

SUPPORTING STATEMENT
WEST COAST FISHERIES PARTICIPATION SURVEY
OMB CONTROL NO. 0648-0749

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.

Region	Respondent Universe*	Total Desired Responses	Responses	Response Rate (Est.)**	Number Contacted
U.S. West Coast Region	2,842	1,771	1,444	50.8%	2,842

*Respondent universe is equal to the total number of fishing permit holders for the U.S. West Coast region, for which there were 2842.

**Actual response rate based upon prior work by Norman, et al. in 2017 (Holland, et al. in press). This was in keeping with similar work conducted by Lew, et al. (2010).

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.

Rather than sample potential respondents, this research will be a census, directed at surveying the universe of West Coast fisheries participants, as identified by their fishing permits. In 2017, 2,842 of these fishing permit holders were identified, and the survey will once again be distributed to each one of them. For this reason, additional methodologies aimed at stratifying and selecting samples from this population are not required. No specialized sampling procedures will be required, and the survey is intended as a biennial collection effort to reduce burden on the universe of potential respondents from within the U.S. West Coast’s commercial fishing population.

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.

Given the proposed survey partners and contractors' prior experiences implementing very similar surveys both in the West Coast region and in other regions, and our own experience implementing this survey in 2017, we anticipate an estimated response rate of 50%.

Using a survey questionnaire developed in conjunction with the NOAA/Washington Sea Grant/University of Washington/University of Arizona project team, the proposed survey contractor will carry out distribution of all mail surveys, and provide an SPSS data file including all variable and value labels. The survey will be provided to the proposed mail survey contractor by University of Washington, and will have received, in addition to Office of Management and Budget (OMB) level approvals, approval from the University of Washington's Institutional Review Board (IRB)'s Human Subjects Division (HSD). All of these procedures are designed to ensure commitment to human research ethics and high completion rates. Prior research has shown that response rates are higher when a research project has university sponsorship than when conducted solely by a commercial organization (even with NOAA sponsorship as well). All involved parties will have signed confidentiality statements about sharing survey data with other people and the entire process will be reviewed and approved by the University of Washington Institutional Review Board (IRB).

The proposed survey contractor, Hardwick Research, has suggested several steps to obtain a 50% response rate. The first involves the use of a \$5 incentive to foster survey responses. James and Bolstein (1992) have indicated that \$5 incentives at first mailing are associated with response rates at or near 50%. Additionally, the survey contractor would implement a multi-part mailing process that would include a postcard announcement notifying participants that a questionnaire will be coming and a thank you gift will be enclosed. This would be followed by the initial mailing of the survey with incentive included and return postage-paid envelope enclosed, a second postcard reminder, and a follow-up postcard reminder to all non-responders. Prior research suggests that the inclusion of cash incentives not only increases response rates overall, but also induces demographic groups that are frequently underrepresented to respond, thereby reducing nonresponse error (Singer and Ye 2013). Taking steps toward maximizing response rate is the first means by which we intend to prevent nonresponse error.

Additionally, because we are interested in accounting for and correcting any nonresponse error, we will analyze for nonresponse bias in terms of distinctive demographic or geographic profiles of survey respondents as compared to non-respondents. Analyzing for these biases will be aided in part by the research design, insofar as we are surveying the universe of West Coast fisheries permit holders and will have some of these demographic and geographic data available via the permits database. Finally, the data should be weighted to correct for potential nonresponse biases related to the income and age of the respondents, using 2010 U.S. Census figures. Our analyses in 2017 did not indicate any significant non-response bias based upon demographic or geographic variables, so we do not anticipate a non-response bias in this second iteration of the

survey.

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.

During the development of the survey, the survey instrument was distributed to seven individuals working within West Coast fisheries, in order to determine whether the questions were appropriate and intelligible given their backgrounds as fishermen and fisheries permit holders. This period of survey feedback also allowed for the research partners to test and complete the survey themselves with the aim of accounting for the estimated burden hours that would be attributed to the survey. All test respondents found the survey to require 15-20 minutes for completion, and the final versions of the questions were deemed appropriate and intelligible for the target population of commercial fishermen. Further, when the survey was implemented in 2017, survey respondents reported that the time to completion was also 15-20 minutes.

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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