

SUPPORTING STATEMENT
GULF OF ALASKA TRAWL GROUND FISH FISHERY RATIONALIZATION SOCIAL
STUDY
OMB CONTROL NO. 0648-XXXX

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 respondent universe for this study includes those individuals, partners, businesses, etc., likely to be impacted by the Gulf of Alaska groundfish trawl bycatch management plan. Types of respondents expected include fishermen, vessel owners, vessel operators, crew aboard groundfish vessels, catcher/processor captains and crew members (both fishing and processing crew), shoreside processor owners/managers and their workers, stationary floating processor owners/managers and their workers, and other individuals who are stakeholders in the fishery such as industry representatives. In addition, the survey/interview pool will include any businesses that are directly tied to the groundfish communities through the supply of commercial items to include, but are not limited to net suppliers, fuel suppliers, equipment suppliers, etc.

The survey will be a census of the groundfish trawl fishery as described; that is, all individuals who meet the descriptions above. The only respondent categories with known numbers are the catcher vessel owners/operators, catcher/processor vessel owners/operators, shoreside processing plant owners and managers, and floating processing plant owners and managers. For all other respondent populations, the number of people in the population can only be estimated using our best available data (see table below).

Calculations have been developed to estimate the number of respondents. Values for these calculations come from a combination of published data, confidential fisheries data, and previous data collection efforts. To determine the number of catcher vessels and catcher/processor vessels active in the Federal Gulf of Alaska groundfish trawl fishery, we queried NMFS confidential fisheries statistics (e.g., NMFS Alaska Region catch accounting system) to determine which vessels had a landing (for catcher vessels) or processed (for catcher/processors, shoreside processors, and stationary floating processors) any groundfish caught in the Gulf of Alaska. This provides a list of the active catcher vessels and catcher/processor vessels which we then merged with State of Alaska confidential fisheries data (e.g., Commercial Fisheries Entry Commission adjusted fish tickets) to determine the weighted average number of crew aboard these vessels.

Assuming these vessels used the same crew for all of their Gulf of Alaska groundfish trawl trips, we summed the average number of crew members aboard each vessel participating in the fishery to get a total number of crew aboard catcher vessels and catcher processor vessels. We will work

closely with the North Pacific Groundfish Observer Program as key informants to reach the crew aboard vessels. In addition, there are various community organizations related to this fishery; for example, the Alaska Groundfish Databank, Inc. We will work closely with these organizations to connect with harder to reach respondent populations whom are fishermen and processor employees. All individuals who complete the survey/interview process will be asked to identify other crew/staff that we can contact to complete the survey.

Description	No. Entities	No. of Estimated Respondents	Estimated Response (60% Response Rate ⁺)
Catcher Vessel Owners/Operators*	89	178	107
Catcher-Processor Owners/Operators*	18	36	22
Stationary Floating Processor Owners/Operators*	4	8	5
Shoreside Processor Owners/Managers [†]	18	36	22
Shoreside Processing Workers	18	472	283
Stationary Floating Processing Workers	4	128	77
Catcher Vessel Crew	89	366	220
Catcher-Processor Crew	18	630	378
Fishery Support Businesses	173	173	104
Misc. Fishermen/Processors – Unstructured interviews ONLY	100	100	60
Fishery Related Organizations – Meetings	5	10	6
Total		2,137	1,284

Some vessels and permits are co-owned, but both owner names are not listed in the permit data, so additional respondents were added to account for vessels with more than one boat owner.

[†] Personal communications alluded to some processors being owned by more than one individual. An exact number of these instances was not able to be obtained.

⁺ An average response rate was calculated as 60%. Personal communications suggest access to shoreside processor employees will be extremely difficult. As a result, a lower response rate is anticipated from this pool of respondents even though the calculations here show a 60% response rate overall.

