with concentration on the locations where the most anglers are present.

It is permissible to obtain some interviews from anglers who have not yet completed their trips, but only in the beach/bank mode, and only at the end of the assignment. These are called "incomplete trip" interviews. To be eligible for an incomplete trip interview, the angler must have completed at least one-third of the fishing trip. Also, for each assignment, incomplete trip interviews may never exceed 50 percent of the interviews obtained in the beach/bank mode. After half of an interviewer's on-site time has elapsed, he/she may get one incomplete trip beach/bank interview for every complete trip beach/bank interview that is obtained. Incomplete trip interviews should never be taken during the first half of an interviewer's on-site time, but only as a last resort during the latter half of the interviewing day.

6.2.4.2 Head Boat (HB) Mode

All HB assignments are conducted at sea. When arranging to ride a head boat, the interviewers should call the contact number for the assigned boat to reserve a spot for the date and type of trip specified. Intercept interviewers will be expected to ride the boats as paying passengers. Interviewers should inform the person taking the reservation about the survey, and should also probe for the number of reservations already made in order to maximize the probability the boat will make that trip, barring bad weather or other unforeseen circumstances. If the particular boat trip has already reached (or is expected to reach) maximum (i.e., Coast Guard) passenger capacity, interviewers should attempt to ride an alternate vessel at that same site. If there is no other available head boat at that site, the interviewer may attempt to ride a headboat at the next nearest site. If there are no available vessels at the original site and the next nearest site, the interviewer will need to reschedule the assignment on the next available day (as long as it is the same day-type) with the same type of trip (e.g. half day or full day) and space available for the interviewer. Trips cancelled due to bad weather should also be rescheduled following the same guidelines.

Under no circumstance should the presence of interviewers cause the vessel to exceed the Coast Guard capacity of the vessel. It is expected that many, if not most, of the sampled trips will require the presence of two interviewers in order to maximize the amount of data collected.

The interviewers should arrive at the vessel no later than ½ hour before the scheduled departure time. Prior to boarding the vessel, the interviewers should locate the captain and introduce themselves, and briefly explain the survey. Under no circumstance should the interviewers board the boat without the captain being made aware of their presence and purpose on the boat. The interviewers should also use this opportunity to solicit input from the captain on the best place to set up for measuring fish, so as to be out of the way of anglers and deckhands. However, the captain should not influence which anglers are to be interviewed.

During the time it takes to reach the fishing grounds, the interviewers should begin to conduct partial interviews, i.e., the interviewers should work through the interview questions with the exception of time of interview, status of interview, hours fished and catch. The location fished (i.e., the question pertaining to distance from shore) can be obtained from the captain at the end of the trip. The interviewers should explain to the anglers that they will be measuring harvested catch as well as some of the discarded catch. The interviewers will return to these anglers later, after they have finished fishing, to complete the interviews. Under no circumstances should the interviewers just approach the more friendly anglers, those anglers that appear to be the most experienced, or those with the most expensive fishing gear, etc. Also, the captain and deckhands should not be interviewed, regardless of whether or not they catch any fish during the trip. While the anglers are fishing, the interviewers will be responsible for getting accurate counts of, and measuring discarded catch. The priority is to identify and count discards, then as time allows, obtain measurements. For trips with few anglers and/or few fish, the interviewers may be able to accurately identify and count all discards for all anglers interviewed. If there are many anglers, many fish being caught and discarded, and/or if movement or visibility around the boat is impeded in any way, the interviewers will need to select a subset of interviewed anglers to observe.

In addition to obtaining counts of each angler's discards, it may also be possible to measure some or all of the discards. For trips with a high number of anglers, the interviewers may need to observe and/or measure discarded catch for a subset of the anglers interviewed.

Just as with harvested catch, fork length will be taken (see Figure 6.2 in section 6.2.5.3) when measuring discards. Weights of live discards will not be collected due to the possibility of injuring the fish. The discard data form may be found in Appendix I.

It is imperative the interviewers not attempt to observe, count and measure discards for so many anglers that the quality of the data is compromised. The goal is to obtain complete data for several individual anglers rather than partial data for all of the anglers. Obtaining measurements of harvested catch takes precedence over measuring discarded catch. The time needed by the interviewers to measure the harvested catch is dependent upon the amount of time available between the last fishing stop and when the boat will reach the dock, the number of fish caught, the number of interviews being completed, weather, and how the anglers' fish are stored on the boat.

Each boat will generally have procedures in place for the storage of fish. The anglers may store their fish individually or as a group, in personal ice chests around the boat, or they may be stored using some sort of numbering system in a common ice box or fish hold. The interviewers should take this into consideration in deciding how and when to measure the harvested catch.

Ideally, the interviewers will be able to observe all discarded catch prior to measuring the harvested catch and finishing all the interviews. In order to maximize the probability of ensuring complete interviews are obtained, the interviewers should maintain regular communication with the boat captain regarding when the boat will be returning to the dock and the amount of time it will take to actually make the return trip. This information will assist the interviewers in determining when they should start measuring the harvested catch. There may be instances when the time needed to return to the dock is insufficient for the interviewers to measure the harvested catch and complete the interviews already started. In these cases, the interviewers will need to begin measuring harvested catch while the anglers are still fishing.

As with CH and PR modes, interviewers must not repeatedly sample the same boats every time they visit a particular site, nor should they repeatedly sample the same type of trip (such as the afternoon half day trip).

6.2.4.3 Charter Boat (CH) Mode

Interviewers should never board a charter boat. Intercept procedures for charter boats resemble those for private and rental boats (described below). With charter boat sites, however, it is well worth the effort to call the site in advance to find out the boats' schedules. With this information, the interviewer can plan to arrive at the dock just prior to the scheduled returns. The interviewer may check charter boat schedules by telephone and the Internet for the assigned site as well as two alternate sites and reschedule the assignment if there are no charter boats going out from any of the three sites due to bad weather. If no charter boats are going out because there is little fishing activity the interviewer should treat the assignment as resulting in zero intercepts (i.e., a completed assignment).

Interviewers should strive to complete individual interviews and catch records for each member of the charter group. However, this may be difficult for charter boats, since anglers often have little control over the handling of their fish, which are often stored together. If several boats are returning at the same time, it is better to interview one or two anglers from each boat than every angler on one boat if an interviewer is unable to interview all anglers on all boats.

Under no circumstances should interviews be conducted with charter captains or mates. They are not considered "recreational anglers" even though they might have fished. Captains and mates may be consulted to determine the actual water area fished or other pertinent information such as to confirm species identification of fish released alive by the anglers.

As with HB and PR modes, interviewers must not repeatedly sample the same boats every time they visit a particular site.

6.2.4.4 Private / Rental Boat (PR) Mode

Because there are large differences between one boat landing/docking facility and another, the best procedure for covering a particular site must be determined by the interviewer. For private boat interviews, the anglers may be interviewed while waiting for a boat hoist or while cleaning the boat at the dock. Others may be interviewed in the parking lot while waiting for access to a ramp to remove the boat from the water. The interviewer will have to use discretion in determining the best approach; however, they should never get in the way of the angler.

Ideally, all anglers on all boats will be interviewed. However, time constraints may not allow for this. If it is not possible to interview every angler on every boat, the interviewer should randomly select a subset of boats and anglers to interview. If there are many boats returning at once, a non-biased method of sub-sampling is needed whereby every second or third boat is approached. If several boats have returned at the same time but are in various stages of removing the boats from the water, the interviewer may also approach the next **available** boat. It is better to interview one angler from each boat than every angler on one boat if an interviewer is unable to interview all anglers on all boats.

As with CH and HB modes, interviewers must not repeatedly sample the same boats every time they visit a particular site.

6.2.5 Conducting Interviews

All approached anglers should be told the interviewer's name and that the survey is being conducted under contract for NMFS. At no time should an interviewer claim to be a NMFS employee.

If the angler is willing to cooperate, the interviewer would then ask the eligibility questions. The Screening Introduction serves two major purposes:

- To introduce the interviewer and the survey; and
- To determine if the angler is eligible for an interview.

While interviewers will be given several copies of the Screening Introduction, it should not be needed on a routine basis if the interviewer fully understands the study background and eligibility requirements. Angler screening questions must be repeated for each new angler interviewed, regardless of whether interviewed anglers were fishing together or not. To be eligible for an interview, an angler must meet all of the following criteria:

- must have been fishing recreationally;
- must have fished in saltwater;
- must have <u>completed</u> <u>his/her</u> <u>fishing</u> <u>trip</u>;
- must have fished in <u>U.S.</u> <u>waters</u>; and
- must be five years of age or older.

Screening Questionnaire

Hello, my name is __________and I represent (CONTRACTOR NAME). We are conducting a survey of marine recreational anglers for the National Marine Fisheries Service of the U.S. Department of Commerce. I'd like to ask you a few questions about your fishing.

1. Was the primary purpose of your trip today for recreation; that is, for fun and relaxation, or was it to provide income either from the sale of fish or from the sale of the fishing opportunity?
   Recreation → Continue
   To provide income → Thank angler and end interview, angler not eligible

2. Were you saltwater fishing today? By saltwater fishing, I mean fishing in oceans, sounds or bays, or in brackish portions of rivers.
   Yes → Continue (if in Maine or U.S.V.I. ask 2a)
   No → Thank angler and end interview, angler not eligible

   2a. Was the majority of your fishing in Canadian or Non-US waters?

Yes → Thank angler and end interview, angler not eligible
No → Continue

3. Were you fishing for finfish today?
   Yes → Continue with question 4
   No → Continue with question 3a

   3a. Did you catch any finfish today?
   Yes → Continue

   No → Thank angler and end interview, angler not eligible

4. Have you completed your saltwater fishing today?

   Yes → Angler is eligible, start main questionnaire
   No → Continue

5. Are you coming back here or going somewhere else to fish?
   Coming back here → Continue
   Going somewhere else → Continue

   5a. Will you still be fishing from a (SPECIFY MODE)?
   Same mode → Thank angler and end interview, angler not eligible
   Different mode → Angler is eligible, start main questionnaire

Screening Question Rationale

Item 1 This question is necessary to determine whether the angler meets the "recreational" criteria. A "to provide income" response to the question would end the screening -- the angler is not a recreational angler. A "recreation" response to Item 1 would lead to Item 2.

In some states an angler may be "commercial" or "recreational" on any given day. Interviewers must ask about the **original intent** for the particular trip taken that day, regardless of the type of fishing license possessed.

Item 2 The purpose of this question is to verify that the angler was fishing in saltwater. An angler is a saltwater angler if he/she thinks he/she is a saltwater angler. At sites where both freshwater and saltwater fishing occur, the interviewer must ask each angler whether they were freshwater or saltwater fishing. Anglers who say they were freshwater fishing are not eligible for the survey and should not be interviewed. A “no” response to Item 2 will end the screening. A “yes” response will lead to Item 3 unless the interviewer knows for a fact that it is impossible for the angler to have been fishing in saltwater (e.g., the angler caught freshwater fish).

In northern areas of Maine, if an interviewer has reason to believe that an angler may have spent time fishing outside of United States waters, the interviewer should also ask if the angler fished in Canadian waters. If the majority of his/her effort was **not** in United States' waters, the angler is **not** eligible for an interview and the screening should be terminated. If the "majority" is determined to be in United States' waters, all of the angler's fishing time, catch, etc., should be included on the Intercept questionnaire -- even time spent and fish caught in foreign waters.

Item 3 The purpose of this question is to verify that the person is a finfish angler, that is, the fishing trip is directed at fish with fins. A "yes" response to Item 3 would lead to Item 4. Note that a person does not have to have caught a finfish to participate; he/she must only have been fishing for finfish. A "no" response to Item 3 would lead to Item 3a.

Item 3a The purpose of this item is to identify shell fishermen who might have landed finfish. The only way a shell fisherman can be eligible is for him/her to have caught one or more finfish incidentally. A "no" at this item would lead to termination of the screening. A "yes" would lead to Item 4.

The angler's actual catch has no effect at all on his/her eligibility. If the angler has thrown fish back or did not catch anything at all, the angler would still be eligible for an interview as long as there was intent to catch finfish. Generally, respondents pursuing crabs, shrimp, lobster, clams, oysters, and other invertebrates are not eligible for the survey; however, if they happened to catch a finfish (whether it was kept or not) during the fishing trip, the respondent should be interviewed.

Item 4 All saltwater anglers are asked whether they have completed their fishing for the day. If the response is “yes,” the angler is eligible for the survey and the interviewer should start the main Intercept Questionnaire. If the response is “no,” the interviewer will continue by asking Item 5.

Item 5 Anglers who are coming back to the same site to fish are eligible only if they plan to fish from a different mode.

Item 5a Anglers are not eligible if they are planning to fish from the same mode at the same site later in the day. Similarly, anglers who are going somewhere else to fish are eligible only if they plan to fish from a different mode at their next site. They are not eligible if they are planning to fish from the same mode at a different site later in the day.

For the most part, interviewers will be intercepting anglers who have completed their fishing trips. If an angler is moving from one site to another site in the same mode, that angler has not completed the trip and is not eligible for an interview. If an angler is moving from one mode to another mode (e.g., from a private boat to a charter boat) at either the same site or different sites, that angler has completed a trip and is eligible to be interviewed about that trip. If an intercepted angler has completed two trips, having fished in two different modes, the interviewer should ask questions pertaining only to the most recently finished trip. No incomplete interviews or complete interviews of anglers who have not completed their fishing trips shall be accepted towards the intercept interview goals. There is an exception to this rule for the beach-bank mode (Section 6.2.4.1).

Interviewers are responsible for conducting complete intercept interviews for eligible anglers at an access site in an unbiased manner. A complete interview includes asking each respondent for specific information about their fishing trip, asking demographic data that are used to match intercept data to the telephone data, examining the catch for species identification and enumeration, and weighing and measuring the catch. For the intercept survey, the intercept interview goal is the number of complete, usable interviews and does <u>not</u> include refusals or incomplete interviews of eligible anglers.

All eligible anglers shall be asked to:

- provide details for the current trip, including: mode of fishing, gear used, general area of fishing (river, bay, ocean less than three miles, ocean greater than three miles, time spent actively fishing, time spent getting on the water (boat modes), fish targeted, number of people fishing together, and details about any fish caught unavailable for inspection (species and disposition of unavailable catch);
- recall their total number of marine recreational fishing trips for finfish made in the past two months, and the past twelve months;
- allow the interviewer to identify, weigh and measure any fish available for inspection, and to provide the interviewers with details about the disposition of this available catch;
- give their county and state of residence, postal zip code, and whether or not their home has a telephone, and
- provide their name and a telephone number for validation purposes.

Sample Intercept Survey questionnaires may be found in Appendix I. NMFS reserves the right to make changes in data items for regional or annual customization and in order to improve response rates or accuracy of the responses. NMFS will submit any questionnaire changes to the Contractor at least 45 days before the beginning of each wave. Some states have periodically added one or two questions to the form; however, all questionnaires must be approved by NMFS prior to use. Intercept Forms may be found in Appendix I.

Some general instructions for conducting the intercept interviews are:

1. Wording - The questions to be put to the anglers are written out in full for a purpose. Methodological studies have shown that even slight changes in wording, for example, "should" versus "could", drastically influence item response. The interviewer should always ask each item on the questionnaire **exactly** as it is written. Instructions to interviewers that are not to be read during the interview are written in italics.

2. Provide Definitions, Not Answers - If the angler asks for the interviewer's opinion about an item, the interviewer should provide a definition for the item in question, rather than supply an opinion or the actual response, for most cases. For example, if an angler is unsure about what gear he was using, the interviewer should explain the differences and let the angler decide. Definitions may be found in Appendix B, Glossary.

3. Codes for Not Applicable Questions - As a general rule, items on the questionnaires that are not applicable to a particular angler (i.e., items falling out in skip patterns) are coded with "8"'s, as indicated on the questionnaire.

4. Codes for Refused Questions - As a general rule, items on the questionnaires that are refused are coded with "9"s.

5. Codes for Don't Know - As a general rule, items on the questionnaires that the respondent does not know the answer to are coded with "9"'s and a last digit of "8".

6. Right Justify and Add Leading Zeros - If an answer does not require use of all boxes provided for an item, the interviewer should right justify the entry and add leading zeros.

7. "Other (SPECIFY)" - In some cases, the response codes for some data items are not exhaustive and include codes designated "Other (SPECIFY)". If a respondent gives an answer not covered by the pre-coded responses, the interviewer should enter the "other" code and write out the respondent's exact response next to the coding boxes. Questions requiring written responses will be specifically identified in the statement of work or in the written specifications for questionnaire changes or use of flexible questions.

8. Notes/Footnotes - For some items, footnotes will be required under some conditions. Examples are: if weight and/or length measurements are missing; if a site code is needed; if a state and/or county code; or if a species code is needed. In such cases the interviewer should place an asterisk (*) by the item and provide

a footnote explaining the situation near the bottom of the Coding Form. NMFS requires footnotes (details) on all disposition 6 or 7 fish.

9. Best Use of Time - There will be times during the day when the interviewer will seemingly have little to do. This time can be used to fill in the identifying information on forms that will be used later at the site. This time can also be spent reviewing and editing completed coding forms, especially if the interviewer is subsampling anglers.

10. Maps - Maps for the state being sampled should be available to help interviewers and anglers locate areas of fishing. NMFS will provide maps of the estuaries used for Question 11, showing the boundaries between inland and state waters.

11. Terminate - If a respondent refuses or can not answer a "key" question, the interviewer must thank the respondent pleasantly and say goodbye. The interview status code should be checked with the appropriate code.

