**SUPPORTING STATEMENT**
**U.S. Department of Commerce**
**National Oceanic & Atmospheric Administration**
**Observer Programs' Information That Can be Gathered Only Through Questions**
**OMB Control No. 0648-0593**

## 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.**

Potential respondent universe:

The potential respondent universe is the set of fishing vessels and fish processing plants that operate in the fisheries with NMFS observer programs. Across all the observer programs, there are 24,540 active vessels and processing plants (unduplicated respondents), and we expect this number to remain similar through 2024 (some observer programs expect the number of active vessels to increase, while others are expected to decrease).

Sampling and Other Respondent Selection Methods:

Sample sizes are expected to be pulled from this universe of active fishing vessels and processing plants in the 10 observer programs; sample sizes per observer program vary depending on operational aspects of the fisheries (please see question 2 below for more details). NMFS currently has, and expects to continue to have observers deployed at only 7 fish processing plants, all of which are in Alaska. For observed fishing trips, some questions are asked once a trip, some are asked several times during a trip to collect haul/set specific information, and others are only asked on trips for which the information cannot be collected readily through direct observation or through non-standardized oral communication in connection with such direct observations. For the purpose of this collection, all the information collected for or associated with a single fishing trip or deployment to a fish processing plant is considered one response. For example, the pre-deployment information, the information provided to an observer, the information in a completed observer evaluation survey, and any reimbursement and data release information provided for a specific trip is considered to be one response. Therefore, the expected number of annual responses, 13,935, is the sum of the number of observed trips and the number of observer deployments or data collections from fish processing plants.

Expected Response Rate:

Expected response rates for all observer programs are high, and range between 95% and 100%.

Estimates were provided by observer programs based on historical response rates. Differences in response rates are tied to program requirements and sampling methodologies.

| Information Collection | Estimated # Active Vessels in the Observed Fisheries | Estimated # of Respondents (Observed Vessels) | Estimate of Annual # of Responses / Respondent | Estimated Response Rate | Estimated Total # of Annual Responses if 100% Response rate | Estimated Total # of Annual Responses Adjusted for Response Rate (Annual Planned Observed Trips) |
|---|---|---|---|---|---|---|
| Northeast Fisheries Observer Program | 17,739 | 895 | 5.5 | 95% | 5145 | 4,888 |
| North Pacific Groundfish & Halibut Observer Program & Processing Plants | 1092 | 417 | 14.0 | 99% | 5889 | 5,830 |
| Alaska Marine Mammal Observer Program | 474 | 95 | 0.9 | 95% | 91 | 86 |
| Westcoast Groundfish Observer Program: Catch and Non-Catch Shares | 1845 | 371 | 5.8 | 99% | 2183 | 2,161 |
| Pacific Islands Region Observer Program | 152 | 148 | 2.6 | 95% | 404 | 384 |
| Southeast Shark Fishery Observer Program | 60 | 60 | 2.0 | 100% | 120 | 120 |
| Southeast Pelagic Observer Program | 80 | 50 | 3.0 | 100% | 150 | 150 |
| GOM observer program | 2653 | 91 | 1.4 | 100% | 130 | 130 |
| WCROP | 45 | 36 | 4.1 | 95% | 154 | 146 |
| Southeast Reef Fish Program | 400 | 40 | 1.0 | 100% | 40 | 40 |
| **Totals** | **24,540** | **2,203** | **NA** | **NA** | **NA** | **13,935** |

