

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

This request is for a revision and extension of this collection related to a second administration of social science survey questions concerning participation in West Coast fisheries.

A. JUSTIFICATION

1. Explain the circumstances that make the collection of information necessary.

The National Marine Fisheries Services' developing interest in ecosystem-based management (EBM) and its implementation has allowed for the development of ecosystem models, including models of California Current Large Marine Ecosystem processes along the U.S. West Coast. In conjunction with these efforts, the California Current Integrated Ecosystem Assessment (CCIEA) process has specified a need for human dimensions data and fisheries models that include behaviors of and social influences on fisheries participants (Levin et al. 2011). These actions, however, will require new data collection and the development of new models.

Previous efforts to use extant data to characterize fishing have been presented to fishery managers at the Pacific Fishery Management Council as part of the California Current Integrated Ecosystem Assessment (Levin et al. 2013) and the annual State of the California Current Report (March 9, 2016), and stakeholders and fishery managers have additionally requested improved data and analyses on fishing behaviors and fishing communities.

While commercial fishery participation is often assumed to be motivated exclusively or primarily by traditional economic factors, the role of non-financial psychological and social factors that directly motivate participation or mediate the responses of fishermen to changes in profitability have largely been ignored in management modeling. There is a substantial social science literature indicating that many fishermen obtain utility from fishing itself – apart from its role in providing income (e.g. Anderson 1980; Smith 1981; Gatewood and McCay 1990; Pollnac and Poggie 2006; Pollnac et al. 2015). Anderson (1980) coined the term “satisfaction bonus” to describe this tendency, and suggested it could affect the adaptive responses of fishermen to falling rents in open access fisheries, leading to greater depletion than might otherwise occur. Fishing may also contribute significantly to a sense of individual identity and social capital, particularly in strongly fishery-dependent communities. Fish kept for personal use or sharing with friends and family is also an important benefit of fishery participation (Poe et al. 2015). Taken together, this collection of factors may influence participation decisions in ways that would not be obvious if only standard market economic motivations are considered.

Given these gaps in information about these factors, and in concert with the evolution of ecosystem-based management (EBM) approaches on the West Coast, NMFS researchers at the Northwest Fisheries Science Center, partnering with the University of Washington and Washington Sea Grant have begun an effort to develop these data collections and modeling developments. The goal of the proposed study is to collect original data regarding the participation of West Coast fishermen in the full suite of commercial fisheries and to develop

scientifically rigorous ecosystem models that explicitly consider social perspectives and behaviors alongside oceanographic and biological considerations.

For this reason, the Northwest Fisheries Science Center seeks to conduct a second iteration of a survey of West Coast commercial fisheries participants, following from the first survey conducted under OMB control number 0648-0749. As before, fishing permit owners will be asked, via a mail survey, a series of general questions regarding their connections to and participation in West Coast fisheries.

Information collected under this clearance will include demographic variables, economic data, fishing use patterns, data on social linkages between resource users and the resource as well as data related to other activities that influence living marine resource use. The overall purpose of collecting these data is to develop stakeholder-based societal inputs relative to fisheries participation, but these survey data will also increase the capacity of NOAA to respond effectively to relevant mandates and executive orders that guide social science activities within the National Marine Fisheries Service ([NEPA](#), [MFCMA](#) and its National Standard 8, and [Executive Order \(EO\) 12898](#)).

2. Explain how, by whom, how frequently, and for what purpose the information will be used. If the information collected will be disseminated to the public or used to support information that will be disseminated to the public, then explain how the collection complies with all applicable Information Quality Guidelines.

Information will be collected for this survey iteratively on a two-year basis, using a mail survey format, and will be disseminated, in an aggregate form (with no personally identifiable information attached), to the public upon request. The information will be used to develop fisheries participation analyses by Northwest Fisheries Science Center (NWFSC) scientists and their survey research partners at Washington Sea Grant and University of Washington. These analyses will also be disseminated to the public in the form of *interpreted products*, including technical memoranda and peer-reviewed publications. Such products will be developed in conjunction with the associated research project. Research partners at the University of Washington will administer the data collection tool over a period of 10-12 weeks, until all applicable respondents have been contacted. **This survey process will be repeated at biennial intervals.** The written form of the survey ensures that the survey is reproducible, and the University of Washington and Northwest Fisheries Science Center's experience in implementing surveys of this nature will help to insure that the quality of the information collected, at the level of raw data, meet NOAA's Information Quality Guidelines.