We lack hard data on the number of processing workers working specifically on trawl caught Gulf of Alaska groundfish. However, the Alaska Department of Labor produces estimates of the average monthly groundfish processing employment throughout the state. As Kodiak is the major port for Gulf of Alaska groundfish, and we know there are 9 processors in Kodiak processing Gulf of Alaska groundfish, we used the average monthly groundfish processing employment from Kodiak over the years 2008-2011 (236.25) and then divide by 9 to get at the average processing employment in the Gulf of Alaska groundfish fishery per processor. This results in an average of 26.25 workers per processor. We then multiply this number by the number of shoreside and stationary floating processors to determine the total number of shoreside and stationary floating processing workers to be included in the sample. During implementation, processing workers will be identified by contacting the processing plant managers at plants that are known to process groundfish caught in the Gulf of Alaska.

The number of support businesses was calculated based on the number of participating entities in each location. For example, in an active fishing port, there is likely a net supplier, some transportation infrastructure, repair and maintenance facilities, fuel and material provider, and

possibly some accounting, lawyer, or other professional services for a total of 5 types of businesses. Based on the activity in each port, we assumed that all ports except Akutan would have at least 5 support businesses. Since Akutan is farther to the west, we assumed there would only be 3 support businesses that are involved in the Gulf of Alaska trawl fishery. We assumed that Dutch Harbor, AK, Newport, OR, and Sand Point, AK would each have 15 support businesses based on the size of their total fishing infrastructure and the community's participation in the Gulf of Alaska groundfish trawl fishery. Since Kodiak is the main landing port for the majority of shoreside landings, and Seattle is home to the most vessels (particularly catcher/processors), we assumed that there would be at least 50 support businesses in each location due to the demand for these services in these locations.

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.

As previously mentioned in Question B.1, the approach to this study is to conduct a census of the study population. All individuals who meet the study criteria will be provided an opportunity to participate in the research. The sample selection will therefore not contain a random sample or other statistical representation of the study population. Respondent selection will be based solely on the criteria of the individuals' participation and having an active role in the Gulf of Alaska Groundfish Trawl Fishery, where those expected roles have been previously addressed in Question B.1.

Data collection will occur primarily through in-person survey administration and unstructured interviews. Researchers will discuss the research with study participants, administer the surveys, be available to answer any questions, code the surveys for anonymity and confidentiality, and collect all the surveys upon completion. In the event individuals are unavailable to meet in person, various options will be available. Hard copy surveys can be provided either in person or via the mail, electronic versions will be available either for distribution via email or accessible over the internet. In the event of any mailing costs to return the survey, postage paid envelopes will be provided as appropriate.

It is expected that a 60% response rate will be sufficient to properly represent the study population. This response rate is based on a similar study conducted by a researcher at NOAA's Northwest Fisheries Science Center with the same collection methodologies (OMB Control No. 0648-0606). Analysis of the results will be conducted to include the response rate for each question. This is an important aspect of the research as the option to skip questions is being provided as an additional layer of confidentiality. The strength and accuracy of each piece of data will therefore be represented through the response rate of the question, in addition to the overall response rates.

Data collection is planned to be conducted only one time in 2014. Additional OMB clearance will be sought once the rationalization program has been fully designed in order to conduct a post-rationalization survey of the study 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.

Numerous steps have been, and will be, taken to maximize response rates and deal with non-response behavior. These efforts are described below.

Maximizing Response Rates

As a reminder, no statistical sampling methodology is intended for this study population; there is no specific sampling frame applied in this case.

The implementation techniques that will be employed are consistent with methods that maximize response rates.

The first step to increase response rates has been taken in the form of providing the opportunity for industry members to review and contribute to the development of the survey tool. Industry members selected are all key participants in various aspects of the industry, to include geographically diverse locations within the fishery, diverse roles within the industry, as well as diverse knowledge of the fishery. Each industry member has been invited to continue to work with the study's principal investigator to discuss the best approach to reach study participants. Several of the industry members have already committed to serving as key informants, gate keepers, and primary contacts to many others in the industry. These individuals will assist in the communication of the research, will have access to literature about the study to be distributed to their constituents, and will assist researchers in the field to coordinate with study participants. The action of working with industry members and including them in the survey design and study and points of contact is expected to increase the response rate dramatically.