**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.**

Statistical Methodology for Stratification and Sample Selection

Fisheries may occur year-round, or may be seasonal. Before an observer program is implemented for a fishery, coverage levels and sampling methods are determined. Resources generally do not allow the deployment of observers on all fishing vessels and all trips in an observed fishery. Because only a portion of the vessels or trips is observed, observer programs have developed methods to achieve a representative sample. Due to variations in fisheries (e.g. gear types used, length of fishing trip, area of fishery), the sampling methods vary between programs. Many of the programs have been able to continue observer coverage during the COVID-19 pandemic and have not needed to adjust their sampling methodologies. If sampling methodologies have been modified due to COVID-19, each program will account for these changes when analyzing the data. ***Specific details by fishery are presented in the supplementary documents describing sampling designs in more detail for the Pacific Islands Region, Alaska Region, West Coast Groundfish Observer Program, the Gulf of Mexico and Pelagic Observer Programs for the Southeast Observer Program, and the Northeast Observer Programs (Attachment B). There is currently no such document for the West Coast Region Observer Program. These documents were developed independently, not in response to an Observer Program requirement.***

In general, programs identify primary, secondary, and tertiary sampling units (e.g. vessel, trip, and haul/set) and establish sampling frames to meet coverage requirements. Coverage levels for fisheries may be specified by regulation, determined by available resources and program costs, or set to meet certain precision targets. Information that informs sampling units, sampling frames, and coverage levels are based on a variety of considerations. For example, the observer program for the Hawaii pelagic shallow-set longline fishery for swordfish provides observer coverage for 100% of trips. This coverage level is a response to the measures required by the 2019 Final Biological Opinion on the Continued Authorization for the Hawaii Pelagic Shallow-Set Longline Fishery.[1] These measures include fleet-wide sea turtle interaction limits. NOAA Fisheries has determined that 100% observer coverage is required to monitor these interaction limits, which have the potential to shut down the fishery. Fleets that have less than 100% coverage, or partial coverage, are subjected to rigorous analysis by NOAA Fisheries scientists to determine coverage levels each year. For example, observer coverage for the North Pacific partial coverage fleets is determined through an Annual Deployment Plan. The Annual Deployment Plan's sampling design for at-sea deployment of observers involves three elements: (1) the selection method to accomplish random sampling; (2) division of the population of partial coverage trips into selection pools or strata; and (3) the allocation of deployment trips among strata.

The vessel sampling frame is often derived from a list of active fishing vessels or fishing

1 https://www.fisheries.noaa.gov/resource/document/final-biological-opinion-continued-authorization-hawaii-pelagic-shallow-set

permits. Programs may stratify the sample by area, gear type, calendar quarter, and/or other variables. Vessel selection methods include census; stratified random sampling (with or without replacement); systematic random sampling, or ad hoc sampling, including at times opportunistic sampling. Once a vessel has been selected for coverage, an observer is assigned to a trip or series of trips (e.g. if trips are one day in length the observer will cover multiple trips). Observers stay with the vessel for the entire trip. Sampling may occur for all hauls/sets, or observers may use sampling schemes (e.g. a random breaks table) to determine which hauls/sets to sample or sub-sample.

The Estimation Procedures

Some types of vessel information, such as the safety, pre-deployment, and gear or vessel characteristics information, are not collected for statistical estimation purposes (besides potential stratification), but rather to provide vessel, haul, or trip-specific information. For example, the safety information collected on the pre-trip vessel safety checklist is used to ensure that a vessel meets the observer program's safety standards before an observer is deployed to or embarks on a specific vessel. Similarly, pre-deployment information (e.g. the expected date, time, and location of a vessel's departure) is used to ensure that observers can be effectively and efficiently deployed.

Other information collected from the observed vessels and trips will be used to estimate biological variables (e.g., catch and bycatch) and economic variables (e.g., variable operating cost and employment) for the fishery as a whole. In this case, the estimation process relies on the stratification of observed vessels and trips, as well as unobserved vessels and trips, based on physical and operational characteristics of both sets of vessels and trips. Often ratio estimators are used and applied by stratum. For example, the ratio of discarded catch to landed catch for observed trips and estimates of landings for all trips from landings reports is often used to estimate the discarded catch associated with all landings. Other estimates are based on multivariate functional relationships that are estimated based on data for an observed vessel and trips and then applied to other vessels and trips. These are but two generic methods that make use of the observer information for estimation purposes. The methods, which can vary by program, circumstances (e.g. the availability of auxiliary information for all trips and vessels), and the variable(s) to be estimated, typically are subject to external review. That review can include a Council's Scientific and Statistical Committee or the review that is required for a paper to be accepted for publication.