12. Forms – Intercept forms are NEVER to be recopied, nor are data to be recorded on anything other than the proper form (such as a dry-erase board or separate sheet of paper). Recopying data is an inefficient use of the interviewers' time and leads to the potential introduction of errors.

6.2.5.1 Item-By-Item Instructions

Several data items are critical to the data expansion routines and are termed key items. If a response to any of the key items is missing, then the interview is not valid. Key items have bold print in the following instructions and have asterisks next to the Item number on the Intercept Questionnaires and Coding Forms. Key items include mode and area of fishing; distance from shore; state and county of residence; group catch questions; catch disposition, number of catch by species; and party information.

These instructions apply to the 2008 Intercept Questionnaires (Appendix I). Some minor changes in data items should be expected from year-to-year.

Items 1-10 are not questions to be asked of the angler. They are identifying information.

Item 1 Record Type - "1" is reserved for all intercept interviews but is not on the form.

Item 2 Assignment No. - The instructions read: "Please indicate if this is your first or second assignment today, by writing "1" or "2"." It is possible, but rare, for one interviewer to be given two assignments in the same day. If an interviewer does two assignments in the same day, the interviewer needs to remember to code this box with a "2" on all Coding Forms submitted for the second assignment.

Item 3 Interviewer Code - Each interviewer will be given a unique four-digit identification number. This number must be used on all submitted forms.

Item 4 Year/Month/Day - The interviewer should record the date of the intercept. The year is pre-coded on the form; therefore, the interviewer should only enter the month and day (two digits each). All forms from the same assignment should have the same and accurate date.

Item 5 Intercept Number - Throughout an assignment the interviewer should consecutively number the forms completed for the assignment. The first form used should be coded "01", the second "02", etc., regardless of whether the interview was obtained at the assigned site or an alternate site. All forms sent in should be numbered, regardless of interview status.

At the end of the assignment the last number used should be the same as the number of forms submitted. All forms from the same assignment should have a unique and sequential interview number, beginning with "01."

Item 6 Interview Time - Using military time, the interviewer should record the time the interview was **completed**. Military time runs on a 24-hour clock starting at 0001 hours (one minute past midnight) and ending at 2400 hours (midnight). For example, 4:45 p.m. should be coded "1645" hours. In the HB mode, partial interviews will be conducted on the way to the fishing grounds but the interviews are not completed until the end of the fishing trip; therefore, the time on these interviews must correctly reflect the *completion* time.

Hours should be checked against times at site. Check to make sure that 24-hour time is used.

Item 7 State Code - The interviewer should enter the two-digit FIPS numerical code for the State of intercept (Appendix C). All forms from the same assignment must have the same and accurate State FIPS code.

Item 8 County Code - The interviewer should enter the three-digit FIPS numerical code for the county of intercept (Appendix C, FIPS codes). All forms from the same assignment must have the same and accurate county FIPS code. County codes must match those on the site register for the State of intercept.

Item 9 Site Code - The interviewer should enter the four-digit numerical code for the site where the interview takes place. This will not necessarily be the assigned site. Site codes and names are unique and are found in the Site Register.

Item 10 Interview Status - This item must be completed at the end of the interview. It serves as an indicator of interview "completeness". Interviews of status "1" or "2" are "good" interviews in that all **key** data have been obtained. Status "1" and "2" interviews count toward the interviewing goal of 20/30 interviews. A status of "1" must have all questions answered. A status of "2" must have all key questions answered. Interviews with a status of "5" do **not** count toward the interviewing goal of 20/30 interviews.

"Questionnaire complete = 1" - This code should be used if the angler responds to all items asked in the interview. In other words, the angler does not refuse to answer any question.

"Refused non-key items = 2" - This code should be used if the angler refuses one or more non-key items but answers all key items.

"Refused key item = 5" - This code should be used if the angler refuses to answer a key item. If a key item is refused, the interviewer should code the item with "9"'s and terminate the interview. Status "5" forms do not count toward the goal of 20 "good" interviews.

Beginning with Item 11 are questions to be asked of the anglers. Boxed items on the Intercept Questionnaire are not asked, but are either instructions to the interviewer or items to be recorded by the interviewer. Key questions are indicated by bold item numbers and printed asterisks.

***Item 11** Fishing From Which Mode? - Interviewers must use discretion in the wording of this question for SH anglers. Obviously, if an angler is leaving a pier, from which no boat fishing was possible, it would be inappropriate to ask whether that angler was fishing from a charter boat. A pier angler should be asked: "Would you say you were fishing from a pier, a jetty, or what?" The interviewer should include in the stem of the question responses from at least two coding categories.

All HB, CH and PR anglers should be offered all four boat alternatives: "Would you say you were fishing from a head boat, a charter boat, a private boat or a rental boat?" If the interviewer can definitively determine that the angler's response is incorrect then the technically correct response should be coded. If the angler has difficulty with the definition of a particular mode, the interviewer should provide definitions and let the angler decide. Charter and Head Boats should be coded as the type of boat it predominately operates as to agree with the stratification of the for-hire fleet as coded in the FHS Directories.

On occasion, the angler will be unable to give a short answer to Item 11. That is, there might be extenuating circumstances that require a more detailed response. The following examples are illustrative of how these "detailed" responses should be handled:

IF THE ANGLER SAYS:	CODE THE MODE AS:
"Bulkhead"	"2" for Jetty, Breakwater, Breachway
"This used to be a bridge but it is now used as a fishing pier."	"1" for Pier
"I hired and fished from a guide boat."	"7" for Charter boat
"I boated to a pier/dock/bridge/causeway, got out of the boat and fished from the pier/dock/jetty.../causeway."	“0”, "1", "2", "3" for pier, jetty/breakwater/breachway/, or bridge/causeway.
"I boated to an oil/gas platform, got out of the boat and fished from the oil/gas platform."	"4" for Other man-made structure and write "oil/gas platform"
"I boated to a beach/bank, got out of the boat and fished from the beach/bank."	"5" for Beach or bank
"I boated to a reef, got out of the boat and fished while standing on the reef."	"6", "7", "8", or “9”- Code to type of boat used
"I boated to a barge, got out of the boat and fished from the barge."	"6"-Head boat

Intercepts at shore sites must be coded from "0" to "5", while intercepts at boat sites must be coded from "6" to "9".

***Item 12** <u>Type</u> <u>of</u> <u>Water</u> <u>Fished</u>- Anglers are asked in what type of "water body" they did most of their fishing. The technically correct response should be coded at Item 12, instead of an obviously incorrect response from the respondent. For a SH angler, it may not be necessary to ask the question. This would be true if the interviewer has observed the fishing and can code the correct water body. Similarly, if an interviewer has ridden on a head boat, the interviewer should code the correct response without asking the question. All other boat anglers will have to be asked the question, since boats can travel great distances.

If the angler responds with an answer other than "ocean/gulf", the interviewer will need to probe to determine the correct response. The follow-up probe is: "What (sound/river/bay/inlet) was that?" The response list for Item 12 contains estuaries that have been recognized by NMFS and the Environmental Protection Agency as "National Estuaries". If the named sound, river, bay or inlet is part of one of the estuaries on the list, the interviewer should code to the appropriate estuary. The estuary maps may also be found in Appendix O. If the named sound, river, bay or inlet is not part of a listed estuary, the interviewer should code "2" for sound, "3" for river, or "4" for bay. "Inlet" should be coded "5" (unless it is part of one of the National Estuaries listed), with the word "inlet" (and the specific name, if applicable) written out in the white space adjacent to Item 12 on the Coding Form.

"Bayou" should be coded "5" with the word "bayou" (and the specific name, if applicable) written in the white space adjacent to Item 12.

Any form coded with a “5” must have the specific water body written on the line provided.

If the angler fished in more than one "water body", that angler should be asked in which "water body" the majority of time fishing was spent. If the angler responds that he/she fished half the time in one water body, and half the time in another, code the response to the water body in which most of the fish were caught.

"Open bays" are included with "ocean/gulf" in the "Open water" category (Code "1"). Open bays are not true bays but stretches of ocean that are called "Such-n-such" bay by local residents, such as Santa Monica Bay in California. There are no open bays on the Atlantic coast.

If a "1" is coded at Item 12, the interviewer should continue with Item 13. If anything other than a "1" is coded at Item 12, the interviewer should code Item 13 with an "8" and continue with Item 14.

***Item 13** Three or Ten Mile Limit? - This item is pertinent only to anglers fishing in "open water" (Code "1" at Item 12). If Item 13 is not pertinent, it should be coded with an "8".

This question is used to determine the effort and catch in State versus Federal jurisdictions. State jurisdiction occurs within the State territorial sea while Federal jurisdiction occurs in open waters beyond the territorial sea. Most States' territorial seas extend three miles from shore. The exceptions are West Florida and Texas where the territorial sea extends approximately ten miles from shore. Since anglers fishing in the shore (SH) mode must have fished within three or ten miles of shore, this is not asked of shore anglers. The interviewer should automatically code Item 13 with a "1" (three miles or less) and continue with Item 14. Anglers fishing in the ocean or gulf from any of the boat modes (HB, CH, and PR), however, must be asked the "three or ten mile" question. The interviewer should enter the appropriate response code at Item 13 and continue with Item 14.

Item 14 <u>Gear?</u> - This question is asked of all anglers. If the angler has used more than one type of gear, he/she should be asked which he/she spent more time using. The gear used the majority of the time should be entered. Only one gear box should be checked, even if the angler used more than one gear. The choices are below (see Appendix B, Glossary of Terms.)

01 = Hook & Line
02 = Dip Net, A-Frame
03 = Cast Net
04 = Gill Net
05 = Seine
06 = Trawl
07 = Trap
08 = Spear
09 = Hand
10 = Other (Specify)

Item 15a <u>Time</u> <u>Fishing?</u> - All anglers are asked how many hours they spent fishing with gear in the water in the mode of intercept on the day of intercept. If the angler fished at more than one site in the mode group of intercept, he/she should be reminded to include all hours spent fishing in the mode at all sites. If the angler fished at a site in a different mode group, he/she should not include time spent fishing in the non-intercept mode.

Interviewers should note that a box with a pre-coded decimal has been provided and that the question requires "to the nearest **half** hour". Only "0" or "5" should appear in the box to the right of the decimal.

Since a trip is defined as fishing in one mode in one waking day, it is waking day hours that should be entered. This should never exceed 24.0.

Time fishing should be less than Item 15b -Time on Boat.

Item 15b <u>Time</u> <u>On</u> <u>Boat?</u> - All anglers fishing from a boat mode are asked how many hours they spent on their boat, away from the dock, in the mode of the intercept on the day of the intercept. This question is meant to measure trip time. Do not include time spent in the boat while the boat is at the dock. Code 15b as “Not Applicable” if the angler is fishing from shore mode.

The minimum entry is "00.5" and the maximum entry is "24.0". The number to the right of the decimal must be "0" or "5". Time on Boat should be larger than Item 15a -Time Fishing.

Item 16 Additional Hours? - This question is used for beach/bank shore anglers who have not yet completed their fishing for the day. Incomplete trip interviews are allowed **only** for the beach/bank category (i.e. mode 5 only) within the shore mode. **No more than 50%** of the beach/bank interviews obtained during any assignment may be incomplete trip interviews. A beach/bank angler must have completed **at least 1/3 of his/her trip** to be eligible for an incomplete trip interview. Code Item 16 as "Not Applicable" if the angler fished from any other mode.

Item 17 Target Species? - The interviewer should ask all anglers to name the kinds of fish they were fishing for. The interviewer should enter the name(s) of the fish on the line(s) provided above the coding boxes and look up the code(s) after the interview is completed.

If the angler says "no", "anything", or "nothing in particular", etc., the interviewer should write "no", "anything", or "nothing in particular" in the first block provided and **leave the coding boxes blank**.

If the angler mentions only one species, that angler should not be pressed for two. The species mentioned would be coded in the first set of boxes and the second set would be left blank. If the angler names two or more species, the interviewer should code only the first two mentioned.
The interviewer should note that identification of a particular **species** of fish is desired, if at all possible. If the angler names a family of fish, the interviewer should probe to determine whether he/she preferred a particular species in that family. For example, if the angler states he or she was fishing for drum, the interviewer should ask "Any particular kind of drum?" If the angler has no preference within the family of fish and several species are possible within that family, the interviewer should enter the family code. If, however, the interviewer knows that the angler could only be going after one species within that family (e.g. there is only one species found in the area), he/she should enter that species code.
For this item, knowledge of how local names translate to exact species is very important. If the angler uses a local (i.e., slang) name (see Appendix K), the interviewer should also enter the accepted common name from the species list (see Appendix N) for the species or family so that field supervisors can check the species code entered.

Interviewers should only record reasonable responses to this item. If an angler responds that he/she was fishing for a species not found in his/her area, this response should not be coded. For example, it is not reasonable that anyone would fish for oceanic pelagic species like blue marlin from an inland pier.

If the intercepted angler is an eligible shellfisher, the target species should be coded to “no particular species/anything”.

All codes must be valid Integrated Taxonomic Information System (ITIS) finfish species codes; otherwise known as Taxonomic Serial Numbers (TSNs).

Item 18 Days Fishing in Past 12 Months? - All anglers are asked how many days they have been saltwater sport fin-fishing in the state of intercept or from a boat launched in the state of intercept, exclusive of the day of intercept, in the past 12 months.

The wording of this item is very important. The angler should think back to the same date in the previous year. He/she should **not** include days spent freshwater fishing, commercially fishing, shellfishing, or days spent fishing in other states.

The interviewer may have to work with an angler to come up with a specific number. Anglers are likely to say something like "every week" or "once a month". In these instances the interviewer should translate the response to a number and verify that number with the angler.

Since the question requires days and the day of intercept should not be included, the maximum acceptable entry would be "364", and the minimum acceptable entry would be "000". Codes "998" and "999" are provided for "don't know" and "refused", respectively.

Item 19 Days Fishing in Past 2 Months? - All anglers are asked the question at Item 19. The limitations that apply to Item 18 also apply to Item 19.

Since the question requires days and the day of intercept should not be included, the maximum acceptable entry would be "59" to "62", depending on the months included, and the minimum acceptable entry would be "00". Codes "98" and "99" are provided for "don't know" and "refused", respectively. Also, the entry at Item 19 should never exceed the entry at Item 18.

***Item 20** Residence? - All anglers are asked their State and county of residence. If the angler does not know his/her county of residence, the interviewer should ask for their city and enter the city name and circle "city" on the Coding Form. In that instance, the coding boxes for county would be left

blank. They would be completed later based on city name by RRs or other contractor personnel.
If the angler should ask, it is their legal residence that they should be reporting. Since this is not included in the question stem, interviewers should only provide this information if the respondent asks for clarification.

After interview completion, interviewers should code the response with the correct FIPS codes for State and county (Appendix C). If an angler is a resident of some country other than the United States, the appropriate country code (Appendix C) must be coded in the State position and "998" must be coded in the county position. If the interviewer is unsure of the correct code, he/she should write out the necessary information and leave the coding boxes blank for completion by field supervisors.

Item 21 <u>ZIP</u> <u>Code?</u> - All anglers are asked the ZIP Code of their residence. The ZIP Code given should be the ZIP Code of the residence named by State and county in Item 20. As before, if the angler should ask, it is the legal residence that is desired. If an angler is a resident of a country other than the United States, "99997" should be recorded.

Item 22 <u>Type</u> <u>of</u> <u>Residence?</u> - All anglers are asked what type of residence they live in. Single family homes and apartments are considered "private residences". Dorms, barracks, nursing homes, and rooming houses are considered "institutional housing units".

If the angler lives in a private residence, the interviewer should code Item 22 with a "1" and continue with Item 23.

If the angler lives in institutional housing, the interviewer should code Item 22 with a "2", code Item 23 with an "8", and continue with Item 24.

Item 23 <u>Has</u> <u>Phone?</u> - This question is pertinent only to anglers living in private residences (Code "1" at Item 22). If Item 23 is not pertinent, it should be coded with an "8". Here we want to know if the angler has a connected land line telephone in the home (because these are the homes we reach with our CHTS telephone survey). If they only have a cellular telephone, but no home land line, this should be coded as “2" for “NO”.

The interviewer should code the angler's response and continue with Item 24.

Item 24 <u>Name</u> <u>and</u> <u>Phone</u> <u>Provided?</u> - All anglers are asked to give a full name and a telephone number for survey verification. Approximately ten percent of all anglers interviewed by each interviewer will be contacted for survey verification purposes. Names and phone numbers should be written on the boxes provided at Item 24. If the angler is a very young child, accompanied by an adult, the interviewer should also get the name of the adult.

It is not necessary to obtain the angler's home telephone number. Any number at which he/she can be reached is acceptable. However, if a work number is obtained, the interviewer should note that it is a work number so that validation attempts will be made during working hours. The interviewer should circle D for day phone or N for night phone. The interviewer should make sure that an area code is obtained.

***Item 25** Unavailable Catch (Type 2 Records)? - All anglers are asked to report on fish caught in the mode that are not available for inspection. **Each angler must report on his/her own unavailable catch in the mode of intercept**. If the angler was at a different site in the same mode, unavailable fish from the other site should be included.

Any fish that the interviewer is unable to positively identify AND count MUST be recorded as "unavailable catch" (under Item 25). Each fish must be counted by the interviewer in order for it to be recorded as "available catch" (Item 31). NMFS maintains this rule because we are confident in properly trained interviewers' ability to identify fish to the species level and to accurately count how many there are of each species. However, we are not confident in all anglers' ability to accurately identify fish to the species level. Even one misidentified fish will result in the recording of inaccurate information, which is why we need to record all information reported by anglers as "unavailable catch". Anglers may be tempted to over or under-report the number of fish caught, which is another reason for recording the fish as "unavailable catch".