Second, communications with key people in the industry have indicated that many crew members and processing plant employees do not speak very good English. To accommodate this and to increase the response rates with these populations, the survey will be translated into Tagalog and Spanish.

Additional efforts to increase response rates include in-person survey administration whenever possible. It has been the experience of other research efforts that conducting the research in person and collecting completed surveys immediately, dramatically increases response rates (Russell and Schneidler 2013, Rea and Parker 1997, Robson 2002). In these in person surveys, researchers will be able to discuss the research with study participants, administer the surveys, be available to answer any questions, code the surveys for anonymity and confidentiality, and collect all the surveys upon completion.

In the event individuals are unavailable to meet in person, multiple options will be provided to study participants to participate in the research. In the event that in person surveys are not feasible for some respondents, hard copy surveys will be provided either in person or via the

mail and electronic versions will be available either for distribution via email or accessible over the internet. In the event of any mailing costs to return the survey, postage paid envelopes will be provided as appropriate. For individuals who are willing to work with us but don't want to fill out the survey, researchers will conduct an interview and complete the survey per the participants responses. For those who don't want to complete the entire survey, a section completion guide directs the participants as to which sections are most important to complete for the role the individual plays in the industry, limiting the sections the participant needs to complete. It is also clearly communicated that the individuals can stop their participation at any time, stop the completion of the survey at any time, or skip any questions of concern at any time, without any personal consequence.

In addition, the individuals participating in the research have the opportunity to communicate with the researcher and provide additional information that is of concern to them to be included in the data set.

Contact has also been made with other key members of NMFS, academia, and industry to better understand the study universe and to work together to collect a more complete data set. Communication with NMFS Alaska Regional Office, NMFS survey program personnel, NMFS Northwest Fisheries Science Center personnel, other NMFS field personnel, and NPFMC Personnel have been included in the collaborative efforts of this research. These efforts have increased the background knowledge available to the researchers, provided additional key informants and gate keepers to the industry, and have provided a communications network throughout the industry to conduct this research. This network of information available to the researchers will contribute to an increased response rate.

Non-respondents

To better understand why non-respondents did not return the survey and to determine if there are systematic differences between respondents and non-respondents, for those individuals who are not interested in the survey at all but are willing to participate in an interview, researchers will limit their data collection to interviews. If a participant is willing to give us only a few minutes of their time, we will ask the questions outlined in Sections A and B of the survey instrument. These sections are estimated to take approximately 5 minutes to complete. These responses will be used to analyze non-response bias.

Information collected from non-respondents will aid in improving the survey implementation and to correct for non-response bias where necessary (e.g., using the Heckman method).

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.

A full review of the study description, the study methodology, and the survey instrument has been undertaken. NMFS personnel, NPFMC personnel, and other federal personnel have reviewed the survey tool and provided comments on both the survey tool and the study. As previously discussed in Question 3, key industry members were provided a description of the

research, discussed the research with the principal investigator, and reviewed the survey tool. Communication with reviewers is being maintained to 1) communicate changes to the survey tool as a result of the reviews, and 2) to lay the framework for the deployment of researchers into the field to conduct the research.

Information received from industry members and other NMFS personnel was found to be invaluable to the development and maintenance of the survey tool. As a result, updates of the survey tool were made to improve the tool. Their continued participation in this research is expected to contribute greatly to its success.

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.

The internal NMFS design, development, and review team including statistical analysis included: Amber Himes-Cornell, Social Scientist AFSC (206) 526-4221; Stephen Kasperski, Economist AFSC (206) 526-4727; Kristin Hoelting, Pacific States Marine Fisheries Commission researcher at the AFSC (206) 617-7548, Conor Maguire, Pacific States Marine Fisheries Commission researcher at the AFSC (206) 526-4286; and Dr. Suzanne Russell, social scientist NWFSC (206) 860-3274.

The primary individuals expected to collect the data include Amber Himes-Cornell, social scientist, principal investigator, AFSC, Mike Downs and Stephen Weidlich at AECOM (contracted to assist with implementation), and others to be identified. Individuals who are expected to analyze the data include Amber Himes-Cornell (206) 526-4221 and possible others yet to be identified.

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