Specifically, each question in the proposed survey is designed to elicit certain data of direct benefit to the ecological and socioeconomic modeling efforts underway at the Northwest Fisheries Science Center, and therefore of benefit to survey respondents reliant on effective fishery modeling. The questions in the proposed survey all relate to elements we will use in our models as potential predictor variables. These will enable us to examine how different segments of the West Coast fishing population are thinking about their fisheries participation, their fishery and economic alternatives, their linkages to local fishing communities and their levels of satisfaction with fishing as an occupation.

Demographics/Involvement in Commercial Fishing

In the first section of the survey, the first five questions are designed to garner basic demographic information from survey respondents, as well as information about respondents' historical and current involvement in fishing.

Fishing Community Connections

In the second section of survey, questions 5-10 will allow for the development of a respondent-informed definition of fishing community, including respondents' familial and local connections to fishing.

Fishing Job Satisfaction

A set of five subsequent questions are designed to measure respondents' general level of satisfaction with fishing as an occupation, and are aimed at producing an enhanced understanding of some of the challenges related to fishing as a livelihood.

Fisheries Participation

In the fourth section of the survey, questions 16- 34 will allow for improved information on differing levels of participation in the variety of fisheries available to West Coast fishermen. These questions are also designed to gather information that would ameliorate models reflecting how and when fishermen choose to move between different fisheries and why fishermen might access alternative, non-fishing occupations. The final set of questions are lastly designed to measure fishing crew employed by respondents, identify levels of management participation, and collect data on how fisheries incomes and benefits vary and accommodate incomes from other occupations.

As explained in the preceding paragraphs, the information gathered has utility for the National Marine Fisheries Service in its efforts to carry out science in service to management needs. NOAA will retain control over the information and safeguard it from improper access, modification, and destruction, consistent with NOAA standards for confidentiality, privacy, and electronic information. See response to Question 10 of this Supporting Statement for more information on confidentiality and privacy. The information collection is designed to yield data that meet all applicable information quality guidelines. Prior to dissemination, the information will be subjected to quality control measures and a pre-dissemination review pursuant to [Section 515 of Public Law 106-554](#).

3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological techniques or other forms of information technology.

The information described in the survey will be collected primarily through the use of completed paper surveys sent via U.S. mail, with an option for web-based input available to mail survey recipients. University of Washington staff will contract with Hardwick Research to mail out the survey via U.S. mail, and NWFSC scientists and University of Washington/Washington Sea Grant partners will be responsible for analyzing the data and disseminating the findings generated by the survey. The mail and web-based questionnaire will follow the written survey instrument provided and will adhere to all protocols that have been developed according to the University of Washington's Institutional Review Board's Human Subjects Division (<http://www.washington.edu/research/hsd/>) as well as the Office of Management and Budget requirements under the Paperwork Reduction Act.

4. Describe efforts to identify duplication.

The social scientists at the NWFSC work closely with regional academics, community-based organizations, industry groups and other parties interested in this type of information. Reviews of existing information are common practice when initiating social science studies. A thorough literature review has been completed and we are confident there is no duplication. An overall strategic research plan will also guide this process and ensure that all data collected is relevant, new and essential for achieving NMFS social science goals. The NMFS point of contact for this research, Karma Norman, also has presented his research to the Ecosystem Subcommittee of the Pacific Fishery Management Council's Science and Statistical Committee (SSC), so he keeps informed of the Council's activities and has verified with the organization that they have not commenced or planned duplicative social research efforts. The partnership with Washington Sea Grant also aids in ensuring that there is adequate communication with other research entities along the Pacific coast such that duplication of research efforts will be avoided.

5. If the collection of information involves small businesses or other small entities, describe the methods used to minimize burden.

The study is designed to survey individual respondents – at the permit owner level - regarding a range of demographic information, and the respondents are not anticipated to be small businesses. Instead, the survey seeks to collect information from individuals involved in the fishing industry. Only the minimum data necessary for the research are requested and the estimated time for the completion of the survey is 15-20 minutes per individual.

6. Describe the consequences to the Federal program or policy activities if the collection is not conducted or is conducted less frequently.