Interviewers should keep in mind that it is possible to record some fish of the same species as "unavailable catch" and other fish as "available catch". If an angler says that he has five Atlantic Cod in a cooler but only allows the interviewer to positively identify and count three of them, the interviewer should record the three Atlantic Cod as "available catch" and the other two as "unavailable catch".

A separate line must be filled in for each unique species-disposition combination. Each line of information is called a "Type 2" record. Each "Type 2" record must contain a species name, a 6-digit species code (TSN), the number of fish, and a disposition code.

Species name and code, number of fish and disposition are key items. It is also important that interviewers write out the full species name (be sure to use the accepted common name). **Abbreviations are not acceptable.**

Each interviewer should strive to report an angler's Type 2 catch to the species level. Since the interviewer cannot inspect or count unavailable catch, it is recognized that the species and numbers reported may not be exact. It is appropriate to show the anglers pictures from the field guide in order to clarify a fish species after narrowing down the possibilities to two or three species. However, at no time should the interviewers force the anglers into choosing one of several species without first narrowing down the possibilities based on the anglers' description. If necessary, one of the "unidentified fish" codes may be used as a *last resort*.

NOTE: If an angler refuses to allow an interviewer to see or count his/her catch, but he/she reports the catch, the interviewer should list the catch in Type 2. This interview is still considered "good" because the angler reported his/her catch to the interviewer.

The question to ask concerning disposition is: "What did you do or do you plan to do with the (species name)?" The interviewer may have to probe until the ultimate disposition of the fish is determined. For example, disposition code 3 should be used if the angler plans to give the fish to his friend, if his friend is planning to eat it.

The disposition codes can be found below Item 25 on the Intercept Form. They include: (1) Thrown back alive; (3) Eaten - plan to eat; (4) Used for bait - plan to use for bait; (5) Sold - plan to sell; (6) Thrown back dead - plan to throw away; and (7) Plan to use for some other purpose.

The use of disposition 7, "some other purpose" should be limited. It should only be used if the angler's response is unusual and does not fall under one of the other dispositions. (If disposition 7 is used, the interviewer should write the angler's response on the form.) Disposition 8, "don't know/didn't ask" and disposition 9 "refused" can not be used for unavailable fish. The use of these two codes will result in a status 5 interview.

NOTE: There is no code for "given away." If the fish have been given away (or are going to be given away), the interviewer should ask what the recipient intends to do with the fish and code accordingly. If the fish were given away to be used for bait the correct disposition would be "4".

All filleted fish should be considered "unavailable catch" and entered under Item 25. NMFS does not believe that an interviewer can look at a slab of meat and identify the fish to the species level. However, if enough of the carcass is left to allow for accurate species identification and an accurate count, the fish can be entered as "available catch" under Item 31.

Anglers may think that fillets are available catch and not report them in response to the question at Item 25. If an interviewer should look at an angler's catch and discover that all of the fish have been filleted, the fillets must be entered as "Type 2" records, and there would be no "Type 3" records. Interviewers *should not assume* that all fillets would be eaten. Even with fillets it is important to ask the question concerning disposition.

Each angler must report on his/her own unavailable catch. If a group of anglers report that they together caught a certain number of fish, and that these fish have been filleted, the interviewer should strive to determine how many fish each angler caught. Fillets should be entered as "Type 2" records (unavailable catch), and each angler's own unavailable catch must be entered on his/her own form. If the group of anglers cannot determine how many fish they individually caught, the interviewer should divide the total number of fish by the total number of anglers contributing to the catch, and report this number of fish on each angler's form.

The catch may appear to be grouped if each angler reports a high number of fish. If a high number is reported or the number seems improbable, the interviewer should probe with each angler to confirm that the angler is reporting his/her individual catch and note this on the form.

If one species is disposed of in two or more manners, it will be necessary to complete two or more "Type 2" records for the species. For example, if an angler caught a total of eight bluefish, five of which he/she threw back alive, and three of which he/she plans to eat, the interviewer should complete two "Type 2" records. The first "Type 2" record would be five bluefish with disposition 1, and the second "Type 2" record would be three bluefish with disposition 3.

Three coding boxes are provided for "Number of Fish" under Item 25. As stated above, this is the number of fish of the listed species-disposition combination caught by an individual angler. Since Item 25 is a key item, there are no "don't know" or "refused" codes reserved for "Number of fish." A number must be entered! ("998" will be read as nine hundred ninety-eight fish!) If an angler has more than 999 unavailable fish of one species-disposition combination, the interviewer should write out the actual number in the available white space on the form. The Contractor will need to manually input the number into the dataset before data delivery.

Seven lines have been provided on the Intercept Form for "Type 2" records. If more than seven are needed, the interviewer should use the second page of a clean Intercept Form. Both the additional and the original form must be clearly marked with "page 1 of 2" and "page 2 of 2."

Items 2 through 10 on page 2 must be filled out and these items must match Items 2 through 10 on page 1.

Box B: Observed for Discard? - This box must be completed for every interview, regardless of mode. If the assignment was not a headboat ride-along then the box “not a headboat ride” would be checked. If the assignment was a headboat ride-along, then either the "Yes" or "No" box will be checked depending on whether or not that particular angler was observed for discard (Type 9) catch. If that angler was observed for discards, all of the discards for that angler should be recorded on the discard form (i.e. none will be recorded in the Type 2 section).

It is possible to check “yes” in Box B (did observe angler for discards) and not have any fish listed on the discard form because the angler did not catch any fish that were discarded. If this happens, a comment should be written in the “Notes/Comments” section.

*** Item 26** Were Fish Caught To Look At? - All anglers are asked whether they caught any fish in the mode of intercept that the interviewer can examine and count. If the angler caught some fish that are available for inspection and can be counted, the interviewer should code Item 26 as “Yes” and continue with Item 27. This angler must have some data recorded as available catch (Item 31.)

If the angler *did not* catch any fish available for inspection or he/she did not allow the interviewer to identify or count the catch, the interviewer should code Item 26 as “No,” code Items 27-29 as “8’s” representing “Not Applicable,” and continue with Item 30. This angler should have no data recorded as available catch (Item 31), but should have an entry at Item 30.

If the angler caught fish that are available for inspection, but they have already been entered on another angler's form because they could not be separated, the interviewer should code Item 26 as “3 - Fish on another angler’s form.” The interviewer is then instructed to enter the interview number where the fish are located in the boxes provided. He/she should code Items 27-29 as “8’s” and continue with Item 30. This angler should have no data recorded as available catch (Item 31), but should have an entry at Item 30.

Interviewers should note that the stem of Item 26 includes the words “to look at.” Fish that have been filleted are not considered available “to look at.” If it turns out that the angler’s fish have all been filleted, the interviewer will have to go back and change the angler’s response to Item 26. Filleted fish are entered at unavailable catch (Item 25), **not** at available catch (Item 31.)

*** Item 27** Catch Mixed? - This question is asked *only* of those anglers who caught fish available for inspection and whose fish have not been entered on another angler's form. If Item 27 is not applicable, it should be coded as "8."

If the angler caught all of the available fish, the interviewer should code Item 27 as "1 - All caught by Angler," code Items 28 and 29 as "8's" representing "not applicable," and continue with Item 30.

If other anglers have contributed to the available catch, the interviewer should code Item 27 as "2 - Other Contributors" and continue with Item 28.

*** Item 28** Separate Catch? - This question is asked *only* of those anglers who report that several anglers have contributed to their available catch at Item 27. If Item 28 is not applicable, it should be coded as "8."

If the angler can separate out his/her own available catch, the interviewer should code Item 28 as "1 - Yes," code Item 29 as "88" and continue with Item 30. **Only the angler's own available catch should then be entered at available catch (Item 31.)**

If the angler cannot separate out his/her own available catch, the interviewer should code Item 28 with "2 – No" and continue with Item 29. **All of the available catch would then be entered on this angler's form at available catch (Item 31.)**

*** Item 29** Number Who Caught Fish? - This question is asked only of those anglers who cannot separate their available fish from the available fish caught by others in their fishing party ("No" at Item 28.) If Item 29 is not applicable, it should be coded as "88."

The angler is asked to indicate the number of anglers who contributed to the total available catch. He/she should *not* include anyone who did not catch any of the available fish. That person should be interviewed separately if he/she spent any time fishing. **The count of contributors should only include anglers who caught one or more of the fish recorded under Item 31 on that angler's form.** As stated above, all of the available catch would then be entered on this angler's form at Item 31. The following are the five possible ways to code Items 26-29:

Statement of Work

IF THE ANGLER SAYS:	CODE:
This angler has **no available catch**. S/he has not caught any fish that the interviewer can look at.	2
	8 – Not applicable
	8 – Not applicable
	88 – Not applicable
This angler has **available catch**. The angler has caught fish that the interviewer can look at and count, and the angler has **caught them all.**	1
	1
	8 – Not applicable
	88 –Not applicable
This angler has **available catch.** S/he is part of a **group of five anglers who all caught fish.** S/he **cannot separate** his/her share of the catch. All of the group's available catch is listed on **this** angler's form.	1
	2
	2
	05 – Number of anglers who caught fish – cannot separate
This angler's **available catch** is part of a **group catch**. His/her available catch has been **reported on the form of the 1st angler in that group who was intercepted that day.**	3 – Record the interview number in the space provided to indicate which form his/her catch is located on!
	8 – Not applicable
	8 – Not applicable
	88 – Not applicable
This angler has **available catch**. S/he is part of a group. Each angler, though, **can separate** his/her share of the catch from that of the group.	1
	2
	1
	88 – Not applicable

*** Item 30** Party Size? - This question is asked to determine how many anglers fished on the boat, *including* the angler being interviewed. Do not include captain or crew. If the angler fished alone on a boat, code as "001." Please code as "Shore Mode" if the angler was fishing from the shore mode.

For the purpose of this survey, a "fishing party" is defined as a group of anglers who fished on the same boat on the same day. Therefore, all anglers fishing from the same boat are considered members of the same "fishing party" regardless of whether they traveled together to the site. In addition, all anglers fishing from the same charter/head boat should be considered members of the same fishing party. **Please note that the number of people on the boat must be identical for anglers in the same party.** If anglers of the same fishing party report a different number of people on the boat, it may be because they do not know the exact number. This may be true especially for HB or CH mode interviews, where the number of anglers fishing on the boat may be high. In this case, it is appropriate to clarify the number on the boat by asking the mate or captain, if possible.

Interviewers should be aware that the number of contributors recorded in Item 29 *cannot exceed* the number of anglers in a "fishing party."

*** Box D** First Person from Boat? - This question applies to those anglers who fished from a boat and who responded that the number of people on the boat (Item 30) was greater than one. Box D must be coded as "8 – Not Applicable" if the response to Item 30 is "001," or if the angler was fishing in shore mode (Item 11).

If the angler indicated in Item 30 that he/she fished together with other anglers on the same boat, then the interviewer should ask him/herself "Is this the first person on the boat that I have interviewed?" If the response is "yes," code Box D as "1 - Yes." If he/she is not the first interviewed, code as "2 - No" and record the interview number of the first angler in the party in the boxes provided. If the interview is HB or CH mode, and more than one boat came in at the same time, the interviewer may need to ask the angler which charter/headboat he/she was on.

Data from Item 30 and Box D are used to determine if being in a group affects catch rates. Box C and D are not questions to be asked of the angler. Rather, they are items to be filled in by the interviewer after the interview is completed.

*** Box E** **Vessel on List?** – This question applies to those anglers who fished from a "for hire" vessel (CH or HB mode) and refers to whether or not the vessel is in the sample frame for the FHS. Regardless of whether or not the vessel is on the list the boat name (or registration number if the boat doesn't have a name) must be written out for every interview conducted in CH or HB modes. The boat name must be ***identical*** to the name that appears on the vessel.

If the vessel has no name, the box labeled "Check box if vessel has no name." should be checked. The vessel number (e.g. MD1234AB) should then be written on the form for verification purposes. Under no circumstances should the vessel ID (e.g. 2400000) be written on the form.

*** Item 31** **Available Catch (Type 3 Records)?** - The angler's available catch should be entered at Item 31 on the Intercept Form. Each line of information recorded is called a "Type 3" record. Each "Type 3" record **MUST** have the following information:

Species name (common name, as indicated in the Coding Manual, available at ftp://cusk.nmfs.noaa.gov/mrfss/tmp/)

- The corresponding 6-digit species code (also from the Coding Manual);
- The total number of that species (all counted by the interviewer); and
- The disposition code (indicating what the angler plans to do with the **majority** of the fish of that species.)

Without this information, the intercept is considered a status 5 interview, and cannot be used. **In addition, the interviewer should strive to obtain weight and length measurements for each fish!** If the angler is in somewhat of a hurry and won't allow the interviewer to obtain both weights and lengths, the priority is to obtain weights.

Interviewers must positively identify and count **ALL** fish that are recorded under the "available catch" section. If they are only able to identify and count some of the fish, those that are identified and counted should be recorded under the "available catch" section (Item 31), and those that are not should be recorded under the "unavailable catch" section (Item 25). When more than one fish of a species is available, the interviewer need not repeat the species name, the species code, the total number of fish, or the disposition code on all lines. In that case, the interviewer should draw arrows down, indicating that the boxes are exactly the same as the ones above. This only holds true, however, for the species name, the species code, total number and disposition. Even if the weights and lengths are the same (which is highly unlikely), they must be written out. As with unavailable catch, it is important that interviewers write out the full species name (making sure to use the accepted common name). Abbreviations are not acceptable.

If fifteen or fewer fish of one species are available, interviewers should try to weigh and measure all of them. If more than fifteen fish of one species are available, the interviewer should randomly select fifteen fish to be weighed and measured (section 6.2.5.3). No more than fifteen fish of one species should be weighed and measured per angler. If the catch is grouped, and there are more than fifteen fish of one species, the interviewer should attempt to weigh and measure up to fifteen fish per species per angler.

Three coding boxes have been provided for “# of Fish” in Item 31. As stated in the discussion of Item 25, no codes have been reserved for “don’t know” and “refused.” A “999” will be read as nine hundred ninety-nine fish. Numbers above three digits, that is, above “999,” should be written out in the available space.

If length or weight is missing, the interviewer should fill in the boxes for the missing data with **“9’s.” Missing data should be footnoted with an explanation.** Acceptable reasons for not obtaining weight or length measurements include:

- Angler refused to let the interviewer weigh his/her fish.
- Angler refused to let the interviewer measure his/her fish.
- The interviewer was unable to obtain a weight because the fish was gutted.
- The interviewer was unable to obtain a weight because the weight exceeded the capacity of the large scale.
- The interviewer was unable to obtain a length because the fish was damaged in some way, or only a carcass (“rack”) remained.

If length and/or weight information are missing for some fish of a species (e.g., the angler refused to have the appropriate number weighed and measured) but some weights or measurements are available, the interviewer should fill in the available weights and lengths using separate “Type 3” records. Additional records for the fish of this species with “9’s” filled in for the missing weight and length should not be added. The interviewer should use a footnote to explain why some fish were not weighed and measured.

If an angler allows an interviewer to identify and count his/her catch, but refuses to allow an interviewer to weigh/measure the catch, the interview is still “good” as long as the angler answered all key items. If all key and non-key items were obtained, it is still considered a “status 1” interview.
If length and weight information are missing on all fish of a species, the interviewer should only fill out one “Type 3” record for the species. That record would have “9’s” in the length and weight boxes. Again, a reason for the missing data should be written on the form.

The disposition codes for the “Type 3” records are listed under Item 31. The question to be asked is: "What do you plan to do with the majority of the (species name)?" Since only one disposition can be used for each species under Item 31, it is important that the disposition is coded as to what the angler plans to do with most of the fish. For example, if an angler has caught three fish of the same species, and he/she intends to sell the largest one and eat the two smaller ones, then the interviewer should code all records with disposition as “3 - Eaten/Plan to eat.” This is because more fish will be eaten than sold.

Weight should be used to determine the disposition code when the fish split evenly by number into two or more dispositions. For example, if there are exactly two fish of one species, one of which will be sold and one of which will be eaten, the interviewer should code to the disposition of the *heavier fish*.

Fifteen “Type 3” records can be entered on each Intercept Form. If more than fifteen are needed, the interviewer should use the second page of a clean Intercept Form, fill out Items 2-10 using the same information from the first form, and attach that form to the original form. In some instances, several "second pages" may be needed. As with “Type 2” records, the interviewer should mark each page as “page 1 of 2,” etc.

The interviewer should never skip a “Type 3” record line on a coding form. The next fish should be entered on the next line.

6.2.5.2 Conducting Economic Intercept Interviews

The economic intercept surveys will be administered to all survey eligible anglers aged sixteen and above. If an individual is under the age of 16 or an interviewer is unable to determine the age, then terminate (after completing the intercept interview) and thank the respondent.

The contractor shall ask the economic intercept survey questions at the end of the routine intercept survey questions and before examining the catch. This should not be done if it would decrease the interviews where the catch is examined. If it does not affect the examination of the catch, this ordering could improve the flow of the interview and the response rates. Anglers would not be told these are additional questions; rather the survey would appear to be a normal part of the survey.

Data from the Economic Intercept survey will be coded and keyed to match exactly the identification code (ID_CODE) from the Intercept Survey. Thus, it will be necessary to administer these surveys congruently. Questionnaires will be administered to anglers who are at least 16 years of age (regardless of target species), and who complete all **key** data items preceding the catch inspection questions.

