B. COLLECTIONS OF INFORMATION EMPLOYING STATISTICAL METHODS

1. Describe (including a numerical estimate) the potential respondent universe and any sampling or other respondent selection method to be used. Data on the number of entities (e.g. establishments, State and local governmental units, households, or persons) in the universe and the corresponding sample are to be provided in tabular form. The tabulation must also include expected response rates for the collection as a whole. If the collection has been conducted before, provide the actual response rate achieved.

The potential respondent universe consists of stores that sell bait, tackle, and fishing-related equipment for marine recreational fishing in coastal and near coastal counties in the contiguous U.S., Hawaii, and Alaska. The sampling frame will be based on lists of fishing license vendors provided by state fisheries management agencies, and lists of costumers provided by industry wholesalers. Respondents to Phase 1 (independent and small chain stores) will be stratified by federal fisheries management region (North Atlantic, Mid-Atlantic, South Atlantic, Gulf of Mexico, Southwest Coast, Northwest Coast, Alaska, and Hawaii). NOAA Fisheries will use a stratified random sample (proportionally sampled from each region) to select the sampling population from the frame. The sampling frame will be cleaned to remove duplicates. Regional and national chains will not be sampled on a stratified basis as only 12 relevant chains have been identified. Tables 1 and 2 describe data on each stakeholder entity. Based on feedback we have received from industry sources, we assume a maximum response rate of 40% for the independent store and small chain portion of the survey (Table 1), and 80% for the large chain portion of the survey (Table 2).

Table 1. Independent and Small Chain Bait and Tackle Store Sample

Column A. Respondent Entity	Column B. Number of Entries in Sampling Frame	Column C. Anticipated response rate	Column D. Expected number of respondents (Column C * 38%)
Mail Survey	6,250	40%	2,500

Table 2. Large Chain Store Sample

Column A. Respondent Entity	Column B. Number of Entries in Sampling Frame	Column C. Anticipated response rate	Column D. Expected number of respondents (Column C * 83%)
National and Regional Chains That Sell Bait and Tackle	12	83%	10

2. Describe the procedures for the collection, including: the statistical methodology for stratification and sample selection; the estimation procedure; the degree of accuracy needed for the purpose described in the justification; any unusual problems requiring specialized sampling procedures; and any use of periodic (less frequent than annual) data collection cycles to reduce burden.

A stratified random sample of the frame will be used to draw the sample population from the sample frames for the independent and small chain portion of the survey. The allocation method for each of the l strata (Respondent Entity) will be a proportional allocation ($n_1/N_1 = n_2/N_2…n_l/N_l$). This allocation method is appropriate when unequal variances for each stratum are assumed, which NOAA Fisheries assumes to be true for stakeholder entities in the frame (Rice 1995).

Note that each state is represented within each l strata. The survey instrument provided is an example of a region specific survey (only variation among regions is the region name and a question inquiring which regional fisheries contribute most to their stores sales of bait and tackle).

Following Equation 1 (Yamane 1967), approximately 286 observations are required to represent the true value for a population of 1,000, assuming a +/- 5% precision rate,

$$n = \frac{N}{1 + N(e)^2}$$

Equation 1.

$$286 = \frac{1,000}{1 + 1,000(0.05)^2}$$

Equation 1, Example.

where n is the sample size, N is the population size, and e is the level of precision required. The equation assumes a confidence interval of 95% and maximum variability in the sample (.50). An observation unit is an individual respondent.

To ensure proportional allocation among the strata and to ensure that the minimum number of observations is met for each strata (286 observations) requires a sampling rate of 0.286% (286/1,000 = 0.286%). Applying this rate to each stratum (7 regions not including Hawaii) results in a combined sample of 2,002 observations. Hawaii, with only approximately 50 stores, should increase the **minimum** number of overall responses to approximately 2,046 ($50/(1+50(0.05)^2) = 44$; 2,002 + 44 = 2,046).

Given the expected low response rate from independent stores and small chains, an abbreviated telephone survey of 10% of non-respondents will be conducted four weeks following the final mailing of the survey. The results of this telephone survey will be used to check for statistically significant differences between respondents and non-respondents on select survey variables.

This collection is anticipated to be a periodic, recurring data collection, taking place every 3 years.

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

For the independent and small chain phase of the study, mail survey implementation will follow state-of-the-art protocols described in 'The Tailored Design Method' (Dillman 2000). Protocols include 3-4 mailings with approximately 2 weeks between mailings: (1) a pre-notice letter informing the respondent that they have been selected to receive a survey within the next two weeks accompanied by a sheet of frequently asked questions (FAQ) and a postcard the store can return if they do not sell bait and tackle; (2) a cover letter describing the importance of filling out the survey completely and the survey questionnaire; (3) a post-card follow up thanking respondents who returned their survey and reminding respondents to complete their survey and return it if they have not already done so; (4) a possible final mailing including a cover letter and survey instrument. The tailored design method is designed to maximize response rates, and components of the design have been scientifically tested and determined to increase response rates for mail surveys (Dillman 2000).

For the large chain phase of the study, we will identify appropriate contacts at individual firms. NOAA Fisheries personal will reach out to these individuals to schedule a time to discuss the study, and recruit them for participation in the survey before sending them a copy of the survey in the mail.

As described in Question 2, a nonresponse survey will be conducted.

4. Describe any tests of procedures or methods to be undertaken. Tests are encouraged as effective means to refine collections, but if ten or more test respondents are involved OMB must give prior approval.

The survey instruments have been designed with input from various industry groups including the American Sportfishing Association, Big Rock Sports (a major wholesaler of recreational fishing tackle), Cabela's (a large national chain with significant catalog and internet sales), and several independent bait and tackle store owners. Limited testing of the survey instruments was conducted with bait and tackle store owners, but with fewer than ten individuals.

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

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