

**SUPPORTING STATEMENT
WEST COAST GROUND FISH TRAWL ECONOMIC DATA
OMB CONTROL NO. 0648-0618**

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.

Description of the Respondent Universe

The objective of this survey is to continue to collect economic cost earnings data from all catcher vessels, catcher processors, motherships, and first receivers/shoreside processors participating in the West Coast groundfish trawl fishery on an annual basis. The survey population includes catcher vessels, catcher-processors, motherships, and first receivers/shorebased processors. Each of these four groups will receive a unique survey questionnaire, and has a survey population defined by the catch share regulations.

The survey will be a census of the survey population. As explained in the following paragraphs, the survey population will include 252 entities for the 2011 data collection. There is no sampling of the survey population. Submission of a survey response is mandatory for all members of the survey population.

The survey population for catcher vessels is defined as all owners, lessees, and charterers of a unique catcher vessel registered to a limited entry trawl permit at any time during the survey period for which data is being collected. This definition covers both catcher vessels making shoreside landings and catcher vessels delivering to motherships. This definition is used for both the pre-IFQ period (2009 and 2010) and the post-IFQ period (2011 and subsequent years). There were 178 members of the catcher vessel survey population in 2011. Catcher vessels exhibit a wide variety of target groundfish species, and often operate in other West Coast fisheries such as crab and shrimp as well as the groundfish fishery. In a typical year, about 30-35 of these vessels also operate in Alaska fisheries.

There were 10 catcher-processor vessels in 2011. The survey population for catcher-processors is defined as all owners, lessees, and charterers of a catcher processor vessel registered to a catcher-processor permit at any time during the year for which data is being collected. Catcher-processors typically operate in only the whiting fishery on the West Coast, and also operate in Alaska fisheries.

There were 7 motherships during 2009. The survey population of motherships is all owners, lessees, and charterers of a mothership vessel registered to a MS permit at any time in during the

year for which data is being collected. Motherships typically operate in only the whiting fishery on the West Coast, and also operate in Alaska fisheries.

The survey population for first receivers/shorebased processors during the pre-IFQ period is defined as all owners and lessees of a shorebased processor and all buyers that received groundfish (including whiting) harvested with a limited entry trawl permit as listed in the PacFIN database during the year for which data is being collected. There were 84 members of the first receiver/shoreside processor survey population in 2009. The survey population for first receivers/shorebased processors during the post-IFQ period is defined as all owners of a first receivers license and all owners and lessees of a shore-based processor that received round or headed-and-gutted IFQ species groundfish (including whiting) from a first receiver in the year for which data is being collected.

Survey Population, Survey Sample, and Response Rates

In contrast to the voluntary economic survey of the limited entry trawl catcher vessels conducted in 2005 and 2006 by NMFS in cooperation with PSMFC, which achieved a response rate of 69%, the EDC achieved a response rate of 92% for catcher vessels in the 2010 data collection which were conducted in 2011. The same data collection effort achieved a response rate of 100% for catcher processors and motherships and a response rate for shoreside processors of 69%. Although forms were received from many catcher vessels that are no longer participating in the fishery, there were a few entities that could not be contacted. We expect the number of owners of catcher vessels that do not turn in forms to decrease for the 2011 and subsequent data collections.

Table 1 --- Current Population and Commercial Fish Landings for all West Coast Fishing Engaged Communities

Survey Group	Population (2010)	Sample	Response Rate
Catcher Vessels	178	178	92%
Catcher-Processors	10	10	100%
Motherships	7	7	100%
Shoreside Processors	57	57	69%
Totals	252	252	

This mandatory survey was the first economic survey of the catcher-processors, motherships, and shoreside-processors. A survey of the shoreside processors was developed and received PRA approval in 2007, but was not fielded when developments in the IFQ program design convinced NMFS to wait for mandatory economic data collection.

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.

There is no stratification and sample selection in the survey design. All members of the survey

population are being surveyed. There are four different questionnaires that are being used based on whether the respondent operates a catcher vessel, catcher processor, mothership, or first receiver/shore-based processing plant. Within each of these four groups, all members of the survey population would be required to complete the questionnaire.

NMFS needs to measure the economic performance of catcher vessels, motherships, catcher processors, and first receivers/shoreside processors operating in the West Coast groundfish trawl fishery in order to meet legal and regulatory requirements, support fisheries management decision making, and undertake economic research. Currently available cost earnings data from non-survey sources is very limited and does not meet these needs. This survey collects the data that is needed (but not currently available from other sources) to construct key economic performance measures such as quasi-rents, capacity utilization, efficiency, economies of scale, as well as economic models such as regional economic impact and econometric models. The data gathered and performance measures constructed will be used to address a wide range of issues; these issues include (but are not limited to) the economic effects of the IFQ program on fishery participants, regional economies, and net benefits to the nation, as well as how the distribution of those measures may have changed. While the data will be used to comply with legal and regulatory requirements, these requirements do not specify a level of data accuracy.

Much of the data requested will be used to compute total (or average) revenue, cost (by revenue or cost category as specified in the questionnaires), and quasi-rents (revenues less variable costs). This information is useful in and of itself to help understand the economic condition of the fishery and how it may have changed. Such data summaries are the type of information that fishery managers, participants and the public commonly wish to have provided. These data summaries will also be used in a regional economic impact model that has been developed by the NWFSC. A basic input to this model is the average cost (by cost category) as a percentage of revenue. The output of the regional economic impact model is used by NMFS and the Council to report on the economic contribution of the fishery to regional economies.