The Degree of Accuracy Needed For the Purpose Described In the Justification

The desired degree of accuracy, and corresponding desired sample size and response rate, depends upon the application for which the data are being used. A basic application of the survey data will be the inference of the unobserved population or sub-population mean values from the observed sample mean values. The expected sample sizes and response rates, which are limited by a variety of factors, will result in estimates that are sufficiently accurate for many purposes. For example, the sample size in the Southeast Pelagic Observer Program and Gulf of Mexico Reef Fish Program is based on the previous year's total fishing effort with the annual target coverage rate ranging from 5 to 8% of total active vessels. Fishing effort may change over

the calendar year due to weather, change in market value and fuel or vessel repair costs, thus fishing vessels are selected with probability proportional to their previous year's effort in anticipation of achieving the 5 to 8% annual coverage.

For many observer programs (even prior to the COVID-19 pandemic), there were situations where observers were not deployed. For example, if an observer is not available or if the boat is considered unsafe for observers, observer coverage is sometimes waived. Sampling protocols already account for these situations. During the COVID-19 pandemic, many observer programs have maintained observer deployments through most of the pandemic, or have adjusted deployments to achieve required sampling levels (for example, increasing coverage levels when observers are redeployed to account for lower coverage rates during the beginning of the pandemic). At this time, we do not know if all observer programs will ultimately be able to meet their coverage targets for 2020. NMFS is prioritizing fisheries where coverages are required by law or where there is 100% observer coverage required for catch share fisheries (quota is distributed to fishermen to catch a specific portion of the catch). If any fisheries are not able to meet their target observer coverage levels, the impact will be increased uncertainty in catch and bycatch which will be considered in upcoming stock assessments and may ultimately result in decreasing future catch levels.

Any Unusual Problems Requiring Specialized Sampling Procedures

There are multiple objectives for observer programs and both the nature of and priority for specific objectives can differ by observer program or by fishery. Meeting the diverse objective of a specific observer program can require specialized sampling procedures. Similarly, the objective of providing useful estimates of the bycatch of endangered species, where such bycatch consists of rare events, can require specialized sampling procedures. The specifics of the specialized sampling procedures used in the various NMFS observer programs can be found in Attachment B.

Any Use of Periodic (Less Frequent Than Annual) Data Collection Cycles To Reduce Burden
The observer information is used to estimate variables that can change substantially by area, season, and year. Therefore, the objectives for collecting observer data cannot be met by less frequent data collection.

**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.**

Methods Used To Maximize Response Rates

A number of methods have been used to maximize response rates. First, most of the information will be collected directly by an observer on the fishing vessel at a time that it is convenient for the captain/crew. Second, a relatively small number of questions will be asked at any one time. Third, the observers are trained to help the captain/crew understand the purpose and need of the

data collection and how data will be kept confidential. Fourth, respondents typically are asked to provide only information that is readily available to them and maintained for their own purposes. Fifth, extensive outreach activities will also help the response rate. Informing the fishing industry about the purpose and need for the collection will be important to the success of the survey. Typically, outreach will occur on a number of levels: (1) news articles in trade magazines such as Commercial Fisheries News and National Fisherman and handouts made available at Council meetings and other fishing industry meetings will describe the purpose and need of the collection (2) similar information will be presented at fishing industry meetings; (3) on board observer interactions with fishermen; (4) a summary of data received in the previous collection will be made available to the target population; and (5) letters to permit holders are used to inform them of a new observer requirement or changes to the existing programs. Sixth, while the collection of economic information is voluntary for some observer programs, being associated with the observer program will increase the amount of attention it gets, and thus improve response rates over, for example, either an interview conducted by someone not associated with the fishery or a separate mail survey. Seventh, plain, coherent, and unambiguous terminology that is understandable to respondents is used. Eighth, responding to some of the questions (e.g., the safety questions) is mandatory for all programs and responding to all of the questions is mandatory for some observer programs.