The NMFS may supply the Contractor’s interviewers with copies of a brochure which explains the purpose for the economic data collection. The Contractor shall be responsible for distributing a copy of this brochure to each intercepted angler who requests information on the Supplemental Economic Survey’s purpose.

Statement of Work

6.2.5.2.1 Economic Intercept Survey Item by Item Instructions

The Contractor for the Intercept Survey shall work together with the NMFS to develop the final formatting and flow of the questionnaire to be used for the Economic Intercept Interview Survey. The questionnaire shall consist of up to 12 questions depending on skip patterns. Examples of questionnaires used or proposed for prior years for valuation and conjoint studies in the Northeast and Southeast are provided at the web site http://www.st.nmfs.gov/st5/. An example economic intercept survey is given in Appendix I.

Items on the questionnaire for which the angler does not know the answer should be coded with "8"s. Items that are refused should be coded with "9"s. If an Intercept Survey interviewer is not certain whether a given respondent is more than 16 years of age, he/she should simply ask the respondent. If the respondent is less than 16 years of age, then the interviewer should thank the respondent and terminate.

The following questions are expected to be very similar to the final questionnaires that will be used. Items 1-10 are not asked of anglers (except occasionally question 10) but are filled out by the interviewer.

Item 1 Record Type - "5" is reserved for all intercept economic survey interviews but is not on the form.

Items 2-9 Assignment No., Interviewer Code, Year/Month/Day, Interview Number, Hour, State, County, Site - These should match the code on the associated intercept interview form exactly.

Item 10 Interview Status - This item has status codes similar to the intercept interview (1=fully complete, 2=partially complete with all key questions answered) but also has two codes associated specifically with the economic interview.

"Initial Refusal of Economic Questionnaire = 3" - This code should be used if the angler refuses to respond to the economic interview, even if they completed the routine intercept interview.

"Angler is less than 16 years = 4" -The interviewer should be able to tell without asking that the majority of anglers will be over 16; however, if the interviewer is not certain respondent is at least 16 years of age, they should simply ask the respondent if he/she is at least 16 years of age. If they are less than 16 years of age, then the interviewer should thank the respondent and terminate the economic survey (but not the routine intercept interview).

Beginning with Item 11 are questions to be asked of the anglers. Key questions are indicated by bold item numbers and printed asterisks. Responses to key questions will be considered more important for proper analysis of the data than responses to non-key questions. Questions asked of all respondents are denoted with the abbreviation AR, and EH denotes questions asked of respondents that lost income as a result of the fishing trip.

Intercept Questions

***Item 11** Multi or Single Day Trip (AR) - Identification of fishing trip status by overnight or one-day trip is necessary for determining the appropriate allocation of elicited travel costs to the fishing trip. Trip status is also used as a basis for characterizing angler behavior. Codes are 1 = one day trip, and 2 = multi-day trip. One-day fishing trips involving departure of a party/charter or private/rental boat from port on the night prior to fishing should not be considered an “overnight stay away from home” unless the angler is spending additional nights away from home.

***Item 12** Years Spent Saltwater Recreational Fishing (AR) - This item is used in angler profiling. This is coded in whole years.

Item 13 Ownership of Boat used in Marine Recreational Angling (AR) - Boat ownership may influence attitudes toward fishing and may affect the type of trip, species targeting behavior, and fishing site selection. This item is coded “1" for yes and “2" for no. If 2 is coded, then interviewer skips to item 15.

Item 14 Boat Purchase in last 12 months (AR). NMFS is interested in purchases of boats within the last 12 months. If a boat was purchased for marine fishing in the past 12 months, this item is coded “1” for yes, and “2” for no.

Item 15 Fees paid for Charter trip by Angler (AR). NMFS is interested in obtaining data on the prices paid by anglers for Charter trips. This is coded in whole dollars and should be the actual price paid per angler.

Item 16 Purchase of Fuel for Boat for trip, in gallons (AR). This question asks how much gas the angler purchased for the fishing trip if using a private or rental boat. This should be coded in whole gallons. If no fuel was purchased, then skip to question 18.

Item 17 Per gallon cost of fuel paid for trip (AR). The cost per gallon that the angler paid for gas for the boat used in the fishing trip.

***Item 18** Off Work Without Pay (AR) – Foregone income is an important component of the opportunity cost of the angler’s time, and the angler is asked whether or not income was foregone. If the angler is fishing on his/her own time, i.e.

after work, weekend, paid vacation, this item is coded no. This is coded “1" for yes and “2" for no. If the answer is no, the interviewer skips to item 18.

***Item 19** Number of hours typically worked per week (EH) – Again, the exact amount of income foregone is an important component of opportunity cost of time, and this question elicits average hours per week worked in order to construct the value of time spent fishing. This item is only asked of respondents who took time off work without pay to go fishing. This item is coded to the nearest whole hour.

***Item 20** Personal income (EH) – Again, the exact amount of income foregone is an important component of opportunity cost of time, and this question elicits household income in order to construct the value of time spent fishing. This item is only asked of respondents who took time off work without pay to go fishing. Interviewers should try to provide privacy for this answer, perhaps by asking the respondent to point to the category of personal income rather than asking for a verbal answer.

***Item 21** Participation in Follow-up (AR) - This question determines whether or not an individual is willing to participate in the follow-up mail survey. Interviewers should indicate “1" for yes or “2" for no, and enter the name and address where the respondent can be reached.

[1] NMFS reserves the right to modify the above questions up to the flexible question limit of 12 questions, depending on topical management or research needs.

6.2.5.3 Identifying, Weighing and Measuring the Catch

Interviewers must strive to identify all fish (types 2, 3 and 9) to the lowest taxonomic level possible, preferably the species level. All type 3 and type 9 records must be identified to the species level, as discussed below. In the interest of professionalism, the interviewer should never ask the angler to identify his/her own available catch. For unavailable fish, including fish that are filleted (both representing Type 2 catch), the interviewer must ask the angler to identify his/her catch. Interviewers will be expected to use their local knowledge to assist the angler in identifying his/her catch. Interviewers should use *Peterson’s Guide to Atlantic Coast Fishes* to assist the angler with this identification. Other identification guides may be used but must first be approved by NMFS.

The Intercept Coding Manual found at ftp://cusk.nmfs.noaa.gov/mrfss/tmp/ contains a complete species list sorted alphabetically by common name within families. Accepted common names are not necessarily those used by local anglers, and interviewers should know how to translate local names to accepted common names. The Intercept Coding Manual also contains a list of local names and how they often translate into accepted common names, as well as additional descriptive information on species with common identification concerns. This can be a valuable tool in achieving correct identifications.

NOTE: The use of 6-digit Taxonomic Serial Numbers (TSNs) began in 2006, in place of the 10-digit NODC codes previously used. (The species coding list may be found in Appendix N.) To allow comparability between years, the Intercept Contractor will be required to deliver data to the NMFS with both the TSN **and** NODC numbers. The NODC numbers may be found at ftp://cusk.nmfs.noaa.gov/mrfss/tmp/.

If an interviewer cannot identify a Type 3 or Type 9 fish to the species level, he/she should make notations on the Intercept Questionnaire, including any distinguishing features about the fish. Then when the interviewing day is completed, or during breaks in the day when no one is available to interview, they should contact their RR. They should explain to what level they were able to identify the fish and provide any distinguishing features. It may then be possible to identify the fish to the species level.

If an interviewer is still unable to identify the fish, it must be coded as a Type 2 record.

If an interviewer cannot identify a fish to the species level, he/she should identify the fish as close to the species level as possible in the type 2 blocks. That is he/she should identify the fish to the genus level or, if not the genus level, the family level. For example, a fish known to be in the left-eye flounder family that cannot be identified to the genus or species level should be coded "172702."

Peterson's *Field Guide to Atlantic Coast Fishes of North America* is the recommended field guide for use by interviewers in identifying fish. However, other local references and taxonomic keys which are approved by the NMFS and are available to interviewers and field supervisors can also be used. The Coding manual also contains descriptive information on species with common identification concerns on the Atlantic and Gulf coasts.

The species code lists in the Coding Manual are not exhaustive. Interviewers may occasionally identify a species that does not appear on the list, particularly species that occur primarily in freshwater. When this situation occurs, the interviewer should write out the scientific and accepted common name of the species and leave the coding boxes blank. The Intercept Contractor should then contact NMFS; NMFS will assign a species code at its discretion.

The species code list also contains codes to be used when the family identity of a fish is unknown. While these cannot be used for available fish, they may be used for fish unavailable for inspection. These codes should only be used as a last resort.

Each interviewer should be provided with two scales each: historically the Intercept Contractor has used a large scale (e.g., 12 kg) and a small scale (e.g., 2 kg). The scale capacity should be selected based on the average sizes and range of sizes of fish in a region. The larger scale shall be used only for fish weighing more than the weight capacity of the smaller scale. Fish weights are to be recorded to the nearest tenth (0.1) of a kilogram when the larger scale is used and to the nearest five hundredth (0.05) of a kilogram when the smaller scale is used. Five boxes are provided for the coding of weight: three to the left of the decimal, and two to the right of the decimal. For example, a fish weighing 2.4 kilograms on the larger scale should be coded as "002.40", and a fish weighing 0.16 kilograms on the smaller, more precise scale should be coded as “000.15".

All fish species in an angler's catch should be weighed unless refused by the angler. If the angler has caught more than fifteen fish of a particular species, then at least fifteen must be selected at random for weighing. Sub-sampling procedures are described later in this section. Weight measurements should be given priority over length measurements when time is limited.

Occasionally an interviewer may come across fish whose weight does not register on the smaller scale at even five one-hundredths of a kilogram. If several fish of the species have been caught, the interviewer should place up to fifteen fish of the species in a plastic bag, taking care that no water accumulates inside. The interviewer would then weigh the entire bag and distribute the weight among the fish in increments of 0.05 kg and 0.00 kg. For example, if fifteen fish weigh a total of 0.65 kg, thirteen fish would be recorded as weighing 0.05 kg, and two fish would be recorded as weighing 0.00 kg. The fish of longer length should each be assigned a weight of 0.05 kg, while the two shortest fish should each be assigned a weight of 0.00 kg. This procedure will result in the correct average weight of the fifteen fish. This is referred to as the “baggie technique.”

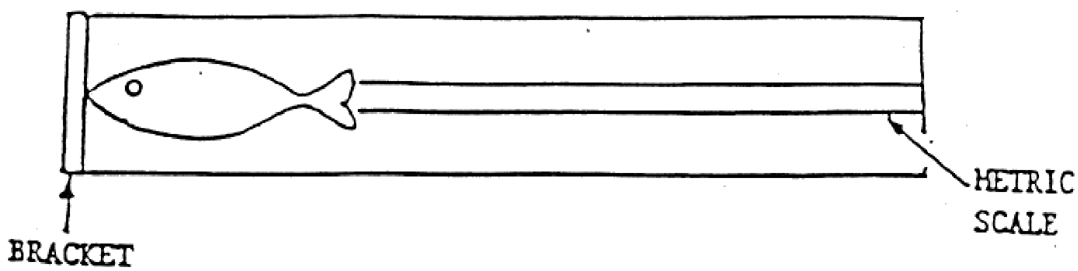
Fish lengths must be taken using a measuring board (one meter long) and recorded to the nearest millimeter. Most measuring boards are labeled in centimeters. To determine millimeters, interviewers should multiply the centimeter reading by 10 and add the number of smaller markings past the centimeter marking. For example, a fish that measures to the first line past “23” is “231” millimeters. Since four coding boxes are provided for the length measurement, a fish that measures 231 millimeters should be coded as "0231." Interviewers must be careful not to introduce a digit bias into their measurements by rounding lengths to the nearest centimeter or half-centimeter. Proposals should address plans to monitor and resolve any digit bias. An example of proper use of a measuring board is provided in Figure 6.2.

All interviewers should also be issued a tape measure to be used in addition to the measuring board, but only for fish that are longer than the measuring board. Interviewers should never use **only** the tape measure to obtain the length of any fish.

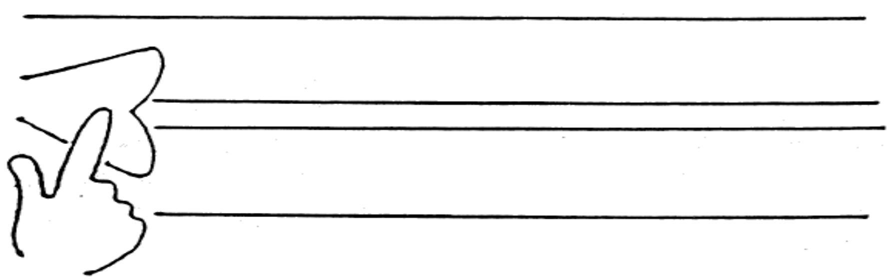
Figure 6.2 Length Measurements

<u>Proper Use of the Standard One Meter Measuring Board</u>

1) Place the measuring board on a hard level surface. You will need both hands free.
2) Place the fish with the anterior-most portion of the head (nose) flush against the upright bracket on the left end of the board. The specimen should be centered over the metric scale.



3) Keeping the nose of the fish against the bracket, press the caudal fin (tail) with the forefinger of the right hand down to the surface of the board.



4) Read the length to the nearest millimeter (mm) at the fork of the caudal fin. Species with tails that are not forked are to be measured in accordance with Figure 6.3.

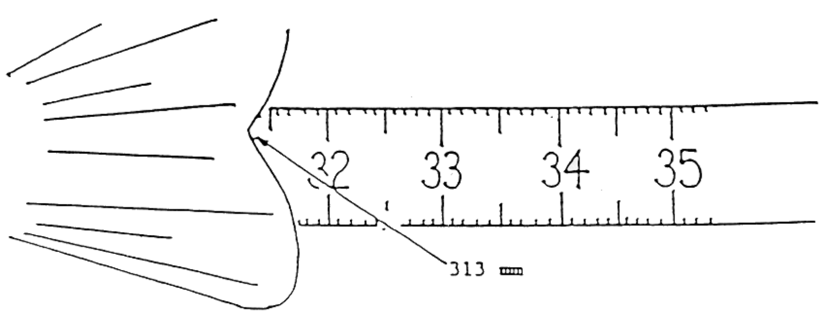
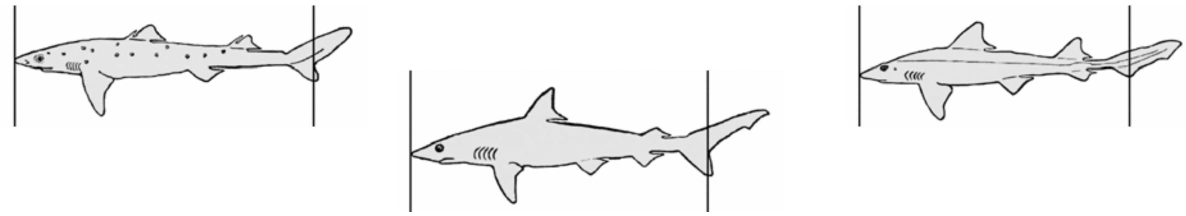
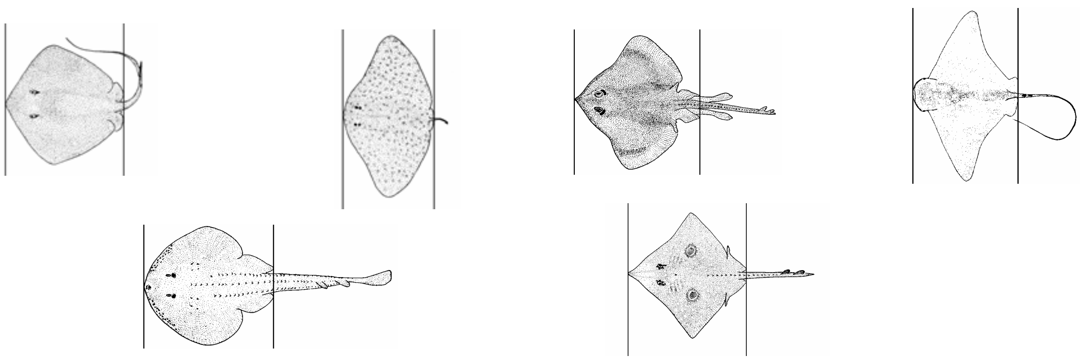


Figure 6.3 Measuring Various Fish

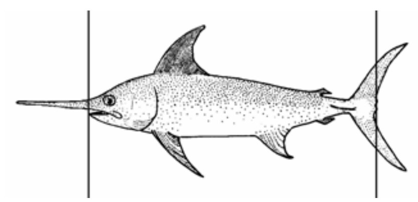
Sharks and sturgeons are measured from the tip of the snout to the center of the fork of the tail.