To understand the relationships between the quasi-rents (revenue minus variable costs) and the variables we collect that affect total or average quasi-rents, econometric models will be used. NWFSC analysts will use the data contained within the completed EDCs to construct statistical models that characterize the determinants and factors affecting the costs and revenues of vessels, first receivers and processors. The benefit of using statistical models to characterize the relationship between costs or revenues and the factors that influence them is that the models may initially be used to analyze the way in which economic performance changes after the immediate implementation of the program. If the Council makes adjustments to the program at a later date, analysts will be able to observe the changes in quasi-rents not attributable to the factors that have historically been the predominant statistical determinants to draw conclusions about the impact of the adjustments. That is, these statistical techniques can be used to disentangle the influence of particular economic variables on quasi-rents from “policy” or “management” variables that change directly as a result of managers’ choices over policies or regulations. Examples of economic variables would be the prices of fuel, materials, or other inputs used in fishing and processing.

The data collected in the EDCs will be used to develop cost and quasi-rent functions that characterize the relationships between fishing and processing activities and their economic

impacts. In order to estimate such functions one needs individual observations on vessel or processor variable costs of operation and gross earnings. These variables will form the basis for the dependent part of the statistical model, while the other data collected on input quantities, catch, and prices will be used as exogenous variables. The analysts will determine the exact specification of the cost and quasi-rent functions based upon the questions desired by fishery managers, the number of observations available, and the perceived quality or accuracy of the collected data.

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.

While this is a mandatory survey, key measures have been taken to maximize response to the survey and the quality of data provided. First, the survey questionnaire has been kept as short as possible while still meeting the needs of NMFS to meet MSA monitoring requirements, provide advice to the NMFS on the economic effects of catch share management, and perform economic research. Second, NMFS economists have held meetings with the owners of catcher vessels, catcher processors, motherships, and shoreside processors to ensure that questions are understandable and ask for data in format that is readily available to survey respondents. Discussions were also held with industry groups at PFMC meetings to solicit additional feedback on questionnaires in an environment where many survey respondents can simultaneously participate in the discussion. Third, the questionnaires will be mailed to members of the survey population soon after the April 15 federal tax filing date. Information will also be included on how to download forms. \. Discussions with industry participants indicated that they would prefer receiving the questionnaire after completing their federal tax filing, when much of the financial information needed to complete the questionnaire would already be at hand.

All of these questionnaires have undergone substantial revision as a result of discussions with industry participants and were further improved after consulting with fishermen and processors after the completion of the 2009 and 2010 surveys. These recent modifications include clarifying questions on the forms and aligning the questions with common bookkeeping practices. These clarifications should also facilitate higher response rates. Finally, the NWFSC will continue to make reminder telephone calls to members of the survey population who have not yet submitted an EDC about one month before the survey due date of September 1.

The penalties for not complying with this mandatory survey are defined in 50 CFR 660.114 as follows:

Who is required to submit an EDC?	Consequence for failure to submit (In addition to consequences listed below, failure to submit an EDC may be a violation of the MSA.)
Limited entry trawl catcher vessels: All owners, lessees, and charterers of a catcher vessel registered to a limited entry trawl endorsed permit at any time in 2011 and beyond	<p>(A) For permit owner, a limited entry trawl permit application (including MS/CV-endorsed limited entry trawl permit) will not be considered complete until the required EDC for that permit owner associated with that permit is submitted</p> <p>(B) For a vessel owner, participation in the groundfish fishery (including, but not limited to, changes in vessel registration, vessel account actions, or if own QS permit, issuance of annual QP or IBQ pounds) will not be authorized until the required EDC for that owner for that vessel is submitted</p> <p>(C) For a vessel lessee or charterer, participation in the groundfish fishery (including, but not limited to, issuance of annual QP or IBQ pounds if own QS or IBQ) will not be authorized, until the required EDC for their operation of that vessel is submitted.</p>
Mothership and Catcher Processors: All owners, lessees, and charterers of a mothership or catcher processor vessel registered to an MS permit at any time in 2011 and beyond	<p>(A) For permit owner, an MS permit or a C/P-endorsed limited entry trawl permit application will not be considered complete until the required EDC for that permit owner associated with that permit is submitted</p> <p>(B) For a vessel owner, participation in the groundfish fishery (including, but not limited to, changes in vessel registration) will not be authorized until the required EDC for that owner for that vessel is submitted</p> <p>(C) For a vessel lessee or charterer, participation in the groundfish fishery will not be authorized, until the required EDC for their operation of that vessel is submitted.</p>
First receivers/shorebased processors: All owners of a first receiver site license in 2011 and beyond	<p>A first receiver site license application will not be considered complete until the required EDC for that license owner associated with that license is submitted, as specified at §660.140(f)(3), subpart D. See paragraph (b)(4)(ii)(A) of this table.</p> <p>(B) All owners and lessees of a shore-based processor (as defined under “processor” at §660.11, subpart C, for purposes of EDC) that received round or headed-and-gutted IFQ species groundfish or whiting from a first receiver in 2011 and beyond</p>

Since there are mandatory surveys, non-response bias is not expected to be a major issue in data analysis. Nevertheless, those variables which are available for both respondents and non-respondents (such as pounds of landings, revenue from landings, and vessel physical characteristics) will be used to compare respondents and non-respondents in cases where some responses are not available for any reason. Procedures used to test for non-response bias may include two sample t tests for normally distributed variables and permutation tests for any variables found to have a non-normal distribution. In cases where non-response bias is detected, appropriate procedures will be used to adjust survey responses for the non-response bias.

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.

NMFS economists have met with members of the survey populations that will receive the questionnaires. These meetings have included a question by question discussion of draft questionnaires to (1) ensure that the question is clearly understandable and (2) the data requested is readily available to survey respondents. In addition, the questionnaires provided with this filing were distributed to advisory groups at the June 2010 PFMC meeting for discussion.

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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