Strategy to Address Non-Response

A considerable amount of information is currently available about the physical and operational characteristics for the fishing vessels in the collection population. This information, which is available from other collections, will be used to compare that population with respondents, and to make any adjustments for systematic bias in survey response. Those other collections include: (1) landings reports or vessel logbook programs that provide individual vessel landing information, in both pounds landed and value of landings, by species, port, and gear, and often trip level effort data for all vessels in the survey population; (2) vessel monitoring systems (VMS) that provide additional operational characteristics; and (3) vessel permit systems and state and Coast Guard vessel registrations programs that provide information on the physical characteristics (e.g., gross tonnage, length, engine power, hull material, and year built) of individual fishing vessels. As a result, it is possible to compare respondents and non-respondents with regard to operational characteristics (e.g., seasonal patterns, species landed, and location of landings) and physical characteristics.

If a fishing captain refused to answer the voluntary pre-trip safety questions related to COVID-19 or other communicable diseases, the observer provider would likely determine it is unsafe to deploy an observer on that trip.

Adequacy of Accuracy and Reliability of Information for Intended Uses

NMFS needs to measure the biological and economic performance of federally managed fisheries and to conduct effective observer programs in order to meet legal and regulatory requirements, support fisheries management decision making, and undertake biological and economic research. For many fisheries, observer programs provide the best source of some of the biological and economic information required for those purposes. The economic data are

critical for constructing key economic performance measures such as profitability, capacity utilization, efficiency, productivity, and economic impacts. The data gathered and performance measures constructed will be used to address a wide range of issues. While the data will be used to comply with legal and regulatory requirements, these requirements do not specify a level of data accuracy. Minimum target response sizes for each population stratum are based on the objective of having a sample mean within 15% of the population mean at the 95% confidence level. It is believed that this provides a sufficient level of precision for inference of population means from sample means. As explained in the response to question 2, even greater precision is highly desirable for other anticipated applications of the data.

Due to the methods that have been used to maximize response rates and to address non-response bias, the collections have in the past and are expected to continue to yield "reliable" data that can be generalized to the universe studied.

We expect boat captains to be accurate in their answer to the pre-trip COVID-19 questions as they understand the importance of the questions and their response is voluntary.

**4. Describe any tests of procedures or methods to be undertaken. Tests are encouraged as effective means to refine collections.**

No pilot surveys will be necessary. These are not new collection programs and extensive efforts were undertaken both to develop this collection and to improve it over time.

**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 required information is provided below by Observer Program.

North Pacific Groundfish Observer Program and Alaska Marine Mammal Observer Program
Jennifer Ferdinand
Director, Fisheries Monitoring and Analysis Division,
Alaska Fisheries Science Center
7600 Sand Point Way N.E.
Seattle, Washington 98115
206-526-4076
Jennifer.Ferdinand@noaa.gov

Observer Providers certified to provide groundfish and marine mammal observers in Alaska. These companies employ the observers who collect information for the Agency:

Alaskan Observers, Inc.
130 Nickerson, Suite 206
Seattle, WA 98109

A.I.S. Inc.
3216 NE 54th Place, Suite 106
Seattle, WA 98105

Saltwater, Inc.
733 N. Street
Anchorage, AK 99501

TechSea International
2303 W. Commodore Way
Suite 306
Seattle, WA 98199

West Coast Groundfish Observer Program
Jon McVeigh
Program Manager
Northwest Fisheries Science Center
2725 Montlake Boulevard East
Seattle, WA 98112
(206) 302-2423
Jon.McVeigh@noaa.gov