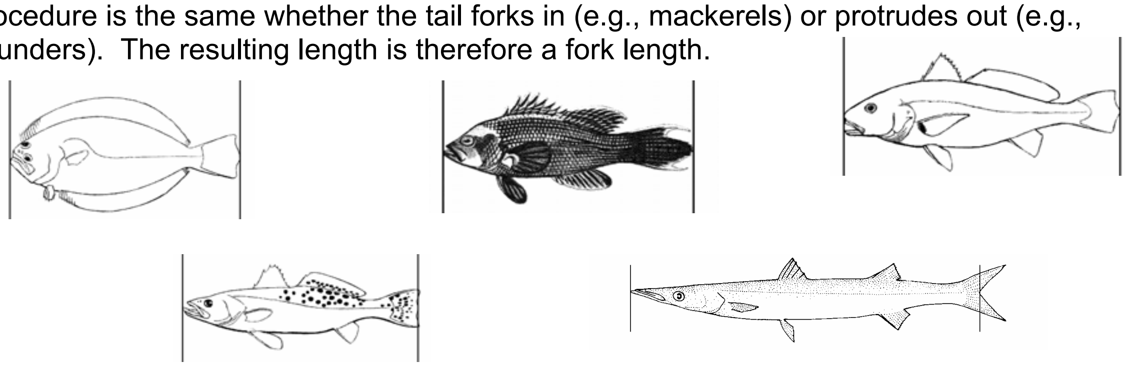
Skates and rays are measured from the tip of the snout to the distal end of the pelvic fins. Do not include the claspers.



Billfishes and swordfish are measured from the tip of the lower jaw to the center of the fork of the tail.



All other species are measured from the most anterior tip of the longest jaw (mouth closed) or end of snout, whichever is terminal, to the posterior tip of the tail at its center line. This procedure is the same whether the tail forks in (e.g., mackerels) or protrudes out (e.g., flounders). The resulting length is therefore a fork length.



A fish that exceeds the length of the measuring board should be placed on the measuring board. The tape measure should be placed under the portion of the fish that extends past the board, being sure that edge of the tape measure is flush with the end of the board. Read the length to the nearest millimeter on the tape measure. Add that measurement to the total length of the measuring board to obtain the total length of the fish.

Interviewers should never hold the tape measure above a fish. This will result in an inaccurate length measurement if the tape measure bends to the contour of the fish's body.

If more than fifteen fish of one species are available for inspection, the interviewer must use an appropriate selection process for the fifteen fish to be weighed and/or measured. The selection process, called "sub-sampling", must be random.

Ideally, the interviewer would line up the fish from largest to smallest, divide the total number by fifteen, and select every n^{th} fish for length and weight measurement. For example, if there are 30 fish of one species, the interviewer should line them up by size and select every 2^{nd} fish. This method of sampling would be "systematic random" rather than "simple random."

Due to time or space limitations, it is nearly always impossible to line up the fish. When systematic random sampling is not possible, simple random sampling is preferred. In such cases, the interviewer should randomly select the fifteen fish to be weighed and measured as they are being counted. The procedure for randomly selecting the fish while counting would follow the same protocol as if the fish were laid out for display. First, estimate the number of fish that are to be counted, divide the estimated total number by fifteen, and select every n^{th} fish for length and weight measurement. Attempting to randomly select fish by blindly reaching into a cooler will typically over-sample large fish, in addition to potentially being dangerous. At no time should the interviewer visually select fifteen fish of "average" size to weigh and measure - this is not random or systematic sampling!

6.2.6 Completing the Discard Form

Items 2 through 8 contain identifying information about the assignment (assignment number; interviewer ID code; date of the assignment; state; county; site code; and vessel name ("header" information), and should match exactly with the other forms for the assignment. As discussed in section 6.2.4.2 above, this form is used for recording lengths of discarded fish from a subset of anglers on headboat trips (see Appendix I).

The remainder of the form contains space for recording species name, species code, length, disposition, interview number that corresponds with the particular angler, and whether or not the fish was directly observed by the interviewer.

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The form contains space to record up to 40 fish. If additional pages are necessary, the header information should be recorded on additional pages, with each page numbered (e.g. Page 1 of 3, Page 2 of 3, etc.) then stapled together.

ASSIGNMENT NUMBER – This entry indicates if this was the first or second assignment for the day. This entry will be a “1” unless an interviewer completes two assignments on the same day. In that case they should write “2” for the second assignment of the day.

INTERVIEWER ID – The interviewer enters their four-digit identification number.

YR/MO/DAY – The current year will be hard-coded on the form. The interviewer should enter a two-digit number for the month followed by a two-digit number for the day of the month when they completed the assignment. Do not use any forms with a year other than current year – forms may look similar, but changes may have been made. All forms from previous years should be discarded.

STATE CODE – Enter the two-digit state code for the state in which the assignment was completed.

COUNTY CODE – Enter the three-digit county code for the county in which the assignment was completed.

SITE CODE – Enter the four-digit site code where the assignment was completed.

SPECIES NAME – Enter the accepted common name of the species.

SPECIES CODE – Enter the six digit TSN of the species.

LENGTH – Four spaces have been provided. Length should be right-justified with leading zeroes. If a length was unable to be collected, four 9s would be recorded.

DISPOSITION – There are only two possible choices, disposition 1 (thrown back alive) or disposition 6 (thrown back dead). For any disposition 6 fish, the interviewer must record a note on the form to indicate why that disposition was used (e.g. the fish was gut-hooked or was left on deck of boat, etc.). Fish that are used for bait (disposition 4) should not be included on the discard form, but must be recorded in the Type 2 or Type 3 section of the interview form for that particular angler. If the fish was not identified to the species level it should be recorded in the Type 2 section; if it **was** identified to the species level it should be recorded in the Type 3 section, even if a length was not obtained. Fish that are recorded on the discard form should **NOT** also be recorded on the interview form.

INTERVIEW NUMBER – Record the corresponding interview number that this fish should be linked to. Fish records that can't be linked back to an interview cannot be used.

OBSERVED? YES or NO – The interviewer should put a checkmark in the appropriate box. Every effort should be made to observe every fish, but it is possible that some fish will be missed. This variable is meant to provide for those instances where the interviewer did not directly observe the discarded fish.

The information on the front of the form is then summarized on the back of the form. First, record the total number of fish for each disposition (1 or 6). Numbers here should match the numbers on the front of the form. Then summarize the total number of fish for each angler interviewed **and** observed for discards (e.g. interview #6: 17 fish).

6.2.7 Completing the Assignment Summary Form (ASF)

Upon completion of each separate assignment the interviewer is responsible for completing an ASF (Appendix I). The ASF is submitted with all the interview questionnaires and updated SDFs for data entry.

The ASF must be completed for *every assignment* whether or not interviews are obtained. The ASF may be printed on a different color of paper to help distinguish it from the SDF and Interview Forms, if the Contractor desires. The ASF should be completed according to the following instructions:

NAME – The interviewer should print and sign their name in the rectangular box provided at the top of the page.

ASSIGNMENT NUMBER – This entry indicates if this was the first or second assignment for the day. This entry will be a "1" unless an interviewer completes two assignments on the same day. In that case they should write "2" for the second assignment of the day. These assignments are **only** given to the most efficient and qualified interviewers, and are **extremely rare**.

INTERVIEWER CODE – The interviewer enters their four-digit identification number.

YR/MO/DAY COMPLETED – The current year will be hard-coded on the form. The interviewer should enter a two-digit number for the month followed by a two-digit number for the day of the month when they completed the assignment. Do not use any forms with a year other than current year – forms may look similar, but changes may have been made. All forms from previous years should be discarded.

STATE – Enter the two-digit state code for the state where the assignment was completed.

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MODE – Enter the appropriate one-digit number for the ASSIGNED mode. Use “1" for shore mode, “3” for private boat mode, “5" for charter boat mode, and “6” for an at-sea head boat assignment.

CONTROL NUMBER – Enter the appropriate four-digit control number for the assignment. This number is provided on the list of assignments that interviewers receive from the Intercept Contractor or RR.

VESSEL NAME – This field should be filled in if the interviewer rode a Head Boat. If the interviewer rode the head boat with another interviewer, the other interviewer’s ID code should be filled in. If this question is not applicable to a particular assignment, then the box is left blank and the interviewer skips to the *TOTAL ON-SITE HOURS*.

HEAD BOAT DOCK-TO-DOCK HOURS – Enter the total hours the boat was away from the dock, rounded to the nearest .25 hours. This question is applicable only if the interviewer rode a head boat.

TOTAL ON-SITE HOURS – Enter the calculated <u>total</u> <u>on-site</u> <u>hours</u> for the assignment, rounded to the nearest .25 hours.

EDITING HOURS – Enter the total editing hours for the assignment, if any. Editing time here is that which is done outside of the assignment, for example, after the interviewer has gone home. Editing done while on assignment, such as between interviews, should not be included here as that is “double-dipping”. In the past, intercept contractors have placed limits on editing time per assignment (e.g., ABC minutes per interview guideline, with a maximum of XYZ hours of editing time claimed per assignment.) This limitation is at the discretion of the Intercept Contractor.

TOTAL MILES – Enter the total number of miles an interviewer traveled to complete their assignment, rounded to the nearest mile. They can calculate the total miles in the “travel section” on the right side of the form, but should be sure to enter it in the three boxes provided.

REASON FOR FIRST ALTERNATE SITE – These boxes are left blank if the interviewer stayed at their assigned site for the entire assignment. If they left the assigned site to visit an alternate site, enter the appropriate code number that best describes the reason for leaving the assigned site to their FIRST alternate site. The list of two-digit “reason codes” is located on the ASF form. The use of codes “07”, “08”, or “09” require comments. The use of code “9” (“other”) should be minimized.

SUMMARY SECTION (bottom part of the form) – The first row of this section is labeled “Asn.,” which is an abbreviation of “Assigned Site.” The interviewer should **always** record the county and site codes for the **assigned site** in the <u>first</u> <u>row</u>. When applicable, the county and site codes for the first and second alternate sites should be recorded in the second and third rows of coding boxes. The second section represents the number of "good" (status 1 & 2 only) interviews obtained, by mode, for the assignment. The third section represents the number of status 3 (initial refusal), 4 (language barrier) and 5 (refused **key** item) anglers encountered in the **target mode**. Since interviewing in other modes is not allowed, the Other Modes Status section should be removed from the form for 2009.

The interviewer must enter his/her tally of "missed" and "ineligible" anglers encountered **in the target mode only at all sites visited**. "Missed" anglers are those in the target mode who were *probably eligible*, but who were not approached because the interviewer was actively interviewing other anglers. Under "Not Done" the interviewer should enter his/her estimate of the number of anglers actively fishing at the site in the target mode when he/she leaves the site. If the interviewer returns to a site later in the assignment, the estimate should cover the number of anglers actively fishing in the target mode when he/she leaves the site for the **last time**.

The other "ineligible" categories include those approached but found to be ineligible because of responses to questions in the screening introduction. Interviewers need to make sure they understand what should, and should not, be included in these categories.

Only include anglers who are "probably eligible" for the survey, i.e. those who were fishing, or incidentally caught a finfish while shellfishing. Do NOT include sunbathers, swimmers, boaters, etc.

- "Not US" = Recreational anglers fishing more than 200 miles off shore or in Mexican, Canadian, or other foreign waters (i.e. not in U.S. waters).
- "Not Rec" = Commercial anglers/anglers whose primary purpose of the trip is to provide income.
- "Not Salt" = Recreational anglers fishing in freshwater.
- "Not Fin" = Saltwater recreational anglers who did not target, or catch, finfish.
- "Not 5 Yrs" = Saltwater recreational anglers under 5 years of age who targeted, or caught, finfish.

ON-SITE RECORD – This section of the form is provided for the purpose of recording the "start" and "stop" times for visits to each site during the course of the assignment. Interviewers should always identify each site by entering the appropriate code number in the boxes under the "site" heading. List the sites in the order that they are visited, including any return trips to sites previously visited. No more than two alternate sites may be visited per assignment. **Interviewers can not record more than five visits on the ASF and should NOT use a second ASF, or write in additional visits below the provided boxes.**

TRAVEL – This section is provided for the calculation of total miles traveled. Record both "beginning" and "ending" odometer readings, calculate the difference, and record that difference in the space labeled “Total Miles.” Be sure to record this result, rounded to the nearest mile, in the coding boxes labeled “Total Miles.”

EDITING TIME – This section is provided for the calculation of total editing time, if any. Record both “start” and “stop” time, calculate the difference, and record that difference in the space labeled “Editing Hrs.”

6.2.8 Completing the Site Description Form (SDF)

Site Description Forms (Appendix I) are used to update site description information. A SDF must be completed for every site visited during an assignment. Additional SDFs may also be submitted any time interviewers or RRs feel there is additional information about a site that should be included in the MSR. The SDF may be printed on a different color paper to distinguish it from other required forms if the Contractor desires.

Interviewers are responsible for estimating fishing pressure during each interviewing visit to each site. Anecdotal information from marina operators, pier owners, boat ramp fishing shops, etc. can be used in the estimation of fishing pressure. Newspaper and weekly magazine fishing reports also provide useful background information for adjustment of fishing pressures and adding and deleting (i.e., inactivating) sites.

Certain sites at which interviewers are not allowed by the site management should be indicated as “hostile sites.” Hostile sites may be excluded from assignment draws, but **may** be used as alternate sites when appropriate. Accurate fishing pressure estimates must be maintained for hostile sites even though they would be excluded from sampling. The MSR serves as a useful database for assessing the geographical and temporal distributions of fishing activity. Such information is important for setting appropriate interviewing goals by county, month, and day type (weekend vs. weekday).

In addition to discovering new sites by accident, interviewers and field supervisors should maintain contacts with local anglers, residents, marina operators, bait stand owners, etc. in order to learn when new sites are planned or established.

When a new site is encountered that is not presently included in the MSR, the interviewer should complete a SDF with the best estimate of pressure for all months indicated. If possible, interviewers should talk to the site personnel and attempt to include monthly pressure estimates for the remainder of the year. The boxes for the site number code should be left blank, and the interviewer should provide an explanation for why the site should be added. The interviewer should also indicate that a new site was visited by writing “NEW SITE” on the Site Description Form.

If an interviewer visits a site presently on the MSR which he/she feels should be removed (e.g., Establishment has gone out of business), he/she should fill out a SDF and clearly mark it as an “INACTIVE SITE” at the top of the form. The interviewer should provide an explanation for why the site should be deactivated.

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NOTE: Sites marked as “INACTIVE” will not be assigned to interviewers (i.e. will not be selected by the site assignment program), and should not be selected as alternate sites unless the interviewer has recent information indicating that the site is active.

General Information -- The interviewer fills in the date, interviewer ID number, and state, county and site number (if it is an existing site) of the assignment. The interviewer should indicate whether this was the assigned site for the assignment or an alternate.

Upon Arrival – The interviewer writes down the time (military time 0001-2400), the number of boat trailers in the parking lot or empty slips at a marina, or shoreline anglers (depending on the mode and the site) at the time he/she arrives at the site. While at the site, they gather (for new sites) or verify information about the site itself, including:

> *Site Name*: If there is no proper name, use a brief description. The site name should be sufficiently different from other site names to avoid confusion.
>
> *Site Street Address*: (e.g., 100 4th Street.) If an address is not possible, a location is needed (e.g., 4th Street and Pine.) If descriptive information must be used instead of an exact address, this should be noted on the form.
>
> *Site City/Town, State and Zip Code*: the city name should be one that is recognized by the US Postal Service.
>
> *Directions*: The directions should be clear so that anyone would be able to locate the site, even if unfamiliar with the area. Cross-streets should be indicated whenever possible. The directions may include the site’s proximity to another existing site on the Site Register.
>
> *Contact Person and Phone Number*. Interviewers should make an effort to obtain this information for new sites and to verify for an existing site.
>
> *Number of Charter and Head Boats that use the site*. Interviewers should count the number of assigned wet or storage slips used by each type at CH and HB sites (the dock master can also usually provide this information). If CH boats such as trailered guide boats primarily utilize PR launch ramps then a best estimate of the number of CH boats launching on an average fishing day should be included.

Upon Departure – Fill in the time (military time) and number of boat trailers, empty slips, and/or shore anglers present at the site when the interviewer completes the assignment. The interviewer should also check the appropriate box to indicate the weather conditions while at the site.

Modes Present at the Site – For each mode, the interviewer should indicate whether the mode is present, not present, or if they are unable to make this determination.

Night Fishing: Note that there are separate categories for indicating if night fishing is present for shore or private/rental modes. The interviewer should also check whether there is adequate lighting available to safely conduct interviews after dark.

Private Access: The interviewer should check the appropriate box to indicate if the site is not open to the general public, even for a fee (e.g., if a key is needed to access through a locked gate). In addition, check whether they may be permitted to interview at the site if it is a private-access site. There may be instances of a privately-owned, restricted-access site that may not allow interviewers on site. If this is the case, the interviewer should indicate this on the form (access=private, hostile=yes).

Tide: If the fishing pressure would be affected greatly by the tidal cycle, the interviewer should check "yes" and explain in the comments section at the bottom of the site description form (e.g. a boat ramp that's inaccessible at low tide would affect PR mode.)

Fishing Pressure Estimates – Using the numerical codes provided on the Site Description Form, the interviewer should estimate the fishing pressure for each mode for both months of the current wave. The interviewer should fill in the calendar month in the space provided in front of the /YY (e.g., in Wave 2, Month 1 is March and Month 2 is April.) If this is an existing site and the interviewer's estimate is different from that on the current register, an explanation should be provided in the comments section.

Fishing pressure for head boats is recorded not as an estimate of anglers but as an estimate of the number of trips that particular boat typically makes on weekdays and weekends (i.e., pressure codes used to indicate number of anglers should NOT be used to indicate pressure for head boats.)

Comments – The interviewer should use this section to clarify the information recorded earlier and to provide additional information of interest to future interviewers at the site.

6.2.9 FHS Dockside Validation

Dockside validation visits require a form for recording the observations or reports of the vessel's activity status. The form is included in Appendix I.