Without current information on the human dimensions of fisheries and coastal use practices, NMFS and the Regional Councils will be unable to adequately understand and predict the potential impacts of policy decisions on people, particularly those people who do not regularly attend public meetings, but are nonetheless affected by the decisions of the Pacific Fishery Management Council (PFMC).

The federal mandates and executive orders described in Section A of this document require the analysis of the impacts that government actions have on the individuals and communities involved in fishing and coastal related activities. Social impacts assessment, analysis of the affected human environment, cumulative impacts as well as the distribution of impacts with a special emphasis on vulnerable or at risk communities are all examples of these requirements. The ability of the NWFSC Social Scientists to adequately respond to this charge rests on access to timely and relevant information about the stakeholders involved. Currently, social scientists are largely dependent on extant data limited to fishing vessels and the fishing trips and landings attributed to these vessels. Existing information does not include research and data on the full set of coastal fisheries stakeholders and their satisfaction with fisheries occupations along with their capacities to access different fisheries as ocean and policy conditions change within target fisheries.

7. Explain any special circumstances that require the collection to be conducted in a manner inconsistent with OMB guidelines.

The collection will be consistent with OMB Guidelines.

8. Provide information on the PRA Federal Register Notice that solicited public comments on the information collection prior to this submission. Summarize the public comments received in response to that notice and describe the actions taken by the agency in response to those comments. Describe the efforts to consult with persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and recordkeeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or reported.

A Federal Register Notice published on November 20, 2018 (81 FR 6841) solicited public comments on this survey.

No comments were offered during the public comment period, and the comment review period closed in January of 2019.

9. Explain any decisions to provide payments or gifts to respondents, other than remuneration of contractors or grantees.

To encourage participation in the mail survey, a token honorarium of \$5 will be given to participants in the initial mailing. Inclusion of an incentive acts as a sign of goodwill on the part

of the study sponsors and encourages reciprocity of that goodwill by the respondent. Singer (2002) provides a comprehensive review of the use of incentives in surveys. She notes that giving respondents a small financial incentive (even a token amount) in the first mailing increases response rates in mail-based surveys and is cost-effective. Such prepaid incentives are more effective than larger promised incentives that are contingent on completion of the questionnaire. In tests conducted by Lesser, et al. (1999), including a \$2 incentive in a mailing with four contact points was shown to increase response rates by an additional 19 to 31 percentage points. Thus, even a small upfront incentive typically is more cost effective than additional follow-up steps that are often considered. Moreover, the use of a \$5 incentive has an even greater potential 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%. Indeed, in the first iteration of this survey work, we obtained a 50% response rate using this approach.

The proposed survey contractor that would be tasked with mailing out the survey, Hardwick Research, has suggested several additional steps to obtain a minimum 50% response rate. The first involves 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.

There are several reasons why we believe inclusion of both a financial incentive and follow-up contacts will be needed to reach desired response rates. A principal reason is because the use of a token incentive in prior NMFS surveys achieved an overall response rate of 57% (e.g. Lew, et al. 2010). Given the similarity of survey protocols and survey materials for this proposed survey, we anticipate a similar response rate for this data collection. Additionally, although every attempt will be made to ensure the survey is easy to read, understand, and complete, the amount of information it needs to present and the number of questions it needs to ask contribute to a survey requiring more respondent attention than some surveys. For these reasons, we expect both incentives and follow-up contacts will be required to obtain a suitable response rate and to evaluate potential non-response biases.

The steps in the data collection follow a modified Dillman Method protocol (Dillman, et al. 2014), and are as follows. Overall, attempted contacts are made via postcard mailing, since most of the potential respondents within the database of fisheries permit holders do not have email or telephone contact information included.

Mail attempt when phone/email screening not available:

The first mail contact to a potential fisherman recipient will be a prenotice postcard sent out to all addresses in the database of commercial fisheries permit holders. The postcard will notify potential respondents of the survey booklet's imminent arrival, and describe, in brief, the survey instrument's purpose.

Mail attempt with survey booklet:

Next, the full survey packet itself will be sent, including the incentive. The survey packet will include introductory language, a survey booklet, and a postage-paid business reply envelope.