One observer provider is contracted to provide federally funded observers who collect information for the Agency:

Alaskan Observers, Inc.
130 Nickerson, Suite 206
Seattle, WA 98109

Three observer provider companies are currently permitted to provide observers in the industry-funded Groundfish Catch Share fishery:

Alaskan Observers, Inc.
130 Nickerson, Suite 206
Seattle, WA 98109

Saltwater, Inc.
733 N. Street
Anchorage, AK 99501

TechSea International
2303 W. Commodore Way
Suite 306
Seattle, WA 98199

Pacific Islands Observer Program

Dawn Golden
Observer Program Manager
Pacific Islands Regional Office
1845 Wasp Blvd., Building 176
Honolulu, HI 96818
808- 725-5170
dawn.golden@noaa.gov

One observer provider is contracted to provide federally funded observers who collect information for the Agency:
Lynker Technologies
5485 Contestoge Ct, Suite 220
Boulder, CO 80301

Southeast Pelagic Observer Program
Larry Beerkircher
Fisheries Sampling Branch Chief and Observer Program Coordinator
Southeast Fisheries Science Center
75 Virginia Beach Drive
Miami, FL 33149
305-361-4290
Lawrence.r.beerkircher@noaa.gov

One observer provider is contracted to provide federally funded observers who collect information for the Agency:

A.I.S. Inc.
3216 NE 54th Place, Suite 106
Seattle, WA 98105

Southeast Shark Bottom Longline and Coastal Gillnet Observer Program and Southeast Reef Fish Program

John Carlson
Observer Program Manager
Southeast Fisheries Science Center
Panama City Lab
3500 Delwood Beach Road
Panama City, FL 32408
305-361-4484
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john.carlson@noaa.gov

One observer provider is contracted to provide federally funded observers who collect information for the Agency:

A.I.S. Inc.
3216 NE 54th Place, Suite 106
Seattle, WA 98105

Southeast Gulf of Mexico Observer Program

Elizabeth Scott-Denton
Observer Program Manager
Southeast Fisheries Science Center (SEFSC)
Galveston Laboratory
4700 Avenue U
Galveston, TX 77551
409-766-3571
elizabeth.scott-denton@noaa.gov

One observer provider is contracted to provide federally funded observers who collect information for the Agency:
A.I.S. Inc.
3216 NE 54th Place, Suite 106
Seattle, WA 98105

West Coast Region Observer Program

Charles Villafana
Observer Program Manager
West Coast Regional Office
501 West Ocean Blvd,
Long Beach, CA 90802 4213
562-980-4033
Charles.Villafana@noaa.gov

One observer provider is contracted to provide federally funded observers who collect information for the Agency:

Frank Orth and Associates
4201 Long Beach Blvd, #315
Long Beach, CA 90807
Phone: 562-427-1822

Northeast Fisheries Observer Program
Amy Martins
Observer Program Manager
Northeast Fisheries Science Center
166 Water Street
Woods Hole, MA 02543
508-495-2266

Amy.Martins@noaa.gov

Northeast Groundfish Fisheries Observer Contractors:
A.I.S., Inc
89 N. Water Street,
New Bedford, MA 02741

At-Sea Monitoring Observer Contractors:

A.I.S., Inc
89 N. Water Street,
New Bedford, MA 02741

East West Technical Services LLC
86 Mumford Road,
Narragansett, RI 02882

Fathom Research, LLC
1213 Purchase Street
New Bedford, MA 02740

Industry Funded Scallop Observer Contractors

A.I.S., Inc
89 N. Water Street,
New Bedford, MA 02741

East West Technical Services LLC
86 Mumford Road,
Narragansett, RI 02882

Fathom Research, LLC
1213 Purchase Street
Suite 315
New Bedford, MA 02740

Further information on the Observer Providers is available at:
https://www.fisheries.noaa.gov/national/fisheries-observers/observer-employers