Status codes:

1=Vessel in
2=Vessel Out - Charter fishing
3=Unable to Validate (e.g., trailered vessel, or otherwise can't locate after physically attempting)
4=Vessel Out - Non-charter / head boat activities
5=Vessel Out - Fishing Status Unknown
6=Vessel not in slip, not in water (dry dock)
8=Not applicable (When the vessel becomes ineligible during the wave)

Source Codes:
1=Direct Observation by Sampler
2=Secondary Information (marina operator, booking agent, etc.)

During site visits, the interviewer should check permanently assigned boat slips to see if the vessel is in or out. The visual check will also work with vessels that are assigned to a permanent location in a storage shed. The sampler next needs to determine if vessels not assigned a permanent boat slip or storage shed are utilizing a site on a regular basis (e.g. if a guide tends to use the same marina's ramp for launching his boat and meeting clients). This information can be used to update the directory and allow for indirect validation through queries with the marina's dockmaster (i.e. 'Has Capt. Q launched his boat today? Is he on a charter fishing trip?').

If the preliminary check determines that a vessel is out, the sampler must then try to determine what activity the vessel is engaged in, such as actively charter fishing, fishing for his/her own pleasure, checking out the engines, etc. In order to do this, the sampler may speak to a reliable source such as a marina operator or booking agent. If the source wants to know why this information is needed, the interviewer should be courteous and explain that we are trying to locate and document areas with charter boat activity in order to improve our effort estimates. If a boat captain asks why the sampler is inquiring about fishing activities the sampler should explain that we are required to obtain data to help us determine if fishing activities are being under or over reported (both cases have been documented) during the weekly for-hire telephone survey. The sampler should also explain that he is also trying to update the site register in order to improve our dockside sampling efforts.

While at a site the sampler should also try to identify vessels which are not included in the FHS frame but who are also using the site. This information should be provided to the contractor as an update to the for-hire vessel directory and also to assist with future dockside validations.

Vessels may also be validated during dockside intercept sampling if the vessel has been validated previously during the week or will be validated subsequently during the week. However, if intercept interviews are obtained from a boat that is on the list of those selected for FHS sampling, then a dockside validation record should NOT be included for that date (i.e. do not interview anglers from and validate the same boat on the same day - if the captain/operator understands what a validation visit is and notices his anglers being interviewed then he is likely to be sure he reports that trip - this is a bias which may influence him to change his ‘normal’ reporting behavior). Validating boats at a CH assignment site is acceptable if their anglers are not intercepted (e.g. visit the site for dockside validation in mid-afternoon, then return later and interview anglers coming off non-selected for-hire boats at the completion of their trips).

6.2.10 FHS Directory Updates

Data collected for FHS directory updates may include vessel name or number, telephone contact information, state and county of operation, and any new or revised contact information for vessels in the existing directory.

The Intercept Contractor should try to obtain as much information on new vessels as possible. This includes:

- the physical address, port, county and state where the vessel is located/docked;
- vessel name and registration number (e.g., ME1234XY);
- whether the boat is considered a charter boat or headboat;
- licensed and permitted capacity of the vessel;
- vessel length;
- the first name, last name, and contact phone number of the captain:
- the best time for contacting the captain or other vessel representative; and
- site code of vessel location if kept at an Intercept Survey site.

6.3 After the Assignment

6.3.1 Editing the Forms

At the end of each assignment, interviewers are expected to review and edit all forms for completeness, legibility, and accuracy if they have not edited throughout the day. Editing may occur while on site waiting to interview eligible anglers or after the interviewer has returned to his/her office (or home). Interviewers should be encouraged to edit their forms for correctness while on-site (preferably between interviews), while the day’s events are still fresh. Coding problems are most easily resolved at the field level, before much time has passed since data collection. These guidelines are meant to ensure that all items on the coding form are completed with valid entries and that the data are consistent and accurate.

A general guideline for editing is that all blocks on the front of the coding form should contain numbers except for item 17 (target species) which may be left blank. This includes leading zeros and "8"'s for not applicable questions. Refused items must be completely coded with "9"'s and responses of "don't know" must be coded with "9"'s with the last digit as "8."

6.3.2 Cleaning and Storing Equipment

The Intercept Contractor must provide interviewers all necessary equipment. Interviewers are responsible for all equipment, which should be wiped clean and dry before finishing a day's work.

All interviewers are expected to take good care of their scales. These scales are expensive, and it is critical to the success of the survey that all interviewers have accurate scales every time they are in the field.

Interviewers should never store any spring scale by hanging it from the weighing hook as this will stretch the spring. They should avoid contact with water if possible and never leave scales lying in a puddle or bucket of water. If the scales do come in contact with saltwater, interviewers should rinse with freshwater and allow them to dry thoroughly before storing. Spraying regularly (e.g. every day they are used) with anti-corrosive grease such as WD-40 is recommended. Spring scales should be protected in sealed, dry, clean zip-lock baggies when not in use.

6.3.3 Calling in Weekly Sample Tallies

The Intercept Contractor should designate the contact point method such as email, telephone, web site, and schedule for interviewers to report the number of eligible interviews obtained in a week (Monday through Sunday). These tallies must be reported to NMFS by Tuesday of the following week. This is important for meeting target sampling goals as a sampling wave progresses. Incomplete weekly tallies may result in a failure to meet the required goals. For this reason, even an assignment in which zero intercepts were obtained must be reported (and sent in). The following information for each assignment should be provided when reporting the weekly assignment results:

- Interviewer name and identification number;
- the originally scheduled date and site;
- the state where the assignment was completed;
- the control number (a number given to each assignment);
- the date the assignment was completed;
- all sites visited (original and alternate)
- total number of "good" interviews obtained by mode and by site; and
- a telephone number and time at which the interviewer can be reached.

NMFS will provide the program for providing a weekly summary of this information prior to contract start-up.

6.3.4 Delivering Completed Assignment Packets

As specified by the contractor, interviewers should mail or deliver the forms for the week's assignments to the contractor's designated contact. A packet for each assignment should include:

- One ASF;
- Up to three SDFs (one for each site visited);
- All completed Intercept Questionnaires, and
- All "bad" status 5 interviews.

7. Personnel Requirements

7.1 Interviewers

The Contractor shall be solely responsible for locating, hiring, training and supervising persons to serve as interviewers for the intercept survey. Training and testing, and level of fish identification expertise proposed by a Contractor must meet or exceed NMFS specifications. Trained interviewers, supervised by the Contractor, shall conduct all interviews with the anglers.

7.1.1 Interviewer Qualifications

Interviewers must have an educational background or field experience in identifying fish species. While interviewers are selected for their skills in fish identification, these are not the only skills required to be a successful interviewer. A good interviewer is one who can approach strangers with little reluctance, who can diplomatically handle touchy situations, who can follow procedures and complete forms with almost compulsive exactitude, and who can identify fish accurately at the species level. The intercept interview involves both a personal interview and a creel census (identification and measurement of the catch); a unique set of skills is required for each. Interviewers also administer the economic intercept survey, which includes sensitive questions such as household income, and require tact and sensitivity.

The specific tasks of a field interviewer are many. The interviewer will be expected to complete site assignments, to have all necessary equipment available and in proper working order (e.g., scales must be properly calibrated) while interviewing, to conduct interviews in an objective and professional manner, to complete all forms accurately and to submit all forms in a timely fashion. They are expected to attend at least two (but preferably all three) local wave meetings per year with their Regional Representative and other local samplers. Interviewers shall wear appropriate attire and present themselves in a professional manner while in the field.

In addition to obtaining intercept and economic interviews, the intercept interviewer is responsible for submitting site description information that is used in the sampling process to select sites and for updating the FHS directory. Intercept interviewers are also responsible for providing timely information on the completion of assignments and productivity information about the assignment.

Intercept interviewers must be able to answer basic questions about the survey they receive from the public, such as why the angler is being interviewed and what the data are used for, but questions requiring more detailed responses about survey methodology must be referred to the NMFS.

To prevent any actual or perceived conflict of interest, any field interviewers who own a charter or headboat (for-hire) vessel, or work as captains or mates on for-hire vessels must not be issued any CH or HB assignments (including dockside validations) in the same county in which they conduct their for-hire business operations. They may work CH, HB, or dockside validation assignments in other counties, however, the NMFS COTR must be notified in advance when these assignments have been issued. Email notification is sufficient.

Other conflict of interest issues may arise, such as when interviewers are involved with fishing rights groups. Contractor personnel must never represent the survey or comment on the survey at any public meetings, in print, or on the web. Interviewers who choose to attend public meetings where fisheries issues are discussed must do so only as a member of the public, and must never attempt to represent the survey. Questions about the survey should be directed to the NMFS Office of Science and Technology.

Proposals must include a thorough description of any and all plans to mitigate such potential conflict of interest issues that would prevent interviewers from being completely objective in their survey duties.

All field personnel are required to fully adhere to the requirements of NOAA Administrative Order (NAO) 216-100, Protection of Confidential Fisheries Statistics.

7.1.2 Interviewer Training

The Contractor shall be responsible for providing interviewer training for the intercept data collection. Training programs shall be designed to ensure quality and consistency of interviewing methods, questionnaire use, coding method, and quality checks of data. The level of training and content of the training programs must be approved by NMFS. NMFS will have at least two weeks to review and approve the training program.

Before a training session, all applicants shall be required to take a fish identification test which includes at least 20 of the most common marine fish species they are likely to encounter in the field. Testing could include using actual fish specimens or use of projections of high resolution 35 millimeter slides, along with descriptions of more subtle taxonomic characteristics. An initial score of 70% shall be considered passing, and only those with passing grades shall be trained as interviewers. Any trainee who scores below 90% must re-take the fish identification test during their first QC visit and score above 90% before they can continue to receive assignments for work on the survey.

An extensive training session must be held for all personnel who have not previously worked on the survey. Personnel who have previously worked on the survey should attend as a refresher but also to cover any procedural changes. This training must cover general intercept interviewing procedures as well as procedures specific to this survey. Training sessions must include a general overview of the background, purpose and design of the intercept survey, the Economic surveys, and the FHS, and the uses of the data collected, as well as the importance of complete objectivity and adherence to protocols. The introduction shall be sufficient to allow interviewers to respond to general questions regarding the intercept survey and FHS. Questions and discussion should be encouraged to ensure that all interviewers understand the importance and overall purpose of the surveys as well as the importance of collecting impartial and accurate data. Interviewers should be briefed on the existence of other programs in various states and regions that monitor charter and head boats, such as the South Carolina mandatory logbook program. The overview must be followed by an item-by-item explanation of the data collection instruments and a review of all materials used to conduct the interviews.

In addition, the contractor is encouraged to include a field visit in the training session.

Subjects included in the Intercept Survey training sessions must include, but are not necessarily limited to:

- An introduction to the objectives, goals and operation of the intercept survey and the FHS, and uses of the data that educates interviewers on appropriate responses to general questions from anglers in the field.
- A review of survey definitions and scope of coverage.
- Procedures for visiting the assigned site first, selecting alternate interview sites and for updating site register data, supplemented by a discussion of sources of local information on fishing activity to aid in these tasks.
- Proper procedures for screening for eligible anglers, conducting the interview and coding the data forms, including an item-by-item explanation of the data collection instruments and a review of all materials used to conduct the interview.
- Proper procedures for conducting the Economic Intercept Surveys including an item-by-item explanation of the data collection instruments.
- Proper procedures for updating the FHS directory.
- Assuring confidentiality of responses, and the reason for call-backs to validate 10% of the interviews.
- Identification of the twenty most frequently caught species in the interviewer's geographic sampling area without the aid of reference materials. Identifications must be accurate at the species level. In areas with high species diversity, the Contractor should consider expanding the number of species required to be identified correctly.

- The effective use of taxonomic keys and other reference materials, including Peterson's *Field Guide of Atlantic Coast Fishes of North America*, to identify other less common fish species in the interviewer's sampling area.
- A review of local names for fishes, identification aids for local fish commonly misidentified, and the use of the specified finfish species list.
- Principles and techniques of random sampling, so that decisions on sub-sampling fish for measurement and sub-sampling anglers at high use sites can be properly determined under a variety of field conditions.
- Correct techniques for length and weight measurements for different groups of fishes, including scale calibration.
- Proper procedures for completing all assignment tally and productivity reports.
- Appropriate methods for handling and deflecting hostility.
- Data confidentiality.
- Appropriate attire and how to present themselves in a professional manner.

Interviewers will be provided with a copy of the intercept survey Procedures Manual, copies of the Privacy Act policy, the Uniform Resource Locator (URL) for the NMFS Program office web site, and all other necessary documents and forms.

Referral lists for additional information, including the Internet address and telephone numbers for local, State and Federal resource management agencies in each area, shall be provided to the Intercept Contractor and must be provided to all interviewers. These numbers should be available to the interviewers to provide to the public when needing additional information about the program.

Each training session must contain periods of role playing to result in good interviewing technique. All trainees must conduct practice interviews with supervisors to allow first-hand criticism of their interviewing technique.

Interviewers must never subjectively interpret the methodology involved in the survey or the protocols, however minor the particular issue may seem. The training must stress the importance of adherence to these protocols.

Proposals must include any and all proposed methodology that will ensure consistency between trainings, as well as methods used to monitor and enforce compliance with following proper protocols.

7.1.3 Interviewer Testing

At the end of the training session, all potential interviewers shall be tested on the following skills, including but not necessarily limited to:

- accurate identification of common fish in the field and proper use of keys when unusual fish are encountered;

- proper conduct of interviews;
- effective handling of people and a range of problems encountered in the field;
- basic knowledge about the survey;
- proper coding of the interview, site description, and assignment summary forms;
- proper procedures for randomly selecting anglers to interview;
- proper procedures for conducting FHS dockside validations;
- proper procedures for the Economic Intercept Survey, and
- proper procedures for updating the FHS directory.

Testing could be accomplished by completing Coding Forms while following hypothetical video or audio taped interviews. Testing must also verify the interviewer's aptitude for successfully interviewing people in the subregion they will sample. Role playing would be a desirable method of determining this aptitude.

Field supervisors must conduct follow-up quality control (QC) testing of each interviewer after the initial training session. Such testing must be conducted by field visits while an interviewer is conducting intercepts. Items to be tested at this later date would include, but not necessarily be limited to: knowledge of the survey, species identification, proper coding of responses, and interviewing technique. The tests must be written tests; i.e., oral undocumented tests are not acceptable to the NMFS.

Additionally, each interviewer shall be administered a ‘refresher’ fish identification test at least twice annually, to ensure that they retain their knowledge of common local species of fish. These tests should be administered during local wave meetings utilizing slides, drawings, photographs, or live specimens; at the discretion of the Contractor and Regional Representative. The tests must be written tests; i.e., oral undocumented tests are not acceptable to the NMFS.

For all tests, a passing score is designated as 90 percent accurate identification of at least 20 of the most common species in an interviewer’s state, 90 percent correct coding of forms, and 90 percent correct answers on interview procedures for the base survey, economic add-ons, and FHS dockside validation.

The Intercept Contractor must maintain a written record of the dates and scores for each QC test and fish identification test, by interviewer and state, including any follow-up testing. This written record must be delivered to the NMFS according to the attached delivery schedule. NMFS will provide the Intercept Contractor with an excel spreadsheet template to use in documenting QC efforts.

7.2 Field Supervisors

Intercept interviewers shall be supervised by field supervisors called Regional Representatives (RRs).

7.2.1 Regional Representative Qualifications

Regional representatives must be knowledgeable about the survey, the Economic surveys, the FHS, and of the other charter and head boat monitoring programs. RRs must have extensive field interviewing experience and training in fish identification in the geographic area under supervision. They must also have effective skills in managing and motivating personnel.

7.2.2 Supervisory Tasks

The RR's role shall include the following:

- supervision of intercept survey interviewers, including any follow-up training;
- spot-checking of interviewers on assignment (QC visits);
- regularly maintaining contact and exchanging information with each interviewer;
- reviewing and maintaining site lists;
- reviewing monthly records of raw fish data for their region (fish dumps) and notifying the contractor of any potential discrepancies;
- reviewing wave report tables and notifying the contractor of any potential discrepancies;
- attending three national-level wave review meetings a year to review data and address field procedure issues as they arise;
- holding three regional (local) wave meetings with interviewers, and
- reviewing the forms submitted by new interviewers from at least their first five assignments.

Upon successful completion of initial training, the RR will accompany the interviewer during his/her first assignment in each mode (e.g. SH, PR, CH, and HB). NMFS recognizes the need for efficiency but recommends that no more than two interviewers accompany the RR at one time. Additional field observations and training of new interviewers are required until field supervisors can ensure that intercept interviews are being conducted completely, consistently, accurately and in accordance with the standard procedures in this Statement of Work. Supervisors should focus on the interviewers' abilities to deal properly and effectively with people, properly conduct interviews, accurately code interview forms, correctly identify species, and to conduct themselves in a professional manner at all times. At no time should the RR provide the interviewers with any information that is contradictory to the SOW.

Proposals should include any and all methodologies the contractor proposes to use to maximize standardization between the initial trainings and follow-up field trainings.

All forms from the first five assignments (or a minimum of the first 100 intercept coding forms) from each new interviewer must be handled separately, and reviewed for accuracy, completeness, legibility and consistency of coding by the RR in each area. New interviewers are defined as interviewers with no previous experience conducting interviews for the Intercept Survey. Special attention shall be directed at errors in biological reasonableness, species identification, completeness and consistency of coding. RRs must also verify that intercepts are collected at assigned sites or that alternate site selection procedures are used properly. Remedial action such as providing additional training, suspension or termination shall be taken whenever appropriate, and shall be conducted in a timely manner.

