

**SUPPORTING STATEMENT**  
**U.S. Department of Commerce**  
**National Oceanic & Atmospheric Administration**  
**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 government units, households, or persons) in the universe covered by the collection and in the corresponding sample are to be provided in tabular form for the universe as a whole and for each of the strata in the proposed sample. Indicate expected response rates for the collection as a whole. If the collection had been conducted previously, include the actual response rate achieved during the last collection.**

<b>Year</b>	<b>Region</b>	<b>Respondent Universe*</b>	<b>Total Desired Responses</b>	<b>Responses</b>	<b>Response Rate (Est.) **</b>	<b>Number Contacted</b>
2017	U.S. West Coast Region	2,842	1,771	1444	50.8%	2,842
2020	U.S West Coast Region	2,725	1,698	1452	53.2 %	2,725
2023	U.S West Coast Region	2,966	1,483	1162	39.2 %	2,966

\*Respondent universe is equal to the total number of fishing permit holders for the U.S. West Coast region per year, for which there were 2842 in 2017 and 2,725 in 2020 and 2,966 in 2023.

\*\*Actual response rate based upon prior work by Norman, et al. (2022) and Holland, et al. (2019). This was in keeping with similar work conducted by Lew, et al. (2010) though response rates dropped somewhat in 2023.

**2. Describe the procedures for the collection of information including:**

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, with 2725 and 2,966 such permits in 2020 and 2023, and the survey will once again be distributed to each one of the identifiable permit holders. 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 triennial collection effort to reduce burden on the universe of potential respondents from within the U.S. West Coast’s commercial fishing population.

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

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, 2020 and 2023, we anticipate an estimated response rate of at least 40%.

Using a survey questionnaire developed in 2017 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 the NWFSC, and will have received Office of Management and Budget (OMB) level approvals. All involved parties will have signed confidentiality statements about sharing survey data with other people and the entire process will be reviewed and approved.

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 2020 U.S. Census figures. Our analyses in 2017 did not indicate any significant non-response bias based upon demographic or geographic variables, and this satisfactory outcome was also replicated in 2020 and 2023, so we do not anticipate a non-response bias in this third iteration of the survey.

**4. Describe any tests of procedures or methods to be undertaken. Testing is encouraged as an effective means of refining collections of information to minimize burden and improve utility. Tests must be approved if they call for answers to identical questions from 10 or more respondents. A proposed test or set of tests may be submitted for approval separately or in combination with the main collection of information.**

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. When the shortened survey was implemented in 2023, survey completion time was reduced to about 15 minutes during tests. The proposed changes to the survey should not impact that and may shorten completion times slightly since respondents need only check boxes rather than write in responses.

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

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## **References**

Holland, D.S., J. Abbott, and K. Norman. Fishing to Live or Living to Fish: Job Satisfaction and Identity of West Coast Fishermen. 2019. *Ambio* 49(2), 628-639. <https://doi.org/10.1007/s13280-019-01206-w>

James, J.M. and R. Bolstein. 1992. Large Monetary Incentives and Their Effect on Mail Survey Response Rates. *Public Opinion Quarterly* Volume 56:442-453.

Lew, D. K., J. Lee, and D. M. Larson. 2010. Saltwater sportfishing in Alaska: A summary and description of the Alaska saltwater sportfishing economic survey, 2007. U.S. Dep. Commerce, NOAA Tech. Memo. NMFS-AFSC-214, 229 p.

Norman K, Holland D, Abbott J, Phillips A. 2022; Community-level fishery measures and individual fishers: Comparing primary and secondary data for the U.S. West Coast. *Ocean and Coastal Management*, 224: 106191.

Singer E. and C. Ye. 2013. The use and effects of incentives in surveys. *Annals of the American Academy of Political and Social Science* 645(1): 112-141.