Second mail reminder:

One week after the survey booklet has been sent out, a postcard reminder will be distributed to all survey recipients reminding them that they will have received the survey, expressing gratitude for any completed surveys, and asking them again for their assistance in filling out the survey - if they have not already done so. Included on this postcard reminder will be an address for a web link version of the survey.

Mail attempt with no prior successful contact:

If the survey is not completed within a period two months, a second post card reminder will be sent by mail to non-responsive survey recipients asking them again for their assistance in filling out the survey, if they have not already done so. Included on this second postcard reminder will again be an address for a web link version of the survey.

Again, this approach during the survey implementation of 2017 resulted in a 50.8% response rate, matching our predicted response rate.

10. Describe any assurance of confidentiality provided to respondents and the basis for assurance in statute, regulation, or agency policy.

As stated in the survey materials, the data collected will be kept anonymous and will not be released for public use except in aggregate statistical form without identification of sources. The survey approach renders respondent participation in the survey entirely voluntary.

11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private.

There is one area where issues of a potentially sensitive nature will be explored.

1. Employment and economic status: Questions regarding employment and income are often useful in determining potential environmental justice issues, as well as allowing for standard demographic analyses. Questions submitted for approval comply with OMB regulations and follow the US Census approach.

The nature of the survey methodology ensures anonymity with regard to this sensitive area.

12. Provide an estimate in hours of the burden of the collection of information.

The total burden hours are projected at 1,894 for the 3-year renewal period. Participants are not expected to spend time gathering information because the information sought is based on participants' personal experiences, perceptions and knowledge.

Current Biennial Survey

Respondents 2017	# of Responses/Response	Total Responses	Burden Hours per	Total Annual

	nt	Divided by 3 to Annualize	Response	Burden Hours
2842	2	1895	0.3333	631

13. Provide an estimate of the total annual cost burden to the respondents or record-keepers resulting from the collection (excluding the value of the burden hours in Question 12 above).

The total recordkeeping/reporting cost burden to respondents is \$0, as there will be postage-paid envelopes included with the mailed surveys. There are no start-up, capital, or maintenance costs associated with this collection. No new or specialized equipment is needed to respond to this collection.

14. Provide estimates of annualized cost to the Federal government.

The annualized cost to the Federal government for this research is estimated to be \$42,264. Initial funding for this research was provided via a research grant provided to the University of Washington, through which research partners developed and deployed the survey work via contract. The second iteration of this research requires funding from NMFS research funds distributed to the Northwest Fisheries Science Center, though costs are substantially reduced based upon the work that was completed in the initial development of the survey instrument and protocols in the 2017 implementation of this survey.

15. Explain the reasons for any program changes or adjustments.

After the initial distribution of the survey, and subsequent data collection conducted under this OMB control number, respondents, fishery management council members and researchers were all in agreement that the analysis and fishery modeling provided by these data would benefit from a longitudinal data collection. For this reason, the same research team involved in the 2017 approval under OMB control number 0648-0749 seeks to modify our original data collection approval for a one-time survey. We are seeking OMB approval of an iterative version of this survey, conducted on a biennial basis, with a second iteration of the survey implemented in 2019.

The adjustment to the program is due to a reduction in the number of permit holders and the fact that this is a biennial survey instead of a one-time survey.

1 Year Survey

Respondents 2016	# of Responses/Respondent	Total Annual Responses	Burden Hours per Response	Total Annual Burden Hours
3543	1	3543	0.3333	1181

Current Biennial Survey

Respondents 2017	# of Responses/Respondent	Total Responses Divided by 3 to Annualize	Burden Hours per Response	Total Annual Burden Hours
2842	2	1895	0.3333	631

Difference in # of Permit Holders		Difference in Total Annual Responses		Difference in Annual Burden Hours
701		1648		549

16. For collections whose results will be published, outline the plans for tabulation and publication.

The survey results are not intended for publication for statistical use by others. Data will be analyzed using standard social science quantitative and qualitative data analysis methods. Where possible and relevant, final reports and other relevant portions of the research process will be posted on the appropriate web site. Where relevant, the study in its entirety may be published as an internal report or in part may be submitted for publication in journals to encourage peer

review of data collected through this process as well as to disseminate findings.

17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons why display would be inappropriate.

The expiration date for OMB approval will be displayed on the forms.

18. Explain each exception to the certification statement.

Not Applicable.