The RR may or may not directly observe later intercept forms, but the RR must still be involved in the resolution of all potential species identification problems and biological reasonableness issues for data submitted by samplers in his/her area. RRs will be expected to review all fish records for interviewers in their area. In particular, the RR must be able to verify the identification and measurements of all species reported by comparison with natural history information from the literature.

Following initial field training, all interviewers shall be observed in the field by a RR during quality control (QC) visits. These QC visits shall be made at least twice annually during an interviewer's regularly scheduled assignment, and must include observation of interviewing technique (such as asking the questions in the proper order and with the proper wording) as well as a check that the interviewer has all the required interviewing materials. These QC visits must be unannounced. A 'QC checklist' has been successfully utilized in the past and is strongly encouraged, along with a brief quiz on protocol. An example may be found in Appendix P. The RRs shall score each interviewer based on performance at the quality control visit, and the intercept contractor shall report to the NMFS program office the date and score of each QC visit for each interviewer number. The first QC visit, made during one of a new interviewer's first three assignments, shall **not** count as one of the two annual QC visits. NMFS requires documentation on any failed QC attempt (i.e., QC visit during which the RR was unable to locate the field interviewer.) Email notification will suffice.

Field supervisors may occasionally conduct intercept interviews in case of staff shortages but NMFS discourages this as a regular practice.

Field supervisors shall be regularly kept informed by the NMFS and Contractor of issues (e.g. regulation changes and proposed management changes) in the recreational fishery in their interviewing area using appropriate communications (e.g. newsletters, phone calls, web notices, etc.). Field supervisors are expected to communicate frequently with interviewers in their area. Questions from interviewers on site assignments and sampling protocol should be encouraged. Regular feedback on coding forms is essential and remedial action must be taken when appropriate.

Newsletters or meetings with groups of interviewers or other focus groups to review data collection procedures, site-specific sampling problems, species identification and new recreational fishery developments would be highly desirable. Follow-up species identification training conducted during field observation may be necessary for species of particular concern. Newsletters and other materials issued to the field staff must be delivered to NMFS at the same time they are issued to field staff; in addition, any materials that contain protocols or other items contained in this SOW must be reviewed and approved by NMFS prior to being issued.

8. Quality Control

8.1 Telephone Validation of Intercept Survey Interviews

Activities specific to proper conduct of validation for the Intercept Survey include:

1. Generation of a large enough sample of intercept survey respondents to be called and interviewed for the purpose of validating at least 10 percent of each interviewer's intercept interviews;

2. Tracking and reporting of progress in completing follow-up telephone validation of intercept interviews.

8.1.1 Validation Sampling Method

Interviewers must collect names and telephone numbers of anglers for the purpose of telephone validation. The main purpose of the telephone validation is to independently verify that the interviewer was at work where and when he/she was supposed to be. It also provides project managers with feedback on interviewer conduct in the field.

NMFS is interested in updating the validation questionnaire to incorporate confirmation of some of the intercept questions. Bidders are encouraged to discuss potential revision in their proposals.

Respondents shall be contacted by phone by the Intercept Contractor. The contractor should use personnel with an objective view-point to conduct the validations, in order to reduce any possible bias. A Regional Representative should not conduct validations for his/her own interviewers, nor should field interviewers conduct validations of other field interviewers.

A sample validation form is included as Appendix Q. Anglers are asked to verify that they were interviewed at a particular fishing site on a particular day. They are also asked whether the interviewer asked to examine their catch.

If interviewer problems are suspected, the validation rate should be increased to investigate the problem. The contractor must notify NMFS when any interviewer is being investigated. Open-ended conversations with respondents should be employed when problems are suspected. While names and telephone numbers will not be volunteered by all anglers, experience shows that approximately 70 percent of anglers are willing to provide this information. Interviewers with significantly lower response rates to this data item or with a high occurrence of bad telephone names and numbers must be closely supervised.

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The Contractor is required to conduct follow-up telephone interviews to validate at least 10% of each interviewer's intercept survey interviews obtained. The sample sizes for the follow-up validation survey should be determined separately for each state/wave stratum. The total validation sample for each stratum should be calculated as 10% of the total intercept interviews conducted by each interviewer, regardless of whether or not a valid telephone number was obtained. In addition, some level of non-response should be expected because some telephone numbers provided by intercepted anglers may prove to be invalid and some intercepted anglers who supplied valid numbers may be difficult to reach. In order to adequately compensate for potential non-response, the Contractor should select more than the minimum number needed to achieve the 10% validation goal.

In order to distribute the validation sample for each wave in a representative manner across interviewing assignments, the Contractor should order interviews by date, interviewer, assignment number (first or second of day),and interview number and then take a systematic sample from the list.

Calculation of an appropriate sample size can be illustrated with an example. Suppose 110 intercept interviews have been collected in a given sampling stratum. In order to meet the 10% validation goal, 11 follow-up interviews should be conducted with intercept survey respondents. If only 100 intercept respondents supplied a telephone number for a follow-up interview and the expected non-response rate for respondents who supplied telephone numbers (invalid or valid) is 20%, then a validation sample of 11 would have to be obtained from approximately 80 possible validation survey respondents. The number of interviews with telephone numbers to draw for validation purposes should be calculated as follows:

> Sample size = (0.10 X 110 intercepts) X (100 intercepts w/phone / 80 potential Validations) = 13.75 rounded to 14 intercepts w/phones.

8.1.2 Validation Questionnaire

Items on the questionnaire for which the angler does not know the answer should be coded with "8"'s. Items that are refused should be coded with "9"'s. An example validation survey instrument is contained in Appendix Q.

Item 1 Date of interview - This question validates that the interview took place at the site and date recorded on the intercept interview form. This is coded "1" for yes, "2" for no

Item 2 Courteous - This item validates that the interviewer conducted the interview in a courteous and professional manner. This is coded "1" for yes and "2" for no.

Item 3 Why discourteous - If the answer to item 2 was no, then the interviewer probes for reasons the interviewer was perceived as discourteous or unprofessional.

Item 4 Available catch - This question ascertains whether any fish were available for the interviewer to look at in order to determine if item 5 should be asked or whether the validation interviewer should skip to item12. This is coded “1" for yes and “2" for no.

Item 5 Look at Fish - This question determines if the interviewer looked at all of available catch. This is coded “1" for “all fish looked at”, “2" for “some fish looked at”, or “3" for “no fish looked at”.

Item 6 Why not looked at - If the answer to item 5 was “2" or “3", the validation probes to determine why all fish weren’t examined, since the interviewer may have followed correct procedures yet was prevented from examining all the available catch. This is coded “1" for “didn’t have time/didn’t want to unpack, etc.”, “2" for “there were too many/more than 15 of one species”, “3" the interviewer didn’t ask to see them”, or “7" for “other” with the other reason specified in an open-ended text field.

Item 7 Weighed Fish - This item determines if the interviewer weighed the available catch. This is coded “1" for “all fish weighed”, “2" for “some fish weighed”, or “3" for “no fish weighed”.

Item 8 Why not weighed - If the answer to item 7 was “2" or “3", the validation probes to determine why all fish weren’t weighed, since the interviewer may have followed correct procedures yet was prevented from weighing all the available catch. This is coded “1" for “didn’t have time/didn’t want to unpack, etc.”, “2" for “they were gutted”, “3" for "there were too many/more than 15 per species”, “4" for “they were too big”, “5" for “the interviewer didn’t ask to see them”, or “7" for “other” with the other reason specified in an open-ended text field.

Item 9 Measured Fish - This item determines if the interviewer measured the lengths of the available catch. This is coded “1" for “all fish measured”, “2" for “some fish measured”, or “3" for “no fish measured”.

Item 10 Why not measured - If the answer to item 9 was “2" or “3", the validation probes to determine why all fish weren’t measured, since the interviewer may have followed correct procedures yet was prevented from measuring all the available catch. This is coded “1" for “didn’t have time/didn’t want to unpack, etc.”, “2" for "there were too many/more than 15 per species”, “3" for “the interviewer didn’t ask to see them”, or “7" for “other” with the other reason specified in an open-ended text field.

Item 11 Measuring board - The validation interviewer asks if the interviewer used either a measuring board or a pull-out tape measure to measure the fish. This is coded as “1" for “measuring board” or “2" for “tape measure”.

Item 12 Time of Interview - The respondent is asked approximately what time of day they were interviewed as a check against the recorded interview time. This is coded as “1" for “12:01AM-6 AM”, “2" for “6:01AM - 9 AM”, “3" for “9:01 a.m. - 12 noon”, “4" for “12:01PM - 3PM”, “5" for “3:01PM - 6PM”, “6" for “6:01PM - 9PM”, or “7" for “9:01 p.m. -12 midnight”.

8.2 Wave Review Meetings

Representatives of the Telephone (both CHTS and FHS) and Intercept contractors, all RRs, NMFS program staff, and personnel from other State entities shall meet periodically (wave review meetings) to review preliminary catch and effort estimates, review summary fishdumps, to discuss field interviewing procedures and cost-effectiveness procedures, to provide continuing education and training of the RRs and field interviewers, and to enhance cooperation between the APAIS and other programs.

In general, wave review meetings will be held as follows:

- Waves 1-2: Intercept Contractor, late June/early July,
- Waves 3-4: Intercept Contractor, held at or near NMFS headquarters in Silver Spring, late October/early November,
- Wave 5-6: Intercept Contractor, late February/early March

The Intercept Contractor is expected to pay for travel for their staff, including RRs, although arrangements for state sub-contracting RRs are between the contractor and those states. NMFS is responsible for travel by NMFS program office staff.

Regional representatives (RRs) shall conduct at least three local wave meetings with their field staff per year. These meetings are generally held shortly after the larger wave meetings in order to review any potential issues that may have been discussed. All interviewers are required to attend at least two of these meetings, although they should be encouraged to attend all three. These meetings will refresh techniques established in previous waves, review the basic details of the surveys, explain the exclusions in questionnaires that are applicable to that wave and point out any changes in forms. Interviewers shall be kept informed of developments in the recreational fisheries being surveyed, and shall be able to refer respondents to the NMFS program staff for further information. Questions on protocol and fish identification should be strongly encouraged during these meetings. Fish identification tests and QC tests are required to be included in each local wave meeting. The contractor must provide the NMFS with a record of each regional wave meeting, including an agenda, attendance list and brief meeting summary (minutes). The dates and scores will be maintained in an excel spreadsheet as discussed in Section 7.1.3, and delivered to NMFS according to the attached delivery schedule.

Proposals must include any and all methodologies that may be used in monitoring adherence to these requirements.

The contractor must provide NMFS at least 30 calendar days notice of each meeting; NMFS will advise the contractor if NMFS program staff will attend any of the meetings.

9. Databases and Data Delivery

9.1 Data Entry

9.1.1 Intercept Data Entry

The Contractor shall use a data entry program provided by NMFS. The data entry program was designed to run on commonly available software (i.e. Microsoft Access). A recent version of the data entry program is available at ftp://cusk.nmfs.noaa.gov/mrfss/tmp/ for examination by offerors. The data entry program includes modules for data entry from questionnaires similar to the economic flex questions for the conjoint surveys.

The data entry program employs logical checks to prevent incorrect coding entries and to flag illogical entries. All checks contained in the intercept checking program must be incorporated into the data entry program. Every data element must be checked for data entry errors, reasonableness in falling within an acceptable range, and logic in relation to other data elements. Duplicate identification numbers must also be identified and corrected.

The data entry program can be run in three different modes of operation:

- concurrent data entry and checking of all variables;
- uninterrupted data entry, with data checking occurring after a data batch is entered; and
- double entry of key variables during data entry, with data checking occurring after a data batch is entered.

Each of those above methods has advantages and disadvantages with regard to smooth data entry versus immediate checking of errors, and using the appropriate personnel to check errors. Current practice is the first method listed. Offerors should address which mode of data entry they would propose to use and summarize their quality control process.

If feasible automated data recording technology became available for on-site intercept interview recording, NMFS would work with the Contractor to develop acceptable procedures.

9.1.2 FHS Directory Updates Data Entry

Offerors should propose what method they will use to track and deliver updates to the FHS directory.

9.1.3 FHS Dockside Validation Data Entry

Offerors should propose what method they would use to handle data entry for the dockside validation data. The current Intercept Contractor and the GSMFC code the information in either Excel spreadsheets or dBase files which are then compiled into the SAS data files.

9.2 Record Formats

The data formats, units of measure, and coding used for the intercept survey and FHS databases shall be provided by NMFS and shall be the same for all Regions.

9.2.1. Intercept Interview Databases

The intercept interview database contains data collected from completed interviews (status 1 and 2). There are seven record types in the creel intercept interview databases. For every interview, there is a unique ID_CODE coded on all records associated with that interview. The ID_CODE is used to link all records of an interview.

The ID_CODE is 16 digits long and it consists of assignment number (usually 1, occasionally 2), interviewer number (4 digit), date of the survey (8 digit [year, month, day]), and interview number (3 digit). Interview numbers begin with one and are assigned consecutively to interviews within an assignment. For example ID_CODE 1232220040914018 would refer to the eighteenth interview collected by interviewer 2322 in his first assignment on September 14, 2004.

The seven record types in the intercept interview databases are:

1. Angler/Trip Data – one I1 record per interview. I1 records contain angler and trip information including ID_CODE, location of the interview, fishing area and mode, trip and fishing hours, gear used, geographic residence and avidity of the angler, presence of phone lines and type of housing, species targeted, presence/absence of catch, number of contributors to the catch, and total numbers of I2-I9 records associated with the interview. Special questions such as artificial reef fishing, sea turtle sightings, tournament fishing, etc. vary by year and area, and are usually recorded on the I1 records.

2. Unavailable Catch (Catch Type B1 and B2) – multiple I2 records for each interview, one record for each species code/disposition combination. More than one disposition code can be used for a particular species code. I2 records contain the ID_CODE, and

the number and disposition of unavailable catch by species. Disposition codes categorize catch as released alive (catch type B2), and used for bait, filleted, or other consumptive use (catch type B1). For unavailable catch, the species name is reported by the angler but cannot be verified by the interviewer. The variable containing the numbers of fish caught (NUM_FISH) is additive across all records.

3. Available Catch (Catch Type A) – multiple I3 records for an interview, one record for each individually weighed/measured fish. If no fish were weighed or measured, there will be one record for a species. I3 records contain the ID_CODE, species code, numbers of fish, disposition of the catch, and length and weight measurements for fish brought to land and identified to species by the interviewer (catch type A). Only one disposition code can be used for each species. The variable containing the number of fish caught (FISHINSP) is not additive across records. This number is the total number of that species caught and is carried across all records for that species with individual length/weight measurements.

4. Group Catches - only one I4 record per interview and this occurs only when A-type catches can not be separated for individual anglers. If catches can be separated, no I4 record exists. I4 records contain the ID_CODE of the interviewed angler, as well as the ID_CODE of the angler whose records contain combined type A catches.

5. Socio-Economic Data - one I5 record per interview. I5 records contain the ID_CODE and socio-economic data collected. Questions and resulting data vary from year to year.

6. First Interview of Fishing Party - only one I6 record per interview. I6 records contain the ID_CODE of the interviewed angler, and the ID_CODE of the first individual interviewed within a fishing party. This record was begun in 1991 in order to link all interviews within a party together.

9. At-Sea Discard Data – multiple I9 records per interview, one record for each discarded fish from At-Sea Headboat interviews.

The intercept SAS file naming conventions are standard across years and regions. Naming conventions are:

Record Type	File Name
1	I1_YYYYW.ssd
2	I2_YYYYW.ssd
3	I3_YYYYW.ssd
4	I4_YYYYW.ssd
5	I5_YYYYW.ssd
6	I6_YYYYW.ssd
9	I9_YYYYW.ssd

where I=intercept, YYYY = year, W = wave, and .ssd is the SAS data set extension. The dataset extension may vary according to the version of SAS. Appendix H lists the variable names, formats, and codes for each record type.

9.2.2 Master Site Register

The MSR files contain the current list of sites for a wave and year with that wave's estimated fishing pressure for each site by mode, month, and day type. There is one record per site. Appendix H lists the variable names, formats, and codes. The MSR is a SAS database that contains all of the information for all states by wave and year.

The naming conventions are standard across years and waves. Naming conventions are: File Name: wv<W><YY>_sr(e.g. wv106_sr for wave 1, 2006).

9.2.3 Assignment Summary Files

The assignment summary files contain the information provided on the ASF. There is one record per assignment. Appendix H lists the variable names, formats, and codes.

Assignment summary data shall be maintained in SAS format and integrated with the identification code from the intercept form. The naming conventions are standard across years and waves. Naming conventions are: AS_<YYYY><W>, YYYYW similar to intercept data above.

9.2.4 Assignment Completion Files

The assignment completion files contain information on the outcome of all fixed, flexible, and reserve assignments. There is one record per assignment. Appendix H lists the variable names, formats, and codes. Assignment summary data shall be maintained in SAS format and integrated with the identification code from the intercept form. The naming conventions are standard across years and waves. Naming conventions are: asgnw<W><YY>.

9.2.5 FHS Directory

The FHS directory file contains the current list of head and charter boat vessels for a wave and year. Appendix H contains variable names, formats, and codes for the Vessel Directory.

The naming conventions are standard across years and regions. Naming conventions are: File Name: <st>dir<wave><yy> (e.g. scdir504 for South Carolina, wave 5, 2004).

9.2.6 FHS Dockside Validation Results

Dockside validation data are to be stored in a specified format such that multiple records for each vessel and vessel operator can be linked by unique survey-specific identifiers. The vessel identifier is specific to each boat and listed in the sample draws for each state. Information to be recorded for each dockside validation are vessel identifier, date and time of validation (if site actually visited), state, county and site codes of location where boat was validated, presence of boat, activity of boat, source of information. Variable descriptions and formats are provided in Appendix H.
The naming conventions are standard across years and regions. Naming conventions are: File Name: <sub-reg code><yy>v<week>.<sas-tag> (e.g. g01v08.sas7bdat for Gulf region, year=2001, week=8 in PC-SAS format).

9.2.7 FHS Vessel Directory Updates

Updating of the FHS vessel directory must occur prior to the sample draws for the next wave's sampling. The addition of new vessels and updates to records for vessels already in the directory will be submitted by the Intercept Contractor to the For Hire Survey Contractor on a mutually agreed upon schedule.

Variables critical to telephone sampling (phone numbers, representatives, etc.) should be the priority for updating. The program that produces the sample draws (a SAS data file following the naming convention 'gd<st><yy><wave>', e.g. gdsc006.sas7bdat - for South Carolina 2000 wave 6) produces a "good list" of all eligible vessels for the current wave's sampling. This list is referred to as the sample frame. It will be used to expand the effort estimates obtained from sampled vessels. The draw program also produces a 'bad list' file which includes the vessel identifier and flag variables indicating which key element is missing, hence the exclusion of the vessel from that wave's sampling frame (follows naming convention 'bd<st><yy><wave>'). This list will be delivered with the sampling frame and weekly draws to the Intercept Contractor at least three weeks prior to the start of the wave. The Intercept Contractor should attempt to obtain the missing information, either by phoning the vessels' representative, in person if the docking location is known, or through indirect sources such as charter boat booking offices or advertisements. Additional missing elements in the directory should be identified and targeted for updating throughout the subsequent wave. Other important information includes the vessel length, mailing address, location for validating (APAIS access site), additional operators and contact information.

9.3 Data Edits

The Intercept Survey Contractor shall be responsible for data editing and delivering error-free data on the initial delivery date. The NMFS intercept data quality assurance programs will be provided to the contractors. The main error-checking program is comprised of a main program, called macro routines and referenced data tables. It is periodically updated as required by the NMFS as the survey or quality control checks are modified, and the updated version or modifications are provided to the contractor.

Statement of Work

Any modifications or improvements to this program made by the contractor need the approval of the NMFS' program office staff before implementation.

Quality control processes for ensuring accurate data entry and editing the data must be approved by NMFS prior to their implementation. Copies of the error-checking programs used in the 2007 survey shall be provided to the successful data collection Contractor, but shall not be assumed to be complete or accurate for purposes of this solicitation. New error checks continue to be developed by NMFS and suggestions from the Contractor are encouraged.

One current method of data quality control and editing involves the generation of a list of all fish records collected in the intercept creel survey, broken down by state and record type (2, 3, or 9). This list, referred to as a "fishdump" (Appendix L), must be generated each month by the Contractor for distribution to Regional Representatives, state representatives, and the NMFS. The fishdump is used as a tool for checking and editing raw fish records in the data before delivery of the monthly and wave data sets to the NMFS. The format for distribution must be electronic (via email attachment or a website). The following data elements are the minimum that must be included: species code; common name; disposition; number of fish; mode of fishing; area fished; gear used; county and site of intercept; and the unique intercept identifier components (the assignment number; interviewer identification code, month, day, and intercept number for that assignment).

The Contractor shall allow reasonable time between distribution of the fishdump and data delivery for respondents to review the records, make comments, and for the Contractor to follow up on the comments and make edits as deemed necessary. NMFS requires five business days to review the fishdump. In addition, all comments made by the NMFS in response to the fishdump must be addressed in a spreadsheet that identifies the record questioned and how the question was resolved. This documentation must be delivered electronically at the time of data delivery.

Updates to the error-checking program and any additional error-checking programs from NMFS shall be provided periodically to the Contractor. The Contractor must implement any changes in a timely manner (within one wave of receipt). Output from the error-check program shall be delivered by the contractor to the NMFS program office for each wave's worth of data according to the delivery schedule in Section F.

Examples of intercept survey editing include the following: editing for duplicate identification numbers; correct state, county, and site codes; correct coding by disposition on the fish records, reasonableness with regard to occurrence of a fish species within a region, area or mode; reasonableness of catch data including number caught, lengths and weights; reasonableness of trip and fishing hours, number of days spent fishing in the past 12 and two months; and residence of anglers.

The historical database from the intercept surveys also may be used by the successful Contractor for constructing criteria and performing outlier analyses.

Questionable records identified by the error-checking program must be examined by the Contractor. This may mean a call-back to the interviewer. Possible errors may also be found during the wave review meetings and those data must be examined by the Contractor.

Those records questioned, and corrected or verified, should be reported to NMFS on spreadsheets listing the key information to identify the record (state, wave, angler id, assignment number, month, day, intercept number) and the value questioned, the resolved or corrected value, and the reason for the correction or why no correction was deemed necessary. If outlier analysis is used to question the recorded responses, the outlier (limit) values should be included on the spreadsheet.

If errors are found after the wave meetings error checking process, the Contractor shall be responsible for correcting the data within one month of the notification of the error.

9.4 Data Delivery

Intercept interview and economic survey databases shall be maintained as electronic datasets. These data shall be delivered to NMFS via FTP following the delivery schedule in Section F (also in Appendix T). All electronic computer files shall be fully documented in the wave reports when changes are made. The final annual reports will contain all versions of the documentation.

Documentation shall include, but not necessarily be limited to the following:

- Characteristics of the files (e.g., description of file content including project name, year and wave of data; record formatting characteristics, including variable name and description, length and alpha-numeric designation; number of records in each file;
- A description of file content including the project name; year and wave of data; date generated; person to be contacted; and other pertinent descriptive information; and
- Logs of edits/changes to the databases.

Intercept data to be provided include, but are not necessarily limited to the following:

- Site registers: 1 electronic copy delivered as a SAS dataset;
- FHS: 1 electronic copy of the directory update for each wave;
- Intercept data shall be provided to NMFS in an electronic file after all data have been thoroughly edited and cleaned as prescribed below. Electronic files of interview records contain fish species, numbers, weights, and lengths (fish dumps) in a format prescribed by NMFS (Appendix L);
- Electronic file(s) containing the ASF data, including but not limited to:

    - interviewer code;
    - disposition of the assignment (completed, alternate site, canceled) and reason for using alternate site;
    - fishing mode, and whether or not a head boat was ridden;
    - total on-site and editing hours;
    - mileage to the site;
    - tallies of intercept samples completed by fishing mode (status 1 and 2),
    - eligible anglers at each interview site who were not interviewed by category (initial refusal, language barrier, refused key item),
    - ineligible people intercepted by screening category, and
    - people missed during conduct of another interview;
- Output from the error-checking program with annotations as to the resolution of questionable data, delivered to NMFS as a MS Word file;
- Separate documentation file (as an excel spreadsheet) addressing other fishdump records (e.g., species ID, counts, etc) not addressed in the annotated error-checking output;
- Electronic file(s) containing the assignment completion data, including the outcome for all fixed, flexible and reserve assignments drawn for a wave, and
- Electronic file(s) containing all dockside validation results by state, site, date and vessel.

10. Survey Reporting Requirements

For the Intercept and FHS directory updates, the Contractor shall prepare and submit wave and annual reports of survey activities and results. These reports are to be provided to NMFS on a bimonthly and annual basis as required in Section F. Timely submission of these performance data is necessary to maintain data collection quality through identification of problem areas and adjustment of procedures as necessary.

Any world-wide web applications developed under this contract will also be delivered to the government at the end of the final contract period. This includes electronic source code for web pages as well as any database programming that provides data over the web. These deliverables will be due at the same time that the annual report for the final option year of the contract is due.

10.1 Supporting Data Collection and Processing Documents

The following are required to be delivered to the NMFS as indicated in order to facilitate communication and documentation of survey and data quality control progress.

1. Weekly tallies of goal monitoring,
2. Monthly fishdumps,
3. Monthly spreadsheets describing resolution of any questions or comments made by the NMFS and other reviewers to fishdump records,

4. For each wave, annotated output from Intchk programs that were run on wave data (programs provided by the NMFS). The output should address all 'checks' and 'errors' indicated in the databases.

10.2 Wave Reports

One report is required for each wave that summarizes interviewing results and key data for the Intercept survey, any other flexible questions, and FHS updates. Three bound hard copies of each wave report are required. In addition to the hard copies, an electronic file(s) of the wave reports will also be delivered to NMFS as a PDF file as one document (i.e., not separated into chapters or sections.) Ideally the electronic and hard copies will be delivered to NMFS at the same time, however, the hard copies are due no later than 3 business days after the due date.

10.2.1 Intercept Wave Report Data

Appendix R contains a recent wave report. The intercept wave report tables shall include, but not necessarily be limited to the following:

Text containing:

- Management activities,
- Results of supervisory field visits;
- State sub-contracting activity;
- Documentation of any affects on sampling or sampling productivity; and
- If needed, recommendations and proposals for change based on intercept survey results, including plans to increase sampling efficiency, minimize variance, enhance participation and cooperation of respondents and/or coastal states, or increase the visibility and usefulness of the APAIS to the public.

Tables containing:

- Total allocated interviews, obtained interviews and interview shortfalls sorted by state, fishing mode, and weekend/weekday stratum (see Tables 1 and 2 of Appendix R.) A separate table must be produced for HB mode to account for trip assignments;
- Interviews allocated by NMFS, additional interviews allocated by the state and ACCSP, interviews obtained, allocation shortfalls, and effort information (total hours and hours/interview to the nearest 100^{th} of an hour) by fishing mode (see Table 3 of Appendix R.) A separate table must be produced for HB mode to account for trip assignments (Table 4 of Appendix R);
- A complete accounting of the outcome of all assignments drawn for each Subregion, State, and mode which shall include (see Table 5 of Appendix R):
    - total drawn assignments;
    - assignments not issued due to unavailability of interviewers or held in reserve;
    - total issued and completed assignments; and

  - numbers of issued assignments not completed by reason (interviewer quit, goal met/assignment canceled, interviewer - personal reasons, weather, other, and unknown). If any assignments are not completed due to "other" or "unknown" the Intercept Contractor must include an additional table giving details. HB mode may be included in this table (see Table 5a of Appendix R);
- A complete accounting of the outcome of all assignments completed for each Subregion, State, and mode which shall include: Interview goals, completed assignments, assignments resulting in interviews, and interviews obtained in the target mode at any site and at the assigned site (see Table 6 of Appendix R.) HB mode may be included in this table;
- A complete accounting of completed assignments and visits to alternate sites, with the reason for leaving the assigned site (no activity due to weather, no activity due to other reason, less than eight anglers in target mode, made goal, tournament weigh station, couldn't find site, encountered another survey interviewer, asked to leave/hostile site, or other (see Table 7 in Appendix R). HB mode may be included in this table;
- A complete accounting of the number of interviews attempted for each Subregion, State, and mode which shall include: Total number of interviews obtained, interviews not completed by reason (initial refusal, language barrier, key item refusal); ineligible anglers encountered in the target mode by category (not completed trip, not U.S. fishing, not recreational, not saltwater, not fin-fishing, not five years of age; and the estimated number of eligible anglers missed in the target mode (see Table 8 in Appendix R). HB mode may be included in this table;
- A separate table with numbers and percents of interviews not completed due to initial refusal, language barrier, and key item refusal, separated by subregion, state, and mode; table must also include total number of successful interviews completed by subregion, state, and mode (see Table 9 in Appendix R);
- Numbers and percents of interviews conducted by state, mode, county name and site compared with percent pressure by county from drawn assignments, and from the MSR (see Table 10 in Appendix R).
- Distribution of completed interviews by time of day sorted by subregion, state and collapsed mode (SH, PR, CH, HB), shown in both tabular **and figure** format (see Table 11 in Appendix R);
- Numbers and percents of interviews completed by area of fishing (state waters, EEZ, inland) sorted by subregion, state and collapsed mode (SH, PR, CH, HB; see Table 12 in Appendix R);
- Mean hours and mean days fished (past 2 months and past 12 months) sorted by subregion, state and collapsed mode (SH, PR, CH, HB; see Table 13 in Appendix R);
- Numbers and percents of interviews by location of residence (in-state coastal, in-state non-coastal, out-of-state) sorted by subregion, state and collapsed mode (SH, PR, CH, HB), (see Table 14 in Appendix R);

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- Numbers and percents of interviews by telephone validation potential (the number of interviews resulting in the obtainment of a phone number) sorted by subregion, state, and collapsed mode (SH, PR, CH, HB), (see Table 15 in Appendix R);
- Summary of confirmed and unconfirmed validation interviews (number of confirmed interviews, # of unconfirmed interviews, total intercepts obtained, and the percent of interviews that were validated) sorted by subregion, state, and interviewer number (see Table 18 in Appendix R);
- One table with a summary of results of telephone validation interviews. The condensed version should have summary totals of: percent not interviewed, percent not professional, percent not looked at, percent not weighed, percent not asked (weight), percent not measured, percent not asked (length), percent tape only, total number of validated interviews, total number of intercepts obtained by the interviewer, percent validation rate, and the total number of interviews with available fish. The results should be sorted by subregion, state, and interviewer (see Table 19 in Appendix R) ;
- Interviews by time of day (from validation interviews), sorted by subregion, state, and interviewer (see Table 20 in Appendix R). The time categories are: 12:01AM-6 AM, 6:01AM - 9 AM, 9:01 a.m. - 12 noon, 12:01PM - 3PM, 3:01PM - 6PM, 6:01PM - 9PM, 9:01 p.m. -12 midnight;
- Species reported by subregion and state, with numbers of records with each species by catch type (A, B1 and B2), total number of fish counted by catch type (A, B1 and B2), numbers of fish weighed and measured, average weight, and minimum and maximum lengths measured, sorted by total numbers of fish counted (see Table 16 in Appendix R); and
- Summary of discarded catch from at-sea headboat sampling, sorted by control number, county, and month (see Table 17 in Appendix R).

10.2.2 FHS Dockside Validation Wave Report Tables

The wave report tables for the FHS dockside validation visits should be included with the intercept Survey wave reports and should summarize the following survey results by subregion, state and wave:

1. A summary of inactive, uncooperative, and ineligible vessels compared to the directory and sample frame, by state and subregion (see Table 22 in Appendix R);
2. A complete accounting of the number of vessels scheduled to be sampled in the FHS that were validated (status 1, 2, 4, 6, and 7) and not validated (status 3 and 5), by sub-region, state and sampling week (see Table 23 in Appendix R);
2. The average number of dockside validation visits per vessel by state and wave (see Table 24 in Appendix R);
3. The distribution of dockside validation visits by time of day, state and wave (see Table 25 in Appendix R.) The time categories are: 12:01AM-6 AM, 6:01AM - 9

AM, 9:01 a.m. - 12 noon, 12:01PM - 3PM, 3:01PM - 6PM, 6:01PM - 9PM, 9:01 p.m. -12 midnight.

10.2.3 Data Reporting Requirements (Economic)

The Contractor shall submit brief bi-monthly reports that describe specific survey results and provide recommendations and proposals for procedural changes based on Add-On Economic intercept survey results. Bi-monthly reports shall include plans to increase sampling efficiency, minimize variance, and enhance participation and cooperation of respondents. These reports shall be sent at the same time that the intercept and telephone survey data are to be delivered.

The bi-monthly evaluation reports for the Economic Mail Survey should provide tables reporting the following survey results by state and wave:

Attempted number of mail surveys
Number of completed mail surveys by activity listed in Table I.
Percent of “don't know” or “other” responses by question
Percent of refused responses by question
Number of completed surveys (with responses to all questions)
Number of incomplete surveys
Number of returned mail surveys because of bad addresses

10.3 Annual Report and Other Deliverables

An annual report is required for each year of the contract that provides an overview of the data collection procedures and results for the intercept, economic surveys, and any flexible questions. Two volumes must be provided, one containing a summary of procedures, and one containing a summary of the data. One bound (or notebook) hard copy of each volume is required. In addition to the hard copies, an electronic file(s) of the annual report will also be delivered to NMFS as a MS Word file. The annual report shall include but not necessarily be limited to the following:

- Yearly summary of the tables provided in the wave reports;
- Description of data collection procedures and results, including description of any changes throughout the sampling year;
- Description of the coding and editing procedures;
- Description of other quality control measures and procedures, including but not limited to the date and score of each QC visit for each interviewer number; fish test score results for each interviewer number; regional wave meeting agendas, summaries and attendance lists;

Other required deliverables:
- Electronic working copies of all data editing and quality control programs, and sample draw programs,

- Hard copies and electronic files of all manuals, forms, and training presentations used in each year of the survey, including all revisions documented with the date(s) of use,
- Any other specially-designed software developed for tracking of assignments, goal monitoring, etc; however, if widely available commercial software is used, only examples of that use would be required. For example, if resolution of possible errors is done on a commercial spreadsheet there is no need to provide those spreadsheets, only examples.

All deliverables are the property of the government and may be passed on to other contractors during future procurement actions.

10.4 Intercept Form Retention

The Contractor shall maintain the set of original completed intercept forms, economic add-on forms, site description forms, and assignment summary forms for each contract year. After completion of a sample year, the full set of completed intercept forms, economic add-on forms, site description forms, assignment summary forms, discard forms, and dockside validation forms shall be delivered to a NMFS contractor, currently in Gaithersburg MD, in mutually agreeable quantities, for archival scanning.